

Appendix 1: Overview of Cambridge City Centre District Heating Scheme

1. Cambridge City Council, working in partnership with the University of Cambridge, Low Carbon Development Initiative (LCDI) and with support from EON, Aecom and Ernst and Young, identified potential for the development of a city centre based Combined Heat and Power (CHP) and District Heating scheme. The over-riding objective of the project was to enable the commissioning of a feasible, deliverable, cost effective scheme to provide heating and electricity to the parties and others within the City of Cambridge at a lower rate of carbon emission than the current infrastructure.
2. The project was based around the concept of developing an Energy Centre housing gas fired CHP plant with a heat network consisting of highly insulated pipes extending into the city centre and connecting to a series Council buildings including Brandon Court, The Guildhall and Mandela House and University of Cambridge academic sites such as the Downing Site and New Museums Site and Colleges. An overview of the planned network is provided in Figure 1 below.
3. While original work was focussed on the potential of having an energy centre located in the vicinity of Parkside Pools, a part of the City Council's Mill Road Depot was also identified as a possible location for the Energy Centre. For an outline capital cost of £25 million, initial financial analysis indicated an Internal Rate of Return of up to 6.8%. Benefits of the scheme included:
 - reducing exposure to future energy price rises, supplying electricity and heat at 10% below market rate to the City Council;
 - saving significant quantities of carbon (8,000 tonnes of CO₂ - in its first year of operation);
 - setting the foundations for a possible larger community heating scheme.
4. It was considered that a joint Venture governance model between the City Council and the University of Cambridge would be the best way forward. Such an approach would provide benefits to the project through risk sharing of the equity required to fully develop the project, a partner to share in the capital investment (and able to raise capital at low interest rates) and enabling a greater level of control in the existing project and any future developments. It was also considered that such an approach would secure greater financial certainty into the project as a direct result of the partnership being able to secure long term contracted customers (through the University as a partner and through the colleges by offering a price incentive).

Figure 1: Network Plan

