Future Highways Research Group

FHRG Waypoint Meeting: Q2, 2025

Hybrid Meeting: MS Teams & Cranfield University

ADEPT / Proving Research Partnership

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Agenda

- **Welcome, Introductions & ADEPT Update**
  - ***Hannah Bartram, CEO, ADEPT***
- **ADEPT & DfT Carbon Leadership Programme**
  - ***Simon Wilson, Research Programme Director, Proving***
  - Programme Overview
  - Purposes & Objectives
  - How to Register
- **Investing In Climate & Nature**
  - ***Barry Wyatt, Climate and Nature Emergency Manager, South Gloucestershire Council***
- **Delivering Efficiencies through AI.**
  - **Identification of Potholes.**
    - ***Amanda Richards, Assistant Director Highways, Network and Asset Management, Surrey CC***
  - **Robotic Process Automation & AI.**
    - ***John Pateman, Buckinghamshire Council***
  - **Open discussion.**
    - Sharing successful AI initiatives across the FHRG
- **Comfort Break**

Agenda
Continued…

- **Delivering Devolution, Highways & Transport (ADEPT & FHRG)**
  - ***Chair: David Shepherd, Executive Director of Place, Kirklees Council***
- *Speakers:*
  - ***Alistair Baldwin, Devolution and Policy Strategy Lead, DfT***
  - ***Christopher Salmon, West of England Combined Authority***
  - ***David Allatt, Cambridgeshire County Council***
  - ***Peter Mann, East Midlands Combined Authority***
- **Next Meeting**
- **A.O.B**
- **Close**

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Highways

PART OF TRANSPORT NETWORK

Welcome

Hannah Bartram, CEO ADEPT

Home

ADEPT Carbon Leadership Programme

Programme Overview & Joining Instructions

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Programme Overview

The journey to the CLP.

Lessons learned.

CLP overview.

Purposes and goals.

Partners and contributors.

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What is the Carbon Leadership Programme?

ADEPT Carbon Leadership Programme

The ADEPT Carbon Leadership Programme is a DfT-funded, three-year initiative to measure:

(a) the carbon footprints of Local Highways Authorities, and

(b) the scale of best practice being adopted in the sector.

Whilst not mandated, it will provide DfT with critical information regarding the carbon profile of local roads in England. This information may be used for future resources targeting and policies formulation.

Proving and FHRG members are asked to participate and support this important programme.

Purposes, Goals & LHA Benefits

ADEPT Carbon Leadership Programme

- **Purposes & Goals:**
  - Measure and evidence carbon emissions accurately.
  - Develop practical strategies for emissions reduction.
  - Improve operational efficiency.
  - Demonstrate environmental leadership.
  - Make progress towards net zero targets.
- **Participating LHA Benefits:**
  - To establish the current carbon footprint (emissions) for highways services.
  - To establish current performance in terms of best practice carbon management.
  - To provide comprehensive benchmarking data.
  - To demonstrate strong carbon credentials when bidding for funds.

Programme Partners & Contributors

ADEPT Carbon Leadership Programme

- **ADEPT:** Strategic Leadership & Programme Management
- **Department for Transport:** Programme Funding & Oversight
  - With ministerial approval and support.
- **Proving Services:** Programme Delivery
- **FHRG:** Peer Reviewers & Knowledge Sharing
- **Colas :** Carbon Assessment Assistance Partners

CCAS & Pioneer Programme

Lesson Learned

ADEPT Carbon Leadership Programme

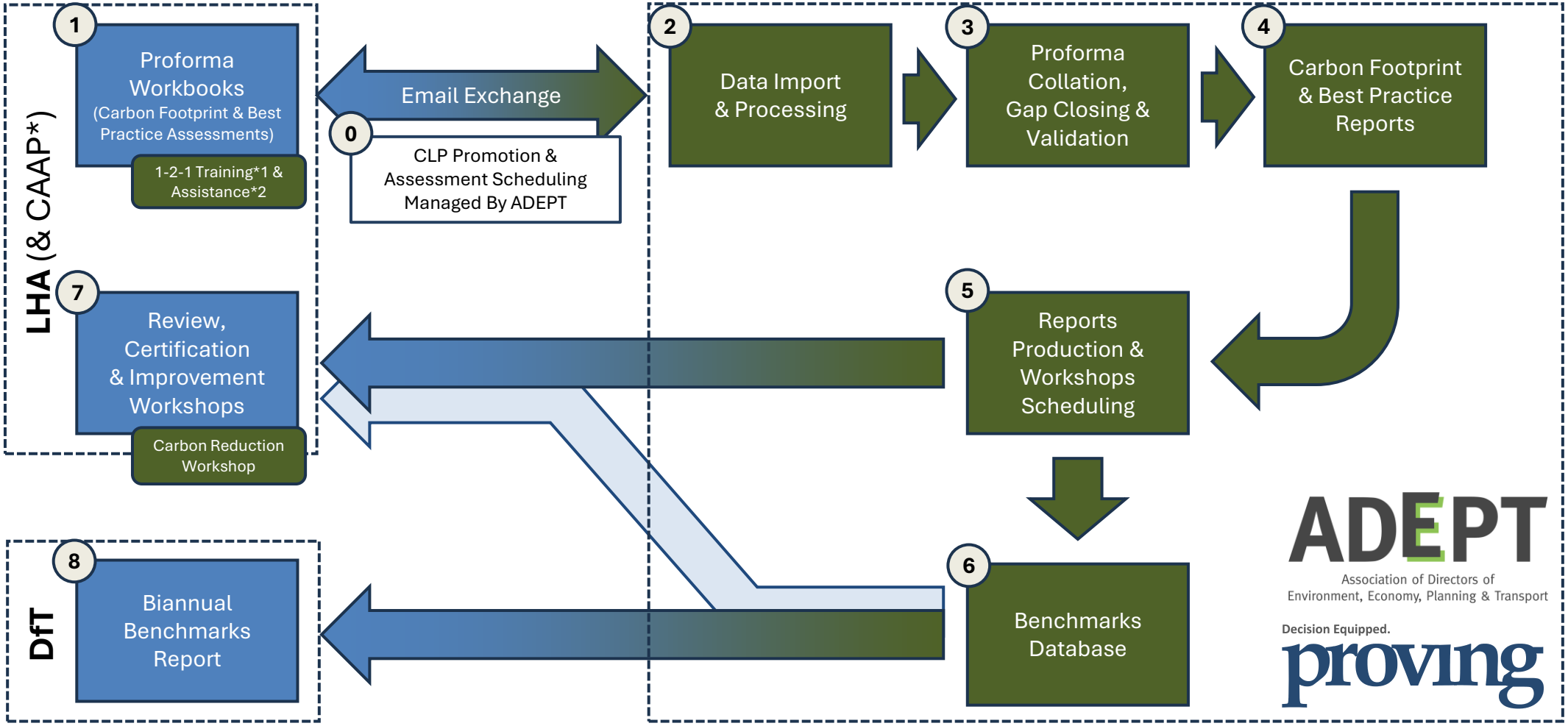
- **Getting data is difficult and time consuming.**
  - *Especially when applying an entirely bottom-up approach.*
  - **A switch from bottom-up to blended (bottom-up and top-down) enables quicker assessments.**
- **Sector readiness was lower than expected.**
  - *Especially within supply chains.*
  - **The resource demands relative to the benefits are an important consideration.**
- **Data accuracy and completeness was highly variable.**
  - *Across services and within a service.*
  - **Using sector benchmarks and sector averages enables range checking and data gap filling.**
- **Emissions factors were missing for key highways activities.**
  - *Impeding carbon emissions assessments at a process level.*
  - **A set of new, research-based, emissions factors were required for specific highways functions.**
- **Carbon is not a top priority for local politicians*.**
  - Where budgets and the condition of the network are the critical issues.
  - **The collateral benefits of carbon reduction must be emphasised.**

*The UK Climate Change Act 2008 (amended in 2019) legally commits the UK as a whole to reach net zero greenhouse gas emissions by 2050.This is a national target, and not directly binding on local authorities.

Carbon Leadership Programme

Keeping it simple.

ADEPT Carbon Leadership Programme



*: Carbon Assessment Assistance Partner, *1: LHA specific briefing, orientation and training, *2: LHA specific support and guidance (proforma completion).

Programme components and key processes.

Carbon Footprint Assessment (CFA).

Best Practice Carbon Assessment (BPCA).

Optional third-party assessment support services.

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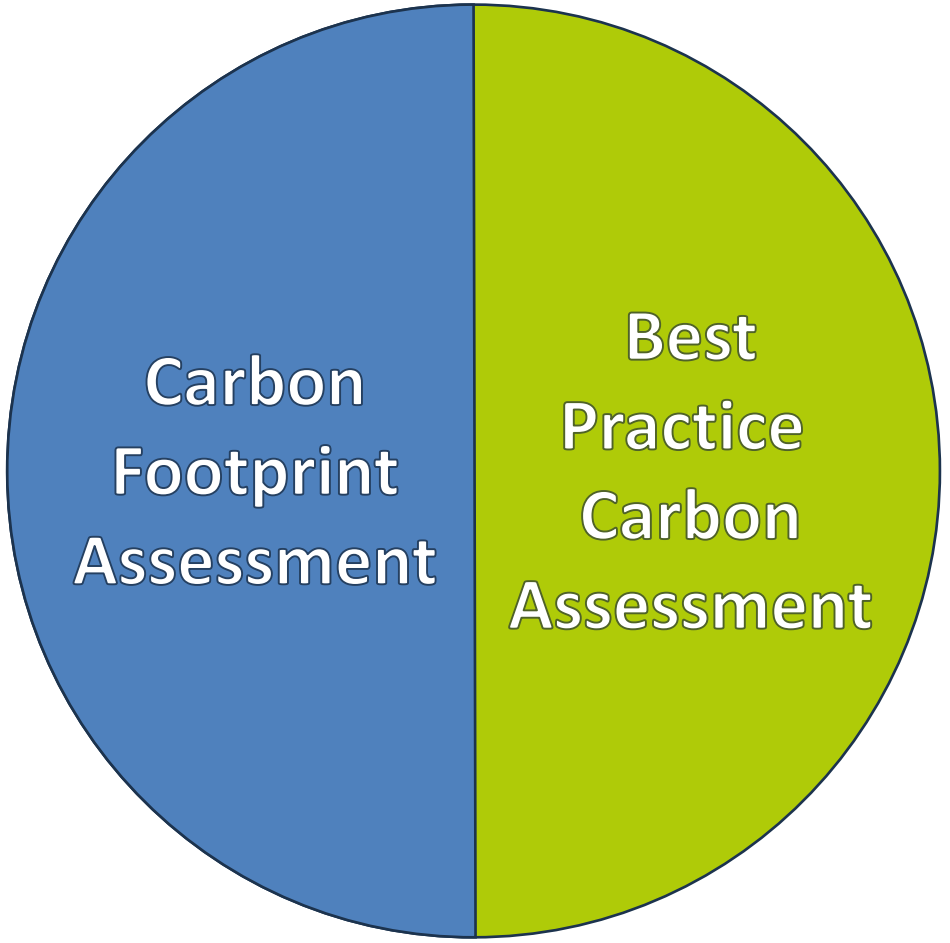
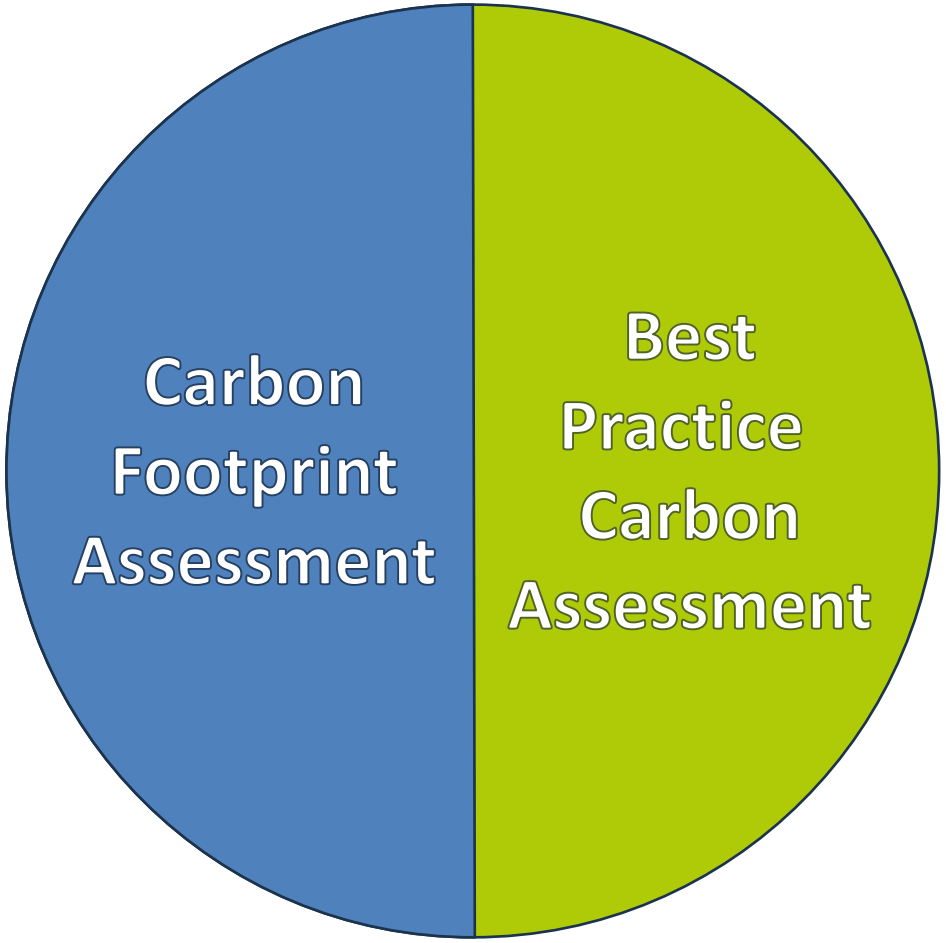
One Programme, Two Assessments

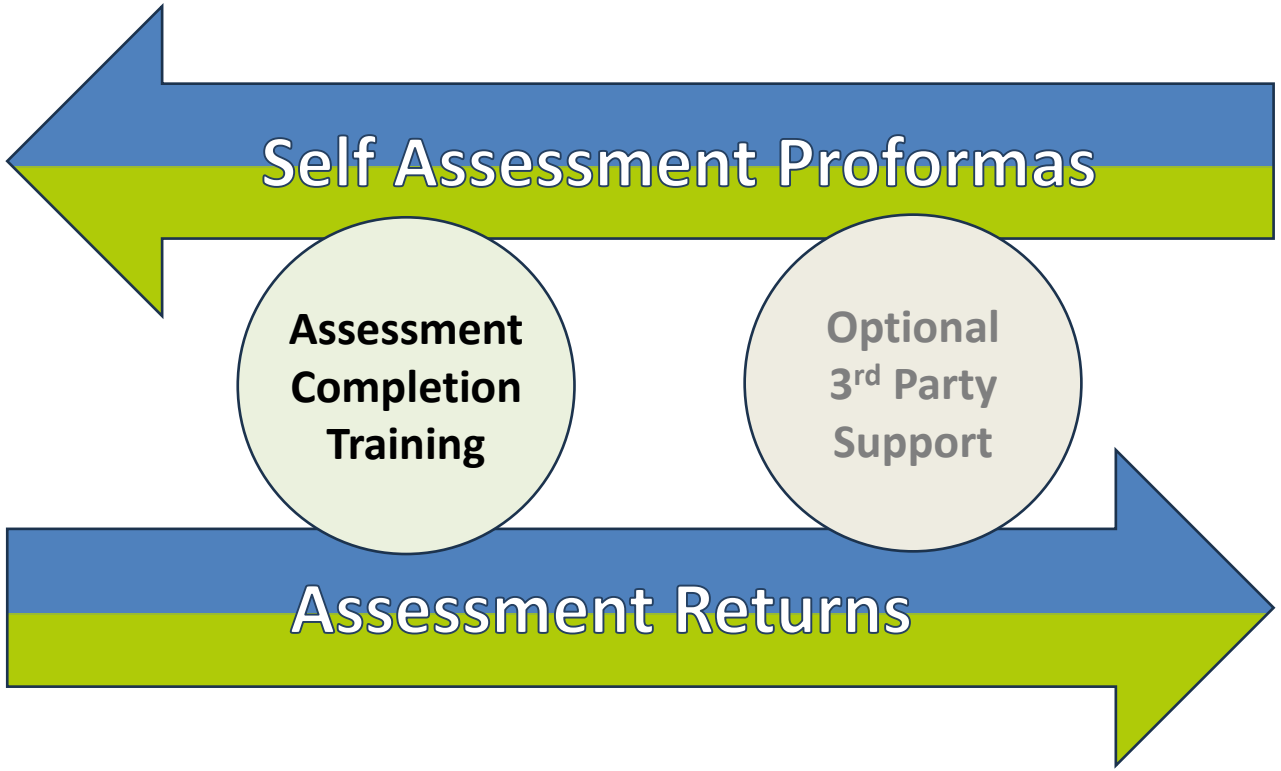
ADEPT Carbon Leadership Programme



One Programme, Two Assessments

ADEPT Carbon Leadership Programme





Carbon Footprint Assessment

ADEPT Carbon Leadership Programme

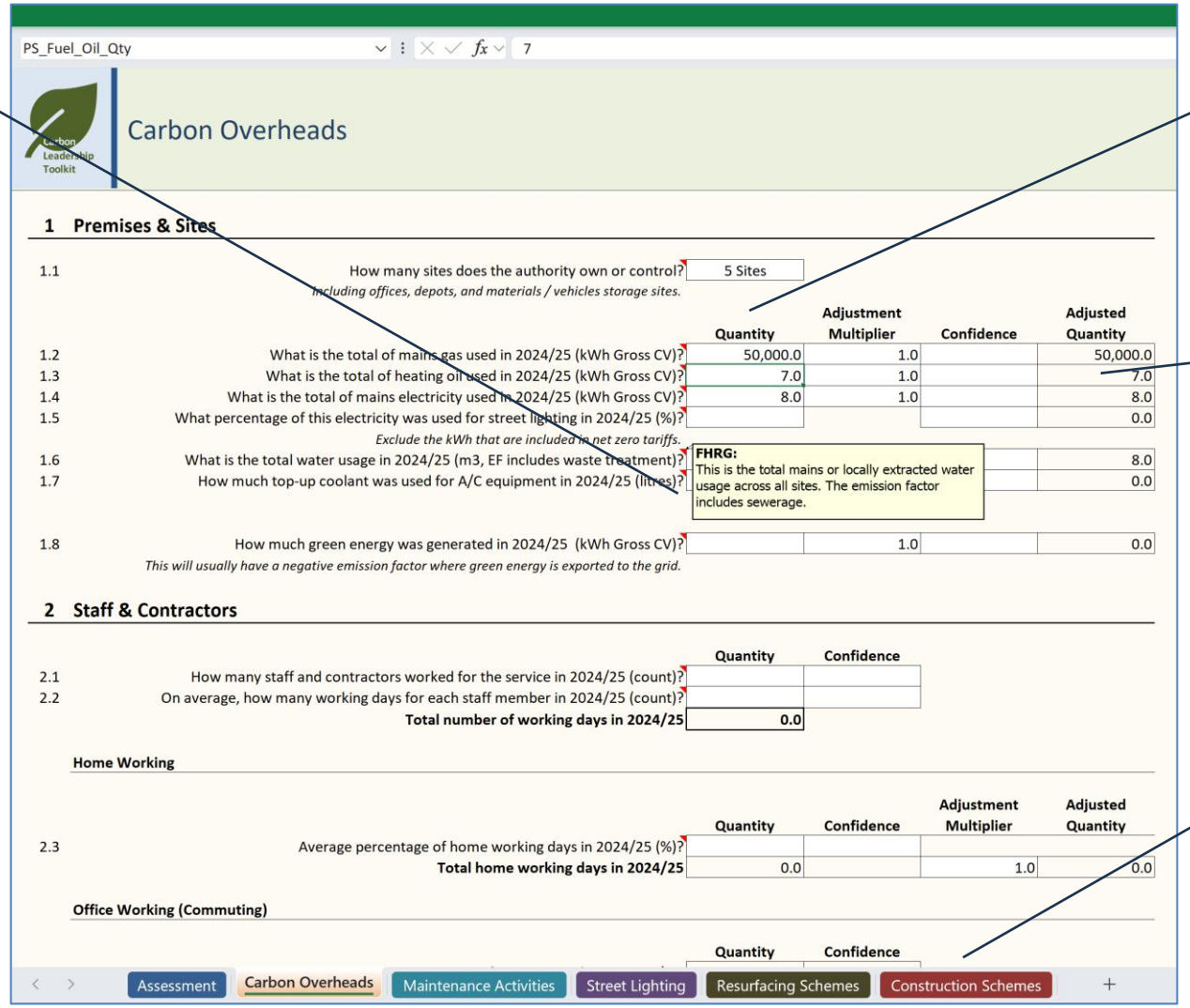
- **Assesses the carbon footprint of highways services.**
  - Maintenance and construction.
- **Utilises a blended method:**
  - Bottom-up for Scope 1 and Scope 2 emissions.
  - Top-down for Scope 3 emissions.
- **Stages:**
  - Training Workshop
  - Proforma Completion (90 days allocated)
  - Proforma Return
  - Proving Review (Errors & Data Gaps)
    - Includes rectification steps.
  - Carbon Assessments Review Workshop
    - Carbon Footprint and Best Practice Carbon Assessments.

Carbon Footprint Assessment Proforma

ADEPT Carbon Leadership Programme

Pop-up help on all questions.

Simple Excel workbook (no automation).



Simple quantity and confidence for each factor.

Emissions factors are not required.

Five sections to complete.

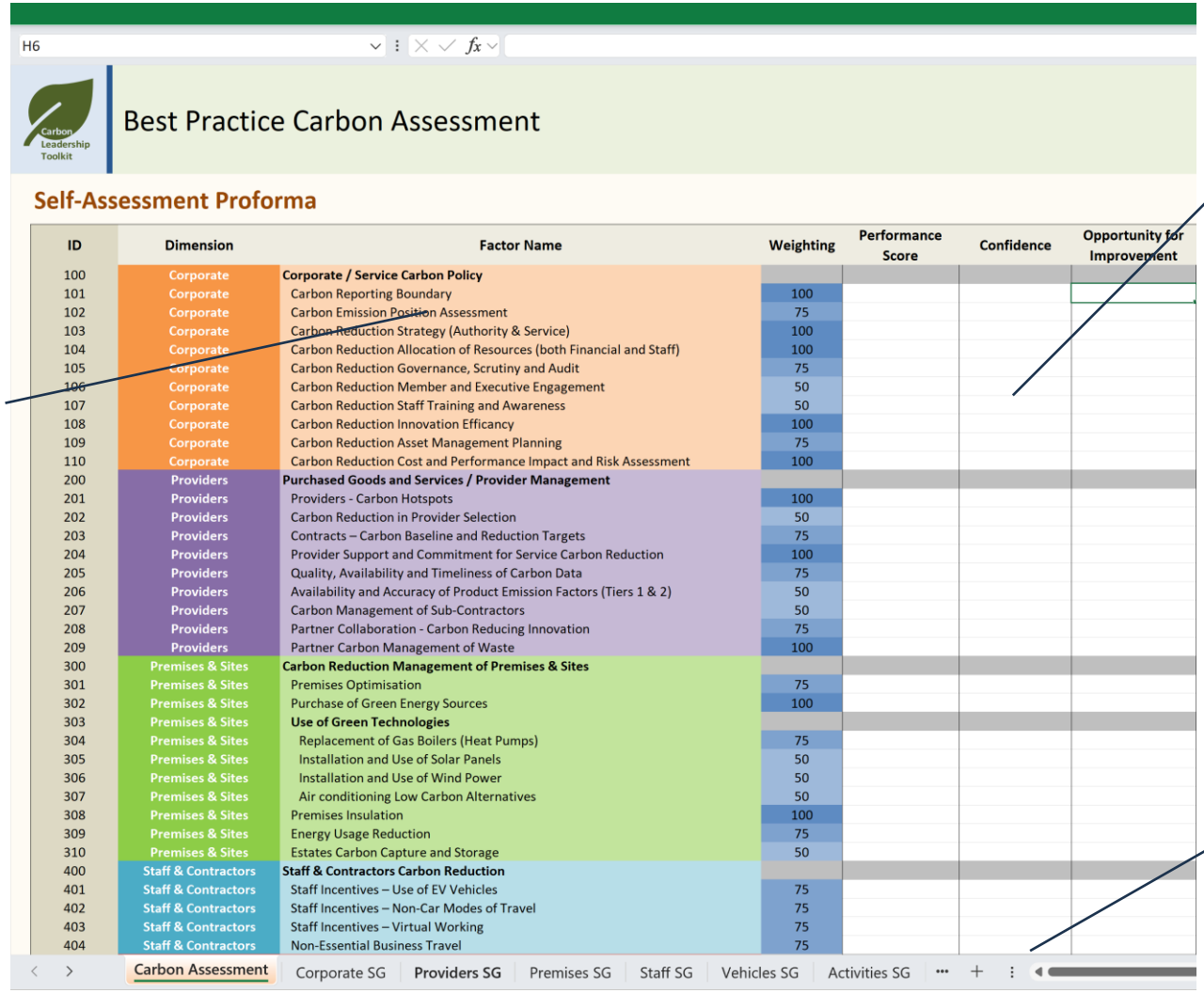
Best Practice Carbon Assessment

ADEPT Carbon Leadership Programme

- **Assesses the scale of adoption of best practice.**
  - Across all highways services.
- **Assessments use the same framework adopted for Value for Money (VfM) assessments.**
- **Stages:**
  - Training Workshop
  - Proforma Completion (90 days allocated)
  - Proforma Return
  - Proving Review (Errors & Data Gaps)
    - Includes rectification steps.
  - Carbon Assessment Review Workshop
    - Supported by peer reviewers.

Best Practice Carbon Assessment Proforma

ADEPT Carbon Leadership Programme



H6

Best Practice Carbon Assessment

Self-Assessment Proforma

ID	Dimension	Factor Name	Weighting	Performance Score	Confidence	Opportunity for Improvement
100	Corporate	**Corporate / Service Carbon Policy**				
101	Corporate	Carbon Reporting Boundary	100			
102	Corporate	Carbon Emission Position Assessment	75			
103	Corporate	Carbon Reduction Strategy (Authority & Service)	100			
104	Corporate	Carbon Reduction Allocation of Resources (both Financial and Staff)	100			
105	Corporate	Carbon Reduction Governance, Scrutiny and Audit	75			
106	Corporate	Carbon Reduction Member and Executive Engagement	50			
107	Corporate	Carbon Reduction Staff Training and Awareness	50			
108	Corporate	Carbon Reduction Innovation Efficancy	100			
109	Corporate	Carbon Reduction Asset Management Planning	75			
110	Corporate	Carbon Reduction Cost and Performance Impact and Risk Assessment	100			
200	Providers	**Purchased Goods and Services / Provider Management**				
201	Providers	Providers - Carbon Hotspots	100			
202	Providers	Carbon Reduction in Provider Selection	50			
203	Providers	Contracts – Carbon Baseline and Reduction Targets	75			
204	Providers	Provider Support and Commitment for Service Carbon Reduction	100			
205	Providers	Quality, Availability and Timeliness of Carbon Data	75			
206	Providers	Availability and Accuracy of Product Emission Factors (Tiers 1 & 2)	50			
207	Providers	Carbon Management of Sub-Contractors	50			
208	Providers	Partner Collaboration - Carbon Reducing Innovation	75			
209	Providers	Partner Carbon Management of Waste	100			
300	Premises & Sites	**Carbon Reduction Management of Premises & Sites**				
301	Premises & Sites	Premises Optimisation	75			
302	Premises & Sites	Purchase of Green Energy Sources	100			
303	Premises & Sites	**Use of Green Technologies**				
304	Premises & Sites	Replacement of Gas Boilers (Heat Pumps)	75			
305	Premises & Sites	Installation and Use of Solar Panels	50			
306	Premises & Sites	Installation and Use of Wind Power	50			
307	Premises & Sites	Air conditioning Low Carbon Alternatives	50			
308	Premises & Sites	Premises Insulation	100			
309	Premises & Sites	Energy Usage Reduction	75			
310	Premises & Sites	Estates Carbon Capture and Storage	50			
400	Staff & Contractors	**Staff & Contractors Carbon Reduction**				
401	Staff & Contractors	Staff Incentives – Use of EV Vehicles	75			
402	Staff & Contractors	Staff Incentives – Non-Car Modes of Travel	75			
403	Staff & Contractors	Staff Incentives – Virtual Working	75			
404	Staff & Contractors	Non-Essential Business Travel	75			

Carbon Assessment | Corporate SG | Providers SG | Premises SG | Staff SG | Vehicles SG | Activities SG

Dimensions and weighted factors.

Simple Excel workbook (no automation).

Simple score, confidence and opportunity for improvement.

Comprehensive scoring guidance.

Getting involved.

Programme rollout.

LHA engagement and commitments.

LHA eligibility, participation and joining instructions.

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Proposed Phased Implementation

Including Staged Feedback & Updates

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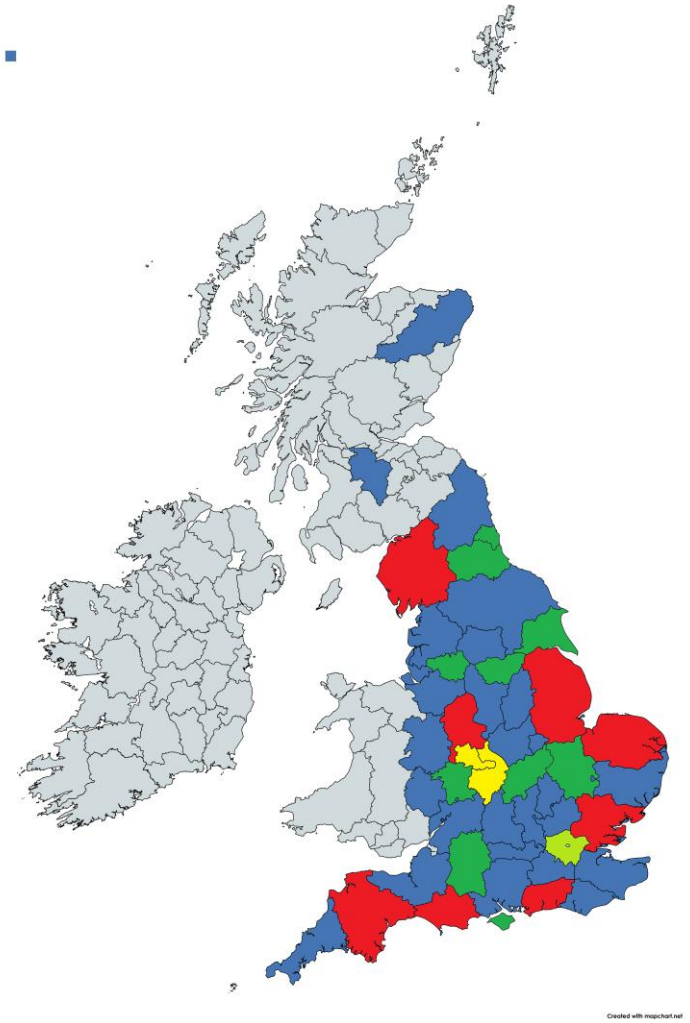

- **FHRG Members (**■, Approx 83% of Local Roads***)**
- **ADEPT Members (**■, Approx 93% of Local Roads**)**
- **Extended Trial Group (**■**)**
  - TfWM (7 Authorities)
- **Phase I (Q2/Q3, 2025) (**■, Approx 19% of Local Roads***)**
- **Feedback, Reflections & Assessment Updates**
  - Phase I: Analysis & Reports
- **Phase II (Q4 2025, Q1-Q3, 2026) (**Remaining FHRG members**)**
- **Feedback, Reflections & Assessment Updates**
  - Phase II: Analysis & Reports
- **Phase III (Q4, 2026, Q1-Q3, 2027) (**Remaining ADEPT members**)**
- **Feedback, Reflections & Assessment Updates**
  - Phase III: Closeout Analysis & Reports

*Outside of the metropolitan areas. Includes temporary Live Labs II members.

Stakeholder Engagements & Commitments

ADEPT Carbon Leadership Programme

- **Proforma training (0.5 days).**
  - Virtual classroom, MS Teams.
- **Proformas completed in-house (90 days allocated per LHA, 4 to 5 days required).**
  - Using readily available data, including meter readings and standard KPIs.
  - Support available where required.
- **Proforma submissions and reviews (1.5 days).**
  - Includes error resolutions and gap closing.
- **Follow-up workshops (0.5 days, senior staff).**
  - Assessment reviews and certification.

Proforma Completion

Keeping it simple.

ADEPT Carbon Leadership Programme

- **For Scope 1 and Scope 2 (direct emissions):**
  - For fuels and materials, use quantities from invoices and meter readings.
  - For staff, how many staff + typical commuting / home working arrangements.
- **For Scope 3 (indirect emissions):**
  - How much did you commission / complete (from you service KPIs)?
    - How many kilometres of winter treatments did you do?
    - How many km2 of grass cutting?
    - How many potholes did you fill?
    - How many gullies did you empty?
    - Etc…
- **You do not need:**
  - Emissions factors,
  - Supply chain records,
  - Staff survey,
  - Etc…
- **Proving will convert your answers into a carbon footprint.**

Joining Instructions

ADEPT Carbon Leadership Programme

- **Briefing Dates**
  - 16th June, 24th June
- **Training Dates**
  - 8th July, 16th July, 23rd July

- **Sign-up on the ADEPT website… it's DfT funded and therefore free for all English LHAs.**

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Investing in Climate & Nature (ICaN)

Barry Wyatt, Climate and Nature Emergency Manager

South Gloucestershire Council

ICaN – Investing in climate change and nature

A portfolio of investment ready opportunities: “that stimulate private investment & market-based mechanisms that improve & safeguard our domestic natural environment”

- Green space pilots show great social value
- No commercial return so, a focus on philanthropic motives with clear (CSR) & (ESG) links
- CIL, S106, TOMS / Social Value Procurement, & SGC insetting
- Opportunity for internal and external markets
- Stacking and bundling

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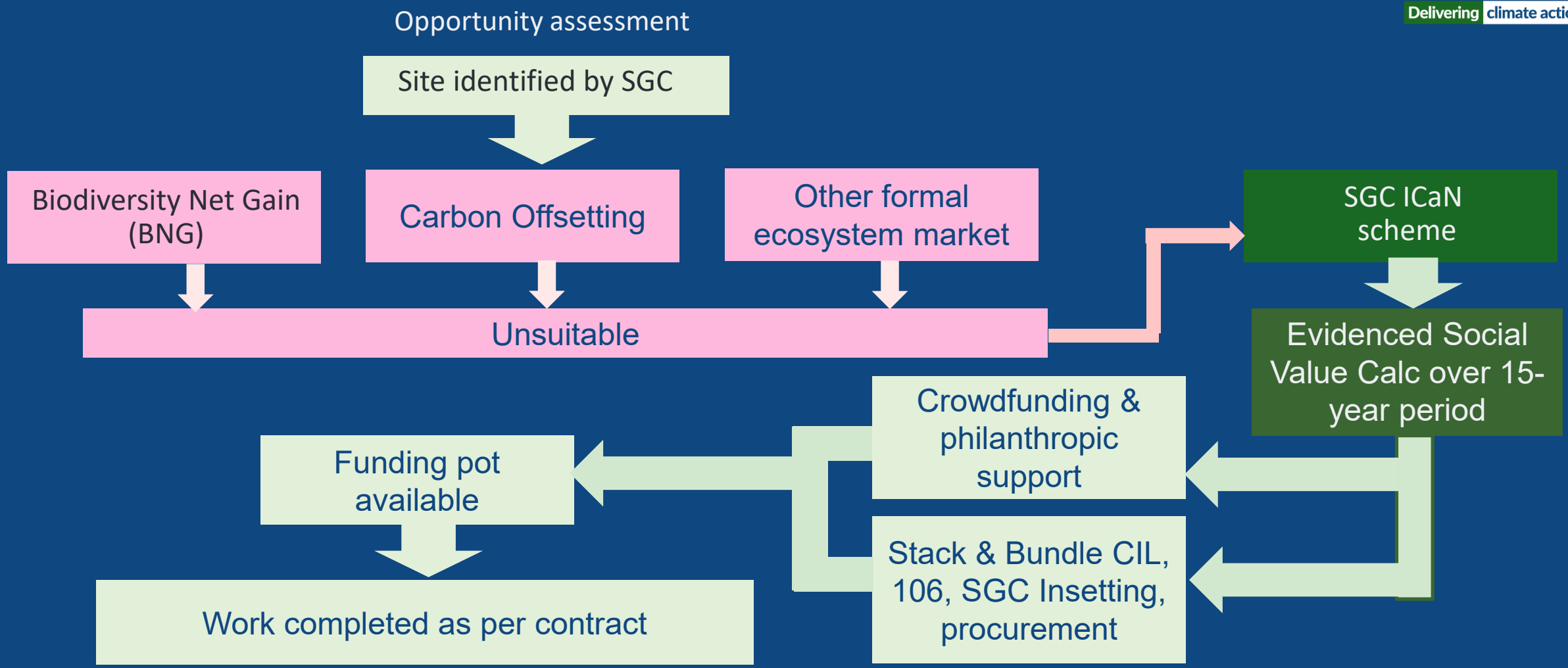
Delivering Climate action

Environment Agency

eunomia

ICaN – Green Space Pathway Simplified Approach



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Delivering climate action

Environment Agency

eunomia

www.southglos.gov.uk

ICaN – How we evaluate the financial benefit

	Francis Way	Aust wetlands	Warmley Nature Action Zone (8 sites)
	Site #4	Site #5	Site #6
Area of site (ha)	**1.7**	**8.9**	**37.6**
Total baseline 15-year social value	**£2,035,000**	**£1,153,000**	**£17,557,000**
Total post intervention 15-year social value	**£2,510,000**	**£1,952,000**	**£24,120,000**
Air pollution removal	*£7,000*	*£13,000*	*£48,000*
Flood regulation	*£10,000*	*£18,000*	*£65,000*
Climate regulation	*£38,000*	*£38,000*	*£161,000*
Recreation	*£1,375,000*	*£660,000*	*£12,906,000*
Physical health	*£730,000*	*£331,000*	*£8,063,000*
Mental health	*£189,000*	*£86,000*	*£2,083,000*
*Biodiversity**	*£161,000*	*£806,000*	*£795,000*
Total uplift in 15-year social value	**£475,000**	**£799,000**	**£6,563,000**
Total intervention cost	**£28,000**	**£80,000**	**£265,000**
Benefit to cost ratio	**17:1**	**10:1**	**25:1**

- Not selling a financial return to investors
- Ability to take credit for the social value of their investment

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KaarbonTech Live Events

ICaN – SWLNZF Decarbonisation of Buildings

- ASHP replacement of old boilers
- Scope 4 avoided carbon emissions
- Prohibitively expensive £/tCO2e even over 15-year life span
- Making the difference ‘gap funding’ approach: deducting counter factual
- Operational savings
- Reduced reliance on fossil fuels

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Greenprint.

A carbon negative systems model for green infrastructure management

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ADEPT LIVELABS2 Decarbonising Local Roads

west sussex county council

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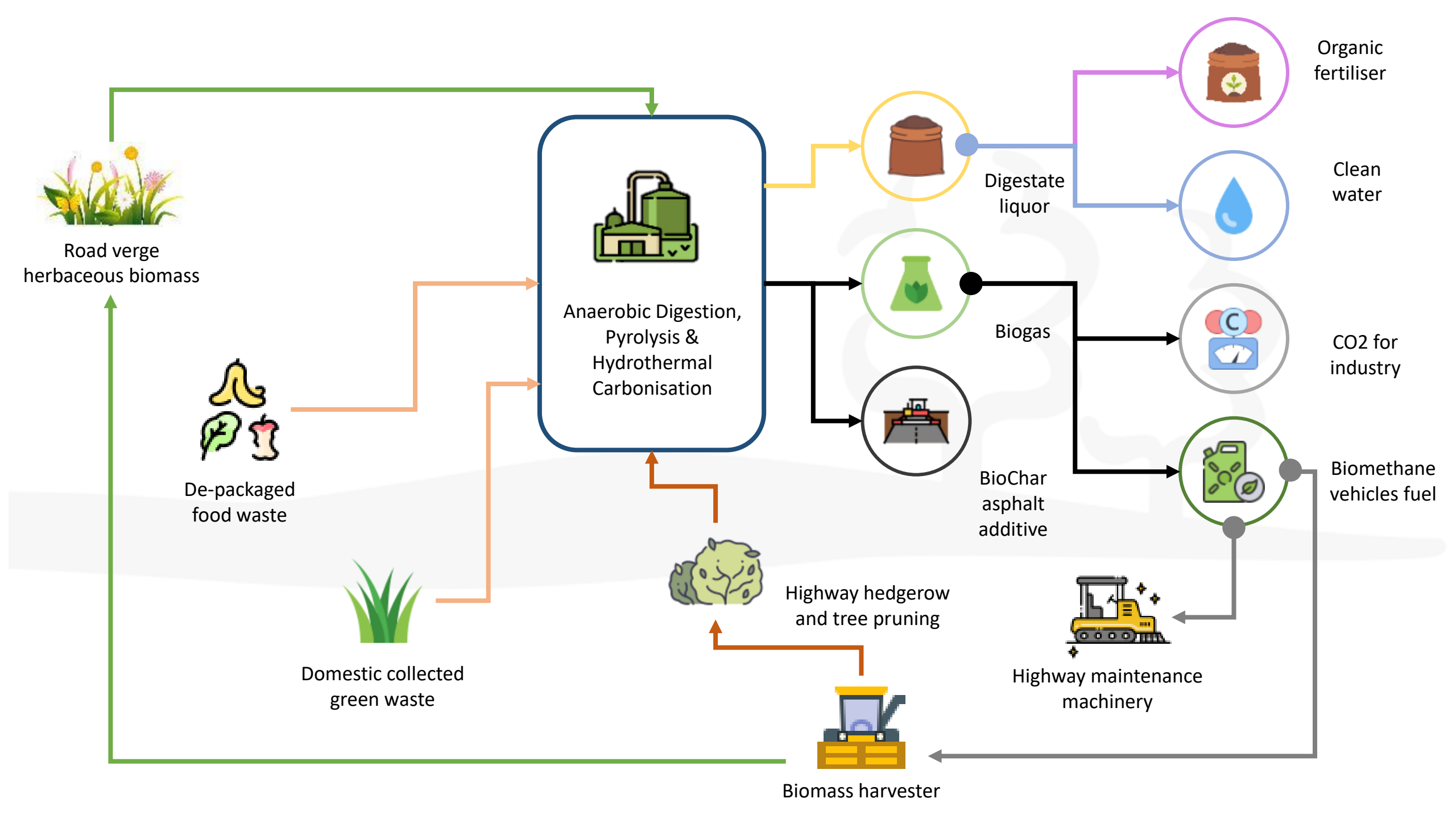
Road verge herbaceous biomass
De-packaged food waste
Domestic collected green waste
Anaerobic Digestion, Pyrolysis & Hydrothermal Carbonisation
Digestate liquor
Organic fertiliser
Clean water
Biogas
CO2 for industry
BioChar asphalt additive
Biomethane vehicles fuel
Highway hedgerow and tree pruning
Highway maintenance machinery
Biomass harvester

The value of the networks we manage

- Over 313,00 miles of network
- Unlocked asset to help reduce CO2
- Carbon neutrality by 2030
- New ways to manage grass verges
- Using cutting to generate energy
- Reducing the carbon footprint of maintenance
- Reducing the cutting frequency and manage expectations

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Greenprint project objectives

- Achieve net zero
- Integrated ‘ecosystem approach’
- Turning waste into a Commodity
- Potential to deliver financial savings
- Increase biodiversity and carbon sequestration at verge side – iCAN?
- Social value outputs increase over time, but grass volumes fall

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AI: Technology Update

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AI Advances…
Since June Last Year

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- **ChatGPT 4.0: 1.8 trillion parameters.**
  - **tens of terabytes** of text, drawn from a massive multi-source web crawl, books, licensed data, and human feedback.
- **ChatGPT 5.0 (anticipated): 17 trillion parameters.**
  - **hundreds of terabytes** of text cross-referenced (for context), drawn from a massive multi-source web crawl, books, licensed data, and human feedback.

A perfect storm… is AI an answer?

- In Q1 2025, UK productivity (output per hour) was 0.2% lower year-on-year, despite output being slightly above pre-COVID levels (ft.com).
- Since the 2008 financial crisis, productivity growth has slowed dramatically. Before 2008, annual labour productivity growth was around 2%, while from 2010 to 2022 it averaged just 0.5% per year (escoe.ac.uk, pwc.co.uk).
- Among G7 countries, the UK's performance has been near the bottom over the past decade (escoe.ac.uk, pwc.co.uk, resolutionfoundation.org).
- **The UK lags ~20% behind France and Germany, and by nearly 40% behind the US in output per hour** (tradingeconomics.com, economicsobservatory.com, ons.gov.uk).
- Between 2019–24, the US grew labour productivity by almost 10%, while UK productivity fell in many sectors — especially in the public sector (theguardian.com).

Will the “disappointed generation” drive an AI Advance?

Understanding Gen Z and Gen Alpha in the Workplace (deloitte.com)

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- **Work-life balance.**
  - Working within strictly set hours,
  - …or remuneration for additional hours worked,
  - …or, preferentially, compensation through extra time off.
- **Mental health and wellbeing.**
  - With an employer that demonstrates their commitment to these employee priorities.
- **Purpose and meaning.**
  - Where careers align with personal values.
- **Career progression and personal growth.**
  - Want career progression and personal growth without compromising work-life balance.
- **Financial stability.**
  - Want to be well paid for the work they do, titles don’t matter.
- **Social responsibility.**
  - Want to be actively involved in addressing social and environmental issues.
- **Collaboration and teamwork.**
  - Want to work in teams, where individual achievements are not as important as team outcomes.
- **Challenge traditional norms.**
  - Want flexible working with a focus on timeouts, mental health and wellbeing… **believe AI should carry the load on day-to-day tasks**.
- **Remote working.**

  Is critical in ensuring work-life balance.

Is there an opportunity for AI in this marketplace?

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Deployment Type	Productivity Gain	Costs Reduction	Examples
Human Assistance / Support	22%	4%	Co-Pilot / ChatGPT Office Assist
Human Resources Control & Optimisation	61%	9%	Amazon, AI Warehouse Management
Human Replacement (non-Robotic)	384%	88%	US Financial Services, AI Call Centres
Human Replacement (Robotic)	275%	55%	"Lights-Out" Robotic Factories (FANUC and Philips)

Non-Agent AI

Refers to AI systems that primarily function as tools, requiring direct user instructions for each task. They lack the autonomy, decision-making capabilities, and learning from experience found in agentic AI.

Agentic AI

Agentic AI refers to autonomous AI systems that are capable of making decisions and performing tasks with minimal human intervention. These agents can learn from experience, adapt to changing environments, and collaborate with humans to solve complex problems.

Agentic Robotic AI

Agentic AI robots are designed to operate **autonomously**, making decisions and taking actions as physical entities in the real world, on their own, often with minimal or no human intervention. They have the ability to act independently, set goals, make plans, and pursue them.

Future of Learning (www.ox.ac.uk)

Tutors and lecturers are replaced with personal AI “masters”.

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- **1. Personalized Learning**
  - AI can adapt course materials, assignments, and feedback to each student’s pace, interests, and abilities.
  - Struggling students get intensive help, while advanced students can explore deeper topics with expert tutoring.
- **2. Automated Assessment**
  - Quizzes, essays, and even code can be graded automatically, providing instant feedback.
- **3. Intelligent Tutoring**
  - AI-powered tutors can answer student questions any time on almost any subject.
  - They can explain concepts, suggest and access resources, and track student progress.
- **4. Course Design and Content Creation**
  - AI tools can help create course content and tests on-the-fly. They can even simulate labs or experiments.
  - AI can analyse which teaching materials work best and use this feedback to create better, tailored materials.
- **5. Collaborative and Interactive Learning**
  - AI can form and supervise smart study groups based on students’ needs and interests.
  - Virtual simulations, role-playing, and interactive scenarios become easier to create and manage.
- **6. Accessibility and Inclusion**
  - AI can translate materials, generate subtitles, or convert text to speech for students with different needs.
  - It helps break language and disability barriers.
- **7. Early Intervention**
  - AI systems can flag students who are struggling or at risk of dropping out, alerting instructors to intervene early.
- **8. Research and Writing Support**
  - With access to the university research databases.

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Surrey's Journey to Automate Pothole Detection Using AI

Amanda Richards, Surrey County Council

Surrey's Journey to Automate Pothole Detection using AI

Amanda Richards, Surrey County Council

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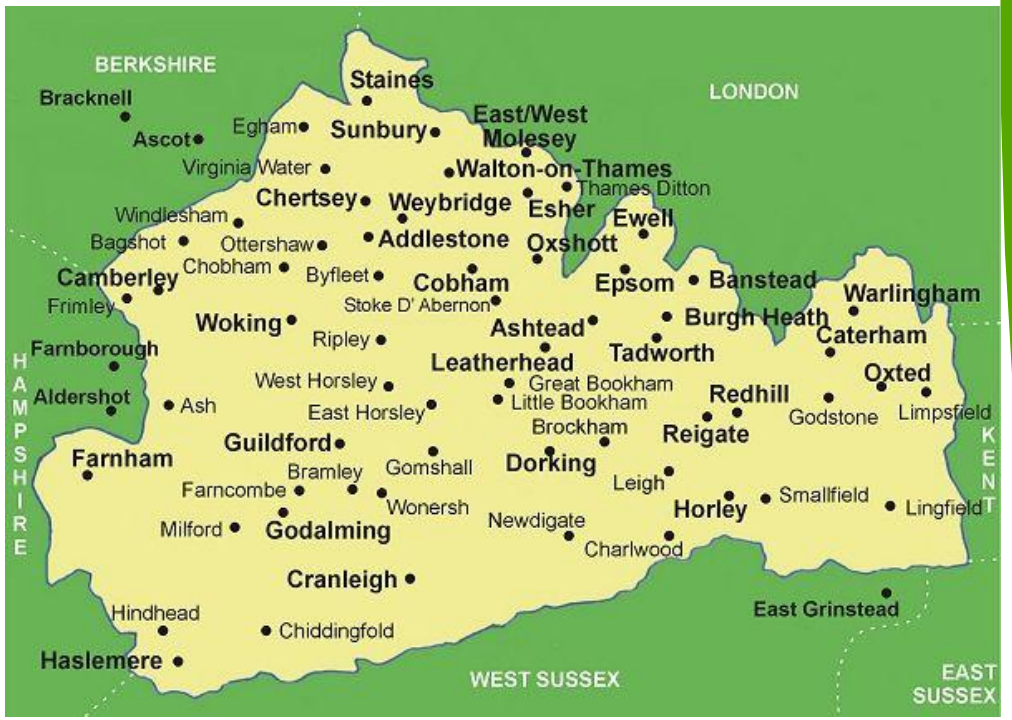
ROUTE REPORTS

About Surrey

- 3,347 miles of roads
- Approx. 50k potholes repaired per annum
- 14 Highway Safety Inspectors needed to carry out inspections
- Corporate aspirations around digital, innovation, climate change
- New Term Maintenance Contract



Challenges

- Taking on Customer Inspections for public-reported potholes/defects
- Identifying duplications of reported defects
- Identifying failed repairs
- Accurately assigning defects to the safety matrix automatically

OBJECTIVE

Making Highway Inspections more efficient and “smarter”

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Finding Solutions

- +Add-Strategy Workshop: **Rethinking Potholes** – June 2019
- 3-day facilitated workshop
- Clients, Contractors, Consultants, SME's, Tech Start-ups, Solution Providers
- Ideas included:
  - ❖Geo-tagging Potholes for improved locational accuracy
  - ❖Collaboration with Utilities
  - ❖Video Data Capture and optimisation through AI
  - ❖Covid accelerated need to look at inspecting the network differently

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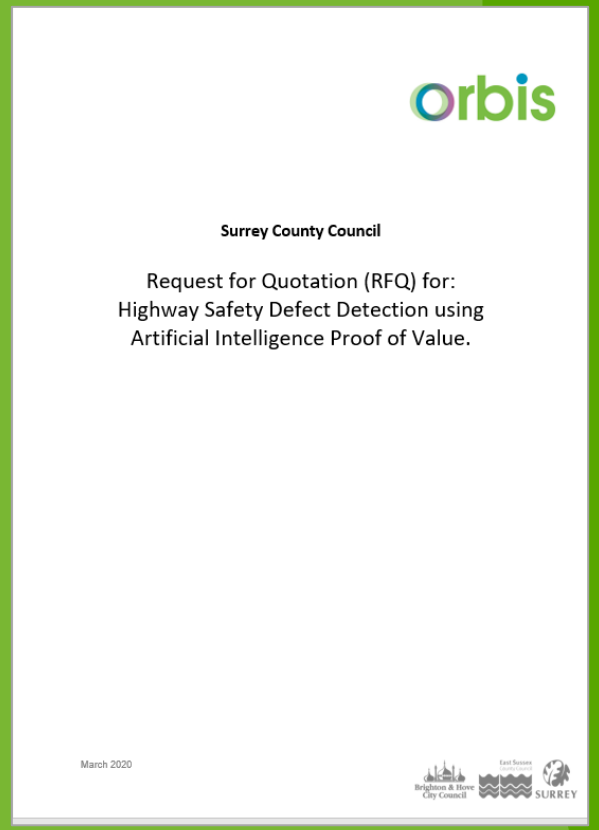
ROUTE REPORTS

Proof of concept

- Principal objectives:
  - To establish if AI technology, can identify highways safety defects, with the priority being to accurately identify potholes, as per the safety defect matrix, from video footage/imagery.
  - Develop an understanding of how safety defects identified through AI can integrate with or change the current end-to-end process.
  - Understand the factors and conditions that influence the success/or not, of using video and AI technology to detect highways safety defects.
  - To understand the data analytic skills and capabilities required, along with cost, so that we build our maturity and knowledge to support next steps.
- Awarded – Route Reports


orbis

Surrey County Council

Request for Quotation (RFQ) for:
Highway Safety Defect Detection using
Artificial Intelligence Proof of Value.

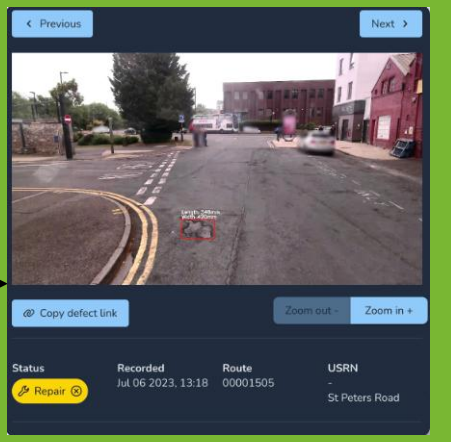
March 2020

Timeline

2020	2021-2022	2023	2024	2025
Surrey issues a tender for AI detections, which is awarded to Route Reports and a POC begins	SCC and RR begin a validation and retraining process to improve the AI	The system is integrated with Confirm, allowing a one-click export of defects	End-to-end driven inspection comparisons carried out and system improved	Surrey begins the transition from manual to automated inspections

How it works

Purpose built devices and cameras analyse and transmit live data and anonymised imagery from vehicles over 4G



Data is displayed instantly on the platform

And can be automatically sent to an existing works management system

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ROUTE REPORTS

Installation

Fitted onto HSI vehicles

Enables direct comparison between Route Reports technology and HSI logged defects

Initial validation

Example of a defect recorded by Route Reports

Same defect picked up and logged by HSI

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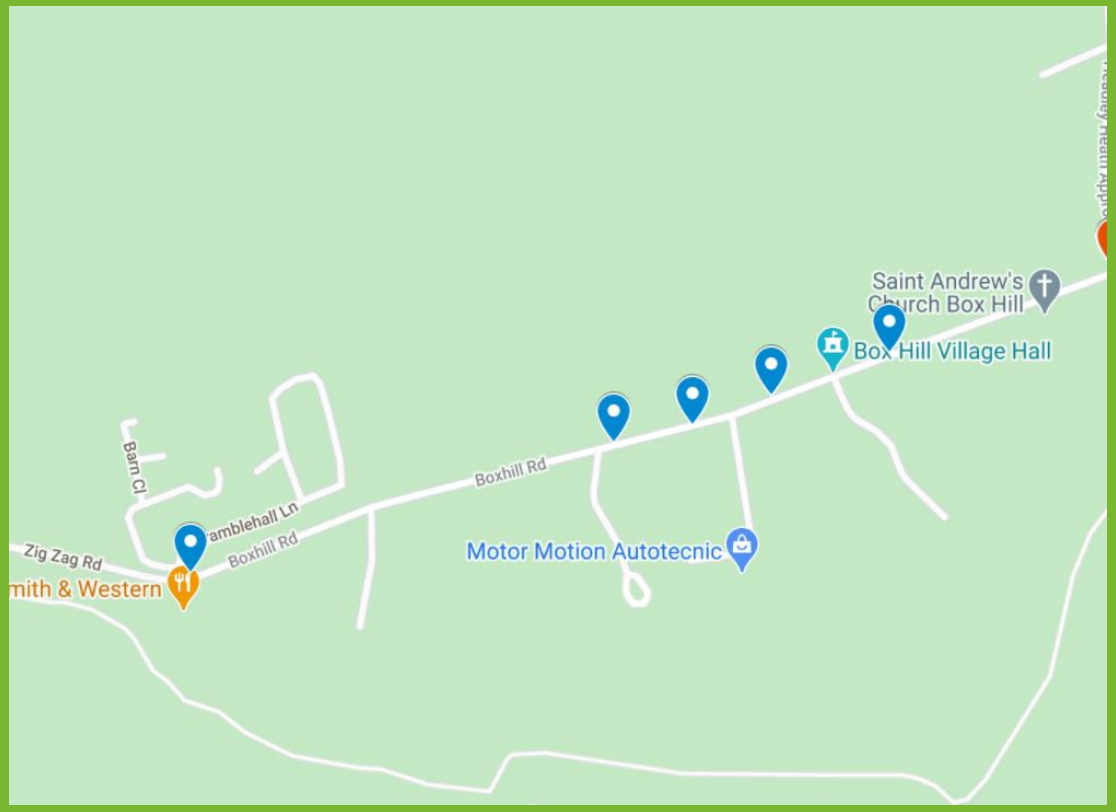
ROUTE REPORTS

Initial validation

SURREY COUNTY COUNCIL
ROUTE REPORTS

Defects recorded by Route Reports, but not picked up by HSI

Initial validation



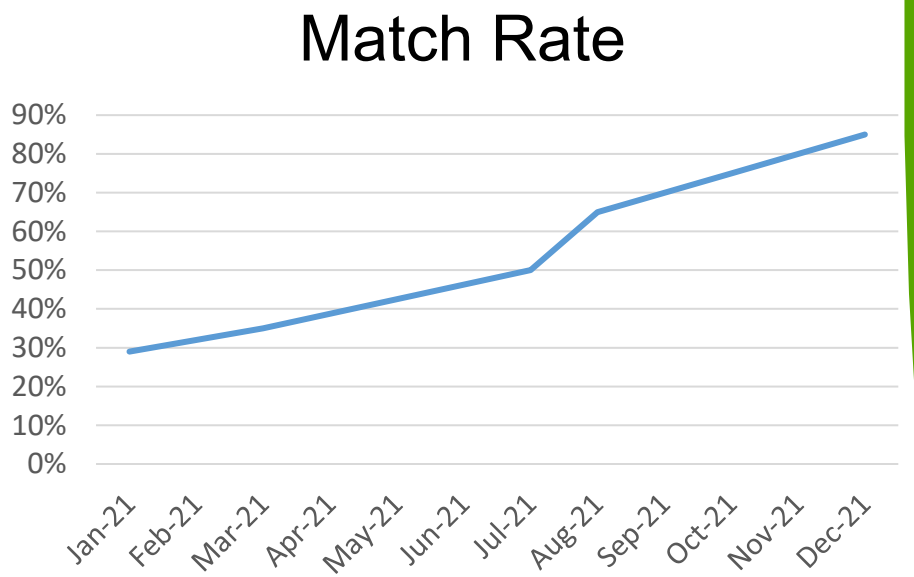
Defects recorded by HSI, but not picked up by Route Reports

Improving the system

"Match rate" calculation to determine how close the RR AI device matched to a human inspector's performance

Throughout 2021, defects that were missed were **re-trained** in the system

By the end of 2021, an **85% match rate** was achieved, which is similar to two highway inspectors compared on the same route.



Re-trainings take place **every month** to continuously improve the accuracy.

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Challenges of 1st time using AI

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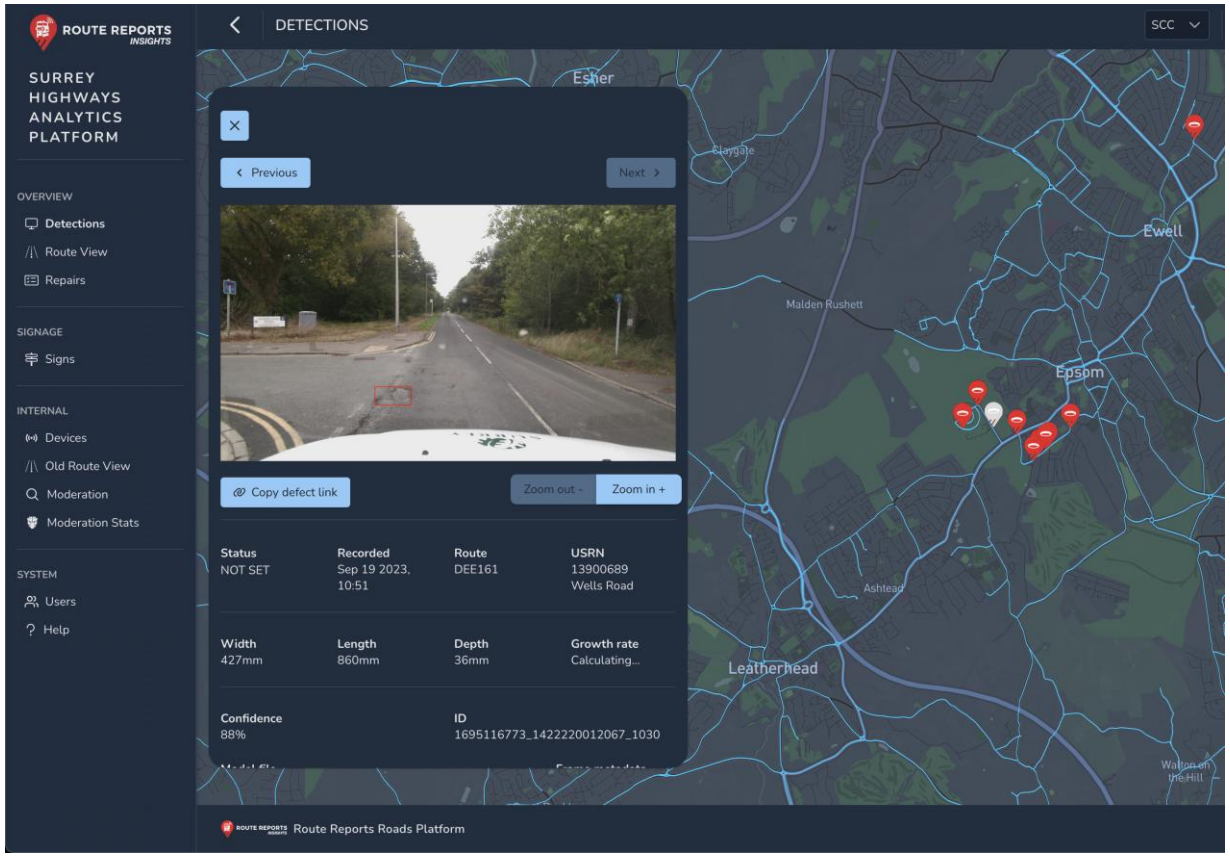
ROUTE REPORTS

Low light, especially in Winter → Solved by testing 5 different cameras until one that worked reliably from sunrise to sunset was found.

Different weather conditions → An additional 10,000 training images were used through each season to help train the algorithm for every road scene.

The traditional inspection method of **pulling over at the side of the road** was compared to a traffic speed drive through of the route. → It was found that the system was much more effective when the inspectors didn't stop - which also resulted in a **4 times faster route time.**

Defect Detection



Defects from Surrey's Highway Network are presented on a live dashboard, where an image of the defect is highlighted, and measurements are available with GIS links.

Defects can then be categorised and selected for repair in two clicks.

Automatic Calibration

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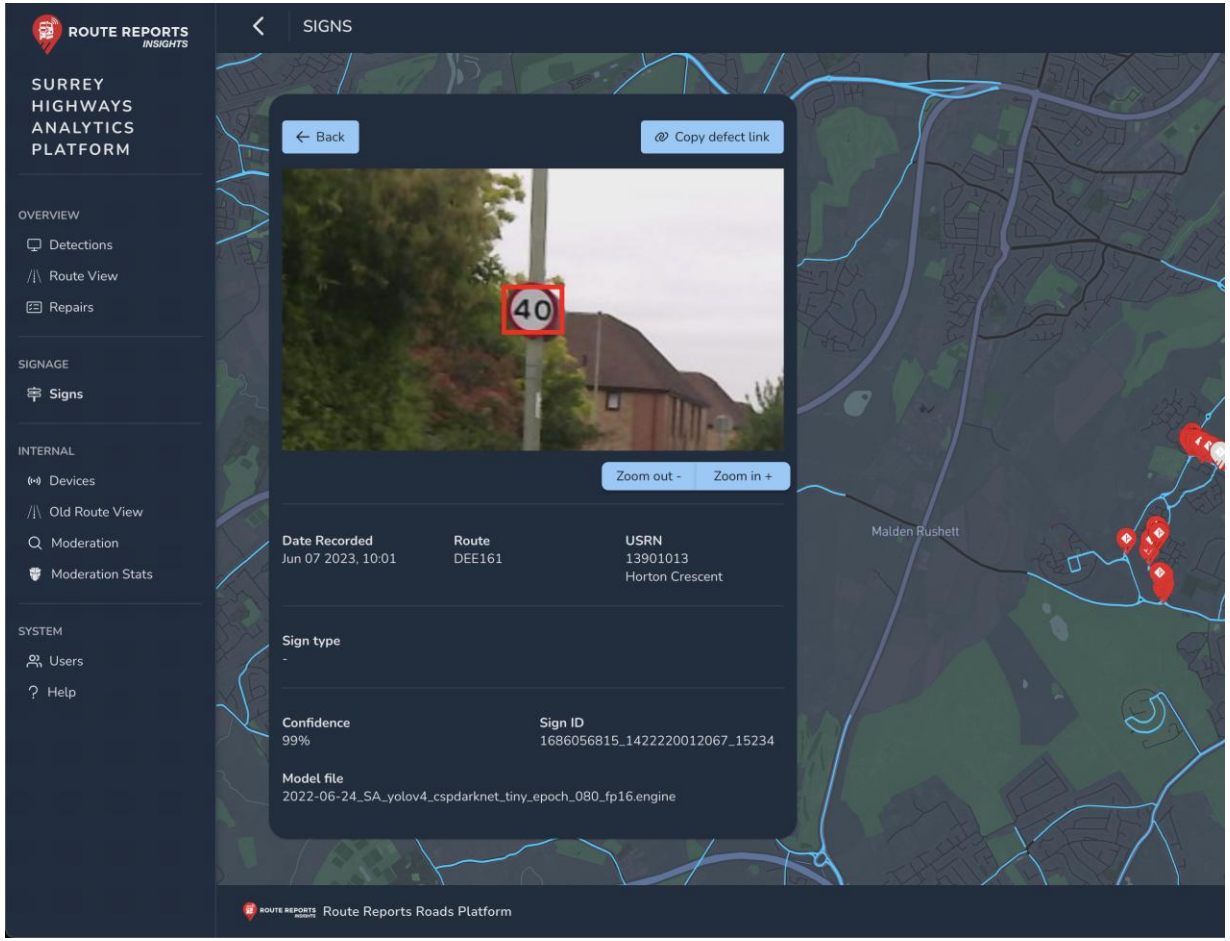
To ensure that width, length and depth measurements are accurate, the devices can auto-calibrate with each drive. This uses a sophisticated algorithm to determine the exact position of the camera compared to the road surface, which can then be turned into a top-down view which is used for automated defect measurements.

Sign Identification



All the road traffic signs across the network are collected, and signs with defects are specifically highlighted, including signs that are:

- Damaged
- Graffitied
- Covered by Vegetation

Route View

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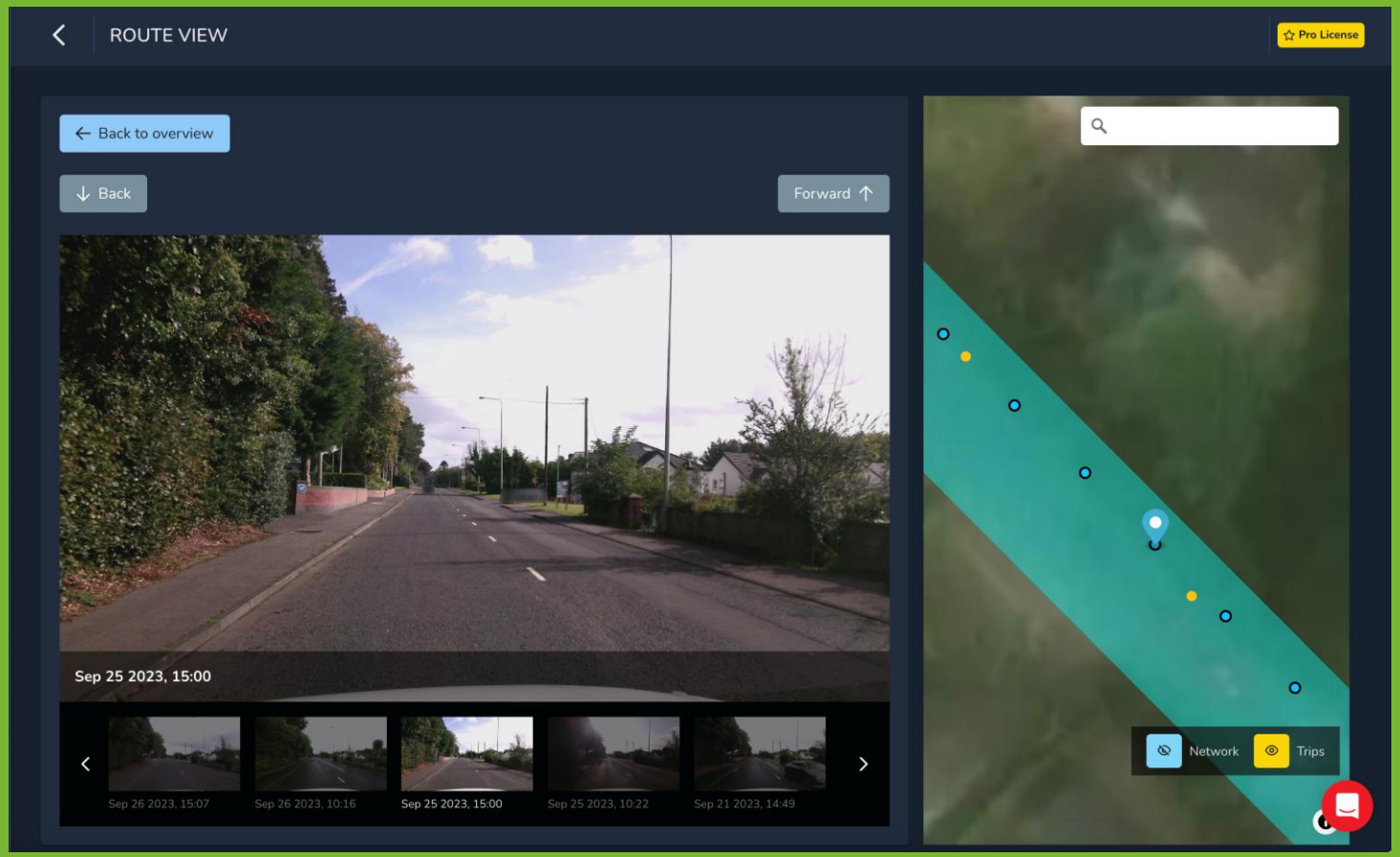
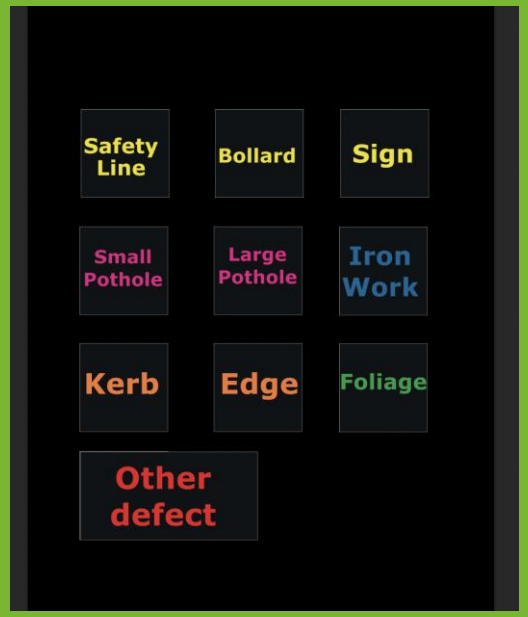
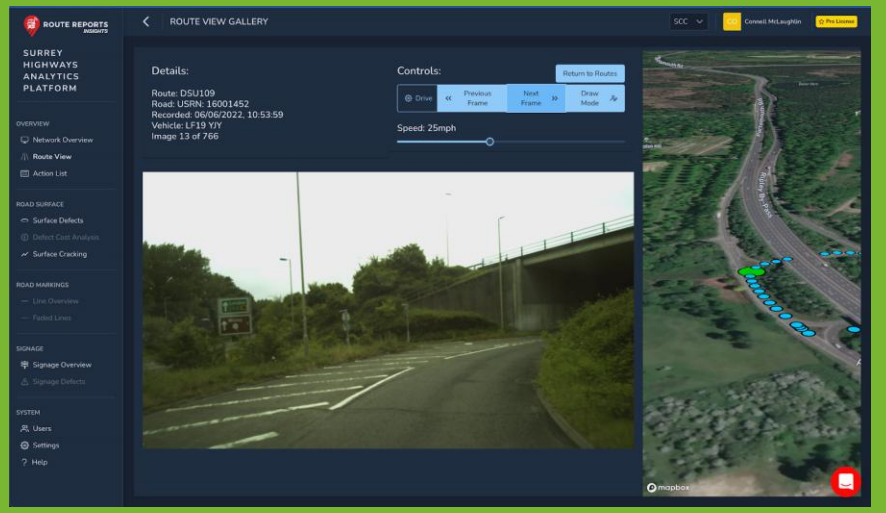
ROUTE REPORTS



- Pick the newest (or historical) image at any point on the road network
- Resident Enquiries can be solved much faster using Route View

Key Pads



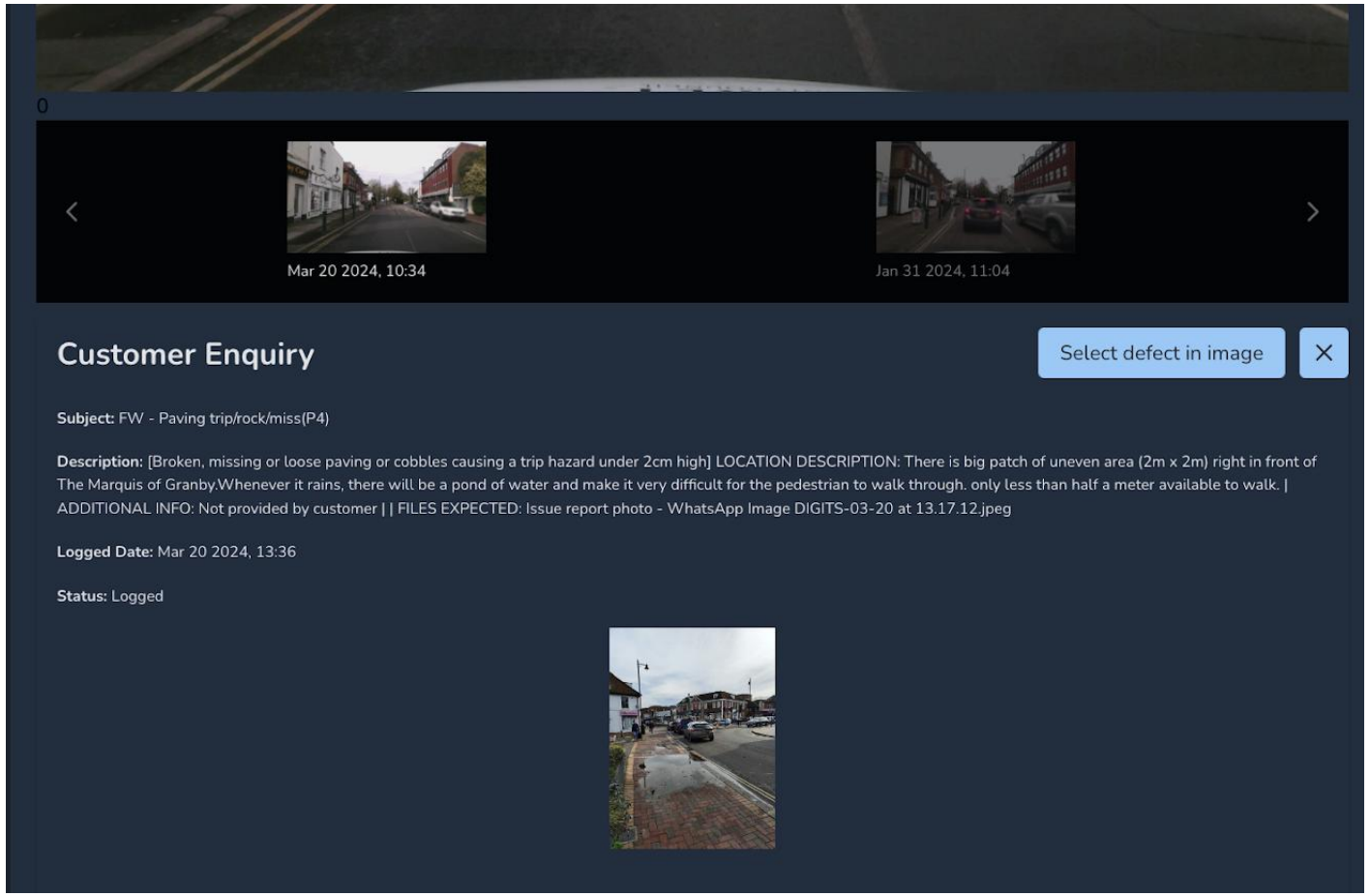


Inspector Keypads

As part of our training and validation exercise, we gave inspectors keypads that could be used while driving a route. Each time a key is pressed, an image and GPS point is captured and tagged with the defect.

This was then used to validate the automatic detections and provide training data for additional types of defects.

Enquiry Handling



- Enquiries are synced with Confirm
- Latest imagery from the enquiry location can be viewed and a job raised directly from the platform

PAS 2161

- The system has been developed to PAS 2161 standards and will be in the first set of accreditation testing later in 2025
- Additional features such as deterioration modelling are planned

Next steps

- The system will begin to take over a proportion of the driven inspections, and as the workflow and accuracy are proven, will begin to take on more of the driven inspections across Surrey

- The ability to resolve enquiries faster will be further developed, with more types of defects being automatically detected

- PAS 2161 functionality will be further expanded, with analysis features to assist in long term asset management

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Automation & AI

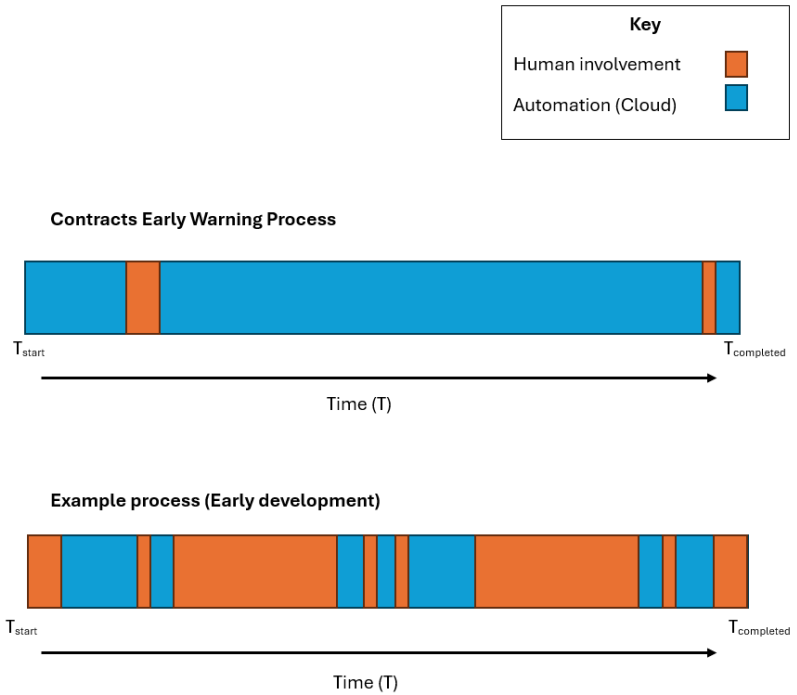
John Pateman, Buckinghamshire County Council

Buckinghamshire Council Technology Camps

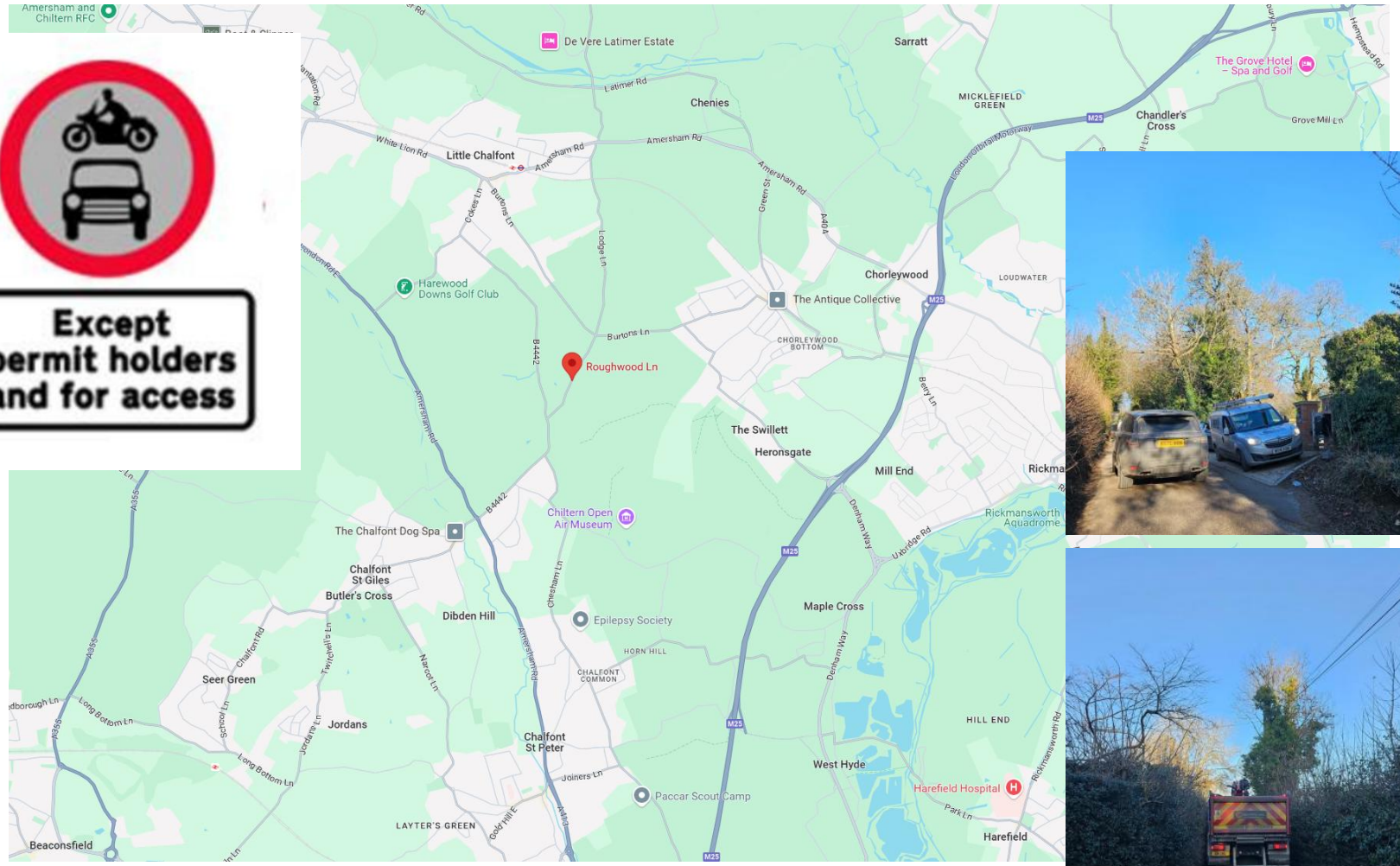
- Council Strategic direction
- Partnership with Microsoft
- Whole Microsoft Power Platform including Microsoft AI Hub
- IT created safe area for creativity
- Community of Practice

Highways Automation

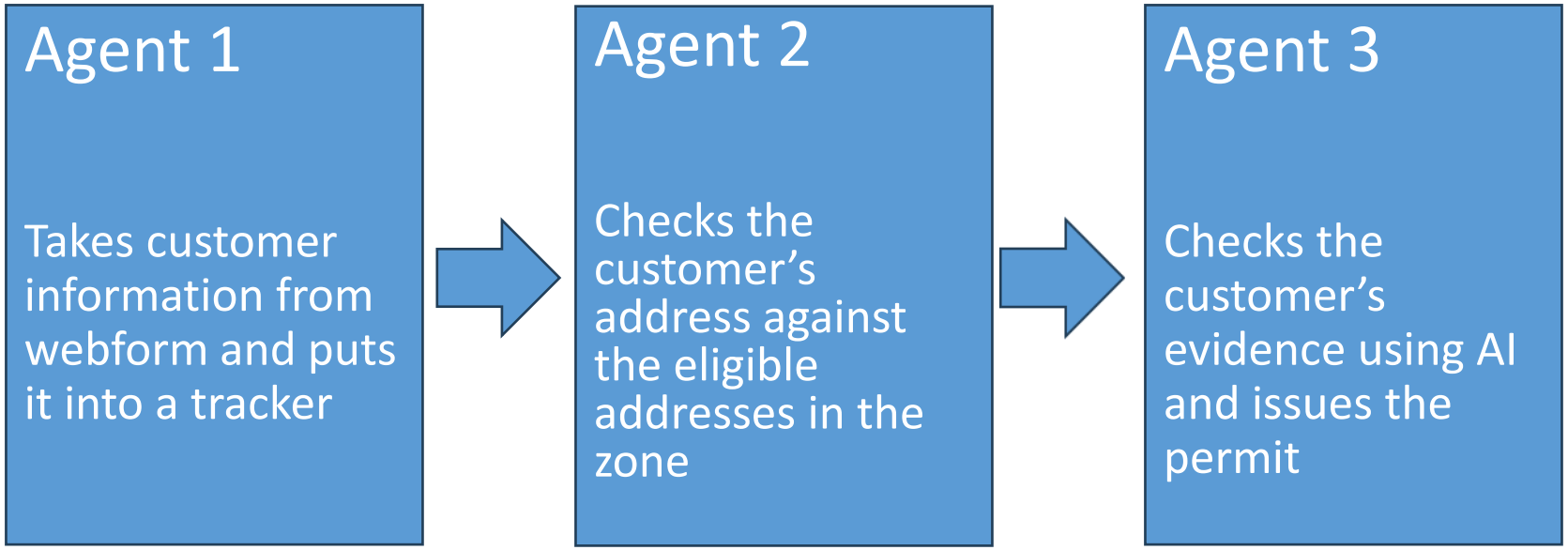
- Over 300 agents/flows (removing routine workload)
- 5 agents using Microsoft AI Hub
- Equivalent of 4.5FTE (when measured in Sep24)



Case study – Roughwood Lane Permit Zone

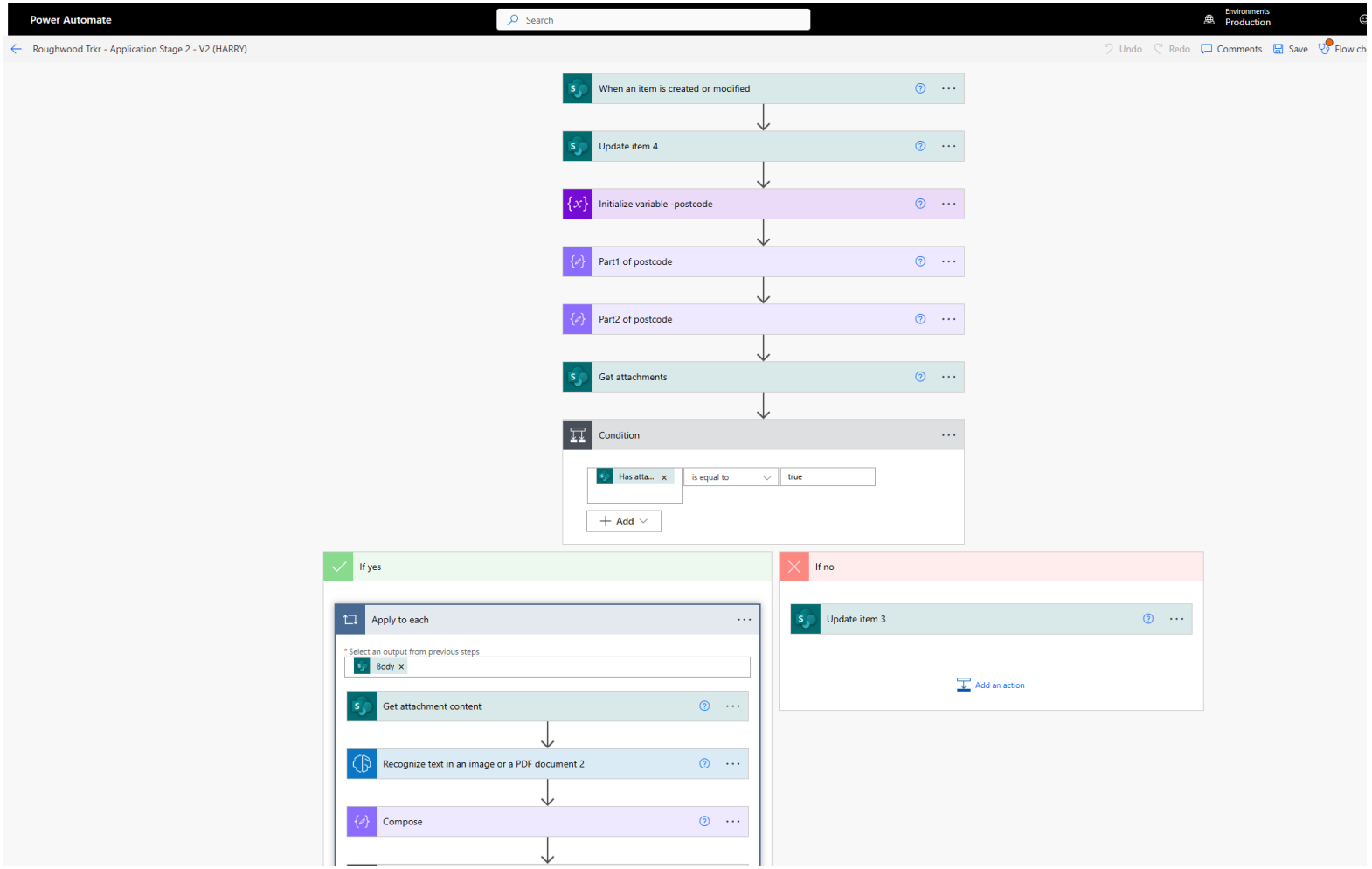


How the automation works



- Uses Power Automate, Sharepoint Lists, AI Hub, MS Approvals
- AI asks for human assistance when required (<10%)
- Great outcomes for residents – 10 minutes typical processing time
- Exceptional quality – under 10 applications with problems out of 5,500.

How it works


Power Automate
Search
Environments
Production
Roughwood Trkr - Application Stage 2 - V2 (HARRY)
Undo
Redo
Comments
Save
When an item is created or modified
Update item 4
Initialize variable -postcode
Part1 of postcode
Part2 of postcode
Get attachments
Condition
Has atta...
is equal to
true
Add
If yes
If no
Apply to each
Select an output from previous steps
Body
Get attachment content
Recognize text in an image or a PDF document 2
Compose
Update item 3
Add an action

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Coffee Break

15 Minutes

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Delivering Devolution, Highways & Transport (Group Link)

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Next Meeting Date: 9th October 2025

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