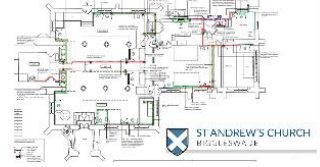


Heating at St Andrew's

Project to replace and develop St Andrews heating system



Launch Presentation – Sunday 19th February 2023

Introduction

The need for a heating project at St Andrew's has been brought about by -

- **Old out of date boiler**
- **Old pipe system in church**
- **The need to move towards carbon reductions**
- **Efficiencies offered by more modern equipment**
- **Align with future development**

Out of date boiler

Our Current boiler has now been around for a long time, it was original installed, probably in the 1960's if not before. It originally was fired by fuel oil and a large green tank used to sit next to the link between the chapter house and the North door of the church. It was converted to gas at the end of the 1970's.

The boiler failed its Gas test at the end of 2020 and we were advised that it was well past its useful life. We had hoped at this stage that we could simply change the boiler to new modern boilers, that would be more efficient, and that by inserting a heat exchanger that we could use the existing pipe work in the church.

Old pipe system in church

We knew that the system was using water and so it was prudent to carry out a pressure test of the current pipe work. This quickly revealed a leak below the trinity altar and by lifting the floor of the alter we found that the leak had been present for some time. The leak was repaired and the system retested.

This time the pipework held up, however inspection of the pipe that had been removed revealed that the pipe work had become very very thin and this was an indicator that we needed to go further than just changing the boiler.

At about the same time the diocese launched a heating review of 4 churches within the diocese and St Andrew's was picked to be part of that review. The review was conducted by a diocesan heating advisor from Worcester Diocese. Her recommendations were that we should renew our whole system rather than try to use our old pipework.

The need to move towards carbon reductions

As with the rest of the world there is a recognised need to reduce our carbon foot print and thus reduce the amount of Carbon that we are emitting into the atmosphere, causing global warming. To do this we need to look at different, modern ways to heat the church. Ground Source heating or Air Source heating are beginning to offer a sustainable alternative, however these technologies alone would not be able to supply the amount of heat that we need to heat the church.

These technologies, however if introduced into the system would reduce the amount of heating required by gas and so lower the amount of Gas we used and therefore the amount of Carbon that we emitted.

Efficiencies offered by more modern equipment

It is true to say that installing the new system will begin us on the journey of Carbon reduction and indeed cost reduction. New equipment will be a lot more efficient than our current boiler. A lot of heat currently goes up the chimney.

Align with future development

The Church throughout its life has never stood still in terms of development, and this will carry on into the future, we must be careful that we do not put barriers in the way of future development work.

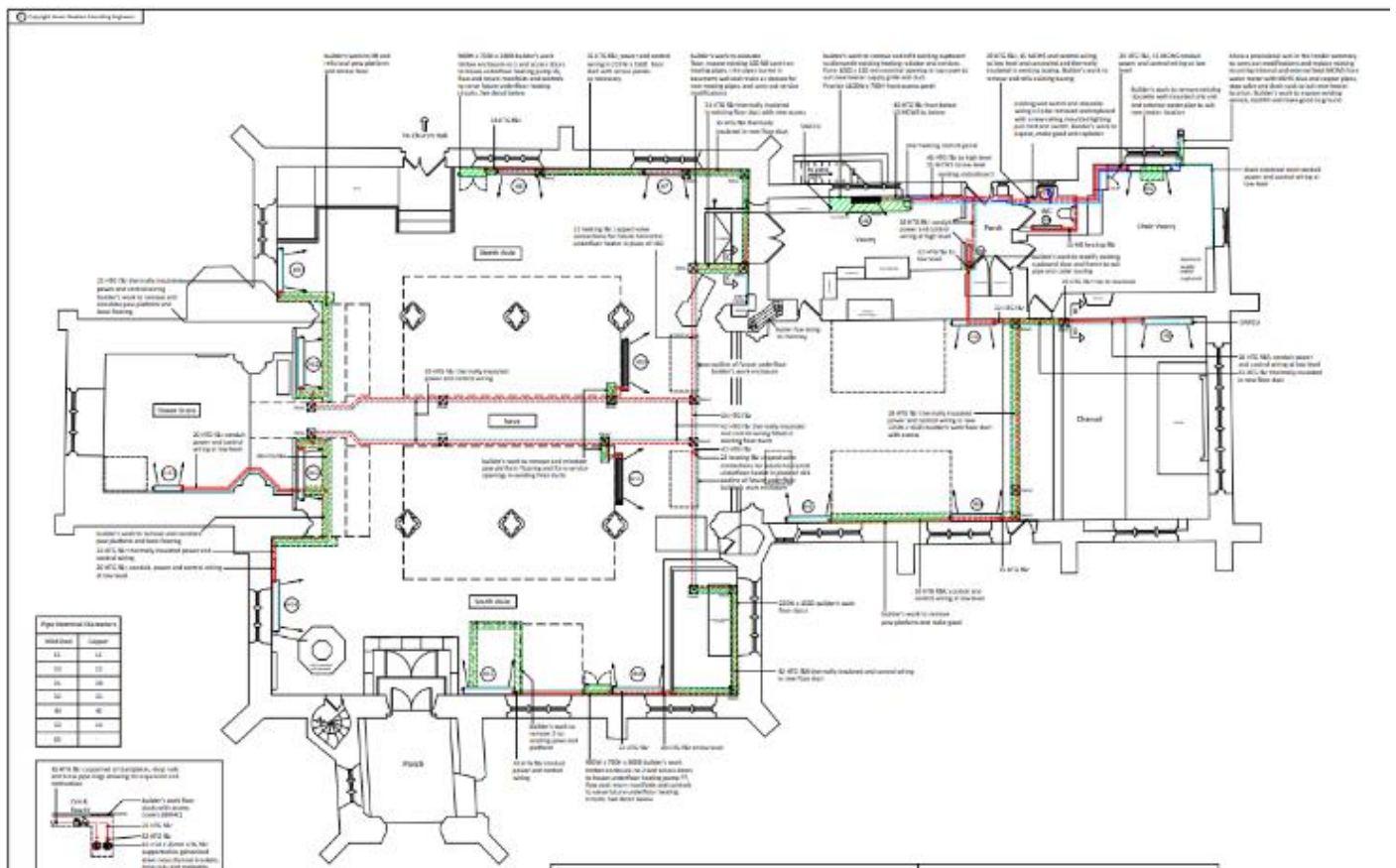
One development that would significantly further improve efficiency, and one that is recommended by the Church of England, is to move to underfloor heating. This type of heating focuses the heat onto the people rather than trying to heat the space around people.

Radiators on the side walls will push heat out, but quickly that heat will head towards the top of the building. Pipes running along ducts in the floor will also emit heat, but this again will quickly head towards the ceiling.

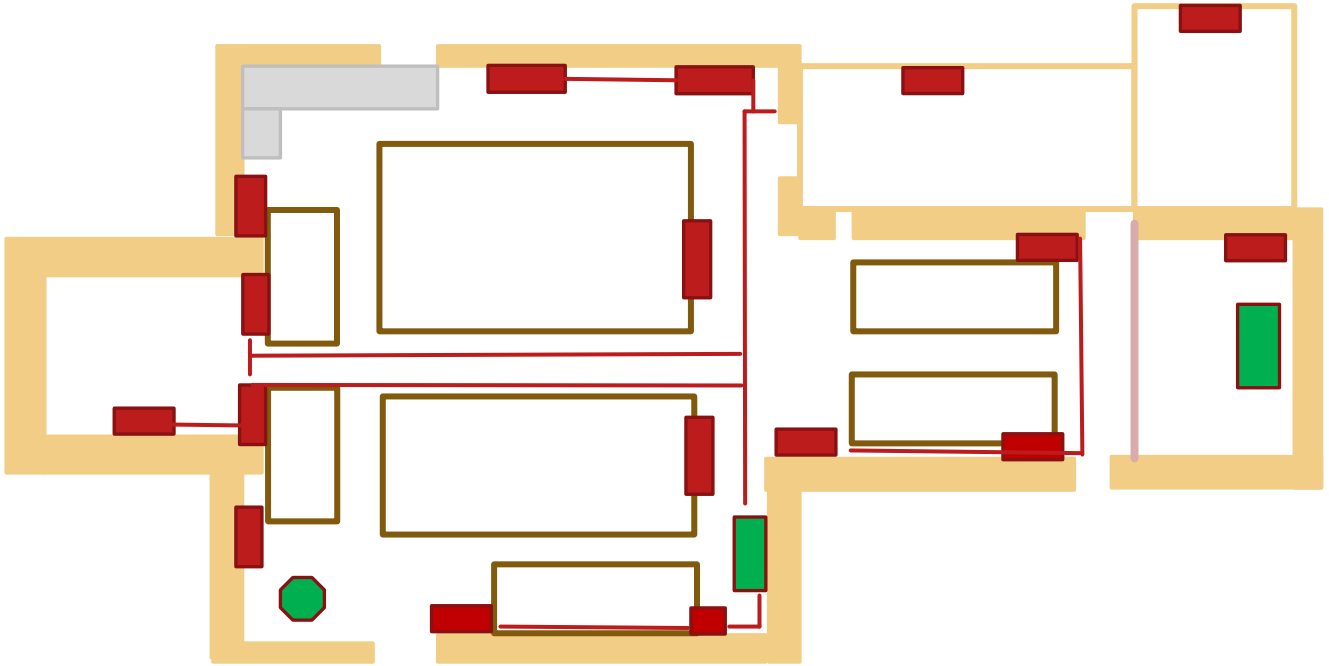
Underfloor heating has the advantage of “heating the person” as it starts beneath your feet where you sit, and whilst the heat still heads upwards this is via the person.

We are installing the necessary equipment into the new scheme that will allow an underfloor system to be included at the earliest opportunity.

The System



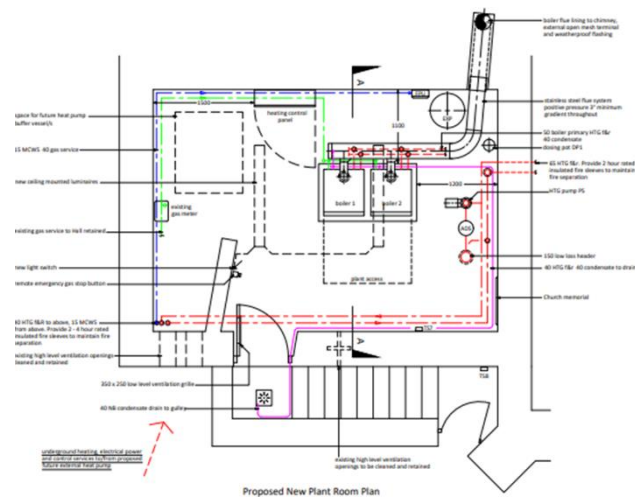
This is the drawing of what the system will look like, most of this actually won't be seen, however a simpler diagram may be thus.



The Maroon shapes are the new radiators, joined together with concealed pipe work.

The Boiler House

Quite a lot of work will be carried out in the Boiler House, where the new boilers will be housed and control equipment fitted.



So what will it cost?

The project has still to go out to tender, this will give use the exact cost, however it is estimated that this will cost in the region of £200,00.

This is a lot of Money!

How will we raise this amount?

- We will first commit the whole project to God
- We will create an appeal
- We will apply for Grants
- We will offer for sale bits of the system, like a metre of pipe work, a radiator or even a boiler.
- We will run a few fundraising events, Beetle drives, Cake stalls, Concerts etc
- We will call on our reserves

And we need your help!

- We need ideas and people to run fund raising activities.
- To buy a few of the items that we offer for sale
- And most urgently we need people to join a team to help write grant applications (all training given)