

## Design and Installation specification - Combination Boiler

The installation has been designed in accordance with the following:

Design and Installation specification - SEDBUK rating A Combination Boiler

The installation has been designed in accordance with the Domestic Building and Compliance Guide 2010 Edition, CIBSE Domestic Heating Guide, Building regulations, Approved Document L1: Conservation of fuel and power in dwellings, Approved Part F and Part G, the relevant British Codes of Practice and manufacturers installation instructions.

### Design Parameters

External Temperature: -3°C

Flow and return Temperature: 80°C/60°C

U Values: Floor: 0.25

Wall: 0.30

Roof: 0.18

Glass: 1.8

### System

The system must be fully pumped, with a boiler interlock (to prevent the boiler from firing when no demand for hot water or heating exists), programmer, a room thermostat and thermostatic radiator valves (TRV's to BS EN 215) on all radiators except in rooms with a thermostat and in bathrooms.

Automatic Bypass valve to be fitted where the boiler manufacturer specifies a bypass circuit.

All pipework must be laid to have access to permit the ease of draining. Pipework at low level must have drain cocks. Pipework at high level must be fitted with automatic air vents to prevent air bottles.

All pipework in garages and unheated spaces must be insulated in accordance with the building regulations Section L:13 & BS 5422.

Dwellings with less than 150m<sup>2</sup> living space/floor area to have space heating zones with independent temperature control, one dedicated to the general living area

Dwellings with over 150m<sup>2</sup> living space/floor area or to meet time and temperature control as per sap calculation are to have the heating circuits divided into at least two zones. Each to have independent time and temperature control and to be included in the boiler interlock arrangement.

The system must be installed in accordance with manufacturers installation instructions, current building regulations the following British Codes of Practice

BS 5440: 1	Flues
BS 5440: 2	Boiler Ventilation in Cupboards
BS 5449	Forced Circulation hot water systems
BS 5546	Design, Installation, testing and maintenance of services supplying water
BS 6798	Installation of gas fired hot water boilers
BS 6891	Gas Installation
BS 7593	Code of Practice for treatment of water in heating systems
BS 7671	requirements for electrical installations, IEE Wiring Systems

### Flues

Flues must be installed in line with BS 5440: 1 and building Regulations Part J: combustion appliances and fuel storage systems. Section 4.

All flues must terminate as per the minimum terminal positions distances. Please see manufacturer's installation instructions. Flues must have access throughout their length, and have suitable access hatches to inspect each connection as per gas safety current edition.

## Equipment Schedule

Equipment	Description
Boiler	40kW Combination Boiler
Flue System	60 / 100mm Horizontal Concentric Flue - 6m Length
Programmer	7 day, 24 hour channel timer, for 2 Heating Zones
Room Thermostat	Honeywell or Similar
TRV's	Honeywell
Expansion Vessel	Fitted in Boiler
Pump	Fitted in Boiler

### Radiator Schedule designed to Flow/Return Temperature 80°C/60°C

No.	Room Name	Manufacturer-Type	Size - Height x length	Type	Output
R1	Kitch/Liv/Din	Stelrad Compact	600 x 1000	K2	1732
R2	Kitch/Liv/Din	Stelrad Compact	600 x 1000	K2	1732
R3	Bedroom 1	Stelrad Compact	600 x 700	K2	1212
R4	En-Suite	Stelrad Compact	600 x 400	P+	538
R5	Bed 2/Study	Stelrad Compact	600 x 700	K2	1212
R6	Bathroom	Stelrad Compact	600 x 500	K2	866
R7	Hall	Stelrad Compact	600 x 700	K2	1212

Date: 10/07/17 Ref No: 17102

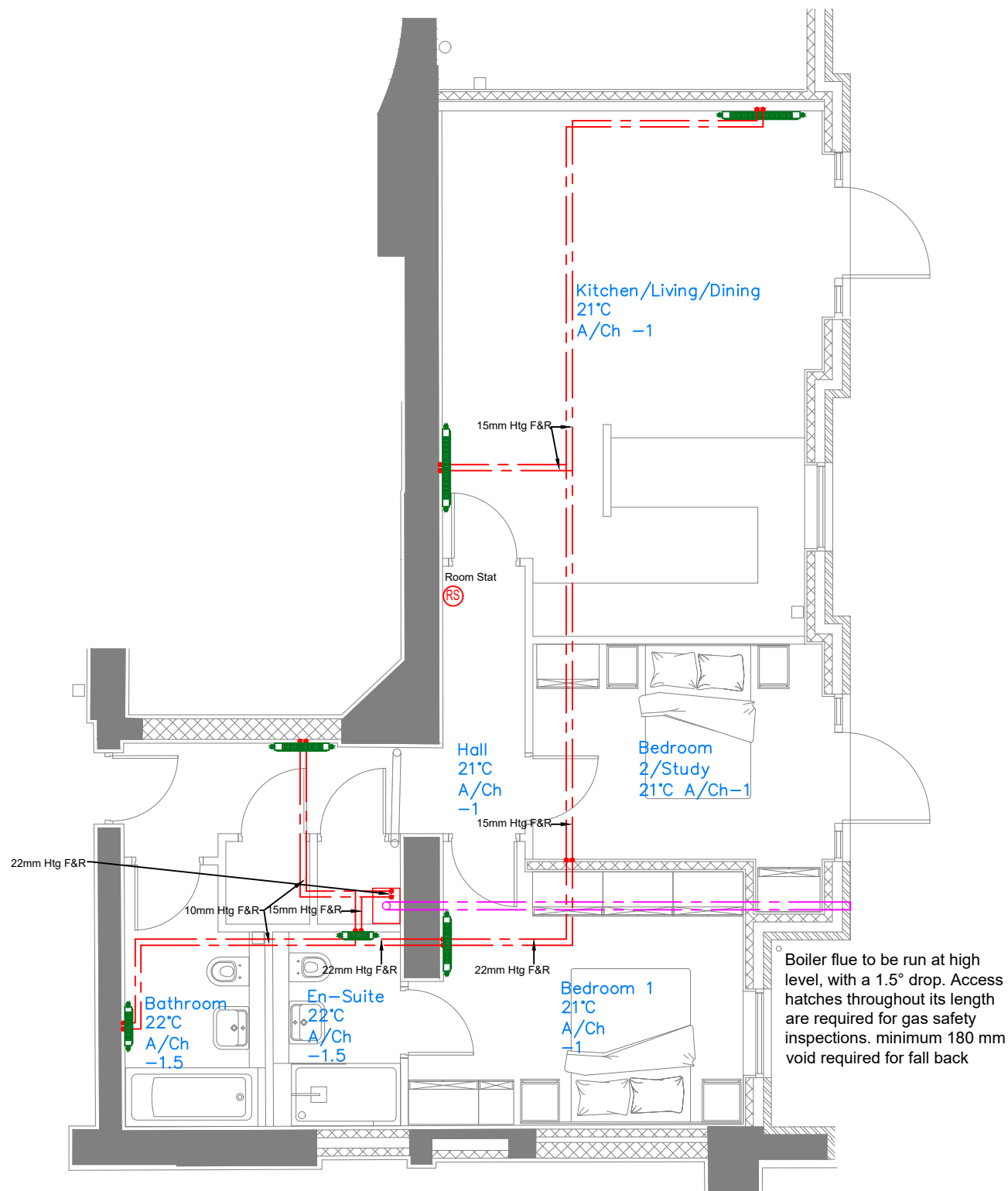
Title: Specification



Drawn By: MJE Scale: 1:75 @ A3

Title: Example Flat Type


Site: MMU

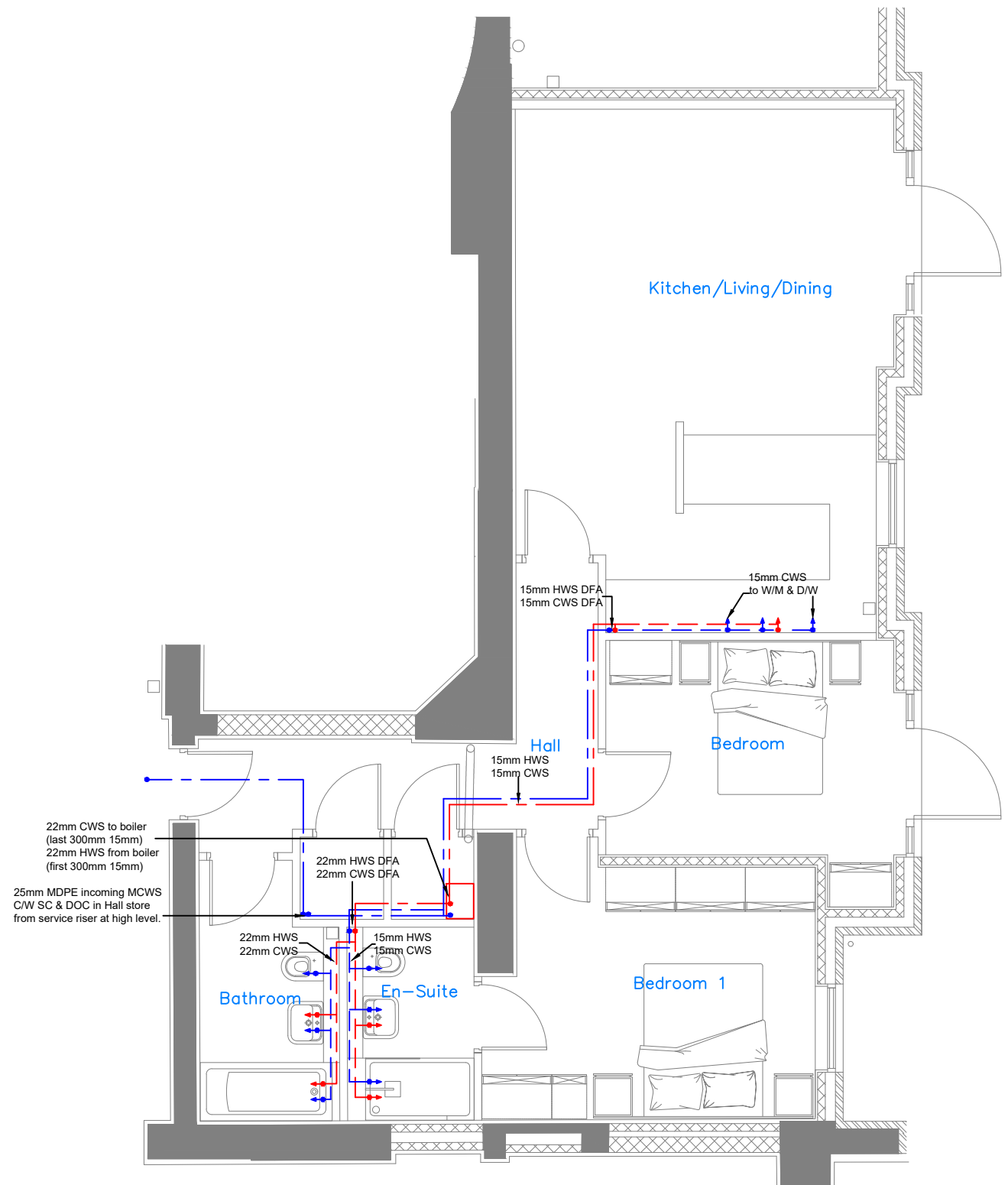


**Additional Design Notes**

Pipework to be run under the floor, in a branch system.

Boiler to be c/w concentric horizontal flue.


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<b>Central Heating Design - Sheet 1 of 1</b>	
	
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<b>Title:</b> Example Flat Type	
<b>Site:</b> MMU	



**Notes**

Plumbing installation is to comply with all current building regulations and requirements

Pipework connections to boiler to be 15mm.

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<b>Title:</b> Example Flat Type	
<b>Site:</b> MMU	