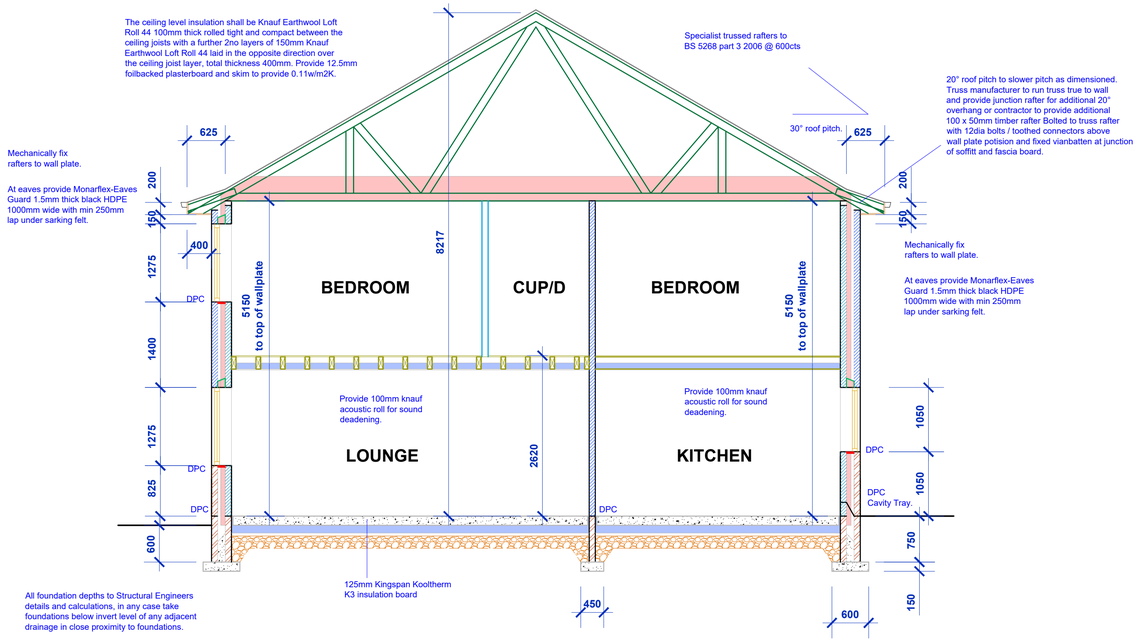
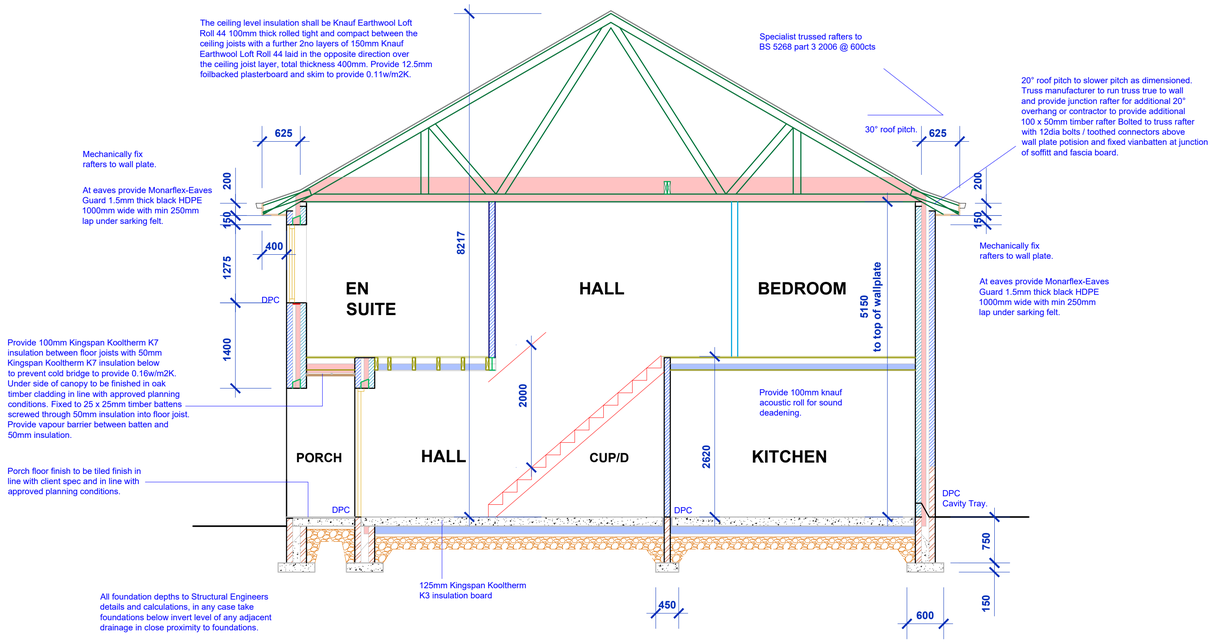


SECTION X - X
DWELLING 1



SECTION Y - Y
DWELLING 1

External supply pipes

Pipes less than 750mm below ground shall be insulated.

Insulation to pipes
Insulation shall be to BS 6700, clause 2.7, Building Regulation Approved Document L1, and BS 5422.

Insulation material shall be preformed flexible closed cell or mineral fibre split tube, thickness to current Building Regulations.

Fire performance of insulation shall be Class 1 spread of flame when tested to BS 4767.

Insulation shall fbe fitted to cold water pipes in unheated spaces and to potable water pipes.

Insulation shall be fitted to hot water pipes except short lengths exposed to view adjacent to appliances.

Insulation shall be fitted in accordance with manufacturer's instructions, ensuring that continuity is maintained over fittings and at supports, leaving no gaps and with the split on 'blind' side of pipes.

The maximum permissible lengths of uninsulated hot water pipes shall be as follows:
Up to and including 12mm diameter pipe - 20m

Over 12mm, up to and including 22mm diameter pipe - 12m

Over 22mm, up to and including 28mm diameter pipe - 8m

Testing shall be completed prior to fitting of insulation.

Hep2O® pipe runs

Approval shall be obtained before commencing work for routes not accurately shown on drawings.

Runs shall be straight and parallel or perpendicular to walls, floors or ceilings. This does not apply to the Conduit System.

The minimum number of joints, bends and offsets shall be used.

Hot pipes shall be located above cold pipes where routed together horizontally, and spaced well away from drinking water pipes.

Pipes shall not be run through electrical enclosures or above switchgear distribution boards.

Sufficient space around pipes shall be allowed to fit insulation without compression.

Wherever possible, pipework shall be concealed within floor, ceiling or roof voids.

HEATING & HOT WATER SYSTEM.

Any New boiler to have a minimum SEDBUK va lue of:- 90%.

Areas with differing heating requirements such as sleeping and living areas to have individual temperature controls, by use of room thermostats or individual radiator valves. To be designed & installed bu CORGI registered domestic heating engineer.

Separate timing controls should be provided for space heating and hot water (except for combination boilers and solid fuel appliances).

Boiler controls must include provision to prevent the boiler operation, when neither the heating system nor the hot water system requires heat.

Any hot water storage vessels to have a min 35mm factory applied coating of PU-FOAM. All pipes and ducts to also be insulated, particularly where they run through unheated spaces or outside the dwelling. Hot water pipework connecting to boilers and hot water storage vessels (including the vent pipe) to be installed for at least 1000mm from the point where they connect.

The heating and hot water system needs to be fully commissioned and certified by a CORGI registered domestic heating engineer. With instructions for all the relevant controls given to the dwelling occupier to store near the appliance.

Details of the type of heating system to be supplied to and approved by Building Control prior to installation.

Valves
Valve types shall have appropriate pressure/temperature ratings and be approved for their intended use by the local water utility company.

Valves shall be provided for isolation and regulation of all equipment and sub-circuits.

Valves shall be located to ensure they can be readily operated, maintained and adjacent to appliances requiring isolation.

Valves shall be fitted with hand wheels for control purposes and lockshields for isolation or regulation of circuits/appliances.

Valves shall be fitted with joints to suit pipe material.

Stop valves and draw-off taps for above ground hot and cold water supplies shall be copper alloy to BS 1010-2, Kitemark certified.

Stop valves for below ground cold water supplies shall be DZR copper alloy CZ 132 to BS 5433.

Gate valves for the isolation and regulation of heating circuits shall be copper alloy to BS 5154, Series B, Kitemark certified.

Double check valve assemblies to prevent backflow contamination of water supplies shall be copper alloy to BS 6282-1 with intervening test cock to BS 2879.

This drawing is provided as a document to gain either Planning Permission or Building Regulation approval purposes only. It is not a guarantee that Planning Permission will be granted.

This drawing and all contents are the copyright of James Campbell Associates Ltd. No copies to be made from the drawing & details within unless authorised by James Campbell Associates Ltd.

The contract for the works is between the client and his / her contractor. Contractor to visit site, study the details provided within the drawing and be familiar with both the work to be carried out in accordance with the details provided. Any stated dimension must be checked prior to any form of construction. All works and materials to comply with all relevant British Standards and carry a genuine BBA certificate. The materials specified within this drawing are a guide for the contractor as they are recognised materials with genuine BBA certificates etc. Any contractor who decides to use any different materials than that noted on the drawing must inform James Campbell Associates Ltd.

Any discrepancies discovered or items found that where not visible at the time of the initial survey should be reported to James Campbell Associates Ltd for consultation with our client.

CONSTRUCTION NOTES:-

HOT AND COLD WATER SERVICE

Design and install for hot and cold water systems to all fittings, as indicated on the drawings, all in Hep20 plastic pipework with all Hep20 fittings etc, and in accordance with: - BS 5449: Code of Practice for Central Heating for Domestic Premises.

BS 5955: Part 8: Specification for the installation of thermoplastics pipes and associated fittings for use in domestic hot and cold water services and heating systems. BS 6700: Design, Installation, Testing and Maintenance of services supplying water for domestic use within buildings and their curtilages.

Hep2O is manufactured and kitemarked to Class S of BS 7291, Parts 1 and 2 and is manufactured within a Quality Management System which satisfies BSEN ISO9002 requirement.

Hep2O Barrier Pipe is Covered by Agreement Certificate 92/2823 to class 'S' of BS 7291.

The water Byelaws Listed in the Water Fittings and Materials Directory Listing Number 0112066.

Associated electrical work

Electrical work in connection with the plumbing installation is to be in accordance with electrical specification and carried out by the electrical engineer and the IEE Wiring Regulations.

Design of installations

The Plumbing Contractor is to be responsible for the design and installation of the Hep2O® systems (1 to 4 below as appropriate) in accordance with Hepworth Building Products instructions, all relevant statutory requirements, standards or codes of practice.

1. Pipeline sizes shall:
a) Meet anticipated simultaneous water demand for the building type
b) Provide a water velocity of 2 m/s for cold water, 1.3 m/s for hot water
c) Provide a minimum discharge rate at each draw-off point (refer to schedule taken from BS 6700)
d) Ensure a cold water storage cistern filling time of not more than.....hour(s).

2. Hot water storage system shall ensure the:
a) Storage capacity is sufficient for the building type
b) Primary heat source is capable of raising the water temperature from 10ºC to 60ºC in 1 hour
c) Temperature of stored hot water is 60ºC to 65ºC.

3. Low temperature hot water space heating system shall ensure:
a) Exposed heat emitters maintain the required room temperatures
b) Surface temperature of heat emitters is not greater than.....ºC.
4. Hep2O® UFH Manifold System shall be installed in accordance with Hepworth Plumbing Products recommendations.

Hep2O® pipe fixing and supports All Hep2O® pipes and fittings, and other equipment/materials shall be securely fixed to the structure in the specified locations, ensuring the operation of valves or taps does not strain pipework.

Pipes passing through walls, floors and other structural elements shall be sleeved and theannular gap filled with expanded foam.

Open ends of pipes shall be temporarily sealed with end caps to prevent damage to the jointing surface and the ingress of dirt, insects or rodents.

Pipes shall be fixed to falls to avoid trapped air and facilitate purging and draining. Vents shall be fitted at high points, and draining taps fitted at low points. Pipes shall be supported true to line and at the following maximum centres:
Pipe diameter Horizontal Vertical (mm)
Up to 16 300 500
17 to 25 500 800
26 to 32 800 1000

Additional supports shall be provided as necessary within 150mm of connections, junctions and changes of direction.
Hep2O® Specification Clauses Hep2O® pipe bends Minimum unsupported cold bend radii for 90º bends shall be to the following dimensions, dependent on pipe diameters. Pipe diameter (mm) 10 15 22 28 Radius (mm) 80 120 176 224

Cold Forming Bend Fixture (HX75) shall be used to fully support small radius (eight times pipe diameter) 90º bends.

Hep2O® pipe spacing
Minimum clearances shall be maintained, measured from pipe face or pipe insulation, for the following conditions:

From floor 150mm
From ceiling 50mm
From wall 15mm
Between pipes 25mm
From electrical conduit, cables, etc 150mm

Hep2O® joints Form joints between Hep2O fittings and pipes, and between other compatible materials, in accordance with Hepworth's jointing instructions.

Pipes entering buildings Pipes shall be laid not less than 750mm below finished ground level.

Where pipes rise into building within 750mm of external face of building or pass within a ventilated floor void, insulation shall be fitted to the pipes extending from finished floor level to 600mm beyond external face of building.

Pipe ducts shall be sealed at both ends with an approved non-hardening, non-cracking, water resistant compound to a depth of not less than 150mm.

Hep2O® Cold and Hot Water Installations

Installation, testing and commissioning of the plumbing installation shall comply with BS 6700, water regulations, the water utility company and Hepworth Plumbing Products recommendations. The whole of the plumbing installation shall be carried out by qualified operatives. All plumbing components shall be stored in dry conditions in original packaging. Hep2O® pipework and fittings shall be protected from prolonged exposure to direct sunlight, preferably in original protective wrappings, until Practical Completion. Where components and materials other than the Hep2O® system are located in moisture-prone areas, corrosion resistant fittings/fixings shall be used, in addition to suitable washers and gaskets for isolation between dissimilar metals. Unless otherwise shown or specified, all equipment, pipework, components, valves and other items requiring maintenance shall be fully accessible. Builder's work shall comply with the restrictions set for the cutting of holes, chases and notches within critical construction as described in current Building Regulations.

All fittings, other than Hep2O®, used below ground or in concealed or inaccessible locations shall be of gunmetal or other material resistant to dezincification.

DRAWING TITLE
PROPOSED SECTIONS X - X & Y - Y- DWELLING 1

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT

LOCATION
The Red House
13 Broadhalgh Avenue
Bamford
Rochdale

DRAWN:-	Martin D. Ashworth	DRAWING NUMBER:-
DATE:-	March 2019	**18.1919.14**
SCALE:-	1:50 @ A1	
ISSUE:-		