



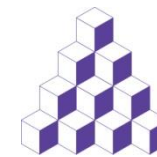
Department
of Energy &
Climate Change



CHP Outreach Workshops

Programme: Reducing Energy Costs with Combined Heat & Power

Manchester 12th March 2015



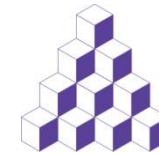
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Greater Manchester Heat Networks

Jonathan Sadler, Julian Packer

March 2015

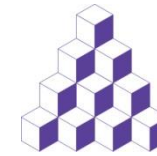
Overview



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- Background and introduction
 - Greater Manchester commitments
 - Project pipeline development
 - Current position
 - Project pipeline
 - Live projects: Manchester Regional Centre
 - Next steps
-

Background & Introduction

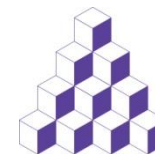


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Background & Introduction

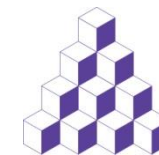
GM commitments



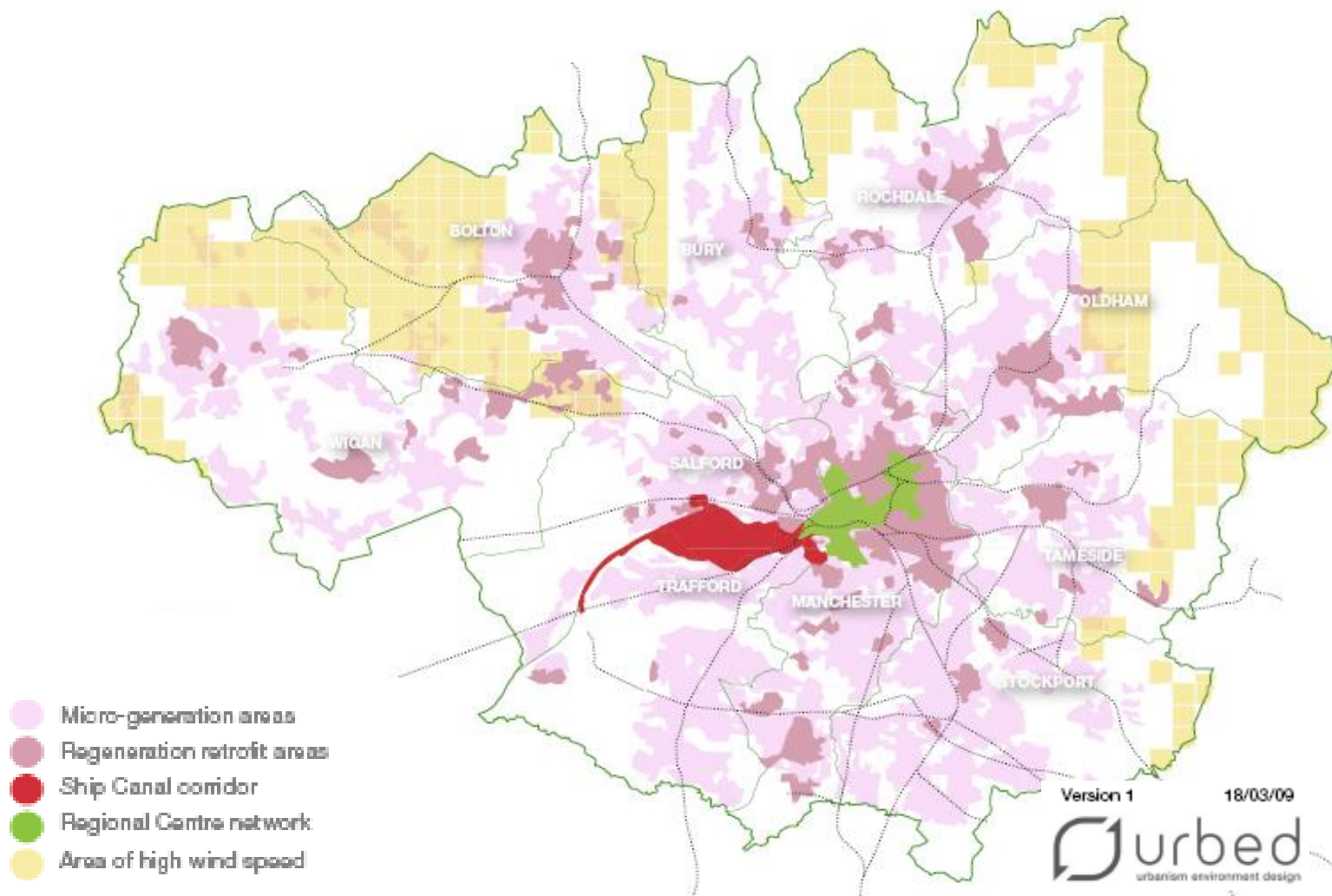
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- GM Climate Change Strategy 2011-20
 - CO2: 48% reduction 1990 to 2020
 - Culture change
 - Low carbon economy
 - Adaptation
 - GM Low Carbon Hub
 - Buildings; Energy; Transport; SC&P; GI; Skills; Sector Growth
 - Energy Plan: 1TWh of local renewable power and 3TWh of renewable heat by 2020
 - GM Low Carbon Project Delivery Unit
-

Pipeline Development (1)

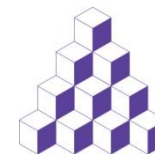


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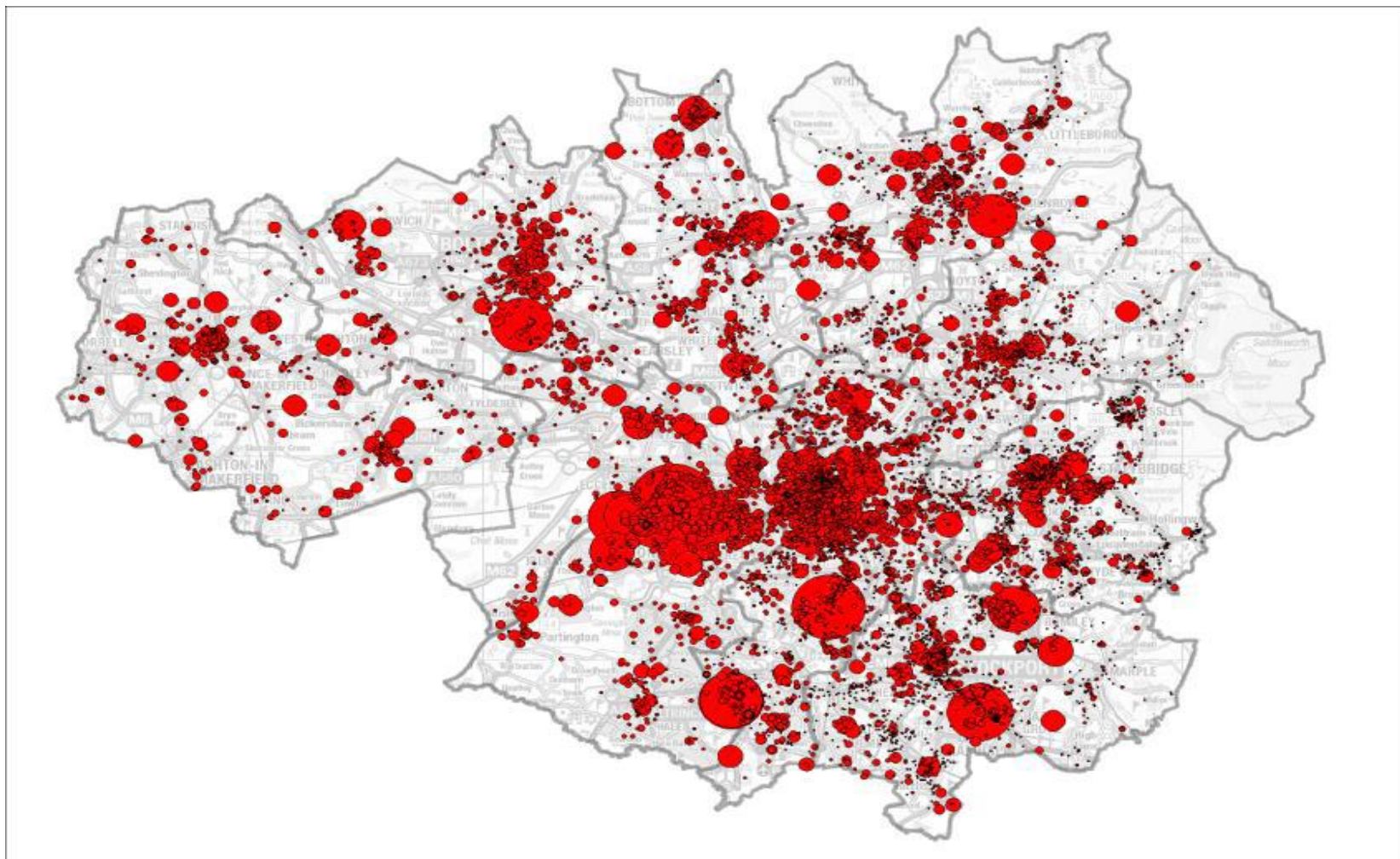


Pipeline Development (2)

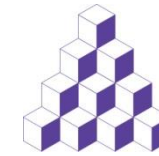
Filtered data from the National Heat Map



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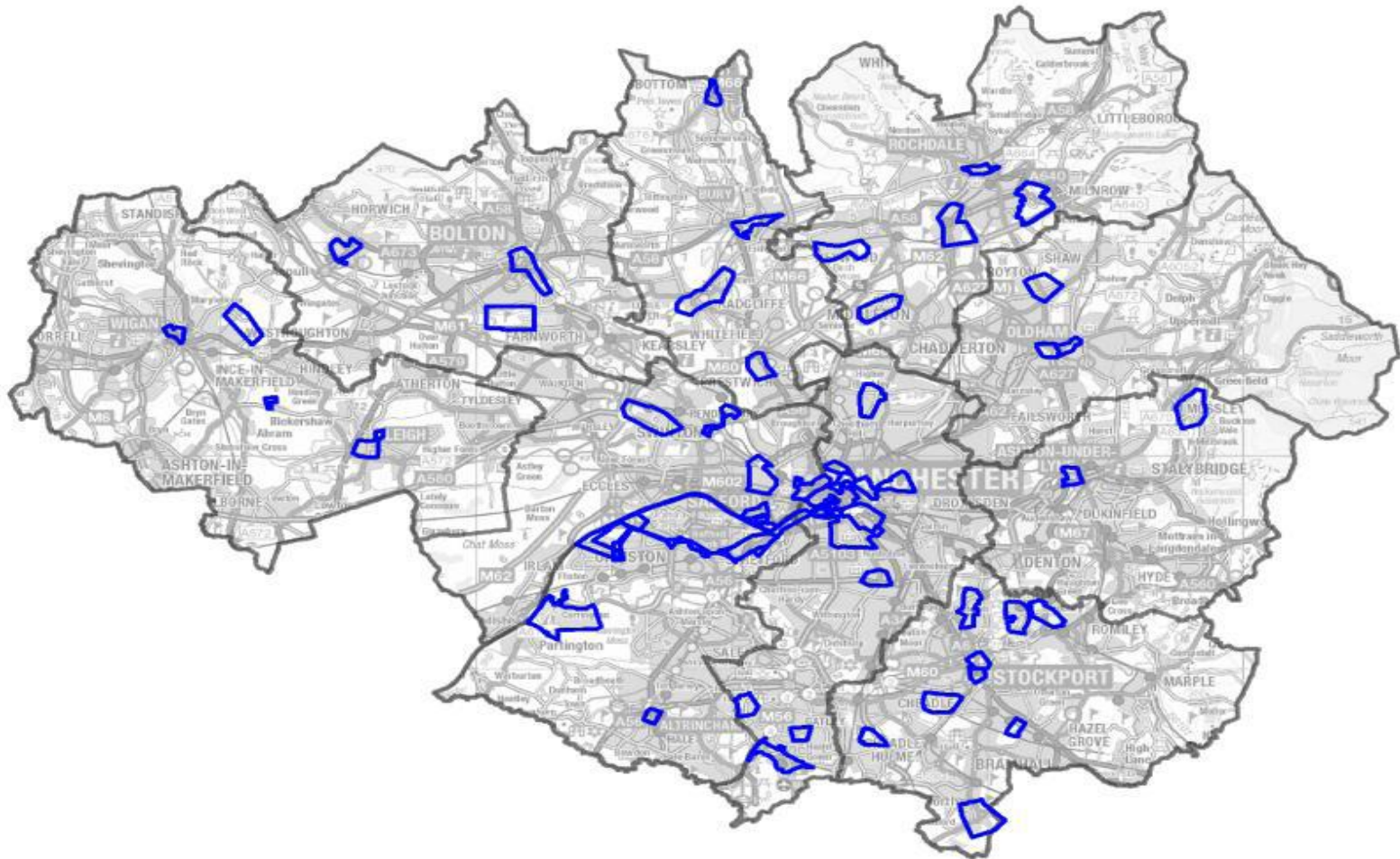


Pipeline Development (3)



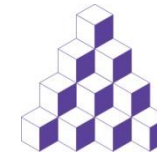
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Project opportunity polygons

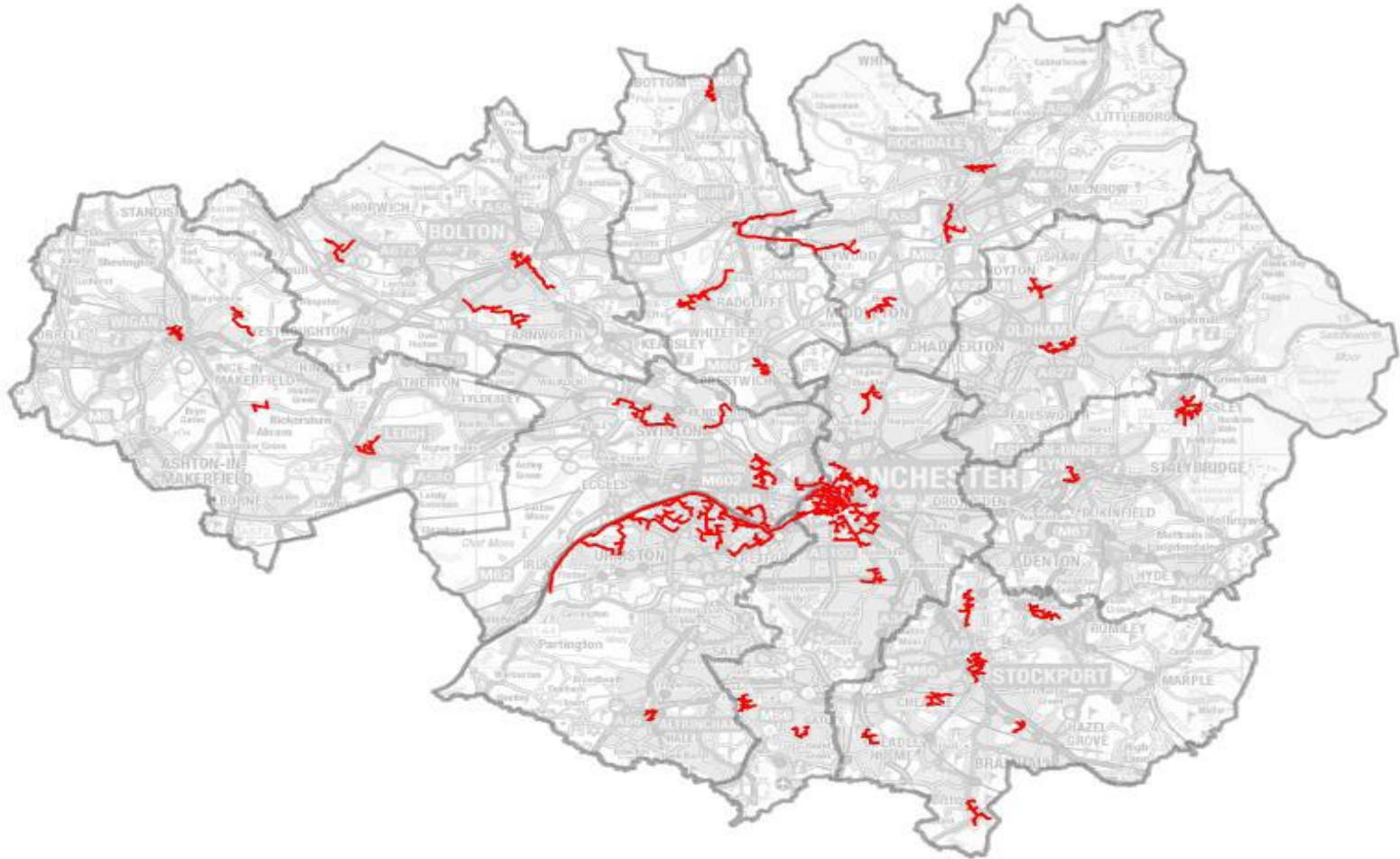


Pipeline Development (4)

Heat Network Opportunities

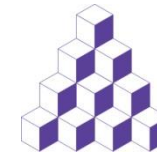


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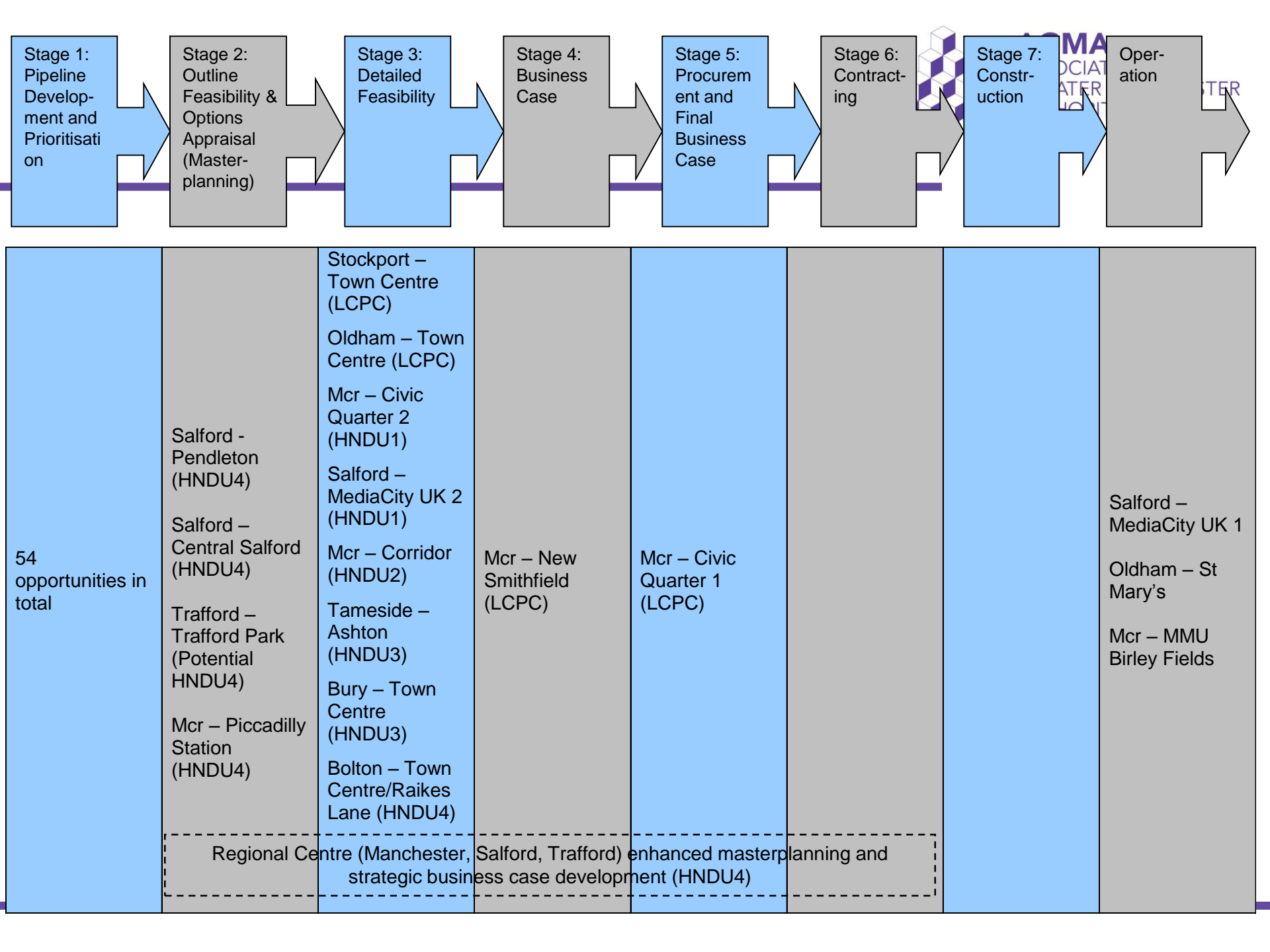
Pipeline Development (5)

Prioritisation



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- **Criteria:**
 - Economic performance (using Internal Rate of Return as the proxy)
 - Carbon saving potential
 - Strategic fit
- **Economic Performance**
 - Development and Capital Investment (CAPEX) costs associate with the scheme
 - Annual heat (and power) sales
 - Annual energy production costs
 - Revenues from incentive support measures and from electricity sales where relevant
 - Operations and maintenance (O&M) costs associated with the assets under the scheme
 - Periodic Replacement (REPEX) costs associated with the assets under the scheme
 - Modelling is carried out assuming 2014 energy prices. DECC Updated Energy and Emissions Projections
- **Carbon Saving**
 - calculated against a business as usual alternative
 - Carbon emission factors are based on DECC's 2013 energy and emissions projections: projections of greenhouse gas emissions and energy demand 2013 to 2030
- **Strategic Fit**
 - GM priority location
 - LA commitment
- **COMMON FEATURE IS THAT ALL THE SCHEMES INCLUDE CHP (natural gas/biomass/EfW/biogas)**



Stage 1:
Pipeline
Develop-
ment and
Prioritisa-
tion

Stage 2:
Outline
Feasibility &
Options
Appraisal
(Master-
planning)

Stage 3:
Detailed
Feasibility

Stage 4:
Business
Case

Stage 5:
Procure-
ment and
Final
Business
Case

Stage 6:
Contract-
ing

Stage 7:
Construc-
tion

Oper-
ation

54
opportunities in
total

Salford -
Pendleton
(HNDU4)

Salford –
Central Salford
(HNDU4)

Trafford –
Trafford Park
(Potential
HNDU4)

Mcr – Piccadilly
Station
(HNDU4)

Stockport –
Town Centre
(LCPC)

Oldham – Town
Centre (LCPC)

Mcr – Civic
Quarter 2
(HNDU1)

Salford –
MediaCity UK 2
(HNDU1)

Mcr – Corridor
(HNDU2)

Tameside –
Ashton
(HNDU3)

Bury – Town
Centre
(HNDU3)

Bolton – Town
Centre/Raikes
Lane (HNDU4)

Mcr – New
Smithfield
(LCPC)

Mcr – Civic
Quarter 1
(LCPC)

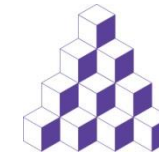
Regional Centre (Manchester, Salford, Trafford) enhanced masterplanning and strategic business case development (HNDU4)

Salford –
MediaCity UK 1

Oldham – St
Mary's

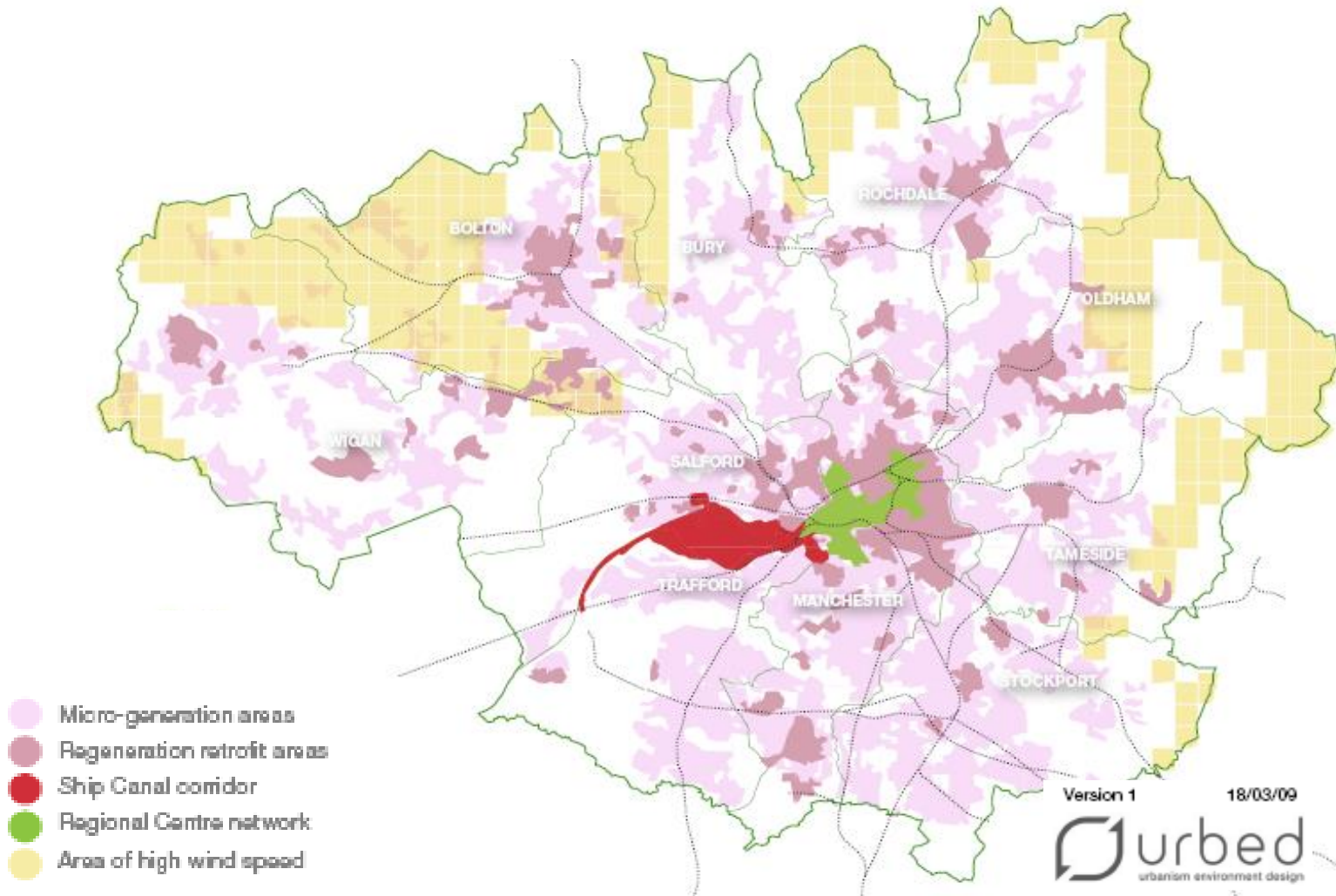
Mcr – MMU
Birley Fields

Manchester Regional Centre



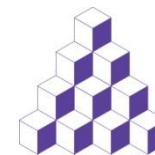
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Strategic Approach (1)

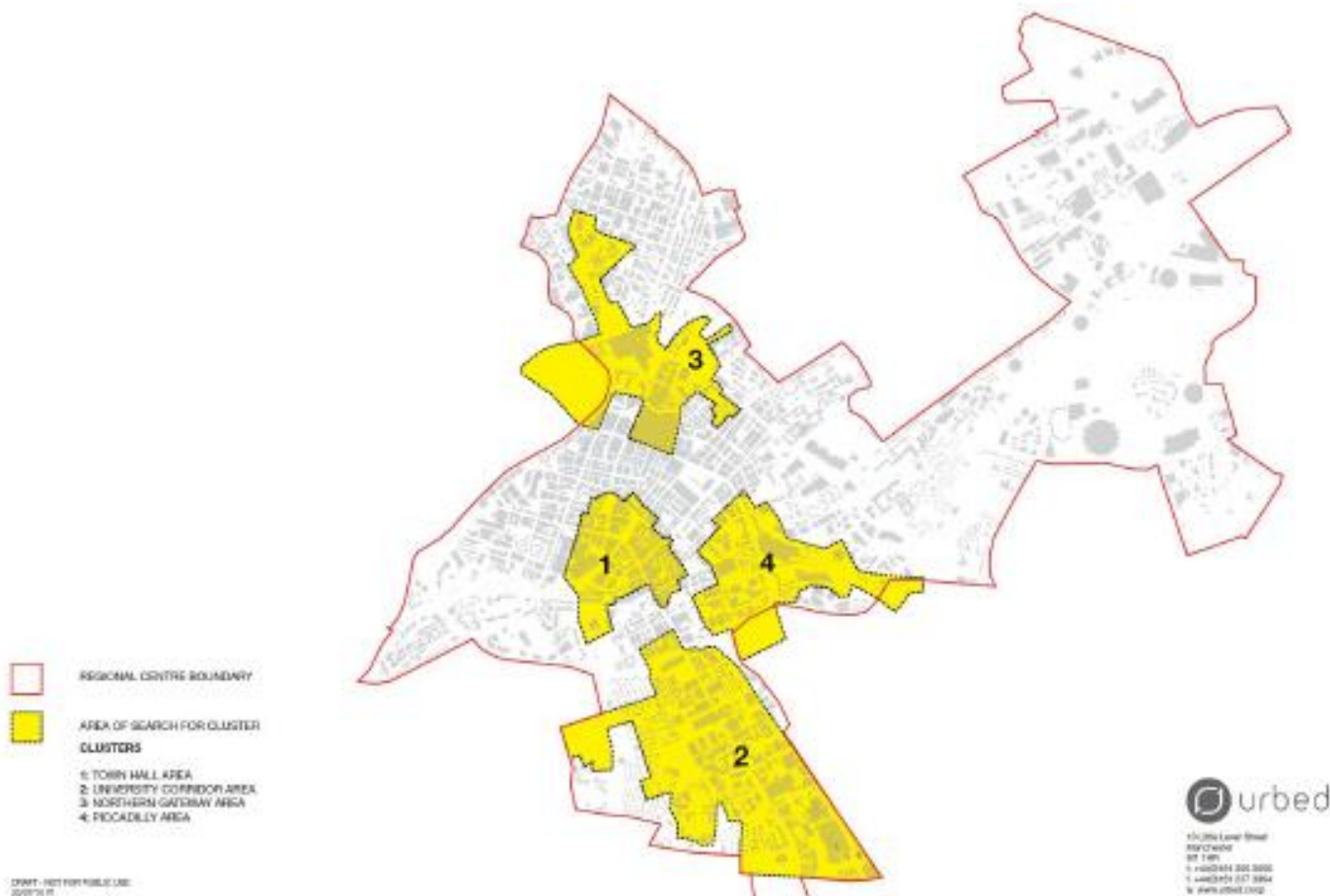


Manchester Regional Centre

Strategic Approach (2)

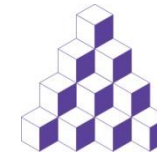


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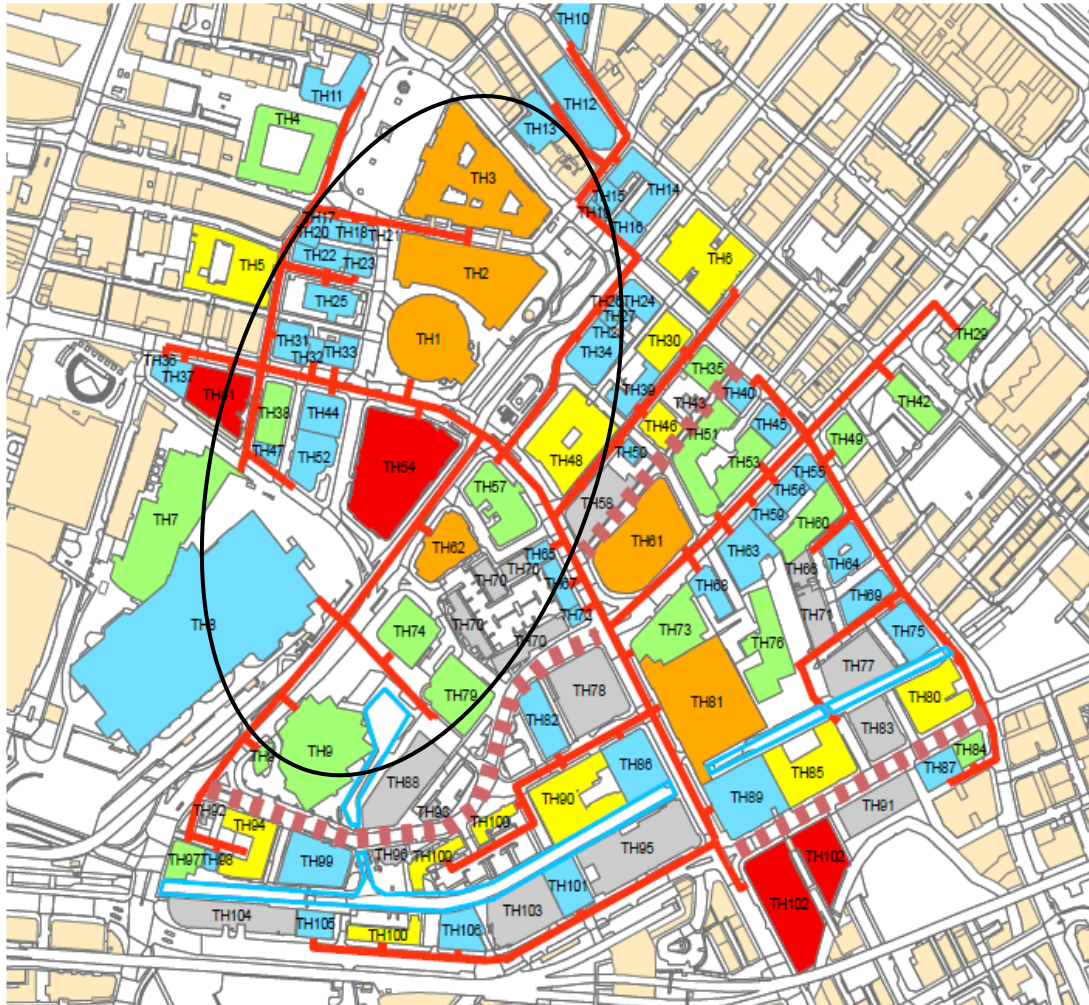


Manchester Regional Centre

Civic Quarter Phase 1



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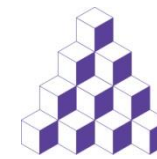
Core Buildings

Town Hall
Town Hall Extension
Central Library
Midland Hotel
No. 1 St Peter's Square
Manchester Central

+

Potential buildings

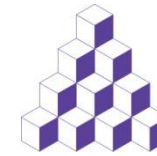
Bridgewater Hall
Heron House
Manchester Art Gallery



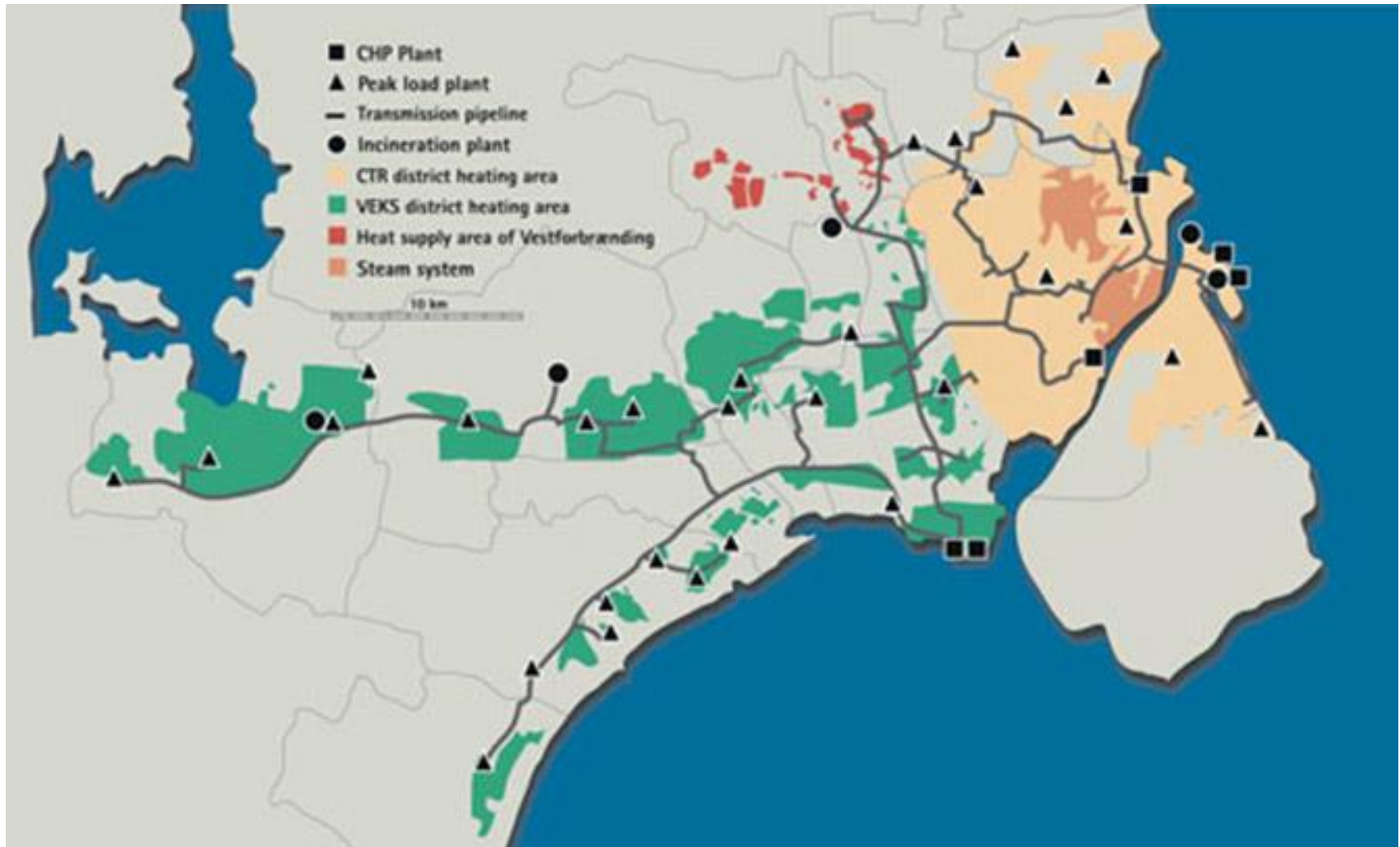
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What Next?

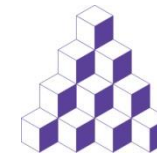
What Next for Manchester?



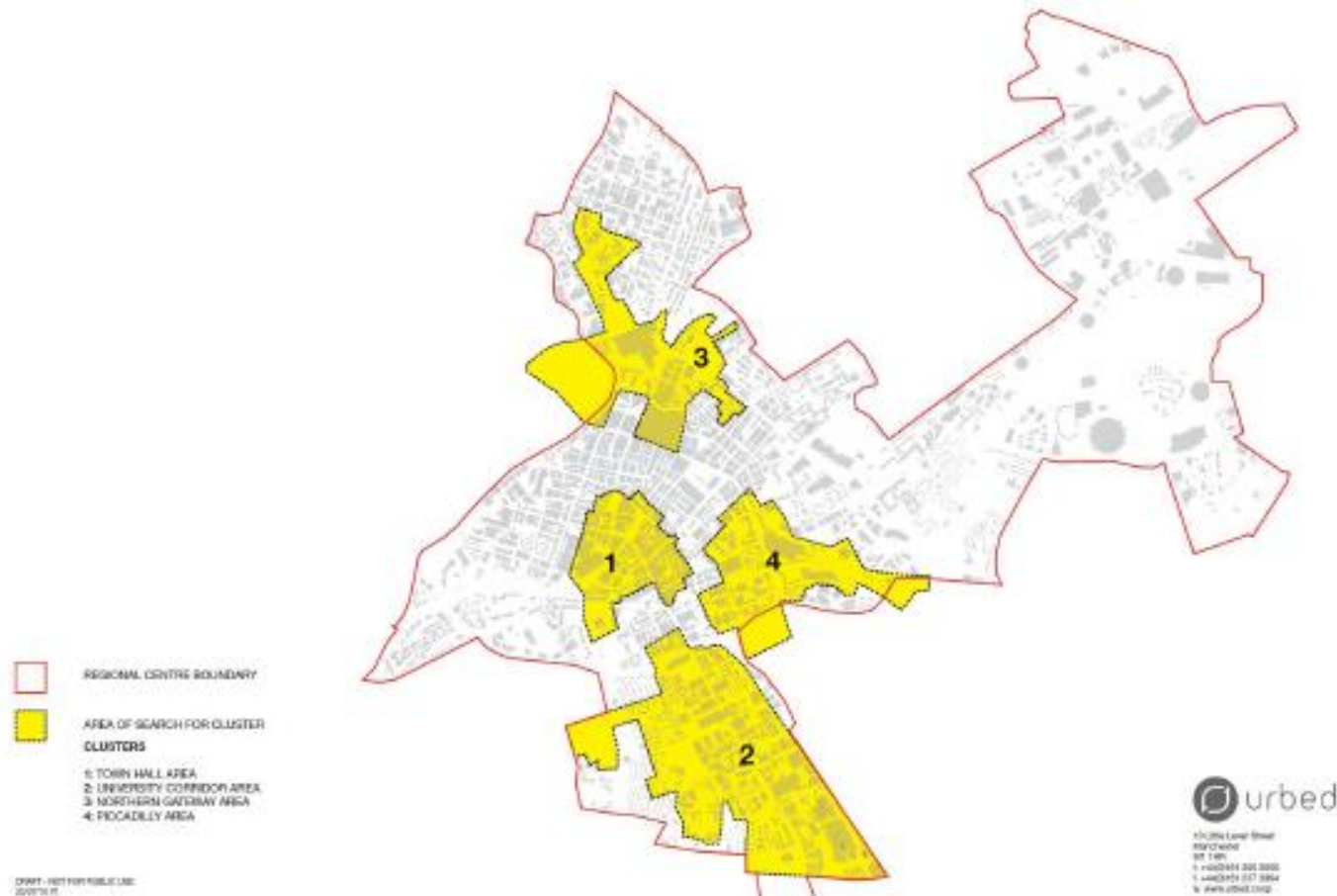
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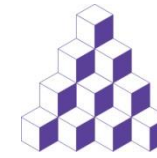


What Next for Manchester?



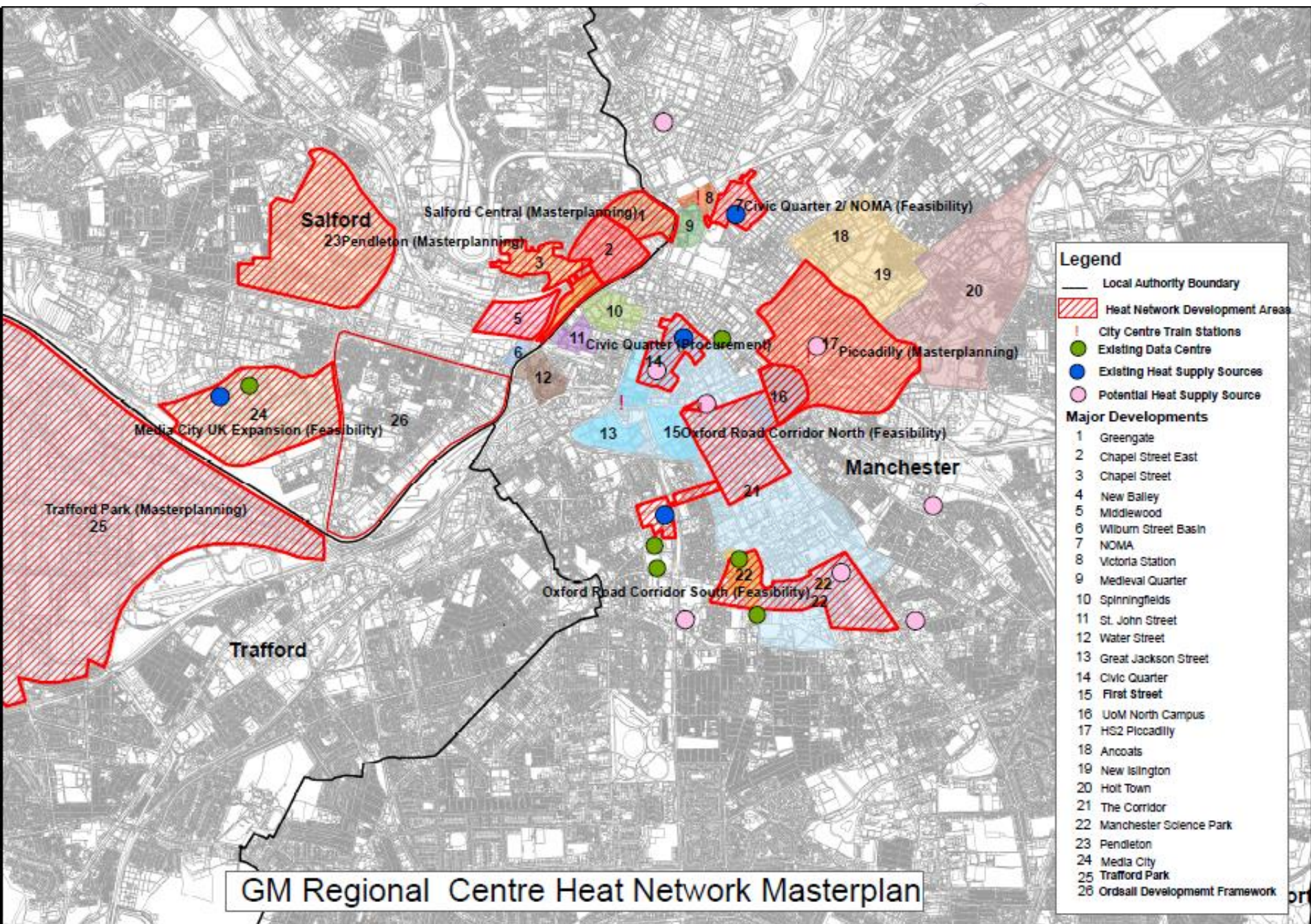
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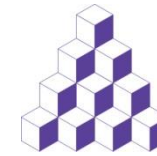


What Next for Manchester?

- Masterplan
 - Delivery programme
 - Governance structures
 - Funding strategy
-



“Joining the Dots”

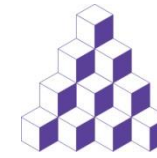


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A Modern Energy Network

MediaCityUK



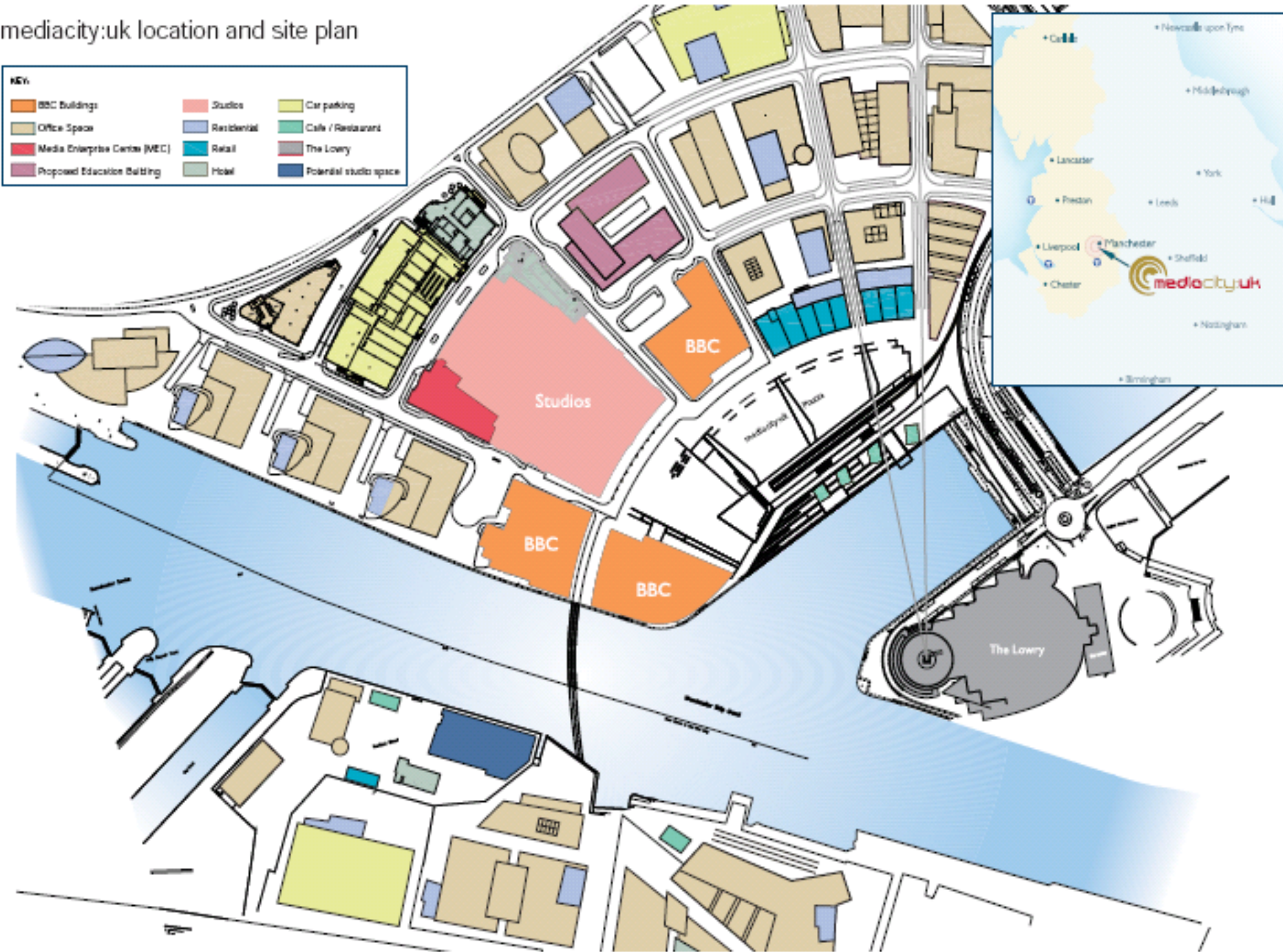
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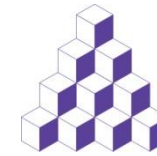
mediacity:uk location and site plan

KEY

BBC Buildings	Studios	Car parking
Office Space	Residential	Cafe / Restaurant
Media Enterprise Centre (MEC)	Retail	The Lowry
Proposed Education Building	Hotel	Potential studio space



Underground Pipe Network



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