



Weathering Change

Community resilience in the face of climate change

Glasgow Centre for Population Health

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Summary of key learning

Weathering Change is an action research project managed and delivered by: the Glasgow Centre for Population Health (GCPH); Sniffer; greenspace scotland; and Glasgow City Council (GCC). Partners have been exploring how people and organisations in North Glasgow can work together to become more resilient to current and future environmental, social and economic challenges, all of which can be exacerbated by a changing climate. An initial scoping phase enabled an area profile to be created based on key data sources and conversations with staff from community and statutory organisations in the area. Members of the project team subsequently engaged with people living locally, before feeding back the learning from this process to the community groups and statutory organisations already engaged with. Finally, a series of community actions were proposed based on feedback and learning generated throughout the project.

Key learning

Key learning has been drawn from a number of areas, including the engagement approach, how the project was designed and delivered, ways of working and how to build community resilience in the face of a changing climate. This learning is summarised under four key headings.

Local engagement

North Glasgow may become more resilient if various local and statutory organisations work together to address common issues. This project has highlighted a pressing need for collaboration and resource pooling to find productive uses for vacant and derelict land, to link up existing growing projects, to improving active travel and to incorporate climate change thinking into future placemaking processes. The engagement process highlighted the following:

- Community consultation with local residents in North Glasgow revealed that climate change is generally perceived to be happening. However, it is not seen to be an important local issue given the context of poverty, deprivation and the wish for more physical and social regeneration in the area.
- Several local organisations have a well-established environmental component to their work (e.g. community gardens, growing groups, education programmes). Despite this, local groups are not always well connected due to the competitive funding environment.
- Local people identified the following priorities for the area: creating jobs; opportunities for young people; environmental conditions; local facilities; transport; and food options. From these broad issues, project team members were able to consider how they may be shaped by a changing climate.

- Despite some interest at the time of consultation, local people consulted did not participate in subsequent project activity. This may be due to consultation fatigue, a lack of interest or the slow pace of change of past regeneration.
- Findings here suggest that future consultation should be linked directly to decision-making processes and that regular communication with local people following consultation is important to maintain trust.
- Priorities for action were identified by local and statutory organisations in relation to better partnership working between neighbouring communities, through unlocking vacant land for development, establishing a food-growing network and identifying opportunities to improve travel/active travel.

Project design, approach and delivery

A theory of change developed for Weathering Change identified a way of working for desired outcomes to be achieved. This included understanding the local context and existing challenges, identifying local priorities and planned activity in the area, and aligning the work of local and statutory organisations. This approach can be effective if supported with resources to deliver improvements, a commitment on the part of statutory organisations to work with communities and a governance structure to follow up on priorities identified. Key learning from the project design and approach included the following:

- Extensive scoping in the early stages of the project was important to better understand the local context and identify opportunities to add value to local or statutory plans/activity.
- Community consultation was an important process for identifying local priorities and getting organisations with a vested interest in the area together.
- Aligning project findings with decision-making processes (i.e. at a strategic level) was challenging due to limited resources and the slow pace of regeneration.
- Further work is required to overcome the barriers to successful partnership working between local and statutory organisations.
- The final phase of the project (prioritising actions) required regular dialogue within a constantly evolving social and political landscape. The lack of resources allocated to community development meant that managing and progressing this was challenging.

Governance and ways of working

For effective collaboration to occur, statutory organisations need to be committed to working with local organisations and have dedicated community development staff. This may also require

preliminary work to build understanding of organisational differences and the barriers to working together. Findings from this project reveal that statutory organisations need to be working more closely with local organisations to support the delivery of their own policy. Key learning in relation to governance and ways of working included the following:

- Timing was an important factor in shaping whether productive collaborations could emerge. For local groups there tended to be a wish for quick improvement, whereas statutory organisations tended to be working in a more strategic and long-term way.
- Statutory organisations and local groups were invited to a workshop to prioritise actions for the area that could be jointly delivered. Although priorities were identified, mechanisms for taking them forward were not.
- Priorities identified at project workshops have been slow to develop. Reasons for this include not having the resources to take forward agreed actions, sporadic attendance from representatives of statutory organisations and delays in the preparation of new plans to be brought forward for consultation.
- It was widely felt that public policy is in place to support the activities of community organisations. A key challenge is to understand how such policy can be effectively implemented.
- Many of the issues identified through Weathering Change have a wider significance for the city region, including the need for a more strategic and better resourced approach to the use of vacant and derelict land.

Community resilience in the face of climate change

Learning from Weathering Change suggests that a combination of direct and indirect approaches to supporting community resilience in the face of climate change are needed. In many areas local groups are already doing work to mitigate and adapt to climate change through a variety of projects. However, building understanding of the likely impacts of climate change locally is needed, with due consideration given to how it may be a stress multiplier for other issues. Key learning on how to support community resilience in the face of climate change is as follows:

- Environmental work is being delivered by local organisations in a variety of ways already. Addressing climate change is a motivation for doing this work, although the subject is rarely broached directly.
- Climate adaptation was not an explicit consideration in identifying future priorities for North Glasgow; it was instead seen to be part of a process of wider action to reduce social and environmental injustice.

- To encourage community participation, findings from this project suggest that climate change can be addressed indirectly through subjects that are relevant to people's everyday lives (e.g. heating, energy, getting around, food).
- There is also value in considering a changing climate more directly, in particular around what local people would like to maintain or improve in their community in the face of climate change. This requires an understanding of what impact climate change is likely to have locally, including how it may be stress multiplier for a range of existing community issues.
- Food growing, active travel, placemaking and regeneration (social and physical) are useful and appropriate subjects for introducing conversations and supporting action on climate adaptation.
- Creative and pro-active approaches may be needed to effectively engage with people about climate adaptation, rather than consultation events designed around a known problem.

1. Background

1.1 The resilience context

Resilience is an increasingly relevant and widely used concept for framing multiple and inter-dependent challenges. The term can be applied across a range of disciplines and scales, and is commonly used to describe the capacity of individuals, communities or places to withstand the impact of acute shocks and chronic stresses. For the purpose of the project the following definition was agreed:

The capacity of individuals, communities, institutions, businesses and systems to survive, adapt, and generate new ways of thinking and functioning no matter what kinds of chronic stresses and acute shocks they experience.

1.2 Glasgow's resilience strategy

In 2014 Glasgow became part of 100 Resilient Cities – an international learning network pioneered by the Rockefeller Foundation. As part of the city's commitment to the network Glasgow City Council (GCC) released a resilience strategy in September 2016¹. The strategy is a city-wide partnership that brings together the aspirations of communities, public sector organisations, private businesses and third sector groups. It seeks to support and deliver a more resilient city by integrating a number of existing policies, plans and programmes. Successful delivery of the strategy depends on collaboration between city partners to deliver projects and actions on the ground. Glasgow's vision for a more resilient city is as follows:

“Glasgow is a thriving, inclusive and resilient city. We celebrate innovation, production and culture. Our future city is a fair society, where all Glaswegians can enjoy the best possible health and well-being, and have the opportunities they need for our city to flourish.”

Four interdependent strategic pillars frame the delivery of the strategy: 'Empowering Glaswegians'; 'Unlocking place-based solutions'; 'Innovating to support economic growth'; and 'Fostering civic participation'. Within 'Unlocking place-based solutions', all three aims were deemed to be relevant to the design and delivery of the Weathering Change project:

- To create an integrated resilience exemplar in the north of the city.
- To tackle the local impacts of global climate change.
- To unlock the community, environmental and economic potential of derelict and vacant sites.

The extent to which these aims have been supported by Weathering Change are discussed later in this report.

1.3 Scotland's changing climate

Scotland's climate is changing and will continue to change in the future, presenting a wide range of challenges to the environment, infrastructure, economy and prosperity of people. Climate change has also been described as one of the greatest modern-day societal threats², which will only be addressed by fundamentally changing established ways of living. By planning and preparing for change now, individuals and communities can become more resilient to this threat, reduce its impact and be better able to take advantage of the opportunities that it may bring³.

Scotland's climate is already changing. Projected climate trends for the west of Scotland are:

- Average temperature will increase in all seasons, with the greatest increases in summer
- Heatwaves and extremely hot summers will occur more frequently in the future
- Rainfall is projected to become more seasonal, with an increase in average winter and autumn rainfall
- Average summer rainfall may decrease
- Heavy rainfall events may occur with more frequency in winter, spring and autumn
- Winter storms with extreme rainfall may become more frequent
- Sea level will rise.

1.4 Climate change impacts

A changing climate presents a number of direct and indirect threats to public health, some of which are already impacting on people in the UK⁴. Direct threats include flooding, heat stress, drought and an increased frequency of extreme weather events, while indirect threats include reduced air quality, vector-borne disease, food insecurity and displacement⁵. Rising temperatures, meanwhile, and the associated heat-related impacts resulting from increased injury, worsening respiratory conditions and even increased mortality, may be compounded by demographic shifts towards a more elderly population. Although warmer winters are likely to result in fewer excess deaths, this reduction is not predicted to offset the increased risk to mortality posed by heat⁶.

Climate change has been described as a 'threat multiplier', meaning that careful forward planning will be needed to protect those with the fewest resources to cope in the aftermath of a climatic event⁷. Climate justice can be considered both in terms of how people contribute to, and are impacted by, climate change. Indeed, the disproportionate impact of climate change on certain

demographic groups (e.g. those living in poverty, disability groups or the elderly), can be compounded by the fact they are less likely to be contributors and have less control over climate-related decision-making and where resources are allocated⁸. A range of socioeconomic factors can shape people's experience of climatic events, including income, housing tenure, affordability of damage insurance and how well connected they are to protective or supportive services. Without access to protective factors, adverse weather events will cause stress and may lead some people to adopt unhealthy habits as a coping mechanism⁹.

1.5 Climate change adaptation, participation and placemaking

Adaptation is defined as the adjustment in economic, social or natural systems in response to actual or expected climate change, to limit harmful consequences and exploit beneficial opportunities³. All major public sector organisations are now required to submit an annual Climate Change report to the Sustainable Scotland Network (SSN) to ensure that they are held accountable for their actions and are demonstrating continuous progress towards both carbon reduction and adaptation¹⁰. To support this transition, Adaptation Scotland – a programme funded by the Scottish Government to help the public sector, businesses and communities understand how to plan for the impacts of climate change – offer a number of examples of adaptation activities, from expanding drainage systems, surface water management, and providing effective emergency planning, to smaller scale interventions that can be shaped by local people, such as greening streets and public spaces, local growing and improving transport connectivity¹¹. According to an evidence review on approaches to building community resilience to climate change by the Joseph Rowntree Foundation (JRF), adaptation activity may be most effectively delivered when public bodies and community organisations work in partnership. The review also highlights the important role of policy areas such as planning and health in supporting the agenda. Climate adaptation, therefore, relates to a series of actions that can contribute to participatory placemaking processes. Placemaking is a recognised and endorsed approach to development in Scotland, defined in Scottish Planning Policy as a creative and collaborative process that includes the design, development, renewal or regeneration of the built environment¹². In light of potential for climate adaptation to be addressed through placemaking approaches, there is a strong case for urban design guidelines and frameworks for assessing places to be amended to incorporate adaptation considerations¹³. In the context of placemaking in Scotland, there is perhaps scope for the Place Standard tool to be reviewed in terms of how climate change adaptation can be addressed through its use with communities.

2. About Weathering Change

Weathering Change is an action research project delivered by the Glasgow Centre for Population Health (GCPH), Sniffer, greenspace scotland and Glasgow City Council (GCC). Project partners have been exploring how people and organisations in North Glasgow can work together to become more resilient to current and future threats in an area of multiple social, economic and environmental challenges. Through identifying planned activity and future priorities for local and strategic organisations in North Glasgow, this project has been delivered with the intention of joining up and adding value to planned activities in the area.

2.1 Geographical focus

Three neighbouring areas in North Glasgow were chosen as a geographical area for the project: Lambhill; Possilpark; and Milton. North Glasgow is an area of strategic regeneration focus, with significant capital being invested in delivering infrastructural improvements. Some team members had previous experience of working in the Lambhill area through 'Climate Ready Lambhill', a project¹⁴ which aimed to develop awareness and stimulate community action on climate adaptation. Socioeconomic and demographic profiles of the three areas show high levels of deprivation and land vacancy in each, but notable differences in physical characteristics, available amenities and demographics. Several community organisations were found to be working in the three areas to mitigate a range of challenges and create new opportunities for local people. Community-based organisations, in particular those supporting environmental improvements, were identified and consulted throughout the project.

Figure 1: Map of Lambhill, Milton and Possilpark.



2.2 Project aims and intended outcomes

Three project aims were agreed to ensure that relevant learning could be captured for different audiences. These aims, which reflect the wish to capture locally relevant findings and wider learning, were intended to:

- shape future practice in the defined project area (operational learning)
- articulate lessons on the approach taken (process learning)
- develop approaches for more effective engagement with communities around climate adaptation and related activities (climate adaptation policy and practice).

Table 1. Project aims.

Project aim	Type of learning	Audience
To better understand local priorities and to support and enable collaborative action on climate adaptation responses in North Glasgow	Operational	Local organisations in defined project area
To gather lessons from the approach taken to delivering the project and explore the effectiveness of action research for gathering this learning	Process	Practitioners
To generate transferable learning around how to successfully engage with communities in climate adaptation and wider regeneration activities	Climate adaptation policy and practice	Policy-makers and practitioners

On agreement of the project aims, a logic model (Appendix 1) was developed to identify actions and an appropriate approach to meet the following desired project outcomes:

- Climate-resilient thinking and responses are introduced into the process of community regeneration in North Glasgow by building on the existing or planned activity of local and statutory organisations.
- Institutions and communities are better aligned as a result of the project and are working together to build resilience in the face of climate change.

- Emerging policy and plans at a local and national level are shaped by learning generated through the project.
- Learning is being used to inform practice/activities in other geographical areas.

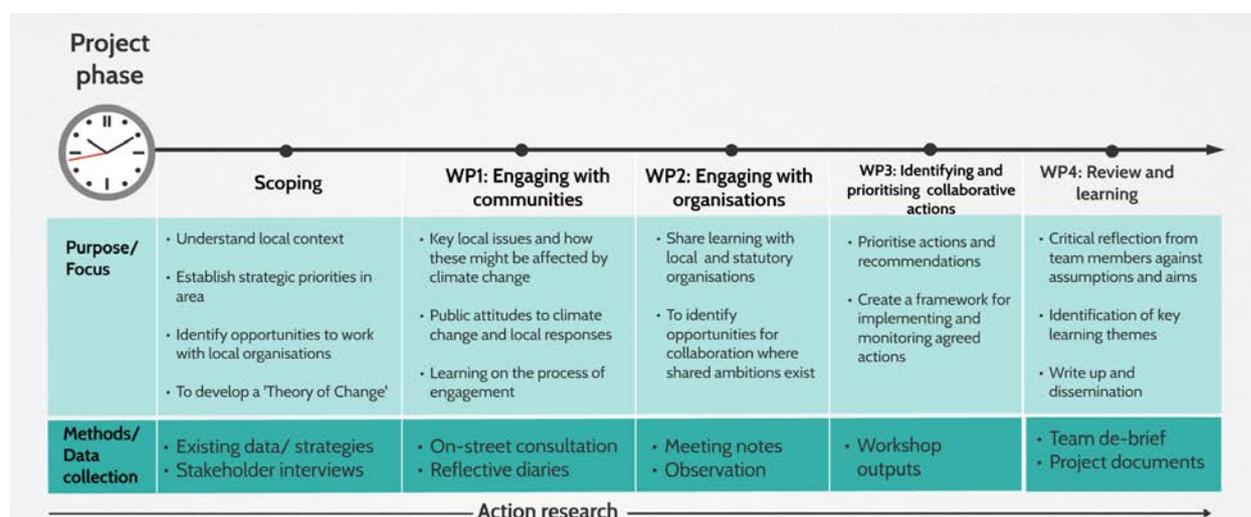
2.3 Project work packages

Following scoping to build an up-to-date area profile and identify key contacts working in North Glasgow, the project was designed around four distinct work packages (WP), as follows:

- WP1: Engaging with communities.
- WP2: Engaging with organisations.
- WP3: Identifying and prioritising collaborative actions.
- WP4: Review and learning.

Figure 2 summarises each phase of work and the methods and data collection used to gather learning. Each work package is described in more detail in Section 3.

Figure 2: Work packages and methods.



2.4 Methods and data capture

Data and learning have been gathered through action research, drawing on a range of methods and techniques to capture learning from each work package. The main methods and data sources are described below:

- Scoping (to understand the local context for the project): existing data sources; local intelligence; strategic drivers; and plans for development/regeneration.
- Feedback from local people through street-based community engagement.
- Continuous reflective practice on the efficacy and transferability of the community engagement approach.
- Feedback from participants of meetings and workshops.
- Qualitative interviews focusing on participant journeys, including key stakeholders in local and statutory organisations and members of the project team.
- Observations made by fieldworkers of the consultation process.
- A reflective de-brief with project team members.

An evaluation framework, based on key research questions and how data might be captured for each, was drawn up and is provided as Appendix 2.

3. Scoping

An extensive scoping phase took place to gather information on a range of contextual factors.

This process involved:

- engaging with a range of key stakeholders in order to map out key activities (planned and intended) within North Glasgow
- identifying emerging plans and objectives of statutory institutions to inform where and how to plan interventions with the community
- proposing a way forward for the project advisory group to consider.

An area profile was developed using routinely collected data and semi-structured interviews with key stakeholders. An additional half-day workshop was held with Local Authority officers working in North Glasgow. Emerging strategies, plans and priorities for the area were identified, while representatives from local organisations provided valuable insights into local issues and priorities for change. This process enabled the project team to define a geographical focus for the project and identify opportunities to add value to planned activity. Information gathered enabled a socioeconomic, environmental and strategic profile of North Glasgow to be developed, which provided detailed information on the following:

- Socioeconomic and health issues.
- Environmental challenges and opportunities.
- Community engagement.
- Recreation and greenspace.
- Regeneration and strategic drivers of change.
- Water management.
- Routinely collected data.
- Funding sources.

3.1 Area profile

North Glasgow, like many other parts of West Central Scotland, has experienced post-industrial decline. Population data reveals high deprivation and unemployment, low educational attainment and multiple health challenges compared with the rest of the city. Based on conversations with staff working in the area and available area statistics, the following key issues were identified:

- Life expectancy is low for both men and women.
- A high percentage of young people are not in education, employment or training.

- Around one third of adults experience income deprivation and are in receipt of out-of-work benefits.
- North Glasgow residents are more likely to report having a disability than the rest of the city's population.
- Of those with dependent children, single-parent households account for more than half of the area's population.
- Almost 100% of the local population live within 500 metres of vacant or derelict land.
- Air pollution, flooding and a lack of green infrastructure are local environmental challenges with climate relevance.
- The surface water management system is stretched at a number of points in the area.
- There is limited good quality greenspace in the area.
- Consultation on potential area improvements have not always been followed up quickly, leaving people frustrated and unwilling to engage subsequently.
- A number of third sector organisations provide opportunities for local people to participate in community life.
- Rates of walking and cycling are low and there is limited infrastructure to support active travel.
- Recreation opportunities exist but are hindered by the quality of the local environment.
- Food options in the area are perceived to be poor.
- Funding is available for small-scale grant applications and money has been earmarked for large-scale regeneration and infrastructure projects in the area.

3.2 Assets and opportunities

Despite identifying challenges, emerging opportunities and ongoing work were also acknowledged. As an area of long-term regeneration focus, new ways of managing water and alleviating flooding were being explored, with recognition being given to the opportunity to simultaneously increase biodiversity and greenspace. There are a number of key greenspaces within the area including two large parks, allotment sites, community gardens and two local nature reserves (one designated as a Site of Special Scientific Interest).

Several organisations work in the area to address issues relating to health, poverty, inequality and social isolation. Many of these are involved in projects or work related (directly or indirectly) to climate change mitigation or adaptation. Organisations were identified that had secured money from the Climate Challenge Fund to deliver a range of climate-related activities, including:

- local growing
- temporary and permanent use of vacant land and derelict buildings

- campaigning for better greenspace
- attending events relating to new development or regeneration projects
- consultation responses to draft plans and strategies
- providing education and skills development on subjects relating to climate change (e.g. waste, food miles, local growing, carbon reduction, fuel poverty, active travel, carbon reduction, sustainable construction).

3.3 Stakeholder interviews

Interviews took place with five members of staff from Glasgow City Council (GCC) and two community organisations (CO) from North Glasgow to meet the following objectives:

- To identify what staff from local and statutory organisations felt should be the main priorities for the area in light of a changing climate.
- To identify how Weathering Change could support the work/planned activities of those interviewed.

Each interviewee was directly involved in the project (i.e. through the project advisory group) or had attended events or meetings. Separate topic guides were developed for local authority staff and representatives from community organisations, but interviews broadly covered the following:

- Their role, responsibilities and how climate change features in work.
- Perceived local climate change impacts.
- Potential opportunities and benefits of climate change.
- Public perceptions of climate change adaptation.
- Public engagement and consultation on climate change.
- Priorities for improving North Glasgow in the face of climate change.

Staff interviewed from Glasgow City Council included officers and managers working in a role relating to climate adaptation, resilience or sustainability. Most had a geographical remit for Glasgow or the wider city region, rather than for North Glasgow. All staff interviewed highlighted the important role that the Council has in engaging local citizens in decision-making about the future of the city, and all worked in a role that involved some form of public engagement (e.g. public requests, community consultation, hosting public events). North Glasgow was felt to be an important area of focus for regeneration and a possible future exemplar for climate adaptation activities. Those interviewed from community organisations, meanwhile, were involved in the day-to-day running and management and had secured funding for climate-related work and had a strong focus on environmental sustainability.

Current and predicted climate change impacts

Climate change was most commonly described in relation to flooding and extreme weather events. Localised flooding – although not seen to be as important as other local issues – was described as a challenge that is likely to get worse.

“In Glasgow flooding is an issue and it might become worse.” (GCC2)

“Flooding is an issue locally but I’m not sure that the public think about it much at all.”
(CO1)

The existing building stock was felt to be particularly susceptible to the impacts of climate change, while retrofitting older tenemental buildings was described as a significant and growing challenge for the city. Protecting vulnerable people living in poor quality housing was identified as a matter of priority.

“Increased rainfall will also affect the integrity of the built environment, especially tenemental housing stock where roof repairs will become a significant problem.” (GCC1)

“There are people who are at risk, the very young and very old, and the people who live in poorer housing, they are more likely to be disproportionately impacted and they need to be protected.” (GCC2)

Heatwaves and drought were additional weather impacts that were predicted to require protective design solutions.

“We already suffer from urban overheating and that’s going to be exacerbated.” (GCC2)

“Heat is a potential future issue – keeping water above ground can be an effective way of absorbing heat.” (GCC4)

Long-term, global food shortages and deteriorating air quality were seen to be potential future risks to the population. Price increases of certain essential food commodities were thought to be inevitable and would test the resilience of people in difficult financial circumstances.

“Most of our food comes from other countries, and if they’re impacted by climate change then the price and availability of food will be impacted.” (GCC2)

“There’s the potential for increased air pollution.” (GCC5)

Opportunities and benefits

Milder winter weather was described as a potential benefit of climate change due to fewer excess winter deaths and a reduction in fuel poverty. Warmer weather was also felt to be an opportunity to attract tourism and for local people to enjoy a more outdoor lifestyle.

“We know there are warmer, hotter summers so that’s an opportunity for tourism, but also for people to be outside more, to spend more time in parks and have a better quality of life, but only if there’s the infrastructure to support this.” (GCC2)

Local food growing was felt to be an important activity for increasing community participation and making Glasgow more resilient to climate change. Local growing and engaging local people on the subject of food was seen as an opportunity that needed to be built on.

“Food is one of the great pleasures in life, there’s a great opportunity to engage with people on the subject of food.” (GCC5)

“If you look at other cities in the UK they are a lot further on than Glasgow, we need people to come forward with ideas [in relation to growing].” (GCC5)

Linked to food growing, the remediation of vacant land was described as an important issue priority to reduce the blight on the community and to make places feel ‘alive’.

“The ability of the Council to remediate land and make it climate ready also offers opportunities for bringing useful land back to the development market.” (GCC1)

“Facilitating development in areas that have historically been neglected is really important, particularly in terms of remediating vacant land.” (GCC3)

Opportunities and benefits were also described in terms of the potential for climate change to provide an impetus for wider societal change. Shifts towards cleaner energy, more sustainable forms of travel, greening and a reduction in energy use were described as agendas that are part of the bigger picture of creating healthier places and building more resilient and participatory communities.

“There’s a strong correlation between the provision of green infrastructure and health and wellbeing.” (GCC3)

“There’s also the need to create more walkable neighbourhoods – addressing climate change can be part of this. I think it’s about moving beyond thinking about climate change

as an isolated issue. It needs to be part of the bigger picture of building more resilient communities in a number of ways.” (GCC2)

Localised renewable energy schemes and surface water management schemes were offered as examples of deliverable changes that could involve community participation and ownership.

“I believe that people need to have both a sense that they can do things themselves to make their community better as well as a sense that the agencies which are supposed to serve them are also doing their bit.” (GCC1)

“Micro renewables could provide cheap energy for community facilities; SUDs [Sustainable Urban Drainage] interventions could address any flooding issues whilst contributing to placemaking.” (GCC4)

Overall it was felt that Scotland was in a relatively favourable position in terms of projected future climate impacts, potentially leading to significant future in-migration and business opportunities due to our expertise on renewable energy.

Public attitudes to climate change and adaptation

There was a general consensus that the impacts of climate change – and specifically how to adapt to this change – were not well understood or high on the public agenda.

“Generally there’s not strong understanding of climate adaptation. The emphasis at the moment is predominantly on emissions. Adaptation is difficult to measure, whereas carbon reduction is more straightforward.” (GCC2)

“I don’t think the public has much idea how they might prepare.” (GCC5)

Where some understanding or interest had developed, this was reported to have been on the back of adverse weather events (e.g. flooding). Proactive attempts to engage with people where there was not seen to be an immediate personal threat were less successful.

“There’s not great interest [in adaptation] if people are not impacted directly. I guess it drops off their list of priorities. There’s perhaps a degree of inevitability about this though.” (GCC3)

Where a need for climate adaptation measures had been identified, examples of more proactive forms of public engagement were given. This included successful recent projects which linked environmental issues with community arts.

“I think that we need to be more creative and innovative in this area, which otherwise tends towards technical PowerPoint presentations that aren’t likely to offer much as to why people should come out of their homes and engage with the agenda.” (GCC1)

Local representatives commented that that the lack of public interest in climate change was primarily because it had less impact on people’s lives than other more immediate issues.

“People don’t think about climate change – it’s not at the forefront of their mind.” (CO1)

“We see climate change as an important but secondary issue.” (CO2)

In light of the challenges facing communities in North Glasgow, attempts to engage with local people on climate-related issues were said to have focused on subjects that were relevant to their everyday lives. An explicit focus on climate change was not felt to be necessary.

“Lots of the organisation’s activities are related to climate change somehow. Maybe the most successful part of this is the work with youth groups around recycling more, carbon use, how to minimise that, why it’s good to grow your own vegetables. It’s about keeping things closer to home.” (CO1)

“Rather than talking to local people about climate change, which would not have traction, we focus on recycling, cutting down on waste, etc.” (CO2)

Education was seen to be important for changing public attitudes and behaviours relating to climate change. Progress was described in terms of teaching young people, but it was felt that more needed to be done to change the attitudes and behaviour of older people.

“I think we need to build it into existing education streams, including adult education. The issues are too intangible and difficult to get across in an informal way.” (GCC5)

“Young people have a good understanding of the issues and school is good in this regard.” (CO2)

Collaboration on climate change

Climate change adaptation was described as a Council commitment that needed to be embedded across all services and strategies. It was also argued that the Council had a role to play in enabling communities to engage in activities that support climate adaptation.

“It needs to be thought about in all decisions or strategies relating to the city. I think it’s important to have an adaptation strategy initially, but eventually it should become part of mainstream practice.” (GCC2)

“At the very least the Council needs to be able to let people know where to go if they have an idea in relation to growing. Perhaps we wouldn’t have the resources to support something but we should be able to put people in the direction of information of how they can go about it.” (GCC5)

For community organisations, investment in the area and funding for their own activities was their main priority.

“There’s not enough money invested in the area to deal with the issues.” (CO2)

“We’re very reliant on grant funding and we don’t have many people donating.” (CO1)

A more strategic approach to funding and greater support for the work of the voluntary sector was also said to be needed, given its importance for delivering the priorities and aims of the Council and the Scottish Government in terms of empowerment and supporting vulnerable people.

“To be able to have funding for three to five years would be wonderful because you can actually strategically plan.” (CO1)

“All their strategies say this is going to buy in to this [supporting the voluntary sector] but it doesn’t really seem to happen this way.” (CO1)

“We play an important role in delivering the policies of the Council. I think we should be recognised a bit more for this.” (CO2)

Lastly, interviewees were asked to prioritise actions to support the development of North Glasgow: Issues raised included:

- raising awareness of the need to adapt to climate change in communities throughout Glasgow
- building on established links with community and statutory organisations
- delivering on agreed priorities for change through concrete actions
- remediating vacant and derelict land
- encouraging new development in North Glasgow
- continuing to promote and encourage local participation in food growing
- finding solutions to retrofitting existing buildings
- providing education on climate adaptation for people of all ages
- supporting the establishment of community-run energy projects
- linking climate adaptation with placemaking (of which there is a renewed emphasis through the City Development Plan and supplementary guidance).

4. Work package one: Engaging with communities

Community consultation took place to gauge public opinion on issues that mattered to people in North Glasgow. The rationale for this approach was to reach a broad spectrum of the population, including those who may not traditionally engage with community organisations. Those consulted were also asked to reflect on how the things that matter to them might be shaped by a changing climate. 'icream architecture'¹⁵ (an organisation that specialises in design and public engagement) was appointed to assist with the creation of a portable pop-up stall and engagement materials to use for consultation. The materials were developed to stimulate conversations around five key themes:

- Leisure.
- Getting around.
- Food.
- Keeping warm and dry.
- Social connections.

'Conversation themes' were chosen because they represented an aspect of everyday living deemed relevant to being climate ready. Branding was also created for the project under the name 'Whatever the Weather'. Engagement materials were transported by a purpose-built rickshaw; which was then parked at locations across North Glasgow. Once parked, a wooden structure was assembled to display the following engagement materials:

- A map of North Glasgow screenprinted on recycled textiles to create a blanket, with needles and threads available to sew on and tag areas or routes of interest.
- Branded tote bags containing food and recipe cards (provided by North Glasgow Community Food Initiative), together with information about the project.
- Luggage tags for people to write down their ideas about 'what is great about the area'.
- Information on how to keep 'warm and dry' at home.

Figure 3: Community consultation in North Glasgow.



4.1 Engagement approach

Six community engagement sessions were held using a combination of street-based community engagement and visits to local organisations. A topic guide covering the five climate-related themes was used to inform conversations (Appendix 3). The guide included questions on gender, age, ethnicity and time spent living in the area. Respondents were also asked to give their contact details if they were happy to do so. The topic guide served as a reminder of the key subjects to cover rather than a script to be adhered to strictly.

4.2 Profile of respondents

Respondents were typically female (67%), White Scottish/British (95%) and had lived in the area for over ten years (75%). People aged '65 or over' were the most common responses in terms of age (27%). Information was provided to each participant on how the information collected would be used. Ninety-five consent forms were obtained to enable feedback to be written up and published.

4.3 Key findings

Learning from the consultation was categorised under the following headings:

- Key local issues and priorities for improvement.
- Public attitudes to climate change.
- Local action on climate change.
- Learning from the consultation process.

Local people described multiple challenges in the area. While the priorities and issues reflect a specific geographic context, transferable learning was found in terms of the types of challenges that are common in areas of socioeconomic disadvantage. Challenges relating to 'the environment' (built and natural), 'social issues', 'economic conditions' and the availability of 'facilities and amenities' were commented on in all three geographical areas, as well as some positive aspects of local life. The most common issues raised by local people are summarised below:

The environment

- Vacant and derelict land.
- Litter, maintenance and air pollution from traffic.
- Accessibility of high-quality green and open space in comparison with other parts of the city.

Social issues

- Drug and alcohol misuse.
- Feelings of safety and territorialism.
- Limited opportunities for young people.
- Generational differences.

Economic conditions

- Limited investment in improving the area.
- Joblessness.
- Limited volunteering options.

Facilities and amenities

- A lack of good quality facilities.
- Limited food options.
- Transport options.

Positive aspects of local life

- Local organisations are doing valuable community work.
- The community is supportive and people have a sense of belonging and identity.
- Some areas have undergone good quality regeneration.

Public attitudes to climate change

Most of those who engaged with the researchers believed that climate change was a threat and many commented that seasonal weather patterns had changed over time. Specific examples of locations that are vulnerable to flooding or bad weather were given, although adaptive responses were not always well understood or seen to be necessary. Instead, there was a perceived need to 'get on with life', which was generally accompanied by feelings of powerlessness to respond to climate change. Some people expressed that they did not feel it should be their responsibility to change their behaviour in the face of climate change; instead pointing to the government or their local authority to set a better example.

Community activities relating to climate change or sustainability were identified, although not all of these activities/projects had a sole focus on the environment or addressing climate change; several people attended for social reasons or to gain new skills, rather than to fulfil environmental interests.

Learning on the engagement process

Reflective learning questions were considered by researchers at the end of each engagement session. This provided an opportunity to think about how subsequent engagement sessions might be adapted, as well as providing learning to shape future engagement approaches. The following questions were considered by researchers.

1. What worked well today? What didn't?
2. What were participants most receptive to?
3. How did climate change feature in the conversations today?
4. Do we need to do anything differently?
5. What are our impressions of what is being and done and what might be done in light of climate change locally?
6. Any other observations?

The main learning points from this reflective process were:

- The conversational approach was useful at encouraging people to talk about what was important to them. At times it could be difficult to steer the conversation towards, or keep the conversation related to, the subject of climate change.
- The various materials and props used were effective at engaging people at specific community events, rather than on-street engagement where people were generally more reluctant to participate.
- People were eager to talk about what had changed and what needed to happen to improve the area. Of the five chosen themes, 'food', 'getting around' and 'play and leisure' (generally through comments on the quality of the environment) were easier subjects to broach than 'social connections' or 'keeping warm and dry'.
- People were more likely to approach researchers when an activity was taking place (e.g. setting up) than when a pro-active approach was taken to consultation.
- The approach was most effective at engaging older people who had lived in the area most of their life. Working-age people were more difficult to engage with and were more sceptical of the researchers' intentions.

Observation was an important aspect of the engagement process and a key part of the reflective learning process. Pertinent observations across the different locations were:

- Walking and driving appeared to be the most common forms of travel. Cycling was uncommon for active travel purposes or for leisure.
- The majority of people were out in the community with a defined purpose (e.g. visiting the shops) rather than for leisure.
- There was a strong sense of community in each of the three areas and most people wanted to see improvements for future generations.
- The availability of shops impacted on people's travel behaviours (e.g. some people walked a long way to get food).
- Community organisations were most commonly attended by young people or those of retirement age (other than staff members), rather than the working-age population.
- Poor weather did not seem to deter people from meeting their daily needs.

5. Work package two: Engaging with organisations

Findings from the community consultation were presented to relevant local and statutory organisations at workshop events and meetings. Each workshop involved a discussion to identify how the findings might shape the future plans of the organisations in attendance, as well as where there could be opportunities for organisations to work together. As a way of organising the learning gathered, team members mapped out priorities for action and opportunities to take forward ideas. Table 2 summarises the themes and opportunities that arose through this iterative process. Three recurring themes emerged: ‘developing a food growing network’, ‘placemaking along the canal corridor’, and ‘improving active travel’. Overarching principles were also drawn up under the heading ‘working together’.

Table 2. Matrix of opportunities.

Theme	Areas of focus		
Developing a food growing network	Natural environment <ul style="list-style-type: none"> Using vacant and derelict land Maintenance of sites 	Urban growing <ul style="list-style-type: none"> Urban farming Development of allotment sites Volunteering Skills development 	Community food network <ul style="list-style-type: none"> Establishment of a local food network Surplus food Growing practice
Placemaking along the canal corridor	Placemaking projects <ul style="list-style-type: none"> Using boats to increase traffic on canal Creating destinations 	Local cultural heritage and identity <ul style="list-style-type: none"> Promoting local heritage Retention of industrial heritage 	Local tourism and business generation <ul style="list-style-type: none"> Development of North Glasgow as place for sustainability Volunteering/ training
Improving active travel links	Active travel routes <ul style="list-style-type: none"> Improving links to local destinations Creating routes along the canal Signposting to destinations Improve lighting and remove litter 	Active travel provision <ul style="list-style-type: none"> Bike hire scheme expansion Organised walking and cycling trips Create cycle clubs Improving cycling infrastructure 	Education, awareness and health <ul style="list-style-type: none"> Provide cycle maintenance courses Social prescribing
Working together			
<ul style="list-style-type: none"> Sharing knowledge and resources such as specialist knowledge and skills, volunteering opportunities, resources, joint funding bids, identifying opportunities for young people. Collaboration between local and statutory organisations through more regular communication and an effort to ensure that communities can benefit from the Community Empowerment Act. Strengthening community links by establishing projects on neighbourhood boundaries and by supporting new members of the community, such as migrants, to get involved. 			

6. Work package three: Identifying and prioritising collaborative actions

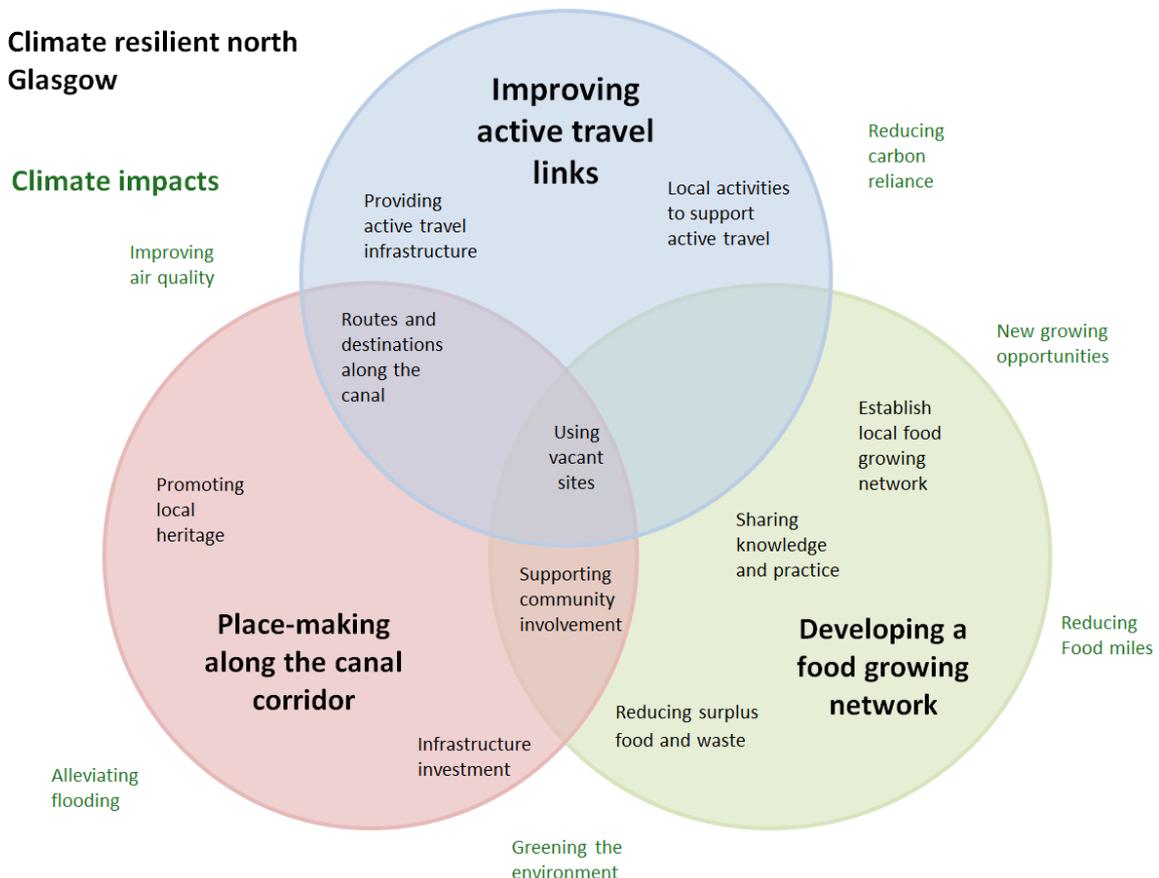
In December 2016 the project team hosted a workshop to bring together staff from local and statutory and organisations. Learning gathered throughout the project was shared and participants were asked to identify specific actions/projects that could be collectively taken forward for each theme (Figure 4). Conversations began with participants locating initiatives/opportunities on a map of the area. Each group focused on the same key question:

- Building on the opportunities that have been identified, what specific actions can be taken forward collaboratively?

Participants were also asked to be mindful of the following:

- Delivering projects in partnership with (and between) community organisations
- Sharing information, opportunities and resources
- Projects which connect communities/the canal to the neighbouring communities
- Utilising vacant and abandoned sites.

Figure 4: Key themes and climate impacts.



An event report was subsequently shared with those in attendance. This set out possible actions to be taken forward for each of the three themes, as well as four key recommendations for participants to consider progressing, as follows:

- Establishing a food-growing network for North Glasgow to share information on growing, marketing and skills development.
- Expanding partnership working between neighbouring communities.
- Facilitating ongoing collaboration between community and institutional partners on the use of vacant and derelict land, particularly to support the development of a green corridor, to provide better quality greenspace and to make links to local heritage.
- Involving community groups that took part in the workshop in the development of plans to improve active travel in the area.

In June 2017, delegates of the European Conference on Climate Adaptation (ECCA) were invited to attend a half-day workshop at Lambhill Stables – a community hub and social enterprise in North Glasgow – to hear about Weathering Change and to offer feedback on how identified challenges might be overcome. Although not part of the original proposal to gather feedback on the project, the conference was identified as an opportunity to engage with professionals and academic leaders in climate adaptation. A group of approximately 20 people attended to hear about local activities relating to climate change and the role of Weathering Change in supporting this. Following presentations, site visits and round-table discussions, delegates were asked to provide feedback on what they had heard and how they felt the project might usefully be taken forward.

Suggestions were as follows:

- Use storytelling to share the work of community organisations.
- Start with where people have an existing interest rather than a pre-determined idea.
- Share relevant learning with groups in other neighbourhoods.
- Use Weathering Change to promote the valuable work of the local organisations that have been involved.
- Review funding structures to ensure the stability and long-term future of voluntary organisations.
- Promote recreational activity in the area, particularly on the canal.
- Link up existing growing projects in the area where there is value in doing so.
- Consideration should be given to how messages about climate change are communicated. It does not need to be the starting point or the main focus of attempts to engage the community.
- Communities should be supported to secure land for small scale development

7. Work package 4: Review and learning

Key findings are summarised below, by work phase initially. Wider learning on the approach, delivery and impact is also provided.

7.1 Summary by work phase

A summary of each work phase, its purpose and the key learning generated is provided below.

Summary of key learning by work phase		
Work phase	Purpose	Key learning
<p>Scoping</p> <p>Met with staff from local and statutory organisations working in the area to identify relevant intelligence, data and strategic drivers.</p>	<ul style="list-style-type: none"> To understand local context To identify opportunities to work with local organisations To understand strategic priorities and to identify existing and future plans and strategies in the area. To develop a 'Theory of Change' (TOC). 	<p>Local context shaped the project 'Theory of Change'</p> <ul style="list-style-type: none"> Climate change was not perceived to be an important local issue given the context of poverty, deprivation and the need for physical and social regeneration. Several local groups were already doing environmental work/were involved in projects in the area. However, groups were not always well joined up due to the competitive funding environment. Local strategies and plans for regeneration were being developed and could be influenced by the project at future points. Adding to, and joining up existing activity, was agreed to be the most effective way for the project to have a positive influence.
<p>2: Engaging with communities</p> <p>On-street community engagement with local residents.</p>	<ul style="list-style-type: none"> To understand what the key local issues and priorities for change are for people living in the area. To gauge public opinion on climate change and how it might impact on what people value in their local area. To encourage local participation in subsequent phases of 	<p>Climate change was not an immediate priority for local people</p> <ul style="list-style-type: none"> Priorities for improvement were employment, opportunities for young people, environmental conditions, local facilities, transport and food options. A lack of investment over a number of years in the area had strained the relationship between local people and statutory organisations. There was a general belief that climate change was happening but people felt powerless to do anything and burdened with a problem that they

	<p>project.</p> <ul style="list-style-type: none"> To develop an understanding of local issues through observation and experience. 	<p>did not create.</p> <ul style="list-style-type: none"> Community spirit was apparent, but several respondents did not feel connected to local organisations. People of working age were more difficult to engage with.
<p>3: Engaging with organisations</p> <p>Meetings/workshops with staff from local and statutory organisations.</p>	<ul style="list-style-type: none"> To share the learning from the community engagement with local and statutory organisations. To align shared ambitions between community organisations. To identify opportunities to shape emerging plans of statutory organisations in defined area. 	<p>There are opportunities to work together and a willingness to do so</p> <ul style="list-style-type: none"> New strategies were emerging for North Glasgow in relation to active travel, land use, regeneration and climate adaptation. Large scale projects/infrastructure improvements were also planned. Local organisations were familiar with the issues identified through the consultation. Local organisations identified opportunities to work together by jointly sourcing volunteering opportunities and funding bids, by aligning related projects and through sharing learning on growing practice.
<p>4: Identifying and prioritising collaborative actions</p> <p>A final event bringing together local and statutory organisations to identify priorities. Feedback from delegates of conference on climate adaptation.</p>	<ul style="list-style-type: none"> To bring together local and statutory organisations to consider specific proposals for working together to deliver regeneration/ projects relating to climate adaptation. To explore themes that had been generated through past engagement. 	<p>The delivery of prioritised actions may be undermined by the limited attendance from statutory organisations and a lack of resources to take them forward</p> <ul style="list-style-type: none"> The event was poorly attended by representatives from statutory organisations. Priorities for action were identified in relation to better partnership working between neighbouring communities, unlocking vacant land for development by community organisations, establishing a food growing network and linking in to future plans to improve active travel. Concerns were raised about the implementation of these priorities, as well as there being few representatives from statutory organisations in attendance. Climate adaptation was not an explicit consideration in identifying future priorities but was instead part of wider conversation on social and environmental change.

7.2 Wider learning: Approach, delivery and impact

To capture wider learning on the approach taken and its impact, team members met to discuss various aspects of the project's delivery. Through a process of thematic analysis, the learning was divided into one of four areas: 'project design and approach'; 'buy in and collaboration'; 'governance and ways of working'; and 'influence'. These are summarised below.

Project design and approach		
Learning theme	Summary	Key learning
Developing a Theory of Change (TOC)	An initial TOC was shaped by scoping work in the defined area, as well as learning from past climate adaptation work.	<ul style="list-style-type: none"> • Our TOC supports the idea of adding value to existing plans and activity in an area, and that by identifying and facilitating opportunities to work together to deliver shared ambitions, better outcomes can be achieved.
Adopting a phased approach	Three work packages were agreed to enable learning from one phase of the project to feed into the next.	<ul style="list-style-type: none"> • A phased approach to area-based projects can be useful for enabling critical reflection and building iteratively on the learning. • Learning from the community engagement phase was particularly useful for generating interest in the project among previously disparate community groups.
Action research to capture learning	Action research was deemed to be the most appropriate way of capturing learning given the project's emergent nature.	<ul style="list-style-type: none"> • Action research can be an effective way of capturing learning on projects with emergent outcomes. Preparatory work at the beginning of the process was important to establish a way of capturing the learning, even when some actions had not yet been agreed.
Learning from other projects	Opportunities to share learning with other projects doing similar work were not taken up.	<ul style="list-style-type: none"> • There may be value in convening a network of projects working on the subject of community resilience across Scotland to enable transferable learning to be shared and brought together.
Introducing climate adaptation	Contact was made with local organisations already doing environmental work to ensure that climate adaptation was understood as a relevant issue.	<ul style="list-style-type: none"> • Findings from this project suggest that the subject of climate change adaptation can be introduced when it is broached in a way that is relevant to people's everyday lives, particularly in terms of how it might affect valued local assets and resources. • Climate adaptation cuts across a number of agendas, including emergency planning, placemaking, regeneration and community development. Our experience of this project is that it can be addressed as part of a broad approach to improving places and building community resilience.

Buy-in and collaboration		
Learning theme	Summary	Key learning
Community consultation	Community consultation enabled the team to establish key local issues and where climate change sat alongside these.	<ul style="list-style-type: none"> • Community consultation generated learning that enabled collective decision-making processes to emerge. • However, this phase did not result in continued participation in project activity from those consulted. • Observation was an important part of the learning during the community engagement phase.
Engagement with community organisations	Organisations that were already doing environmental work in the area were identified.	<ul style="list-style-type: none"> • Engagement with community organisations helped to identify how communities are being supported and how/if climate change is being addressed as part of this. • Sharing the findings from the community engagement was an effective way of bringing organisations with a vested interest in the area together. This paved the way for future joint working on shared challenges. • Despite initial interest, keeping resource-stretched organisations involved was difficult.
Engagement with statutory organisations	Contacts were made in the scoping phase of the project. Conversations were held throughout the project, and those involved were asked to attend an event – together with community organisations – to identify priorities for future working.	<ul style="list-style-type: none"> • Despite productive meetings and support for the project ideas, it was suggested that Weathering Change needed to be part of a broader long-term agenda for improvement in this part of the city. • Learning was said to have been generated for the local authority involved in terms of effectively delivering partnership projects, connecting up disparate departments and engaging better with community organisations. • Getting buy-in and aligning the project findings with decision-making processes was challenging.
Collaboration between local and statutory organisations	The project sought to help build partnerships between local and statutory organisations.	<ul style="list-style-type: none"> • More flexible procurement practice and an increased community presence could allow statutory organisations to engage more effectively with community groups. • More flexible processes – and a Local Authority presumption in favour of community use of long-term vacant sites – could enable some short-term regeneration projects to take off.

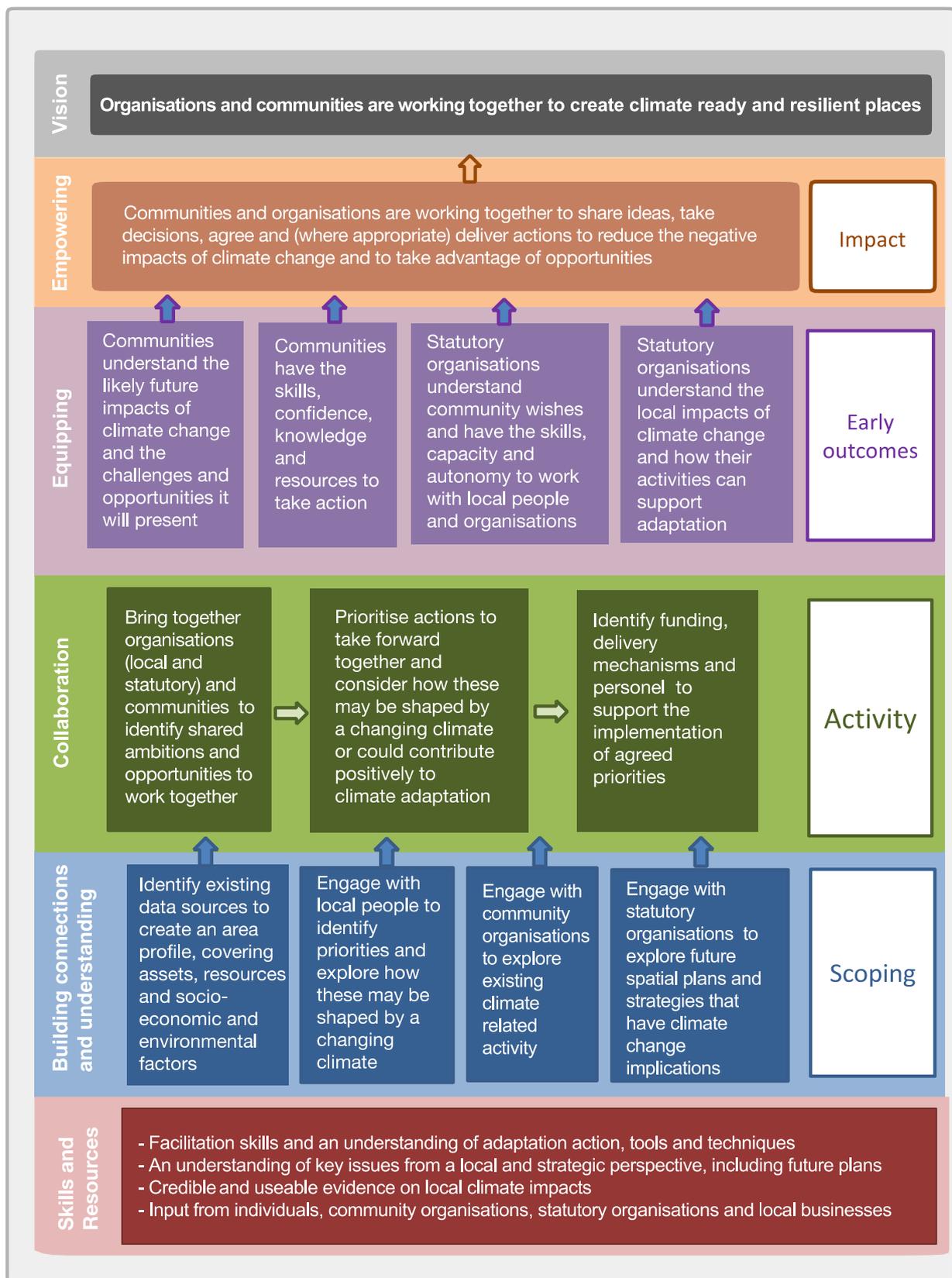
Governance and ways of working		
Learning theme	Summary	Key learning
Roles and expectations	The partners involved brought different skills, expertise and expectations. No one involved had a geographical remit for the area.	<ul style="list-style-type: none"> Involve people with local knowledge and a vested interest in the areas' improvement to ensure that identified priorities are followed through.
Accountability and flexibility	Although an advisory group was established and the team reported to it directly, there was limited accountability.	<ul style="list-style-type: none"> Have a project oversight group that convenes regularly to ensure that the project maintains momentum. Make links to existing structures within a Local Authority (e.g. an Environmental Committee) could increase accountability for decisions made and ensure that learning shapes decision-making at a more strategic level.
Timescales	Timescales were set at the outset, based partly on where opportunities were identified to shape emerging opportunities. Regeneration is a time-consuming and resource-intensive process. Opportunities to support processes of change did not always materialise within the intended timescales.	<ul style="list-style-type: none"> This project highlighted an important difference between statutory and community organisations in terms of the timescales that they both work to. Community organisations can often be dealing with immediate issues, whereas statutory organisations tend to be working to longer timescales. This is important to consider when attempting to bring organisations together around common issues.
Legacy	This project sought to help partnerships develop beyond the agreed period of the project. As a final stage for the project, new plans and opportunities have been identified for the project to feed into.	<ul style="list-style-type: none"> Ensure that opportunities are in place for local people and organisations involved can to feed into subsequent processes of change.

Influence		
Learning theme	Summary	Key learning
Bridging the policy and practice gap	Despite policies which favour the community-led development of vacant land and buildings, land-banking and the prioritisation of long-term development prevents this from happening.	<ul style="list-style-type: none"> • Structural adjustments and the transfer of power and resources from local authorities to communities have not occurred yet. • Public policy is already in place to support the activities of community organisations. A key challenge is to understand how existing policies (e.g. the Community Empowerment Act) can be implemented. • A dedicated task force could be set up to address long-term land vacancy in Glasgow, particularly focusing on disadvantaged areas where it is most abundant.
Impact	Priorities identified at a workshop for local and statutory organisations have not all been taken forward as intended. Reasons for this include not having a nominated person to take forward a particular action and waiting for new plans to be brought forward for community consultation.	<ul style="list-style-type: none"> • Priorities were identified following meetings and workshops with local and statutory organisations. The priorities remain relevant to the area and should be considered further in terms of how they might be implemented and what resources might be needed.
Alignment with planned activity	Efforts were made to ensure that the project was aligned with planned activity and strategic drivers in the area. Unfortunately some plans and activities identified during the scoping phase did not materialise as intended or emerge as quickly as hoped for.	<ul style="list-style-type: none"> • This aspect of the project required continuous dialogue within a cluttered and constantly evolving landscape. Having a member of the team with a dedicated role for this may have helped.

7.3. Climate-ready places and communities: theory of change

A theory of change developed at the beginning of the project (Appendix 1) has been revisited and reworked to reflect project learning. Figure 5 shows the steps needed to support effective joint working between communities and organisations to create more climate-ready and resilient places. Behind this theory of change are a number of assumptions and necessary prerequisites, including essential skills, sufficient resources and the capacity of participating organisations, as well as a collective belief that creating more resilient communities in the face of climate change is a worthwhile ambition.

Figure 5: Theory of change (adapted from Sniffer/Adaptation Scotland's theory of change).



8. Discussion

Findings from this project raise important questions about how communities and organisations can work together more effectively to support processes of change. The need for more effective partnership working to address multiple neighbourhood challenges sits within an important context of a changing climate. Key learning from this project is discussed on the opportunities that climate change may bring, how it can be integrated with other agendas and the importance of climate justice as an emerging aspect of inequality in communities. Encouraging local participation, project buy-in and facilitating joint working are also discussed as aspects of the project that have been challenging, while the action research approach is set out in terms of its merits and suitability for similar projects. Finally, consideration is given to how the project has shaped the delivery of Glasgow's Resilience Strategy.

Climate change as an opportunity

Learning generated through Weathering Change has demonstrated that being 'climate ready' or 'resilient to climate change' is about more than responding to identified threats. Understanding the local context and identifying valued local assets are important precursors for considering actions that can reduce risk, while simultaneously providing opportunities. In contrast to actions intended to mitigate climate impacts, which can appear insignificant at an individual or community scale, climate adaptation is an opportunity for local perspectives to be heard. Adaptive responses to climate change invariably involve an assessment of how established practice or resources may be affected, meaning that individuals or communities can engage with a subject that is directly relevant to their own lives. It should be noted that this project did not seek to directly promote climate adaptation; instead emerging strategies and opportunities were identified that could potentially support adaptation and enable increased local input. This approach – while based on principles of co-production and supported by staff involved in climate adaptation work – was difficult to implement due to differences in working cultures between statutory and local organisations and resource constraints faced across the board.

Climate adaptation and wider processes of change

Climate change adaptation is an important challenge for all Scottish communities. What responses this will require will differ from place to place, but learning from this project suggests that adaptation activity may be most effective when linked to existing structures and planned activity. Places that are vulnerable to climate change can be supported by local authorities and other statutory organisations through a combination of infrastructure improvements and by opening up opportunities for local action. Where climate change may not be perceived to be as important as

other more immediate concerns, learning from Weathering Change suggests that it needs to become part of wider conversations about local priorities, with due consideration given to how a changing climate may shape these. With this in mind, climate change can be an important part of the current policy drive towards more participatory placemaking in Scotland.

Climate justice

The ability for community organisations to take forward ideas for adaptation can be strengthened by a proactive, supportive and enabling local authority. Although climate justice was not an explicit focus of this project, our experience of working with community organisations in an area of multiple challenges revealed that climate change is being addressed indirectly through related environmental projects or work, rather than being an explicit focus of attention. Through supporting access to local resources (e.g. land, facilities, funding, people), local authorities can play an important role in enabling environmentally friendly practice to be taken forward by local groups. In some places community groups are well established and sufficiently well organised to take forward actions independently, while in others – and potentially those most in need – statutory support for groups to become established may be required.

Local participation

The project's final event, which aimed to bring together community members, local groups and statutory organisations, was not attended by those consulted in the earlier phase of the project. Team members reflected that this could have been because the consultation reached people who may not have typically engaged with community organisations or attended consultation events, but also because the approach to including them beyond this point was too formal. It was also suggested that past consultations in the area had not resulted in quick action on the ground, and there may have been scepticism about whether attending would have led to change. The disconnect between local people and service providers was highlighted during the community consultation, with local people suggesting that action on the ground was more important than further consultation on local issues, which were said to be well documented. A less formal approach, based on issues of local interest is proposed if taking a similar approach in the future.

Project buy-in and influence

Scoping in the early stages of the project helped to identify opportunities to shape emerging plans and strategies in the area. This was valuable for informing how the project could usefully support processes of change. However, delivery mechanisms were not established for the implementation of agreed priorities. This raises questions of around accountability and whether project-based work is the most effective way of influencing change, or whether a longer-term approach involving local people with a vested interest in the area would be more effective and sustainable. The project

also identified a perceived gap between policy and practice. An example of this was the remediation of vacant land, where various policies and initiatives were felt to be in place to support community organisations, but barriers continued to prevent them from being implemented. The Community Empowerment Act was also described as an important legislative development, but it was stressed that more emphasis needed to be placed on how it could be implemented and have a meaningful impact. Local authorities are duty-bound to ensure that this happens.

Facilitating joint working between community groups

Weathering Change was built on the premise that identifying the aims and priorities of organisations working within a defined area would allow the project team to consider how these might be built on and aligned with other related plans. A key challenge for local organisations working in the area was the competitive nature of the funding environment. Although no silver bullet was identified to address this issue, opportunities for local organisations to work together were put forward such as applying for joint funding, aligning related projects and sharing learning, skills or volunteers. Scale and timing were important factors in shaping how well local and statutory organisations were able to work together. While statutory organisations were often working in a strategic and long-term way, local representatives described having to address immediate concerns before being able to think more strategically. Organisational differences hindered mutually beneficial partnerships from developing between statutory and third-sector organisations.

The action research process

Undertaking action research to gather data and learning was appropriate given the emergent nature of the project. The team was reflective throughout, with sufficient flexibility built in. The project team's experience of Weathering Change is that an appropriate balance needs to be struck between allowing for new ideas to be taken forward and maintaining a structure to capture learning. Project researchers stressed the ongoing challenge of gathering learning for different audiences, such as area-specific learning to support future action, together with learning that is deemed to have relevance to a wider audience.

Supporting the delivery of Glasgow's Resilience Strategy

Weathering Change has provided an important source of learning for the future delivery of Glasgow's Resilience Strategy. In particular it has highlighted the need for a better resourced and more strategic approach to three key priorities within the strategy: *"to create an integrated resilience exemplar in the north of the city"*; *"to tackle the local impacts of global climate change"*; and *"to unlock the community, environmental and economic potential of derelict and vacant sites in Glasgow"*. To address the first of these aims, attempts were made to align developments in the

north of the city to encourage productive partnership working. Despite some progress, the project highlighted practical challenges associated with collaborative working, and further effort is required on the part of statutory organisations to advance understanding of how they can best support local organisations within a challenging financial environment. Several local organisations are already delivering local environmental improvements at a variety of scales, highlighting an abundance of open space that is ripe for nature-based solutions to be brought forward. North Glasgow has the potential to become an exemplar for resilient practice, both through large-scale infrastructure projects and smaller scale community-led projects. As an area of regeneration focus, it will be important that the potential impacts of climate change, including the opportunities that they may bring, are considered in future plans and discussions. Throughout the course of Weathering Change, vacant and derelict land has regularly been highlighted as a persistent and ongoing challenge. Further effort is needed to go beyond highlighting the scale of the problem to finding solutions to it.

9. Recommendations and next steps

The recommendations offered in this section are intended to provide insight for:

1. local and statutory organisations in North Glasgow working together to address identified challenges
2. local and statutory organisations working in other parts of Glasgow
3. practitioners or researchers undertaking similar work/projects
4. policy-makers interested in community resilience in the face of climate change.

Recommendations are provided under the following headings: 'local context and community wishes'; 'project design, approach and delivery'; 'governance and ways of working'; and 'resilient and climate-ready communities'.

Local context and community wishes

Generating useable learning for organisations working in North Glasgow was an important project aim. The priorities agreed at the project's final planned workshop were the culmination of various meetings and events throughout the project. These priorities were as follows:

- Progress a food-growing network for the area to share information and to identify opportunities for collaboration.
- Facilitate ongoing collaboration on the use of vacant and derelict land at a more strategic level in relation to the development of green corridors, better quality greenspace, highlighting local heritage and influencing development decisions.
- Involvement in the development of plans to improve connectivity, accessibility and transport in the area, particularly in relation to improved active travel infrastructure and bus services. This includes influencing the delivery of the Open Space Strategy, as well as the expansion of the NextBike cycle hire scheme.

Why is this important?

These priorities remain valid and important to the future development of North Glasgow. It is recommended, therefore, that local and statutory organisations collectively consider what resources might be required for them to be taken forward.

Project design, approach and delivery

The project identified a number of valuable learning points including the importance of:

- establishing a clear governance structure and lines of accountability
- ensuring clarity on individual and organisational roles
- making direct links to organisational decision-making processes and structures
- identifying organisational needs and priorities that can be supported
- focusing on specific challenges that can be addressed rather than broad issues
- moving beyond project-based work to a more sustainable approach built on lasting relationships between organisations
- involving team members with a vested interest in the area's long-term improvement
- ensuring that the collaborating organisations are aware of how their involvement can positively support their own work
- engaging with people in ways that are meaningful to their everyday lives
- considering the value of community consultation as a means of bringing together groups with a vested interest in the area
- using action research as an approach for capturing learning on projects with emergent or unknown outcomes.

Why is this important?

These principles are intended to support future place-based projects where there is an onus on effective partnership working and/or community consultation. They may be considered at the design stage of a new project.

Governance and ways of working

The project team's experience of Weathering Change is that partnership working between local and statutory organisations can be effective when the following conditions are in place:

- Local connectors and facilitators are available to link activities and raise awareness of what is going on. This is particularly important for navigating a constantly evolving third sector landscape. Statutory organisations should seek to identify local connectors as a route to better supporting local organisations and working collaboratively.
- Local people and organisations receive regular updates on the likely timescales of regeneration and proposed developments, including when delays are expected and why.

- Local organisations are encouraged to work together to address identified local needs where possible. This may be done through jointly applying for funding to deliver projects/proposals/events or by sharing skills and expertise.
- Representatives from local organisations feel that their concerns are being met and acted upon, and there are clear lines to statutory decision-making.
- Statutory organisations develop their understanding of how communities can be better supported through the delivery of existing policies and strategies. Furthermore, councils and local authorities focus on the specific actions and resources required to ensure that communities can capitalise on the opportunities presented by the Community Empowerment Act (Scotland).
- Efforts are made to better understand the organisational differences between statutory and third sector organisations, including the timescales that they work to and the role of funding in shaping decision-making and practice for both types of organisations.
- Where appropriate, consideration should be given to what place-based consultation has already taken place and what changes occurred as a result. A deliberate effort should be made to ensure that community consultations are transparent and focused on delivery.
- Strategic organisations/agencies need to be working with, rather than working for, communities, exploring community priorities, plans and intentions rather than undertaking actions on their behalf.

Why is this important?

To enable productive partnership working between local and statutory organisations in order to jointly address complex and interdependent challenges, including poverty, social cohesion, environmental decay and likely future challenges presented by a changing climate.

Resilient and climate-ready communities

Learning from this project highlighted a number of challenges and opportunities on how to support communities in the face of a changing climate.

- Further work is needed to raise awareness of climate change as an emerging issue in communities.
- To encourage community participation, findings from community organisations involved in this project suggest that climate change should be introduced indirectly through subjects that are relevant to people's everyday lives (e.g. heating, energy, getting around, food).
- Climate adaptation may also be considered in relation to what local people would like to maintain or improve in their community, in the face of climate change, and local groups need to

be aware of how a changing climate can affect them at a local level and act as a stress multiplier.

- Creative and proactive approaches are needed to effectively engage with people about climate change, rather than consultation events designed around an identified climate-related threat.
- In order to facilitate community-based responses in the face of climate change, opportunities may need to be framed in ways that also highlight wider economic, social and environmental benefits. Food growing, active travel, placemaking and regeneration (social and physical) are useful and appropriate subjects for introducing conversations and supporting action on climate adaptation.
- Institutions and communities need to have a shared awareness of the existing funding landscape for climate-related projects. Efforts are needed to share information across organisations and encourage joint funding bids.

Why is this important?

To support appropriate local responses to climate change in Scottish communities.

Next steps

Findings from this project are being actively disseminated to:

- Organisations working in the north of Glasgow
- Glasgow City Council Officers and Elected Members
- Community Planning Partners.

Particular attention will be paid to how learning can be used to influence further developments in North Glasgow, as well as how organisations can work together to address common issues. We will also consider how learning can be applied and embedded into mainstream policy and practice at a wider city level, where appropriate.

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Appendix 1. Logic model.

Project aims:					
<ul style="list-style-type: none"> To better understand local priorities and to support and enable collaborative action on climate adaptation responses in North Glasgow. To gather lessons from the approach taken to delivering the project and explore the effectiveness of action research for gathering this learning. To generate transferable learning around how to successfully engage with communities in climate adaptation and wider regeneration activities. 					
Summary of approach	Actions	Methods/ data capture	Outputs	Outcomes	Assumptions
<p>Scoping to understand local context, identify relevant organisations, strategic drivers and opportunities.</p>	<p>Meeting with staff from statutory and local organisations in defined area. Identifying relevant data sources.</p>	<p>Project will take an action learning approach, drawing on a range of methods and techniques to capture learning throughout project.</p>	<ul style="list-style-type: none"> A vision for what is important for communities in North Glasgow in relation to climate resilience 	<ul style="list-style-type: none"> Climate-resilient thinking and responses are introduced into the process of community regeneration in North Glasgow by building on the existing or planned activity of local and statutory organisations. 	<p>Climate change is a stress multiplier of other social, environmental and economic factors that affect community resilience.</p> <p>There are both difficulties and opportunities associated with climate change.</p>
<p>WP1: Engaging with communities to identify aspirations of local communities and where responding to climate change sits alongside these priorities</p>	<p>Community consultation in Lambhill, Possilpark & Milton:</p> <ul style="list-style-type: none"> Mobile street-based data collection using mobile cart and materials. Workshop with local organisations/groups to present key findings from consultation. 	<ul style="list-style-type: none"> Observations made by fieldworkers of process, change and impact on stakeholders throughout the project period. Data captured through street based community engagement approach. 	<ul style="list-style-type: none"> A plan for how institutions can address community resilience and climate change Report documenting areas identified for collaboration between institutions and communities and outputs from workshops 	<ul style="list-style-type: none"> Institutions and communities are better aligned as a result of the project and are working together to build resilience in face of climate change. 	<p>Increasing resilience will require greater local adaptive capacity, structured interactions between actors at diverse levels, and empowerment of local communities to influence improved service delivery. This is more likely to be achieved when:</p>
<p>WP2: Engaging with organisations to identify opportunities for organisations (local and</p>	<ul style="list-style-type: none"> Liaising with Thriving Places community planning partnership/partners Liaising with Scottish 	<ul style="list-style-type: none"> Feedback from workshop participants to capture 	<ul style="list-style-type: none"> Published outputs from learning 	<ul style="list-style-type: none"> Emerging policy and plans at a local and national level are shaped by learning generated through the project. 	<ul style="list-style-type: none"> Communities want to engage and there is a diversity of local perspectives expressed, heard and fed into the decision-making process. Strong networks exist including interpersonal, between individuals and organisations and between organisations

<p>statutory) to work together where shared ambitions exist.</p>	<p>Canals/canals partnership</p> <ul style="list-style-type: none"> • Liaising with GCC planning department 	<p>knowledge and attitudinal changes around climate change.</p>	<p>captured as part of process at each stage.</p>	<ul style="list-style-type: none"> • Learning is being used to inform practice/activities in other geographical areas. 	<p>themselves</p> <ul style="list-style-type: none"> • There is awareness of the impacts of climate change and the capacity to adapt at the community level and with the institutions involved
<p>WP3: Prioritising collaborative actions to identify how communities and institutions can collaborate to make changes</p>	<p>Bringing together community groups and local organisations through a workshop to consider ways of working together and also to influence policy at a local and national level.</p> <p>Prioritising actions for working together to become more a more climate resilient place</p> <p>Working with local communities to devise an action plan for the area based on priorities for change.</p>	<ul style="list-style-type: none"> • Use of Place Standard to capture feedback on quality of neighbourhood and opportunities for improvement with focus on becoming more climate resilient. • Qualitative interviews focusing on participant journeys, including members of the community, key stakeholders in organisations and members of project team. 			<ul style="list-style-type: none"> • Local action is aligned with regional and national policy • Multiple benefits of adaptation are addressed, for example the benefits for health and wellbeing and economic development, and not just environmental considerations
<p>WP4: Review and learning Documenting process through action research – learning captured and reported on after each WP.</p>	<p>Writing up and sharing learning with communities and institutions involved, as well as wider audiences where it is transferable.</p>				

Appendix 2. Evaluation framework.

Research question	Data sources/ methods	Report section
What approach did we take and how did this evolve over time?	Project documents	About Weathering Change
What is the socioeconomic, environmental and health profile of the defined area?	Existing data	Scoping
What are the important strategies, plans and proposed regeneration activities that cover the three chosen areas?	Pre-project meetings document analysis	Scoping
What activities are currently ongoing to support resilience and climate adaptation in Possilpark, Lambhill and Milton?	Pre-project meetings existing data Workshop consultation	Scoping WP1: Community consultation
Do local people feel that climate change is an issue that is worth doing something about?	Consultation	WP1: Community consultation
In the face of climate change, what do local people value and wish to see maintained?	Consultation	WP1: Community consultation
Do local people feel a sense of control and influence over decisions affecting their area?	Consultation	WP1: Community consultation
Are formal organisations being influenced by the wishes of the local community/community organisations in the area?	Workshop/ interviews	WP2: Supporting collaborative working
Have funding opportunities for climate adaptation or other local projects been identified?	Workshop/ interviews/ group de-brief	WP2: Supporting collaborative working
What actions, ideas or plans have been jointly taken forward by local groups?	Workshop interviews	WP2: Supporting collaborative working

How can opportunities for community activity relating to climate adaptation be enhanced?	Workshop interviews	WP2: Supporting collaborative working
What do local groups think the priorities should be for taking forward ideas/projects developed through Weathering Change?	Workshop/ interviews	WP2: Supporting collaborative working
What are the barriers and facilitators to effective joint working between local communities and organisations and how might these be overcome?	Interviews Workshop Document analysis Reflective learning	WP3: Learning from action research
Are there lessons from the project that could usefully shape future practice elsewhere?	Reflective learning Interviews Workshop Document analysis	WP3: Learning from action research

Appendix 3: Topic guide for community consultation

Social connections

- Who do you know around here (family, friends, etc)?
- Who do you see on a regular basis?
- Who do you rely on?
- Do you or anyone you know feel lonely?
- Do you go to any groups?
- Do you ever exchange favours with neighbours?
- Is this a place where new people are made to feel welcome?
- Does the weather ever get in the way of meeting up with others?
- Would you say there is a strong sense of community here?
- How does living here make you feel?
- What would you change to make living here better?

Getting around

- How do you normally get around the local area?
- What other kind of journeys do you make (where and how)?
- Where would you like to go more easily?
- How can the journeys be improved? What would you like to see different?
- Does the weather ever affect you getting out and about?
- What changes would make getting around easier and more enjoyable?

Food

- Who normally buys the food in your household?
- Who cooks?
- Who do you eat with?
- How do you make decisions about what to eat?
- Where do you normally get your food?
- What are the shops like?
- Do you ever worry about food?
- Do you know anyone who grows their own food?
- Does the weather ever affect you being able to get food?
- What one thing would you change about food?

Keeping warm and dry

- Do you consider your house warm and dry?
- How easy is it to keep your house warm and dry?
- Is it easy to keep warm and dry when you're out and about?
- How? (to prompt issues around clothing, availability of indoor spaces, the need to go out)
- Is there anywhere people can go to keep warm and dry?

- Have you noticed that it's more difficult to keep warm and dry lately?
- What one thing would you change to make it easier to keep warm and dry?

Leisure and play

- Do you have much free (spare) time?
- What do you like to do with it?
- Where do you like to go (take your kids to)?
- Can you do that locally or do you need to go elsewhere?
- If you had more free time, what would you like to do with it?
- Does the weather ever affect what you do with your free time?
- What would improve how you spent your free time?

Gender

- Female
- Male

Age

- 65+
- 50 - 65
- 30 - 50
- 16 – 30

Ethnicity.....

Length of time living in area.....

- All their life
- 20 - 30 years
- 10 – 20 years
- 5 - 10 years
- <5 years

Contact details (email or phone) _____

Extra information...



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