

MANCHESTER: THE GREEN ENERGY REVOLUTION

FINAL REPORT

QUANTUM STRATEGY & TECHNOLOGY AND PARTNERS
FOR SUSTAINABILITY NORTHWEST AND MANCHESTER KNOWLEDGE CAPITAL

26th October 2005

CONFIDENTIALITY (Confidential or not confidential): **CONFIDENTIAL**

Project Name: Manchester and the Green Energy Revolution

Project Number: SNW 001

Quality Assurance

Quantum Strategy & Technology Ltd has internal quality policies based on the systems used by two major UK energy & environmental consultancies. These are both registered with BS Quality Assurance Limited as compliant with BS EN ISO 9001. Once formalised the Quantum systems will be submitted for similar registration. In the meantime all work conducted by Quantum and its subcontractors is carried out in accordance with these in-house procedures and documentation systems.

UNIT APPROVAL	Name	Date
Written by:	Richard Pearce	14/10/05
Issued by:	Quantum Strategy & Technology Ltd	
Approved by:	Bob Bailey	

Revision History Records

Revision	Date	Creation / Update summary
R0	14/10/05	Richard Pearce
R1	17/10/05	Richard Pearce
R2	26/10/05	Richard Pearce

Quantum Strategy & Technology Ltd

Business Centre
Station House
Stamford New Rd
Altrincham
WA14 1EP
Tel: +44 (0) 161 924 2388
Email: richard.pearce@quantumst.co.uk

CONTENTS

		Page Number
	Project Summary	4
1.	Introduction	11
2.	Priority Projects	14
3.	Public Policy & Planning Initiatives	42
4.	Communications and Behavioural Change	48
5.	Carbon Baseline and Monitoring	63
6.	Management and Organisation	68
7.	Conclusions and Recommendations	75

Project Summary

1. Background and Objectives

The ultimate goal of Manchester: The Green Energy Revolution (M:GER) is to put Greater Manchester on a path to being the shining light on sustainable energy living and working, by substantially reducing its carbon footprint and emissions of other greenhouse gases whilst contributing to the social and economic development of the city region. The policy context is the Government's Energy White Paper with a focus on areas in which intervention is feasible at a sub-regional level i.e. dealing with energy efficiency, distributed generation and low carbon transport.

This project examines the feasibility of implementing a package of options that will enhance awareness of sustainable energy issues whilst reducing emissions in practical, innovative and significant ways. The project follows a scoping study undertaken by Sustainability Northwest (SNW) on behalf of Manchester Knowledge Capital (M:KC) which defined the nature and scope of M:GER and identified 23 project ideas covering eight aspects of Manchester life.

The project team responsible for conducting this Feasibility Study is led by Quantum Strategy & Technology and includes Arup, Creative Concern and Shepherd Robson. The project started in March 2005 and will be completed early in November 2005 following the final stakeholder meeting on 1st November.

The project has been conducted in the context of the key aims of M:KC to raise the economic performance and profile of the city region, to provide a framework for investment and growth and to build partnerships with academia, researchers and entrepreneurs.

2. Key Results

This Feasibility Study has identified and evaluated a series of practical projects and initiatives which, when implemented, will place Manchester on a firm path towards achieving the ultimate goal of M:GER. They were selected from an initial list of 140 ideas which were evaluated against a set of criteria designed to reflect the aims of both M:GER and M:KC.

Figure 1 (overleaf) illustrates the recommended structure for M:GER with three cross-cutting initiatives dealing with Policy & Planning, Communications and Funding and a series of discrete projects covering sustainable energy supply and use across the key areas of Manchester Life.

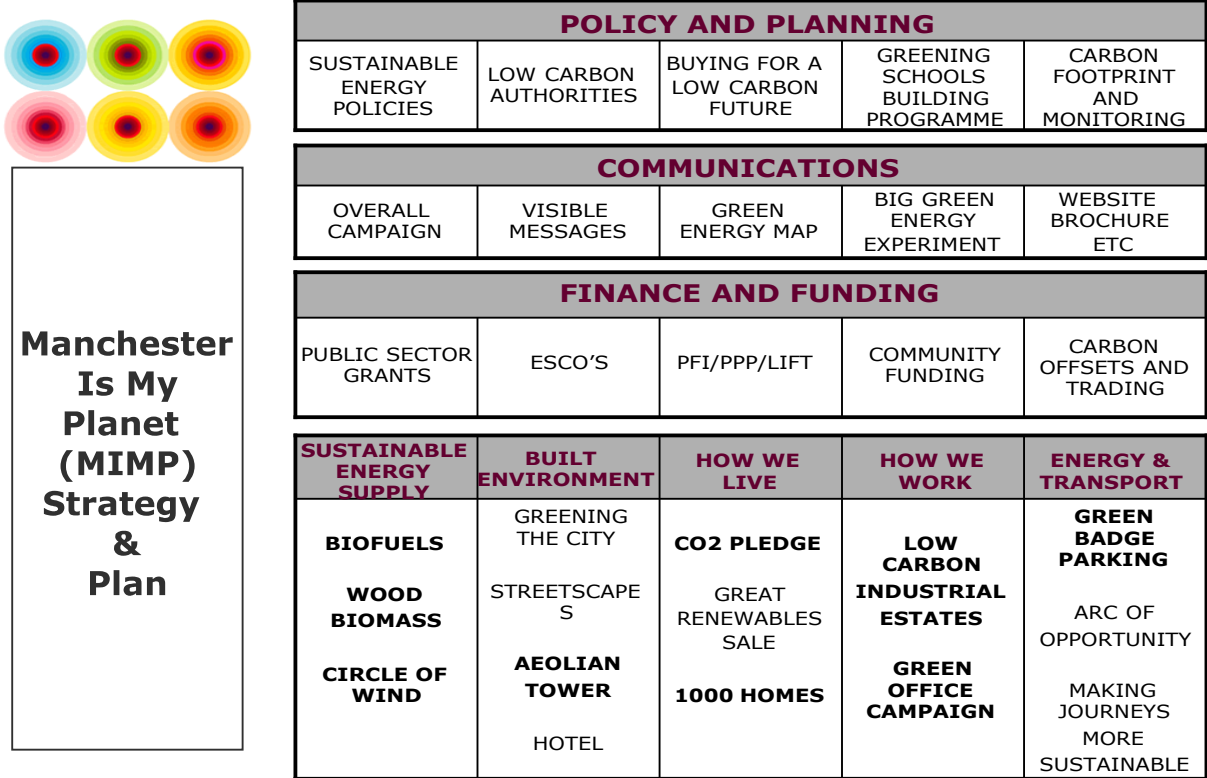
The three cross-cutting initiatives are vital to the overall success of M:GER:

Policy and Planning – a series of initiatives to provide a framework to facilitate implementation and demonstrate that the public sector is leading the way in terms of sustainable energy strategies and plans in their own areas of influence

Communications - an up-beat and coherent brand (Manchester Is My Planet) for the overall campaign and for stakeholders to promote their own projects. The campaign will raise the profile of the city region as a "greenest, cleanest and coolest city on the planet." It is the driving force behind the CO₂ Pledge and covers a number of specific communications projects such as the Green Energy Map

Financing and funding – for the overall operation of MIMP as well as the individual projects by drawing on a wide range of public and private sector funding sources for sustainable energy projects.

Figure 1: Structure of M:GER



Nine projects, highlighted in the diagram, have been identified for “fast tracking” due to funding deadlines and/or the existence of enthusiastic project champions. One of the projects, the CO₂ Pledge, is already underway and has resulted in over 10,000 individuals pledging to “play my part in reducing this city’s greenhouse gas emissions by 20% before 2010”. Work is now in progress to help individuals to implement their pledges and to extend the campaign to others.

The projects and initiatives will make significant contributions towards reducing the CO₂ footprint of the city region – initial estimates put the total at over 200,000 tonnes of CO₂ per year within the next 2 to 3 years. They will provide substantial economic benefits by creating employment in the sustainable energy supply chain through stimulating local demand and creating a platform for suppliers to expand into global markets. Estimates of these benefits will be made following a current appraisal of the energy supply chain in the city region. Other benefits include reducing energy costs and increasing security of energy supply. Many of the projects have direct links with the knowledge base in Manchester through the close involvement of the universities and the professional services sector.

Table 1, at the end of this summary, provides an overview of the projects and the criteria used to evaluate them. Short project descriptions are contained in Section 2 of this report and detailed project profiles are provided in a separate annex.

Over 200 stakeholders, from the public, private and voluntary sectors, have been engaged during the Feasibility Study and many of them have shown strong support for the overall campaign and for the specific projects and initiatives.

A methodology for calculating the carbon baseline for Greater Manchester has established a 2003 baseline of 5.34 million tonnes of carbon (about 20 million tonnes of CO₂) emissions in Greater Manchester. The baseline can be used to establish CO₂ reduction goals across the city region and for monitoring the impacts of the campaign.

3. The Next Steps

Action plans for all the projects and initiatives have been drawn-up, identifying project champions, stakeholders and funding sources.

Manchester Knowledge Capital (M:KC) will take responsibility for co-ordinating and facilitating the implementation plan, and it is recommended that M:KC is supported by a Steering Group, comprising Manchester's key energy stakeholders.

In particular M:KC will:

- Provide direct inputs to progress the three cross-cutting activities, namely Public Policy & Planning, Communications and Financing
- Take forward the overall MIMP communications campaign to raise awareness of the initiative, both within and outside the city region, and to achieve behavioural change
- Develop and implement the next phases of the CO₂ Pledge project
- Oversee the implementation of the priority projects and initiatives
- Stimulate innovation, knowledge and technology transfer in the sustainable energy field and encourage partnerships between academia, industry and entrepreneurs
- Encourage the development of an overall sustainable energy strategy and plan for the city region. This should set challenging but realistic CO₂ reduction goals to 2010, and define the means to achieve them. It should also address socio-economic indicators, benefits and monitoring procedures.

The Feasibility Study points up long-term considerations which will require further development and discussion. It is recommended that the potential to establish a Sustainable Energy Agency for the city region is also investigated.

Table 1: Project Evaluation

Projects	Evaluation Criteria									
	Project Lead'ship	S'holder Support	Feasibility	Fundability	Relevance	Economic Benefits	Environ Benefits	Social Benefits	Profile	Replic. Pot.
Greening The City	*****	***	**	***	***	*	*****	****	*****	*****
Streetscapes	***	***	****	**	****	**	**	****	*****	*****
Aeolian Tower	*****	***	**	***	****	*	***	*	*****	***
Hotel	**	***	****	****	****	***	***	**	*****	**
Hydrogen Demo	***	****	**	*	****	***	*****	**	*****	***
Renewables Sale	****	****	***	**	****	****	***	*	****	*****
1000 Homes	****	****	*****	***	****	*	****	*	*****	*****
CO2 Pledge	*****	*****	*****	****	*****	***	****	**	*****	*****

	Evaluation Criteria									
Projects	Project Lead'ship	S'holder Support	Feasibility	Fundability	Relevance	Economic Benefits	Environ Benefits	Social Benefits	Profile	Replic. Pot.
Low C Ind. Estates	****	****	****	****	*****	***	****	*	***	*****
Green Office Campaign	****	****	***	***	*****	***	****	**	***	*****
Ribbon of Wind	*****	***	****	****	****	**	****	*	*****	*****
Wood Waste Biomass	*****	***	****	***	*****	***	****	***	****	*****
Biodiesel	*****	***	****	**	*****	****	*****	**	*****	*****
Green Badge Parking	****	****	****	***	****	*	*	*	****	***
Arc of Opportunity	****	****	**	**	*****	***	***	**	*****	*
Sustainable Journeys	***	***	***	***	*****	***	****	***	*****	***

	Evaluation Criteria									
Projects	Project Lead'ship	S'holder Support	Feasibility	Fundability	Relevance	Economic Benefits	Environ Benefits	Social Benefits	Profile	Replic. Pot.
Green Energy Map	*****	*****	*****	****	*****	*	**	*	*****	**
Big Green Experiment	*****	*****	****	****	*****	**	*	*	*****	***
Sustainable Policies	***	****	*****	*****	*****	**	****	**	****	*****
Low Carbon Authorities	***	***	****	****	*****	****	***	****	****	*****
Green Procurement	***	***	****	*****	*****	****	**	**	***	*****
Schools Building	***	*****	****	****	*****	*	***	**	*****	*****

Notes: Number of stars reflect the extent to which the project meets the criteria (5 stars= highest:1 star = lowest)

Evaluation criteria:

Project Leadership: Existence of a project champion; project champion "clout"

Stakeholder Support: Ease of stakeholder engagement; political support

Feasibility: Technical feasibility for capital projects; feasibility of implementation for others

Fundability: Availability of and access to funding

Relevance: M:KC aims and regional priorities

Economic Benefits: Job creation; added-value

Environmental Benefits: Reduction of CO2 and other environmental emissions

Social Benefits: Fuel poverty; quality of life; gender/ethnic issues

Communications Potential: Public profile and image for Manchester

Replication Potential: Scope and scale of the potential for the city region.

1. Introduction

Project Objectives and Scope

The ultimate goal of Manchester: the Green Energy Revolution (M:GER) is to put Greater Manchester on the path to being the shining light on sustainable energy living and working, by substantially reducing its carbon footprint and emissions of other greenhouse gases.

This project (hereafter called the Feasibility Study) examines in detail the feasibility of implementing a package of options that will enhance awareness of sustainable energy issues whilst reducing emissions in practical, innovative and significant ways. The project aims to bridge the gap between rhetoric and reality, translating ideas into actions.

The project follows a scoping study undertaken by Sustainability Northwest (SNW) on behalf of Manchester Knowledge Capital (M:KC) which defined the nature and scope of the M:GER and identified 23 project ideas covering eight aspects of Manchester life, namely:

- Reducing the impact of how we work
- Visible statements
- Transport and energy
- Enhancing our built environment
- Communicating change
- Energy and waste
- Reducing the impacts of how we live.
- Public policy

The Scoping Study was undertaken in the context of the Government's Energy White Paper goals and Sustainable Communities Agenda. Its recommendations also took account of the need to contribute towards the economic development of the city region, to make best use of existing resources and to deliver practical outcomes with realistic benefits.

The Study recommended that this Feasibility Study should be undertaken by consultants and this was approved by M:KC and the Association of Greater Manchester Authorities (AGMA) Executive.

The project team responsible for conducting this Feasibility Study is led by Quantum Strategy & Technology and includes Arup, Creative Concern and Shepherd Robson.

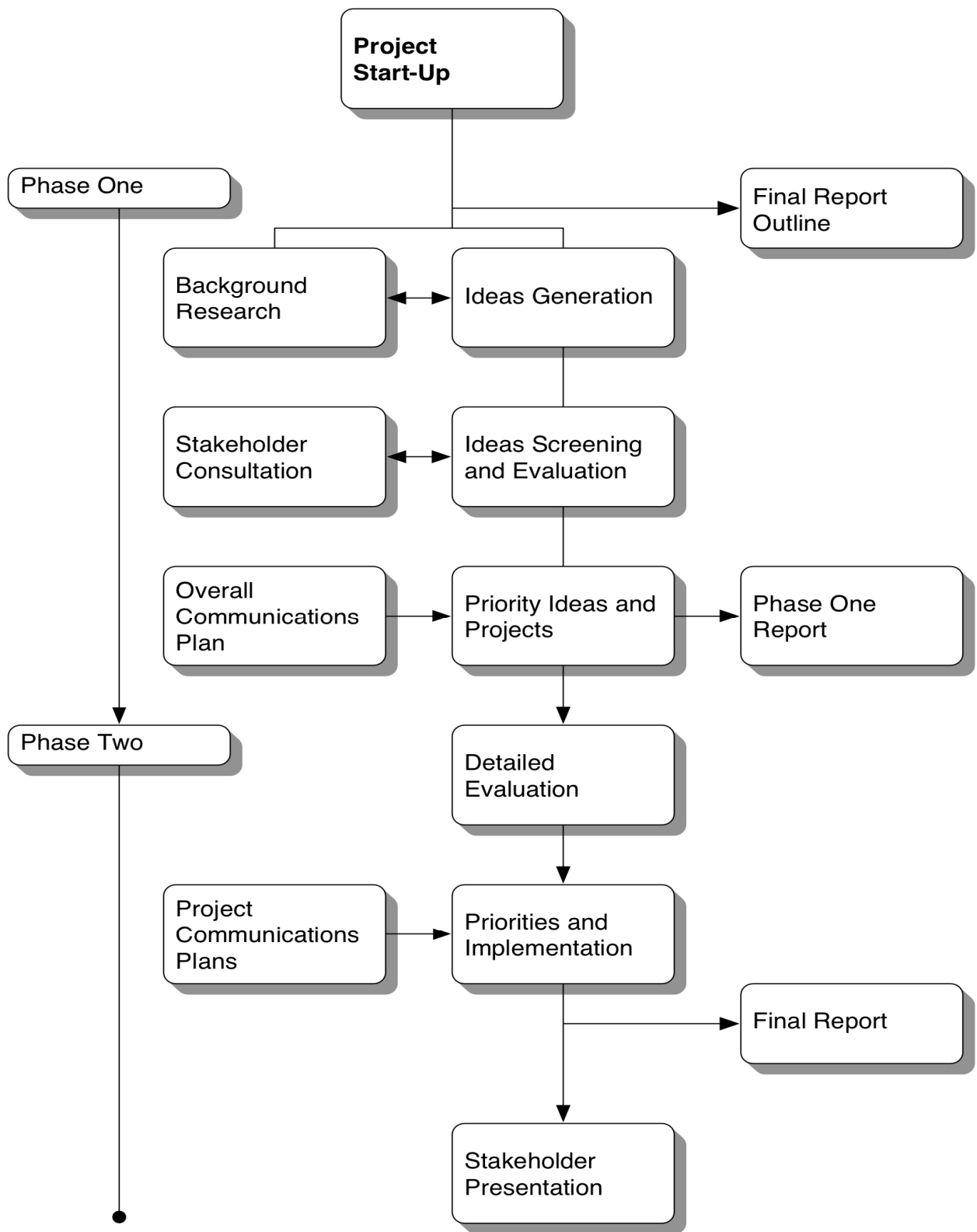
Overall Programme of Work

The project started in March 2005 and is due to be completed early in November 2005 following the final stakeholder meeting on 1st November. The programme of work has been carried out in two Phases

Phase 1: Development and Screening of Ideas;

Phase 2: Detailed Analysis and Implementation Plan.

The following diagram illustrates the various elements of the two phases.



Project outline: flow diagram

Phase 1 Activities

The activities of the project team during this Phase have been as follows:

- Undertaking a review of “exemplar” cities elsewhere in the UK and Europe to identify lessons learnt and to provide examples of successful sustainable energy initiatives and projects. The results of this were covered in the Progress Report at the end of March 2005 (copy included in Annex).
- Identifying current sustainable energy initiatives and projects in Greater Manchester through contact with the local authorities and other stakeholders. This has been further developed during Phase 2 through the idea of a Green Energy Map (see section 4) and a separate project for M:KC to produce a brochure illustrating specific sustainable energy initiatives in each to the 10 local authority areas. This brochure has been produced for publication at the final stakeholder event on 1st November 2005.
- Compiling a stakeholder list and making contact with selected stakeholders in the local authorities and private sector. This now consists of a list of over 200 organisations and individuals.
- Developing the ideas evaluation and screening process including a proforma for detailed evaluation of the projects during Phase 2
- Planning and organising the Ideas Forum which took place on 21st April
- Evaluating the ideas generated at the Ideas Forum together with those developed during the Scoping Study and by the Project Consortium
- Planning and organising the Projects Forum on 19th May to review the initial short list of projects
- Reviewing the methodology for establishing a carbon baseline for the City region and for monitoring the results of the Green Energy Revolution (M:GER)
- Developing an overall communications strategy and plan for the M:GER under the branding of Manchester is my Planet (MIMP) (see section 4)
- Producing the Phase 1 Report which contained our recommendations for the projects to take forward into Phase 2. A copy of this Report is available.

Phase 2 Activities

The activities of the project team during this Phase have been as follows:

- Undertaking more detailed evaluations of the priority projects selected during Phase 1. This has included background research, discussions with project champions and other stakeholders and the production of project profiles based on the proforma developed in Phase 1. Summary project profiles are contained in Section 2 of this report and the full profiles will be provided as a separate annex. The profiles, together with the initial project ideas, will also be provided in the form of a database for ease of reference and up-dating.
- Working with the Association of Greater Manchester Authorities (AGMA) members on the Public Policy and Planning initiatives. The results of this work are contained in Section 3 of this report. It was decided to treat these initiatives differently from the other projects since they do not lend

themselves to the same proforma approach. In practice the work has focussed on the development of a common approach across the 10 authorities and on establishing current practice rather than on further evaluation since there is agreement across most of the authorities that all the initiatives are important to pursue.

- Developing the Communications Strategy and Plan which was discussed at the end of Phase 1 and at the Working Group meeting on August 17th. Key elements of the strategy/plan have already been implemented in support of the CO₂ Pledge campaign including branding and design/production of the web site and materials (see Section 4). The Communications Strategy recommended that the name of the overall M:GER initiative should be changed to "Manchester Is My Planet" and this has been welcomed by M:KC and other key stakeholders. The projects, particularly those that have been identified for early implementation, also have individual communication plans which link into the overall campaign.
- Developing the methodology for the measurement of the carbon baseline for the city region by local authority area and establishing a process for the monitoring of progress as the M:GER programme develops. The results of this work are covered in Section 5 of this report. The overall impact of the programme in terms of CO₂ savings is discussed in the conclusions (see Section 7).
- Reviewing the future management and organisation of the M:GER and identifying the key roles and responsibilities for M:KC. This is covered in Section 6 of this report.
- Organising the final stakeholder event which will be held at Manchester Town Hall on the afternoon of the 1st November. This event will link into the culmination of the first stage of the CO₂ Pledge campaign.

The overall conclusions and recommendations are summarised in Section 7.

2. Priority Projects

Project Profiles

Summaries of the selected projects are contained in the following pages, covering the following topic areas and projects:

Built Environment:

Greening the City
Self-sufficient Streetscapes
Aeolian Tower
Common Health Hotel
Hydrogen Demonstration Project

How We Live:

The Great Renewables Sale
1000 Homes

How We Work:

Low Carbon Industrial Estates
The Green Office Campaign

Sustainable Energy Supply:

Circle of Wind
Biofuels and Low Carbon Vehicles
Wood Waste Biomass

Transport & Energy:

Green Badge Parking Permit
Arc of Opportunity
Making Journeys More Sustainable

The detailed profiles for the above projects based on the project proforma will be provided in a separate annex to the final report (currently subject to final preparation).

The **public policy and planning initiatives**, which were selected during Phase 1, are covered in Section 3 and the **communications projects** are described in Section 4, since they both cut across the 5 broad themes identified above.

Project Title: Greening the City

Project Summary:

Tree planting and other street greenery will be promoted, for example to create green corridors to improve air quality and visual amenity. The intention is to create pleasant urban green routes that owing to improved air quality, reduced noise and enhanced visual amenity, will make the street environment a more conducive place to be. As well as contributing to an improvement in life quality it is intended that the initiative will encourage walking/cycling and help to reduce the propensity for car/bus trips over short distances. The impact on reducing carbon emissions is likely to be small in an urban area.

Project Champion:

Trees for Cities and Red Rose Forest are already working on greening areas of Manchester. MCC is promoting the Greening Manchester initiative.

Stakeholders:

AGMA members, New East Manchester, Medlock Valley, Countryside Agency, National Urban Forestry Unit

Locations:

Focus on major transport corridors e.g. Oxford Rd., Salford Crescent/Chapel St.

Funding Sources:

There are difficulties due to the high cost of tree planting and maintenance in the urban environment. Funds could be raised from individuals and companies investing to reduce their carbon emissions e.g. through the Pledge campaign.

M:GER Links:

Transport projects: Arc of Opportunity and Making Journeys More Sustainable.

Wood biomass project through the tree pruning and surgery work (ref. Bioregional tree stations in Croydon)

Public Policy initiatives to encourage greening of new developments

Pledge campaign to encourage offsetting of carbon emissions but the main focus of this likely to be on the rural fringes of the city region rather than urban tree planting.

Priority/timescale:

Medium/low in terms of the potential role for M:GER

Actions:

Main role for the M:GER is to support the work of Red Rose Forest and Trees for Cities by helping to promote tree planting schemes in the priority transport corridors and policy/planning initiatives.

Project Title: Self-sufficient Streetscapes

Project Summary:

A programme of updating energy consuming street furniture and equipment with more energy efficient systems and renewable energy powered options. All AGMA members will be encouraged to power street lights, bus shelters, signage, message systems, phone booths etc. with energy efficient systems e.g. LED lights and photovoltaics (or small-scale wind technology where appropriate) or to contract for them to be supplied with renewable energy in the form of "green" electricity. Motorway signage could also be included.

The project should also help to deliver economic benefits to the city region through the involvement of local suppliers/installers (e.g. Future Electronics in Salford Quays which produces LED lights) and by encouraging inward investment (e.g. by working with suppliers such as Solar Century).

Project Champions:

Rochdale MBC interested in using Kingsway Business Park to demonstrate innovative street furniture. Solar Century is promoting solar powered bus shelters. MCC is powering street lights with green energy. Oldham interested in lighting areas to reduce crime and vandalism.

Stakeholders:

AMGA members, GMPTE, Renewables Northwest, Envirolink Northwest, suppliers of street furniture and renewable energy technologies,

Locations:

PV up-lights already installed to illuminate trees next to the Town Hall in Manchester
Kingsway Business Park (Rochdale), priority transport corridors plus other areas.
Oldham's street lighting programme under New Deal for Communities

Funding Sources:

AGMA members - scope for third party financing/ESCO contracts based on savings e.g. for energy efficient lighting.

EST or Carbon Trust for innovative projects.

M:GER Links:

Transport corridor projects: Arc of Opportunity and Making Journeys More Sustainable.

Public policy/planning initiatives

Low Carbon Industrial Estates and Green Business Parks (e.g. Enworks)

Visible Messages (see section 4.3.1) for renewable powered signage

Priority/timescale:

Medium – ongoing role for M:GER to promote the benefits and use of the various technologies.

Actions:

Progress specific opportunities with individual AGMA members – see above.

Organise a workshop in conjunction with Renewables Northwest to raise awareness

Link into the transport corridor projects to encourage use of appropriate technologies.

Work with the AGMA authorities to include low/zero carbon street furniture in policy and planning initiatives.

Project Title: "Common Health" Hotel

Project Summary:

The Common Health Hotel would be a progressively modelled hotel that would highlight the current 'state of the shelf' ecological design initiatives, whilst 'closing the loop' for a visitor's experience and tour of Manchester. Operations and management would also reflect the principles of sustainability.

The goal is to have a local developer, with green credentials, compile a joint venture team and develop a hotel that is the leading example in the UK of a sophisticated, environmentally informed and operated hotel. The goal could also be met by attracting an existing or new hotelier/international franchise to construct a new or refurbished hotel. It could be a developer led investor project, or a developer led franchise from an international chain

Project Champion:

R.gen/Urban Splash interested in taking this idea forward.

Stakeholders:

Green Hotel Association, BRE, AGMA Members, NWDA, Chamber Business and Industry, Manchester Tourist Board, Manchester Plus, MIDAS.

Locations:

Initial ideas for locations include New Islington and Hollingwood.

Funding Sources:

This would be funded through existing development routes plus any grants for feasibility studies and specific innovative technologies or systems (e.g. from Carbon Trust).

Scope for local authority to take a lead in a development working with a hotel chain to lease and manage the operation?

M:GER Links:

Linked to Greening the City and the Aeolian Tower.

Priority/timescale:

Medium – needs continued discussions with developers

Actions:

Follow-up discussions with developers and international chains

Feasibility study to review options

Project Title: Manchester's Aeolian Tower

Project Summary:

A wind powered mixed use high rise building in Manchester with a public high level viewing gallery, as a complement and counterpoint to the CIS "Sun" tower.

The big idea is to sponsor an international design competition for a 'wind augmented' skyscraper that also exhibits the state-of-the-art in ecologically sophisticated design for Manchester.

Invite architects, who are already working on schemes for high rise buildings in the region to develop design concepts for building integrated wind energy generation in a skyscraper. This project would also highlight an 'excellent' BREEAM rating or better.

Project Champion:

Initially this is M:KC but will need to encourage one or more of the AGMA members to get involved in the competition idea (e.g. currently being discussed with MCC).

The task could also be undertaken by private concerns within the region, using the MGER initiative for marketing, permitting and grant funding proposals.

The principle could also be applied to an existing tower such as the Civic Centre in Oldham. It should be noted that Cooperative Financial Services are already involved in a project to integrate small wind turbines into their Portland Street building.

Stakeholders:

British Wind Energy Association, RIBA, MIDAS, AGMA members, turbine manufacturers, national developers.

Locations:

The tower could be located anywhere in the city region but most likely in the City Centre to maximise impact. Scope to consider Oldham Civic Centre also.

Funding Sources:

NESTA or Intelligent Energy Europe for the competition. Carbon Trust for design advice and feasibility study on an existing building.

M:GER Links:

Links to Visible Messages and the Green Energy Map.

Priority/timescale:

Medium/high – will take time to initiate and run the competition but urgent if going for EIE funding.

Actions:

Further discussions with MCC and others regarding the competition.

Organise Action Energy Design Advice support for a review of the options for Oldham's Civic Centre (Carbon Trust).

Project Title: Demonstrating the Hydrogen Economy

Project Summary:

This project will demonstrate a range of applications for hydrogen and fuel cells in a building and/or for transport applications. Sites/host organisations could include a university campus, the Airport or a public sector building complex e.g. hospital.

It will link into current initiatives that are being promoted by the EU and UK government (DTI).

The project will demonstrate applications for hydrogen and fuel cells in one or more of the following areas:

- CHP for a building and/ or site complex
- low emission vehicles
- portable power supply
- back-up power supply.

The project could also demonstrate methods of hydrogen supply and storage. It should also investigate the production of hydrogen from renewable sources rather than fossil fuels to demonstrate sustainability. .

Project Champion:

Joule Centre for Energy R&D (Salford University)

Stakeholders:

Northwest Energy Council, suppliers of hydrogen and fuel cells. Manchester Airport.

Locations:

Salford University, Manchester Airport?

Funding Sources:

DTI funding is available for demonstration projects early next year and hydrogen/fuel cells will form a major element of the EU's 7th Framework Programme. Larger scale EU funding will be available for "lighthouse" projects.

M:GER Links:

Key area under the Knowledge Capital agenda

Links into Streetscapes project on signage.

Priority/timescale:

Medium/High priority if going for DTI funding.

Actions:

Discussions with Salford University regarding demonstration project.

Attend Joule Centre meeting on hydrogen and fuel cells in the late Autumn.

Decision on scope to bid into the DTI programme before the end of 2005

Organise a debate on the potential for the hydrogen economy taking account of the various hydrogen production routes and their environmental impacts.

Project Title: The Great Renewables Sale

Project Summary:

The project will promote and make available locally small-scale renewable equipment for Manchester residents or groups e.g. blocks of flats. Technologies covered will be those included in the current DTI consultation on microgeneration i.e. micro wind turbines, solar panels, solar PV, biomass boilers, ground source heat pumps and micro CHP. A key part of the project will be to address the current lack of an installer base for such technologies in Greater Manchester.

Project Champion:

North Manchester EEAC (Tim Barwood) has expressed an interest in taking on the project management and operational role. The 2 Greater Manchester EEACs will be able to operate together from 2006, and will be able to provide supporting energy efficiency advice.

The leadership of this project needs to be reviewed in the light of the resources and capabilities of the EEACs to stimulate demand for small-scale renewables and the potential to establish a Sustainable Energy Agency in Manchester (see section 6.2.2).

Stakeholders:

Energy suppliers - EEC funding

DTI - Low Carbon Buildings Programme

Renewables Northwest

Sustainability Northwest (potential roll-out of the Community Renewables Initiative)

MIDAS and Envirolink NW - supply chain development and installer base

B&Q – promotions/special offers on micro-renewables

NWDA – current regional project to address training for micro-renewables

Technology suppliers and installers

Locations:

Installations will cover the whole of the city region.

Funding Sources:

EEC

DTI

M:GER Links:

Strong link to the CO2 Pledge and the MIMP website.

Priority/timescale:

Medium – need to assess and develop installer capacity and initiate training.

Actions:

Initiate project with MIDAS/Envirolink NW on market assessment of potential for installation and capacity implications.

Liaise with NWDA on installer training project.

Discuss opportunities for increasing supply capacity and training of installers with manufacturing/distribution companies.

Negotiate with manufacturers on bulk purchase discounts

Discuss EEC funding potential with a range of utility companies.

Maintain contact with DTI regarding Clear Skies/PV Programme replacement scheme.

Agree project management and funding with North Manchester EEAC

Project Title: 1000 Homes

Project Summary:

The project will equip 1000 homes in Manchester with smart meters. These will provide a visible display of energy and water consumption and costs, along with internet provision of detailed data such as trends, consumption patterns of different equipment and comparison with other consumers in similar housing types. The information provision will be supported by energy efficiency advice and the impact of the meters on consumption patterns will be monitored over a period of 3 years.

This project will be extended to include other measures to stimulate behavioural change amongst consumers. In this context, SNW has developed an idea to encourage domestic users to conserve energy by being rewarded with:

- a) cash-equivalent vouchers that can be spent with a number of retailers in the same way as other loyalty point schemes
- b) or discounts on energy saving devices
- c) and/or discounts on other products or services.

Interest has been shown to-date by Scottish Power, The Co-op Group, Booths Supermarkets, the Association of British Insurers and B&Q. A pilot scheme as part of the M:GER would be a good way to take this forward.

Project Champions:

North Manchester EEAC (Tim Barwood) has confirmed that they are willing to take on the project management and co-ordination. Four local authorities have expressed initial interest in the project: Manchester, Rochdale, Salford and Tameside.

SNW on the loyalty scheme development (see above)

The leadership of this project needs to be reviewed in the light of the resources and capabilities of the EEACs to the potential to establish a Sustainable Energy Agency in Manchester (see section 6.2.2).

Stakeholders:

As above plus Lowry Homes (private sector, new build), BEAMA, EST.

Recruitment of homes will also be through the Pledge Campaign.

Locations:

Initially in the four local authority areas but could be wider if Lowry Homes and Pledge volunteers are involved.

Funding Sources:

There is scope to include this project in the BEAMA/EST trials on smart meters.

M:GER Links:

Strong link to the CO2 Pledge and the public policy initiatives.

Priority/timescale:

High – if EST confirms interest, the proposal needs to be included in the EST's draft programme by end October 2005.

Actions:

Short term (September to November 2005)

Meet BEAMA and EST to devise the project outline.

Meet Lowry Homes to discuss their involvement

Develop the proposal to be included in EST's draft programme (by end October), including costed input from EEACs & LAs.

Develop the loyalty scheme idea in conjunction with the identified project partners

Medium term (January – March 2006)

Agree, cost and identify funding for the project management input from EEACs

Agree the inputs from local authority housing

Agree private sector targets

Hold discussions with equipment suppliers

Long term (from April 2006)

Project start-up (6 months)

- recruit homes
- finalise metering equipment and data provision specifications
- confirm & contract out equipment supply.

Project implementation

- meter installation and householder training
- provision of energy efficiency advice
- respond to enquiries on data and meter problems
- collect and analyse data.

Project reporting

- analysis and reporting of impact to both EST and GER.

Project Title: Low Carbon Industrial Estates

Project Summary:

Designate an industrial estate to be an exemplar in sustainable energy. This would include promoting energy efficiency in production and transport and low energy design in new builds and major refurbishments. The project would also encourage the use of combined heat and power plants and renewables such as biomass for heat production and wind turbines for electricity generation. Joint working between individual companies to bring about optimum low carbon solutions would be actively encouraged.

It is intended that work be carried out with a number of businesses (probably 10-15 in the first phase) in a defined geographical area to encourage them to investigate their total carbon emissions and measures to mitigate them. The investigation will cover internal energy use, special process emissions, transport of raw materials and finished product, staff business travel and commuting (e.g. car share schemes). Mitigation measures will include staff awareness and motivation as well as technical fixes.

A modification of this approach could be used in the context of new business parks or industrial estates with the aim of creating a "zero carbon" development. A key issue in this context would be the location of the business park with respect to public transport access.

Project Champions:

Currently there are three potential Project Champions:

- Trafford Park Business Forum (TPBF)
- Groundwork Tameside¹
- Kingsway Business Park, Rochdale (as an example of a new development)²

Stakeholders:

Greater Manchester Chamber of Commerce, Chamberlink, Tameside Chamber of Commerce, Rochdale MBC, Carbon Trust

Opportunities for the involvement of local colleges and schools

Locations:

Trafford Park, Ashton-u-Lyne (Green Business Park), Kingsway Business Park

Funding Sources:

Carbon Trust "Networks" programme (November 2005 call).

M:GER Links:

Circle of Wind – turbines on industrial sites.

Wood Biomass – for CHP

Transport initiatives – car share schemes, Green Badge parking.

¹ This follows discussions with Enworks and Groundwork

² Concerns expressed by some members of the Working Group about the location of this development close to the motorway network and the lack of access to public transport.

Priority/timescale:

High – Carbon Trust deadline

Actions:

Identify source of funding to take the project to the next stage.

If TPBF/GMCC agree, make application to Carbon Trust for funding in the November round.
Make applications to other funding sources, especially for Tameside and Kingsway projects.

Recruit companies to the projects.

Run workshops and commence work at individual companies.

Continue hands-on support including staff awareness training and assistance with assessing technical measures.

Monitor CO₂ savings, prepare case studies and publicise results

Project Title: Green Office Campaign

Project Summary:

Work with a large commercial organisation or public sector body (e.g. Local Authority, NHS, University) which occupies a lot of office space in Gtr. Manchester to implement a range of simple energy saving devices related to lighting, computers & photo copiers, ventilation and air conditioning and lift controls. Simultaneously mount an energy awareness campaign for building occupiers, informing them of what's happening but also alerting them to what they can do and the effect it has on CO₂ emissions both at work and at home.

Encourage local suppliers of sustainable energy products and services to get involved, thus creating new jobs in the city region.

Project Champion:

There are three potential Project Champions from different types of buildings:

- Bruntwood (office developers and owners)
- Manchester University
- Gtr. Manchester Strategic Health Authority.

Others have also expressed interest in participating (e.g. MMU and SNW).

Stakeholders:

Suppliers of energy efficiency and renewable energy services and technologies, Envirolink NW, MIDAS, university spin-outs e.g. Information Prophets.

Locations:

See project champions – should be applicable across the whole of the city region.

Funding Sources:

Energy audits and feasibility studies through Carbon Trust

Carbon Management Programme for universities (Carbon Trust)

Installation of equipment to be covered by the building owners during refurbishment.

M:GER Links:

Link to Manchester is My Planet and the CO₂ Pledge.

A related project supported by MCC and managed by Groundwork is the Business Pledge programme. Groundwork are currently making bids into EU programmes (e.g. LIFE and Intelligent Energy Europe) to support an extension of this into a Carbon Pledge campaign in collaboration with a number of the local authorities.

Priority/timescale:

High – scope for working in the short-term with Bruntwood.

Actions:

Identify source of funding to take the project to the next stage – bringing partners together, undertaking feasibility studies and developing workshop material. Probably need £15-20k.

Undertake feasibility studies on selected buildings to establish which measures are appropriate and economic (already done on 4 Bruntwood buildings). Obtain details of last

two years energy consumptions and building occupancy levels. Introduce I-Prophets software.

Develop awareness session training materials.

Contact local suppliers (where possible) plus other suppliers (if necessary) to obtain quotations for required equipment and installation. Evaluate tenders/quotations.

Commence installation and project manage. Commission systems.

Run awareness sessions for building occupiers to alert them to new systems and train them in 'good housekeeping' measures, also linking to energy saving at home.

Commence monitoring of energy consumptions plus other factors such as building occupancy.

Project Title: Circle (Ribbon) of Wind

Project Summary:

A circle of wind turbines on brownfield sites around the M60. Large sections of the M60 run through industrial areas or undeveloped land away from housing. Siting wind turbines along these sections would be a highly visible demonstration of Manchester's commitment to renewable energy, both for the city's inhabitants and for visitors. The project is intended to demonstrate that wind turbines can be installed in urban/industrial landscapes and not just in upland rural areas. There are two possible routes for taking individual schemes forward:

- on industrial sites, where the turbines will usually be owned by the company operating the site;
- on brownfield sites where the site owner will usually lease the land to a wind developer, who will own the turbines and pay the site owner an agreed percentage of the revenue stream.

Visualisation software could be used to assist the process (e.g. with link to Salford University).

Project Champions:

Chemicals Northwest, individual chemicals sites

Other large industrial sites and distribution centres

Rochdale MBC and other AGMA members along the "ribbon".

Stakeholders:

Renewables and Envirolink NW. developers (e.g. Community Wind Power)

Locations:

Although the idea of a "circle of wind" is an attractive concept, it is unlikely that it can work completely in practice. This is because the average wind speeds around the southern half of the M60 are too low to justify wind installations on economic grounds alone. Also there are potential problems with interference with aircraft radar and communications systems close to the airport. Examination of average wind speeds does, however, suggest that turbine installations would be viable along the M61, M60, M62 corridor between Wigan and Rochdale which would form an equally visible statement. There is also scope to the east of Manchester.

Funding Sources:

Once the concept has been promoted, the installations will normally be funded entirely by the private sector. Some pump-priming (e.g. for initial feasibility studies) would be useful from the public sector but even this is not essential as private sector developers are already promoting this service and either absorbing the cost or charging a small fee.

M:GER Links:

Low Carbon Industrial Estates

Priority/timescale:

High – could get some project moving quickly through Chemicals NW and Envirolink/Renewables NW.

Actions:

Identify source of funding to progress the project to the next stage.

Hold meetings with Rochdale MBC and representatives of Heywood Distribution Park and Kingsway Business Park plus local farmers to discuss concept.

Contact Oldham, Bury, Bolton & Wigan LAs to identify possible sites & follow up as above.

Via Chemicals NW, approach individual companies in Gtr Manchester to discuss concept.

Undertake initial feasibility studies at suitable interested sites.

Initiate planning process.

Source suitable turbines.

Project Title: Wood Biomass Initiative

Project Summary:

Initiative to promote the use of wood as a sustainable fuel based on smokeless zone compliant appliances. The project will focus initially on wood waste from a variety of sources including tree surgery, demolition work, local wood processors and recyclers and local authorities. Large quantities of wood waste are generated in the Greater Manchester area, disposal costs are rising and wood recycling companies are keen to diversify their customer bases to reduce reliance of the panel board industry due to falling prices.

The short term aim of the project is to demonstrate local markets for a fuel based on the wood waste e.g. for schools, local authority buildings, district heating schemes. In the longer term, there is scope to develop a supply chain from energy crops grown on brownfield sites, the rural fringes of the city region and elsewhere in the NW.

Project Champions:

Red Rose Forest, Hadfield Wood Recyclers, Envirolink NW (supply chain), Renewables NW (on the schools programme).

Stakeholders:

Boiler manufacturers, AGMA members (for sites).

Locations:

Tameside, Manchester and Oldham have expressed interest and are identifying potential projects in schools and local authority buildings.

Funding Sources:

EST for small scale biomass/community heating

EU FP6 for larger scale automated biomass from waste

M:GER Links:

Greening the Schools Building Programme – see Public Policy initiatives

Low Carbon Industrial Estates

Priority/timescale:

High – project champion and supply chain for wood waste in place.

Target sites being identified.

Actions:

Confirm interest and involvement from the project champions

Organise a workshop to present the “package” aimed at the AGMA members and other interested parties.

Identify target sites for demonstrations and initiate projects

Promote results to encourage replication

Develop longer term strategy for energy crops supply.

Project Title: Biodiesel and Low Carbon Vehicles

Project Summary:

The project has two high level objectives:

1. To use biodiesel at >5% blends with fossil diesel in hybrid and conventional buses or other vehicles operating in central Manchester and at Manchester Airport.
2. To measure and promote the benefits of biofuels for transport as a carbon saving and sustainable energy supply technique.

The key deliverables will be:

1. An independent, credible assessment of the costs and benefits of operating biodiesel buses in practical service routes;
2. A targeted marketing and promotional campaign to inform a wide audience about the use of biodiesel in which shows Manchester at the leading edge of low carbon transport.

The aim should be to develop the initiative to cover other local authority vehicles, taxis and private cars as soon as possible.

Project Champions:

GMPTC and Manchester Airport

Stakeholders:

Bus operators (Stagecoach, First)

AGMA members (Stockport, Rochdale and Manchester have expressed initial interest)

Hybrid bus manufacturers (Wrightbus, Eneco)

Biodiesel suppliers (e.g. Greenergy, Rix) plus local suppliers if the required quality standards are achieved.

Locations:

Initially on MetroShuttle routes, Airport terminal buses and other bus routes.

Funding Sources:

EST – new set of Transport Energy grants include a low carbon bus demonstrator programme.

Intelligent Energy Europe – funding support for monitoring, market assessment and dissemination of results.

M:GER Links:

Transport initiatives – Arc of Opportunity and Making Journeys More Sustainable with links to Quality Bus Corridors.

Priority/timescale:

High – preliminary work needs to start soon. EIE workshop on 2nd/3rd November.

Actions:

Convene a working group to discuss the project concept with the potential local authority partners (initial meeting took place on 6th September)

Design and agree the nature and scope of the project, means of funding, responsibilities and technical requirements.

Identify a lead partner, who then develops a formal project proposal for funding from one or more of the UK or EU programmes in collaboration with the other partners.

Once co-funding has been secured, the lead partner sets up and launches the project in collaboration with the other partners.

Manage the project, including conducting a monitoring, assessment and communications campaign.

During and after the 12 month monitoring period, actively promote the project results to the general public, the bus industry and the public sector

Project Title: Green Badge Parking Permit

Project Summary: The implementation of a Green Badge Parking Permit scheme which allows zero/low emission vehicle owners to park either free of charge or at a reduced rate within Greater Manchester. A low/zero emission vehicle owner applies to the Local Authority for a "green badge" parking permit (GBPP) which allows them to park their car within any legal car parking space operated by the Local Authority (excluding disabled car parking bays), either free of charge, or at the reduced rate for the length of time governed by local regulations.

Only the registered keeper of the vehicle may apply for a GBPP and must provide the following documentation;

- a) V5 certificate (proof of vehicle's zero/low emission status)
- b) MOT certificate (proof that the vehicle is road worthy)
- c) Driver's license
- d) Insurance details

The permit, once issued, will be valid for 12 months. When this time period has elapsed, the registered owner must renew their permit by supplying the above documentation to prove they are still the registered keeper of the vehicle.

Project Champions:

AGMA members - Stockport MBC has indicated a willingness to pilot the scheme. Discussions also with Rochdale, Oldham, Trafford and Tameside.

Stakeholders:

Large estate owners with on-site parking e.g. universities, hospitals.
Local hybrid/electric car dealerships – sponsorship?

Locations:

Across all AGMA areas

Funding Sources:

EST for pilot scheme

Low Carbon Vehicle Partnership for development and promotional activities (16th October 2005 deadline).

M:GER Links:

Making Journeys More Sustainable and Arc of Opportunity – links to transport corridors and availability of on-site parking e.g. off Oxford Road

Priority/timescale:

High for Low Carbon vehicle Partnership Bid

Actions:

Preliminary discussions with Local authorities (e.g. Stockport) and other stakeholders.
Application to Low Carbon Vehicle Partnership (made by M:KC)
Marketing and communications plan
Amendments to Traffic Regulation Orders
Project Implementation

Project Title: Arc of Opportunity

Project Summary:

The linkage of Manchester's knowledge economy through an environmentally sensitive transport connection i.e. linking all higher education establishments in Manchester City Centre with Salford. Phased development consisting of:

Short Term: focused public transport link, utilising zero/low emission fleet of vehicles, cross cutting link to the Biodiesel Project.

Medium Term: upgrade the public transport link and implement a segregated track

Long Term: iconic development, monorail/people mover

Project Champions:

GMPT

Stakeholders:

Salford and Manchester City Councils, universities, transport operators, BBC?

Locations:

Arc of Opportunity; area stretches from Salford University to the north west of the city centre to Piccadilly and the Higher Education precinct in the south east.

Funding Sources:

Opportunities for funding may exist from LTP which may include funding via the Transport Innovation Fund, Low Carbon Trust (DFT), certain regeneration funds, New Vehicle Technological Fund and new EST programme.

M:GER Links:

Making Journeys More Sustainable

Green Badge Parking Permit

Priority/timescale:

Medium – short term implementation 12 to 24 months

Actions:

Immediate Actions - by end of Financial Year 2005-06`

Discussions with GMPT/operators/MCC over route changes and links

Discussions with MCC consultants about linkages to the Oxford Rd Corridor Study

Identification of possible route for segregation/bus lanes/bus priority

Medium Term Actions - during Financial Year 2006-07

Study to determine and allow safeguarding of potential route, discussions required with MCC, SCC and GMPT

Longer Term Actions - ongoing

Review technologies for iconic people mover

Project Title: Making Journeys More Sustainable

Project Summary:

Use of a pool of ideas from a large tool kit of sustainable transport initiatives (see full profile) applied to a transport corridor/area. In a manner similar to the DFT "Safer Cities" concept, the aim would be to use a number of initiatives, where the effect would be cumulative and the whole would provide larger benefits than the sum of the individual parts.

Project Champions:

GMPTe, AGMA members, LTP team

Stakeholders;

Transport operators, firms based in city/town centres plus wide range of stakeholders involved in the various transport corridor projects.

Locations:

A number of potential transport corridors have been identified in discussions with the local authorities. LTP priority transport corridors follow Metro extension routes.

Funding Sources:

Potential for certain schemes to "badged up" and implemented through LTP and Transport Innovation Fund.

M:GER Links:

Arc of Opportunity

Green Badge Parking Permit

Priority/timescale:

Medium for LTP transport corridors.

Actions:

During financial year 2005-2006

Continue discussions with LAs and the LTP team to determine a suitable corridor/area. LTP initial priorities for Quality Bus Corridor implementation are the proposed Metrolink routes. It needs to be decided if support of M:GER is initially for these routes or alternatively, will M:GER priorities indicate greater benefits for non-QBC routes.

MCC are discussing key transport corridors, M:GER will be represented at these meetings.

Identify key stakeholders etc to aid in the implementation of the initiatives

Beyond Financial Year 2005-2006

Once corridors for support decided; determine toolkit for use on that corridor with appropriate LA, GMPTe and LTP Team.

Identify funding opportunities

Base line report required to ascertain current transport situation, further studies required after toolkit implementation in order to monitor progress

Fast Track Priorities

The fast track projects that need progressing over the next few weeks are as follows:

- **Aeolian Tower** – if the idea of a competition is progressed and funding from EIE is sought. A related idea of **Greening the Town Halls** could also be considered for an EIE bid under the eco-buildings action area
- **1000 Homes** – opportunity to join the EST/BEAMA pilot and to link onto the Pledge campaign. There is also scope to link this into a project being developed by SNW to provide a financial incentive for householders to implement sustainable energy measures through a loyalty card scheme.
- **Low Carbon Industrial Estates** – application into the Carbon Trust with Trafford Park Business Forum and Greater Manchester Chamber of Commerce
- **Green Office Campaign** – opportunity to work closely with Bruntwood and others on implementation. This will also link into the next Phase of the Pledge campaign
- **Circle (Ribbon) of Wind** – project champions are in place, high profile potential
- **Wood Waste Biomass** – project champions in place, opportunity to link into Greening the Schools Building Programme (see Section 3.5) and other local authority buildings e.g. leisure centres
- **Biodiesel and Low Carbon Vehicles** – project champions and partners in place, scope for a bid into the current round of Intelligent Energy Europe
- **Green Badge Parking Permit** – project champion for the pilot, bid into the Low Carbon Vehicle Programme.

It should be noted that the **CO2 Pledge** project and the wider **Manchester Is My Planet Campaign** have already started – see Communications (Section 4).

The other projects which have been evaluated during Phase 2 also provide potential for further development but do not have close deadlines in terms of funding programmes and, in some cases, need more work to identify specific project opportunities and champions. The action plans at the end of the project profiles in the previous section indicate the next steps.

An important topic in this context is the **Transport Sector** where there is scope for the M:GER to get involved in the development of the Local Transport Plan (LTP) for the city region which is due to be submitted in March 2006. In particular, this involves the development of ideas and initiatives linked to the priority transport corridors. This could bring in a number of the built environment and transport projects which have been evaluated during Phase 2.

The following table summarises the anticipated benefits and costs of the priority projects.

Table 2 Summary of Project Costs and Benefits

Project	Costs	Returns	Environmental Benefits	Economic Benefits	Social Benefits
Biodiesel and Low Carbon Buses/Vehicles	Hybrid bus costs £145K compared with conventional bus cost of £85K	Annual saving for operating a biodiesel hybrid bus is around £8K. Payback is about 6 years	Combined biodiesel/hybrid bus could achieve over 60% CO ₂ emission reductions.	Limited in the short term but employment could be generated from the local production and distribution of biodiesel fuel	No direct social benefits
Low Carbon Industrial Estates	Capital and operating costs will be borne by the participating companies.	Project payback should range from 10 months to 3 years. The pilot project should produce CO ₂ savings at a project cost of less than £10/tonne (excluding capital costs of equipment)	Estimated at 8,500 tonnes CO ₂ per annum for a pilot project involving 15 companies. Replication could lead to substantial savings across the city region e.g. 85,000 tonnes CO ₂ per annum for 10 projects.	Good potential for local and regional suppliers of sustainable energy products and services. Lower operating costs for participating companies hence increased competitiveness.	Potential for social benefits in some areas where there is scope for local employment generation
Green Office Campaign	Capital costs likely to range from £20K to 200K per building but many of the measures will be no/low cost	Some very short term paybacks for no/low cost activities and up to a maximum of 3 to 4 years for those involving capital investment.	About 500 tonnes CO ₂ per annum for an average building. If replicated 50 times, this would result in savings of 25,000 tonnes CO ₂ per annum	Substantial potential for local/regional suppliers of sustainable energy products and services. Scope to stimulate start-ups and spin-outs. Lower cost base for participating companies.	Potential for social benefits in some areas where there is scope for local employment generation

Project	Costs	Returns	Environmental Benefits	Economic Benefits	Social Benefits
Ribbon of Wind	Installed cost for new turbines is around £700/kW and £500/kW for second hand	Payback for a second hand turbine would be around 3 to 4 years	10 x 600kW turbines would save around 5,650 tonnes CO ₂ per annum. 50 turbines would save 28,250 tonnes CO ₂ per annum	Good prospects for local and regional supplies to provide hardware, maintenance and other services – link into supply chain initiative run by Envirolink NW. Sites will benefit from reduced operating costs.	Some benefits through local job creation on installation and maintenance if in areas of deprivation.
CO₂ Pledge	Stage 1 of the campaign has cost £160K. Stage 2 costs currently being estimated.	No direct returns to the campaign but substantial benefits to the participants at no or low cost.	10,000 pledges is equivalent to savings of 22,000 tonnes CO ₂ per annum if the pledges are achieved. An additional 50,000 pledges would achieve savings of 110,000 tonnes CO ₂ per annum	Will lead to major financial benefits to participants if they implement their pledges i.e. 20% savings in energy costs. Most of this can be achieved without expenditure.	High social benefits to those in fuel poverty areas where energy costs account for significant proportions of disposable income.
Great Renewables Sale	Capital costs of installations will be met by the property owners with grant support where available.	Returns vary from around 3 years for a micro-wind turbine (claimed) to about 50 years for PV. Grant schemes will reduce payback by half.	CO ₂ savings of 0.65 tonnes CO ₂ per annum per household for a combination of solar water heating and small wind turbines. Hence, 1000 installations of each would save 625t/yr.	Significant scope for job creation by developing the local installer base (to be estimated through current MIDAS/Envirolink project)	Installation in LA housing will have an impact on fuel poverty.

Project	Costs	Returns	Environmental Benefits	Economic Benefits	Social Benefits
1000 Homes	Limited information indicates a cost of £200 per house or an annual cost of £85 per year including the provision of analysed data.	Payback on installed cost could be around 2 to 3 years if energy savings are made as a result of the smart meters.	The aim of the project is to calculate the energy and CO ₂ savings that can be achieved in practice.	Cost savings in smaller trials have been up to 20% of energy bills – this equates to up to £136 per year for an average household. More data is needed, hence the reason for the trials.	Installation in LA housing should have a significant impact on fuel poverty.
Wood Waste Biomass	Installed cost of 25-50kW biomass boiler with large storage silo is around £45K.	Wood chip fuel available at 10% less per kWh than gas and 50% less than oil.	Waste wood chip is carbon neutral hence potential for significant CO ₂ reduction in replacing gas or oil fuel for heating.	Supply of fuel from within Gtr Manchester will lead to job creation.	No direct social benefits

Note:

1. Impacts have not been estimated for the other projects since they need further development before they can be quantified. Impacts for the Public Policy initiatives are covered in Section 3.
2. Economic benefits in terms of job creation and increased outputs/added-value are difficult to estimate with any degree of realism without an analysis of current capabilities, resources and capacities in Greater Manchester in the field of sustainable energy products and services. A current project for MIDAS by Envirolink Northwest will provide information on current capabilities and resources and this will provide a basis for estimating the economic impact of implementing the MIMP programme.

3. Public Policy and Planning Initiatives

3.1 Background

Four public policy initiatives were investigated under Phase 2 of the project:

1. Standard Sustainable Planning Policies & Guidance
2. Low Carbon Authorities
3. Green Purchasing
4. Greening the Schools Building Programme.

These initiatives received support from a number of Local Authority representatives at the Projects Forum. They were presented and discussed at the GM Environmental Co-ordinator's Forum meeting on 20th July, which was attended by representatives from 8 Authorities. Officers agreed to support all 4 initiatives in principle.

Achieving policy changes across all (or most) of the authorities will be a long process, as they require the approval of Cabinet members as well as senior officers. Different authorities currently place different priorities on sustainable energy and consequently the resources allocated to such projects vary between the Boroughs. It is recognised that there is support and enthusiasm from a number of authorities who have been leading the way in this field. However, it may be unrealistic to expect to achieve the aims of these policy measures across all authorities in the short to medium term.

3.2 Standard Sustainable Planning Policies & Guidance

This project is to promote consistent supplementary planning guidance for sustainable construction across all Greater Manchester to ensure a level (but challenging) playing field for development.

Based on work done in Oldham and under consideration in Bolton & Manchester, the Greater Manchester Supplementary Planning Guidance (PPS22) would require integration of a proportion of on-site renewable energy generation and standards of energy efficiency above Building Regulations.

The 2004 changes in the planning system mean that all Authorities are currently starting consultation processes on their Local Development Frameworks, which can incorporate both new Spatial Plans and new Planning Policies and Guidance. This gives a good opportunity to harmonise policies across GM and incorporate renewable energy generation requirements in a significant number of authorities. However, due to different timescales, it may take 3-5 years to get these policies in place across Greater Manchester.

As part of this initiative, each Borough would commit to promote at least one carbon-neutral development within their Borough. Linked to this will be the provision of information to developers:

- Design criteria to meet the standards
- Information on sources of advice (architects, designers, BRE, EST, CCI etc)
- Information on renewable technologies, suppliers, grants available etc.

This information will be provided to developers on initial contact with the authority. A further Information Pack will be developed to be sent out to anyone applying for planning permission for smaller developments, extensions etc. Whilst not covered by the requirements, this pack will pass on similar information on insulation measures, use of passive solar heat, use of low-energy appliances and installation of renewables.

Each authority is free to set its own specific planning guidance and sustainability appraisal criteria for planning applications. Thus to achieve a standardised approach across the authorities will require negotiation of (for example);

- Proportion of renewables element (currently 10% in Oldham, suggestions of 20% in other areas)
- Whether to incorporate higher standard for energy efficiency
- Definition of size of development to which it applies (>10 dwellings or 1000m2 in Oldham)
- Method of enforcement
- Method for revising Guidance along with changes to Building Regulations or developments in technologies.

One way forward may be to negotiate a minimum set of requirements, allowing the more adventurous authorities to go beyond these.

Existing situation in each Borough

Information on current and proposed requirements for on-site renewable energy and higher energy standards in developments has been gathered for 8 Authorities;

Bolton:	Specific Planning Guidance being developed including 10% renewables on developments greater than 10 dwellings or 1000m2. Out for consultation at present and expect to be adopted in autumn.
Bury:	Have just started on the new LDF procedure and have completed the consultation on Sustainability Appraisal documents. As yet no work has been done on new planning policies, but Bury are interested to get involved with an AGMA initiative.
Manchester:	Draft policy for development control and specific guidance being developed. Consultants (Gillespies) are preparing a document on the role of planning in contributing to Manchester becoming "Britain's Greenest City". This will be available at the end of September at which point Manchester will start to define their planning policies. Manchester have agreed to share this report with other GM Authorities.
Oldham:	10% renewables in draft Planning Guidance and currently operational. The initial version included the potential to use solar gain to meet a part of the requirement, but difficulties with defining this may lead to this being revised. Expect the Guidance to be fully adopted in the autumn.
Rochdale:	Sustainable Urban Design SPG part of new LDF. Might be possible to incorporate renewables but may be problem with timescale
Salford	Still awaiting the details
Stockport	Still awaiting the details

- Tameside: Interested in developing similar policies and have had discussions with Manchester CC and Renewables NW. As yet the Planning Officers have not been involved. Current draft Guidance documents contain sustainability checklists including integrating renewable energy and low-energy design.
- Trafford General Part 1 policy theme in UDP on sustainability, energy conservation and waste minimisation but no specific policy. Not in current LDS format
- Wigan: The UDP, due to be adopted in February, includes a policy permitting (but not requiring) renewable energy development. New SPDs specifically advise sustainable practices.

Action Plan

The project needs to be developed within AGMA's Strategic Planning Information Group (SPIG), which has a sub-group on environmental issues. The secretary of the SPIG is Andrew Chalmers from Bolton MBC.

Work with AGMA's Strategic Planning Information Group and RNW to;

1. Assess the level of interest in developing this policy with the remaining Planning Authorities
2. Confirm LDF policy schedules within each authority
3. Agree the main elements of a common policy on integrated renewable energy
4. Identify the main barriers to a common policy or minimum agreed position
5. Work with planning policy officers to integrate the agree policy into their LDF
6. Agree common guidance for developer.

3.3 Green Procurement Policy

The proposal aims to introduce sustainable procurement criteria in public sector organisations to specifically address issues of energy consumption and greenhouse gas emissions reduction. This includes:

- Energy purchase
- Goods and services that don't have far to travel to clients
- Goods that did not need much energy to be produced (with an emphasis on recycled products)
- Goods and services that do not need much energy to work

Initially this proposal has been put to the 10 Greater Manchester local authorities and GMPTE. It could also be extended to other organisations in the public sector (e.g. health), universities and private companies.

Although generally supportive of the proposal, the Environmental Co-ordinators were concerned about the resources required to develop and implement sustainable procurement across all the authorities' activities. It was suggested as a first stage to concentrate on;

- Procurement of "green" energy
- Procurement of goods or services with a high energy impact (buildings, large equipment, vehicles etc.)

Information on the sustainability criteria in current procurement policies has been gathered from 6 Authorities plus GMPTE.

- Bolton: Have policies for recycled paper and green electricity, but difficult to deliver in other areas. Have streamlined the purchasing system using Oracle which restricts choice of supplier – environmental criteria are supposed to be included in this restriction.
- Bury: Procurement policy for consumables includes environmental requirements.
- Manchester: Undertaking pilot assessment of practices & producing draft guidelines. Incorporating Green Purchasing Policies in Schools Building Programme.
- Oldham: Have set up new procurement strategy incorporating environmental factors, but problems with implementation. Aiming to become a Fair Trade Borough.
- Rochdale: Generic procurement policy (proposed, not yet adopted) includes requirements for suppliers to have EMS and Environmental Policies. Rochdale is not in the Manchester LA Purchasing Group.
- Stockport: Strategy has been developed but not had a good response from Procurement.
- GMPTE: Draft sustainable procurement policy and checklist for suppliers has been developed and is currently under discussion.

The feedback is generally positive but there are concerns about;

- Commitment from senior levels in the authorities
- Implementation issues and scope
- Insufficient supplier capacity (particularly local) to meet the criteria

Expertise on sustainable procurement exists within Greater Manchester, most notably at the Centre for Excellence in Tameside. It has not yet been possible to get a direct commitment to involvement in this project from the CfE but this route needs pursuing. Further expertise is available within Groundwork Manchester who have done a similar programme for the NHS and would be keen to take this project further.

Action Plan

Further discussion is needed with the Centre for Excellence to see whether they would be able to take on this project. As an alternative the project could be undertaken on a consultancy basis (e.g. by Groundwork, SNW or others).

Actions to include:

1. Agree a project champion
2. Identify the key procurement staff in each authority
3. Agree the scope of purchases to be included
4. Draft a minimum standard for green procurement across the 10 Local Authorities
5. Identify and address the main barriers to implementation
6. Determine implementation procedures for the agreed policies.

3.4 Low Carbon Authorities

This proposal is about declaring and achieving a carbon reduction target covering emissions within the control of Greater Manchester Authorities. It involves a process similar to the Carbon Trust's Local Authority Carbon Management Programme (LACM).

Manchester, Oldham, Rochdale, Stockport & Tameside are already involved in LACM, and as part of this process have defined their baseline CO2 emissions and targets. However, the structure of the CMP allows for variations between authorities as to which activities are included in these baselines. Bolton already has a CO2 target and would be happy to come in on a Greater Manchester one.

The CO2 emissions targets approved by authorities so far are given below. These do not include savings from the purchase of "green" electricity but do include internally generated renewable energy.

Bolton: To be advised

Oldham To be advised

Rochdale: 15% reduction on BAU scenario from 2000-2010. BAU would be an expected increase of 8-9% giving a net reduction of 6-7%.

Stockport: 15% net reduction from 2000 to 2010. By 2004 Stockport had achieved 6% reduction but expects the remainder to be very challenging.

Manchester & Tameside are in the process of developing targets as part of their LACM Programmes, which may be of the same order as those above.

Interest in committing to a Greater Manchester target needs to be determined from other authorities (Bury, Salford, Trafford & Wigan). This will be a key theme of the Carbon Management Conference to be held in March 2006.

Action Plan

1. Work with the GM Environmental Co-ordinators Forum (GMECF) to promote the development of common CO2 baselines and targets
2. Present the M:GER and policy initiatives at the Carbon Management Conference
3. Get agreement from authorities which have completed the LACM Programme to provide assistance to the remaining authorities to help with setting up their own programmes.
4. Determine common baselines, CO2 targets and monitoring procedures including the provision of data to the Kyoto Club (e.g. Oldham MBC has recently joined).
5. Agree responsibilities within the GMECF for annual reporting against the target.

3.5 Greening the Schools Building Programme

This project was very positively received as it is in-line with work already underway in most authorities and can give a very visible benefit to the city region.

Information on the status of the Schools Building Programme in each authority and relevant contacts is being collected. Feedback so far is;

Bury: One new school planned, already incorporating sustainability criteria.

- Bolton: 3 schools projects already incorporate renewables and sustainability criteria have been specified for the remainder.
- Manchester: First school incorporates renewables, aiming for Eco-Schools standard and working with WRAP to maximise recycled content. Looking to extend to other schools in the programme.
- Oldham: Part of national pilot programme. 3 currently in procurement. Influenced PFI contracts through sustainability checklist & covered by 10% renewables requirement.

Manchester, Oldham and Tameside are also interested in using one of their schools as a pilot for the Biomass Supply Chain project.

There is also expertise available through the Centre for Construction Innovation (CCI) who have been involved in developing the Sustainable Schools programme for Manchester City Council.

Action Plan

1. Identify a project champion to take this forward (either a lead authority or CCI)
2. Identify the status of and key contacts for schools building projects in remaining authorities
3. Collate and circulate a list of exemplar schools
4. Agree a common standard to aim for across the AGMA region e.g. Eco-Schools Very Good or BREEAM Excellent.
5. Develop a structure to work with schools building projects in each authority.

4. Communications and Behavioural Change

4.1 Introduction and Overview

In the literature on public attitudes to climate change, there is a resonant counterpoint to be found around the urgency and agency felt by the general public when it comes to climate change. When polled or surveyed, a significant 90 per cent of the public believe that climate change is a serious issue confronting humankind at the start of the 21st century. Contrastingly, only 9 per cent of those asked believe that they can do anything about fighting climate change.

Communicating climate change has to be about bridging this gap between climate concern and the ability to actually do something to counter climate change. What the 90 per cent finding above makes clear is that for many, the 'issue' of climate change has been raised and the challenge now is to 'connect' that issue to energy use, particularly in the domestic arena. The role of protest still exists, not least in keeping a pressure on world leaders to hit their agreed targets under mechanisms such as Kyoto, for example, but within the context of Manchester's 'Green Energy Revolution' (now rebranded as 'Manchester is my Planet' for reasons that will become clear later in this report), it is creating a sense of focused agency and empowering people that is of paramount importance.

Vitality that empowerment, engagement and, just as importantly, a sense of fun can help deliver the wider set of programmes laid out in the Manchester is my Planet report. For a programme such as this, a rich creative seam of pride, power and passion is more important than fear, anger and distress. Photocalls should be about people, not victims. Print and online campaign materials should emphasise action, rather than reflection.

This report covers suggested communications projects – including the already successful climate change pledge – but just as importantly it contains a suite of tools, imagery ideas and campaign guidelines to help anyone developing a communications programme under the 'Manchester is my Planet' banner to hit the ground running and establish immediate synergy with the wider campaign. As the consultation rounds and early actions within this project have made clear, there are many individuals and organisations across the city region only too ready to help us get out the message about climate change. They simply need the tools and the encouragement to get on with it. This report will highlight the progress and success achieved with the Manchester is my Planet branding, the CO₂ pledge and the dissonance jamming campaign (which has superseded the visual messages element).

4.2 Campaign Tactics

As this outline shows, this strategy will fuse the dynamic and powerful Green Energy Revolution with the recently-launched Climate Change Communications initiative from Defra in an attempt to create a new benchmark for communications on climate change and energy. The strategy will use Defra's guidelines and principles and focus them down into four campaign tactics outlined later in this paper: 1) We Know Who YOU are; 2) Manchester is My Planet; 3) Extreme Visual Pleasure; 4) Dissonance Jamming. Accompanying this report are visual schematics designed to layout the audience segments that will be encountered by Manchester is my Planet and the wider campaign schematic that has informed this outline plan.

So what are the real objectives and tactics that will help the Manchester City Region become an exemplar on communicating climate change?

Through high levels of audience understanding (Campaign Tactic: We know who YOU are) and through highly localised communications interventions (Campaign Tactic: Dissonance Jamming) this behavioural change strategy will go beyond attitudinal change (a vital pre-cursor of tangible action on climate change) and will directly contribute and respond to the government's carbon reduction targets.

It will position the Manchester City Region as an exemplar, as the increasing and extensive use of renewable energy technologies and deployment of 'low-carbon' innovations begin to reduce its carbon consumption. The strategy will explicitly seek to enhance 'brand Manchester' and will also be presented as a direct contributor to the 'Greening Manchester' programme launched by Manchester City Council. It will boost civic pride and local 'buy-in' to the campaign. (Campaign Tactic: Manchester is my planet).

It will positively promote and encourage individual projects as they get underway, ensuring that the maximum attention and impact are derived from each element. It will form 'mini' campaign plans for each signature project, removing key barriers to change (Campaign Tactic: Dissonance Jamming) in carefully targeted audience segments (Campaign Tactic: We know who YOU are).

The strategy will set out firm and consistent visual criteria so that all audiences know that ideas, messages, calls to action are all part of a highly stylised, positive and focused campaign (Campaign Tactic: Extreme Visual Pleasure).

It will give Manchester: Knowledge Capital and its partners the impetus to apply for additional funding as the project will be a known and respected addition to the Government's climate change agenda. An explicit goal of the behavioural change strategy is to powerfully and effectively be the first major UK programme to deploy the Climate Change Communications strategy launched by Defra and devised by Futerra, the sustainable development communications advocacy.

The behavioural change strategy will also – through surveying and suggested monitoring programmes – set out possible 'Reinforcing Loops' of awareness that could enhance programme communications. These could be where architects are targeted, for example, with a synergistic message as geography teachers and major property companies are targeted.

Building on Defra's Climate Change Communications Strategy

In February 2005 Defra published a series of research papers and reports prepared by the sustainable development advocacy Futerra as part of a climate change communications initiative that will include a 'communicators toolkit' and a £12 million fund for local and regional communications programmes. The initiative states that 'changing public awareness, attitudes and ultimately behaviour are all going to be vital if we are to achieve our climate change goals. The communications stemming from the Green Energy Revolution explicitly seeks to deploy the tools, techniques and research prepared as part of this initiative and, where appropriate, looks to the local and regional communications fund for support.

Changing attitudes is a key objective in general marketing terms – whatever the product and whoever the target audience – and is certainly crucial if the Green

Energy Revolution is to take Manchester by storm. We must ensure that every person who lives and/or works in the Manchester city region is aware of the various projects underway, and, more importantly, they understand the projects and their overall importance. VITALLY the Green Energy Revolution can build upon the ATTITUDINAL CHANGE outlined in the Climate Change Communications initiative and deliver the resulting BEHAVIOURAL CHANGE' through a series of campaign tactics that fuse high levels of audience understanding (Campaign Tactic: We Know Who YOU Are) with communications interventions at local points of potential behavioural change (Campaign Tactic: Dissonance Jamming).

Climate Change is often perceived to be a global rather than a local issue. By creating awareness of the various projects at the CITY REGION scale, we will effectively increase understanding of climate change, by making it a factor in everybody's 'real life'. It will be a REAL WORLD ISSUE and will be something anyone can act upon – as outlined in Defra's Rules of the Game it will seek to avoid the raising of fear without the agency – the ability to act – that should accompany it.

The benefits of making Manchester is my Planet projects well known in the Manchester city region are twofold. Firstly they would help to create a sense that Manchester is a real leader in the fight against climate change, reinforcing awareness and creating a sense of place and responsibility. Secondly, the success of the projects themselves will be influenced by the support of the community. For Defra, however, Manchester can be the 'LABORATORY' that tests its strategy; Manchester can work with Defra – and potentially with Futerra – to transparently deploy the principles, the toolkit and the research launched in February 2005.

Defra's Rules of the Game publication suggests that traditional marketing methods might not offer the solution to changing attitudes with regard to climate change. In fact its 'uber-principle' suggests that marketing theory is particularly lacking in this area: 'Changing attitudes towards climate change is not like selling a particular brand of soap; it's like convincing someone to use soap in the first place'. It therefore offers 20 principles for climate change communication, which Manchester is my Planet should follow with its own communications strategy in order to ensure maximum cohesion with national policy.

Defra's initiative outlines the need for a 'Big Hairy Audacious Goal' or BHAG (pronounced bee-hag) to make any kind of success of a climate change communications programme. A BHAG should 1) have an extensive time frame ranging from 10 to 30 years; 2) be clear and compelling; 3) be consistent with the values and purpose of the organisation. According to the central strategy paper, a BHAG should 'express ambition and commitment to leadership, the urgent need to create a real and tangible difference and the aspiration that climate change can be dealt with through effort and positive change'. Manchester's 'Green Energy Revolution' project – now rebadged as Manchester is my Planet – IS that very BHAG. The next challenge is to create a branded statement that ties the campaign strands together – this challenge will be tackled in phase two of the communications strategy.

The behavioural change strategy to be drawn up for Green Energy Revolution will build on an extensive audience surveying exercise and will be structured around a series of four campaign tactics detailed below.

4.2.1 We know who YOU are!

A key recommendation within this report is that surveying and some focus group work be conducted as quickly as possible to create an extensive understanding of the current attitudes and awareness of up to 80 specific audience segments across the city region. It is envisaged that the lion's share of the surveying will be a phone poll of at least 2,000 households across the eleven local authorities in Greater Manchester. This poll will explore attitudes regarding 'how we live' and 'how we work' respectively. Demographic and professional life questions will allow the strategy team to develop segmented analysis for lifestyle segments (e.g. sports fans, theatre goers, trainspotters) and professional segments (e.g. accountancy and professional services; marketing and PR; IT and programming; health and social services). This audience mapping will also allow the strategy team to set a baseline for attitudes that could, in future years, be used for audience tracking purposes.

As part of phase two, an initial 'media-driven' survey was undertaken to establish how many people leave their TV on standby in the city region. This subject was selected as it feeds in well to the dissonance jamming campaign tactic. It was found that more than a quarter of adults in the city region leaves their television on standby rather than switches it off when it is not in use. These results are valid and can be used in future media releases to support the campaign. Full results are available in the Annex to this report.

Furthermore, extensive desk research has been undertaken to establish what academic research into public perceptions of climate change has unearthed. In the main it seems that: although defence, crime and vandalism have taken priority over the environment, most people have heard of climate change, although few know that it is caused by CO₂. There is an apparent willingness among the public to take action to reduce domestic energy use, although it should be 'made easy' and there are many barriers to giving up car usage. A copy of the full report is available.

Finally, Creative Concern recommends a phone poll of at least 2,000 households across the ten local authorities in Greater Manchester. This poll will explore attitudes regarding 'how we live' and 'how we work' respectively. Demographic and professional life questions will allow the strategy team to develop segmented analysis for lifestyle segments (e.g. sports fans, theatre goers, trainspotters) and professional segments (e.g. accountancy and professional services; marketing and PR; IT and programming; health and social services). Audience mapping to this extent will also allow the strategy team to set a baseline for attitudes that could in future years be used for audience tracking purposes. An outline of costs for this exercise can be found in the Annex to this report.

4.2.2 Manchester is my Planet

A pivotal campaign tactic will be to fuse the Mancunian brand value of strong civic pride with the 'old-school' eco-motto, 'Think Global; Act Local'. This will be about Mancunian action, taken across the city region, to show the world how 'revolutionary' we are. It will also be about the direct, local environmental improvements that will be made through combating climate change by using the potential impacts of climate change on Manchester as reinforcement. In fact, we can boil all of this down to a simple, aspirational statement:

"We want to make Manchester the cleanest, greenest and coolest city on the planet."

The Manchester is my Planet campaign is built around a series of ten communications guidelines developed to help secure this fusion of civic pride and global concern. These are:

1. Be positive!

Telling people the world is about to end, and that they're a key part of the problem, has been tried before and has failed. Don't make people feel uncomfortable about what they should be doing but are not – give them aspirational and achievable goals to aim for.

2. Keep it real!

We're a caring bunch, the people of Greater Manchester, but when it comes to climate change it's too often seen as a problem for other people, perhaps in the developing world. Try and keep your communications relevant and stress what climate change might mean down your street or in your neighbourhood – not a thousand miles away.

3. Don't get tied up!

There's a lot of science involved in climate change and there is still a tiny minority of people who like to claim that wacky scientists have cooked the whole thing up – this is a load of nonsense and should be ignored! Don't get tied up in the science of climate change but rest assured that it is happening, right now, and that we need to do something about it.

4. Make no assumptions!

It's really easy to assume that people either know what climate change is or that they are committed to making a personal commitment to positive environmental changes. Would you believe that only 9% of people in the UK think that individual households are best placed to make a difference on climate change,

even though 90% of people think that it's an important issue. The safest bet is not assume knowledge, or commitment!

5. Actions speak louder!

Don't get people scared, worried or concerned about climate change without giving them something to do about it! It is serious – the Government's main science advisor has described climate change as a 'weapon of mass destruction' for example - but we need people to start making small changes today as we work up to bigger changes tomorrow, so let's make actions the order of the day and leave the doomsday scenarios behind!

6. Don't think about it, do it!

Fewer than one in ten people, according to a 2004 poll, disagree with the proposition that climate change is causing higher temperatures, and yet energy use is going up in the UK! Getting into a rational debate on what to do next is fine, but it's not part of this campaign and from the evidence, might not even work! Let's bypass the debate and get straight on with our top priority – getting our energy use down!

7. You trust those that you know!

If you're a supporting organisation, this where you come in! When it comes to climate change people respond better to organisations or voices that they already know (you're known as 'transmitters' to comm's geeks) so make it clear that you are supporting the campaign and that you'd like your employees, clients or students to make the pledge!

8. Consistency is crucial!

Global warming, greenhouse gases, the ozone layer, climate change – crikey! It's confusing enough already, so try and make your communications simple, to the point and consistent. We've managed to get our pitch down to something reasonably simple, so you might try using this: 'Each time we boil a kettle, leave a TV on standby or drive a car, we use energy. The more we use, the more greenhouse gases we create and the more we change the world's climate.'

9. Control freaks, unite!

Always remind people that they are the ones with the power here. Households and transport together account for a massive 66% of the energy used in the UK, so personal action on energy can make a massive difference and by working together, the three million people who live or work in Manchester could actually have a national – perhaps even an international – impact.

10. Have fun, and get something out of it!

The final and most important tip here is to have some fun with this campaign and try to use it to boost your business or your organisation. We want this campaign to make a real difference on climate change, but we also want it to show the world what a switched on, original and modern place the city region of Manchester is.

The opportunity of running a pledge campaign under the Manchester is my Planet (MIMP) banner has ensured that many of these campaign guidelines have already been successfully implemented. A full outline of the pledge campaign can be found below in section 3.2 and the media and campaign guidelines can be found in the appendices.

Consideration has also been given to targeting all residents and businesses within the Manchester City Region (not just green groups or confirmed environmentalists), and preparative research has begun with regards to communicating to 'hard to reach groups'.

Hard to reach groups in the Manchester City Region have been identified as Black Minority Ethnic (BMEs), homeless, people with low levels of literacy, elders and children.

A separate awareness campaign would be initiated for children and work has begun to design a school's pack. A series of creative meetings has also identified the opportunity to use comedy as a means of communicating climate change across all genders, ages and lifestyles. Work has commenced with reference to devising a PR campaign that is comedy-based, beginning with the identification of Manchester comedians available for comedy PR workshops and the idea of drawing up a document with 101 humorous suggestions of why climate change is bad for our city, with accompanying PR angles.

Finally, campaigns have already been launched under the Wigan is my Planet, Salford, Trafford and Oldham is my Planet banners; the campaign is intended to be localised to as great a degree as possible to further underline local relevance.

4.2.3 Extreme Visual Pleasure

The Defra Communicating Climate Change Strategy makes it clear that highly visualised messages, and a consistent sense of a single campaign are two vital parts

of any successful communications exercise. As such, the behavioural change strategy will include an 'Extreme Visual Pleasure' tactic that will take the form of design guidelines, a consistent standard to be applied across all communications, and some early ideas for campaign deployment. This revolution will look good, taste great and achieve much.

The overarching objective is to create a unifying and consistent branded look and feel that will immediately connect with as wide a range of audiences as possible and which, at a glance, will attract and acquire an individual's attention.

Creative Concern's design team has set out firm and consistent visual criteria so that all audiences know that ideas, messages, calls to action are all part of a highly stylised, positive and focused campaign. These visual cues and criteria have already been shared with a wide range of campaign partners and have been made available through the Manchester is my Planet website (www.manchesterismyplanet.com).

The branded devices and stylings created under this campaign tactic have been included in the Annex to this report.

The creation process for the Manchester is my Planet identity included an extensive mapping of the street-level brands and visual identities in play across the Manchester city region. A full photographic record was taken of poster sites, hoardings, shop fronts, transport systems and promotional messages, then the final visual identity (made up of a colour palette, font applications and a series of circular graphic devices) was created. The key visual graphic being deployed in all campaign materials is included as a graphic overleaf:

4.2.4 Dissonance Jamming

It is at the point of dissonance – a conflict between what you know you SHOULD BE DOING and WHAT YOU ARE ABOUT TO DO that climate change communications falls down at present.

This issue is specifically highlighted in Defra's strategy, where it is felt that the most that can be achieved, perhaps, is attitudinal change which may, at some point, shift through to behavioural change. This 'Manchester is my Planet' behavioural change strategy (closely related to a specific signature project around visual messages) suggests that there may be opportunities to communicate with well identified audiences AT THE POINT OF DISSONANCE.

The aim will be to 'JAM' the dissonance, resolve the conflict and result in a positive climate change decision being made. This means communicating at the most local, devolved level possible; at petrol pumps, in lavatories, in supermarket aisles, lunch queues in cafes, at the hardware outlet.

Dissonance Jamming is the act of getting into that moment, the very minute, that one of our target audience considers using the car, rather than walking to the local shop, or hits the standby button rather than switching the television off. We want to be present in that second and convince them to take the greener option.

Creative Concern has identified dissonance jamming opportunities in several different areas of life. These are listed in the Excel document and detailed in the schematic diagrams included in the Annex.

4.3 Project Profiles

To get the revolution rolling out in good time, a series of smaller communications plans will have to be created for Manchester is my Planet projects to help any delivery agency build a consistent communications programme as part of their activity. The plans will reflect the four campaign tactics outlined above and similarly will build upon Defra's research reports and strategy on climate change communications. These smaller campaign plans will also be simple to deliver, highlighting WHO the audiences are for that particular project, WHAT messages are likely to work best with those audiences, WHY the audiences would respond to any call to action and WHERE communications could be deployed to maximum effectiveness.

It is highly recommended that any campaign communications make use of the ten guidelines on 'how to communicate' outlined above and if possible should include the 'Manchester is my Planet' branding and livery.

Four project ideas have been identified to take forward specific communications-related projects under the 'Manchester is my Planet' banner. These are: 1) 'Visible Messages; 2) a Green Energy Map; 3) the Big Green Energy experiment; and 4) a CO₂ Pledge. This report has already discussed the progress made with the Manchester is my Planet branding and the dissonance jamming campaign. Details of progress on the CO₂ pledge campaign are given below. Profiles on the Green Energy Map and the Big Green Energy Experiment will follow before the end of October.

4.3.1 Visible Messages

This project is based on the idea that most people have no idea how much energy we use as a city region – and what that means in terms of the volume of CO₂ emissions. We propose to develop easy to remember messages so people can visualise what it means in terms of greenhouse gas emissions, climate change or green energy, e.g. "x tonnes of CO₂ would fill the City of Manchester Stadium x times..." This would highlight energy use right across the city region. In supermarkets, bars and clubs, at petrol pumps, in school; basically wherever you are, we aim to be!

This links through to the 'Dissonance Jamming' strategy, which has already been discussed above, and as detailed in the appendices.

4.3.2 Green Energy Map

The Green Energy Map aims to communicate, to a variety of audiences, existing and developing green energy and sustainable projects to the 10 Greater Manchester boroughs. These projects will be represented through a public art piece and via the Manchester is my Planet website, with the addition of printed access packs and information updates in schools, libraries, museums, and information points. Each borough will be individually represented on both mediums, (through a map and abstract 'atom') allowing the viewer to not only see what is happening within each borough, but also to encourage a competitive spirit between towns, businesses and the public

4.3.3 The Big Green Energy Experiment

A mass public participation project that demonstrates the value of energy production (and the difficulty with which energy is produced) and thus encourages the public to conserve and review their own use of energy in the home. This is also a highly media

friendly project that will generate substantial media coverage and sustain regional and national interest in MIMP.

A series of devices – ranging from 'vegetable batteries' and bicycles with dynamos – will be set up and will provide 'renewable' forms of energy to power Manchester's 2006 Christmas lights display in Albert Square, Manchester city centre.

4.3.4 CO₂ Pledge

The CO₂ pledge is one of the very first projects within the 'Green Energy Revolution' to 'go live' and makes full and extensive use of the Manchester is my Planet branding. An opportunity arose in mid-August for the pledge campaign to be launched early to acquire a national profile for Manchester's action on energy, and the campaign was launched two weeks later, on 25 August.

The following is a campaign update after 7 weeks of campaigning:

<p>Campaign day: 49 Current pledge numbers: 9815</p>
--

Campaign update | Thursday 13 October 2005

As the 'Manchester is my Planet' campaign hurtles towards its 1 November deadline, the target of 10,000 pledges looks certain. 9815 people have already signed up to reduce their individual carbon load by 20%, in line with the government's overall UK target of reducing carbon emissions by 20% before 2010. The campaign intends to use the closing G8 climate event, and also the UK's presidency of the EU, to show that there is mass support for climate change action in and around the Manchester city region with widespread public commitment to change.

The 'Manchester Is My Planet' campaign is being led by the not-for-profit agency, Manchester: Knowledge Capital, with a group of partners that include, regional think-tank, Sustainability Northwest and the ten local authorities. The campaign is being sponsored by Defra, the Northwest Regional Development Agency, Manchester: Knowledge Capital, and Manchester City Council. Other major supporters include Defra, United Utilities, Manchester Museum and ITV Granada, as well as Bolton, Manchester, Salford and Manchester Metropolitan Universities.

All ten of the local councils of Greater Manchester have pledged their support and will be organising pledge events of their own. The commitment of all ten councils emphasises the support for action in the Northwest and the website for the campaign (www.manchesterismyplanet.com) includes a breakdown of how each local authority area is performing.

The aim of the campaign is to inform individuals as to how the everyday usage of household items, kettles and lights etc, is contributing to overall carbon emissions and ultimately climate change. The campaign will initially ask people to support by either pledging online, texting the word "pledge" and their postcode to the campaign number, 80010 or completing a pledge card at one of the many events the campaign team are present at. The opening weekend of the campaign saw 3,500 people pledge their support at the Manchester Pride Festival alone, and a further 500 at the Manchester City game against Portsmouth.

Each individual who pledges will receive a pack containing the Top Ten Tips for saving energy. These are simple actions such as only boiling the kettle with the water you

need and turning appliances off rather than using standby. Also included are a further ten pledge cards and advice on how to sign up friends and family so that together we can make Manchester the greenest, cleanest and coolest city on Earth.

Additionally the pack will contain stickers based around the unique design of six colourful concentric circles that can be used to remind us of the places we need to save energy. Placing stickers on light switches, television remote controls and even the kettle will serve as a timely reminder of the opportunities to save energy and money. Finally each pledger will receive a lollipop simply as a thank-you for taking the time to contribute to saving the planet... starting with Manchester.

Press releases and photocalls

The campaign team has put out the following releases, all of which can be found on the downloads section of the website:

- 25/08** Launch release with Elliot Morley, Christopher Ecclestone and other Manchester dignatories.
- 26/08** 'Salford is my Planet' release with Hazel Blears
- 26/08** David James and Manchester City Football Club take the pledge
- 30/08** Release on results of first weekend of campaigning
- 05/09** Salford Reds come out in support
- 08/09** Beverley Hughes MP says that 'Trafford is my Planet'
- 14/09** Wigan Athletic star takes the pledge
- 28/09** Rugby star in a lather to help tackle climate change.
- 04/10** Diane Modhal pledges to tackle climate change in Manchester
- 10/10** Greater Manchester's premier sport clubs and athletes pledge to tackle climate change at home.

We also have a few more stories and news releases in the pipeline including:

- * Lemm Sissay backs the pledge (poet)
- * Stone Roses star donates campaign anthem (Ian Brown's 'My Star')
- * Oldham is my Planet, with Michael Meacher
- * Rochdale Observer profile of a local family pledging

Regarding wider TV coverage, we have met with the managing director and programmes controller of ITV Granada and have secured weatherman Fred Talbot as a spokesperson for the campaign. We now hope to work with them to produce a magazine feature, perhaps following a pledging family as they cut their energy use.

Regional BBC (Northwest Tonight) have not run a piece yet but will, once we have our pledge numbers up closer to 10,000. Their director of regional programmes has also put a proposal to his board for BBC North to become an official supporter of the campaign.

Coverage secured

Durrants takes around a week so our latest coverage in the Manchester Evening News, Wigan Evening Post and Salford Advertiser is not included yet. So far we have achieved the following:

Publication/station	Date	Size	Circ/Audience	EAC
BBC GMR	26/08/05			
Imagine FM	26/08/05			
Century FM				
All FM	09/09/05			
Galaxy FM	25/08/05			
Wigan Evening Post	16/09/05	Full page	10,527	
Manchester Metro News	26/08/05	Half page	308,600	
Manchester Metro News	09/09/05	3/4 page	308,600	
Manchester Metro News	09/09/05	3/4 page	308,600	
Manchester Metro News	09/09/05	1/4 page	308,600	
Manchester Evening News	26/08/05	1/4 page	142,000	
Manchester Evening News	06/09/05	Full page	142,000	
Manchester Evening News	09/09/05	Half page	142,000	
Salford Advertiser	15/09/05	Half page	87,000	
Third Sector	07/09/05	Full page		
Channel M	25/08/05	News report		
Man City Programme	27/08/05	Half page		
Man United Programme	10/09/05	1/3 page		
Wigan Athletic Programme	18/09/05	Half page		
Salford Reds Programme	09/09/05	Half page		

Online performance

We have 25+ web banners and links on 25 supporting websites including:

The Printworks

Manchester Friends of the Earth

Co-operative Bank Intranet

University of Manchester Intranet

Mersey Basin Campaign

Galaxy Radio

All FM

MANCAT

Hazel Blears' website

Manchester City Football Club

The Community Foundation

Emerge

Manchester Online

Greater Manchester Passenger Transport Executive

Trafford MBC

Rochdale MBC

Nornir

CTAC

Urbis

Events and stunts

A dedicated and especially-recruited pledge team has attended a number of events to collect pledges, stage photocalls and generate publicity. These include:

- Photocall in Exchange Square
- Manchester Pride Festival (Three Days)
- Manchester City FC vs. Portsmouth
- Salford City Reds
- Wigan Athletic FC
- Royal Bank of Scotland
- Swinton Civic Centre
- In town without my car
- Granada TV Studios

Support network

Our network of formal supporters, all of whom are promoting the pledge to their staff, students and customers, is growing all the time. Highlights in the last few days include advertisements in programmes for matches at Manchester United, Wigan Athletic and the Salford Reds. Manchester Museum is preparing a major display for their foyer, with every visitor being asked to pledge! We also have 15,000 pledge cards going into student packs and the University of Manchester emailing every one of their 20,000 students about the pledge as they arrive. As of today, the participating organisations list is as follows:

Allied London, Arup, Bolton MBC, Bury MBC, Bridgewater Hall, Co-operative Bank, Smile and CIS, Cornerhouse, CTAC, Emerge Recycling, Environment Agency, Environment Network for Manchester, ENWORKS, Friends of the Earth Manchester, Galaxy Radio, George House Trust, GMPTE, GMWDA, GM CVO, Groundwork Northwest and Northwest Trusts, ITV Granada, Lancashire Wildlife Trust, The Lowry Theatre, MANCAT, Manchester Metropolitan University, Manchester City Council, Manchester City Football Club, Manchester United Football Club, Manchester City Art Galleries, Manchester Museum, Manchester Museum of Science and Industry, Manchester: Knowledge Capital, Manchester EEACs, Manchester Enterprises, Marketing Manchester, MIDAS, Manchester Pride 2005, Manchester Student Christian Movement, Mersey Basin Campaign, Moonfish, Nornir, North West Regional Assembly, Northwest Business Leadership Team, Northwest Regional Assembly, Northwest Regional Development Agency, Northwest Trades Union Council, Oldham MBC, The Printworks, Red Rose Forest, Rochdale MBC, RWE Solutions, Salford City Council, Salford City Reds, Salvation Army, Sheppard Robson Architects, Stockport MBC, Sustainability Northwest, Tameside MBC, Trafford MBC, United Utilities, University of Manchester, University of Salford, Urbis, Wigan Athletic FC, Wigan and Leigh College, Woodford Group.

4.4 Summary Conclusion: behavioural shift, delivering change and an improved image for Manchester

The development of a visual brand, 'Manchester is my Planet', provides a 'synergy and reality' check to ensure that all communications are consistent with 'brand Manchester' and that they are in keeping with Defra's principles of communicating climate change. There will also be a cross-analysis with other major city-region and region communications programmes, for example those planned by the Northwest Regional Development Agency, Sustainability Northwest and others. More details in terms of the costing out of potential campaign plans and identifying delivery agencies for individual campaigns and communications projects will be developed in consultation with M:KC.

5. Carbon Baseline

As part of the Green Energy Revolution project it was agreed to attempt to calculate a figure for carbon emissions related to activities in Greater Manchester, to provide a baseline against which future savings could be measured.

Despite having national targets for CO₂ emissions reduction from 1990 levels, there has been no regional or sub-regional calculation of the baseline emissions for that year. The nearest available data comes from the North West Energy Survey completed in 1990 using a bottom-up analysis of energy consumption in 1998.

Data Available

As no accurate 1990 baseline exists, and given that the results of the Green Energy Revolution programme will only affect emissions from 2005, it was decided to attempt to quantify the baseline from the most recent data. Three sources of data are available;

- Atmospheric emissions, from the EMIGMA database managed by CATE (Centre for Air Transport and the Environment) at MMU
- DTI electricity and gas usage by postcode area
- Defra draft report on CO₂ emissions by Local Authority Area.

The EMIGMA database covers Greater Manchester and Warrington and contains information on carbon emissions from fossil fuels for³;

- Domestic and small commercial premises by fuel type (gas, oil, coal etc)
- Boilers > 2MW
- Part A Processes
- Part B Processes
- Road transport per km road length
- Rail transport per km track section
- Bus and coach station emissions.

The data is collected from a range of sources by post-code (domestic & small commercial), point sources (filling stations, boilers and industrial processes) and road surveys, and is then amalgamated by Local Authority Area. Oil and coal usage for domestic premises has been estimated from EST national data.

The DTI data (Regional and local consumption statistics 2003) is based on utility company supplies by postcode area, disaggregated by domestic and commercial/industrial users and aggregated by local authority area. This data is still provisional and a final report is due to be published at the end of October 2005. The DTI recognises that the data still has some problems with postcode allocation to Local Authority area, and gas consumption figures in some areas. Fortunately, the Greater Manchester data appears to be reasonably sound.⁴

³ EMIGMA 2003 update Final Report – Hazel Peace, CATE

⁴ Source: Mike Janes, DTI (mike.janes@dti.gsi.gov.uk)

The Defra report⁵, which is still in draft form and will not be published until October 2005, uses predominantly the DTI data sets, complemented by NAEI (National Atmospheric Emissions Inventory) data on point sources. Liquid and solid fuels as well as industrial emissions from smaller sites are modelled at the local level based on employment and fuel intensity statistics. Data for individual large industrial sites has been excluded from the Local Authority Area figures.

Each source has some issues with data quality, although it was felt by the DTI that the CATE data was more likely to be accurate at a local level than their own. However, analysis of the CATE data shows one particular anomaly in the Part A processes emissions for a particular site in Wigan.

Calculation Methodology

The carbon baseline for 2003 has been calculated as follows;

- Carbon emissions from fossils fuels by Local Authority split into Domestic, Industrial and Transport (from EMIGMA)
- Carbon emissions related to electricity consumption by Local Authority, split into Domestic and Industrial & Commercial (from DTI).

Within this there are the following known omissions/errors;

- Self-generated electricity (e.g. CHP) is accounted for as fossil fuel
- Electricity use for transport (Metrolink and Network Rail) is currently within Industrial electricity consumption (although it is expected to be able to disaggregate this shortly)
- Electricity use has been converted to carbon emissions based on the national generation mix (124 tonnes C/GWh)
- Renewable electricity generation is not separately accounted for as this is assumed to be included in the national generation mix.
- The fossil fuel consumption of smaller commercial premises is included within Domestic consumption.
- No data on CO₂ emissions related to Manchester airport or Barton aerodrome
- No data on emissions from other sources such as landfill sites or sewage works.
- The questionable Part A process data from a company in Wigan has been removed.

The resulting calculation gives a baseline of 5.34 million tonnes carbon (nearly 20 million tonnes of CO₂) emissions generated as a result of activities within Greater Manchester in 2003. The breakdown of this is shown in the table below.

⁵ Local & Regional CO₂ Estimates for 2003

Table 2 Provisional Carbon Baseline for Greater Manchester in 2003 (tonnes carbon)

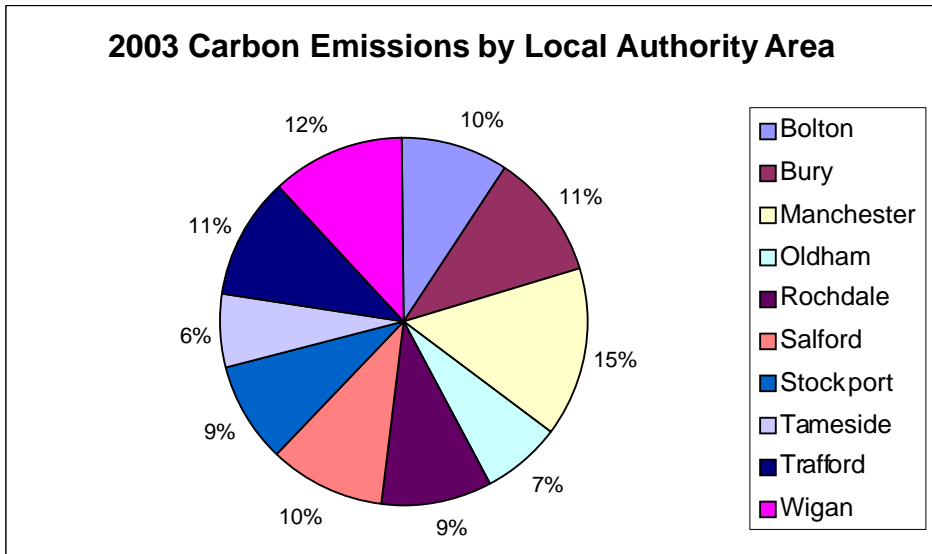
	Domestic (& small commercial)			Industrial			Transport	All
	Fossil Fuel	Electricity	Total	Fossil Fuel	Electricity	Total	Fossil Fuel	Total
Authority								
Bolton	179,091	59,846	238,937	113,647	14,393	128,040	143,439	510,416
Bury	193,641	40,286	233,927	206,713	9,738	216,451	134,709	585,088
Manchester	318,273	91,260	409,533	129,834	24,434	154,268	228,796	792,597
Oldham	146,877	44,604	191,481	64,796	11,515	76,311	92,475	360,267
Rochdale	146,761	43,539	190,300	151,369	10,960	162,329	151,714	504,343
Salford	150,820	48,896	199,716	148,371	12,505	160,876	198,882	559,474
Stockport	217,068	66,876	283,944	33,055	15,368	48,423	144,154	476,521
Tameside	158,965	45,741	204,706	17,031	11,792	28,823	95,266	328,795
Trafford	161,668	49,853	211,521	230,343	11,697	242,040	133,128	586,689
Wigan	198,896	64,998	263,894	223,172	16,352	239,524	133,058	636,477
Total	1,872,060	555,900	2,427,960	1,318,331	138,754	1,457,085	1,455,621	5,340,666

For comparison, the Defra draft report calculates GM emissions at 5.18 mtC, some 3% lower than our estimate. However, within this overall figure there are differences in allocation both to Boroughs and sectors, which will need further investigation. The Defra data on gas consumption also excludes single large point sources within one postcode, for reasons of confidentiality.

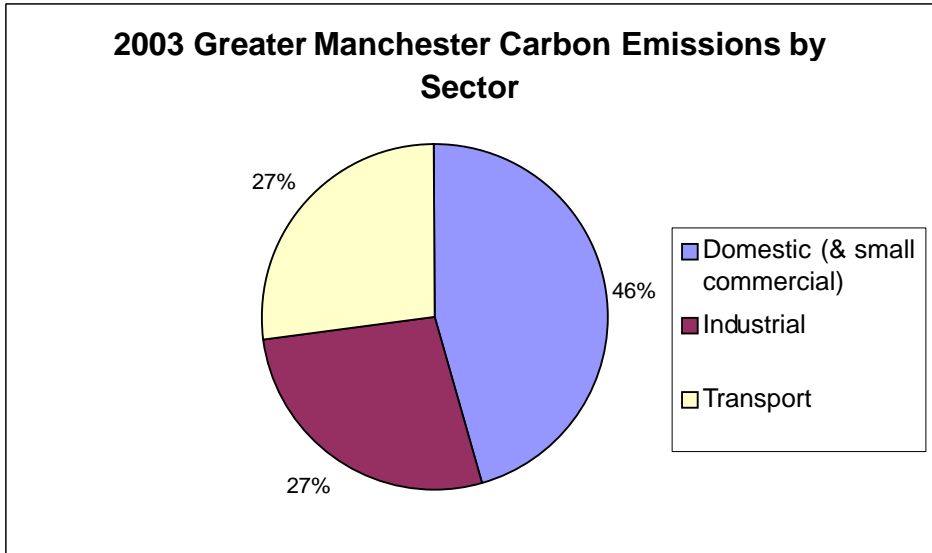
There is still a significant piece of work to be done to understand and assess the differences between the CATE and Defra data, before a definitive figure can be given for Greater Manchester. This work will have to wait until the Defra report is published later in the year.

The baseline has not yet been analysed against economic activity or number of households, but the data is available to carry out this analysis at a later date.

Figure 1 shows the breakdown of the calculated emissions between boroughs.



The breakdown by sector is shown in Fig 2. This breakdown should be treated with caution, as it includes gas for small commercial premises as Domestic consumption, and electricity for transport within the Industrial consumption.



Ongoing Emissions Monitoring

The calculation of a baseline figure has only been possible through the fortuitous combination of;

- AGMA Air Quality Group’s request for inclusion of non-transport emissions in the EMIGMA database as part of a Service Agreement with CATE.
- The DTI’s publication of disaggregated consumption data for 2003.

It was expected that both data sources would be updated on an annual basis, and therefore the Air Quality Group would request the inclusion of emissions related to electricity consumption in the annual monitoring report from CATE. However, due to staff changes at CATE, they have pulled out of the Service Agreement and will not be continuing to update EMIGMA. It is likely that Greater Manchester Transport Unit (GMTU) will take on the role of monitoring transport-related emissions. However, it is currently unclear whether any monitoring of non-transport emissions will be included in their remit.

As an alternative, Defra has carried out an assessment of carbon emissions by local authority area for 2003, based on the DTI data, which will be published in autumn 2005. Although it was expected that this may be an annual report, at present Defra have no funding to repeat the exercise next year, and there is some confusion as to which department should be responsible for the data.

A further set of data will be available in December, as the Stockholm Institute have been commissioned by 6 GM Local Authorities plus Cheshire to calculate a carbon footprint for their Authority areas plus Greater Manchester as a whole.

Once these 3 sets of information are available, a piece of work will be required to analyse the differences and determine the methodology to be used for a final emissions calculation.

However, as yet no organisation holds a remit to carry out this work, and it is likely that no mechanism will exist for continued monitoring of carbon emissions across Greater Manchester. It is recommended that AGMA be asked to ensure the continued monitoring of CO₂ emissions, possibly within the Service Agreement for GMTU, and/or in conjunction with other stakeholders such as SNW through their Climate Change activities.

6. Management and Organisation of Manchester Is My Planet

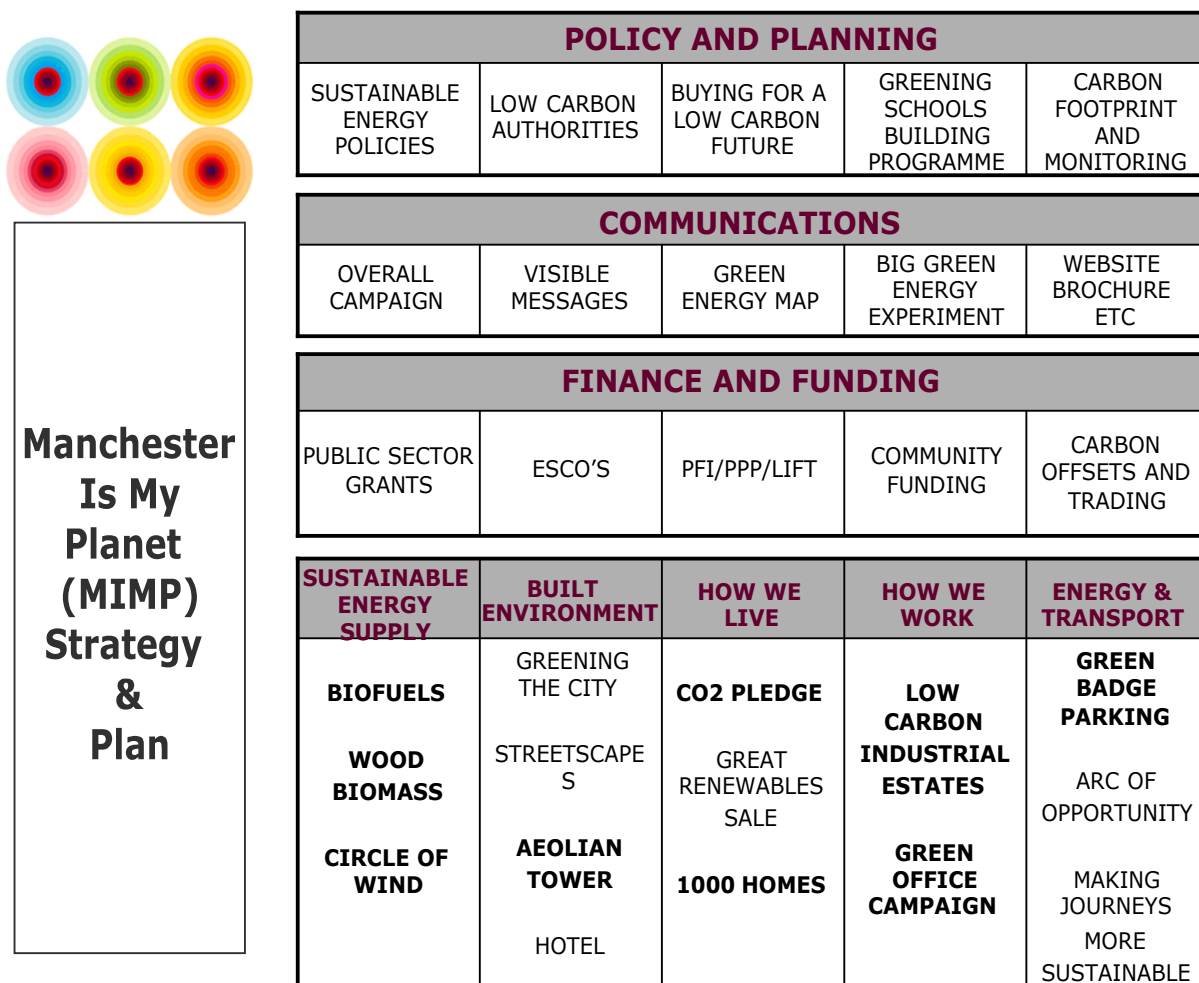
6.1 Vision, Objectives and Role

The overall vision and broad objectives for Manchester Is My Planet (MIMP) are to:

- develop the city region of Manchester as a shining light of sustainable energy living and working
- achieve a substantial reduction in its carbon footprint and the emissions of other greenhouse gases.

This Feasibility Study has identified and evaluated a series of practical initiatives and projects which, when implemented, will place Manchester on a firm path towards realising the vision. During the work, a wide range of existing projects and initiatives have been identified and these can also be considered as part of the overall campaign. In fact, there is considerable interest amongst many of the stakeholders involved for their projects to be branded under the MIMP banner since this will help to promote the projects and to facilitate implementation.

The overall structure of the MIMP is illustrated in the following diagram:



The diagram illustrates the discrete projects in the lowest block covering sustainable energy supply and use across the key areas of Manchester Life. There are also three cross-cutting activities which are vital to the overall success of MIMP:

- Policy and Planning initiatives which will provide a framework to facilitate implementation and will demonstrate that the public sector is leading the way in terms of sustainable energy strategies and plans in their own areas of influence
- Communications and Behavioural Change programme building on the success of the CO₂ Pledge campaign. This provides the glue for joining together the various activities of MIMP and an up-beat and coherent brand for stakeholders to promote their projects and initiatives
- Financing the overall operation of MIMP as well as the individual projects and initiatives. There is scope here to raise awareness of existing public sector funding sources in the UK and Europe for sustainable energy projects and to assist stakeholders to put together successful proposals. There is also potential to address other funding mechanisms which involve the private sector and public/private sector partnerships including ESCO contracts/third party financing, community funding, PFI/PPP/LIFT, emissions trading etc. We recommend that an early activity for M:KC should be to organise a high level seminar/workshop on this topic aimed at both public and private sector investors.

An overall sustainable energy strategy and plan for the city region is needed to bring together the existing projects and initiatives, with those identified during this feasibility study, to provide a comprehensive approach to delivering the vision. A key aspect is the need to develop challenging but realistic goals for carbon reductions within specified timescales (e.g. to 2010, 2015 and 2020) and to define the activities necessary to achieve these goals. Equally important is the need to realise the economic and social benefits for the city region. The current initiatives with the AGMA authorities on the policy, planning and the carbon baseline provide a sound starting point for this work.

In this context, Manchester should consider making a case for being a pilot of energy planning at local authority level. This could be based on the Swedish energy planning methods. In Sweden each local authority is obliged to have an up-to-date energy plan and associated environmental impact assessment. These plans set targets for e.g. energy efficiency, use of renewable energy and CO₂ emissions, and are democratically approved by elected members. Progress is monitored and the plans are updated roughly every five years.

6.2 Delivery

6.2.1 Short Term

The responsibility for the development and implementation of MIMP in the short term (i.e. over the next 2 to 3 years) currently rests with Manchester Knowledge Capital (M:KC) and the overall management of this has been recognised through the appointment of a Director at M:KC whose main role is to manage the programme.

The key MIMP delivery tasks to be managed by M:KC are as follows:

- to oversee the various projects and initiatives across the key areas of Manchester Life either directly or through others such as the project champions and consultants

- to provide direct inputs to progress the three cross-cutting activities, namely Public Policy & Planning, Communications and Financing
- to encourage the development of the overall sustainable energy strategy/plan for the city region and to identify how this should be implemented in the longer term.

A summary of the potential M:KC role in each of the projects and initiatives is given in the Table at the end of this section.

Within the wider context of the Knowledge Capital agenda, there are opportunities for M:KC to:

- stimulate innovation, knowledge and technology transfer in the field of sustainable energy by working with academic institutions, sector/cluster groups and business support organisation
- encourage partnerships between academia, industry and entrepreneurs e.g. through grant funded projects
- help the city region to realise the economic benefits of moving towards a sustainable energy economy e.g. by highlighting new business opportunities and the potential for cost savings.

Further discussion is needed with M:KC to quantify these activities and to estimate the resources/budgets required for implementation and to identify funding sources.

6.2.2 Longer Term

Consideration should be given to the longer term management and delivery of MIMP. The approach to this will depend on a number of factors including the long term aims and objectives of M:KC, its funders and other stakeholders. The main options include:

- continue through M:KC
- use an existing organisation
- establish a new organisation.

These options should be assessed as part of the development of the overall strategy and plan for MIMP.

One option is to establish a Sustainable Energy Centre (SEC) or Agency for Greater Manchester which would work along similar lines to other SECs in Europe or London's Climate Change Agency i.e. it would play a pivotal part in the development and delivery of a sustainable energy strategy and plan across all the main sectors of city life. One of its first tasks would be to work with AGMA to develop local energy plans, some of which are already in progress.

The two existing EEACs in Manchester have already put forward a plan for a Manchester Sustainable Energy Centre (SEC) in a bid for the EST's pilot SEC programme. The bid was not successful, however, the activities of the two EEACs are being brought under a single contract and there are plans to extend their roles to include a wider range of advice and support than the current domestic energy efficiency and local authority remit. The North Manchester EEAC has already expressed an interest in leading on some of the MIMP projects and both of them are involved in the Pledge campaign. There is also a strong capability in the energy team at MCC which can augment and extend the

capabilities of the existing EEAC teams. This could provide a basis for the development of an organisation to take on the development and delivery of MIMP in the longer term.

Funding sources for a Sustainable Energy Centre/Agency could come from a variety of sources including the AGMA members, EST, Carbon Trust and the private sector (e.g. based on those who are already involved in the M:GER Steering Group and the Pledge campaign).

6.3 Regional Priorities

The MIMP campaign reinforces and links into a number of regional priorities and initiatives including:

- the draft Regional Economic Strategy (RES) which puts sustainable development at its heart and identifies energy as a key area for focussed development of new and higher value businesses
- the work of the Northwest Energy Council which advises the NWDA on sustainable energy issues and priorities
- the establishment of the Joule Centre for Energy R&D, based at the University of Manchester and involving all the region's universities and private sector stakeholders
- the development of a Sustainable Energy Strategy by the Northwest Regional Assembly
- the work of the NW Climate Change Group under the auspices of SNW including the recent initiative, led by Lord Thomas of Macclesfield, to encourage leading public and private sector organisations to sign-up to a Climate Change Charter.

It is important that the future development of MIMP realises the synergies with these regional activities and seeks to involve the organisations involved so as to maximise the impacts and benefits for Manchester and the North West as a whole. In particular, some of the MIMP projects have potential for implementation elsewhere in the region once they have been demonstrated to work in Manchester. The CO₂ Pledge campaign already involves a substantial number of people who live outside Manchester, together with some large organisations, and they can act as ambassadors for its future roll-out.

Table 3 – M:KC Role and Inputs

Project Title	Project Champion/Partners	M:KC Role	Other Short Term Inputs
Greening the City	Trees for Cities Red Rose Forest	Promotion of greening initiatives Links into transport corridor projects and public policy initiatives	Small input of interim support needed.
Self-sufficient Streetscapes	Rochdale and Oldham MBCs and MCC	Progressing opportunities with the AGMA members Links into the transport corridor projects and public policy initiatives	Small input of interim support needed.
Aeolian Tower	M:KC with MCC and other AGMA members e.g. Oldham	Working with MCC on the idea of a competition Organising design advice from Carbon Trust	Small input of interim support needed. Montage drawing for Oldham Civic Centre?
Common Health Hotel	R.gen and Urban Splash	Progressing discussions with developers and international chains Organising feasibility study to review options	Small input of interim support needed.
Hydrogen Demo Project	Joule Centre Salford University	Overseeing role mainly Assistance with DTI and FP7 funding	Workshop in November to review demo options – will be organized by Joule/Salford
CO2 Pledge	M:KC, Creative Concern and others	Management of campaign Funding for Phase 2 Delivery of Phase 2	Creative Concern on Phase 1 implementation and Phase 2 design and development

Project Title	Project Champion/Partners	M:KC Role	Other Short Term Inputs
Great Renewables Sale	North Manchester EEAC	Overseeing role mainly Links with Pledge campaign	Significant inputs needed to assess and develop supplier and installation capacity – project with MIDAS.
1000 Homes	North Manchester EEAC	Overseeing role mainly Links with Pledge campaign	Significant inputs needed to develop and submit EST proposal
Low Carbon Industrial Estates	Trafford Park Business Forum/GMCC Groundwork Tameside Rochdale MBC	Overseeing role mainly	Significant inputs needed for Carbon Trust proposal and other funding sources.
Green Office Campaign	Bruntwood Manchester University GMSHA	Overseeing and promotional roles mainly. Include offices in future phases of the Pledge	Significant inputs needed to bring partners together, undertake feasibility studies and develop/deliver workshops
Circle of Wind	Chemicals Northwest and AGMA members along the M61/60/62 corridor	Overseeing and promotional roles mainly	Significant inputs needed to get first few projects off-the-ground working with Chemicals NW and the LAs
Bio-fuels and Low Carbon Vehicles	GMPTTE and Manchester Airport	Overseeing and promotional roles mainly. Links with transport initiatives	Significant inputs needed to follow-up meeting in September and to submit bids into EST and EIE
Wood Waste Biomass	Hadfields Red Rose AGMA members	Overseeing and promotional roles mainly. Organisation of a workshop to present the wood waste biomass “package” and to confirm target sites	Some inputs needed to progress the initiative with the project champions

Project Title	Project Champion/Partners	M:KC Role	Other Short Term Inputs
Green Badge Parking	AGMA members Stockport for pilot scheme?	Overseeing and promotional roles mainly Links with the other transport initiatives	Some inputs needed for ongoing discussions with the local authorities and for the LCVP bid.
Arc of Opportunity	GMPTE LTP team MCC, SCC Universities	Involvement in the priority transport corridor plans and Oxford Road corridor working with the GM LTP team	Some inputs needed to attend meetings/workshops on Oxford Rd and the transport corridors.
Making Journeys More Sustainable	GMPTE LTP Team AGMA members	Involvement in the priority transport corridor plans working with the GM LTP team	Some inputs needed to attend meetings/workshops on the transport corridors and to identify a suitable project to demonstrate ideas.
Communications and Behavioural Change	M:KC Creative Concern	Management of the MIMP campaign Identification of funding sources	Large inputs needed on MIMP and the Pledge campaign
Public Policy and Planning	AGMA members	Ongoing co-ordination and support to maintain momentum with current initiatives Inputs to the LA Carbon Management Conference early in 2006.	Some inputs needed to keep the ball rolling in the short term
Financing & Funding	M:KC	Lead role for M:KC Development of links with funders Assisting stakeholders with bids Organisation of a funding workshop	Some inputs needed to organize and run the funding workshop

7. Summary of Conclusions and Recommendations

Fast Track Projects

The evaluation has identified 9 high priority projects that need progressing over the next few weeks:

- **Aeolian Tower** – if the idea of a competition is taken-up and it is decided to bid into the EIE programme.
- **CO₂ Pledge** – this project is already underway with over 7,500 Mancunians pledging to reduce their CO₂ emissions. The campaign has engaged a wide range of key stakeholders in the city region as well as at national government level
- **1000 Homes** – there is an opportunity to join the EST/BEAMA smart meter pilot and to link onto the Pledge campaign
- **Low Carbon Industrial Estates** – there is scope for an application into the Carbon Trust with Trafford Park Business Forum and GM Chamber of Commerce
- **Green Office Campaign** – there is an opportunity to work closely with Bruntwood and others on implementation. This will also link into the next Phase of the Pledge campaign and other local initiatives such as MCC's Business Pledge
- **Circle (Ribbon) of Wind** – the project champions are in place and the project has high profile potential
- **Wood Waste Biomass** – the project champions are in place and there is an opportunity to link into Greening the Schools Building Programme
- **Biodiesel and Low Carbon Vehicles** – the project champions and partners are in place and there is scope for a bid into the current round of Intelligent Energy Europe (EIE)
- **Green Badge Parking Permit** – there is a project champion for the pilot and an opportunity to bid into the Low Carbon Vehicle Programme.

It is estimated that these projects will contribute to a reduction of over 200,000 tonnes of CO₂ per annum over the next 2 to 3 years. There will also be significant economic and social benefits due to job creation in the sustainable energy supply chain, energy cost reductions and increased security of supply by reducing reliance on fossil fuels. Further work is needed over the next few weeks to quantify these benefits as the projects are further developed.

The other projects, which have been evaluated during Phase 2, also provide potential for further development but do not have short term deadlines in terms of funding programmes and, in some cases, need more work to identify the specific project opportunities and champions. Actions to progress these projects have been identified in the various project profiles.

An important topic in this context is the **Transport Sector** where there is scope for the M:GER to get involved in the development of the Local Transport Plan (LTP) for the city region which is due to be submitted in March 2006. In particular, this involves the development of ideas and initiatives linked to the priority transport corridors. This could bring-in a number of the built environment and transport

projects which have been evaluated during Phase 2, namely: *Greening the City, Self-sufficient Streetscapes, the Arc of Opportunity and Making Journeys More Sustainable*.

Public Policy and Planning Initiatives

Four public policy initiatives were investigated under Phase 2 of the project:

- Standard Sustainable Planning Policies & Guidance
- Low Carbon Authorities
- Green Purchasing
- Greening the Schools Building Programme.

These initiatives received support from a number of local authority representatives at the Projects Forum. They were presented and discussed at the GM Environmental Co-ordinator's Forum meeting on 20th July, which was attended by representatives from 8 Authorities. Officers agreed to support all 4 initiatives in principle.

Progress has been made on all of the above initiatives during Phase 2 with varying degrees of enthusiasm and support from the different AGMA members. However, achieving policy changes across the authorities will be a lengthy process as they require the approval of cabinet members as well as senior officers. Information on the current situation with respect to each initiative in the local authorities has been gathered, with some gaps still to be filled, and actions to progress the initiatives have been identified.

Communications Strategy & Plan

The recommended strategy fuses the dynamic and powerful Green Energy Revolution with the recently-launched Climate Change Communications initiative from Defra in an attempt to create a new benchmark for communications on climate change and energy. The strategy uses Defra's guidelines and principles and focuses them down into four campaign tactics: 1) We Know Who YOU are; 2) Manchester is My Planet; 3) Extreme Visual Pleasure; 4) Dissonance Jamming.

Through high levels of audience understanding (Campaign Tactic: We know who YOU are) and through highly localised communications interventions (Campaign Tactic: Dissonance Jamming), this behavioural change strategy goes beyond attitudinal change (a vital pre-cursor of tangible action on climate change) and directly contributes and responds to the government's carbon reduction targets.

It aims to position the Manchester City Region as an exemplar, as the increasing and extensive use of renewable energy technologies and deployment of 'low-carbon' innovations begin to reduce its carbon consumption. The strategy explicitly seeks to enhance 'brand Manchester' and also directly contributes to the 'Greening Manchester' programme launched by Manchester City Council. It will boost civic pride and achieve local 'buy-in' to the campaign. (Campaign Tactic: Manchester is my planet).

It will positively promote and encourage individual projects as they get underway, ensuring that the maximum attention and impact are derived from each element. It will form 'mini' campaign plans for each signature project, removing key barriers to change (Campaign Tactic: Dissonance Jamming) in carefully targeted audience segments (Campaign Tactic: We know who YOU are).

The strategy sets out firm and consistent visual criteria so that all audiences know that ideas, messages, calls to action are all part of a highly stylised, positive and focused campaign (Campaign Tactic: Extreme Visual Pleasure).

Linked into the overall strategy and plan are three specific communications projects:

- the CO₂ Pledge which is already underway (see section 7.1)
- the Green Energy Map, a highly visible and accessible way of showing where all the existing and developing projects are located
- the Big Green Energy Experiment.

Carbon Baseline and Monitoring

A methodology for calculating the carbon baseline for Greater Manchester has been developed based on information from the EMIGMA database on atmospheric emissions (CATE at MMU), electricity and gas usage from the DTI and Defra's draft report on CO₂ emissions by local authority area.

A carbon baseline for 2003 has been estimated for each local authority in the city region, broken down into three broad sectors: domestic (including small commercial), industrial & commercial and transport usage. This gives a total baseline of 5.34 million tonnes of carbon (about 20 million tonnes of CO₂) emissions in Greater Manchester in 2003. Individual local authority contributions vary from 15% of the total (for Manchester) to 6% of the total (for Tameside). Domestic (and small commercial) accounts for 46% of the total, with industry and transport representing 27% each.

It should be noted that there are a number of known errors/omissions in the calculations e.g. electricity use for transport is included under industrial and no data on emissions related to airports has been included to-date. More work is needed to reconcile the different sources of data and to analyse the information against economic and demographic factors so that future changes can be taken into account. Further information from Defra and the Stockholm Institute will be available soon and this should also be taken into account in the development of the methodology.

In order to establish a process for the regular monitoring of emissions, it will be necessary to designate an organisation with a remit to carry out this work. In particular, there will be a need to identify how the EMIGMA database is to be kept up-to-date following the decision at CATE to pull out of the Service Agreement with the AGMA Air Quality Group.

Management and Organisation of MIMP

The responsibility for the development and implementation of the MIMP in the short term (i.e. over the next 2 to 3 years) currently rests with Manchester Knowledge Capital (M:KC) and the overall management of this has been recognised through the appointment of a Director at M:KC whose main role is to manage the programme.

The key MIMP delivery tasks to be managed by M:KC are as follows:

- to oversee the various projects and initiatives across the key areas of Manchester Life either directly or through others such as the project champions and consultants

- to provide direct inputs to progress the three cross-cutting activities, namely Public Policy & Planning, Communications and Financing
- to encourage the development of the overall sustainable energy strategy/plan for the city region and to identify how this should be implemented in the longer term.

Within the wider context of the Knowledge Capital agenda, there are opportunities for M:KC to stimulate innovation, knowledge and technology transfer in the field of sustainable energy and to encourage partnerships between academia, industry and entrepreneurs. There is also an important role for the organisation to help the city region to realise the economic benefits of moving towards a sustainable energy economy e.g. by highlighting new business opportunities and the potential for cost savings.

Consideration should be given to the longer term management and delivery of the MIMP. The approach to this will depend on a number of factors including the long term aims and objectives of M:KC, its funders and other stakeholders. The main options include:

- continue through M:KC
- use an existing organisation
- establish a new organisation.

These options should be assessed as part on the development of the overall strategy and plan for the MIMP.

One option is to establish a Sustainable Energy Centre/Agency for Greater Manchester which would work along similar lines to other SECs in Europe or London's Climate Change Agency. It would play a pivotal part in the development and delivery of a sustainable energy strategy and plan across all the main sectors of city region. In this context, Manchester should consider making a case for being a pilot of energy planning at local authority level e.g. based on Swedish energy planning methods.