CONSTRUCTION NOTES

PREPARATORY WORKS
Remove existing roof coverings and roof structure. Existing ceiling and joists remain. Prepare walls ready for raising.
Remove utility room and reduce levels and prepare extension area ready for oversite.

EXISTING FOUNDATIONS
Contractor to expose existing foundations to ascertain suitability for raising of walls.
Excavated trial pits to be made available to Building Inspector for inspection prior to works commencing.
Inspector will confirm suitability following Inspection.

EXTENSION FOUNDATIONS
All concrete work to LA Approval. To be 1:2:4 mix 21N/mm2 strength trench fill footing 600mm wide x 1000mm deep for external walls.

EXTERNAL WALLS BELOW DPC
To be structural blockwork min 7n/mm2 to engineers design.Introduce bitumen polymer type dpc built into all walls and leaves 150mm above g/l stepped as required.

EXTENSION EXTERNAL WALLS ABOVE DPC/GROUND LEVEL
Cavity Wall construction.
FINISH: 100mm Bradstone rough dressed walling. Southwold colour. stone to be agreed.

100mm cavity filled with 100mm Unilin CavityTherm full fill insulation. (formerly Xtratherm)
Include for Unilin/Xtratherm Riser,Top and Corner Panels, Cavity Tray Channel and Service Void Channel for any beam and block floor vents.

Inner leaf throughout to be 100mm Celcon 'Standard' Insulation blockwork finished internally with 12.5mm plasterboard on dabs and 3mm skim coat of ltwt insulating plaster. Introduce bitumen polymer type dpc built into all walls and leaves 150mm above g/l.
Fill cavities with weak mix mortar to 225mm below dpc. Seal cavities around openings and at tops of walls with 100mm Catnic cavity closers.

Stainless Steel Wall ties conforming to BS 1243:1978 should be used and placed at approx 600mm c/c horiz and 450mmc/c vert, do not place directly on the DPC. It is recommended (to avoid piercing the boards with additional wall ties at reveal openings), that an additional wall tie is included within 225mm of the opening on each board course. Double up ties at openings.

U value of External walls = 0.18w/m2k

RAISING OF EXISTING WALLS - GABLES AND FRONT
Where existing wallls are to be raised. Clean and prepare exposed walls ready for raising.
Inspect existing walls for any damp issues and if required install injection dpc to specialist specification.
Cracks and cavities should be cleaned out, filled and sealed with NHL pointing mortar.
External finish of 3 coat lime render (hydraulic) in Bath Stone colour. 10mm scratch coat, 10mm float coat and 6mm finish coat.
Raise external leaf in 100mm Celcon Standard Insulation blockwork and inner leaf in 100mm Celcon Standard Insulation blockwork.
Match existing cavity width (assumed 50mm) and fill with 50mm Knauf Dritherm Cavity Slab 32 Ultimate insulation.
Stainless Steel Wall ties conforming to BS 1243:1978 should be used and placed at approx 600mm c/c horiz and 450mmc/c vert, do not place directly on the DPC. Double up ties at openings.
Finish internally with layer of Celotex PL4050 insulation (50+12.5) on dabs and 3mm skim coat of plaster.

U value of raised external walls = 0.19w/m2k

LINTELS
Use Catnic Cougar heavy duty insulated lintels throughout. (see schedule) www.catnic.com.
Damp-proofing at lintel level must be provided with stopends and weep holes. Bifold door lintel to engineer confirmation.

EXTENSION LOWER GROUND FLOOR SOLID SLAB (insulation above slab)
65mm screed on vapour control layer laid on 100mm Celotex GA4100 floor insulation on 100mmth. conc slab 1:2:4 on 1200 gauge poly dpm lifted and laid under all dpc's. DPM to be laid on sand blinded and compacted hardcore depth not exceeding 600mm deep. DPM to be continuous at all joints. Full radon protection to be provided with Radon sumps and Radon cavity tray.
'U' value of this construction =0.16 w/m2k. p/a=0.68

EXTENSION UPPER GROUND FLOOR BEAM AND BLOCK
65mm screed on vapour control layer laid on 100mm Celotex GA4100 floor insulation on beam and block floor as supplied by Stowell Concrete or similar approved. Fill all voids with mortar and plaster complete wall surface down to finished block level.
Include for plastic telescopic vents at 1.5mc/c for ventilation to floor void. 1200 gauge poly dpm laid over beam and block floor prior to insulation and linked to radon cavity tray on external wall. Overlap joints.
(NOTE INSULATION OPTIONAL AS LOWER GROUND FLOOR SOLID SLAB INSULATED FLOOR RUNS UNDER THIS AREA)

UPPER LOBBY ROOF (40 DEGREE PITCH)
FINISHES: Natural Slate
All on treated battens and Tyvek breathable roofing membrane on 50x150 C24 rafters and ceiling joists @ 400mmc/c.
All on 100x50mm plates anchored to walls with 'mafco'or similar approved plate anchors @1.8mc/c.
Rafter ends tied to wall plates with galv. anchor straps. Lateral restrains to end walls comprising of 30x5mm galv m.s anchors fixed over 3No. rafters, turned down and secured to blockwork. Form valleys at intersections of roofs with code 5 lead lining on 19mm ply layboard and ex 75x75 tilting fillets. Code 5 lead lining and cavity trays at abutments with walls. Insulate level ceiling area with 400mm Earthwool loft roll 40.
Insulate sloping areas with 120mm Celotex XR4120 insulation between rafters with further layer of Celotex PL4040 fixed under.
Ensure min 30mm air gap is maintained between top of insulation and top of rafter in accordance with Celotex specifications.
Roof to belnd into lower flat roof with grp flat roof finish dressed up under slates.
UPVC fascia and soffitts set 200mm clear of finished wall with roof ventilation via glidevale vents equivalent to continuous strip 10mm wide.
UPVC rainwater pipes and downpipes discharging into existing soakaway min 5.0m from any building.
'U' Value of level areas of roof = 0.10w/m2k
'U' Value of sloping areas of roof = 0.18w/m2k

LOWER LOBBY EXTENSION FLAT ROOF (WARM ROOF - NO VENTILATION)
Fibreglass GRP finish to specialist detail on 146mm Unilin Insulation Thin-R FR-TP manufactured to EN 13165 by Unilin Insulation, comprising a rigid PIR core between low emissivity foil facings bonded onto 6mm WBP Plywood. To be installed in accordance with instructions issued by Unilin Insulation. Unilin Thermal Ply is faced with a gas tight foil facer. Bed the panel to top of firrings using vapour resistant mastic to create a continuous vapour control layer.
Firring strips with falls to boundary wall - Ex 50 to 0mm firrings on 47x145C24 joists @ 400mmc/c.
Line underside of joists with 12.5mm plasterboard with plaster skim to finish.GRP finish to be dressed down over fascia.
All on 100x50mm plates anchored/rawlbolted to walls with 'mafco' or similar approved plate anchors.Joist ends tied to wall plates with galv. anchor straps. Lateral restrains to end walls comprising of 30x5mm galv m.s anchors fixed over 3No. rafters, turned down and secured to blockwork. Dress GRP finish up under tiles. UPVC fascias with 150mm soffit projection. Code 5 lead lining and cavity trays at roof abutment with house wall. UPVC rainwater pipes and downpipes discharging to soakaway min 5m from any building.
Double up rafters each and every side of the lantern rooflight.
'U' Value 0.15w/m2k

MAIN HOUSE ROOF (40 DEGREE PITCH)
FINISHES: Natural slate.
All on treated battens and Tyvek breathable roofing membrane on Fink trusses as supplied by Pasquill Bridgwater (01823 275369) www.pasquill.co.uk Trusses to BS5268 pt3 1998/ EC5 and to include all necessary lateral and diagonal bracing. Double up Trusses either side of any velux rooflights.
All on 100x50mm plates anchored to walls with 'mafco'or similar approved plate anchors @1.8mc/c.
Rafter ends tied to wall plates with galv. anchor straps. Lateral restrains to end walls comprising of 30x5mm galv m.s anchors fixed over 3No. rafters, turned down and secured to blockwork. Form valleys at intersections of roofs with code 5 lead lining on 19mm ply layboard and ex 75x75 tilting fillets. Code 5 lead lining and cavity trays at abutments with walls. Insulate level ceiling area with 400mm Earthwool loft roll 40.
Extend rafters down on rear elevation as a 'cut roof' (50x150 C24@ 400mmc/c bolt to trusses and bear off beam 'D'.
UPVC fascia and soffitts set 200mm clear of finished wall with roof ventilation via glidevale vents equivalent to continuous strip 10mm wide.
UPVC rainwater pipes and downpipes discharging into soakaway min 5.0m from any building.
'U' Value of level areas of roof = 0.10w/m2k

DORMER FLAT ROOF (WARM ROOF - NO VENTILATION)
Fibreglass GRP finish to specialist detail on 146mm Unilin Insulation Thin-R FR-TP manufactured to EN 13165 by Unilin Insulation, comprising a rigid PIR core between low emissivity foil facings bonded onto 6mm WBP Plywood. To be installed in accordance with instructions issued by Unilin Insulation. Unilin Thermal Ply is faced with a gas tight foil facer. Bed the panel to top of firrings using vapour resistant mastic to create a continuous vapour control layer.
Firring strips with falls to rear - Ex 75 to 0mm firrings on 47x170C24 joists @ 400mmc/c.
Line underside of joists with 12.5mm plasterboard with plaster skim to finish.GRP finish to be dressed down over fascia.
All on 100x50mm plates anchored/rawlbolted to walls with 'mafco' or similar approved plate anchors.Joist ends tied to wall plates with galv. anchor straps. Lateral restrains to end walls comprising of 30x5mm galv m.s anchors fixed over 3No. joists, turned down and secured to timber frame. Form valleys at intersections of roofs with code 5 lead lining on 19mm ply layboard and ex 75x75 tilting fillets.
UPVC fascias with 150mm soffit projection. UPVC rainwater pipes and downpipes discharging to soakaway min 5m from any building.
'U' Value 0.15w/m2k

DORMER CHEEKS AND FRONTS
Catnic Urban Standing Seam Cladding on breather membrane on 18mm OSB3 fixed to 100x50 C24 studs @400mmc/c cross braced horizontally @900mm c/c. 60mm Celotex GA4060 insulation between studs and pushed back to plywood sheathing. Fit services into cavity if required. Ensure the unprinted foil surface faces the air cavity. Install a further internal layer of 60mm Celotex PL4060 over the studs.
Joints between boards to be tightly butted, taped and jointed using appropriate tape and jointing material to create the vapour control layer.
Vapour seal all perimeter abutments using sealant. Seal around all penetrations for electrical outlets and switch boxes with plaster skim to finish.
Double up rafters either side of the dormer cheeks.

FIRST FLOOR
To be located above existing ceiling which is to remain in place. Strap existing ceiling joists to new floor joists on completion of floor.
20mm moisture repellent t&g wood board flooring on 72x220 C24 grade joists @400mmc/c. Herringbone strapping with s/s straps.
Line underside ceilings with one layer 12.5mm th. plasterboard and skim to form ceilings. 100mm isowool to floor voids.
Provide lateral straps where first floor joists run parallel with external walls. Double up joists under partitions and baths.

NEW STAIRS UPPER TO LOWER LOBBY
Upper floor - Lower floor = 1050mm approx. 6No. risers @175mm, 250mm going. Max pitch 42°. Width of flight 1200mm.
Install handrail 900mm above pitch line. 2m headroom to be provided at all times. Balustrade where applicable @100mm c/c.
50mm min going at winders if applicable. Balustrade guardrail height 1100mm.

NEW STAIRS MAIN
Ground floor - First floor = 2910mm approx. 14No. risers @207.85mm, 250mm going. Max pitch 42°. Width of flight 860mm.
Install handrail 900mm above pitch line. 2m headroom to be provided at all times. Balustrade where applicable @100mm c/c.
50mm min going at winders if applicable. Balustrade guardrail height 1100mm.

NEW INTERNAL PARTITIONS
To be of studwork. 100x50mm treated sw tread, sole and wall plates. 100x50mm treated sw studs @ 400mmc/c and 100x75mm treated sw noggins @ 600mmc/c. All to be finished with 12.5mm th. plasterboard, butt jointed, taped and skim coat of plaster to each side. 100mm insulation quilt in studs.

WINDOWS/DOORS/GLAZING
All new windows and doors to be in upvc or powder coated aluminium, DOUBLE glazed and fitted with trickle vents.
Window glazing to have 'U' Value of 1.2w/m2k or less.Windows to bedrooms to be suitable for escape with min opening 0.33msq min 450mm wide with cills between 800mm and 1100mm above floor.
Provide safety glazing in critical locations including where patio/Bifold doors are full height glazing.
Any replacement windows to have trickle ventilators with equivalent area of 8000mm² in habitable rooms and 4000mm² in bathrooms.
Internal doors to be undercut by 10mm to the finished floor level.

SURFACE WATER DRAINAGE
New gutters and downpipes at end of extension. To soakaway min 5m from any building.

GENERAL
All new structural timber to be strength graded and marked DRY or KD. Decorate to Clients choice.

FIRE SAFETY
All halls/landings to be fitted with mains wired smoke detection and interlinked and fitted with battery backup.
Mains wired Heat detector in kitchen (interlinked)
Ensure new bedroom windows meet escape window dimension criteria - to be suitable for escape with min opening 0.33msq min 450mm wide with cills between 800mm and 1100mm above floor.

BOILER/HEATING
To be designed installed and commissioned in accordance with the Domestic Services Compliance Guide 2013 (incorporating 2018 amendments)
Extend central heating via wall mounted radiators.
All central heating installations by approved Contractor.

FOUL DRAINAGE
All work to LA Approval. Soil pipe to be 100mm Supersleve vitrified clay pipe flexibly jointed or OSMA plastic underground drainage system or similar approved and laid to min 1:40 fall bedded on 150mm th. pea gravel and surrounded. Where pipes pass thru walls include flexible joint and use prestressed lintels. Where drains run under building encase in concrete.
Soil pipes to terminate 900mm above any openings within 3m. Any new manholes on site to be OSMA Plastic Inspection chambers.
All foul connections via existing foul drains.
WASTE SIZES:
WC - 100mm dia soilpipe Wash Basin - 32mm dia with 75mm deep seal bottle trap.
Bath - 38mm dia with 75mm trap
Kitchen Sink - 38mm dia with 75mm trap
Shower - 38mm dia with shower trap.

PART L1A SECTION 10.7 - GLAZING RATIO COMPLIANCE CHECK. (LOWER/UPPER LOBBY)
Floor area of extension: 13m² x 25% = 3.25m²
Add windows/doors that no longer exist: 3.50m²
Allowable area = 6.75m²
Actual Area of new windows/doors/rooflights: 5.15m²
REQUIREMENT SATISFIED

WATER EFFICIENCY
Pressure regulating aerator fitted on kitchen sink taps. Spray taps fitted to all wash hand basins.
WC's to be low dual flushing cisterns.

PART P - ELECTRICAL SAFETY
All electrical work required to meet the requirements of Part P (Electrical safety) must be designed, installed, inspected and tested by a person competent to do so. Prior to completion the Council must be satisfied that either :-
1. An electrical installation certificate issued under a Competent Person Scheme has been issued; or
2. An appropriate electrical installation certificate has been issued for the work, and that it has been signed by a person competent to do so; or
3. They have carried out sufficient inspections and tests to ensure relevant work complies with part P.

Electricalworks to min IEE Standards by approved IEE Electrical Contractor. Switches and sockets between 450 -1200mm from floor level. Provide 100% energy saving light fittings.

VENTILATION
Mechanical ventilation to bathroom/ensuite/wc to be Vent Axia Lo-carbon Quadra (variable speed selection) ducted to external air and wired to light switch with time delay and isolator switch. Include trickle ventilators of 5000mm² to all wet rooms.
In kitchen mechanical ventilation via cooker extractor hood ducted to external air.
Trickle Ventilators must be 'equivalent area' performance tested to BS EN 13141
Provide minimum 3 No. Trickle Ventilators to open plan kicthen dining area.
Trickle ventilators to habitable rooms to be min 12000mm²
Flexible ducts for extractors to be max 1.5m and installed to ensure flow resistance is minimised.

STRUCTURAL CALCULATIONS
Structural engineers calculations will be required for the following.
1. Beam 'A' lower lobby for wall plate.
2. Beam 'B' living room for first floor joists
3. Beam 'C' supporting post 'E'
4. Beam 'D' supporting main trusses and dormer roof
5. Post 'E' supporting beam 'D' to break up span.
6. Bifold door lintel and connection with Beam 'C'
7. Wall stability check at Beam 'B' junction with external wall for possible wind post.
8. Foundations (if required following excavation and Inspector comments)
9. Loadings check for all roofs to confirm timber sizes.
10. Floor joists load check and secure strapping of existing ceiling joists to new floor joists
11. Roof Trusses (By supplier)

BUILDING COMMISSIONING
All commissioning certificates to be supplied to building control incl. Electrical,Heating, etc
Building services manual to be provided to be retained at property for future occupants.

PARTY WALL ACT
Works will come under the Party Wall act of 1996 and the building owner is advised to seek the appropriate legal advice.

CDM REGULATIONS
In accordance with the provisions of regulations 9(1), Duties of Designers, we are required to advise our Clients as to the duties placed upon them under the Construction (Design & Management) Regulations 2015.

Broadly, the client's duties include:

* Ensuring suitable arrangments are put in place for managing projects.

* Where appropriate, notify the HSE of construction works.

* Where there is more than one contractor, or if it is reasonable forseeable that more than one contractor will be working on a project at any time, the client must appoint, a Principal Designer and a Principal Contractor.

* Provide information on relevant health and safety issues that may affect the design or construction of the project.

* Ensuring those appointed are competent and adequately resourced to carry out their health and safety resposibilities.

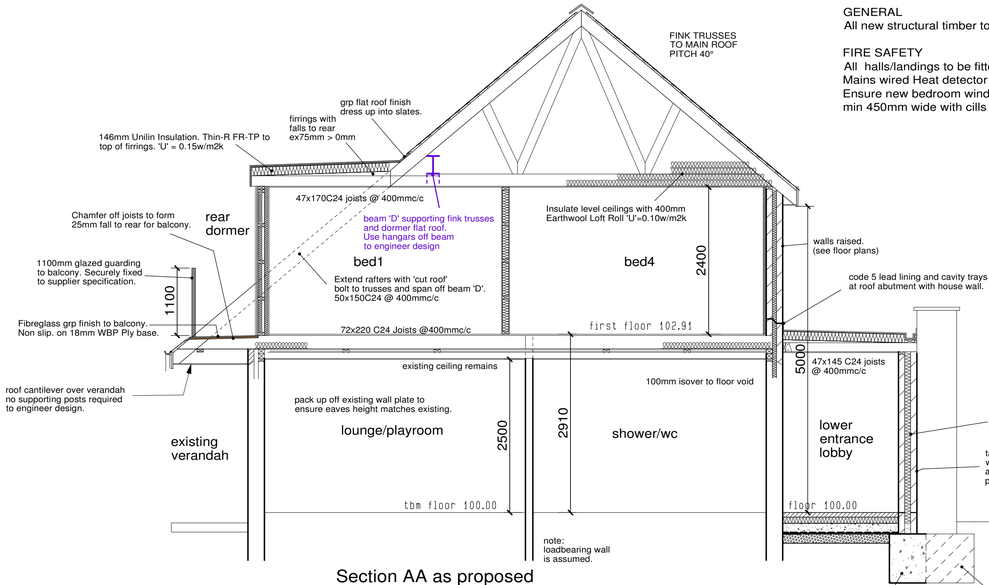
* Ensuring that suitable welfare provisions have been provided on site before the commencement of the construction phase

* Ensuring that a suitable construction phase health and safety plan has been prepared by the contractor/principal contractor before construction works start.

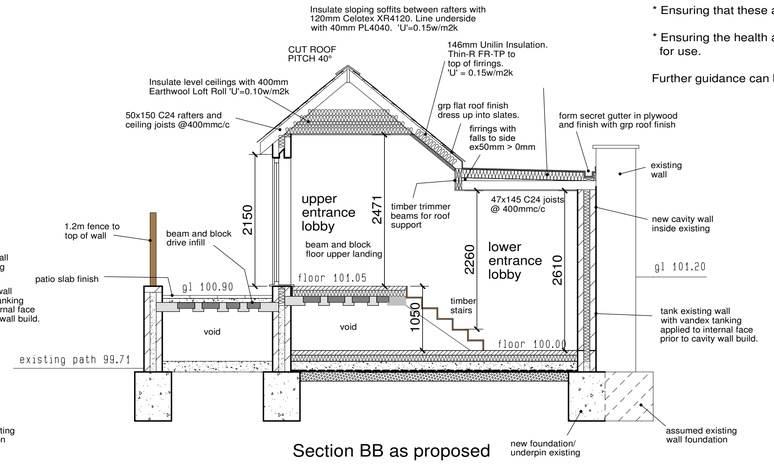
* Ensuring that these arrangements are maintained and reviewed throughout the project.

* Ensuring the health and safety file given to you at the end of the project is kept available for use.

Further guidance can be obtained from the HSE website. www.hse.gov.uk



Section AA as proposed
CANTILEVERED OVER EXISTING VERANDAH



Section BB as proposed

0 1 2 3 4 5m

Rev	Date	Details	Ref
A	OCT 24	EXTERNAL FINISHES & WINDOW STYLE	

PROJECT:

New roof and dormers for loft conversion
7A Masons Lane
Bradford on Avon
BA15 1QN

SECTIONS AND NOTES

CLIENT: Mr & Mrs Shellard

SCALE: 1:50 @ A1

DRAWING NO: 2024/SHELLARD/04A

DATE: AUG 2024

DRAWN: m. bissex

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