Hi Nicky,

Thank you for inviting me to look at the requirements of the Burwell Hall building.

Although we install many heat pumps, in this case I think one would be a poor match to the property. Not only would all radiators need to be replaced with vastly larger ones but the pipes as well would have to be upgraded. You would need 2x 12kw minimum or a 3-phase GSHP which you do have the power for.

The rough cost for an air source solution here is £30,000, for a ground source likely over £50k. Given the price of commercial electricity contracts we are generally steering all but the very well insulated buildings away from electrification for now.

The Vitovalor is capable of running far hotter than a heat pump, it can output up to 80c while heat pumps have a maximum of 55c before you need a "high temperature" heat pump which is appropriately less efficient. Although the fuel cell and built in peak load boiler are capable of these higher temperatures they incorporate intelligent weather compensation to maintain the lowest temperature possible through modulation which increases the run time, maximises generation and comfort.

The Vitovalor is also one of the highest SAP rated appliances, only some high end ground source match it and almost no air source which means it will make the largest difference to a energy performance certificate.

We will use a plate heat exchanger to separate the old radiators and pipework, this means the new equipment is protected against existing corrosion and particles, we will also flush the existing system to maintain the radiators for as long as possible.

The work is expected to be started and finished within a week, the fuel cell side will be commissioned some time after we have completed the installation as it is done by the manufacturer.

VAT of 0% is added as the Vitovalor is a "renewable" product.

The generation of electricity by this unit may at times export to the grid but there is no mechanism by which a commercial owner can be paid for this. At some point in the future it may be advisable to look at battery storage if it turns out that a large amount of free energy is being exported.

Kind regards

Patrick