

## Under Floor Heating Project, WR65RQ

I am installing a mobile home in my garden and I think that UFH would be a good option. I see the advantages as being: effectiveness/efficiency; space saving; ease of installation; low impact on aesthetic of the space.

I would like to source everything I need from one supplier. I would also like to work with someone local honest, and trustworthy. Given what I have read whilst perusing the content on your website, UHS Ltd seems to fit the bill!

I intend to install the system as a self-install project (as with the rest of this mobile home project) although as the project expands to the point of overwhelming me, that could change!

What I definitely would very much appreciate however is a little advice

To give you a flavor: I'm installing something like this (although the details differ, for better/worse!)



This is where I was with my assembly 2 weeks ago before it started raining endlessly! I now have some of the roof done, but my progress has been slowed significantly!



Having done some reading and research and pondering, this is what I THINK I would like to do, although I'm happy to be told otherwise:

I intend to have a LPG Combi boiler for heating and hot water. The UFH will be the only heating; FWIW DHW would probably be a shower and sink in bathroom, and a sink in a small kitchen area. If feasible I would consider locating the boiler (and hence some/all of the controls, manifold etc) in a small outbuilding directly adjacent to my mobile home (see images later).

I imagine a multi zone UFH system of maybe 4 zones (again, you might convince me otherwise).

I would like to use battery powered RF/wifi thermostats and an associated receiver/wiring centre. This is primarily because I want to minimize the 240V wiring requirements within the mobilehome. Smarthome 'stuff' is of interest, but not a primary driver.

In terms of heating needs: I imagine the building will be well insulated by UK standards - hopefully airtight with 100mm celotex on roof walls and floor. But It is intended to be occupied by my elderly mother, so comfort is important.

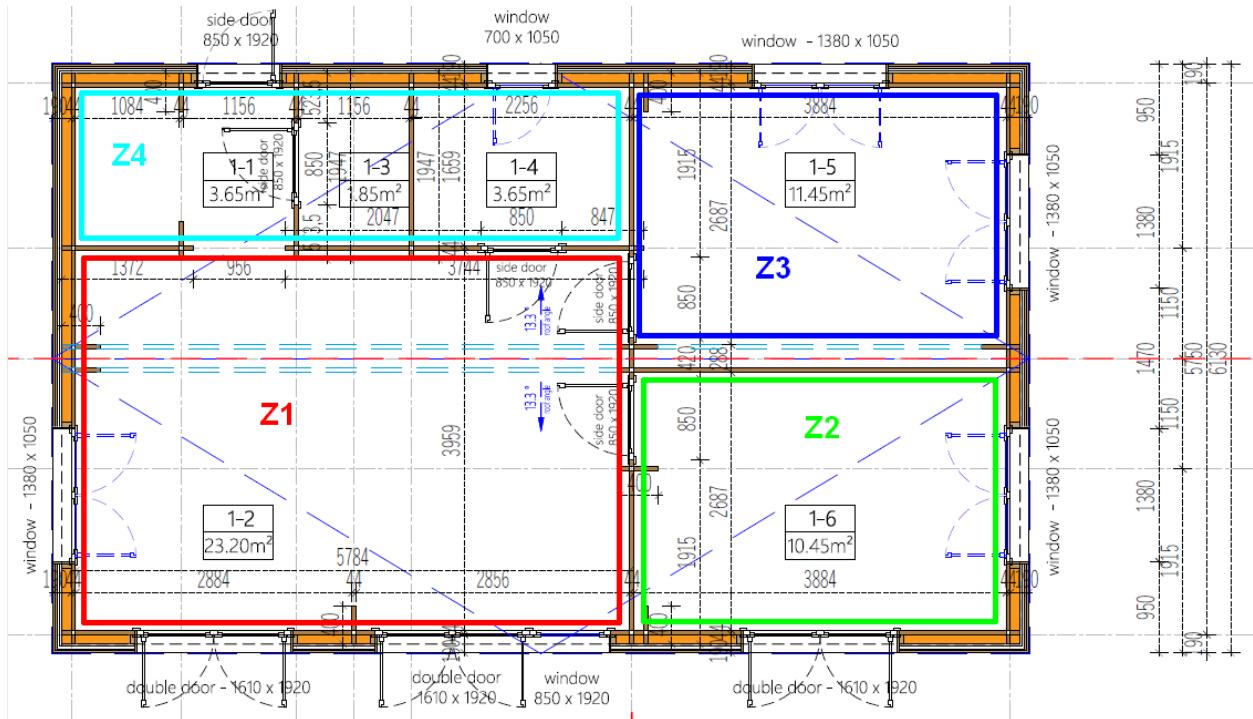
That's the basics. But as we all know: the devil is in the details!

Here is a general image of my subframe and subfloor construction (don't dwell on my bricklaying!). The subframe is 160mm deep; the subfloor sits on top and is 100mm deep. My original plan, prior to thinking about UFH, was to put 100mm of celotex GA4100 on top of the subframe between the subfloor joists (with an airtight membrane below and a vapour control membrane above), with 20mm T&G softwood flooring on top.





This is the floor layout with areas etc. I have added what I initially thought might be 4 zones. Z1 is the living space. Z2 is an office/bedroom. Z3 is a bedroom for my elderly mother Z4 is a bathroom + small kitchen and utility space. Maybe this is too many zones? I thought Z1 and Z4 might be combined, if there was some major advantage to this. Equally Z2 and Z3 could be a single zone.



If the boiler (let's say, in the outbuilding 2m to the left of the mobile structure) can be separated from the manifold/controls, such that the manifold could go in the bathroom (space 1-4 on the above), I thought this might simplify the pipe layout. In this scenario the boiler-to-manifold pipe run could be under the structure (and thus well insulated!) or be inside (mostly) and run along the central backbone of the structure (dashed red line in above; pale blue dashed line are the central subframe beams).

Ultimately, I could also put the boiler in the building, if it made everything simpler. I can certainly see the advantages with respect to getting hot water faster!



