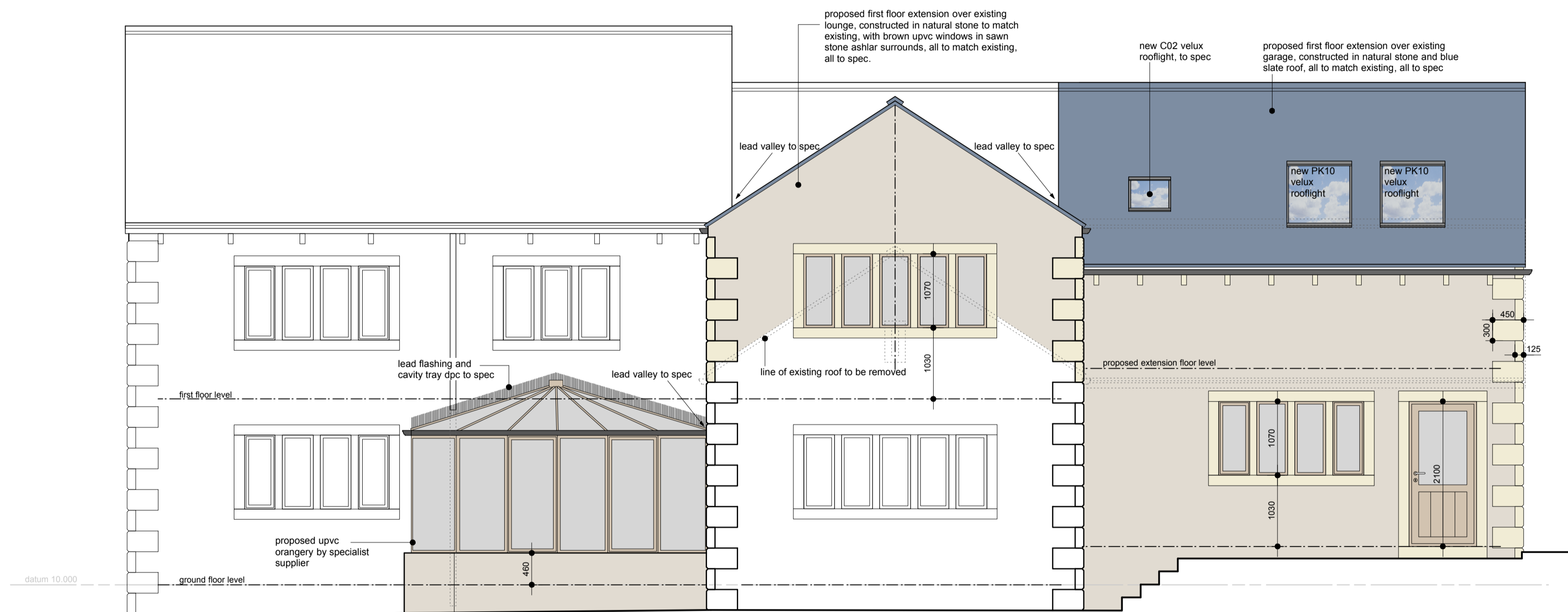
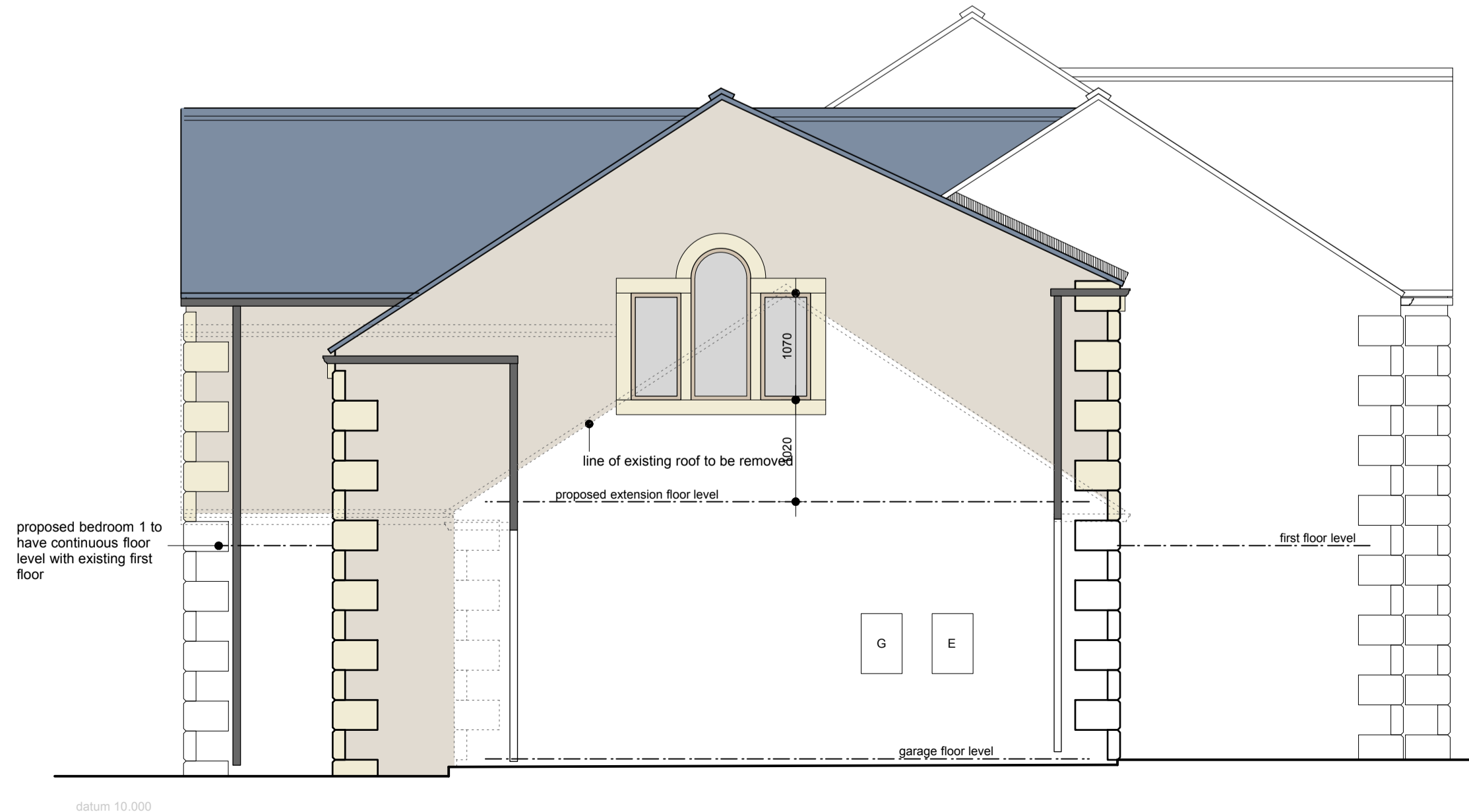




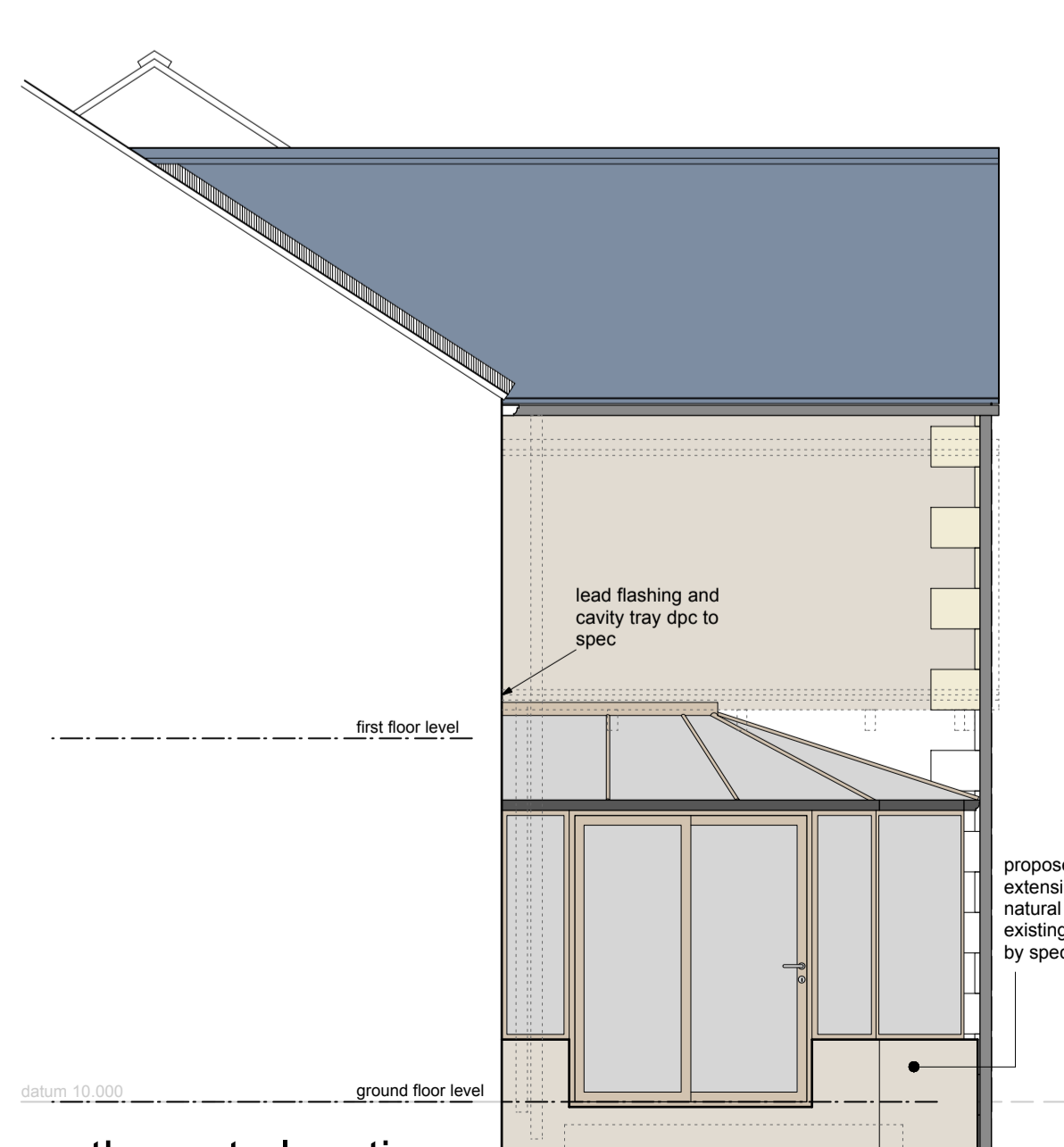
front elevation



rear elevation



side elevation



north west elevation

**SUBSTRUCTURE**

**Excavating & Filling**

Carry out all excavations as necessary in order to achieve the required formation levels for new foundations, floor structures, drainage trenches and external works, to achieve the finished levels shown on the drawings. Dispose of all surplus materials arising from the above excavation work.

**Concrete Foundations:**

Mass concrete strip foundations for external cavity walls are to be laid in C30 grade ready mixed concrete. Strip foundations to be min. 150mm thick with min. 150mm projection beyond thickness of supported wall, with a min. top cover of 600mm externally (final depth of foundations subject to agreement with KC Building Control).

**Foundation Walls:**

Walls below ground to be built up in 2 skins of class 'A' concrete blockwork or foundation blocks, to the same thickness as the walls above. Build in s/steel safety type wall ties @ 450mm vertical & 750mm horizontal staggered c/s in double skin walls and fill cavity up to external ground level in lean mix concrete. Lay min. 150mm thick hardcore bed for solid floor structures in well-consolidated sulphate free crushed stone, blinded with sand to receive DPM.

**SUPERSTRUCTURE**

**Garage Floors (extension to existing):**

New section of mass concrete garage floor slab to be laid to same thickness as existing slab, with a minimum depth of 150mm, laid in C35 mix concrete with smooth float finish. Incorporate single layer of A252 fabric rf. mesh in top of slab, with min. 40mm cover. Slab to be dowelled into existing using 12mm dowel bars at max. 600mm c/s. Slab to be laid on 1200G Visqueen DPM, with lapped & taped joints, lapped with any vertical & horizontal DPC's in walls. Existing DPM, which should be turned up at end of existing slab, is to be turned down flat with new DPM lapped and taped on top of this. DPM laid on sand blinded hardcore as previously described.

**New External Cavity Walls (stone):**

Cavity walls to be constructed with an outer leaf of min. 100mm thick on bed local natural stone laid in regular courses to match existing. Maintain a max. 100mm wide structural cavity. Inner leaf to be 100mm thick loadbearing lightweight aggregate blockwork (min. 3.5N/mm<sup>2</sup>). Incorporate 50mm thick Celotex CG5000 rigid board cavity insulation within cavity (except for garage), held tight against blockwork using proprietary wall tie retaining clips. Blockwork to be dry-lined internally with 12.5mm plasterboard & 3mm skim finish on scrim-reinforced joints (wall construction to give a U-value not greater than 0.28 W/m<sup>2</sup>K). Build in s/steel safety type wall ties @ max. 450mm vertical & 750mm horizontal staggered c/s & @ 225mm vertical c/s adjacent openings. Close tops of cavities with 9mm Supalux cavity closers or similar approved board.

Externally, openings to have 100 x 150mm ashlar stone heads, cills & jambs, and 100 x 100mm mullions to match existing. Internally, openings to have Naylor's R9 lintels over, installed in accordance with manufacturers instructions. Install proprietary weep hole ducts (in colour to match wall) over all openings, @ 600mm c/s (min. 2 per opening).

All openings to have proprietary cavity closers to all reveals, with a stepped cavity tray DPC above opening & a horizontal cavity DPC below the sill. Build in a continuous horizontal DPC to both leaves of cavity walls, located min. 150mm above the adjacent external ground level. All new walling to be bonded into existing walling, maintaining a continuous cavity, as shown.

**Internal Walls (studding):**

To be formed with 100 x 50mm sw. studs @ 400mm c/s with 100 x 75mm sw. head & sole plates & 100 x 50mm sw. noggins @ 1200mm staggered c/s. Partitions to be faced both sides with 12.5mm plasterboard & 3mm skim finish on scrim-reinforced joints. All partitions to incorporate 100mm mineral wool sound insulating quilt (min. density 10kg/m<sup>3</sup>) packed tightly between studs.

**Steel Beams:**

Build in steel beams where shown on drawing, seated on concrete padstones – all to Structural Engineers details. Encase beams with 2 layers of 12.5mm Gyproc Wallboard nailed to min. 50 x 50mm timber soldiers @ max. 600mm c/s, with all joints staggered. Plasterboard to receive 3mm skim finish on scrim-reinforced joints (30min. fire protection).

**Suspended Timber First Floors (over garage):**

To be 22mm thick T & G jointed moisture resistant flooring grade chipboard on C16 grade 175 x 50mm floor joists @ 400mm c/s. Incorporate timber strutting between joists at centre of span, where span of joists exceeds 2.5m. Over garage, incorporate 120mm thick Celotex FR5000 rigid board flooring insulation, tightly fitted between joists. Ceilings generally to be underdrawn with 12.5mm gypsum plasterboard & 3mm skim finish on scrim-reinforced joints.

**Suspended Timber First Floors (over drawing room):**

To be 22mm thick T & G jointed moisture resistant flooring grade chipboard on T/J joists, capable of spanning 4.8m under domestic loading (1.5kN/m<sup>2</sup>). Incorporate 100mm mineral wool sound insulating quilt (min. density 10kg/m<sup>3</sup>) packed between joists. Ceilings generally to be underdrawn with 12.5mm gypsum plasterboard & 3mm skim finish on scrim-reinforced joints.

**New Windows/Exterior Doors:**

Manufactured to BS 7412 in wood effect PVCu to match existing. To be fitted with hermetically sealed unit double-glazing with a min. 16mm gap between panes (windows to have a U-value not greater than 1.6 W/m<sup>2</sup>K). Opening lights to be weather-sealed and to provide min. 5% of floor area to rooms served. Windows to be fitted with trickle-vents to give min. 5000mm<sup>2</sup> opening to habitable rooms and 2500mm<sup>2</sup> to other rooms. Any glazing extending to less than 800mm above finished floor level (windows) and 1500mm above finished floor level (doors & side panels) to be safety glazing to BS 6206. All glazing to comply with BS 6262.

**Roof Windows:**

Install Velux roof windows to the references & sizes shown on the drawing. Velux to be double glazed and to have a U-value not greater than 1.3 W/m<sup>2</sup>K. To be installed complete with the appropriate flashing kit (dependent on roof finishes) in accordance with the manufacturers installation instructions. Generally double-up roof timbers where trimming around roof window openings (unless otherwise specified by Engineer). Roof windows to provide rapid ventilation of min. 5% of floor area to each habitable room served. Roof windows to incorporate trickle ventilation to give min. 5000mm<sup>2</sup> opening to habitable rooms and 2500mm<sup>2</sup> to other rooms.

**Internal Doors:**

Generally to be 6 panelled interior quality timber doors/frames for stain finish to match existing, to clients approval.

**Pitched Roof over bedroom 1 (traditional):**

All roof timbers to be in C16 grade timber. Roofs to be surfaced with blue slates to match existing. Slate to be laid in a traditional manner, on 38 x 25mm tanalised sw. battens (at c/s to suit) fixed over Proctors Roofshield vapour permeable roofing membrane, on 195 x 50mm sw. rafters @ 400mm c/s, with 170 x 50mm sw. ceiling joists @ 400mm c/s, all seated on and secured down to 100 x 50mm sw. wallplate, secured to block inner leaf with 1000mm long galv. ms. holding down straps @ 1000mm c/s.

For size and position of purlins/binders etc. see sections. Over flat ceilings incorporate 300mm thick mineral wool insulation laid in 2 layers, 150m between joists and 150mm over joists (roof construction to have a U-value not greater than 0.16 W/m<sup>2</sup>K). Over sloping ceilings incorporate 100mm thick Celotex GA4000 rigid board roofing insulation between rafters, rafters underdrawn with 49.5mm Celotex GD5040 insulated plasterboard & 3mm skim finish on scrim-reinforced joints (roof construction to have a U-value not greater than 0.18 W/m<sup>2</sup>K). Build in 150mm high Code 4 lead flashings/soakers and cavity tray DPC at junction of new roofs and existing walls where shown.

**Pitched Roof over bedroom 2 (raised tie trussed rafters):**

All roof timbers to be in C16 grade timber. Roofs to be surfaced with blue slates to match existing. Slate to be laid in a traditional manner, on 38 x 25mm tanalised sw. battens (at c/s to suit) fixed over Proctors Roofshield vapour permeable roofing membrane, on pre-fabricated raised tie timber trussed rafters @ max. 600mm c/s, manufactured and erected in accordance with BS 5268 Part 3: 1985 and including sw. bracing fixed in a chevron pattern along rafters and ceiling ties. Account to be taken in the design of the trusses of any water storage platforms or trimming. Truss manufacturer to be responsible for providing all necessary structural calculations for Local Authority approval. Trusses to be seated on and secured down with truss clips to 100 x 50mm sw. wallplate, secured to block inner leaf with 1000mm long galv. ms. holding down straps @ 1000mm c/s. Over flat ceilings incorporate 300mm thick mineral wool insulation laid in 2 layers, 150m between ceiling joists and 150mm over joists (roof construction to have a U-value not greater than 0.16 W/m<sup>2</sup>K). Over sloping ceilings incorporate 100mm thick Celotex GA4000 rigid board roofing insulation between rafters, rafters underdrawn with 49.5mm Celotex GD5040 insulated plasterboard & 3mm skim finish on scrim-reinforced joints (roof construction to have a U-value not greater than 0.18 W/m<sup>2</sup>K). Build in 150mm high Code 4 lead flashings/soakers and cavity tray DPC at junction of new roofs and existing walls where shown.

**Lateral Restraint:**

To be provided in roof & first floor by 1200 long x 30 x 5mm galv. m.s. straps secured with 8swg. X 75mm long nails to 3nr. rafters/joists and built into wall @ 1.2m c/s (roof) and 2.0m c/s (first floor). Incorporate sw. packs & noggins at strap locations, min. 50mm thick x half rafter/joist depth.

**Roof Drainage:**

New roofs to drain to UPVC gutters, profile & colour to match existing, on brackets secured to wall and sat on stone gutter corbels, to match existing. Matching 63mm dia. RWP's secured on pipe clips to manufacturer's instructions. RWP's to discharge to ventilated clay trapped gully's where shown on drawing, fitted with cast alloy grating.

**Lead Valley Gutters & flashings (orangey):**

Lead lined valley gutter at junction of new orangery roof and existing wall where shown, to be formed in Code 6 (BS.1178) lead sheet, with a Code 4 lead cover flashing over. Build in 150mm high Code 4 lead flashings/soakers and cavity tray DPC at junction of orangery roof and existing wall where shown. Works to be carried out by Orangery specialist supplier.

**Lead Gutters:**

Lead lined gutters between new roof and wall to be laid in Code 6 (BS.1178) lead sheet in max. lengths of 2.25m and jointed over 50mm high drips. Gutters to be min. 225mm wide and min. 100mm deep, with lead dressed up & over tilt fillet beneath roof ties, or if appropriate form abutment with existing wall, with a Code 4 lead cover flashing over. Min. fall of gutters between drips to be 1:80. Lead to be laid over 18mm thick plywood sole boards, fixed to new/existing roof timbers.

Where new roofs meet existing, new short rafters to be seated on 25 x 150mm sw. layboards onto existing rafters. Valleys to be min. 125mm wide and to be lined with Code 5 lead, min. 500mm wide on 18mm exterior grade plywood (min. 225mm to each side of valley) supported on noggins fixed to rafter sides. Underlay to be dressed over tilt fillets down each side of gutter.

**Below Ground Drainage:**

New surface water to connect to existing as shown via 110mm dia. Hepworth Plastidrain (or similar approved) pipes and fittings - all to BS EN 1401-1: 1998. Pipes to be laid to an even fall of min. 1:80 (sw.) & shall generally be laid with a 150mm granular bed & 150mm cover of selected fill. New foundations to be taken down below invert of existing drains in close proximity. Drains passing through walls to be bridged over with conc. lintels, maintaining a min. 50mm clearance from the crown & sides of the pipe. Drains beneath floor slabs to have a full 150mm granular bed & surround. Drains with less than 1.2m cover beneath driveways & hardstandings to be laid in accordance with pipe manufacturers instructions.

**Inspection Chambers (if required):**

To be constructed in proprietary p.c. concrete sections, set & jointed in 1:3 cement/sand mortar, or built in 215mm Class B engineering brickwork, built off a 150mm C25P mix concrete base slab. Chambers within manholes to be benched up in similar concrete with a smooth trowelled finish. Polypropylene I.C.'s may be used down to a max. invert of 1000mm, installed in accordance with manufacturers laying instructions. Chambers to be fitted with medium duty airtight cover & frame.

**Above ground Drainage:**

In UPVC pipework with solvent welded joints, installed in accordance with BS.5572:1978. Min. 100mm dia. soil & vent. pipe where shown, to terminate min. 900mm above any opening within 3m & fitted with birdproof guard. No connections to be made to soil pipe within 200mm of a WC connection, except that wastes up to 50mm dia. may connect on the same centre-line. Base of stack to connect to drain by a min. 200mm radius rest bend.

**Waste runs to appliances as follows:**

	min. dia.(mm)	max. run (mm)
WC	100	no limit
Shower	40	3000
	50	4000
Washbasin	52	1700
	40	3000

Use 75mm deep seal traps or if max. run is exceeded use re-sealing trap.

**Mechanical Ventilation:**

Shower rooms to have extract fan with a min. extract rating of 15 litres/sec.

**Heat Producing Appliances:**

Heating engineer responsible for extending existing central-heating system to cater for alterations, including re-siting and provision of new radiators complete with TRV's. Heating engineer to inspect the existing system to assess its adequacy and suitability to be extended and also to assess and report on the adequacy of the existing C.H. boiler to cater for the increase in space heating requirements prior to commencement of the works on site. If larger output boiler is required the Contractor must confirm the requirements to the building owner at tender stage.

**Electrical:**

Existing general power & lighting circuits to be extended/modified to cater for the extension & alterations, to building owner requirements. All installation work to be carried out by qualified electricians fully conversant with BS 7671. All electrical work is to comply with the requirements of Part P (electrical safety) and must be designed, installed, inspected and tested by a person competent to do so, with an appropriate BS 7671 electrical installation certificate issued upon completion.

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rev.	description	date	NG	NG
P01	Drawing prepared for building regulation purposes	11.10.16	NG	NG



project Proposed extension and alterations at Braystone House, 32A Wilshaw Road, Wilshaw, Holmfirth, HD9 4DZ for Mr Jim Alexander

title elevations & specification as proposed  
number 16026D-06-P01  
scale 1:50  
size A1