Coordinating property-level surveys for climate resilience

The Resilient Roch project is addressing multiple issues in local housing energy efficiency, building condition and flood risk - through the development of co-ordinated property surveys.



#### **Resilient Roch**

The Resilient Roch project is one of 25 across the country funded by the Flood and Coastal Resilience Innovation Programme (FCRIP). The Programme emphasises innovation in flood risk management, including:

- Combining different resilience actions to increase their impact.
- Trialling new resilience and adaptation activities.
- Identifying new ways of working and overcoming barriers.
- Isolating and disseminating best practice.

**Resilient Roch** develops and tests holistic and innovative approaches to flood and climate resilience in communities in Rochdale vulnerable to flooding (particularly neighbourhoods in Littleborough and Wardleworth). It aims to enhance surface water management and create a culture of rainwater management by increasing community participation in flood resilience activity and enhancing residents and businesses capacity to respond to flooding. This includes the promotion of more robust financial

resilience and measures to promote sustainable water management at a property scale. The project has been delivered alongside a wider EA structural defence and attenuation scheme <u>https://thefloodhub.co.uk/rochdale-and-littleborough/</u>.

The aim of this strand of Resilient Roch was to improve our understanding of how building condition and climate resilience in residential properties can be enhanced through retrofit measures to provide warmer, more flood resilient homes.

### The Housing Challenge in Rochdale

The quality and standard of housing and how it is maintained is inextricably linked to residents' climate resilience. Like many post-industrial towns, Rochdale's inner-urban housing stock is dominated by densely constructed late Victorian and Edwardian-era red-brick terracing. Most of this housing is over a century old, in a poor state of repair. Typical features requiring repair or renewal include property roofing, pointing and remedial work to cellars that suffer from severe damp. In addition, and largely due to these characteristics, the energy efficiency of properties is often of a very low performance standard.

The need to improve the quality and performance of housing has been elevated on political agendas recently, not least given that new housing standards require minimum energy performance ratings for private rented sectors property, as well as the need to develop TANZ properties ('Truly Affordable Net Zero').



Figure 1 - Victorian terraced housing in Wardleworth

Both communities are penetrated by watercourses. Many of the properties are at significant fluvial flood risk as well as surface water flood risk, and often a combination of both. The flood risk to the areas has heightened in recent years and is only set to

increase with climate change and with ever greater pressures on the urban environment and its green and blue infrastructure.



Figure 2 – Map of Wardleworth (left) and Littleborough (right) Surface and River Flood Risk

A multiple survey approach of individual properties is ideally required to understand these intersecting challenges and to enhance our understanding of the interventions required to create decent quality and more climate and future-proofed housing stock. The Resilient Roch project is testing how this approach might work at a neighbourhood scale, and identifying the challenges and opportunities in doing so.

# **Climate Resilience in the Built Environment**

#### Innovation

By addressing underlying issues in the housing stock, the project began to address some of the issues faced by people living in communities subject to multiple disadvantages affecting health and wellbeing, environment and standard of living that result in them being disproportionately affected by flooding.

The project team formed partnerships to trial a streamlined method of conducting multiple surveys concurrently on private properties. It developed a new approach that brought benefits by co-ordinating surveys, by integrating possible interventions and by bringing greater convenience and efficiency for contractors and clients.

### The surveys

The project co-ordinated different strands of funding and housing renewal goals to maximise improvements to housing quality. By attending to relevant underlying issues in the housing stock that impact climate resilience, the project began to address some of the issues faced by people living in deprived areas that result in them being disproportionately at flood risk and experiencing both flood and fuel poverty.

Three surveys were necessary for each property assessing their energy performance, the property condition (dilapidation survey) and property level flood resilience (see Figure 3).



### Figure 3 - Combined Survey Approach

The **RICS Building Condition survey** highlighted any structural issues in the property requiring attention from the property owner. Vitally, this survey also identified if any features of the building – including maintenance and upkeep – would undermine the functionality of property level flood resilience measures installed later.

The **Energy Performance Report** gave the property an energy efficiency rating which partly determined the property's eligibility for energy efficiency intervention retrofitting. If eligible, this would be offered to homeowners as part of the project.

The **Property Flood Resilience (PFR) survey** assessed the "leakiness" of the property and listed the interventions available, some of which would then be offered in the next stage of the project.

OVERVIEW OF THE COMBINED SURVEY APPROACH					
EPR Energy Report	RICS building condition	PFR Survey: Hazard Assessment & Outline			
		Design			
Contractor: Energy Works	Contractor: Independent	Contractor: JBA			
(Groundworks) on behalf of Eclipse Energy	building surveyors	Consulting			
Primary benefit					
Co-ordinating surveys to minimise disruption to residents and ensure efficiencies in					
surveying, data collection and management.					
Examples of additional benefits:					
- Housing standards involvement where structural defects or health and safety issues were					
identified.					
- Social Care teams notified about several residents that require further personal support.					
- Signposting & links to other home improvement interventions (grants including Warm					
Homes grants, support and advice) to reduce energy costs and improve living standards					
(e.g. energy efficiency advice, supply of handrails, white goods, smoke alarms etc.)					
- Collection of data regarding residential property insurance.					

Using technical flood modelling outputs provided by JBA Consulting for the **Resilient Roch Outline Business Case**, four rules were agreed to determine the initial eligibility criteria for the PFR programme.

Original Eligibility Criteria Rules		Property count within defined programme areas for each rule	
		Littleborough	Wardleworth
Rule 1	Those properties with previously installed PFR or a PFR Report from 2015 Storm Eva Defra flood grant	127	178
Rule 2	Those properties within the OBC outputs (1 in 30 year event and a threshold over 200mm)	101	29
Rule 3	Those properties that are attached to eligible properties	74	27
Rule 4	Those outlying properties located within a street with a majority of eligible properties	26	16
	Total	328	250

### Figure 4 – Eligibility protocols used for screening

Using this methodology, 578 properties were identified across Littleborough and Wardleworth as *potentially* benefiting from a PFR survey. These were properties deemed to be at higher flood risk. This included many properties that received a Defra flood grant to install PFR measures after Storm Eva in 2015, but where the standard of flood resilience may have subsequently reduced, including wear and tear or failure of flood resilience assets (for instance, doors that develop defects and a deterioration in general property condition/maintenance).

There are many factors - often in combination - that can lead to a decline in flood resilience assets and property condition. These can include a deterioration of landlord and tenant communication and relationships, a lack of knowledge regarding when problems and defects should be either rectified through repair or reported to a landlord. These challenges can be further exacerbated in instances when the collective flood resilience memory or capacity has been weakened or lost e.g. residents who experienced flooding and/or had measures installed have been replaced by property owners or tenants that have recently moved into a property, or where the capacity to maintain property and flood resilience assets effectively is impeded by cost, health or other personal reasons.

Subsequent detailed flood modelling undertaken later in the project served to further refine property numbers to 412 eligible for the programme. The project team is currently working to engage with the most flood risk affected properties to maximise take up of measures in the areas of highest need and benefit.

### Benefits

The surveys remained distinct but were conducted concurrently wherever possible. This allowed surveyors to co-ordinate their activity and would ensure that any installation to improve one aspect of the property would be complementary with other installed measures for example it facilitated specification of more flood resilient alternatives for cavity wall insulation.

Communications were centralised within the core Resilient Roch team at RBC to provide a coherent identity to the work, to bolster residents' confidence in the scheme and to provide a single point of contact for administrative or technical questions.

Completing the surveys concurrently encouraged early interaction between contractors. It also allowed some surveys to be completed at the same time on a property, making the process more convenient for the property occupier.

As the structural survey delivery progressed, the team noted that there was a degree of repetition between the surveys on building condition. This afforded the opportunity to introduce further efficiency by using the information gathered from the energy efficiency surveys to capture intelligence on the building condition. At this point the building condition survey was no longer included in the programme, as the remaining two surveys were effective at picking up relevant issues about condition and defects.

# Procurement

The project required careful co-ordination on the part of RBC. Officers drew upon significant experience of previous housing improvement, environmental and flood risk projects to meet the project's complex procurement and administrative requirements.

Officers from RBC ensured that proper procurement was followed, with the Council utilising available frameworks to procure JBA Consulting to undertake the flood modelling, engineering and PFR survey activity work packages. RBC also enrolled with the Environment Agency's Client Support Framework for procuring relevant activities from its available suppliers to gain appropriate access to market and PFR

installers that meet EA requirements for product specifications and experience/expertise.

### Engagement

Delivering multiple surveys posed challenges in terms of practical co-ordination. This demanded careful communication and engagement.

Encouraging residents to take up surveys required communication through several methods. Eligible households were sent a letter outlining the surveys on offer and signup details. Non-respondents were followed up with further letters, multiple phone calls, and e-mails. The officer that co-ordinated this work had a long-standing background in business. They likened the task to that of marketing, saying their role was to "sell' the project as very few people responded to sign up from the receipt of [the initial] letters". Most appointments were made via telephone conversations. This intense engagement helped Project staff to build a rapport and trust with residents and was essential to securing survey appointment bookings. The work also developed a detailed database with key contact and contextual information for residents.

The team took care to ensure property owners and residents were fully aware of the eligibility criteria for each set of measures to help manage expectations. This included careful explanation that eligibility criteria were different and not contingent. For instance, in some cases the team could proceed with flood resilience measures even if eligibility for energy efficiency measures were not met. In other cases, people assumed they did not qualify as they were not on benefits or because they owned their own home. Although this was stated in letters and e-mails, some required a further verbal explanation – or clarification - of this.

Understanding that it is often easier to speak to people in person, RBC and the **National Flood Forum** visited properties to explain the project in greater depth and obtain contact details. The **National Flood Forum (NFF) are flood engagement specialists who act as facilitators between the community and flood risk management authorities**, often improving the accessibility of flood risk management information. The NFF has been working in Rochdale since 2013, supporting the local community and helping to form Flood Action Groups in Wardleworth and Littleborough.

Local Flood Action Groups also had strong connections with residents in their areas, particularly in Wardleworth where the group is well known. With NFF support, the group had an open line of communication with residents where questions could be asked about the surveys on offer. Regular meetings were held where information about the scheme could be shared and the group could give updates on how the community were receiving communications. Alongside colleagues from Groundwork and Energyworks, Flood Action Group members supported the door knocking campaign by developing rapport and trust and in some instances assisting with translation from English to Urdu. These interactions have helped **develop trust and connections in the community, allowing the project to work with residents of diverse backgrounds** where there are often multiple barriers to communication.

The NFF also engaged with other community groups in both areas to share information about the project through presentations and roundtable discussions. Some of this engagement overlapped with Environment Agency attempts to engage with the community as they shared information about the capital scheme in the area. Where possible, efforts were coordinated to help residents understand that the two projects are part of a wider complementary flood resilience approach to reduce risk and increase home and business resilience.

#### Innovation

As part of the holistic flood risk management solutions being offered by the Resilient Roch project, the community has been involved in the process from the beginning. Flood Action Groups are a key point of contact for the local authority and wider community, allowing information to spread through people the community trusts, whilst also sharing information through more traditional methods, including Rochdale Borough Council communications.

# Conducting the surveys

As stated before, the project addresses multiple issues in local housing, energy efficiency, building condition, and flood risk, through a multiple survey approach, with the aim of 'futureproofing' the housing stock.



Figure 5 - The back alleys of terraced blocks at flood risk in Littleborough

When residents contacted RBC, appointments were booked for all three surveys. At first, these surveys were conducted simultaneously. However, it later became more efficient for contractors to conduct the RICS Building Condition Survey and EPR Energy Report at the same time and the PFR survey at another. The process remained

streamlined as all communications went through Rochdale Borough Council who then managed all survey results and reports. Eventually the survey process was made increasingly streamlined through the phasing out of the RICS Building Condition Survey, as it was felt the other surveys were collecting building condition information adequately.

While survey delivery commenced, engagement continued ensuring a steady stream of survey bookings. This made it more manageable for contractors and reduced the wait-time for surveys after residents had agreed to them. Many properties have a high turnover rate. Consequently, completing surveys promptly was important, otherwise the process of contacting the residents would have to be repeated with as tenants moved into properties.

Continuous engagement with the community was also important due to the convenience afforded to contractors if every property in a terrace block had signed up for the surveys. In some instances, word-of-mouth was the most successful engagement tool as some residents were less apprehensive once their neighbours' surveys began.

The administrative team communicated with residents from over 300 properties to explain what was on offer and to organise the surveys on their behalf. This included contact with owner occupiers, tenants, landlords, property management/estate agents and families of residents who were unable to speak for themselves due to vulnerabilities or language barriers. The administrative team provided significant support through telephone calls to update and inform residents as the project progressed.

Overall 619 surveys were completed, including 224 PFR surveys, 199 RICS building condition surveys, and 196 EPR energy surveys<sup>1</sup>. After the surveys, each contractor reported their findings on templates and passed these to the RBC Resilient Roch team. Regular meetings were held with all contractors to ensure the condition of the building would allow any interventions to be functional and complementary. At this point, the RBC team shared reports with the owner-occupier or landlord.

The surveys underwent a further review by project officers "marrying up information" and to ensure the team were "not looking at things in silos" (interview, Resilient Roch staff). A summary sheet was compiled across the surveys to flag any issues for the property 'at a glance'. These were then put through a 'traffic light' filtering system to identify which properties would be targeted for the next stage of intervention.

At this point, the summary sheet was sent to Housing Standards to check for issues relating to Health and Safety, or to report ongoing problems with landlords, etc. A link to the full reports was also sent where properties showed. Some of the cases required visits from the Housing Standards Team. In one instance, a gas leak was detected by the surveyor and urgent assistance was given. Serious cases were paused until remedial action was undertaken by the property owner.

<sup>&</sup>lt;sup>1</sup> All statistics in this report are up to date as of December 2024.

Details of properties where there are no problems or where Housing Team issues had been cleared or rectified were shared with contractors who then identified properties that they could work on. Coordination meetings with contractors ensured efficient and effective works delivery, and to keep records up to date.



Figure 6 - Example of PFR Hazard Assessment and Outline Design Report from JBA

#### Innovation

The streamlining of the delivery process by making use of new partnerships provided an innovative approach to the delivery of flood management and climate resilience projects. The delivery of the project also demonstrated the innovation required to overcome the challenges of combining multiple resilience interventions.

#### **Lessons Learned**

The team has identified key insights from the project:

**Benefits and challenges of combining surveys**. Delivering multiple surveys was challenging from both a co-ordination and a communication perspective. But there were clear benefits. A housing manager in Rochdale welcomed the project's emphasis on co-ordinating activity across and within local authority teams. Another officer noted that the project catalysed innovation in how they approached the management of properties. That officer noted that surveyors had identified a particularly dangerous property that was deemed uninhabitable, adding: "these were people in danger that would otherwise not have been found".

Many residents reported that a combined survey was more convenient for the end user (the property occupier) than organising three separate surveys. On site, surveyors were able to co-ordinate activity, and this helped ensure that any proposed interventions would be complementary. Combining surveys had the added benefit of reducing the likelihood of residents changing their mind and refusing further surveys.

One of the project's initial aims was to organise the surveys to occur at the same time to reduce inefficiencies. However, there was a degree of reticence from some contractors who were concerned that combining surveys reduced their own efficiency. One contractor suggested they felt that combined surveys actually caused more strain for residents as multiple contractors were vying for attention.

This meant that after a month of combined surveys, the contractor delivering the PFR survey did so independently. This did not result in residents declining surveys, but it did result in increased administrative burdens as two visits were organised per household rather than one. A handful of residents were confused by this change, with some residents trying to turn surveyors away. To address this, the project team needed to contact residents again to clarify the survey arrangements.

The separation of the surveys increased the time commitment required from residents and presented an administrative strain for the survey bookers. However, RBC were keen to retain control of the bookings and administration to co-ordinate activities both on-site and when reconciling the survey outputs when completed. The branding of the project helped to keep communications clear and reduced confusion in the community.

"...from the beginning we've wanted to do it under the umbrella of the Council so that residents are reassured that it is a non-profit scheme, it's not a scam, that it's in keeping with the previous work that was done for the Storm Eva grant...we're trying to project manage through us so that people are aware it's one and the same project." Delivery Manager, Resilient Roch

**Housing conditions and council interventions.** Many tenants were reticent to report poor housing conditions due to fear of eviction and difficulty in finding alternative accommodation. However, the building condition surveys offered to landlords by RBC allowed housing conditions to be identified without risk to tenants. On occasion, surveys highlighted significant safety issues, including an instance of a severe structural defect to ceiling joists and a carbon monoxide leak. In such cases, RBC ensured landlord compliance with regulations to provide safe and habitable properties.

Additionally, the presence of RBC officers in the area allowed signposting to both homeowners and renters to other council services that are available. For example, an elderly resident was identified as having eligibility for a grant to make improvements to her home that could assist her mobility. She was put in contact with Adult Care, who supported her through the process of making a grant application.

*Surveys were intrusive, requiring careful communication and sensitivity.* Encouraging residents to sign-up for multiple surveys in their homes was a considerable challenge for the project. The surveys – particularly the energy efficiency and building condition surveys – could be intrusive requiring multiple contractors and council employees to simultaneously enter the property, conduct observations and take internal photos. Some residents had privacy concerns, deterring them from signing up. The project allowed interactions with residents and landlords that highlighted issues with housing conditions that may not have normally come to light.

Surveyors had to strike a balance. They needed to be mindful that occupiers may be distrustful of their presence but also needed to understand they had a duty of care to report anything unsafe or concerning to other branches of the council.

**Engaging with landlords.** Target areas (particularly Wardleworth) had many privately rented properties and several houses of multiple occupancy (that is, where multiple otherwise unconnected households share common areas, such as bathroom and kitchen facilities). Express permission had to be gained *both* from the landlord and tenants to ensure access to the property and tenant presence for the survey's duration. Again, this required careful co-ordination on the part of the RBC officer leading the work. This was a particular challenge when landlords were absent, perhaps being abroad for long periods of time, or if they were simply uninterested in improving the property. Two properties of multiple occupancy were referred to the council's housing standard's team due to concerns about tenant safety.

**Community influencers.** The project capitalised on long-standing community engagement (facilitated by the NFF) to enhance its profile of the project and to ensure support from residents. Much of this work was undertaken by members of the Wardleworth and Littleborough Flood Action Groups. These are known and trusted groups in the community that have influence in discussions about flood risk.

Language and cultural barriers. A common challenge across all communication was that a large proportion of residents in Wardleworth do not speak English as a first language. While most households had contact with English speakers that could help translate written and sometimes verbal communication, this significantly slowed down interaction. Door-knocking and face-to-face interaction posed a particular challenge in this regard. We found that those at home during the day were less likely to have proficiency in English. Moreover, many female respondents explained that their male partners would need to hear the information being shared before permitting access for surveys.

**Structural challenges to integration.** Under current funding structures, the scope for implementing an integrated suite of measures (encompassing flood resilience, energy efficiency and property condition) has been severely constrained. Whilst all properties were surveyed for both PFR and energy efficiency measures – and a successfully tested methodology for this approach established – the criteria for grants to fund energy measures has meant very few properties are eligible for support. However, the surveys *could* provide an evidence base that can be drawn upon for future energy efficiency interventions. Officers are currently examining options for alternative funding approaches that can increase the opportunity to deliver flood resilient energy efficiency measures in more properties. This would maximise existing grant funding access and identify new sources of funding that can unlock delivery both within and as a pipeline beyond the FCRIP project timeline.

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