

## Appendix 1 – Background

The South Kilburn District Energy Network was required by the GLA as part of the approvals for the South Kilburn Regeneration Project.

A District Heat Network is where one Energy Centre provides heat to a number of buildings. A District Heat Network becomes a District Energy Network when it also generates electricity. For clarity, communal heating is where boiler plant serves a number of units within a single building.

Initial appraisals of the proposals indicated that the financial viability was poor and in order to install a District Energy Network, additional funding would be required.

The proposal for a District Energy Network has gone out to the market twice with no success. Feedback from tenderers indicated that this reflected the poor financial viability of the project and the lack of comfort with regard to the number of potential customers.

Since previous market appraisals, a more thorough review of the potential for the project has been undertaken within the Council. All developments across South Kilburn have been and will be required to pay into a fund as part of their Section 106 agreements to provide funding for the scheme. It has been determined that with the S106 money, the project is viable.

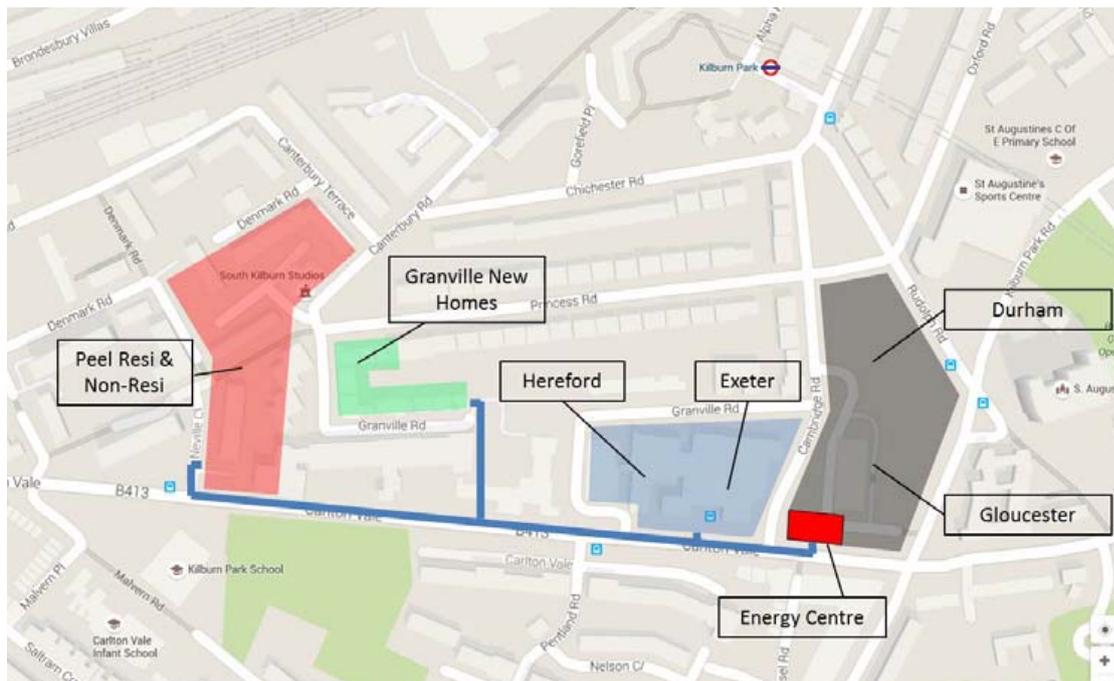


Figure 1: Initial heat network for South Kilburn

The current proposal is to procure a network which provides heat to the following developments at South Kilburn (see Figure 1):

- Gloucester & Durham
- Hereford & Exeter
- Carlton & Granville Centres
- Peel
- Granville New Homes

In addition, a request has been received from Neville, Winterleys & Carlton which is located to the North of Peel.

With the current S106 money and the additional money from future developments there is huge potential for a South Kilburn District Energy Network.

The Energy Centre at South Kilburn is located in the basement of Gloucester & Durham at the corner of Cambridge Road and Carlton Vale. This is currently being constructed with access contractually required by December 2019.

## **Selling Heat and Electricity**

There are two main routes for selling heat with a District Energy Network.

- Heat is sold to the building as a bulk heat supply and the building management company manage the billing of individual properties.
- Heat is sold to individual properties which would include the requirement to meter and bill each property.

For the South Kilburn District Energy Networks, in order to include the existing projects within a future network, at least some bulk heat sales will be required. Selling directly to each property, whilst offering the most complexity, would also offer the greatest opportunity to protect vulnerable tenants.

It should be noted that selling heat is currently an unregulated market, which has historically been open to abuse. The current market thinking is that regulation is very likely within the next few years. The current market thinking that initially this would be based around the Heat Trust's guidance which Brent would require any potential contractor to follow in any case.

Selling electricity is a regulated market and therefore it is very complicated to sell electricity to residential customers.

Selling electricity directly to commercial customers or supplying Brent buildings directly is commercially beneficial. The price at which the network will be able to sell electricity to the grid is much lower than the potential price obtained from a commercial customer. For example, if the cost of purchasing electricity is 10p/kWh, it is likely that selling electricity would yield around 4.5p/kWh. Commercial customers would be happy to purchase electricity at a discount, so the network could yield 9p/kWh (a 10% discount to the commercial customer, but double the amount the network could expect to be paid by the grid).

## **Techno-Economic Model**

A techno-economic model has been prepared by Anthesis – Sustain in association with Heat Network Associates. Anthesis – Sustain are engineers who have been commissioned to design the energy centre up to RIBA Stage 3 which is now complete. Heat Network Associates are experts in the field of district heat networks and have particular expertise in understanding the business cases for this type of project.

In simple terms, without the Section 106 money, the project would take 36 years to recoup the initial cost of the project. With the Section 106 money, there is great potential for the project to expand and therefore generate more revenue.