

**Anne-Marie McCullagh**

Clonlea House  
Balinteer Road  
Balinteer  
Dublin 16

Date 28-Nov-16

Project Address: Anne-Marie McCullagh  
Quotation Number: QRD1107  
Project Size: 128.43M2  
Heating Source: Fossil Fuel Boiler  
Project Manager: Steven Nelson

Dear Sir/Madam

**Re: Underfloor Heating System at Anne-Marie McCullagh**

Firstly, I would like to thank you for your enquiry and for allowing us to provide a quotation for an Underfloor Heating system on the above mentioned project.

I have set out a quotation based on the plans and specification provided.

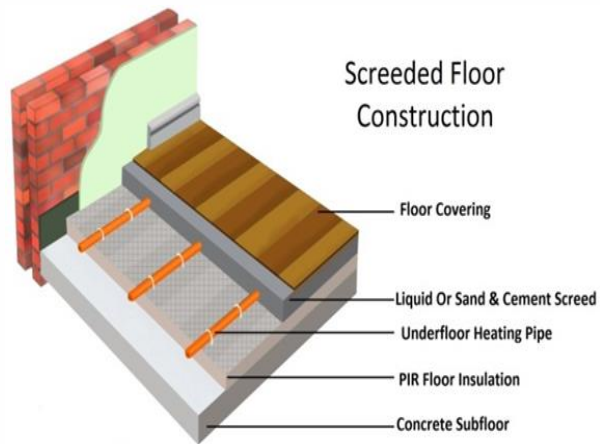
Our service is backed by a full Employers Liability, Product and Public Liability as well as Professional Indemnity Insurance.

I trust that we have interpreted your requirements correctly, If you require any further help or have any queries, please do not hesitate to contact me.

Yours Sincerely

Steven Nelson  
Warmth Ltd

## Floor Construction



Basic system for fixing Underfloor Heating Pipe (with push in pipe staples) to rigid insulation panels on a solid floor slab before screeding

The concrete screed is laid over the top of the pipes which sets to provide a solid floor ready for your chosen floor covering

In screeded floors, the screed acts to diffuse the heat across the surface, providing an even temperature at floor level.

## Underfloor Heating Proposal

### Ground Floor

Underfloor Heating	Qty
Area M2	74.99m2
16mm Polyethylene Underfloor Heating Pipe with 100% Oxygen Barrier	550m
Push-in Pipe Staples for PIR Insulation	1000
Manifold Assembly Complete	1
Thermoelectric Actuator Heads	7
CAD Design	1
<b>Supply &amp; Design Cost:</b>	<b>€723.00 ex VAT</b>
<b>Installation Cost:</b>	<b>€582.00 ex VAT</b>
Recommended Controls	Qty
Heatmiser PRT Programmable Room Stat	4
Heatmiser UH3 8 Zone Wiring Box	1
<b>Controls Cost:</b>	<b>€243.40 ex VAT</b>

### First Floor

Underfloor Heating	Qty
Area M2	53.44m2
16mm Polyethylene Underfloor Heating Pipe with 100% Oxygen Barrier	400m
Push-in Pipe Staples for PIR Insulation	800
Manifold Assembly Complete	1
Thermoelectric Actuator Heads	5
CAD Design	1
<b>Supply &amp; Design Cost:</b>	<b>€536.00 ex VAT</b>
<b>Installation Cost:</b>	<b>€415.00 ex VAT</b>
Recommended Controls	Qty
Heatmiser PRT Programmable Room Stat	4
<b>Controls Cost:</b>	<b>€181.40 ex VAT</b>
<b>Total cost of proposed Underfloor Heating System</b>	
<b>€2,680.79</b>	<b>ex VAT</b>

## Upgrades

### Included in your quote:

#### Heatmiser PRT Programmable Room Stat

The Heatmiser PRT is a programmable room stat and programmer in one, providing up to 4 different temperatures at different times of the day. Energy Saving What's more, the PRT includes Optimum Start which is an energy saving feature designed to reduce the amount of heat up time required by automatically learning the heat up time your home needs.



### Control Upgrade:

#### Heatmiser PRT-WTS Wireless Room Stat

Heatmiser PRT-WTS is our programmable wireless thermostat with Touchscreen display, ideal for those looking to relocate their existing thermostat. Working in the Office, Watching TV in the Living Room? The Touchscreen Wireless Thermostat series is supplied with a wall mounting plate however you are more likely to make use of the desk stand as it allows you to decide exactly where to place the thermostat, with a range of up to 100 meters (open space)

Cost to upgrade from:  
€ 120.00



#### Heatmiser Neo Wireless Room Stat

Cost to upgrade from:  
€ 210.00

The Heatmiser neoStat offers you a smarter way to control your heating from anywhere! Neo offers control over both heating and hot water via web browser, smartphone & smart watch apps and thermostats. The neoStat communicates to the neoHub and other neoStats within your home, to create a fully controllable network system of your home heating.

It includes features such as Geo Location, where you can set a Leaving and Returning trigger. When you pass these triggers, Neo will adjust the temperature in your home automatically.

Geo Location on Neo works across multiple users, so the heating will only turn off when the last person has left and will detect when the first person is returning





## **Specification and Warranties**

Underfloor Heating System	All of our Underfloor Heating Systems are designed to comply with BS EN 1264 & CIBSE Underfloor Heating Design Stipulations
Underfloor Heating Tubing	Our 16mm cross-linked Polyethylene with integral oxygen barrier is manufactured to the DIN 4726 & BS 7291 Standards. It also has full TUV approval. The Pipe carries a 75 year manufacturers defects warranty
Manifolds	The Reliance Underfloor Heating Manifolds are manufactured from Duplex 304 Stainless Steel. On the Flow Bar, each Port is equipped with a Flow Setter, allowing for accurate Flow Rate settings. Each Port on the Return Bar contains an Integral Control Valve allowing for electronic control. A 5 year manufacturers warranty is provided with all manifolds
Controls	All Controls are provided with a 2 year warranty
A-Rated Pumps	With the 2013 change in European Regulations, all standalone circulation pumps must be A-rated. All of our A-rated pumps come with a 2 year warranty
CAD Design	All Underfloor Heating Systems are designed by a fully qualified Engineer on the latest software. We provide tube length, pipe spacing, heat outputs, flow rates and head loss. Our Design is backed with Professional Indemnity Insurance
Installation	We carry out the System Installation to the highest standard using skilled Installers. All pipework is laid and plumbed up to the Manifold and pressure tested, leaving the System under pressure during and after the screed has been laid.
Balancing & Flow Rate Settings	We have allowed for an Engineer to attend site for the final commission of the System before Handover. This would include balancing the System and setting the Flow Rates to suit the 'As Fitted' CAD Design

## **Building Requirements**

### **Sand and Cement Screed**

We recommend that all Sand & Cement Screeds should be laid to a minimum depth of 65mm over the floor insulation. This is subject to Building Control guidelines.

### **Liquid/Hemihydrate Screed**

We recommend that all liquid screeds should be laid to a minimum depth of 50mm over the floor insulation. This once again is subject to the supplier's guidelines

### **Screed Drying**

The Underfloor Heating should not be used to accelerate the screed drying process. The screed will take a minimum of 21 days.

### **Sub-floor Preparation**

A clear, clean level subfloor should be provided to insure floor insulation panels can lay flat and fit close together for maximum effect.

### **Floor Covering Resistance**

The Warmth CAD Engineer should be provided with a list of anticipated floor coverings and resistances. When these are not provided a default value of 0.1m<sup>2</sup>K/w will be used.

### **Wooden Floors**

For the protection of wooden floor coverings, the floor temperature should never rise above 27°C. This should be achieved by professional system design.

## **Responsibilities Schedule**

Task	Warmth Ltd	Mechanical Contractor	Electrical Contractor	Main Contractor
Subfloor Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply & Installation of DPM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply & Installation of Insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply & Installation of Vapour Barrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply & Installation of Edge Insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply of Underfloor Heating System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Installation of Underfloor Heating System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure Testing of Underfloor Heating System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floor Screeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Supply of Underfloor Heating Controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wiring & Installation of Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Connection to Heating System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final System Inspection & Balancing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



### **Exclusions**

All Builders work is excluded from our contract. This would include marking out, knocking and drilling through walls, notching battens and making good.

Temporary mounting boards are to be put in place prior to installation in instances where walls are not in place.

Unless specifically listed in the Equipment Schedule, controls and pumps have not been for.

It is the Responsibility of the Main Contractor to provide the following:

- Safe dry storage for materials
- Water supply for System Testing
- Adequate lighting
- 110V Electric Supply

Please note, if items are not listed in the Equipment Schedule, it is assumed that they are excluded from the price. Please feel free to contact us for necessary clarification.

### **Terms**

- This Quotation is Valid for 120 days from the date of issue
- The above Quotation is subject to current rate of VAT which will be charged on invoice.
- Availability is typically between 1-2 weeks from order date.
- Our acceptance of the order is subject to a full Credit Check and account status.
- Payment terms shall be agreed at point of order.
- This Quotation is based on our Terms & Conditions outlined below.

### **Extras and Variations**

Should we be required to carry out additional works, or incur waiting times, these will be charged on a day by day basis as set out in our Terms and Conditions of Business.

Variations to the Contract that incur costs will be re-quoted and advised in writing prior to the work commencing whenever possible.

CAD drawings will be issued on receiving the order (unless otherwise requested) showing pipework layout, system schematics and electrical diagrams. Any required alterations should be issued in writing.



## Terms & Conditions of Sale

### Warmth (Ireland) Ltd

Company Number: IE586643

#### 1. Definitions

"The Company" means Warmth (Ireland) Ltd of Ardee Business Park, Hale Street, Ardee, Co Louth.  
 "The Conditions" means the standard conditions of sale set out in this document and (unless the context otherwise requires) includes any special terms agreed in writing between the Company and the Customer.  
 "The Contract" means the contract for the sale and the purchase of the Goods and/or Services  
 "The customer" means any person contracting with the Company  
 "Services" means any service which the Company is to provide in accordance with these Conditions  
 "The Goods" means the Goods (including any instalments, of the goods or any parts for them) which the Company is to supply in accordance with these Conditions  
 "Writing" and any similar expression, including a facsimile transmission, email, and other comparable means of communication

#### 2. Application

a) The Company's conditions of sale are set out below to the exclusion of all other conditions, and shall be incorporated in every offer, quotation, acceptance, and The Contract for the sale or supply of Goods or services by the Company. No addition to, or variation of these Conditions will bind the Company unless it is specifically agreed in Writing and signed by the Director of the Company. No agent or person employed by, or under contract with The Company has any authority to alter or vary in any way these Conditions except as stated above  
 b) If these terms are so varied, subject to the express terms of that variation, these Conditions shall continue to apply as if that variation were incorporated into this Contract. If any document placing an order on The Company includes or refers to other conditions of contract then no account shall be taken of such other conditions.  
 c) Any typographical, clerical, or other error or omission in any sales literature, quotation, price list, acceptance of offer, invoice or other document or information issued by The Company shall be subject to correction without liability on the part of The Company

#### 3. Acceptance of orders

a) All offers and quotations by The Company are given on the basis of prompt acceptance by The Customer and shall remain open for acceptance for a period of 90 days unless revoked, withdrawn or verified by The Company prior to such acceptance  
 b) The Company shall sell and The Customer shall purchase The Goods in accordance with The Company's written quotation (if accepted by The Customer), to the exclusion of any other conditions subject to which any such quotation is accepted or purported to be accepted, or any such order is made, or purported to be made by The Customer  
 c) A non-refundable design deposit of 10% in The Company's quotation ("the deposit") shall be payable when placing the order. Cheque, cash, credit/debit card or interbank transfer may make payment of the deposit  
 d) No order submitted by The Customer shall be deemed to be accepted by The Company unless and until confirmed by The Company in Writing  
 e) The Customer shall be responsible to The Company for ensuring the accuracy of the terms of any order submitted by The Customer, and for giving The Company any necessary information relating to The Goods within sufficient time to enable The Company to perform The Contract  
 f) Any discrepancies within the quotation must be notified in Writing to The Company within seven days or the Company is entitled to assume that all the provided details are correct and accurate  
 g) After the Company has acknowledged the Customers order, the Customer is not entitled to cancel the Contract without the written agreement of the Company. The Customer must pay a fair and reasonable amount to cover the work carried out to date by the Company

#### Prices and charges

a) Until an order has become binding, all prices are subject to change without prior notice  
 b) The prices quoted by the Company are exclusive of VAT (unless otherwise stated)  
 c) After the order has become binding between the Company and the Customer, all prices are subject to increase due to unforeseen issues beyond the Company's control (including costs of materials, labour, transport, any taxes or charge imposed by the government or any other authority)

#### Invoices and payments

a) Unless otherwise stated by The Company in Writing, the gross invoice amount is due prior to delivery of the Goods  
 b) If the Customer fails to pay, the Company may cancel the Contract and cancel any other orders from the Customer  
 c) If the customer issues a cheque which is not honoured on presentation or if the Company deems it necessary to arrange special presentation of a cheque the Company reserve the right to debit the Customer with the cost of doing so

#### Delivery of goods

a) Delivery of the Goods shall be made by the Company to the Customer at an agreed time and date. If the Customer fails to take delivery of the Goods, the Company has the right to charge a fee for redelivery of the Goods  
 b) The Company shall not be liable for any loss, damage or expense arising from any delay in delivery however so caused  
 c) The Company reserves the right to make delivery by instalments unless otherwise expressly stipulated in the Contract, and these Conditions shall apply to each instalment delivery and any claim by the Customer in respect of any one or more instalments shall not entitle the Customer to treat the Contract as a whole as repudiated  
 d) If the Company failed to deliver the Goods (or any instalment) for any reason other than any cause beyond the Company's reasonable control, or the Customer's fault, and the Company is accordingly liable to the Customer, the Company's liability shall be limited to the excess (if any) of a cost to the Customer (in the cheapest available market) of similar goods to replace those not delivered over the price of the Goods  
 e) If the Customer fails to take delivery of the Goods or fails to give the Company adequate delivery instructions at the time sated for delivery then without limiting or any other right remedy available to the Company, the Company may store the goods until actual delivery and charge the Customer for the reasonable costs (including insurance of storage) or sell the Goods at the best price readily obtainable and (after deducting all reasonable storage and selling expenses) account to the Customer for the excess over the price under the Contract or charge the Customer for any shortfall below the price under the Contract  
 f) The mode of transport shall be at the Company's discretion. For deliveries outside Northern Ireland, the Company shall be entitled to charge all additional delivery costs to the Customer's account

#### Defective goods

a) Subject of the exclusions set out in (b) below, the Company warrants that the Goods will correspond with their specifications at the time of delivery and will be free from defects in material and workmanship from the date of delivery for the following periods  
 i) UHF Tube 50 (fifty) years  
 ii) Pumps and electrical components 2 (two) years  
 iii) Manifold 5 (five) years  
 iv) Solar panels 10 (ten) years  
 v) Heat pumps 5 (five) years  
 vi) Biomass 2 (two) years  
 b) The above warranty is given by The Company subject to the following conditions  
 i) The Company shall be under no liability in respect of any defect in the Goods arising from any drawing, design or specification supplied by the Customer  
 ii) The Company shall be under no liability in respect of any defect arising from wear or tear, wilful damage, negligence, abnormal working conditions, failure to follow the Company's instructions (whether oral or in Writing) misuse or alteration or repair of the Goods without the Company's approval  
 iii) The company shall be under no liability under the above warranty (or any other warranty, condition or guarantee) if the total price for the Goods has not been paid by the Due Date for payment  
 iv) The above warranty does not extend to parts, materials or other equipment not manufactured by the Company in respect of which the Customer shall only be entitled to the benefit of any such warranty or guarantee as is given by the manufacturer to the Company  
 c) A claim by the Customer which is based on any defects in the quality or condition of the Goods or their failure to correspond with specification shall (whether or not delivery is refused by the Customer) be notified to the Company within seven days from the date of delivery or (whether defect or failure was not apparent on reasonable inspection) within a reasonable time after discovery of the defect or failure. If delivery is not refused and the Customer does not notify the Company accordingly, the Customer shall not be entitled to reject the Goods and the Company shall have no liability for such defects or failure and the Customer shall be bound to pay the price as if the Goods had been delivered in accordance to the Contract  
 d) Where the Goods are returned by the Customer and accepted as defective by the Company, the Company shall at its option either repair or replace such goods without cost to the Customer or allow the Customer credit therefor the Customer shall not be entitled to make any claim in respect of such goods for work done thereon, transport claim, loss of profit on resale or in respect of any claim, loss, damage or expense whatsoever other than replacement cost

e) The Customer shall not be entitled to withhold payment by reason of an alleged minor defect  
 f) Except as expressly provided in the Conditions, and except where the Goods are sold to a person dealing as a consumer (within the meaning of Unfair Contract Act 1977) all warranties, conditions, and other term implied by statute or common law are excluded  
 g) Where the Goods are sold under a consumer transaction (as defined by the Consumer Transaction (Restriction on Statements) order 1976) the statutory right of the Customer are not affected by these Conditions  
 h) Except in respect of death or personal injury caused by the Company's negligence, or liability for defective products under the Consumer Protection Act 1987 The Company shall not be liable to the Customer by reason of any representation, or any implied warranty, condition or other term, or any duty common law under the express terms of the Contract, for consequential loss or damage (whether for loss of profit or otherwise) costs, expenses or other claims for consequential compensation whatsoever (and whether caused by negligence of the Company or its employees or agents or otherwise) which arise out of or in connection with the supply of the Goods or expressly provided in these Conditions

#### Risk and property

a) Risk of damage to or loss of the Goods shall pass to the Customer  
 i) In the case of goods too be delivered at the Company's premises, at the time when the Company notifies the Customer that the Goods are available for collection, or  
 ii) In the case of goods to be delivered otherwise than at the Company's premises, at the time of delivery or if the Customer wrongfully fails to take delivery of the Goods, the time when the Company has tendered delivery of the Goods  
 b) Notwithstanding delivery and the passing of risk in the Goods or any other provision of these Conditions, the property in the Goods shall not pass to the Customer until the Company has received full payment for the Goods and all other goods agreed to be sold by the Company to the Customer for which payment is then due  
 c) Until such time as the property of the Goods passes to the Customer (and provided the Goods are still in existence and have not been resold), the Company shall be entitled at any time to require the Customer to deliver up the Goods to the Company. Should the Customer fail to do so, the Company may enter the premises where the Goods are stored and repossess the Goods  
 d) The Customer shall not be entitled to pledge or in any way charge by way of security for any indebtedness any of the Goods which remain the property of the Company but if the Customer does so all moneys owing by the Customer to the Company shall (without prejudice to any other right or remedy of the Company) forthwith become due and payable

#### Installation

a) Where the Company provides installation work or advice to the Customer, it warrants that such work shall be done or such advice given with reasonable skill and care  
 b) The Company does not accept liability for any action or omission on the part of any approved installer or other person  
 c) It is the responsibility of the Customer to obtain any required planning permission and to ensure that the work to be undertaken complies with building regulations including any local building codes  
 d) The Company shall not be liable in respect of any waste or damage to or interference with any water supply whether public or private whether under the Environmental Protection Act 1990, the  
 e) Additional Works and Waiting times will be charged at a rate of £500.00 per day per 2 man squad

Water Industries Act 1991, the Water Resources Act 1991 or otherwise in connection with the supply or installation of Goods and it shall be the Customer's responsibility to ensure that any reasonable requirements in respect of water supplies and the presence on land of waste are complied with fully. If a claim is made against the Company under any of the above legislation then the Customer shall indemnify the Company against all loss, damages, costs and expenses awarded against or incurred by the Company in connection with the claim  
 e) The Company is not responsible for any electrical work. This is the responsibility of the Customer

#### Force Majeure

The Company shall not be liable to the Customer to the extent that fulfilment of its obligation to the Customer has been prevented, hindered or delayed by force majeure as herein after defined and without limiting the generality of the foregoing the Company shall be entitled to cancel delivery in whole or in part when it is delayed in or prevented from making delivering by strikes, lock-outs, trade disputes or labour troubles or any cause beyond the Company's control including, but without limitation, Act of God, embargo, or other Governmental Act, regulation or request, fire, accident, war, riot, delay in transportation, inability to obtain adequate labour, materials, or manufacturing facilities ("force majeure") and the Company shall not be bound to obtain in the market goods with which to replace goods delivery of which has been cancelled as a result of any of the mentioned events

#### Patents/Modifications and Improvements

a) In cases where the Customer provides drawings, designs, models or specifications, for the purpose of enabling the Company to fulfil the Contract, the Customer shall indemnify the Company against all actions, claims, costs, damages or losses arising from any infringement of letters patent, design, trademark or copyright protected by law in respect of such drawings, models or specifications or any Goods made or supplied by the Company in compliance therewith  
 b) The Company reserves the right to undertake such modifications or improvements to any of its products as shall be deemed necessary from time to time without any prior notification and such modifications or improvements shall not entitle the Customer to reject the Goods so improved or modified or any products previously supplied to the Customer prior to the modification or improvement being effected

#### Miscellaneous

a) A person who is not a party to the Contract has no right under the Contract (Rights of Third Parties Act 1999) to enforce any term of the Contract but this does not affect any right or remedy of a third party which exists or is available apart from that Act  
 b) Any notice relating to these Conditions shall be in writing and may be served or delivered to the party to be served in the case of a Company at its registered office and in the case of an individual at his address notified in writing to the other party from time to time and notices sent by first class delivery mail shall be deemed to have been delivered seven two hours after posting and proof of due posting shall be sufficient evidence of delivery

#### Returns

a) All goods delivered or collected should be checked to ensure all items are correct and you have the correct quantities. It is the responsibility of the Customer to check all items for damage. Goods found not be to be good condition due to transportation will not be the responsibility of the Company  
 b) In the event where the customer returns goods due to customer error (without limitation, over ordering, customer errors, goods no longer required) a 10% handling charge will be levied, the 10% charge will be calculated from the expected resale value of the goods returned, if the products are returned with incomplete packaging including but not limited to ripped bags, damaged boxes, incomplete paperwork, etc. will be subject to a further 10% charge to cover repackaging and restocking of the goods. Customers will also be liable for all delivery charges  
 c) All goods returned (as stated in section b) must be undamaged and in good order, including all packaging, manuals, fixtures, etc. If the goods are not in a condition for resale the goods will not be accepted for refund. It will be responsibility of the customer to arrange collection. Total Floor Heating can arrange for dispatch of the goods will be charged at the current rate of that date