

# Case studies of community resilience to climate change

---

by Katya Brooks, Alexia Coke, Paula Orr, Rolands Sadauskis, Neil Simcock, Liza Papadopoulou,  
Andrew Stirling, Clare Twigger-Ross and Gordon Walker

The concept of community resilience to climate change in the UK has a diverse range of meanings and associated activities. This report presents four case studies of actions at the local level designed to improve resilience of communities to some aspect of climate change. They have been examined using a frame of community resilience to climate change with a focus on capacities, community engagement and governance. It is supplementary to Community resilience to climate change: an evidence review, published by JRF, which draws on the case studies for illustrative examples.

# Case studies of community resilience to climate change

Katya Brooks, Alexia Coke, Paula Orr, Rolands Sadauskis, Neil Simcock, Liza Papadopoulou, Andrew Stirling, Clare Twigger-Ross and Gordon Walker

The concept of community resilience to climate change in the UK has a diverse range of meanings and associated activities. This report presents four case studies of actions at the local level designed to improve resilience of communities to some aspect of climate change. They have been examined using a frame of community resilience to climate change with a focus on capacities, community engagement and governance. It is supplementary to [Community resilience to climate change: an evidence review](#), published by JRF, which draws on the case studies for illustrative examples.

---

## The report shows:

- four case studies covering flooding, place making, energy and Transition;
- how resilience of communities to climate change manifests in a number of different ways;
- the core roles of engagement and community capital in improving resilience of communities;
- the interrelationship between different capacities for resilience, e.g. between institutional and infrastructure resilience; and
- the value of using a 'resilience to climate change' lens for exploring these case studies.

# Contents

---

1	Introduction	1
2	Liverpool Flood Resilience Community pathfinder	4
3	Llanelli Cynefin programme	14
4	Norton community wind energy project	23
5	Transition Heathrow	31
	Notes	43
	References	44
	Acknowledgements	46
	About the authors	47
	List of tables	
1	Inclusion criteria and the selected cases	2
	List of figures	
1	Levels of flood socio-spatial vulnerability in Liverpool	5
2	Flood plain on the Woodlands Estate	6
3	Cynefin poster	14
4	Llanelli flood warning areas	15
5	'Great day identifying community strengths as we plan for a Llanelli Resilience Plan'	18
6	Cynefin programme street stall, Wales	19
7	'Llanelli Community Partnership. Fantastic turnout.'	20
8	A projection of how the proposed wind turbines would appear in the Norton landscape	23
9	Map of Norton civil parish and potential wind turbine sites	24
10	Grow Heathrow site poster, London	31
11	Location of the Heathrow Villages	32
12	Protest sign at Transition Heathrow, London	34
13	Picture of site, Transition Heathrow, London	35
14	Growing spaces at Transition Heathrow, London	36
15	Vegetables at Transition Heathrow, London	40

# 1 Introduction

The Joseph Rowntree Foundation (JRF) commissioned Collingwood Environmental Planning (CEP), in collaboration with Professor Gordon Walker and Dr Neil Simcock (Lancaster University), Dr Alexia Coke (independent researcher) and Professor Andy Stirling (University of Sussex), to undertake an evidence review on community resilience to climate change as part of the *Climate Change and Communities* programme. The research was undertaken between July 2014 and May 2015.

The review focuses on evidence and practice around climate change resilience at the community level, and examines the following key issues:

- the concept of community resilience to climate change; what the term means and how it is used in research, policy and practice;
- what key factors create community resilience to climate change;
- the nature of emerging practice;
- factors that may support or hinder the development of community resilience to climate change;
- the roles of different stakeholders in supporting this; and
- the relationship between vulnerability and resilience.

To complement and enrich a desk-based evidence review, four case studies were undertaken based on telephone interviews and documentary analysis. The case studies sought to profile practical, innovative and emerging community actions across the UK that involve citizens in working to develop resilience to climate change in relation to one or more of three defined areas: community flood risk management, community energy generation and efficiency, and community food growing. The case studies were as follows:

- Liverpool Flood Resilience Community pathfinder;
- Llanelli Cynefin programme;
- Norton community wind energy project; and
- Transition Heathrow.

## Case study selection

Initially a long list of case studies was generated from an online search of documentary evidence from advisors and from participants' presentations at the workshop 'Focusing the Evidence: Community Climate Change Resilience Practices', organised by CEP in October 2014. Cases were then assessed against a set of inclusion criteria to ensure those selected would facilitate exploration of the key prerequisites, components, barriers and facilitators for building community resilience in the context of climate change (see Table 1).

**Table 1: Inclusion criteria and the selected cases**

Case study inclusion criteria	Grow Heathrow	Liverpool Flood Resilience Community Pathfinder	Llanelli Cynefin	Norton community wind energy project
Cases include some explicit consideration of developing actions to build community resilience to climate change (though this may not be a core driver)	✓	✓	✓	✓
All cases will focus mainly on one or a combination of three defined areas (flood, food, energy)	✓ Food	✓ Flooding	✓ Flooding	✓ Energy
The cases will be geographically spread across the UK	✓ South England	✓ North West England	✓ Wales	✓ South Yorkshire
A proportion of the cases will be located in areas of social disadvantage	–	✓	✓	–
All cases will have community engagement as a central endeavour (i.e. will focus on citizens being part of the actions)	✓	✓	✓	✓
The group of cases together will cover a range of governance approaches/initiators	✓ Transition Network and Plane Stupid activists	✓ UK Government (Defra)	✓ Welsh Government (NRF)	✓ Community-interest energy company (social enterprise)
All cases will work in partnership with other organisations e.g. voluntary organisations, local authorities, intermediary organisations (e.g. Transition Network, National Flood Forum)	✓	✓	✓	✓
All cases will have at least three years' documented activity	✓	✓	✓	✓
The group of cases together will illustrate a range of community actions with varying catalysts, approaches, purposes and points of interest	Project emerged out of the Transition movement and protest (against expansion of Heathrow Airport). Nature of protest as a factor influencing resilience. Established by outsiders to the community.	Project started with local social issues. Built on activities of a residents' association for community engagement. Links to national government programme on flood risk management; has implications for community role in addressing climate change impacts.	Example of a project located in an area of climate vulnerability and social disadvantage. Project illustrates a different government-led model with no targets, which is about participatory approaches to working with communities.	Example of a project initiated by a company located outside the local area with a mitigation focus that has faced local opposition. Illustrates difficulties of insider/outsider-led initiatives.

## Method

At least two semi-structured telephone interviews were conducted per case study, with community members and practitioners actively involved in the delivery and/or management of each of the case examples. Interview questions were based around a schedule of common questions, to enable comparison across interviews.

## Purpose of this report

This report comprises the four case studies in full. It is supplementary to [Community resilience to climate change: an evidence review](#), published by JRF, which draws on the case studies for illustrative examples.

# 2 Liverpool Flood Resilience Community pathfinder

## Summary

Flooding is a current threat to Liverpool. The city's location, the characteristics of its development and the projected effects of climate change make the risk of increased flooding a serious concern for the authorities. Following flooding in 2012, Liverpool City Council funded property-level protection measures such as flood doors and triple-glazed windows for five houses in the Woodlands Estate in Belle Vale ward. The following year, the City Council was awarded funding under the Department for Food, Environment & Rural Affairs' (Defra's) Flood Resilience Community pathfinder scheme to build on this experience and carry out further measures to improve at-risk homes on the Woodlands Estate, as well as organise other initiatives to raise awareness and increase the resilience of the local community to flooding.

The project illustrates an initiative by a local authority aimed at joining up community development and capacity-building approaches with practical measures to improve flood management infrastructure (drains and brooks) and resilience to flooding at the household level. At the heart of the approach is getting members of the community involved in, and taking responsibility for, managing flood risk, in co-ordination with institutions such as the Environment Agency (EA), the local water company and different departments within the local authority. The pathfinder is linked to the wider 'Let's get ready Liverpool' resilience campaign, and provides an opportunity to explore wider resilience issues.

The case study explores a challenge that is often encountered in this kind of project: how to build community capacities and resilience in areas of high vulnerability, where the driver comes principally from outside the community.

## Community context

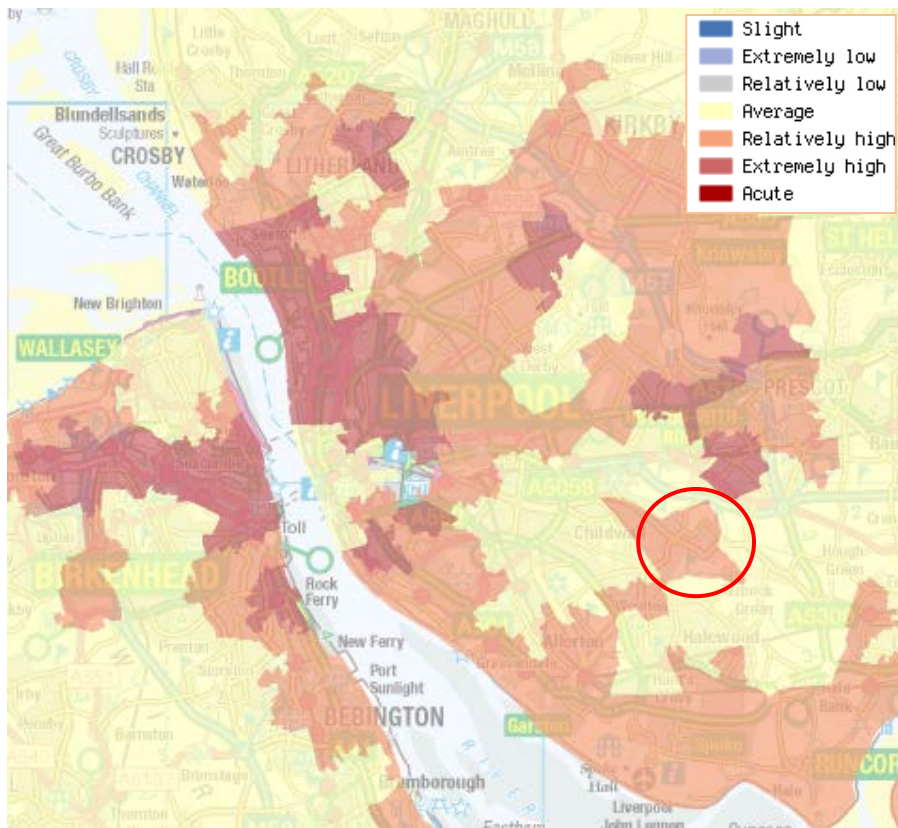
Liverpool is vulnerable to a range of climate change consequences. A Climate Framework developed for Liverpool City Council in 2009 identified significant current risks from tidal, river and rain-related flooding, and pointed out that 'rising sea-levels will increase future tidal flooding risks' (CAG Consultants, 2009). Liverpool has the fourth-highest surface-water flood risk in the UK. The sewers and drainage systems under the city are old, and most open brooks and water courses are culverted (Liverpool City Council, 2013c). This makes dealing with flood risk a wider issue than simply investing in flood defences.

The city has a population of 445,200. Liverpool has struggled to deal with problems of decline and urban decay throughout the past century. Across the city there are high levels of deprivation, with 22 small geographical areas (Local Super Output Areas, or LSOAs) falling within the 1% most deprived in England. Life expectancy is three years below the national average, despite the gradual increase in years lived (Liverpool Department of Public Health, 2012).

Figure 1 maps social vulnerability with respect to flooding in Liverpool. It is part of the Climate Just web tool, developed in partnership by JRF, Climate UK, the University of Manchester and the EA, to provide neighbourhood-level maps of exposure to climate hazards (focused on flooding and heat) and social vulnerability in England. The map shows where negative social impacts are more likely, incorporating indicators for each of the five dimensions of socio-spatial vulnerability: sensitivity, enhanced exposure, and (in)ability to prepare, respond and/or recover (Climate Just, 2015). These elements combined demonstrate that a large part of the city of Liverpool has relatively high and extremely high levels of social vulnerability to flooding.



**Figure 1: Levels of flood socio-spatial vulnerability in Liverpool**



Source: <http://www.climatejust.org.uk/map>

## Local area – Belle Vale ward and the Woodlands Estate

Belle Vale<sup>1</sup> is one of the most deprived wards in Liverpool, and is located in an area of relatively high flooding vulnerability (see Figure 1). The 2010 Index of Multiple Deprivation shows that 83.5% of the ward's population is in the 10% most deprived nationally. This is much higher than for Liverpool as a whole, where the proportion of residents in the 10% most deprived is 49.6%. On the positive side, the ward has no neighbourhoods in the top 1% that are most deprived nationally.

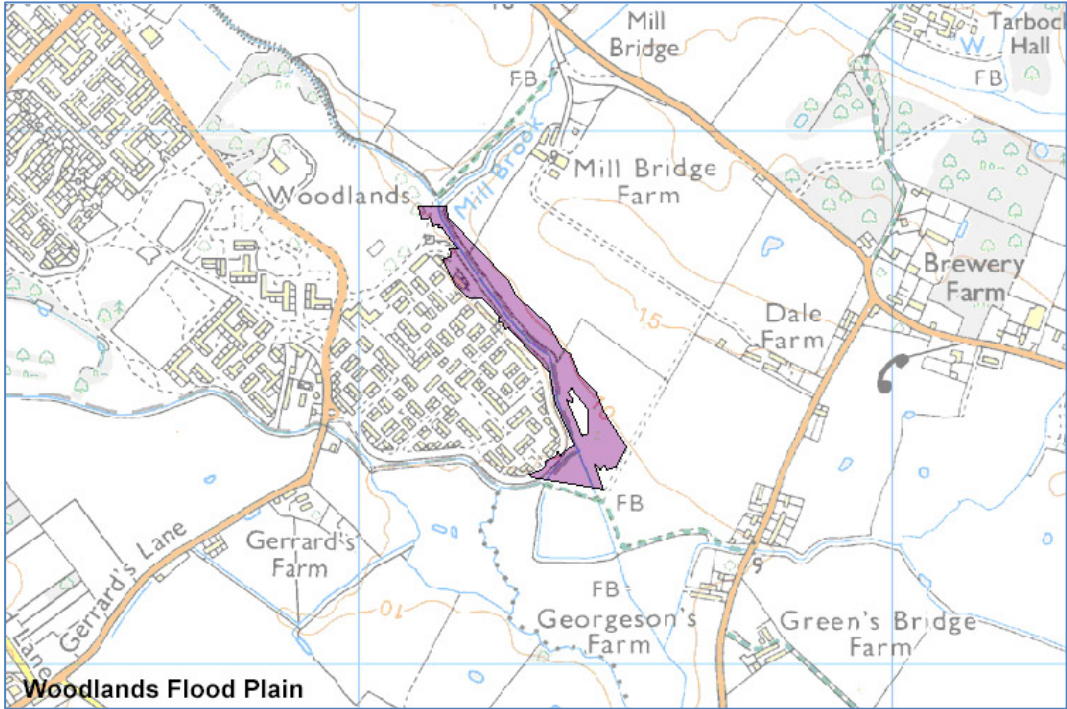
Belle Vale's estimated population in 2012 was 15,048. The ward has a number of characteristics that make the population less able to cope with climate change consequences and vulnerable to a wider range of risks that could compound these effects:

- a higher proportion of elderly people (65 years and over) and a lower proportion of working-age residents than the average for the city;
- 1,500 households (27.7%) containing only pensioners, with 1,089 pensioners living alone;
- a high proportion of lone parent households (23.3% – the fourth highest rate in Liverpool);
- 37.8% of households have a member with a long-term health problem or disability (the third highest rate of wards in Liverpool);
- an average household income of £26,200, well below the Liverpool average of £30,400; just over a third of the children in Belle Vale live in poverty, slightly higher than the Liverpool average;
- significantly lower educational qualifications than the Liverpool average: 12% of the ward's population are educated to degree level or above (compared with 22.4% for Liverpool as a whole), while two fifths (40.3%) of residents have no qualifications (compared with 28.7% for the city as a whole); and
- a disproportionately high percentage of the working population in the lower-ranked occupations.



The Woodlands Estate is on the outskirts of the urban area of Liverpool, close to woodland, farmland and a river: Netherley Brook forms the boundary between Liverpool City Council (LCC) and Knowsley Metropolitan Borough Council (KMBC). The area is drained by separate foul- and surface-water drainage systems, both of which are the responsibility of the local water company, United Utilities. The foul flows are pumped away by the nearby Woodlands Pumping Station on Winster Drive to a United Utilities waste water treatment works, and the surface water drains into Netherley Brook by two outfalls. Figure 2 shows the flood plain (in purple) in the Woodlands Estate.

**Figure 2: Flood plain on the Woodlands Estate**



Source: Liverpool City Council, 2013b

The pathfinder Project plan describes the location and the limitations in residents' access to Council services and support:

Geographically the community is relatively isolated in a semi-rural setting along the city boundary. Accessibility to Council and other public sector services is less than average for a core city urban area, and due to the economic downturn and decreasing budgets, local services are withdrawing even further. Therefore accessing services involves longer journey times and reliance on fully operational transport and telecommunications infrastructure.

Liverpool City Council, 2013a

## Aims and objectives

The Liverpool pathfinder was made possible by inputs from stakeholders at different levels, from national government down to the local community. In one sense, DEFRA's pathfinder scheme reflects a top-down impulse, with local authorities being invited by DEFRA to bid for funding to carry out innovative measures to increase community resilience to flooding.

### Purpose

For DEFRA, the purpose of the Flood Resilience Community pathfinder scheme is to enable and stimulate communities at significant risk of flooding to develop innovative local solutions that:

- Enhance flood risk management and preparedness in ways which quantifiably improve the community's overall resilience;
- Demonstrably improve the community's financial resilience in relation to flooding;

- Deliver sustained improvements which have the potential to be applied in other areas

Defra, 2012

The funding opportunity created by Defra DEFRA allowed Liverpool City Council (LCC) to take forward an approach to community resilience to flooding that it had already been promoting through its Environmental and Emergency Resilience Unit. The Unit sees the wider benefits of community initiatives, beyond the improvements to individual properties, as creating awareness and providing information about climate change and flooding, reducing anxiety, increasing community resilience and engagement, improving the Council's partnership working and enhancing its reputation (Liverpool City Council, 2013b: 4).

LCC expects that the outcomes of the pathfinder project will:

- Raise awareness and reduce the public costs of emergency response;
- Support localism, community flood awareness and action by householders to reduce flood damage e.g. through sign up to flood warnings, creating a Flood Group, etc.;
- Increase understanding of the consequences associated with a changing climate;
- Increase understanding of the risks in the local area;
- Increase community resilience and help people to feel more in control; and,
- Strengthen local networks and partnerships and improve communications with Liverpool City Council and other Partners.

Liverpool City Council, 2013a

Local residents' understanding of the pathfinder scheme's objectives are similar to those of the LCC:

"[The project is about] ... making the community more resilient by taking measures to control the risk of flooding from Netherley Brook, increasing residents' ability to stop flood water from getting into their homes, making people aware of environmental change and getting them involved with the authorities about flooding."

Interviewee 1

'Community resilience' is referred to as a focus for the work at the national, city and community level. DEFRA's objectives consider this in the context of flood risk management, and also refer to community *financial* resilience, emphasising the importance of communities' awareness of the risk of flooding and being prepared, including by having financial mechanisms in place (through access to insurance, among other things). LCC puts resilience in the context of limited public services ('reduce the public costs of emergency response'), but also points to the psychological impact of a community being able to deal with the risks it faces, in order to 'help people to feel more in control'.

## Activities

The Liverpool pathfinder project includes activities that develop community capacities in all of the five areas of resilience identified by Cutter *et al.* (2010; also [see main report](#)).

### Social resilience

The pathfinder is located in an area of multiple deprivation. Residents on the Woodlands Estate are in the top 15% of most deprived areas in England.

In order to facilitate the participation and increase resilience of people for whom English is a second language, materials have been translated into different languages.

### Economic resilience

Recognising that economic resilience is a significant challenge in the pathfinder area, the project has carried out a number of activities to address this capacity:

- promoting flood insurance, so that people are covered for repairing or replacing property damaged by floods. All 38 at-risk properties have received information packs, and information and advice has been provided to other residents at events and meetings; and

- identifying sources of funding for community flood initiatives and offering support for individuals and groups in accessing funding. The pathfinder has provided advice and support on funding to the Woodlands Residents' Association and to the flood group.

The project had also intended to work with insurance companies and encourage them to reduce premiums in recognition of the increased resilience of the local community. However, continuing negotiations between the insurance industry and central government over Flood Re, a new national scheme, has meant that local companies have not wanted to take action at an individual level.

## Institutional resilience

A large number of activities has been carried out to increase institutional resilience, at the Woodlands Estate through the development of institutional capacities such as the flood group and flood wardens, and through improving networking across local, city-wide and national agencies and organisations (the EA, United Utilities, neighbouring local authorities, Ward Members, the local MP, the National Flood Forum (NFF), LCC Departments, Police, Mersey Forest, DEFRA and private companies, e.g. property-level protection experts).

One example is the activity to develop the flood group. The project led to the creation of the first Flood Action Group (FAG) in Liverpool, using an approach to community engagement developed by the NFF. The group meets at the Woodlands Residents' Association's community centre. One of the activities undertaken by the FAG has been to set up a Resilience Hub in a garage near to flood-prone properties, where local people can get flood sacks and other equipment. The Resilience Hub is one of the first in the country and has been publicised on the recently-launched national Communities Prepared website. Members of the FAG will be given training on how to use the equipment in preparation for or during an emergency event.

## Infrastructure resilience

The pathfinder project has resulted in improvements to infrastructure resilience at several levels:

- as a result of representations from the flood group, LCC installed CCTV cameras in all surface-water drains, making it possible to monitor and remove blockages; this is the first drainage system in the city to be fully mapped. Also as a result of residents' action, the EA agreed to install a height gauge in Netherby Brook, making it easier for residents to see when water levels in the brook are unusually high;
- the creation of a Resilience Hub in a disused garage, where provisions such as high viz jackets and wind-up torches are being stored for use in flood events, means that residents have access to equipment to keep safe and enable them to cope better:

**“We have got a garage with equipment for flooding; we are going to provide equipment for residents to use in the event of flooding with information on how to use it.”**

Interviewee 1

- twenty seven individual properties (plus six that had benefited from a previous project) received flood doors, brick sealant, flood air bricks and other 'resistance' measures to stop water infiltration.

## Community capital

Much of the pathfinder work has focused on developing networks and skills within the local community. This is often linked to work on other resilience capacities: for example, the development of flood wardens (institutional resilience) has resulted in residents carrying out tasks such as checking water levels and clearing the river of obstructions, and passing on information to other residents while they are out and about:

**“Local people go out and litter-pick and at the same time they keep an eye on what the brook is doing. One resident is also a great litter-picker and sometimes gets the council out to deal with problems when there has been fly-tipping. People tend to respond positively to this resident because they can see the work he does and because he is a nice person.”**

Interviewee 2

Some activities have been carried out to engage with particular sections of the community, such as children and young people. A local theatre company, Valley Community Theatre, produced a short film on flooding which they incorporated into an interactive play to raise flood awareness among young people. Three local schools were shown the play and flood awareness film. Valley Community Theatre also encouraged schoolchildren to write their own plays to raise awareness with their parents and wider families; the plays incorporated and demonstrated simple and practical actions that people could take to make themselves more resilient.

## Governance

The project is being run by LCC, in partnership with the local water company (United Utilities), the EA and the NFF. While a number of different organisations and interested parties such as local councillors and local authority staff are involved in the project, the management structures have been quite flexible:

“Well, as I mentioned, the structure is quite flexible, and from the reference group and from the steering group and from the sort of local discussions we have, and it’s also a very broad church in the sense that it has representatives from specialist fields, and also covers the political dimension, which is very important really at local levels, because obviously there’s a lot of political input and bringing partners together at local level has shown to residents that if they work constructively together they can get things done.”

Interviewee 3

Good relationships have been developed between the strategic partners/agencies. This involvement has helped to provide additional technical knowledge to help understand the flooding issues in the area.

The project has a good relationship with the local community centre, its workers and users, including the Woodlands Residents’ Association. Maintaining the relationship with the Residents’ Association is seen as crucial to the success of the project, as the Association facilitates work with the community, for example by getting residents to participate in surveys. Other activities such as working with local schools and young people are being carried out by the project team and the NFF project officer.

The project seeks to build the capacities of the Residents’ Association to take a greater role in managing flood risk on the estate. LCC has been careful not to take initiatives for the Residents’ Association and to support the Association as it develops its own initiatives, such as volunteer flood wardens. Inevitably there are moments when the dynamics of the different groups and individuals involved come into conflict. However, the support of a NFF engagement officer has been valuable in ensuring that these conflicts are managed and not allowed to derail the process.

“There was already a level of informal networking between residents and between residents and council officers but this has grown in dignity and strength. The relationship between the residents and council officers has matured.”

Interviewee 2

The LCC project manager considers that the main factors in the success of the project’s governance model have been that all those involved have worked together, that the governance structure is flexible, that local residents are involved, and that those leading the work have personal contact with the community.

## Resilience and vulnerability

The Liverpool pathfinder is being carried out in Belle Vale, a deprived ward in the most deprived city in the country. Vulnerability is something that concerns local residents; they are aware that certain properties are more vulnerable to shocks like flooding because of where they are located, and they are aware of the members of the community who are more vulnerable, because of factors such as their age or situation (e.g. single parents, people battling addiction, etc.). Interviewees talked about addressing these vulnerabilities as part of the work of the project:

“A little flood group is emerging out of the project... They are active chaps who make the world go round, for example by keeping an eye on old ladies, making sure that single parents get information.”

Interviewee 2

## Successes and challenges

### Successes

Those involved see building community capital as key to the sustainability of the pathfinder project. This has given the Residents' Association a critical role as the link to local people. Installing protection measures in properties on the estate is seen as a useful 'hook' that was attractive to local residents, and provided a way of starting to engage with them about flood risk and the need to make preparations. Increased awareness of the risk of flooding is seen as an important measure of the effectiveness of the project.

One key area of effectiveness of the pathfinder scheme has been to link up community activists working on the Woodlands Estate with the institutions and organisations that manage flood resilience across the city. The project has also enabled these organised local residents to work on initiatives that have multiple objectives, going beyond increasing physical resistance to flooding, to encompass measures that increase the physical attractiveness of the area and the well-being of its residents, such as planting trees, in collaboration with Mersey Forest. As a result, there are now better lines of communication, which makes it easier to solve problems that might have been seen as too difficult to tackle in the past. Residents on the Woodlands Estate are now familiar with officers from LCC, the EA and the water company. This has had benefits for relations within the local community, and has also led to better cross-agency working for the organisations involved: for example, these agencies recently gave a joint presentation at a major conference in the city on how to put together an effective flood plan. This is the first time that this kind of joint presentation has happened. These developments create knowledge and understanding that goes beyond flood risk management, as residents begin to understand how procedures work and how they can get things done, and agencies provide joined-up responses to their needs. This is increasing the confidence of local people and their ability to put forward their own views and draw on their local knowledge.

### Challenges

One of the main challenges for the project has been strengthening networks and relationships between flooded residents and organisations with responsibilities for flood risk management. Flood-affected communities are keen to see measures being taken immediately to prevent future flooding, but this is sometimes not possible or realistic because the agencies responsible need to balance a range of different priorities.

“[There is a] lack of understanding of the role and limitations of LCC. We've worked to stop the back up of water – I've had lots of conversations with [xxx] at LCC about this. I understand the difficulties... My role is to support the council officers and limit their exposure to difficult and demanding residents.”

Interviewee 2

Other factors that cause tension between residents and agencies, and also between agencies, working in this area include:

- a lack of relevant skills and capacities: while there is a recognition that local residents may sometimes lack the technical knowledge and capabilities to be able to effectively monitor and manage some flood risks, there is less understanding that many agencies do not have staff with skills in community engagement, and this may lead to misunderstandings and distrust between the community and the agency; and
- pressure on resources: both individuals and organisations are under considerable pressure to cope with 'everyday' demands. Lack of involvement in community initiatives such as Flood Groups or local partnerships is often not a reflection of apathy, but rather of being over-stretched.

# Key learning points from the Liverpool Flood Resilience Community pathfinder

## Key components of the resilience of communities to climate change shocks and stresses

The Liverpool Flood Resilience Community pathfinder frames the challenge of making the Woodlands Estate community more resilient to flooding within the context of climate change and the increased risk of flooding impacting on vulnerable people. It addresses all of the five resilience factors or components: social (by identifying and specifically targeting vulnerable people such as the elderly); economic (by working with local businesses); infrastructure (e.g. by developing locally-managed flood infrastructure such as a flood store); institutional (by strengthening partnership working between decision-making organisations such as the LCC, the EA and United Utilities, and between these organisations and the community, e.g. through the Residents' Association); and, finally, developing community capacities (such as wider flood awareness and training for residents in using the equipment in the Resilience Hub).

One of the people most active in the project felt that community capacities are the most important of the resilience capacities, and the one that the project is principally addressing:

“... the one which stands out for me is the community capital. I think that's key when we're working with a longstanding residents' association that has the respect of the residents on the estate, because it's been going for years and years.”

Interviewee 3

There is a close link between the development of community capacities and the ability of community organisations to link up with institutions that manage flood risk. In Liverpool, the brooks and watercourses are highly intervened and are culverted in many parts of the city. Residents are often unaware of the risk of flooding until it affects them. The lack of understanding of the roles and responsibilities of different stakeholders (in the case of the Liverpool pathfinder, these include the local authority, the EA, and the water and sewage company) may lead to the expectation that the authorities should be able to stop flooding altogether.

Being able to work in parallel in strengthening community capacities and institutional resilience requires some existing links and willingness at both levels (community and relevant institutions) to make the time for new networking activities. While the Liverpool pathfinder is in some ways unique, in that some of the institutional participants have a background in community development and are therefore more aware of the value and the challenges of working with community organisations, there is evidence from Flood pathfinder projects in other parts of England that institutions such as local authorities, the EA and water companies are becoming more aware of the importance of liaising with local communities and building their capacities. The Leader of West Sussex County Council said in a presentation to the NFF Conference in 2014 that 'helping communities to help themselves' was money well spent (Goldsmith, 2014).

## The relationship between community resilience to climate change and wider institutional and societal resilience to climate change

A briefing on creating resilient communities (CLASP, undated) produced by a local authority and public sector sustainability support service for the North West of England describes resilience in terms of ability to cope with extreme weather: Taking practical actions now helps us to cope with extreme weather, such as heavy rain, drought or heatwaves, and reduces economic losses from such catastrophes.

The pathfinder project plan describes the risk of surface-water flooding to residents living along Netherley Brook and notes that 'Climate change will cause increased frequency of high flows and this source of flooding is only likely to be exacerbated in the future' (Liverpool City Council, 2013a).

While the project's practical actions focused on flooding as a tangible expression of the changing climate, it has also been developing activities aimed at creating wider awareness of climate change, particularly among young people.



Getting young people involved and helping them to understand the effects of the changing climate will prepare them for the future, make them more climate resilient and aid in embedding the behavioural change this project is seeking to deliver.

LCC, 2013a

While the language used suggests a focus on resilience to weather and extreme events such as flooding, in practice LCC and those involved in the pathfinder project recognise the wider vulnerability of Woodlands Estate residents, associated with the demographic factors and the social characteristics of the area, and the way that these factors could compound the negative consequences of flooding. The physical isolation of the estate and its distance from the city centre heightens the need for residents to be able to cope on their own.

But not only does the pathfinder recognise the need to prioritise this location and community, there is also an understanding that different kinds of approach are needed to be able to get through to residents and build ownership. One of the interviewees reflected that a positive aspect of LCC's involvement was that staff had been 'light on their feet' in terms of reducing the weight of bureaucratic processes to ensure that measures could be taken with the involvement of local people, making the most of their understanding of local conditions. The example given was the way that local residents were used to distribute official LCC letters about the project, in the process explaining their relevance to elderly or disabled people, single parent families and others who might normally not even look at a formal communication of this kind.

There has been an emphasis on building links to emergency planning and flood risk management institutions. There have been several multi-agency meetings, attended by different LCC departments, the EA, United Utilities (the local water company) and the residents' flood group. These meetings provide an opportunity for residents to raise concerns about the management of flood risk and to find out the work that agencies are doing, as well as improving information-sharing between the agencies themselves. The NFF promotes the value of multi-agency meetings as a mechanism for liaison between communities and flood risk management institutions, and it has proved successful in different projects.

## **The relationship between community resilience to climate change and the resilience of physical infrastructure in different localities**

Since the Victorian era, the response to flooding in Britain has tended to be to seek engineering solutions, mainly in the form of drainage or flood defences, often focusing on creating channels or barriers to control the flow of water and resist its ingress into homes or property. With climate change increasing the risk of extreme weather events and flooding, there is concern that infrastructure will be unable to cope and that alternative approaches need to be developed. This is based on the premise that communities need to be able to co-exist to some extent with flood water and prepare for flooding to happen, without it disrupting human activities or damaging property.

The Liverpool pathfinder provides an example of how improving the resilience of 32 properties at risk of flooding from Netherley Brook, and encouraging the emphasis on 'resilient repair' in the future, can make communities more able to withstand the damage caused by flooding. Most of the measures (such as the installation of flood doors, triple glazing on windows and automatic air-brick covers) are intended to keep flood water out of properties, and also to provide social benefits such as improved insulation (which means well-being benefits from warmer homes and lower energy bills) and a reduction in the risk of burglary. One interviewee pointed out that while these property-level measures have been a key focus of the project, it is the awareness that they create that is the most important gain in terms of resilience:

"[Property Level Protection] hasn't got longevity in the sense that after a certain amount of time it deteriorates. That's the way of the world. But the bigger message for me, really, is this awareness thing, and getting people aware of what flooding ... what the flooding risks are and how they can prepare themselves for it. And it's the mantra within our emergency planning, really, in terms of be aware and then prepare."

Interviewee 3

The local community is also more able to manage flood risk, as a small group of volunteer flood wardens monitor water levels in Netherley Brook in order to be able to give neighbours early warning of the possibility of flooding, and to provide information about blockages and problems in the brook to the



relevant management authorities. The creation of a local Resilience Hub, with equipment that residents can use to divert water in the case of flooding, is another measure that has increased local capacity to manage flood risk.

However, in the case of flooding, community flood risk management needs to be linked to and supported by wider flood management initiatives, as community infrastructure will only be able to cope with certain levels of flooding. The multi-agency meetings established by the pathfinder project are opportunities for residents to raise wider issues, such as the management of the drainage system, which are the responsibility of external institutions.

The flooding case study highlights the importance of strengthening institutional resilience (i.e. the capacity of institutions to work effectively together, and to work with local organisations) as an element of overall community resilience. This element, creating a link to wider resilience networks, is a key part of flood resilience, which should not be left solely to the local community.

## Key factors for building resilience

The main drivers for looking at ways of strengthening community flood resilience in this part of Liverpool were to:

- address the issue of increased risk of flooding associated with climate change: the project links to LCC's Environment and Emergency Resilience Unit's 'Let's Get Ready Liverpool' campaign;
- learn lessons about what action at a community level really works for local people on the ground; and
- create examples and tools for other communities wanting to increase their resilience.

Among the relevant actions supporting community resilience to flooding (that is a direct consequence of climate change) that have emerged from the Liverpool pathfinder, the creation of a local flood group confirms the importance of local organisation as a key element of resilience. The group has been able to evolve and pursue flooding and flood risk issues with relevant agencies, through multi-agency meetings and ongoing dialogue. The flood group has developed extensive local knowledge and has drawn up an action plan of their local flooding concerns to discuss with various agencies.

The group also set up the local Resilience Hub in a local unused garage close to flood-prone properties. The group got money to refurbish the premises and buy equipment such as wind-up radios, torches, grit, snow shovels, hi-viz bibs, etc. The Resilience Hub is a point of contact both for local residents in the case of extreme weather, but also for registered providers in Liverpool such as the Ambulance Service and the Fire and Rescue Service. The experience developed by the group in operating the hub will be used as an exemplar of how other flood groups in the Liverpool city region could operate.

The Flood Group also worked with LCC planners, the NFF, United Utilities and the EA to develop a community and household plan. They have shared the plans, and the Woodland Community Centre has agreed to be a centre of refuge should residents have to be evacuated.

The pathfinder has also allowed learning about the importance of linking flood resilience initiatives with physical improvements to the estate and neighbourhood, and to other well-being benefits. The additional benefits provided by installing property-level flood protection measures, such as improving insulation and reducing burglaries, have already been mentioned. Two other strands of the pathfinder that have had a positive impact on the estate are:

- the work with Mersey Forest to explore how community tree planting could be used to help not only to increase people's understanding of flooding and climate change, but also to enhance the look of the estate; and
- the involvement of the Valley Community Theatre in a climate change awareness-raising project. Valley Community Theatre incorporated the pathfinder's flood film into an interactive play to raise flood awareness among young people. The play was written by local writers and performed at local schools by third-year drama students from a nearby university. Through this medium, valuable messages were delivered in a fun way. The plays raised awareness among the children's parents and wider families, and incorporated and demonstrated simple and practical actions that people could take to make themselves more resilient to climate change consequences.

# 3 Llanelli Cynefin programme

## Summary

Funded by the Welsh Government, the Cynefin programme brings together local people, community groups, and businesses and organisations that deliver services to improve where they live or work. It aims to help these stakeholders to work together to make their community a cleaner, safer and better place to live. This initiative also provides the Welsh Government with opportunities to modify its approach to community engagement and to learn how to improve the efficiency of policies implemented on the ground.

The town of Llanelli is one of nine communities across Wales where Cynefin 'Place Coordinators' have been employed. The programme was established in Llanelli in 2013, recognising climate resilience as a central issue for flood vulnerable communities there. The coordinator has used an inclusive approach, working with multiple stakeholders ranging from the private sector to non-governmental organisations and universities. One of the main aims of the Cynefin initiative in Llanelli has been to look at the issue of flooding and to develop an emergency flood plan to empower communities in the case of extreme weather events.

Although still ongoing, the initiative has already implemented new ways of working for institutions, and has made good progress in effectively influencing and engaging policy-makers at all levels.

**Figure 3: Cynefin poster**



Source: @CynefinLlanelli, 2015

## Community context

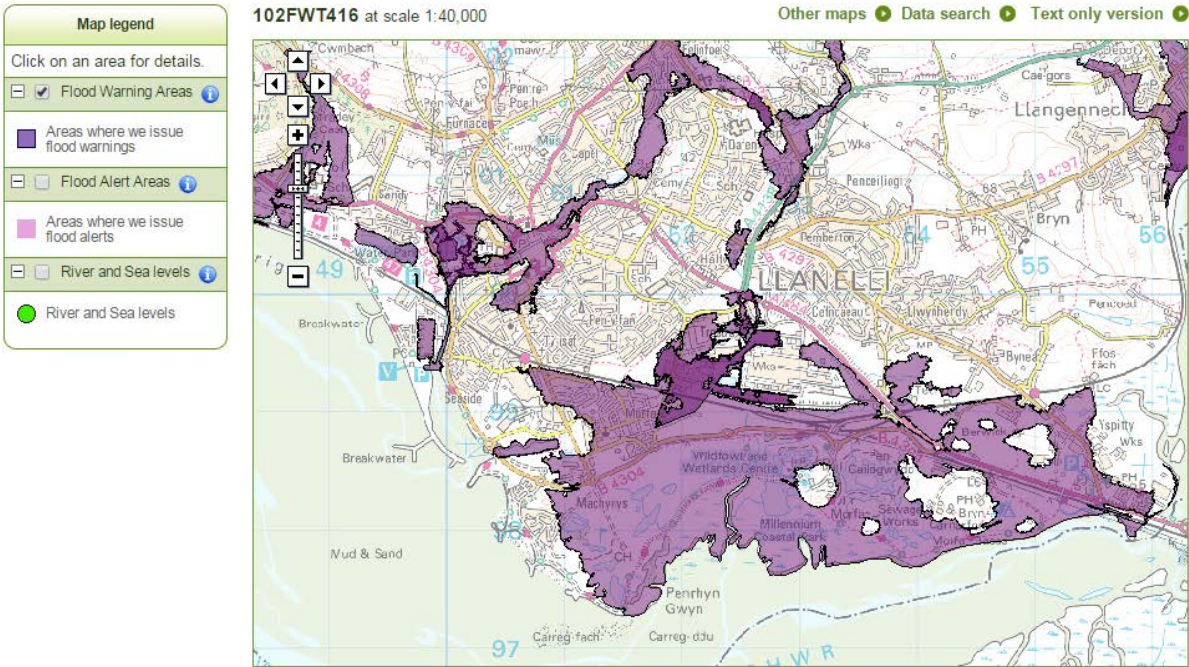
This case study focuses on Llanelli – a town with a population of approximately 35,000, located in the county of Carmarthenshire, on the west coast of Wales, within the commuter belt of Swansea. The town is surrounded by smaller villages and communities in the Llanelli Rural District that are often unofficially referred to collectively as 'Llanelli'.

Historically, it is an old industrial town with former coal-mining and steel works, and is now one of the most deprived areas in the county (Irving, 2010). According to a National Assembly for Wales report (2010), 12% of areas in Llanelli fall in the 10% most deprived areas in Wales, and the majority of its areas are more deprived than the Welsh average (Welsh Government, 2014). The town has a tight-knit community base to build upon.

In 2013, the overall population density of Carmarthenshire, including Llanelli, was 78 people per km<sup>2</sup>. People aged under 45 years accounted for 50.2% of the total population, and 22% of the total population were aged 65 or more. Seventy six per cent of the population was born in Wales, whereas only 4% was born outside the UK. Some 44% of the population in Carmarthenshire speak Welsh (Carmarthenshire County Council, 2014).

As a result of extreme weather events, Llanelli has become increasingly vulnerable to flooding and the risk of communities being affected by property damage. In 2013, a Welsh Government-funded flood scheme was undertaken in Llanelli to help protect almost 160 properties. Figure 4 illustrates the flood warning areas in Llanelli.

**Figure 4: Llanelli flood warning areas**



Source: Environment Agency (2015)

## Aims and objectives

The Welsh Government’s aim in initiating the Cynefin programme in 2013 was to try and change its approach and learn how to improve the efficiency of policies implemented on the ground. To achieve this, Place Coordinators were appointed and were expected to identify issues and solutions to improve future policy-making. The Welsh Minister for Natural Resources and Food (John Griffiths, MWP) has confirmed that the Place Coordinators will continue to operate in their communities until March 2016 (Griffiths, 2014).

The Cynefin programme has three overarching objectives:

1. Place – to physically improve the area where each case study is located.
2. Process – to change the way communities work and manage their resources, by forming new relationships, and to encourage thinking ‘outside the box’.

3. Policy – to influence and engage with policy on various levels (and identify the barriers that need to be overcome so that resources from the Welsh Government can be used more effectively).

At the start of the programme, emphasis was placed on improving quality of life and access to resources in local areas of deprivation, and the former Minister for Natural Resources, Culture and Sport was keen for it to focus on urban areas. With a change of Minister came a slight change in the Cynefin target group, to involve more rural communities. The initiative is closely linked to the Well-being of Future Generations (Wales) Act 2015<sup>2</sup> in Wales, which focuses on youth engagement. Much of Cynefin's work centres on increasing youth participation in reviewing local resources and shaping their communities.

The central aim of the initiative is to bring together, empower and improve the quality of life for a number of urban and rural communities in Wales. One interviewee described the objective:

“So our role is trying to find that sweet spot between policy, place and people. If a policy is working really well, let's show evidence of how that is working so it can be replicated elsewhere. If it's not – let's find better ways of working that can enable people to co-design policies that work for them.”

Interviewee 1

The aims and objectives are determined through a combination of bottom-up and top-down approaches in each Cynefin area. The Place Coordinators have the freedom to engage with a wide range of stakeholders, to find out the needs of a community and how those needs can be delivered. Importantly, it is the Place Coordinator who strives for a mandate from the communities to help make connections and assess how information, policy drivers and funding can help to deliver the objectives on the ground. Although the process is overseen by the management team of Cynefin, the work that is delivered on the ground is mainly directed by the communities, as explained by this interviewee:

“Welsh Government has shown us the confidence and the trust that we can find solutions by working on the ground with communities. So we're not driven by pressures above, but rather a combination of bottom-up and top-down processes where both have a role to play in making places better.”

Interviewee 1

There are instances when the activities on the ground are driven by the government due to initiatives where new funding needs to be spent. In these circumstances Place Coordinators are introduced, with new departments and funding streams to integrate those initiatives into the communities in which they work.

Llanelli is one of nine areas within the Cynefin programme where Place Coordinators are working on a wide range of issues, but it is the only area that has an emphasis on climate resilience and sustainability.

The Place Coordinator for Llanelli defines resilience as 'the ability of a community to quickly recover from a catastrophic event. The intention is to encourage stakeholders to learn to be a part of the resilience building process so that when an emergency hits it won't have a detrimental effect on the community'. As a result of several consultations and stakeholder-engagement activities, the programme identified flood management within communities as being inefficient. It is estimated that there are around 2,500 homes at risk of flooding in Llanelli. Addressing these concerns has become the main aim of the Llanelli programme.

## Activities

The Llanelli case study addresses four of the five resilience factors or components:

- social (by working with local people to improve their life quality);
- economic (by working with local businesses and organisations);
- institutional (by facilitating the interaction between Natural Resources Wales, the town council and organisations); and
- community capital (e.g. learning events, creating a platform for debates).

## Social resilience

Llanelli Cynefin has emphasised the importance of social capital. Through a list of priority projects that include activities perceived as essential by the local community, the programme has worked on enhancing coping capacities by educating communities and developing an emergency flood plan. Bilingualism and initiation of new networks to support adaptive capacities is another area of work that aims to empower stakeholders and motivate the community to appreciate its culture and get a better sense of belonging.

## Economic resilience

In terms of transformative capacities, the programme has worked with local businesses and communities to encourage the use of time credits more actively and support more organisations in signing up for this system, in order to create an alternative currency in Llanelli. Engagement with businesses has also led them to determine what their role in an emergency situation would be.

## Institutional resilience

For the town of Llanelli, being part of the Cynefin programme has enabled institutional resilience to be increased. This work has occurred at a strategic level, where policy-makers have taken a closer look at the current policy-making practices. Lessons have been learnt and approaches altered, based on the ongoing work in the various locations where the Cynefin programme is operating, including how to engage with communities and include them in the policy-making process. There has also been ongoing work with Llanelli Town Council to look at public expenditure and engagement with other stakeholders, with the intention that once the Llanelli Cynefin programme ends, the council will be in a position to continue this work.

“The aim is to ensure that statutory partners that have responsibility to protect communities in emergencies start working with those places to ensure a consistent, coherent message that is co-designed with the community, that also establishes better collaboration between agencies and reduces duplication and, often, confusion.”

Interviewee 1

As highlighted by Folke *et al.* (1998), institutional resilience is about managing continuity and change in order to adapt an institutional system, while not changing it so often that stakeholders lose their trust in the institutional setup (Herrfahrdt-Pähle and Pahl-Wostl, 2012).

“I think we have shown that we need to have more flexibility in our delivery programmes. What we can do once we have the evidence is to start influencing policy at many levels, which I think is really important, because policy needs to be informed by evidence on the ground.”

Interviewee 2

There is a wide spectrum of stakeholders that are involved in the Llanelli programme. Altogether there are around 60 organisations, from the third and private sectors, that represent a range of interests, including the Communities First initiative, and organisations working in poverty, health, environment and other domains.

Activities such as development of an emergency flood plan (see Figure 5) and introduction of a First Responders role make people feel that they are prepared in the event of any emergencies, and bring different flood agencies together with communities.



**Figure 5: ‘Great day identifying community strengths as we plan for a Llanelli Resilience Plan’**



Source: @CynefinLlanelli

## Community capital

The focus of the Cynefin initiative has been on capacity building within the communities. Deprived communities are the priority, as they are the most vulnerable to all aspects of climate change. The aim has been to help those communities to become more self-reliant and more confident.

“A big part of what Cynefin is doing at the moment is empowering communities to start thinking about taking some responsibility about their own areas, and also show them how they can work together with the service providers and the organisations in their area to add value and to shape what happens in their areas.”

Interviewee 2

The Llanelli programme has embedded an approach that reports on how the activities of the programme are protecting future generations, enabling them to communicate future scenarios and challenges when they are engaging with communities – in this way they are educating the communities and also listening to their viewpoints. Llanelli has been looking at the different roles of its community regarding preparedness, response and recovery in light of flood. An important factor has been the understanding of risks and uncertainty, and developing the skills needed to face those, in a changing world. Much of this work involves young people and seeks to protect future generations.

When talking to different stakeholders in Llanelli, the ongoing aim of the Place Coordinator is to establish a common understanding of community resilience. There are multiple ways in which stakeholders try to build flood resilience: some focus on health and vulnerability, others on finance and skills. The Coordinator is specifically working on establishing a common understanding of what a resilient community is, and how to deal with things like insurance, evacuation/relocation of vulnerable people, and the roles of different stakeholders in emergencies, etc.

For the Llanelli programme, the target audience is the community of Llanelli town. The Place Coordinator has been engaging with stakeholders by organising road shows and attending venues that hold stakeholder group meetings, and the use of social media has been an important tool. Llanelli area is part of Communities First, whose representatives have been working in the area for a longer period than Cynefin and have built up knowledge and the trust of the community (they also hold events and run drop-in centres, etc. – see Figure 6).

**Figure 6: Cynefin programme street stall, Wales**



Source: @CynefinLlanelli

It is important to recognise that the role of the Place Coordinator is generally to take an overarching view, to build capacity and facilitate delivery on the ground by local communities and organisations.

The desired impact of the Cynefin initiative has various levels of achievement:

“It’s not just about the delivery on the ground – it’s a learning programme so it’s learning how Cynefin initiative works in different ways and how they can inform policy to think about how to engage with the communities and involve the communities, and how they can use their resources. So it’s as much about improving a place as it is about changing the way of working and the barriers and the drivers to community action, and actually improving the place.”

Interviewee 2

## Governance

The Cynefin programme in Llanelli was designed through multi-partner involvement, and many planning and inception meetings. Most of the stakeholders involved in Cynefin were also part of a steering group of the Welsh pathfinder Action Research Programme, established to support Community Action for Climate Change. As a result, learning from the pathfinder programme fed into Cynefin, even though these programmes have quite different objectives.

The Cynefin programme has two layers of operation:

- Place Coordinators: work on the ground in the localities, making place-based improvements and influencing policy at local level.
- Management team: apart from doing the managerial tasks – they are also part of the delivery team, but more on a strategic level – they influence policy within the Welsh Government, work with the local authorities, and work with a lot of the partners and other core funded organisations. This role is considered to be different from other management roles relating to Welsh Government-funded programmes.

The Welsh Government funding for the Cynefin initiative amounts to £575,534 per year, and covers the cost for the management contract and the salaries for nine Place Coordinators (Griffiths, 2014). According to the Minister for Natural Resources, Culture and Sport, Place Coordinators do not have a budget to spend in the community, as their role is to seek funding for work that communities want to undertake.



The delivery of the initiative is very open-ended: once Place Coordinators have established stakeholder visioning and engagement, and have gained an understanding and a mandate from the area about what they want to achieve, then the coordinators develop targets and objectives for the work. The Cynefin initiative has built-in flexibility mechanisms, so that Place Coordinators can respond to any opportunities through their work and partnerships that arise that fit with the aims of their communities, and can change their agenda.

Unlike most European-funded projects, where a thorough reporting and accounting process is mandatory, Welsh Government has given the Place Coordinators the space to work without the burden of extensive paperwork. The coordinators have the freedom to get to know the area and the people, and work from the bottom up to find out what and/or who needs assistance. In this sense there are no specific targets besides the overall aim to 'make the place better'.

For Llanelli specifically, the Town Council has supported a grass-roots led Community Partnership to bring together community groups/organisations and individuals with the aim of supporting community-led action. The Community Partnership meets every three months at various locations in Llanelli to look at local priorities, and to generate ideas to feed back to the Town Council and other organisations (see Figure 7).

**Figure 7: 'Llanelli Community Partnership. Fantastic turnout.'**



Source: @CynefinLlanelli

Over the last year the Llanelli programme itself has held many public events in communities that have provided opportunities to engage local people one-on-one, for example, holding a stall in the town centre, serving tea and coffee, and asking people's opinions. This has proved to be a successful approach, and the Llanelli programme aims to continue this work in the coming months. It is unclear what will happen after the programme has ended and how community engagement work will be followed up.

## Resilience and vulnerability

Generally, climate change has not been the emphasis of the Cynefin programme across Wales, except for the Llanelli initiative where an indirect link to climate resilience is made through empowering communities to become more resilient to flooding, because of recent experiences. The reason is that most of the communities that Cynefin has engaged with have been in deprived areas. For these communities, climate change is often not the priority, and knowledge about the consequences of climate change is scant. Importantly, these communities are most at risk from the effects of climate change. The difference with Llanelli is the community's awareness of their own flood risk and climate vulnerability.

There is a belief within the Cynefin programme that it is empowering people, increasing their knowledge and connections to resources as well as their capacity to respond. A climate change narrative is offered by the coordinator and the actions taken within the different Cynefin areas are working towards building climate resilient communities.

## Successes and challenges

### Successes

The Cynefin initiative provides evidence that responsible work in an area can result in meaningful changes: proper community engagement, genuine partnership working-relationship building, and adding value. One of the key reasons for effective action in Llanelli has been the lack of budget for Place Coordinators' project delivery. This has meant that people approach them not because of money, but to discuss effective and reasonable actions that can be achieved on a limited budget. These actions can also be considered effective due to the fact that the Place Coordinator of Llanelli has managed to influence one of the largest town councils in Wales to adopt this approach. This has enabled Llanelli Town Council to recognise the issues facing their town, and they are starting to use legal means and tax policy to spend their money more efficiently, leading to better solutions to the risks of local communities. As a result, the stakeholders have become players in the sphere of delivering programmes, rather than just observing how money is spent without any great impact on the community:

**"It's not just the residents, but also other public bodies who now engage with them a lot more around delivering programmes or consulting or gaining statistics on their area."**

Interviewee 1

Strengths include:

- not being bound by the restraints of a budget and the increased paperwork that would be required for more financial accounting;
- having a facilitator/enabler role in the community, allowing the Place Coordinator to approach anyone at any time, having an eye on the community and making things happen; and
- action learning being part of the strategy – the programme has constantly tried to do things differently, as the management team and Place Coordinators have been learning throughout the implementation of the programme, and modifying their approach accordingly.

### Challenges

In terms of challenges, time has been spent by Place Coordinators proving the worth of the initiative, breaking down barriers and overcoming misconceptions. One of the major issues has been the reliance on grant funding and the co-operation of partner organisations. There have been situations where some organisations have expressed their willingness to collaborate, but in reality some do not want to or do not know how to do it. A great advantage has been that this initiative has been supported by the Welsh Government and advised by Commissioner Peter Davies (Wales' Commissioner for Sustainable Futures), who is on Cynefin's leadership group. The fact that policy-makers have been involved in the delivery and management is unusual, and important for the learning process.

Weaknesses of the programme include:

- the short timeframe of the programme (initially funded for a year, and then extended for a further two years) and the pressure to deliver short-term results instead of potentially more valuable long-term change; and
- the lack of clarity of the approach.

It is important to note that work in Llanelli is still ongoing, thus there will be some period of time before it will be possible to assess all the positive outcomes achieved.

## Key learning points from Llanelli Cynefin

### Key factors in developing resilience to climate change

Multi-agency working has been at the centre of the efforts to develop resilience in Llanelli communities. Establishing partnerships within the communities themselves has enabled residents, local organisations

and businesses to determine what work is going to happen in each area. The importance of the Place Coordinator and the community itself has to be recognised, as they have embraced this type of approach and want to be seen as a proactive community.

## **The roles of different stakeholders in developing resilience to climate change**

The Llanelli programme takes an inclusive and open-ended approach, involving multiple stakeholders with roles that can fluctuate depending on the circumstances and desired outcomes. Generally the Place Coordinators have a facilitator role that allows them to work with all stakeholders in order to understand their issues and find solutions to improve their surroundings, based on their needs. Communities and stakeholders are strongly perceived to be the main drivers of the direction of activities on the ground. On a policy level, the Llanelli Town Council is perceived as being an active partner and a leading force with an ear to the ground, whereas the Welsh Government has the main steer from the management level to help, and and look at the direction the programme is taking.

# 4 Norton community wind energy project

## Summary

In January 2010, a community-interest company based in York (hereafter referred to as the community-interest energy company ) proposed that a new community wind energy project be constructed in the parish of Norton near Doncaster, comprising two 2.5 MW turbines (see Figure 8). Upon completion, they proposed that the electricity be sold to the National Grid, with the profits generated going largely to a newly formed co-operative called Norton Energy Community (NEC), owned by those residents of Norton parish willing to pay £1 to purchase a share. These profits will not be distributed to individual shareholders – instead, they can only be spent on *collective* projects within the local area, with a focus on protecting the environment and mitigating climate change. Within this broad remit, the local shareholders have decision-making power over how the money is spent.

**Figure 8: A projection of how the proposed wind turbines would appear in the Norton landscape**



Source: <http://nortonenergycommunity.org/index.html>

Motivated by a desire to implement wind energy technology in a fairer and more socially just manner than typical 'private-developer' led projects (Jeong *et al.*, 2012), helping the area to become a 'low-carbon' community and building long-term local resilience to climate change are the key aims of the project. While the wind turbines will themselves generate low-carbon energy, the aims of this project are not limited to this. Over the longer-term it is hoped that the monetary and decision-making resources provided to the community will lead to many other environmental and renewable energy projects in the local area.

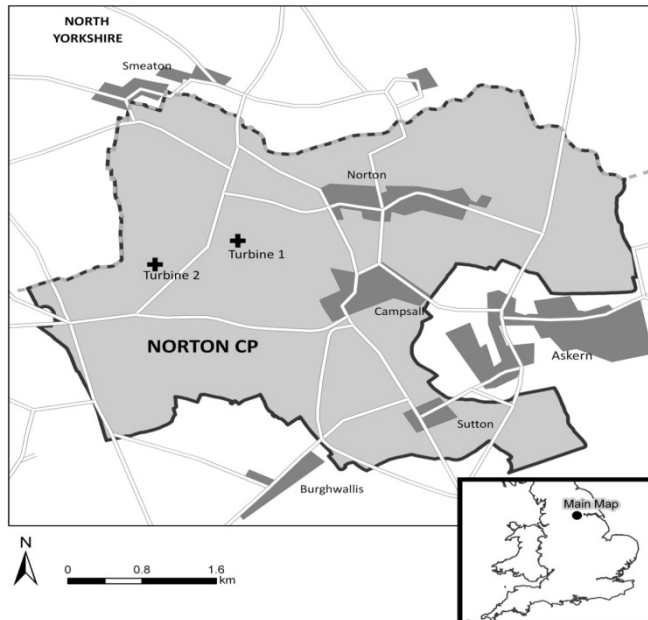
Planning permission for the project was submitted in summer 2012, following a period of local community consultation, and the completion of feasibility studies and impact assessments. Since that point, however, the project has remained stuck in the planning process for various reasons (detailed further later), with Doncaster Metropolitan Borough Council unwilling to give a decision either way until two objections by radar operators are dropped.

## Community context

Norton is a civil parish in the Doncaster Metropolitan Borough (DMB) and the county of South Yorkshire, in the North of England (see Figure 9). The civil parish comprises the villages of Norton, Campsall and Sutton, with a total population of approximately 4,300.

The parish itself is predominantly rural, with few very big employers (Doncaster Council, 2011). Census data shows that 58.56% of people in Norton were in some form of employment, marginally higher than the 56.03% in DMB as a whole, but slightly lower than the rest of England and Wales. Only 3% of people were classified as 'unemployed', which is slightly lower than the DMB average.

**Figure 9: Map of Norton civil parish and potential wind turbine sites**



Source: Simcock, 2012

## Aims and objectives

The aims and objectives of the Norton wind project frame the issue of local climate change resilience, addressing a broader vision of building local capacity that, over time, will enable transformative change in the local area and a transition to a 'low-carbon community'. In this sense, the project is intended to be more than 'just' a one-off renewable energy installation, instead providing the foundation for change that could build in significance over time (Jeong *et al.*, 2012). When describing its objectives, it is notable that the community-interest energy company uses the terms 'resilience' or 'capacity' only occasionally. Nonetheless, it is clear that the project objectives, implicitly at least, relate to the five resilience capacities outlined by Cutter *et al.* (2010):

- Infrastructure: the objective is to generate benefits to the local and national environment by facilitating the construction of new, low-carbon community infrastructure, enabling the local area to both mitigate and adapt to climate change.
- Economic capital: by ensuring profits stay in the local area and providing substantial finance for low-carbon projects, the aim is to generate jobs and investment and so rejuvenate the local economy. See the Resilience and vulnerability section below for further discussion.
- Institutional capital: by putting in place formal collective decision-making structures regarding how the wind turbines' profits will be spent, the project aims to enhance community decision-making power, and increase its capacity to manage and implement projects that will mitigate climate change. It is hoped that equipping the local community with the power to govern its own affairs will lead to the locality designing and developing its own low-carbon projects long into the future:

"I'd come to a conclusion that the climate change problems were more to do with social injustice rather than any technical problems, i.e. that communities were so divorced from their environment and the environment is really owned by private organisations, that leaves communities unable to act for themselves, as it were. And by enabling communities, to give them the resources to do something, it might be possible for them to act as change-makers in their own environment."

Community-interest energy company director 1

- Community capital: through collective decision-making, and providing people with the ability to shape and protect their local environment in a communal way, the project aims to build social cohesion and increase the community capacity in the area. It is hoped that strengthening these networks will make the community more resilient in the future:

“... that ability to come together as a large community group, discuss things and make decisions as a group, would be part of that resilience and part of that maturing attitude towards the environment, that was the general idea. It takes people outside of that small world of being an individual actor, as it were, you’re coming together as a community group to actually make decisions.”

Community-interest energy company director 1

It is also important to note that, for the community-interest energy company at least, the objectives of the project were not limited to the local area of the Norton community. They also intended the project to be an experiment of a different way of implementing and governing renewable energy projects, such that they might inspire other communities and act as a ‘seed’ for wider change elsewhere. As one director of the community-interest energy company described it: ‘it’s a small seed, but it’s hopefully something in the right direction’.

As this section has demonstrated, the aims and objectives of the Norton wind project have been determined largely by the community-interest energy company – an organisation based not within the Norton parish but in York, far away from the local community. In this sense, many of the objectives can be thought of as somewhat top-down and imposed upon the local area. However, should the project successfully gain planning permission, the local members of the Norton Energy Community co-operative will have democratic control over how these profits are spent, so long as they broadly relate to environmental protection.

“Communities have their own ideas about what constitutes a good thing to do and really it’s up to them to decide what would be the best thing for them themselves really.”

Project leader, Community-interest energy company

## Activities

As noted above, the Norton project aims to address four of the five resilience capacities: infrastructure, economic, institutional, and community. Many of the activities that aim to enhance these capacities will occur after the wind turbines have been constructed and are generating electricity, and so at this stage are not yet in place.

### Infrastructure resilience

As a renewable energy source, the original wind turbines are envisaged as playing a part in mitigating climate change. In the longer term, it is hoped the profit generated by these turbines will provide the finance for further low-carbon and sustainability projects that will contribute to further climate change mitigation, and enable the community to adapt to future stresses such as energy insecurity and price rises. For example, it is hoped that much of energy the community consumes will be generated by renewable sources based within the locality, thereby providing residents with fixed-cost energy and a secure supply.

### Economic resilience

As noted above, the energy generated by the original two wind turbines will be sold to the National Grid. These profits must then be reinvested in the local area on low-carbon and environmental projects and industries. Through this continuous investment, the aim is to generate jobs and investment that can rejuvenate the local economy.

### Institutional resilience and community capital

Institutional resilience and community capital are enhanced through activities at two stages of the project – prior to and after project construction.

Prior to construction, community engagement activities were undertaken from 2010–2012, before the project was submitted for planning permission. Contact with the Parish Council was established and maintained through a series of face-to-face meetings, phone conversations and emails, and members of the community were engaged through a number of different methods including information leaflets, public exhibitions and meetings, and a project website and online discussion forum. One of the aims of getting people together for discussion and collective decision was to build trusting social relations and community capital, both among local residents and between the community and the community-interest energy company.

The various engagement strategies used are described in detail in Simcock (2012), but the most novel aspect of the community engagement was a poll undertaken in summer 2010. Following a period of consultation, this poll enabled local residents to vote on whether the project was acceptable and could proceed to planning permission. This was achieved via a questionnaire, posted by the community-interest energy company to every household within the parish, asking residents to vote either 'Yes' or 'No' on whether they gave consent for the wind turbines to be constructed. Households in the parish were, in effect, given direct authority over this decision – the community-interest energy company was adamant that the project would not proceed, even to seeking planning permission, unless at least 51% of respondents voted 'Yes'. In the end, 80% of households voted in favour of the scheme proceeding, although only 10% of eligible households voted. The community-interest energy company did not consider this a problem, since every household had been given the opportunity and right to vote if they wished.

Following the construction of the project, as noted, the community will have collective decision-making power over how the profits from the turbines are distributed. This will be achieved through setting up a new co-operative called Norton Energy Community. This organisation will be owned by local people (all households within the parish can join for £1) and will oversee the distribution of turbine profits. Its co-operative governance structure will ensure that decisions are made collectively via the 'one-member, one-vote' principle, thus formally institutionalising collective decision-making. Therefore, the aim is to enhance the area's institutional capital, and also build community capital by getting people together for discussion and shared decision-making.

## Governance

To date, the action has been led and run mostly by two committed individuals at the community-interest energy company. Local people and members of the parish council have been involved and have influenced various aspects of the project, particularly before the application for planning permission was made. However, this involvement has not been 'formalised' through any legal or institutional structure – it has been largely through informal discussions and other engagement with the community-interest energy company leaders, alongside the community-wide vote on whether the project should proceed to planning permission.

If the project receives planning permission, however, those local residents that have bought a share in the Norton Energy Community co-operative will have formal voting rights over how the profits from the two turbines should be spent.

Funding for the project initially came from national and regional state grants, such as the Yorkshire Key Fund, that provided the community-interest energy company with the necessary funds to undertake feasibility studies and conduct community consultation. For several years, however, costs encountered have been 'funded' through the personal salaries of the community-interest energy company leaders (who have full-time jobs outside of this project), while the cost of their time has thus far been voluntary.

## Resilience and vulnerability

Social and economic regeneration is one of the main project objectives. By ensuring profits stay in the local area and providing substantial finance for low-carbon projects, the project developers aim to generate jobs and investment that can rejuvenate the local economy. As one of the community-interest energy company directors interviewed said, community resilience here is partly about 'making local jobs in small local industries' and providing the area with a degree of economic self-sufficiency. To some



degree, this aim was also related to dealing with existing vulnerabilities in the local area – parts of the parish are relatively socio-economically deprived, and the community-interest energy company's leaders saw an opportunity to remedy this through a community wind energy project:

“Now, the project we're working on... it's in an area of South Yorkshire that's quite deprived, and has been ravaged previously by capital through coal mining ... So, you know, there is an opportunity to do it in a different way, there's an opportunity for capacity building, social action, social change ... and our project is very much aimed at identifying a programme of sort of regeneration initiatives and social initiatives, environmental initiatives and projects, to help change this place for the better.”

Community-interest energy company director 2 – quoted in Jeong *et al.*, 2012

## Successes and challenges

Compared to the other case studies discussed in this report, to a large degree it is hard to evaluate the 'success' of the Norton wind project, given that it has yet to gain planning permission and the turbines have not been constructed.

As noted, the main driver for the project was the community-interest energy company's desire to implement a wind project that they saw as radically different to private-developer led models, particularly in terms of providing long-term environmental and economic benefits (and resilience) to the area. More broadly, they saw the project as a way of empowering the local community and, in doing so, creating a sense of stewardship for the local and global environment.

The project is well-intentioned, and if it manages to get built it could provide the local area with both the resources and decision-making power to drive forward further low-carbon initiatives. However, so far it has been ineffective in achieving its goals, since it has remained in the planning process for over 2½ years. Moreover, it has not generated the level of local resident support or 'buy-in' that was expected, and indeed has been the source of considerable conflict within the local community. This is one of the primary reasons why it has remained in the planning process for so long.

The main weakness of the action is a lack of significant involvement from local people in the design and planning of the project. While the community-interest energy company has good intentions and is willing to commit significant amounts of time, resources and expertise to driving the project forward, the lack of local involvement in key decisions (such as the choice of technology, or the siting and size of the wind turbines) and perceived poor information provision contributed to resentment and mistrust within the community. There was a sense among some local residents that the community-interest energy company was dictating to the community, and that the process lacked transparency.

At the same time, the committed leadership of the community-interest energy company, with expertise in the renewable energy industry, is also a strength of the project. Community renewable energy projects, even when involving a wide range of local residents, often still rely on a handful of dedicated individuals who are will to spend time moving the project forward (Walker, 2008).

Potentially, the effects of the action will be very long term – the wind turbines will be operational for at least two decades, while it is also expected that a number of further low-carbon and environmental projects will flow from this.

## Key learning points from the Norton community wind energy project

### Key factors for the development of community resilience in the face of climate change

This case study highlights key issues that can undermine the development of resilience, particularly in terms of attempting to develop local and 'community-owned' renewable energy schemes. Some of these barriers can be argued to relate to a lack of some resilience capacities.

First, it can be difficult for small organisations or volunteers that run community energy projects, many of whom are likely to have full-time jobs elsewhere, to mobilise the time, expertise and resources required to see a project successfully through planning (Walker, 2008). The main director of the community-interest energy company noted that he had been taking the project forward himself ('It's just been me sort of doing everything in my spare time really'), and that the expertise he had gained from past work in the wind energy industry had been very helpful. However, the fact he was working alone contributed to the project development proceeding very slowly. Therefore, a lack of available institutional capital acted as something of an impediment, with this project (and often other community energy schemes) reliant on individuals trying to proceed without sufficient support from wider institutions.

Second, there was a lack of access to the necessary economic capital to fund the development of the project. For around two years, the Norton project had been kept going by the personal income of the community-interest energy company's project leaders, but they were now encountering difficulties in raising money. The main director noted that this was partly the result of the stage that the project was at – while funding is now available through the Rural Community Energy Fund (RCEF), this is largely to conduct initial feasibility studies, and develop a business plan and planning application. Funding to complete the construction of projects once they have been granted planning permission is also relatively easy to find. However, gaining funding for projects that are between these two stages appears to be challenging – for example, as detailed further below, the Norton project received two formal planning objections from aircraft radar operators, on the grounds that the turbines would interfere with their radar systems. They offered to install technology that would mitigate this problem, and so drop their objection, but only if the community-interest energy company agreed to pay £40,000 for this measure.

“There's been no state funding for years now, and really what's kept the project alive is the fact that I've [personally been part of] a joint venture with an organisation, and they've been happy to pay the odd £1,000 here and there, just to do small reports and things like that, that the planners have asked for. But it's obviously getting serious now because we've got £40,000 to find in the next 30 days.”

Community-interest energy company director 1

The community-interest energy company's leader also recalled that the complexity of the forms and criteria that had to be met also made accessing funding difficult: 'administratively it's quite hard to get all the boxes ticked'.

A third issue encountered during the project development was opposition from both large institutions and some local residents (an 'official' local opposition group formed in late 2010 to protest against the scheme). The major reason the Norton wind project has been delayed in planning for over two years is the formal objections raised by two large aircraft organisations, on the grounds that the turbines would potentially interfere with their aircraft radars. These large organisations proved to be very influential in the planning process, with council planning officers refusing to make a decision until these objections had been removed. However, one director of the community-interest energy company questioned the validity of these objections, noting that '[neither organisation] submitted robust technical reasons for their objection, they just put the objection in', and that the objections made were based purely on principle rather than any hard evidence or through conducting any rigorous investigation. He felt that these types of objection potentially acted as a barrier to community wind energy across the UK:

“And I think one of my interpretations of the whole industry now is that it's tending towards big turbine schemes where organisations with a lot of money can sort of challenge this sort of institutionalised ignorance, and the smaller operators just don't have a chance to challenge it at all. So for instance we've got about a dozen smaller community projects on the go at the moment which are just single turbine schemes but would provide energy for about 400 houses, with one of them. But we've had to turn back about another ten because we know we would get objections from a radar operator and we just don't have the resources to challenge them at all.”

Community-interest energy company director 1

Local opposition to large-scale and private developer-led wind energy projects has been extensively studied (e.g. Devine-Wright, 2011). Often there is an assumption that nominally 'community-led' projects will generate a greater level of local support and avoid the opposition that is common to private developer projects (Walker, 2008). However, the Norton project faced significant local opposition,

demonstrating that local support cannot be either assured or assumed under the wide diversity of contexts, conditions and arrangements through which community renewables are being pursued and practised.

There were several reasons for this local opposition, but concerns centred on social and environmental justice and fairness were often at the forefront. In terms of procedural justice, opposition groups complained strongly that there had been a lack of involvement for local people in the design and implementation of the project prior to its submission for planning permission (Simcock, 2012). Once the project had been submitted to planning, this concern was at the core of several formal objections made to the planning authority. Although the community-interest energy company had run a community-wide poll that enabled local residents to vote on whether or not they wanted the project to go ahead, objectors complained that involvement in this one decision was insufficient – they also wanted greater, more transparent community involvement and influence in other key decisions, such as the siting and number of turbines, and even the choice of technology itself (*Ibid*). They also argued that there was a need for better quality information – without this, the community poll would be essentially meaningless, and people would be unable to make an informed decision:

“These are questions that ought to be answered. I don’t think we can say if we support it until we know more.”

Local resident, male

“[The information] was just very condensed and just basically told you enough to draw you in.”

Local resident, female

The context of these concerns is also vital – in the Norton case, they were heightened by the fact that the community-interest energy company was an ‘outsider’ to the area, and so lacked social relations and community capital with local people. This contributed to a lack of trust, which in turn led to a desire for a high degree of openness and transparency.

“It’s all a bit cloak and dagger really ... I think it just makes you naturally suspicious when something like that happens, like they’ve got something to hide.”

Local resident, female

There were also concerns about distributive justice, in terms of how the monetary benefits of the project would be shared across the local area. Although the aim of the project was to distribute the turbine profits to collective projects within the area, with no private monetary gains by individual households, there were to be some payments made to individual landowners in return for the right to build the turbines on their land. This created some dissent within sections of the community, who found it unfair that certain landowners would gain financially while others would miss out. These concerns were embedded within the particular context and history of the area, which had seen disagreements and feuds between landowners for many years.

## **Building and mobilising community capital: the roles of different stakeholders in developing resilience to climate change**

The above accounts of local opposition highlight the importance of trusting social relations and community capital between community members and those leading community energy projects, and how a lack of this can act as an impediment to project development. The Norton project was initiated and led by an ‘outsider’ to the local area, the community-interest energy company. Despite the community-interest energy company being a not-for-profit organisation, this outsider status fuelled local suspicion of the company and its motives, which in turn led to calls for very detailed information and engagement in many different project decisions.<sup>3</sup> The fact that this was felt by some local residents not to have occurred acted as an impediment to the community-interest energy company building a trusting relationship with the local community. In contrast, the local opposition group – led by those who lived within the area – was very effective at tapping into and mobilising pre-existing local community capital and networks.

The experience of the Norton project suggests that it is difficult even for well-intentioned social enterprises to simply 'drop in' to a local area and expect to be able to build community energy projects and resilient, low-carbon communities, without putting significant effort into building strong and trusting relations with the local community. Such initiatives need to be embedded within the local area, allowing a strong and transparent role for local people in influencing key decisions – in the case of renewable energy projects, this includes the choice of technology, and its scale and location.

# 5 Transition Heathrow

## Summary

Transition Heathrow's project, known as Grow Heathrow, is located on the site of an ex-market garden in Sipson, one of the five Heathrow Villages that would be impacted by the potential expansion of Heathrow airport. It was established by activists from the direct action organisation Plane Stupid, following the 2009 Climate Action Camp in the area.

Squatting a privately owned site, Grow Heathrow has been under threat of eviction since August 2014, but continues to thrive with support from local residents, the Member of Parliament (John McDonnell MP), Hillingdon Borough Council and the Metropolitan Police. Formerly derelict, the land has been transformed from a site of anti-social behaviour to a well-regarded community hub, organic garden and 'an example of how to communities can adapt to low-carbon, sustainable, off-grid living' (Mason and Whitehead, 2012). It provides a venue for local residents and environmental activists to share knowledge and practical skills, and for other groups to meet.

This case study is illustrative of a project led by 'outsiders' to the local area that has galvanised support through consulting and building trust with the local community, and joining up with existing community actions and protests regarding Heathrow airport expansion, climate change and the housing crisis. It highlights the political nature of community action for building resilience to climate change.

**Figure 10: Grow Heathrow site poster, London**



Source: Katya Brooks



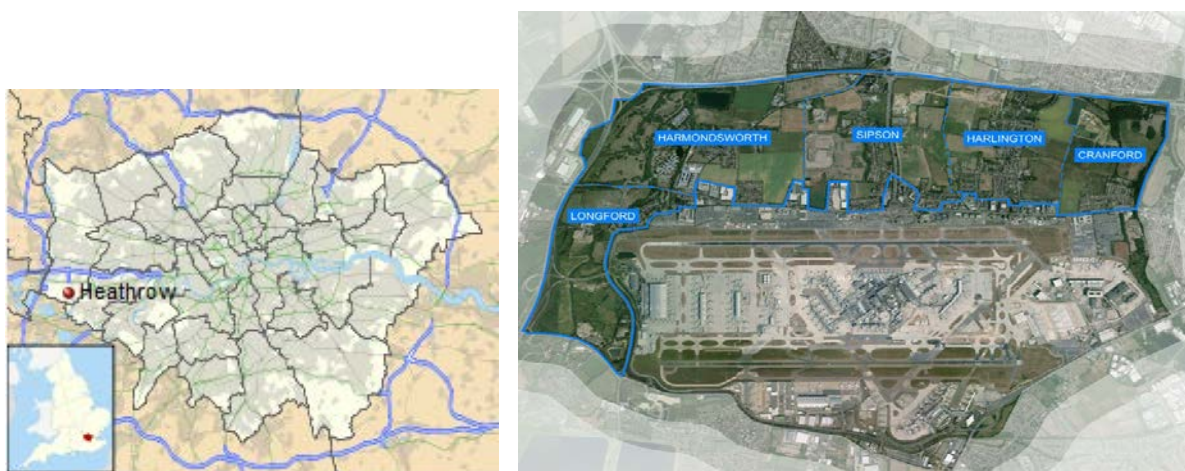
## Community context

### Heathrow Villages

Grow Heathrow is situated in the Heathrow Villages ward of the London Borough of Hillingdon. The ward is part of the Hayes and Harlington constituency, where the Member of Parliament is John McDonnell MP. Comprising the villages of Sipson, Harmondsworth, Longford and Harlington, as well as an area of West Drayton and the Bath Road, it is located between the M4 and Heathrow Airport. As described by the Heathrow Villages Forum (2014):

[The area has] a strong agricultural history. Until the early 1940s most of the land around Heathrow was used to grow fruit, vegetables and flowers [...] Since the opening of Heathrow Airport, the area has had to cope with several plans to expand the airport, but it remains relatively undeveloped with plenty of open green space compared to surrounding areas.

**Figure 11: Location of the Heathrow Villages**



Sources: <http://en.wikipedia.org/wiki/> (left); <http://www.heathrowvillagesforum.org/Heathrow%28hamlet%29> (right)

The 2011 census shows the population of the Heathrow Villages as 12,199, and with 5.2 people per hectare it is one of the least densely populated wards in the borough (borough average is 23.7 people per hectare).

Heathrow Villages is an ethnically diverse ward. The three most populous ethnic groups are White British (50%), Asian/Asian British (33.1%) and 7.9% Black/African/Caribbean/Black British. It has the highest number of residents across all wards stating that they were born in other EU countries (10.1%).

Though Hillingdon is a relatively affluent borough, average household income in the Heathrow Villages ward is the second lowest in the borough at £32,400, below the UK average of £39,060 and £46,550 for London.<sup>4</sup> Moreover, one of the eight Local Super Output Areas (LSOAs) covering the ward is ranked in the lowest 20% on a multiple deprivation score for London, with the rest in the lowest 50%.<sup>5</sup>

In comparison with other wards in the borough, Heathrow Villages has the highest number of workers in elementary professions (20.5%) and the lowest number of workers in the professional sector (8.5%).

The ward is next to Heathrow Airport, which according to BAA figures from 2008–9 employs approximately 1,500 of its residents,<sup>6</sup> roughly a sixth of people of working age in a ward that has a total population of approximately 12,000.

Despite the fact that the airport is the largest employer in the borough, the council has actively opposed its expansion because of concerns about the impact this will have on local communities.<sup>7</sup> In particular, original plans for a third runway involved demolishing Sipson village completely. In August 2007, a climate

camp was organised in Sipson to protest against climate change, and the proposals to expand Heathrow Airport in particular.

In Sherwood's history of the Heathrow area, he charts how the airport has radically changed what he describes as a peaceful and prosperous agricultural community based on market gardens that served London pre-World War II. In particular, he notes:

“The development of the airport has totally changed the social structure of the communities living around it. Many of those now depend on the airport for their economic well-being and resent any criticism of it. However, as relative newcomers they should accept that there are those who are even more resentful of the manner in which the airport came about...”

Sherwood, 2009 (Foreword to first edition)

This may suggest that opinion among residents within the ward is divided on whether the expansion of Heathrow Airport would be positive or negative. A recent survey of people who lived near airports in England suggested there has been a shift since 2010 towards more support for airport expansion, up from 36% to 46%, though the analysis does not break the figures down by airport. A local news website reported that one opponent of the growth of Heathrow Airport who lives and works in Sipson felt she had seen a similar shift in local opinion, which she attributed to a change ‘in demographic’, many homeowners having sold up, and being replaced by tenants who, she suggested, were more ‘transient’.<sup>8</sup> While only anecdotal, this could indicate that there are fewer people within the area who feel they have a stake in the local community, a sense of belonging.

## Aims and objectives

### Transition Heathrow and Grow Heathrow

Transition Heathrow grew out of the climate camp of 2009 that was held at Sipson, and an ‘adopt-a-resident’ scheme run by Plane Stupid, a direct action network that opposes airport expansion and short-haul flights, which linked activists and residents in case bulldozers arrived to demolish homes for a runway:

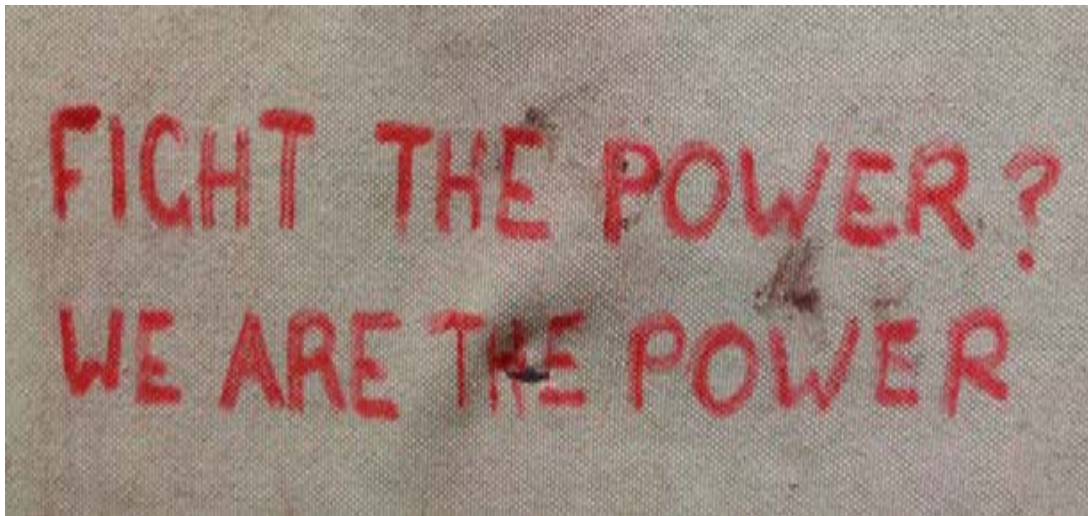
This is when we really started to get to know the area – the people, the community, the history. [...] The need for a long term vision based on community resilience in the Heathrow villages was clear and luckily enough someone had a plan. As part of a university project someone from Plane Stupid had drawn up a long term vision for the Heathrow villages – and the vision was called Transition Heathrow. All it needed was some people to move down there.<sup>9</sup>

Joe Rake writing on Transition Heathrow on the Transition Town website

Six Plane Stupid activists moved to the area in October 2009, taking a copy of *The transition handbook* (Hopkins, 2008) with them.



**Figure 12: Protest sign at Transition Heathrow, London**



Source: Katya Brooks

## **Purpose**

On its own website, Transition Heathrow's purpose is described as:

... a grassroots action group working to build resilient Heathrow communities, capable of collectively coping with the injustices and threats of climate change and peak oil.<sup>10</sup>

Congruent with this, the following aims are listed:

1. To further the Heathrow Villages as an iconic symbol of community resistance to the economic, ecological and democratic crises.
2. To develop and promote community and resource autonomy, to support long-term community resilience.
3. To establish replicable structures of organisation, which could provide a model for future non-hierarchical, consensus-based communities.
4. To root the grassroots radical values of the third runway resistance in the Heathrow Villages for the long term.

**Figure 13: Picture of site, Transition Heathrow, London**



Source: Katya Brooks

The three activists interviewed for this case study echoed aspects of this stated purpose and aims, and also mentioned that being engaged with residents in the community, they came to appreciate the potential consequences of airport expansion at local-level: 'If people's homes are destroyed then their entire personal history and identify is destroyed too' (Interviewee 1). This has allowed 'a more joined up approach' (Interviewee 3) that sees Transition Heathrow as resisting both environmental and community degradation.

The phrase 'building community resilience' is part of Transition Heathrow's 'branding', and the importance of resilience-building was mentioned by all interviewees as being a core aim of the project:

"The community has had the heart ripped out of it. The airport's contributing to the massive problem of housing in London. Combatting those things is part of building community resilience. It comes from how we help people to value themselves, to interact with their surroundings. [...] We're helping local people to find their identity without defining it for them."

Interviewee 1

## Activities

Grow Heathrow has climate mitigation, adaptation and community resilience elements. It particularly addresses the following resilience factors or components:

- social (by specifically targeting social inequities and people vulnerable to urban-based environmental threats);
- infrastructure (e.g. providing a hub for local residents, activists and non-governmental organisations, or NGOs, to share knowledge and practical skills);
- institutional (strengthening partnership working between local residents, Heathrow employees, environmental activists and campaigning NGOs, the local council, the MP and Metropolitan Police); and
- community capital (e.g. awareness raising, political mobilisation, education and skills training).

## Social resilience

The Transition Network has developed an area of work on 'personal resilience', which bridges social resilience and community capital, focusing on 'burnout' (stresses on physical and psychological health) of people working on transition, which links with the Young Foundation's Wellbeing and Resilience Measure (WARM) (Mguni and Bacon, 2010).

## Institutional resilience

An important element of Grow Heathrow activities has been the campaign and media work that activists have undertaken to highlight the issue of airport expansion, sometimes in relation to the threat of their eviction. Described as a 'hub for local residents and environmental activists', Grow Heathrow has 'played host to a wide range of political gatherings for groups such as: UK Uncut, Climate Camp, Reclaim the Fields, The Transition Network, People&Planet, No Tar Sands Network, The Kick Nuclear Campaign, PEDAL, Palestine Place, Cuts Cafe and many more'.<sup>11</sup>

## Infrastructure resilience

As a result of the original Plane Stupid activists' first six months living in the area, and consultations with local community members and groups, the community's lack of a common space in which they could get together was identified as a key problem. Having seen a derelict market garden in the area that had been the site of anti-social behaviour, they proposed at a residents meeting to squat this land and to turn it into a productive space where the community could meet and where sustainable living could be practised.

**Figure 14: Growing spaces at Transition Heathrow, London**



Source: Katya Brooks

The activists were surprised when there were no objections. With the help of local residents, they cleared rubbish from the site, repaired greenhouses and turned them into living, workshop and growing spaces, and reclaimed land for further planting. Christine, a local resident who features in a video about Grow Heathrow, said:

“...They’ve utilised a piece of land that was being, frankly, abused by the land owner. There was [a] massive amount of fly tip rubbish: car parts, car braking, fuel tanks; all manner of things on this agricultural land. What they’ve done is be a completely open community space. Anyone can ring that bell at the entrance and they’ll open the doors and let you in. As a result it’s become a hub and it’s the only community space we’ve got. I’m gobsmacked they could be forcibly removed when they’re doing so much good for our community here.”<sup>12</sup>

## Community capital

Grow Heathrow activities are open to the public. Beyond growing vegetables and fruit, the activities undertaken have included a bicycle maintenance and repair facility, the making of soap, as well as running a range of workshops on organic gardening, permaculture design, bicycle maintenance, and wood and metal work, to share knowledge and practical skills: ‘We provide our facilities almost indiscriminately to people that want them and our workshops are free wherever possible’. Workshop topics include web design and HTML programming for beginners, building and insulating with cob, grey-water systems theory, fun and easy fermenting, art, music, intuitive painting and sound healing, ‘subvertising’ and planning direct actions. Direct-action training is also offered to members.

Interviewee 1 suggested that the main purposes of the workshops are ‘outreach’ and ‘education’. While it seems that often those who come to the workshops come from further afield, there ‘are members of the wider community who come on site and build stuff, some enjoy bumbling around the way people who live here do and some attend our meetings and are involved in decisions’ (Interviewee 1). Transition Heathrow activists have visited local schools, organised workshops for the Scouts, and run stalls at local events, but one interviewee explained that because of insurance issues, they are not yet able to welcome children on site.

## Governance

Though an ‘official’ part of the Transition movement, Transition Heathrow is ‘autonomous’, in Interviewee 1’s words. Like other Transition local groups, it is those involved in Transition Heathrow who decide what activities they will undertake, and how, and they have their own website. The numbers of those living on the site fluctuate, and they often have both day visitors and longer-term visitors. Meetings to decide on action are open to both those who are ‘residents and non-residents’ and are ‘non-hierarchical’: ‘We make all decisions together’ (Interviewee 1).

While it appears that decisions on Grow Heathrow’s overall direction, as well as day-to-day organisation, are taken by those actively involved in Transition Heathrow, activists did consult people in the local community about their plans to squat the site, and they were accompanied by some local residents when they moved in. Interviewee 3 feels this helped to ‘embed the project in the local area, a sort of sense of legitimacy in the area’. He felt they had gone from being regarded to some extent as ‘outsiders’ to being seen as ‘local residents’ as they developed friendships in the community, as endorsed by one local resident:

“Some of the locals, most of the locals probably, were probably a bit suspicious about hippy types coming in and squatting, but within weeks they really became a valued part of the community and everyone was going around saying, ‘Aren’t these people lovely? Aren’t the police being horrible to them?’ They really got embedded in the community quickly and they supported us with our campaign against the runway and it’s just grown from there. They’re a really central part of the community now; everybody loves them!”<sup>13</sup>

It appears they maintain good relations with a number of local representatives, in particular the local MP, John McDonnell, as Interviewee 3 explains:



“He backed us from the beginning, not just personally but also in court cases, because the owners wanted the land back we were squatting. All the way from coming to have a drink with us around the fire, coming to our public meetings we’d organised in the squat to talk to people about what we’re doing, through to going to the House of Commons and raising the fact that we were raided one morning by the police. He’s still a big supporter of the project and that probably helps a lot. He’s very well respected in the local area.”

John McDonnell’s statement of support features on Transition Heathrow’s website:

This inspirational project has not only dramatically improved this derelict site but it has lifted the morale of the whole local community in the campaign against the third runway and in planning a sustainable future for our area. We cannot lose this initiative and I will do all I can to enable it to continue.

They have also been supported by some local businesses:

“We have really good communication with local businesses and we try to support the local economy, which the businesses appreciate as there are quite a few of us here. One of the ladies running a local pub is really in support of us and speaks out whenever there’s a discussion of any kind and sticks her neck out for us and that’s massively empowering.”

Interviewee 1

Among others, the project has received funding from the Lush soap company, with whom there are plans to sell Grow Heathrow soap in the near future, and from the Oppold and Puckham Charitable Foundation, and there have been donations from members of the public, including visitors to the site and workshop attendees.

Transition Heathrow has close links with a number of anti-airport and climate change activist groups, in particular Stop Heathrow Expansion. They are also associated with the Heathrow Villages Planning Committee (HPVC), which is made up of local councillors, residents’ associations, service providers, businesspeople and landowners, religious groups and community groups. It is establishing a local forum to develop a Neighbourhood Plan, having been awarded funding to do so.

## Resilience and vulnerability

Resilience is largely framed here as being in relation to climate change, a stress capable of delivering specific shocks. The strategy is one of resisting airport expansion in order to prevent further carbon dioxide emissions, and thus is about mitigating potential climate change, rather than building resilience to the potential consequences of climate change. Resilience building aims of the project have also become about saving homes within these communities, as this is the concern that motivates local people’s involvement in protesting against the airport expansion (a form of frame bridging and expansion; Snow *et al.*, 1986).

However, there is an adaptation component in that one of the aims is to promote community resilience within these communities more generally, through developing community and resource autonomy. The concept of community as a bottom-up, undifferentiated locus of democratic decision-making, in opposition to corporate and government elites, is espoused. In this framing, community resilience to climate change means autonomous local communities that are able to resist the power of carbon-promoting elites to facilitate a low-carbon future based on a particular vision of sustainable living: off-grid, food-growing communities, rooted in radical values. It thus requires a social and institutional transformation in both ways of living and processes of decision-making, though the specific resilience is not about adapting to change in the local context, but resisting it.

The approach taken by Transition Heathrow to build community resilience has largely focused on strengthening social and cultural capital. This is done through providing a supportive space where local residents can come and discuss plans for community action, and through running workshops that aim to assist participants in developing practical skills to resist airport expansion, or to live in ways that are seen as more sustainable. While members of the local community have used these facilities, it is not clear how many have taken advantage of these opportunities, and what impact they have had. However, anecdotally, it appears that some local people at least feel grateful for the presence of Grow Heathrow in face of the

threat of airport expansion. The provision of a space to meet, as well as to grow vegetables and fruit locally, is also contributing to the infrastructure capacity of the community.

The community is vulnerable in the sense that the very existence of at least one of the villages is in question. However, it is not an area that is particularly vulnerable to climate change or unemployment, and is not particularly poor or disadvantaged from a financial point of view. However, it seems to be characterised by relatively low-paid work, a quarter of which is at the airport. BAA, in its continuing campaign for a third runway, suggests such jobs are under threat without expansion.<sup>14</sup> This could suggest that Transition Heathrow is working for the resilience of those whose livelihoods do not depend on the airport, although Transition Network framing would argue that peak oil (a term used to describe the maximum extraction rate of oil after which the rate of production declines; it is suggested that we are approaching that point) makes the decline of such livelihoods inevitable (though this was not an argument those interviewed invoked).

While interviewees suggested there was some pre-existing social and institutional capital within Sipson, partly because of on-going local campaigns against airport expansion, they argued that the Climate Camp and then the setting up of Grow Heathrow has helped to reinvigorate local resolve. They also mentioned how homeowners have been selling up to BAA, and are being replaced by short-term tenants who have little stake in the local area, suggesting social and institutional capacity is continuing to be eroded, despite their presence. This makes community engagement more challenging, and a couple of interviewees implied they have struggled to reach tenants or ethnic minority groups, who make up a relatively large proportion of the population.

The interviews also highlighted the potential vulnerability of Grow Heathrow itself, because of the challenges of living communally on squatted land, and the associated threat of eviction. However, by deliberately building relationships with local power holders, in particular the local MP, and highlighting the plight of the Heathrow Villages and themselves in the national media, they have so far been able to use this political capital to survive. Following publication of the Airport Commission's final report in July 2015, the Government's decision on the issue of airport expansion and where this will occur is awaited. If the decision is not to build a third runway at Heathrow, then Transition Heathrow's overall goal will have been achieved. What is unclear is whether, in these circumstances, Grow Heathrow activists will remain to continue working for a low-carbon future, and whether the site owners will continue to fight for their eviction if there is some certainty for the future.

In essence, this is about community-focused resilience to climate change, in the form of resistance to airport expansion, of people who have a stake in the local area (and are therefore possibly more affluent) for an anti-capitalist, low-carbon future.

## Successes and challenges

### Successes

All interviewees in one way or another pointed to the fact that they had managed to resist eviction and remain where they are, 'in solidarity' with those who risk losing their homes, as their main success:

**"A big success is that people know we're behind them and we're still there, and they're quite happy to have us there. They know we were there and up for taking more daring and bold direct action and protect the area from expansion."**

Interviewee 3



**Figure 15: Vegetables at Transition Heathrow, London**



Source: Katya Brooks

This is supported by these two local residents interviewed on camera for videos about the project:

“I’m a council tax payer and they’re welcome in this village anytime, as far as I’m concerned... It gives us encouragement. When you’ve been fighting something for so long and you get sick of your own voice and this is just a different side of things and tackling things from a different angle and it’s lovely because it brings back enthusiasm again.”

Tracy<sup>15</sup>

“They’re wonderful. They’ve lifted our morale in the villages ever since Climate Camp came. We were struggling but then Climate Camp came and these young people came to support us and we haven’t looked back.”

Lynne<sup>16</sup>

Two interviewees also pointed to mainstream media coverage they had managed to secure for the issue, partly as a result of the threat of eviction, suggesting that this had been important in attracting new people to get involved. As Interviewee 2 surmised: ‘We’ve helped to make the case to stop the third runway being built. I hope that people feel proud and happy and empowered to think that it’s possible to have sustained presence on a piece of land for all that time’. Interviewee 3 was pleased that they had managed to set up an eco-community that is integrated into, not separated from, surrounding communities, echoing a critique of eco-communities also aired by Rob Hopkins of the Transition movement.

Interviewees also highlighted the interpersonal, personal and educational successes of the project; how they have each benefited, and how Grow Heathrow had provided a temporary home for a number of homeless people, as well as ‘free interesting workshops that people can find out about themselves and our way of living, teaching people about their own food and permaculture’. One interviewee also mentioned the positive impact they were having on the biodiversity of the site, as well as more broadly battling pollution:

“The main strength is the people: the people of the local area who have embraced us [...] the international and national visitors who will come and run a workshop for us, who are

interested and inspired by what we do. We're a community coming together and people are good to each other and are kind to each other and co-operate."

Interviewee 1

It has been seen to be useful in galvanising a wider range of community members.

## Challenges

All interviewees recognized a 'subtle difference' existing between Transition Heathrow and Grow Heathrow, and how those involved identify themselves. One interviewee was initially:

"... concerned about the apolitical side of Transition Towns. I think the Transition Town model is about local people coming together to create the change themselves rather than directly opposing, and ignoring, what the government is doing."

Interviewee 3

Interviewees identified how the Grow Heathrow site had been a 'community space' that was 'open for local people to come whenever they wanted, pretty much 24/7 at the beginning but that became more limited when people became tired of people coming in and out all the time'. This highlights a key challenge in maintaining and expanding community actions: activist burn-out. All interviewees identified the difficulties of living communally and sustaining a constant presence on a site with few facilities, the threat of eviction, the need to earn a living, and an ebb and flow of residents, some of whom were not as committed to the aims of Transition Heathrow.

## Key learning points from Transition Heathrow

### Key factors for the development of community resilience in the face of climate change

This case study highlights the political nature of community action for building resilience to climate change. This is particularly clear here because of the anti-capitalist stance of some of the activists involved. But it reiterates the need to acknowledge the importance of clarifying resilience 'for what' and 'of whom' (in addition to 'to what'), and how different framings will privilege one set of perspectives over another, with practical consequences for the activities then undertaken. Interviewee 3 stated that:

"The site was actively on the ground where Heathrow wanted to build a third runway and we were actively resisting it by being there, but at the same time building our own solutions to climate change and environmental and economic threats."

Here, it is largely the activists who have defined the problems and solutions they seek to address through Grow Heathrow. Their interactions with people in the local community have led them to incorporate community concerns about losing their homes. Overall they see their role as educating people about how they frame 'resilience'. However, while Transition Heathrow was set up by people who came from outside the community with a particular vision of the world they want, they moved into a ward where many people were already opposed to the expansion of Heathrow Airport, though not necessarily for the same reason. The local council, for instance, is campaigning against the expansion of Heathrow Airport because of the local impact, but is not opposed to airport expansion *per se*.

This has enabled alliances to be built with individuals and organisations that want the same outcome (the prevention of Heathrow Airport expansion), even if their underlying rationales for this are different. As a community within a community, they have also managed a sustained presence for five years, which has perhaps helped them to be seen as part of the wider community, although the transience of residents in Grow Heathrow and in the Heathrow Villages has made maintaining relationships challenging. It also highlights the issue of nurturing the personal resilience of organisers of such community action, an aspect that the Transition Network has picked up on generally in the work of Transition initiatives, and which they attempt to support. Grow Heathrow itself appears to have become a space for other activist groups to plan, share, and possibly recharge.

While the overtly campaigning and squatting aspects of Grow Heathrow are atypical within the Transition movement, and it has been described as a more 'radical and confrontational' version of a Transition food project (Beecher *et al.*, 2012), Ben Brangwyn of Transition Network has blogged approvingly of Grow Heathrow:

To those who aren't familiar with the more radical edge of activism and transition - pay them a visit and leave your preconceptions at the door. I was mightily impressed by how they were conducting themselves, and spoke to local residents who supported their efforts. Grow Heathrow is right up there in my top 10 Transition, "Holy cow, I didn't expect that!" list.

Ben Brangwyn, 2011<sup>17</sup>

The key message from this case study is that protest can develop resilience and community action in the context of climate change, and shows that outsiders can be positive agents within this.

# Notes

- 1 Data in this section comes from Liverpool City Council's 2014 Belle Vale ward profile.
- 2 <http://www.senedd.assembly.wales/mglIssueHistoryHome.aspx?lId=10103>
- 3 In other cases of community energy projects that are led from within the local community, by already-trusted local residents, the same degree of information is not always necessary, since residents are prepared to trust that the project leaders will do the right thing for the area (Simcock, 2012). However, in the Norton case, information and transparency relating to all of the community-interest company's actions were considered vital for ensuring that the community's interests were protected.
- 4 <https://www.hillingdon.gov.uk/media.jsp?mediaid=33039&filetype=pdf>
- 5 <http://data.london.gov.uk/dataset/indices-deprivation-2010>
- 6 <http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/Employment-survey.pdf>
- 7 <http://www.hillingdon.gov.uk/media/pdf/p/g/HP-heathrow-special-web.pdf>
- 8 <http://www.getwestlondon.co.uk/news/local-news/heathrow-airport-expansion-now-more-7499181>
- 9 <https://www.transitionnetwork.org/stories/joe-ryle/2011-09/how-transition-town-movement-found-transition-heathrow>
- 10 <https://www.transitionnetwork.org/initiatives/heathrow>
- 11 <http://www.transitionheathrow.com/grow-heathrow/>
- 12 <https://www.youtube.com/watch?v=ACjQ-vqEx3g>
- 13 <https://www.youtube.com/watch?v=R9cQ4tDfSI8>
- 14 [http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/a-new-approach\\_LHR.pdf](http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/a-new-approach_LHR.pdf) (p34).
- 15 <https://www.youtube.com/watch?v=orp6-KIZVFE>
- 16 <https://www.youtube.com/watch?v=orp6-KIZVFE>
- 17 <https://www.transitionnetwork.org/stories/joe-ryle/2011-09/how-transition-town-movement-found-transition-heathrow>

# References

- Beecher, J., Scott Cato, M. and Weir, N. (2012) 'The resilience of cooperative food networks: a case study from Stroud', in D. McDonnell and E. Macknight (eds), *The Cooperative Model in Practice: International Perspectives*. Aberdeen: CETS
- CAG Consultants (2009) *Climate Impacts and Vulnerabilities Framework. For Liverpool City Council*. June 2009.
- Carmarthenshire County Council (2015) 'Carmarthenshire county profile'. Carmarthen: Carmarthenshire County Council. Available at: [http://www.carmarthenshire.gov.wales/media/824482/county\\_profile.pdf](http://www.carmarthenshire.gov.wales/media/824482/county_profile.pdf) (accessed 2 November 2015)
- CLASP (undated) *Briefings for elected members. Briefing 5: Creating resilient communities*. Available at: [http://media.claspinfo.org/sites/default/files/Brief\\_5\\_LR.pdf](http://media.claspinfo.org/sites/default/files/Brief_5_LR.pdf) (accessed 2 November 2015)
- Climate Just (2015) Climate Just web tool. Available at: <http://www.climatejust.org.uk/map> (accessed 2 November 2015)
- Cutter, S., Burton, C. and Emrich, C. (2010) 'Disaster resilience indicators for benchmarking baseline conditions', *Journal of Homeland Security and Emergency Management*, Vol. 7(1), pp. 1–22
- DEFRA (2012) *Flood Resilience Community pathfinder Prospectus*. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69621/pb13841-frco-prospectus-20121206.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69621/pb13841-frco-prospectus-20121206.pdf) (accessed 13 October 2015)
- Devine-Wright, P. (ed.) (2011) *Renewable energy and the public: from NIMBY to participation*. London: Earthscan
- Doncaster Council (2011) Details of the Askern Spa Ward. Available at: <http://www.doncaster.gov.uk/db/chamber/default.asp?Nav=Ward&WardID=24> (accessed 19 July 2013)
- Environment Agency (2015) 'Risk of flooding from rivers and sea'. Available at: [http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?lang=\\_e&topic=floodmap&layer=default&scale=10&x=251250&y=200012#x=252085&y=199468&scale=8](http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?lang=_e&topic=floodmap&layer=default&scale=10&x=251250&y=200012#x=252085&y=199468&scale=8) (accessed 2 November 2015)
- Folke, C., Pritchard, L., Berkes, F., Colding, J. and Svedin, U. (1998) 'The problem of fit between ecosystems and institutions', IHDP Working Paper No. 2, International Human Dimensions Programme
- Goldsmith, L. (2014) *Building community flood resilience in West Sussex*. Presentation at the National Flood Forum Conference, 13 March 2014. Available at: <http://www.nationalfloodforum.org.uk/nff-conference/> (accessed 13 October 2015)
- Griffiths, J. (2014) 'Written statement – Cynefin Change Programme'. Welsh Government: Ministry for Natural Resources, Culture and Sport. Available at: <http://wales.gov.uk/about/cabinet/cabinetstatements/2014/cynefin/?lang=en> (accessed 13 October 2015)
- Heathrow Villages Forum (2014) 'What's special about the Heathrow Villages?'. Available at: <http://www.heathrowvillagesforum.org/> (accessed 14 October 2015)
- Herrfahrdt-Pähle, E., and Pahl-Wostl, C. (2012) 'Continuity and change in social-ecological systems: the role of institutional resilience', *Ecology and Society*, Vol. 17(2), p. 8
- Hopkins, R. (2008) *The Transition Handbook: from oil dependency to local resilience*. Totnes: Green Books
- Irving, A. (2010) *Llanelli existing sewerage system: the potential for surface water removal*. Cardiff: Environment Agency Wales. Available at: <http://old.amdro.org.uk/English/environment/planning/Planning%20Policy%20and%20Development%20Plans/Local%20Development%20Plan/Documents/SurfaceWaterRemoval.pdf> (accessed 2 November 2015)
- Jeong, Y., Simcock, N., and Walker, G. (2012) 'Making power differently: exploring in motives and meanings of community renewable energy developments in cases from the UK and South Korea', in A. Davies (ed), *Enterprising communities: grassroots sustainability innovations*. Bingley: Emerald Group, pp.105–21
- Liverpool City Council (2013a) *Flood Resilience pathfinder Draft Plan - Omnicom 17420*
- Liverpool City Council (2013b) *Community resilience: Liverpool's journey*. PowerPoint presentation. Available at: <http://media.claspinfo.org.ccdn.faelix.net/sites/default/files/Paul%20B.pdf> (accessed 13 October 2015)
- Liverpool City Council (2013c) *Supporting communities*. PowerPoint presentation

- Liverpool Department of Public Health (2012) *Active City: Strategy 2012–2017*. Available at: [http://www.liverpoolccg.nhs.uk/Library/About\\_us/Publications/Liverpool%20Active%20City%20Strategy%202012%20to%202017.pdf](http://www.liverpoolccg.nhs.uk/Library/About_us/Publications/Liverpool%20Active%20City%20Strategy%202012%20to%202017.pdf) (accessed 13 October 2015)
- Mason, K. and Whitehead, M. (2012) 'Between here and there: mobilising urban vulnerabilities in climate camps and transition towns', in S. Dooling and G. Simon (eds), *Cities, nature and development: the politics and production of urban vulnerabilities*. London: Ashgate
- Mguni, N. and Bacon, N. (2010) *Taking the temperature of local communities: the Wellbeing and Resilience Measure (WARM)*. London: Young Foundation
- National Assembly for Wales (2010) *Key Statistics for Llanelli, May 2010*. Cardiff: National Assembly for Wales. Available at: <http://www.assembly.wales/NAfW%20Documents/10-034.pdf%20-%2014052010/10-034-English.pdf#search=llanelli> (accessed 13 October 2015)
- Sherwood, P.T. (2009) *Heathrow: 2000 Years of History*. Stroud: The History Press
- Simcock, N. (2012) *Imposition or 'the will of the people'? Procedural justice in the implementation of community wind energy projects*. PhD Thesis. Lancaster: Lancaster University
- Snow, D., Rochford, E., Worden, S. and Benford, R. (1986) 'Frame alignment processes, micromobilization and movement participation', *American Sociological Review*, Vol. 51(4), pp. 464–81
- Walker, G. (2008) 'What are the barriers and incentives for community-owned means of energy production and use?', *Energy Policy*, Vol. 36, pp. 4401–5
- Welsh Government (2014) *Welsh Index of Multiple Deprivation (WIMD) 2014*. Available at: <http://gov.wales/docs/statistics/2015/150812-wimd-2014-revised-en.pdf> (accessed 2 November 2015)



# Acknowledgements

The authors would like to thank all those involved in the case studies who gave their time in interviews and provision of documents. Thanks to those who attended the workshop, for sharing their expertise and insights with the team. Thanks to Katharine Knox of JRF for providing guidance and valuable insights to the project and report, together with the JRF advisory group for this theme, who provided feedback on early findings from the project.

# About the authors

**Katya Brooks** was working as a Senior Consultant with CEP when this project was carried out. She has a background in sociology with strong qualitative and quantitative research skills. She has particular interest in community resilience, social vulnerability, stakeholder engagement and evaluation. Over the last ten years she has built extensive experience of social research and project management within the third sector and academia.

**Alexia Coke** is a lecturer in sustainable development geographies at Kingston University. She is interested in sustainable development issues in both the North and the South of the UK, particularly how the new UN Sustainable Development Goals will be translated into practice. Her recent research-related roles have included exploring the challenge of greening industrialisation in developing countries, the creation of scenarios for sustainability pathways in Europe, and the community-based strategies of the Transition movement for a low-carbon future.

**Paula Orr** is a Principal Consultant at CEP. She has worked on sustainability and participation in the UK and Chile since 1992, and has recently been focusing on engagement and learning processes. She is currently working on proposals to improve the way that people's values are represented in assessments of the social impacts of offshore renewables in Scotland. She is also involved in ongoing work on community resilience to flooding.

**Rolands Sadauskis** is a Consultant at CEP. In the course of his career in the environment and climate domain, he has worked in public administration, research and policy advocacy settings. Rolands has particular interest in climate change adaptation, resilience, and climate and energy policy, particularly at the European level.

**Liza Papadopoulou** is a Consultant at CEP. She is an environmental economist interested in the interface between society and the natural environment, with special reference to policies that incorporate ecosystem values and drive sustainable development. She is currently exploring public perceptions of environmental risks and the uptake of resilience measures to climate change impacts.

**Neil Simcock** is a researcher at Lancaster University. His research interests broadly focus on considering how a just transition to a low-carbon society might be enabled. Past and current work has focused on community-based sustainability initiatives, conflict around the siting of renewable energy infrastructure, and fuel poverty.

**Andrew Stirling** is Professor of Science and Technology Policy at [SPRU](#) (Science Policy Research Unit) at the University of Sussex where he is co-lead in the ESRC [STEPS Centre](#) and [Nexus Network](#). Formerly working for environment and disarmament organisations, he was later research Director for SPRU and has served on several EU and UK advisory bodies. He works on the politics of science and innovation.

**Clare Twigger-Ross** is a Technical Director at Collingwood Environmental Planning (CEP). She leads the practice's work on social research and social appraisal, and has a background in environmental psychology. Her recent work has been on community resilience in relation to emergencies, flood risk and climate change, making links with earlier research into social vulnerability and community engagement in environmental decision-making.

**Gordon Walker** is Professor at the Lancaster Environment Centre and Co-Director of the DEMAND Centre, Lancaster University. He has a wide-ranging profile of research on the social and spatial dimensions of environment, energy and sustainability issues. This includes work on environmental justice; social practice, sociotechnical transitions and energy demand; community innovation and renewable energy technologies; and the concepts of vulnerability, resilience and governance in relation to forms of 'natural' and technological risk.

The Joseph Rowntree Foundation has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policy makers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the authors and not necessarily those of JRF.

A pdf version of this publication is available from the JRF website ([www.jrf.org.uk](http://www.jrf.org.uk)). Further copies of this report, or any other JRF publication, can be obtained from the JRF website ([www.jrf.org.uk/publications](http://www.jrf.org.uk/publications)) or by emailing [publications@jrf.org.uk](mailto:publications@jrf.org.uk)

A CIP catalogue record for this report is available from the British Library.

All rights reserved. Reproduction of this report by photocopying or electronic means for non-commercial purposes is permitted. Otherwise, no part of this report may be reproduced, adapted, stored in a retrieval system or transmitted by any means, electronic, mechanical, photocopying, or otherwise without the prior written permission of the Joseph Rowntree Foundation.

© Collingwood Environmental Planning Ltd 2015

First published November 2015 by the Joseph Rowntree Foundation

PDF ISBN 978 1 91078 323 8

Reference number: 3167

Cover image: iStock photo ID:9886535 czacio

Joseph Rowntree Foundation

The Homestead

40 Water End

York YO30 6WP

[www.jrf.org.uk](http://www.jrf.org.uk)



Inspiring Social Change