Best practice for local energy plans

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Drivers for local authorities to go for heat networks

- **Environmental** - for example, Woking - based on strategic approach to minimising climate change
- **Social** – for example, Aberdeen - driver was fuel poverty; alternative systems for tower blocks often very expensive to run
- **Economic regeneration** - long-term business case in evidence – our established networks grow year by year – Sheffield; newer schemes gather momentum – Birmingham
- **Energy security & fuel flexibility** – migration to renewables – for example, Barnsley has changed from coal to biomass; Aberdeen to integrate biomass.

Challenges for local authorities to go for heat networks

- – Local authorities are the key 'nerve centre'
- – Strategic perspective across whole area
- – Hold planning powers
- – Know the potential actors in the market and the local stakeholders

- – … but they do not have money
- – And they need informed staff and/or someone to provide 'hand-holding'
- – It is likely they will be working with the uninformed both in-house and externally.

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Opportunities

- regeneration

- developers who must meet high level of energy efficiency

- local heat resources that are already there

- low or no carbon plant installed already, sometimes not working

- being prepared – funding packages crop up from time to time!

Establishing the demand

– Is there confidence that district heating is the right solution?

– Maybe not, but no-one knows locality better and there may be a 'gut feeling'

– Where is the 'evidence base'?

– Start with pre-feasibility back-of-the-envelope assessment

– Always begin with the demand

– Hence the importance of heat mapping for the locality – this reveals where heat demand density is high

– This gives the first basis for input to masterplanning and planning policy.

Low carbon supplies

– Are there local sources of surplus energy?

- Power station
- Waste-to-energy plant
- Industrial processes
- Data centres

– Is there potential for renewable heat supply?

- Biomass
- Solar thermal
- Other secondary sources

– Don't forget low carbon technologies

- CHP
- Heat pumps

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Towards the planning policy

– Identify clusters

- high demand potential 'anchor' loads
- high heat demand density
- potential for energy linkage
- low or zero carbon supply

– Such circumstances when favourable justify a feasibility study and subsequent business plan

– Policies derive form this and can be tailored to particular circumstances.

Local opportunity: Swansea
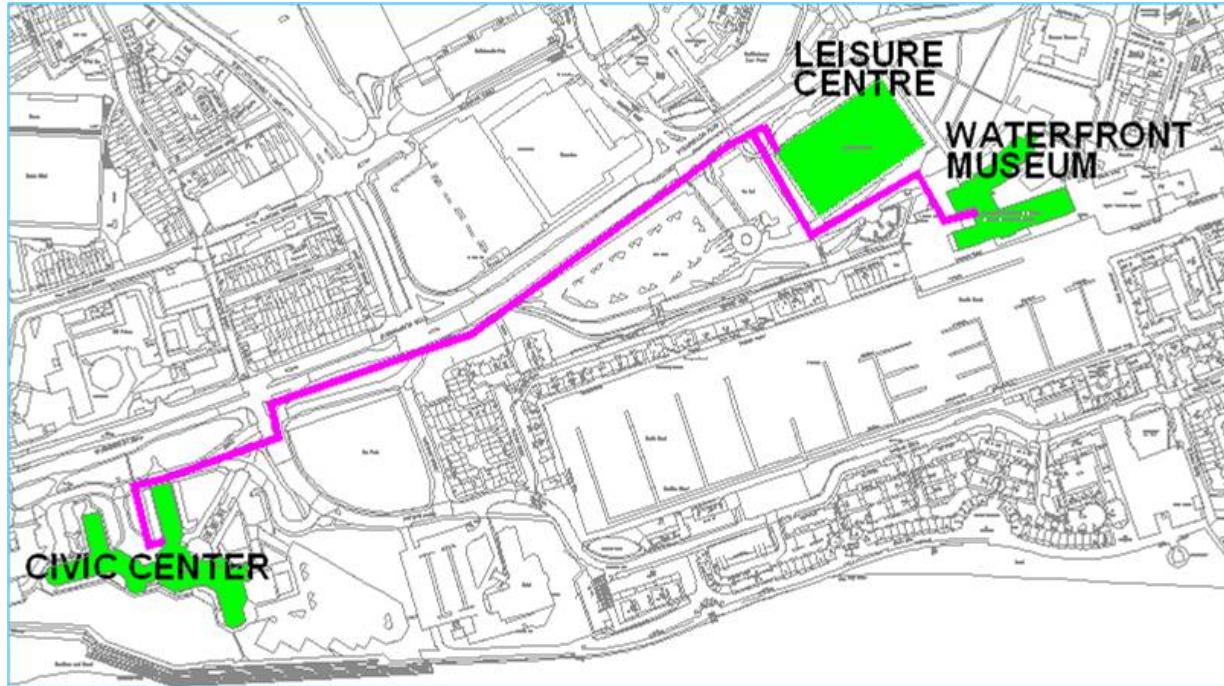
Wider long-term context: Swansea