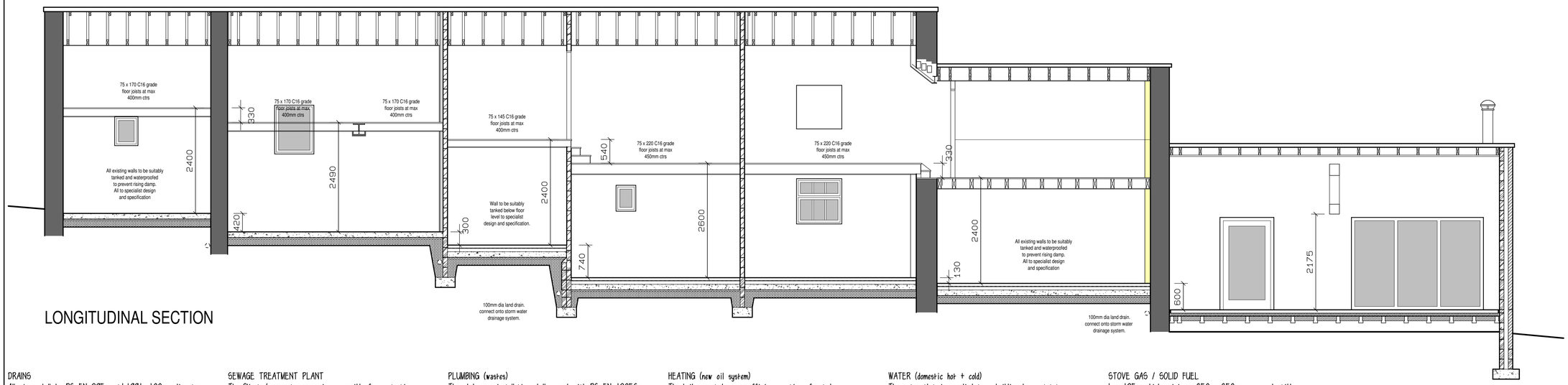


LONGITUDINAL SECTION

DRAING
All pipes shall be BS EN 295-part1:1991, 100mm diameter (or otherwise specified) with flexible jointing collars, and generally laid between 1 in 30 + 1 in 80 gradients. Bed and backfill in accordance with manufacturer's instructions. Where drains pass through walls they shall be laid in short pipes and protected by lintels over. Any drains installed under a floor slab is required to be surrounded in 200mm thick 20N grade concrete and shall have 'flexcell' board positioned at each pipe joint.
When drains are laid together foul shall run lower than storm. Provide back inlet gullies or 100mm SVP s to receive foul wastes.
Storm drains to have trapped gullies to collect rainwater.
Fit rodding eyes to head of branches as indicated.
Inspection chambers shall be of pvc or pre-cast concrete units laid on and surrounded with 100mm thickness of concrete.
Fix suitable galvanised cover and frame.
In masonry chambers form 150mm high benching to channels.
Make new connections to the existing drains in the direction of flow. The drainage layout indicated is a suggested idea and the final layout including cover and invert levels must be checked and agreed on site with the L.A. Building Inspector prior to work commencing on site.
All drainage invert and cover levels must be checked and verified by the Contractor on site prior to commencement. Redundant drains shall be stopped up with concrete or removed and ground re-instated.

SOAKAWAYS
Soakaways to be designed in accordance with the BRE Digest 365.
A standard porosity test should be carried out by the Client or Contractor before installing any soakaway to ensure the suitability of the sub strata.
Any soakaway must be located minimum 5.0m from a building or road and 2.5m from any boundary. When in normal ground they shall be at least 1.0m diameter and 1.5m deep below the invert (agree size and location with L A Inspector on site), backfill with selected rubble, top with 150mm depth of gravel with polythene sheet laid over and min 300mm soil ground cover.

WORKING NEAR DRAING
Important note for the Building Owner / Contractor.
It is your responsibility to check if construction is being undertaken within 3.0m of a 'shared sewer' (i.e. a drain pipe serving more than 1 property). If so, the Building owner must contact the local Water Authority to ascertain what information should be provided for, and make the application to build near or over the pipe(s).
Most water Authorities make a charge for this.
This must be undertaken prior to any works commencing on site.
Please note that long timescales are often required.
Severn Trent Tel No 01902 793871

SEWAGE TREATMENT PLANT
The Client / property owner is responsible for contacting the Environment Agency Office in order to determine whether a 'consent to discharge' is required and conditions to be observed. This must be undertaken prior to work commencing on site and be confirmed in writing.
The property owner is also legally responsible to ensure that the system does not cause pollution, a health hazard or nuisance.
Prior to commencement of works on site the owner is to have conducted a series of porosity tests to determine the permeability of the sub soil and to establish the most suitable position of the plant and length of irrigation drains.
All test results and assumptions made are to be submitted to L.A. Building Control prior to installation of tank.
A BS6297 glass reinforced plastic high performance packaged sewage treatment plant is to be installed to accept new foul water waste from the development. Plant size is to be determined by manufacturer to suit the expected hydraulic flow, organic load, ammonia levels and treatability and be agreed with the L.A. Building Inspector. Locate in a suitably protected area of the site, being a minimum of 10.0m downslope from any building and watercourse and within 30.0m of tanker access for de-sludging etc.
Inspection chambers should be provided to both the inlet and outlets of the tank for sampling and inspection.
A notice plate shall be fixed within the building describing the necessary maintenance as noted in Building Regulation Part H section H2, 1.57 page 34.
Treated effluent from treatment plant is to be discharged directly to a watercourse subject to consent being obtained from the Environment Agency. If this is not possible or consent is refused treated effluent shall be discharged into a drainage field :- The outfall drainage field should be sited downslope and terminate at least 10.0m from any watercourse or permeable drain and at least 15.0m from any building and sufficiently away from any other soakaways etc. Irrigation area drains should be of 100mm diameter perforated pipe laid at 1 in 200 gradient and at least 500mm to invert in trenches between 600 to 900mm wide spaced 2000mm apart. Provide bed of 300mm clean shingle / stone (graded between 20mm and 50mm) before laying pipes then top up with same to 150mm above pipe and cover with geotextile membrane and 300mm earth.

BIN STORAGE AREA
A designated area of
1.6 x 0.75m must be provided externally for the use of refuse bin storage.
Position to be agreed on site with the L.A. Building Inspector.

PLUMBING (wastes)
The whole new installation shall accord with BS EN 12056-2:2000 and CP304. All wastes shall have 75mm deep seal traps and be taken to SVP or back inlet gully with sizes as follows:
To sink unit, washer, bath, shower, provide 40mm diameter up to 3.0m length, over 3.0m length increase to 50mm diameter.
To wash basin, provide 32mm diameter up to 1.7m length, over 1.7m increase 40mm diameter. 100mm diameter pvc soil pipe shall be provided to terminate in balloon cage via weathering collar above roof, minimum 900mm above any opening window, situated within 3.0m horizontally.
All exposed pipes within the property shall be suitably boxed in with removable covers to allow for future access for rodding. The internal SVP shall be wrapped with 100mm insulation quilt and be fitted with a sealable rodding access point in a suitable position.

WATER EFFICIENCY
Within 5 days of completing the dwelling, the Building Owner is responsible for providing the Local Authority Building Control Inspector a copy of the detailed water calculations using 'The Water Efficiency Calculator for New Dwellings' (see http://www.wrcplc.co.uk/partgcalculator/Default.aspx).
The calculation takes into account the actual flush rates of wc's, baths capacity, flow rates of basin taps, sink taps, bath taps, and shower heads. Where applicable it will include default rates for washing machines and dishwashers.
This must show that the actual items used will consume less than 125 litres / person / day. This is not the estimated use which has been used for a design stage calculation.
Failure to provide compliance will result in the Local Authority Building Control Inspector not issuing the completion certificate for the building. Responsibility for compliance rests with the installer / Building Owner.
NOTE - Flow rate figures can be achieved by either; installing a non-efficient fitting with a flow restrictor device, or by use of a more water efficient fitting.

WATER SUPPLY
New water service is to be supplied by local water company which shall be compliant with all current regulations. Service is to be complete with external stop tap and meter.
A further stop tap shall be installed upon entry into the building which is to be sited in position that is easily accessible.
'Wholesome' water is to be provided to any place where drinking water can be drawn off, where any sanitary or hygiene conveniences and washing facilities are to be installed, and to any sink where food is prepared.

HEATING (new oil system)
The boiler must have an efficiency rating of not less than A. Install a maximum 45KW oil fired, thermostatically, timed and zone controlled, wall hung condensing combination boiler with horizontal or vertical flue of standard specification to suit. Fit external flue guard if necessary.
Provision shall be made to enable flues to be swept and inspected. A flue shall not have openings into more than one room or space except for the purposes of inspection or cleaning or fitting of an explosion door, draught break, draught stabiliser or draught diverter.
Openings for inspection and cleaning shall be formed using purpose factory made components compatible with the flue systems having an access cover that has the same level of gas tightness as the flue system and an equal level of thermal insulation.
Covers shall be non combustible.
After the appliance is installed, it should be possible to sweep the whole flue.
If the appliance is installed within a room containing mechanical extract, the installation engineer is to undertake a spillage test to BS5440: Part 1 clause 4.3.2.3.
Test results should be available to the L.A. Building Inspector.
A completion commissioning certificate (to be issued by a OFTEC Registered Engineer) is required to cover the whole gas installation.
Connect to all services and smallbore pipe system with thermostatic valves to all radiators. All primary and concealed pipework to be insulated with flame retardant cellular polyethylene, 9mm thick.
Water supply pressure must be sufficient to operate all relevant fittings and appliances.
Ensure that hot water taps are fitted on the left side of the relevant fitting.
Baths are to be fitted with a device (typically an inline blending valve) to prevent the hot water exceeding 48°C.

OIL (tank supply)
New Class D (gas oil) double walled plastic tank (capacity to be agreed with Client) is to be installed and maintained by an OFTEC Registered Technician in a position recommended in BS 5410 : Part 1 : 1997, taking into account minimum separation distances between tank, buildings and property boundary, access for delivery of the actual tank and oil deliveries thereafter. Tank should comply with OFTEC Standard OFS T100. Tank to be installed on a 150mm deep, 21N concrete base of width and length to suit tank size. A 300mm wide, 500mm deep trench is to be excavated between tank and entry position into dwelling to accept the supply pipework. Backfill as directed by supplier.

CARBON MONOXIDE ALARMS
Install mains powered carbon monoxide alarm, to BS EN 50291 Type A and fitted with a sensor failure warning device.
They shall be located on the ceiling at least 300mm from any wall or if located on a wall, they shall be as high as possible (above any doors and windows), but not within 150mm of the ceiling and between 1 and 3m horizontally from any appliance.
All installations and commissioning certificates should be provided by the installer, along with the manufacturer's instructions and maintenance advice.

WATER (domestic hot + cold)
The water that is supplied to a building by a statutory water undertaker or a licensed water supplier must be installed through an installation complying with the requirements of Water Supply (Water Fittings) Regulations 1999 (SI 1999/1148 as amended).
All primary and concealed pipework to be insulated with 9mm thick flame retardant cellular polyethylene.
Provide 2 N° rows slatted timber shelving to cylinder cupboard (where provided).
Hot water storage systems must be designed and installed in accordance with BS 6700:2006+A1:2009. Water supply pressure must be sufficient to operate all relevant fittings and appliances, where necessary a booster pump must be provided.
The hot water system provided must be designed, constructed and installed so as to resist the effects of temperature & pressure and is to be adequately supported.
Hot water vessels must incorporate precautions to prevent the temperature of water stored exceeding 100°C and ensure that any discharge from safety devices is conveyed to where it is visible but will not cause danger to any person(s).
A permanent and visible notice must be fitted to the hot water storage system as detailed in Approved Document G 2010 edition of the Building Regulations (see paragraph 3.23 and 3.24), when the system is commissioned by a suitably qualified person. Notice of the commissioning must be provided to Building Control by the installer.
Ensure that hot water taps are fitted on the left side of the relevant fitting.
Baths are to be fitted with a device (typically an inline blending valve) to prevent the hot water exceeding 48°C.
Flexible hoses are not to be used for any final tap connections in any circumstance. All final connections are to be via solid copper pipework, including appropriate copper connection kits for any specified mixer outlets.

STOVE GAS / SOLID FUEL
Lay 125mm high, minimum 850 x 850mm non combustible hearth to project 150mm to each side and rear of the chosen appliance and 300mm beyond the front face all to accept a free standing solid fuel stove. Stove to be connected to a 'Selkirk' 178mm internal diameter SM twin wall, insulated multi fuel chimney system to BS4543 and compliant with the Building Regulations Part J.
All fitted in strict compliance with manufacturer's instructions. External section of flue is to be painted black.
Selkirk Tel No 01737 353388
A 50mm air gap is to be maintained around flue for the full height. Where pipe passes through floor and roof structure joists/rafters are to be trimmed and the void fire stopped with FR quilt.
All appropriate flashings and weathering collars are to be incorporated above roof level. Chimney is to terminate 2300mm clear of roof surface when measured horizontally, except where the termination is 600mm above ridge line.
Provisions shall be made to enable flues to be swept and inspected. A flue shall not have openings into more than one room or space except for the purposes of inspection or cleaning or fitting an explosion door, draught break, draught stabiliser or draught diverter.
Openings for inspection and cleaning shall be formed using purpose factory made components compatible with the flue systems having an access cover that has the same level of gas tightness as the flue system and an equal level of thermal insulation.
Covers shall be non combustible.
After the appliance is installed, it should be possible to sweep the whole flue.

FLUE AND HEARTH NOTICE PLATE
Where a hearth, fireplace, flue or chimney is installed, a notice plate as shown in diagram 16 of Approved Document Part J 2010 Edition (page 26) of the Building Regulations and installed conveying the following information :-
a) location of the hearth, fireplace or beginning of the flue,
b) category of the flue and type of appliances that can be safely installed,
c) type and size of flue and manufacturer's name,
d) installation date.
Notice plate should be robust, indelibly marked and securely fixed in an unobtrusive but obvious position within the building, such as next to the electricity consumer unit or as agreed on site with Building Inspector.

CONCEALED FLUES
Where a flue is routed within a void, appropriate means of access at strategic locations shall be provided. This is necessary both when an appliance is first installed and subsequently when the appliance is serviced.
Means of access for flues needs to be sufficiently sized and positioned to allow visual inspection to be undertaken of the flue, particularly at any joints, see Diagram 14 of Approved Document J 2010 Edition (page 25) that shows an acceptable approach for a flue in a ceiling void.
Access hatches should be at least 300 x 300mm or larger where necessary to allow sufficient access to the void to look along the length.

0.0m 1.0m 2.0m 3.0m
scale bar @ 1:50

MRS J HEATH

PROPOSED BARN CONVERSION
IVY FARM,
BACK LANE,
HEATON,
RUGHTON SPENCER,
SK11 0SJ

WORKING DRAWING
SHEET 4

Date	Sheet	Scale
OCT 2017	A1	1:50
Drg No.	Rev.	Drawn
2015-2021-07	A	ASR

A- 24/05/2018 - TITLE SHEET AMENDED

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