

## ZERO CARBON RUGELEY

# WP17-D12-4: COMMUNITY-CENTRIC DESIGN FOR PLACE-BASED DECARBONISATION AND SMART LOCAL ENERGY SYSTEMS: A GUIDE

Element	Description
Title	WP17-D12-4: Community-centric design for place-based decarbonisation and smart Local energy systems: a guide
Creator	Zoe Robinson, Adam Peacock, Ryan Langley, Tom Morton.
Subject	Summary of Community-Centric Design
Description	Summary of Community-Centric Design engagement work during the three years of ZCR.
Publisher	Keele University
Contributor	N/A
Date	06/03/23
Type	Report
Format	Word Document
Identifier	WP17-D12-4
Source	Independent
Language	English
Relation	WP17
Coverage	
Rights	Open
Dissemination / Confidentiality	<input type="checkbox"/> Public/ ZCR webpage/ Social media <input type="checkbox"/> ERIS/ IUK Consortiums <input type="checkbox"/> Funder <input type="checkbox"/> Consortium <input type="checkbox"/> Internal

# **COMMUNITY-CENTRIC DESIGN FOR PLACE-BASED DECARBONISATION AND SMART LOCAL ENERGY SYSTEMS: A GUIDE**

Report authors:

Professor Zoe Robinson, Keele University

Dr Adam Peacock, Exeter University

Ryan Langley, Keele University

Dr Tom Morton, Open University

## Executive summary

There is increasing acknowledgement of the benefits of place-based approaches to decarbonisation, such as smart local energy systems, as well as other place-based net zero initiatives. A focus on place brings with it an acknowledgement of the different technical barriers, opportunities and pathways for decarbonisation of different places. However, places also differ in their communities, whether this is different demographics, different levels of vulnerability and disadvantage, different norms and cultural heritage. Successful place-based decarbonisation requires an approach which acknowledges and adapts to the specifics of a local community in all its diversity, as well as to the more often considered, differences in the built environment, infrastructure and assets of a place.

This report outlines an approach that we call ‘community-centric design’ which brings together principles and approaches from user-centric design and community engagement, for embedding community inputs and catalysing local communities as part of place-based decarbonisation or smart local energy system initiatives. This report draws on three years of experience of the InnovateUK funded Zero Carbon Rugeley project (March 2020 to March 2023) which was part of the wider UK Government’s Prospering from the Energy Revolution programme.

Zero Carbon Rugeley aimed to design a smart local energy system for the town of Rugeley in Staffordshire, and from the start included a commitment to embedding the local community at its heart. A user-centric design and community engagement work package led by Keele University in collaboration with New Vic Borderlines, the outreach arm of the New Vic Theatre in Newcastle-under-Lyme, worked closely with the rest of the project’s work packages and partners with the aims of i) providing insights from the community into the design of the specific SLES solutions; ii) supporting the development of a shared vision and design of a Rugeley SLES between the community and SLES designers; and iii) catalysing a ‘SLES-ready’ community, increasing the community’s understanding of the implications of a SLES on the community members’ own lives and work, and their motivation to engage in appropriate measures to make a SLES a reality.

The overarching approach to community-centric design described in this guide is based around three, temporally overlapping, phases: i) exploratory; ii) specific; and iii) legacy. The exploratory phase aims to develop a broad understanding of the community and the overarching response to the project in its entirety; the specific phase focuses on community responses to specific elements of a smart local energy system; and the legacy phase aims to build the agency and resources within the community for action to continue beyond the project funding period. These phases of activity are underpinned by two-way interaction between the design teams and community, mediated by the community-centric design

team. The approach is flexible and iterative, developing through reflection on the engagements with the community.

Throughout these three phases the community-centric design team drew on a range of different engagement methods, which were in part influenced by the restrictions of the COVID-19 pandemic. The different methods aimed to engage a diversity of audiences, and to enable both shallower and deeper, and different time intensity engagements. The approaches included: social media as a two-way interaction tool; in-person and online cultural animation workshops; pop-up engagements in existing community spaces; and drop-in day-long project specific events; in addition to a series of additional online and in-person talks, and contributions to other local community organisations. A key additional element of engagement was the development of a Community Gatekeeper group and Community Ambassador network of highly engaged individuals, who acted as critical friends to the project throughout, and have developed their own community-led group, which has been supported and resourced as part of the project's legacy activities.

This document provides a roadmap through the process of community-centric design for other projects to follow in their own place-based decarbonisation projects, and includes ten learnings to develop a successful community-centric design approach drawn from three years of in-depth engagement with the Rugeley community.

## Table of Contents

<b>Executive summary</b> .....	<b>3</b>
<b>0. Introduction</b> .....	<b>7</b>
0.1 Background context .....	7
0.2 Aim of this guide.....	7
0.3 Zero Carbon Rugeley project background .....	7
0.5 Report structure .....	8
<b>Section 1: Rationale, theoretical underpinnings and key principles of the community- centric design approach</b> .....	<b>9</b>
1.1 The community-centric design (CCD) context to Zero Carbon Rugeley .....	9
1.2 Community-centric design workstream aims and objectives .....	10
1.3 Community-centric design workstream structure .....	10
1.4 Theoretical principles underpinning community-centric design (CCD) in Zero Carbon Rugeley: Energy transitions; technocentric design and the production of energy injustice .....	11
1.5 Principles of CCD engagement within Zero Carbon Rugeley:.....	12
<b>SECTION TWO: Setting up a community-centric design process</b> .....	<b>14</b>
2.1 Introduction .....	14
2.2 Development of the Community Engagement Strategy .....	15
2.3 Community and stakeholder mapping .....	15
2.4 Identifying target audiences and subgroups for engagement .....	16
2.5 Establishing community advisor groups .....	16
2.5.1 Community Gatekeeper Advisory Group.....	16
2.5.2 Community Ambassador Group .....	19
2.6 Embedding community insights into project design.....	22
2.6.1 Community engagement delivery group vs individual partner engagements .....	22
2.6.2 Between design cycle review process .....	23
<b>SECTION 3: METHODS OF COMMUNITY-CENTRIC DESIGN</b> .....	<b>25</b>
3.1 Introduction .....	25
3.2 Methods of engagement – social media .....	26
3.2.1 Social media approach and principles .....	26
3.2.2 Key learnings and recommendations for using social media .....	27
3.3 Methods of engagement: Cultural animation Workshops.....	29
3.3.1 Background to cultural animation .....	29
3.3.3 Key learnings and recommendations for using cultural animation approaches.....	30
3.4 Methods of engagement: Drop in events – online and in-person talks.....	31

3.4.1	Background to online and in-person talks .....	31
3.4.2	Key learnings and recommendations for the use of online and in-person talks.....	32
<b>3.5</b>	<b>Methods of engagement: Drop-in in-person events .....</b>	<b>32</b>
3.5.1	Background to drop-in in-person events .....	32
3.5.2	Key learnings and recommendations for in-person events.....	33
<b>3.6</b>	<b>Methods of engagement: ‘Pop-up’ in-person engagement .....</b>	<b>34</b>
3.6.1	Background to pop-up engagement .....	34
3.6.2	Key learning and recommendations for pop-up engagement .....	35
<b>SECTION FOUR: ENGAGEMENT TOOLS AND ACTIVITIES.....</b>		<b>36</b>
<b>4.1</b>	<b>Stage 1: Exploratory .....</b>	<b>36</b>
4.1.1	Overarching approach .....	36
4.2.2	Online cultural animation workshops.....	36
4.2.3	Social Media engagement (exploratory questions/discussions) .....	37
<b>4.3</b>	<b>Stage 2: Specific .....</b>	<b>38</b>
4.3.1	Overarching approach .....	38
4.3.2	Cultural Animation Workshops.....	39
4.3.4	Online talks .....	42
4.3.5	Social Media Engagement (Specific themes) .....	42
4.3.6	Drop-in Energy Heritage Day .....	43
4.3.7	Pop up engagement .....	44
4.3.8	Performance Walk .....	46
<b>4.4</b>	<b>Stage 3: Legacy .....</b>	<b>47</b>
4.4.1	Overarching approach .....	47
4.4.2	SLES Champions .....	47
4.4.3	Support of the Eco Rugeley Community Group.....	47
4.4.4	Community exhibition.....	48
<b>SECTION FIVE: Lessons learned and recommendations for community-centric design in place-based decarbonisation .....</b>		<b>50</b>
<b>References.....</b>		<b>54</b>
<b>Appendices.....</b>		<b>55</b>
<b>Appendix 1: Community Engagement Strategy .....</b>		<b>55</b>

## 0. Introduction

### 0.1 Background context

There is increasing acknowledgement of the benefits of place-based approaches to decarbonisation, such as smart local energy systems, as well as other place-based net zero initiatives. A focus on place brings with it an acknowledgement of the different technical barriers, opportunities and pathways for decarbonisation of different places. However, places also differ in their communities, whether this is different demographics, different levels of vulnerability and disadvantage, and different norms and cultural heritage. Successful place-based decarbonisation requires an approach which acknowledges and adapts to the specifics of a local community in all its diversity, as well as to the more often considered, differences in the built environment, infrastructure and assets of a place.

### 0.2 Aim of this guide

This document provides a guide to planning, designing and delivering a community-centric approach to place-based decarbonisation and smart local energy system design. This report draws on the experience of a three-year community-centered Smart Local Energy System design project, called Zero Carbon Rugeley. The approach described brings together the field of user-centric design and community engagement and uses the phrase '**community-centric design**' throughout, to represent an approach at the intersection of these two fields.

This report will be of value to those interested in public engagement, community engagement or user-centric design in place-based decarbonisation projects. Place-based decarbonisation projects take many names including, smart local energy systems, net zero neighbourhoods, energy smart places amongst others. All have the same broad goals of decarbonisation in the context of a place, and hence the need to engage the local community in the design and implementation of the decarbonisation solutions.

### 0.3 Zero Carbon Rugeley project background

The Zero Carbon Rugeley (ZCR) project was led by Equans and funded by InnovateUK as part of a UK Government programme entitled 'Prospering from the Energy Revolution.' The project aimed to design a Smart Local Energy System (SLES) for the town of Rugeley and surrounding villages, in Staffordshire, England. The project was 'technology agnostic' from the start, with the technological solutions emerging from the learnings about the place itself. The project started in March 2020 and finished at the end of March 2023; hence the project spanned the COVID-19 lockdown period. This inevitably affected the delivery

methods of the engagement approaches in the early stages of the project, creating opportunities and learning about alternative, online methods of engagement.

The Zero Carbon Rugeley project embedded user-centric design and place-based engagement strategies to embed the Rugeley community in the SLES approach. This was based on the understanding that local values, experiences and perceptions of the project should remain at the forefront of the energy transition. This was seen as a critical way of overcoming the ideological and structural issues that generate and reinforce energy injustices in society. It also recognised that local contextual knowledge could prove valuable in improving SLES design.

The ZCR project was broad in scope encompassing diverse ‘technical’ components of a place-based energy system as well as key non-technical ‘enabler’ areas. The eight key work streams comprised:

- Business Models (enabler)
- Markets (technical)
- Mobility (technical)
- Buildings (technical)
- Energy (technical)
- User-centric design and community engagement (enabler)
- Policy and regulation (enabler)
- Finance and investment (enabler)

This report focuses on the user-centric design and community engagement workstream, which was closely integrated with the other work streams. This work was led by Keele University in collaboration with New Vic Borderline (the outreach arm of the New Vic Theatre in Newcastle-under-Lyme), Chase Community Solar and Equans (formerly Engie).

## 0.5 Report structure

This report is structured into four sections:

- **Section One:** Rationale, theoretical underpinnings and key principles of the community-centric design approach.
- **Section Two:** Setting up a community-centric design process.
- **Section Three:** Methods of community-centric design
- **Section Four:** Engagement tools and activities.
- **Section Five:** Lessons learned and recommendations for place-based decarbonisation projects.



## Section 1: Rationale, theoretical underpinnings and key principles of the community-centric design approach

### 1.1 The community-centric design (CCD) context to Zero Carbon Rugeley

The Zero Carbon Rugeley project took a largely bottom-up approach to designing a SLES, which was less concerned with embedding or testing specific technologies and more focused on developing a design solution that was appropriate for the ‘place’ of Rugeley. As articulated by project lead organisation Equans: *“At the centre of this pioneering project is the Rugeley community; residents, local businesses and commuters who access the area regularly”*. Zero Carbon Rugeley aimed to create ‘a bespoke Rugeley SLES’, not simply a ‘SLES in Rugeley’. The project design included a specific work stream on ‘user-centric design and community engagement’ which developed and applied innovative, place-based engagement methods. From the start, the ZCR project aimed to embed user-centric design in the proposed solutions, using innovative community engagement methods, to ensure wants and needs of the community were addressed. Therefore, rather than UCD being added as a ‘siloed’ independent workstream, the entire project was framed around the idea that the community would and could be embedded in the process, to ensure that the design propositions developed were embedded directly into the context of the energy challenges experienced by the local community.

User-centric design (UCD) has a diverse and distinctive history in the context of computer system design and software development and individual energy technology development, but not in the wider context of place-based design. We therefore needed to consider what UCD might look like in the context of designing around a specific ‘place,’ hence the use of the term ‘community-centric design.’ Given the complex technical, and often ‘hidden’ aspects of a SLES, our ambition was not for the community to co-design technical pathways or solutions, but to bring the insights, and local contextual knowledge of the community to the technical design teams, to help inform decision-making for a more socially just SLES design, and design an approach appropriate to the town of Rugeley.

A critical role of the community-centric design team was to act as ‘intermediaries’ between the consortium and community. Intermediaries are defined as individuals that aim to “facilitate connections and collaboration between various levels and actors to introduce and promote innovations, and to structure and support effective and functioning multi-level governance” (Parag and Janda, 2014, p. 104). This definition effectively describes the role of the community-centric design team in the context of bringing the community voice to the wider project team.

## 1.2 Community-centric design workstream aims and objectives

The three main objectives of the user-centric design workstream are articulated below:

1. To provide insights from the community into the design of the specific SLES solutions;
2. To support the development of a shared vision and design of a Rugeley SLES between the community and SLES designers;
3. To catalyse a 'SLES-ready' community – using educational methods to increase the understanding of the implications of a SLES on the community members' own lives and work, and their motivation to engage in appropriate measures to make a SLES a reality.

In addition, the community-centric design team wanted to influence wider outcomes beyond the project's boundaries in time and space, in particular to:

1. Catalyse activity in the community beyond the scope of the project, such as enhancing networks, running independent events, development of community 'SLES champions'.
2. Enhance a 'user' (or community) focused approach to energy systems design throughout the project partners beyond the scope of the project.
3. Influence future policy and practice of community-centric design in place-based decarbonisation.

## 1.3 Community-centric design workstream structure

Over the three-year duration of the project the activity was inevitably iterative, with learning from the community and reflection on the process leading to refinement in the approach. The overarching structure of the approach comprised three (often overlapping) phases:

- 1) **Exploratory:** In this phase activities were designed to develop a broad understanding of: the community; the local context and perceptions of the local area and its challenges both generally and in relation to different energy vectors and services; opportunities and areas of pride or concern; and the community's willingness to engage in the community-centric design process. This phase also provided understanding of the community's perceptions of the project, its aims and the concept of a smart local energy system.
- 2) **Specific:** This phase focused on activities exploring specific elements of the SLES with the local community, in terms of acceptance of technologies and different business

models, the willingness to adopt different technologies, levels of understanding of the proposed solutions, and envisioned implications of embedding these technologies within the community. Activities in this phase ranged from workshops for in-depth exploration of issues with engaged community members, to short, 'drop-in' engagements through 'pop-up' events. Project consortium members were encouraged to consider how community input might be useful to refining the specific design components.

- 3) **Legacy:** This phase reflects activities and resourcing of the community to support a legacy of activity for the community to be able to continue work supporting place-based decarbonisation beyond the funded scope of the project.

#### 1.4 Theoretical principles underpinning community-centric design (CCD) in Zero Carbon Rugeley: Energy transitions; technocentric design and the production of energy injustice

It is widely accepted that to meet its decarbonisation goals, the UK will need to significantly and systematically transition its current methods of energy extraction, generation, transmission and consumption. Fundamentally, this requires the increased uptake of renewable energy technologies, alongside increased energy efficiency and flexibility of demand, requiring social acceptance and understanding and behavior change.

Research into the public perceptions of renewable energy technologies, demonstrates that the degree of engagement from project implementors with the public, and the extent to which the public is 'empowered' to engage with the design and implementation of such projects, can have a significant effect in shaping public perceptions of these technologies and their associated infrastructures (e.g., Cowell and Devine-Wright, 2018). There is increasing critique of 'technocratic' and top-down decision-making approaches to the deployment of renewable energy technologies (Wolsink, 2010). Yet there is some evidence to suggest that stakeholders tend to view only those with substantive 'technical' expertise as being important individuals to drive changes within a current or prospective energy system (Bailey et al., 2009). Such 'technocentric' perspectives focus on the technical or engineering solutions required to make energy systems work, rather than focusing on the lives entangled with energy systems and the accompanying environmental, social and economic implications of these systems. In many cases public opposition to the energy transition continues to be seen as a problem to 'remove' rather than understand and evaluate (Haggett, 2011; Cotton and Devine-Wright, 2012).

The Zero Carbon Rugeley projects aimed to move beyond these traditional technocratic and technocentric perspectives to the energy transition, and apply principles of energy justice,

through designing processes which considered potential energy injustices within the design of a smart local energy system. Our approach did not just focus on understanding community concerns and perspectives around the design of a smart local energy system, but aimed to develop a process where community members were inclusively part of the smart local energy system design process. As well as bringing local community insights to the design of Rugeley's SLES, our work aimed to develop replicable processes by which communities can engage with the design of 'their' energy systems and have a key role in driving the energy futures of their local area.

### 1.5 Principles of CCD engagement within Zero Carbon Rugeley:

A set of principles was established at the start of the ZCR project to inform the design of the engagement approach, and to communicate with the wider consortium the underpinning principles to thinking about the role of the community in design of the smart local energy system. These principles are:

- 1) **Heart of the system.** The user will shape the performance of any system, therefore must be at the heart of energy system innovations.
- 2) **Multiple identities.** Each individual may have many different roles, and interact with energy in many different ways.
- 3) **Valuing difference.** We seek and value different perspectives; all views and voices are equal to others; there is no hierarchy.
- 4) **Respect and curiosity.** Engagement with the community must be underpinned by respect, curiosity, open-mindedness, and a commitment to deep listening.
- 5) **Designing with.** As a project team we should see ourselves as part of the system; designing *with* the community, not *for* the community; doing things *with* the community, not *to* the community.
- 6) **Reflexive and iterative.** Our process of engaging with the community should be reflexive and iterative, continually adapting to our learning and experiences with the community.
- 7) **Positive, long-term relationships.** Building positive relationships with the community are key, with a consideration for the impacts beyond the life of the project and managing expectations.

These principles recognised the diversity of experiences in relation to energy systems, and emphasized the desirability of *working with* the community as opposed to *doing to* the community. The community-centric design team attempted to limit any expectations and pre-existing assumptions about the types of data or insights that would be provided from the community. The whole consortium also needed to reflect on *how* to co-design with the community and to evaluate where local insights might be valuable. The engagement process sought to avoid ‘one-way data harvesting’ forms of engagement (Hoverston and Swaffield, 2019) and to build long-lasting, positive relationships with the community. Respect for the community meant being open to critique and dialogue and to different and changing levels of engagement from within the community.

We maintained a significant amount of ‘reflexivity’ in designing our CCD approach, recognising that understandings and perspectives pertaining to the complexity of a smart local energy system would evolve over time and in multiple ways (e.g., Chilvers, 2013 in the context of renewable energy technologies). Our engagement approaches were also iterative based on project stage and consortium inputs, and increasing understanding of the community, critiques from within the community.

## SECTION TWO: Setting up a community-centric design process

### 2.1 Introduction

This section provides details of the initial phase of setting up the community-centric design process adopted through the three years of the Zero Carbon Rugeley project. This structure, evolved throughout the process, and the structure described is based on a reflection of what evolved and making sense of the lessons learned rather than what was planned at the start.

The Zero Carbon Rugeley project was initially funded for two years and was structured around two design cycles. A subsequent third year of the project was funded with a focus on implementation. The initial design cycle aimed to develop an overall system model for Rugeley, while the second design cycle aimed to finalise the design with individual solutions and implementation mechanisms to enable the design. These two cycles were separated by a review phase.

In terms of the 'community-centric design' (CCD) work the first project design cycle mapped on to what we now term the 'exploratory' phase – understanding the Rugeley community in a broader context. The second design cycle mapped on to the CCD 'specific' phase, where more individual solutions were explored with the community. The third implementation phase maps on to the CCD 'legacy' phase, aiming to create the agency within the community and key stakeholders to continue to catalyse the community to be 'SLES-ready' for a time where the finance, policy and other enablers can accelerate the implementation of the SLES design, and for place-based decarbonisation actions to be driven by the community. However, it should be noted that these three phases are not temporally discrete and are overlapping throughout. The final model of community-centric engagement that we would recommend for application to other projects includes these three stages: exploratory, specific, legacy.

This section describes the process of setting up the community-centric design process as part of the initial 'exploratory' phase, and the methods by which community insights were fed back into the project design. Section 3 outlines the overarching methodological approaches of the community-centric design process covering social media, cultural animation and other approaches. Section 4 outlines examples of the specific tools and activities used within the community-centric design process for each of the three phases, and Section 5 summaries the learnings and recommendations from the ZCR community-centric design activities.

## 2.2 Development of the Community Engagement Strategy

Developing a community engagement strategy that was appropriate for the Rugeley community and for the specific project was the first stage of work. This strategy was used both to guide thinking about the community engagement work, but also to inform other consortium members of the approach. The initial community engagement strategy developed at the start of the project can be found in Appendix 1. The key elements of the strategy included:

1. Establishing underlying principles (see section 1.5)
2. Identifying target audience and sub-groups for engagement
3. Outlining community engagement objectives (see section 1.2)
4. Identifying messages and engagement approach for different objectives
5. Community mapping and identification of communication channels within the community
6. Evaluation approach
7. Governance approach.

Note that this strategy was considered as flexible and iterative, and not every aspect was enacted as originally outlined in the initial strategy as a result of different factors and prioritization of activities. The Community Engagement strategy was reviewed and developed following the end of the first design cycle and review phase (see section 2.6.2 and [WP7-D3](#) for design cycle 1 and [WP7-D6.1](#) for design cycle 2). Different elements of the community engagement strategy are explored in more detail below.

## 2.3 Community and stakeholder mapping

Open access statistical data were used to develop an initial understanding of the socio-economic contexts within the project boundary (See [WP7-D2: Community mapping report](#)). This data included demographic profiles, deprivation, education, housing, economy and employment as well as land use within the project boundary. A further detailed layer of community mapping was added through development of a database mapping all of the major community assets and actors within Rugeley, this included schools, churches, other community hubs (such as theatres, health centers), community groups and clubs, as well as regular community events (such as markets and fireworks displays), major landlords, and businesses and print and broadcast media (see Community strategy in Appendix 1 and [WP7-D2: Community mapping report](#)). This 'community mapping' was used to develop a broader understanding of the community as well as identify specific potential channels for engagement with the community.

## 2.4 Identifying target audiences and subgroups for engagement

With the project's aspiration for a whole-town scale smart local energy system, every individual who lives in, works in, or travels through or to Rugeley has the potential to be impacted by a future SLES, and has a role to play in contributing to its design. At the start of the project the following key groups of 'audience' were identified:

- Rugeley residents
- Landlords
- Small business owners
- Energy managers for large energy use organisations
- Community hubs/services (e.g., schools, health centers).

Individuals within the Rugeley community may fall into more than one audience category, due to having multiple roles within the community. Some of these audiences (such as community services like churches, community centers and schools) can also be important as communication channels in their own right.

Due to a need to prioritise resources the community-centric design work focused on the Rugeley resident audience, and provided support for engagement work led by other consortium partners with the other target audience groups. Small business owners were not targeted as part of the project, although this could have provided an additional route to engage with a wider range of Rugeley residents, with the assumption that many local business owners would also live within the town.

Key sub-groups within each audience category were also identified (see Appendix 1), for example Rugeley residents could also be grouped according to housing tenure, socio-economic and demographic status, and vulnerability, such as fuel poverty, age and disability. Thinking about the sub-groups within each audience category could help evaluate how to ensure a breadth of engagement.

## 2.5 Establishing community advisor groups

### 2.5.1 Community Gatekeeper Advisory Group

The community engagement strategy identified the importance of local actors in supporting the community-centric design. These local actors are individuals who have significant local influence and pre-existing engagement networks within the local community. Such individuals have been identified in the academic literature as 'middle actors', and have an important role within energy transitions, being seen as "better equipped... with qualities that top actors lack (or are perceived to lack) and bottom actors appreciate, such as trustworthiness, legitimacy and ability to shape social norms and values" (Parag and Janda, 2014, p. 106).



We therefore developed a ‘Community Gatekeeper Advisory Group’ of ‘middle actors’ who were able to provide advice on the community engagement approaches from their position as trusted and embedded members of the local community, as well as where appropriate provide access to their own community networks. Table 1 outlines the composition of the Community Gatekeeper Advisory Group which changed over time as new ‘middle actors’ became engaged with the project, and as involvement from individuals waned. Many of these ‘middle actors’ held a number of different roles within the community, and many knew each other, whilst others were working in isolation from one another.

<b>Organisation</b>	<b>Sector</b>	<b>No. of individuals involved</b>
Friends of Hagley	Local history group	2
Cannock Chase District Council	District Council	5
Rugeley Town Council	Town Council	6
Brereton and Ravenhill Parish Council	Parish Council	1
Power for All	Local activist group	1
Transforming the Trent Valley	Regional conservation and wildlife group (externally funded)	1

Rather than being a transactional relationship aimed only at benefitting our own work, we aimed to develop trusted relationships with individual gatekeepers, through discussing one-to-one how to mutually work together, and looking for synergies with gatekeepers’ own local ambitions which we could help support through our work.

Meetings with the ‘Community Gatekeeper Advisory Group’ were arranged approximately bi-monthly initially, with regular email exchanges also taking place where relevant. Meetings would cover the following areas: i) updates on the design of the SLES itself, project progress and high-level aspects of the design; 2) an overview of social media engagement (when this was a key engagement approach due to COVID-19 lockdown restrictions); 3) upcoming plans for the next two months; and 4) specific questions to gain feedback from the advisory group. In the latter stages of the project numbers of Community Gatekeepers engaging in meetings declines, and this group was merged with the Community Ambassador Group (Section 2.5.2)

In addition to providing feedback and insights into the community engagement approach, these meetings also played a role in helping the individuals in the group to develop their understanding of the rationale behind smart local energy systems and its design. We would discuss openly with the group challenges we were experiencing in engagement, and demonstrate how their inputs were positively informing our approach and its impact. Insights and feedback from the group covered the methods for engagement, upcoming

opportunities for engagement or new ways of collecting data, as well as potential barriers to our engagement approaches. For example, feedback was given on timings of workshops, how events were advertised or explained, if other local events were happening at the same time, identification of opportunities to attend other community events, identification of other local gatekeepers, novel ideas for engagement, and other local initiatives that could support accessibility. Through this feedback we were able to adapt our engagement approach specifically to the Rugeley community in line with our commitment to a reflexive engagement approach. Table 2 outlines some of the key lessons we learned from our community gatekeeper advisory group, some of which may have relevance to other projects.

Table 2: Recommendations made by Community Gatekeepers and the alterations made to the engagement approach as a result.	
Recommendation	Accounted for by:
Alter the time we hold workshops on weekdays and weekends	Creating poll for interested locals to decide when workshops should be held
Make information and advice more approachable/interesting	Reviewing use of terminology, creating glossary of terms, creating posts explaining different energy transition concepts. Themed weeks for social media content developed e.g., World book day (week) and citizen spotlight weeks showing local sustainable experiences within the community
Improve appearance of social media pages and event/workshop appearance. Ideas provided for improving this image	Created role to lead on social media and rebranded engagement interfaces
Provide advice for small changes people can make in the home to reduce concerns around scale of climate challenge	Posts developed regarding sustainability in the home more broadly, showing myths and misconceptions, as well as small scale changes that can reduce carbon footprint
Develop stories relating to history of Rugeley and its relationship with energy. Map out the relevance of energy over time	Significant project and working group developed with interested local groups and external organisations to develop this. Videos, talks and social media posts pertaining to local culture and relating to history with energy specifically developed and shared
Make workshops shorter-too much time commitment required for some workshops	Shorter hour-long workshops designed for 'specific' phase, to test specific design principles (e.g., showing up to suggest EV charger locations on an interactive map

The Community Gatekeepers also played an active role in the community engagement activities, with many following the ZCR social media channels, attending workshops alongside lay members of the community, and asking for feedback through their own social media channels

In summary the Community Gatekeep Advisory Group benefited the community-centric design approach through: 1) development of a 'community-centered' reflexive engagement approach through open feedback from local sources informing our approach; 2) developing

a sense of trust and legitimacy for the project within the community through the visibility of the CCD team engaging with trusted and known community members, and the CCD team demonstrating a genuine interest in the perspectives and experiences of the community and their right to access information about the project; 3) increasing the 'reach' of our engagement through engaging with community gatekeeper networks.

There are several key learnings from our work with the Community Gatekeeper Advisors of relevance to this approach in other projects:

- 1) offer more frequent and one-to-one meetings to provide maximum flexibility for engagement and maximise the potential for inputs from different perspectives, while respecting the voluntary nature of the role and the busy schedules of individuals;
- 2) include as many gatekeepers as possible using 'snowballing' to recruit, to open up new opportunities for engaging more members of the community, bringing in new perspectives, and accounting for ebbs and flows in engagement from different gatekeepers;
- 3) manage expectations throughout – particularly relevant for a project focused on design rather than implementation;
- 4) develop a monthly summary newsletter to aid continued communication and engagement with gatekeepers and retain engagement with those unable to input time into meetings;
- 5) exploit synergies between project objectives and gatekeeper goals to enable 'win-wins' and demonstrate the benefit for gatekeepers of engagement with the project;
- 6) provide funding and support to help assist these individuals with their own objectives. For example, in the final year of the ZCR project the project funded a retrofit to the Rugeley Community Church and Centre, benefiting the organisation, but also providing a hub for ongoing education with the community about the retrofit process and its benefits.

We could not have developed the engagement reach we have developed with the community without the involvement and support of the Community Gatekeeper Advisory Group. One of the most important contributions these 'middle actors' had was in helping us work through any engagement difficulties we were having. The lived experiences and local, contextual knowledge of these actors enabled us to understand whether it was intrinsic factors pertaining to our engagement approaches which were not working, i.e., the proposed length of our workshops not suiting interested parties, or whether it was extrinsic factors, i.e., the workshops were not being attended due to the timings of them clashing with other local events.

### *2.5.2 Community Ambassador Group*

A key element of our community-centric design approach that emerged was the development of a 'Community Ambassador Group', to enable residents who wished for significant involvement in the project, but perhaps were less integrated into other local organisations, to have the opportunity to engage deeply with the project. Such individuals were typically identified from their regular attendance at workshops or through online discussions, or through contacting us directly to request greater involvement.

As this group developed, we created a 'Community Ambassador Workbook' to provide key insights into the aims, objectives and realities behind the ZCR project, as well as an initial list of opportunities through which individuals could engage with the project. These opportunities included helping to facilitate discussions online, recruiting other interested parties to engage in the project, and testing and providing feedback on engagement materials.

The Community Ambassadors acted as critical friends to the community-centric design team, providing us with feedback (much like the Community Gatekeepers), but also helping us to test key engagement materials. Although these were a small group of particularly engaged and well-informed individuals, they felt enabled to speak on behalf of the wider Rugeley community, from their own networks and experiences. The Ambassadors would ask questions about the project in general or specific materials, and highlight aspects they did not understand and provide suggestions on materials. These questions provided prompts for the community-centric design team to generate new social media posts to provide more clarity on some of the more difficult to understand aspects of the SLES. In this way, we were learning from the community to shape our engagement approach.

Engaging with the ZCR project through the Community Ambassadors Group also served as a catalyst for other sustainability activity within the community. The Community Ambassadors had their own local ambitions around energy, zero carbon and wider sustainability concerns, including promoting Rugeley's unique energy heritage, local litter picks, and developing local facilities. The Community Ambassadors set up a new local group called Eco-Rugeley, to help promote these interests, which has amassed a significant amount of local support and has become a key route for development of the ZCR project's legacy.

The development of a Community Ambassador group provided a route for the ZCR project to benefit from the passion and commitment to the project's overarching goals through developing deep, long-lasting relationships within the community, helping not only to provide deep insights into the community, but also to develop a project legacy within the community. Such long-term relationship development with community members can often be overlooked by projects led by external organisations, but we believe are an essential part of successful place-based decarbonisation projects.

There are several key learnings and recommendations from our work with the Community Ambassadors Group of relevance to this approach in other projects:

**1) Accept that Community Ambassador involvement with the project will fluctuate over time** - therefore the need to develop an engagement approach which benefits from Ambassador input but is not *contingent* upon their input and would place significant burden on these voluntary individuals.

**2) Ensure Community Ambassadors understand the project boundaries and focus but provide avenues to develop their own interests.** At times the Community Ambassadors focus of interest was outside of the project's 'energy system' focus. The development of 'Eco-Rugeley' as a separate group set up by the Community Ambassadors, provided the avenue for the community to develop other sustainability activities within the local community. However, there were suggestions from the Ambassadors about how they would like to see ZCR project money spent on projects such as community gardens. Where this was not possible, this could generate frustrations for the Ambassadors.

**3) Provide funding and support for Community Ambassador-led projects.** In order to address some of the frustrations of Ambassadors outlined above, we would recommend establishing funding streams specifically to support initiatives led by Community Ambassadors to help them achieve their own ambitions for the community, as a way of further developing trusted, bi-directional relationships with Ambassadors. This could be seen in a similar way to providing individual incentives to take part in research, but here, such funding could be used for the community as acknowledgement of the time and support provided through the Ambassadors. The Ambassadors had a variety of innovative ideas to address sustainability goals in the community. Aside from aligning well with the ambitions of the SLES, these ideas could help recruit other local individuals to develop an interest in carbon reduction. Much of the support required includes low-cost equipment, such as litter pickers, or support with grant writing for larger costs, such as for community gardens. The project consortium developed good links with key stakeholders crucial to the development of some initiatives, these relationships could be leveraged to help Community Ambassadors navigate some of the challenges of implementing their own project goals.

**4) Provide training and resources for Community Ambassadors to support them in catalysing a 'SLES-ready community.'** Learning from peers can be an influential way to spread knowledge and action about energy transitions. Community Ambassadors are ideally placed to play a role in circulating knowledge within their own communities. Projects should therefore build in resource to support training of Community Ambassadors and provide resources for them to work independently within the community to circulate knowledge about energy transitions and smart local energy networks (see section 4.4.3).

**5) Ensure Community Ambassadors appreciate the 'design' focus of a project and manage expectations around implementation.** Community Ambassadors were eager to see actual implementation of low carbon solutions within their community and were frustrated that this was not taking place. The ZCR project was funded to focus on the 'design' of a smart

local energy system rather than its implementation, which requires development of enablers around policy and finance and investment beyond the remit of the project. Frustrations may in part have been due to a lack of understanding of the complexity of the SLES design process and requirements for implementation of solutions.

**6) Identify visible, achievable implementation projects.** The frustrations expressed by the Community Ambassadors highlights the importance of demonstrating some level of implementation of solutions. As part of the final phase of the ZCR project a retrofit was carried out of the Rugeley Community Church and Centre. Earlier identification of similar opportunities can be seen as important to maintain the interest and trust of Community Ambassadors as well as provide a physical legacy for the project.

**7) Anticipate delays and barriers of ‘red tape’ and build in solutions at the start.** Two additional areas of Community Ambassador frustration stemmed from i) time-consuming university ethical protocols which the Ambassadors sometimes felt limited their capacity to conduct meaningful engagement of their own accord; and ii) restrictions in sharing some project information with the community due to the legal agreements signed between the consortium partners. If the development of a Community Ambassador Group is anticipated from the beginning of a project then some of these issues could be addressed through governance decisions early on, with the potential to class a Community Ambassador Group, or relevant legal community-based organisation as a key ‘project partner’.

These learnings demonstrate that there are significant challenges of working collaboratively and deeply with community members in this way. There are inevitably tensions in engaging directly with members of a community when a project is simply at a ‘design’ stage and may never go any further, and when community ambitions go beyond project funding boundaries. However, despite these challenges, the engagement with a group of ‘Community Ambassadors’ developing long-lasting, open and trusting relationships between community members and the project, is we believe essential in retaining the ‘local’ element of a ‘smart local energy system’ and provides significant benefits to a project through local insights, experiences and support, as well as delivering a more just and community-oriented energy transition.

## 2.6 Embedding community insights into project design

Community-centric design requires insights from the community to be fed-back into the project design. Processes were embedded into the ZCR project to enable this to occur, although this could be further improved. The mechanisms discussed to embed these insights into the wider project include a Community Engagement Delivery Group comprising representatives of the different project partners and work packages vs individual partner engagements, and the review process embedded between the two project design cycles in the original two-year project structure.

### 2.6.1 Community engagement delivery group vs individual partner engagements

The initial governance structure developed to enable two-way discussion between the community-centric design team and the diverse project partners representing the different work packages was a monthly 'community engagement delivery group.' The aim of this group was to provide a communication channel: i) for requests from the partners for areas for insights from the community to be developed through the community-centric design team activities; ii) to enable project partners to input into the design of community engagement activities; and iii) to provide feedback on community insights to partners.

There was insufficient engagement with project partners through this approach to make the approach effective. This is likely because it placed significant time demand on partners where not all of the discussion was seen as relevant to their own area of work, as discussions would cover all different project work packages. Instead, a more effective method of engagement with project partners was for individual conversations with the community-centric design team to help understand the different needs of the work packages regarding community insights. Although this worked well to help inform the design of the community engagement activities, more time could have been set aside for a similar approach to feedback regular insights from the community engagement activities.

Towards the end of the project an externally-facilitated 'lessons learnt' event was held for the whole consortium (see [WP17-D10 report](#)). One reflection of the project shared by many members of the consortium was that the interconnection between different work packages and aspects of a SLES was relatively limited. The community-centric design work wrapped around all of the work packages to different extents and therefore could create one mode of increasing this integration, learning and understanding between work packages. The development of the initial community engagement delivery group governance model to meet an additional need for increased cross work-package integration may help make this governance structure more effective, but needs commitment and buy-in from all project partners.

### *2.6.2 Between design cycle review process*

A review phase lasting eight weeks took place between the two design cycles of the original two-year project structure. During this review phase each work package presented their initial design ideas and key learnings from the first design cycle. The community-centric design work package presented their community insights from design cycle 1 (the exploratory phase), which showed how the community had responded to the prospect of a SLES, the changes they were expecting, the solutions they had proposed and key learnings through trialing our engagement approach. The consortium partners then evaluated where technical community wants could be embedded in the design, whether their design propositions would suit the community based on local contextual data and where more detail would be beneficial from the community to ensure the design is catered to them. For

example, the community had indicated a desire for more public EV charging points. But where would these chargers be best used according to community inputs compared to where they could be deployed in a technical sense? Were there any design requests for these chargers? Hence, Design Cycle 1 was important for focusing ZCR on the place-specific context of the SLES, but there was a recognition that there was a need to go further in terms of co-designing specific solutions.

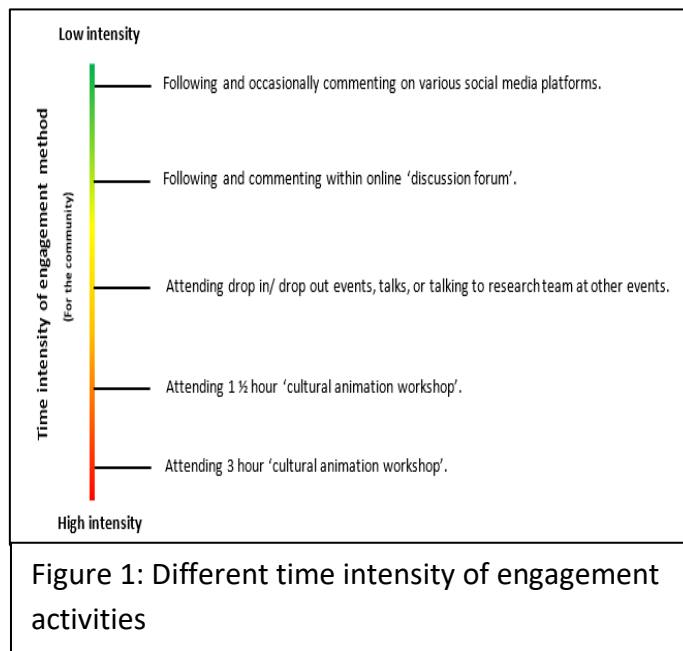


## SECTION 3: METHODS OF COMMUNITY-CENTRIC DESIGN

### 3.1 Introduction

This section explains the overall methods of engagement with the community used in our community-centric design approach, alongside key learnings and recommendations. Throughout we explain the rationale behind the methods used (which include the restrictions imposed by the COVID-19 pandemic). This section provides detail on the following methods of engagement: i) social media; ii) cultural animation workshops; iii) drop-in in-person events; and iv) drop-in online events.

The International Association for Public Participation (IAPP) devised a public participation spectrum related to different levels and approaches to public participation within a project (IAPP, 2013). The five different levels are: *inform* – provide information to the public; *consult* – top-down communication and one-way flow of information; *involve* – two-way information exchange with some degree of public input and direct involvement; *collaborate* – working more intensely with the public to develop a solution together; and *empower* – leaving the public empowered to be able to make a final decision. A quick scoping review of user-centric design (UCD) approaches and UCD in energy systems design (See [WP7-D1: Quick scoping review: user-centric design](#)) highlighted a wide range of different engagement tools used, including interviews, singular focus groups, multiple focus groups, and rapid prototyping workshops, each of which, required different levels of time for engagement. In keeping with the underpinning principles of UCD in the context of the community-centric design approach we developed, we felt it important to offer opportunities for individuals to engage with us at different levels of intensity (Figure 1). Our community-centric design approach therefore included methods which aligned with several of the different IAPP levels. However, the over-arching approach is reflected by the ‘collaborate’ level as demonstrated by our Community Ambassador approach (section 2.5.2) and ‘empower’ level, reflected in the final ‘legacy’ stage of our three-phase structure to our community-centric design activities. The ‘collaborate’ level is particularly pertinent given our role as an intermediary between a multitude of different actors within the project and community.



## 3.2 Methods of engagement – social media

### 3.2.1 Social media approach and principles

Whilst the decision to use social media as a key engagement tool was initially informed by the need to develop an engagement approach that would work under COVID-19 lockdown restrictions, we found social media platforms to be an effective way of collecting insights from the Rugeley community, and would replicate this process in future projects. The development of a project Facebook page provided an avenue for a large number of members of the Rugeley community to contribute their thoughts about the project, and specific elements of the project, without them needing to attend workshops or consultation events which would require them to commit hours of time. Although use of social media as part of an engagement strategy comes with its issues of digital exclusion, which may preferentially exclude particular demographics, it also increases the inclusion of voices that would not be willing or able to invest time in other more time-intensive engagement approaches. The 'distant' nature of social media engagement also likely empowered dissenting voices to be heard, which may be excluded from other modes of engagement.

We developed a Facebook page specifically for the community-centric design element of the ZCR project called 'EngageZCR.' Facebook was chosen as the preferred social media platform due to its more ubiquitous use than other platforms. Ideally other social media platforms would have been used more intensively to increase inclusion particularly for younger demographics preferring use of other platforms. However, the way that we used the Facebook platform was time intensive, and prevented similar use of other platforms.

Several months into using the Facebook platform in this way we created a new role within the project team with responsibility for overseeing the social media engagement.

The key principles underlying the development of the Facebook page were:

- To promote bi-directional communication rather than one-way dissemination;
- To respond (respectively) to ALL contributions.

The Facebook page was used for a number of different purposes including:

- To promote workshops and events;
- To collect feedback on specific questions;
- To provide information about the project and specific aspects of the SLES design;
- To provide space for discussion within the community about issues relating to the ZCR project, through establishment of a Facebook discussion forum;
- To allow the community to ask questions about the project.

An issue with using social media is that it can be intensive; not only in terms of the time spent operating the social media platform with responses being posted at all times of day, and needing careful time management to prevent overload of the engagement team, but also in the (often contrasting) views which can lead to intense debate. Comments related to local transport in particular evoked conflict. An additional advantage of social media is that it provides useful statistics relating to engagement, which can help track the 'reach' (geography, time stamps and demographic characteristics) of those engaging.

### *3.2.2 Key learnings and recommendations for using social media*

Through trial and error with engagement, we developed some key rules for the social media platform that we would strictly follow. These are also our key recommendations from our own experiences in using social media for engagement:

- 1) Respecting and responding to all views.** Through using social media for the ZCR project, we encountered many varied, conflicting, skeptical, and sometimes rude and accusatory responses from individuals. The project team committed to responding to every individual that engaged with us, asking them to elaborate on their perspectives, to re-explain it, or simply to acknowledge that they had been listened to. We acknowledged that not everyone will be happy with work pertaining to low carbon, nor understand it, or care, and that it was important to respect and engage with all members of a community. Where we replied with individuals who held negative perspectives, we found they would engage at least one more time to further highlight their perspective, which helped better understand their reticence to engage or their perceptions of the energy transition and climate change.

- 2) **Posting regularly.** Maintaining a consistent presence on social media was seen as important to demonstrate a sense of continuity within the project and a continued commitment to listening to the community. This consistent engagement also helped to build a sense of familiarity with the community and learn which individuals were regularly engaging with the page. Inevitably, as more in-person events took place later in the project, time restrictions meant that there was less use of Facebook to pose questions to the community, but there was continued use of the platform for advertising of events and providing information where areas of fear, uncertainty and doubt about different aspects of the SLES were identified.
- 3) **Finding an appropriate frequency of posts.** We experimented with different amounts of posting, from posting once a week to posting every day, and found that posting three to four times a week provided a happy medium where we would generate the most responses, reducing this number down to one per week at key holiday periods such as Christmas.
- 4) **Using other community Facebook pages effectively.** An advantage of Facebook is the ability to connect with other local community-focused Facebook groups. Identifying these groups was a key part of the community mapping stage (section 2.3). We ensured that we ‘liked’ other pages and asked permission to post to them. Where we posted cross posted too often, we would sometimes receive polite messages asking us to reduce the number of posts shared on other pages.
- 5) **Having a dedicated team member for social media engagement.** Maintaining a regular social media presence and responding to all posts is time consuming (albeit effective), and the time and resource needed should not be under-estimated. We hired a part-time research assistant to dedicate time to developing social media material, managing responses and monitoring the engagement process.
- 6) **Use a Facebook discussion forum alongside the Facebook page.** The Facebook page was useful for putting information out into the community, but we struggled to develop discussions *between* community members. To combat this, we set up a ‘discussion forum’ group, which people could join if they wanted to engage in more meaningful conversations about a low carbon future for Rugeley. This discussion forum enabled local people to connect with each other, to post ideas they had come across and to lead on developing local initiatives. Using this forum, we would also regularly ask for feedback on our engagement approach.
- 7) **Ask for insights and input.** We would regularly ask questions on the Facebook page to collect insights from locals about aspects of a smart local energy system, as well as invite people to share their own experiences and insights with us. This could be as broad as favourite books or advice to reduce carbon footprints in the home, or specifically in relation to the different energy vectors covered by the SLES, such as experiences of EV ownership).

Section four gives examples of different posts and inputs from the EngageZCR page to demonstrate how this was used to address the three stages of the community-centric design approach.

### 3.3 Methods of engagement: Cultural animation Workshops

#### 3.3.1 Background to cultural animation

‘Cultural Animation’ is an umbrella term (coined by a collaborative venture between Keele University and New Vic Borderlines) for a specific approach to community engagement; that focuses on in-depth interactions with specific communities and comprises a series of interactive, creative and innovative activities (Millward et al., 2019). The approach has been used in a series of other contexts, including for community recovery from tsunamis and industrial decline (Goulding et al., 2018). It has also proven particularly successful at engaging with and better understanding the experiences of demographics whose voices are often less heard.

Cultural animation activities are diverse in scope and scale, but all aim to create deliberative, co-productive environments which challenge and subvert presumed power inequalities between communities and stakeholders. We outline three key characteristics of the cultural animation approach: 1) the role of the ‘animateur’; 2) the use of creative activities drawing from the arts such as music, drama and poetry; and 3) the bringing together of diverse stakeholders in a space that disassembles traditional power hierarchies. Within the ZCR community-centric design work package, a cultural animation approach was adopted in the design of workshop activities that aimed to draw insights from diverse community members across the exploratory and specific stages of community engagement. Section 4 outlines specific examples of workshops from each of these stages.

Cultural Animation workshops are led by an ‘animateur’ – an individual that directs the course of the workshop and explains activities, and facilitates discussion and raises new conversations as points emerge during the workshop. The animateur helps to foster an engaging, welcoming environment for all. During group activities or discussions, the animateur remains in the background as much as possible, progressively handing the directing role over to participants. Whilst the animateur may begin a discussion with a direct question they will allow workshop participants to steer the conversation and interactions. Therefore, Cultural Animation differs from more structured traditional focus groups in embracing inherent flexibility and a more subtle controlling of discussion by the animateur.

Cultural Animation is deeply rooted in the arts, drawing from creative disciplines to inform the design of activities. Rather than simply creating dialogue between participants, Cultural Animation promotes collaborative activities to explore topics from different participant perspectives. For example, rather than asking people to simply discuss their experiences of using public transport in their local area, a Cultural Animation workshop may encourage participants to collaboratively develop a poem to reflect their experiences. This encourages participants to discuss together their experiences, coming up with key terms that they

would like to see reflected in the poem. This approach develops cohesion of the group and provides a more open space, and reduces pressures, for individuals to discuss their perspectives than a traditional focus group, and encourages open, reflective and critical discussion.

Cultural Animation is also very effective at working with a diversity of participants at the same time, through creating equalizing spaces and activities. Through our workshops we have had members of local charities, local councils, local activist groups, and residents all working collectively on the same activity.

### *3.3.3 Key learnings and recommendations for using cultural animation approaches*

- 1) Create activities with different time commitments.** Cultural animation approaches require significant time commitment of participants in order to develop the depth of relationships and engagements required. Our initial workshops typically lasted for two to three hours. As the project progressed, we developed workshops that were shorter in order to enable engagements with individuals with limited time, particularly those in full-time employment or with young families.
- 2) Technical concepts can be explored through cultural animation approaches.** Many aspects of a smart local energy system are highly technical. The development of cultural animation approaches for engagement with SLES concepts demonstrates the versatility of the approach to different issues. Co-designing the workshops with non-technical experts, helped in developing ways to translate technical concepts to a lay audience.
- 3) Cultural Animation approaches do not appeal to everyone.** Cultural Animation approaches might not match the expectations of those attending workshops who are interested in more passive or traditional forms of community engagement. Cultural animation requires all attendees to take part with ‘nowhere to hide’, and this may be particularly highlighted when conducted in an online environment (here using Zoom). At times, some participants decided the workshop was not for them and left, which is made easier in an online setting. This was rare, but it is important to remember that the fun, creative nature of the workshops will not appeal to everyone. This represents all the more reason to ensure that a diversity of engagement opportunities is offered throughout the whole community-centric design process.
- 4) Cultural animation approaches can be delivered in person or online.** The cultural animation approach was originally developed for in-person engagement. However, the COVID-19 lockdown restrictions meant that this was not possible for the initial stages of the ZCR project. The community-centric design team was committed to the principles and benefits of a cultural animation approach, and therefore developed new ways of delivering cultural animation through online workshops (see Section 4).

- 5) **No spectators allowed!** Members of the ZCR project consortium expressed interest in attending the cultural animation workshops out of interest. However, if individuals are present in a 'spectating' role this can jeopardise the workshop environment, where everyone present is on an equal level. Because the project sought perspectives specifically from Rugeley community members, consortium members were not allowed to observe the online workshops.
- 6) **Learn from experienced practitioners.** Cultural Animation was developed and pioneered by the New Vic Borderlines in collaboration with the Community Animation and Social Innovation Centre at Keele University, prior to the Zero Carbon Rugeley project. The team at New Vic Borderlines have extensive experience of applying the approach in different contexts. Taking part in a range of workshops prior to attempting to develop this approach in new contexts is recommended, as is collaborating with experienced practitioners. More information about Cultural Animation can be accessed here: <https://www.keele.ac.uk/casic/>. More information about New Vic Borderlines and contact details can be accessed here: <https://www.newvictheatre.org.uk/education-and-community/borderlines/>

### 3.4 Methods of engagement: Drop in events – online and in-person talks

#### 3.4.1 Background to online and in-person talks

Cultural animation online workshops were not the only method of engaging with the community. Although cultural animation approaches have many benefits, there are also limitations, particularly as a method to increase knowledge of participants. Therefore, more traditional talks were also run online as part of our engagement activities to help increase community member's knowledge of different aspects of the energy transition. The energy transition is continually unfolding and remains largely distanced from the wider public. Many of our engagement activities revealed relatively limited 'energy transition literacy' amongst community members as well as several articulated areas of fears, uncertainties and doubts. Community members also often expressed uncertainty about where to find informative and trustworthy material. It was therefore felt necessary to provide opportunities for community members to learn more about different aspects of the energy transition and smart local energy systems, and to have an opportunity to engage with those who had personal experience of energy transition technologies. A popular talk, generating extensive discussion and sharing of experiences and advice, was held by a member of Keele University staff who talked about his experience of electric vehicles and integrating smart technologies into his home.

We also held talks to other community groups both within the community, often through the request of Community Gatekeepers, and as the project became better known, outside of Rugeley, to community groups in other areas. These talks would be situated within events

which were both sustainability or energy focused or more general in nature, such as Rugeley Town Council's Community Day.

### 3.4.2 Key learnings and recommendations for the use of online and in-person talks

- 1) **There is a desire for information from a trusted source, traditional informative talks can help address this.** Our social media engagements highlighted a degree of skepticism or factually incorrect information relating to the energy transition. Due to the often-technocratic nature of the energy transition, much of information about the changes occurring or required, remains hidden from the wider public. Hosting talks with local communities can help increase energy transition literacy essential for place-based decarbonisation. The public's acceptance and confidence with engaging with online talks as a result of changes in ways of working through the COVID-19 pandemic enables easier access to these talks for many. In person talks, particularly where hosted by community gatekeepers in the community's *own* spaces, can also help increase energy transition literacy for those less willing or unable to attend online talks.
- 2) **Universities are seen as important sources of trusted information.** Our engagements with the community demonstrated occasional reticence to accept information from stakeholders perceived to be 'profiting' from the energy transition. Universities have an important role to play as trusted, 'honest brokers' of knowledge. The inclusion of university partners in local initiatives can provide an additional source of engagement opportunity and help address issues of trust.

## 3.5 Methods of engagement: Drop-in in-person events

### 3.5.1 Background to drop-in in-person events

#### **Rugeley Energy Heritage Days**

Due to COVID-19 lockdown restrictions throughout the first two years of the ZCR project opportunities for in-person engagement activities were limited. By October 2021 we were able to organise a local event for the community, which was named the 'Rugeley Energy and Heritage Day', reflecting the community's strong sense of heritage around energy due to its coal mining history and former coal-fired power station. The success of this event in 2021 led to a repeat in 2022. These day-long events had three objectives:

- 1) To disseminate information regarding local energy-related plans and initiatives, including the progress of the Zero Carbon Rugeley project, with opportunities for question-and-answer sessions and group discussion.



- 2) To provide a space for local citizens, voluntary groups, public organisations, private sector companies and the ZCR consortium to network, share ideas and experiences and develop new working partnerships on sustainability-related issues.
- 3) To use the event as an opportunity for data collection, collecting community insights from a wider range of people including those who had not previously engaged with the project.

The event was held at a local theatre, with the theatre room being used to host a children's cinema which showed animated, sustainability-oriented films throughout the day. In the business suite we held talks throughout the day, which were delivered by the ZCR consortium, Equans and by local community groups. Within the main foyer there were local businesses selling sustainable goods and local community groups promoting their work. In 2021, we held a business-oriented networking event in the evening and New Vic Borderlines ran cultural animation-inspired engagement activities. There was an array of posters related to climate change, local history, renewable energy, as well as maps for residents to spatially map where they would like to see the deployment of specific technologies. All participants were entitled to a free meal from a local business. In total, ~160 local residents attended, and we received excellent reviews, with many local residents wondering if another follow up event would be held. The event was one of the busiest the venue had hosted in a significant amount of time

### *3.5.2 Key learnings and recommendations for in-person events*

- 1) **A diversity of project partners and stakeholders is required to attend events.** It was necessary to co-ordinate a diversity of project partners and stakeholders to be available to talk to the community. For this event we drew on different partners involved in the ZCR design process, as well as representatives from local community groups and our Community Gatekeepers. This diversity of stakeholders enabled us to explore multiple perspectives on energy transition, heritage and climate issues, as well as better explain different aspects of the SLES to the community. Overall, the presence of these stakeholders helped ensure that there was a co-productive and networking atmosphere at the event, but also helped to prevent any one 'vision' of a Zero Carbon Rugeley from dominating the day.
- 2) **Creating trust and building relationships through in-person events.** The event provided the opportunity for interested locals to meet the individuals both within and outside the ZCR consortium that they had been engaging with for over a year. Many told us that it was "nice to see that there were real people working behind the scenes", and engagement during Q+A sessions was significant. We learned that despite the ability to reach a significant number of individuals through online engagement, having people in person was irreplaceable in developing levels of trust in the project.

- 3) **Significant costs and time – frequency and timing.** Organising the bespoke ZCR ‘Energy Heritage’ days required a substantial amount of financial and staffing resource, for the event itself but also the marketing and advertising to maximise turnout. Due to these commitments of time and money, running one bespoke event a year is probably the ideal frequency. The first event took place almost two years into the project. Although it would have been ideal to have held this earlier, we would recommend a period of time from when community engagement starts in order to build momentum and interest to maximise engagement and attendance from local community members.
- 4) **Provide incentives to attend.** Not everyone in a community will be attracted by an event focused around energy or heritage. In order to both attract a wider range of people to the event, beyond those who had already engaged with the project, and to thank people for their time in attending, we ran a children’s cinema throughout the day as well as provided a free lunch for all attendees. Data from the Energy Heritage Day in 2022 demonstrates that the children’s cinema was a significant draw for families, while also providing an opportunity to keep a child occupied while a parent or guardian attended talks or engaged with stalls and activities.

### 3.6 Methods of engagement: ‘Pop-up’ in-person engagement

#### 3.6.1 Background to pop-up engagement

‘Pop-up’ engagement activities is the term given to informal, ‘drop-in’, in-person activity undertaken in existing community spaces. These in-person events were only held in the latter stages of the project once lockdown restrictions were eased and confidence in attending in-person events had been regained. This style of pop-up engagement was designed to build broader engagement with the Zero Carbon Rugeley project with a wider range of people within the Rugeley community, by taking place in existing community spaces, and involving shorter (2 to 10 minute) activities and discussions. Engagement activities were designed to be transferable to any public facing event, enabling researchers to meet the Rugeley community where they were and demonstrating a shift in approach to public engagement from earlier stages of the project where community members were invited to attend and participate in events hosted by the ZCR consortium.

The engagement activities were taken to three community events in Rugeley during 2022 a Jubilee Street Party held in Rugeley town centre to mark the Queen’s Platinum Jubilee, the Artisan Market held in each month in Rugeley town centre, and a ‘Rugeley Eco-Day held in the Rugeley Community Centre (and inspired by the ZCR-run Energy Heritage days). At all the events ZCR held a stall in which community members could drop in and participate in SLES-related activities aimed at generating insights for the ZCR consortium.

The activities were designed in collaboration with New Vic Borderlines using principles of cultural animation. These activities were related to the 'specific' phase of the community-centric design approach, with specific engagements designed around questions of energy transitions, buildings and retrofit, mobility and community energy. The full report of the pop-up engagements can be found at [WP17-D12-2](#), and examples of activities outlined in Section 4.

### *3.6.2 Key learning and recommendations for pop-up engagement*

- 1) **Pop-up engagements can help gain insights from a wider number of individuals.** During the course of the Jubilee Street Party event over 50 individuals provided input into the different activities. This is a much larger number than typically engaged with other more time intensive activities. Having a greater quantity of responses helps to identify commonly occurring concerns and issues. In the context of these engagements, issues of equity, justice and accessibility, as well as fears, uncertainty and doubts about aspects of the energy transition were frequently referred to. This greater number of responses from individuals and those who had not previously engaged with the project helps identify priority areas for consideration as part of an iterative community-centric design approach.
- 2) **Meeting the community where they are.** Running pop-up engagement activities in existing community spaces can help engage those with only peripheral interest in aspects of the energy transition. This can help identify a wider range of concerns and perspectives to those of more engaged individuals. Designing activities that can be rolled out at different events allows repetition of the activities in different settings, or the same setting on different occasions where resourcing allows.
- 3) **The role of Community Gatekeepers.** Knowledge of, and access to, these different community events and spaces was enabled by relationships with Community Gatekeepers (such as members of Rugeley Town Council) and highlights the importance of developing relationships with these individuals within a community.
- 4) **Staff to both facilitate and record.** Effective use of pop-up engagement activities requires a minimum of two staff members on the stall, and ideally four. One member of staff is required to explain the activities and facilitate discussions, while one member of staff is required to take field notes to help interpret the data collected. More staff members allow more conversations to happen at the same time, and to ensure that important insights aren't lost.

## SECTION FOUR: ENGAGEMENT TOOLS AND ACTIVITIES

This section outlines the different engagement tools and activities developed as part of each stage of the project and can be adapted to other place-based decarbonisation projects.

### 4.1 Stage 1: Exploratory

#### 4.1.1 Overarching approach

The exploratory phase was characterised by activities that were designed to develop a broad understanding of the community, the local context and perceptions of the local area and its challenges both generally and in relation to different energy vectors and services, as well as perceived opportunities for the area, areas of pride or concern in relation to the town, and the level of willingness to engage in the community-centric design process. This phase also provided understanding of the community's perceptions of the project, its aims and the concept of a smart local energy system.

The exploratory phase engagement activities included:

- 1) Online cultural animation workshops** on 'Who is Rugeley?'; Transport in Rugeley – the first and last mile; Sustainable housing – myths and realities
- 2) Social media:** establishment of a Facebook page dedicated to project engagement and a focus on building engagement and establishing a two-way interaction approach.

#### 4.2.2 Online cultural animation workshops

Three individual online Cultural Animation workshops were designed and delivered during the exploratory phase of ZCR. The workshops were delivered online due to COVID-19 restrictions. The three workshops were titled 1) Who is Rugeley, 2) Transport in Rugeley – The first and last mile; and 3) Sustainable housing – myths and realities. Each workshop was repeated several times to allow as many people to attend as possible, with 15 sessions run during this phase. Twelve individual participants attended the workshops, with several participants attending more than one. The following section provides an outline of each workshop. A detailed description of each workshop can be found in [WP17-D12-D7](#) which provides an in-depth guide for delivery in place-based decarbonisation projects.

#### **Workshop 1: Who is Rugeley?**

This workshop was designed to understand community views of energy and decarbonisation from a broad standpoint. It encouraged participants to think about Rugeley as a whole,

considering where carbon is emitted, and what barriers and solutions may exist within a 'Zero Carbon Rugeley'. A range of participatory activities were used including:

- A 'scavenger hunt' that asked each participant to find an object in their home that represented Rugeley;
- A 'barriers to decarbonisation bingo' game; and
- Mapping of 'carbon hotspots' in Rugeley.

This workshop was also the first opportunity for Rugeley community members to engage with Cultural Animation, therefore, it can be viewed as an introductory workshop.

### ***Workshop 2: Transport in Rugeley – The first and last mile***

This workshop explored mobility in Rugeley and sought to understand methods of travel, key patterns of mobility, different types of sustainable transport solutions for the area, and the potential for actioning change locally. It was designed to encourage participants to think about mobility and transport in their area, and how energy consumption and carbon emissions are connected to mobility. Activities included:

- Groups creating a Cinquain poem and Haiku that described i) a journey in Rugeley and ii) a *sustainable* journey in Rugeley.
- Annotation of a map of Rugeley to identify current travel issues and areas of high carbon emissions.

The purpose of these activities was to encourage participants to think in an abstract manner about their current travel experiences and how they could be made more sustainable, and to identify locations of specific mobility challenges in Rugeley.

### ***Workshop 3: Sustainable housing – myths and realities***

This workshop explored perceptions of building retrofit and encouraged participants to consider energy consumption in their home. The workshop focused on asking participants to *personify* their house, thinking about where energy is generated, where it is consumed, and where it is wasted. This then shaped an activity whereby participants were asked to consider how to make their house '*healthier*' by retrofitting it.

#### *4.2.3 Social Media engagement (exploratory questions/discussions)*

This exploratory phase saw the creation of the EngageZCR Facebook page and Discussion Forum, and the establishment of a two-way interaction approach to social media use. In this stage of the project, engagement aimed to collect broader data related to a hypothetical Zero Carbon Rugeley. Social media was used to pose questions to the Rugeley community at a range of different levels (Figure 2), using both the ZCR Facebook page and Discussion Forum to ask questions and discuss responses with individuals. Questions such as "What does Zero Carbon Rugeley mean to you?" sought to enable the Rugeley community to discuss aspects and perspectives of climate change action and what aspects of a smart local energy system in Rugeley they considered important. More specific questions were aligned

to individual work packages such as mobility and buildings to enable the Rugeley community to engage with a place specific concept of a SLES and generate more targeted data. Between March 2020 and February 2021, a total of 240 responses were generated from social media posts.

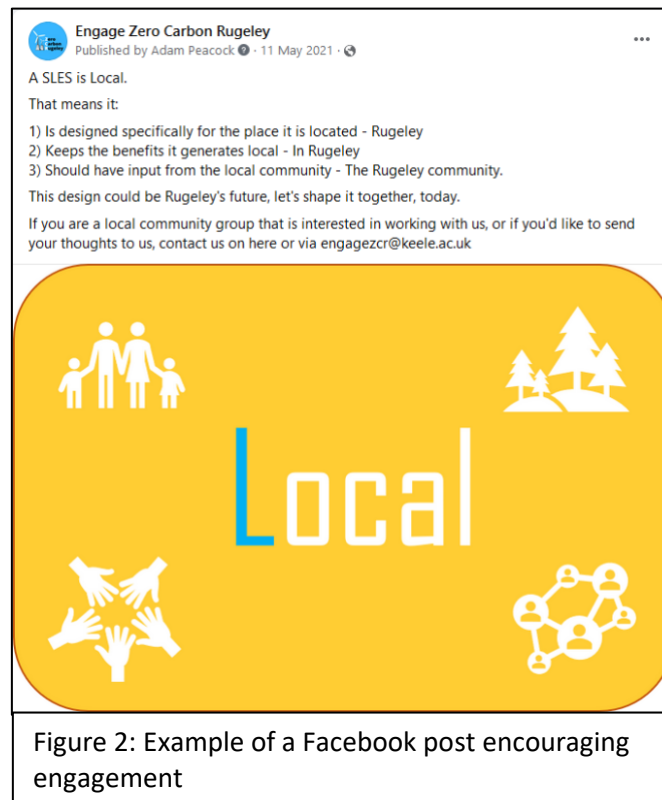


Figure 2: Example of a Facebook post encouraging engagement

## 4.3 Stage 2: Specific

### 4.3.1 Overarching approach

Stage 2 engagement activities focused on specific design propositions and SLES elements. Working with consortium partners the community-centric design team designed engagement activities to tested specific propositions with the community. These activities also aimed by translating technical concepts into lay language to improve the accessibility of and understanding of the SLES solutions for the community. These 'specific' activities allowed us to create scenarios whereby the community could indicate:

- i) their degree of understanding of the solution(s) and where further understanding might be needed;
- ii) their overall reactions to the solution(s) and decisions as to where particular solutions might be employed;
- iii) their concerns and suggestions relating to the solution; and
- iv) their likelihood to engage with the proposed solution in the future.

This stage of the community-centric design process also included:

- online talks designed to address areas the community had expressed a desire to know more about;
- themed social media engagement;
- a drop-in event, drawing on the theme of energy heritage that emerged during the exploratory phase, and enabled different types of engagement around specific SLES topics;
- pop-up events; and
- an energy heritage focused performance walk

#### *4.3.2 Cultural Animation Workshops*

We designed four new workshops as part of this phase of activities: on Mobility Futures arising from the SLES (held in person); on community reactions to propositions for Smart Retrofit (held in person and online); on Autonomous Vehicles (held in person); and on Autonomous Vehicles, Mobility as a Service and Journey Planning Apps. The following section provides an outline of both workshops. A detailed description of each workshop can be found in [WP17-D12-D7](#). The Autonomous Vehicle workshop design and report is available as [WP17-D2](#).

#### ***Workshop 4: Mobility Futures***

The core aim of this workshop was to understand participants' perceptions of mobility issues and opportunities in Rugeley, as well as their vision for low carbon transport in Rugeley. The workshop involved a series of mobility games that were designed to encourage participants to reflect upon their current mobility experiences and think about what they would like to see improve. The games were also designed to explore the difficulties of 'seamless' travel through discussing how travel in Rugeley could be improved. The workshop concluded with an activity whereby participants were asked to redesign the town to support low carbon transport using tape, buttons, and cards (Figure 3).



Figure 3: Net-Zero town re-design activity.

### **Workshop 5: Smart Retrofit**


The smart retrofit solutions workshop was designed to understand participants' reactions to specific domestic smart technologies and the extent to which individuals in Rugeley would be willing to engage with different retrofit pathways and different levels of smart energy management systems in their home. The workshop focused on domestic retrofit and smart home energy technologies by telling the participants a story about three characters who experienced a retrofit process (Figure 4). Throughout the story, the characters had different reactions and questions to the retrofit process, with the idea being that the participants had an opportunity to relate to or disagree with certain characters, to stimulate discussion about different views and generate questions. Throughout the workshop story key questions were posed to participants in relation to the different characters' responses.



The group, sign up to a 'Home Energy Improvement Program' and their houses are inspected by trained professionals. Each member of the group (and you!) are given a document showing the improvements that could be made in their home. Improvements could include:


- 1) **'Fabric'** side, i.e. insulation, double glazing, and draft proofing.
- 2) **Energy technology** to produce and store energy e.g. solar panels/batteries.
- 3) **A home energy management system**, including energy monitoring and smart controls.

**David** **Jill**



**David** and **Jill** understand the 'fabric' and 'energy technology' but are both unsure about the energy management system.

**Anna**



**Anna** is very interested in the energy management system

Figure 4: Introductory slide from the online workshop introducing the characters and outlining the retrofit process.

### Workshop 6: Autonomous vehicles, Mobility as a Service, and Journey Planner Apps

An Autonomous Vehicle workshops was designed to help project partner Conigital understand a diversity of user views about Autonomous Vehicles. This workshop had a number of different stages, and largely adopted more traditional workshop approaches than a true cultural animation approach. The full report on the AV, MaaS and Journey Planner workshop can be found at in report [WP17-D2](#). The activities included in the Autonomous Vehicle workshop included:

- 1) A 'knowledge line' up where participants marked their initial knowledge levels about AVs on a line marked 1 to 10, from 'nothing' to 'loads'.
- 2) 'What three words' exercise to gather participant's initial associations when they heard the term 'Autonomous Vehicle' and facilitated discussion.
- 3) 'Deep-dive' facilitated discussions, where participants in pairs moved between different discussions covering the questions:
  - a. what are your concerns about autonomous vehicles and where have these concerns come from?
  - b. what do you view as the benefits of autonomous vehicles?
  - c. what features would like autonomous vehicles to have?
- 4) A discussion using the blank oversized monopoly board (used in several different cultural animation workshops) to encourage participants to think about how autonomous vehicles could play a role in their current travel routines.

- 5) A ride in a simulated AV (the AV sensing technology was operational, but it was run with a driver controlling the car) and debrief discussion.
- 6) Repeat of the knowledge line-up activity, and summary of a key learning point, and remaining question.

A separate workshop was carried out which combined exploration of AVs, Mobility as a Service and Journey Planner Apps, to explore the potential for these mobility options in Rugeley. This workshop included the following activities:

- 1) A knowledge line up for AVs, MaaS and Journey planner apps;
- 2) 'What three words' exercise on AVs;
- 3) An audio recorded 'talk aloud' activity where participants used the Journey Planning app, and spoke their thoughts aloud reflecting live on their experiences of the app;
- 4) A 'MaaS in Rugeley' activity, where participants annotated a map reflecting on how MaaS, Autonomous Vehicles, and the Journey Planning Apps could be used in Rugeley;
- 5) A ride in the simulated AV and debrief; and
- 6) Repeat of the knowledge line-up activity, and summary of a key learning point, and remaining question.

#### *4.3.4 Online talks*

Engagement with the community in the initial phase of the project identified that a key barrier to engaging with a SLES was the lack of general knowledge amongst community members relating to what components of a SLES looked like in reality. To address this barrier, two informative lectures were delivered by a Keele University staff member drawing on personal experience. These lectures were advertised widely on social media on:

- "Everything you wanted to know about Electric Vehicles but were afraid to ask" and
- "Smart Energy solutions in the home".

Both lectures provided a personal account of each topic, and aimed to enable attendees to understand how the topics could shape a SLES in Rugeley. Both sessions also provided an opportunity for participants to ask questions and discuss the topics presented.

#### *4.3.5 Social Media Engagement (Specific themes)*

During the 'specific' phase of the community-centric design approach, social media was used to explore specific questions that were identified during the refinement of the engagement strategy following the end of the project's first design cycle. This approach consisted of periods whereby social media content would focus upon one specific component of a SLES at a time. This took place through a combination of informative content and key questions on social media in the same period of time as these topics were engaged with through the cultural animation workshops, and online talks. For example,

Electric Vehicles were the focus of a two-week period in which a range of specific questions were asked alongside the delivery of an online talk. During this period, a Rugeley community member got in touch to share their experience of owning an EV, and this information was turned into three pieces of social media content that were shared on the ZCR Facebook page (Figure 5). Similarly, domestic retrofit and smart energy technologies was focused upon for a month-long period during which several key questions were asked and an online talk was delivered. This thematic approach provided continuity between content and allowed topics to be explored in depth one at a time.

## Electric Vehicles: A local owners experience of charging

**How do you charge your vehicle?**

“ I bought a charging point for my home. With the choice of a home-charger that would fully charge the car in 8 hours and one that took 16 hours, I chose the former for £400 - charging overnight is ideal for me. ”

**What are 'fast' chargers like to use?**

“ My furthest journey so far to Northumberland where I was able to use a modern fast charger by a Dutch company 'Fastned' - that took two and a half hours to fully charge the car. ”

**What is it like charging away from home?**

“ I have charged away from home on three occasions: two to South-east London, Kent and Sussex, the first when learning what to do involved three slow chargers, the second just using a normal 3-pin plug at the home of a family member. ”

**How far has one charge taken you?**

“ With a range of 282 miles ... journeys to Warwickshire, Gloucestershire, Northamptonshire and North Wales have all been made without any charging away from home. ”

**Where does your electricity come from?**

“ My electricity comes from a genuine green-energy electricity supplier. It supplies 100% renewable electricity. All its tariffs have been accredited as Uswitch Green Tariff Gold Standard. ”

A big thank you to [REDACTED] for providing an excellent insight into what it is like to own and use an electric vehicle!



**Figure 5: One of three pieces of social media content informed by a Rugeley community member.**

#### 4.3.6 Drop-in Energy Heritage Day

In October 2021, the first of two annual day-long Energy Heritage events were delivered (figure 6) (see section 3.5 and report [WP17-D12-1](#)). This event provided an opportunity for

Rugeley community members to engage with the ZCR project consortium through a range of informative talks and Q & A sessions on specific SLES topics, contribute to specific cultural animation activities to collect data on specific SLES components, as well as providing a space for individuals to engage with broader sustainability issues.



Figure 6: Photos from the energy heritage day.

#### 4.3.7 Pop up engagement

During the final year of the project, an emphasis was placed on creating in-person engagement opportunities, and engaging a wider cross-section of the community with specific SLES elements. The pop-up engagements took place through the ZCR community-centric design team attending several externally hosted events. A summary of the pop-up engagement process and findings is available as report [WP17-D12-D2](#) and a guide for replicating pop-up engagements is available as [WP17-D12-D6](#) and recommendations are in section 3.6. The core aim of pop-up engagement activities was to meet the community where they were at in as many different spaces as possible. Engagement typically took place through a ZCR stand with a range of specific SLES-themed activities. Two specific 'levels' of activities were designed for pop-up engagements that enabled participants to engage for different durations of time:

##### **Level 1 activity (30 seconds – 2 minutes)**

This was a quickfire engagement activity designed to capture the attention of people passing by the stand. Participants were asked to respond to the following question by

placing a button in a corresponding jar “to save the planet, would you rather change how your house works, or how you travel, or both?”.

**Level 2 activity (5 – 10 minutes)**

These activities were tailored to specific SLES components. Participants would either take part in a mobility or building activity, depending on their response to activity 1, or both if they chose.

The mobility activity involved participants annotating an A3 map of Rugeley (figure 7) with their travel routines, any mobility challenges, and opportunities for low carbon transport.



Figure 7: Level 2 mobility activity.

The buildings activity involved participants writing their responses to a range of questions on a blank playing card and attaching it to a dolls house. The dolls house was used as a prop for informing discussions about building retrofit (figure 8).



Figure 8: Level 2 mobility activity.

#### 4.3.8 Performance Walk

In summer 2022, Keele University and New Vic Borderlines worked with a local history group, Friends of Hagley, to design and deliver an Energy Heritage Performance Walk. The walk was designed as a public engagement piece in response to themes present in the first two years of ZCR surrounding the strong sense of energy heritage stemming from Rugeley's coal mining industry and coal power station. With a view towards situating the history of the power station within Rugeley's broader industrial heritage, the performance walk explored the energy heritage that existed prior to and alongside coal mining as well as how the town may relate to and identify with energy in the present and future.

Key locations that represent aspects of Rugeley's energy heritage were identified as part of planning a route that led from Rugeley town centre to the power station site. For example, the walk stopped alongside a canal underneath a railway bridge, with a disused railway bridge nearby that was previously used to transport coal to the Rugeley Power Station (figure 9). The route was selected to allow the performers and researcher to encourage discussions around the core themes of energy past, present, and future. The walk involved New Vic Borderlines practitioners performing a range of characters that were designed to reflect various aspects of Rugeley's energy heritage. The walk provided an alternative method of public engagement, with participants engaging with specific elements of a SLES through connecting it to their town's energy heritage. A report providing information on the design of the performance walk is available as [WP17-D8](#).



Figure 9: Photo taken during the Performance Walk.

## 4.4 Stage 3: Legacy

### 4.4.1 Overarching approach

The final stage focused on creating legacy within the community in order to maintain momentum around low carbon transitions generated by the ZCR activities that would carry on beyond the end of the project funding. Key aspects of building legacy included developing agency within the community as well as providing resources to support the community. The three different legacy aspects outlined below are:

- i) Development of an Energy Transition/SLES Champions training course for peer circulation of knowledge;
- ii) Training and resources for the Eco-Rugeley community group; and
- iii) Development of a community exhibition of the ZCR project approach and outputs.

### 4.4.2 SLES Champions

Throughout the first two years of ZCR, low levels of energy literacy and a general lack of knowledge relating to aspects of the energy transition and a SLES amongst local residents was identified as a key barrier to engaging with a SLES. To attempt to address this, a 'Energy Transitions/SLES Champions' training course was co-designed and piloted with members of the Rugeley Community Ambassadors group. A key aim of this training course is for it to be peer delivered to community groups in Rugeley and beyond, so that energy transition upskilling can take place beyond the life of ZCR.

The course consists of four, interactive 1.5 to 2 hour sessions and follows a similar format and principles to the successful and nationally renowned Carbon Literacy Project, with about 8 hours of learning in total. The four sessions are themed around:

- 1) Energy and Carbon Literacy;
- 2) Domestic Energy Efficiency;
- 3) Domestic Energy Generation and Storage;
- 4) Low Carbon Travel.

There are plans for an additional session to be developed with project partner Chase Community Solar on Community Energy, to help develop understanding within the Rugeley community about initiating community energy projects.

### 4.4.3 Support of the Eco Rugeley Community Group

Eco Rugeley is a local community-led group established by members of the ZCR Community Ambassadors. Since forming in summer 2021, Eco Rugeley has merged with two other existing sustainability groups, Plastic Free Rugeley, and ROSA Community Garden, to host

monthly sustainable activities for people in Rugeley. The group has hosted four consecutive months of activities in 2023, attracting between 20 and 40 attendees at each event.

Given the success of Eco Rugeley and the prolonged engagement with ZCR, the decision was made to support Eco Rugeley in a range of different ways. ZCR donated a pack of 'How Bad are Bananas' game cards (figure 10) to the group which have been put to use in activities with schools and scout groups. ZCR has also provided the group with a thermal imaging camera and training on how to use the camera. Members of the Eco-Rugeley group had expressed an interest in using the camera to help people in Rugeley to identify areas of their homes that heat is escaping through, and to aid discussions about energy efficiency measures and retrofit. The 'Energy Transitions/SLES Champion' training course is also available to Eco-Rugeley members who have co-designed the course.



Figure 10: Image showing How Bad are Bananas game cards used by Eco Rugeley in a monthly event.

#### 4.4.4 Community exhibition

In the final month of the project, ZCR hosted a Community Exhibition at the Rugeley Community Church and Centre (figure 11). The exhibition showcased the community engagement work and wider ZCR project outputs, and included a 'community voice' section, maps of the SLES design, and details of the retrofit of the community centre. Members of the Rugeley community were invited to see the exhibition as a final project close event. This exhibition is available for use in other community spaces within Rugeley.





Figure 11: SLES design output map as part of the community exhibition.

## SECTION FIVE: Lessons learned and recommendations for community-centric design in place-based decarbonisation

This section outlines broad lessons and recommendations based on open and honest reflection of the community-centric design approach adopted throughout the three years of the ZCR project to inform future community-centric approaches to place-based decarbonisation.

- 1) **Ensure dedicated, significant resource for a community-centric design team throughout the duration of the project from a partner organisation trusted by the community.** Creating the long-standing, deep and trusted relationship within the community for place-based decarbonisation projects originating from organisations external to the community takes time and resource and should be seen to be as critical to the success of a project as other partners and work packages. This requires significant financial resource to support a team of individuals to undertake this work, which must be on-going and align with the engagement timescales of the community, for example weekend and evening work. Universities can act as the trusted, honest broker for this work, which aligns with many universities' articulated roles as civic or anchor institutions within a region, as well as knowledge generators in relevant fields.
- 2) **Ensure the principle of community-centric design is embedded in project design and governance from the start.** Embedding these principles from the start and ensuring the community-centric design team are an integral part of the project team can ensure that all partners develop their own work packages mindful of the 'place' as having its own particular requirements and characteristics, and of the importance of listening to the local community as a key tenet of a just approach to place-based decarbonisation. Governance and communication structures need to be developed, and maintained throughout, with commitment from all project partners, to ensure that the community-centric design team's learning from the community is effectively embedded in the thinking and designs of the other project partners. This cross-project focus on community insights could create the catalyst for improved cross-work package integration, which was identified as part of a consortium 'lessons learned' event as an area that could have been developed further.
- 3) **Develop trusted relationships and communication channels with key community stakeholders who can act on community insights.** Place-based decarbonisation solutions require a diverse set of actors, beyond the project team, to contribute to their implementation. Many of the insights from community engagement activities will be of relevance to key community stakeholders, who may lack the resource for the same level of community engagement. Therefore, early development of trusted relationships and communication channels with key stakeholders can help inform

those who can potentially help address issues experienced by members of the community. Examples from the ZCR project, are the impacts of poor pavements, and overgrown hedges on active travel, and particularly accessibility for those with prams or mobility scooters, issues that could be addressed, but may not be known about, by relevant Councils.

- 4) **Provide opportunities for the technical teams to engage directly with the community.** Although the community-centric design team largely acted as intermediaries between the community and the wider project consortium, community members engaged in the ZCR project expressed a desire to talk directly to the technical design partners. These opportunities allowed the community to access an additional layer of technical detail about the project and elements of smart local energy systems. Project partners also benefited from these opportunities through direct engagement with the community, leading to greater understanding of the lay public's level of understanding of aspects of place-based decarbonisation, and increased appreciation of the benefits of a community-centric design approach. At the end of the project, the project partners displayed a real commitment to the community of Rugeley and appreciation of working directly with community members beyond the scope of the ZCR project.
- 5) **Identify community gatekeepers and maintain relationships throughout, identifying win-wins where possible.** Engaging with community gatekeepers, those individuals with key roles in key organisations within the local community, is essential to place-based decarbonisation projects and to a community-centric design approach. These individuals can help broaden the understanding of the community and those within it, helping to snowball engagement, and provide feedback on different aspects of a project and its engagement approaches. These individuals often hold several different roles within a community, and are time poor, therefore taking time to understand synergies between a place-based decarbonisation project and their community goals can help identify win-wins that ensure commitment and engagement throughout the duration of a project.
- 6) **Prioritise your audience and try to include small, local businesses.** Place-based decarbonisation is relevant to every individual who lives in, works in, and travels to and through the 'place'. It is necessary to identify different audiences as part of community-centric design and to prioritise those to work with and to be clear on where different responsibilities lie for engagement with different audiences. The ZCR project found small, local businesses difficult to engage with, yet these have the potential to be useful 'priority' audiences for future projects due to the multiple roles they are likely to have within a community, as workers, potential residents, and as communication channels. Where a clear 'offer' is available that could help reduce energy costs, small business owners will also have additional motivations for engaging in place-based decarbonisation which may encourage their wider engagement with the project.

- 7) Develop a network of community ambassadors – and support them to achieve their own community goals.** Long-term, trusted relationships were developed with Community Ambassadors in the ZCR project providing open and honest insights into many different aspects of the project and engagement approach, as well as becoming a key development for the project’s legacy beyond the funded project timescale. It is recommended that future place-based decarbonisation projects plan to develop similar community partnerships, and build in specific financial resource to support community ambassadors’ own related goals for the community, as an acknowledgement of their time and commitment to the project, further developing the trusted relationship.
- 8) Use a range of approaches for engagement – online, in-person, deep and shallow and of different time intensity.** Individuals within a community have different levels of interest, different levels of willingness, different time commitments, and different access to and interest in digital technologies. Developing a community-centric design approach that embraces a wide range of different engagement opportunities will enable the greatest diversity of individuals within a community to engage with a project. This project used social media, online and in-person workshops, all-day drop-in events, online and in-person talks, and ‘pop-up’ events in community spaces. There are many further ways that different community members can be reached, and different ways to engage community members in their own spaces, for example, on buses, in pubs, that will further help engage a diversity of voices.
- 9) Use social media for two-way interaction.** The use of social media as a core engagement tool for two-way interaction and discussion between community members in the ZCR project was developed as a result of the COVID-19 lockdown. However, we would recommend a similar use of social media (Facebook) as part of future place-based decarbonisation projects. We found that posting 3-4 times a week on social media during ‘peak engagement’ periods, with 1-2 posts a week during quieter periods (at Christmas) was a good balance in the ZCR project. Social media can engage voices that would not engage in other ways, but takes time to ensure that all posts are responded to, to ensure that individuals feel that their views are listened to. Facebook discussion groups proved a useful tool to enable online discussion between community members – although the potential for digital exclusion of some voices must always be considered and alternative mechanisms of similar levels of engagement provided.
- 10) Consider and build project legacy from the start.** Although one of the initial community engagement objectives referred to legacy within the community, the approach for developing legacy was developed relatively late on in the ZCR project. The legacy approach was in part determined by the outcomes of earlier engagement activities. Key aspects of the project legacy include: the development of a ‘Energy Transition/SLES Champions’ training course for community members to be able to deliver to other community groups; the gifting of a thermal imaging camera and

training on its use to enable community members to engage others in considering energy efficiency and retrofit measures; a set of 'How Bad are Bananas' game cards to enable community members to have conversations in community settings such as schools about carbon footprints and increase levels of carbon literacy; the development of a community exhibition of learnings from the ZCR project which can be used in different community settings; the retrofitting of the Rugeley Community Centre and associated display materials; and teachers who have been trained in retrofit and energy efficiency curriculum materials developed through the project. A key delivery vehicle of many of these legacy materials is the Eco-Rugeley community group which was developed by the Community Ambassadors who had not previously known each other. The development of such a group must come from the desire of community members themselves and cannot be imposed by external project organisations, but supporting existing community groups in similar ways could play a similar role in establishing a project's legacy beyond its funding timeline.

The community-centric design work throughout the ZCR project demonstrates that community members have important, local, contextual knowledge to offer which can complement smart local energy system design and is important to place-based decarbonisation. Engaging with the community is essential to bring the 'local' or 'place' to life in a smart local energy system or in place-based decarbonisation approaches. It is vital to consider this social dimension above and beyond the specific technical outputs. The energy transition is, after all, a "social project" (Sovacool et al, 2016). Through this report we showcase how communities can offer vital non-technical (as well as sometimes technical) input, which is essential for understanding some of the non-technical systemic barriers and socio-cultural responses and expectations to smart local energy system design and place-based decarbonisation.

## References

- Bailey, I. and Wilson, G.A., 2009. Theorising transitional pathways in response to climate change: technocentrism, ecocentrism, and the carbon economy. *Environment and planning A*, 41(10), pp.2324-2341.
- Chilvers, J., 2013. Reflexive engagement? Actors, learning, and reflexivity in public dialogue on science and technology. *Science Communication*, 35(3), pp.283-310.
- Cotton, M. and Devine-Wright, P., 2012. Making electricity networks “visible”: Industry actor representations of “publics” and public engagement in infrastructure planning. *Public understanding of science*, 21(1), pp.17-35.
- Cowell R, Devine-Wright P (2018). A ‘delivery-democracy dilemma’? Mapping and explaining policy change for public engagement with energy infrastructure. *Journal of Environmental Policy and Planning*, 20(4), 499-517.
- Goulding, C.; Kelemen, M.; Kiyomiya, T. (2018), "Community based response to the Japanese tsunami: A bottom-up approach", *European Journal of Operational Research*, Vol.268(3), 887-903.
- Haggett, C., 2011. Understanding public responses to offshore wind power. *Energy Policy*, 39(2), pp.503-510.
- Hoversten, M.E. and Swaffield, S.R., 2019. Discursive moments: Reframing deliberation and decision-making in alternative futures landscape ecological planning. *Landscape and Urban Planning*, 182, pp.22-33.
- International Association for Public Participation, IAP2 Public Participation Spectrum, 2013, <http://iap2canada.ca/page-1020549> (accessed February 2013)
- Millward, H.; Kelemen, M.; Mangan, A. (2019), "Co-producing Community and Individual Change through Theatrical Interventions", *Organizational Aesthetics*, Vol.8(1), 34-50.
- Parag, Y. and Janda, K.B., 2014. More than filler: Middle actors and socio-technical change in the energy system from the “middle-out”. *Energy Research & Social Science*, 3, pp.102-112.
- Sovacool, B.K., Heffron, R.J., McCauley, D. and Goldthau, A., 2016. Energy decisions reframed as justice and ethical concerns. *Nature Energy*, 1(5), pp.1-6.
- Wolsink, M., 2010. Near-shore wind power—Protected seascapes, environmentalists’ attitudes, and the technocratic planning perspective. *Land use policy*, 27(2), pp.195-203.

## Appendices

### Appendix 1: Community Engagement Strategy

#### **Zero Carbon Rugeley Community Engagement Strategy**

##### **1. Introduction**

This community engagement strategy outlines the overall approach, ethos and principles underlying community engagement in the Zero Carbon Rugeley project; the goals of the community engagement activities both in broad project objectives and specific work package requirements; indicative activities with the community; and approaches to governance around effective engagement within the community. It is important that this strategy is not seen as 'fixed' or 'final' and that it is constantly reviewed and refreshed as the project progresses, and that action occurs concurrently and as part of the planning and evaluation process. Co-production means that it is important that the community itself also helps shape the community engagement activities, as well as inevitably evaluation of the success of the activities undertaken.

The Community Engagement Strategy aims to avoid surface level consultation with the community, aiming to build trusted relationships within the community, to generate a shared, understandable, and engaging language between the project team and the Rugeley community.

The range of different users within Rugeley is vast as are the different elements of the smart local energy system for which user insights are sought, and the range of different engagement methods required. It is important that priorities are identified in collaboration with work packages, and ownership for particular elements lies with different partners to cover the scope of user insight required, but again these will develop iteratively. Direct engagement from other WPs will also be required in the production of community-facing resources and direct engagement with the community.

The use of the term 'Rugeley community' is used throughout to represent every user of energy within the geographic constraints of the project, although understanding that communities are not always geographically bounded, and have porous boundaries. The term 'customer' is avoided as this reflects simply an interactional relationship. The terms consumer and user are not ideal as these reflect a passive engagement with energy, as well as a one-directional relationship with energy, no longer necessarily the norm in a SLES, where 'prosumers' will be important, although 'user' is inevitably sometime used!

Inevitably COVID-19 will have serious consequences to the community engagement approaches that were originally envisaged for the project, based on significant face-to-face cultural animation activities within the community. The same creative, participatory ethos needs to be transferred into online environments, methods of which are largely under-developed and untested. More online activities create the risk of excluding those less familiar with or unconnected to online methods of communication, likely to be those most

vulnerable, and who's voices are often unheard. This highlights the important role for gatekeepers, such as Cannock Chase District Council and Chase Community Solar to ensure the 'hard to reach online' parts of the Rugeley Community still have a voice. Even as the lifting of lockdown measures continues there is still likely to continue to be for the duration of the project, a reticence to attend face-to-face group activities, which is likely to impact certain demographic groups more, while the potential for local lockdowns will also remain. Therefore, throughout the project duration it is necessary to develop both a suite of online/remote and face-to-face approaches, and carefully monitor the reach of these activities into the community. However, the potential for the Covid-19 recovery response, and the desire to 'build back better', may provide unexpected opportunities to excite, and engage the community with plans for visioning a different energy future for Rugeley.

## **2. WP7 objectives**

The overarching objectives of WP7, embodied by the Community Engagement Strategy are:

- 1) To provide insights from the Rugeley community into the design of the different elements of a Rugeley SLES;
- 2) To support the development of a shared vision and design of a Rugeley SLES between the community and SLES designers;
- 3) To develop a 'SLES-ready' community - understanding the implications of a SLES on their own lives and work, and with the motivation to engage in appropriate measures to make a SLES a reality.

In addition to the key objectives, further desirable outcomes emerging from the community engagement process and activities with the Rugeley community include:

- i. Catalysing activity in the community beyond the scope of the project, such as enhancing networks, running independent events, development of community 'SLES champions';
- ii. Enhancing a 'user' (or community) focussed approach to energy systems design throughout the project team beyond the scope of the project;
- iii. Contributing to the academic research community around transdisciplinary and user-centred design processes and user insights in relation to SLES and their components;
- iv. Contributing to future policy and practice of user-centred design in SLES.

## **3. Ethos and underlying principles to the community engagement approach**

Rather than rely on traditional community engagement approaches such as focus groups, interviews and surveys, the community engagement approach from the start has intended to be rooted in more participatory methods. Although, there is still a place for some traditional methods of community engagement in the ZCR project. Many traditional methods such as focus groups can be critiqued in terms of creating hierarchical power relationship between the project and the community, a one-way 'data harvesting' approach to the community, and typically excluding particular socio-economic groups within communities. Participatory community engagement approaches aim to build deeper relationships and trust between project teams and communities, emphasise co-production throughout a



longer process of engagement, be designed to maximise inclusivity within the community, and an ethos of 'doing *with*' rather than 'doing *to*' the community.

The New Vic Theatre are internationally recognised for their community engagement activities, particularly with what have been traditionally referred to as 'hard to reach' communities, using their cultural animation approaches drawing from the creative arts.

The ZCR Community Engagement Strategy starts from the acknowledging the role of existing networks and groups within the community, and past and existing related dialogues (for example around the Power Station redevelopment) building on these, as well as trying to bring new voices into these dialogues on the future of energy systems in Rugeley.

The following principles underpin the approach to community engagement throughout the ZCR project:

- 8) **Heart of the system.** The user will shape the performance of any system, therefore must be at the heart of energy system innovations;
- 9) **Multiple identities.** Each individual may have many different roles, and interact with energy in many different ways;
- 10) **Valuing difference.** We seek and value different perspectives; all views and voices are equal to others; there is no hierarchy;
- 11) **Respect and curiosity.** Engagement with the community must be underpinned by respect, curiosity, open-mindedness, and a commitment to deep listening;
- 12) **Designing with.** As a project team we should see ourselves as part of the system; designing *with* the community, not *for* the community; doing things *with* the community, not *to* the community;
- 13) **Reflexive and iterative.** Our process of engaging with the community should be reflexive and iterative, continually adapting to our learning and experiences with the community;
- 14) **Positive, long-term relationships.** Building positive relationships with the community are key, with a consideration for the impacts beyond the life of the project and managing expectations.

#### 4. Target audience and sub-groups for engagement

With the aspiration of a whole-town scale SLES, every individual who lives in, works in, or travels through or to Rugeley will be impacted by a future SLES, and has a role to play in contributing to its design. There are many different ways that these different individual actors could be grouped. It is proposed that the following groups are used as distinct audiences:

- a) Rugeley residents
- b) Landlords (social housing; private)
- c) Small business owners
- d) Energy managers for large energy use organisations
- e) Community hubs/services (ie. schools; health centres)

Travellers to and through Rugeley who are not residents or employees of Rugeley are omitted from the Community Engagement Strategy.

Clearly there are many further ways to segment, or group, within each of these audiences, which may need to be different for different work packages. Likewise, different audiences may be more or less relevant to the different work packages. Individuals within the Rugeley community may also fall into more than one audience category, due to their different roles within the community. Some of these audiences (such as community services like schools) may be also important as communication *channels* in their own right.

The table below outlines an initial breakdown of each audience. These different groups within each audience may need separate engagement approaches.

**Table 1:** Groups within each target audience

<b>Audience</b>	<b>Key groups within each audience where relevant</b>	<b>WPs</b>
Rugeley residents	Owner-occupier; social housing tenants; private tenants Socio-economic, and demographic groupings Vulnerable (fuel poor, elderly, disability)	WP2,3,4,5,6.
Landlords	Mass stock owners (public, private) Private landlords	WP2,3,5,6.
Small business owners	With/without residence By sector	WP2,3,4,5,6
Energy/sustainability managers for high energy users		WP2,3,4,6
Community services (ie schools, health centres)	Schools Churches Community buildings (e.g. village halls; social clubs)	WP2,3,4,5,6

Key segmentation attributes (ie socio-demographics; housing tenure) will be collected as part of engagement activities and regularly reviewed and compared to assess whether the proportion of those engaged through the activities are representative of proportions in Rugeley (based on a data analysis still to be carried out); geographic representativeness of engagement will be reviewed and specific geographically focused recruitment activities put in place where necessary.

## **5. Community Engagement Objectives**

The Community Engagement activity for ZCR has several different objectives. These are not discrete phases and several different objectives may be achieved through a single engagement approach or activity. The key objectives for cycle 1 of the project are:

1. To raise awareness and understanding of the ZCR project and its goals (including the breadth of the elements of a SLES and the project ie. the different WPs), and generate positive interest and develop positive relationships between project and the community;
2. To generate insights from the Rugeley community to inform the design of different elements (WPs) of the Rugeley SLES;
3. To increase understanding of smart local energy systems and its components, and the implications of a SLES to themselves, as well as to wider society and the environment.

In addition, the second design cycle includes the additional community engagement objective:

4. To test with different community audiences and sub-groups, SLES component designs from Cycle 1, leading to co-design development.

## **6. Achieving the Community Engagement Objectives**

The information below details the proposed approach to achieve the community engagement objectives outlined above, with the exception of Objective 4. It should be noted that the development of this detail is iterative based on evaluation and reflection as the project develops. Detailed dialogue is needed with each relevant WP in the design of each engagement activity to ensure the usability of results and appropriate communication of SLES elements, which will also be a key part of the governance structures outlined below.

### **6.1 Engagement Objective 1: Project awareness and relationship building**

Key messages to be communicated as part of Objective 1 are:

- What the ZCR project aims to do (and what it will not do) and over what timescale;
- What a SLES is and the potential relevance to the audience;
- The 'user-centred' ethos and current and future ways to get involved;
- Processes for getting involved, getting in touch and asking questions;
- The project team are people, and friendly!;
- Additional messaging as determined by different WPs.

The community interaction sought includes:

- Individuals signing up as being interested in hearing more about the project (either through social media or email newsletter);
- Letting other people in the community know about the project (snowballing);
- Key interested people identifying themselves and starting relationship building with the project team;
- Questions starting to be asked and answered;
- Additional messaging as determined by different WPs.

The community engagement approaches for achieving Objective 1 are approached by consideration of each audience, as outlined below.

**Table 2:** Community Engagement approaches for CEO1

<b>Audience</b>	<b>Sub group</b>	<b>Recruitment/engagement channel</b>
Rugeley residents	Owner-occupier	<ul style="list-style-type: none"> <li>-ZCR Facebook</li> <li>-ZCR Twitter</li> <li>-Local print media</li> <li>-Community hubs: schools, pubs, health services, leisure services, transport hubs (rail, bus) – leaflet, poster, Facebook, Twitter link (from community hub social media)</li> <li>-Community networks (ie Power for All)</li> <li>-Newsletter to email distribution list (grown through ‘contact us’)</li> <li>-Snowballing</li> </ul>
	Social housing tenants	<ul style="list-style-type: none"> <li>-ZCR Facebook</li> <li>-ZCR Twitter</li> <li>-Local print media</li> <li>-Communication through social landlord channels (ie meeting, newsletter)</li> <li>-Direct communication from CCS (tailored comms)</li> <li>-Poster if there is a social hub with accommodation</li> <li>-Community networks (ie Power for All)</li> <li>-Newsletter to email distribution list (grown through ‘contact us’)</li> <li>-Snowballing</li> </ul>
	Private tenants	<ul style="list-style-type: none"> <li>-ZCR Facebook</li> <li>-ZCR Twitter</li> <li>-Local print media</li> <li>-Community hubs: schools, pubs, health services, leisure</li> </ul>

		<p>services – leaflet, poster, Facebook, Twitter link</p> <ul style="list-style-type: none"> <li>-Community networks (ie Power for All)</li> <li>-Newsletter to email distribution list (grown through ‘contact us’)</li> <li>-Snowballing</li> </ul>
	Different socio-economic, and demographic groupings, and geography within Rugeley	As above; capturing key socio-ec, demographic, geographic data as part of ‘contact us’ process (and through targeting)
	Vulnerable (fuel poor, elderly, disability)	<ul style="list-style-type: none"> <li>-As above (community hubs likely to be more important than online)</li> <li>-Particularly important is communication through social landlord channels (ie meetings, newsletter)</li> <li>-Direct communication from CCS (tailored comms)</li> <li>-Use of proxies to capture key vulnerability criteria as part of ‘contact us’ process</li> </ul>
Landlords	Mass stock owners (public, private) (user and communication channel)	<ul style="list-style-type: none"> <li>-Identification of key mass stock owners (WP5) and direct letter representing their role as user and communication channel</li> <li>-Newsletter to email distribution list (grown through ‘contact us’, direct contact)</li> </ul>
	Private landlords	<ul style="list-style-type: none"> <li>-Advice from WP5 needed</li> <li>-Use of Estate Agents as gatekeepers; direct letter through gatekeeper</li> <li>-Newsletter to email distribution list (grown through ‘contact us’)</li> </ul>

Small business owners	With/without residence Sector	-Directory of businesses in Rugeley available? If so direct letter -LinkedIn -Newsletter to email distribution list (grown through 'contact us')
Energy/sustainability managers for high energy users		-Identification of high energy users and contact details from WP6; direct letter in collaboration with WP6. -Newsletter to email distribution list (grown through 'contact us')
Community hubs/services (ie schools, health centres)	Schools (user and communication channel)	-Identification of Schools in project boundaries (note it has been suggested that many families commute students to 'better' schools in Lichfield); direct letter representing role as user and communication channel -Newsletter to email distribution list (grown through 'contact us')
	Community buildings (e.g. village halls; social clubs) (user and communication channel)	-Identification of community buildings; direct letter representing role as user and communication channel -Newsletter to email distribution list (grown through 'contact us')

## **6.2 Engagement Objective 2: Generating insights for design elements**

Initial discussions with each work package have identified the sorts of areas into which the different WPs would like to gain insights. These are outlined in the table below alongside suggested areas identified by WP7, and the key users of interest, or segments that need to be ensured are included. Based on these discussions initial ideas of community engagement activities are given considering both face-to-face and online options. Further

detailed dialogue is needed with WPs regarding the design of each engagement activity to ensure the usefulness of results to the design teams. Due to the areas of overlap between WP5 and WP6 these have been considered together.

Each of these areas needs to be underpinned by a literature reviews of existing knowledge relating to user perceptions and experiences, as well as learning from consultations as part of the Power Station redevelopment planning process, in which the insights from the Rugeley community generated through the ZCR project can be placed.

Further detail on the cultural animation approaches is given in section 8 below.

**Table 3.** Community engagement approaches for CEO2

	<b>What? (Who? Audience in brackets)</b>	<b>Engagement activity</b>	<b>For whom &amp; recruitment considerations</b>
<b>General/relevant to whole project</b>	1. What knowledge/interest/engagement there is in the zero carbon and energy agenda in Rugeley (All)	Online polling	For residents and small businesses through social media (Facebook; LinkedIn) (likely biased sample if engaging in ZCR social media)
		Group talks and discussions	Existing environmental groups; other community groups/networks
		Cultural animation approaches	Residents; others? Recruitment through online, community hubs, networks, broadcast and print media, gatekeepers.
		Interviews	Key community gatekeepers (TBD; relevant Council)

	2. What a Zero Carbon Rugeley looks like to people in Rugeley (All)	Online activities	For residents and small businesses through social media (Facebook; LinkedIn)
		Cultural animation approaches	Residents; others? Recruitment through online, community hubs, networks, broadcast and print media, gatekeepers.
		Schools activities	Young people; schools; & older demographic through homework activities.
	3. What changes and transitions are possible and desirable for people in the Rugeley community (All)	Online activities	For residents and small businesses through social media (Facebook; LinkedIn)
		Interviews	Vulnerable (through gatekeepers, and with attendant as required); key community stakeholders; community hubs, energy managers; mass stock landlords



		Cultural animation approaches	Residents; others? Recruitment through online, community hubs, networks, broadcast and print media, gatekeepers.
<b>WP2 Business Models</b>	TBD	TBD	TBD
<b>WP3 Markets</b>	1. Insights into user attitudes towards different market elements (e.g. ...WP3 input needed) (All)	Online polling	For residents and small businesses through social media (Facebook; LinkedIn)
		Surveys	Residents; landlords; small business; community services
		Interviews	Mass stock landlords; energy managers
	2. Motivations/willingness/barriers to opt into an aggregator service (All? Especially Residents)	Online polls	For residents and small businesses through social media (Facebook; LinkedIn)
		Surveys	Residents; landlords; small business; community services

		Interviews	Mass stock landlords; energy managers
		Cultural animation approaches	Residents; others?
	3. Insights into what users want out of a SLES (ie what areas of energy markets/motivations for involvement may be of interest) (All)	Online polls	For residents and small businesses through social media (Facebook; LinkedIn)
		Surveys	Residents; landlords; small business; community services
		Interviews	Mass stock landlords; energy managers
		Cultural animation approaches	Residents; others?
		Online polls	For residents and small businesses through social media (Facebook; LinkedIn)
	4. Insights into the potential barriers to users engaging in different market elements (All)	Surveys	Residents; landlords; small business; community services
		Interviews	Mass stock landlords;

			energy managers
		Cultural animation approaches	Residents; others? Recruitment through online, community hubs, broadcast and print media, gatekeepers.
<b>WP4 Mobility</b>	1. Create personas based around the local population, covering demographics, travel patterns and travel preferences, and size of persona group, estimate the size of the demand, which groups would be most receptive.	Survey	Residents. Online survey using online channels for recruitment; hard copy survey through gatekeepers. + data sets (WP4 input)
		Interviews	Major transport operators; relevant Council Officer. Identify contacts with WP4 help and direct contact.
	2. Establish what the “customer jobs” are. This is linked to travel patterns / preferences but broken down a bit more e.g. drive to work, find a parking space, park, refuel, drive to supermarket, drive home etc.	Cultural animation approaches	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers.
		Interviews	Major transport operators; relevant Council Officer. Identify contacts with WP4 help and direct contact.

	3. Understand what the pains points are within those “jobs” e.g. finding a parking space, congestion etc.	Cultural animation approaches (and online activities)	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers.
		Interviews	Major transport operators; relevant Council Officer. Identify contacts with WP4 help and direct contact.
	4. Understand what the mobility wants are e.g. guaranteed availability of charge points.	Cultural animation approaches (and online activities)	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers.
		Interviews	Major transport operators; relevant Council Officer. Identify contacts with WP4 help and direct contact.
	5. Attitudes towards different New Mobility Services (barriers, motivations, likelihood to adopt, ability and willingness to change)	Cultural animation approaches (and online activities)	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers.
		Survey	Residents. Online survey using online channels for recruitment; hard copy

			survey through gatekeepers.
		Interviews	Major transport operators; relevant Council Officer. Identify contacts with WP4 help and direct contact.
<b>WP5 Buildings &amp; WP6 Energy Systems</b>	1. Understand the 'levers' and tipping points to action retrofit (motivations to do the work)	Cultural animation approaches (and online activities)	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers. Other specific groups?
		Interviews	Key stakeholders identified with WP5 (Council; mass stock owners). Schools? How include private landlords?; energy managers.
	2. Understand the barriers to actioning retrofit	Cultural animation approaches (and online activities)	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers. Other specific groups?
		Interviews	Key stakeholders

			identified with WP5 (Council; mass stock owners). Schools? How include private landlords
	3. Insight into energy behaviours, motivations and priorities	Online polling	For residents and small businesses through social media (Facebook; LinkedIn)
		Cultural animation approaches	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers. Other specific groups?
		Interviews	Vulnerable (through CCS as gatekeepers, with attendant as required); Community services (e.g. schools); energy managers.
	4. Insight into barriers to making change within energy systems	Online polling	For residents and small businesses through social media (Facebook; LinkedIn)

		Cultural animation approaches	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers. Other specific groups?
		Interviews	Vulnerable (through CCS as gatekeepers, with attendant as required); Community services (e.g. schools); energy managers.
	5. Attitudes towards, willingness to adopt, sustainable energy solutions relevant for small energy users (need direction on what 'solutions from WPs 5&6)	Online polling	For residents and small businesses through social media (Facebook; LinkedIn)
		Cultural animation approaches	Residents. Recruitment through online, community hubs, broadcast and print media, gatekeepers. Other specific groups?
		Interviews	Vulnerable (through CCS as gatekeepers, with attendant as required); Community services (e.g.

			schools); energy managers.
	6. Attitudes towards, willingness to adopt, sustainable energy solutions in buildings/facilities relevant for high energy users (building retrofit; renewable generation; alternative energy sources (canal, coal) and heat pumps, fuel cells, battery storage)	Interviews	Energy manager as identified by WP6

### **6.3 Engagement Objective 3: Increasing understanding**

Engagement Objective 3 is interwoven into Objectives 1 and 2 strategies above as increasing understanding can be a key precursor to gaining insights

**Table 4** Community engagement approaches for CEO3

	<b>What?</b>	<b>Engagement approach</b>	<b>For whom &amp; recruitment channel</b>
<b>General/relevant to whole project</b>	Increase understanding of principles and components of smart local energy systems	Covered in Engagement Goal 1	Covered in Engagement Goal 1
<b>WP2 Business Models</b>	Increase understanding of different potential business models within a SLES	Case studies (short videos, written case studies). Find stories relevant to all users.	Small businesses; energy managers; community services
		Information sheet	Small businesses; energy managers; community services
		Live Q&A with peers and ZCR team (online or offline). Different events for	Small businesses; energy managers; community services



		different audiences.	
	Increase awareness of relevant policy and related opportunities (WP8)	Targeted briefing notes	Small businesses; energy managers; community services. Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.
<b>WP3 Markets</b>	Increase user understanding of how energy markets could affect them and how they can engage in energy markets (All)	Peer stories (short videos, written case studies). Find stories relevant to all users.	Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.
		Live Q&A with peers and ZCR team (online or offline). Different events for different audiences. Priorities TBD.	Online platform for hosting? Recruitment channel depends on desired event audience – general advertising, or direct invitation.
		FAQ. Questions structured for different audiences	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter.
		Information sheet	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter
		Video	Website; linked to from FB, Twitter,

			LinkedIn, newsletter
		Webinar	Online platform for hosting? Target audience? Recruitment channel depends on desired event audience.
<b>WP4 Mobility</b>	Increase understanding of New Mobility Services and integration of NMS into a SLES	Case studies (short videos, written case studies). Find stories relevant to all users.	Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.
		Live Q&A with peers and ZCR team (online or offline). Different events for different audiences. Priorities TBD.	Online platform for hosting? Recruitment channel depends on desired event audience – general advertising, or direct invitation.
		FAQ. Questions structured for different audiences	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter.
		Information sheet	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter
		Video	Website; linked to from FB, Twitter, LinkedIn, newsletter

		School activities	Work with schools to design appropriate activities
	Increase awareness of relevant policy and related opportunities (WP8)	Targeted briefing notes	Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.
<b>WP5 Buildings &amp; WP6 Energy Systems</b>	Increase understanding of retrofit, implications and process & increase understanding of elements of a SLES and implications	Case studies (short videos, written case studies). Find stories relevant to all users.	Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.
		Live Q&A with peers and ZCR team (online or offline). Different events for different audiences. Priorities TBD.	Online platform for hosting? Recruitment channel depends on desired event audience – general advertising, or direct invitation.
		FAQ. Questions structured for different audiences	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter.
		Information sheet	Hosted on website; general sign posting from FB, Twitter, LinkedIn, newsletter
		Video	Website; linked to from FB, Twitter, LinkedIn, newsletter

		School activities	Work with schools to design appropriate activities
	Increase understanding of relevant policy and opportunities	Targeted briefing notes	Hosted on website; general advertising from FB, Twitter, LinkedIn, newsletter.

### Communication channels

Through the WP7 User Centric Design work package we will open up different communicative spaces utilising existing spaces, networks and communities, as well as establishing new ones. The table below outlines different communication channels specific to the Rugeley community where appropriate.

<b>Social media</b>	<b>Gatekeepers/community representatives</b>	<b>Community hubs</b>	<b>Schools</b>
Facebook LinkedIn Twitter	Chase Community Solar Councillors MP Mass stock holders (ie Sneydlands ) CCDC	Etching hill Women's Institute Rose Theatre Rugeley Leisure Centre Health Centre (Sandy Lane) St Thomas Golf Course (Hawkesyard Estate)	John Bamford Primary School Redbrook Hayes Community Primary School Chancel Primary School St Joseph's RC Primary School Churchfield Primary School Hob Hill Primary School The Croft Primary School Etching Hill Primary School Western Springs Primary School The Hart School Chase View Community Primary School

<b>Print and broadcast media</b> Express and Star Cannock Chase (community radio) BBC WM (radio)	<b>Community groups</b> Etching hill Women’s Institute Rugeley Cricket Club Trent Valley Cricket Club Rugeley Rugby Club Rugeley Rifle Club Rugeley Tennis Club Rugeley Snooker/Billiards Club Rugeley Poker Club	<b>Community events</b> Outdoor markets (Tues, Thurs, Sat) Fireworks display last weekend of school holidays (town Council organises) Christmas lights switch on	<b>Pubs</b>
<b>Landlords/Mass stock owners</b>	<b>Churches</b> St Augustine’s	???	???

### **Cultural Animation approaches**

The Community engagement approaches in Tables 2-4 include reference to ‘cultural animation approaches. These activities will be diverse but be based in the ethos of participatory research. Several of the activities may require the direct contribution from members representing different work packages. A list of indicative activities both in a face-to-face and online format are given below.

Indicative face-to-face activities

- Pop-up events in town
- ‘Speed dating’ where ZCR WP representatives work around different representative groups of Rugeley
- Away day to other ‘smart’ communities with multiple ZCR WPs; the need to see things in action, and hear from real people; ‘dealing with disbelief’
- Community presentation of ideas for a SLES
- Community asset mapping – shared spaces, transport
- Community vision making and designing
- Specific engagement around themes

Indicative online activities

Use of Social media, predominantly Facebook and LinkedIn (for small businesses) as an interactive platform will be used. It is suggested that rather than being framed around the language of ‘Zero Carbon Rugeley’ and the expectations and potential bias in interest this will generate, that the social media and other activity is framed around ‘a green and

pleasant future' for Rugeley. The sorts of activities that could be developed through these platforms include:

- Short videos for introductions to 'faces' of the project; introduction to project and elements (WPs) of SLES. Providing 'faces' to the project and background information
- Invitations to upload photos in response to questions on energy/mobility behaviours/issues/challenges
- Completion of a series of poll questions on attitudes to different elements of SLES
- SLES acronym competition
- 'Question time' with ZCR WP leads and community members.
- Interactive exhibition (requiring additional funding)

Because of the likely importance of an online platform for this project significant initial energy will be put into developing a significant follower base on these platforms before prior to substantial 'data collection' activities (Objective 2) using this platform.

## **Evaluation**

Quantitative and qualitative evaluation of the community engagement activities will be carried out throughout, both to contribute to the iterative development of the community engagement strategy and to evaluate the overall impact of WP7 in meeting both the community engagement objectives and overall WP objectives. Key questions to be addressed by evaluation activities are:

- i. Who is being included/excluded (compare against a proportionate breakdown of categories in the community)
- ii. Are appropriate engagement methods being used in relation to the groups engaged and the community engagement goals?
- iii. What is the impact on those engaged? Are the community engagement goals being met?
- iv. Is the community engagement contributing to the WP7 objectives?
- v. Are community insights being incorporated into design? What is the impact of the community engagement activity on the broader ZCR design process? Is the ethos of 'user-centric design' being met?

There are three discrete evaluation stages.

**1) Event/activity evaluation:** Each discrete event or activity will be evaluated drawing on the key evaluation questions above (including the numbers of people engaged and who is being engaged, including socio-demographic, geographic information, and the impacts of engagement). Appropriate evaluation mechanisms will be developed for the relevant activity and target audience.

**2) Ongoing evaluation:** will be considered through the community engagement governance groups covering the questions above.

**3) Project end evaluation:** will be carried out through interviews with WP leads, and community gatekeepers and advisors; and a survey of the whole consortium, and as part of the online communication channels.

### **Governance**

Two groups will be established to oversee the user-centric design activities for the ZCR project.

#### **Community Engagement Management Group**

Purpose: This is an internal ZCR group which encompasses representatives from each of the work packages and partners. This group will:

- i. Ensure all WPs and Partners are aware of messaging and communication with the community;
- ii. Approve comms (outside of meetings) before bring disseminated externally in order to check messaging or add to messaging;
- iii. Monitor and evaluate the community engagement activities against the project, WP7 and community engagement objectives;
- iv. Provide input from the design WPs into the design and development of the community engagement activities;
- v. Facilitate learning from the community engagement activities into the work of the design work packages.

Meetings will be scheduled every ~2 months.

Membership:

A separate WP7 group is not required as all WP7 partners are included in this group.

#### **Community Gatekeeper Advisory Group**

Purpose: This is an external group including representatives of key gatekeeper organisations within the Rugeley community, and key project partners. This group aims to:

- i. Provide community gatekeeper insights into the development of the community engagement activities (existing groups, activity, networks, community priorities);
- ii. Keep community gatekeepers up-to-date with ZCR community engagement activities;
- iii. Facilitate learning from ZCR to be utilised by community gatekeepers.

Meetings will be held every ~6 months with some communication in between.

Membership: