





Dairy Cottage, 2 Kings Lane, Little Harrowden, NN9 5BL

Heating Installation Application

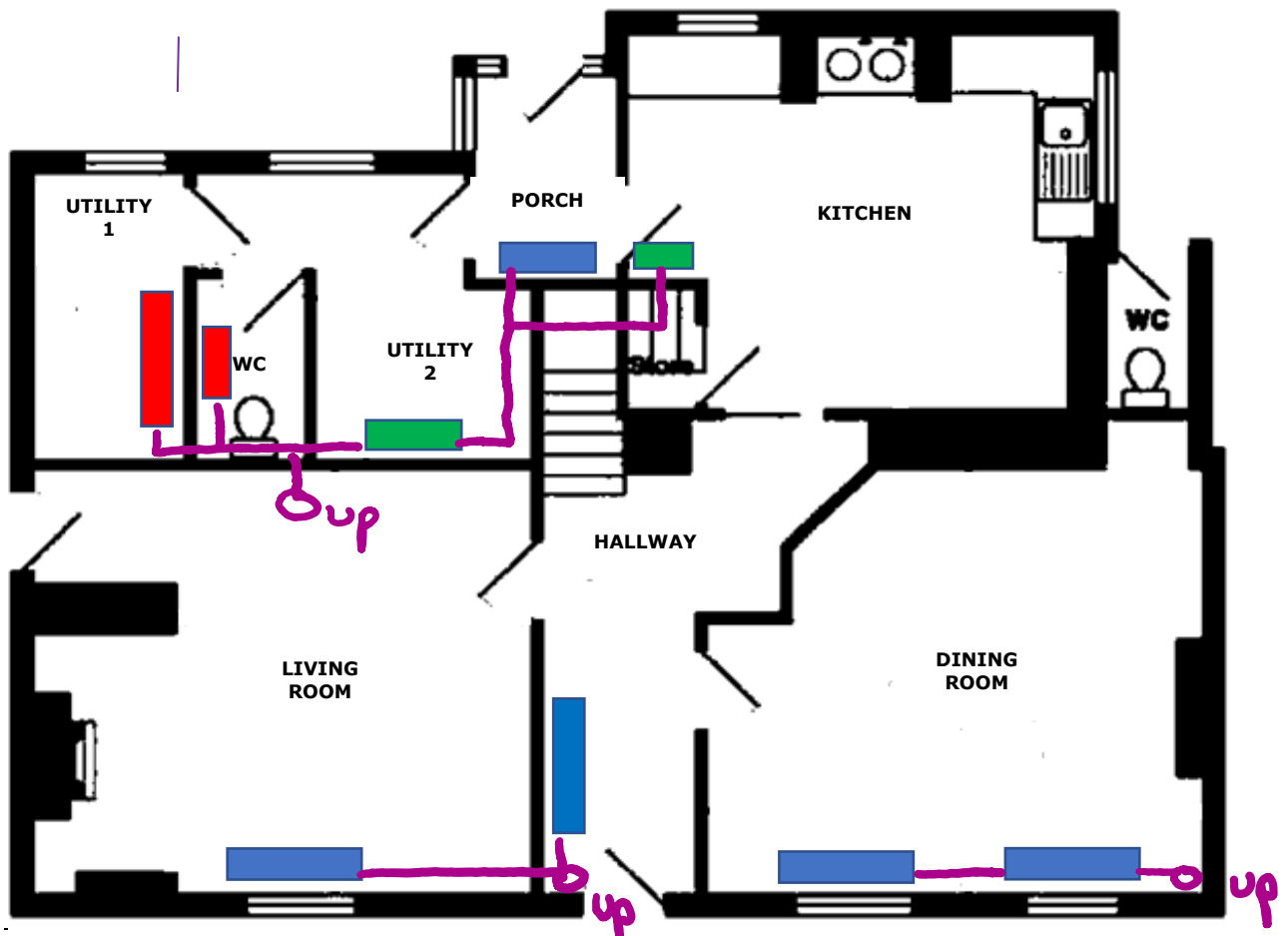
The purpose of this document is to identify the proposed heating system to be installed at Dairy Cottage, showing the location of all radiators and how the system will be installed. At present, there are storage heaters to the living room, hallway, bedroom 3 and first floor bathroom only. These will be removed as part of this installation.

Heating layout

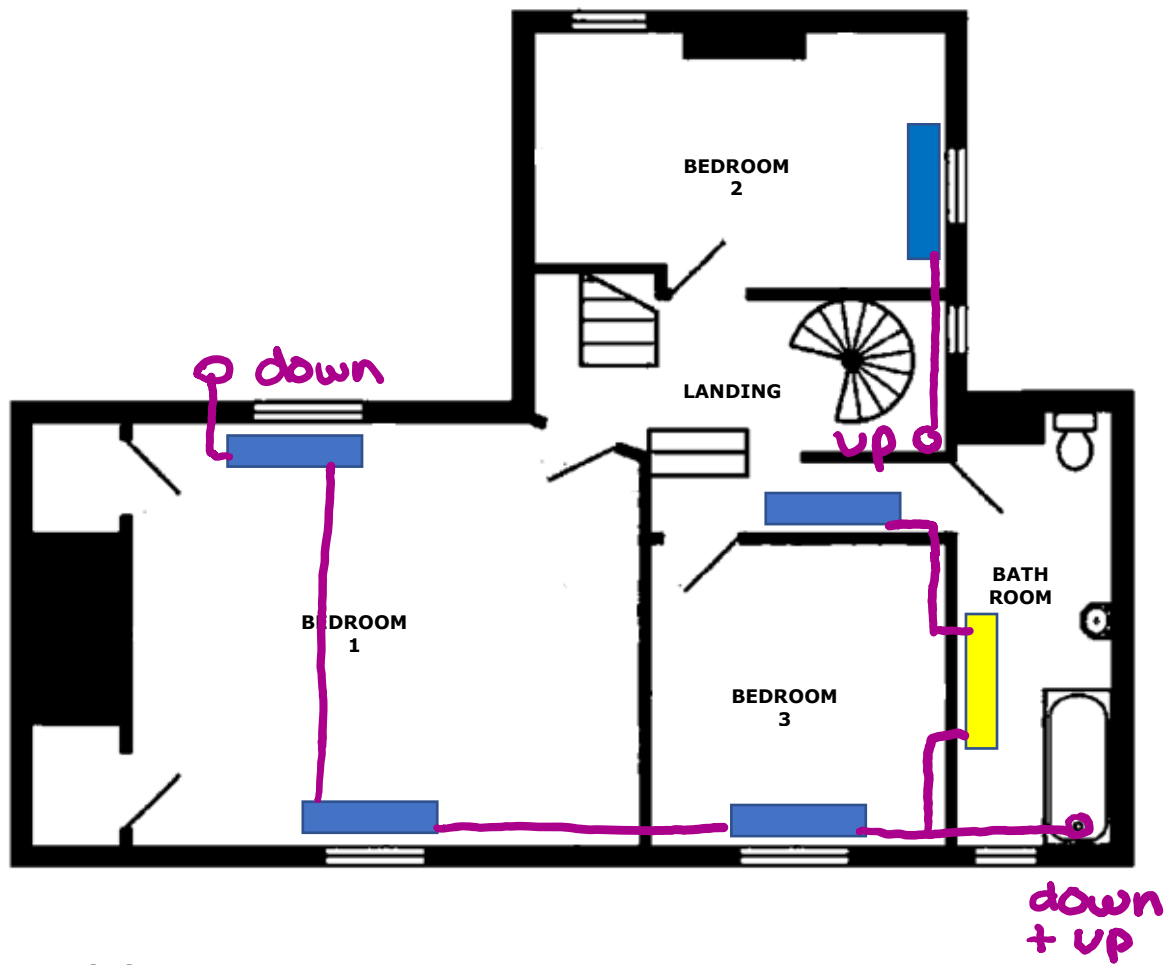
The following plans identify the radiator locations across the building and the pipe routes for the system installation.

KEY	
	Column radiator
	Standard radiator
	Vertical radiator
	Towel Rail

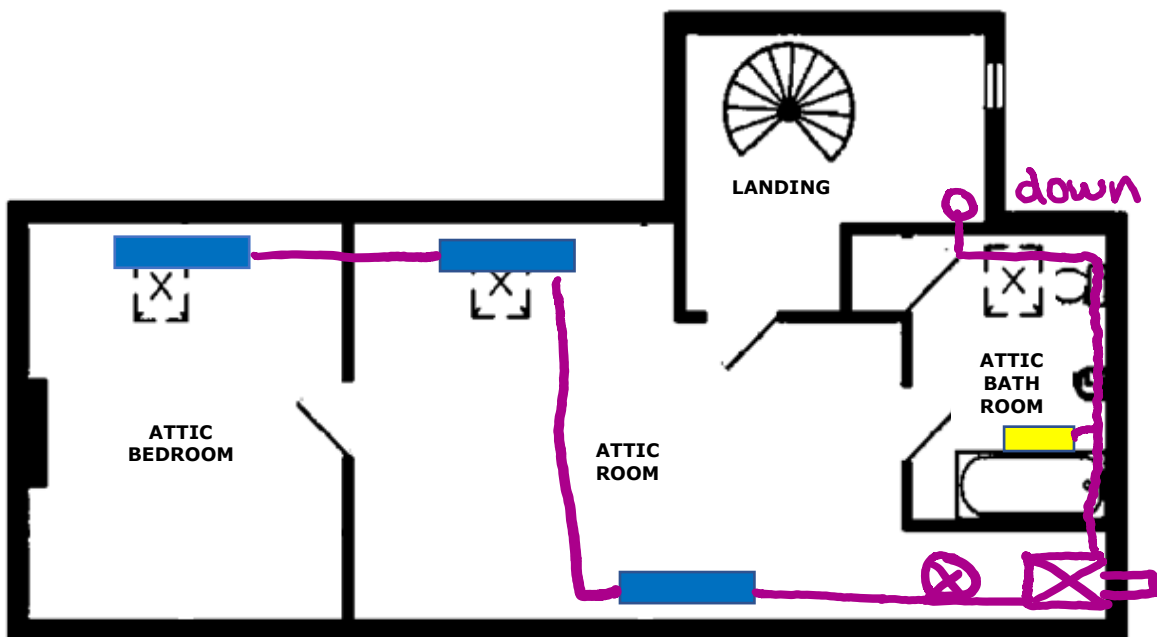
Ground Floor



First Floor



Second Floor



Methodology

The following section identifies the detailed scope of each room and how the above plans will be achieved.

Current house

The house is currently served by a combination of gas and electric services. There are electric storage heaters to the entrance hallway, living room, bedroom 3 and the first-floor bathroom only. All other rooms within the house are currently un-heated. Hot water is created by a gas supply to the Rayburn in the kitchen which heats the water via 28mm pipes running to the cupboard within the loft bathroom to the system tank. As part of the installation of the new heating system for the whole house, this old, inefficient and not full house coverage will be removed.

Proposed System

The house is proposed to be solely heated by gas via a boiler and unvented hot water cylinder system serving a combination of radiators and towel rails in each room. This system is the most efficient method of heating for the spaces and ensures heating is achieved in all rooms to provide a house habitable and ensuring the building doesn't have cold spots throughout which can lead to damp as is currently the case in the property. Both the boiler and water cylinder will be positioned in the loft space to a small area to the rear of the bathroom. The positioning of this allows the boiler to be positioned on the same external wall as where the house gas meter is currently located. This will allow a 22mm gas pipe to be neatly run from the gas meter up to the boiler on the 1st floor.

The required sizing has come following an assessment of the house heating requirements based upon the dimensions of each room, the results can be seen in the table below which show 21 watts is required for the radiators. This then equates to a 28kw boiler when adding allowance for heat loss across all pipework and cylinder coil allowance.

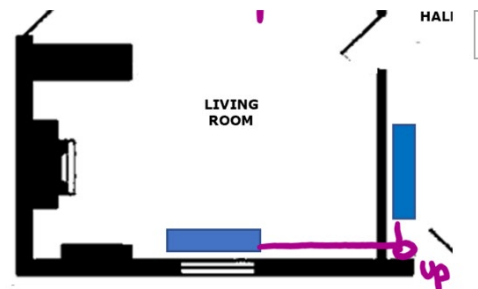
Room	Radiator Type	Watts	BTU
Washing area	Standard	907	3097
Downstairs WC	Standard	333	1137
Boot / fridge area	Vertical	1476	5040
Rear Porch	Column	792	2704
Kitchen	Vertical	1956	6679
Sitting Room	Column	2155	7358
Entrance Hall	Column	1135	3875
Dining Room	Column	1340	4575
Dining Room	Column	1340	4575
Bedroom 1	Column	997	3404
Bedroom 1	Column	1037	3541
Bedroom 2	Column	1644	5613
Landing	Column	1135	3875
Bedroom 3	Column	815	2783
Bathroom	Towel Rail	1576	5381
Loft Bedroom	Standard	670	2288
Loft Games Area	Standard	559	1909
Loft Games Area	Standard	559	1909
Loft Bathroom	Towel Rail	646	2206
Totals		21072	71949

Please refer to Appendix 1 to the rear of this document which shows the type of radiators to be installed within the property. All pipework will be either 15mm or 22mm depending on the number of radiators being served by that pipe. All pipes passing through a wall will be sleeved.

Ground Floor

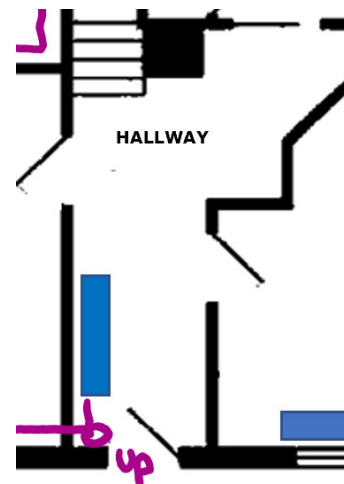
Living Room

A traditional column radiator will be positioned under the window within the living room and will be approximately 600 x 1300mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipe supply for this radiator will come from the radiator in the hallway via a hole being drilled through the internal wall between the living room and the hallway and will be run surface mounted to the radiator.



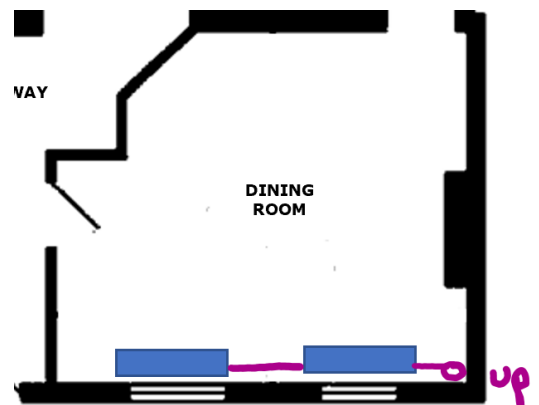
Hallway

A traditional column radiator will be positioned on the wall between the hallway and living room and will be approximately 500 x 1100mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipe supply for this radiator will come from the first floor radiators within bedroom 1 where the supply will be taken through the existing floor boards (not in a joist location) and the pipework will then be run down in the corner of the hallway, surface mounted. This pipework will serve the hallway radiator along with serving the living room radiator.



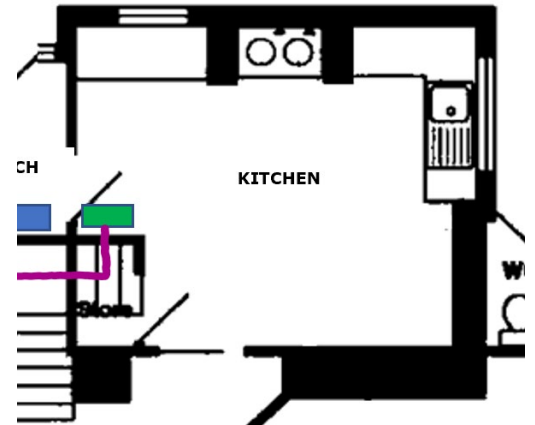
Dining Room

Two traditional column radiators will be positioned under each of the windows in the dining room and each will be approximately 600 x 1100mm in dimensions (final dimension depending upon supplier). The colour of these radiators will be determined upon the final colour scheme of the room. The pipe supply for these radiators will come from the first floor radiators within bedroom 3 where the supply will be taken through the existing floor boards (not in a joist location) and the pipework will then be run down in the corner of the dining room, surface mounted and then run along low level to each radiator. This pipework will only serve the 2 radiators within the dining room.



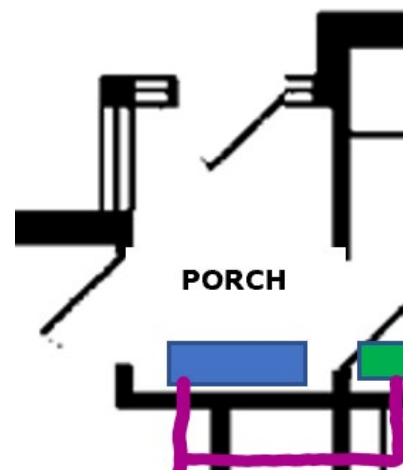
Kitchen

A vertical radiator will be installed in the kitchen to the rear of the entrance door and will be approximately 1800 x 700mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipe supply for this radiator will come through the wall from within the store cupboard under the stairs with the supply for this coming from the utility area.



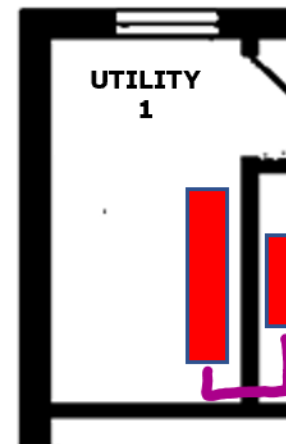
Porch

A traditional column radiator will be installed in the rear porch to the rear wall and will be approximately 600 x 600mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipe supply for this radiator will come through the wall from within the utility area.



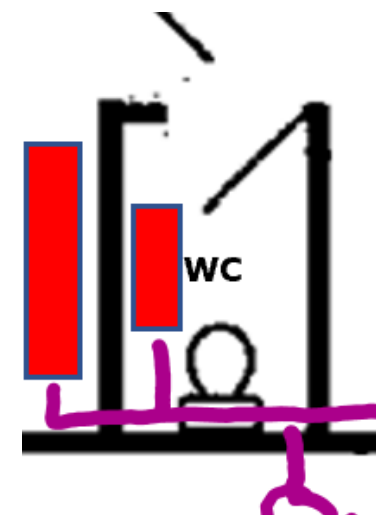
Utility Area 1

A double panel double convector radiator will be installed in the utility area which will be used as a washroom and will be approximately 600 x 1200mm in dimensions (final dimension depending upon supplier) and finished in white. The pipe supply for this radiator will come through the wall from the WC next door which is a stud wall.



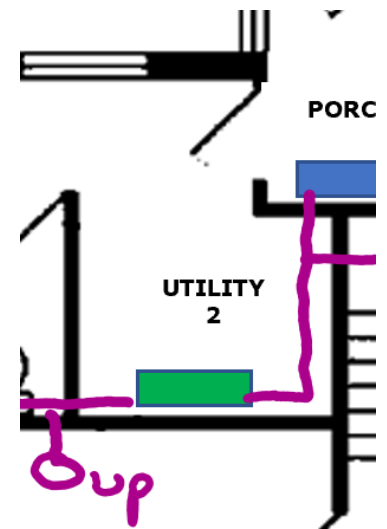
WC

A double panel double convector radiator will be installed in the WC and will be approximately 500 x 400mm in dimensions (final dimension depending upon supplier) and finished in white. The pipe supply for this radiator will come from the first-floor bedroom 1 pipework where the pipework will be drilled through the wall and enter into the WC at high level. This will then be run down the wall surface mounted and send a supply both left and right to service the WC and utility area 1 radiators and utility area 2, porch and kitchen radiators.



Utility Area 2

A vertical radiator will be installed in utility area 2 to the rear wall and will be approximately 1800 x 400mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipe supply for this radiator will come from the WC via the pipe running through the stud wall and the supply will continue around the room surface mounted and pass through both the wall into the porch to serve that radiator and through the wall into the cupboard under the stairs to serve the kitchen radiator.



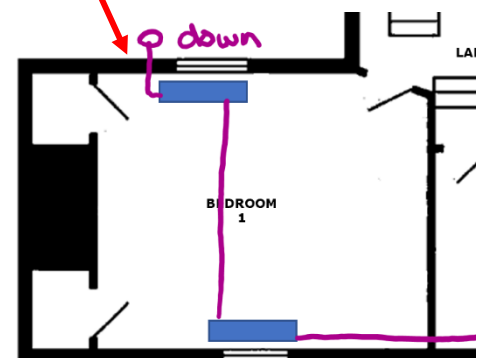
First Floor

Bedroom 1

Two traditional column radiators will be positioned under each of the windows in bedroom 1 with the one to the front of the house approximately 600 x 830mm and the one to the rear approximately 300 x 830mm in dimensions (final dimension depending upon supplier). The pipe supply for these radiators will come from the radiators within bedroom 3 where the supply will be taken through the wall between bedroom 1 and bedroom 3. Bedroom 1 has a floating timber floor on top of the original floor and so the pipes will be run within the void created by the false floor and service each radiator with the radiator to the front of the house served by the bedroom 3 radiator. A supply will then be taken across the room within the void to serve the radiator under the back window. A supply will be taken out of the external wall from this radiator to serve the heating within the rear utility area.



Photo of location of this radiator



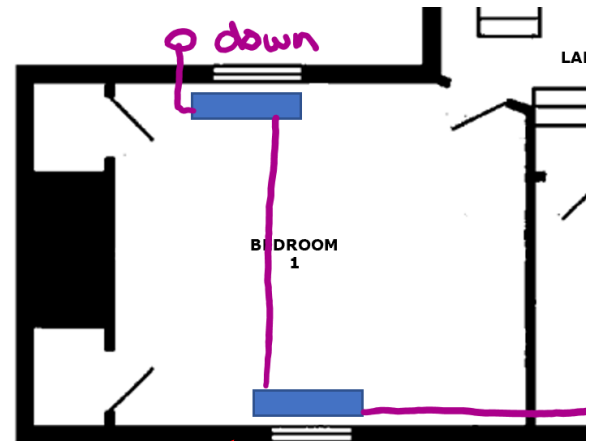
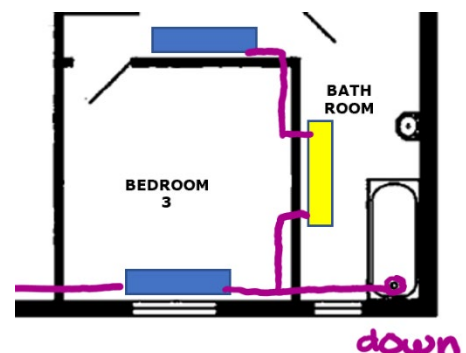


Photo of location of this radiator

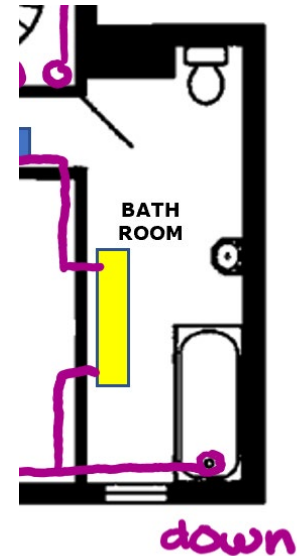
Bedroom 3

A traditional column radiator will be positioned under the window in bedroom 3 and will be approximately 300 x 830mm in dimensions (final dimension depending upon supplier). The pipe supply for these radiators will come from the boiler within the loft where the supply will come down into the corner of bedroom 3 and continue down into the dining room to serve the dining room radiators via the bathroom. The supply will also go both left and right to serve the bathroom left and bedrooms 1 and 3 right. The pipework will be run surface mounted from the corner to the radiator under the window and continue through to bedroom 1 via a hole in the wall. The left supply will pass through a stud wall into the bathroom to serve the towel rail and to go down to the dining room.



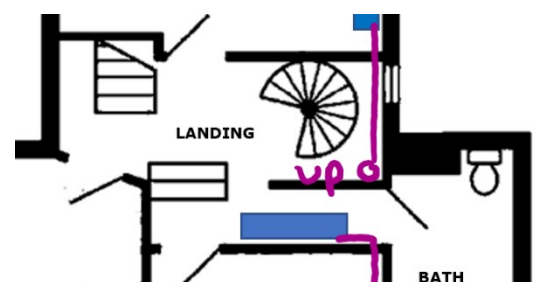
Bathroom

A towel rail will be positioned along the stud wall between bedroom 3 and the bathroom and will be served by the pipework coming from bedroom 3. This pipework will be run within the stud wall to the bathroom and exit at the points for the radiator. It will also continue into the corner of the room and go through the floor to serve the dining room below.



Landing

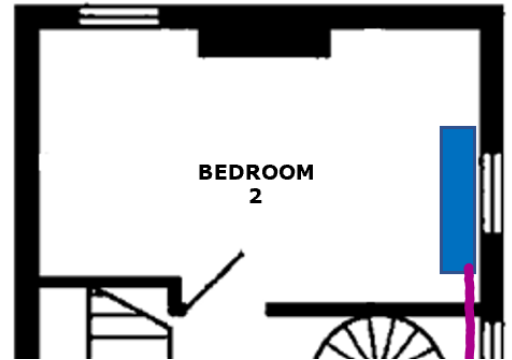
A traditional column radiator will be positioned to the wall between the landing and bedroom 3 and will be approximately 600 x 830mm in dimensions (final dimension depending upon supplier). The pipework for this will be run within the stud wall to the perimeter of bedroom 3 from the bathroom with the pipework exiting the wall at the points for the radiator.



Bedroom 2

A traditional column radiator will be positioned under the window to the side of bedroom 2 and will be approximately 600 x 1300mm in dimensions (final dimension depending upon supplier). The colour of this radiator will be determined upon the final colour scheme of the room. The pipework for this will be served from a supply running down the landing

wall from the loft (the same route currently taken by the water supply from the kitchen to the loft) and will enter bedroom 2 through the wall between the landing and bedroom. The pipework will be run surface mounted to the radiator.



Second Floor

Attic Bathroom

A towel rail will be positioned within the bathroom between the shower and basin and will be served from the supply running between the boiler and down to bedroom 3. The supply will run around the bathroom and exit through the wall and down the wall to the first-floor landing using the same penetrations as those by the existing hot water supply running to the kitchen.



Attic Room

Two traditional column radiators will be installed in the attic room on opposite sides of the room, each will be approximately 600 x 605mm in dimensions (final dimension depending upon supplier). The pipework for the radiator on the rear wall will be run from the boiler on that wall with the pipework run within the timber floor to serve the radiator. This pipework will then cross the room within the timber floor to serve the radiator on the opposite wall. A supply will then be taken from this to serve the attic bedroom. The loft has a false timber floor and the pipework will run within this without passing through any of the original structure.



Photo of location of this radiator

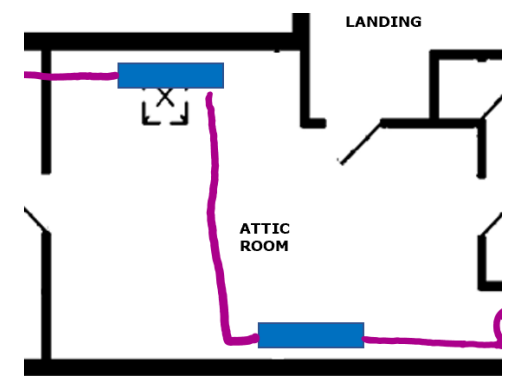
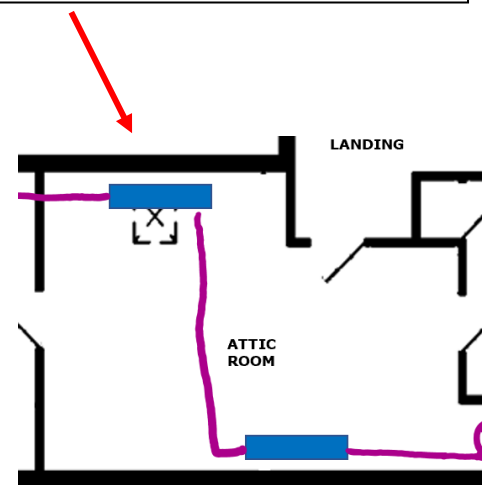
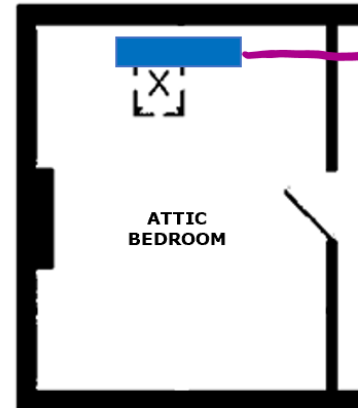


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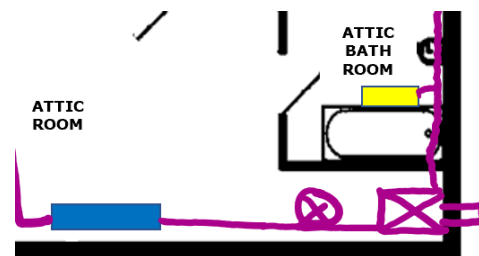
Attic Bedroom

A traditional column radiators will be installed in the attic room and will be approximately 600 x 605mm in dimensions (final dimension depending upon supplier). The supply for this will be run within the floorboards from the radiator within the attic room. The loft has a false timber floor and the pipework will run within this without passing through any of the original structure.



Boiler & Cylinder Location

The boiler and cylinder will be located within an existing cupboard space in the loft.



Appendix 1 - Types of radiators

The following table show examples of the type of radiators to be installed in the property.

	
<p>The above radiator is an example of a traditional column radiator to be used throughout the property in the main areas.</p>	<p>The above radiator is an example of a double panel double convector radiator which will be used in the utility area.</p>
	
<p>The above radiator is an example of a vertical radiator which will be used in the utility area and kitchen.</p>	<p>The above towel rail is an example of what will be used in the 2 bathrooms.</p>