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Deep dive learning and carbon stories

ADEPT LIVELABS2 Decarbonising Local Roads

Introduction

Helen Sunderland

Partner, UK&I Consulting, Ernst & Young

Live Labs 2 Commissioning Board member

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Live Lab surgeries:

Meet and mix with the 7 Live Labs teams on their stands in the Expo zone

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Miranda Sharp
Founder, Metis Digital

& Live Labs 2 Commissioning Board member

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Monitoring & Evaluation: how we'll help you evidentially address carbon

Adriana Moreno Pelayo
Associate Director, City Economics and Planning
Arup

Dominic Savolainen
Senior Economist
Arup

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ARUP

Live Labs 2 Monitoring and Evaluation

Live Labs Expo

17/04/2024

ARUP

Overview

Developing the evaluation framework

- Overall M&E Framework scoping approach
- Monitoring
- Impact evaluation
- Process evaluation
- Value for money evaluation
- Contract update and M&E summary timeline

Scoping approach

Work done to date

Familiarisation

- Initial review of business cases
- Informal familiarisation interviews with each project

Review logic models for each Live Lab

- Review logic models
- Workshops with key stakeholders
- Suggest changes if necessary

Refine research questions

- Review questions in the ITT
- Discuss additional questions as appropriate
- Prioritise key questions

Define key impact metrics

- Identify key metrics for each of the inputs, outputs, outcomes and impacts
- Identify data sources and data requirements
- Determine what data is being collected, and further data collection needs and methods
- Refine metrics based on data availability / possibility of collection

Determine evaluation methods

- Set out evaluation methods based on research questions and indicators
- Approach to counterfactual

Draft Framework Report

- Issue Draft Framework Report
- Action key suggestions and comments

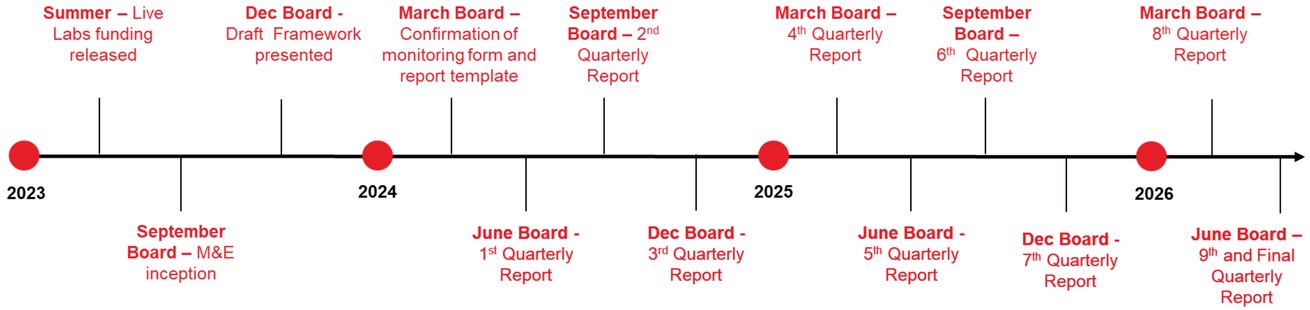
Final Framework Report

Signed off at the March Commissioning Board

Monitoring

Purpose of monitoring: Regularly assess whether the delivery of the labs is on track to meet objectives

Monitoring timeline



- Categories of indicators:
  - Technical outputs
  - Collaboration
  - Dissemination and communication

- Deliverable: Dashboard and short PowerPoint report

Key principles:

- Quarterly monitoring to align with Commissioning Board meetings
- Minimise burden on the labs, focusing on key indicators
- Standardised form for labs to fill in either through Microsoft Forms or Excel
- Flexible approach providing consistency across labs but also tailoring reporting to the activities happening in each lab

ARUP

Impact evaluation research questions

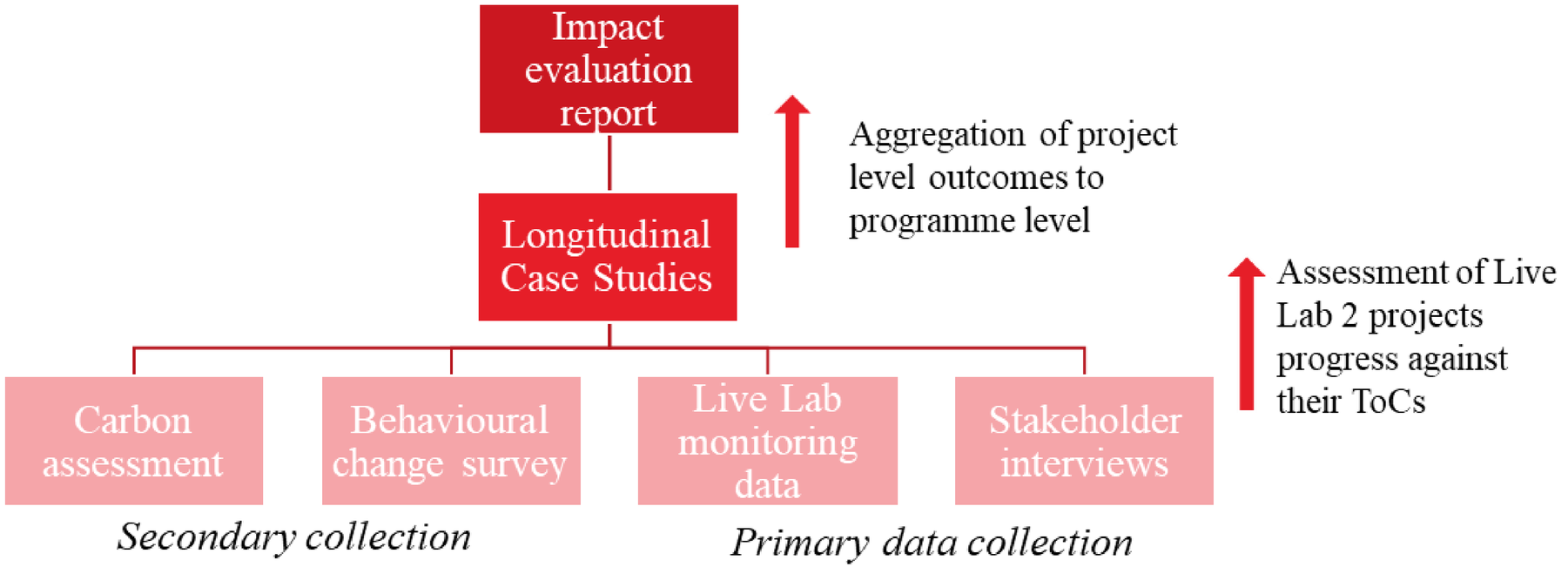
Purpose of impact evaluation: assess and measure the overall impact of the programme

Research questions:	Key indicators:
• To what extent have Live Labs 2 projects led to reductions in a) Scope 2 and b) Scope 3 carbon emissions from local roads compared to existing standard practice? (Project level impacts)	→ Carbon
• To what extent have the Live Labs 2 projects adopted new systems, processes, procedures or products as a result of their participation in the Live Labs 2 programme?	→ Behaviour change
• To what extent have Live Lab Local Authorities attitudes to innovation changed as a result of their participation in the Live Labs 2 programme?	→ Behaviour change
• To what extent have Live Labs 2 approaches been adopted as business as usual across the LAs they operate in?	→ Behaviour change
• How effective was Live Labs 2 in its mission of achieving a step change in the normalisation and uptake of zero/low carbon techniques, solutions and materials in the local roads' sector and adjacent sectors?	→ Behaviour change
• What other impacts – both intended and unintended – have occurred as result of the Live Labs 2 interventions?	→ Wider impacts

Link to BIT scope will be monitored

Key components of the impact evaluation

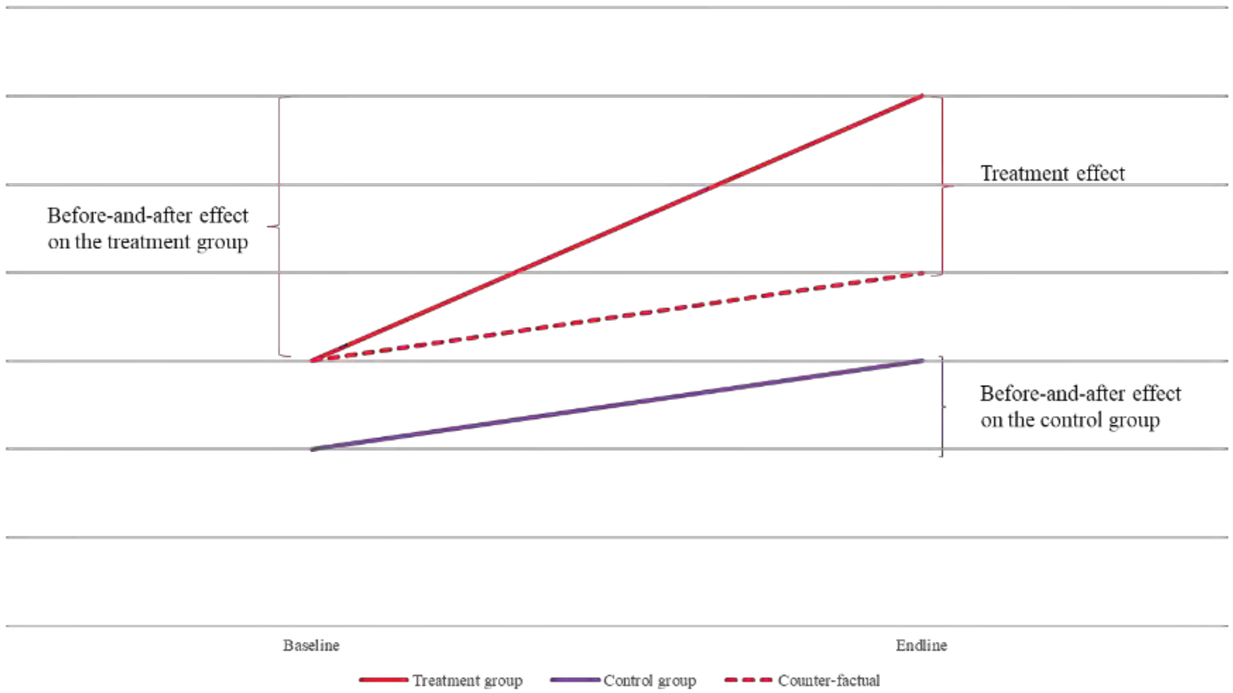
Impact evaluation split into four key activities to provide a quantitative and theory-based assessment



Approach to impact evaluation

Assessing behaviour change

- Quantitative survey at Local Authority level with Local Authorities participating in the Live Labs 2 programme and a control group of Local Authorities, looking at behaviour change:
  - Commitment and capability of Local Authorities to reduce the embedded carbon (scope 2 and 3) in their local road projects.
  - Commitment and capability of Local Authorities to measure the embedded carbon (scope 2 and 3) in their local road projects.
  - Willingness (resource, capability and confidence) of Local Authorities to engage in innovation (especially low-carbon innovation).
  - Willingness (resource, capability and confidence) of Local Authorities to engage with SMEs.
- Control group, potentially based on:
  - ADEPT membership
  - Use of FHRG tool
  - Geography
  - Relationship with LL2 private sector partners



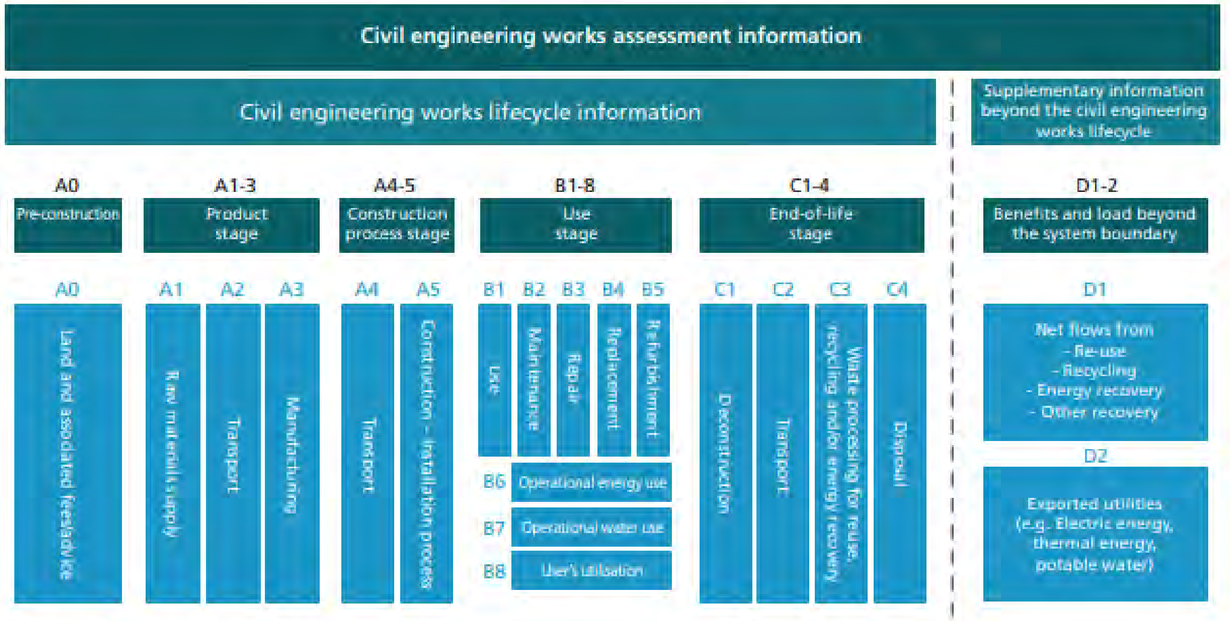
Key considerations: spillover effects & dependent on future BIT scope

Approach to impact evaluation

Assessing carbon impacts

- Carbon impacts will be **quantified by the labs directly**. Carbon baselining is currently in progress.
- Arup will **aggregate and review** (not QA) to assess for consistency of inputs and provide an overall assessment
- Some labs are working in partnership with organisations including universities to assess carbon.
- **Stages of lifecycle of the project is important. Most labs will use standards such as the ICE ones.**
- Three types of interventions:
  - Innovation and Product Development;
  - Roads Infrastructure Maintenance; and
  - Knowledge Sharing and Guidance.
- **We will be able to assess quantitatively the carbon impacts of the first two interventions, but not the third**

Lifecycle Stages for Categorising Carbon Emissions in Civil Engineering Works (source: ice Guidance Document for PAS 2080, from BS EN 17472:2022)



Approach to impact evaluation

Assessing carbon impacts – key considerations

- **What interventions are being baselined and assessed in each lab?**
- **What inputs and methods are being used and how robust are these?**
- **Are the inputs and methods consistent with what other labs are doing?**
- **Do the results make sense?**

Programme level carbon analysis

Process evaluation

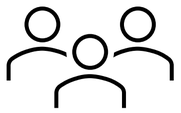
Purpose of process evaluation: Understand how the programme is being implemented and impacts on programme delivery

Research questions:

• Was the Live Labs 2 programme delivered as intended – What worked well and not so well?
• How were communication activities planned and executed?
• How did knowledge sharing occur throughout the programme?
• How has the wider context influenced the delivery of Live Labs 2?
• Were lessons learnt from the delivery of Live Labs 1 implemented in Live Labs 2?
• How did the Live Labs select innovations for their plans to decarbonise the network?
• How was carbon monitored across the Live Labs 2 programme (scope 2 and 3)?

Key methods of the process evaluation

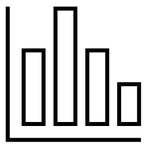
Mixed-method, four components, drawing heavily on interviews



Interviews: Conducting 31 semi-structured interviews with Live Lab Project Teams, ADEPT, DfT, COAST, FHRG and the Commissioning Board across the delivery of the Live Labs 2 programme.

Attending technical team meetings: Observe, but also provide, helpful notices which will support our evaluation

Document reviews: Review the programme and project designs, exploring formal arrangements around governance, processes, resources and timescales (business cases, prospectus, previous evaluation reports, change control, reporting templates)



Performance data: Aligned with monitoring data and identify aspects of the programme's performance, efficiency and effectiveness (communication, spend and carbon data)

Key principles:

- Utilise quantitative and qualitative methods across objective and subjective topics
- Build expectation of change in the evaluation
- Align with impact evaluation activities

Value for Money evaluation

Purpose of value for money evaluation: to assess the benefits against the costs of the Live Labs and to determine the extent to which benefits outweigh costs, including scaled-up scenarios regionally and nationally.

Research questions:

- To what extent did the intervention level (i.e. not scaled up and not considering outcomes across the LA) benefits of the Live Labs outweigh the costs?
- To what extent did/could the LL LA level (considering outcomes across the LA and/or scaled up to LA level) benefits of the Live Labs outweigh the costs?
- To what extent did/could the impact level (i.e. scaled up across the UK) benefits of the Live Labs outweigh the costs?

Value for Money impacts

Impacts to be monetised - provisional

Potential benefits	Devon	East Riding	Liverpool	North Lanarkshire	South Glouces-tershire and West Sussex	TfWM	Wessex
Reduced whole-life emissions							
Reduced or increased whole-life costs							
Improved road safety							
Increased biodiversity other natural capital							
Increased air quality – reduced PM, NOx and other relevant emissions							
Reduced noise pollution							
Improved network performance, reliability, and resilience							

No data collection proposed		Key benefit & data collection proposed		For future review	

M&E timeline

Data requirement	Evaluation type	2023/24 (Y1)	2024/25 (Y2)	2025/26 (Y3)	2026/27 (Y4)	2027/28 (Y5)
Phase		Procurement and Deployment			Establishing new BAUs	
Monitoring data	Monitoring	4 rounds of quarterly monitoring data collection	4 rounds of quarterly monitoring data collection	4 rounds of quarterly monitoring data collection	-	-
Carbon data collection	Impact evaluation	Baseline carbon data collection	-	Interim carbon analysis	Endline carbon impacts data	-
Wider outcomes data	Impact evaluation	Baseline outcomes data	-	-	Endline outcomes data	-
Survey of local authorities	Impact evaluation	Baseline survey	-	-	Endline survey	-
Qualitative interviews	Impact and process evaluation	Interviews with Live Labs on initial project set-up processes and baseline case studies	-	Interviews with Live Labs and other stakeholders on project delivery and endline case studies	Interviews with Live Labs and other stakeholders	Interviews with Local Authorities on the scale-up of Live Lab solutions
Programme documents		*Reviewed on an ongoing basis*				
VfM data		-	-	-	-	VfM data on scalability

Key activities in the next 6 months:

1. Set up monitoring form and design quarterly reporting dashboard
2. Produce first Monitoring Report (June)
3. Begin Baseline Impact Evaluation Activities
4. Develop Baseline Live Lab Case Studies
5. Explore issuing Behavioural Change Survey
6. Begin Year 1 Process Evaluation activities
7. Produce Baseline Report (August)

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Deep dive learning and carbon stories

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How we communicate carbon stories: interactive session on Comms needs, drivers and messaging

Jason Pavey

Managing Director, O&M UK & Europe, AtkinsRéalis

& Live Labs 2 Commissioning Board member

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How we communicate carbon stories: interactive session on Comms needs, drivers and messaging

Josh Neicho
Storyteller

Local Story Exchange

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Local Storytelling Exchange

HOW TO COMMUNICATE THE GREEN TRANSITION

Action-based storytelling

Untapped consensus and desire to act

Social learning

Emissions reductions as a co-benefit

'Deliberative' engagement

How we report

Finding relevance

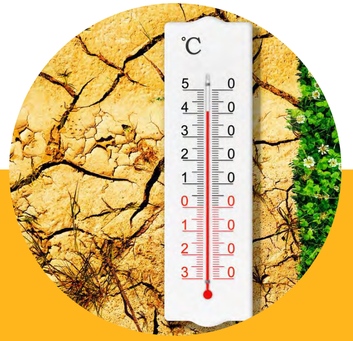
Local Storytellers find people, groups and businesses who embody the transition - by connecting with community fora, media and social media, and by simply living in the places where it's happening.

Local Storytellers are led by local concerns and needs but they prioritise voices and stories that open up political space, channelling the national climate debate at key moments.

Local Storytellers research and pitch stories to local news outlets, to use in ways most relevant to their audiences. We also work with national partners to localize press releases and research.

Britain talks climate

Insights



Britons know that climate change is real and that humans are causing it

Climate change is consistently seen as a concern for ‘everybody’

Certain values and ideas have almost universal resonance across Britain

Birmingham council tenant wraps house in insulation and saves 90 per cent on bills

BirminghamLive

“The building is more settled - I can't hear noise though I live close to Birmingham International Airport. Before, summer to autumn the house was very cold - after the project, I switch on the heating maybe one hour in the morning and one in the evening. Sometimes it’s half an hour.

“Although I know the government is supporting people, it's short-term. This kind of project will support people long-term. Especially people struggling to choose whether to buy food or to pay bills."

'I slashed my energy bill by a third by making one simple change - it has changed my life'

A mum from Balsall Heath has slashed her energy bill by making an ‘important change’ to her home. Sabrina Erdogan has recently installed solar panels on her end-of-terrace property.

The mum-of-one said she was overjoyed to have reduced her monthly utility bills - and also expressed her joy at making a ‘positive contribution’ to the environment. Sabrina had solar panels installed on her property with the help of Retrofit Balsall Heath - a community-led neighbourhood project designed to improve the energy efficiency of local homes.

BirminghamLive

Apprenticeship opens up new path for worker, 40

A 40-year-old transport engineer has encouraged people considering a career change to look at apprenticeships. Sheldon Swayze from Wolverhampton retrained with National Express after years of experience in factories, carpentry and the care industry. He completed a three-year course in Birmingham in August 2022, and started a full-time engineering job the following month.

"I love it – no two days are the same," he said. Mr Swayze, who works on electric and hydrogen buses, said he had always loved working on his own vehicles. "When this came up, it was ideal for me," he explained. "I've been in jobs before where you watch the clock. Doing this, if anything, there's never enough hours in the day. The time just flies by because I enjoy what I do so much."

Amy Price: My apprentice story during National Apprenticeship Week

I have always been interested in apprenticeships as it is a great balance of on-the-job learning and training combined with classroom learning, and I know that’s the way I learn best...

That is one of the brilliant things about apprenticeship learning – you open your eyes to things that you might not have considered before. Many people still don’t know much about sustainability and it’s something that we should all be more aware of.

Daily Focus

Worcester News

Worcester pupils and parents celebrate Cycle to School Week

ASalon owner Georgie Robinson got back into cycling for the first time since she was at school so she could accompany her six-year-old on his new bike. “I really enjoy it,” she said. “The Bike Bus helped with confidence - I realised I didn't know how to use gears properly. It’s nice that you meet together, encourage each other and help.”

Alex Mace, who leads the Bike Bus to St. Barnabas C of E Primary, said: “My boys think it’s a really fun way to start the school day, cycling to school with their friends and have even nicknamed it the Barna-bus.”

First electricity from Port of Tyne-based Dogger Bank wind farm reaches England

THE SHIELDS Gazette

Tom Nightingale, the Equinor North East stakeholder manager, was the first person to be based at the new Port of Tyne facility last year and has expressed his pride at the moment that power was first recorded. He commented: “We’ve been working for over 10 years with our project partners to get to this point and soon we will be producing so much electricity we will be controlling about five per cent of all the UK’s electricity from our facility.

“This will be the world’s largest offshore windfarm when it is completed in 2026 and what we have been able to do across the country, but also in the North East, is replace other industries with new green energy projects.”

Staff at Hebden Bridge National Trust site are waving goodbye to ‘dirty’ diesel generator after ‘game-changing’ solar project

“It was smelly, noisy and dirty,” Chris said of the generator. “We won’t miss it and nor will our visitors, as it was the biggest source of complaints we got. We understood that criticism because we promote ourselves as an off-grid, sustainable site but the technology was outdated and struggled to cope with how popular we’ve become.

“Now when we have busy days or big events visitors can know that their ice creams, teas and coffees have all been powered by clean energy produced on site. The only reason the mill is here is because the adjacent river meant it could produce its own power via a waterwheel. So ever since 1805 this site has had a heritage of making energy from renewable sources - now we’ve come full circle.”

HALIFAX Courier

CotswoldJournal

The Fleece Inn changes name for Great Big Green Week

The 17th-century Fleece Inn in Bretforton, owned by the National Trust, was renamed the Green Man during the Great Big Green Week.

Now, the Trust is looking to repeat the festival, aimed at inspiring discussion about climate change, both at The Fleece Inn and elsewhere when it returns next year.

One festival attendee Tom Ciotkowski said: "All the best movements for change start in the pub. You can expose people to a wide range of opinions over a pint, who might otherwise not hear them".

The challenge for green innovators

Current media reporting

It is vital that we can learn from the actions of others. Our approach to climate communication and storytelling builds people's agency for climate action by providing a wide variety of stories of people taking positive action on climate change.

Negative

98%

Positive

2%

Key messages

How to tell your story

01

Keep it relevant

Use real life examples that are relevant to your audience. Feature people who they can resonate with

02

Avoid divisive messaging

‘Pyramid issues’ such as Brexit lead to inflexible thinking. Try coming at a new angle with you story

03

Think about your angle

What values does your audience resonate with? By focussing on these, the message is more likely to land well and lead to changes in behaviour.

Become a piece of the jigsaw

TALK TO US

www.localstoryexchange.org
info@localstoryexchange.org

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