# Borders Green Energy

Intelligent interior climate solutions

# Underfloor Heating

## Details Required

☐ ***Type of heat source you intend to use***

Whether you're using a boiler or a heat pump to supply your underfloor heating and hot water, we need to know so that we can supply the correct components should the temperature of the heating water need to be blended down. Since 2008, almost all of our customers have installed a heat pump as their heat source.

☐ ***Floor plan for each floor***

The floor plans will show us how the rooms are laid out, and potential locations for the equipment.

☐ ***Elevation drawings***

Elevation drawings show the positions and sizes of windows and doors, which enable us to accurately calculate the heat loss of the building.

☐ ***U-value information for the external walls, floors, windows, doors, and roof***

It's all about insulation, as you'll read in our blog. Again, this is important information for calculating the heat loss of the building.

***General***

☐ Location of your project.
☐ Your name, current postal address, and telephone number.
☐ Planning application number, if possible.

## Comparing Quotes

***Allowance for low temperature heat source***

When it comes to calculating the quantity of pipe we put in the floor, we always calculate for a low temperature heat source at 35°C, even if you're installing a boiler initially. This means that the pipe is normally spaced at 100 - 150 mm centres, which future-proofs a building to allow for a change to a heat pump in the future. Wider pipe spacing would result in inadequate performance. We would obviously recommend installing a heat pump in the first instance because of their energy efficiency, and getting away from using fossil fuels. Even if you're installing a heat pump from the outset, some other major underfloor heating companies will calculate your floor pipe for a temperature of 45°C and a wider pipe spacing in order to save money on materials. Bearing in mind that heat pumps operate most efficiently at 30 - 35°C, designing pipe for a higher temperature means your heat pump won't be working at its most efficient, costing more to run than it needs to. Furthermore, if you run your heat pump at 45°C rather than 35°C the energy efficiency star rating of the heating system will reduce from the maximum 6 stars, to 4 stars.

☐ Check that the other company has quoted for a maximum flow temperature of 35°C, thereby awarding you 6 stars for the energy efficiency of your system.

***Quantum Control Thermostats***

Quantum control thermostats allow you to set individual times and temperatures for each room/zone. You can also include a hub in the system to enable you to control your heating remotely. The thermostats learn the heating characteristics of the rooms they're in, and will bring the room to temperature by the time you have set. For example, if you want your kitchen at 21°C by 6.30 a.m., the system will calculate when to call for heat in order to make it so. The water supply temperature is automatically adjusted.

☐ Check what controls option the other company has included in their price.

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**Reduce your carbon footprint to a fingerprint.**

***Individual room controls***

On your behalf, we won't compromise on the efficiency of your system; our main driving forces are customer satisfaction and energy efficiency. We simply don't want you calling us after your first winter to say that you're disappointed with the performance of your system. As a result, we always include individual thermostats for the major rooms, though smaller rooms like a WC or small hall, may be included with a larger area of similar temperature. We **never** have bedrooms and en suites/bathrooms on the same thermostat because most people like a cool bedroom and a cosy bathroom, so it's simply not appropriate to do so.

❑ Check that the other company has not linked a number of rooms to be controlled by one thermostat. Even a small en suite should be separately controlled from its adjoining bedroom.

## General

Our underfloor heating quotes will contain and be accompanied by all the information you need to know what is included, excluded, and what needs to be done by others before and after installation. This includes details of the way the floors should be constructed, which is information that should be passed on to your architect or structural engineer. Because not all underfloor heating systems are the same, **this information is absolutely essential** for your architect, and then your builder and joiner who will have to do the work to prepare the floors.

Our UFH is installed such that the floor pipe is in full contact with the thermal mass of your screed, whether that's concrete; a liquid pouring screed; or, in suspended timber floors, a dry sand/cement (biscuit) mix. Please see our floor construction diagrams for diagrams and photo galleries.