

## Climate Change Adaptation and Resilience: a local perspective in Wigan Borough

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The world's climate is changing drastically, with the Intergovernmental Panel on Climate Change (IPCC) stating that man-made influence is the driving force behind the most recent and dramatic changes in climate. Across the many news outlets we encounter daily, we find ourselves subjected to the environmental disasters attributed to a changing climate. Collectively, we view the declining Arctic and Antarctic ice sheets, thermal expansion of the oceans causing destruction of aquatic flora and fauna, urban heating over densely populated cities and most recently dramatic weather events including the thousands of bushfires across a dry and arid Australia, and the possibility of low lying equatorial islands disappearing into a rising ocean. Worldwide, communities are trying to cope with the effects of climate change. Local leadership, location specific strategies and knowledge of surrounding environments are essential to building resilience to projected climate impacts.

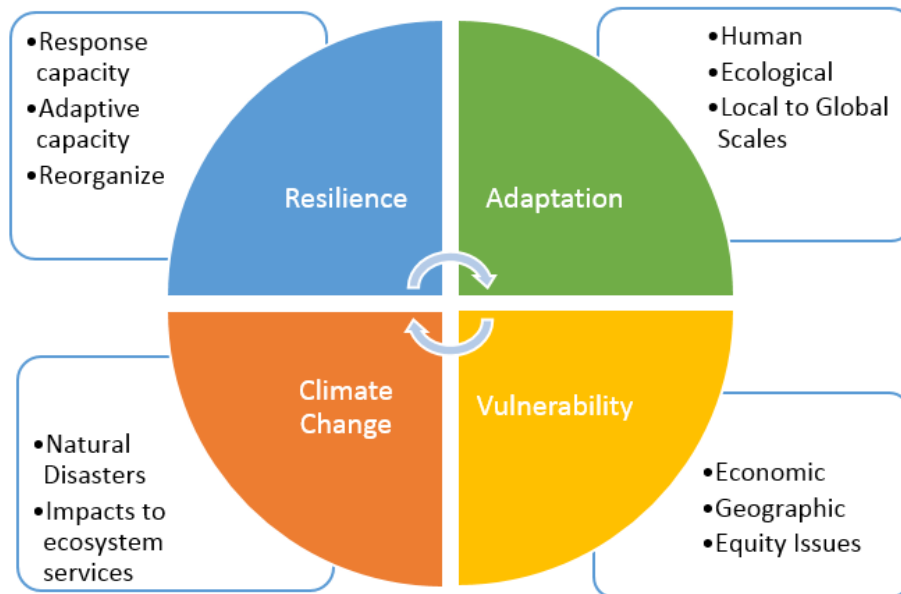


(Image – wildfires, severe drought and more frequent intense storms impacting the planet)

Currently, the UK, along with the rest of the world, is not on track to meet targets set in the historical 2015 Paris Agreement. Therefore, alongside a surge in carbon emissions reduction, with an emphasis on mitigation and exploration of sustainable offsetting mechanisms, there needs to be a shift to ensuring local communities adapt and become resilient to the effects of climate change.

Humans have had to adapt to their environments throughout history by developing practices, cultures and livelihoods suited to local conditions. However, climate change raises the possibility that societies may encounter climate change that previous experience has not prepared them for.

In the context of climate change, adaptation refers to those crucial actions or plans that a community, household or individual will employ against a current or anticipated impact of climate change. Resilience refers to the ability to recover (bounce back to the original state before the exposure to shock) from the effect of climate change. Both adaptation and resilience are key elements of climate change policy and delivery, and are essential measures to ensure the safety, prosperity and future of local communities.



(Image – the climate change resilience and adaptation loop)

Adaptation and resilience measures can be planned or put in place spontaneously in response to a local pressure. Measures could include large scale infrastructure changes such as building defences to protect against flooding, improving the quality of road surfaces to withstand hotter temperatures as well as behavioural shifts such as individuals utilising less water, significant changes in energy usage and more households and businesses protecting themselves against the risk of flooding.



(Image – flood barriers built to defend urbanised areas for extreme flooding)

England's legislative adaptation and mitigation framework is primarily set out in the Climate Change Act 2008. The Act places several legal requirements on the UK Government and their independent scientific advisory body the Committee on Climate Change (CCC). The CCC advise Government via yearly progress reports and provide scientific information to support the development of the Government's 5 yearly Climate Change Risk Assessment (CCRA).

Following on from the findings of the CCRA, a 5 yearly National Adaptation Programme is produced, which sets the actions that Government and others will take to adapt to the challenges of climate change in the UK.

At a regional level, the 5 Year Environment Plan for Greater Manchester sets out Resilience and Adaptation to Climate Change as one of the 5 climate-related challenges.

The priorities established under this challenge include:

- Priority 1 – Embedding climate change resilience and adaptation in all policies
- Priority 2 – Increasing the resilience of and investment in our critical infrastructure
- Priority 3 – Implementing a prioritised programme of nature-based climate adaptation actions
- Priority 4 – Improving monitoring and reporting

Locally, within Wigan Borough, we have aligned with the priorities outlined in the 5 Year Environment Plan for Greater Manchester, to ensure consistency and development together across the Greater Manchester region. Wigan Borough also borders several other local authorities outside of the Greater Manchester region, therefore close collaboration and strong partnerships are imperative to act efficiently together.

#### Why should we adapt & become resilient to climate change?

Many of the services provided by local authorities and other local organisations are likely to be affected by climate change. Data from the UK Climate Projections 18 (UKCP18) outlines how the most recent decade (2008-2017) has been on average 0.8°C warmer than the 1961-1990 average. All the top 10 warmest years have occurred since 1990 and annual average rainfall has increased meaning on average northern England and Scotland are around 11% wetter today than 1961-1990. Projected trends will see a move towards warmer, wetter winters and hotter, drier summers.

In Greater Manchester, we can relate these projections to extreme storms in February 2020 including Storm Ciara and Storm Dennis and the significant flooding of December 2015 as well as the impacts and aftermath of the months long dry spell across Summer 2018. These extreme weather events are becoming more frequent, result in people being displaced from their homes, communities and / or businesses and disruption to many services, increasing the profile of the changing climate.



(Imaged – the aftermath of Storm Ciara in Greater Manchester, February 2020)





(Image – aftermath of the Summer 2018 heatwave in the UK)

Climate change adaptation and resilience helps individuals, communities, organisations and natural ecosystems, to cope with the consequences of climate change that cannot be avoided. However, these behavioural changes are not autonomous and effective adaptation and resilience requires knowledge, planning, coordination and foresight.

Successful adaptation not only depends on governments but also on the active and sustained engagement of stakeholders including national, regional, multilateral and international organizations, the public and private sectors, civil society and other relevant stakeholders, as well as effective management of knowledge.

Currently the UK, along with the rest of the world, is not on track to meet targets set during the historic 2015 Paris Agreement, where global nations committed to keep global temperature well below 2.0°C rise above pre-industrial times, and to endeavour to limit temperatures to 1.5°C. Therefore, alongside a surge in carbon emissions reductions, there needs to be a shift to ensuring communities adapt and become resilient to the effects of climate change.

#### The role of Local Authorities in increasing adaptation and resilience to climate change

Adaptation to climate change can be planned nationally but is in large part delivered locally as actions need to be tailored to localised situations. Local government provides a vital role in climate change adaptation and resilience, as it is the level of governance closest to the community. Decision-making is arguably one of the largest roles that local government needs to consider with regards to adaptation and resilience to climate change, and this is inherently challenging. In addition to dealing with climate change impacts and uncertainty about future risks and climate projections, local authorities need to manage competition and conflicts with other priorities in an oftentimes crowded policy agenda.

There is also difficulty with mainstreaming adaptation and resilience as effective methods within the political sphere when they come up against traditional climate mitigation measures. Oftentimes, it is only when communities experience the true cost of climate change and extreme weather in environmental, social and economic terms, that provides the strongest catalyst for action, and aided by the recognition that the local environment has value.

To ensure sustained individual, community wide and economic prosperity, as well as enhancing environmental quality, increasing the resilience of local communities, businesses, ecosystems and infrastructure to the impacts of climate change should be a key priority. Local authorities also have responsibility for promoting health and wellbeing in economic, social and environmental terms. Therefore, it is paramount that local authorities are considering how to actively prepare for climate change to ensure that their communities, particularly those that are the most vulnerable, are resilient to future climatic impacts.

The onset of a global pandemic, namely coronavirus (COVID-19), at the start of 2020 highlighted the significant importance of resilience to external pressures and shocks. Within the UK, lockdown from late March 2020 initiated overnight behavioural changes from individuals, communities and businesses, that had not been witnessed since the First and Second World Wars. Local authorities completely overhauled their standard working practise, redeploying many staff to ensure essential services continued, and vulnerable residents and communities were cared for. Emergency and contingency planning has been brought to the forefront of daily life for local authorities, which has emphasised areas of weakness that need to be developed or updated ahead of any further external pressures.



(Image – socially distanced active travel is encouraged across Greater Manchester)

It is apparent that adaptation and resilience is playing a key part in the recovery from COVID-19, with many people's lives altered as a consequence of this. Many of the behavioural changes experienced during lockdown have had a sustainable dimension, such as curtailing the vast majority of air travel, dramatically reducing vehicular movement and an significant increase in active travel. Although in the height of lockdown, measures imposed could be considered draconian in nature, it is clear that the vast majority of people had shifted to slightly more sustainable lifestyles, adapting fairly smoothly to new ways of living. It is imperative that local authorities build on these 'green behaviours' that not only benefit the planet and the environment, but residents health, wellbeing as well as their finances.

### Climate Adaptation and Resilience within Wigan Borough

To acknowledge the urgent issue of climate change, Wigan Council, along with many local authorities across the UK, declared a climate emergency on 17<sup>th</sup> July 2019. As a member of the Greater Manchester Combined Authorities, we also aligned with a centralised target of achieving net carbon zero as a Council by 2038 or sooner, ensuring we influence the Borough to also achieve this date.

We are currently in the final stages of development of our Outline Climate Change Strategy for Wigan which has been delayed due to the onset of the coronavirus. The strategy has outlined six strategic climate change action themes:

- Our Adaptation & Resilience
- Our Air Quality & Transport
- Our Natural Environment
- Our Built Environment
- Our Sustainability & Consumption
- Our Communities & Wellbeing

Each of the themes will have a dedicated working group comprising internal colleagues across service, and external stakeholders who will work together ultimately to create an action plan. With regards to Adaptation & Resilience, extensive work has taken place on this important

topic of climate change which has been further shaped by our experience and response to COVID-19. We have conducted a workshop, research and subsequent report and we are in the process of setting up the Adaptation & Resilience Working Group to begin the work on delivery of the action plan. At all stages, we have worked alongside our wider Greater Manchester partners at the Combined Authority and have sought knowledge and experience from leaders in climate resilience.

A large focus for Wigan Council in 2020, alongside all other authorities, has been the response and subsequent recovery to COVID-19. However, it has been of the upmost importance to Wigan Council, to ensure our diligent climate change work has not shifted in priority, and this has continued to be the major focus of work for several key officers.

We have continued to align our work on adaptation and resilience to the 4 priorities that Greater Manchester highlighted in the 5 Year Environment Plan for Greater Manchester.

- Priority 1 – Through various services including Network Management, Civil Contingencies, Planning Development & Planning Policy, as well as our Transformation team, we are beginning to map out vulnerabilities to not only service provision and strategic workplans, but also our residents, communities and businesses to ensure climate change, and the specific priorities of adaptation and resilience are included in all policies and development moving forward
- Priority 2 – Many of our teams including Highways, Flood Risk, Public
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(Image – Naturalising the Borough with wildflowers growing near Pennington Flash in Leigh)



(Image – Wigan Flood Alleviation Scheme built by the Environment Agency now protects approximately 600 homes and 170 commercial properties from flooding of the River Douglas in the low-lying southern areas of Wigan)

As with many local authorities, our external engagement has been limited for the best part of 2020, due to COVID-19. However, when safe to do so, we plan to begin a wealth of engagement activities across our borough with a range of residents, communities, businesses, schools, charities and other organisations, to begin widespread education and support with regards to climate change. In the meantime, we are developing virtual campaigns to virtually engage with the people of Wigan Borough, to update them on important climate change developments, and provide them with their own route map to carbon neutrality. We are also reviewing our internal resilience to extreme weather, to understand how future events may impact our service delivery, so that we can understand and correct any weaknesses.

Local authorities simply cannot solve the problem of climate change by themselves. We all have a duty to transition to low carbon and sustainable lifestyles, by the choices we make in life and what we consume in the form of products and services. However, local authorities have a duty to help protect and support their residents and communities from increasing extreme weather events caused by a changing climate. Knowledge and education are key, and a willingness to adapt to different ways of life, as we have all experienced during COVID-19, is the only way we will be able to increase our combined resilience to the impacts of climate change.