Our Building Blocks for a Low Carbon Economy

Whilst the need for carbon reduction is now widely accepted, the pace of change is still nowhere near fast enough to deliver the emissions reductions that will need to be made.

In the UK we have a habit of looking for the latest novelty instead of pushing ahead with the big changes that are needed. And they will need to be big. In fact everyone will need to be engaged – from big business to individual households.

For Manchester the stakes are high. The low carbon economy will be about building a city that is fit for the 21st century. It is about a collective endeavour in which every single decision will contribute.

But the city has done it before, using it's own ingenuity and the latest technology to meet the energy needs of the industrial revolution. So we think Manchester is up to the challenge.

And this is where we come in. Since the launch of our Sustainable Urban Neighbourhood (SUN) inititiative in Hulme in 1996 we have pioneered thinking on how to make cities low carbon.

We have been working across Greater Manchester to make the low carbon economy a reality, providing guidance and support to identify the opportunities, get things moving and give people confidence that change can happen.

What will be your contribution?

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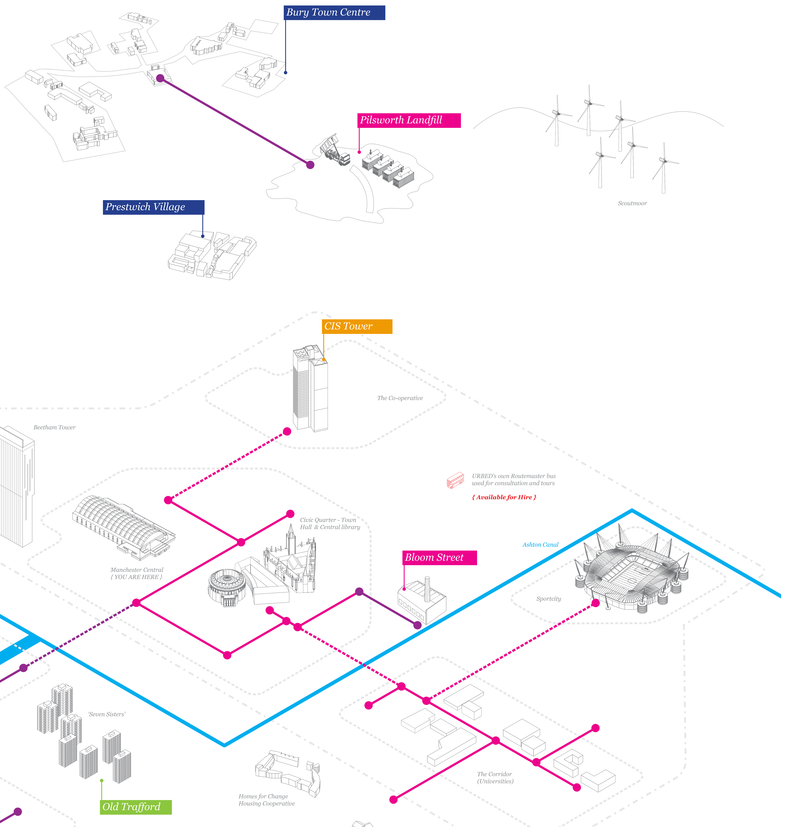


URBED Projects
Across the UK

Housing Retrofit Standards

Moving beyond decent homes: Research and development of a new low carbon standard for social housing in the West Midlands, drawing upon extensive stakeholder engagement. Case studies of management best practice and fully costed retrofit specifications tailored to eight different housing 'archetypes'.

Client: West Midlands social landlord consortium (BHHP)
Partners: EVA, TSN, Government Office West Midlands, Faithful+Gould

Passive Urban Design Guidance

Nottingham City Centre Urban Design Guide: Futureproofing the urban fabric of Nottingham. Development of innovative urban design guidance for the city centre of Nottingham incorporating a sustainable energy strategy. Guidance underpinned by detailed urban design supported by microclimate modelling by Cambridge University.

Client: Nottingham City Council
Partners: Martin Centre (Cambridge University)

Green Infrastructure

Liverpool Fundamentals Charter: A short project to identify regional infrastructure priorities. Development of a complete green infrastructure strategy for Liverpool's Knowledge Quarter, drawing upon the latest thinking and best practice in green infrastructure planning. Including analysis of the functions and benefits by Planning & Housing Partnership.

Client: Mersey Forest Partnership / Liverpool Vision
Partners: Natural Economy Northwest, University of Liverpool, NHS Trust

Retrofit for the Future

Demonstrating 80% carbon reductions for existing properties: We are using Retrofit for the Future funding to demonstrate how 80% carbon reductions can be achieved on 12 homes in Rotherham. Proposals include a fabric first approach to improve the thermal performance with improved ventilation, a low energy fit out and renewable energy technologies. Performance will be monitored over the next 2 years.

Funders: Technology Strategy Board
Clients: Russell Construction, Rotherham 2010, Wakefield District Homes

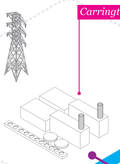
Low Carbon Economy Strategy

Dearne Valley Eco-vision: Development of a 20 year eco-vision for the new Dearne Valley Environmental Park. Four year eco-vision for the Dearne Valley Sub-region, Yorkshire Forward and the three local authorities and to put in place the strategic policy framework and to identify priority projects and EU partners.

Client: Grafham City Region
Partners: Rotherham, Barnsley and Doncaster Councils, Yorkshire Forward, Treeconn South Yorkshire

A Zero Carbon Victorian Semi?

Carrington Power Station



URBED Projects
Inside Greater Manchester

Community Engagement

Carbon Co-operative pilot for two streets in Moss Side: Following some initial market research, we are now piloting our unique member led 'one stop' service in Moss Side. This is working in establishing 5 new co-operatives in Moss Side. We believe that this is the key to making retrofit easier and cheaper for owner occupiers.

Partners: Manchester Education Z'one, Manchester City Council, Manchester Metropolitan University, Groundwork, Eco Students, Adactus Housing Association, Moseaven Housing Association, Energy Saving Trust

Micro-generation Technology

Solar manufacturing study to support CIS solar tower funding bid: A study of the regional potential to develop solar manufacturing, looking at the full range of photovoltaic technologies and the issues faced in trying to create demand and build a wide sector. It included extensive engagement with what was then the CIS on the need for a feed-in tariff.

Client: NWDA and Ecotricity North West
Partners: CIS, Total Gaiasol

Low Carbon Manufacturing

A solar park concept to attract investment: Following our earlier study into the potential for solar manufacturing, we took things a step further by developing a concept for a 'solar park' to attract a factory to St Helens. Our concept was supported by market research to identify companies that might be positioning to invest in the EU.

Client: Knowsley Solar Alliance
Partners: Quantum Strategy & Technology, St Helens Council, Mersey Partnership

Green Infrastructure

Liverpool Fundamentals Charter: A short project to identify regional infrastructure priorities. Development of a complete green infrastructure strategy for Liverpool's Knowledge Quarter, drawing upon the latest thinking and best practice in green infrastructure planning. Including analysis of the functions and benefits by Planning & Housing Partnership.

Client: Mersey Forest Partnership / Liverpool Vision
Partners: Natural Economy Northwest, University of Liverpool, NHS Trust

Waste to Energy Network

Waste to energy heat networks: Using landfill gas to heat Bury town centre. A spatial strategy, engineering concept and delivery plan to take forward a heat pipeline linking Pilsworth landfill gas power station and Bury town centre. The project could heat most of the town centre, creating a catalyst for other zero carbon heating and Carbon Reduction Commitment benefits.

Client: Bury Council
Partners: AECOM, the Carbon Trust, CHPA

City Centre Network

Manchester Regional Centre energy network: A low carbon energy network for the City Centre. The aim strategy is to take forward the City Council's proposal for a low carbon energy network to supply the City Centre. Using the 'heat cost' method of heat planning we have identified clusters of buildings from which a network could develop, as well as devising an innovative mutual ESCo model to bring together building owners.

Client: Manchester City Council
Partners: Arup, Cornelius Partnership, AECOM, CHPA

Powerstation Heat Network

Concept plan for heat offtake from Carrington power station: A concept plan and strategy for using waste heat from the proposed gas fired power stations at Carrington, with the potential to supply a corridor extending all the way to Manchester City Centre. It would be one of the largest single carbon reduction measures in Greater Manchester.

Client: AGMA, Manchester City Council
Partners: Trafford Council, Salford Council, Ramboll Denmark

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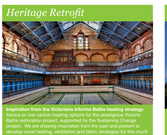
Funders: Technology Strategy Board
Clients: Russell Construction, Rotherham 2010, Wakefield District Homes

Regeneration Retrofit

Low carbon energy strategies for Rochdale, Oldham and Trafford: Developing low carbon energy strategies for regeneration areas, including heat mapping, energy masterplanning, performance standards and retrofit fabric improvements. We have worked with HMR Pathfinders, ALMO's and their private sector partners to work up strategies.

Clients: Rochdale, Oldham and Trafford Councils, Oldham and Rochdale HMR, Pochdale Development Agency, NWDA, Salford Housing Trust
Partners: Ramboll Denmark, AECOM

Heritage Retrofit



Inspiration from the Victorians informs Baths heating strategy: A study for the Victoria Baths Trust to inform the Baths heating strategy as part of the Baths restoration project, supported by the Sustaining Change project. We are drawing inspiration from the past and present to develop novel heating, ventilation and fabric strategies for this much loved building.

Clients: Victoria Baths Trust, NWDA
Partners: AECOM

Home Retrofit

A Zero Carbon Victorian Semi? Putting our energy where our mouth is. Our associate urban designer Charlie Baker decided to use his own home to explore how a typical Victorian semi could become zero carbon. Solutions include external insulation, triple glazing, ground source heat pump, solar thermal and photovoltaic panels. Informed our retrofit package. C. Geo specialists and pod poop.

Partners: Low carbon building product manufacturers

Low Carbon Economy Strategy

Dearne Valley Eco-vision: Development of a 20 year eco-vision for the new Dearne Valley Environmental Park. Four year eco-vision for the Dearne Valley Sub-region, Yorkshire Forward and the three local authorities and to put in place the strategic policy framework and to identify priority projects and EU partners.

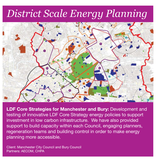
Client: Grafham City Region
Partners: Rotherham, Barnsley and Doncaster Councils, Yorkshire Forward, Treeconn South Yorkshire

City Region Scale Energy

City Region scale energy planning strategies: Decentralised and zero carbon energy planning policy framework for Manchester City Region. Development of a sub-regional evidence base and policy approach to energy planning for the City Region, responding to the challenge of zero carbon development and the PPS1 supplement on Planning and Climate Change. We are taking forward the spatial plan vision with support from AGMA and the ten districts.

Client: AGMA
Partners: ten districts of Greater Manchester, AECOM, Quantum, Ramboll Denmark

District Scale Energy Planning



LDF Core Strategies for Manchester and Bury: Development and testing of innovative LDF Core Strategy energy policies to support decentralised energy networks. Including technical and policy support to build capacity within each Council, engaging planners, regeneration teams and building control in order to make energy planning more accessible.

Client: Manchester City Council and Bury Council
Partners: AECOM, CHPA

Town Centre Energy Planning

Low carbon infrastructure for Bury, Prestwich and Radcliffe: Identifying low carbon infrastructure opportunities to supply new and existing buildings in Bury, Prestwich and Radcliffe town centres. Technologies include wind power, gas fired CHP, biomass heating, wastewater treatment heat recovery, rainwater geothermal heating, hydroelectric and micro-generation.

Client: Bury Council
Partners: AECOM