

GENERAL NOTES:

All dimensions and levels are to be checked on site prior to works commencing and any discrepancies reported to HSSP Architects immediately. All proposed levels are to be confirmed onsite and taken from the survey data.

All standards, specifications and details are to be fully compliant with the current building regulations and other associated legislation. All materials used must be suitably certified.

Contractor to confirm the location of any existing storm and foul drainage on site. All new storm and foul drainage is to connect to the existing. Drainage layout shown on HSSP drawings is indicative for the purpose of building regulation compliance. Contractor / client to confirm location of existing drainage on site and invert levels.

Please refer to the structural engineers detailed design for all works associated with the steelwork, foundation design and below ground drainage.

Mechanical extract to be in accordance with approved document F. Ventilation extract locations through the fabric are indicative only and any penetrations through the roof and facade must be kept to a minimum and agreed on site prior to works commencing.

Details of the heating system to be confirmed and submitted by the contractor prior to issue of the 'as built' SAP and EPC. Details of the heating system to be confirmed and submitted to the Local Authority a minimum of 5 days prior to completion.

Radiators throughout to be correctly sized based upon the BTU calculations by the heating engineer / or the contractor. HSSP drawings shows indicative positioning only.

Electric towel radiators are to be provided in all bathrooms, ensuite and WC's and are to be fully specified and detailed by the client and contractor. Number and sizing to be confirmed by the contractor.

All smoke and heat detectors to be mains operated with battery back-up to BS5446-1 and 2. They should be located a minimum of 300mm away from light fittings or any vertical surfaces.

To be read in conjunction with the following drawings:

7660-04-060  
7660-04-061  
7660-04-062  
7660-04-063

MATERIALS & WORKMANSHIP

To be in accordance with Regulation 7, building work must be carried out in a workmanlike manner using adequate and proper materials which are appropriate for the circumstances used, adequately mixed or prepared and applied/ fixed / used so as adequately to perform the functions for which they're designed.

The Construction Products Regulation requires that construction products that are covered by a harmonised European product standard or conform to a European Technical Assessment should normally have CE marking.

When using materials, the following can be used as a means to determine the materials suitability:

- CE marking under the Construction Products Regulation
  - CE marking under other EU directives and regulations
  - British & European Standards
  - Other national and international technical specifications Independent Certification Schemes
  - Tests and calculations
  - Past Experience
- In determining the adequacy of workmanship, the following is applicable:
- CE marking - A material with CE marking is likely to have workmanship specified in the relevant European Technical Assessment.
  - British Standards or other appropriate technical specifications
  - Independent Certification Schemes
  - Management Systems
  - Past Experience
  - Testing

Building Work:

To be in accordance with Regulation 3 and 4 of the Building Regulations. Building work should be carried out in such a way that, when work is complete, the work and building comply with the building regulations.

Energy Efficiency Requirements:

New build to comply with the requirements of the SAP assessment with completion: registered with the Government Portal in accordance with 2020 regulations

Notification of Work:

Building work is to be notified to the local authority building control body unless the works are self-certified by a registered competent person or third party or the work is exempt from the need to notify by regulation 12(A) and, or schedule 4 to, the Building Regulations.

Responsibility for Compliance:

People who are responsible for the building work must ensure that the work complies with all applicable requirements of the Building Regulations. The building owner may also be responsible and should the work not comply with the Building Regulations, the building owner may be served with an enforcement notice.

WORKS TO EXISTING BUILDINGS

Contractor must carryout his statutory requirements under the Construction (Design and Management) Regulations.

All work shall comply with the relevant Building Regulations, and the contractor shall provide the necessary notice to the Building Inspector for inspection at the required stages.

All dimensions are to be checked by the contractor on site before work commences.

Turf and other vegetable matter to be removed from the ground to be covered by building to a sufficient depth (150mm min) to prevent growth later.

All building work is to be carried out with proper materials appropriate for the circumstances in a workmanlike manner.

Contractor shall incorporate Accredited Construction Details (where applicable) as specified in SAP Build Standards. A signed copy of each ACD will be required upon issuing the final certificates. Failure to work to ACD's and other specified details will risk the project not complying with Part L, and so incur further costs.

Contractor to expose/check existing foundations where necessary to determine their suitability to carry any extra load, and to agree any additional work required with the Building Inspector.

Contractor to check existing walls and verify whether they are load-bearing before removing/altering, and taking appropriate precautions.

Contractor to check existing structure where opened for any evidence of decay from fungal and insect attack, and inform client of any additional work required.

DEMOLITION

All demolition must be carried out in accordance with the Construction Design and Management Regulations. Any work involving the disturbance and/or removal of any Asbestos material must be notified and strictly carried out in accordance with HSE procedures and Codes of Practice.

REMEDIAL WORK

Any additional rebuilding which may be considered necessary but is not indicated on the drawings or specifications, please consult the Local Authority before carrying out the work.

Weathered brickwork/stone to be replaced and weathered joints raked out and repointed with a suitable mortar.

All existing timbers to be inspected for woodworm and rot and replaced or treated by approved specialist.

All existing external and internal ground floor walls to have a silicone injected damp proof course by approved specialist if no DPC is present.

EXTERNAL WALLS

Aerated concrete block inner leaf, Full Fill Cavity Wall

Brick Faced Cavity Wall

- 102.5mm approved facing brickwork outer skin
- 100mm cavity
- full fill mineral wool with k value 0.032 (i.e. Crown Ditherm 32 cavity batts
- 100mm Aerated concrete blockwork
- 12.5 plasterboards on dabs and mechanically fixed to wall with skim coat
- internal finish to clients specification

to achieve a minimum of  
U-Value of 0.28 W/m<sup>2</sup>K

Note: Varying the above specification will change the U-Value

Timber faced cavity wall

- Timber cladding of t & g treated Siberian Larch horizontal boards, t, g and v jointed 150 x 25mm (as per Trade's recommendations). Staggered vertical butt joints, fixed to vertical timber battens (to all elevations), with round head stainless steel screws, with flat plain stainless steel washers, 2 number screws / board fixing, (number of fixings requires per board to be confirmed by sub-contractor) With a Solid black corner detail.
- 100 mm dense aggregate 7kN blockwork leaf
- 100mm cavity full fill mineral wool with k value 0.032 (i.e. Crown Ditherm 32 cavity batts
- 100mm Aerated concrete blockwork
- 12.5 plasterboards on dabs and mechanically fixed to wall with skim coat
- internal finish to clients specification

to achieve a minimum of  
U-Value of 0.28 W/m<sup>2</sup>K

Note: Varying the above specification will change the U-Value

Render faced cavity wall

- 18mm cement based render with masonry paint [TBC]
- 100 mm dense aggregate 7kN blockwork leaf
- 100mm cavity full fill mineral wool with k value 0.032 (i.e. Crown Ditherm 32 cavity batts
- 100mm Aerated concrete blockwork
- 12.5 plasterboards on dabs and mechanically fixed to wall with skim coat
- internal finish to clients specification

to achieve a minimum of  
U-Value of 0.28 W/m<sup>2</sup>K

Note: Varying the above specification will change the U-Value

General Specifications

Below DPC & Ground.

Use brickwork to meet F2 and S2 designation. Brick to be selected and agreed with the building inspector. Concave mortar joints to BS EN 1996:1-1 sulphate resisting. Brickwork bond to match facing brickwork. Use suitable foundation blockwork below ground

Mortar mix below DPC to be 1:3 (cement:sand) and above DPC 1:1:6. Colour and joint type to be confirmed.

Brickwork expansion and blockwork contraction joints in all masonry walls to be as per engineers designs. 10mm movement joints to be formed by cavity wall ties positioned 225mm each side of joint, and 225mm vertically staggered. Joint to be filled with 10mm Hydrocell filler foam with 10x10 polysulphide mastic outer seal.

Suitable cavity wall ties to the new external walls are to be fitted at 750cfs horizontally and 450 cfs vertically, and 300 cfs vertically within 225 from all openings with unbonded joints. Ancon or similar and approved to BS5926:2010, ADA and in accordance with the manufacturers information.

Wall insulation to be continued at least 215mm min. below the DPC and underside of slab/screed (or 215mm min. below top of beam if suspended beam and block floor) and supported on row of ties if needed. Insulation to extend to the top of the external wall including the gable end.

All internal and external walls must prevent the passage of moisture from the ground and formation of condensation. A suitable damp proof course should be installed which is continuous with the damp proof membrane, or least 150mm from the ground level and the cavity taken at least 225mm below the lowest level of the damp proof course. Weep holes should be provided every 900mm. Please refer to ADC Section 5: Diagram 8 & 9.

Openings

Lintels or steel supporting structure to head of openings:

Jambis and Gills to be fitted with non combustible rigid uPVC insulated cavity closer, e.g. Trathem Cavitytherm Close-R or similar and approved with a min. thermal resistance path of 0.45m<sup>2</sup>k/w, insulation to be installed fitting tightly ensuring no gaps including above and below cavity tray.

FOUNDATION - Trench Fill to Engineers Designs

Trench fill foundation as indicated under all load bearing walls excavated to at least 1m below finished ground level (Minimum requirement of Part A) and in accordance with the Engineers designs.

Depth to be checked on site and increased as necessary to suit local ground conditions, the presence of mature trees or trees to be removed in consultation with the Engineer. All foundations to the approval of the Building Inspector and in accordance with the NHBC Standards handbook Section 4.2

Foundations mix to be to the Engineers specifications

HEAVE PROTECTION

Heave protection may be required where generally foundations exceed 1500mm below ground level. Subject to local ground conditions with high shrinkage soils; where significant vegetation is adjacent or has been removed as part of the work or where required by warranty. Heave protection to be to the approval of the Building Inspector and/or warranty provider (if applicable) refer to figure 4 of Section 4.2 of the NHBC standards handbook.

FIRE STOPPING

Firestopping with a minimum resistance of 60 minutes is to be provided to the top of the Party Wall Structure where it meets the underside of the roof covering. Fire stopping should meet the underside of the roof.

CAVITY BARRIERS TO PARTY STRUCTURES

Cavity Barriers meeting E30 (30 minutes integrity) and I15 (15 minutes

insulation) are to be provided around all physical openings into the external masonry cavity wall.

In addition, Cavity Barriers shall be provided to close the cavity at each junction between the Party Cavity Wall and the External Cavity Wall.

GROUND FLOOR - Suspended Beam and Block Floor

Basic Radon Area

- 50mm minimum proprietary screed or cement:sand screed 1:3) with fibre reinforcing additive, over
- 500 gauge polythene slip layer, with
- 25mm Celotex TB4000 thermal break strips to perimeter, over
- 100mm Celotex GA5000 Rigid Insulation Boards, over
- Basic Radon Area: Visqueen Radon Barrier dressed up to bridge cavity as per manufacturers details
- Beam & Block floor to 3rd party designs

to achieve a minimum of

U-Value of 0.22 W/m<sup>2</sup>K

Basic Radon Area: Visqueen Zedex Cavity Tray to be provided at perimeter walls, no direct contact between cavity tray and radon barrier to prevent slip plane forming. Weepholes to be provided at 1m centres

Floor insulation to abut firmly against blockwork wall leaving no gaps

Manufacturer's calculations for the suspended ground floor to be submitted to the Local Authority 28 days prior to commencement on site.

Beam and block floor to be laid in strict accordance with manufacturer's recommendations and gaps between blocks to be light and grouted to form a monolithic construction, beam and block floor to be built into the external walls on fell DPC which must extend up the external face of the blockwork inner skin and linked with the DPM.

Minimum 150mm void to be maintained below floor beams and 75mm stone blinding or 100 over site concrete to soil. On shrinkable soil where heave could take place, allow additional 50-150mm movement depending on potential.

Allow for 1500mm2 below ground ventilation per linear metre of wall: Maximum centres of 2,000 metres and start from 450mm (or as close as practicable) from external corner; dependent on free area of ventilator (e.g. Tmloc 6,176mm2 ventilators may be placed at maximum 2 metre centres). Openings should incorporate suitable proprietary grille to prevent the passage of vermin but not restrict air flow. Any intermediate walls must be perforated (Air bricks, ducts or Honeycomb construction) to maintain cross ventilation.

Allow for 1500mm2 below ground ventilation per linear metre of wall: Maximum centres of 2,000 metres and start from 450mm (or as close as practicable) from external corner; dependent on free area of ventilator (e.g. Tmloc 6,176mm2 ventilators may be placed at maximum 2 metre centres). Openings should incorporate suitable proprietary grille to prevent the passage of vermin but not restrict air flow. Any intermediate walls must be perforated (Air bricks, ducts or Honeycomb construction) to maintain cross ventilation.

Sarnafil fully adhered membrane adhered to 126mm TD 4000 Celotex insulation which is mechanically fixed to 20mm WBP plywood decking, allow for 1000 gauge Sarnapap vapour control layer sandwiched between the insulation layer and the structural decking. Structural plywood deck to be fixed to angular SW timber fixing pieces to required slope on SW joists to strutral engineers design and detail, with 12.5 plasterboard ceiling under skimmed and painted. With concealed guttering.

Note: All to be laid strictly in accordance with sarna specifications & constructed by approved contractor, client to be provided with 20 year written guarantee on completion.

to achieve a minimum of

U-Value of 0.18 W/m<sup>2</sup>K

PITCHED ROOF - TO MATCH EXISTING

Corus Kalzip sheet roofing (Ref: K2-O-CON-T-23-002 B for overview of system), over timber deck, over rafters to structural engineers design and detail. Profile Steel Soffit and gutter to match existing.

to achieve a minimum of

U-Value of 0.18 W/m<sup>2</sup>K

MANDATORY WATER EFFICIENCY COMPLIANCE

Part G2 will be satisfied if it can be demonstrated that the estimated consumption of wholesome water (Potable water as described under Water Supply (Water Quality) Regulations 2000 (SI 2000/3184) or Private Water Supplies Regulation 2009 (SI 2009/3101) ) in both hot and cold water applications does not exceed 125 litres per person per day

Primary Approach

Compliance can be demonstrated by an approved calculation methodology as described in Part G (2015) of the Approved Documents, Appendix A, pages 36 - 44

Alternative Approach

Compliance may be demonstrated via the "Fittings approach". It must be demonstrated and recorded that each fitting is subject to the following limits set out in the table below.

Maximum Fittings Consumption

Water Fitting Maximum Consumption

WC 6/4 litres dual flush or 4.5 litres single flush  
Basin taps 6 l/min  
Sink taps 8 l/min  
Dishwasher 1.25 l/place setting  
Washing machine 8.17 l/kg/ogram

INTERNAL PARTITION - CLASS C, BLOCKWORK

- min. 12.5 Plasterboards and skim or equal approved (mass 10kg/m<sup>2</sup>),
  - Concrete blocks of minimum density 120 kg/m<sup>3</sup> (excluding finishes),
  - min. 12.5 Plasterboards and skim or equal approved (mass 10kg/m<sup>2</sup>)
- All joints to be well sealed.

LINTELS

Catholic or similar approved galvanised steel lintels over all external openings, fixed to British Standard 5977 and manufacturer's recommendations. Lintels to be specified by the client and manufacturer.

Weep Holes to be provided at 450mm centers to head.

RAINWATER GOODS - uPVC

uPVC half round gutters 150 mm diameter, with 89 mm round downpipes, with all associated brackets and fittings. Colour black.

Hopper head required to the flat roof area.

WINDOWS & DOORS

Window & door frame units to overlap cavity by a min. 30mm (unless fully related)

All windows and doorsets to be at least double glazed with sealed units having a mini 6mm argon filled air gap and Low E glass coatings.

All frames to be sealed around the perimeter internally and externally. To achieve a u-value of 1.4 W/m<sup>2</sup>K or better; with a g-value of 0.63

Windows to be fully draught-proofed. Trickle vents required, refer to the background ventilation calculation and elevation schedule

Manufacturer to be confirmed by the client

Window manufacturer to assess handing and note the sizes given are actual brickwork opening sizes and should allow approx.10mm tolerance to structural opening. All openings to be site measured prior to manufacture.

Additional requirements for Security and Safety

Main entrance door to provide way of seeing callers by either a door viewer or an area of clear glazing within the door or adjacent to the doorset.

In accordance with Part Q, provide door chain or door limiter for security.

Ground floor windows and others accessible from lower roofs to be tested to BS:7950:1997 for enhanced security. The same windows should also have key-operated locking, except where the window forms an escape route from a first floor bedroom. In this case the other pane should be 6.4mm laminated glass and no locking handle fitted.

First floor windows to bedrooms should have an opening casement fitted with egress hinges giving at least 0.33m<sup>2</sup> (450x750mm) clear escape route. The bottom of the opening being no higher than 1100 mm from the finished floor level.

All upper floor windows should be fitted with child-proof restrictor hinges allowing the window to open no more than 100mm, the restrictor should be have override to allow for safe cleaning of the entire outside face of the window from inside (PART K) and escape where required (PART B).

Where opening lights open over pathways, restrictors are to be fitted.

STRUCTURAL STEELWORK

All steelwork to be to engineers specifications and in accordance with the structural calculations. Appropriate blue brick or concrete padstones are to be provided with a minimum beam bearing as specified by the engineer

Fabrication of steelwork to be in accordance with BS 5950:Part 2. All steelwork to be to engineers specifications and of grade 43. Steelwork to be shot blasted and treated with suitable primer.

Contractor responsible for the erection of steelwork to ensure the stability of the structure at all times during erection, and for any temporary bracing and struts required.

FIRE PROTECTION TO LOAD-BEARING STEELS

Load-bearing Steelwork to be intumescently coated to provide 30

minutes fire resistance alternatively.

Fully Encase exposed elements of load-bearing steel in 15mm Firecase boards to provide 30 minutes fire resistance

ENERGY ASSESSMENTS

Appropriate energy assessment to be undertaken by a qualified Energy Assessor. If required

PEA certificate to be forwarded to the Bulding Inspector prior to construction

Legal Requirement

EPC to be produced and displayed in the building prior to occupation. Energy Ratings and the EPC to be inserted into the O&M Manuals

GAS FIRED BOILER

Existing to be checked to ensure system can be extended.

Details of the heating system to be confirmed and submitted by the contractor to the Local Authority and the Energy Assessor a minimum of 5 days prior to completion to facilitate issue of the 'as built' SAP and EPC.

Should a new gas boiler be required, this shall be provide heating and hotwater in accordance with the SEDBUK rating from the SAP Assessment:  
Ideal Logic Heat H

- Time and Temp zone controls
- Enhanced load compensator
- Interlock in heated space

Installation to be fully detailed, specified, designed and undertaken by a registered Gas Safe engineer.

Ventilation requirements, flue sizes and outlet positions to be confirmed by the boiler manufacturer, and in accordance with AD J Section 2, Table 1 & 2, Diagram 17 & 18.

HOT WATER SUPPLY AND SYSTEM

The hot water temperature should be limited to 48 degrees by use of an in-line blending valve or similar, with a maximum temperature stop and a suitable arrangement of pipework.

All hot water pipework to be fully insulated in accordance with the SAP assessment.

Hot taps to be located on the left in throughout the dwelling

HEATING - CONVENTIONAL RADIATORS

Existing system to be checked for suitability for extension.

Radiators throughout to be correctly sized based upon the BTU calculations by the heating engineer or the contractor. HSSP drawing shows indicative positioning only.

Details of the heating system to be confirmed and submitted by the contractor prior to issue of the 'as built' SAP and EPC. Details of the heating system to be confirmed and submitted to the Local Authority a minimum of 5 days prior to completion.

FIRE & NOISE PROTECTION OF SVP PIPES

Soil and vent pipes passing through other rooms of the dwelling are to be encased in a timber stud frame supporting 15mm British Gypsum Wallboard or 12.5mm British Gypsum Wallboard TEN & skim, with 25mm unfaced and wire reinforced mineral wool around pipe.

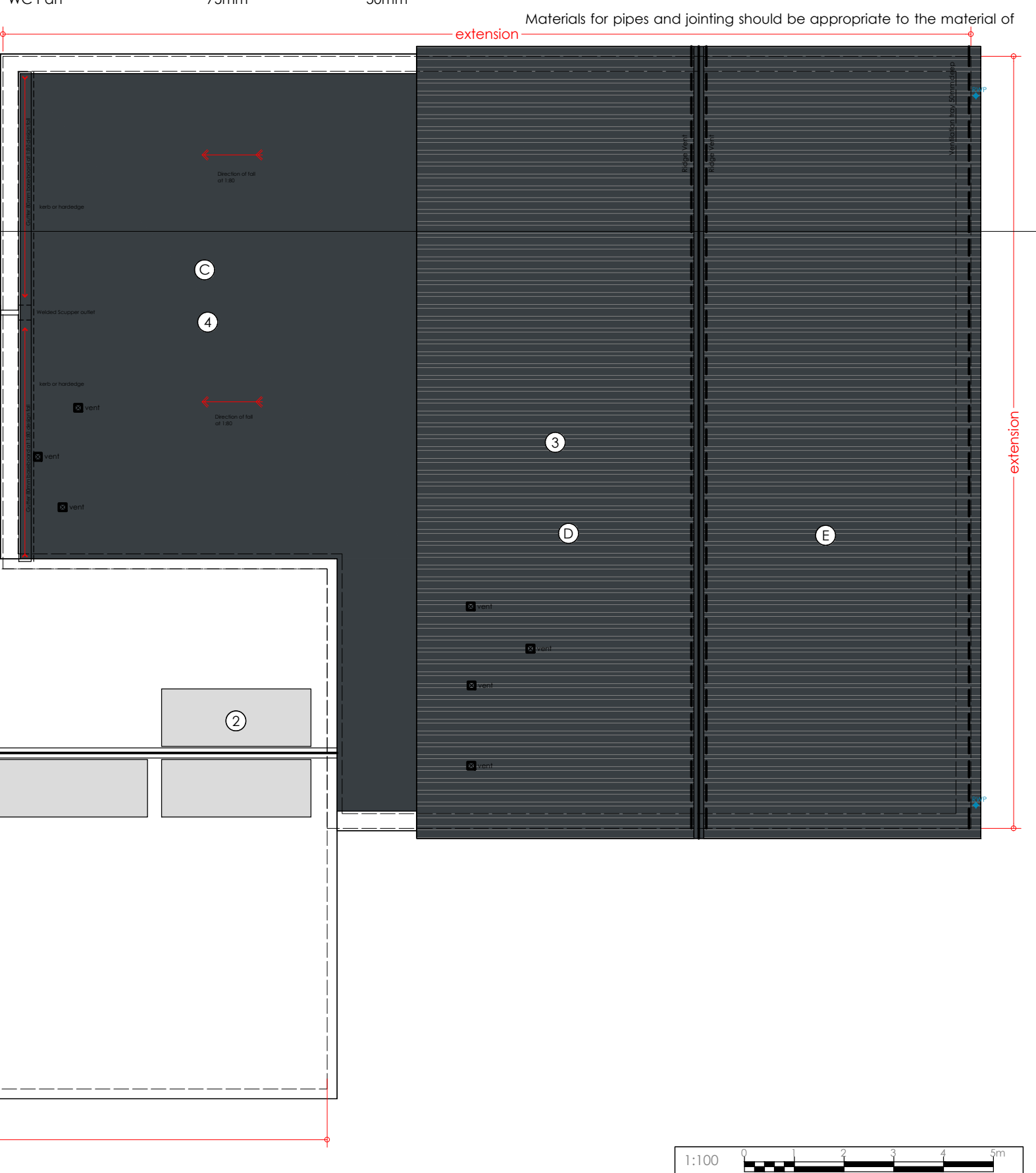
Seal junction of casing to ceiling/floor where they penetrate.

ABOVE GROUND DRAINAGE

Guidance for the design of sanitary pipework can be found in BS EN 12056.

All points of discharge into the system should be fitted with a trap to prevent foul air from entering the building; Minimum trap sizes are detailed below:

Appliance	Diameter of Trap	Depth of Seal
Washbasin	32mm	75mm
Sink/Washing Machine/ Dishwasher	40mm	75mm
WC Pan	75mm	50mm



All pipework should discharge into a stub stack or discharge stack with care taken to prevent cross flow into any other branch pipe. In accordance with ADH Diagram 2.

Waste pipe diameters:  
wash hand basin and bidet 50mm minimum,  
sink 40mm minimum,  
WC 100mm minimum.

Condensate pipe from the boiler can connect into sanitary pipework if necessary, with a minimum diameter of 25mm with a 75mm condensate trap. Installation should be in accordance with BS6798. Bends in branch pipes should be avoided.

All waste pipes to connect internally to the Discharge Stack separately. Discharge Stacks should be ventilated and must terminate with a suitable durable cage 900mm minimum above window heads. Discharge Stacks connected to drains liable to surcharge require a 50mm ventilation pipe above the likely level of flood. Discharge bend must be of minimum radius 200mm at canteilne of stack.

Workmanship to be accordance with BS 8000 p1 13: Code of practice for above ground drainage

BELOW GROUND DRAINAGE

Foul drainage to adoptable foul sewer connecting to the the existing public foul or combined sewer. This is to be fully detailed and confirmed by the contractor/drainage designer and agreed with the Building Inspector. Should a gravity system not be feasible, a suitable pumping installation should be provided with adequate storage and alert system

Storm drainage to adoptable storm sewer connecting to public storm sewer. If this is not possible a combined sewer may be connected to. Flow restriction in accordance with MEC designs and agreed with the Water Authority prior to construction.

The sewerage undertaker should be notified at least three weeks before it is intended to connect to the public sewer. Should this not be possible please discuss alternative options with the building control body before works commence.

The likelihood of surcharging should be discussed with the sewerage undertaker and the relevant action taken if necessary. Where the risk is considered low, building protection may be acceptable in the form of gulleys.

Changes in direction and gradient should be minimised and access points provided where required. Connections should be made in the direction of flow and using prefabricated components.

When connecting to existing, repair couplings should be used to ensure a watertight joint and the junction packed to avoid differential settlement with adjacent pipes.

The system should be ventilated, pipes laid to even gradients and straight lines. Slight curves are acceptable subject to any blockages being accessible

Where pipes are laid within 1m of the building, backfill with concrete to a level fixed within the lowest of the building, equal to the distance from the building less 150mm. concrete encasements to have expansion joints at 9m maximum intervals

Where pipes pass through walls or substructure, provide bridge movement joints and structural lintels. Openings to be masked with suitable rodent barrier to prevent entry of vermin or fill material. All in accordance with ADH1, Section 2, Diagrams 7 and 8. Pipe gradients and sizes should be in accordance with ADH1, Section 2, Diagram 9.

The sewer should have a minimum diameter of 100mm with a minimum flow rate of 3.5 l/s. The drain carrying foul water should have a minimum internal diameter of 75mm. Drain gradients should be laid in accordance with ADH1, Section 2, Table 6.

Manholes and inspection chambers are to be constructed using precast units fixed in accordance with manufacturers instructions. Access fittings shall be not less than 225 diameter, where depth is less than 600mm, inspection chambers to be not less than 450 diameter, where not greater than 1200 deep, and manholes 1000 diameter, where depth is more than 1500mm. Covers are to be appropriate duty, and must be screw fixed.

All Foul drainage to have minimum falls of 1:40  
All Storm Drainage to have minimum falls of 1:80

Pipes may be rigid or flexible, suitable materials for pipework include: Vitrified clay to BS 65, BS EN 295, concrete to BS 5911