

Appendix F

Liskeard Heat Mapping

**Liskeard Town Framework Plan
Urban Extension Assessment – Step 8 Heat Mapping Assessment**

An assessment of the potential for renewable or low carbon decentralised energy

February 2011

Introduction

This paper sets out the results of a brief desk based assessment of sustainable energy opportunities in relation to any future growth areas around the town. The following table indicates an initial assessment into the potential for each cell to link into or support a potential decentralised energy or district heating network providing renewable or low carbon energy.

A heat map of Cornwall has been prepared. The heat map covers all of Cornwall's towns and shows the heat demand generated by domestic and (some) non domestic buildings e.g. industrial and public buildings such as schools. If the average heat demand or usage of parts of the existing urban area is over 3000kW/m² then evidence demonstrates that there is sufficient heat demand or usage to enable a district scale heat network to be viable. By assessing the existing heat demand of built areas within the town and noting proximity between important anchor load buildings such as schools; industrial uses; leisure centres (which have a high heat demand) a picture can then be pieced together showing the potential for a heat network within a given area.

Evidence demonstrates that where new development is able connect to a decentralised heat main the costs of the requirements for developers to meet higher standards of the Code for Sustainable Homes is reduced – i.e. a community or neighbourhood scale approach to supplying renewable or low carbon energy is a cheaper solution than seeking an approach that focuses on individual properties.

This assessment and table sets out an initial assumption in relation to the location of each of the potential urban extension cell areas i.e. its proximity in relation to areas of existing high heat demand areas and so called 'anchor load' buildings within the built area of the town to determine whether a cell area has the following:

- Good opportunity to link into a potential district heat network
- Limited opportunity to link into a potential district heat network - unlikely but requires further assessment
- Poor or no potential to link into a potential district heat network - highly unlikely to be a viable area to support district heating due to low heat demand and or large distances between the new development and existing heat loads

The assessment is not seeking to discount any cells based on its potential or lack of, but will enable the information to be considered as a strength or a weakness of a cell which can be highlighted along with other considerations when consultation takes place regarding potential options for future growth of the town.

Related and more detailed work is being progressed by officers within the Planning and Regeneration Service to assess the potential for renewable or low carbon energy opportunities within Cornwall; a key element of which is exploring the potential for district scale heating networks to supply both existing and new development. This brief Town Framework Plan assessment is intended as providing a link into this more detailed work so renewable or low carbon energy opportunities can be explored at an early stage when determining potential locations for future growth within and adjoining Cornwall's towns.

Liskeard Heat Mapping Assessment – Urban Extension Assessment Table

The table that follows sets out the results of each cell using the following assessment criteria.

- Good opportunity to link into a potential district heat network – ***the cell is scored green***
- Limited opportunity to link into a potential district heat network - unlikely but requires further assessment – ***a cell is scored yellow***
- Poor or no potential to link into a potential district heat network - highly unlikely to be a viable area to support district heating due to low heat demand and or large distances between the new development and existing heat loads – ***a cell is scored red***

Summary of Results

Cells which demonstrate greatest potential to support DH scheme

2, 7, 10, 11

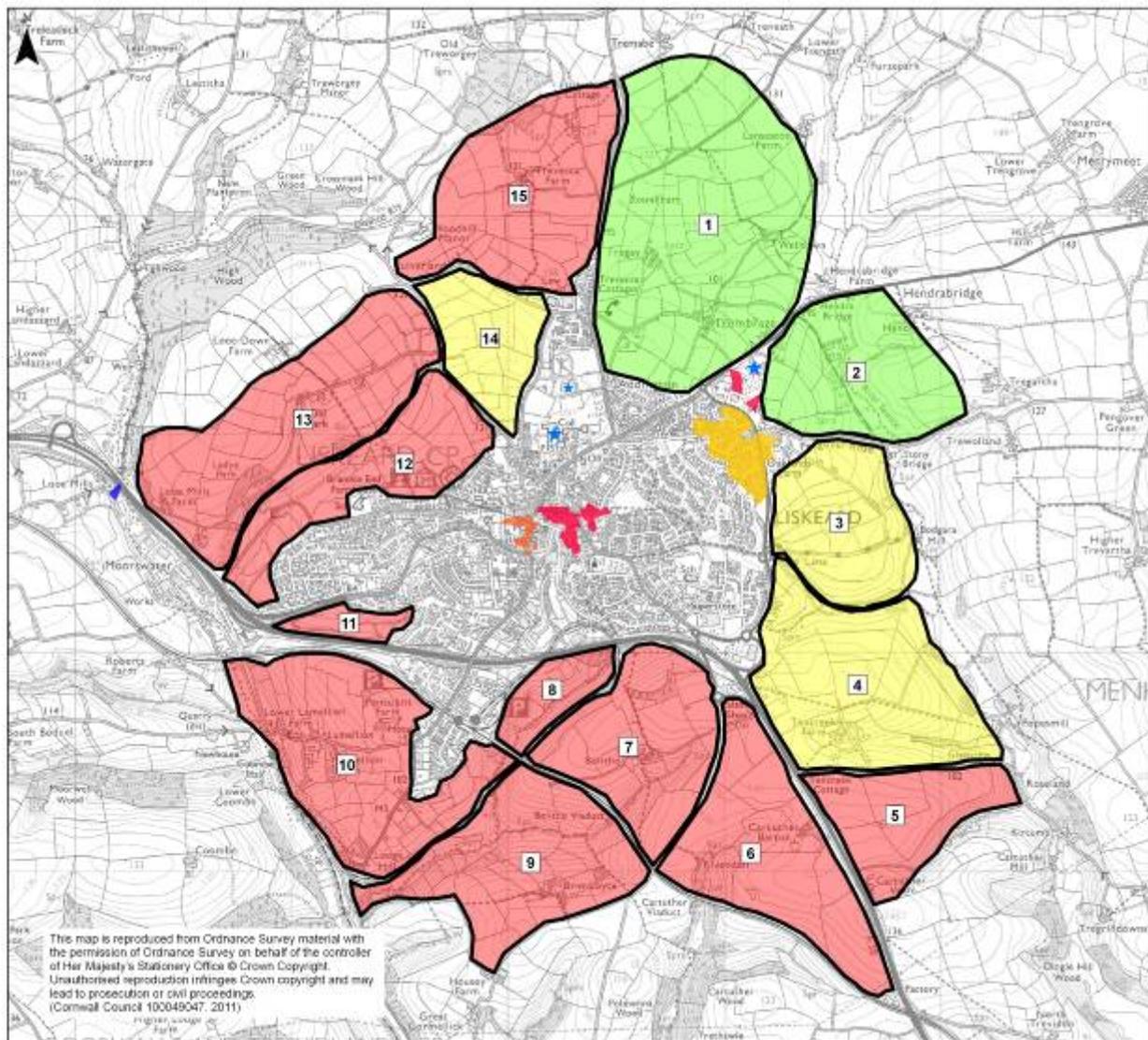
Cells showing some potential but with limitations/constraints

1, 3, 4, 13, 14

Cells that would support/connect to a viable DH scheme

5, 6, 8, 9, 12, 15

Cell No	Commentary	Score
Cell 1	Liskeard hospital is adjacent to the southern boundary of the cell which is a potential anchor load. There is also a viable residential heat load to the south around 150 metres. There is also a leisure centre and a school SW of the cell.	G
Cell 2	Liskeard hospital is adjacent to the western boundary of the cell – there is also a viable residential heat load in close proximity. The road is less of a constraint than cell 1 to potential anchor loads. Note works in middle of the cell.	G
Cell 3	A viable residential area lies adjacent to the north west boundary of the cell. There is also a business park at the same location which is not picked up by the heat mapping but is worth investigating.	Y
Cell 4	There is no accessible viable residential in proximity. There is retail to the west however (supermarket, warehouses stores and an Argos)	Y
Cell 5	No adjacent existing development as the cell is disconnected from the urban area (cell could come forward with cell 4).	R
Cell 6	There are some retail units to the north of the cell but they are separated by the A38 dual carriageway. There is no adjacent residential.	R
Cell 7	There are some retail units to the north of the cell but they are separated by the A38 dual carriageway. There is no adjacent residential.	R
Cell 8	Cell is surrounded by a rail line (Looe branchline). The A38 runs along the northern boundary – significant financial barriers to a heat main. No adjacent residential demand. There is a business park 300 m west but not picked up on heat map.	R
Cell 9	Cell is isolated from the urban area and separated by the railway. No adjacent development of note.	R
Cell 10	No adjacent residential with a sufficient heat demand. There is a business park to the north but no heat demand mapped and it is separated by the railway. Note sewage works to SW boundary – potential for AD?	R
Cell 11	Relatively small area – no viable heat demand in close proximity.	R
Cell 12	A large area. There are no obvious mapped heat loads in proximity. There is a primary school directly adjacent to the east and another smaller school further east again may warrant investigating?	R
Cell 13	A large area. There are no viable heat loads in the area – there is a high heat load south of the A38 which may be worth further investigation?	R
Cell 14	Liskeard school and a leisure centre are south east of the cell which are potential anchor loads. No viable residential heat demand in proximity.	Y
Cell 15	Peripheral cell – no viable heat demand in close proximity.	R



**Liskeard Town Framework Plan
Urban Extension Assessment -
Step 8**

★ Anchor loads, high heat users
e.g. schools, hospitals

Coloured areas = existing areas of high
heat usage - i.e. potential for a viable
District Heat scheme

- Cells which demonstrate greatest potential to support District Heat scheme
- Cells showing some potential but with limitations / constraints
- Cells that would not support / connect to a viable District Heat scheme

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 **Liskeard Heat Map
Assessment - Potential
for District Heat Networks**

Camborne One Stop Shop
Dolcoath Ave, Camborne, TR14 8SX
Drawn by: RLB Date: Apr 2011