

Manchester City Council

Salford City Council

Trafford Council

Local Flood Risk Management Strategies

**Strategic Environmental Assessment:
Scoping Report**

September 2013

1 Introduction

- 1.1 Manchester City Council, Salford City Council and Trafford Council are three unitary authorities located at the heart of the Greater Manchester City Region. In addition to sharing boundaries and broader policy objectives, the three authorities are hydrologically linked through a network of rivers, canals, sewers and drains, and commissioned a joint Strategic Flood Risk Assessment (SFRA) on this basis.
- 1.2 Under Section 9 of the Flood & Water Management Act 2010, Manchester City Council, Salford City Council and Trafford Council, as Lead Local Flood Authorities for their areas, are required to produce a strategy for managing Local Flood Risk, which means:
- Flooding from surface water run-off (where rainwater is unable to drain away sufficiently quickly and begins to pond on the surface, often after a heavy storm)
 - Flooding from groundwater (where the ground becomes over-saturated with water after extended periods of rainfall)
 - Flooding from ordinary watercourses (such as non-main rivers, canals, ditches and ponds which are unable to contain their water, often after a heavy storm or an extended period of rainfall)
- 1.3 Section 9 of the Flood & Water Management Act 2010 also details what Local Flood Risk Management Strategies (LFRMSs) should contain, including:
- Identifying the risk management authorities in the authority's area and the flood risk management functions that may be exercised by those authorities in relation to the area;
 - The objectives for managing local flood risk, the measures proposed to achieve those objectives, how and when the measures are expected to be implemented, the costs and benefits of those measures, and how they are to be paid for;
 - The assessment of local flood risk for the purpose of the strategy, how and when the strategy is to be reviewed, and how the strategy contributes to the achievement of wider environmental objectives.
- 1.4 The LFRMS must be consistent with the National Flood and Coastal Erosion Risk Management Strategy and the lead local flood authority must consult risk management authorities that may be affected by the strategy, and the public, as part of the preparation process. Section 11 of the Act sets out how all flood risk management authorities should use the LFRMSs.

- 1.5 The Strategic Environmental Assessment Directive (2001/42/EC) requires that certain plans and programmes undergo an environmental assessment, due to the likelihood that they will have significant environmental effects once implemented. The Environmental Assessment of Plans and Programmes Regulations 2004 ('the SEA Regulations') transpose the Directive into UK law. The Councils have determined, in consultation with the bodies specified in the Regulations (English Heritage, the Environment Agency and Natural England), that SEA will be required for their LFRMSs. This means that the Councils must each prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing their LFRMS and any reasonable alternatives taking into account the objectives and geographical scope of the strategy.
- 1.6 This Scoping Report will be used in the Strategic Environmental Assessment (SEA) of the Councils' Local Flood Risk Management Strategies, and has been developed jointly by the three authorities. The Scoping Report includes:
- A review of the relevant plans and programmes at different spatial levels which may influence the LFRMSs;
 - A description of the baseline economic, environmental and social characteristics of each authority's area, together with the identification of key environmental and sustainability issues of relevance to the LFRMSs;
 - The development of a framework of SEA objectives against which the LFRMSs' measures and any reasonable alternatives will be appraised.
- 1.7 The Scoping Report will be subject to consultation with the three statutory consultees (English Heritage, the Environment Agency and Natural England), together with risk management authorities and navigation authorities in the Councils' areas. The Scoping Report uses what is considered to be the best information available at the time of its preparation.
- 1.8 It is also necessary, under Regulation 61 of the Habitat and Species Regulations 2010, to carry out an Appropriate Assessment in respect of any plan or project which either alone or in combination with other plans or projects would be likely to have a significant effect on a European Site, and is not directly connected with the management of the site for nature conservation. European sites include Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites. There are no European designations within the Manchester, Salford or Trafford areas but a SAC, part of the Rochdale Canal, is adjacent to the MCC boundary, in Oldham and parts of the Manchester Mosses SAC lie close to the Salford boundary. This assessment will be provided by the Greater Manchester Ecology Unit, and the results will be included in the Environmental Report.

- 1.9 The Water Framework Directive (WFD) 2000/60/EC, and the WFD Regulations 2003 make it a requirement to ensure that the strategy will not lead to actions which result in a deterioration in the status of any water body (including the channel, the flow, and the flora and fauna), will not prevent future restoration/improvement, and includes opportunities for improvement in the status of water bodies to help meet WFD objectives. This requirement will be incorporated into the assessment framework.

2 Key issues arising from the baseline information

2.1 The key sustainability issues identified from the review of plans and programmes and the baseline information are summarised below:

Human Health

2.2 Life expectancy in Manchester and Salford is below the national average but life expectancy in Trafford is above the national average.

2.3 One factor in improving this may be adult participation in regular exercise. In 2012, adult participation in regular exercise was lower in Salford than the national average, but significantly higher in Trafford. In Manchester, 35.9% of adults participated in regular exercise, which was similar to the national average.

Issues arising for the LFRMS

2.4 Flooding, particularly involving sewers, can have profound impacts on physical health, and in severe cases may cause a risk to lives.

2.5 These issues, together with the adverse implications for properties, and particularly if they are common, can contribute to the perceived flood risk and can impact on stress levels and mental health. The LFRMS may affect this directly through actions to manage flood risk.

2.6 Indirectly, the LFRMS may impact on physical and mental health if it affects public access to land used for physical recreation and to other goods and services that make a difference to quality of life.

Possible Objective for the SEA

- Improve health and life expectancy and reduce threats and stress

Biodiversity (including Flora and Fauna) & Soil

2.7 Manchester, Salford and Trafford are predominantly urban and suburban in character but there are a number of sites that have been designated for biodiversity, including 3 Sites of Special Scientific Interest (SSSIs); two in Trafford and one in Manchester. 100% of the SSSI land in Trafford and 68% of the SSSI land in Manchester is in a 'favourable' condition. There are 119 Sites of Biological Importance (SBIs) and 15 Local Nature Reserves (LNRs) between the 3 districts, representing a broad range of different habitat types. SBIs and LNRs account for 1,241ha and 607ha respectively. Nine species and eight habitats are protected through the Greater Manchester Biodiversity Action Plan, and a number of these are found within the 3 authorities. Much of the open land in the western part of Salford, together with some land in Trafford, is peat. Of particular note within Salford is the 240 hectares of readily restorable lowland raised bog, which is mostly located on current and

former peat extraction sites. Within Trafford, Carrington Moss has been identified by the Council as a key area for conservation and enhancement.

- 2.8 Salford contains the majority (83%) of the Grade 1 agricultural land (more than 1500 hectares) and 7% of the Grade 2 agricultural land in Greater Manchester, and Trafford contains the majority (76%) of the Grade 2 agricultural land in Greater Manchester (more than 2300 hectares). This best and most versatile agricultural land represents a significant resource. All 3 authorities contain several hundred hectares of Grade 3 agricultural land, some of which is likely to be Grade 3a, which is also classified as best and most versatile agricultural land. Most of Manchester's best Grade 3 agricultural land is contained within the Manchester Airport site and not therefore available for agricultural purposes.
- 2.9 In recent years, the vast majority of dwellings built in the 3 authorities have been on brownfield land, conserving greenfield land for other uses.
- 2.10 The City Region has had a long history of intense industrial activity, and faces a considerable challenge in dealing with its legacy of contaminated land. Manchester has had an industrial use on some 26.5% (3,066 hectares) of its land at sometime in the past, with these uses being concentrated in the East Manchester wards of Bradford, Ancoats & Clayton and Miles Platting & Newton Heath. So far, over 6500 potentially contaminated sites have been identified in the City, based on an informed estimate of the potential for contamination to be present at a site and the possibility that it may pose a risk to health or the environment. The next stage has begun, to carry out detailed inspections of the 6500 sites, in order of priority, to identify whether contamination is actually present.
- 2.11 It is estimated that there are historic records for approximately 450 potentially contaminated sites in Salford. Salford's contaminated land strategy is currently under review.
- 2.12 In Trafford there are 1527 sites of potential concern, 59 of which are landfill sites. These sites have been identified based on past potentially polluting activity and have been risk-rated depending on known sources, pathways and receptors.

Issues arising for the LFRMS

- 2.13 LFRMS options may include construction, land use change, changes to flood risk and more general changes to the water environment. These could negatively impact on some aspects of biodiversity, but there could also be opportunities for habitat creation or improvement.
- 2.14 The LFRMS may impact on land use and therefore on soil resources. Much of the best and most versatile land in Salford and Trafford has been created by draining the previously extensive areas of lowland raised bog at Chat Moss and Carrington Moss.
- 2.15 The LFRMS will need to consider the issue of contaminated land in relation to sites where currently flooding could lead to the release of pollutants into

watercourses or groundwater, and sites where development or actions identified by the LFRMS could cause or exacerbate such a situation.

- 2.16 The LFRMS should consider how development and flood risk management interact, helping to shape future plans and strategies and their application.

Possible Objectives for the SEA

- Maintain and where possible enhance biodiversity and geodiversity, and soils
- Protect and where possible enhance the landscape and green infrastructure
- Ensure the efficient use of land, using brownfield and remediating any contamination where practicable
- Maintain and where possible enhance water quality and aquatic environments

Water & Flood Risk

- 2.17 There have been major improvements in water quality in Greater Manchester in recent decades, with fish returning to rivers which were previously too polluted. However, much more progress needs to be made in order to meet the Water Framework Directive (WFD) target that all watercourses must meet good ecological status or potential by 2027 (if not possible by 2015). Latest figures indicate that Manchester has 21% of watercourses in the Good category; Salford has 12.5% and Trafford has 12.5%. The Bridgewater Canal, the Ashton Canal and the Rochdale Canal do all meet the relevant standards.
- 2.18 The Environment Agency has classed the North West as an area of relatively low water stress. Although infrastructure improvements may be necessary to continue to meet water supply needs, this is much less of an issue than in other, drier parts of the country.
- 2.19 Flood risk is a significant issue for all 3 authorities. In terms of fluvial flooding, a regional study found Manchester and Salford to be among the most at risk authorities in the northwest. Recent modelling work has increased our understanding of the flood risk from the 'Grey Irwell' (through the city centre) and the Manchester Ship Canal, and shown that an extreme flood would place significant areas of all 3 authorities at risk.
- 2.20 All 3 authorities are within the Greater Manchester Flood Risk Area, as identified by the Preliminary Flood Risk Assessments.
- 2.21 The Manchester Salford Trafford Hybrid Strategic Flood Risk Assessment (SFRA) also identified that some areas are potentially vulnerable to groundwater flooding (although there are few recorded instances of this), or to flooding from canals such as the Bridgewater Canal. Evidence on these types of flooding is less well developed than that for fluvial and surface water flooding.
- 2.22 The strategic surface water flood map contained in the Greater Manchester

Surface Water Management Plan (GM SWMP) includes an allowance for drainage via the sewer system. This was produced in close collaboration with United Utilities and whilst this is not a sophisticated assessment of sewer capacity, and is not based on any empirical data, it does represent an improvement on previous modelling.

- 2.23 Multi-authority or sub-regional documents like the Manchester, Salford, Trafford (MST) Hybrid SFRA and the GM SWMP are useful but they are point-in-time documents. The Environment Agency produces and updates various national data sets which provide nationally comparable information. These include the (soon to be) updated Flood Map for Surface Water (which uses information from the GM SWMP), the main river (and some non-main river) fluvial maps, and ground water maps. Third parties, such as United Utilities, Peel Holdings and the Canal and River Trust also have their own strategies and datasets.
- 2.24 It is important to emphasise at this stage that modelling will not provide certainty that floods will occur or what their extent / depth / velocity would be. Modelled outputs are only as good as the datasets / methodology that are used in the process, and models which include significant assumptions (such as drainage rates for surface water runoff) should be treated with some caution. However, even with this qualification, modelling remains a very useful tool for assessing flood risk.
- 2.25 Under the Flood & Water Management Act 2010, as Lead Local Flood Authorities (LLFAs) Manchester, Salford and Trafford are responsible for leading flood risk management from ground water, surface water runoff, and ordinary watercourses - primarily non-main rivers. Canals are also defined as ordinary watercourses (and are therefore the responsibility of LLFAs) but Navigation Authorities have separate and seemingly overlapping statutory responsibilities in this regard.
- 2.26 The Local Flood Risk Management Strategies will not provide a framework for managing flood risk from main rivers or reservoirs (which are the responsibility of the Environment Agency) although some information will be provided for contextual purposes.
- 2.27 On this basis, the main sources of shared flood risk affecting Manchester, Salford and Trafford are from the river (Grey) Irwell / Manchester Ship Canal, as well as areas of groundwater risk, surface water runoff and from the Bridgewater Canal.

Within **Manchester**, ordinary watercourses, particularly non-main rivers in both the Upper Mersey and Irwell Catchments and the Ashton, Bridgewater and Rochdale Canals, ground water and surface water runoff, including interactions with sewers and highway drains, are the main sources of flooding to be considered. Details of properties at predicted risk of flooding, including those within the 10% most deprived areas according to the IMD, are contained in the Manchester Table in Annex B – Baseline information.

The principal flood risk in **Salford** is from main rivers, notably the River Irwell and Worsley Brook and its tributaries. There is also flood risk from sewers, canals and surface water. The Manchester Ship Canal and Bridgewater Canal potentially present significant risks to extensive areas of land alongside them. Whilst the actual risk from the Manchester Ship Canal has been subject to detailed modelling and is considered manageable given suitable water level controls, the modelling of actual risk from the Bridgewater Canal remains to be verified and endorsed by the three authorities. In Salford, over 12,000 residential properties are within Flood Zone 2 and 2500 are within Flood Zone 3. Of these, 4500 properties in Flood Zone 2 and 2000 in Flood Zone 3 are also within the most deprived 10% of areas nationally.

Flood risk in **Trafford** arises from main rivers, particularly the Mersey, Timperley Brook, Baguley Brook, Fairywell Brook, Sinderland Brook, Red Brook and Bollin, and also from sewers, canals and surface water. A number of areas within the Borough are also affected by groundwater rebound. Current understanding of flood risk arising from the smaller ordinary watercourses in the Borough is limited.

The Manchester Ship Canal and Bridgewater Canal potentially present significant risks to extensive areas of land alongside them. Whilst the actual risk from the Manchester Ship Canal has been subject to detailed modelling and is considered manageable given suitable water level controls, the modelling of actual risk from the Bridgewater Canal remains to be verified and endorsed by the three authorities.

In Trafford, the total number of residential properties in Flood Zone 2 is 2776 and in Flood Zone 3 is 554. The number of residential properties that fall within Flood Zone 2 and are also within the top 10% of most deprived areas according to the IMD is 71. There are no residential properties that fall within Flood Zone 3 and are also within the top 10% of most deprived areas according to the IMD.

Issues arising for the LFRMS

- 2.28 Flood Risk to existing properties and assets, and to future developments will need to be considered in the LFRMS. This could include flood warning and information sharing measures, property resilience measures, maintenance of existing drainage infrastructure and the provision of new infrastructure where needed, flood defence works, landscaping and guidance for new developments.
- 2.29 Development could lead to cumulative effects on water quality (e.g. through an increased area of impermeable surfaces, accelerated rates of polluted run-off, and disturbance of contaminated land / groundwater) if not managed properly. Care needs to be taken either to avoid the disturbance of contaminated land and soils which may lead to increased pollution of runoff or the contamination of groundwater, or to secure the remediation of contaminated land, thus improving soil and water quality through the reduction in polluted run-off.
- 2.30 The LFRMS should have a significant impact on flood risk. Flood mitigation measures will in many cases also have an impact on water quality, particularly as the morphology of watercourses is one of the features

assessed when determining the ecological status or potential of a watercourse.

Possible Objectives for the SEA

- Maintain and where possible enhance the quality of water resources, water bodies and the wider environment
- Minimise the probability and consequences of flooding

Air Quality

- 2.31 The SEA of the National Flood and Coastal Erosion Risk Management Strategy concluded that significant impacts on air quality as a result of the strategy were unlikely to occur and therefore it was scoped out of the assessment. Similarly, it is concluded that significant impacts on air quality as a result of the LFRMS are also unlikely to occur and therefore Air Quality is scoped out of this SEA.

Climatic Factors

- 2.32 All three authorities have road transport emissions below the UK per capita average. Manchester and Salford both have overall per capita greenhouse gas emissions below the national average. Trafford's emissions are significantly higher than the national per capita average, but this is largely because the commercial and industrial emissions are very high in the borough, presumably due to the large concentration of industry in Trafford Park.
- 2.33 Research funded by the Joseph Rowntree Foundation has shown that large parts of the 3 authorities are more vulnerable than the national average to both flood risk and risk associated with heatwaves, both of which are predicted to get worse as a result of climate change. This assessment is based on the communities' vulnerability (for example age and income profiles), the hazard (likelihood of a flood or heatwave occurring) and the exposure (e.g. type of dwelling).

Issues arising for the LFRMS

- 2.34 Proposals in the LFRMS may involve construction, which would contribute to greenhouse gas emissions. Flood risk management will make a significant contribution to how well adapted communities are to the increased risk of flooding as a result of climate change, and different approaches may make a positive or negative impact on vulnerability to heat stress, depending on the materials and approaches used.

Possible Objectives for the SEA

- Minimise the probability and consequences of climate change

Population, Housing and Employment

- 2.35 All three authorities experienced significant population growth between 2001-2011. Manchester grew particularly rapidly, with a 19% population increase, and is seeking further population increase to contribute to the economic growth of the City and to support local services and facilities. Salford and Trafford both had population growth of 7.8% over this period, which was higher than the national average. There are high rates of migration both into and out of the three authorities, with international migration playing a significant role. In Salford in 2009-10 there was a small net gain of 200 people from internal UK migration and a much larger gain of 2400 people from international migration. In the 2011 census, Manchester was the most densely populated local authority in the North West, with 4350 people per square kilometre. Densities in the other two authorities are also relatively high.
- 2.36 All three authorities have seen significant housing growth over the last 8 years. In absolute terms, the average number of dwellings built in Manchester is much greater than in Salford which is much greater than in Trafford. All three authorities have a lower proportion of detached 'household spaces' than the national average. This is particularly noticeable for Manchester. Salford and Manchester also have a greater proportion of terraced housing and flats than the national average. In 2001, the main housing type in Manchester was terraces and the most common housing type in Salford and Trafford was semi-detached dwellings. Between 2001 and 2011, all 3 authorities saw a significant increase in the proportion of apartments in the dwelling stock, with flats now the most common housing type in Manchester. All 3 Authorities are seeking an appropriate increase in dwellings to support the sustainable growth of the City Region. All housing, existing and new, needs to have a suitable level of protection from flood risk in order to remain habitable and affordable to residents.
- 2.37 Deprivation is a serious issue in the 3 authorities, particularly Manchester and Salford, which ranked 4th and 26th in the national Index of Multiple Deprivation in 2010. This is a reflection, in part at least, of the City Region's industrial past and the subsequent decline of that industry. Trafford ranked 190 in 2010, out of 326 local authorities in England.
- 2.38 Manchester and Salford both have above average levels of unemployment and other forms of worklessness; in Trafford the levels are lower than the national average.

Issues arising for the LFRMS

- 2.39 An adequate supply of good-quality, safe housing, which needs to be free from or resilient to flood risk, is needed to support sustainable growth and to reduce social and economic exclusion and stress.

- 2.40 Failure to protect employment and service concentrations, transport routes, and other infrastructure and assets from flooding could reduce the attractiveness of the area to existing and new businesses and residents.

Possible Objectives for the SEA

- Minimise the probability and consequences of flooding on housing and potential housing sites
- Reduce deprivation and factors which may exacerbate it such as poor housing
- The three authorities each need to play their part in supporting the sustainable growth of the City Region

Infrastructure and Material Assets

- 2.41 All 3 districts have complex networks of roads, rail, tram and bus services, which are an essential part of the infrastructure underpinning population and economic stability and growth. A number of key road transport routes run through the 3 authorities, including the M62, M56, M60, M602 and A57(M). There are also a number of important canals, including the Manchester Ship Canal which links to the Mersey Estuary and broad canals such as the Bridgewater Canal which link to the wider canal network. This infrastructure is mapped in annex B.
- 2.42 All 3 districts contain complex networks of utility infrastructure – gas distribution and storage facilities, electricity generation and distribution networks and water supply and wastewater treatment / removal infrastructure. Sewer pipes and highway drains have often become combined with culverted non-main rivers over time and the precise role and function of such watercourses may not always be readily understood.
- 2.43 All 3 districts have areas related to actual or potential mineral extraction, which need to be safeguarded from built development. Sand and gravel deposits are found across the 3 authorities, although existing built development means that the opportunities for mineral extraction are limited. Maps in appendix B show the areas which have been safeguarded for potential future mineral extraction, and also current mineral extraction sites and areas of search. Any flood defence works within these areas may need to consider prior extraction of minerals.
- 2.44 All 3 districts have waste management facilities which need to be safeguarded, and protected from potential flood risk and the resulting potential for polluted run-off. Existing waste facilities are mapped in appendix B.

Issues arising for the LFRMS

- 2.45 Actions from the LFRMS may affect the use of land, thus having an impact on infrastructure and material assets. Flooding can have a serious impact on infrastructure and material assets, and the LFRMS will seek to address this.

Possible Objectives for the SEA

- Maintain and where possible enhance the transport network
- Protect existing and future infrastructure and assets
- Minimise the probability and consequences of flooding

Cultural Heritage

2.46 All 3 districts have designated heritage assets including listed buildings (some of which are 'at risk'), scheduled ancient monuments, conservation areas (some of which are 'at risk' in Salford and Trafford), and registered parks and gardens. Districts also have non-designated heritage assets such as buildings of local interest, archaeological sites and monuments, and historic landscapes, all of which are identified in the Historic Environment Record held by the Greater Manchester Archaeological Advisory Service. It is worth noting that in the context of Greater Manchester, industrial heritage forms an important part of cultural heritage. It is also worth noting that the peatlands in Salford and Trafford are of archaeological interest. These heritage assets, whether designated or not, require protection from (further) harm, including from flooding. More details of these assets are contained with the cultural heritage section of Annex B. Certain types of heritage (for example weirs, wharves, canalside warehouses, etc) are located in and adjacent to watercourses due to their historical purpose and are therefore particularly likely to be at risk of flooding.

Issues arising for the LFRMS

2.47 Actions from the LFRMS may affect the use of land, thus having an impact on built aspects of cultural heritage. It may reduce flooding in some areas and increase flood risk in other areas, which will have an impact on any historic townscapes, parks and buildings in the vicinity. Any flood risk management proposals for the peatlands of Salford and Trafford should take the archaeological interest into account.

Possible Objectives for the SEA

- Protect and where possible enhance townscapes and cultural heritage
- Minimise the probability and consequences of flooding

Landscape

2.48 The 3 authorities cover a total of 4 National Character Areas between them: Manchester Conurbation, Lancashire Coal Measures, Mersey Valley and Shropshire, Cheshire & Staffordshire Plain. There are no designated landscapes within the 3 authorities.

2.49 All 3 districts have significant areas of green infrastructure, consisting of networks of multi-functional open spaces, linear corridors, and the links between them. Among the functions performed by green infrastructure are climate change mitigation and flood risk reduction, by for example reducing the urban heat island effect and providing areas of natural drainage.

Issues arising for the LFRMS

2.50 Actions from the LFRMS may affect the use of land and changes in flood risk and water levels, thus having an impact on landscape. Such changes may of course present opportunities to create new landscape features and enhance the landscape.

Possible Objectives for the SEA

- Protect and where possible enhance the landscape and green infrastructure

2.51 The objectives and baseline indicators will form the basis of the SEA framework for the LFRMS. The baseline indicators will also form part of the monitoring framework for the LFRMS. Chapter 4 describes the assessment methodology in more detail.

3 Choosing the SEA Objectives

3.1 The following list of draft SEA Objectives has been drawn up following discussion between the three authorities and having considered the following:-

- The review of relevant Plans and Programmes
- The outcomes of the baseline analysis, identification of the key sustainability issues and problems, and possible objectives arising from these
- The requirements of the SEA Regulations 2004 and the 2005 SEA Guidance:

ANNEX I of the 'SEA Directive' lists biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.*

** 'Population' covers not only demographics but also a wide range of social and well-being issues*

- The SA objectives used for the 3 authorities' local plan documents

3.2 In a first sift of these sources, it was decided that the LFRMS would not have anything other than a very indirect impact on:-

- the qualifications and skills of the resident population
- air quality

and so these objectives were excluded.

3.3 The draft list of SEA Objectives for the LFRMS included 12 objectives. The list embraces the SEA requirements, and includes an appropriate balance of environmental, social and economic objectives, appropriate to the Manchester/Salford/Trafford context.

The Draft SEA Objectives for the Manchester/Salford/Trafford Local Flood Risk Management Strategies

1. Minimise the probability and consequences of flooding
2. Minimise the probability and consequences of climate change
3. Maintain and where possible enhance the quality of water resources, water bodies and their environment
4. Maintain and where possible enhance biodiversity, geodiversity and soils
5. Protect and where possible enhance the landscape and green infrastructure
6. Protect and where possible enhance townscapes and cultural heritage
7. Ensure the efficient use of land
8. Protect and enhance the health and well-being of the population
9. Support the sustainable growth of the City Region
10. Minimise economic and social exclusion for all
11. Protect existing and future economic and social infrastructure and assets, services and amenities and encourage economic investment and growth
12. Maintain and where possible enhance the transport network for all users

4 Assessment Methodology

Testing the LFRMS objectives

- 4.1 Initially a compatibility matrix will be used to identify to what extent the objectives of the LFRMS are compatible with the SEA objectives as set out in the previous chapter.

Testing the LFRMS including strategic options

- 4.2 For each authority, the draft LFRMS, including any strategic options being considered, will be assessed in terms of how they will contribute to achieving the relevant SEA objective. The assessment will be an iterative process, drawing upon the SEA baseline indicators in Annex B and using the results to inform revisions to the strategy and the selection of options where appropriate. The predicted effects will be recorded as 'positive', 'neutral', 'negative' or 'uncertain' together with an explanation of the score, using a recording method based on that recommended in 'A Practical Guide to the Strategic Environmental Assessment Directive' (ODPM, 2005). An illustration of the assessment matrix is included in Annex C.
- 4.3 The resulting revised draft strategy and accompanying environmental report (recording the SEA process and its outcomes) will then be consulted upon with the statutory consultees and other internal and external stakeholders.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES
Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Ramsar Convention	1971	The Ramsar Convention on Wetlands of International Importance	The Convention is an intergovernmental treaty that provides the framework for international cooperation and national action for the conservation and wise use of wetlands and their resources. The Ramsar Contracting Parties have committed themselves to: designating suitable wetlands for the List of Wetlands of International Importance and ensuring their effective management; working towards the wise use of all their wetlands through national land-use planning, appropriate policies and legislation, management actions, and public education; and cooperating internationally on trans-boundary wetlands, shared wetland systems, shared species, and development projects that may affect wetlands.	The LFRMS will seek to avoid adverse impacts on Ramsar sites and enhance them wherever possible.
European Commission	1979 (Amended in 1997)	EC Council Directive 79/409/EEC, on the Conservation of Wild Birds	The Directive relates to the conservation of all species of naturally occurring wild birds. It covers the protection, management and control of these species and lays down rules for their exploitation applying to birds, their eggs, nests and habitats. Member states are required to	The LFRMS will seek to avoid adverse impacts on wild bird species and enhance their habitats wherever possible.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES
Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>take measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all species of birds. The following are subject to special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution: species in danger of extinction; species vulnerable to specific changes in their habitat; species considered rare because of small populations or restricted local distribution; and other species requiring particular attention for reasons of the specific nature of their habitat.</p>	
European Commission	1985 (Amended in 1997)	EC Council Directive 85/337/EEC & 97/11/EC, on the Assessment of the Effects of certain Public and Private Projects on the Environment	<p>The Directive aims to ensure that the authority giving the consent for a particular development project makes its decision in the knowledge of any likely significant effects on the environment. The Directive therefore sets out a process, known as Environmental Impact Assessment (EIA) that must be followed for certain types of project before approval can be given.</p>	<p>The LFRMS will have regard to the requirements of the Directive as the Strategy sets out the broad framework for investment in new local flood risk management infrastructure.</p>

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
United Nations	1992	The Kyoto Protocol and UN Framework Convention on Climate Change	The objective of the Convention, and related instruments, is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climatic system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.	The LFRMS will have regard to the Protocol and Convention in seeking to manage and mitigate increased flood risk due to climate change.
European Commission	1992	EC Council Directive 92/43/EEC, on the Conservation of Natural Habitats and of Wild Fauna and Flora	The aim of the Directive is to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora. The Directive lists a number of species and habitats which are to be protected by means of a network of sites across Europe. These sites are known as Special Areas of Conservation (SACs). The Habitats Directive introduces the precautionary principle; that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are	The LFRMS will seek to avoid adverse impacts on habitats and enhance them wherever possible.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES
Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			imperative reasons of overriding public interest. In such cases compensation measures will be necessary to ensure the overall integrity of the network of sites.	
European Commission	1998	EU Biodiversity Strategy	The Strategy aims to anticipate, prevent and address the causes of significant reduction or loss of biodiversity at source. It states that the scale of human impact on biodiversity has accelerated dramatically in recent decades and that, in spite of efforts by the Community and Member States to address the problem of biodiversity reduction or loss, existing measures are insufficient to reverse present trends.	The LFRMS will seek to avoid adverse effects on biodiversity, particularly land use changes and construction activities that would result in detrimental changes in water levels.
European Commission	1998	EC Council Directive 98/83/EC on the quality of water intended for human consumption	The objective of the Directive is to protect the health of consumers and to make sure that water is wholesome and clean. The Directive sets quality standards for drinking water quality at the tap and obliges Member States to monitor regularly drinking water quality, including provision of adequate and up-to-date information to consumers.	The LFRMS will have regard to the requirements of the Directive, particularly in view of the link between flooding and the potential pollution of water supplies.

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Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
European Commission	1999	EC Council Directive 1999/31/EC, on the landfill of waste	The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste by introducing stringent technical requirements, particularly relating to surface water, groundwater, soil, air and human health.	The LFRMS will have regard to the aims of the Directive, particularly the need for landfill sites to avoid causing problems with surface water and groundwater.
European Commission	2000	EC Council Directive 2000/60/EC, establishing a framework for Community action in the field of water policy	<p>The Water Framework Directive (WFD) aims to improve and integrate the way water bodies are managed. Member States must aim to reach good status in inland and coastal waters by 2015. The WFD seeks to:-</p> <ul style="list-style-type: none"> • enhance the status and prevent further deterioration of aquatic ecosystems and associated wetlands • promote the sustainable use of water • reduce pollution of water, especially by 'priority' and 'priority hazardous' substances • ensure progressive reduction of groundwater pollution. 	The LFRMS will have regard to the aims of the Directive, in particular by seeking to encourage more sustainable water use and identifying opportunities for improving drainage systems to protect the aquatic environment from water pollution via surface run-off.

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Plans and Programmes: International Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
European Commission	2006	EC Council Directive 2006/118/EC on the protection of groundwater against pollution and deterioration	The Directive establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater.	The LFRMS will have regard to the Directive, particularly in view of the link between flooding and potential water pollution.
European Commission	2007	EC Council Directive 2007/60/EC on the assessment and management of flood risks	The Directive requires Member States to assess if all water courses and coastlines are at risk from flooding; to map the flood extent and assets and humans at risk in these areas; and to take adequate and coordinated measures to reduce this flood risk. Its aim is to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity.	The LFRMS will take direct account of the Directive, dealing as it does with the assessment and management of flood risk at the local level.

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
UK Parliament	1981	The Wildlife and Countryside Act 1981, as amended	The Wildlife and Countryside Act 1981 consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain.	The LFRMS will seek to avoid adverse impacts on natural habitats and wild bird species wherever possible.
UK Parliament	2000	The Countryside and Rights of Way Act 2000	The Countryside and Rights of Way Act 2000 applies to England and Wales and provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI), strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).	The LFRMS will seek to avoid adverse impacts on areas of countryside and public access.

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
English Nature	2003	Accessible Natural Greenspace Standards in Towns and Cities: a Review and Toolkit for their Implementation	This report sets out the results of a research project into the contemporary natural greenspace standards model in order to determine whether its validity could still be supported, how local authorities were managing greenspace policy and how the standards might be promoted effectively in the new and changing policy environment.	The LFRMS will have regard to the linkages between areas of natural greenspace and areas for local flood management.
DCLG	2004	The Environmental Assessment of Plans and Programmes Regulations (S.I. 2004 No. 1633)	These Regulations implement Directive 2001/42/EC of the European Parliament and Council on the assessment of the effects of certain plans and programmes on the environment	The LFRMS is one such plan and hence will be accompanied by an Environmental Report prepared in line with these SEA Regulations.
DEFRA	2005	Securing the Future - UK Government Sustainable Development Strategy	The Strategy establishes a set of actions and priorities to support the achievement of Sustainable Development. The 4 priorities are:- <ul style="list-style-type: none"> • Sustainable consumption and production • Climate change 	The LFRMS will consider the effects of climate change on flood risk and will have regard to protecting water resources. The LFRMS is also required to contribute towards wider environmental objectives,

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<ul style="list-style-type: none"> • Natural resources and protection • Sustainable communities <p>The 5 statements of principle are:-</p> <ul style="list-style-type: none"> • Developing within environmental limits • Promoting a strong healthy and just society • Achieving sustainable economic growth • Promoting good governance • Using sound science responsibly 	and supporting sustainable development will be a key theme.
ODPM/Scottish Executive/Welsh Assembly Government/DoENI	2005	A Practical Guide to the Strategic Environmental Assessment Directive	This Practical Guide provides information and guidance on how to comply with the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment” (the Strategic Environmental Assessment Directive).	In undertaking SEA of the LFRMS, regard will be given to the advice contained in the Practical Guide.
UK Parliament	2006	Contaminated Land (England) Regulations	The Regulations aim to provide an improved system for the identification and remediation of contaminated land where contamination is causing unacceptable risk to human health or the wider environment.	The LFRMS will have regard to the need to avoid pollution caused by run-off from contaminated land.

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
DEFRA	2007	A Strategy for England's Trees, Woods and Forests	<p>The Strategy aims to :-</p> <ul style="list-style-type: none"> • Provide a resource of trees, woods and forests in places where they can contribute most in terms of environmental, economic and social benefits now and for future generations • Ensure that trees, woods and forests are resilient to the impacts of climate change and contribute to the way in which biodiversity and natural resources adjust to a changing climate • Protect and enhance water, soil, air, biodiversity, landscapes, and the cultural and amenity values of trees and woodland • Increase the contribution that trees, woods and forests make to the quality of life for those living or working in or visiting England • Improve the competitiveness of woodland businesses and promote the development of markets for sustainable woodland products and ecosystem services where this will 	<p>Tree, woodland and forest cover have an important influence on run-off. The LFRMS will have regard to these as it deals with surface water, ordinary watercourses and groundwater.</p>

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			deliver identifiable public benefits, nationally or locally, including reducing carbon emissions.	
Department for Culture, Media and Sport/Welsh Assembly Government	2007	Heritage protection for the 21 st Century – White Paper	The White Paper proposes an overhaul of heritage policy to provide a simplified system of protecting historic or other important assets and allowing developers and owners greater certainty over designations and development affecting such assets.	The LFRMS will have regard to flood risk as it relates to listed buildings, including buildings at risk, and other heritage assets.
DTI	2007	Meeting the Energy Challenge: A White Paper on Energy	<p>The White Paper aims to deliver four goals:</p> <ul style="list-style-type: none"> • to cut CO2 emissions by 60% by 2050, with real progress by 2020; • to maintain the reliability of energy supplies; • to promote competitive markets in the UK and beyond; and, • to ensure that every home is adequately and affordably heated. 	The LFRMS will need to acknowledge the potential consequences of human-induced climate change. This will include making climate change assumptions for flood risk assessment and management purposes. The LFRMS will also need to consider flood risk to existing and proposed power-generation infrastructure, and how this can best be managed.

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Plans and Programmes: National Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
DEFRA	2007	Guidance for Local Authorities on Implementing the Biodiversity Duty	Local authorities have a duty to have regard to the conservation of biodiversity in exercising their functions. This duty was introduced by the Natural Environment and Rural Communities Act 2006. This document provides guidance for local authorities on implementing that duty.	The LFRMS is required to contribute towards wider environmental objectives, and supporting biodiversity will be a key theme.
Pitt Review	2008	Learning lessons from the 2007 floods	The Pitt Review makes recommendations for urgent and fundamental changes in the way the country is adapting to the increased risk of flooding and calls on the Government to set out publicly how it will make rapid progress, and be held to account, on improving the country's flood resilience.	The LFRMS will set out a co-ordinated approach to managing flood risk at the local level, which is one of the key themes of the Pitt Review.
UK Parliament	2008	Climate Change Act 2008	The Act establishes a target to reduce UK carbon emissions by 80% by 2050, relative to 1990 levels. The Act also requires the Government to publish 5-yearly carbon budgets starting with the period 2008-2012. Emissions are to be reported on annually. Targeted greenhouse gases are carbon dioxide and methane. Other greenhouse gases are nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, and others	The LFRMS will need to acknowledge the potential consequences of human-induced climate change. This will include making climate change assumptions for flood risk assessment and management purposes.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			designated by the Secretary of State. The Act provides for the inclusion of international aviation and shipping emissions, with the Government to determine how and when.	
UK Parliament	2009	The Flood Risk Regulations 2009	The Regulations place a duty on the Environment Agency and lead local flood authorities to prepare maps and reports in relation to river basin districts and flooding within any given local authority area. They also place a duty on the Environment Agency and lead local flood authorities to identify flood risk areas and prepare flood risk management plans.	Mapping produced in order to meet the requirements of the Regulations will be a key data source for the LFRMS. Linkages will also need to be made between the LFRMS and flood risk management plans.
DEFRA	2009	Safeguarding our Soils – A Strategy for England	The Strategy sets out the Government's approach for improving soil quality in England and safeguarding the ability of soils to provide essential services.	Soils and vegetation have an important influence on run-off, and surface water runoff can make a key contribution to soil erosion. The LFRMS will have regard to these as it deals with surface water, ordinary watercourses and groundwater.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Environment Agency	2009	Water for People and the Environment; Water Resources Strategy for England and Wales	<p>The Strategy sets out actions for:-</p> <p>Climate change:</p> <ul style="list-style-type: none"> • enabling habitats and species to adapt better • allowing the way we protect the water environment to adjust flexibly • considering environmental pressure from human water use and its whole life-cycle. <p>The water environment:</p> <ul style="list-style-type: none"> • protecting conservation sites that depend on water • improving environmental resilience • safeguarding water resources via effective catchment management • improving understanding of how water and ecology interact. <p>Managing water resources:</p> <ul style="list-style-type: none"> • supporting housing/related development where the environment can cope with additional demands • allowing a targeted approach where 	The LFRMS will deal with local flood risk management, which is a key element of managing the wider water environment.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>resource stress is greatest</p> <ul style="list-style-type: none"> • ensuring efficient water use in homes/buildings/industry/agriculture • providing greater incentives to manage demand <p>Valuing water:</p> <ul style="list-style-type: none"> • allowing water companies to address affordability issues • allowing more efficient water use • providing better information on a product's water efficiency 	
DCLG	2009	Development and Flood Risk PPS25 Practice Guide	The Practice Guide provides advice on development and flood risk and, though originally produced to supplement PPS25 (which has now been superseded by the NPPF), still offers useful guidance.	The LFRMS will have regard to the technical advice on flood risk contained in this document.
UK Parliament	2010	The Flood and Water Management Act 2010 ¹	The Flood and Water Management Act places a range of new duties on lead local flood authorities, including production of asset registers and local strategies,	The need for, and overall purposes of, the LFRMS are set out in the Act. The LFRMS is required to

¹ Implementation is being undertaken via a range of statutory instruments. A number of provisions, including those relating to sustainable drainage approving bodies, have yet to be commenced.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>investigation of flooding incidents and a new regime for sustainable drainage. Risk management authorities are to co-operate with each other, and the Act provides lead local flood authorities and the Environment Agency with a power to request information required in connection with their flood risk management functions. The Act also requires flood and coastal erosion risk management authorities to aim to contribute towards the achievement of sustainable development when exercising their functions.</p>	<p>have specific regard to these key legislative provisions.</p>
HM Government	2010	Healthy Lives, Healthy People: Our strategy for public health in England (White Paper)	The White Paper outlines the Government's commitment to protecting the population from serious health threats; helping people live longer, healthier and more fulfilling lives; and improving the health of the poorest, fastest.	Flooding, particularly by polluted waters, can have a major, detrimental impact on health and wellbeing. The LFRMS will play its part in managing these risks in local communities.
HM Government	2010	Local growth: realising every place's potential (Local Growth White Paper)	The White Paper outlines a new approach to local growth, shifting power away from central government to local communities, citizens and independent providers. This means recognising that where drivers of	Supporting sustainable development, to underpin local growth, will be a key theme of the LFRMS.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>growth are local, decisions should be made locally. The aims are to:-</p> <ul style="list-style-type: none"> • shift power to local communities and business, enabling places to tailor their approach to local circumstances • promote efficient and dynamic markets, in particular in the supply of land, and provide real and significant incentives for places that go for growth; and • support investment in places and people to tackle the barriers to growth. 	
DEFRA	2010	The Conservation of Habitats and Species Regulations 2010	The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.	The LFRMS is required to contribute towards wider environmental objectives, and protecting habitats and species will be a key theme.
DCLG	2011	PPS10: Planning for Sustainable Waste Management	The PPS sets out the Government's planning policy framework for achieving sustainable waste management, and	The LFRMS will have regard to the need to avoid pollution by run-off

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			provides specific guidance to a range of authorities on preparing plans and deciding planning applications.	from land which is, or has been, in waste management use and for such uses (particularly landfill/landraising) to avoid compromising the function of floodplains and other local flood management areas.
Environment Agency	2011	The National Flood and Coastal Erosion Risk Management Strategy for England	The Strategy's overall aim is to ensure that flooding and coastal erosion risks are well-managed and co-ordinated, so that their impacts are minimised. The Strategy helps bring together Government and the authorities who are responsible for managing these risks with the organisations, communities, and people who are at risk. The Strategy covers flooding from the sea, rivers, surface water, sewers, groundwater and reservoirs.	The LFRMS is required to be consistent with the National Strategy.
DEFRA	2011	Biodiversity 2020 - A strategy for England's wildlife and ecosystem services	The overall aim of the Strategy is to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit	The LFRMS is required to contribute towards wider environmental objectives, and supporting biodiversity will be a key

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>of wildlife and people. There are four priorities for action up to 2020:-</p> <ul style="list-style-type: none"> • a more integrated large-scale approach to conservation on land and at sea • putting people at the heart of biodiversity policy • reducing environmental pressures • improving our knowledge. 	<p>theme.</p>
HM Government	2011	The Natural Choice (Natural Environment White Paper)	<p>The White Paper proposes key reforms for protecting and improving our natural environment, and reconnecting people and nature. These are:-</p> <ul style="list-style-type: none"> • Supporting Local Nature Partnerships • Identifying Nature Improvement Areas • Ecologically coherent planning, retaining the protection and improvement of the natural environment as core objectives of the planning system • Piloting biodiversity offsets, to make requirements to reduce the impacts of development on biodiversity simpler 	<p>The LFRMS is required to contribute towards wider environmental objectives and protecting and improving the natural environment will be a key theme.</p>

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			<p>and more consistent.</p> <ul style="list-style-type: none"> • Improving public health locally, by making high-quality green space available to everyone; • Action to get more children learning outdoors; • New Green Areas Designation, empowering communities to protect local environments that are important to them. 	
HM Treasury	2011	National Infrastructure Plan 2011	<p>The Government's ambitions are to:</p> <ul style="list-style-type: none"> • Improve the performance, capacity, connectivity and environmental impacts of the UK's transport networks; • Achieving a secure, diverse and reliable energy supply for the UK while reducing the carbon intensity of electricity generation at least cost to consumers; • Increasing superfast broadband and mobile coverage, and ensuring adequate spectrum availability to support a thriving communications 	<p>The LFRMS will set out a co-ordinated approach to managing flood risk at the local level, which should benefit existing and proposed infrastructure. The LFRMS will also identify specific investment schemes for local flood management.</p>

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			industry; <ul style="list-style-type: none"> • Maintaining the security and performance of the water and sewerage system while reducing its environmental impacts; • Mitigating the impacts of flooding as part of a well-managed, co-ordinated and affordable risk management system; and • Reducing waste sent to landfill, increasing recycling rates and moving towards a zero waste economy. 	
DEFRA	2011	Guidance for risk management authorities on sustainable development in relation to their flood and coastal erosion risk management functions	The Flood and Water Management Act 2010 requires certain flood and coastal erosion risk management authorities to aim to make a contribution towards the achievement of sustainable development when exercising their functions. It also requires the Secretary of State to issue guidance on how those authorities are to discharge this duty and explain the meaning of sustainable development in this context – this document does that.	Supporting sustainable development will be a key theme of the LFRMS.
DEFRA	2011	Government Review	The review sets out a commitment to work towards a zero waste economy and	The LFRMS will have regard to the need to

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
		of Waste Policy in England 2011	reaffirms the importance of managing waste in line with the waste hierarchy. It sets out a number of detailed measures which will contribute to achieving these aims.	avoid pollution by run-off from land which is, or has been, in waste management use and for such uses (particularly landfill / landraising) to avoid compromising the function of floodplains and other local flood management areas.
Environment Agency	2011	SEA and Climate Change: Guide for Practitioners.	The Guide provides practical advice for plan-makers, responsible authorities and consultants preparing SEAs or SAs.	In undertaking SEA of the LFRMS regard will be given to the advice contained within this document.
DCLG	2012	National Planning Policy Framework	The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England. A key thrust of the NPPF is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan making and decision taking. The NPPF reinforces the requirement for sustainability appraisal and states that it should be an integrated part of the plan	The LFRMS will need to be in line with the aims of the NPPF, particularly the focus on achieving sustainable development; specific guidance on flood risk will be considered as part of this.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			preparation process.	
DCLG	2012	Technical Guidance to the National Planning Policy Framework	The Technical guidance provides additional advice to local planning authorities to ensure the effective implementation of the NPPF as it relates to development in areas at risk of flooding and mineral extraction.	The LFRMS will have regard to the technical advice on flood risk contained in this document.
Environment Agency	Updated quarterly	On-line Flood Map	The EA have produced a number of predictive flood maps addressing flooding from different sources which are updated quarterly.	The LFRMS will have regard to the EA's flood map where it is the best available information.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Red Rose Forest	1994	Red Rose Forest Plan	The Red Rose Forest Plan sets out a 40 year programme to achieve the aim of establishing a community forest in Greater Manchester. The Plan sets out the Forest wide vision under headings including community contact, sport, recreation and access, and tourism as well as strategies for the development of core Forest areas. In addition the Plan sets out short, medium and long term targets for delivery by the Red Rose Forest Partnership.	Tree, woodland and forest cover has an important influence on run-off. The LFRMS will have regard to these as it deals with surface water, ordinary watercourses and groundwater.
Association of Greater Manchester Authorities (AGMA)	2002	Greater Manchester Derelict Land Strategy	This Strategy sets out the framework for the reclamation of derelict, underused and neglected sites across the conurbation for soft end after uses such as landscaping and habitat creation.	The LFRMS will have regard to the linkages between land reclamation for soft end after uses and areas for local flood management.
AGMA	2006	Manchester City Region Spatial Strategy	This strategy was prepared by AGMA and submitted as a contribution to the review of the Regional Spatial Strategy. The Strategy outlines a vision and key strategic objectives for the Manchester City Region, and defines a spatial policy framework	The LFRMS will need to be developed within the context of the spatial strategy for the Manchester City Region.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			designed to achieve these.	
GONW ²	2008	North West of England Plan – Regional Spatial Strategy to 2021	The Regional Spatial Strategy (RSS) provided a framework for development and investment up to 2021. It established a broad vision for the region and its sub-regions, priorities for growth and regeneration, and policies to achieve sustainable development across a wide range of topics – from jobs, housing and transport to climate change, waste and energy.	The LFRMS will have regard to the wider regional/sub-regional spatial context.
AGMA	2008	Towards a Green Infrastructure Framework for GM	This report was commissioned by AGMA and Natural England to advise how Green Infrastructure (GI) might be embedded into the City-Region’s spatial planning policy and practice in order to enable and sustain growth.	Development of Green Infrastructure, particularly for flood storage and strategic sustainable drainage, can offer considerable benefits for local flood management. The LFRMS will have regard to opportunities identified in such GI initiatives.

² The current Government has now abolished the RSS.

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Plans and Programmes: Regional and Sub-Regional Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Salford City Council / Manchester City Council / Trafford Council	2008	Irwell City Park Planning Guidance	This non-statutory Planning Guidance relates to the intention to establish the Irwell City Park as an exciting and unique waterfront location within the Regional Centre. The principles set out are intended to provide clear guidance to stakeholders in the development process – landowners, local businesses and residents, statutory agencies, public sector organisations and private developers.	The LFRMS will have regard to the aspirations of the Irwell City Park Planning Guidance.
AGMA	2008	Strategic Flood Risk Assessment (SFRA) for Greater Manchester	This study provides a sub-regional overview of flood risk across the conurbation, making use of existing information to establish the broad baseline position and identifying where further, more detailed assessments are required. Limited information on District-level issues is provided and recommendations made for further work.	Areas identified within the SFRA as being at risk of flooding should be taken into account in drafting the LFRMS, where the SFRA continues to be the best available information.
AGMA	2009	Prosperity for all: The Greater Manchester Strategy	This strategy was a direct response to the 2009 Budget which gave the Manchester City Region the opportunity to become a pilot statutory city region. This decision allows for the tailoring of programmes at a	The LFRMS will have regard to relevant programmes developed by the Greater Manchester Combined

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			local level to meet the area's economic, social and environmental needs and for the local authorities in Greater Manchester to have a direct and more dynamic hand in where the future of the city region lies. ³	Authority.
United Utilities	2009	Business Plan 2010-2015: Planning for the Future	This 5-year Plan sets out how UU will maintain its current standards of service, where it will invest to meet expectations and how it will reduce its greenhouse gas emissions. It sets out the implications of that investment for investors and consumers, and contains detailed tables providing information on its plans.	The LFRMS will set out a co-ordinated approach to managing flood risk at the local level and identify specific investment schemes for local flood management. These should be formulated having regard to other actions proposed within UU's current Business Plan.
Environment Agency	2009	Irwell Catchment Flood Management Plan	This CFMP gives an overview of the flood risk in the Irwell catchment and sets out	The LFRMS will set out a co-ordinated

³ AGMA agreed to the creation of the Greater Manchester Combined Authority in March 2010 and in April 2011 the combined authority was established.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
		(Summary Report)	the Environment Agency's preferred plan for sustainable flood risk management over the next 50 to 100 years.	approach to managing flood risk at the local level and identify specific investment schemes for local flood management. These should be formulated having regard to other actions proposed within the CFMP.
Environment Agency	2009	Mersey Estuary Catchment Flood Management Plan (Summary Report)	This CFMP gives an overview of the flood risk in the Mersey Estuary catchment and sets out the Environment Agency's preferred plan for sustainable flood risk management over the next 50 to 100 years.	The LFRMS will set out a co-ordinated approach to managing flood risk at the local level and identify specific investment schemes for local flood management. These should be formulated having regard to other actions proposed within the CFMP.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Environment Agency	2009	Upper Mersey Catchment Flood Management Plan (Summary Report)	This CFMP gives an overview of the flood risk in the Upper Mersey catchment and sets out the Environment Agency's preferred plan for sustainable flood risk management over the next 50 to 100 years.	The LFRMS will set out a co-ordinated approach to managing flood risk at the local level and identify specific investment schemes for local flood management. These should be formulated having regard to other actions proposed within the CFMP.
Environment Agency	2009	Water for life and livelihoods: River Basin Management Plan - North West River Basin District	This plan is about the pressures facing the water environment in the North West River Basin District, and the actions that will be taken to address them. It has been prepared under the Water Framework Directive, and is the first of a series of six-year cycles of planning and action.	The LFRMS will set out a co-ordinated approach to managing flood risk at the local level and identify specific investment schemes for local flood management. These should be formulated having regard to other actions proposed within the River Basin Management Plan.

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Greater Manchester Biodiversity Project	2009	Greater Manchester Biodiversity Action Plan	The overall aim of this Plan is to promote the conservation, protection and enhancement of biological diversity in Greater Manchester for current and future generations.	The LFRMS is required to contribute towards wider environmental objectives, and supporting biodiversity will be a key theme.
NWRA	2010	Atlantic Gateway – Accelerating Growth Across the Manchester and Liverpool City Regions – Framework for a Global Growth Opportunity	Atlantic Gateway is a framework for collaboration between the Manchester and Liverpool city regions which will help unlock their full sustainable economic growth potential. The framework outlines how partners will work together to resolve common barriers and challenges to growth faced across the Gateway area. It sets out a complementary approach, which supports existing city region plans, and will accelerate the delivery of low carbon economic growth.	The LFRMS will have regard to the growth aspirations of the Atlantic Gateway framework.
Transport for Greater Manchester and Greater Manchester Combined Authority	2011	Greater Manchester's third Local Transport Plan 2011/12 – 2015/16	This document seeks to support the development of an integrated transport network to meet the demands that will be placed upon it by a growing economy, whilst addressing the need to tackle social exclusion, create sustainable communities and enhance the environment.	The LFRMS will need to have regard to the impact of local flood risk management measures on existing and proposed transport infrastructure programmed in the

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Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
				current Local Transport Plan.
Manchester CC Salford CC Trafford Council	2010/2011	Manchester, Salford, Trafford Hybrid Strategic Flood Risk Assessment (SFRA)	This document provides a detailed assessment of flood risk from rivers, canals, groundwater, surface water and sewers in Manchester, Salford and Trafford. It builds on the overview provided by the SFRA for Greater Manchester and sets out detailed modelling/mapping outputs for areas within Manchester, Salford and Trafford where key development is proposed.	Areas identified within the SFRA as being at risk of flooding should be taken into account in drafting the LFRMS, where the SFRA continues to be the best available information.
AGMA	2012	Greater Manchester Joint Waste DPD	The Joint Waste DPD sets out a waste planning strategy to 2027 that enables the adequate provision of waste management facilities in appropriate locations for municipal, commercial and industrial, construction and demolition and hazardous wastes. The Plan identifies specific sites and areas for waste management and provides a suite of policies for development management.	The LFRMS will have regard to the need to avoid pollution by run-off from land which is, or has been, in waste management use and for such uses (particularly landfill/landraising) to avoid compromising the function of floodplains and other local flood management areas.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES
Plans and Programmes: Regional and Sub-Regional Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
AGMA	2013	Greater Manchester Joint Minerals DPD	The Joint Minerals DPD was adopted by each Council on 26 th April 2013. The DPD sets out a Minerals planning strategy to 2027 including the identification of suitable locations for minerals protection and extraction and a suite of policies to be applied in this regard.	The LFRMS will have to have regard to the implications of the Joint Minerals DPD, including in terms of groundwater flooding from redundant mines.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES
Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Manchester CC	1995	Unitary Development Plan (UDP) – Extant Policies July 2012	The UDP was adopted by the Council in 1995 and was subject to a number of partial reviews between 1998 and 2005. Manchester's Core Strategy (adopted July 2012) replaces the majority, but not all, of the policies in the UDP.	The LFRMS will need to be developed within the context of the development plan for the City, including extant UDP policies.
Manchester CC	2005 (Action Plan refreshed 2012)	Wildabout Manchester – the Manchester Biodiversity Strategy + Action Plan	The Strategy outlines what biodiversity is, why it is important, what's already happening and an Action Plan to help protect, conserve and enhance biodiversity in the City. The Strategy also details the important habitats and species present and identifies specific priorities for Manchester.	The actions and priorities identified in the Biodiversity Strategy and Action Plan should be taken into account in drafting the LFRMS, and be refined in the light of the latter.
Manchester CC	2006	The Manchester Way: Sustainable Community Strategy 2006-2015	The Strategy sets out a vision and set of priorities for the City: to support continued and sustainable economic growth and ensure that more people and communities share its benefits; it identifies the environment, education, training, poor health and anti-social behaviour as the most important issues that need to be addressed.	The LFRMS will need to be developed within the context of the Sustainable Community Strategy and have regard to its vision and priorities.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Manchester CC	2009	Manchester: A Certain Future (MACF)	This document is a climate change action plan for Manchester which aims to reduce our contribution to global warming, with headline actions to 2020. It forms the starting point for actions through to 2050 towards a better adapted, lower carbon future.	The actions and goals identified in MACF should be taken into account in drafting the LFRMS, and be refined in the light of the latter.
Manchester CC	2009	Open Space, Sport and Recreation Study	This study is an assessment of open spaces, sport and recreation facilities within the City Council boundaries in accordance with the requirements of Planning Policy Guidance Note 17 (PPG17) and its Companion Guide. It incorporates local standards for seven open space typologies, and identifies strategic priorities.	The areas identified in the study, and the standards and priorities, should be taken into account in drafting the LFRMS, and be refined in the light of the latter.
Manchester CC	2011	Preliminary Flood Risk Assessment	This document confirms that a large part of the City is included within the Greater Manchester Flood Risk Area as identified by the Environment Agency.	The area identified as a Flood Risk Area should be taken into account in drafting the LFRMS.
Manchester CC	July 2012	Core Strategy DPD	The Core Strategy is the key Local Development Document that sets out the long term strategic policies for Manchester's future development up to 2027, and forms part of the framework that planning applications are assessed	The LFRMS will need to be developed within the context of the development plan for the City, including the Core Strategy DPD, and have

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			against. It is accompanied by the latest proposals map which shows Core Strategy, GM Waste Plan and GM Minerals Plan and extant UDP policies.	regard to its vision and priorities. Future reviews of the development plan should also have regard to the LFRMS.
Manchester CC	In Draft, January 2013	Manchester Green and Blue Strategy	This Strategy provides an assessment of the extent and functionality of Green and Blue Infrastructure in Manchester, which aims to recognise gaps, identify priorities, and provide a framework for prioritising investment. It will incorporate a 15-year G&B action plan.	The priorities and actions identified in the Green & Blue Strategy should be taken into account in drafting the LFRMS, and be refined in the light of the latter.
Salford CC	2006	Salford Greenspace Strategy SPD	This SPD aims to ensure that all households are within an appropriate distance of a full range of greenspaces.	The LFRMS may affect future land uses and flood risk on greenspaces.
Salford CC	2006	Nature Conservation and Biodiversity SPD	This SPD aims to enhance the biodiversity and nature conservation interest of Salford, safeguarding protected and priority species and habitats.	The LFRMS may affect future land uses and flood risk, which may impact on biodiversity.
Salford CC	2008	Flood Risk and Development Planning Guidance	This Guidance aims to ensure that new development in areas at risk of flooding in the City is adequately protected from flooding and that the risks of flooding are not increased elsewhere as a result of new development.	The LFRMS may affect the flood risk to buildings and development sites.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Salford CC	2009	City of Salford Unitary Development Plan 2004-2016 – Policies saved beyond 21 June 2009	This UDP aims to guide development and land use in Salford, meeting housing needs and maximising employment opportunities whilst protecting and enhancing environmental assets.	Will affect future land uses within Salford.
Partners In Salford	2009	Connecting People to Opportunities – Salford’s Sustainable Community Strategy 2009-2024	This Strategy aims to create: <ul style="list-style-type: none"> • A healthy city • A safe city • A learning and creative city • A city where children and young people are valued • An inclusive city with stronger communities • An economically prosperous city • A city that's good to live in 	The LFRMS will need to be developed within the context of the Sustainable Community Strategy and have regard to its vision.
Salford CC	2011	Preliminary Flood Risk Assessment	This document confirms that a large part of the City is included within a National Flood Risk Area as identified by the Environment Agency.	The area identified as a Flood Risk Area should be taken into account in drafting the LFRMS.

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
Trafford Council	2006	Revised Trafford Unitary Development Plan (UDP)	The purpose of the Plan is to provide the framework and priorities for the development, improvement and conservation of land through to 2016. A number of UDP Policies/Proposals have now been replaced by the Core Strategy and Joint Waste DPD.	The LFRMS will need to be developed within the context of the development plan for the Borough, including extant UDP policies.
Trafford Partnership	2010	Trafford Vision 2021: a blueprint – Sustainable Community Strategy	The Strategy vision is to make Trafford a thriving, diverse, prosperous, culturally vibrant Borough at the heart of the Manchester City Region, celebrated as the enterprise capital of the North West and home to internationally renowned cultural and sporting attractions.	The LFRMS will need to be developed within the context of the Sustainable Community Strategy and have regard to its vision.
Trafford Council	2011	Preliminary Flood Risk Assessment	This document confirms that a large part of the Borough is included within a National Flood Risk Area as identified by the Environment Agency.	The area identified as a Flood Risk Area should be taken into account in drafting the LFRMS.
Trafford Council	2012	Trafford Local Plan: Core Strategy	The Core Strategy provides the overall planning strategy for the Borough, and is the spatial expression of the Trafford Sustainable Community Strategy (SCS). It sets out what change is necessary, where and when, how it is going to be managed and delivered. It establishes a balance between growth, regeneration,	The LFRMS will need to be developed within the context of the Local Plan for the Borough and have regard to its vision and objectives. Future reviews of the Local Plan should also have regard to the

ANNEX A: REVIEW OF PLANS AND PROGRAMMES

Plans and Programmes: Local Level

Organisation	Date	Title	Main aims and objectives	Relevance to LFRMS
			environmental protection and improvement to ensure that Trafford becomes a place where people want to live, learn, work and relax, up to 2026 and beyond.	LFRMS.
Trafford Council	2013	Sustainable Trafford	This document provides an over-arching strategy to tackle climate change and energy security between 2013 and 2020.	The LFRMS will have regard to the objectives and proposals of the Strategy, particularly those relating to flood risk and water management.

ANNEX B: DETAILED BASELINE INFORMATION

Human Health

	Manchester	Salford	Trafford	National Comparison / Target
Life Expectancy at birth	Male – 74.1 Female – 79.1 (2008-2010)	Male – 74.8 Female – 79.9 (2008-2010)	Male – 78.8 Female – 83.1 (2008-2010)	UK: Male – 77 Female – 81.3 (2008-2010)
Adult participation in regular exercise (Sport England Active People Survey) (April 2011 - April 2012)	35.9%	33.2%	40%	England 35.7%

Biodiversity including Flora and Fauna

	Manchester	Salford	Trafford	National Comparison / Target
No. of Sites of Biological Importance (date)	36 (2012)	33 (2012)	50 (2011)	Not applicable
Total Area of Sites of Biological Importance (date)	304 ha (2012)	510.94 ha (2010/2011)	426.4 (2011)	Not applicable
Local Nature Reserves	8 LNRs, totalling 392ha (2012)	Blackleach Country Park (WLH/001) – 41.0ha	Broad Ees Dole 8.78ha Trafford Ecology Park 4.39ha Total area 13.17ha	Natural England target 1 ha / 1000 population

ANNEX B: DETAILED BASELINE INFORMATION

	Manchester	Salford	Trafford	National Comparison / Target
		Kersal Dale (ESA/001) – 33.1ha Worsley Woods (WBO/001) – 41.3ha Clifton Country Park (SWI/001) – 77.9ha Kersal Moor (ESA/002) – 8.2ha Total area 201.5 ha (2011)	(2011) (0.05ha per 1000 population)	
The percentage of land designated as SSSI in favourable condition as a percentage of all land with SSSI status within the District	68% (2012) ⁴	N/A	100% (2011)	GM average: 29.8%; NW average: 78.9%; England average: 69.7% (2006)
Priority Habitats	UK BAP Priority Habitats (2005): Acid grassland Ancient and/or species-	UK Priority Habitats within Salford - 2008 Wet woodland –	Not monitored	Not applicable

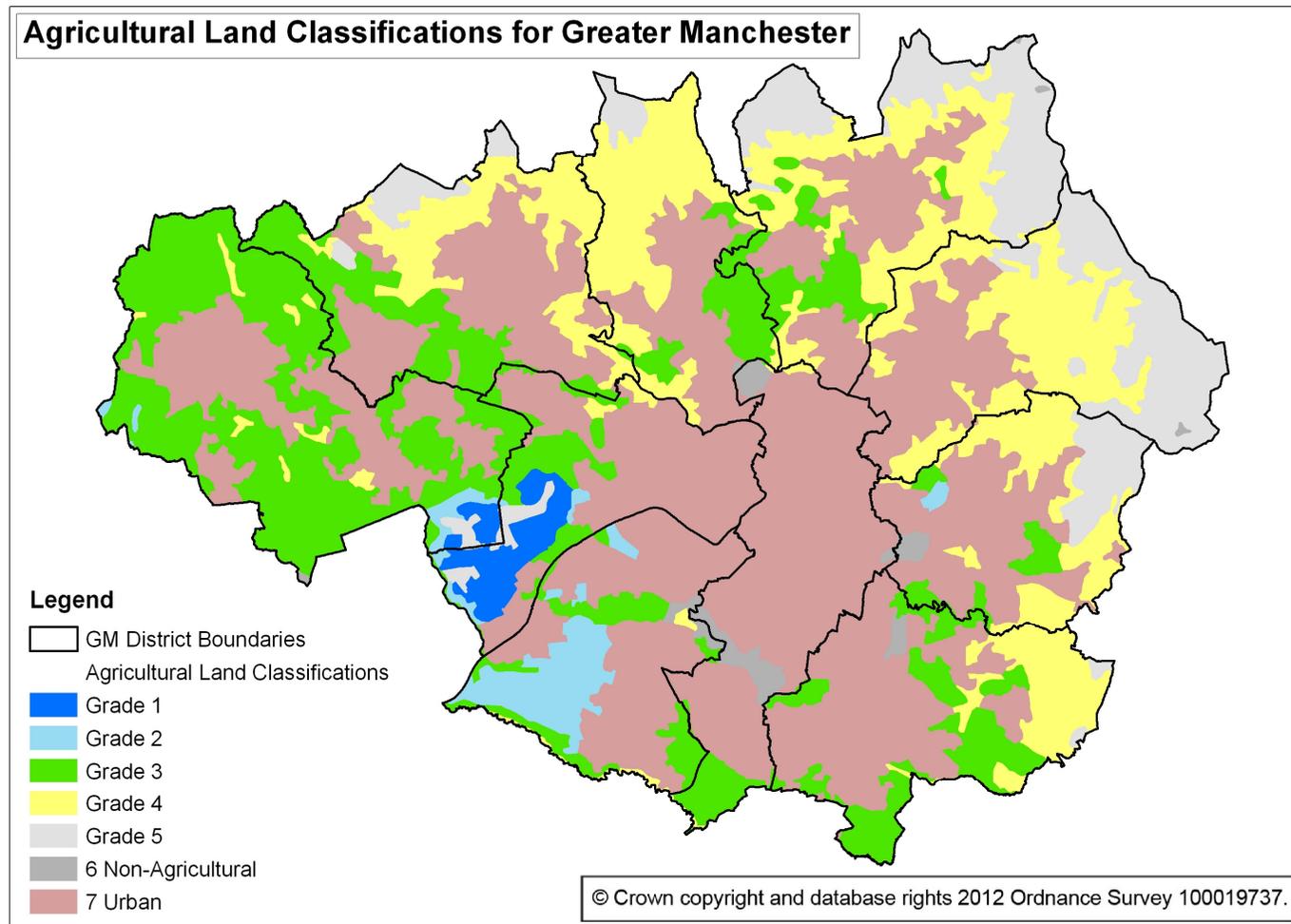
⁴ <http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?Report=sdr13&Category=C&Reference=1018>

ANNEX B: DETAILED BASELINE INFORMATION

	Manchester	Salford	Trafford	National Comparison / Target
	rich hedgerows	5.2ha		
	Wet woodlands	Eutrophic Standing Waters – 18.9ha		
	Lowland broadleaved woodland	Lowland Dry Acid Grassland/ Lowland Heath – 20.3ha		
	Lowland heathland			
	Lowland meadows	Lowland Raised Bog – 14.2ha		
	Unimproved neutral grassland			
	Marshy grassland	Lowland Raised Bog (readily restorable) – 240.5ha		
	Managed greenspace			
	Reedbed	Total – 299.1 (of which 63.2ha are within SBIs)		
	Rivers			
	Canals			
	Ponds & Lodges			

ANNEX B: DETAILED BASELINE INFORMATION

Soil



Map 1 Agricultural Land Classification across Greater Manchester

ANNEX B: DETAILED BASELINE INFORMATION

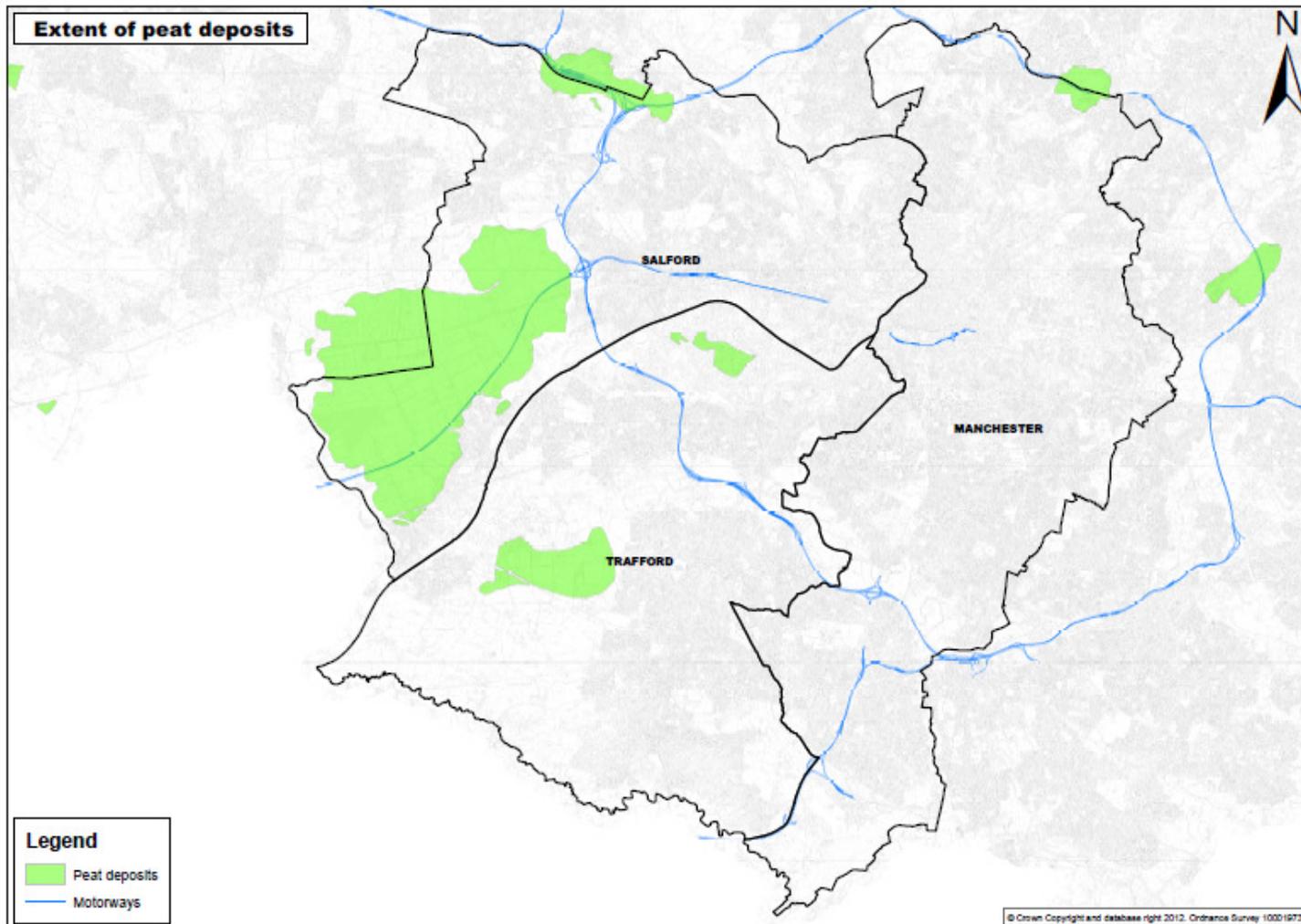
As can be seen on Map 1, Salford has a significant area of Grade 1 agricultural land (more than 1500 hectares) and Trafford has a significant area of Grade 2 agricultural land (more than 2300 hectares). Most of Manchester's best Grade 3 agricultural land is contained within the Manchester Airport site and not therefore available for agricultural purposes.

	Manchester	Salford	Trafford	National Comparison / Target
Agricultural Land	Grade 1 – 0 Grade 2 – 0 Grade 3 – 798 ha Grade 4 – 94 ha Grade 5 – 486 ha	Grade 1 – 1580 ha Grade 2 – 220 ha Grade 3 – 1556 ha Grade 4 – 203 ha Grade 5 – 386 ha	Grade 1 – 0 Grade 2 – 2342 ha Grade 3 – 1704 ha Grade 4 – 205 ha Grade 5 – 0 ha	England: Grade 1 – 354,644 ha Grade 2 – 1,849,258 ha Grade 3 – 6,291,711 ha Grade 4 – 1,840,315 ha Grade 5 – 1,100,784 ha ⁵
% of dwellings built on brownfield land	90.7% (2009/10) 92.6% (2010/11) 89.3% (2011/12)	92% (2003/04 – 2010/12) 97.4% (2009/10) 86.5% (2010/11) 97.3% (2011/12)	88% (2004/05 – 2011/12) 81% (2009/10) 69% (2010/11) 61% (2011/12)	National target for 60% of all dwellings to be built on brownfield land has recently been removed.

Of particular note are the extensive peat deposits in Salford and Trafford, which are shown on map 2 below.

⁵ All these figures can be found in Salford's latest SA (Publication Core Strategy)

ANNEX B: DETAILED BASELINE INFORMATION



Map 2 Peat deposits across Manchester, Salford and Trafford

ANNEX B: DETAILED BASELINE INFORMATION

Water & Flood Risk

	Manchester	Salford	Trafford	National Comparison / Target
Water Quality – Classification of water courses under Water Framework Directive	Good – 3 (21%) Moderate – 9 (64%) Poor – 2 (14%) Bad – 0 (0%)	Good – 1 (12.5%) Moderate – 5 (62%) Poor – 1 (12.5%) Bad – 1 (12.5%)	Good – 1 (12.5%) Moderate – 4 (50%) Poor – 2 (25%) Bad – 1 (12.5%)	EU target for all watercourses to meet good ecological status or potential by 2027 (if not possible by 2015)
Water availability	Part of NW – classified by EA as an area at Low Water Stress	Part of NW – classified by EA as an area at Low Water Stress	Part of NW – classified by EA as an area at Low Water Stress	Not applicable
Properties in EA fluvial flood risk zones	See Manchester Table below	Flood Zone 2 – 12723 Flood Zone 3 – 2554	Flood Zone 2 – 2776 Flood Zone 3 - 554	Not available
Properties at risk of surface water flooding (0.3m or greater) ⁶	See Manchester Table below	1 in 30 – 297 1 in 100 – 1014 1 in 200 - 1439	1 in 30 – 332 1 in 100 – 910 1 in 200 - 1800	Not available

⁶ Data from the Greater Manchester Surface Water Management Plan Strategic Flood Map, Council Tax and LLPG

ANNEX B: DETAILED BASELINE INFORMATION

MANCHESTER	All Residential Properties (Manchester)	Residential Properties in the worst 10% IMD (Manchester)
Flooding Measure		
Fluvial Flood Zone 2	8,884	1,908
Fluvial Flood Zone 3	2,829	870
Fluvial Flood Zones 2 & 3 Total	11,713	2,778
Ashton Canal, Bridgewater Canal, Rochdale Canal - Breach Zone A	1,737	1,507
Ashton Canal, Bridgewater Canal, Rochdale Canal - Breach Zone B	3,316	620
Ashton Canal, Bridgewater Canal, Rochdale Canal - Overtopping	14*	14*
Rochdale Canal breach zone in Oldham that extends into Manchester	477	412
Canal Flooding Total	5,544	2,553
Groundwater Flooding	7,968	249
Shallow Groundwater Flooding	1,161	46
Groundwater Rebound	6,503	0
Groundwater Flooding Total	15,362	295

ANNEX B: DETAILED BASELINE INFORMATION

Surface Water 1:30 year storm, 0.3metre depth.	459	261
Surface Water 1:100 year storm, 0.3metre depth.	1,289	688
Surface Water 1:200 year storm, 0.3metre depth.	2,733	1,023
Surface Water 1:30 year storm, 0.1metre depth.	2,933	1,000
Surface Water 1:100 year storm, 0.1metre depth.	7,561	3,222
Surface Water 1:200 year storm, 0.1metre depth.	13,277	4,959

* No overlap between overtopping and breaches.

Residential property data is taken from LLPG / Council Tax Records. Fluvial Flood Zones are from the Environment Agency Flood Map. Canal Flooding and Groundwater Flooding are taken from the Manchester Salford Trafford Hybrid SFRA. Surface Water Flooding is taken from the Greater Manchester Surface Water Management Plan Strategic Flood Map.

Air Quality

The SEA of the National Flood and Coastal Erosion Risk Management Strategy concluded that significant impacts on air quality as a result of the strategy were unlikely to occur and therefore it was scoped out of the assessment.

Similarly, it is concluded that significant impacts on air quality as a result of the LFRMS are also unlikely to occur and therefore Air Quality is scoped out of this SEA.

ANNEX B: DETAILED BASELINE INFORMATION

Climatic Factors

	Manchester		Salford		Trafford		National Comparison / Target	
Greenhouse Gas Emissions: Per capita emissions by sector (tonnes) (2010)	Industry & Commercial	2.80	Industry & Commercial	2.20	Industry & Commercial	5.20	UK	
	Domestic	1.90	Domestic	2.20	Domestic	2.50	Industry & Commercial	2.70
	Road Transport	1.00	Road Transport	1.30	Road Transport	1.20	Domestic	2.40
	Per capita - Total	5.70	Per capita - Total	5.80	Per capita - Total	8.90	Road Transport	1.60
							Per capita - Total	6.60

Research⁷ has shown that large parts of the 3 authorities are more vulnerable than the national average to both flood risk and risk associated with heatwaves. This is based on the communities' vulnerability (for example age and income profiles), the hazard (likelihood of a flood occurring) and the exposure (e.g. type of dwelling).

Population

	Manchester	Salford	Trafford	National Comparison / Target
Total Population (2011) census	503,100	233,900	226,600	Not Applicable
Population increase (2001-2011)	19%	7.8%	7.8%	Regional growth in Greater Manchester: 6.61%. National growth: 6.98% ⁸

⁷ Lindley et al 2011 'Climate change, justice and vulnerability' Joseph Rowntree Foundation

⁸ <http://www.manchesterconfidential.co.uk/News/The-2011-Census-Greater-Manchester-Results>

ANNEX B: DETAILED BASELINE INFORMATION

	Manchester		Salford		Trafford		National Comparison / Target	
Migration	41,590 inward; 38,890 outward (net gain 2,700) ⁹ (2007)		UK 12200 inward; 12000 outward (net gain 200) International 3600 inward; 1200 outward (net gain 2400) (2009-10) ¹⁰		Internal migration inward: 8930 outward: 9450 (net gain -520); International migration inward: 1570 outward: 2070 (net gain -500) (2007)		Not applicable	
Age – Proportion of population at different ages (Census 2011)	0 – 4	7.2%	0 – 4	7.0%	0 – 4	6.6%	England and Wales:	
	5 – 9	5.7%	5 – 9	5.6%	5 – 9	6.2%	0 – 4	6.2%
	10 – 14	5.3%	10 - 14	5.6%	10 - 14	6.2%	5 – 9	5.6%
	15 - 19	7.6%	15 - 19	6.5%	15 – 19	6.0%	10 – 14	5.8%
	20 - 24	13.3%	20 – 24	8.3%	20 – 24	5.2%	15 – 19	6.3%
	25 – 29	11.3%	25 – 29	9.0%	25 – 29	6.1%	20 – 24	6.8%
	30 – 34	8.9%	30 – 34	7.4%	30 – 34	6.6%	25 – 29	6.8%
	35 – 39	6.8%	35 – 39	6.6%	35 – 39	7.2%	30 – 34	6.6%
	40 – 44	6.5%	40 – 44	6.9%	40 – 44	7.9%	35 – 39	6.7%
	45 – 49	5.7%	45 – 49	6.9%	45 – 49	8.0%	40 – 44	7.3%
							45 – 49	7.3%

⁹ ONS 2007 Mid year estimate

¹⁰ Source ONS Population mid year estimates 2001 and 2010

ANNEX B: DETAILED BASELINE INFORMATION

	Manchester		Salford		Trafford		National Comparison / Target	
	50 – 54	4.8%	50 – 54	6.0%	50 – 54	6.8%	50 – 54	6.4%
	55 – 59	3.9%	55 – 59	5.0%	55 – 59	5.6%	55 – 59	5.7%
	60 – 64	3.6%	60 – 64	5.3%	60 – 64	5.6%	60 – 64	6.0%
	65 – 69	2.6%	65 – 69	4.1%	65 – 69	4.3%	65 – 69	4.8%
	70 – 74	2.3%	70 – 74	3.4%	70 – 74	3.8%	70 – 74	3.9%
	75 – 79	1.9%	75 – 79	2.7%	75 – 79	3.2%	75 – 79	3.2%
	80 – 84	1.4%	80 – 84	2.0%	80 – 84	2.5%	80 – 84	2.4%
	85 – 89	0.8%	85 – 89	1.3%	85 - 89	1.5%	85 - 89	1.5%
	90 and over	0.4%	90 and over	0.6%	90 and over	0.8%	90 and over	0.8%
Deprivation – Rank in the 2010 Index of Multiple Deprivation	2010 Manchester ranked 4 th		2010 Salford ranked 26 th		2010 Trafford ranked 190		Not applicable	
Properties at risk of fluvial flooding in 10% most deprived areas (EA flood zones)	See Manchester Table under “Water & Flood Risk” section above		Flood Zone 2 – 4507 Flood Zone 3 – 2012		Flood Zone 2 – 71 Flood Zone 3 – 0		Not available	

ANNEX B: DETAILED BASELINE INFORMATION

Housing and Employment

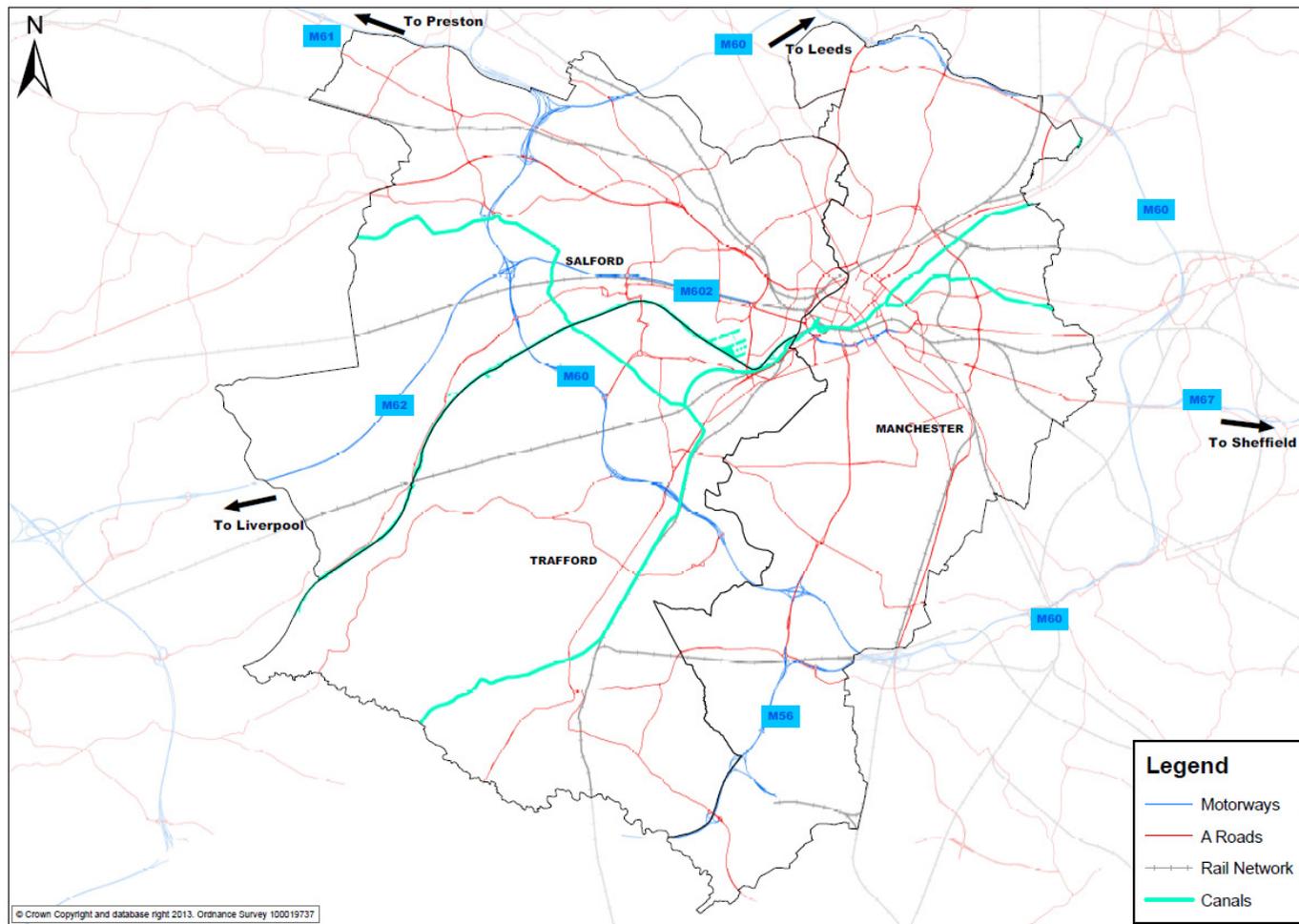
	Manchester	Salford	Trafford	National Comparison / Target																																								
Net additional dwellings	Total 21,513; (2003/04 – 2010/11) – average 2689 pa	Average 1503 ¹¹ pa (2003/04 – 2010/11)	Average 551 (2003/04 – 2010/11)	Not applicable																																								
Type of household space (2011 census data)	<table border="1"> <tr><td>Detached</td><td>4.96%</td></tr> <tr><td>Semi-detached</td><td>30.31%</td></tr> <tr><td>Terraced</td><td>30.18%</td></tr> <tr><td>Flats</td><td>34.51%</td></tr> <tr><td>Caravan</td><td>0.04%</td></tr> </table>	Detached	4.96%	Semi-detached	30.31%	Terraced	30.18%	Flats	34.51%	Caravan	0.04%	<table border="1"> <tr><td>Detached</td><td>8.55%</td></tr> <tr><td>Semi-detached</td><td>34.35%</td></tr> <tr><td>Terraced</td><td>28.21%</td></tr> <tr><td>Flats</td><td>28.80%</td></tr> <tr><td>Caravan</td><td>0.09%</td></tr> </table>	Detached	8.55%	Semi-detached	34.35%	Terraced	28.21%	Flats	28.80%	Caravan	0.09%	<table border="1"> <tr><td>Detached</td><td>15.02%</td></tr> <tr><td>Semi-detached</td><td>43.99%</td></tr> <tr><td>Terraced</td><td>21.52%</td></tr> <tr><td>Flats</td><td>19.44%</td></tr> <tr><td>Caravan</td><td>0.03%</td></tr> </table>	Detached	15.02%	Semi-detached	43.99%	Terraced	21.52%	Flats	19.44%	Caravan	0.03%	England: <table border="1"> <tr><td>Detached</td><td>22.26%</td></tr> <tr><td>Semi-detached</td><td>30.71%</td></tr> <tr><td>Terraced</td><td>24.49%</td></tr> <tr><td>Flats</td><td>22.11%</td></tr> <tr><td>Caravan</td><td>0.43%</td></tr> </table>	Detached	22.26%	Semi-detached	30.71%	Terraced	24.49%	Flats	22.11%	Caravan	0.43%
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Terraced	24.49%																																											
Flats	22.11%																																											
Caravan	0.43%																																											
Employment rate of working age (16-64) population (October 2012)	58.7%	67.3%	71.3%	UK – 70.2%																																								
Unemployment rate (October 2012)	12.8%	10.0%	7.4%	UK – 8.1%																																								

¹¹ Salford Publication Core Strategy Sustainability Appraisal

ANNEX B: DETAILED BASELINE INFORMATION

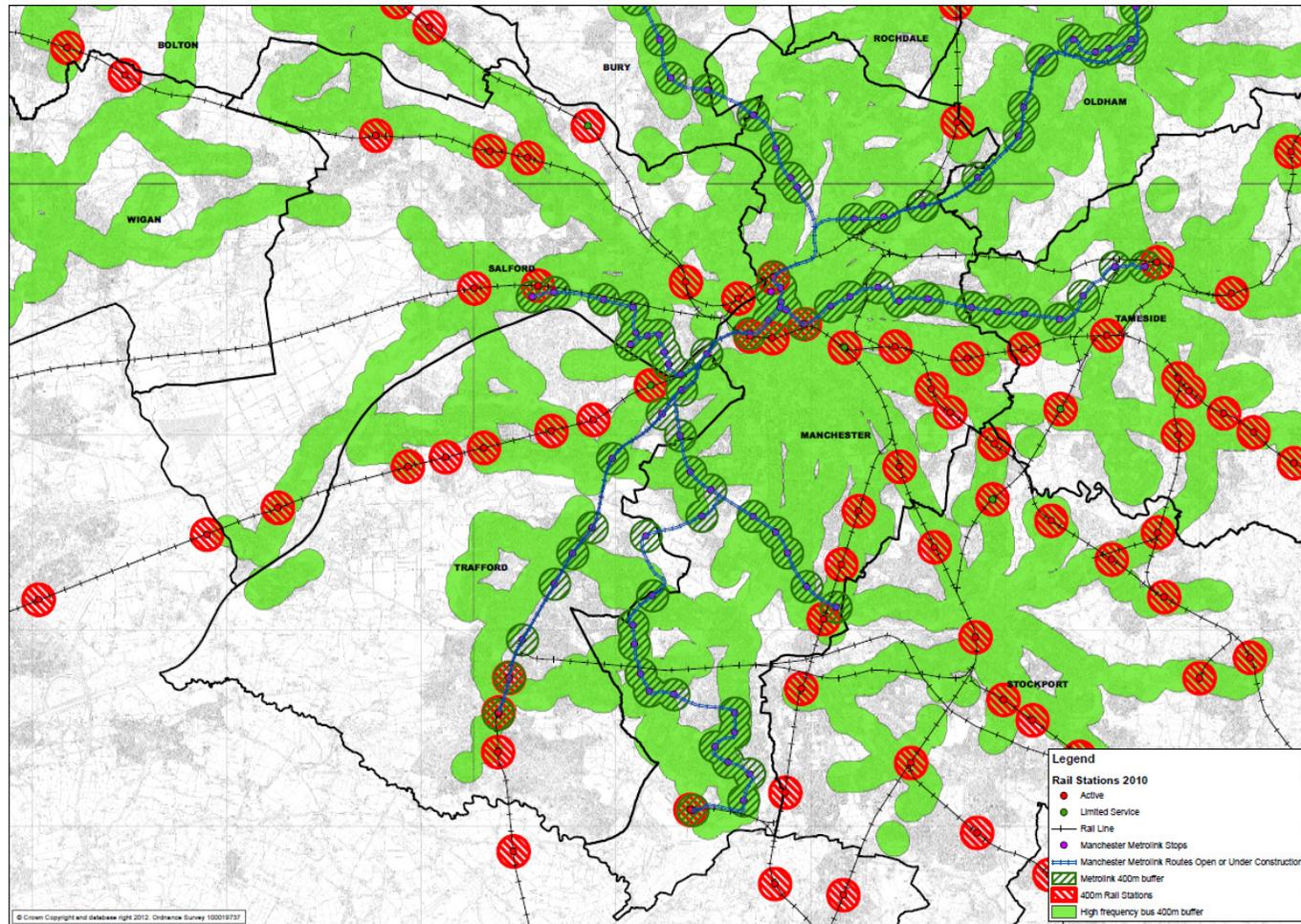
Infrastructure and Material Assets

Transport network



Map 3 Key Road and Rail Links

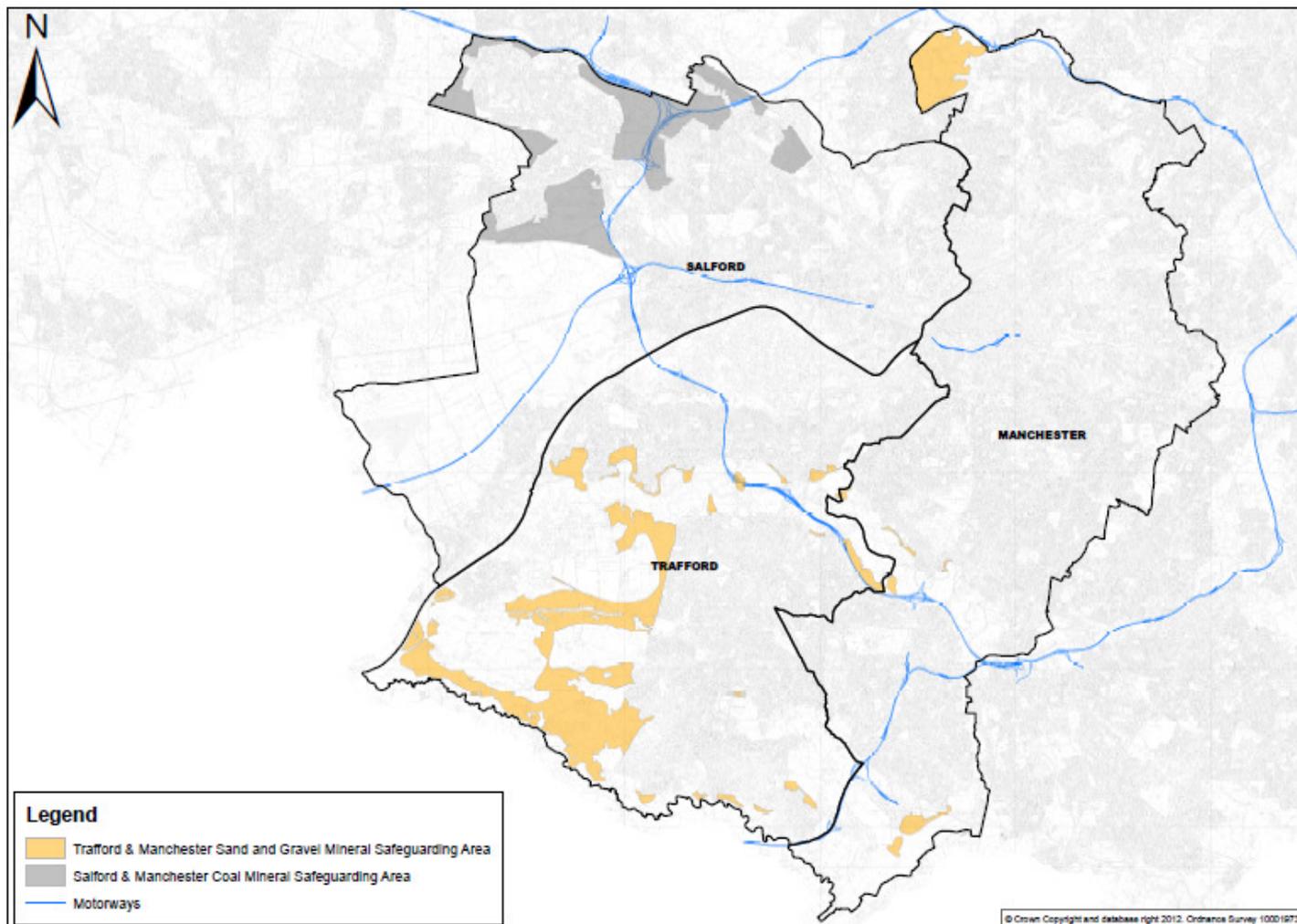
ANNEX B: DETAILED BASELINE INFORMATION



Map 4 Public Transport: Rail, tram and high frequency bus routes

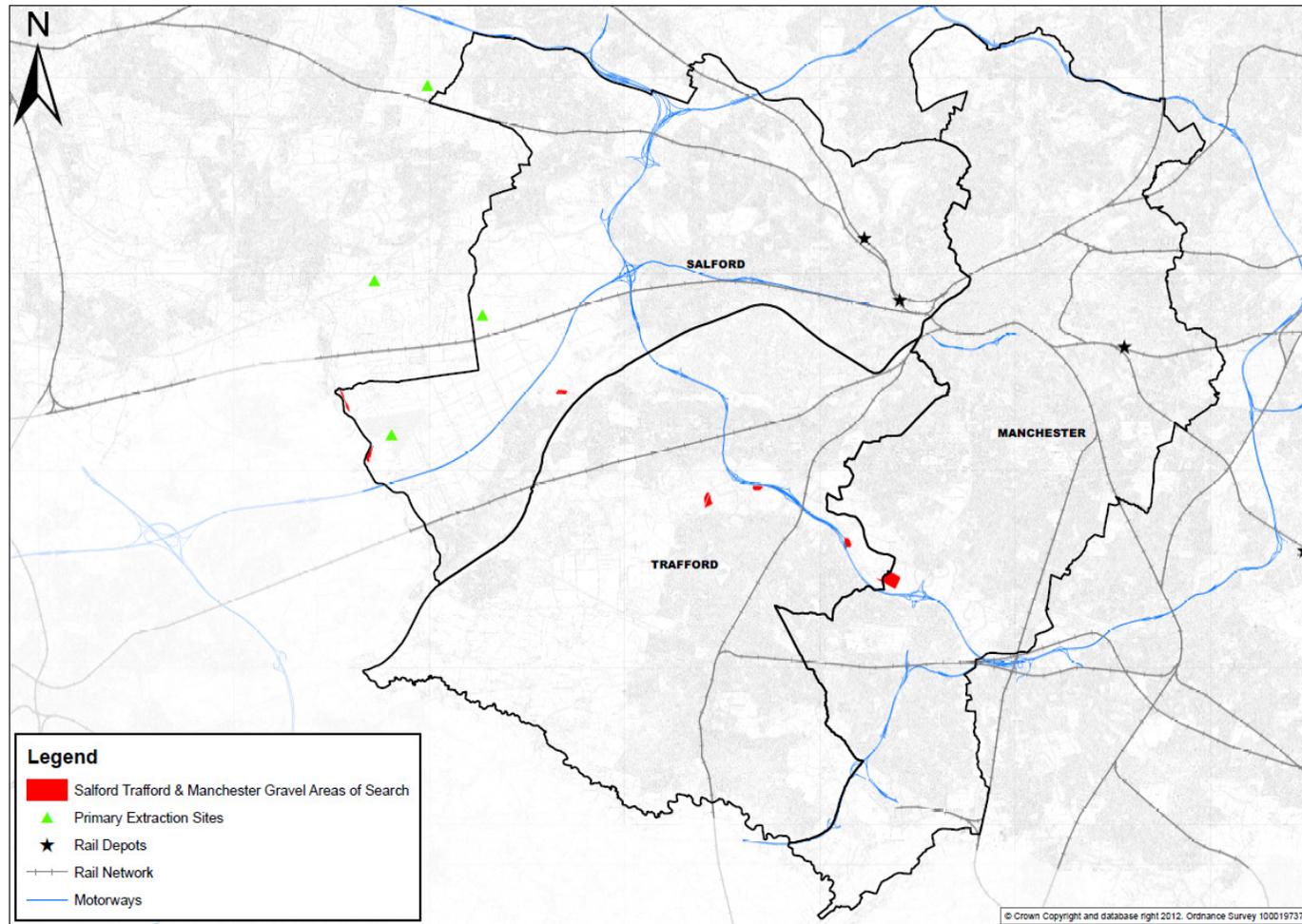
ANNEX B: DETAILED BASELINE INFORMATION

Minerals



Map 5 Mineral Safeguarding Areas

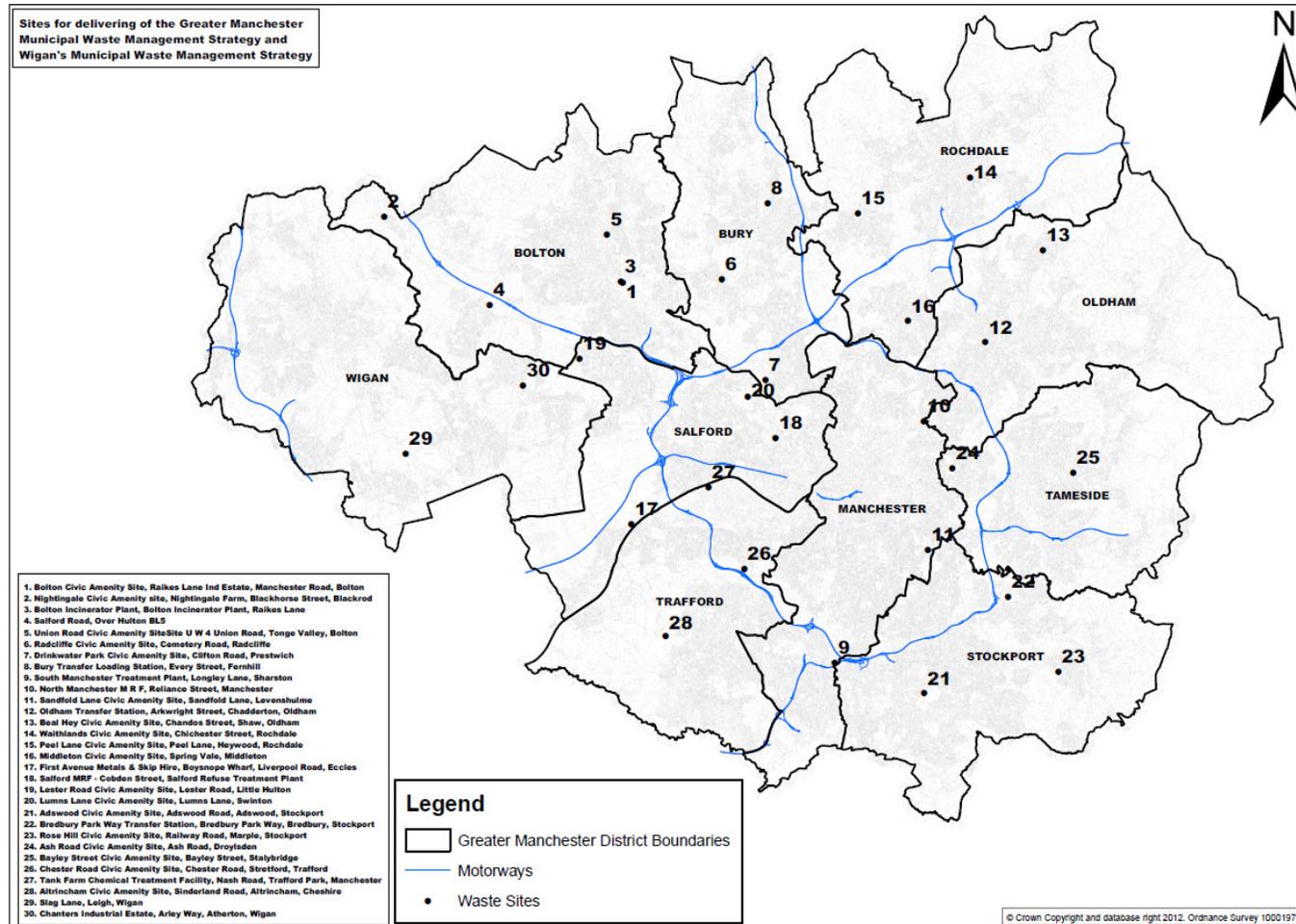
ANNEX B: DETAILED BASELINE INFORMATION



Map 6 Mineral extraction sites, areas of search and rail depots

ANNEX B: DETAILED BASELINE INFORMATION

Waste management



Map 7 Waste management sites

ANNEX B: DETAILED BASELINE INFORMATION

Cultural Heritage

	Manchester		Salford		Trafford		National Comparison / Target
Listed Buildings	Grade I	15	Grade I	6	Grade I	6	3.2% (997) of England's grade I and II listed buildings are "at risk"
	Grade II*	82	Grade II*	13	Grade II*	9	
	Grade II	794	Grade II	211	Grade II	325 (1% at risk)	
	Total	891	Total	230	Total	340	
	7 grade 1 or II* listed buildings at risk of decay in 2012, excluding places of worship		(10 considered to be 'at risk' in 2012)		(1 considered to be at risk in 2012)		
Scheduled Ancient Monuments	6		3		1		Not applicable
Conservation Areas	34		16 (5 considered to be 'at risk' in 2012)		21 (2012) (5 considered to be at risk in 2012)		Not applicable
No. of parks and gardens registered by English Heritage	8 - 0 at risk of decay		2		3 (2006)		Not applicable

Landscape

There are no national landscape designations covering the 3 authorities and, in line with government guidance, there are no local landscape designations (though conservation areas are designated as discussed under cultural heritage).

The national character areas covering the area are Manchester Conurbation, Lancashire Coal Measures, Mersey Valley and Shropshire, Cheshire & Staffordshire Plain.

ANNEX C: STRATEGIC ENVIRONMENTAL ASSESSMENT MATRIX (ILLUSTRATION)

Key of Impact Significance

+	Positive Impact	0	Neutral (No) Impact
-	Negative Impact	~	Unknown Impact

LFRMS Policy or Objective		SEA Objectives												Impact Summary	Comments	Conclusions
		1. Minimise the probability and consequences of flooding	2. Minimise the probability and consequences of climate change	3. Maintain and where possible enhance the quality of water resources, water bodies and their environment	4. Maintain and where possible enhance biodiversity, geodiversity and soils	5. Protect and where possible enhance the landscape and green infrastructure	6. Protect and where possible enhance townscapes and cultural heritage	7. Ensure the efficient use of land	8. Protect and where possible enhance the health and well being of the population	9. Support the sustainable growth of the City Region	10. Minimise economic and social exclusion for all	11. Protect existing and future economic and social infrastructure assets, services and amenities	12. Maintain and where possible enhance the transport network			
1. XX	Impact	+	+	-	0	~	~	~	+	+	~	+	+	+	+	+
	Comment															
2. XX	Impact															
	Comment															
3. XX	Impact															
	Comment															