

St. Catherine's heating.

General

The heating at St. Catherine's is provided by a gas boiler sited in the cupboard in the kitchen. Hot water is supplied by means of an electric boiler also sited in the same cupboard.

The space heating of the building is supplied in two ways. The new extension (kitchen, toilets etc.) is heated by an under floor system with the temperature controlled by a programmable room thermostat sited to the left of the chair store.

The main church space is heated using nine fan convectors (blowers) which are controlled by a wirelessly connected programmable thermostat usually sited with the PA equipment by the porch.

The Boiler installation (see picture overleaf for details)

The Vaillant boiler is a modern (2015) condensing boiler providing the hot water for both the extension and main church circuits. It is pressurised using a pressure vessel which is sited in the roof space above the chair store. Each circuit has its own pump with the church one on the left-hand side of the cupboard, facing front and the extension one on the right facing the road.

The thermostat controller is positioned just to the right of the boiler with the receiver for the Honeywell wireless thermostat just above and to the left of it.

As the system must be pressurised there is a braided steel covered "filling loop" under the thermostat controller.

The system may lose pressure. If it drops too low the boiler will not fire (**error code F22**) and it must be pressurised so that the needle in the dial gauge, under the flap on the front of the boiler, just above the on-off switch, is in the middle of the grey section of the scale. This is accomplished by opening the taps at either end of the filling loop which allows mains water into the system. **Take care not to allow too much pressure into the system.** *Note that If the dial gauge shows an apparently correct pressure the error may be cleared by powering the boiler off at the switch on the wall marked "boiler", waiting for 10 seconds and then turning the power back on.*

The Church fan convectors (blowers)

The nine blowers are arranged in three pairs and one triple (in the chancel). Each set is controlled by one master unit with the others slaved off the master. They will not start until the incoming hot water reaches a set temperature (to ensure that they do not circulate cold air). When they are running they are controlled by two thermostats that are accessible once the front cover has been removed. At present they are set as:-

Thermostat 1 switches the fan speed from high to low when an incoming air temperature of approx. 18°C is reached.

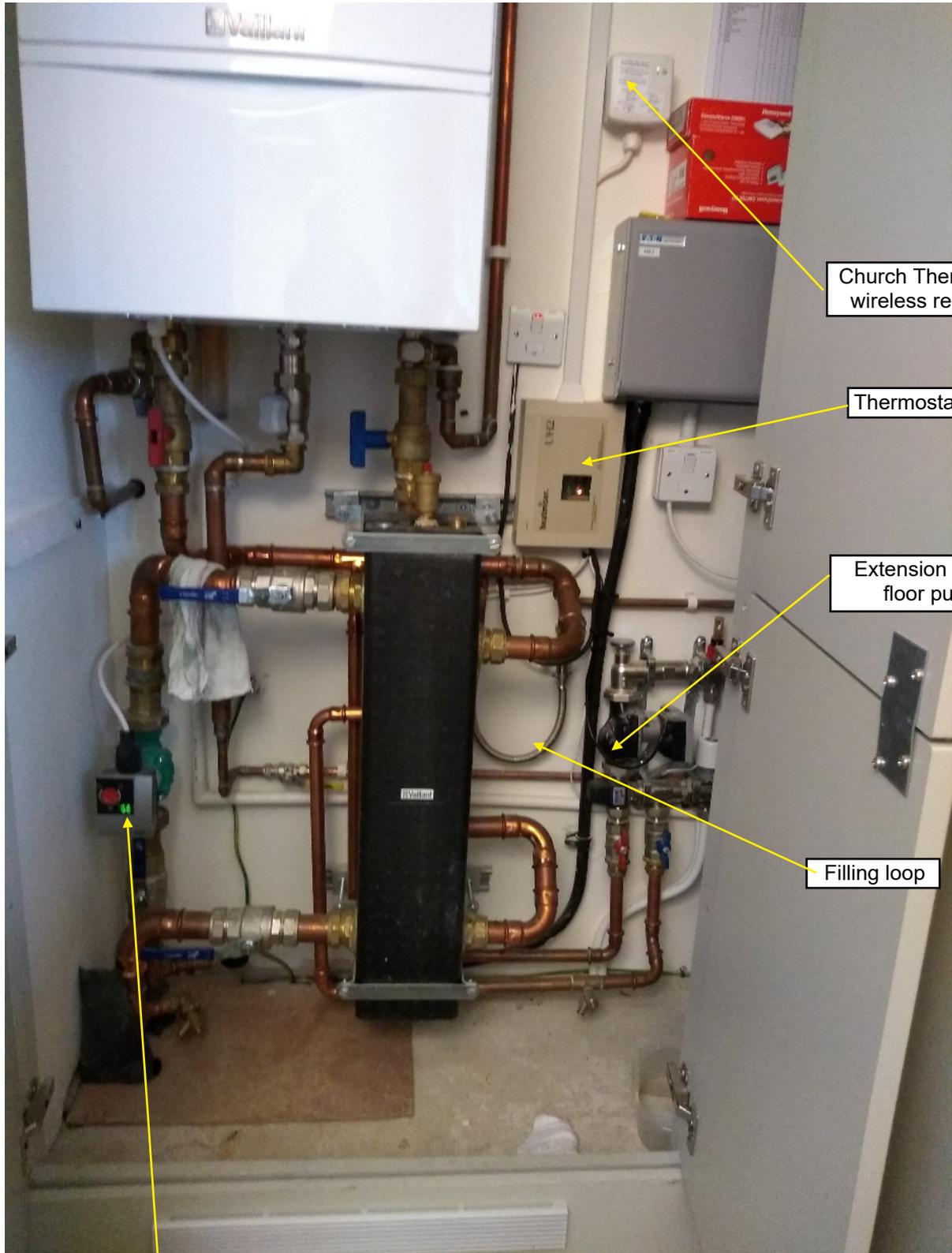
Thermostat 2 switches the fan off when an incoming air temperature of approx. 20°C is reached.

As the air is drawn into the units it passes through a filter mesh which traps any dust etc. This should be cleaned regularly (annually?) To keep a good airflow through the blower.

The Church wireless thermostat

The first thing to know is that this is not the unit supplied by the installers which did not have a "party" mode. The original unit was swapped with the unit at St. Francis. The only issue that this causes is that if it needs to be "re-paired" with the receiver it has to be done manually. Generally speaking the thermostat should not need changing as it is specifically set to heat the church for the Sunday service. This is accomplished by initially getting the temperature to 10°C early on Sunday morning and then boosting to 18°C a few hours before the service. If other heating is required it is best done by the use of the "party" mode.

St. Catherine's Boiler installation



Church Thermostat wireless receiver

Thermostat controller

Extension under floor pump

Filling loop

Pump for church