SPECIFICATION FOR PROPOSED

CHANGE OF USE TO SMALL HMO

AT

14 MARLBOROUGH STREET, BRISTOL.

BS5 6RH

Z-862-S001

CITYSCAPE
ARCHITECTURE

Design & Legislation

- The following specifications and plans are intended to be used for Building Regulation and Planning applications only. We accept no liability in relation to disputes/delays arising from site construction works.
- Copyright Cityscape Architecture Ltd.
- This specification to be read in conjunction with drawing numbers prefixing: Z-862-D… and all subsequent amendments and supplementary calculations.
- No responsibility will be taken for discrepancies arising from errors in data supplied by others.
- Whilst we take all reasonable steps to ensure that the information contained within these documents is accurate and up to date, no liability can be accepted for any errors or omissions.
- On depositing the local authority application/s the applicant is deemed to have viewed and approved the scheme drawings and specifications.
- Our services and responsibilities to you as agents terminates when the local authority has reached their decision stage/s.
- We do not act as agents for applicants who follow the Building Notice procedure.
- All documents are protected by Copyright and may not be reproduced in whole or part without the authors express written consent.
- All works to approval of Local Authority Building Control and Planning officers.
- All work to comply with the Building Regulations 2010 and subsequent amendments / revisions / editions whether detailed in these plans and specifications or not.
- All works to comply with relevant codes of practice and British Standards and to be fitted to the manufacturers instructions.
- Contractor / applicant to check all dimensions, angles and levels on site prior to commencement of work. In the event of any discrepancies in the approved drawings and / or specifications no liability or responsibility will be accepted once work has started. Any discrepancies to be reported in writing with details drawings and dimensions where appropriate. Once site work has commenced the onus is on the applicant and contractor to ensure that the local authority, shared party wall owners, neighbours, utility companies etc. are in approval of all site works or revisions to approvals.
- Contractors to comply in all respects with the current Building Regulations and related Building / British Standards and Codes of Practice, whether detailed in this scheme or not.
- All elements of structure to be minimum ½ hour fire resistant and to comply with building regulation approved document B. Where required timber to be treated with ‘Albi’ in accordance with manufacturers guidelines.
- Boundaries: Any building work on or over boundaries to be with the adjoining owners written consent. Boundary walls, where demolished must be replaced in their historic position unless other legal agreements are made for relocation. We reserve the right to assume boundaries. Your legal site boundaries / ownership as detailed in your property deeds take precedent over any boundaries shown on local authority applications.
- Boundary disputes: No liability will be accepted in relation to clarifying legal site boundaries. If you have any doubts as to the extent of your legal site ownership then please consult your legal advisor.

- Any work over, or within the vicinity of any private or public sewer to be to satisfaction of Local Utility Company drainage engineers department and the inspecting BCO. If any underground services are revealed during excavation then construction method / details may have to be revised to the satisfaction of the Local Utility Company and your local Building Control office.
- A planning approval can detail encroachment on or over land that is not under your ownership. Typically this may be rainwater goods, foundations, drains, eaves or wall structures. Granting of planning permission does not imply any ownership or rights of access over neighbouring land.
- Your attention is brought to the Party Wall Etc. Act 1996 and subsequent amendments. As this act has legal implications, if you have any doubts as to your obligations under this act please consult a Party Wall Surveyor. We strongly advise the applicant not to carry out any work that is subject to this Act until you have written agreement from all concerned parties. Details of this act are available from your local authority.
- We are not appointed as the principal designer under the CDM regulations and these duties are to be carried out by a specialist contractor.
- Approval for works from your local authority does not imply approval from your neighbours, nor does it grant access over neighbouring land. The applicant must obtain prior written consent of the owners and occupiers of any land upon which it is necessary to enter in order to construct, externally finish, decorate or in any other way carry out works in connection with this development including future repairs/ maintenance or to obtain support from adjoining structures. If you intend to carry out works, covered under the act, on a Party structure then you must inform all owners affected, in writing, at least two months prior to site construction works.
- Ensure all relevant insurance parties are notified prior to the commencement of works on site as structural alterations may invalidate insurance policies.
- Permission may be required for the connection of drainage to the mains system – this work is to be carried out to the approval and specification of the local utility company and BCO. Connections should be made to the existing private drainage system where possible.
- Services to the site are to be trenched and located to the approval and specification of the supplying service company and to approval of the BCO.
- Minimum U-values to be in accordance with approved document L1 2010 revision and subsequent amendments.
    - External walls: 0.18W/m²°K
    - Floors: 0.18W/m²°K
    - Pitched roof - insulation at rafter level: 0.15W/m²°K (loft conversion)
    - Pitched roof – insulation at ceiling level: 0.15W/m²°K
    - Flat roof or roof with integral insulation: 0.15W/m²°K
    - Windows, roof windows – 1.4W/m²°K
    - Rooflight – 2.2W/m²°K
    - Solid or part glazed external doors – 1.4W/m²°K
- No dimensions to be scaled from these drawings.
- All existing walls that are intended to accept additional loadings from the new works including their foundations should be inspected in consultation with the BCO on site to verify their load bearing capacity and structural condition. It may be necessary to partially or completely rebuild walls and or underpin foundations. Structural engineers advice to be sought for the avoidance of doubt.

- Existing lintels taking new increased loading to be exposed and assessed for suitability to carry new loads, upgrade / replace as necessary to satisfaction of BCO.
- Existing walls being removed are to be assessed for their load bearing capacity by contractor on site prior to removal, supports to be installed where necessary to satisfaction of BCO and structural engineers.
- Foundations to be taken minimum 150mm below the invert level of any drains in the vicinity of the proposed works. This includes drains within a 45 degree strike point of foundations where loading can affect the stability of the sewer.
- Foundations to existing party walls to be exposed and assessed. Where necessary party walls to be underpinned. Underpinning work to be carried out to structural engineers details.
- All structural engineers calculations supersede any notes and dimensions shown in these plans and specifications, unless stated otherwise, any conflicts to be reported before work commences.
- All energy performance reports and calculations supersede any notes and dimensions shown in these plans and specifications, unless stated otherwise, any conflicts to be reported before work commences.
- No desktop studies are carried out with regard to the site soil conditions. Applicants and Contractors to allow contingency for unforeseen foundation work arising when work commences.
- No desktop studies are carried out with regard to any underground services running through this or any adjoining site. The client is responsible for making the surveyor aware as to the location of any underground services during the site survey. Assumptions may be made as to the route of concealed drainage and pipework, cables etc, but this must always be verified on site as work proceeds.
- Client to check site for the Geological data relating to the risk of Radon penetrating the building and the protective measures to be adopted where necessary.
- Where foundations are within the area of influence of tree roots or trees being felled to make way for foundations then engineers advice to be sought with regard to foundation type, size and depth with regard to ground heave, damaged ground, water tables etc. Foundation depth to be in accordance with NHBC or LABC guidelines and to approval of BCO. It may be that in such cases a solid slab floor will not be practicable and a suspended concrete or timber floor may be required. It may be prudent to remove tress early to allow the ground and water table to restore naturally before foundations are dug however ground can be damaged despite this. It may be prudent to carry out site investigation work prior to work commencing site works.
- Water filled central heating system to be installed throughout with new wall mounted radiators to suitable heating engineers design. Radiators to be fitted with thermostatic control valves. New radiators and underfloor heating to be designed to run at 55°C installed when central heating system fully replaced.
- Higher capacity boiler / heating system may be required due to additional loading on increased size system.
- Hot water and heating pipes to be insulated as per guidance given in AD L table 4.4

Nominal Internal pipe diameter	Min Insulation thickness
≤ 10mm	5mm
≤ 25mm	10mm
≤50mm	15mm

- ≤100mm 20mm
- All electrical installations to be in accordance with current regulations, and certification to be provided.
- All gas plumbing installations to be carried out by approved GAS SAFE registered installers.
- New gas fired condensing combination boiler to be installed to provide domestic hot water and heating, including suitable timer system. To be fitted in accordance with manufacturers guidelines and to approval of BCO. Radiators to be fitted with thermostatic control valves. Existing boiler to be reused where practical and to be located and fitted in accordance with manufacturers guidelines and to approval of BCO. New radiators and underfloor heating to be designed to run at 55°C installed when central heating system fully replaced.
- Wholesome hot and cold water supply to be made available to kitchens and sanitary areas including water of a suitable quality to any flushing devices, as per Approved Document G.
- Hot water supply to bath/shower not to exceed 48°C. Inline thermostatic mixer to be fitted.
- Note – due to inaccessibility it has not been possible to accurately survey the position and dimensions of the party walls adjoining the neighbours and the size and extent of the adjoining structures. Any discrepancies to be reported.
- Drawings and specifications not to be used by a third party for the manufacture or provision of elements and materials such as: staircases, doors, windows, trusses, kitchens, etc. Contractors involved with such, should carryout independent site surveys and enquiries prior to manufacture or supply and any discrepancy to be reported.
- If you are in any doubt as to the validity of information made available within these pages, or if you wish to rely on this information, then it may be in your best interests to seek verification by contacting us or seek further assistance from your solicitor.
- Clearances from flue outlets to adjacent roof surfaces and windows must be in accordance with Diagrams 17 and 18 for solid fuel appliances, Diagrams 34 and 35 for gas appliances, and Diagram 41 for oil burning appliances. The recommended clearances also apply beyond the property boundary
- Final layout of plumbing and drainage to be to BS EN 12056-2000 and BS EN 752 to ensure adequate falls are achieved and connections made to appropriate systems etc. Avoid excessive notching of floor timbers.
- Report to be carried out to justify the adequacy of the existing walls and floors to prevent damp ingress without the need for any additional measures being incorporated where concern lies.
- All timbers to be treated for attack from moisture.
- Any building work for which Section 5 and/or Section 6, Part L sets a standard, the energy performance of the fixed building services and/or on-site electricity generation affected by the work should be assessed and documented. Guidance on commissioning and providing information to follow Sections 8 and 9, for further information and details of what should be provided.

Demolition

- All demolition work to be carried out in a safe manner following suitable procedures.
- Ensure adequate support is in place before cutting of existing timbers and loading to be removed from timbers where necessary.
- All spoil to be carted from site and disposed of in appropriate manner.

- Controlled substances to be dealt with by specialist and or licensed contractors as necessary.
- Grub up and remove redundant drainage and ensure integrity of any systems affected.
- Materials to be recycled where possible.
- Existing walls being removed are to be assessed for their load bearing capacity by contractor on site prior to removal, supports to be installed where necessary to satisfaction of BCO and structural engineers.
- Adjoining structures to be left in stable structural condition and appropriate action taken to ensure all elements are waterproofed where necessary.
- Provide support to surrounding structural elements influenced by demolition until suitable permanent supports are in place.
- Engineers procedures to be followed where appropriate with regard to demolition, if advice is required it is the contractors responsibility to give adequate notice such that advice can be prepared before demolition commences.

Foundations

- No desktop studies are carried out with regard to the site soil conditions. Clients and Contractors to allow contingency for unforeseen foundation work arising when work commences.
- See design and legislation section with regard to foundation details encroaching on neighbouring land.
- Structural engineers design to supersede these drawings and specifications.
- Foundations being built up to existing structures to be to structural engineers design and to supersede architects foundation details.
- All foundation sizes and depths to complete approval of Local Authority Building Control officer. Exact size and depth to be ascertained on site dependent on site and sub soil conditions.
- Clay master board, or similar, to be used in areas of severe ground movement.
- Trial holes should be provided to ascertain the adequacy of the existing foundations to carry the additional loading if requested.
- Foundations to be taken down to a suitable load bearing strata, below any tree roots and the invert of any drains.
- All brickwork or 7kN blockwork to be used below D.P.C. level.
- Weak mix cavity fill to 225 mm below D.P.C. level.
- Ensure adequate support put in place to support neighbouring structures and ground during construction works.
- All spoil to be carted from site and disposed of in appropriate manner. Soil may require testing for contaminants before disposal can take place.

Groundworks

- Remove topsoil under area of floor and treat with weed killer.
- An alternative house floor system may be used subject to specialist’s details and Local Authority Building Control officer’s approval.
- Provide adequate shoring to surrounding ground when excavation and foundation work taking place.
- Where suspended timber ground floors are maintained:

  - Any existing airbricks to floor void to be ducted to external air using UPVC ducting cast into new slab terminating at new airbricks.
  - Provide 225 x 65mm terracotta air bricks at maximum 1200mm centres to provide adequate under floor ventilation. Minimum 1500mm^2 per meter run of wall in two opposing walls, not below highest ground level, or laid to fall to outlet above ground level.
  - Ground covering material: 100 mm concrete (BS5328 mix ST1), laid on 1200g polythene DPM.
- Where foundations are within the area of influence of tree roots or trees being felled to make way for foundations then engineers advice to be sought with regard to foundation type, size and depth with regard to ground heave, damaged ground, water tables etc. Foundation depth to be in accordance with NHBC or LABC guidelines and to approval of BCO. It may be that in such cases a solid slab floor will not be practicable and a suspended concrete or timber floor may be required. It may be prudent to remove tress early to allow the ground and water table to restore naturally before foundations are dug however ground can be damaged despite this. It may be prudent to carry out site investigation work prior to work commencing site works.
- All spoil to be carted from site and disposed of in appropriate manner. Soil may require testing for contaminants before disposal can take place.
- Client and contractor to allow for remedial works to remove contaminants if identified in the site investigation report.

Concrete ground floor - Domestic

- Floor level to match existing.
- Minimum 65 mm sand : cement screed including mesh reinforcement on,
- Where site conditions dictate:
  - BASIC RADON PROTECTION: Provide continuous minimum 1200g DPM from floor to cavity tray to external skin of cavity walls for basic Radon protection. All joints to be taped and membrane should not be penetrated.
  - FULL RADON PROTECTION: All works to comply with BRE BR211. Provide continuous minimum 1200g DPM from floor to cavity tray to external skin of cavity walls for Radon protection. All joints to be taped and membrane should not be penetrated. Membrane to be chased into wall of existing house or lapped with house existing DPM/ Radon barrier. Sump to be installed in accordance with BRE BR211 located as per guidance and ducted to external air.
- Minimum 1000 gauge DPM separation layer all joints taped and turned up walls at perimeter.
- 125mm Unilin Thin-R XT-UF insulation installed to manufacturers guidelines.
- 25mm Unilin Thin-R XT-UF insulation to perimeter at a height equal to thickness of insulation + screed depth.
- Minimum 100 mm concrete (1:2:4)
- 1200g D.P.M. minimum lapped with wall D.P.C. minimum laps 150 mm. All joints to be suitably folded/taped.
- Sand blinding
- Minimum 150mm to 250mm maximum clean hardcore, maximum 75mm size.
- Skirting, architraves, coving, etc to client specification or to match existing.
- Ventilated beam and block floor to be used where recommended by Building Control / structural engineer where ground conditions dictate.

Suspended timber floor

- Floor level to match existing.
- 22mm moisture resistant T&G flooring grade chipboard sheets, all joints glued.
- Acoustic foam fixed to each floor joist.
- For floor joists specification, see structural engineers design as floor joists supporting additional structural elements.
- Ends of joists to span from wallplate to wallplate / steelwork, as necessary. Minimum end bearing of 100mm, or, where necessary joists fixed in to Catnic joist hangers connected to structural steelwork with full nailing schedule. Where hangers suspended from steelwork ensure timber packing used to fill web of steel.
- Joists fixed in to Catnic joist hangers built into brickwork where possible.
- 30 x 5mm galvanised mild steel straps minimum 1200mm long at maximum 1200mm centres fixed to minimum 3Nr joists. Provide packings and noggins to strapping points.
- Herringbone strutting or solid blocking: spans up to 2.5m, none. Spans 2.5m to 4.5m, 1 at mid span. Spans over 4.5m, 2 at 1/3 span. (Herringbone; either traditional timber or Catnic galvanised mild steel type.)
- 12.5 mm plasterboard and 3mm gypsum plaster skim to ceilings to provide minimum ½ hour fire protection. All joints to be taped. 15mm plasterboard to be used where no skim applied, eg for ceilings being painted or plasterboard to be papered directly. Vapour control plasterboard to be installed where vapour control layer required, e.g Gyproc Duplex, installed in accordance with manufacturers guidelines.
- Where suspended ground floor maintained:
  - Suspended ground floor: 130mm Unilin XT/UF insulation between floor joists. Insulation to be fitted into joist saddle clips or fitted onto battens. Installed in accordance with manufacturers guidelines.
  - Where necessary mesh to be fitted underneath insulation to ground floor to prevent insulation falling free of floor.
- Provide minimum 100mm thick mineral wool minimum 10kg/m3 between floor joists between habitable rooms to comply with approved document E.
- Skirting, architraves, coving, etc to client specification.
- Floor joists beneath new stud partitions to be doubled up and bolted at 600mm centres with M8 bolts and dog tooth connectors.
- Floor joists to be doubled up under bath feet and bolted at 600mm centres with M8 coach bolts.
- Staircase to be bolted to walls and floors at head and toe. Dimensions within the stairwell should be checked before ordering any pre-manufactured joinery.
- Underside of staircase to be lined with 12.5mm firecheck plasterboard and 2.5mm skim to provide minimum ½ hour fire protection. All joints to be taped.
- Minimum 50mm clearance to trimmings around chimneys. Joists used for trimming to be doubled up and bolted at 1/3 span with M12 bolts and dog tooth connectors.

Staircase

- New softwood pre-manufactured staircase to be bolted to floor and walls at head, toe and along strings.
- Maximum riser 220mm, minimum tread 220mm. Minimum tread on winders to be 50mm. (Pitch not to exceed 42º).
- Minimum 50mm tread where step joins newel post.

- Minimum handrail height of 900mm to be maintained on staircase handrail and all balustrades. Provide handrail to stairwell wall as well as Balustrading.
- Balustrading to resist a horizontal force of 0.36kN/m.
- Handrail to be fixed to stairwell wall.
- Maximum distance between spindles or runners to be 100mm.
- Minimum headroom over stair to be 2000mm unless stated otherwise.
- All staircase and onsite stairwell dimensions to be checked on site prior to orderings / installing. All elements to be confirmed by staircase manufacturer / supplier, any discrepancies to be reported.
- Underside of staircase to be lined with 12.5mm firecheck plasterboard and 2.5mm skim to provide minimum ½ hour fire protection. All joints to be taped. Vapour control plasterboard to be installed where vapour control layer required, e.g Gyproc Duplex, installed in accordance with manufacturers guidelines.
- Minimum clear landing length at head of staircase to be equal to width of staircase.
- Minimum clear landing at foot of staircase to be 400mm.

External walls – render finish

- 20mm waterproof render finish completed to match existing.
- Painted with minimum 2 coats masonry paint – apply first coat of stabiliser to render if suppliers advise.
- Use facing blockwork where no access available for rendering, mortar to suppliers specification
- Medium density 100mm block (7kN).
- Mortar mix to specification of brick suppliers.
- 150mm cavity with stainless steel wall ties embedded into each leaf at minimum 450mm centres vertically and minimum 750mm centres horizontally, installed as per manufacturers guidelines.
- Ties at 300mm c/c vertically maximum at all structural openings and returned ends each leaf of wall.
- Blockwork to be tied to existing using Catnic steel wall tie strips bolted to existing construction, ties at 450mm vertically.
- Maintain cavity at junction of new and old or vertical DPC to be installed.
- Cavity partially filled with 100mm Unilin XT/CWP (T&G). Insulation to extend below DPC level to lap with floor slab insulation. Insulation to be retained to inner skin with retainers fitted to cavity wall ties. Ensure 50mm residual cavity maintained and kept clean.
- 100mm Thermalite ‘Shield’ block with mortar to manufacturers specification. 100mm Thermalite High Strength 7 with mortar to manufacturers specification to be used where structural engineer specifies for additional load bearing purposes.
- All cavities closed around openings with vertical and horizontal damp proof courses provided minimum 150mm laps. Provide thermal cavity closers to all junctions installed in accordance with manufacturers guidelines.
- 12.5mm plasterboard on dabs with 3mm skim.
- Apply min one mist coat to plaster finish prior to decoration.
- Skirting, architraves, coving, etc to client specification or to match existing.
- Provide horizontal / stepped tray DPC at junction of pitched roof and walls. Provide weep holes to allow the egress of water.
- Provide cavity tray with all appropriate stop ends and weep holes together with a lead flashing at abutment of new roofs and cavity walls

- Provide damp proof course, minimum 150mm above adjacent ground level. Where necessary ground level to be reduced to prevent DPC bridging.
- Cavity to be closed at roof level with non combustible material, i.e. brick, block or cement fibre board spanning cavity.
- All lintels to have minimum 150mm end bearings unless stated otherwise.
- Cavity trays to be provided above all lintels and beams with weep holes to allow egress of water.
- To cavity wall construction provide 13mm bitumen impregnated fibreboard expansion joints finished externally with approved mastic sealant, to approval of Local Authority Building Control officer. Joints to be at maximum 6.0m centres with joints no greater than 3.0m from external corners. Joint to be applied to both skins. Slip ties to be installed at 3 course intervals.
- Steel beams as noted on plan to be encased in 12.5mm firecheck plasterboard with angle beads and 2.5mm plaster coat or 13mm render to give minimum ½ hour fire resistance.
- Where blockwork and render used to external skin below DPC ensure DPC is not bridged.
- Brickwork / blockwork piers providing support to structural lintels to be brick / block bonded to existing and to be taken down to foundation level.
- All windows to be double-glazed.

Treatment to existing gable wall for Thermal Resistance

- Note: this specification is for upgrading of 215mm thick gable and party walls for thermal insulation.
- This construction is not suitable for 100mm thick brick/blockwork walls.
- Existing wall to be of sound construction with no voids. Voids to be filled and parge coat applied to walls if poor quality, e.g Gyproc SoundCoat Plus.
- To inner face: 50mm Unilin XT/TF (MF) installed as per manufacturers guidelines. All joints taped. Product includes vapour control layer.
- 25 x 50mm treated battens fixed to wall.
- 12.5mm plasterboard and 2.5mm skim, joints taped.
- Provide firestops to top and bottom of each board and around openings, eg doors and windows with battens.
- Apply minimum one mist coat to plaster finish prior to decoration.
- Skirting, architraves, coving, etc to client specification.
- All timbers to be treated for attack from moisture.
- Provide all necessary waterproofing to new masonry walls, parapets, DPM, copings, etc.
- Wall to be tanked with waterproof render to prevent moisture ingress to specialists specification.
- New DPC to be injected to prevent rising damp to specialists specification.

Treatment to existing party wall

- Existing party walls to be treated for resistance to moisture from rising and penetrating damp. Specialist contractor to advise on remedial work necessary to approval of LA BCO. Site investigation to be carried out when work commences.
- Existing party walls to be assessed for structural stability by engineer prior to commencement for works on site and remedial work to be carried out where necessary.

- Provide all necessary waterproofing to new masonry walls, parapets, DPM, copings, etc.

Details of supporting steelwork / timber / retaining work

- All design calculations to be deposited with LA BCO and approved by same prior to ordering or insertion of any beams, padstones or associated works.
- Provide structural steelwork supports as shown in engineers design.
- Provide reinforced concrete / blockwork where shown in engineers design.
- Provide structural timber as shown in engineers design.
- It is advised that a structural engineers report of the existing roof structure be obtained if there are any doubt as to the integrity of the structure.
- Engineers procedures to be followed for construction of retaining structures and installation of structural steel / concrete.
- All structural engineers calculations supersede any notes and dimension shown in these plans and specifications, unless stated otherwise, any conflicts to be reported before work commences.
- Supporting piers to be of approval of local authority building control inspector, and lintel to be left exposed for full inspection before plastering over.
- Brickwork / blockwork piers providing support to structural lintels to be brick / block bonded to existing.
- Lintels to be coated with two layers of 12.5mm fire check plasterboard with angle beads and 3mm skim to provide minimum ½hr fire resistance.
- Lintels exposed to external air to be treated as follows:
  - At fabricator's yard: -
    - Blast clean steelwork to SA2.5 quality
    - Paint with 75 microns high build zinc phosphate modified alkyd paint.
  - On site: -
    - Touch up any damage as above.
    - Paint with 60 microns high build alkyd finish (colour as required).
- Where necessary for compliance with Approved Document E: Ensure that any supporting steel work, concrete work, lintels, etc are insulated and isolated from plasterboard.

Pitched roof

- It is advised that a structural engineers report of the existing roof structure be obtained if there are any doubt as to the integrity of the structure. Ensure structure adequate to take any increase in loading from new materials. Structure to be upgraded where necessary to approval of LA BCO
- Check all roof angles and suitability of tiles on site prior to installation.
- Check suitability of roof windows for roof pitch. Velux do not recommend the installation of most of their roof windows at angles of less than 15°.
- Existing roof to be stripped and new felt and battens as per details below to be installed.
- Existing flashing to remain where possible and replaced with code 4 lead where necessary works needed.
- Check general condition of existing roof structure and make good any damage.
- Concrete interlocking tiles to match existing and to match pitch. Each tile to be clipped.
- “Marley Wessex”, “Redland Double Pantile”, “Sandtoft Double Pantile”, or similar concrete interlocking tiles, with 100 mm headlaps (suitable for 15º pitch).

- Minimum 38 x 25mm softwood treated battens fixed to rafters with galvanised nails. For rafters at 400mm centres
- Minimum 38x50mm softwood treated battens fixed to rafters with galvanised nails. For rafters at 600 centres
- 'Tyvek Supro' breathable roofing felt. Provide minimum 15mm gap between any inter rafter insulation and underside of felt to allow for sag. This membrane requires additional protection from UV damage at eaves level, use either UV resistant roofing membrane or rigid eaves trays. All to be installed in accordance with supplier details.
- Contractor to ensure that vapour permeable roofing underlays have a valid British Board of Agreement or equivalent certification. The installation should be carried out in strict accordance with the requirements of that certification, including the need for any ventilation.
- For roof carcass details see structural engineers design drawings and calculations, conflicts to be reported.
- Roof carcass bearing fully on 100 x 75 mm sawn softwood wall plate fixed to wall using 30 x 5mm galvanised mild steel straps minimum 1200mm long at maximum 1200mm centres.
- Joists to be fixed into Catnic galvanised mild steel joist hangers fixed to 75 x 150 wall plate bolted to wall with M12 resin bolts at 600mm centres. Provide full nailing schedule to joist hangers.
- Ridge beam and connection details to structural engineers design.
- Rafters used as trimmers for roof windows to be doubled up and bolted at 1/3 span with M10 bolts and dog tooth connectors. Double up trimmers to head and toe of roof windows.
- Gable end to be tied to rafters using 30 x 5mm galvanised mild steel straps minimum 1200mm long at maximum 1200mm centres. Provide packings and noggins to strapping points.
- Rafters to be connected to wallplate with truss clips.
- To attic voids minimum 300mm glass fibre quilt insulation, 100mm laid between joists and 200mm over joists laid in opposite direction. Ensure insulation is not compressed by loft boarding.
- 12.5mm foil backed plasterboard and 3mm skim to ceilings, all joints to be taped.
- To new sloping roof sections with breathable felt: 100mm Unilin XT/PR insulation to be fitted between rafters with 82.5mm Unilin XT/TL(MF) insulated plasterboard across face of rafters (based on 400mm centres). Installed in accordance with manufacturers guidelines. Note minimum 150mm deep rafters required for this application. Maintain 50mm ventilation between top of insulation and underside of felt.
- To new sloping roof sections with non breathable felt: 100mm Unilin XT/PR insulation to be fitted between rafters with 82.5mm Unilin XT/TL(MF) insulated plasterboard across face of rafters (based on 400mm centres). Installed in accordance with manufacturers guidelines. Note minimum 150mm deep rafters required for this application. Maintain 50mm ventilation between top of insulation and underside of felt.
- 3mm plaster skim finish all joints taped.
- Velux Light wells: Externally exposed stud walls around light wells to be filled with 100mm Unilin XT/PR insulation. Face of carcass to be lined with 82.5mm Unilin XT/TL(MF) insulated plasterboard. Installed in accordance with manufacturers guidelines. 3mm plaster skim finish all joints taped.
- Provide continuous air vent at eaves level using Glidevale 250 eaves ventilation system. Also suitable to prevent birds nesting in roof space.
- Fascia board to match existing.
- Marley top abutment ventilation system providing 5000mm^2/linear metre.

- Should any roof (existing and/or proposed) require ventilation, then ventilation to the roof(s) at eaves, above insulation and abutments, to be in accordance with the guidance given in Part C.
- All timbers to be treated for attack from moisture.
- Valleys to be lined with code 4 lead work, minimum up-stand 150mm.
- Abutments to be lined with code 4 lead work, minimum up-stand 150mm.
- Provide cavity tray with all appropriate stop ends and weep holes together with a lead flashing at abutment of new roofs and cavity walls

Drainage, Ventilation & Heating

- All drain runs are assumed and should be verified on site when work commences with any discrepancies being reported.
- Assumptions may be made as to the route of concealed drainage but this must always be verified on site as work proceeds.
- It is asvised that prior to the commencement of site excavation works a drainage survey is carried out by an accredited drainage company so existing foul and surface water drainage can be identified and any issues can be considered in the build.
- After excavation and exposure on site of existing drainage layouts the proposed drainage layouts are to be agreed between your building/drainage contractor, the building inspector and your provider before installation/diversion etc.
- You may also require the agreement of your neighbours if your proposed connections require access to their property.
- All drain runs are to be tested and approved by local utility companies and BCO prior to covering
- Public sewers: local utility companies have the power to advise building control to reject schemes which could interfere with their sewers or plant. Ensure full approval is sought from such companies prior to commencement of works.
- If separate drainage system ensure connections made appropriately.
- All new drain runs are connected to the existing system. Avoid direct connections to the public sewer where necessary and seek permission where this is necessary.
- All obsolete drain runs to be grubbed up and removed.
- All new drain runs are connected to the existing system.
- All new underground drainage to be minimum 110mm diameter ‘pushfit’ UPVC laid at minimum 1:40 fall. Provide 75mm concrete cover over shingle where drain is less than 600mm deep.
- Proprietary manhole sizes as follows: up to 1000mm deep – 450mm dia; 1000 to 1500mm deep – 1050 dia; over 1500mm deep – 1200 dia.
- Reinforced concrete lintels to brickwork where drain runs pass through.
- All drain runs below building to be flexible jointed and encased in 100mm pea shingle.
- New gully to be Hepworth P.V.C. pre-formed type with access for rodding equipment.
- New inspection cover to be Hepworth P.V.C. pre-formed type on 150 mm concrete base. To be fitted with bolt down airtight metal cover internally.
- New inspection chamber to be installed on public sewer to be in accordance with the guidance given in “Sewers for adoption 8th edition” and to approval of local utility company and Building control officer.
- Where existing inspection chambers being removed sewer to be piped through with like for like materials and joints.
- Provide adequate clearance either side of sewers and bridge with precast concrete lintels.

- Invert level of foundations to be minimum 150mm below the invert level of sewers.
- Provide access at any change of direction.
- Internal waste pipes to be P.V.C.u push-fit type, with minimum 75 mm traps on all fittings. Waste sizes as follows: sink 40mm dia; basin 32mm dia; WC 110mm dia; bath 40mm dia; shower 40mm dia. Use 50mm dia where drain run exceeds 3.0m and is less than 4.0m
- All drain runs to showers to have anti-vac traps.
- Any connection to S.V.P. not to be within 200mm of WC connection and to be in accordance with BS5572
- Main S.V.P. to drainage system to extend - minimum 900mm above any opening window and capped with balloon grating. If passing through roof provide proprietary lead collar.
- Where shown S.V.P. to terminate internally. S.V.P. to be fitted with 'Durgo' air admittance valve. Valve to be fitted above highest flood level, (sink).
- Encase S.V.P. in plasterboard and skim internally with 50 x 50mm sawn softwood timber carcass and encased in 12.5mm firecheck plasterboard, tape and skim to provide minimum ½hr fire resistance. Fill carcass cavity with mineral wool insulation for sound insulation.
- Final layout of plumbing and drainage to be to BS EN 12056-2000 and BS EN 752 to ensure adequate falls are achieved and connections made to appropriate system, without the need for excessive notching of floor timbers.
- Anti cross flow and rodent barrier to be fitted to foul drains to prevent rodent access.
- Rainwater should be taken to soakaway where ground conditions permit – percolation test to be supplied to building control where soakaway to be used. Where ground conditions are not suitable surface water to be taken to existing surface water sewer system.
- If required rainwater soakaways to be minimum 1m³ in capacity, rubble filled, and to be sited minimum 5.0m away from any building. Finish 450mm below ground level, cover with polythene, 100mm concrete and finish with topsoil.
- Soakaways can only be considered as acceptable depending upon siting, construction and testing of ground to determine suitability. Final details to be agreed with LA BCO on site but first choice should be main sewerage.
- New gutters to be P.V.C.u type to match existing.
- New rain water pipe to be 68 mm diameter P.V.C.u type to match existing, to be fitted directly in to gully with 75 mm deep seal trap.
- Provide mechanical ventilation to kitchen / toilet / bathroom. Vent to provide min 60l/sec (kitchen / utility) / 15l/sec (bathrooms) air change. Vents to run to external air with intermediate fans as distance run dictates. Use centrifugal fan for longer runs and fit condensation traps where vertical runs exist.
- Where no natural ventilation exists mechanical vent to be connected to light switch with 5 min run on.
- Every room to have a controllable trickle vent providing 8000mm² (10000mm² to single storey dwellings) and purge ventilation where the openable vent is equal to 1/20th of the floor area.
- Clearances from flue outlets to adjacent roof surfaces and windows must be in accordance with Diagrams 17 and 18 for solid fuel appliances, Diagrams 34 and 35 for gas appliances, and Diagram 41 for oil burning appliances. The recommended clearances also apply beyond the property boundary.
- Ensure any fittings installed into ceiling are to be suitable for necessary resistance to fire, vapour and heat loss and sealed to vapour barrier where necessary and installed to manufacturers guidelines.
- Follow the guidance for ventilation:

  - Always leave trickle vents open and unblocked, even in winter. You will use a little more energy to heat your home but have fresh air to prevent illnesses.
  - Where possible, leave doors between rooms open to ensure cross-ventilation. This will further improve the amount of fresh air drawn into the building.
  - Regularly clean any extractor fans in bathrooms and kitchens.
  - Check the manufacturers instructions for any whole house mechanical ventilation system you have and ensure the filters are replaced in line with those instructions, usually this would be annually.
  - Where chimney stacks are removed provision to be made for suitable background ventilation to the rooms where removed, e.g. trickle vents 8000mm^2 (10000mm^2 to single storey buildings) to be fitted.
- Mechanical ventilation systems must be commissioned in accordance with an approved procedure and sufficient information about the ventilation system and its maintenance requirements must be given to the building owner to allow the system to be operated effectively (see section 4, Part F). Appendix C of Part F includes a completion checklist and commissioning sheet which the system installer should complete to demonstrate compliance.
- Confirmation required to show adequate ventilation to the inner room can be maintained due to the abutment of the extension, to show compliance with the guidance in Part F Section 3.
- If relocating the boiler - A carbon monoxide alarm should be located in the same room as the combustion appliance (boiler) and on the ceiling at least 300mm from any wall or on a wall, as high up as possible (above any doors and windows) but not within 150mm of the ceiling and between 1m and 3m horizontally from the appliance. Carbon monoxide alarms should comply with British Standard BS EN 50291. Alarms should be powered by a battery designed to operate for the working life of the alarm. Alarms should also have a warning device to alert users when the working life of the alarm is due to pass. Alternatively, a mains-powered alarm with fixed wiring (not plug-in) should be fitted provided the alarm has a sensor failure warning device. Alarms should have an output function (Type A apparatus) for triggering ancillary devices such as remote alarms or specialist alarms for older people and disabled people.

Stud walling

- At ground floor level - Non loadbearing and built of concrete slab – NOT screed and insulation. Slab may need reinforcement for increased loading – to be verified by structural engineer.
- 100 x 50mm (75 x 50 where non load bearing) softwood studs at 400 mm centres.
- 100 x 50mm (75 x 50 where non load bearing) softwood sole and header plates.
- Noggins at 900mm centres.
- Internal stud walls to be filled with 100mm Rockwool roll batt insulation.
- Walls subject to part E sound regulations (between habitable rooms within 1 dwelling and not between dwellings, and only walls with no openings, eg doors) to be filled with 50mm Rockwool FLEXI. Use 12.5mm sound check plasterboard to both faces of this wall.
- Provide 1200g vapour barrier where required.
- Provide 18mm plywood sheathing to stud walls expected to receive kitchen wall and base units, bathroom fittings, etc.
- 12.5mm plasterboard and 2.5mm skim to provide minimum ½hr fire resistance.
- Skirting, architraves, coving, etc to client specification or to match existing.

- Floor joists beneath new stud partitions to be doubled up and bolted at 600mm centres with M8 bolts and dog tooth connectors.

Windows, Doors & Roof lights

- All new glazing to be double glazed. Pilkington Low 'E' glazing to be used to all new double glazed units.
- Every room to have a controllable trickle vent providing 8000mm² (10000mm² to single storey dwellings) and purge ventilation where the openable vent is equal to 1/20th of the floor area or 1/10th of the floor area where openings only open up to 30°.
- Glazing in critical zones to be toughened or laminated and to comply with Building Regulations Approved Document K4 2013 Section 5, and subsequent amendments.
- Glazed roof covering to achieve an AA, AB or AC fire designation as per guidance as given in Section 10, Part B4.
- Fire rated and toughened or laminated safety glazing to roof lights.
- Velux recommend that their pitched roof windows are not installed at angles below 15°. Upstand kits can be installed where required or some new generation Velux windows are suitable for roofs with 10° pitch.
- Provide means of escape from any inner rooms with min clear opening area of 0.33m^2. (Minimum 450mm in any direction)
- Provide means of escape from habitable first floor room with min clear opening area of 0.33m^2. (Minimum 450mm in any direction) Cill to be situated between 800 and 1100mm from finished floor level.
- Horizontal guarding to be fixed at 800mm above finished floor level where low sills required for planning sensitive windows / Velux installations. Guarding to provide gaps no larger than 75mm between and to be permanently fixed.
- Any glazing in primary escape stairwell to be ½hr fire resistant. E.G. Georgian wired glass or 'Pilkington Pyrostop' or similar if clear glass required.
- For new and replacement windows, roof windows, rooflights and doors (controlled fittings), if the entire unit of that fitting is provided, all the following apply:
  - Units should be draught-proofed.
  - Units should meet the minimum standards given in Table 4.2.
  - Insulated cavity closers should be installed where appropriate.

Fire doors, fire resistance and smoke detection

- Smoke detectors to be to BS 5839 and to be connected to mains supply and interlinked. Detectors with built in sirens as shown on plans. Units to contain
- Wireless smoke detection and siren system to be used subject to compliance with BS 5839 Part 6 section 21 and approval of LA BCO. Units to contain battery backup.
- Provide intumescent hoods to down lighters when installed in timber floor / ceiling for fire resistance. Vapour control hoods to be fitted where necessary to avoid breaching of ceiling vapour control layer, to be sealed against ceiling vapour control layer.
- Fire rated and toughened or laminated safety glazing to roof lights.
- Provide means of escape from any inner rooms with min clear opening area of 0.33m^2. (Minimum 450mm in any direction)
- Provide means of escape from habitable first floor room with min clear opening area of 0.33m^2. (Minimum 450mm in any direction)

- New works and any alteration to the emergency lighting system to be carried out in accordance with the standards of BS5266: Part 1: 2016 and subsequent amendments.
- New works and any alteration to the fire alarm system to be carried out in accordance with the standards of BS 5839-6: 2020 and subsequent amendments.
- Any final exit doors and internal doors providing access to escape routes to be secured only with locking devices which can be opened from the escape side in an emergency without the use of a key.
- Any glazing in primary escape stairwell to be ½hr fire resistant. E.G. Georgian wired glass or Pilkington 'Pyrostop' or similar if clear glass required.
- Protected Means of Escape to be provided to allow protected egress from the loft room(s) to the outside of the building via the staircase without the need to pass through any rooms.
- All walls to this stairwell to be minimum ½ hour fire resistant and provide minimum FD30 fire rated doors fitted with intumescent strips and 3 No 100mm hinges to all openings in the Protected Means of Escape Staircase.
- Fire hinges to be fitted to fire escape windows to prevent restricted egress.
- Underside of staircase to be lined with 12.5mm firecheck plasterboard and 2.5mm skim to provide minimum ½ hour fire protection. All joints to be taped.
- Existing fire strategy not to be compromised with regard to egress in the event of a fire or changing risk to escape routes.

Electrical design, installation, inspection and testing

- All installations to comply with Approved Document P where necessary and to satisfaction of LA BCO.
- In the areas affected by the building work, each internal light fitting should have lamps with a minimum luminous efficacy of 75 light source lumens per circuit-watt. Internal light fittings should have local controls to allow for the separate control of lighting in each space or zone. Controls may be manual, automatic or a combination of both.
- In the areas affected by the building work, each external light fitting should be controlled with sensors to control the light in response to day/ night. If luminous efficacy is 75 light source lumens or less, automatic controls which switch lights off after the area lit becomes unoccupied. If luminous efficacy is greater than 75 light source lumens, manual control is acceptable.
- Any new or replacement heating, lighting layouts and switching design to follow guidance as given in Part L1 for the purposes of controls, layouts, efficacy and insulation as applicable for each service. Your attention is drawn to the provisions of the "Domestic Services Compliance Guide".
- Reasonable provision shall be made in the design, installation, inspection and testing of electrical installations in order to protect persons from fire or injury.
- Sufficient information shall be provided so that persons wishing to operate, maintain or alter an electrical installation can do so with reasonable safety.
- Any person intending to carry out electrical work is not required to give a building notice or deposit full plans if:
  - Registered with one of the Part P self certification schemes listed in schedule 2A; or
  - Carrying out electrical work of a nature described in Schedule 2B.
- Installers registered with a Part P self certification scheme are to provide a self certification certificate to the occupier and a notice to that effect to the local authority not more than 30 days after completion of the work.
- Electrical installations must be:

  - Designed and installed to afford appropriate protection against mechanical and thermal damage, and so they do not present electric shock and fire hazards to people;
  - Suitably inspected and tested to verify that they meet the relevant equipment and installation standards.
- Work to follow the technical rules described in the body of BS 7671 and subsequent amendments, or an equivalent standard approved by a member of the EEA that included issuing an electrical installation certificate to the client. And given in installation manuals that are consistent with BS 7671 and subsequent amendments, such as:
  - The IEE On-Site Guide
  - The series of IEE publications, Guidance Notes No's 1 to 7.
- Where any electrical installation work is classified as an extension, a material alteration or a material change of use, the addition and alteration work must include:
  - Such works on the existing fixed electrical installation in the building as are necessary to enable the additions and alterations, the circuits which feed them, the protective measures and the relevant earthing and bonding systems to meet the requirements: and
  - Establishing that the mains supply equipment is suitable.
- All work on older systems to be carried out with reference to Appendix C
- Any new or replacement heating, lighting layouts and switching design to follow guidance as given in Part L1B for the purposes of controls, layouts, efficacy and insulation as applicable for each service. Your attention is drawn to the provisions of the "Domestic Services Compliance Guide"

Important information

- Manufacturers of construction materials details and specifications are provided in good faith at time of issue of plans to assist you, the client, in obtaining fair and reasonable quotations from building contractors.
- The building specification details that we, the company, provide to you, are not intended to be built from, they are only provided to you, the client, to obtain planning and building regulation decisions.
- As planning and building regulation approvals are valid for 3 years (please refer to your local authority decision notices for time frames)
- Manufacturers details and specifications are often revised and updated over this period and updated/upgraded/discontinued due to manufacturer or building regulation requirements .
- Your building contractor should clarify, in writing, with the manufacturer of any specified building material that the proposed materials intended for use on site are up to date with the manufacturers specifications and recommendations.
- We do not make any further enquiries with manufacturers, if manufacturers details do change we may contact you with any upgrades or changes or alternative solutions, however this is not included in our fee .
- Your building contractor may revise their quotation subject to using alternative materials.
- Any changes to building materials specified, whether that may be due to building contractors preferred supplier or shortage of any specified material , are to be agreed directly between the building contractor and manufacturer .
- We are not site / project managers so the onus will be on the client / building contractor to agree any alterations to an approved planning and building regulation scheme.

- If approved scheme drawings require any revisions due to manufacturers changes in building materials and dimensions of proposed structures are affected then further planning or building regulation applications may be required, these applications can take 8 weeks minimum .
- We cannot be held responsible for any changes to our building specification due to manufacturers changes to their building product specifications.