

# District Heating in Halifax

Ben Adey-Johnson

Power Calderdale

3<sup>rd</sup> May 2017



# An introduction to Arup





Over 13,000 people in more than 90 offices across 40 countries

# Arup in Yorkshire & the North West

700+ people

Located across six offices

Connected to a worldwide network







Sydney Opera House, Australia



Tall Buildings engineered by Arup

ARUP



Central Teaching Hubs



Wellington Place



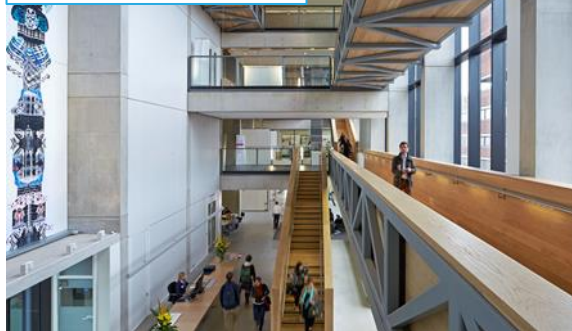
Adv Manufacturing Park



MECD



MMU Art & Design



Headingley Carnegie



The Diamond



Three business streams  
**Buildings**  
**Infrastructure**  
**Consulting**



St Helen's Hospital



Kirkby Leisure Centre



Manchester City Model



York Uni Sustainable Energy Strategy



Waste PFI



Clinical Leaders Programme



Ulley Reservoir



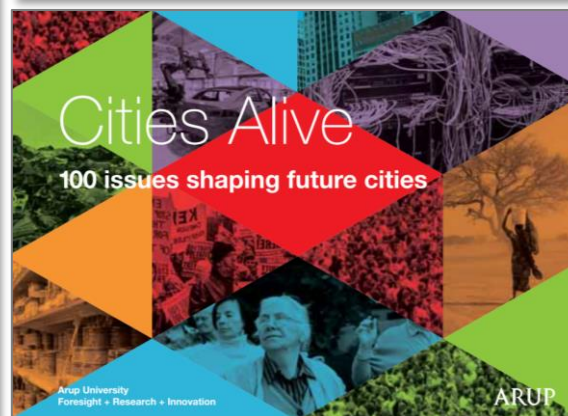
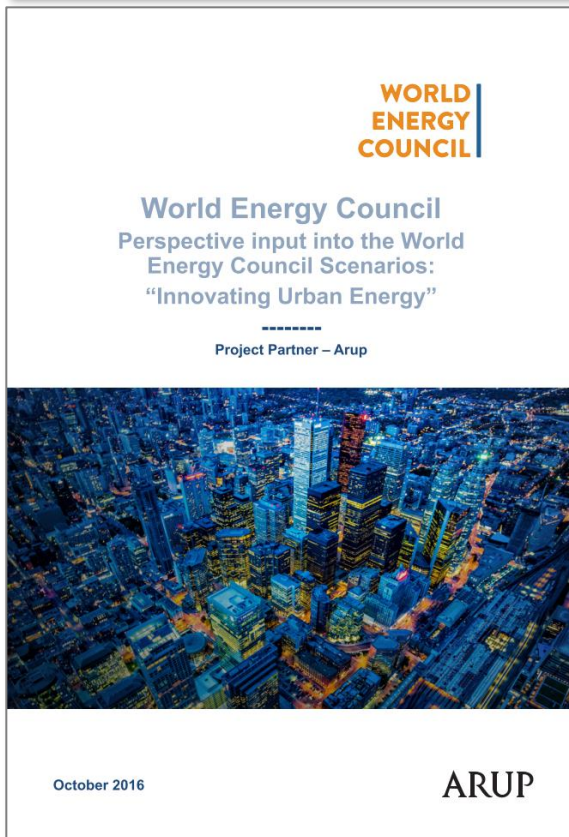
Loftsome Bridge



LCR offshore wind



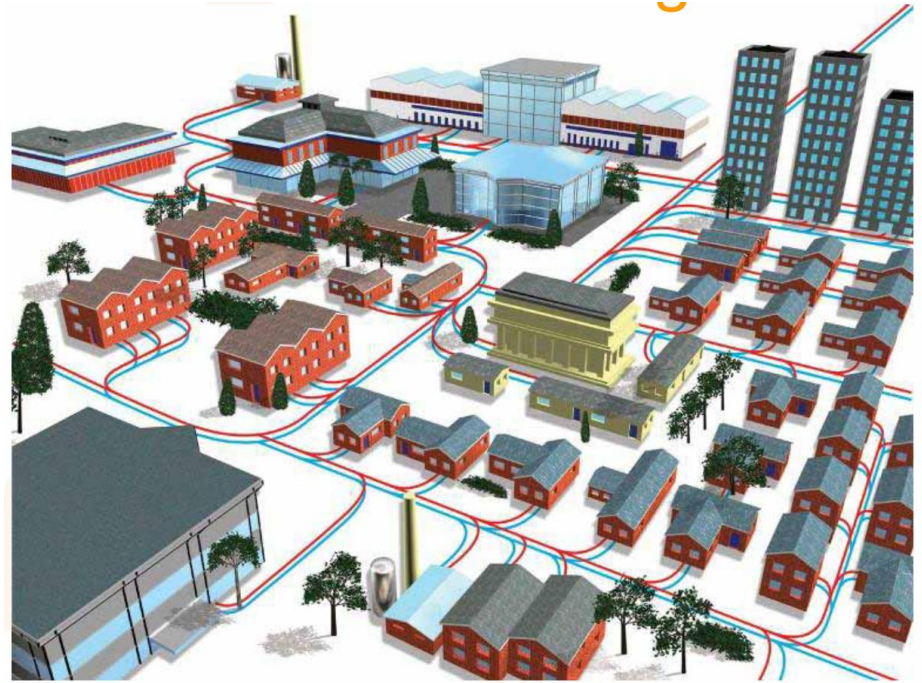




Our ambition is to shape a better world.  
That is why we strive to go further than  
just delivering the most high quality creative  
work for our clients. We also aim to leave a  
lasting and sustainable legacy for the future.



# District Heating

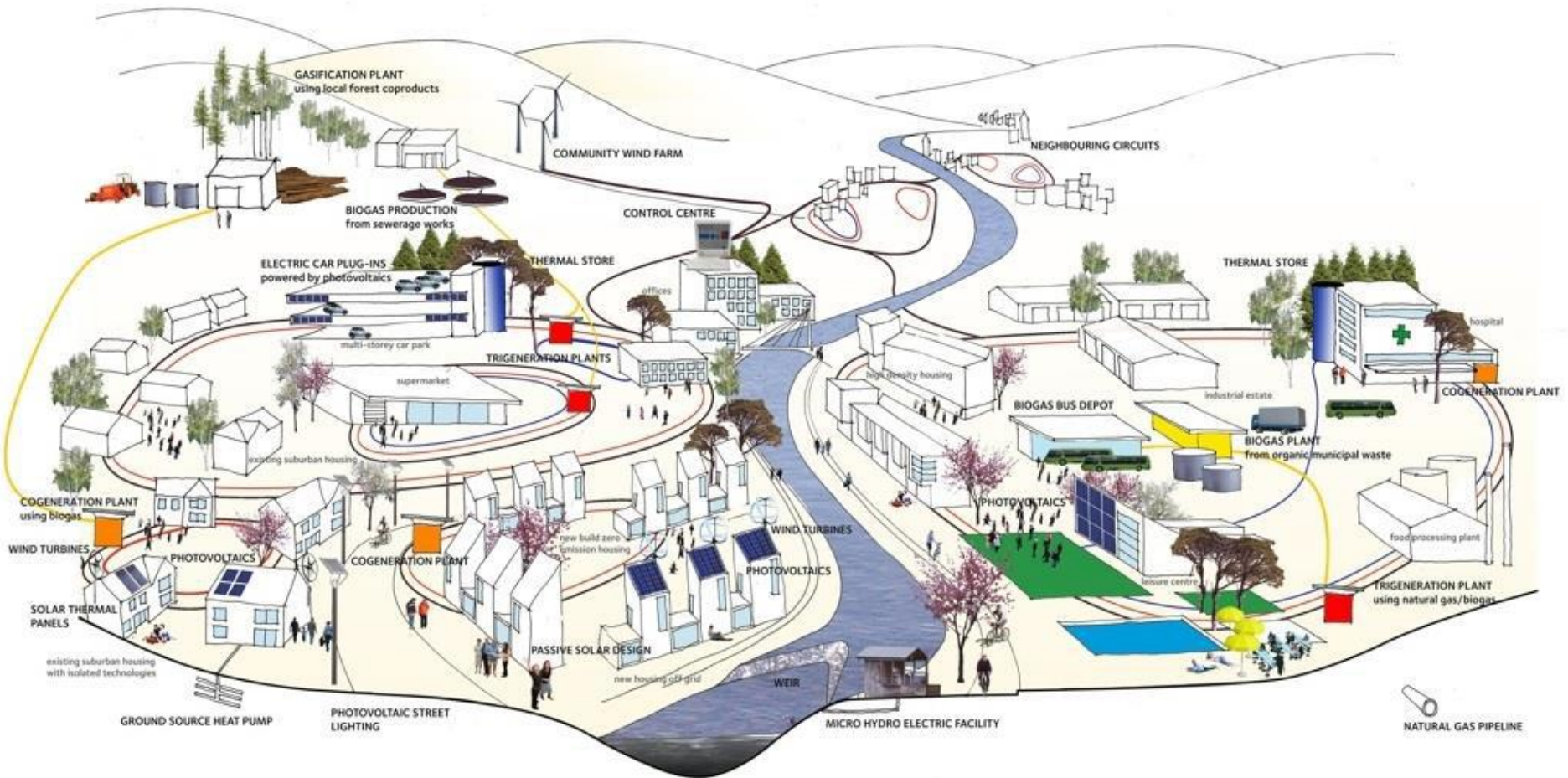




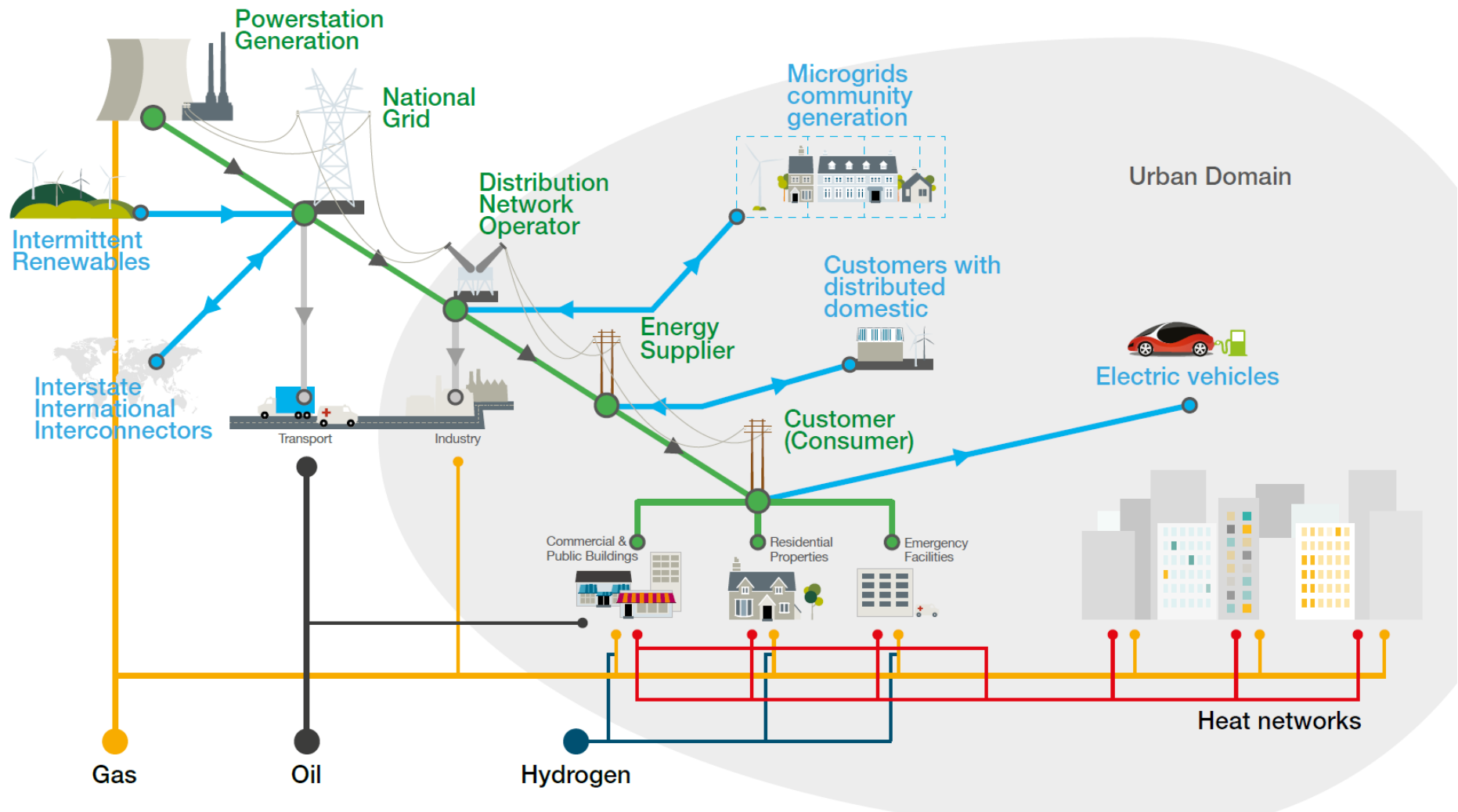




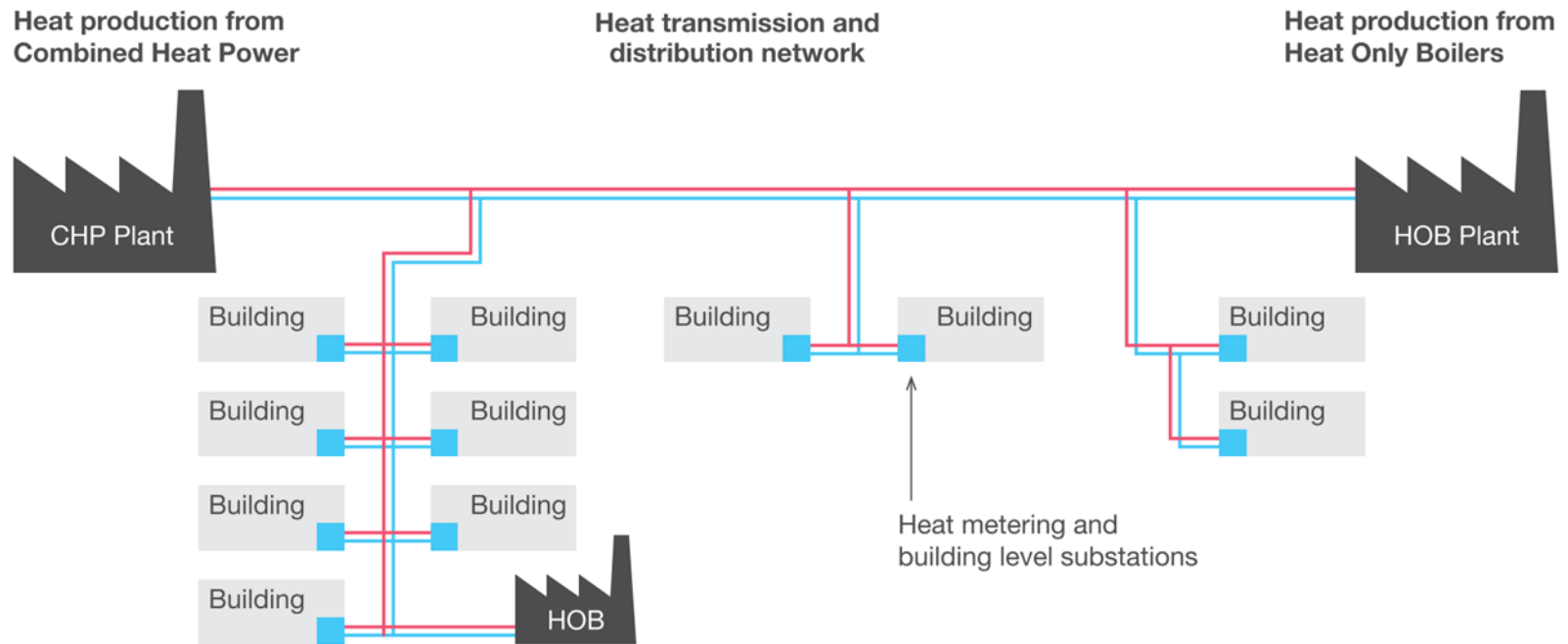
# Integrated community







Supply of heat from a central heat source via a network of pipes carrying hot water to heat consumers.





Heat production from  
Combined Heat Power

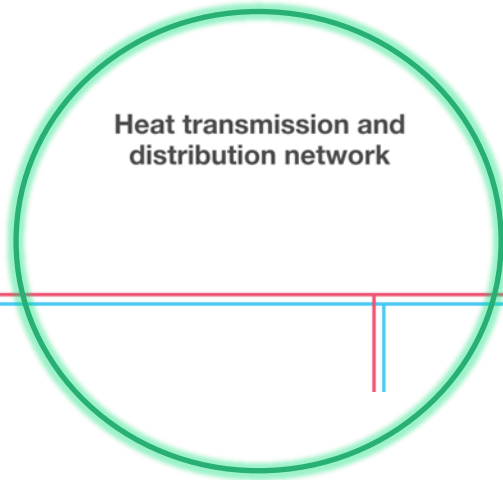


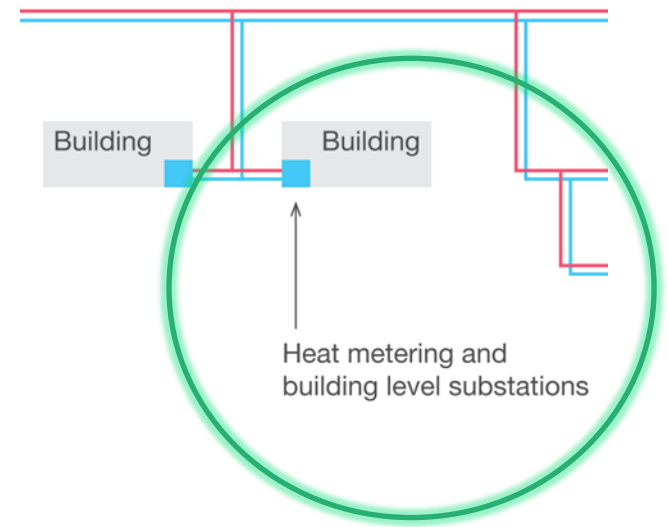
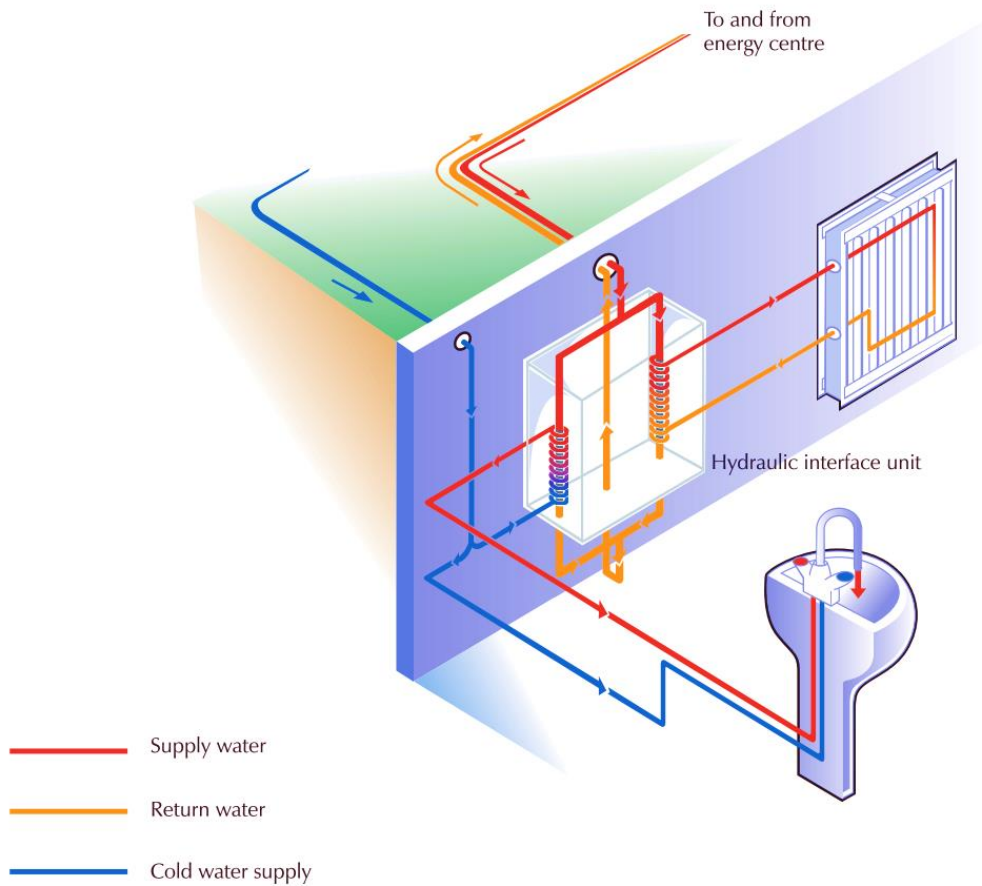
University of Liverpool Energy Centre

Heat production from  
Combined Heat Power



Heat transmission and  
distribution network









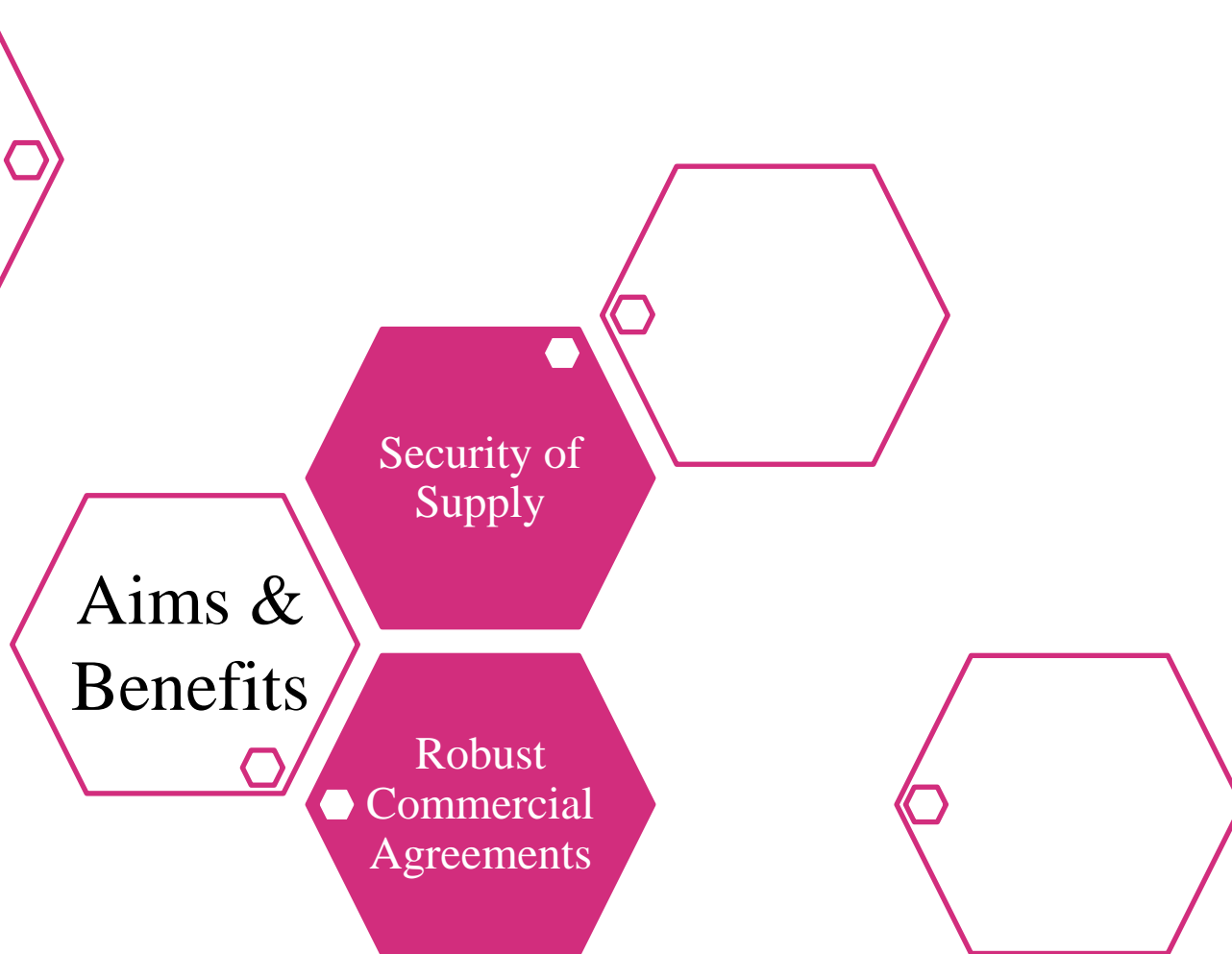
A diagram consisting of four large, empty hexagons arranged in a diamond pattern. Each hexagon has a small, solid magenta hexagon attached to one of its outer edges. The central hexagon contains the text 'Aims & Benefits'.

Aims &  
Benefits

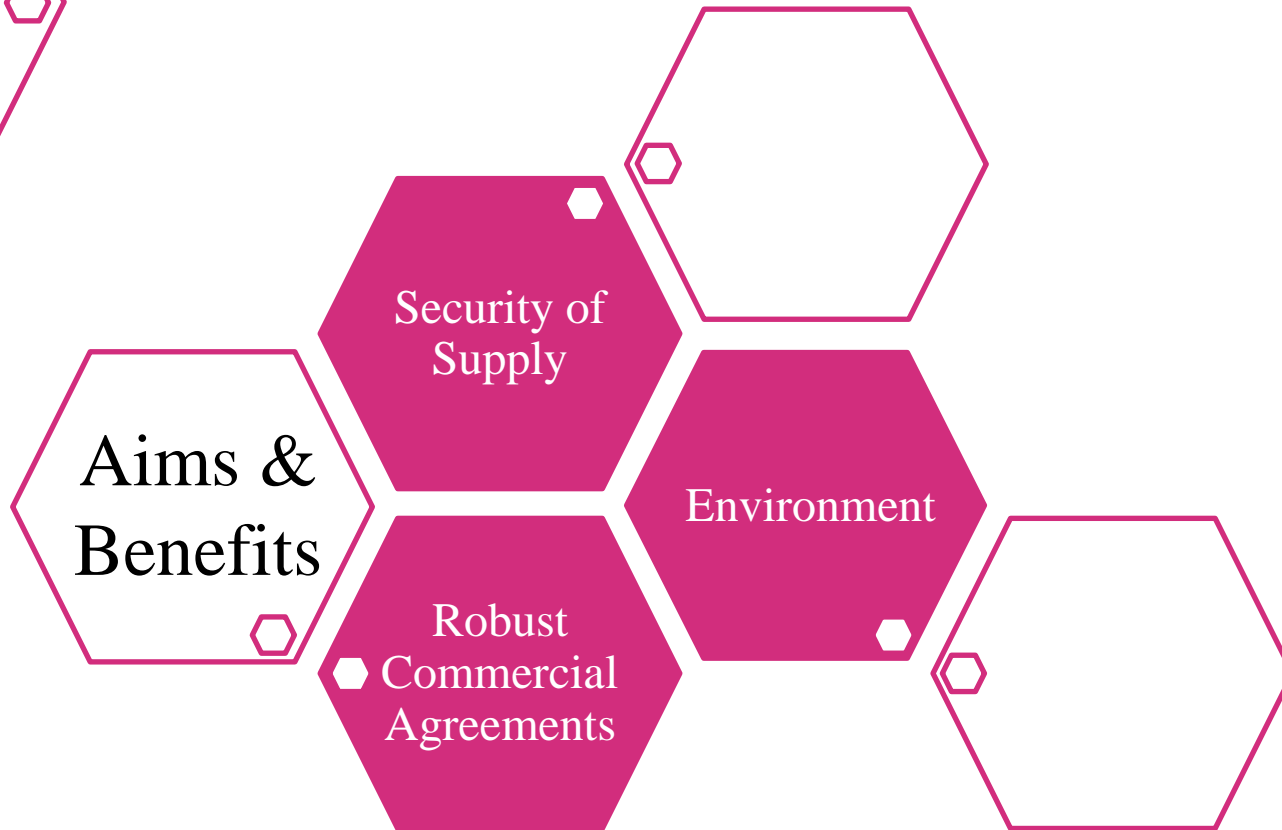


Aims &  
Benefits

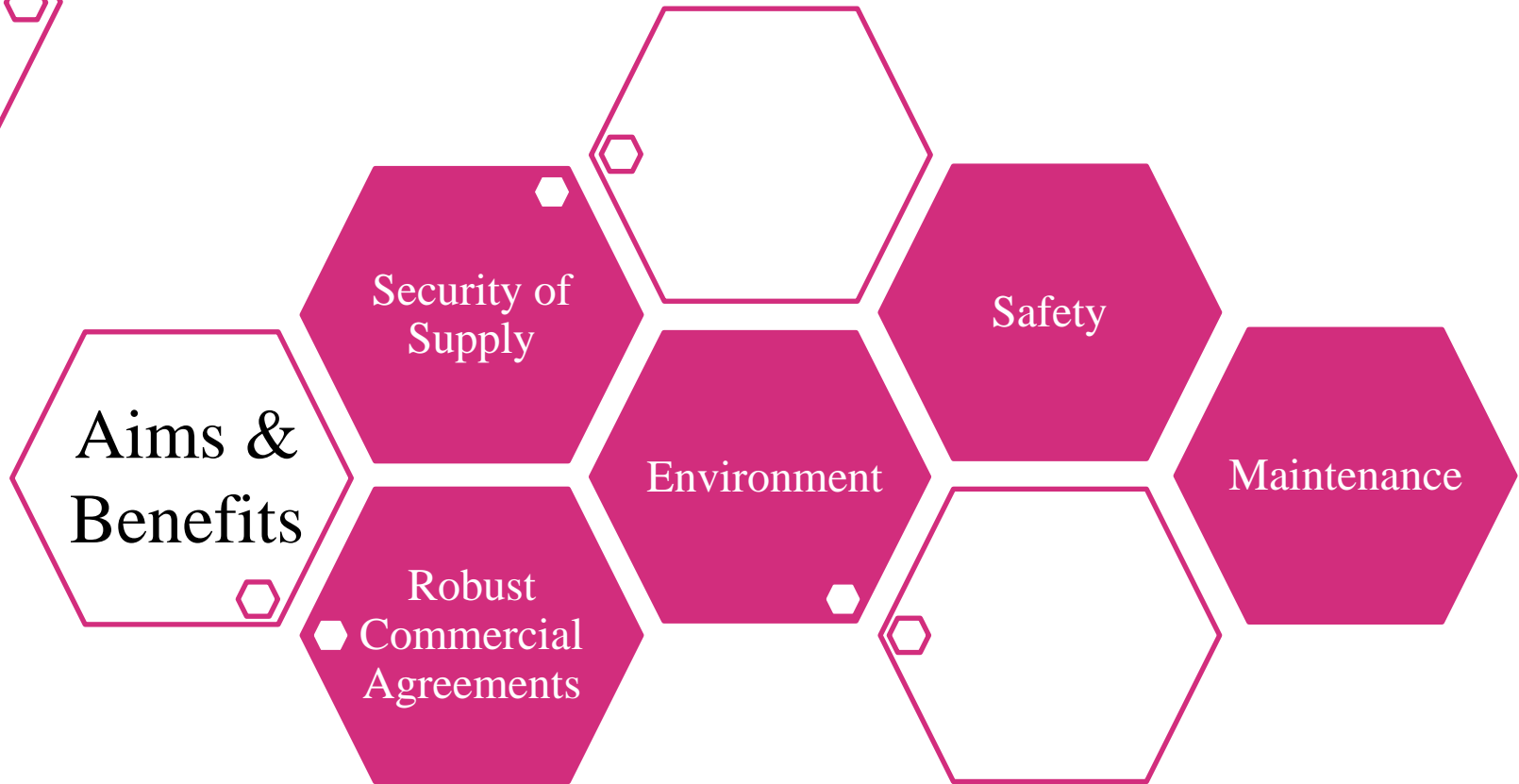
Robust  
Commercial  
Agreements



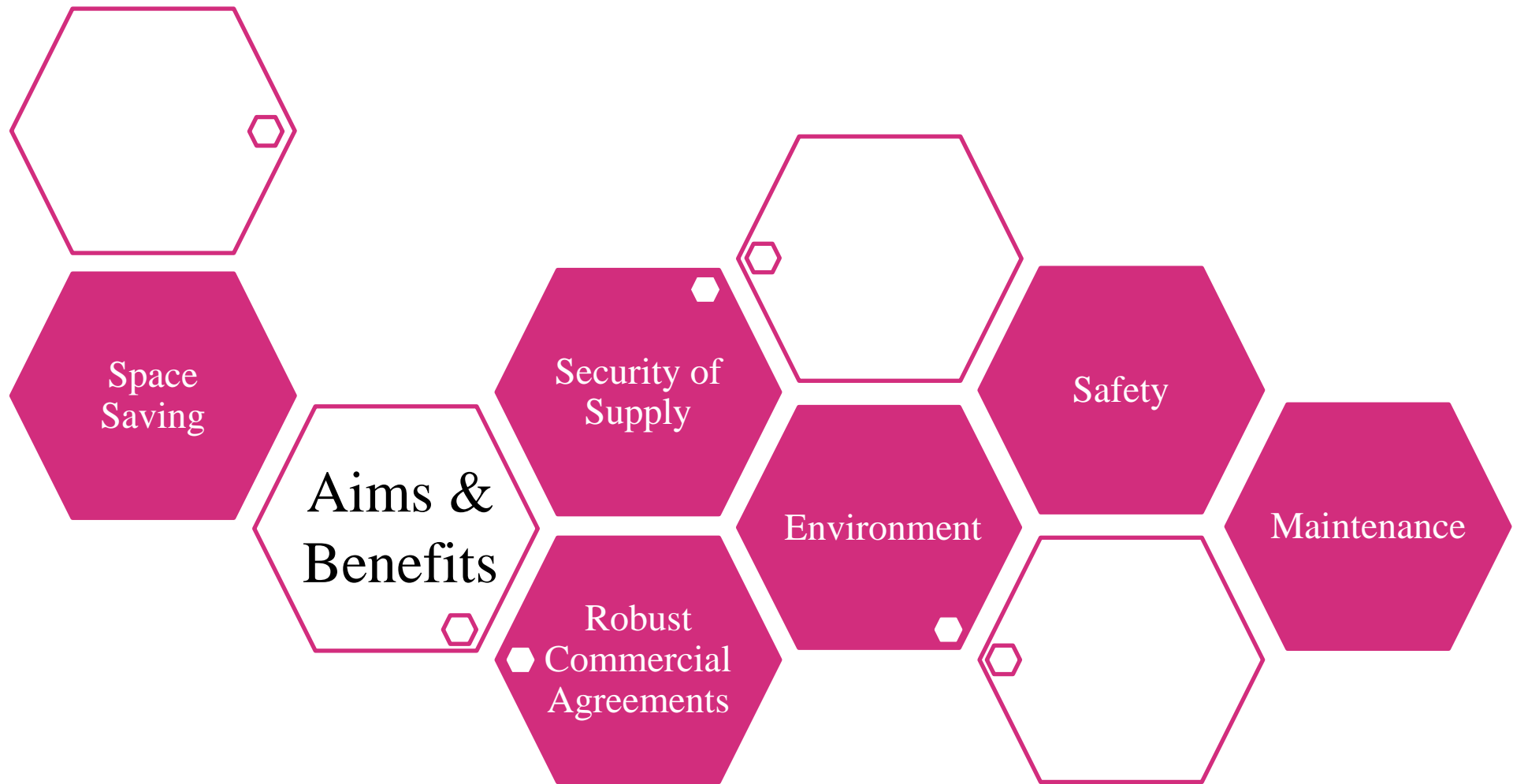


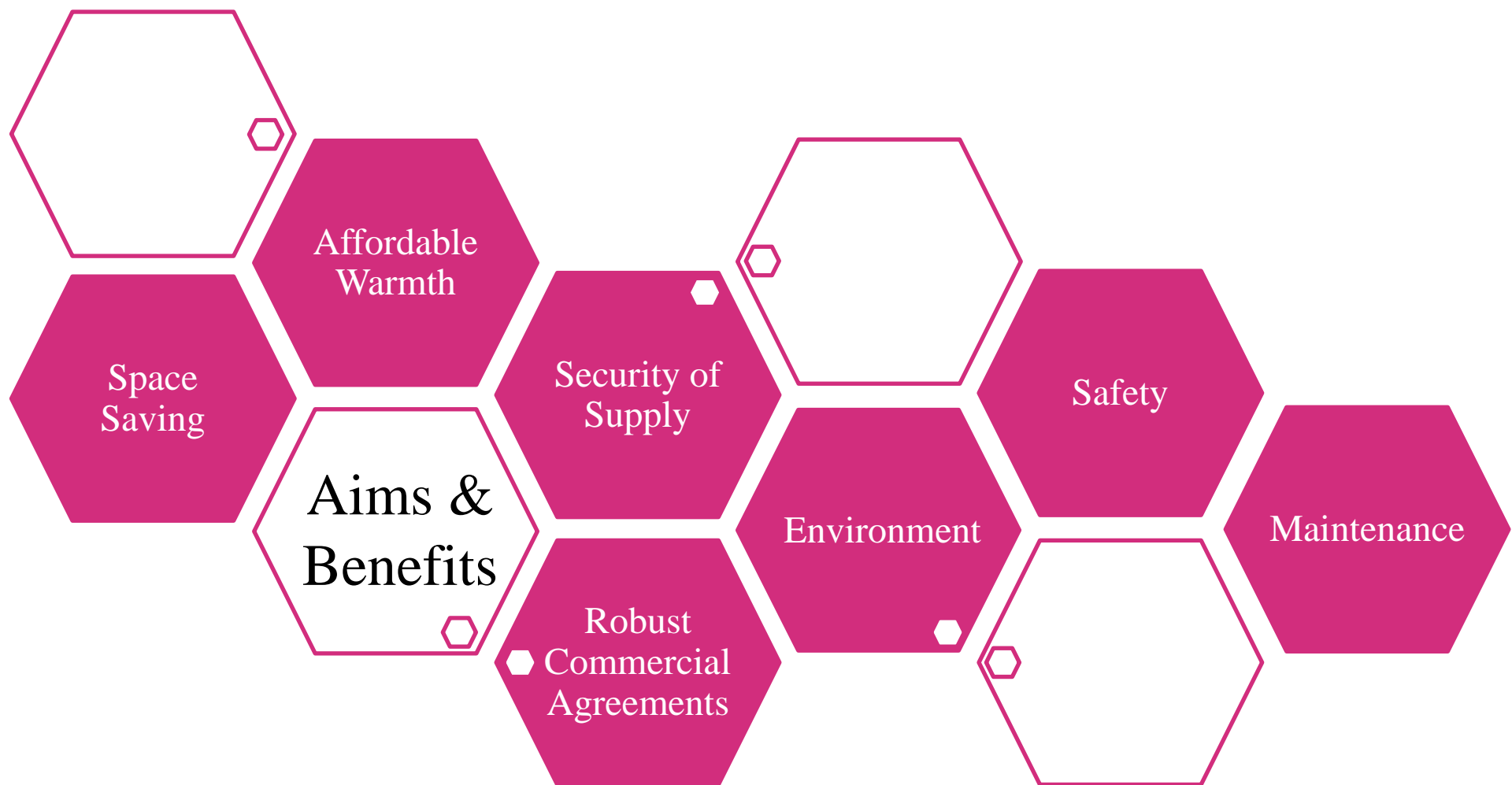


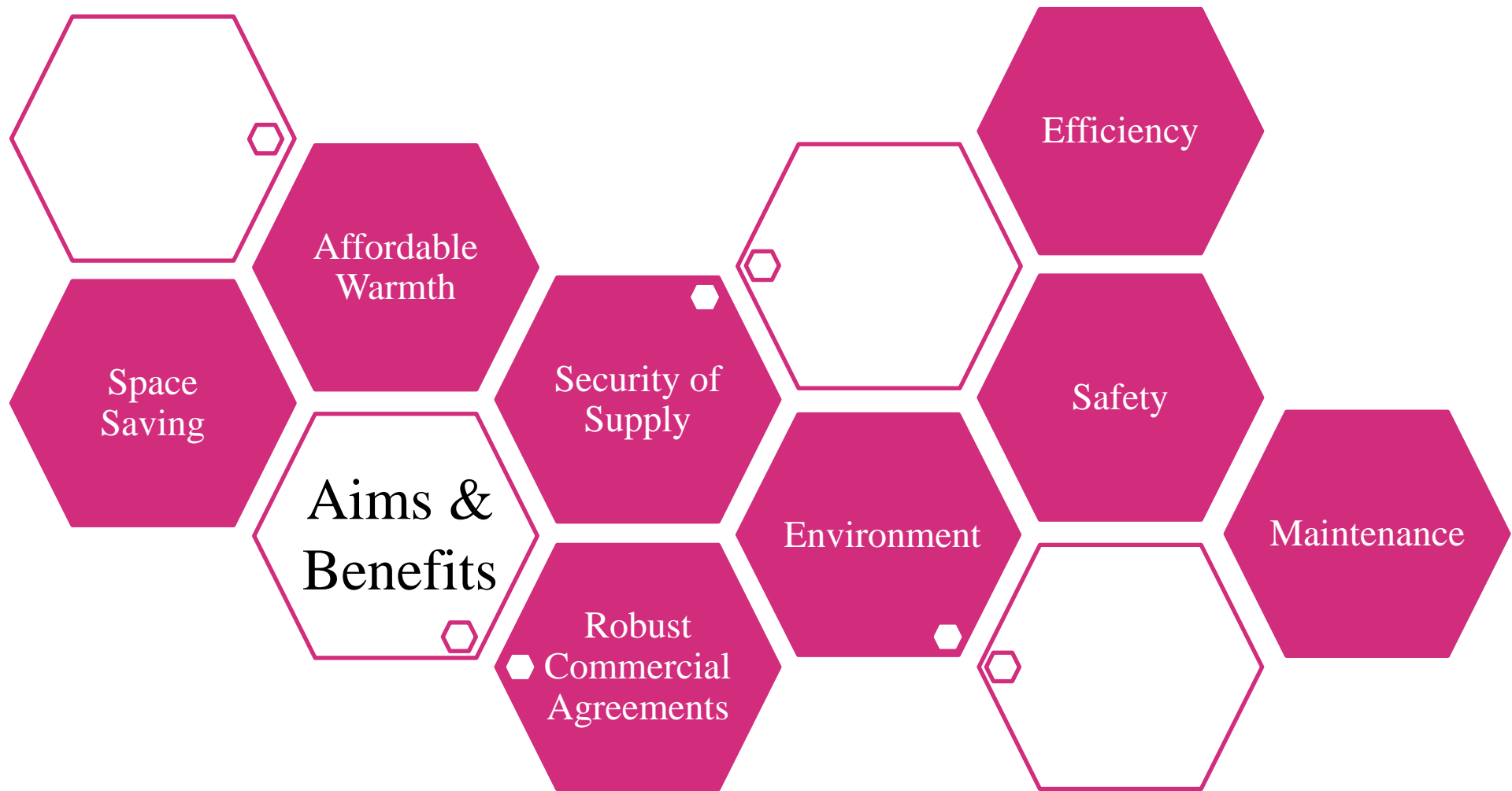




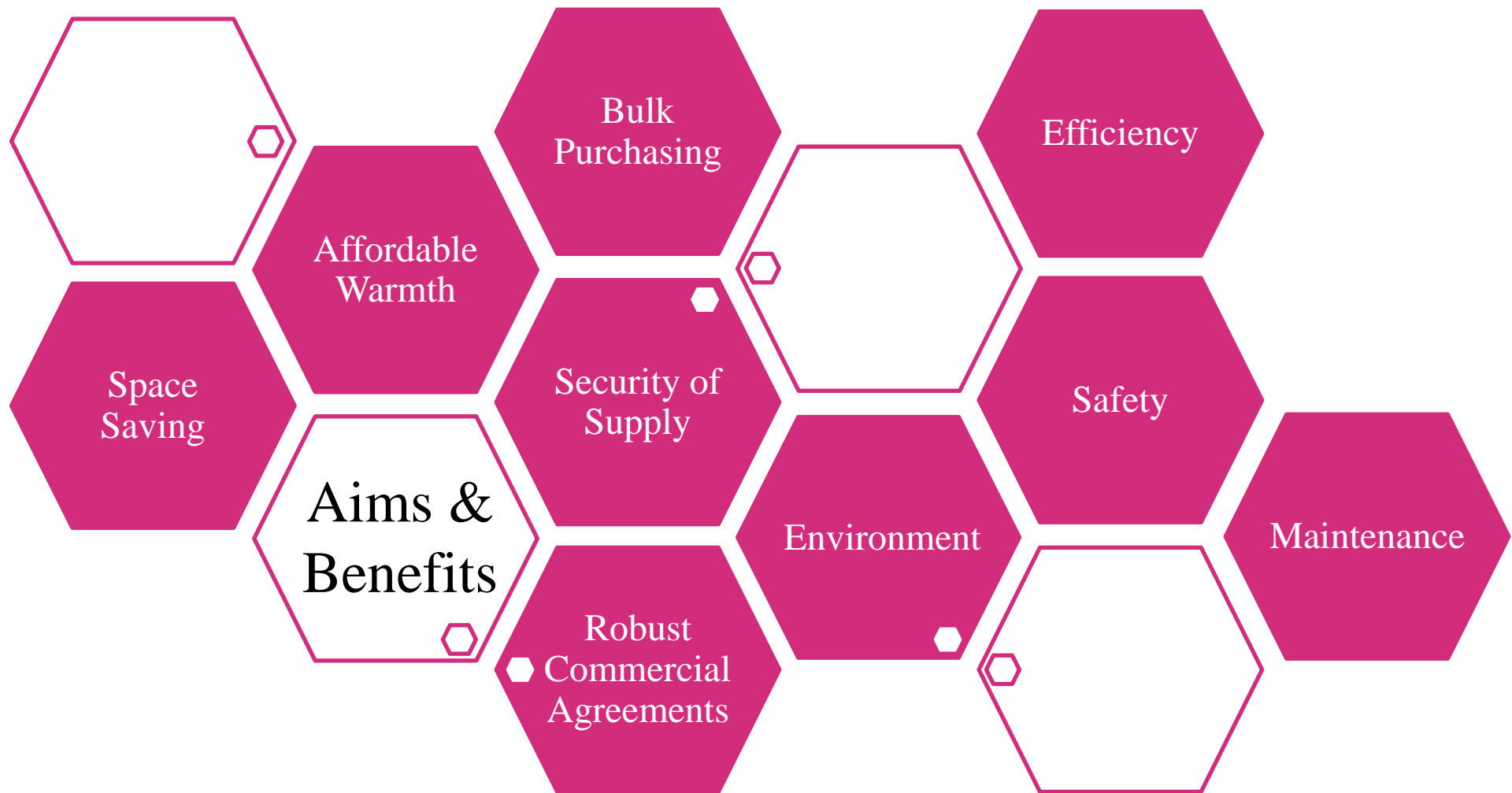




















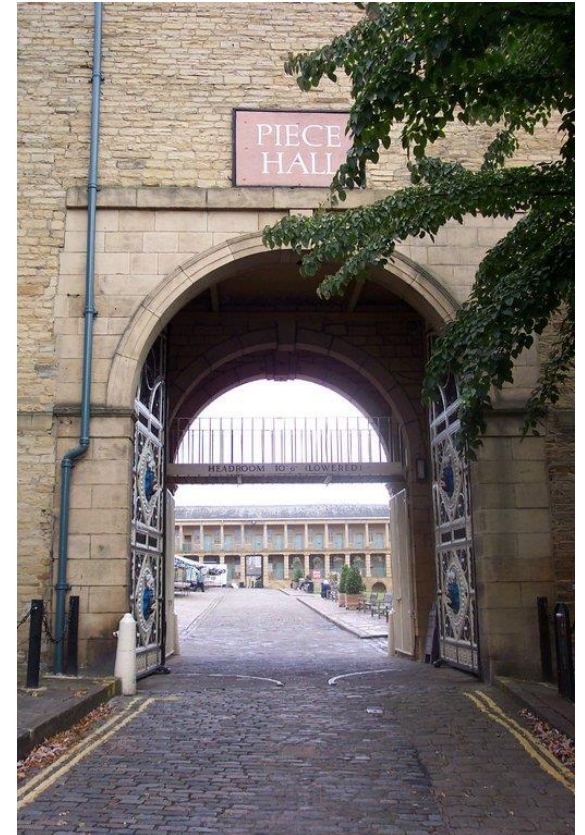
## UK Networks:

- Stratford City
- Olympic Park
- Kings Cross
- Battersea
- Islington
- Manchester
- Aberdeen
- Gateshead
- Nottingham
- Leeds

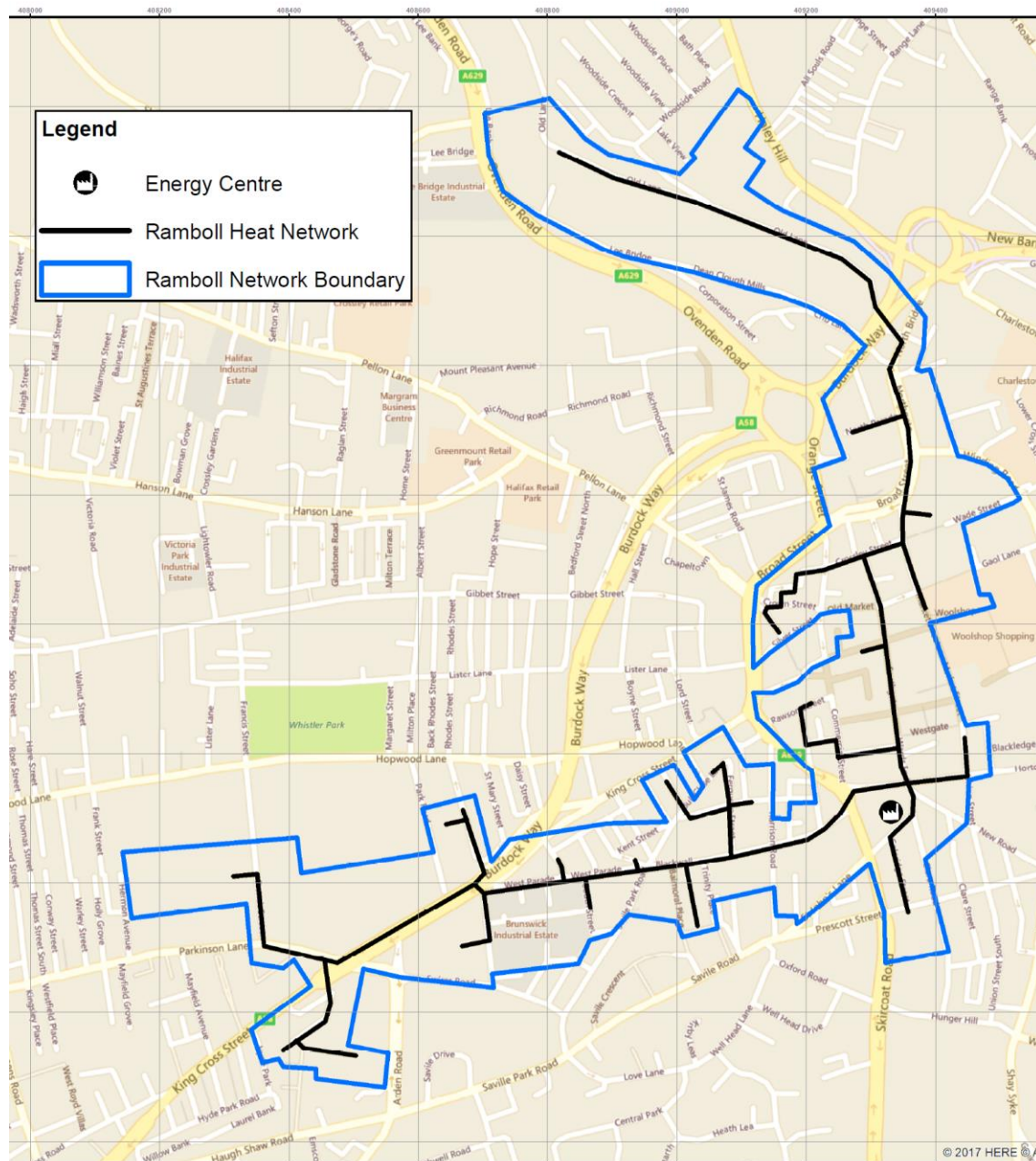
and many more



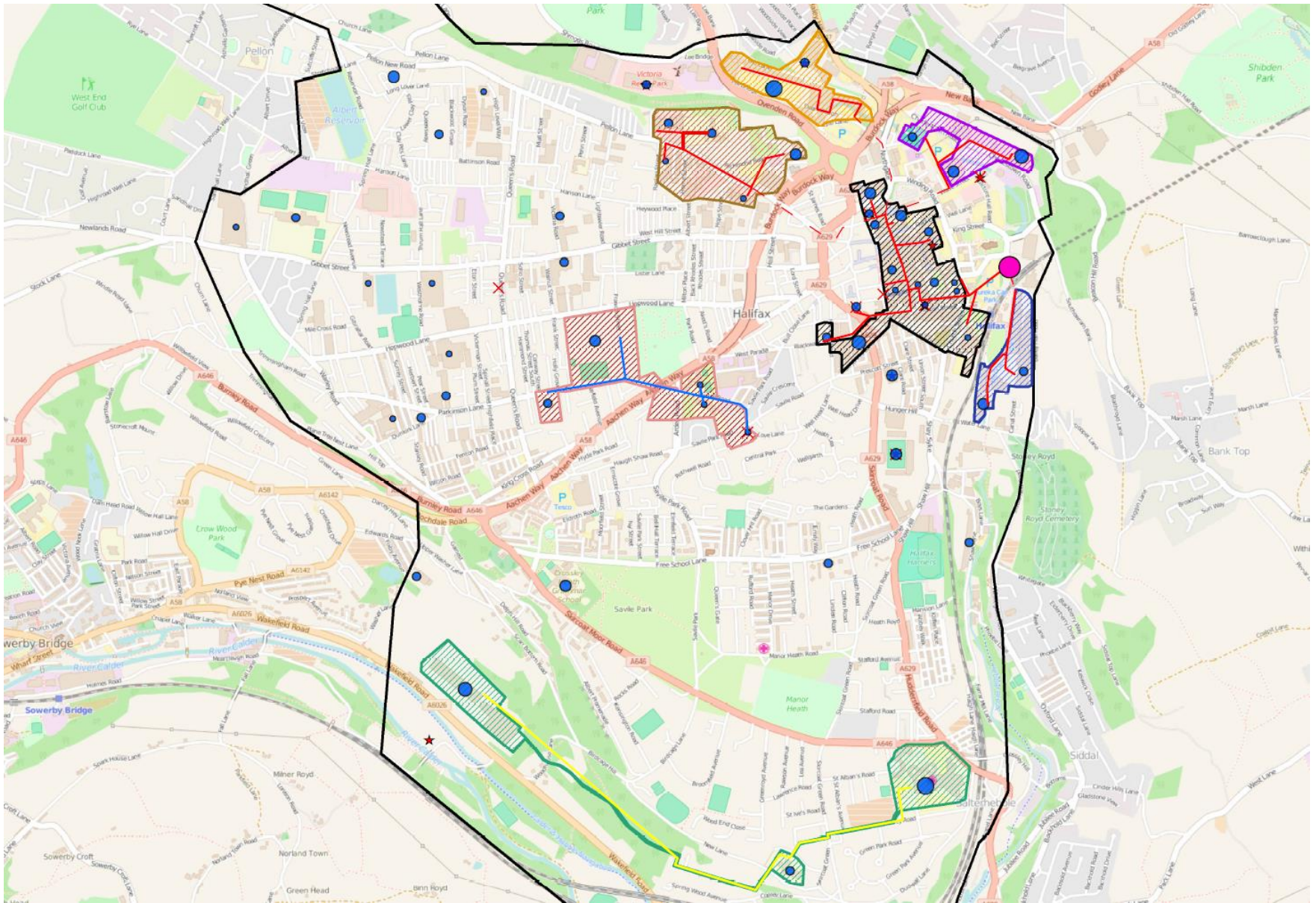




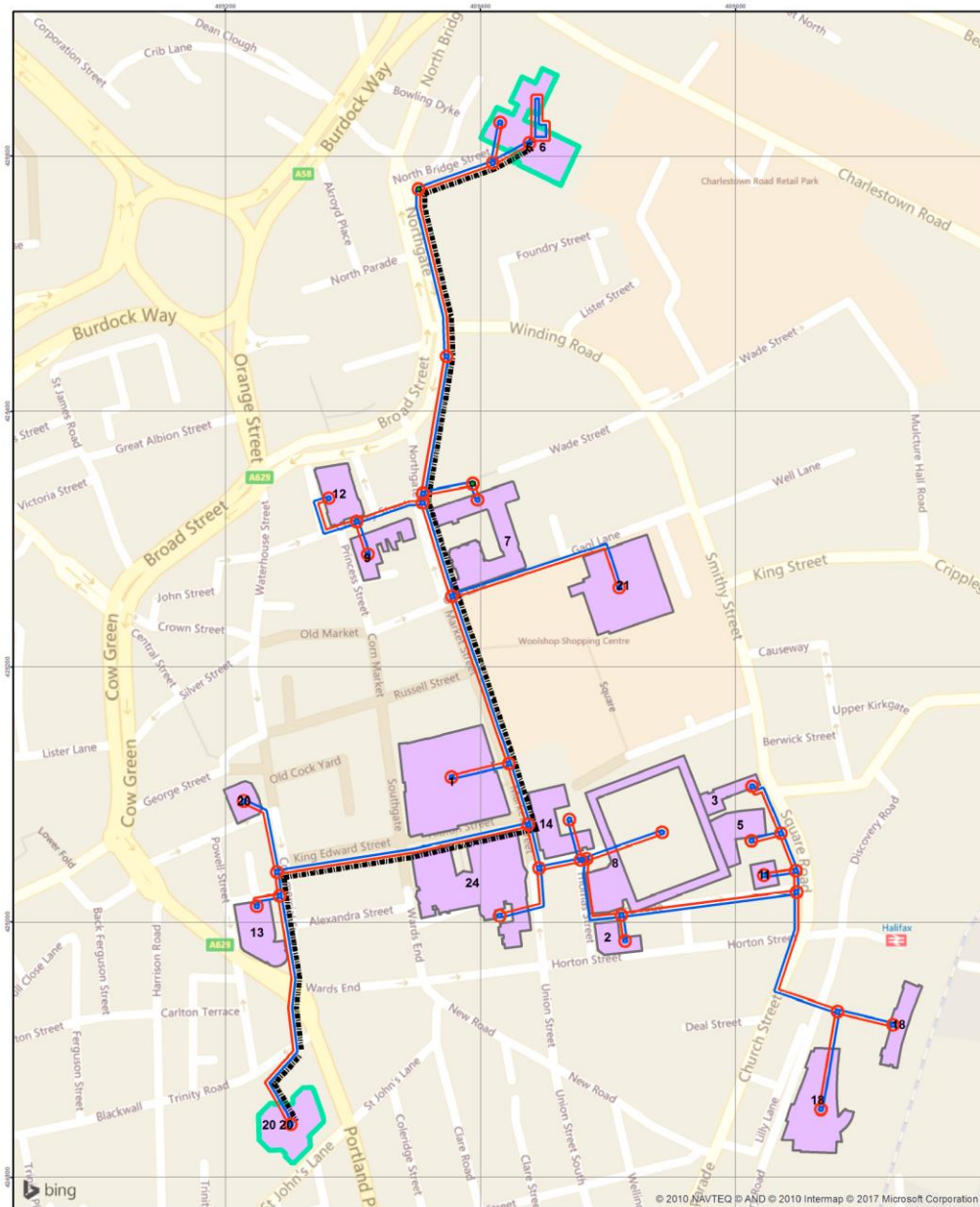
# Halifax Heat Network











# Thank you

Ben Adey-Johnson

Power Calderdale

3<sup>rd</sup> May 2017