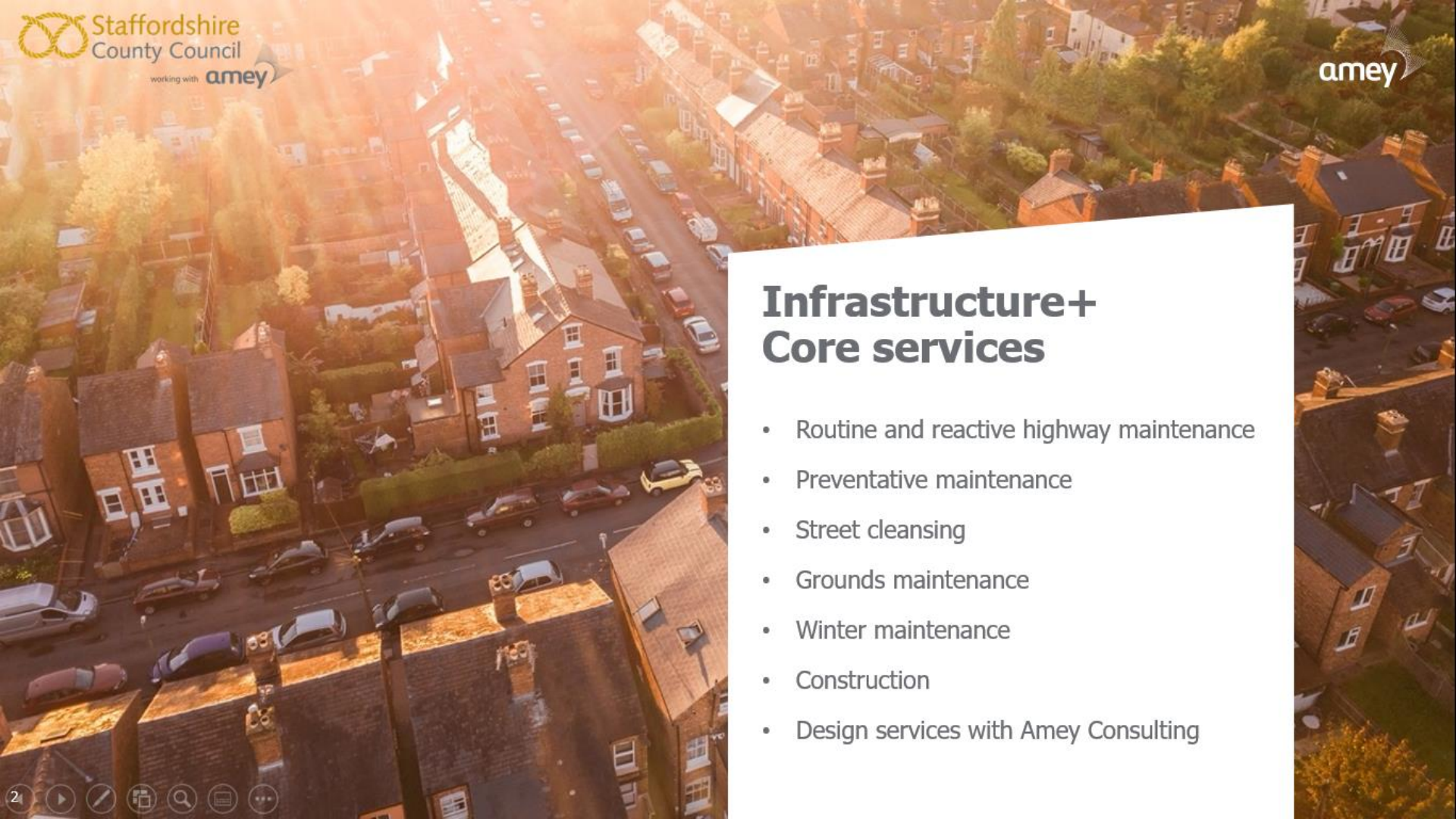


Staffordshire County Council working with amey

amey

Infrastructure+ Core services

- Routine and reactive highway maintenance
- Preventative maintenance
- Street cleansing
- Grounds maintenance
- Winter maintenance
- Construction
- Design services with Amey Consulting

ROADMAP TO NET ZERO

2020-2035
15 Year Plan and beyond...

2020

CARBON FOOTPRINT
Data capture: Fuel, procurement data, business travel, depot energies and resources, waste disposal, material recycling schemes | Collaboration with supply chain regarding Amey's carbon agenda, collaborative approach for Carbon reduction in Scope 3 emissions. | Synergise with client working group.

GREEN BUILDINGS/SITES
LED replacement programme | Energy efficient IT solutions | Auto-off appliances, Motion sensor lighting | Building Insulation Improvements | Low Energy heating solutions. | Low carbon construction site set-up.

FLEET MANAGEMENT
Installation of EV charging infrastructure at depots| Introduce EV's into the LCV fleet, low/zero emitting company car policy| Alternative fuel (HVO/GTL) technology for vehicle, plant and gritter trials.

WATER CONSERVATION
Identify rainwater harvesting opportunities on depot building and sites | Sensor controlled equipment | Water harvesting on our sites for dust suppression and welfare units.

BEHAVIOURAL CHANGE PROGRAMME
Green Driver schemes | Idling avoidance | Business travel avoidance | Environmental Champions | Carbon accounting integration| Awareness Campaign | Locally sourced products and services.

RENEWABLE ENERGY
Only green electricity procured, making the move to electric (EV's, Plant, Equipment) more sustainable.

ZERO WASTE TO LANDFILL
Establish Waste Data reporting with Waste contractor | Monthly recycling scores to track improvements | continue circular economy opportunities | Explore reusable Staffordshire waste streams.

PROTECTING OUR NATURAL CAPITAL
Distinguish biodiversity enhancement opportunities | Community days | Client partnership to produce green schemes.

2023

SUPPLY CHAIN ENGAGEMENT
Supply chain engaging in Net Zero agenda| Environmental considerations engrained in procurement decisions| Promotion of Net Zero around Staffordshire and across Amey.

TECHNOLOGY INNOVATION
Material innovation R & D | Carbon Capture | Tool & Equipment innovation | Workshops with suppliers | Longevity matrix integration.

CARBON FOOTPRINT
Have a ridged carbon foot printing system in place to capture procurement carbon data accurately | Track changes| Identify further improvements | Support business cases.

FLEET MANAGEMENT
Continued market research in EV/Low carbon fleet options | Infrastructure improvement and role out | Decarbonisation of larger fleet and transportation.

ZERO WASTE LANDFILL
Established circular economy schemes | Reuse Aggregate | Warm Mix Asphalt control | Landfill ban | Synergies with waste contractors

2026

CARBON OFFSET (last resort)
Carbon sequestration schemes (Tree/shrub/wetland integration)| Distinguish biodiversity opportunities for conservation/improvement| Locate regeneration projects areas within schemes| Determine synergies with SCC's natural environment objectives

BEHAVIOURAL CHANGE PROGRAMME
Integrated environmental frameworks to commercial running of the business | PDR objectives to meet Net Zero targets | Carbon Literacy Training Refresh and upgrade

BUSINESS TRAVEL
Cut carbon mileage by 25% and business mileage by 35% in comparison to 2019. 100% fleets to zero emission vehicles

CONTINUOUS IMPROVEMENT
Continue to review, innovate and trial

2035

Account certified to PAS 2080 | Carbon Neutrality Approval and Certification | Working with Carbon Trust

CARBON NEUTRAL ACCREDITATION

2040

Be Fully Net Zero including Scope 3 and suppliers by 2040

Achieve Scope 1 and 2 Net Zero by 2035 with a minimum of 80% Absolute Reduction on our emissions

amey

Staffordshire County Council

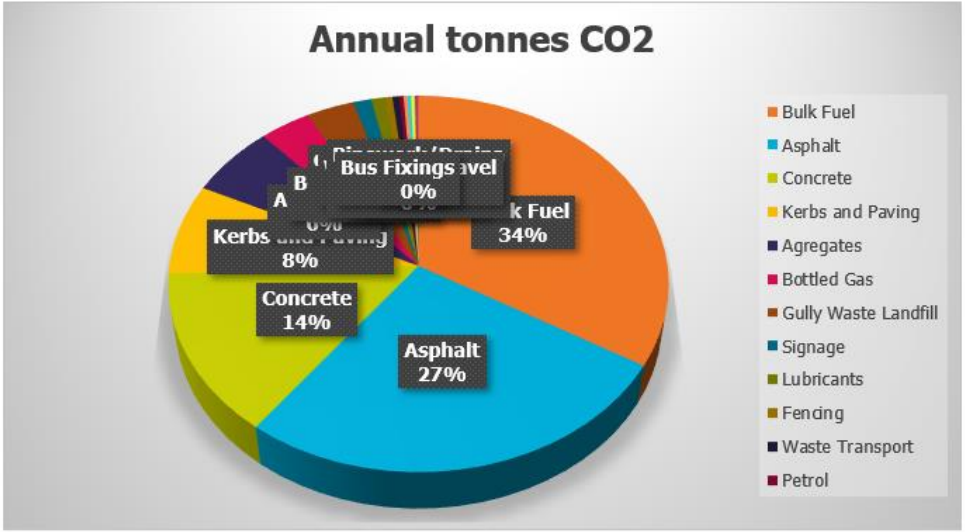
Main carbon outputs

Decarbonisation Fleet & Plant:

- EV for <3.5 T Vehicles
- HVO for HCVs
- Plant

Low Carbon material options:

- Warm Mix/Low temp asphalt
- Low carbon intensive concrete
- Designing out carbon in design phases of construction schemes

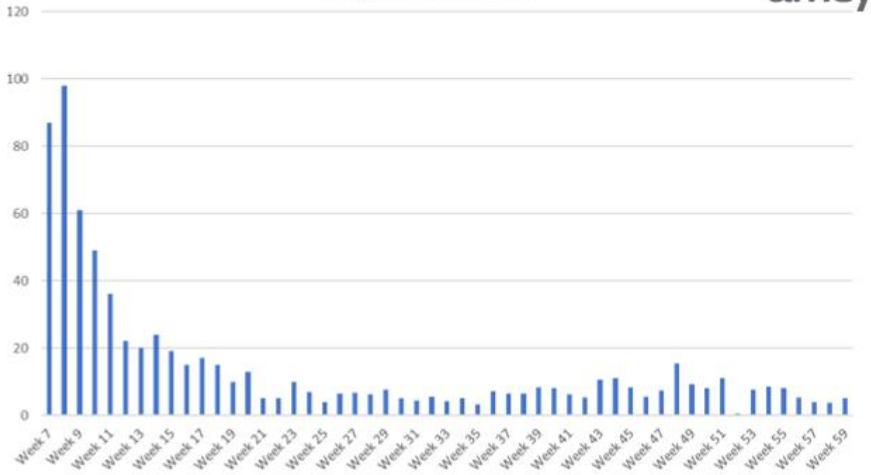


Item	Annual tonnes CO2
Bulk Fuel	2505.39
Concrete	1049.53
Asphalt	2002.05

Behaviour based change

Anti – Idling campaigns

- Reduced idling times by **87%** across the depots
- saved **1,100 kg** of carbon each month
- Achieved **over £6,000** in fuel savings over 12 month period



Green Driver Award 2022

- Improve fuel efficiency within drivers
- Decrease wear and tare

The Live Lab programme

- **£1.975m** won through ADEPT + over **£500k matched funding from SME's**
- Over **13** partners, including **1** university and **10** start-ups
- SIMULATE is a UK first, combining unique **SME innovations** with industry support, expertise and funding to create a **mobility and air quality incubator** programme and **live test bed**
- **£1m** of further work already generated for SMEs as direct result of the support and growth in SIMULATE
- Over **10** individual projects in delivery
- Projects ranged from **e-scooter trials**, through to **green walls** and **intelligent traffic systems**

SIMULATE is an end-to-end Future Mobility and Cleantech living laboratory

SIMULATE LIVE LAB
INCUBATION | PILOTING | SCALE UP

Vision Definition
Sept '19 – Oct '19

"A network of interconnected Mobility Hubs and Transport Nodes providing multi-modal, sustainable and demand-responsive transport solutions that can adapt to the varied topography and population density within Staffordshire".

Challenge Creation
Dec '19 – Jan '20

Three Air Quality Management Areas (AQMAs)

+

Four Mobility Challenges designed around delivery of the hub ecosystem:

1. Micro-Mobility
2. Demand Responsive
3. Point-to-Point
4. Behaviour Change and Integration

Challenge Sharing
Feb '20 – Apr '20

100+ SMEs attend launch of Challenge documents in London

SIMULATE website goes live – **£100k** per SME available

Expansive partner network drives high volume of traffic

Partner Selection
May '20

132 applications make SIMULATE the most subscribed Mobility Incubator in the UK

Three-stage selection process culminates with Dragon's Den to select final 10 from shortlist of 25

Incubation
Jun '20 – Dec'20

Successful SMEs receive a bespoke programme of incubation delivered by Amey, the Connected Places Catapult and Keele University, lasting 6-months

Live Trialling
Aug '20 – Nov '21

SMEs in the programme build towards live trialling

Successful SMEs invited to partnership discussion

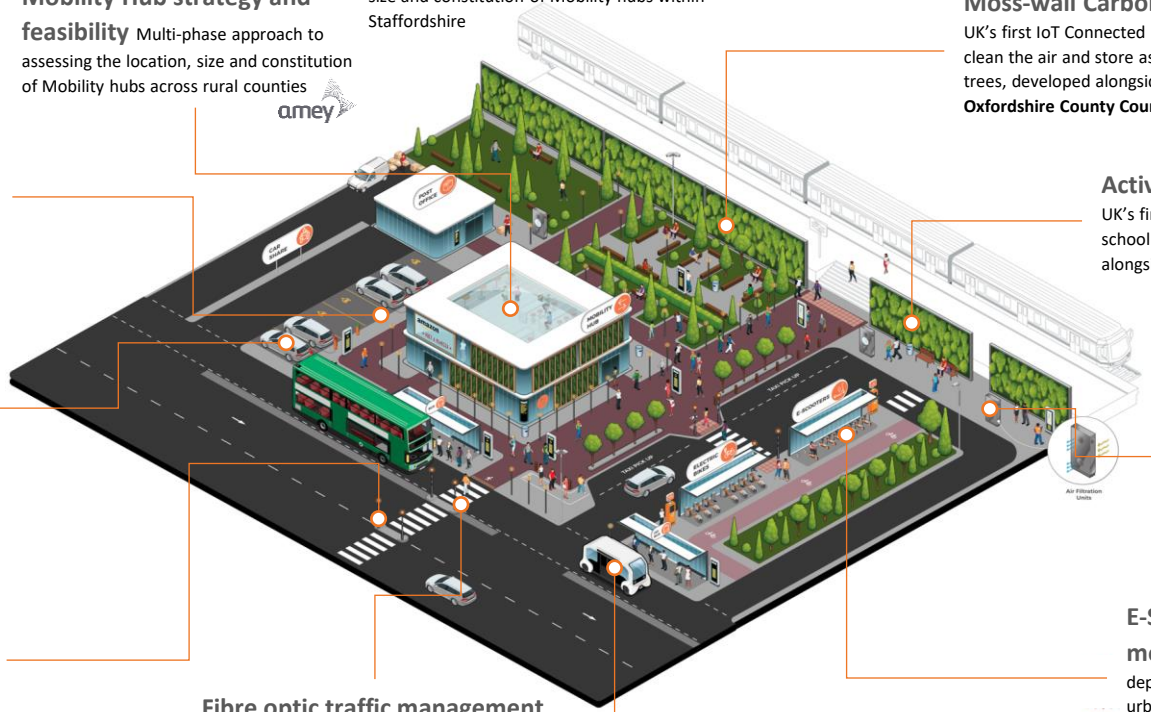
Innovation is structured around the delivery of a future place ecosystem

Live-Lab Management **Amey** manage programme with **Connected Places Catapult** delivering a bespoke accelerator with support from **Keele University** approach to assessing the location, size and constitution of Mobility hubs within Staffordshire

Mobility Hub strategy and feasibility Multi-phase approach to assessing the location, size and constitution of Mobility hubs across rural counties

Moss-wall Carbon Sink Developing the UK's first IoT Connected Moss 'carbon sink' to clean the air and store as much carbon as 40k trees, developed alongside **FortyTwo** and **Oxfordshire County Council**

Pop-up Electric Charging Hubs UK first trial of new 'pop-up' charging units alongside partners **Urban Electric**



Active Greenwall Developing the UK's first active airflow Greenwall to protect school playgrounds from high pollution areas alongside **Biotecture**

Electric Car Share UK first trial of ground-breaking new mini electric vehicles; the 'BeeAnywhere' developed by UK based auto manufacturer **MEV**

Deploying water-based air filtration technology working with ISCLEANAIR on the only filterless air purification technology on the market

Pollution monitoring across 4 locations including 3 AQMAs air quality monitoring test-beds to test the efficacy of the solutions deployed in SIMULATE alongside **EarthSense** and **Now Wireless**

Fibre optic traffic management working alongside Fotech to Use fibre optic cabling to monitor traffic flow for intelligent traffic signal management

Demand Responsive Transport 6 simulations across the county will feed into a DRT rollout in Staffordshire

E-Scooter deployment and monitoring two e-scooter providers deploying over 200 scooters across rural and urban settings in Staffordshire with **ZWINGS** and **Ginger**

Benefits across the innovation ecosystem

People and place

Green walls reduced exposure to air pollution by 65%

E-scooters replacing up to 150,000 miles of car journeys in 2021, with a carbon saving of 2000 tonnes

Pollution forecasting using AI, allowing traffic signal adaptions to reduce pollution levels in city centre hotspots

Electric chargers improving the street scene and creating EV accessibility to all citizens

Demand-responsive-bus services providing travel to those in social isolation

Learning and academia

4 industry/academia projects progressed through Keele University producing **6+** research experts in sustainable transport

Step change momentum in Staffordshire's Mobility Hub ecosystem and future mobility strategy

Staffordshire embedded with network of partners advising future transport strategy and forwarding new technology into the county

SME growth

£1m+ funding raised

13 further trials

60 commercial leads

5 new contracts so far

Lessons learned and possible solutions

Mobility ecosystems have been fully disrupted through demand-responsive transport providers – but this raises as many questions as answers	Local Authorities must take the lead and develop **transport data hubs** that allow them to own and regulate data governance, regulation and procedure
There are thousands of start-ups in the market, but how to Local Authorities choose which ones to deploy?	We must innovate better and get away from prescriptive funding of pilots and instead create **innovation ecosystems** that enable ideas to develop organically and be tested iteratively
Technology is getting tested, but it's not making it into BAU	When we test new technology, we must evaluate the underlying frameworks it sits within such as asset management and operation models and update them accordingly, **redesigning services**
Reluctant procurement departments are stifling the ability to explorative relationships and traditional contracting mechanisms are not set up for disruptive technology	Create shared **risk innovation partnerships** that enable fast onboarding of suppliers and easy access to the right experience