

Oldham

Local

Plan

**Local Plan Review: Issues and
Options Climate Change
Topic Paper**

July 2021



Oldham
Council

1	INTRODUCTION	2
2	KEY POLICIES, PLANS AND STRATEGIES	3
3	EVIDENCE BASE	26
4	CONSULTATION	41
5	FUTURE EVIDENCE REQUIRED	44
6	KEY ISSUES	45
7	PLAN OBJECTIVES	46
8	INTEGRATED ASSESSMENT	47
9	EVIDENCE SOURCES	49

1 INTRODUCTION

- 1.1** This Climate Change and Flood Risk Topic Paper is one of a series that has been prepared as part of the process of evidence gathering to support the review and preparation of Oldham's Local Plan.
- 1.2** The full range of Topic Papers deal with the following:
- Housing
 - Economy and Employment
 - Our Centres (incorporating retail)
 - Communities (incorporating community facilities, health and well-being, education, open space, sport and recreation provision and infrastructure etc).
 - Open Land (incorporating Green Belt, Other Protected Open Land and Land Reserved for Future Development)
 - Natural Environment (nature conservation, Green Infrastructure and landscape)
 - Built Environment (incorporating design, heritage)
 - Transport
 - Climate Change and Flood Risk
- 1.3** The principal aim of the Topic Paper is to set out current key policies, plans and strategies relating this topic area that will form the basis for the development of the Local Plan. The Topic Papers will present a profile of the borough and highlight key issues and opportunities that the Local Plan should seek to address. Helping to shape and influence the direction and focus of the Local Plan's planning policies, designation and site allocations.
- 1.4** The Topic Papers all have linkages with each other. In particular, the Natural Environment Topic Paper addresses many elements of climate change in addition to the Topic Paper.
- 1.5** It is intended that the Topic Papers will be 'living' documents that can be updated as we progress through the preparation of the Local Plan, carry out further consultation and complete additional evidence.

2 KEY POLICIES, PLANS AND STRATEGIES

National Context

National Planning Policy Framework (July, 2019)

2.1 The National Planning Policy Framework (NPPF) states the planning system, should support a transition to a low carbon future in a changing climate, taking full account of flood risk. It should help to shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience, encourage the reuse of existing resources and support renewable and low carbon energy and associated infrastructure.

Planning for climate change

2.2 NPPF requires plans to take a proactive approach to mitigating and adapting to climate change, taking into account the long term implications for flood risk, water supply, biodiversity and landscapes and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.

2.3 New development should:

- avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and
- help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

2.4 To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
- identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

2.5 Local Planning Authorities (LPAs) should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in Local Plans or other strategic policies that are being taken forward through neighbourhood planning.

Planning and Flood Risk

- 2.6** Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
- 2.7** Strategic policies should be informed by Strategic Flood Risk Assessment (SFRA) and should manage flood risk from all sources. They should consider cumulative impacts on, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards.
- 2.8** All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:
- applying the sequential test and then, if necessary, the exception test as set out below;
 - safeguarding land from development that is required, or likely to be required, for current or future flood management;
 - using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and
 - where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations.
- 2.9** The aim of the sequential test is to steer new development to areas with the lowest risk of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The SFRA will provide the basis for applying this test. The sequential approach should be used in areas known to be at risk now or in the future from any form of flooding.
- 2.10** If it is not possible for development to be located in zones with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in national planning guidance.
- 2.11** The application of the exception test should be informed by a strategic or site-specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. For the exception test to be passed it should be demonstrated that:
- the development would provide wider sustainability benefits to the community that outweigh the flood risk; and
 - the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

2.12 Both elements of the exception test should be satisfied for development to be allocated or permitted.

2.13 Major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:

- take account of advice from the lead local flood authority;
- have appropriate proposed minimum operational standards;
- have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and
- where possible, provide multifunctional benefits.

Planning Practice Guidance

2.14 The Planning Practice Guidance (PPG) includes detailed advice on climate change (March 2019), renewable and low carbon energy (18 June 2015) and flood risk (March 2014). A summary of some of the key points is shown below:

2.15 The guidance highlights that it is important to consider climate change as it can influence the emission of greenhouse gases. LPAs should ensure that protecting the local environment is properly considered alongside the broader issues of protecting the global environment. Planning can also help increase resilience to climate change impact through the location, mix and design of development.

2.16 Addressing climate change is a key principle of NPPF and this will be reflected in whether the Local Plan is 'sound'. The Climate Change Act 2008 and the Planning and Compulsory Purchase Act set out a statutory duty on Local Planning Authorities to include policies in their Local Plan designed to tackle climate change and its impacts. NPPF emphasises that responding to climate change is central to the economic, social and environmental dimensions of sustainable development.

2.17 Section 19 (1A) of the Planning and Compulsory Purchase Act 2004 requires LPAs to include in their Local Plans "policies designed to secure that the development and use of land in the Local Planning Authority's area contribute to the mitigation of, and adaptation to, climate change".

2.18 The Climate Change Act 2008 establishes a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels.

2.19 The guidance provides examples of how the Local Plan might mitigate and adapt to climate change:

2.20 Examples of mitigating climate change by reducing emissions:

- Reducing the need to travel and providing for sustainable transport
- Providing opportunities for renewable and low carbon energy
- Providing opportunities for decentralised energy and heating
- Promoting low carbon design approaches to reduce energy consumption in buildings, such as passive solar design

2.21 Examples of adapting to a changing climate:

- Considering future climate risks when allocating development sites to ensure risks are understood over the development's lifetime
 - Considering the impact of and promoting design responses to flood risk for the lifetime of the development
 - Considering availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality
 - Promoting adaptation approaches in design policies for developments and the public realm
- 2.22** Engaging with relevant stakeholders will identify how the Local Plan can respond to climate change.
- 2.23** LPAs should pay particular attention to integrating adaptation and mitigation approaches and looking for 'win-win' solutions that will support sustainable development. This could be achieved in a variety of ways, for example
- by maximising summer cooling through natural ventilation in buildings and avoiding solar gain;
 - through district heating networks that include tri-generation (combined cooling, heat and power); or
 - through the provision of multi-functional green infrastructure, which can reduce urban heat islands, manage flooding and help species adapt to climate change – as well as contributing to a pleasant environment which encourages people to walk and cycle.
- 2.24** The impact of climate change needs to be taken into account in a realistic way. In doing so, LPAs will want to consider:
- identifying no or low cost responses to climate risks that also deliver other benefits, such as green infrastructure that improves adaptation, biodiversity and amenity;
 - building in flexibility to allow future adaptation if it is needed, such as setting back new development from rivers so that it does not make it harder to improve flood defences in future; and
 - the potential vulnerability of a development to climate change risk over its whole lifetime.
- 2.25** In terms of evidence the guidance outlines that Climate Change risk assessments can help inform the Local Plan and Sustainability Appraisal.
- 2.26** Local risk assessments can be used to identify those climate risks, including those arising from severe weather events, the planning system can address. Risk assessments could consider the implications for the built environment and development, infrastructure, services and biodiversity, and their subsequent implications for vulnerable groups and community cohesion. Identifying those impacts which pose most potential risk or disruption to the provision of local services will enable vulnerability to be assessed and areas suitable for development to be identified and adaptation responses to be put in place.
- 2.27** Other parts of a Local Plan's evidence base will also include information on climate change risks, such as the Strategic Flood Risk Assessment and Water Resource Management Plan and water cycle studies. Infrastructure providers hold information

on the extent of supply and network constraints and their existing plans to reinforce those networks and capacity. Other service providers may also have carried out risk assessments that have implications for planning, such as health and social service providers.

- 2.28** In terms of energy where energy efficiency improvements require planning permission LPAs should ensure any advice to developers is co-ordinated to ensure consistency between energy, design and heritage matters.
- 2.29** NPPF expects LPAs when setting any local requirement for a building's sustainability to do so in a way consistent with the government's zero carbon buildings policy and to adopt nationally described standards. Local standards will need to be based on robust evidence, taking into account the Government's Housing Standards Review.
- 2.30** The guidance gives advice on passive solar design.
- 2.31** The guidance gives detailed advice on flood risk. The key steps are to Assess - Avoid - Manage and Mitigate Flood risk. These steps are designed to ensure that if there are better sites in terms of flood risk, or a proposed development cannot be made safe, it should not be permitted.

Renewable and low carbon energy

- 2.32** Planning for renewable and low carbon energy will help reduce greenhouse gases and slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable.
- 2.33** LPAs should first consider what the local potential is for renewable and low carbon energy generation and consider:
- the range of technologies that could be accommodated and the policies needed to encourage their development in the right places;
 - different technologies have different impacts and impacts can vary by place;
 - the UK has legal commitments to cut greenhouse gases and meet increased energy demand from renewable sources. Whilst local authorities should design their policies to maximise renewable and low carbon energy development, there is no target which the Local Plan has to deliver.
- 2.34** LPAs may wish to establish policies which give positive weight to renewable and low carbon energy initiatives which have clear evidence of local community involvement and leadership.
- 2.35** There are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, LPAs will need to ensure they take into account the requirements of the technology and, critically, the potential impacts on the local environment, including from cumulative impacts. Identifying areas suitable for renewable energy in plans gives greater certainty as to where such development will be permitted. Wind turbines should not be permitted unless it is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan. Maps showing wind speeds will not be sufficient.

2.36 Policies based on clear criteria can be useful when they are expressed positively (i.e. that proposals will be accepted where the impact is or can be made acceptable).

2.37 The guidance sets out detail on the issues that need to be considered for each type of technology.

The Future Homes Standard (Ministry of Housing, Communities and Local Government, October 2019)

2.38 The 2019 Spring Statement includes a commitment that, by 2025, a Future Homes Standard will be introduced for new build homes to be future-proofed with low carbon heating and world leading levels of energy efficiency. Energy efficiency requirements for new homes are set by Part L and Part 6 of the Building Regulations.

2.39 The UK has set in law a target to bring all its greenhouse gas emissions to net zero by 2050 – one of the most ambitious targets in the world. Homes – both new and existing – account for 20% of emissions. Despite progress reducing emissions from homes, we need to go much further. New homes being built now and in the next 5-10 years will still exist in 2050 and therefore we must ensure that the energy efficiency standards we set for them put us on track to meet the 2050 target.

2.40 The consultation sets out two options to uplift energy efficiency standards and requirements:

- Option 1: 20% reduction in carbon emissions compared to the current standard for an average home. This could be delivered by very high fabric standards (typically with triple glazing and minimal heat loss from walls, ceilings and roofs).
- Option 2: 31% reduction in carbon emissions compared to the current standard. This could be delivered based on the installation of carbon-saving technology such as photovoltaic (solar) panels and better fabric standards, though not as high as in option 1 (typically double not triple glazing).

2.41 The consultation sets out that option 2 is MHCLG's preferred option.

Modern Methods of Construction (Speech by the Minister of State for Housing at Legal and General's modular housing factory, 24 January 2020)

2.42 In a speech given by the Minister of State for Housing changing modern methods of construction (MMC) was recognised not only as a way to speed up housing construction but also in enabling the opportunity to help meet climate change targets of net zero by 2050. The precision in MMC means it is easier to meet A rated energy efficiency standards. MMC also means less waste and pollution on the construction process itself.

Modern Methods of Construction (Housing Communities and Local Government Committee, 3 July 2019)

2.43 The report sets out that for decades this country has not built enough homes, which has led to rising housing costs. The Government has set an ambitious target to build 300,000 homes annually by the mid-2020s but constraints such as the shortage of skilled workers mean it cannot meet that target using traditional building methods alone. A significant proportion of homes must be built using modern methods of construction (MMC) if we are to meet the target to deliver 300,000 homes annually.

2.44 This country builds most of its homes using traditional methods, but it is widely acknowledged we are not building enough homes to meet demand and reports of poor quality workmanship are commonplace. Our predecessor Committee said that MMC could make an important contribution towards addressing the industry's problems and speed up the delivery of homes. Advocates of using MMC cite several benefits to using these methods in comparison with traditional construction techniques. The most commonly cited benefits of using MMC include:

- Quicker and more predictable delivery – a possible 20–60% reduction in the construction programme time. Many submissions highlighted the benefits of working indoors, avoiding weather disruption.
- Better quality of delivery – Great Places Housing Group found greater accuracy and “Zero defects on completion with reduced incidents of defects occurring in use. This results in reduced maintenance workload and consequential reduced costs for the landlord.”
- Reduction in costs – a possible 20–40% reduction in construction costs and the potential for improved whole life cost.
- Fewer people on site – potential for a reduction of 70%+ in onsite labour.
- Improved health and safety for workers – A larger proportion of the workforce is factory based, working at safe heights in controlled environments.
- More diverse workforce – currently women make up 12% of the construction workforce. An increasing proportion of factory based work and standardised hours could encourage different people into the workforce.
- Creation of local employment – factories provide stable employment and can be situated in areas with higher levels of unemployment to generate employment opportunities.
- More efficient use of materials - half the total waste produced in UK comes from construction. 27 Factories can be optimised to minimise material waste to below 1% of the total, in comparison with traditional construction which typically vary between 18% and 22%.
- Overall reduction in energy consumption – Keepmoat Homes told us they can use 20–30% less energy to heat MMC homes in comparison with traditionally built new homes.
- Fewer deliveries to the site – fewer lorries travelling backwards and forwards to the site to deliver materials.
- Lighter weight of construction and shallow foundations—modular builds can be around 30% lighter than conventional masonry construction and can withstand shallower foundations which means they can be erected in areas where underground tunnels might prevent the construction of traditional buildings.
- More choice for consumers – greater possibility for customisation with some techniques enabling customers to choose finishes from a specification menu, including facing material, floor coverings, internal configurations and extra bedrooms.
- Dynamic database tracking—Using Building Information Modelling (BIM) software a database tracks the unit from its original design through to occupation. This information can be shared with stakeholders and therefore has the potential to improve stakeholder confidence in the system.

A Green Future: Our 25 Year Environment Plan to Improve the Environment (Defra, 2018)

- 2.45** The Plan aims to deliver cleaner air and water, protect threatened species and provide richer wildlife habitats. The Plan also sets out how Government will tackle the effects of climate change, considered to perhaps be the most serious long-term risk to the environment given higher land and sea temperatures, rising sea levels and extreme weather patterns. The Plan aims to show that Government will work with nature to protect communities from flooding, slowing rivers and creating and sustaining more wetlands to reduce flood risk and offer valuable habitats.
- 2.46** For flood mitigation, Government will focus on using more natural flood management solutions; increasing the uptake of Sustainable Drainage Schemes (SUDS), especially in new development; and improving the resilience of properties at risk of flooding and the time it takes them to recover should flooding occur.

Environment Bill, DEFRA

- 2.47** The Environment Bill was reintroduced to parliament on 30 January 2020. The Bill sets out how we plan to protect and improve the natural environment in the UK.
- 2.48** The Bill builds on the 25 Year Environment Plan to protect the environment. The Bill legally obliges policy makers to have due regard to the environmental principles. The principles are: 1) environmental protection should be integrated into policy-making principle; 2) the preventative action to avert environmental damage principle; 3) the precautionary principle; 4) environmental damage should as a priority be rectified at source principle and 5) the polluter pays principle.
- 2.49** A new statutory cycle of target setting, monitoring, planning and reporting will help deliver significant, long term environmental improvement and ensure government can be held to account for its actions. The Bill will set new legally binding targets in four priority areas of the natural environment: air quality; waste and resource efficiency; water and nature and will be overseen by a new public body - the Office for Environmental Protection.

The National adaptation programme – Making the country resilient to a changing climate (Defra, 2018)

2.50 The programme vision's includes *“The natural environment with diverse and healthy ecosystems, is resilient to climate change, able to accommodate change, and valued for the adaptation services it provides.”*

2.51 The Natural Environment Topic Paper also covers some of the objectives. Objectives include to:

1. Reform our approach to water abstraction;
2. Improve water quality, reverse the deterioration of groundwater and reduce emissions of harmful substances;
3. Manage floods and coastal erosion to save lives, better protect communities and support economic growth;
4. Enable households and businesses to increase their resilience to flooding;
5. Improved management of soils using natural capital thinking; and
6. Improved soil health.

2.52 With regards to infrastructure the vision is “An infrastructure network that is resilient to today’s natural hazards and prepared for the future changing climate”.

2.53 It includes the objectives to:

1. further cross sector understanding of energy interdependencies as part of resilience planning and risk management strategies; and
2. Increase the resilience of energy infrastructure from all forms of flooding.

2.54 On local government the vision is “Local Government plays a central role in leading and supporting local places to become more resilient to a range of future risks and to be prepared for the opportunities from a changing climate”.

2.55 Objectives include:

1. Planning for and implementing climate change adaptation at local government level, and addressing relevant priority climate change risks affecting the sector, with government and local government working together. This will embed into activities undertaken by local authorities in the course of fully discharging their duties so that they can support and protect local communities; and
2. To ensure that climate change adaptation is implemented most effectively at city level, including through partnership working.

Clean Growth Strategy (HM Government, 2017)

2.56 The Clean Growth Strategy has identified areas where we need to see the greatest progress to meet the 5th carbon budget set in July 2016, which requires a 57% reduction in emissions over 2028-32 across the UK compared to a 1990 baseline. This is working towards the Climate Change Act requirement to reduce UK emissions by at least 80 % by 2050. The strategy sets out policies and proposals that aim to accelerate the pace of clean growth i.e. deliver increased economic growth and decreased emissions.

2.57 Some of the relevant key policies and proposals include:

- Consulting on strengthening energy performance standards for new and existing homes under Building Regulations, including future proofing new homes for low carbon heating systems.
- Building and extending heat networks across the country, underpinned with public funding.
- Phasing out the installation of high carbon fossil fuel heating in new and existing homes currently off the gas grid during the 2020s, starting with new homes.
- Investing an additional £80 million, alongside £15 million from Highways England, to support charging infrastructure deployment for ultra-low emissions vehicles.
- Investing £1.2 billion to make cycling and walking the natural choice for shorter journeys.
- Supporting peatland through a £10 million capital grant scheme for peat restoration.
- Planting up to 130,000 hectares of new woodland and implement plans for farmers to plant more trees across England.
- Developing new ambitious plans for the sustainable management of our natural environment including capturing more carbon by our plants and soil.

Community Energy Strategy (Department of Energy and Climate Change, 2015)

- 2.58** The energy background paper to the Greater Manchester Spatial Framework (now Places for Everyone) explains that the national 'Community Energy Strategy: People Powering Change' established the potential benefits of community energy and a vision of a flexible, devolved, competitive and innovative energy system that serves local people. It highlighted that local communities can make an important contribution to maintaining energy security, tackling climate change and keeping costs down for consumers.
- 2.59** It established the Government's support for a spectrum of community models to energy generation, demand reduction, demand management and purchasing. This included wholly community-led and owned, and at other times, partnership working with the private, public and voluntary sectors supporting transition to a low carbon energy system.
- 2.60** In March 2016 DECC published a Community Heat Toolkit to help communities and smaller local authorities identify and develop community heat schemes. This found community groups and local authorities at all scales are looking at how their heat is generated and used and coming up with innovative projects to help address fuel poverty, reduce energy bills and increase sustainability. It identifies opportunity for community heat in the UK's future energy system, guidance and information to support community heat network projects and the need for heat networks to be considered as part of wider plans for the community and associated socio-economic impacts.

Regional Context

Places for Everyone

- 2.61** Places for Everyone: A Joint Development Plan Document of Nine Greater Manchester Districts is being jointly prepared, following Stockport's decision to withdraw in late 2020. The nine local Greater Manchester districts agreed that to address strategic matters such as housing need and economic growth as well as issues such as flood risk and strategic infrastructure, it would be best to work on a joint development plan

- Places for Everyone. Once Places for Everyone is adopted, all nine Local Plans will be required to be in general conformity with it. As the proposed Places for Everyone evolves, strategic policies can be reflected in draft Local Plans.

2.62 In relation to Climate Change, the key aspects Places for Everyone will cover which affect Oldham are:

- Promoting carbon neutrality; and
- Promoting the role of green space in climate resilience and reducing flood risk.

2.63 For the purposes of this topic paper information on draft policies is as proposed in the Greater Manchester Spatial Framework (GMSF) Publication Plan Draft for Approval October 2020.

Policy GM-S 1 'Sustainable Development' states that development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.

Policy GM-S 2 'Carbon and Energy' seeks to deliver a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions. Measures to achieve this include:

1. Promoting the retrofitting of buildings with measures to improve energy efficiency and generate renewable and low carbon energy, heating and cooling;
2. Taking a positive approach to renewable and low carbon energy schemes;
3. Keeping fossil fuels in the ground;
4. Planning for a balanced and smart electricity grid by identifying geographical locations which could support energy assets;
5. Increasing the range of nature based solutions including carbon sequestration through the restoration of peat-based habitats, woodland management, tree-planting and natural flood management techniques;
6. Development of Local Energy Area plans to develop cost effective pathways to achieve carbon targets; and
7. An expectation that new development will:
 - Be zero net carbon from 2028 by following the energy hierarchy...with an interim requirement that all new dwellings should seek a 19% carbon reduction against Part L of the 2013 Building Regulations.
 - Incorporate adequate electric vehicle charging points to future proof for the likely long-term demand;
 - Where practicable, prioritise connection to a renewable/ heating / cooling network;
 - Achieve energy demand reductions for residential development in terms of space heat demand; hot water energy demand and the delivery of on-site renewable energy generation.

For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced.

- For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the 'Ene 01 – reduction of energy use and carbon emissions' category rising to 'BREEAM outstanding' equivalent for ENE 01 from 2028.
- Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize reductions in carbon emissions in line with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible.

District Local Plans may set out specific carbon emission reduction targets, particularly if carbon neutral targets have been set sooner than 2038, or promote other measures through which energy efficiency of buildings and renewable energy generation can be achieved.

Policy GM-S 3 'Heat and Energy Networks' sets out that delivery of renewable and low carbon energy schemes will be supported with particular emphasis on the use of decentralised energy networks in areas identified as "Heat and Energy Network Opportunity Areas". Within the identified "Heat and Energy Network Opportunity Areas", there will be: a requirement that new residential developments over 10 dwellings or other developments over 1,000 m2 floorspace should evaluate the viability of connecting to an existing or planned heat/energy network (where such a network has been identified within the Heat Network Opportunity Areas); and/or installing a site-wide or communal heat/energy network solution.

Policy GM-S 4 'Resilience' states the development of Greater Manchester will be managed so as to increase considerably the capacity of its citizens, communities, businesses and infrastructure to survive, adapt and grow in the face of physical, social, economic and environmental challenges. Key measures will include:

1. Ensuring that developments make appropriate provision for response and evacuation in the case of an emergency or disaster;
2. Supporting the retrofitting of existing buildings, infrastructure and places to enhance their resilience;
3. Locating critical infrastructure and vulnerable uses away from locations at a high risk of acute shocks;
4. Providing adaptable buildings and places that can easily respond to changing needs, future climate impacts and new technologies;
5. Designing indoor and outdoor environments to provide a reduction and respite from more extreme temperatures and winds associated with climate change and greater urbanisation;
6. Increasing the size, spread, quality and interconnectedness of the green infrastructure network, enabling the city region, its citizens and wildlife to adapt to changing conditions; and
7. Taking an integrated catchment-based approach to managing flood risk.

Policy GM-S 5 'Flood Risk and the Water Environment' states an integrated catchment based approach will be taken to protect the quantity and quality of water bodies and managing flood risk, by:

1. Returning rivers to a more natural state, where practicable, in line with the North West River Basin Management Plan;
2. Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;

3. Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
4. Expecting developments to manage surface water runoff through sustainable drainage systems and as close to source as possible (unless demonstrably inappropriate) so as to not exceed greenfield run-off rates or alternative rates specified in district Local Plans, such as those identified for areas with critical drainage issues;
5. Ensuring that sustainable drainage systems:
 - i. Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;
 - ii. Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
 - iii. Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and
 - iv. Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.
6. Securing the remediation of contaminated land and the careful design of developments to minimise the potential for urban diffuse pollution to affect the water environment;
7. Securing further investment in wastewater treatment to reduce the frequency of intermittent discharges of storm sewage; and
8. Conserving water and maximising water efficiency in new development.

Policy GM-S 6 'Clean Air' states measures will be taken to support improvements in air quality.

Policy GM-G 2 'Green Infrastructure Network' states the protection, management and enhancement of green infrastructure will contribute to the development of a Nature Recovery Network for Greater Manchester. South Pennine Moors and Moston Brook is recognised as opportunity areas.

Policy GM-G 3 'River Valleys and Waterways' states Greater Manchester will seek to deliver the priorities including:

1. Reduce flood risk, through Natural Flood Management (NFM), including careful land management and a catchment-wide approach;
2. Improve water quality, including through land decontamination and the management of diffuse pollution from industry and agriculture;
3. Return rivers to a more natural state where practicable, including through deculverting and the re-naturalisation of river banks and flood plains.

Policy GM-G 5 'Uplands' seeks to extend the area of active blanket bog, through the protection of existing sites and the positive restoration of degraded areas to contribute to important functions such as flood risk management and carbon sequestration; and to increase the role of the area in water storage, flood risk management and water quality improvements, as a catchment-based approach.

Policy GM-G 7 'Trees and Woodland' seeks to encourage the positive management of woodland to bring it into a more productive state, improve habitat diversity, and more effectively contribute to important green infrastructure functions such as flood risk management, urban cooling and carbon storage / sequestration.

Policy GM-E 1 'Sustainable Places' states Greater Manchester will become one of the most liveable city regions in the world through places having attributes such as being resilient, durable, resource efficient; supported by critical infrastructure such as energy, water and drainage and green spaces.

The Greater Manchester Strategy (GMCA, 2018)

2.64 The vision is to make Greater Manchester one of the best places in the world to grow up, get on and grow old...a place at the forefront on climate change with clean air and a flourishing natural environment.

2.65 Priority 7: A green city-region and a high quality culture and leisure offer for all seeks to reduce carbon emissions and air pollution, increase resilience, more sustainable consumption and production, and an outstanding natural environment.

2.66 The ambitions of the strategy are for Greater Manchester to be a carbon neutral city-region.

Greater Manchester's Springboard to a Green City Region (GMCA, 2018)

2.67 The vision is a carbon neutral, climate resilient city-region with a thriving natural environment and circular, zero-waste economy where our infrastructure will be smart and fit for the future. We will have an integrated, clean and affordable public transport system, resource efficient buildings, greater local community renewable energy, cleaner air, water and greenspace for all.

Greater Manchester Natural Capital Investment Plan (GMCA, January 2019)

2.68 The plan is designed to deliver the vision of:

"A Greater Manchester where investments in natural capital enhance the long-term social, environmental, and economic health and wellbeing of its people and businesses."

2.69 The vision defines 'Investment in natural capital' as "Funding that is intended to provide a return to the investor while also resulting in a positive impact on natural capital."

2.70 The plan has three key components:

1. A pipeline of potential project types which need investment;
2. Finance models to facilitate private sector investment and the role of public sector; and
3. Recommendations to put the plan into practice over the next 5 years.

Greater Manchester Five-Year Environment Plan (GMCA, 2019)

2.71 The plan sets a long term environmental vision to be carbon neutral by 2038. The aims for the environment include:

1. Aim for our mitigation of climate change - to be carbon neutral by 2038 and meet carbon budgets that comply with international commitments;
2. Aim for sustainable consumption and production - recycling 65% of municipal waste by 2035 and reducing the amount of waste we produce;
3. Aim for our natural environment - to protect, maintain and enhance our natural environment for all our benefit, taking steps to implement and achieve environmental net gain; and
4. Aim for resilience and adaptation to climate change - To be prepared for the impacts of climate change and already be adapting to the future changes from any increase in climate shocks and stresses.

2.72 The actions that need to be taken over the next five years include:

- Increasing local renewable electricity generation;
- Increasing the diversity and flexibility of our supply;
- Decarbonising how we heat our buildings;
- Reducing the heat demand from existing homes;
- Reducing the heat demand in new buildings;
- Reducing the heat demand from existing commercial and public buildings;
- Embedding climate change resilience and adaptation in all policies;
- Implementing a prioritised programme of nature-based climate adaptation action; and
- Increasing the resilience of and investment in our critical infrastructure.

2.73 The plan states that local policy should:

- Require 20% renewable energy generation at new development;
- Identify "Heat and Energy Opportunity Areas" and require an assessment of viability of connecting new development to a heat network within these areas;
- Require zero carbon development by 2028;
- Develop a resilience strategy;
- Undertake a Strategic Flood Risk Assessment; and
- Implement proposals to manage flood risk and the water environment in new development.

Greater Manchester Local Industrial Strategy (GMCA, GM Local Enterprise Partnership and HM Government, June 2019)

2.74 The Local Industrial Strategy is designed to deliver an economy fit for the future, with prosperous communities across the city region and radically increased productivity and earning power. The strategy will inform how we achieve carbon neutral living. Greater Manchester will launch the first city-region mission to achieve this, aiming to:

- deliver environmental improvements that directly enhance well-being, health, resilience, biodiversity and quality of life, including by enhancing the natural capital of the city-region;
- design and trial innovative technology and financial mechanisms to support delivery of energy efficient homes, buildings and low carbon transport, helping to reach the point at which all new homes and commercial/industrial buildings are net zero carbon;

- tackle poor air quality - the largest environmental risk to the public's health – through a co-ordinated Clean Air Plan developed by Greater Manchester's local authorities;
- accelerate new models of local renewable energy generation, storage and efficiency within the city-region, adopting a 'whole system approach', and testing the creation of a local energy market; and
- support Greater Manchester enterprises to accelerate the implementation of energy and material efficiency measures in the design and production of products and services through the Growth Hub and local partners' activity.

North West SuDS Pro-Forma and guidance (North West Regional Flood & Coastal Committee and United Utilities, 2020)

2.75 The pro-forma is a requirement for any planning application for major development, confirming how surface water from a development will be managed sustainably under current and future conditions. Sustainable drainage system should be designed in accordance with CIRIA The SuDS Manual C753 and any necessary adoption standards.

North West River Basin Management Plan (Environment Agency, 2016)

2.76 The plan sets out a programme of measures by 2021, including for improved status of water bodies. It aims to tackle issues including physical modifications and pollution.

2.77 The plan identifies measures to manage the above issues. These include to:

- Consider the impact on hydromorphology when preparing spatial plans and local flood risk management plans;
- Consider the impact on water quality in the preparation of spatial plans;
- Make sure that new developments address potential pollution problems by using sustainable drainage systems to manage surface water;
- Consider urban diffuse pollution pressures when developing spatial plans. These should incorporate sustainable drainage schemes and water efficiency measures where practical and affordable;
- Incorporate green and blue infrastructure into regeneration schemes where possible; and
- Consider the impact of pollution when preparing spatial plans.

Water Resources Management Plan (United Utilities, 2019)

2.78 The Management Plan sets out a sustainable plan for water supplies in the North West.

2.79 Oldham falls within the 'Strategic Resource Zone' where we will have a healthy surplus of water once leakage reductions and water deficiency activities have been implemented. This also ensures resilience, should demand be higher than expected or the climate more drier than predicted.

Final Drought Plan (United Utilities, 2018)

2.80 The drought plan outlines United Utilities' approach in managing water supplies to make sure there's always enough water available for nearly seven million customers and 200,000 businesses across the North West, even during drought conditions.

2.81 Greater Manchester falls within the Integrated Resource Zone. The plan explains the drought triggers applicable to this zone.

Irwell Catchment Flood Management Plan (Environment Agency, 2009)

2.82 The Management Plan gives an overview of flood risk in the Irwell catchment and sets out a plan for sustainable flood risk management.

2.83 The River Irwell catchment drains the highly urbanised area to the north of Manchester. The towns with the highest populations include Oldham. The main rivers are the Irwell, Roch, Croal, Medlock and Irk, all of which flow (via the Irwell) into the Manchester Ship Canal.

2.84 The sources of the main rivers are found in the Pennines, where land rises to 450 metres above sea level in the north and east of the catchment. A large proportion of the catchment's geology and soils are relatively impermeable, meaning that water is more likely to remain on the surface than drain through to groundwater. The rapid expansion of industrial development in the late 19th century and its subsequent decline in the late 20th century has left many of the watercourses in the Irwell catchment in a heavily modified condition, with many kilometres of walled banks and culverts. The highly urbanised nature of the catchment means it is one of the least naturally wooded areas in the North West, although there are numerous nature conservation sites.

2.85 The sub-areas and actions relevant to Oldham are:

Sub-area 4 Middleton, Radcliffe and Milnrow

- Develop a Flood Risk Management Strategy for the River Beal to assess viable flood risk reduction options;
- Continue inspecting the condition of existing defences;
- Identify and monitor culvert condition; and
- Continue to provide advice on development issues so as to not increase flood risk.

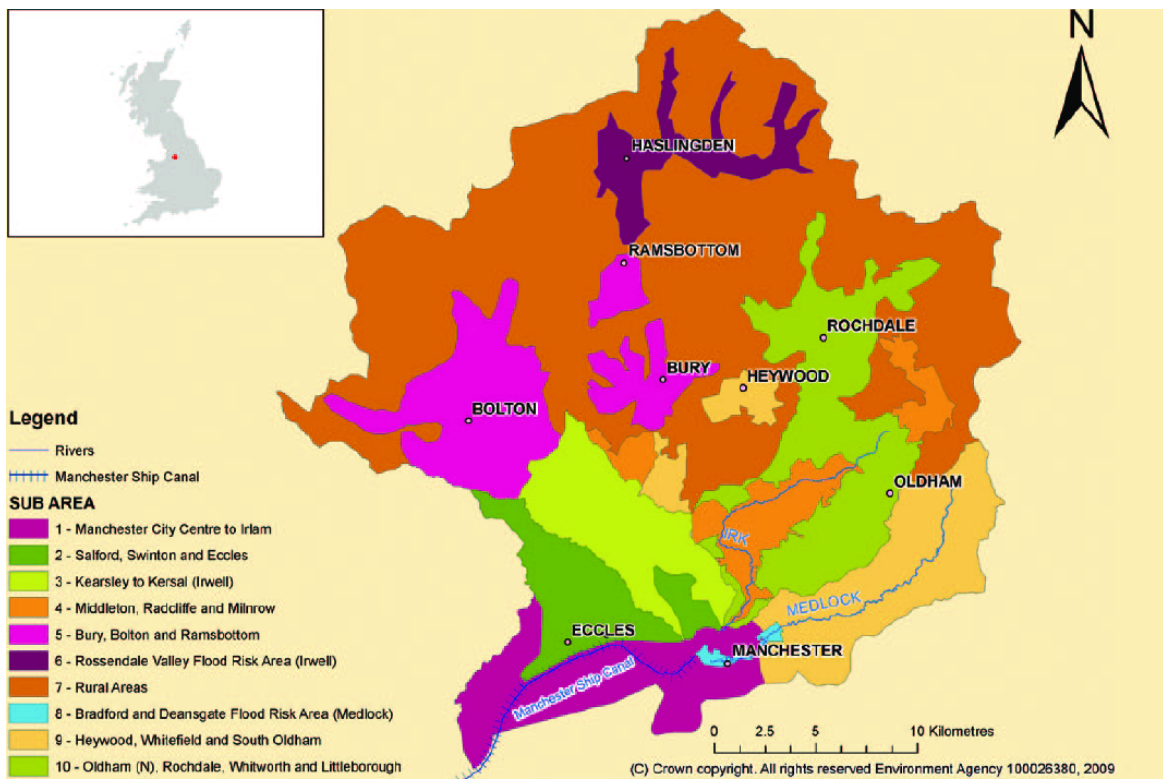
Sub-area 9 - Heywood, Whitefield and South Oldham

- Develop hydraulic models for the Medlock to increase understanding of flood risk;
- Develop a flood risk management strategy for the Medlock;
- Provide advice on development issues so as not to increase flood risk; and
- Identify and monitor culvert condition.

Sub-area 10 - North Oldham, Rochdale, Whitworth and Littleborough

- Continue to provide advice on development issues so as to not increase flood risk; and
- Continue to investigate causes of sewer flooding to look at culvert conditions.

Sub-area 10 - North Oldham, Rochdale, Whitworth and Littleborough



Upper Mersey Catchment Flood Management Plan (Environment Agency, 2009)

- 2.86** The plan gives an overview of flood risk in the Upper Mersey catchment and proposes sustainable flood risk management for the next 50 to 100 years.
- 2.87** The Upper Mersey catchment is made up of the Rivers Mersey, Tame, Goyt, Bollin and Sinderland Brook. Reservoirs in the Tame sub-catchment has an influence on flows within the catchment, particularly in the upper reaches.
- 2.88** The sub areas and actions relevant to Oldham are:

Sub-area 1- Peak District

- Explore means of achieving land management change to reduce run-off from the upper catchment; and
- Assess the potential for making flood storage or expanding existing flood storage to reduce flood risk downstream and increase biodiversity and water sports recreation.

Sub-area 3 - Tame

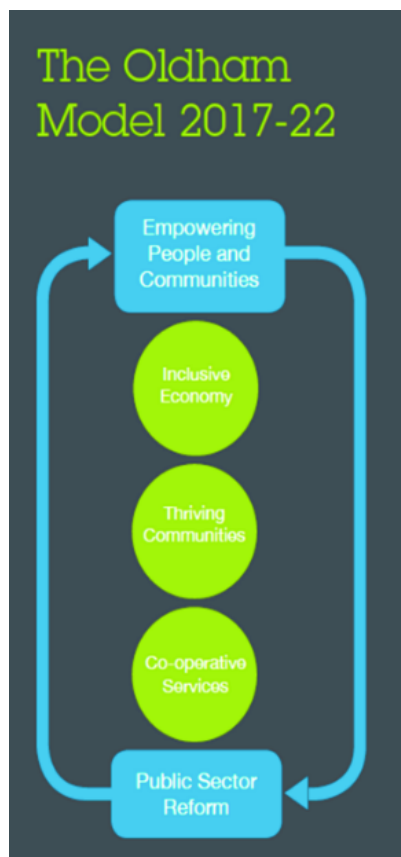
- Identify the maintenance / capital works associated with flood risk management that will be required over the future 100 year horizon; and
- Put in place policies in the Local Plan which seek to remove critical infrastructure from Flood Zones 3 and 2 over time. Seeking to relocate this infrastructure at the end of its operational life would improve the area's ability to respond to flood incidents.

Local Context

The Oldham Plan 2017-2022

2.89 The Oldham ambition is to be a productive and cooperative place with healthy, aspirational and sustainable communities.

The Oldham Plan 2017-22



2.90 The delivery model is based around three shifts to deliver this ambition:

1. Inclusive Economy
2. Co-operative Services
3. Thriving Communities

2.91 Under the Thriving Communities the vision is for people and communities to have the power to be healthy, happy and able to make positive choices. Tackling climate change has a direct impact on people's quality of life through ensuring that cooling is provided, protection from flood risk, energy security, addressing fuel poverty through lower energy costs and cleaner air. Supporting community energy schemes also supports cooperative services.

The Corporate Plan

2.92 Oldham's current Corporate Plan expired in December 2020. Work to refresh Oldham's Corporate Plan was due to be completed by summer 2020, however, the impact of the Covid-19 pandemic meant that this was no longer viable. Instead, we are in the process of developing our Covid-19 Recovery Strategy which will act as an interim Corporate Plan until at least 2022.

Covid-19 Recovery Strategy (Oldham Council)

2.93 As a Co-operative council, Oldham is committed to tackling the impact of COVID-19, protecting our most vulnerable residents and communities. The steps we are taking to tackle the pandemic and the subsequent recovery planning, aim to support people, especially those groups who are often most impacted.

2.94 Building on the learning so far and the anticipated events to come, we are developing a comprehensive Recovery Strategy, which will help shape our approach and vision for Oldham over the next eighteen months. We do this whilst we continue to respond to an ongoing critical incident where we are focused each day on saving the lives of Oldham's residents.

2.95 Our objectives and approach to our Recovery Strategy are rooted in the Oldham Model, ensuring as we adapt to a changing world that we build Thriving Communities, an Inclusive Economy and work Co-operatively with each other.

2.96 Objectives include to stimulate a green recovery that accelerates our ambitions around reducing the boroughs carbon footprint and protecting our greenspace for residents to enjoy.

Creating a Better Place (Oldham Council, January 2020)

2.97 Creating a Better Place focuses on building more homes for our residents, creating new jobs through town centre regeneration, and ensuring Oldham is a great place to visit with lots of family friendly and accessible places to go.

2.98 This approach has the potential to deliver around 2,500 new homes in the town centre designed for a range of different budgets and needs, 1,000 new jobs and 100 new opportunities for apprenticeships, and is in alignment with council priorities to be the greenest borough.

2.99 The council as part of this work will review land and property assets to ensure the council delivers against ambitions for energy efficiency; and delivers against ambitions for public buildings to be carbon neutral by 2025.

Oldham Green New Deal Strategy 2020- 2025 (Oldham Council, 2020)

2.100 In July 2019 the council announced a climate emergency and committed to becoming carbon neutral as an organisation by 2025, and to becoming the UK's first "Green New Deal Council", setting a target of 2030 for carbon neutrality for the borough as a whole. In recognising the huge opportunity in tackling the climate emergency the Green New Deal Strategy sets in place a framework to achieve the above targets whilst working with residents and partners to make Oldham an even greener, smarter, more enterprising place.

2.101 The vision is to "Make Oldham a greener, smarter, more enterprising place".

2.102 The objectives include:

- Make Oldham a leading local authority area for environmental quality and play a leading role in meeting the Greater Manchester Mayor's Green City Region objectives.
- Deliver a sustainable economy, tackling fuel poverty and generating training and employment opportunities in the growing green business sector.
- Maintain a high quality local environment which delivers health and well being for residents, including food and recreation, reducing costs for public services.
- Generate inbound tourism for the borough by building on Oldham's reputation for being a green, attractive and forward thinking sustainable borough.
- Keep Oldham at the forefront of development and deployment of cutting edge environmental technologies, and ensure that the benefits are kept locally.
- Future-proof the regeneration of the borough by establishing Oldham as an exemplar Green City on energy, carbon, water and green infrastructure.

2.103 The strategic aim of the Strategy is to meet our environmental targets whilst maximising the benefit of this action to develop Oldham's green economy. The three pillars of the strategy are:

- Green Economy, including work, skills and business engagement;
- Low Carbon (physical infrastructure); and
- Northern Roots (the 160-acre eco-park at Snipe Clough and its attendant brand and initiatives, and the state of the art zero-carbon Eco-Centre at Alexandra Park).

2.104 The Low Carbon theme of this strategy focuses on the generation, distribution and use of energy in the council and wider public sector, businesses, homes and community buildings across the borough, as well as transport.

2.105 Through a Local Energy Market Oldham can help to put energy generation and use back in the hands of citizens, creating more self-reliant and empowered communities in charge of their own resources.

2.106 The council will seek to enable delivery of these cutting-edge technologies in Oldham for the benefit of residents, businesses and to ensure that Oldham is seen as a home and destination for business and education opportunities which realise the value of these new technologies, and to continue to secure associated external funding for projects in Oldham.

2.107 As well as the importance of tackling energy use in achieving carbon neutrality, the financial impact of high energy costs is highlighted through the following:

- the council spends around £5 million annually on energy.
- the borough spends around £500 million on energy.
- fuel poverty in Oldham is currently running at around 13% of households – over 12,000 homes, despite 6,000 people being brought out of fuel poverty by Warm Homes Oldham.

2.108 Making a substantial impact on these costs requires radical solutions. This Strategy proposes the development of a Local Energy Market, encompassing and catalysing several key components and outcomes:

- building renewable energy generation, including public and community owned schemes
- developing low carbon housing, including enabling the transition to electrical heating systems
- supporting the transition to electric transport
- enabling the redevelopment of Oldham Town Centre as a zero-carbon regeneration scheme
- the creation of a council-led Oldham Virtual Energy Company to accelerate the finance, installation and operation of renewable energy and Nature Based Solutions
- tackling fuel poverty with innovative approaches such as special tariffs for residents on pre-payment meters, and generating funds for energy efficiency retrofit measures in fuel poor homes.

Local Flood Risk Management Strategy for Oldham (Oldham Council, 2014)

2.109 The strategy is an important new tool to help understand and manage flood risk within the borough. It principally aims to tackle 'local flood risk', which includes flooding from surface water, groundwater, ordinary watercourses, canals and reservoirs. The strategy aims to address this gap in knowledge and direct and manage the way forward.

2.110 The objectives of the strategy include:

- Build and maintain partnerships with Risk Management Authorities and stakeholders.
- Communicating risk, warning and preparedness to all stakeholders and encourage self-help.
- Review and update existing warning systems and Emergency Management Plans.
- Improve understanding of flood risk, flooding mechanisms and flow paths to inform development of solutions using all available 'tools'.
- Establish guidelines for determining scheme priorities.
- Aim to improve the long term performance of flood risk management assets.
- Manage surface water flows.
- Review planning controls, SUDS enforcement, and designation of washlands.
- Improve resilience of key utility infrastructure to flood risk.
- Encourage upland catchment management.
- Carry out appropriate Environmental Assessment for flood risk management.

2.111 Each objective has actions against it, including to work with Strategic Planning to update the Local Plan and support flood risk management and work with Development Management to ensure policies are implemented to their full effect and to maximise the use of sustainable drainage on all developments.

Lead Local Flood Authority (LLFA) Draft Guidance for Developers: Flood Risk Assessment for Planning Applications

2.112 The LLFA is developing guidance for developers regarding the delivery of Sustainable Drainage Systems (SUDS) for minor developments. It sets out SUDS design principles and makes comment to funding and maintenance issues.

3 EVIDENCE BASE

Regional

Greater Manchester Carbon and Energy Policy Implementation Study (GMCA, April 2020)

- 3.1** The report considers different options for achieving the GMSF (now Places for Everyone) target for all new developments to be net zero carbon from 2028. The study includes a Part 1 report, which includes the technical analysis in terms of the on-site new buildings' energy and carbon performance levels sought and details the proposed policy pathway to meeting the 2028 target.
- 3.2** A Part 2 report, written in conjunction with this report, presents all the data and information for setting up and operating a carbon offset fund.
- 3.3** In stage 1 (2020 - 2025) the report sets out a number of recommendations, including:
- the draft GMSF policy is amended to align with the Part L trajectory (either 20% or 31% reduction over Part L 2013) for domestic buildings.
 - a BREEAM (energy and carbon requirements only) minimum rating of 'Very good' is considered for non-domestic buildings.
- 3.4** In stage 2 (2020 -2025) the report sets out a number of recommendations, including:
- 3.5** For domestic buildings:
- renewable energy generation if mandated should be expressed as minimum installed capacity, for example minimum % of the roof space area targets such as a initial PV installation requirements of up to 20% of total roof space with a caveat around technical feasibility.
 - introduction of the Carbon Offset fund.
 - requirement of any performance gap minimisation provisions to be provided by the developer through a written statement during the planning application.
- 3.6** For non-domestic buildings:
- it is recommended that a non-domestic BREEAM minimum rating of 'excellent' is considered.
 - carbon requirements wise a mandatory requirement for achieving BREEAM 'Excellent' with at least 6 credits for Energy performance within the 'ENE 01 - reduction of energy use and carbon emissions' is advised to be implemented.
 - it is recommended that a level of performance for unregulated energy use is implemented based on the different building typologies. This can be found under BREEA, criteria for 'Ene 08 Energy efficient Equipment'.
- 3.7** In stage 3 (2028 - onwards) the reports sets out a number of recommendations including:
- 3.8** Domestic and non-domestic:
- full alignment with the net zero carbon construction and operation UK GBC definitions is advised (upon confirmation of project viability and feasibility).

3.9 Non-domestic:

- it is recommended that a Non-domestic BREEAM minimum rating of 'Excellent' is considered.
- carbon requirements wise a mandatory requirement for achieving the BREEAM 'Outstanding' 9 credits for Energy Performance and 4 for energy modelling and reporting within the 'Ene 01 - reduction of energy use and carbon emissions' is advised.
- It is also recommended that a level of performance for unregulated energy (operational) use is implemented based on the different building typologies. This can be found under BREEAM criteria for 'Ene 08 Energy Efficient Equipment'.

3.10 Additional requirements for consideration include:

- the introduction of mandatory decentralised energy storage requirements.
- the introduction of mandatory embodied carbon thresholds.
- reduction of allowances in terms of carbon offsetting to support more on-site delivery
- It is recommended that the policy considers the introduction of mandatory monitoring and post-occupancy evaluation standards for most developments.

Carbon and Fracking Evidence (GMCA, October 2019)

3.11 This report provides further evidence to inform the current policy for 'Carbon and Energy' (Policy GM-S2) outlined in the draft GMSF (now Places for Everyone). The report focuses on Shale Gas and its carbon impact. has shown that the continued extraction of fossil fuels will not be compliant with a carbon emissions reduction pathway that is aligned with international commitments within the 'Paris Agreement'. It is therefore considered prudent to not exploit new sources of hydrocarbons and keep fossil fuels in the ground so at this point in time Greater Manchester will not support hydraulic fracturing (fracking).

Greater Manchester Spatial Energy Plan (Catapult, 2016)

3.12 The spatial energy plan has been prepared as evidence to support the GMSF (now Places for Everyone) and was published as part of a background paper in 2016. It assesses the current and future energy demand and existing energy systems within Greater Manchester, and provides a simple high level overview of the opportunities and challenges for low carbon transition over the lifetime of the GMSF to 2035, and ultimately beyond to 2050.

3.13 The GMCA has committed to achieving emissions reductions of at least 80% by 2050 and has adopted a carbon target to deliver a 48% reduction, or 11 million tonnes by 2020 against a 1990 baseline and 41% by 2020 from 2005 levels.

3.14 Achieving Greater Manchester's long term decarbonisation ambitions will require significant changes to the types of energy that are used; as well as how, and when, they are used. For Greater Manchester to continue to grow and thrive during this change future energy sources must be secure, affordable and sustainable.

3.15 To meet long term carbon targets there will have to be a significant reduction in the use of gas and it is expected that buildings will have to change almost entirely to different sources of energy for heat and hot water. This is likely to include use of

electrically powered heat in individual buildings and heat provided from central locations via district heat networks. The dense urban nature of some parts of Greater Manchester means that there are opportunities for significant growth of heat networks aligned with, and building out from, strategic development sites. In some areas there might be opportunities to provide heat to these networks using waste heat.

3.16 New development provides the opportunity to act as a catalyst for low carbon energy infrastructure. Local policy can support low carbon transition and devolution presents an opportunity for Greater Manchester to be a low carbon innovation leader.

3.17 The plan identifies that Oldham:

- Uses the lowest amount of energy in Greater Manchester;
- Has high levels of fuel poverty alongside Manchester and Rochdale; and
- Has a district heat network at St. Marys District Heat providing heat and hot water to around 1,400 homes and Oldham leisure centre. The former coal fired district heat network is now gas-fired and is managed by First Choice Homes Oldham. Heat meters have been introduced.

3.18 In terms of low carbon and energy potential the plan identifies that:

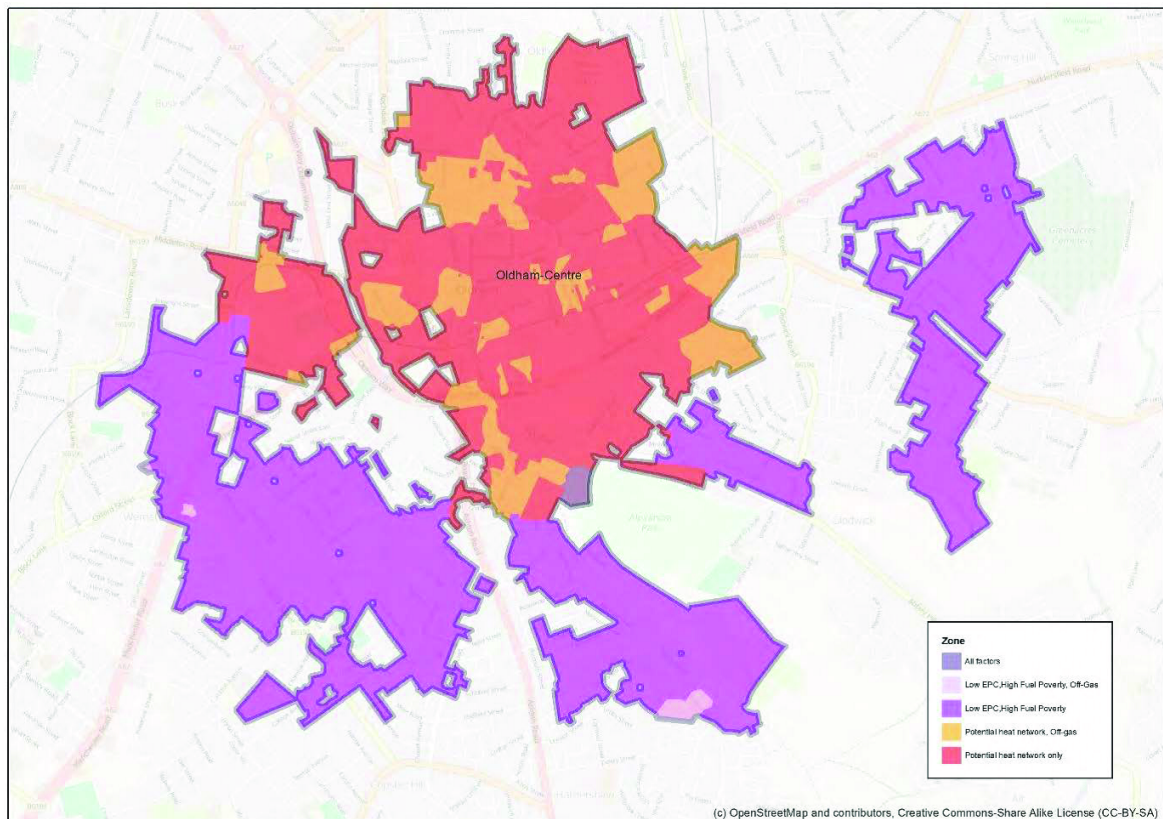
- Up to 68 % of existing gas demand could technically be replaced with renewable heat from heat pumps, solar thermal and bioenergy within the Greater Manchester region.
- Ground Source and Air Source Heat Pumps have the technical potential to contribute to 50% of current Greater Manchester domestic and non-domestic heat consumption.
- Solar thermal has the technical potential to provide 13% of current gas demand.
- Biomass could have the potential to provide 5% of current gas.
- Hydropower has the potential to provide 0.04% of Greater Manchester's electricity demand with potential in Oldham.
- Unconventional gas (Shale) and coal bed methane is a potential future energy source for Greater Manchester.
- Urban areas are most likely to move towards heat networks and Greater Manchester has previously identified feasible opportunities for approximately 35 individual District Heating Networks with technical potential to reduce Greater Manchester carbon emissions by 413 ktCO₂ (3 %).
- There is potential for mine water heat extraction.

3.19 The study explains that the abolition of the national commitment to deliver zero carbon new homes by 2016, means the planning system could have an important role in supporting decarbonisation at a local level.

3.20 The Planning & Energy Act 2008 still supports the ability of Local Authorities to set local requirements for renewable energy from new development. The study and has identified that the deployment of small scale renewable generation in Greater Manchester is behind the national average and planning policy could support increased uptake within districts. It has also identified heat network opportunity zones.

- 3.21** There is an opportunity for Greater Manchester to consider the role of carbon ‘off-set’ obligations or payments from new development as part of the planning process which could be repurposed to fund retrofit improvements to tackle decarbonisation of existing homes and buildings.
- 3.22** The study recommends Local Area Energy Strategies are undertaken at district level to support the implementation of the Local Plan.
- 3.23** The paper outlines that the **Greater Manchester Climate Strategy 2011-2020** provides a useful overview of energy planning in Greater Manchester to date, including:
- **Low Carbon Economic Area** – the Greater Manchester area was designated a Low Carbon Economic Area in 2009 which resulted in a range of work being undertaken by GMCA to establish carbon efficient buildings and infrastructure. This work includes retro-fitting buildings, decarbonising the energy supply and training businesses and the workforce within the area.
 - **Greater Manchester Energy Plan** – Launched in 2010, the Greater Manchester Area Plan provides an overview of Greater Manchester’s energy system and sets out Greater Manchester’s core energy challenges and priorities to 2020.
 - **Decentralised and Zero Carbon Energy Report** – published in 2010, this work sought to provide strategic evidence to enable Core Strategies to set minimum targets for low and zero carbon energy, identify opportunities for linking new development and supporting energy infrastructure with existing communities, identify the most appropriate energy mix for delivering new development and growth aspirations across Greater Manchester.
 - **Greater Manchester Climate Change Strategy** – the Greater Manchester Climate Change Strategy was launched in July 2011 and identifies four key objectives; to make a rapid transition to a low carbon economy, to reduce collective carbon emissions by 48 % by 2020, to be prepared for and actively adapting to a rapidly changing Climate and ensure ‘Carbon literacy’ is embedded into the culture of our organisations, lifestyles and behaviours.
- 3.24** The study identifies areas of opportunity that may be used to inform planning policy. These are areas that have high energy use, fuel poverty (where more than 15% of households are considered fuel poor) or other potential considerations. These can be laid alongside the opportunities for district heat (areas within 500m of a heat network), new build and retrofit schemes.
- 3.25** This data is used to produce a series of opportunity areas that could be targeted for low carbon zoning or development. The following opportunity area has been identified for Oldham. This would serve 8,495 domestic households and a non-domestic footprint of 447,000 sqm.

Potential heat network in Oldham



3.26 The study concludes:

- The technologies with the highest technical potential to contribute to a new, low carbon energy system in Greater Manchester include district heating, individual electric heat pumps, bio-fuels and solar technologies for both hot water and electricity. In each case the economic feasibility will need to be assessed to establish what is viable whilst maintaining security of supply and meeting decarbonisation targets.
- Effective planning for new networks will be needed to support roll out of district heating and to manage the transition from the predominant gas system in Greater Manchester. Electrification of heating is also likely to require reinforcement of electricity networks with associated cost and disruption.
- Greater Manchester needs to set an ambitious, and consistent, local carbon target for the region and individual Local Authority areas.

RESIN (Greater Manchester)

3.27 The RESIN project is investigating climate change adaption practices in European cities and assessing impact and vulnerability in order to develop standardised methodologies and decision support tools that can be used to develop local adaption strategies.

3.28 Manchester is one of the project's four core cities, where research is being carried out to co-create the RESIN methodologies and tools to ensure that these are tailored to cities' needs.

3.29 Greater Manchester's critical infrastructure sectors are identified as:

- Transport: air (Manchester Airport), rail, port (Salford) tram (metrolink), road, walking and cycling.
- Energy: gas, electricity and heat.
- ICT: digital connectivity.
- Water and waste water: water supply and water treatment.
- Social infrastructure: schools and education, health services and community facilities.
- Green Infrastructure.

3.30 The key themes emerging from this climate change risk assessment of Greater Manchester's critical infrastructure are:

- Impacts associated with floods and storms present the highest risks to critical infrastructure. Both of these hazard events are projected to become more frequent and intense with climate change, which in turn increases the associated risks to critical infrastructure.
- Extreme weather and climate change impacts on energy infrastructure represent the highest risks to Greater Manchester's critical infrastructure.
- Five infrastructure sectors are present in the top 10 risks; energy, road; water supply and treatment, green infrastructure and social infrastructure. This suggests that the extreme weather and climate change poses a wide ranging threat to Greater Manchester's critical infrastructure network.

3.31 The assessment should help in prioritising risks in Greater Manchester and subsequent strategies and plans.

Greater Manchester Local Energy Market

3.32 The Local Energy Markey (LEM) project aims to reduce and remove known challenges through designing and delivering a replicable approach to Local Energy Area (Master) Planning.

Strategic Flood Risk Assessment for Greater Manchester (GMCA, 2019 and 2020)

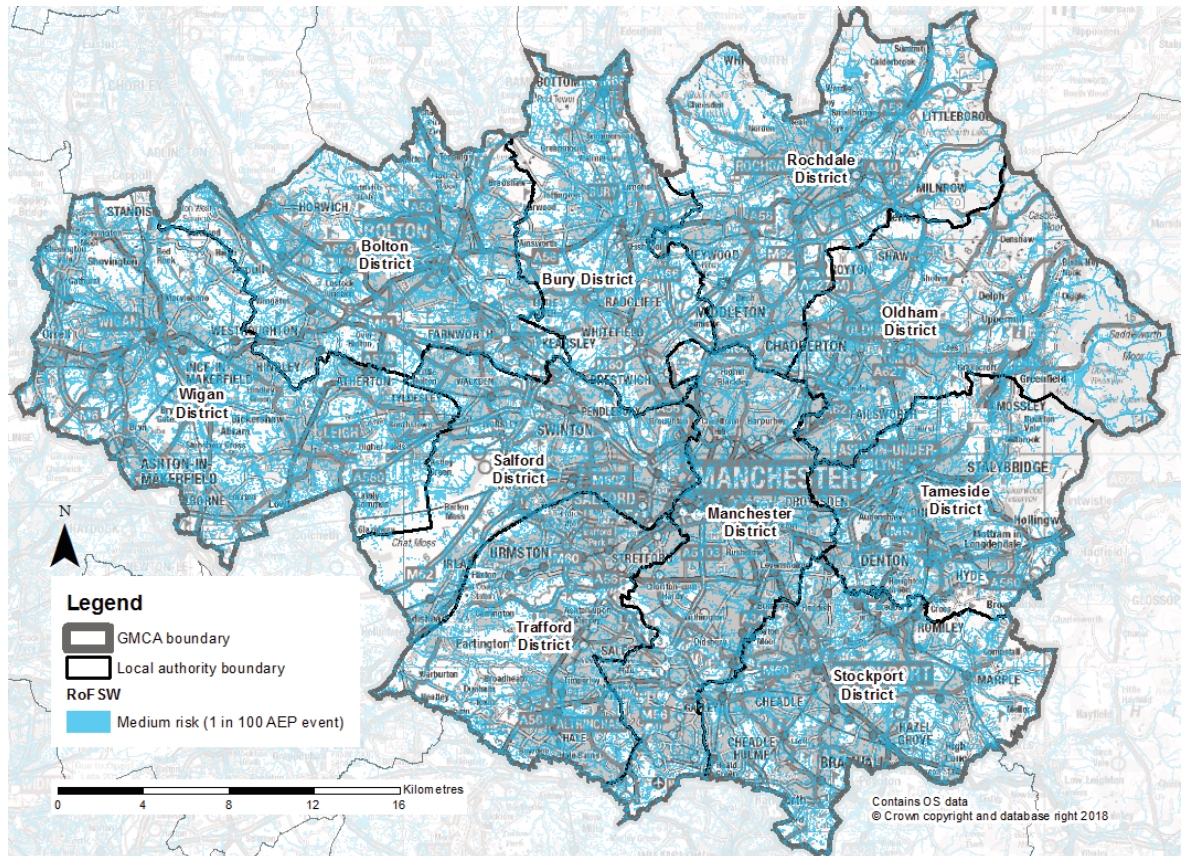
3.33 A Greater Manchester Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) has been completed. The SFRA will be used to apply the sequential test, and where necessary the exceptions test in accordance with NPPF.

3.34 In terms of fluvial flood risk (from rivers), the SFRA shows where there are considerably sized residential areas within Flood Zone 3. Oldham has two areas (Lower Rushcroft and Goats). This is lower than most Greater Manchester districts.

3.35 The Functional Floodplain (Flood Zone 3b) is also mapped and provides important space for making space for flood waters when flooding from rivers occurs. Development should be directed away from these areas.

- 3.36** Surface water flood risk is an issue for all Greater Manchester districts. Only the upland areas in the north and east i.e. in Bury, Rochdale, Oldham, Tameside and Stockport are not covered in by the mapped surface water flood risk.

Surface Water Flood Risk



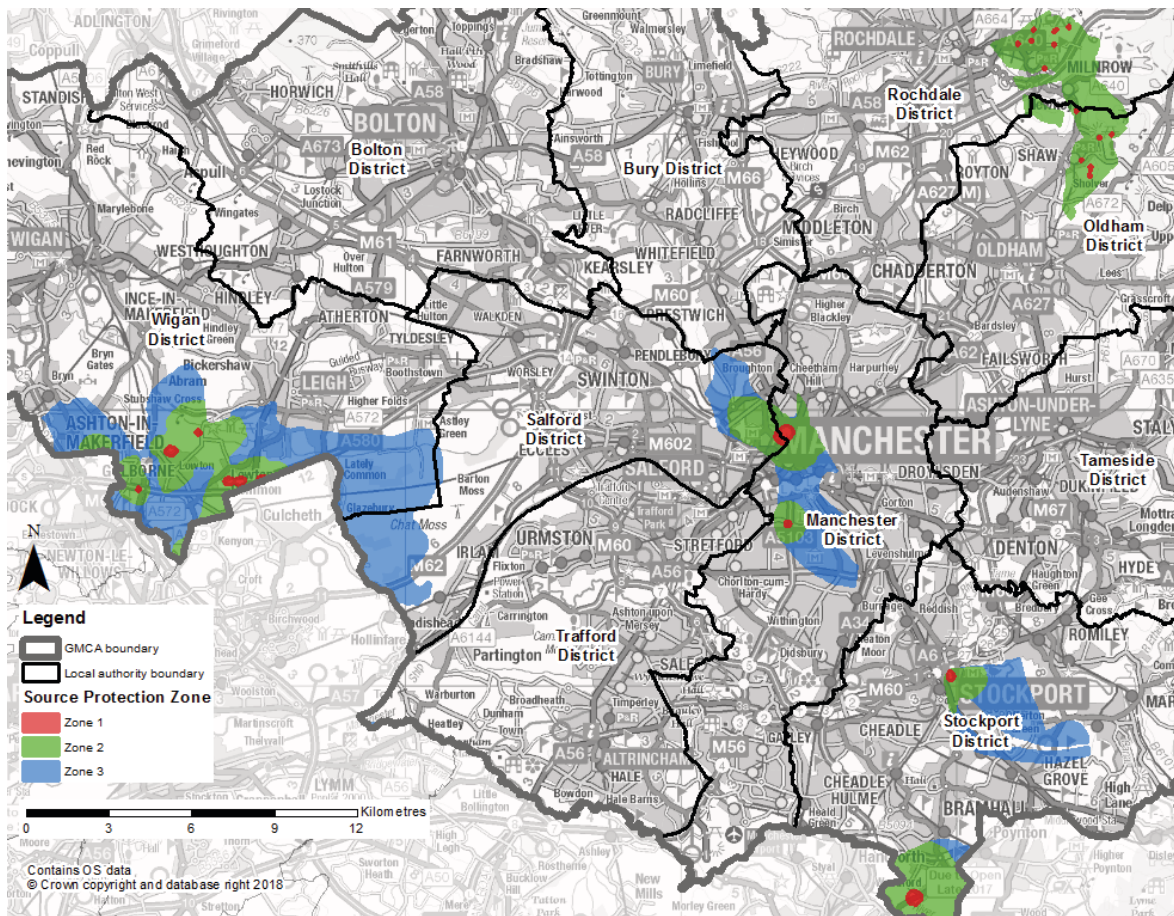
- 3.37** Flooding from the sewer network mainly occurs when flow entering the system, such as an urban storm water drainage system, exceeds its available discharge capacity. The system then becomes blocked or it cannot discharge due to a high water level in the receiving watercourse. Pinch points and failures within the drainage network may also restrict flows. Water then begins to back up through the sewers and can surcharge through manholes, potentially flooding highways and properties. It must be noted that sewer flooding in 'dry weather' resulting from blockage, collapse or pumping station mechanical failure (for example), is the sole concern of the drainage undertaker.
- 3.38** United Utilities (UU) is the water company responsible for the management of most of the drainage network across Greater Manchester.
- 3.39** The Environment Agency (EA) can designate Areas with Critical Drainage Problems (ACDPs). ACDPs may be designated where the EA is aware that development within a certain catchment / drainage area could have detrimental impacts on fluvial flood risk downstream, and / or where the EA has identified existing fluvial flood risk issues that could be exacerbated by upstream activities. No ACDP have been identified within Greater Manchester.

3.40 However, Opportunities Areas for Further Critical Drainage Management (OAFCDM) have been drafted using UU data, surface water flood hotspots and historical surface water flooding data and the policy. The policy for 'Critical Drainage Areas' can be applied to these areas. In Oldham the OAFCDM are:

- Oldham Waste Water Treatment Works (WwTW); and
- Saddleworth WwTW.

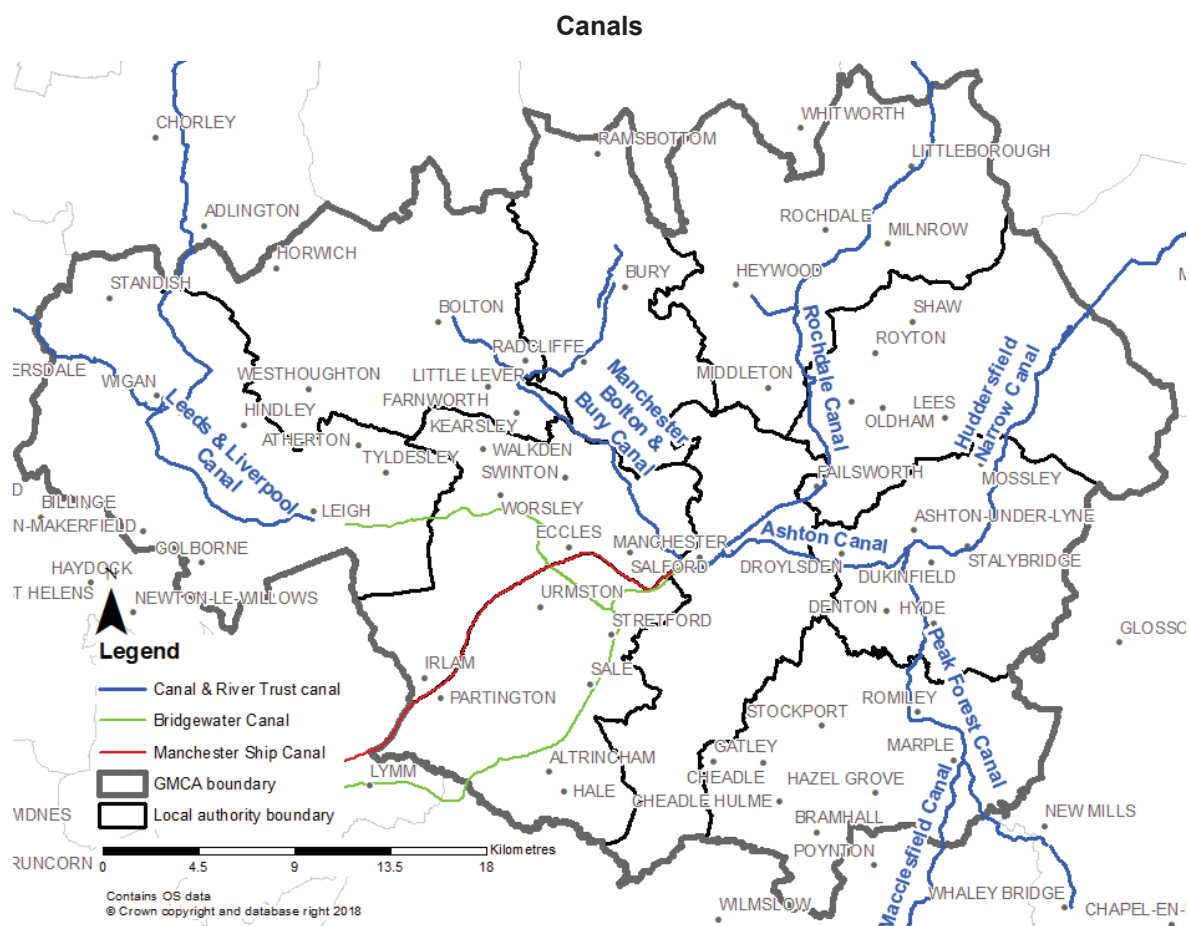
3.41 The SFRA has not mapped Groundwater flooding as it is very localised. EA Source Protection Zones (SPZs) have been assessed however. SPZs show the risk of contamination from any activities that might cause pollution in the area. Three zones are mapped which show the risk to groundwater source.

Groundwater Source Protection Zones



3.42 The risk of flooding along a canal is considered to be residual and is dependent on a number of factors. As canals are manmade systems that are heavily controlled, it is unlikely they will respond in the same way as a natural watercourse during a storm event. Flooding is more likely to be associated with residual risks, similar to those associated with river defences, such as overtopping of canal banks, breaching of embanked reaches or asset (gate) failure. The SFRA highlights the possible risk of flooding from canals of relevance to Oldham:

- Huddersfield Narrow Canal - a Canal Hazard Zone was produced for the Huddersfield Narrow Canal in Oldham.
- Rochdale Canal - canal breaches are most likely to occur at the lower lying areas of Chadderton and Failsworth.



3.43 Like canals, the risk of flooding associated with reservoirs is residual and is associated with failure of reservoir outfalls or breaching. This risk is reduced through regular maintenance by the operating authority. Local Authorities are responsible for coordinating emergency plans for reservoir flooding and ensuring communities are well prepared.

3.44 The SFRA recommends the use of Green Infrastructure and Sustainable Drainage Systems (SUDS), using the SFRA to inform where open space should be utilised for water in the areas of greatest flood risk. Examples include:

- Restoration of the natural character of floodplains;
- Keeping and preserving of areas of existing natural floodplain;
- Introduction of new areas and enhancing existing areas of greenspace whilst incorporating sustainable drainage within new development; and
- Reduction of downstream flood risk.

3.45 Natural England recommend the use of the online tool Local Action Toolkit.

3.46 Natural Flood Management (NFM) or Working with Natural Processes (WwNP) is a type of flood risk management used to protect, restore and re-naturalise the function of catchments and rivers to reduce flood risk.

3.47 Techniques and measures, that may be applicable to Greater Manchester, include:

- Peatland and moorland restoration in upland catchments
- Re-meandering streams
- Targeted woodland planting
- Reconnection and restoration of functional floodplains
- Restoration of rivers and removal of redundant structures
- Installation or retainment of large woody material in river channels
- Improvements in management of soil and land use
- Implementation of rural and urban SuDS

3.48 The SFRA has provided maps to show where potential WwNP should be investigated further as a means of flood mitigation against potential development sites.

3.49 The location of Environment Agency flood risk management projects up to 2025/26 are also mapped.

Environment Agency Priorities for Greater Manchester (GMMC Sustainable Places Team, February 2018)

3.50 The paper explains that the EA works with partners such as local authorities to help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

3.51 The priorities for Greater Manchester have been outlined spatially to provide a platform for collaborative working.

Future Growth and Environmental Priorities:

3.52 This outlines that over the next 30 years over 25,000 new homes will be within existing flood zones (78% within flood zones 2 and 22% within flood zone 3) and approximately 74% of growth will be on brownfield land. Over 1,500 hectares of development will be adjacent to failing waterbodies.

3.53 The EA states that it will:

- Assist GMCA to adapt to a rapidly changing climate by providing resource on the EU RESIN project;
- Support growth in Town Centres and ensure the environment plays a critical part;
- Work closely with Local Planning Authorities so all brownfield land is brought back into beneficial use, flood risk reduced and there is overall environmental enhancement and a transition to a low carbon future; and
- Identify opportunities for future growth and investment in strategic flood risk management.

Improving the Water Environment:

3.54 There are 2423km of watercourses in Greater Manchester, including the Mersey, Irwell and the Tame which all rise in the Pennines. A significant proportion (over 90%) are failing current objectives under the EA Water Framework Directive, largely attributed by being heavily modified.

3.55 The EA will work with partners to:

- Deliver the natural course project and communicate critical outcomes for embedded learning; and
- Utilise opportunities across all water catchments to improve the health of our rivers, lakes and groundwater's to contribute to achieving Good Ecological Status / Potential as required by the Water Framework Directive.

Water Infrastructure:

3.56 United Utilities are investing to improve the Oldham and Royton Wastewater Treatments Works.

3.57 Within the next 5 years the EA will:

- Monitor United Utilities asset plan and identify which assets require improvement for our water resources for future investment programmes. Significant drivers for water quality in Greater Manchester is the reduction of phosphorus from sewerage treatments works, improvements to sewer treatment works, improvements to combined sewer overflows and tackling diffuse pollution in urban areas.
- Ensure sustainable levels of abstraction, in particular work with United Utilities to investigate water resource linkages between groundwater abstraction and surface water flows on the River Beal (Oldham).
- Protect drinking water safeguard zones through clear actions plans, in particular focusing on Oldham and Tameside.
- Work with other infrastructure providers to tackle poorly performing assets that might be causing local water quality problems.
- Encourage the use of SUDs through engagement with stakeholders.
- Provide advice on requirements for future Source Protection Zones.

Asset Management and Flood Risk Involvement:

3.58 The EA has nine major and 124 minor assets across Greater Manchester. Their Investment Programme is seeking to deliver £56 million in Flood Defence Grant in Aid Projects over the next four years to protect 4,600 homes.

3.59 The EA will:

- Ensure all their assets / future projects consider the feasibility of including cycle ways to support ambitions for strategic cycling routes.
- Reduce the risk of flooding to more households through the delivery of capital flood risk management schemes.
- Work with authorities to secure partnership contributions for flood risk management schemes.
- Deliver improvements to flood risk management assets.

- Deliver multiple environmental, social and economic benefits as part of flood risk schemes. Implement Natural Flood Management Schemes across the Irwell, Roch, Mersey and Tame catchments by 2021.
- Target flood risk management measures and projects within existing areas where ‘at risk’ communities has been identified.

People and Place:

3.60 There are five water catchments partnerships in Greater Manchester. In Oldham these are the Irwell and Upper Mersey partnerships.

3.61 Greater Manchester is the Defra Urban Pioneer which will test the ambitions for the Defra 25 year plan.

3.62 The EA will:

- Oversee delivery of the Defra Urban Pioneer to provide better environmental outcomes for ‘natural capital’ and develop closer integrated working with partners.
- Work collaboratively to deliver a range of environmental projects that adopt a Catchment Based Approach.
- Work with partners to combine Natural Flood Management / habitat creation to reduce flood risk focusing on upland catchments.
- Deliver our natural course project and build capacity to protect and improve our North West water environment, now and for the future.
- Explore finance models to invest in Green Infrastructure.

Irwell Management Catchment: Natural Capital Account and Ecosystem Services Opportunities Mapping (GMCA, 2018)

3.63 This report identifies the natural capital value of the Irwell Management Catchment’s (IMC) waterbodies, and the opportunities for investment in ecosystem services (ESS) provided by the IMC’s waterbodies.

3.64 The project, led by GMCA, is part of Natural Course, a EU LIFE Integrated Project aimed at integrated water management through accelerating the objectives of the Water Framework Directive (WFD) and improved flood risk management.

3.65 The report highlights that 77% of the waterbodies are classified under the WFD as “Heavily Modified” and have poor or moderate ecological status. The water quality is poor because of widespread sources of diffuse urban pollution. Significant numbers of properties are at risk of flooding.

3.66 The “urban pioneer” project is designed to support and inform the development of the UK Government’s 25 year Environment Plan. The urban pioneer focuses on improving the natural environment through improved decision making to support the health, wellbeing and prosperity of Greater Manchester’s residents.

3.67 Phase 1 of the project resulted in ecosystem opportunity mapping being completed. This can be used to provide evidence about best locations to invest in maintaining and enhancing natural capital to deliver the greatest public benefit.

3.68 The reports states:

- The net asset value of the IMC is £7.7bn.
 - The ESS provided by the IMC have a net value of £418/year.
 - The gross asset value is £8.5 billion.
 - The benefits to people who use greenspace are particularly large, with recreation benefits values totally £190 million / year.
 - The existence of greenspaces in the catchment avoids £157 million / year of costs associated with poor physical and mental health. Avoided costs benefit residents, the public sector and businesses.
 - The amenity value of living close to greenspaces is revealed through differences in property prices and is valued at £80 million / year.
- 3.69** The report has mapped the value of ecosystem services for each waterbody catchment. The higher population density areas rely on waterbodies and associated greenspaces more therefore higher values are shown.
- 3.70** Habitat maps were created for over 200,000 individual land parcels and can be viewed on Mapping GM <https://mappinggm.org.uk/> (within 100 m of river corridors).
- 3.71** The mapping can help identify investment priorities. It identifies where ESS ranking and valuation are both above average where the future investment is to maintain existing natural capital value and develop new projects which address specific environmental problems or meet specific health needs of local communities; and where ESS opportunity ranking is below average and valuation is above average where investment should continue to maintain natural capital.
- 3.72** For each opportunity area measures and interventions have been identified, such as channel re-naturalisation, flood plain re-naturalisation, diffuse pollution attenuation schemes, pollution source control schemes, new waterfront access, community stewardship, health and community cohesion schemes, urban greening, habitat creation and natural flood management.

Identification of opportunities to enhance the beneficial use of the Green Belt (GMCA, 2020)

- 3.73** An assessment has been carried out focusing on the identification of potential opportunities to enhance the beneficial use of retained and proposed Green Belt in the vicinity of the Greater Manchester.
- 3.74** The opportunities include to:
- Enhance the ecological and hydrological beneficial features within the area of retained Green Belt by combining flood risk reduction (including the alleviation of surface water flood risk issues) with green infrastructure improvements.
 - Protect and where possible enhance semi-natural habitats such as the tracts of heather moorland, blanket bog, acid grassland and broadleaved woodland associated with the upland landscape. Encourage the natural regeneration of woodland and wetland habitats in order to slow the water flow towards the River Tame below.
 - Working in conjunction with the EA, the opportunity exists to improve river corridor flood risk management as well as alleviate surface water flood risk issues. This could be achieved through the use of SuDS and water storage techniques in agreement with landowners and third parties.

Local

Oldham Council Local Needs Analysis (Oldham Council, October 2020)

- 3.75** The needs analysis aims to inform recommendations on social value, key priorities, strategies and needs.
- 3.76** The analysis shows that Oldham performs relatively poorly compared to the North West average on the following indicators:
- Air pollution is 7% worse.
 - installations of photovoltaics per capita is 36% worse.
 - Renewable electricity generation per household is 79% worse.

Oldham Town Mine Energy Study (The Coal Authority, April 2020)

- 3.77** This study was commissioned to explore mine water as a potential energy source to feed the demands of the town centre. Ten locations are considered to have good or very good potential based on the presence of worked areas in multiple seams under each respective site.
- 3.78** Those sites with a Good or Very Good status are considered worthy of taking forward to more detailed feasibility study to establish precise drilling locations based on underground targets. This detailed work involves reference to the original mine plans for each seam where available.

RED WoLF (Rethink Electricity Distribution Without Load Following) (since July 2019)

- 3.79** The EU funded programme Interreg North-West Europe (NWE), brings together 14 Partner Institutions from UK (5), France (4), Ireland (3), Belgium (1) and Germany (1), universities, housing associations, local authorities as well as training and other non-profit organisations across North-West Europe aim to tackle housing emissions, responsible for approximately 300 million tonnes of CO₂/year.
- 3.80** Across the six pilot sites in UK, Ireland and France, there will be 100 houses which will reduce carbon emissions from their energy use by 215 tonnes/year. By the end of the project in 2022, the smart hybrid storage systems will be market-ready and prepared to be installed into NWE homes.

Northern Roots (Oldham Council)

- 3.81** The first phase of the exciting and ambitious Northern Roots initiative will create an exemplar Eco-Centre on the site of the current Alexandra Park Depot.
- 3.82** This facility will replace the current depot and provide a new depot facility for the council, as well as accommodating the existing community growing hub and providing extra community and educational facilities.
- 3.83** The Eco-Centre will be zero carbon in its operation and will aim to reduce the energy running costs of the facility to zero also, through the installation of renewable energy technologies and highly energy efficient buildings. It will demonstrate both new and existing trusted technologies in a future-proofed facility of national significance.

Slow the flow (since 2018)

- 3.84** Oldham is currently working on a 'slow the flow' project, a campaign to build natural defences against flooding, working alongside ongoing infrastructure improvements to structures, culverts and bridges.
- 3.85** Planting additional trees will help to ensure less flooding of homes and property while supporting and improving the environment and landscape.
- 3.86** Trees in the pipeline include one hectare (2,000-2,500 trees) on Oldham Edge and another hectare of woodland in the Irk Valley. Three acres of new woodland is planned at Crompton Moor.
- 3.87** In addition to woodland 900 trees have been placed in streets and open spaces in the past two years.

4 CONSULTATION

- 4.1** To begin preparation of the Local Plan the council carried out a 'Regulation 18' notification between July and August 2017.
- 4.2** To inform this work we asked what the local community and stakeholders thought:
- a) the Local Plan should contain and what the key planning issues are for Oldham; and
 - b) what, in broad terms, should be the main aims of the Local Plan.
- 4.3** In addition we published our Integrated Assessment Scoping Report and invited the Environment Agency, Historic England and Natural England to comment on the scope of the Local Plan. This was also available for the local community and stakeholders to view and comment on if they wished.

Thematic comments

- 4.4** The main messages that came out of the initial consultation regarding climate change and flood risk are:
- To prioritise the re-use of available, previously used land, where not of environmental value, in advance of greenfield land due the green lung function and flood resilience that greenfield land offers.
 - Natural capital must be planned into new development for climate change resilience, flood risk and green lung function.
 - Need to minimise and then eliminate emissions of greenhouse gases. Greater Manchester is aiming for zero emissions by 2050. Housing and businesses premises must be zero-carbon buildings, heavily insulated with south facing roofs, solar pv and solar water heating panels built in and south facing walls to maximise heat gain. Listed buildings should be retrofitted, with solar panels and additional insulation should be favoured. Buildings must not be provided with gas and wood / biomass is unacceptable for air quality reasons.
 - Buildings should be provided with electric heating and cooling and electric vehicle charging points.
 - Business premises should be incorporated into housing developments and be provided with fibre to the premises, to enable home working etc. Developments should be connected to the surrounding area, particularly schools, shops and employment by sufficient walking and cycling routes. developments should be built at high densities and follow European practice of housing four floors high of good design with easy access to parks to reduce emissions.
 - The Local Plan must facilitate wind power and accept that there may be strong opposition, however community-owned wind turbines where profits are retained to benefit local people may prove more acceptable.
 - The Local Plan should promote solar power. Solar panels should be a condition of all new significant extensions and alternations and should be promoted on employment, community buildings and farm land.
 - The council should work with United Utilities to maximise power generation from water flowing out of existing reservoirs; explore potential to convert existing reservoirs into pumped storage schemes, storing energy; and encourage micro-hydro and / or low-head hydro equipment elsewhere.

- Favour the installation of battery and other energy storage devices where renewable energy generation is being installed.
- Retain rainwater on the hilltops and moors; reduce run off speeds; re-use old mill lodges / dams as water capture; householders and businesses to use porous materials for hard structures; not build on the floodplain.
- Recommend the requirement for Natural Flood Management measures in new developments proposed on the upland catchment areas.
- Code for Sustainable Homes has been incorporated into Building Regulations. The Local Plan should not contain policies that infer or require delivery of design standards above those prescribed nationally. The inclusion of such would be a further constraint.
- Should avoid siting potentially damaging activities in the most sensitive locations, such as Groundwater Protection Zone 1.
- If there are United Utilities assets within the boundaries of allocated sites developers should explore options for addressing this early on.
- Important to provide policies that emphasise the need for water supply and wastewater drainage infrastructure to be given consideration in the earliest stages of planning.
- Site drainage must reflect principles of NPPF surface water hierarchy:
 - Into the ground;
 - To a surface water body;
 - To a surface water sewer, highway drain, or another drainage system;
 - To a combined sewer.
- To consider alternatives to the public sewer for surface water discharges. Sites with land drains or near to watercourses are a more sustainable option to the public sewer. A policy that encourages sustainable waste management is encouraged.
- All new development should include sustainable drainage systems, unless demonstrated to be inappropriate, and reduce areas of impermeable surfaces. Examples include green roofs, permeable surfaces, infiltration trenches, filter drains / strips, swales, detention basins, and purpose built ponds and wetlands.
- Attenuation will be required to meet national standards and any local standards and should demonstrate flood volumes exceeding allowable design values are retained in areas which will not increase flood risk for adjacent land owners.
- Drainage proposals should be part of a wider strategy and be supplemented by appropriate maintenance and management regimes for the lifetimes of SUDS.
- The threat of drought is equally important based on future climate change predictions, combined with potential threat of increased population growth, inefficient water usage and over abstraction of the waterways. Drought should be recognised and planned for as part of the Local Plan.
- Developments should be required to meet Sustainable Codes and Standards such as Breeam.
- Wind power – Oldham could explore KiteGen as a possible replacement for its inefficient wind farms.

Spatial comments

- Houses in Saddleworth should have adequate drainage and sewage infrastructure.
- Other Protected Open Land should be retained as they help mitigate causes of climate change.

5 FUTURE EVIDENCE REQUIRED

- 5.1** The council needs to provide a positive strategy for decentralised and low carbon / renewable energy. A Local Energy Strategy will help map out where opportunities for decentralised and low carbon / renewable energy.
- 5.2** There is a need to update and refine Critical Drainage Areas (CDAs).

6 KEY ISSUES

Key Issues

From a review of the plans and strategies, evidence and issues raised at the Regulation 18 and Scoping Report consultation the following key issues have been identified:

- There is the need to support Greater Manchester's and Oldham's climate change objectives to be carbon neutral and build resilience through mitigating and adapting to climate change, considering the longer implications for flood risk, water supply, drought, biodiversity and landscapes and the risk of overheating from rising temperatures.
- There is the need to bring brownfield land back into beneficial use and support town centre growth whilst also achieving environmental improvement.
- There is a need to take a natural capital approach to combating climate change through measures such as the use of green infrastructure and allowing for adaptation, for example through setting back new development from rivers.
- There is a need to use the opportunity mapping to identify appropriate measures to achieve integrated water management.
- There is a need to support natural flood management solutions, such as new tree planting under schemes such as City of Trees and Slow the Flow initiatives and water storage in the uplands. There is the need to incorporate green and blue infrastructure into new developments.
- There is the need to restore peat bogs (blanket bog), particularly in the uplands.
- There is a need to reduce and manage flood risk from all sources, taking into account the cumulative impacts on areas susceptible to flooding and climate change.
- There is the need to ensure that new and critical infrastructure is located (or relocated where opportunities arise) away from areas of flood risk.
- There is a need to determine appropriate drainage standards.
- There is the need to promote the use of SUDS that offer multi-functional benefits and which are maintained throughout the lifetime of SUDS.
- There is the need to reduce areas of impermeable surfaces.
- There is the need to protect water resources and avoid Groundwater Source Protection Zones.
- There is the need to improve water quality, re-naturalise rivers and waterways, improve public enjoyment and access to waterways and improve opportunities for sustainable travel along waterways.
- There is the need to ensure sustainable water supply and waste management for wastewater.
- There is a need to identify a positive strategy to ensure that growth is matched with secure, affordable and sustainable energy. There is a need for positive policies for energy that encourage the development of commercial and community-lead energy schemes.
- There is the need to consider whether to identify suitable areas for renewable and low carbon energy sources and areas where heat networks could be appropriate. A positive approach should also consider the location, mix and design of development and follow the energy hierarchy.
- There is a need to encourage modern methods of construction.

7 PLAN OBJECTIVES

7.1 The following draft plan objectives are proposed as a result of the initial issues that have been identified in relation to this climate change paper. These will be refined as further evidence and the Local Plan is progressed:

7.2 PO 6 Embedding sustainability, energy efficiency and low (zero) carbon by:

- supporting secure, affordable and sustainable energy through a positive approach towards community and commercial energy schemes; the identification of low carbon and renewable energy opportunities and the implementation of the energy hierarchy within new developments;
- reducing the risk of flooding to people and property taking into account climate change;
- managing flood risk through the use of integrated water management and the provision of green infrastructure, including the use of Sustainable Urban Drainage Systems (SUDS), which offer multi-functional benefits such as environmental improvement, biodiversity net gain, urban cooling and recreation to manage climate change stresses; and
- ensuring that water resources are protected and water quality is improved.

8 INTEGRATED ASSESSMENT

- 8.1** The Local Plan will be supported by an Integrated Assessment (IA). The IA will include the Sustainability Appraisal (SA) / Strategic Environmental Assessment (SEA), Equalities Impact Assessment (EqIA) and a Health Impact Assessment (HIA). The Habitats Regulations Assessment (HRA) will still be a standalone document; however its findings will be integrated into the IA.
- 8.2** The role of an IA is to promote sustainable development through assessing the emerging Local Plan against economic, environmental and social objectives. It is a way of ensuring that the preferred approach in the Plan is the most appropriate when assessed against any reasonable alternatives. It also allows for any potential adverse effects to be identified and mitigated and for improvements to environmental, social and economic conditions to be made.
- 8.3** The Scoping Report is the first stage of the IA process (Stage A). It identifies the scope and level of detail to be included in the IA report.
- 8.4** The IA Scoping Report identified the following issues to be addressed in the Local Plan in relation to the Climate Change and Flood Risk:
- Requires objective to improve air quality.
 - Requires objective to reduce energy use, promote energy efficiency and promote renewable and low carbon energy, including at the community level.
 - Requires objective to adapt to and be resilient to climate change.
 - Requires objective to promote the sustainable management of natural resources and to protect and improve air, water and soil quality.
 - Ensure that the plan takes account of the North West River Basin Management Plan and Catchment Management Plans.
 - Requires objective to sustainably manage water resources, and protect and enhance the water quality and the aquatic environment; and mitigate the effects of floods and droughts. Requires objective to minimise flood risk, mitigate and adapt to the effects of flood risk and be more resilient to the risks that floods pose.
- 8.5** The IA proposed an Integrated Assessment approach and scoring system to the assessment of the emerging Local Plan.
- 8.6** Consultation on the Integrated Assessment Scoping Report took place between 10 July and 21 August 2017.
- 8.7** The IA Scoping Report has been updated (Update 1) to support the Issues and Options consultation. The issues in relation to this topic paper have been updated to read:
- There is a need to continue to reduce fuel poverty through improving the energy efficiency of existing and new homes.
 - There is a need to protect and improve water resources.
 - There is a need to be resilient to the effects of climate change.
- 8.8** The Integrated assessment has appraised the vision, plan objectives and spatial options.

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- 8.9** Plan Objective 6, which addresses climate change , scored a mixture of neutral, positives and significantly positive scores. No mitigation / enhancements were identified.
 - 8.10** The IA will help to develop and refine the options of the Local Plan as work progresses and assess the effects of the Local Plan proposals and consider ways of mitigating adverse effects and maximising beneficial effects. An IA report will be published alongside each Draft Local Plan published for consultation before the final Publication stage.

9 EVIDENCE SOURCES

- National Planning Policy Framework (2019) <https://www.gov.uk/guidance/national-planning-policy-framework>
- Planning Practice Guidance <https://www.gov.uk/government/collections/planning-practice-guidance>
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- The Environment Bill, Defra <https://www.gov.uk/government/publications/environment-bill-2020>
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- Clean Growth Strategy (HM Government, 2017) <https://www.gov.uk/government/publications/clean-growth-strategy>
- Community Energy Strategy (DECC, 2015) <https://www.gov.uk/government/publications/community-energy-strategy>
- Greater Manchester's Plan for Homes, Jobs and the Environment: Greater Manchester Spatial Framework Publication Plan (GMCA, Draft for Approval, 2020) <https://www.greatermanchester-ca.gov.uk/what-we-do/housing/gmsf2020/>
- The Greater Manchester Strategy (GMCA, 2018) <https://www.greatermanchester-ca.gov.uk/ourpeopleourplace>
- Greater Manchester's Springboard to a Green City Region (GMCA, 2019) <https://www.greatermanchester-ca.gov.uk/media/1317/springboard-report.pdf>
- Greater Manchester Natural Capital Investment Plan (GMCA, 2019) <https://www.greatermanchester-ca.gov.uk/wp-content/uploads/2019/01/efec-GMNCIP-Summary-A4-16pp-V3-Lo-Res2.pdf>
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- North West SuDS Pro-forma and guidance (North West Regional Flood and Coastal Committee and United Utilities, 2020) <https://www.nwrffc.co.uk/wp-content/uploads/2020/08/NW-SuDS-Pro-forma-Guidance-Completing-Your-Pro-forma-30-Aug-2020.pdf>
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- Final Drought Plan (United Utilities, 2018) <https://www.unitedutilities.com/corporate/about-us/our-future-plans/water-resources/drought-plan/>
- Irwell Catchment Flood Management Plan (2009, Environment Agency) <https://www.gov.uk/government/publications/irwell-catchment-flood-management-plan>

- Upper Mersey Catchment Flood Management Plan (Environment Agency, 2009) <https://www.gov.uk/government/publications/upper-mersey-catchment-flood-management-plan>
- The Oldham Plan 2017-2022 <https://committees.oldham.gov.uk/documents/s83732/Oldham%20Plan%202017-22.pdf>
- Covid Recovery Strategy (Oldham Council)
- Creating a Better Place (Oldham Council, January 2020) https://www.oldham.gov.uk/news/1798306_mln_investment_strategy_set_to_be_approved_by_oldham_council
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- RESIN <https://resin-cities.eu/home/>
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- Northern Roots <https://northern-roots.uk/>
- Slow the Flow (programme)