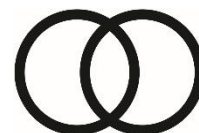


Net Zero and Rurality, South Lakeland

Feasibility study into a cross-sectoral, place-based, approach to overcoming non-technical barriers to net-zero living in South Lakeland, Cumbria.



**Westmorland
& Furness
Council**



CLES
the national organisation
for local economies

Project Partners and Steering Group

This feasibility study was led by Westmorland and Furness Council (previously South Lakeland District Council) and Cumbria Action for Sustainability. It was delivered in partnership with nine additional local partners – the University of Cumbria and eight local businesses. The Centre for Local Economic Strategies (CLES) was commissioned to deliver this feasibility study report between April and June 2023.



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1. Introduction

This is a report on the 3-month project “Net Zero and Rurality”, a feasibility study into a cross-sectoral, place-based approach to overcoming non-technical barriers to net-zero living in rural areas (focussing on South Lakeland). It was funded by Innovate UK through the Net Zero Living Pathfinder Places programme.

The main aims of the feasibility study were as follows:

- Application of the new "Place Standard with a Climate Lens" (PSCL) to co-design and assess the potential for a network of integrated net-zero hubs within the project area.
- Assess new forms of finance to establish a rural net-zero-living fund for South Lakeland to overcome the financial barriers to decarbonisation.

The project has been led by Westmorland and Furness Council (formerly South Lakeland District Council), with the support of Cumbria Action for Sustainability (CAfS), the University of Cumbria and eight local businesses (as detailed in “Project Partners and Steering Group”).

In this way, the project aimed to tackle some of the non-technical barriers to net zero living in a rural area as well as building on the work of Westmorland and Furness council, and the Zero Carbon Cumbria Partnership (ZCCP) - a groundbreaking collaboration of 80+ public, private and third sector organisations that has identified the priority actions needed to reduce carbon emissions in Cumbria.

Non-technical barriers to delivery include, but are not limited to:

- Funding or access to finance
- Capacity, capability and skills
- Consumer engagement and behaviour change
- Policy and regulation
- System governance
- Common data standards for open source and interoperability

Representatives from all project partners formed a project steering group to provide oversight as well as contributing to the on-going development and delivery of the project. This steering group met regularly throughout the project.

On behalf of the project partners, Cumbria Action for Sustainability commissioned the Centre for Local Economic Strategies (CLES) to deliver the following work packages (WPs):

- WP1: Co-design of Net Zero Projects in South Lakeland
- WP2: Feasibility Study into Rural Net Zero Finance

In its delivery, CLES built on the Place Standard Tool with a Climate Lens and implemented a co-design approach to develop the projects outlined within this report. These projects were developed by a group of over fifty individuals from a range of businesses, community groups and public sector organisations from the local area. They have been developed to address specific 'non-technical barriers' to decarbonisation in rural areas, such as high transport costs, the difficulties of achieving economies of scale in rural areas, and a lack of funding. The outputs of this project will inform approaches to overcome these barriers and accelerate the transition to net zero living in South Lakeland. See Place to Plate and Circular Economy Hub for more information.

CLES also produced the Net Zero Finance Log and convened an expert panel to develop innovative finance solutions which could be used to drive net zero projects in South Lakeland. See Finance Horizon Scanning for more information.

2. Methodology

WP1: Co-design of Net Zero Projects in South Lakeland

A co-design approach was taken to WP1, bringing together a cross-sector range of stakeholders identified by the Project Partners - ranging from business leaders, young people and local residents to development agencies. The process was designed to ensure all parties were comfortable and able to contribute and engage in the codesign process meaningfully. This was shaped by the Project Team's knowledge of the stakeholders in attendance and their motivations and interests, and CLES' experience in co-design and inclusive facilitation. WP1 consisted of the following stages:

- A pre-workshop survey developing an understanding of the non-technical barriers currently faced by workshop participants as well as gathering information for the co-design workshop;
- A co-design workshop to bring all stakeholders together and co-design and select priority projects. This workshop:
 - Brought together 48 people representing business, the VCSE sector, local government and environmental groups across South Lakeland.
 - Was a rapid sprint design process to develop projects to tackle non-technical barriers to decarbonisation in South Lakeland.
 - Identified three projects for further development: Place to Plate, Circular Economy Hub, Future Farms.
- Two further **project-specific design workshops** with key stakeholders who attended the first workshop. These developed the Circular Economy Hub idea further, and integrated Place to Plate and Future Farms for further development.

Pre-workshop survey.

CLES prepared a survey for all stakeholders due to attend the workshop to gather information about:

1. Participants' current knowledge of decarbonisation activity within their own business or organisation.
2. Participants' knowledge of wider decarbonisation activity in South Lakeland
3. The barriers currently being faced by participants who want to deliver on decarbonisation but can't.

4. Where the gaps are in local delivery of decarbonisation – particularly in relation to challenges stakeholders face around the non-technical barriers which are the focus of this project.

Information from this survey was synthesised for use at the workshop as introductory information and to “set the scene” for ideas generation.

Initial design workshop.

The first day-long workshop focussed on co-designing projects and was facilitated in a way that opened the floor to multiple perspectives. CLES developed the methodology for the workshop in partnership with the Project Team and utilised a number of facilitation tools to deliver the final outcome of several project ideas for further development in the second round of workshops.

Place-Standard Tool with a Climate Lens (PSTCL) adaptation and feedback

The PSTCL was identified by the Project Team as a key facilitation tool for use in this codesign workshop. Upon examination, CLES found that it was most appropriate to use this tool to prompt discussion about the types of challenges South Lakeland is facing around different themes in relation to climate change, and the specific South Lakeland context.

Due to the wide-ranging nature of the PSTCL, and the workshop’s focus on particular spheres of emissions reduction, the themes discussed were narrowed and grouped with a key question for discussion and for participants to vote against. Facilitators also had additional questions to explore different elements of the theme. Following the discussion against each theme, participants were asked to vote on how they felt South Lakeland scored on a scale of 1-7 (low-high) based on the key questions.

Theme	Question	Average Score
Housing	How well are the homes in South Lakeland adapted to climate change?	3/7
Transport	How easy is it to move around and get to where I want to go in a way that produces the least emissions?	1.5/7
Spaces	How well are spaces set up and used to enable net zero activity in South Lakeland?	2/7

Local Economy	How well is the local economy set up to enable net zero activity in South Lakeland?	3/7
People and Influence	How well connected and heard are local people and businesses in shaping and delivering net zero in South Lakeland?	3.5/7

For the purposes of project identification and development (which was the main purpose of the workshop), the PSTCL was a valuable context-setting exercise to bring people together to consider these challenges collectively. It provided a useful framework to engage participants in discussions which drew them away from siloed thinking with respect to their individual connections to different issues and helped people to consider the challenge of climate change in a more holistic and place-based way.

The template questions within the PSTCL tool were adapted to suit the audience and draw out more discussion around the economic potential of net zero. As a tool, the PSTCL is more suited towards engaging with “the community” at large. CLES would encourage changes to wording which make the themes and questions more relevant to businesses and other forms of organisation which the tool could be used to engage with.

Additional methods

To complement the PSTCL, CLES also drew from a bank of tools, including those developed for the [Oldham Energy Futures project](#) and methods such as 124All and Design Lab. Critical to the workshop design was a clear set of intended outcomes and outputs from the workshop, which informed the creation of the workshop plan and all associated resources. Below is a high-level overview of the key activities and methods used during the workshop. A full session plan for the workshop is included in Appendix 3.

Exercise	Method
“Where are we now”	PSTCL as outlined above.
“Where do we need to get to”	Presentation addressing the questions: <ul style="list-style-type: none"> ○ What is needed in South Lakeland with regard to emissions reduction? ○ What social and economic benefits and potential does the transition bring for South Lakeland?

	<ul style="list-style-type: none"> ○ What does South Lakeland need from the perspective of Strategic Leadership and the community? ○ What projects and initiatives are already happening in South Lakeland? Where are the gaps? ○ What is the funding landscape like at the moment? ○ What non-technical barriers have you told us you are facing to delivering net zero? <p>This presentation used key information from CAfS about emissions reduction requirements and the social and economic potential of transition in South Lakeland, and information from CLES based on a strategic document review of climate action in South Lakeland, the pre-workshop survey and WP3 (finance).</p>
Defining the problem	<p>Table-based group discussions gathering key challenges participants were facing, and grouping them into key non-technical themes which were then shared with the room via a feedback session. Key questions addressed were:</p> <ul style="list-style-type: none"> ○ What are the challenges/barriers you are facing to driving forward work on net zero? ○ What are the overarching challenges we are facing? How do these connect?
Ideas Generation	<p>An exercise using the 124All method to generate individual project ideas which were then discussed in pairs, narrowed down, and discussed as a whole table. A single idea was chosen per table to be pitched to the room. Proformas with key questions each project should be able to answer were used to record these ideas. Detailed notes on delivery in Appendix 2, project ideas generated from this exercise in Appendix 3, with the final ideas from each table in Appendix 1.</p> <p>The questions addressed in the proforma were:</p> <ul style="list-style-type: none"> ○ What is the idea in a nutshell? ○ Why is this project important for South Lakeland in particular? ○ Which of the key emissions areas would benefit from this work? ○ Which systemic/non-technical barriers would this project tackle? ○ Why is collaboration important for this project? ○ Who are the dream team of collaborators for this project?

<p>Voting</p>	<p>The ideas emerging from the Ideas Generation exercise were then voted on by participants to narrow the number of projects for further development from six to three. People voted based on which ideas:</p> <ul style="list-style-type: none"> ○ They could see themselves/their organisations working on. ○ Could lead to the greatest difference in South Lakeland.
<p>Design Lab</p>	<p>The three ideas voted on were then further developed using an extended proforma with additional questions. This was the core output from the workshop and was used to inform and further discussion about the projects in the second round of workshops.</p> <p>The additional questions addressed in the design lab were:</p> <ul style="list-style-type: none"> ○ What does this project idea need to get it off the ground? People, money, space ○ How does it link to other projects emerging today and/or existing projects? ○ If you were pushed to innovate just one further notch on this idea, what would that look like? ○ Who will benefit from this project? ○ How will this project have a positive impact on rural areas in South Lakeland? ○ Any concerns about this project? How could these concerns be addressed?

Three projects emerged as priorities: Place to Plate, Farm Futures and Circular Economy Hub. Due to the heavy connection between Place to Plate and Farm Futures, it was decided by the Project Team that the two should be integrated. This was also decided because there is a similar project to the Farm Futures project in the concept stage of development being led by Westmorland and Furness Council.

Project-specific design workshops

A further two workshops were held to focus on each project in turn, bringing together a select group of stakeholders who had also been in attendance at the first workshop and additional stakeholders identified as important collaborators.

The project-specific design workshops refined the project ideas further still, generated a shared vision for the projects among the stakeholders, and also began the process of garnering support for the subsequent phase of the project. Also discussed were: resource requirements, the estimated project baseline position in terms of starting point, and potential additional partners.

Sections 3 and 4 detail the projects designed using the co-design process in WP1.

WP2: Feasibility Study into Rural Net Zero Finance

WP2 was delivered in parallel with WP1 and worked to identify innovative and place-specific green financing options for South Lakeland which have potential to be used to support the implementation of net zero projects in the area. CLES undertook a desk-based review of net zero finance, taking a broad approach to exploring funding sources. CLES also established a financial advisory group to bring in specialist green financial knowledge. Access to finance, and navigation of financial options was identified as a key non-technical barrier by stakeholders in the region.

Financial review

This review produced an overview of the landscape for net zero finance and articulated how appropriate different funding sources are for different projects. This includes an overview of each form of finance, and commentary on what would be required to establish them in South Lakeland. With this overview, CLES researched the ways in which finance can be packaged to maximise its visibility, accessibility and impact.

The review can be found in Chapter 5, and takes the format of an extended, searchable, excel spreadsheet version of the below summary finance landscape table.

	Public Sector	Private Sector	VSCE Sector
National	<i>e.g. Innovate UK, BEIS</i>	<i>e.g. Triodos Bank, Ecology Building Society</i>	<i>e.g. Joseph Rowntree Foundation, Power to Change</i>
Regional	<i>e.g. Borderlands Inclusive Growth Deal, Net Zero North West Hub</i>	<i>e.g. Electricity North West, Baywind Co-op</i>	<i>e.g. Community Foundations, Green Finance Community Hub</i>
Local	<i>e.g. Councils, Anchor Organisation Spend</i>	<i>e.g. Cumberland Building Society, Sellafield Transforming West Cumbria</i>	<i>e.g. Community Buy-Out & Ownership, Re-investing Revenues from Renewables Generation</i>

Financial advisory group

Drawing on CLES's network of contacts within the green finance space for advice on atypical elements within the costings and to support the development of financial models, we brought together a financial advisory group. We met with the group three times and the members of the group were:

- Dr Mark Davis of Leeds University – an expert in the development and delivery of [Community Municipal Investments](#).
- Dr Belinda Bell of Cambridge University - a social entrepreneur who [works through academia](#) to drive real world social and environmental impact.
- Mark Hall, Programme Manager, Place-Based Impact Investing at the [Impact Investing Institute](#).

3. Place to Plate

This project was originally conceived in broad terms as two different but similar projects at the initial design workshop. It has subsequently been refined by selected stakeholders into one project.

The South Lakeland context

Globally, food systems account for [over one third of greenhouse gas emissions](#) and have become significantly more energy intensive over time – with two thirds of food system emissions coming from agriculture, land use and changes in land use. As South Lakeland’s economy is dominated by agriculture (with a strong tradition of hill farming, meat production and dairy) and hospitality and tourism (a key purchaser and consumer of food and drink in South Lakeland), how to decarbonise the food and drink system was a key challenge identified through the co-design process. The decarbonisation of the food and drink system would also have a significant emissions impact more broadly, as food and soft drinks are the [largest manufacturing sector in the UK](#).

South Lakeland’s rural context presents a range of challenges and opportunities when considering the decarbonisation of the food and drink system which apply across the geography of the new Westmorland and Furness Council (into which South Lakeland District Council has been amalgamated) and wider Cumbria. Agriculture, forestry and fishing, manufacturing of food and drink, accommodation and food service activities and transportation and storage account for [27.2% of the emissions](#) from businesses in Cumbria.

Addressing non-technical barriers to decarbonisation within the food and drink sector could therefore enable emissions reductions across these emissions areas – including reducing emissions from power, heat, mobility and manufacturing.

This project will address the following non-technical barriers to decarbonising the food and drink system (as identified through the co-design process):

- Lack of evidence base for what a low carbon food and drink supply chain would look like in South Lakeland.
- Lack of or negative perceptions of what a low carbon food and drink supply chain would look like in South Lakeland, and what this would mean for local businesses and farmers.

- Siloed approaches to decarbonisation across the food and drink system in South Lakeland.
- Lack of economies of scale and issues around localising supply chains that are inherent in the rural context.

Project summary

Through taking an evidence-based and demonstrator-led approach, Place to Plate will deliver the research and action required to establish how a systems approach can be applied to the decarbonisation of food and drink supply chains in South Lakeland. Due to the amalgamation of South Lakeland District Council into Westmorland and Furness Council, the geographical boundaries of this project will need to be defined by the Steering Group prior to its delivery.

Within the context of this project, the food and drink supply chain includes:

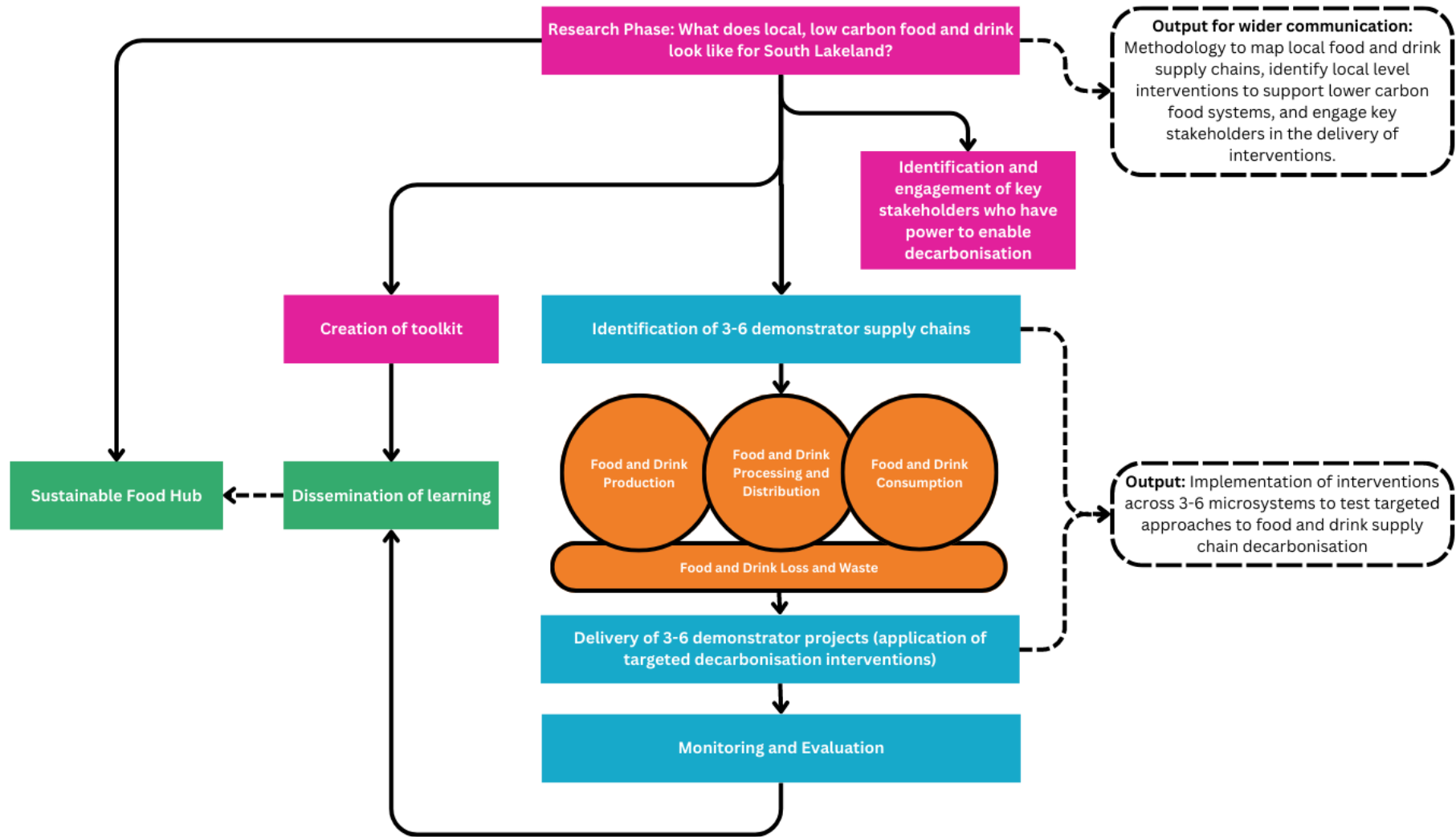


This will be done through:

- **Research** into “What does local, low carbon food look like for South Lakeland?” based on the supply chains of six products heavily produced or consumed in South Lakeland.
- **Identification and engagement of key stakeholders** at the local, regional and national level with the power and/or influence to deliver decarbonisation measures across the food and drink system in South Lakeland.
- **Creation of a toolkit** which will enable other localities to map their local food and drink supply chains, identify interventions applicable at the local level which can support the development of a lower carbon food and drink system, and provide a framework for how to identify and engage with key stakeholders in the delivery of those interventions.

- **Delivery of 3-6 demonstrator projects** seeking to apply interventions across the food and drink supply chain of products produced using pastoral and arable farming, and products distributed by a wholesale and retail distribution company.
- **Creation of a Sustainable Food Hub** which will initially focus on the dissemination of good practice (see “Creation of toolkit” below), the research and demonstrator findings and learning.
- **Delivery of dissemination and networking events** which will bring together local stakeholders involved in food and drink supply chains to share learning and progress the replication and scaling of interventions identified and tested through the research and demonstrator projects.

Figure 1: Place to Plate project structure.



Research phase

The research phase of this project will explore the research question “What does local, low carbon food and drink look like for South Lakeland?”. This phase of the project will be specified in consultation with key stakeholders to establish the most realistic and relevant parameters for the research. Consideration will need to be given to the choice of food chains to map, the location of the food processing (inside/outside South Lakeland), the complexity of product, and relevance to other areas of Cumbria/UK.

Proposed secondary research questions are:

- 1) What are the top six food and drink products produced and consumed in South Lakeland?
- 2) What do South Lakeland’s food and drink supply chains currently look like in relation to these key products? What is the impact of this on carbon emissions?
 - a) This should include assessing the provision of services like packaging, abattoirs and meat processing.
- 3) How could these food and drink supply chains be both localised and low carbon?
- 4) What are the key areas across the supply chain where interventions could have an impact on carbon emissions? Which interventions would have the most significant impact, and which areas of the supply chain could be most easily decarbonised (e.g transportation for processing and distribution purposes)?
- 5) Who are the key stakeholders that have control of or influence on decarbonisation measures at different points across the supply chain? Which of these stakeholders are drivers at the local, regional and national level?
- 6) What are the current barriers or enablers to delivering these decarbonisation measures in South Lakeland?
 - a) These could include other non-technical barriers associated with decarbonisation, including finance (e.g farming subsidy payments), data and information, community engagement, governance and policy, lack of consumer demand.
- 7) What are the potential social, economic and other environmental impacts of the key decarbonisation options?

It is possible that the research phase will identify technical as well as non-technical barriers to decarbonisation. Whilst the priority for the demonstrators and dissemination will be the latter, future development of the hub could over time include addressing the former.

Identification and engagement with key stakeholders

Question 5 of the research phase will help to identify key stakeholders which have responsibility for elements of decarbonisation at different scales – from local to national.

Question 6 of the research phase will necessitate engagement initially with local stakeholders such as businesses, farmers, consumers and representative bodies such as the Farmer Network. This engagement will be used to answer the research question and also attract stakeholders who would be interested in the demonstrator phase of work.

Following the delivery of the research, the stakeholders identified in Question 5 will be informed about the project and lines of communication established to share those learnings which involve changes to governance, finance or policy. Within the context of changes to farm subsidy payments, Defra, the National Farmers Union and the Farmer Network will be critical stakeholders to engage in this project.

Creation of toolkit

The research phase will be written up as a toolkit for other areas/audiences seeking to drive local food and drink system decarbonisation. This will enable them to:

- Map local food and drink supply chains.
- Identify non-technical interventions that can support the development of a lower carbon food and drink system.
- Identify the stakeholders responsible for the delivery of interventions.
- Engage key stakeholders in the delivery of those interventions.
- Identify potential incentives to secure the interventions.
- Understand the tools available to measure the carbon reduction impact of the interventions.

The format of the toolkit (whether as a range of different types of tools and resources, a single document or a website), will be determined at a later stage in agreement with the Steering Group. This is because its core audience will need to be defined, which will shape the final output.

Identification and delivery of 3-6 demonstrator projects

The demonstrator projects will:

- Carbon audit and baseline (as far as possible) each element of a supply chain connected to one type of product (including preparation, additives, packaging, storage and the travel of consumers to buy the product).
- Coordinate stakeholders to identify and begin implementing decarbonisation interventions, across different elements of between three and six food and drink supply chains. This may require incentivisation by remunerating participants for their time.

A range of 3-6 is given because the number of demonstrators will depend on which products are identified and which stakeholders within those supply chains are most engaged in this project.

Demonstrator projects will be selected:

- To reflect the products dominantly produced in South Lakeland, and heavily consumed products which are distributed by both a wholesale and retail distributor. This should include products produced through pastoral farming (such as beef, lamb, milk and eggs) and arable farming. Two businesses which could be engaged as wholesale and retail distributors are McClures and Booths (both local to Cumbria).
- Using the networks detailed in “Alignment with existing activity” and through stakeholder engagement during the research phase.

Any interventions identified will be supported by the research phase and be achievable within the remit of local organisations, rather than being dependent on changes to national policy. This is because of the time-limited nature of the project. However, where higher-level national barriers are identified consideration will be given to how to communicate them to relevant stakeholders (e.g Defra) through the project’s communication and dissemination approach.

A standardised approach to evaluation and monitoring will be developed and applied across the demonstrators, with a focus on emissions reduction. In addition, participating stakeholders will be surveyed and/or interviewed to establish a baseline of current understandings and perceptions of the decarbonisation of the food and drink system prior to the demonstrators and as they progress in order to track changes over time.

Sustainable Food Hub

In its early stages the Sustainable Food Hub will be an online platform which will:

- Communicate good work happening in South Lakeland around food and drink system decarbonisation (including the sharing of good practice from Cumbria and elsewhere) via case studies and other forms of content.
- Disseminate the toolkit developed following the research phase.
- Communicate the progress and findings of the demonstrator projects, with a particular focus on South Lakeland’s rural challenges and the nature of agriculture in the area, and how different local interventions can enable emissions reduction.

This hub also has longer term potential to be the foundation for a physical space for networking. Whilst the initial focus of the hub would be on non-technical barriers it could also in the future extend its reach to technical barriers – performing as a hub to share and test new food growth and processing techniques, dependent on stakeholder interest in this concept, and the availability of funding.

Dissemination and networking events

To scale and replicate the solutions developed through the demonstrator projects, it will be necessary to both disseminate the learning from Place to Plate and bring together local stakeholders to explore how interventions could be applied in different contexts and at different scales in South Lakeland and the wider region.

Online events will be used to communicate the findings from the project to interested stakeholders which would include: farmers, consumer groups, sustainability groups, retailers, wholesalers, restaurants and cafes, supermarkets, local shops, marketplaces, processors. These will include people from across the UK who would benefit from the insights generated from the project.

A series of in-person networking events will also be coordinated under the banner of the Sustainable Food Hub for local farmers, businesses and consumers. These will focus on bringing people together from across the food and drink system to discuss how they might apply the interventions in their own contexts, fostering further cross-sector collaboration.

Project Outcomes

This project has been designed to deliver evidence-based approaches to food and drink system decarbonisation across the supply chain in South Lakeland. The initial research phase will be critical to the set up of the demonstrator projects, and wider dissemination will be important in securing long term change at scale.

The intended outputs are:

- A report answering the research questions. This will include detail on the challenges and opportunities presented by South Lakeland's rural context when seeking to decarbonise food and drink supply chains, and across specific components of the supply chain.
- A published and promoted toolkit for use by other localities to replicate the methodology used in the research phase.
- An evidence base for the implementation of interventions at different stages of the supply chain to support decarbonisation which can be communicated to an external audience, with a particular focus on rurality.
- An evidence base for the decarbonisation of arable vs pastoral approaches to farming, which is of particular interest to the farming community in South Lakeland and debates around how to achieve more sustainable farming in the wider region.
- Written up examples of how interventions were identified and implemented through the demonstrator projects.
- Stakeholders who can act as decarbonisation champions in their respective parts of the supply chain to support the sharing of learning as a result of the demonstrators and spread the use of successful approaches.
- The creation of an online platform or hub to promote work across the food and drink system in South Lakeland, and its launch with the dissemination of the toolkit produced in the research phase and learnings from the demonstrator projects.
- A feasibility study for the creation of a physical hub space which will be designed to support the removal of the additional barriers identified in the

research phase and challenges identified through the demonstrator projects.

- Two online dissemination events communicating the findings and learning of the project to a wide audience.
- Four in person networking events for local farmers, businesses and consumers.

Expected outcomes include:

- Insights which will be communicated to an external audience as to the nature of food and drink system decarbonisation in a rural context. This is particularly important because the rural context requires us to contend with a variety of different barriers in comparison to more urban contexts, including dispersed communities, greater transport miles, and the difference between sustainability and emissions reduction when discussing food production and farming.
- A better understanding of the carbon emissions associated with different aspects of the food and drink supply chain, and how they can be addressed at the local level.
- Greater connectivity and partnership working between stakeholders across different elements of the food and drink system in South Lakeland, facilitated via the demonstrator project delivery groups and networking events.
- Emissions reductions as a result of demonstrator interventions over the course of the project (using baseline, interim and final emissions calculations).
- The removal of barriers relating to the lack of evidence-base for what is needed to decarbonise the food and drink system in South Lakeland
- Reduced siloing and more integrated action and collaboration on decarbonisation between the actors in the food and drink system in South Lakeland.
- Proof of concept for specific decarbonisation interventions across the supply chain, de-risking them and enabling further investment from business owners and farmers (and other relevant stakeholders).

Alignment with existing activity.

There is a range of decarbonisation activity already happening across South Lakeland's food and drink system and more widely across the region which will be used to inform the research methodology for the first stage of the work and identify potential demonstrator participants. This work, however, predominantly exists in siloes and does not connect across the supply chain.

One local exception is Zero Carbon Cumbria's Low Carbon Food Programme (detailed below) which would be used as a point of learning to shape the Place to Plate project's approach to engagement across supply chains. Another project it

would be valuable to draw learning from (with regards to cross-sector working) is the Rural Development Programme for England (LEADER), which aimed to foster innovation and partnership working in networks and across boundaries to develop the rural economy.

There are multiple networks both at a local and national level which exist to support decarbonisation and better practice around different elements of the food and drink supply chain. These include:

- Cumbria Organics: A network of people interested in organic production of food in and around Cumbria, including farmers, growers, processors, retailers and consumers.
- Zero Carbon Cumbria's Low Carbon Food Programme: A project focussed on education and support around making low carbon food choices among consumers and businesses across Cumbria. This will include the establishment of a Low Carbon Food Network. This network will predominantly focus on connecting the tourism and hospitality industry to food and drink production and delivering low carbon menus – zooming in on food consumption and reducing emissions in the tourism and hospitality industry.
- Home Grown Here: A cooperative of growers and veg box schemes seeking to build a better food and drink system for Cumbria.
- Agriculture and Horticulture Development Board Monitor Farms: A national network of farmers who want to improve their businesses by sharing performance information and best practice.

Importantly, however, these networks do not encompass the whole supply chain and still remain disparate. They also tend to focus on one part of the food and drink supply chain (e.g food production) rather than spanning the breadth of the supply chain.

There has been and is currently a range of activity happening across the food and drink supply chain themes and a variety of good practice the demonstrator project can draw from, including:

- [Farming for a Future](#): A continuation of the Fellfoot Forward Whole Farm Carbon Pilot, working with five farms to calculate their carbon footprint using the Farm Carbon Toolkit, which identified elements such as renewable energy and energy efficiency as key missing elements from this carbon auditing approach.
- [Sticklebarn Pub's menu carbon footprinting](#): A pub owned by the National Trust in the Langdale Valley within South Lakeland, Sticklebarn opted to use a carbon calculator to let customers know the carbon footprint of each of their dishes.
- [Waste into Wellbeing Kendal](#): A local volunteer-led social project which turns food which would otherwise go to waste from local supermarkets, shops and cafes/restaurants into meals provided on a pay as you can basis or redistributed through a community larder.

- [Farming in Protected Landscapes \(FIPL\)](#): Part of Defra's Agricultural Transition Plan, FIPL funds projects within each protected landscape including projects focussing on nature recovery and climate change impact mitigation. In the Lake District the programme's priority is farm carbon audits, action planning and delivery.
- [Fife Diet](#): This campaign, which began in 2007, became Europe's largest food project supporting people to eat local food or grow their own to reduce their carbon footprint. It was highlighted at COP26 and inspired growers and consumers across Scotland to explore and innovate to localise their food – both delivering carbon savings and retaining money spent on food within the local economy.

Barriers this project will address

Lack of evidence base for what a low carbon food and drink supply chain would look like in South Lakeland.

The current lack of data available to quantify carbon emissions across the food and drink system is a significant barrier to progressing food and drink system decarbonisation in South Lakeland. This data is needed to identify and target interventions which could then reduce these emissions and measure their impact. Farmers and farming representatives who participated in the co-design process also highlighted the difficulty of auditing for carbon across their operations (for example the carbon emissions from energy use in food production and possible decarbonisation through energy production on farmland). Similarly, the range of activity across the supply chain (from logistics to travel miles for consumers to buy food) means that the total carbon output of a food and drink supply chain has not been quantified due to the scale of emissions data that would be required.

Fulfilling all the data requirements to map the carbon emissions of the whole food and drink system is unrealistic within the context of this project. However, the demonstrator projects will identify which elements can currently be measured and where there is a need for a more robust approach to data gathering.

These challenges sit against a backdrop of debate about which types of produce and farming are “sustainable” or can help to reduce carbon emissions. This includes a lack of understanding, information and data about how localising the food and drink supply chain might support decarbonisation in South Lakeland (including the current emissions across the food and drink supply chain). The question of localisation will be addressed within this project to explore how actions within South Lakeland could help to decarbonise the supply chain, rather than solely relying on larger scale decarbonisation of “out of area” elements of the supply chain.

The removal of this barrier will be demonstrated through the development of a dataset for each demonstrator project which baselines emissions and can be used to measure changes in emissions over time.

Lack of or negative perceptions of what a low carbon food and drink supply chain would look like in South Lakeland, and what this would mean for local businesses and farmers.

Perceptions of what low carbon food will look like for South Lakeland are also a barrier. Due to the dominance of pastoral farming in South Lakeland [calls to move to a more plant based diet](#) to tackle climate change are perceived by some involved in food and drink supply chains within South Lakeland as posing a threat to local livelihoods and the farming traditions of the region. Within the context of a transition, this context will need to be addressed when proposing ways forward to produce lower carbon food which are both evidence based and led by food producers in the area.

The removal of this barrier will be enabled through the engagement of farmers and farming representatives throughout this project, and the delivery of a demonstrator project which provides evidence as to how pastoral farming in South Lakeland could be lower carbon (and a comparison to arable farming and produce produced outside the area).

Siloed approaches to decarbonisation across the food and drink system in South Lakeland.

As the food and drink system is multi-faceted with regulatory and market pressures driving change from outside South Lakeland, identifying cross-sector approaches to decarbonisation is a challenge. Currently there are many initiatives seeking to decarbonise the food and drink system in South Lakeland, but these remain disparate. The co-design workshops highlighted the breadth of activity happening across the area, but also demonstrated a lack of coordination across supply chains which could elevate these efforts to the next level with regards to achieving emissions reductions at scale. There were also demonstrable gaps within current decarbonisation efforts, most notably within the sphere of sustainable food processing and distribution.

The removal of this barrier will be enabled by using this project to develop an understanding of the interconnected nature of the food and drink system in South Lakeland and its decarbonisation, and delivering demonstrators which will implement solutions and foster cross-sector collaboration.

Lack of economies of scale and issues around localising supply chains that are inherent in the rural context.

One of the key challenges faced in rural areas when seeking to decarbonise is that of the distributed nature of people, businesses and infrastructure. With regards to the food and drink system, South Lakeland has potential to decarbonise food production, but also challenges in relation to food distribution and out of area food processing, as well as trying to connect local people to good quality food produced in the area at affordable prices.

The removal of this barrier will be enabled by:

- The use of the research phase of this work to identify challenges, reflect them back to key local stakeholders and discuss potential local solutions (through the dissemination of the research findings and networking sessions).
- The use of the demonstrator projects to identify interventions which could be applicable across multiple supply chains and delivered at scale.
- The use of the dissemination work to enable further application of the interventions, which may identify potential economies of scale across supply chains or parts of the food and drink system.

Systems this project addresses

The food and drink system as a whole encompasses multiple emissions areas, and this project will therefore deliver emissions reductions across three main systems which intersect across the food and drink supply chain:

- **Land** – through the implementation of interventions relating to food growing (which necessitates farm carbon auditing and exploration of emissions reduction in relation to land use and the use of heat and power in food production).
- **Transport** – interventions in the distribution of food in South Lakeland and in its consumption (in relation to how consumers travel to buy food) will reduce emissions from e.g. petrol/diesel fuel, embodied carbon in vehicles.
- **Manufacturing and storage** – with multiple manufacturers in South Lakeland who produce, process and store food, the food and drink system is tied up with that of manufacturing. Implementation of interventions within processing in particular will have an impact on manufacturing emissions from heat and power.

An important reason to tackle these emissions through the entry-point of the food and drink system is that, as a foundational element of South Lakeland's economy (through agriculture and hospitality/tourism), it will have significant carbon reduction implications both within and outside of the region if efforts are made to decarbonise across the piece.

Scaling and replicability

The project's research outputs will be designed to enable scaling and replication of the approaches used in the research phase and the design of interventions by the demonstrator projects.

The insights gained from the research will be applicable for other similar rural areas. The final research report will be written in a way that highlights the issues many rural localities face as well as challenges and opportunities specific to South Lakeland. As a starting point, learning gleaned in South Lakeland should be shared across the Westmorland and Furness Council and Cumberland Council areas.

With regards to replicability, the development of the toolkit will enable other localities to use the approach created in South Lakeland within their own area.

The demonstrator projects will be used as microsystems to test interventions which could be applied at scale. A common problem with demonstrator projects is that upon completion learning is not shared and further delivery of solutions is not enabled (resulting in a “tailing off” of activity). To tackle this, resource has been included within the Delivery Plan for dissemination, networking and stakeholder remuneration to support the distribution and application of the learning from the demonstrator projects.

Stakeholders involved in the demonstrator projects will be engaged to support in the identification of opportunities to scale the interventions they implement, and to disseminate learning from the demonstrators.

The Sustainable Food Hub will coordinate activity to enable the sharing of learning, application of interventions at scale and incubation of new cross-sectoral approaches. This will initially be done through the networking events which will be delivered as part of this project but could be further developed depending on the Sustainable Food Hub feasibility study.

Delivery Plan

Project refinement, funding identification and application

- Additional stakeholder engagement to further refine the project.
- Best practice review and engaging with project teams from relevant initiatives elsewhere/in South Lakeland.
- Any refinements to project design following the above, funding bid development and submission. This could be to Innovate UK Phase 2 funding or alternative funding as outlined in the WP2 Finance Log.

Year 1 delivery

- Establishment of a Steering Group to oversee activity.
- Recruitment of Project Team.
- Specify research piece to be delivered by external research body.
- Initial engagement with key high-level/national stakeholders (Defra, National Farmers Union, Farmer Network).
- Programme management processes established, reporting and governance arrangements set up.
- **Workstream A: delivering the research, developing the replicable methodology toolkit** - Procurement of the research delivery partner, delivery of the research piece, identification and engagement with key stakeholders at different levels of influence within the food and drink system locally, regionally and nationally, write-up of the toolkit, dissemination events in coordination with Workstream C.
- **Workstream B: identifying and planning 3-6 demonstrator projects** – Identify and engage key supply chain stakeholders based on 3-6 products,

agree evaluation and monitoring framework including carbon baselining, bring stakeholders together and present research findings, coordinate group meetings to identify and plan interventions, finance identification for interventions, begin funding applications/business case development.

- **Workstream C: developing the Sustainable Food Hub** - agreeing core principles of the initial website and specification for its creation, managing the procurement of website design and developers, working with developers to create the bespoke website, gathering local case studies of good practice and building into website, embedding research report and toolkit, online dissemination events and physical events in coordination with Workstream A.
- **The delivery of the three workstreams will be staggered. Workstream A and C are suitable for immediate implementation whereas Workstream B requires insights from Workstream A to begin.**

Year 2 delivery

- **Workstream A:** Mid-point review including updates for dissemination via the Sustainable Food Hub (blogs or other content).
- **Workstream B:** planning and initiating 3-6 demonstrator projects – further intervention planning and initiation, ongoing monitoring and evaluation, gathering of policy or other barriers for communication to key regional and national stakeholders (e.g Defra), mid- and final-point evaluation and monitoring, process write-up and dissemination. The write-up will outline the process from building the demonstrator groups to intervention delivery and be used to share learning more broadly in the region and across the UK.
- **Workstream C:** further development of the Sustainable Food Hub – ongoing content development and management, business case development for a physical Hub space, dissemination and networking events in coordination with Workstream B.

Stakeholder engagement

Key stakeholders to be involved in the next stage of work include:

- Westmorland and Furness Council
- Cumbria Action for Sustainability
- University of Cumbria
- Steering Group members
- Defra
- Rural Payments Agency
- The National Farmers Union
- Farmer Network
- Local landowners

- Cumbria Tourism
- Cumbria Local Enterprise Partnership (Rural Panel)
- Cumbria Chamber of Commerce
- Zero Carbon Cumbria Partnership
- Businesses within the local food and drink supply chain

Beyond these groups, additional key stakeholders will be identified during the research phase of work. The research will be used to identify and engage people, businesses and farmers which need to be involved in the demonstrator projects.

Engagement with businesses

Westmorland and Furness Council and CAfS already have extensive experience engaging with businesses in this space due to their work across a range of projects, including the Zero Carbon Cumbria Partnership. Initially, businesses will be engaged in the research phase through utilising pre-existing networks (as outlined above in “Alignment with pre-existing activity”).

To support outreach to new stakeholders, the project team would continue to work with reputable local organisations representative of local businesses such as the Cumbria Chamber of Commerce, Cumbria Tourism and the Farmers Network. Similarly, drawing on the connections businesses engaged in this feasibility study have in the area would be beneficial, as food businesses will likely have connections to all elements of the food and drink supply chain which could be drawn on.

Multiple participants at the co-design workshop expressed the need to take a considered approach to engaging farmers, as the farming calendar can affect their availability.

Ideally, the final Sustainable Food Hub would be a model owned and shaped by local residents and businesses – including the farming community. To do this, these groups must be sufficiently engaged in this project from the outset.

Engagement with the public sector

The core groups involved in this project will be private businesses and residents. However, the public sector are large consumers of food within the region and have a significant role to play in addressing the barriers which will be identified through the research phase.

While Westmorland and Furness Council would be a core partner in the delivery of the project, the wider public sector in the area should be made aware of the project and receive updates about its progress. This would be particularly useful if demonstrator projects want to explore how public sector procurement could be used to encourage or enable decarbonisation along food and drink supply chains.

Engagement with communities

Wider engagement with local residents and visitors will be delivered through the creation of a website which will host information about Place to Plate – the initial form of the Sustainable Food Hub – and open invitations to participate in networking events to progress the work following the demonstrator projects.

The website will also be used to amplify the good work already happening in South Lakeland by profiling good approaches to decarbonising the food and drink system and sharing them both on the website and via social media.

Dissemination of findings

Findings will be disseminated via:

- A report outlining the research conducted in the research phase and its findings.
- An online event launching the initial report from the research phase. This will be targeted at:
 - Local authorities seeking to support food and drink system decarbonisation;
 - Organisations working within the food and drink system;
 - Community groups invested in the creation of a fairer food and drink system.
- A local in-person launch event which will also act as a networking and project information event to communicate next steps about the work to businesses, farmers and the wider community.
- Regular blog updates on the demonstrator projects from identification through to delivery and evaluation.
- An online event sharing the learning from the demonstrator projects.
- A local in person dissemination event to share learning from the demonstrator projects which will also act as a networking and “next steps” event to explore the potential to replicate and scale the interventions created through the demonstrator projects.

Finance and Resource Plan

Table 1: Place to Plate cost estimates

Item	Description	Year 1								Year 2				Total	
		Q1		Q2		Q3		Q4		Q1		Q2		LB	UB
		LB	UB	LB	UB	LB	UB	LB	UB	LB	UB	LB	UB		
Project management & coordination	Staffing cost: 3-5 X FTE (cost reflects 1-2 senior and 1-3 junior staff members - project manager, engagement worker/s, carbon measurement expert/quant person, project support, comms, 1.5X salaries to include overheads, recruitment, training and expenses)	£30,000	£71,250	£30,000	£71,250	£30,000	£71,250	£30,000	£71,250	£30,000	£71,250	£30,000	£71,250	£180,000	£427,500
Steering group	£6k-£12k budget for reimbursement of steering group members	£1,000	£2,000	£1,000	£2,000	£1,000	£2,000	£1,000	£2,000	£1,000	£2,000	£1,000	£2,000	£6,000	£12,000
Research services	£350k-£550k budget to procure expert academic & consultancy support to conduct research (supply chain mapping, emissions data, literature review study, identification of interventions, survey on barriers and enablers, reporting, and design services for Toolkit)	£100,000	£150,000	£100,000	£150,000	£75,000	£100,000	£25,000	£50,000	£25,000	£50,000	£25,000	£50,000	£350,000	£550,000
Stakeholder engagement	£12k-£24k budget for events & workshops to bring together stakeholders (1-2 per quarter)	£2,000	£4,000	£2,000	£4,000	£2,000	£4,000	£2,000	£4,000	£2,000	£4,000	£2,000	£4,000	£12,000	£24,000
Demonstrator projects	£240k-£480k budget for delivering 3-6 demonstrator projects, including reimbursing pilot organisations, and to research future finance/seed funding options for ongoing delivery	£40,000	£80,000	£40,000	£80,000	£40,000	£80,000	£40,000	£80,000	£40,000	£80,000	£40,000	£80,000	£240,000	£480,000
Sustainable food hub	£2k-£4k per annum budget for website domain, hosting, security & maintenance			£2,000	£4,000							£2,000	£4,000	£4,000	£8,000
Sustainable food hub	£50k budget for website development & design					£25,000		£25,000						£50,000	-
Communications	£7k-£10k budget for targeted communications and marketing									£3,500	£5,000	£3,500	£5,000	£7,000	£10,000
Legal and insurance costs	Legal fees, liability insurance & cover (c.£20k-£40k per annum)	£20,000	£40,000							£20,000	£40,000			£40,000	£80,000
Contingency	10%	£17,300	£30,725	£17,500	£31,125	£17,300	£25,725	£12,300	£20,725	£9,800	£20,725	£10,000	£21,125	£84,200	£150,150
Optimism Bias	15%	£31,545	£56,696	£28,875	£51,356	£28,545	£42,446	£20,295	£34,196	£19,695	£40,946	£17,025	£35,606	£145,980	£261,248
Total		£241,845	£434,671	£221,375	£393,731	£218,845	£325,421	£155,595	£262,171	£150,995	£313,921	£130,525	£272,981	£1,119,180	£2,002,898

Note: LB = lower bound of range estimate, UB = upper bound of range estimate

Estimated total funding required for first 18 months: **£1,119,180 – £2,002,898**

Project Legacy

This project will create the foundation for a systems-based approach to decarbonisation across the food and drink system in South Lakeland. As the food and drink system is so extensive and multifaceted, building an evidence base, creating methods/interventions which can be applied across contexts and at scale, and focussing on what is within the power of local actors and stakeholders to change will help to deliver targeted outcomes which will benefit both South Lakeland and other localities.

As well as creating a toolkit articulating how localities can map and intervene in their food and drink supply chains to deliver decarbonisation, the lasting impact on participants of a successful process of cross-system collaboration would result in a group of individuals who could share their learning and spread good practice across their networks. This is particularly important in the context of engaging farmers with the decarbonisation agenda, as many of the co-design participants highlighted the need for a robust and peer-to-peer approach to building trust and disseminating knowledge through the farming community in South Lakeland.

Furthermore, the Sustainable Food Hub would continue to drive innovative work decarbonising the food and drink system across South Lakeland, and address the barriers identified in the research phase.

Net zero tools to be used

There are a number of tools this project could use which have already been trialled by projects in South Lakeland as outlined above. Most significant among them are farm carbon auditing and carbon menus which have been trialled and are being further developed through the Low Carbon Food programme of the National Lottery funded Zero Carbon Cumbria project. The project would also benefit from tools which can enable emissions measurement across different elements of the food and drink supply chain – including the processes involved in distributing and processing food (e.g disaggregating data about fleet vehicle emissions).

The research element of this project will help to identify further net zero tools which could be used through the demonstrator phase, focussing on the monitoring and evaluation of emissions reduction as a result of interventions.

The Project Manager and any wider steering group would engage with university academics to support research methods and net zero tools. In addition, it will be necessary to extend the knowledge already held within the Rural Net Zero Project Team and Steering Group beyond food production and the tools available to measure carbon at a farm level. This project particularly requires some level of expertise present to recommend net zero tools which can enable the measurement of emissions and other impacts within the sphere of food processing and distribution.

Open-source data plans

All data gathered and analysed as part of the research phase and the demonstrators will be collated and presented via public facing reports, including information about which datasets were used and how data was collected. This information will also be an important part of the toolkit developed following the research piece, as other localities will need to understand how to access the data they need to conduct their own mapping and analysis of local food and drink supply chains.

This information will be published on the Sustainable Food Hub website so that it is publicly available.

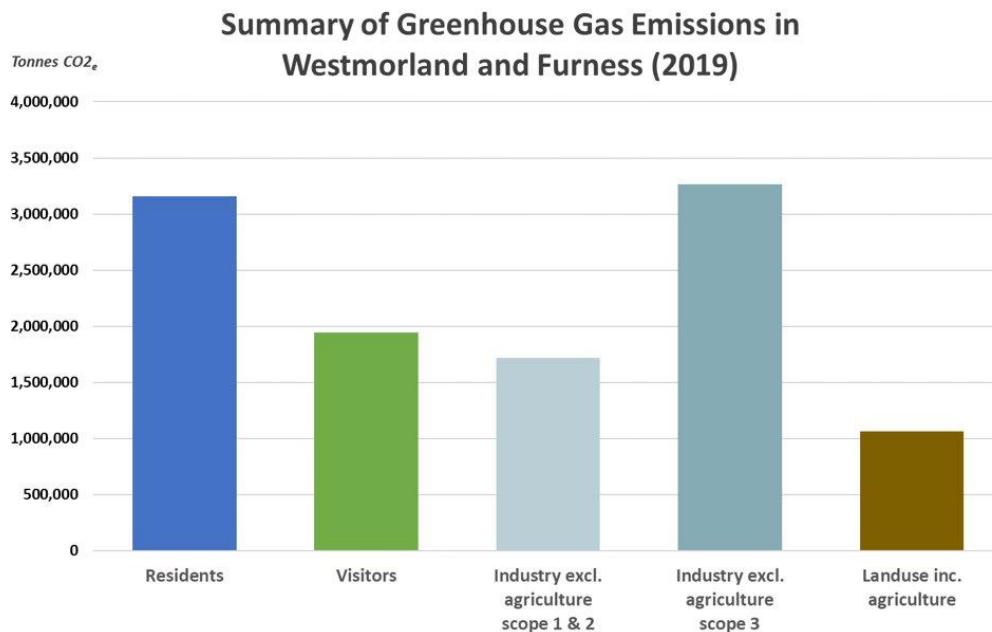
4. Circular Economy Hub

The Circular Economy Hub is the second of two projects developed through the co-design process outlined in Section (2).

The South Lakeland context

In Westmorland and Furness (which includes the former local authority known as South Lakeland District Council), industry is responsible for producing the largest amount of annual greenhouse gas emissions (see Fig. 2). Figure 2 separates emissions from industry into scopes 1, 2 and 3 emissions – scope 1 and 2 are those emissions that are owned or controlled by a company such as the emissions resulting from the use of the organisation’s vehicle fleet, and scope 3 are also known as ‘upstream emissions’, these are emissions that an organisation is indirectly responsible for within its supply chain e.g., the purchase, use and disposal of products from their suppliers.

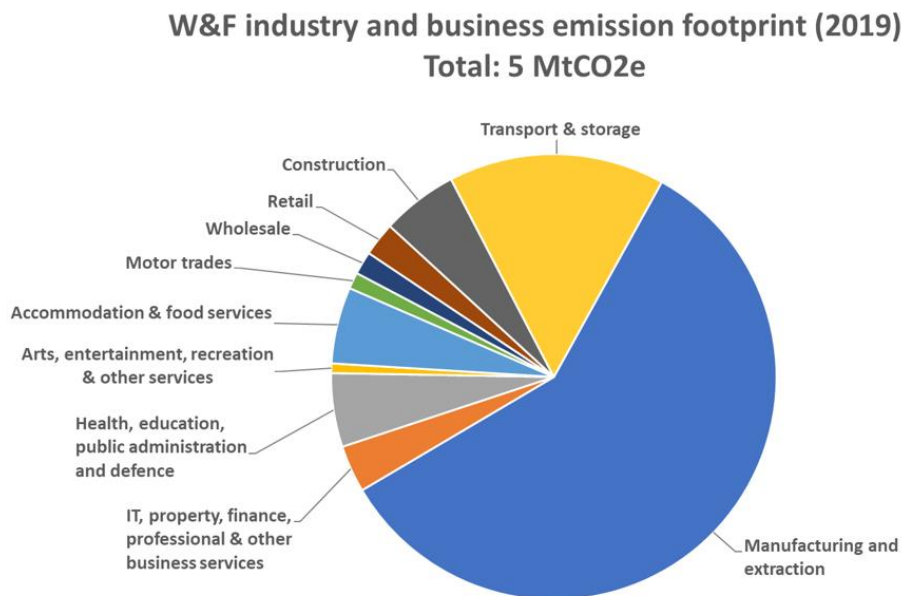
Figure 2: Greenhouse gas emissions by source



Source: Small World Consulting & CAfS, 2019

If we break the emissions from industry down into sectors (see Figure 3), it is the manufacturing, transport and storage sectors that are the largest contributors.

Figure 3: Industrial emissions breakdown



Source: Small World Consulting & CAfS, 2019

South Lakeland is home to over 6,000 businesses - [85% of which are micro-businesses and 14% small businesses](#). Through establishing a shared vision and mechanisms to work together, this project aims to support emissions reduction from the business base and their supply chains.

Project summary

Through applying ‘circular economy’ and ‘sharing economy’ principles and approaches, the South Lakes Circular Economy Hub (CEH) project proposes to bring together organisations across the private, public and third sectors within South Lakeland to identify options for improved resource use between organisations and reducing waste. The types of resources considered will include heat, power, space, skills, ideas and materials (such as any wasted by-products from production processes), and any other underutilised assets (such as vehicle fleets that are not fully optimising journeys for maximum passengers/freight).

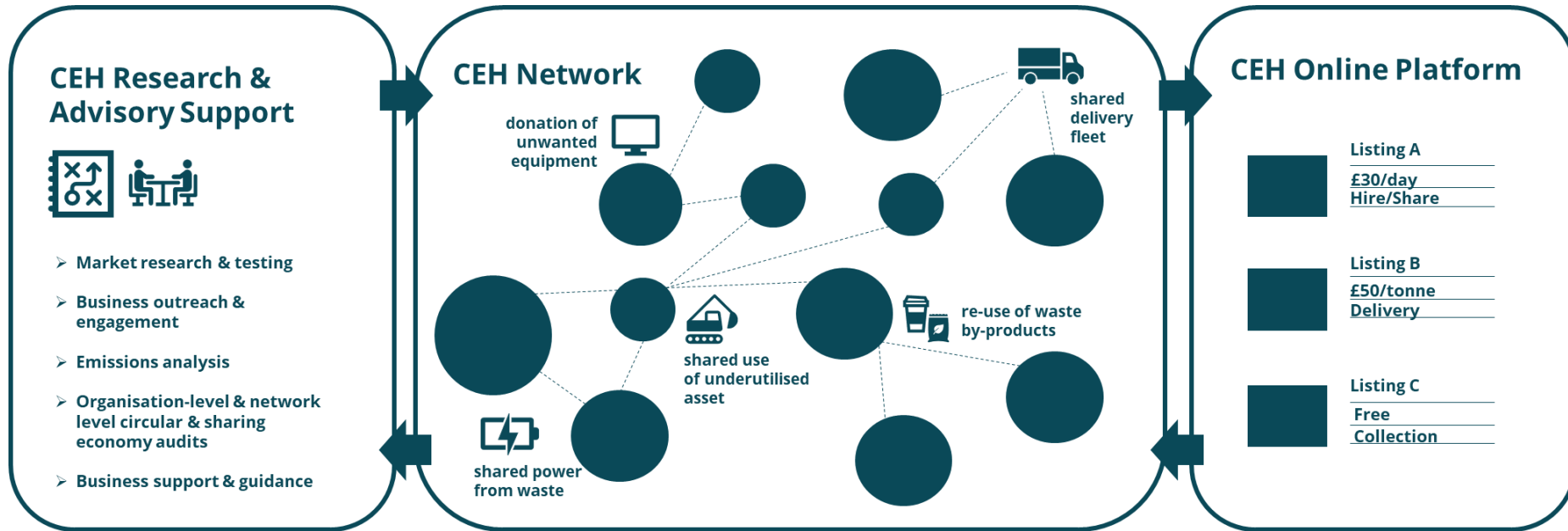
The Hub will provide business support and advice on the potential to embed circular economy and sharing economy principles into current operations, and a membership network and online forum to facilitate this business-to-business sharing and waste optimisation.

The South Lakes Circular Economy Hub will support the transition to net zero in South Lakeland by removing the following key non-technical barriers:

- The lack of staff skill and capacity in micro and small businesses across South Lakeland to force the pace on decarbonisation

- The lack of a live network enabling deep collaboration amongst the business community regarding decarbonisation efforts.
- The lack of a current forum that would facilitate and enable resource efficiencies through product redesign, materials salvage, reuse, sharing and waste optimisation between organisations.
- The lack of capacity, connectivity and economies of scale due to the rural context, which results in:
 - Limited waste products and underutilised assets readily available without significant searching.
 - Lack of population density with inefficient transportation associated, as many vehicle journeys are not operating at capacity in terms of passengers or freight.
 - Lack of resource within small businesses to individually draw on services to establish circular economy practices, and lack of services currently available to support businesses collectively to do so.

Figure 4: Figure 4: Circular Economy Hub (CEH) Example Illustration



Project outcomes

The Hub is designed to involve and benefit all businesses, community organisations and public sector teams and services. The first year will involve setting up the forum and mechanism for organisations sharing resources and establishing a productive and communicative network for collaboration across sectors. The intended outputs include:

- A research and advisory support wing of the Hub, to provide market research and testing, business outreach and engagement, emissions analysis, circular and sharing economy audits, and business support and guidance.
- A membership network of engaged businesses, community organisations and public sector teams.
- An online Hub platform enabling the buying, selling, sharing, trading or donation of resources between organisations.
- Active Hub coordination and management to facilitate the set up and operations of the above platform and network.

The Hub will be equipped to provide specialist support to businesses in the areas of embedding circular economy practices in their business models and processes, and will have a focus on establishing longer-term business-to-business partnerships for sharing resources and optimising re-use of waste, not purely facilitating one-off transactions.

The expected outcomes, as a result, include:

- Businesses and other organisations from different sectors collaborating in completely new ways
- Strengthening business-to-business relationships and networks through collaborative process and product innovation
- Testing and demonstrating the application of circular and sharing economy approaches in rural geographies
- Higher levels of cooperative and communal use of equipment, vehicles, and energy sources
- Higher levels of re-use of currently wasted by-products and other resources and materials
- Strengthening local supply chains
- Reductions in consumption of new goods and raw materials
- Reduction in miles travelled across the county
- Improved levels of reuse vs recycling.
- Reductions in waste going to landfill
- Energy efficiency gains and greenhouse gas emission reductions

- Cost savings generated for the local business, public sector and third sectors
- Residents benefitting from improved commuter travel options and any associated cost savings
- Supported behaviour change that product design for circularity and resource sharing becomes standard practice across organisations
- Developed a greater understanding of what types of resources and products can be shared or reused and where demand and impact is high

Alignment with existing activity.

As outlined earlier in this section, the South Lakes Circular Economy Hub project builds on the insights gathered through [Westmorland and Furness Council and the Zero Carbon Cumbria Partnership's work](#) to analyse the local economic context and associated emissions data to identify high emitting sectors and systems.

To inform the project's establishment, project teams will seek to learn from the work of Zero Waste Scotland, initiatives led by the Ellen MacArthur Foundation, and examples from abroad, in particular, from the Netherlands. Furthermore, the project complements and aligns with two other key initiatives happening within the region:

- [The Rebuild Site](#) – based in Carlisle, in the north of Cumbria, the rebuild site embeds circular economy principles by taking surplus materials from construction sites to be re-used. The Site's purpose is to better use materials, reclaim materials currently being thrown away or down-cycled, and reuse as much excess and 'nearly-new' materials as possible – to create new value in what is often treated as waste. The surplus materials they collect go to community groups and charities to help with their building, gardening, crafting and repair projects, and they sell nearly new and surplus materials to trades and members of the public at reduced prices.
- The Circular Economy Hub takes inspiration from The Rebuild Site's application of these approaches within the construction sector, and will be able to engage with project teams at the Site to understand any best practices and lessons that can be learned. The Hub's project design aims to trial a different version of this approach in three key ways:
 - Encouraging long-term sharing models as well as salvage, collection and re-use.
 - Widening the number of resource types that are in scope (including e.g. power and vehicles, as well as materials).
 - Facilitating direct business-to-business resource sharing and transfer to embed salvage, re-use and sharing within business-as-usual supply chains and operations (as well as one-off instances of sales and donations).
- [The Cumbria Exchange](#) – is a virtual network of non-profits and businesses working together for the greater good of West Cumbria. It is a free initiative for community organisations and businesses to connect with each other to

offer free or in-kind support for mutual benefit. It primarily operates and provides brokerage support in West Cumbria but also extends the web-based facility to the whole of Cumbria. The Exchange encourages businesses to offer their support to groups or organisations in the local community - through sharing their knowledge, resources and skills; offer employees a different learning and development opportunity through engaging with their local communities; or through donating unwanted equipment. Equally, the Exchange provides a platform for community organisations to request support wanted in these areas.

- The Circular Economy Hub will be well positioned to learn from the virtual brokerage model the Exchange demonstrates, with the design and development of a bespoke online platform for businesses and community organisations to use. The Hub will employ this model within the specified focus area of facilitating and enabling resource sharing – between businesses, public and third sector organisations too. Additionally, as well as allowing room for the donation aspect, the Hub will enable the sale, hire, trade and sharing arrangements for resources.

Finally, the Hub will benefit from alignment to other umbrella organisations facilitating business networking and supporting cross-sector collaboration across South Lakeland, e.g. local Business Improvement Districts.

Barriers this project will address

Lack of deep cross-sector collaboration on decarbonisation

The first barrier the project aims to address is the lack of a current network that enables deep collaboration amongst the business community, public and third sectors regarding decarbonisation efforts. The Hub project seeks to address this barrier through the establishment of the Circular Economy Hub membership network and research and advisory wing.

To ensure the network garners a sufficiently large, cross sectoral, and engaged membership of organisations across South Lakeland aiming to benefit from increased resource sharing locally, resource must be allocated to coordinate and manage its establishment – the role will be critical within the first year, including to: deliver a programme of activity to communicate the vision for the Hub with organisations across South Lakeland and embed mechanisms for easy sign up, and engage and convene members to help shape the platform's development to suit their needs and intended usage.

The research and advisory wing will collectively serve organisations across South Lakeland through enhancing knowledge and capability in circular and sharing economy approaches including market research, demand testing and audits to understand potential for resource optimisation and waste reduction, and through sharing of successful practice in e.g. reviewing and revising product and process design to maximise salvage.

To demonstrate the removal of this barrier, the scale and makeup of the Hub's established network will be monitored overtime, as well as gathering qualitative feedback on increased collaboration and knowledge sharing on decarbonisation through circular and sharing economy approaches.

Lack of forum to facilitate resource sharing between organisations

The second barrier the project aims to address is the lack of a current forum that would facilitate, encourage, and enable product/process redesign, resource sharing and waste optimisation between organisations. The Hub project will address this barrier through the creation of a bespoke, easy to use, online platform for all businesses, public sector teams and third sector organisations to utilise. The online platform will allow organisations to publicise their underutilised assets and materials, with options to set up a direct sale, trade, donation or share/hire agreement with another organisation looking to utilise the resources. For example, if a delivery vehicle was only used on average three days per week by one organisation, or deliveries were often completed with spare load capacity – the organisation could advertise a sharing arrangement for another organisation making deliveries in similar areas and circumstances.

To enable success, this assumes organisations have the capacity and knowledge to investigate their current resource usage across all aspects of business operations, production processes and current supply. Through engagement with stakeholders at co-design workshops, this was identified as a potential challenge. Therefore, a key role for the Hub team, in the enabling activities to ensure this project is a success in breaking down this barrier, will be to provide support and guidance to businesses to investigate what opportunities there are for product redesign, use of salvage and reuse of materials, resource sharing and waste reduction within their operations.

To demonstrate the removal of this barrier, the usage of the Hub's online platform will be monitored. The numbers and type of businesses visiting the site, the listings posted, and successful resource sharing arrangements given rise to as a result, will be key metrics to evaluate success. In addition, qualitative feedback from organisations can be gathered to understand what aspects of the platform are enabling success, and where improvements can be made.

The rural context and adapting to the lack of economies of scale

The rural context brings with it heightened barriers in terms of the economies of scale across transport, energy and waste. This includes, for example:

- the lack of population and business density that results in often inefficient transport journeys for passengers and freight.
- the lacking volume and variety of waste products and underutilised assets to be readily available without significant searching and support.

- Fewer opportunities for utilising waste heat to power neighbouring facilities, due to lower density of the built environment.
- It also reduces opportunities for procurement of resources locally. Further, many businesses in the area are micro businesses and have limited staff capacity available to work to identify the opportunities – particularly a challenge in context of Cumbria's growing workforce gap and in current economic conditions.

The Hub will enable smart adaptation to these contextual barriers, intervening to research, promote, and coordinate the opportunities that exist – providing proactive analysis of businesses to audit processes and assets to understand opportunities for resource sourcing and sharing between different organisations (including the sharing of vehicle journeys) and product and process design optimisation.

Systems this project addresses

Through delivering against the above outcomes, the project is ultimately intended to deliver greenhouse gas emissions savings, and is intended to impact across three core systems:

- **Product Manufacture** – through the re-use of materials between organisations, delivering reductions in emissions from product manufacturing and the purchase of raw materials.
- **Mobility** – through the sharing of vehicle fleet, optimising journeys and deliveries by sharing commuter and freight vehicles between organisations, delivering reductions in emissions from transport, reductions in road congestion and less pressure for new road building.
- **Heat and Power** – through research into waste heat mapping and exploration of potential for re-capture and re-use of waste energy, delivering energy efficiency gains and local renewable energy generation.

Scaling and replicability

The Hub project aims to act as an innovative demonstrator into:

- How public, private and third sector organisations can come together into a forum for direct resource sharing.
- How circular and sharing economy approaches can be applied in a rural area, including enabling businesses from different sectors to collaborate in completely new ways.

As the Hub programme moves forward in South Lakeland, there is potential to widen the scale to extend to the whole of the Westmorland and Furness geography. This expansion will lead the Hub to deliver greater impact, supporting sharing and circular economy developments for a larger population of organisations.

If proved successful, this model can be replicated in other rural areas across the UK, with minimal adaptation to suit the unique make up of local economies. The opportunity for scale will be maximised in year two, when once operational and demonstrating impact, the success stories and process learnings can be shared and disseminated with stakeholders across the UK to inspire and explore application in their own settings – including through looking to work with the [UKRI Circular Economy Hub](#) as a mechanism to disseminate findings.

Delivery plan

Project refinement and funding application

- Additional stakeholder engagement with local organisations to strengthen knowledge on the levels of likely demand for Hub services and the kinds of resources in scope.
- Best practice review and engaging with project teams from similar initiatives elsewhere (including the [UKRI Circular Economy Hub](#))- developing case study bank of examples to draw on.
- Identify and convene lead partners and agree ownership and governance and ownership structures – for example, a new Community Interest Company (CIC) could be established to own and deliver the Hub, it could be added to the remit of an existing suitable organisation or partnership, or this initiative could be Council owned and led. Third party specialist advise is likely required to support in this.
- Any refinements to project design following the above, funding bid development and submission.

Year 1 delivery

- Establish Hub Terms of Reference, legal and insurance arrangements.
- Recruitment of the Hub management and coordination team.
- Agreeing Year 1 action plan, objectives, and initial output and outcome targets.
- Programme management processes established, reporting and governance arrangements set up.
- **Workstream A: establishing the Hub's Research and Advisory wing,** recruitment of staff members and establishing core research priorities and remits, including: further market research and testing through business outreach and engagement to conduct a pilot of organisation and network level circular and sharing economy audits, and working with research partners including universities and government partners to develop tools for emissions and carbon savings analysis, monitor and evaluate metrics,

and researching potential for transport logistics optimisation, waste heat capture for local power generation.

- **Workstream B: creating the Circular Economy Hub Membership Network**, coordinate and manage its establishment: communicate the vision for the Hub with organisations across South Lakeland and embed mechanisms for easy sign up, engage and convene pioneer members to help shape the platform's development to suit their needs and intended usage.
- **Workstream C: creating the Circular Economy Hub Online Platform:** agreeing core principles of platform and specification for its creation, managing the procurement of web platform design and developers, working with developers to create the bespoke platform building on the findings from engagement with members and best practice from similar forums elsewhere, pilot testing the platform and launching, communicating its launch.
- **While workstreams A, B and C are being established, a pilot cohort (Wave 1) of businesses will be recruited**, incentivised with resource and budget assigned for their engagement in the design of the Hub and to become early adopters – partaking in organisation-level audits to assess potential opportunities for increased circularity and resource sharing, establishing and demonstrating early trade and sharing agreements.

Year 2 delivery

- Agreeing year 2 action plan following year 1 progress and outputs achieved, setting new objectives and realistic targets for output and outcome metrics.
- Engagement and outreach with members to disseminate advice and guidance on identifying opportunities for resource sharing and waste optimisation in and between their organisations.
- Supporting members to use the platform, providing training and guidance.
- Encouraging members to utilise the platform, publish listings, and publicise listings to members and target members to garner interest.
- Gathering feedback and making improvements as usage increases.
- Monitoring usage and success against target metrics.
- Research, establish and implement project legacy plan with long term financing arrangements.

Stakeholder engagement

Key stakeholders to be involved in the next stage of work include:

- Businesses (including those business partners engaged in this feasibility study) and business umbrella organisations including BIDs/Chamber of Commerce
- Community organisations
- Public sector teams
- University students and academics
- Transport hauliers
- Product developers
- Circular and sharing economy experts and practitioners e.g. Rebuild Site, the Cumbria Exchange, Zero Waste Scotland, Ellen MacArthur Foundation, UKRI Circular Economy Hub.

Engagement with these groups is critical for the successful establishment and operation of the Circular Economy Hub – and in order to achieve its vision to act as an innovative demonstrator into how public, private and third sector organisations can come together into a forum for direct resource sharing, and how circular and sharing economy approaches can be applied in a rural area, including enabling businesses from different sectors to collaborate in completely new ways.

As outlined in the delivery plan, active and continual stakeholder engagement is required throughout preparatory work, year 1 and year 2, to: establish the membership network; design the online platform; encourage stakeholders to use the platform; share success stories; gather feedback and continuously improve.

Dissemination of findings

Findings will be disseminated locally via networking events every six months where member organisations can come together to hear about good practice and discuss the progress of work so far. These networking events could also be used to recruit new members, gather feedback from stakeholders, explore potential synergies, new resource sharing opportunities and complementary initiatives which could be taken forward.

Outside the area, the project will share its findings at an online event every 12 months, targeted at:

- Local authorities seeking to support decarbonisation
- Community groups invested in resource sharing initiatives
- Organisations wanting to embed circular economy approaches
- Other groups interested in hearing about the work in South Lakeland.

These events will showcase success stories, lessons learned and best practice to inspire other areas to explore application in their own settings.

Finance and Resource Plan

Table 2: Circular Economy Hub cost estimates

Item	Description	Year 1								Year 2				Total	
		Q1		Q2		Q3		Q4		Q1		Q2		LB	UB
		LB	UB	LB	UB	LB	UB	LB	UB	LB	UB	LB	UB		
Project management & coordination	Staffing cost: 2-4 X FTE (cost reflects 1-2 senior staff/PM, 1-2 project support, 1.5X salaries to include overheads, recruitment, training and expenses)	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 180,000	£ 360,000
Steering group	£6k-£12k budget for reimbursement of steering group members	£ 1,000	£ 2,000	£ 1,000	£ 2,000	£ 1,000	£ 2,000	£ 1,000	£ 2,000	£ 1,000	£ 2,000	£ 1,000	£ 2,000	£ 6,000	£ 12,000
Research and advisory wing services	Staffing cost: 3-5 X FTE (cost reflects 1-2 senior and 1-3 junior staff members, 1.5X salaries to include overheads, recruitment, training and expenses)	£ 30,000	£ 71,250	£ 30,000	£ 71,250	£ 30,000	£ 71,250	£ 30,000	£ 71,250	£ 30,000	£ 71,250	£ 30,000	£ 71,250	£ 180,000	£ 427,500
Research and advisory wing services	£140k-£280k budget to procure expert academic & consultancy support	£ 30,000	£ 60,000	£ 30,000	£ 60,000	£ 20,000	£ 40,000	£ 20,000	£ 40,000	£ 20,000	£ 40,000	£ 20,000	£ 40,000	£ 140,000	£ 280,000
Online platform	£2-4k per annum budget for website domain, hosting, security & maintenance	£ 2,000	£ 4,000							£ 2,000	£ 4,000			£ 4,000	£ 8,000
Online platform	£200k-£300k budget to procure bespoke website development & design			£ 50,000	£ 75,000	£ 50,000	£ 75,000	£ 50,000	£ 75,000	£ 50,000	£ 75,000			£ 200,000	£ 300,000
Membership network	£12k-£24k budget for events & workshops to bring together stakeholders (1-2 per quarter)	£ 2,000	£ 4,000	£ 2,000	£ 4,000	£ 2,000	£ 4,000	£ 2,000	£ 4,000	£ 2,000	£ 4,000	£ 2,000	£ 4,000	£ 12,000	£ 24,000
Wave 1 pilot	£22.5k budget for business incentivisation (£1.5k per business, 15 businesses)					£ 11,250	£ 11,250	£ 11,250	£ 11,250					£ 22,500	£ 22,500
Communications	£7k-£10k budget for launching online platform & targeted comms									£ 3,500	£ 5,000	£ 3,500	£ 5,000	£ 7,000	£ 10,000
Legal and insurance costs	Legal fees, liability insurance & cover (c.£20k-£40k per annum)	£ 20,000	£ 40,000							£ 20,000	£ 40,000			£ 40,000	£ 80,000
Contingency	10%	£ 11,500	£ 24,125	£ 14,300	£ 27,225	£ 14,425	£ 26,350	£ 14,425	£ 26,350	£ 15,850	£ 30,125	£ 8,650	£ 18,225	£ 213,325	£ 220,050
Optimism Bias	15%	£ 18,975	£ 39,806	£ 23,595	£ 44,921	£ 23,801	£ 43,478	£ 23,801	£ 43,478	£ 26,153	£ 49,706	£ 14,273	£ 30,071	£ 351,986	£ 363,083
Total		£ 145,475	£ 305,181	£ 180,895	£ 344,396	£ 182,476	£ 333,328	£ 182,476	£ 333,328	£ 200,503	£ 381,081	£ 109,423	£ 230,546	£ 1,001,248	£ 1,927,860

Note: LB = lower bound of range estimate, UB = upper bound of range estimate

Estimated total funding required for first 18 months: **£1,001,248 – £1,927,860**

Project legacy

The Hub is intended to provide a long term mechanism for organisations to cooperatively optimise their resources and continue to support the decarbonisation of local supply chains.

The largest costs are associated with the Hub's set up across years 1 and 2, once up and running, longer term costs are lower but are likely to include:

- General online platform maintenance and improvement.
- Any updates and changes to format to meet user demand and challenges arising.
- Research and advisory wing team members, primarily focussed on supporting organisations to conduct audits.
- Programme management to support ongoing operations and continuous improvements as above, monitoring progress, sharing best practice to scale, establishing common themes or barriers and bringing businesses and experts together to tackle them, ongoing dissemination of learning/best practice regionally and nationally.

In Year 2 of the project, research will be undertaken to establish and pilot ongoing funding mechanisms, which might include:

- Membership structure fees (with various membership packages dependent on organisation type, usage, size etc), if members are realising benefits to their organisations in the form of cost savings that enable this to achieve good return on investment.
- Members paying commission on items sold or loaned, proportionate to the income generated, where members are only required to pay when actively benefitting from the Hub's service.
- Sponsorship package for larger businesses with a local presence to contribute funding as part of their Corporate Social Responsibility (CSR) commitments. This could be incentivised through PR benefits for firms, such as through the addition of a logo, branding and communications narrative around support for the Hub.
- Consider green finance loans (log of options included in the next chapter), if there are higher up-front costs at the end of year 2 but slower revenue generation aspects to repay.
- Consider green finance grants (log of options included in the next chapter), if costs exceed revenue generation potential longer term.

Further, to enhance the project's legacy and maximise impact longer term – complementary programmes or extensions to the core initiatives maybe launched that could combine a revenue generation aspect. For example:

- A Library of Things to increase resource sharing among small businesses and residents.
- The Hub extending its offer to skills and knowledge sharing support around circular and sharing economy principles, and supporting the development of new business models and supply chain processes.
- The establishment of a product design workshop and demonstrator to encourage product and manufacturing process evolution to maximise re-use.
- The conducting of analysis and mapping material flows and setting up an established system for sharing transport logistics.
- Working with the council to develop and establish a zero carbon local heat network.

In addition, the work of the Hub could positively influence the council to develop a Circular Economy Strategy for Westmorland and Furness.

Net zero tools to be used

The project would benefit from the development and use of analytical tools and guidance that enable analysis of organisation level emissions, resource usage in operations and production processes, and vehicle fleet journeys and commuter/freight capacity.

The Hub's research and advisory wing will seek to measure and monitor the scale of greenhouse gas emissions savings associated with the increased re-use, resource sharing and innovation in product and process design to embed greater circularity. It will be important for metrics to consider, and subtract, any increases in emissions associated with any changed products, processes or increased transportation of goods between organisations.

The Hub team will engage with university students and academics to support research methods and net zero tools. The Hub team will also engage with transport hauliers, as well as businesses directly, to develop greater understanding of current transport logistics, to develop data and mapping work to identify efficiencies. Additionally, the Hub team will seek to gather the latest intelligence on waste heat and plans for low carbon heat and power generation locally to support organisations seeking to forward plan in this area.

Open-source data plans

Data will be collected and analysed on the scale and makeup of the membership of the Circular Economy Hub, and the usage of the platform, outputs and impacts of this use including salvage and re-use rates of waste otherwise headed for landfill, carbon savings from resource sharing increases, reduction in use of raw materials and so on. This data can be published on the platforms website to allow open access, and communicated with stakeholders.

5. Finance Landscape Review

Overview of the green finance landscape

Access to finance, and navigation of financial options was identified as a key non-technical barrier to delivering decarbonisation in the region. Through horizon scanning of government websites, community energy websites, grant funding organisations and banking sector websites, and in consultation with our Green Finance Advisory Group, the following Green Finance Log has been produced.



Green Project
Finance v2.xlsx

The Green Finance Log provides an overview of the landscape of net zero finance options, grouping those operating at national, regional and local scales. Options are divided into two key types of funding: 1: non-repayable/grant funds, and 2: repayable/loans.

Type 1: non-repayable/grant funds

This includes applicable national government funding streams, competitions and grants, applicable National Lottery funding pots, and over 20 grant funding organisations with net zero remits. At the regional and local scales, options include North West and Cumbria specific funding streams – both public sector led (e.g. Net Zero North West Hub), and charity-led (e.g. Community Foundations). Crowdfunding is also included as a way of raising funds to invest in community net zero and sustainability initiatives, as well as raising funds through local renewable energy generation schemes, and attracting local business investment including those larger businesses with defined CSR funding arrangements.

Non-repayable grant funds are an option for projects where total costs exceed revenue generation, to cover gaps, and also where no revenue generation is expected – but projects are expected to deliver all important social, economic and environmental benefits that align with funder objectives.

Type 2: repayable/loans

This includes alternative banks and building societies providing loans to finance green initiatives and community groups (e.g. Triodos Bank), with some offering low and no interest loans (e.g. Radical Routes). Investing models that look to pool capital from individual investors to deliver social impact are also included (e.g. Ethex, and Pure Leapfrog). Innovative and place-based green finance loan models

are also included, such as Community Development Finance Institutions (CDFIs), reinvesting Local Pension Funds, and Community Municipal Investments (also known as Climate Bonds).

Repayable loans are a viable option for financing projects that will deliver a return on investment that covers the cost of the loan (including any interest). They can be utilised to kickstart projects where upfront costs are high but revenue generation is forecast that will enable loan repayments.

Net Zero Living Fund

To resource a sustained 'Net Zero Living Fund' in South Lakeland that can be used to support the implementation of a wide variety of net zero action in the region, innovative and place-specific green finance options could be explored. Three key options include:

- Community Development Finance Institutions (CDFIs) - CDFIs are small non-bank lenders, like credit unions, but have a greater focus on local business lending, often to support businesses that are not able to get traditional bank finance. They are not-for-profit lenders providing usually 3-5year loans. They do this through receiving large bank finance and taking the role, responsibility and liability for lending, intentionally disseminating in smaller portions to use to support communities in different way. There are now 35 CDFIs across the UK, [Enterprise Answers](#) is the CDFI based in Cumbria.
- Local Pension Funds - can be captured and directed to provide more impactful local investment, but they operate at larger than local scales and have the duty to make investments that are delivering a risk adjusted return and as such cannot veer far from delivering good returns on investment. More information on how local pension funds are being reinvested locally for greater impact can be found on the Impact Investing Institute [website](#).
- Community Municipal Investments (also known as CMIs, or Climate Bonds) - are an innovative way of enabling the public make a positive impact on the climate crisis, as well as being a useful tool to allow councils across the UK to accelerate Net Zero plans. For example, since 2020, over 800 investors have invested £2million with two councils, West Berkshire and Warrington, to fund solar energy projects. Fifteen percent of CMI investors also chose to donate their earned interest back to the council. Abundance Investment provide more information [here](#).

To continue work to explore these options and establish a Net Zero Living Fund in South Lakeland, the team could seek to continue with the financial advisory expert advisory group convened to inform this feasibility study, and conduct a best practice and lessons learned review of the three options – studying examples where these investment initiatives are being utilised elsewhere in the UK and engaging with lead partners and key stakeholders to inform plans for replicating in South Lakeland. This could be resourced as part of project coordination and

research teams set up to deliver projects A and B of this work, as an extension to project legacy activities, with additional estimated costs amounting to approximately £50,000 to cover staff time to conduct research and reimbursing the ongoing engagement of the financial advisory panel.

6. Conclusions & Next Steps

Summary Conclusions

The co-design approach brought together a large number and a wide variety of stakeholders across public, private and third sectors in South Lakeland, and was successful in identifying two viable and well supported projects: Place to Plate, and the Circular Economy Hub.

The use of the Place Standard Tool with a Climate Lens (PSTCL) in workshop 1 was useful in focussing minds on the particular features of the place, and prompted participants to identify, and become familiar with, the non-technical barriers to decarbonisation in the local rural economy. However, additional bespoke facilitation and tools were needed to then collectively and consensually identify and further develop projects that met the brief. Follow up workshops were also held to further refine project proposals. Whilst the PSTCL was initially helpful in drawing out the local reality of what climate change adaptation means for South Lakeland, it needed significant adaptation to enable the development of project ideas at sufficient detail for this feasibility study.

Project A: Place to Plate

As detailed in Section (3), Place to Plate will deliver the research and action required to establish how a systems approach can be taken to the decarbonisation of food and drink supply chains in South Lakeland. This will be done through:

- **Research** into “What does local, low carbon food and drink look like for South Lakeland?”
- **Identification and engagement of key stakeholders** at the local, regional and national level.
- **Creation of a toolkit.**
- **Delivery of 3-6 demonstrator projects.**
- **Creation of a Sustainable Food Hub.**
- **Delivery of dissemination and networking events.**

This project will address non-technical barriers to decarbonising the food and drink system (as identified through the co-design process) including:

- Lack of evidence base for what a low carbon food and drink supply chain would look like in South Lakeland.

- Lack of or negative perceptions of what a low carbon food and drink supply chain would look like in South Lakeland, and what this would mean for local businesses and farmers.
- Siloed approaches to decarbonisation across the food and drink system in South Lakeland.
- Lack of economies of scale and issues around localising supply chains that are inherent in the rural context.

And, in line with the IUK funding criteria, will deliver greenhouse gas emissions savings, and is intended to impact across three core systems: Land, Transport, and Manufacturing (all of which are intersected by Heat and Power).

An important reason to tackle these emissions through the entry-point of the food and drink system is that, as a foundational element of South Lakeland's economy (through agriculture), it will have significant carbon reduction implications both within and outside of the region if efforts are made to decarbonise across the piece.

The project's research outputs will be designed to enable scaling and replication of the approaches used in the research phase and the design of interventions by the demonstrators.

The Sustainable Food Hub will use the learning from the demonstrators to develop similar solutions at scale for different parts of the food and drink system and enable the sharing of learning and incubation of new cross-sectoral approaches through its networking events.

This project was originally conceived in broad terms as two different but similar projects at the initial design workshop. It has subsequently been refined by selected stakeholders into one project. Due to this, however, it is at a much earlier stage of concept development than the Circular Economy Hub. As such, work is needed to further refine the idea with input from key local partners who can provide deeper insights as to how it could be delivered in South Lakeland, and finance options for the demonstrator projects. The proposal needs to be stress tested and interrogated further before it can be formulated into a funding bid or business case.

Project B: Circular Economy Hub

As detailed in Section (4) the South Lakes Circular Economy Hub project proposes to bring together organisations across the private, public and third sectors within South Lakeland to identify options for improved resource use - sharing ideas, materials and other resources between organisations and reducing waste.

The types of resources will include heat, power, space, skills, and materials (such as any wasted by-products from production processes), and any other underutilised assets (such as vehicle fleets that are not fully optimising journeys for maximum passengers/freight). The Hub will provide business support and advisory capacity into the potential to better embed circular economy and sharing economy

principles into current operations, and a membership network and online forum to facilitate this business-to-business sharing and waste optimisation.

The South Lakes Circular Economy Hub will support the transition to net zero in South Lakeland by removing the following key non-technical barriers:

- The lack of a current network enabling deep collaboration amongst the business community regarding decarbonisation efforts.
- The lack of a current forum that would facilitate and enable resource sharing and waste optimisation between organisations.
- The lack of economies of scale due to the rural context.

And, in line with the IUK funding criteria, will deliver greenhouse gas emissions savings, and is intended to impact across three core systems:

- **Product Manufacture**
- **Mobility**
- **Heat & Power**

The Hub project aims to act as an innovative demonstrator into:

- How public, private and third sector organisations can come together into a forum for direct resource sharing.
- How circular and sharing economy approaches can be applied in a rural area, including enabling businesses from different sectors to collaborate in completely new ways.

If proved successful, this model can be replicated in other rural areas across the UK, with minimal adaptation to suit unique make up of local economies. The opportunity for scale will be maximised in year two, when once operational and demonstrating impact, the success stories and process learnings can be shared and disseminated with stakeholders across the UK to inspire and explore application in their own settings.

However, as the project proposal is in early stages of concept development and project design, and unique in its scale, approach and application, much more engagement with organisation, market research and demand testing, are required to stress-test the proposals and estimate the level of resource sharing and waste optimisation the project can aim to achieve in South Lakeland.

Synergies between the two projects

There are many opportunities for connectivity to maximise impact through delivering the two projects simultaneously.

- Both projects will play a key role in supporting dominant sectors of the economy in South Lakeland to decarbonise – including agriculture and tourism.

- Waste reduction is a common theme across both projects. Initiatives on food waste reduction are being pioneered already in South Lakeland, and there is opportunity to explore the application of these initiatives in the wider business base and supply chains through the work of the Circular Economy Hub.
- There are opportunities, as part of the Place to Plate project, to explore how circular economy and sharing economy principles can be incorporated in demonstrator projects – learning from the work and guidance of the Circular Economy Hub research and advisory wing. With the Place to Plate initiative focussed on decarbonisation of the entire food system, there is a role for circular and sharing economy principles to be embedded in the approach – including e.g. facilitating the re-use of currently wasted by-products in the food manufacture supply chain.
- Reducing emissions from transport logistics is also a common theme between the two projects, and there is opportunity for cross-fertilisation of ideas and approaches to scale impact in this area. Whilst the Place to Plate project will consider food distribution specifically, the Circular Economy Hub seeks to explore optimisation of other freight and passenger journeys.

Next Steps & Recommendations

As outlined above, the co-design process enabled the creation of two new projects to take forward to IUK funding application, but further actions are to be taken between now and funding bid submission to further refine the project proposals and plans.

- Additional stakeholder engagement, including convening core groups of stakeholders to stress test ideas and refine proposals.
- Market and demand testing – particularly for the Circular Economy Hub – engaging with local organisations to get an initial idea on the potential scale and type of assets and resources in scope.
- Best practice review and engaging with project teams from similar initiatives elsewhere – developing an understanding of key success factors and lessons to be learned to factor into final proposals.
- Identify and convene lead partners and agree ownership, governance and accountability structures.
- Any refinements to project design following the above, and further assessment against the requirements of the funding application, funding bid development and submission.
- Utilising the Green Finance Log to consider alternative streams of finance where required, to factor into project legacy planning, or alternative sources of funding to supplement IUK funds if applications are unsuccessful.

Appendix 1: Top Project Ideas (Co-design workshop)

In addition to the two projects included in this report there were a further 3 projects co-designed on the day that did not gather the highest numbers of votes, so were not taken forward to the final Design Lab stage. These were:

- 1) Green knowledge and skills hub;
- 2) Low Carbon Langdale; and,
- 3) Peat restoration.

Their project summaries are outlined below (transcriptions from the original summary sheets from the Co-Design Workshop).

Green knowledge and skills hub

What is the idea in a nutshell?

- Green knowledge and skills hub – connected to innovation hub – GSK
- Opportunity for both businesses and communities

Why is this project important for South Lakeland?

- Currently nothing here for either biz or community to understand how net zero in our **specific context**
- Rural businesses have different needs – transporting goods
- Factoring in difference between urban and rural

Which of the key emission areas would benefit from this work?

- Power, heat, transport – could expand scope

Which systemic barriers would this project tackle?

- Challenges around behaviour change (potential for non tech info and support)
- Skills and knowledge

Why is collaboration important for this project?

- Delivery connection between businesses

- Teach – learn – act
- Trying to pool what already exists – having one org
- Keeping it moving

Who are the dream team of collaborators on this project?

- CAFS
- ZCCP
- Chamber of commerce
- Electricity NW
- Cumbria LEP
- Cumbria tourism
- Farmers Network

Low Carbon Langdale

What is the idea in a nutshell?

- Piloting net zero transition
- Creating a model which can be replicated in other geographical areas
- The model will tackle a number of key barriers
- Decarbonisation of heat – community owned heat network
- Transport – electric bikes
- Housing – hive network
- Perception
- To include business networking and collaboration

Why is this project important for South Lakeland?

- Tackles every barrier that all areas are facing
- The model can be replicated
- Tackles the big emission areas
- Large tourist influx which can help behaviour change

Which of the key emission areas would benefit from this work?

- Heat
- Transport
- Housing
- Agriculture
- Food waste

Which systemic barriers would this project tackle?

- Behaviour change
- Transport
- Access to sustainable energy
- Proof of concept
- Collaboration

Why is collaboration important for this project?

- Place based approach requires collaboration with all stakeholders
- The place includes all significant barriers. The place includes visitor economy and agriculture
- Engage with the visitor economy and widen remit of behaviour change

Who are the dream team of collaborators on this project?

- Business – visitor economy and agriculture, Langdale hotel, national trust
- Transport providers, stagecoach
- Energy suppliers
- Council
- Community
Visitors

Peat Restoration

What is the idea in a nutshell?

- Accelerating peat restoration
- Bringing it into public consciousness
- Finding innovative ways to finance – local offset or crowd funding

Why is this project important for South Lakeland?

- Unique opportunity – we have peat bring natural heritage to communities
- Co-benefits – flood alleviation, biodiversity, clean water supply

Which of the key emission areas would benefit from this work?

- Land

Which systemic barriers would this project tackle?

- Collaboration
- Finance
- Behaviour change

Why is collaboration important for this project?

- It wont happen otherwise

Who are the dream team of collaborators on this project?

- Local nature partnership
- Cumbria wildlife trust
- Peat partnership
- Landowners
- LONPA
- National trust

Many other initial project ideas were generated in the early part of workshop 1 which did not get taken forward to the stage of development of the top 6. The copies of the initial idea forms that we asked stakeholders to complete on the day are in Appendix 2.

Appendix 2: Additional Project Ideas (Co-design workshop)

The project ideas outlined below were gathered from all participants at the Co-design workshop. Forms have been provided based on those made available to the team following the workshop.

What is the idea in a nutshell?

Package of heat decarbonisation activities for villages to cut energy bills + carbon - heat pumps, air tightness, insulation, heat networks

Which systemic barriers would this project tackle?

→ energy costs for homes
→ fuel poverty
-

Why is this project important for South Lakeland in particular?

- Gas boilers ban post 2026,
- Old housing stock, stone built reliance on oil
- cold houses, high energy bills

Why is collaboration important for this project?

→ costs ↓ massively if co-ordinated
→ ambient heat networks share heat around village

Which of the key emission areas would benefit from this work?

- Home + business heat CO₂ emissions

Who are the dream team of collaborators for this project?

- Housing Associations, WAF Council
- DESNEZ - heat networks

What is the idea in a nutshell?

Pier to Pier business ^{+ community} network to educate inform and share knowledge around why net zero is important.

Which systemic barriers would this project tackle?

Community engagement

Why is this project important for South Lakeland in particular?

Lack of knowledge, resource + community has been identified as a barrier

Why is collaboration important for this project?

Collaboration is key as this network relies on business + community engagement

Which of the key emission areas would benefit from this work?

Industry + residential

Who are the dream team of collaborators for this project?

Business + community representatives

What is the idea in a nutshell?

Project to support residential rental property owners to convert their property portfolio into a much more energy efficient one

1. Funding
2. Co-operative / Hub Group for SLOC

Which systemic barriers would this project tackle?

- Housing Policy
- Visitor vs local community
- Support agriculture / business / industry.

Why is this project important for South Lakeland in particular?

This is focused on providing energy efficient homes for local residents at properties they can afford. Stopping conversion of residential lets to holiday homes. As energy efficient homes too expensive / unviable for Property Landlords

Why is collaboration important for this project?

→ Everyone benefits
- Residents
- C

Which of the key emission areas would benefit from this work?

- Residential
- A significant contributor to CO₂ homes in area
- Retains property occupation in South Lakes reduces commuter miles.

Who are the dream team of collaborators for this project?

CAFS
Uniting W+F
Large Property Landlords.

What is the idea in a nutshell?

a Peat restaurant
or
b Eng educationalists
→ schools

Which systemic barriers would this project tackle?

a skill shortage
b Finance

Why is this project important for South Lakeland in particular?

a Reducing emissions for Peat
b children hold the keys to behavioural change

Why is collaboration important for this project?

Restaurant project
to engage communities

Which of the key emission areas would benefit from this work?

a Peat
b all

Who are the dream team of collaborators for this project?

a WWT Council Farmers
b Schools - u

• Zero carbon roofing product

What is the idea in a nutshell?

RUAC?
Create x3 car free towns
by utilizing layers
funding a trust
to design & get community buy in.
x unlocks different funding.
Redesign as shared spaces where norms is to walk
• Catalist to behaviour change - Wellbeing & destigmatised to live in Lakeland.
• standard. → University
• Peat

Which systemic barriers would this project tackle?

- Convenience perception
- Politics - pleasing silent board majority instead of silent majority.
- Perception of achievability.

Why is this project important for South Lakeland in particular?

- Towns designed for work & car
- Visitor experience -ve due to traffic
- Emissions associated with short journeys due to ltd options
- Small enough to be achievable.

Why is collaboration important for this project?

- Needs to be designed with residents taking into account their needs.
- Utilise European cities where this has worked, as the norm & testimonials that it's nicer!!!

Which of the key emission areas would benefit from this work?

• Transport

Who are the dream team of collaborators for this project?

- Designers
- WWT Council - local procurement
- Landscape designers to green former roads.

What is the idea in a nutshell?

Establish a really effective information and networking hub for South Lakeland linking and supporting all parts of the community - gov, public services, bus, local communities and individuals. to address decarbonisation efficiently and effectively

Which systemic barriers would this project tackle?

Lack of Information / Understanding, Sharing best practice, addressing other barriers

Why is this project important for South Lakeland in particular?

Fragmented rural communities with some very significant businesses. that all need to come together to deliver net zero by 2037

Why is collaboration important for this project?

It involves the entire community (as defined above) Could build on existing collaboration and partnerships

Which of the key emission areas would benefit from this work?

All.

Who are the dream team of collaborators for this project?

Councils, ZeeP, Community + Business Groups (CCComere), etc AND Their Members, Participants Similar Groups elsewhere

Apprentice ships for supply based industries

What is the idea in a nutshell?

Resilience hubs - defining, refining & access. local solutions to energy, transport, modelling, sharing expertise knowledge building engagement. pavements for rural communities - safe walking = cycling links between hamlets & villages to facilitate connectivity & reduce short car journeys, access to local amenities

Which systemic barriers would this project tackle?

Why is this project important for South Lakeland in particular?

Why is collaboration important for this project?

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

What is the idea in a nutshell? - "Carbon catalyst"

Food hub - "Field to Fork"

Team of people
↳ Proj mgr at each stage
↳ PR + comms
Carbon emission through the full chain
business to business links

Which systemic barriers would this project tackle?

Why is this project important for South Lakeland in particular?

Reducing miles
Huge opportunities for rural community

Why is collaboration important for this project?

Which of the key emission areas would benefit from this work?

Space

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

A B2B coordinator who can (with a team) advise & implement communication and shared knowledge of projects to help reduce & drive emission to net zero. The team could also take be used into other companies and

Which systemic barriers would this project tackle?

Communication
Access to information
Uncertainty

Why is this project important for South Lakeland in particular?

To drive the change & establish & grow a network of people & business who all have the same objective, net zero by 2028

Why is collaboration important for this project?

It will involve many business & organisations which will learn & grow on both a business professional & personal level.

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

Incentives to move solar & retrofit trades into the area

Incentives for businesses to cut carbon in rates reductions or to the grant at VAT rates

Which systemic barriers would this project tackle?

Lack of trades to deliver change / even quote for grants funding

Changing attitudes

Why is this project important for South Lakeland in particular?

Because demand for building improvement outstrips supply

To incentivise carbon savings

Why is collaboration important for this project?

Has to be equal opportunity, fair, transparent

It is cross sector cross community

Which of the key emission areas would benefit from this work?

Home energy use

Energy use, food waste, travel

Who are the dream team of collaborators for this project?

Trades guilds / council

Council, govt

What is the idea in a nutshell?

Skills Academy
Green Skills Hub + Green Technology manufacture

Which systemic barriers would this project tackle?

Availability of skills to retrofit homes.

New knowledge coming into South Lakeland → leads to confidence in the way forward Net Zero

Why is this project important for South Lakeland in particular?

Old homes throughout South Lakes that need retrofitting

Why is collaboration important for this project?

People will need to be trained in skills so - Furness / Kendal Colleges would be collaborators

University liaison

Which of the key emission areas would benefit from this work?

Energy emissions - households

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

Develop *insetting* *for* Scheme.
(Carbon offset)

Which systemic barriers would this project tackle?

- Decarbonise residual emissions at a local level

Why is this project important for South Lakeland in particular?

- Heavy industry + tourism emissions
- Available land

Why is collaboration important for this project?

- Would involve many different organisations, regulators + public bodies to agree + resource.

Which of the key emission areas would benefit from this work?

- Using space (land) re-planting trees + Peat Bogs
- Funded by organisations + visitors to Lake District

Who are the dream team of collaborators for this project?

- Land owners
- National Parks
- Natural England.

What is the idea in a nutshell?

App for car sharing/
car borrowing
(like airbnb but for our cars)

Which systemic barriers would this project tackle?

This enables us to share our existing assets/resources, cut down on the costs of car use

Why is this project important for South Lakeland in particular?

Lack of public transport

Why is collaboration important for this project?

This is fundamentally an approach that organises for collaboration

Which of the key emission areas would benefit from this work?

Transport

Who are the dream team of collaborators for this project?

- A techie
- Someone who understands the issues/constraints/legalities/operational stuff of this idea
- A bunch of users

What is the idea in a nutshell?

Master plan + road map

Which systemic barriers would this project tackle?

Joining together all the activities that are happening to ensure all pulling in the same direction.
Facilitates collaboration, build networks

Why is this project important for South Lakeland in particular?

Lots of action but fragmented communities + groups + sectors means no overview
- we need to know where we are going with collective buy in

Why is collaboration important for this project?

Which of the key emission areas would benefit from this work?

Potentially all but would have a prioritized plan.

Who are the dream team of collaborators for this project?

Enthusiastic, action focused individuals representing broad spectrum of the region - places, businesses, sectors.

What is the idea in a nutshell?

Carbon Auditing Hub

An online portal that has a series of questions about a business premises or home. That not only gives recommendations for carbon reduction but could be a hub for online auditing.

Which systemic barriers would this project tackle?

- skills

Why is this project important for South Lakeland in particular?

Why is collaboration important for this project?

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

Green Hub Carbon Knowledge Hub
- Resource Material
- Anding courses - open books
- Support for experts - help on operations + research
- Supply chain

Which systemic barriers would this project tackle?

Green
Low of knowledge industry
Access to finance
Supply chain issues flow of energy data opportunities

Why is this project important for South Lakeland in particular?

Why is collaboration important for this project?

Need to make use of all expertise in the area - won't get on
only small buy-in + input
Large area which is critical for jobs + development
Over-reliance on one organisation keeps up to date with all
issues - won't win

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

CAHS - Zero Carbon Cumbria
Universities
Chamber
Greening NW
Cumbria Tourism
CLEP

What is the idea in a nutshell?

Install a network of cycle lanes,
off road, with hired electric
bikes.

Which systemic barriers would this project tackle?

Congestion on roads

Why is this project important for South Lakeland in particular?

Old road network & town
centres busy with traffic

Why is collaboration important for this project?

Land bought / leased from farmers,
Electric bikes to be leased

Which of the key emission areas would benefit from this work?

Car emissions

Who are the dream team of collaborators for this project?

Farmers / land owners /
Construction firms to build /
maintain tracks
Bike / e bike hire companies

What is the idea in a nutshell?

Housing energy (holistic energy service)
Journey from energy advice to understanding
retail + lifestyle opportunities to connecting
to funding to deliver.
With an Employer loan scheme (side to work
for solar panels)

Which systemic barriers would this project tackle?

knowing what to do, to you home
financial barriers
party liability to pay
access to knowledge

Why is this project important for South Lakeland in particular?

Tackle poor housing stock
Impartiality on advice
Bespoke to Re-home
Supports all demographics

Why is collaboration important for this project?

Involved 2 buy in

Which of the key emission areas would benefit from this work?

Home energy

Who are the dream team of collaborators for this project?

Cafs
Business/employers

What is the idea in a nutshell?

- Electric carshare scheme with
Cumbria-wide app
- Co-wheels

Which systemic barriers would this project tackle?

- Barriers to affordable transport,
more accessible than public transport,
useful in winter when bus service is
infrequent.
- Create well paid jobs to both help
roll-out and manage the scheme
- Help small businesses who need
to work in rural areas
- car is more accessible to
people with disabilities.

Why is this project important for South Lakeland in particular?

- Carbon impact of transport is high
- bus service is awful in the winter,
trains are unreliable and don't cover
most of the area.

Why is collaboration important for this project?

- Need large amounts of funding to
make the scheme affordable -
perhaps on a pay scale to support
people on the lowest income
- Need technical expertise to create and
manage the app or platform

Which of the key emission areas would benefit from this work?

- Re-use or shared use is a more
sustainable option

Who are the dream team of collaborators for this project?

- Innovate
- Cafs
- councils
- tech experts

- South Lakeland

What is the idea in a nutshell?

Creation of a 'one stop shop' that individuals + businesses can access to be directed to appropriate funding sources. They can then request support to make + administer applications / funding

Which systemic barriers would this project tackle?

It would help people navigate a large and complicated funding space
It would make application more efficient + produce greater success rate
Would ~~not~~ help remove funding management issues.

Why is this project important for South Lakeland in particular?

Rural isolation - digital connection
Rural issues for business cases.

Why is collaboration important for this project?

Needs a range of partners to identify opportunities and be effective in supporting applications + bid management

Which of the key emission areas would benefit from this work?

Energy
transport
heat
etc..

Who are the dream team of collaborators for this project?

Gateway partners.
Partners + contribution of skills
Accountable body.

What is the idea in a nutshell?

educate self-employed tradesmen / women on zero carbon renewable energy options eg. heat pumps, hydrogen etc.

Which systemic barriers would this project tackle?

- household energy
- currently these trades may not have the benefit of the latest knowledge because their local tradespeople are not having the knowledge

skills gap

Why is this project important for South Lakeland in particular?

high proportion of self-employed tradespeople vs national = 14% of working population

Why is collaboration important for this project?

because being self-employed means these people are isolated with no or little access to the latest scientific thinking

Which of the key emission areas would benefit from this work?

- household energy emissions
- small business energy emissions

Who are the dream team of collaborators for this project?

- self-employed tradespeople
- knowledge holders of the latest scientific knowledge
- universities
NB. we need to compensate the time of

What is the idea in a nutshell?

Retrofit a historic property/group of properties as "exemplars". Opportunity to share lessons learned and roll out more widely. And apply to wider housing stock? (more modern bases)

Which systemic barriers would this project tackle?

- Time/resource by sharing knowledge
- Historic building stock "what to do" / Rural

Why is this project important for South Lakeland in particular?

- understand challenges of historic building stock/ planning/ vernacular and benefits of

Why is collaboration important for this project?

Number of housing providers with similar challenges ~~but~~

Which of the key emission areas would benefit from this work?

Housing, Energy

Who are the dream team of collaborators for this project?

Builder/ installer ^{from out of area} technology/architects.
Housing providers/property owners.

What is the idea in a nutshell?

Nature for Climate Jobs

Which systemic barriers would this project tackle?

Planning
Landowner engagement
Employment
Skills gap

Why is this project important for South Lakeland in particular?

Young people into employment with Nature for Climate job skills development

Why is collaboration important for this project?

No one organisation could deliver this alone, it requires skills, training, development, mentoring, employability, diverse and local strategic plan for nature

Which of the key emission areas would benefit from this work?

Land based CO2 by emitting peat
Separating high woodland/peatland/peat
carbon sequestration

Who are the dream team of collaborators for this project?

Currier Post Partnership
Land and Nature Skills Service
CDRPT UoC
NT
CWT

What is the idea in a nutshell?

SUPPORTING FARMERS ON
THEIR JOURNEY TO NET - ZERO

Through demonstration farms + funding
for farmer group workshops. The farms could do
carbon audits, assess energy efficiency measures
and feasibility of renewable energy, assess potential to increase sequestration

Which systemic barriers would this project tackle?

Communication with farmers about
the practicalities + benefits to
their businesses of reducing carbon
emissions + increasing storage. Could also
provide information about private finance
opportunities as well as public funding.

Why is this project important for South Lakeland in
particular?

Farming is a very important part of
the rural economy and a significant
producer of livestock and milk. The
farmed environment is important for
landscape, biodiversity + management has the
potential to increase carbon
storage

Why is collaboration important for this project?

Working with farmers, industry bodies
+ researchers to maximise
understanding + communication

Which of the key emission areas would benefit from this
work?

Emissions of carbon + sequestration of
carbon.

Who are the dream team of collaborators for this project?

Farmers, NFU, Farmer Network, CLA,
AHDB, researchers eg. from Lancaster
University Centre for Ecology + Hydrology,
carbon audit companies. Local
bodies such as Natural Ther...

What is the idea in a nutshell?

~~Training to enable existing~~

Training ~~to~~ to enable existing
heating engineering traders/companies
to become skilled in air + ground
source heating systems + so transfer
to low carbon heating system installation

Which systemic barriers would this project tackle?

Lack of capacity in the
sector in South Lakes. Unreliable
traders/installers. No-one to go
to in order to get an installation
carried out

Why is this project important for South Lakeland in
particular?

Lots of off-grid houses/businesses.
Oil/coal expensive + very polluting.
Cold housing = poor health
Need to move quickly away from
fossil fuels

Why is collaboration important for this project?

Need to be able to offer an
accredited scheme to multiply
out businesses to give the
same opportunities + skills
level

Which of the key emission areas would benefit from this
work?

housing/domestic/business heating

Who are the dream team of collaborators for this project?

The LEP/Local authority/~~the~~ Heat
pump engineering firms

What is the idea in a nutshell?

Case studies - Success stories - ~~Real~~ real data - template for others to follow.
focus on building energy. More than just a case study - have for it a platform. Code promotion/dissemination.

Which systemic barriers would this project tackle?

Lack of knowledge
Lack of confidence
Supplier data base.
Who to trust.

Why is this project important for South Lakeland in particular?

Solutions not obvious for an building stock.
limited skilled installers.

Why is collaboration important for this project?

Cross sector examples.
Research element to get real data.
Get installers/contractors on board to save details.

Which of the key emission areas would benefit from this work?

Building energy.

Uol.
?
Chrs.
all

Who are the dream team of collaborators for this project?

Researcher - cost & carbon savings.
Media - films / engaging.
Business & community engagement.
Property owners.
Installers.
↳ key known project uniting.

What is the idea in a nutshell?

Encourage householders to think about the benefits of improving (reducing) energy use in their home to give improved comfort, CO₂ reduction and financial savings

Which systemic barriers would this project tackle?

Lack of knowledge in the general population

Why is this project important for South Lakeland in particular?

Home energy loss is a major element of CO₂ emission in SL, which is in one of the colder areas of the UK

Why is collaboration important for this project?

It needs to be widespread over many communities
Publicity benefits (press etc.)
Sharing of ideas

Which of the key emission areas would benefit from this work?

Energy loss from homes

Who are the dream team of collaborators for this project?

Experts in home energy loss
Experts in publicity & ~~energy~~ community engagement
Local trusted residents
Councils

What is the idea in a nutshell?

Holistic home carbon understanding service. Support residents to understand their whole energy use, (Home, Travel, Lifestyle) then support the behaviour change, energy use & infrastructure to achieve this.

Which systemic barriers would this project tackle?

Why is this project important for South Lakeland in particular?

Why is collaboration important for this project?

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

A local organisation to facilitate, coordinate and implement local carbon offsetting. Putting businesses, organisations and individuals together with land owners, environmental groups, farmers etc. to bring truly local offsetting.

Which systemic barriers would this project tackle?

- Public awareness

Why is this project important for South Lakeland in particular?

There are big opportunities for offsetting in the local area. It's rural and there are land management opportunities

Why is collaboration important for this project?

It's at the very core of it.

Which of the key emission areas would benefit from this work?

All of them

Who are the dream team of collaborators for this project?

What is the idea in a nutshell?

- South Lakeland Community Energy
- reduce reliance on fossil fuels
 - use natural resources of solar/wind
 - share generation between households + businesses
 - use land as well as buildings

Which systemic barriers would this project tackle?

- Scaling up of renewable energy production by a factor of $\times 10$
 $\times 50$
 $\times 100$

Why is this project important for South Lakeland in particular?

- Significant reduction in use of fossil fuels (CO2 emissions)

Why is collaboration important for this project?

- Requires infrastructure changes
- Collaboration between council, energy companies, residents, businesses
- Planning consent (LNDP, NOT)
- T

Which of the key emission areas would benefit from this work?

- Power/Energy consumption

Who are the dream team of collaborators for this project?

- Council
- Electric companies
- Community groups
- Business networks
- Stakeholders, LNDP/NOT/Nature

What is the idea in a nutshell?

Focus on Heat pumps?

A Net Zero Skills + Finance hub to support businesses, start ups, organisations to both train people + groups in Net zero skills (renewable, solar, ev's) + Fund/Support Funding

Which systemic barriers would this project tackle?

- Skills
- Finance
- business collab/engagement

Why is this project important for South Lakeland in particular?

- Rural Issues
- Skills Gap
- encourage local green growth

Why is collaboration important for this project?

- Multiple providers needed
- Different Angles

Which of the key emission areas would benefit from this work?

- Heat
- power
- Mobility (less so)

Who are the dream team of collaborators for this project?

- Training providers
- Heat pump engineering firms
- CMA to COG

What is the idea in a nutshell?

Community/Village Renewable Energy scheme
e.g. solar farm or ground source heat pumps
directly supplying the homes in the village

Which systemic barriers would this project tackle?

The need for individuals to have expert
knowledge.

Why is this project important for South Lakeland in particular?

Many villages are relying on coal or oil fired
boilers for heat which are possibly the most
polluting

Why is collaboration important for this project?

It couldn't be done otherwise - the community
would have to financially contribute

Which of the key emission areas would benefit from this work?

Who are the dream team of collaborators for this project?

The Community in question
Local Govt / Parish Council?
An expert?

What is the idea in a nutshell?

Electric bike network; suite of
hire points run by local businesses / clubs
Subsidised for locals (income
generators for visitors)

Which systemic barriers would this project tackle?

Behaviour change
Better roads.

Why is this project important for South Lakeland in particular?

Cycling is already popular, there is
evidence that people would cycle
more if barriers were removed.

Why is collaboration important for this project?

Hire points come in many forms
and be new/existing business.
Development of a workable
model.

Which of the key emission areas would benefit from this work?

Transport particularly commuting

Who are the dream team of collaborators for this project?

WFC + Town/Parish Councils
Interested businesses.

Appendix 3: Workshop Plan

The workshop plan detailed below is an appended version with detail about the delivery of each activity based on the approach taken by facilitators through the co-design workshop.

10:00	Presentation 1: Introduction to the day - 5 minutes
10:05	Exercise 1: Where are we now? (PSTCL)
Room setup	<p>The room should have five stations set up which people can move around. The stations will be based on the themes of:</p> <ul style="list-style-type: none"> ○ Housing ○ Transport ○ Spaces ○ Local economy ○ People and influence <p>Facilitators will be assigned a station in advance of the exercise based on their confidence with the subject matter. They will have prompt questions for your theme.</p>
Exercise purpose	<p>To glean information about how South Lakeland is perceived broadly in relation to each theme, and how people see this in relation to the work that will be required to get South Lakeland to net zero. It is primarily a thematically relevant ice-breaker to get people thinking about South Lakeland as a whole, rather than their individual business or sector.</p>

Harvesting	Facilitators to either ask participants to write down, or note down themselves, interesting points about the strengths or weaknesses South Lakeland has in their thematic area. For example: Housing may be weak in that the quality of housing stock overall is poor; Transport may be strong in that there are reliable services for more remote communities. Ask everybody to vote on the scale of 1-7 where they feel South Lakeland is in relation to the key question on the sheet.
Process	Facilitators at one station each. Participants should move between the stations. Need a designated person to prompt people to move after five minutes but if there is a deep or relevant conversation happening then people don't have to move on. Use the questions on the flipchart sheet to stimulate discussion and use the prompt questions provided to get into more depth about specific issues.
Outputs	A sheet of flipchart with key points about the strengths and weaknesses of the theme, and sticky dot voting on a scale of 1-7 based on the key question on your sheet.
Resource/equipment required	5 x sheets with theme, key question and 1-7 ranking for voting; Sticky dots for attendees (5 each – 300 – 60 per facilitator); Sticky notes for attendees and facilitators

10:30	Feedback 1
Feedback Purpose	To relay the key discussion points from each thematic area, particularly South Lakeland's strengths and weaknesses in relation to the theme, and the overall perception of how it performs based on the voting done by participants. <i>E.g: Voting was around the 2-3 mark for Transport, which had the question "How easy is it to move around and get to where I want to go in a way that produces the least emissions?" – meaning people perceived that it's not at all easy to do, but not impossible.</i>

10:45	Presentation 2: Where do we need to get to?
Room setup	Attendees should go back to their original tables.
Presentation purpose	To relay key information from the pre-workshop research and survey analysis so that participants understand the current landscape of: strategic and community direction around net zero, projects and gaps in activity, finance and funding, and key systemic barriers being faced in South Lakeland. Presentations should be short and contain only key information to help participants think about the next activity.

Presentation to cover five key areas:

- Introduction
- What's needed? (What's needed in South Lakeland re: emissions reduction?)
- What's the potential? (What social and economic benefits and potential does the transition bring for South Lakeland?)
- What's already happening?
 - What does South Lakeland need from the perspective of Strategic Leadership and the community?
 - What projects and initiatives are already happening in South Lakeland? Where are there gaps?
 - What's the funding landscape like at the moment?
- Why isn't more happening? (What systemic barriers have you told us you are facing to delivering net zero?)

11:15	Exercise 2: Defining the problem
Room setup	Attendees should be at their original tables. One facilitator per table – facilitators can ask someone to help with note-taking on sticky notes if you like, but be prepared to note-take as they go.
Exercise purpose	To give participants the opportunity to share the challenges they are facing in delivering net zero, and to bring together those challenges to identify overarching systemic barriers people are facing in South Lakeland.
Harvesting	Keep sticky notes of the challenges people are sharing. Try to group them in themes. Then for the section looking at connections and overlaps, use this to test how the themes have been grouped and get thoughts on any overarching challenges which speak to the points being made. <i>E.g if multiple people talk about challenges relating to capacity, explore what support there is/isn't/should be to enable them to overcome that barrier, and group those issues together under a heading like "lack of capacity" or "need for capacity building". This could include a lack of business support around achieving net zero for both organisations in the room and their wider supply chains, for example.</i>

Process	<p><i>Start by explaining that we're trying to get as many voices as possible on these subjects, so be prepared for us to move to people who haven't spoken and try to bring in others if you've already spoken.</i></p> <p>Spend 20 minutes on the question: "What are the challenges/barriers you are facing to driving forward work on net zero?" Try to get input from all participants and manage the voices at the table. Take down peoples' input on sticky notes and try to group themes – this isn't wholly necessary but good as a starting point for further conversation.</p> <p>Spend 15 minutes on the question: "What are the overarching challenges we're facing? How do these connect?". Note any connections for the feedback session after lunch.</p> <p>This can be informed by asking the table whether the groupings reflect their understanding of the barriers they're facing. If the facilitator hasn't had time to group the barriers, facilitate a discussion about how to categorise the barriers. <i>Some potential categories: citizen engagement/communities, capacity, skills, finance, data, governance, social equity and inclusion.</i></p>
Outputs	<ul style="list-style-type: none"> ○ Sticky notes with challenges/barriers to progress across all elements of net zero work (on the flipchart) ○ A few big themes across all in the group – shared systemic challenges and barriers to be relayed in the next session. ○ A sense of how these themes relate to each other.
Resource/equipment requirements	Sheets of flipchart with the core question for each table; Sticky notes; Pens.
11:50	Lunch and facilitator check-in
Purpose of discussion	<p>To share information on the previous activity:</p> <ul style="list-style-type: none"> ○ What were the big themes that emerged from the discussions? ○ What were the connections which were drawn out?

	<ul style="list-style-type: none"> ○ Were there any distinctions across sectors or emissions areas? ○ Were there any stand-out comments which you feel should be relayed to the room? <p>To check in re:</p> <ul style="list-style-type: none"> ○ How we feel the workshop's going ○ Any worries or concerns/things that need to be addressed ○ How we'll run the next session based on numbers at tables (1:2:4:All may need adapting depending on the numbers at different tables)
Outputs	Slide on feedback from the session for the next presentation. The facilitation team should feel comfortable with how the next sessions will run.
Tasks	Stick up flipcharts from "Where are we now" and "Defining the problem" somewhere participants can see.

12:30	Feedback 2: Non-technical barriers in South Lakeland
Room setup	Attendees to be back at their original tables.
	<p>Presentation on:</p> <ul style="list-style-type: none"> ○ What non-technical barriers are and why they're important. ○ Recap of what has been said that's South Lakeland specific ○ Examples of how places are addressing three key barriers (based on barriers highlighted in the pre-workshop survey).

12:50	Exercise 3: Ideas Generation
Room setup	All attendees at their original tables. Facilitator at each table.
Exercise timings	5 mins: Individual stage - Individuals sit and think of an idea, working through the pro forma.

	<p>10 mins: Buddy up 1 - Individuals to buddy up with someone else at the table, either the person they're sat next to or someone they would like to speak with. The two are to explain their idea to each other and consider how they could be combined, or if one is stronger than the other and should be taken forwards.</p> <p>10 mins: Buddy up 2 - The pair should join another pair and present their ideas to each other. Once again, they should consider how the ideas could be combined, or if one is stronger than the other and should be taken forwards.</p> <p>15 mins: Whole table - The whole table should come together and discuss the ideas that were brought forwards. Again, where are there points of synergy or are there any ideas which are particularly strong based on the criteria we're looking for.</p> <p>15 mins: Working up the pitch - The table should start to work up their pitch for the project they've landed on. This should be facilitated by the facilitator on the table based on the pro forma questions.</p>
Exercise purpose	To take the group through a process to develop a strong idea which could be put to the room for further development. Using a process of peer to peer discussion to filter, strengthen or remove ideas which do not meet the criteria for the next Phase of funding (based on the pro forma).
Harvesting	The information required for the large pro forma which will be used to communicate the idea to the room for voting. As facilitator you should be prepared to present this idea, so gather as much information as you can against the questions.
Process	<p>Every person should have sight of a copy of the pro forma.</p> <p>Relay that:</p> <ul style="list-style-type: none"> ○ We are trying to come up with the strongest idea we can which answers the questions on the pro forma as well as possible, to put it through to a vote where we decide which three ideas are taken forwards for further development. ○ The aim with these questions is to give us a good feel for the idea you're putting forward, and these are important questions for working out if your idea would be eligible for the funding available. We will need answers to these questions to draw together a proposal for funding. ○ You don't have to have answers to the questions straight away but try to work through them as you move through this process.

- When you're thinking about your project idea, consider the things we've already heard about today: the key systemic barriers we know exist in South Lakeland, the need for collaboration, the social and economic benefits it could bring to the area, challenges relating to rurality, and how it could address particular emissions areas.
- We have the sheets from our previous activities stuck up on the wall, so feel free to go and have a look to refresh your memory.
- If you're struggling, tell me and we can have a chat.
- We would love to have a record of your ideas, so if you like you can fill out the pro forma and even if the idea isn't taken forwards at this stage it will still be noted and could be taken forward at another time.

Individual stage prompt questions:

- Which challenge do you think is most significant to address in the area?
- What would it look like if we managed to tackle that problem?
- What would a first step be to move us towards that future? Who would need to be involved?

Buddy up 1, 2 and Whole table prompt questions:

- Do you feel either of these ideas can answer the questions on the pro forma more than the other?
- Are there opportunities to merge your ideas? Is there a higher level challenge both of them speak to?

Key Guidance:

- Make sure everybody is aware that they should use the pro forma as a way to think about their idea and shape their conversations.

	<ul style="list-style-type: none"> ○ At the stage with full table discussion, ask each group to mention some of the ideas that had bubbled up in their conversation, and what they landed on (this is for the Feedback 3 session). ○ Keep the conversation on track at the whole table stage in terms of deciding which ideas should move forward. ○ Your biggest input as a facilitator will need to be at the “working up the pitch” stage. Work through the pro forma. ○ It’s your job to get as much information out of the group to present a solid idea to the room. ○ If there is an obvious participant who might like to present the idea to the room, see if they would be willing to lead the pitch development, or support by note-taking, and whether they would be happy pitching to the room (each idea will only have 3 minutes).
Output	Completed pro forma for the core idea/s (max 2) the group have AND (if people decide to fill them out) a handful of pro formas from different stages of the ideas development conversation.
Resources/equipment required	Per table: 8x small pro formas for individuals; 2x large pro formas for the final idea (2 just in case there are 2 ideas to progress); big pens for facilitators; Bic pens for participants.

13:50	Feedback 3
Room setup	All attendees at their original tables. Facilitator at the front.
Feedback purpose	To relay interesting snippets of conversation from the discussion and ideas which didn’t quite make it BUT might be of interest to people in the room.

14:05	Break and facilitators to check-in
Purpose of discussion	To sense check ideas which have emerged to make sure they’re on track and can be progressed if they’re voted on, look at any opportunities to merge ideas, and if there are any in particular which are a priority in the Project Team’s view.

14:20	Exercise 4: Voting
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Room set up	Everybody to be in a place where they can see the ideas. The final ideas are up on the wall with spaces for sticky dot voting.
Process	<p>Facilitators OR a member of the group (as defined previously) will present the idea from their table based on the information they've received from the group. This pitch should be succinct and address the questions in the pro forma.</p> <p>All participants should have 3x 2 colours of sticky dots (6 in total). They should place the dots on the three top ideas which:</p> <ul style="list-style-type: none"> ○ They can see themselves/their organisation working on. ○ Could lead to the greatest difference in South Lakeland. <p>Facilitator will identify which three make it through to the Design Lab.</p>

14:35	Exercise 5: Design Lab
Room set up	<p>Three stations to be set up with a pro forma for each project idea. <i>To have one facilitator per theme with three floating providing support or asking questions – if appropriate, could double up.</i> One of the two should have an eye on the time and call it when it's time to move.</p> <p>15 minutes per theme, 5 minutes to move.</p>
Exercise purpose	To develop the three project ideas selected through the voting process and stress test them within the context of IUK criteria for Phase 2 funding.
Process	<p>There are three project ideas. We want you to move around to contribute to each idea.</p> <p>Just because these ideas have come out doesn't mean other ideas can't be progressed – this is just within the context of this project and the future funding we will be seeking.</p> <p>The facilitator on the original tables of the selected ideas will hold the pen for the chosen idea in the Design Lab session, with support from another facilitator.</p>

	<p>The room will be split into 3 groups. Please start at the station of the idea you are most excited about, if there is no room, bob on down to the next station.</p> <p>Once there we'll give you 15 minutes to take part in a Design Lab facilitated by your facilitator focussed on the chosen idea. You'll be exploring the idea more deeply and stress testing its relevance, how do-able it is and why it's important for South Lakeland in particular.</p> <p>After your first 15 minutes is up on your first idea – you'll be asked to stand up from your table and make your way to the next idea, where you'll have 15 minutes to explore the second idea in the same way, building on the thoughts and inputs of the previous group.</p> <p>Same again for the third idea, until you have had a chance to input, shape and hone each of the ideas brought through to the Design Lab.</p> <p>At the end of the Design Lab session we should have 3 ideas that have been worked up ready to progress to workshop 2 where we will work to turn the idea into a detailed proposal and identify a financial model to support its delivery.</p> <p><i>As facilitators, use the questions on the pro forma to prompt discussion. If the idea is not a goer/there are significant issues highlighted, consult with the Project Team and decide whether to substitute it for another of the top 6 ideas which would be viable.</i></p>
Harvesting	All information required via the pro forma. Also any additional relevant comments which may sit outside the scope of the questions on the pro forma.
Output	Three worked up pro formas with the project details required for the next workshop. A list of key collaborators, including people who could be involved in the development and delivery of the project (and who would be appropriate based on the list of “dream collaborators”).
Resources required	Timer to get everybody to move; Output pro forma from the previous exercise to populate Design Lab template.; Blu tack; Sticky notes; Big pens.

15:35	Presentation 3: Rounding off and next steps
Room set up	All to convene somewhere that makes sense for a presentation at the front (doesn't matter where they sit).
Presentation:	
<ul style="list-style-type: none"> ○ Facilitator to outline where we're at with the ideas (5 mins max.). ○ Facilitator to explain what happens next (5 mins). 	