New Heat Solutions GEOTHERMAL HEATING SPECIALISTS

Water Funge igship

Gortnahoe, Thurles, Co. Tipperary.

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18/12/16

Ken McCullagh. Clonlea Lodge, Ballinteer, Dublin 16.

Quotation for underfloor heating - Supply and installation Kitchen/Living & Utility Next Door.

Heat sources:

Air Source Oil Boiler

Quantity	Details				
230m	17mm POEC Double Oxygen Barrier Piping				
1	Underfloor Manifold				
3	Ports				
28m	Underfloor quick Track & Pipe Staples				
1	High Head Circulating Pump				
1	Motorised valve				
1	Room thermostat and integrate to existing oil & radiator system				
1	Under floor temperature mix valve				
	Flow and Return pipework - from oil boiler to underfloor manifold				
	Fixtures and fittings				
	All Materials and Labour	1,251.79			
	Plus Vat @ % 13.5	168.99			
	Tota	l € 1.420.78			

- Quote is valid for 90 Days.
- The room stats are optional but not essential. The master controller would be controlling the complete house; this is normal and also the most efficient system.

Please note:

- 1. The Piping above is 17mm diameter double oxygen barrier piping.
- 2. The amount of piping required is based on 6" & 4" spacing.
- 3. Quote is based on drawings provided at the time of the quotation.
- 4. Quote does not include Insulation or the placing of insulation.

- 5. Recommended would be two layers totalling 150mm of minimum high-density insulation on base, Use Xtratherm or Kingspan, with 25mm edge/ perimeter insulation for the underfloor slab.
- 6. 50mm insulation is sufficient on the first floor slab.
- 7. On all floors the edge insulation is also required (25mm will suffice).
- 8. Total area to be clear of all materials prior to our arrival for the installation.
- 9. We recommend between 75 to 125mm of concrete screed to be used. Whatever depth you go for, it is vitally important that the depth remains constant across the complete floor area.
- 10. A number 10 aggregate is a superior final cement pour rather than standard readymix. It bonds around the pipe better and has better thermal characteristics.
- 11. All room stats (where supplied) will be digital.
- 12. The temperature control will be integrated to the heating schedule of the existing system while maintaining a base temperature in the event that the radiator system is not used.
- 13. Locate the controller as agreed at first fixing, we need to liase with the electrician at this time (this will be installed by your electrician for RECI purposes)
- 14. Controls include all time clocks etc for the underfloor **and** the hot water cylinder.
- 15. Where stud work is to be nailed to the floor, we need to avoid these studs with the piping, to this effect, all walls to be marked out clearly in advance
- 16. All sewers, services and wastes to be fitted prior to insulation installation.

IMPORTANT

The above includes all of the controls, motorised valves and pumps, which will be required for the set up of the hot water & under floor circuits.

Terms of payment:

- 1. 75 % Payment on installation of underfloor piping, or appropriate zone / area.
- 2. 25% on completion of commissioning.

Any queries or clarification that you may need please contact us at 0862265465.

Regards,		
Eric Norton		