Cheshire & Warrington Local Energy Networks

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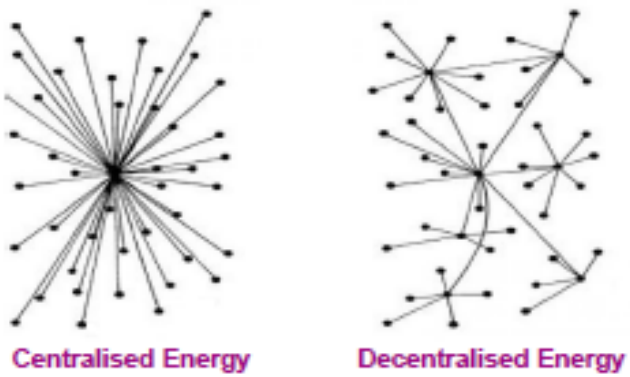
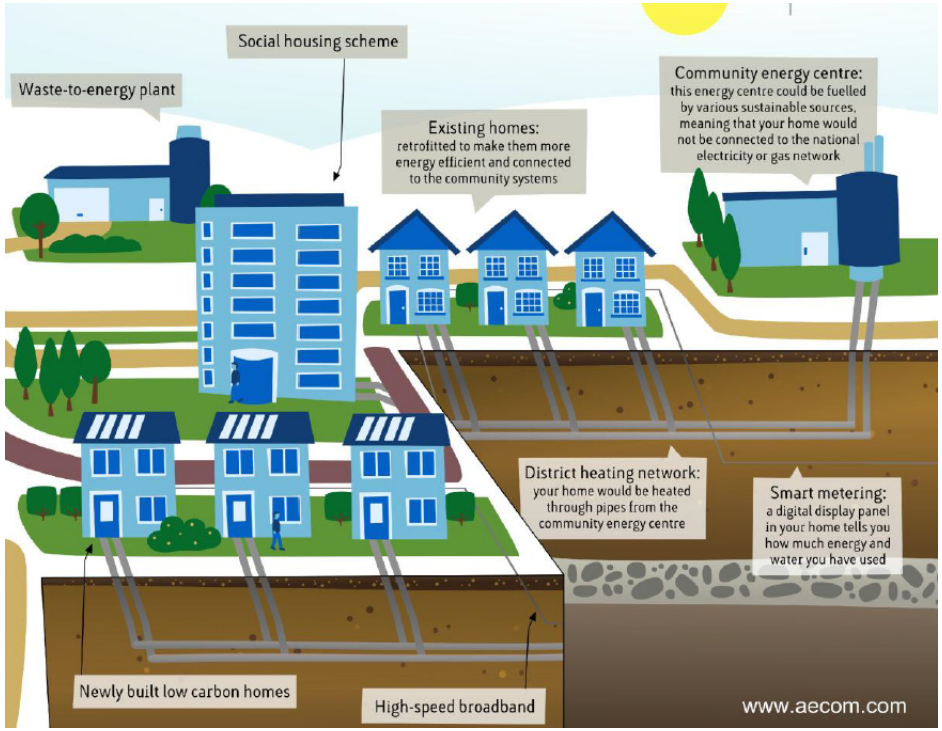
What is a local energy network/decentralised energy/district energy/district heating/heat network….?

- Local generation and supply of energy
- Supplement or replace the traditional decentralised infrastructure
- Heat supplied from a central source to multiple buildings – a few or city-wide
- Opportunity to deliver significant and cost effective reductions in CO_2 emissions





Why Local Energy Networks in Cheshire & Warrington?

- Multiple benefits – but one of the main technologies to meet our renewable energy targets and reduce our carbon emissions
  - Wind?
  - Solar?
  - Hydro?

- Previous high level renewable studies had highlighted the potential for local energy networks

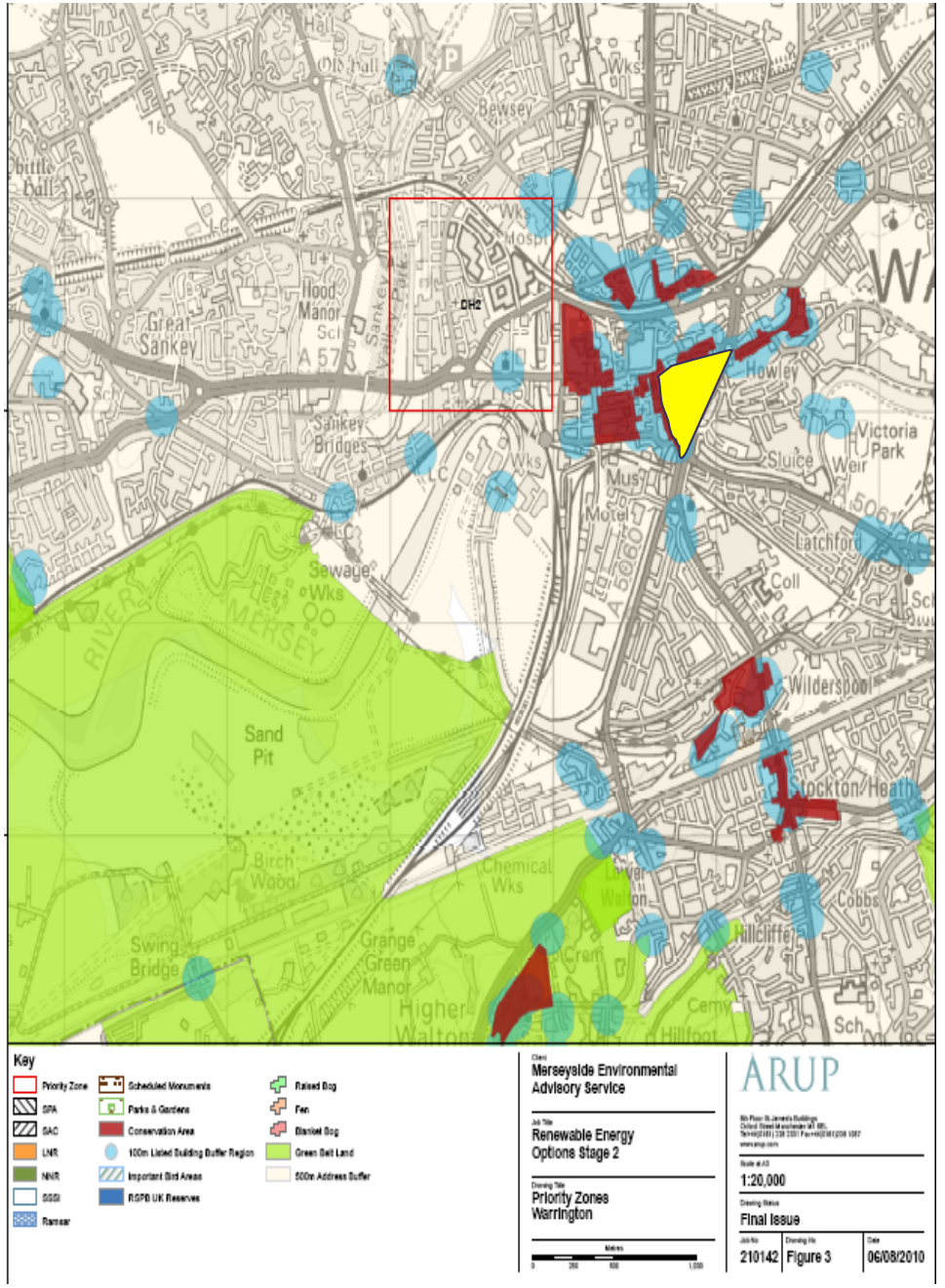
"CHP could provide 4400MW of energy by 2020 (18% of the NW low carbon technology potential)"

"Cheshire has the potential to supply over 37.5MW of electricity from biogas –the highest in the NW"

Northwest Renewable and Low Carbon Energy Capacity and Deployment Project Report" (2010)

Investigating local energy networks

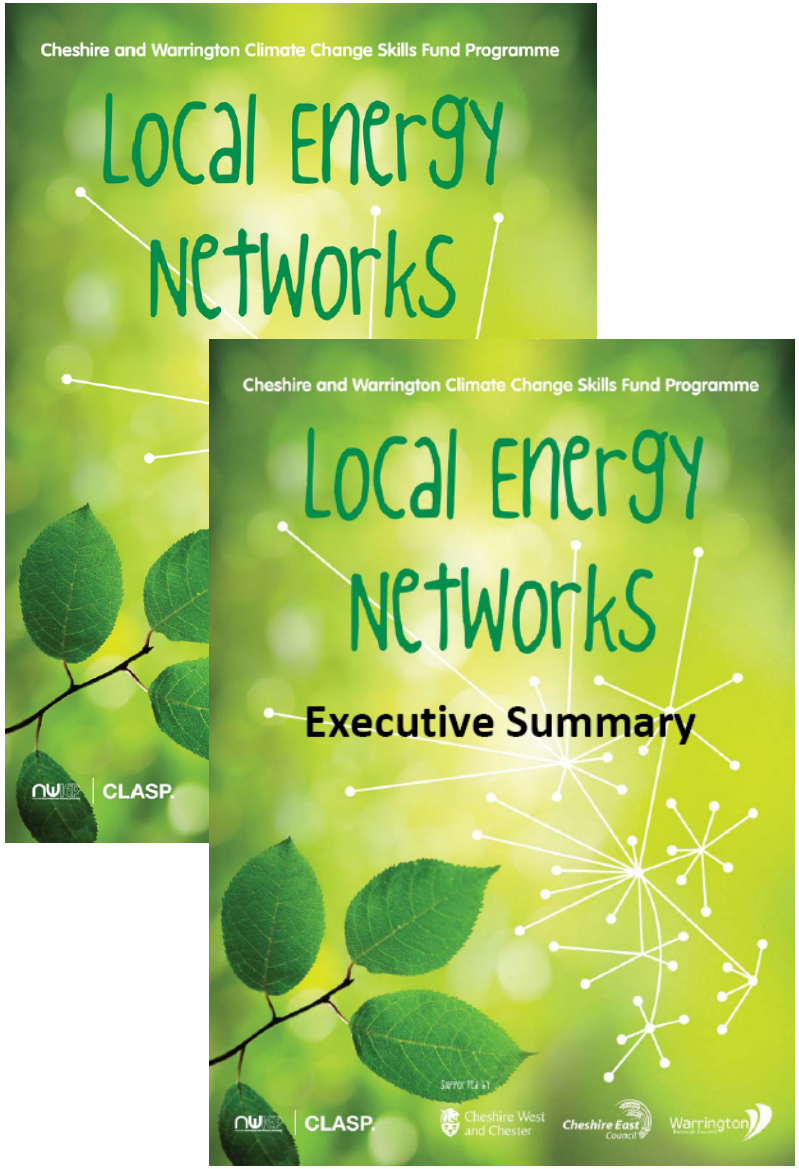
- Liverpool City Region Energy Capacity Study completed October 2010
- Our priority was local heat networks – but mostly existing buildings
- What about areas of new development – like Bridge Street Quarter?
- As local authority officers, how do we assess potential?
- Where on earth do we start?



Local Energy Networks in Cheshire & Warrington

Objective of the study: to illustrate the process of considering local energy networks by demonstrating a step-by-step approach, using examples from Cheshire & Warrington.

Aim of the study: to help overcome obstacles to moving such projects forward.



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Local energy ‘roadmap’

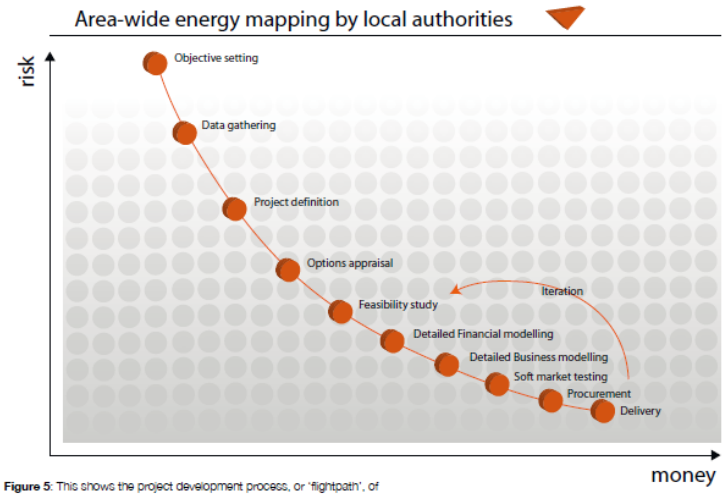
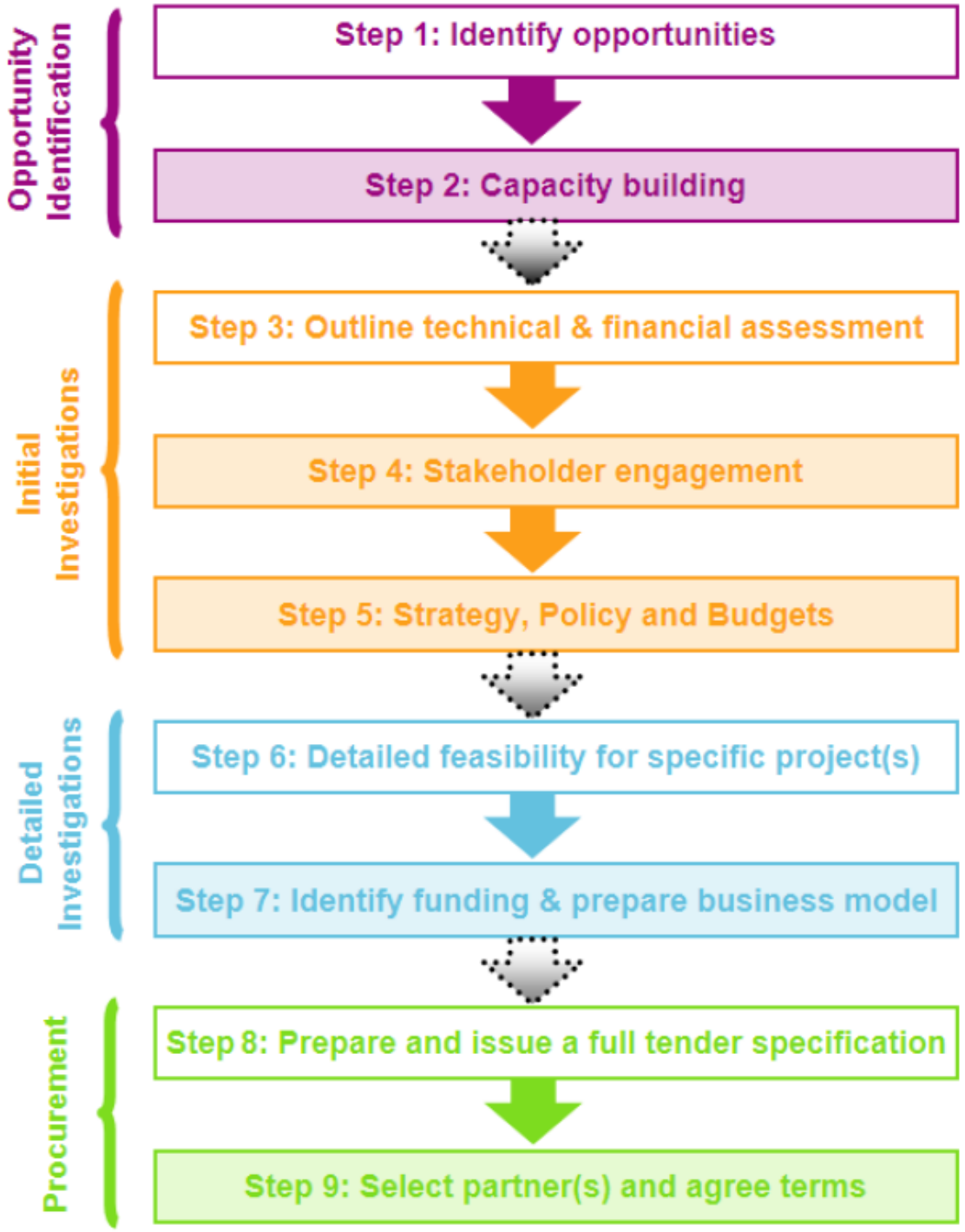


Figure 5: This shows the project development process, or ‘flightpath’, of a project, illustrating how the risk reduces the further along the process the project proceeds

- Strategic approach
- Opportunity led
- Combination of both

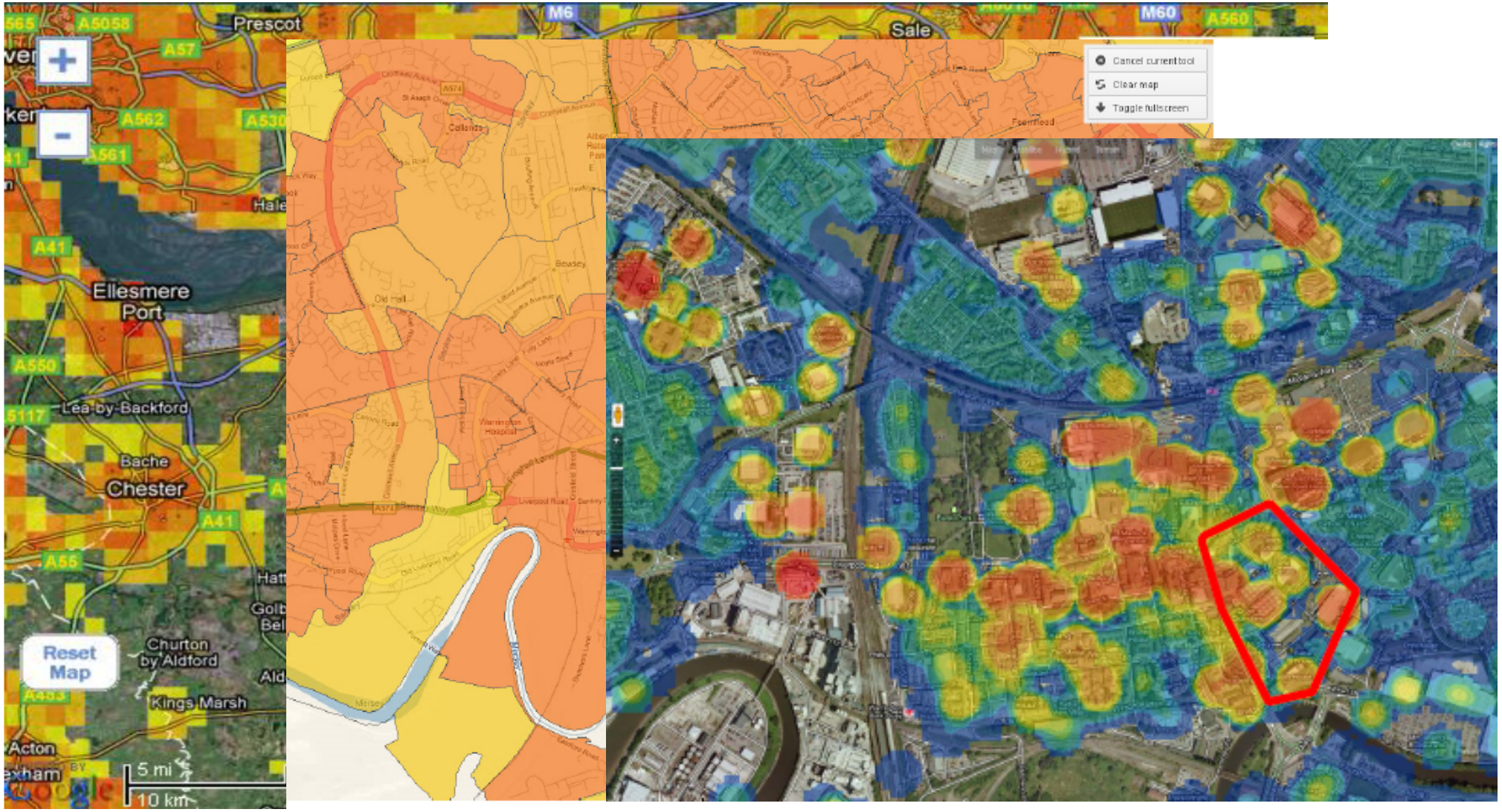


First steps

Opportunity Identification

Step 1: Identify opportunities

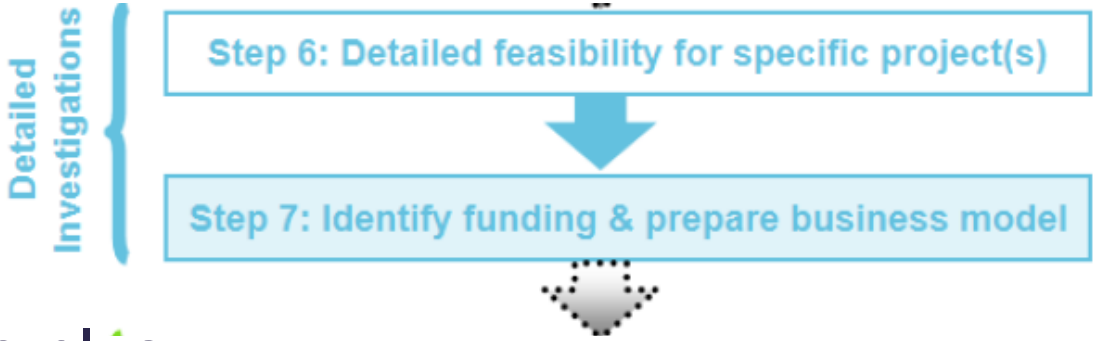
Step 2: Capacity building



Bridge Street Quarter

Workshops with council members
Meetings with developer partner – keep the opportunity open
Embed enabling policy in LDF Core Strategy
Discussion with project managers and directors
Briefings to Climate Change Board

Genuine opportunity?



- Assessed phase 1 alone plus phase 1-5
- Looked at estimated energy demands and heat loads
- Gave indicative size of plant and plant room
- Mapped likely pipework routes
- Estimated costs and rates of return (6% approx.)
- Outcome = **an opportunity**

Next steps

- Detailed feasibility study
- Work with developer partner to consider options
- Investigate and consider financial models and governance
- Work with other Authorities to share expertise/costs
- Consider potential of other sites across town including new housing/social housing
- Keep alert to other opportunities i.e. school development