

Appendix E: Fuel Conversion Programmes

To achieve our energy efficiency standards and reduce fuel poverty we will need to change the type of heating system used in 722 properties. Specifically we need to:

- Replace 471 solid fuel heating systems with an alternative heating source by 2025;
- Consider replacing 251 electric heating systems with gas central heating where it is available to reduce the energy costs for tenants and remove inequalities in service provision.

These 722 properties fall into three categories of geographical area within the District, as follows:

- Areas where there is a mains gas infrastructure available;
- Areas where there is a mains gas infrastructure available in the relevant village but not currently within 20 metres of our properties;
- Areas where there is not currently a mains gas infrastructure available within the village.

These are broken down in more detail in the tables below.

Mains gas infrastructure available	Number of properties currently on solid fuel or electric heating
COALVILLE	86
MOIRA	17
WHITWICK	48
CASTLE DONINGTON	10
ASHBY	7
MEASHAM	58
THRINGSTONE	7
IBSTOCK	8
RAVENSTONE	7
ELLISTOWN	5
HEMINGTON	9
SNARESTONE	5
BELTON	2
APPLEBY MAGNA	15
DISEWORTH	1
BLACKFORDBY	2
SWANNINGTON	6
TOTAL	293

Mains gas infrastructure available in village but not currently within 20 metres of our properties	Number of properties currently on solid fuel or electric heating
ALBERT VILLAGE	41
COLEORTON	61
DONISTHORPE	80
TOTAL	182

Mains gas infrastructure not currently available in village	Number of properties currently on solid fuel or electric heating
BREEDON	13
CHILCOTE	1
NEWBOLD COLEORTON	16
NEWTON BURGOLAND	19
NORMANTON	5
OAKTHORPE	89
OSGATHORPE	21
OVERSEAL	8
SWEPSTONE	8
TONGE	6
WORTHINGTON	61
TOTAL	247

The approach for delivering the heating conversion programme is described below:

Mains gas infrastructure available

Solid fuel heating to gas

There are 92 properties with solid fuel heating systems to be converted to gas by 2025. Of these 57 are scheduled to be replaced as part of the decent homes improvement programme through standard lifecycle replacements. The remaining 35 will be converted over the next ten years as part of our energy efficiency programme funded from our non decency capital budgets.

Electric heating to gas

There are 201 properties currently heated through electric storage heaters to be converted to gas. Of these 98 are scheduled to be replaced as part of the decent homes improvement programme through standard lifecycle replacements by 2025. The remaining 103 will be converted over the next ten years as part of our energy efficiency programme funded from our non decency capital budgets.

Mains gas infrastructure available in village

A feasibility study will be completed by 31 March 2016 to determine the costs of gas mains provision to each of the 182 properties affected, including which it is financially viable to receive gas and which will require alternative solutions.

Of these properties 134 are heated by solid fuel and 48 by electric storage heaters.

Mains gas infrastructure not currently available in village

There are 245 properties heated by solid fuel in these 'off-gas' areas to that will be converted to an alternative heating sources by 2025. The preferred option being renewable energy, with the alternative being electric heating. The most relevant renewable energy choices available to us that are currently being assessed:

- Air Source Heat Pumps (ASHP) – The least expensive choice for a standalone system and the most flexible in terms of property requirements. This is our preferred renewable energy choice however, a final decision will be made following the conclusion of the Green and Decent Pilot in December 2016.
- Biomass Boiler – Provides a highly efficient controllable heating system and can use existing heat distribution system (radiators), but costs for installation to individual properties are high, manual handling and bulk buying of pellets is required and not all property types would be suitable so a combination with other heating types would be required.
- Groundsource Heat Pumps – These have the potential to deliver the greatest energy cost savings but are the most expensive solution to retrofit to individual properties. The geology of the area and the associated legacy of coal workings also complicates the use of this as a solution. It has therefore not been considered as a suitable option for individual properties but it may prove to be a viable choice as a heat network solution (see below).
- Heat Networks (renewable or non-renewable) – Connection of a number of properties to one heat source can allow more innovative solutions to be used and can provide lower cost energy. We are investigating heat network options for identified estates and streets where we have a high concentration of properties owned by NWLDC.
- Electric Heating - Electric heating is a tried and tested solution for off gas properties. It is significantly less expensive to install over renewable technology and can be installed within the majority of properties. The cost of electricity even at off-peak economy 7 rates is however, more expensive comparatively than gas or renewable energy and electric storage heating is less controllable than these alternatives meaning that householders can have difficulties heating their home how they would like at an affordable cost, particularly with larger or harder to heat properties.