

Urban Very Light Rail

A solution for Coventry (and other small to medium size cities)



Climate Change and Clean Air



Modelled NO2 exceedances (2021- updated AQ modelling)

Do-Minimum 2021 Compliance Status

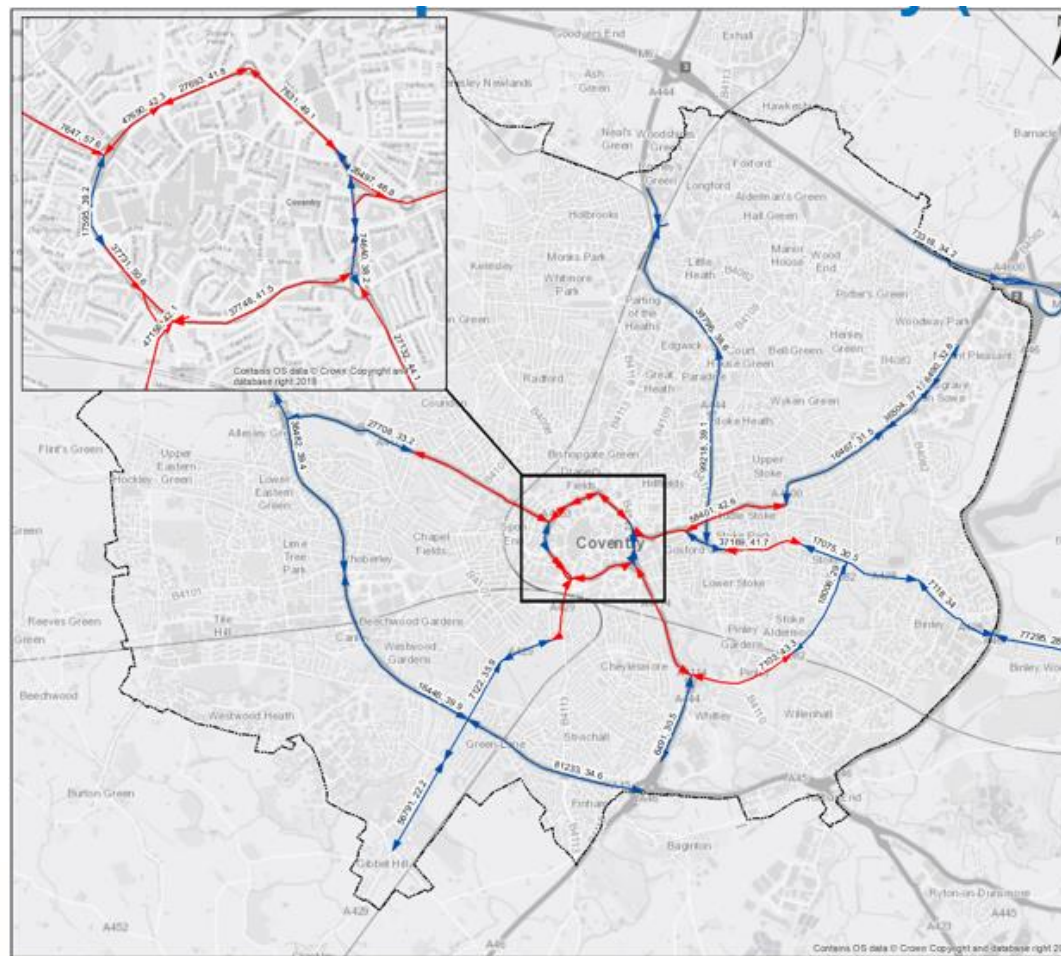
Key

Do-Minimum PCM Links

 No Exceedance

 Exceedance

 Local Authority Boundary



AIR QUALITY EXPERT GROUP

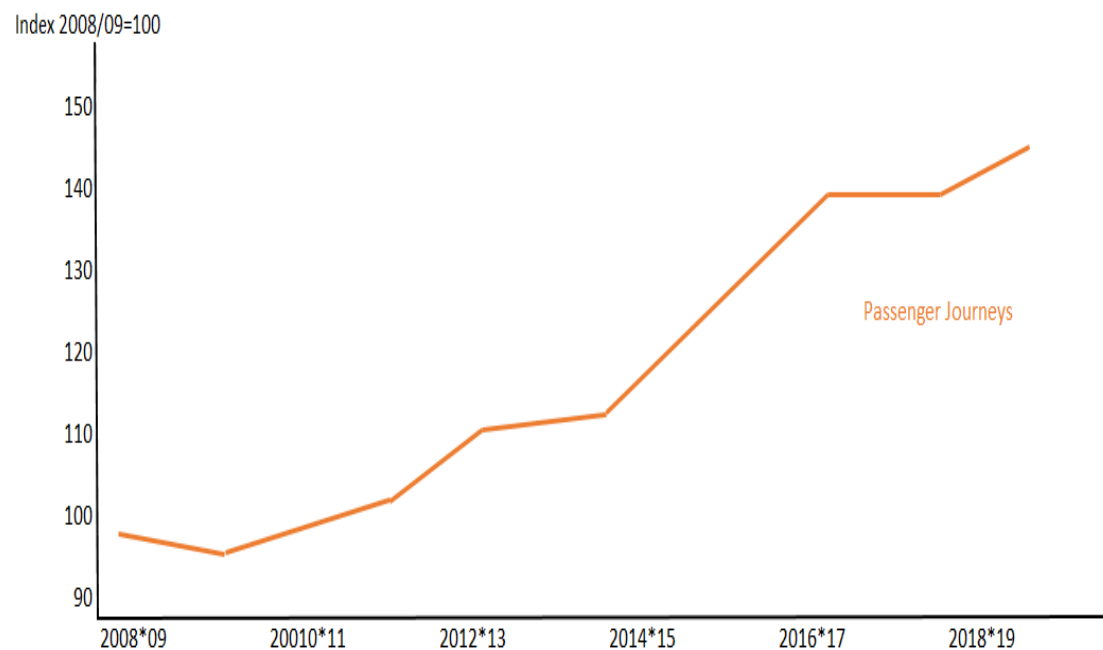
Non-Exhaust Emissions from Road Traffic



Prepared for:
Department for Environment, Food and Rural Affairs;
Scottish Government; Welsh Government; and
Department of the Environment in Northern Ireland

Light Rail Success

Trams are hugely successful in getting people out of their car



Passenger journeys

272.4 million
passenger journeys

15.6
passenger journeys
per head

Passenger journeys increased by 1.9% in 2018/19.

Source: DfT Light Rail and Tram Statistics 2018/19



Cost of Trams

Average £35m to £50m per km



**Theresa May announces £250 million for major
Midland Metro extension and more**

Nottingham's £570M tram extension opens

Edinburgh's tram system opens –
£375m over budget and three years
late

VLR target cost £10m per km



Coventry & Warwickshire
Local Enterprise Partnership

WMG
THE UNIVERSITY OF WARWICK

Dudley
Metropolitan Borough Council

**MIDLANDS
ENGINE**
HM Government

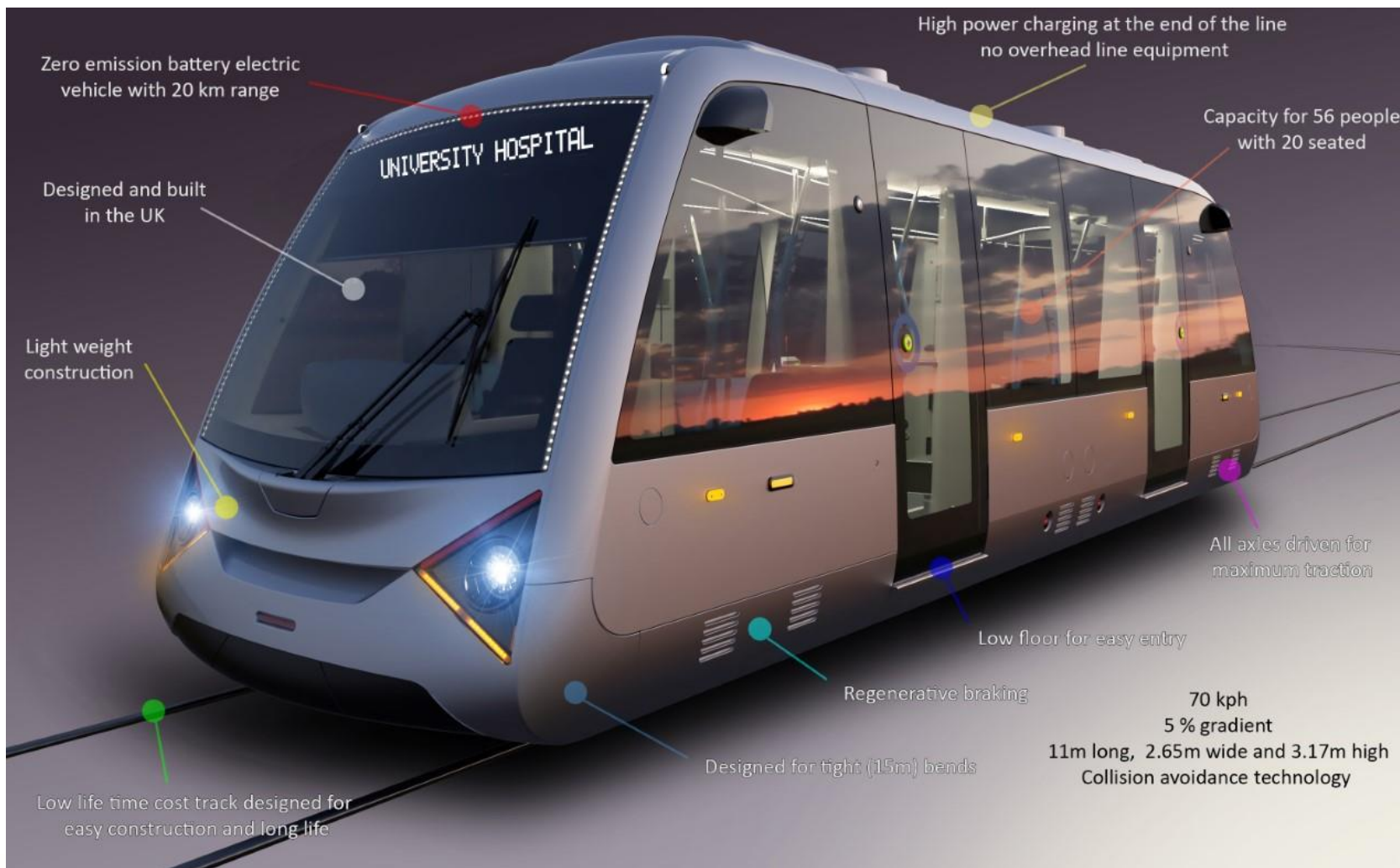
**WEST MIDLANDS
COMBINED AUTHORITY**

RLB
Rider
Levett
Bucknall

TDI TRANSPORT DESIGN
INTERNATIONAL

INGEROP
Inventing for tomorrow







TDI
TRANSPORT DESIGN
INTERNATIONAL

Vehicle Assembly

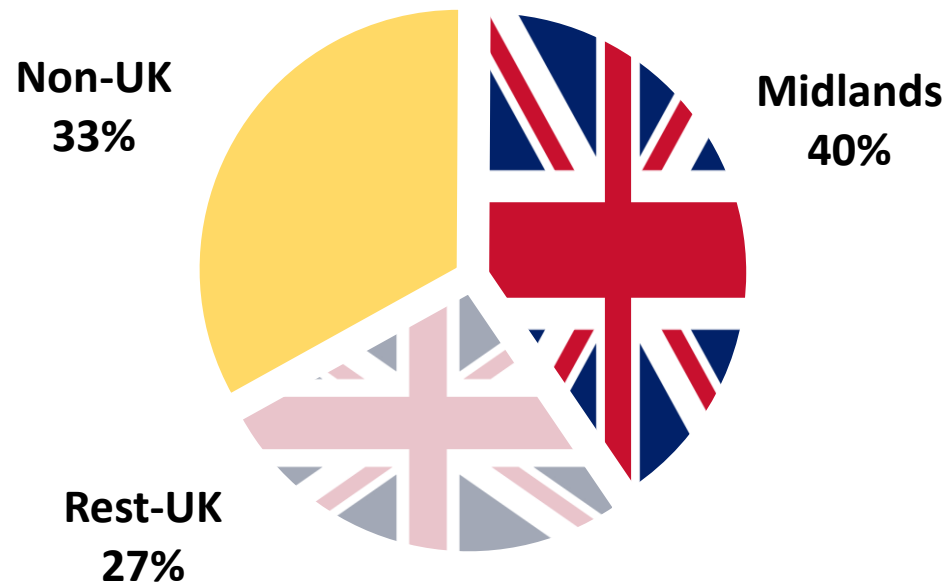


Supporting UK Industry

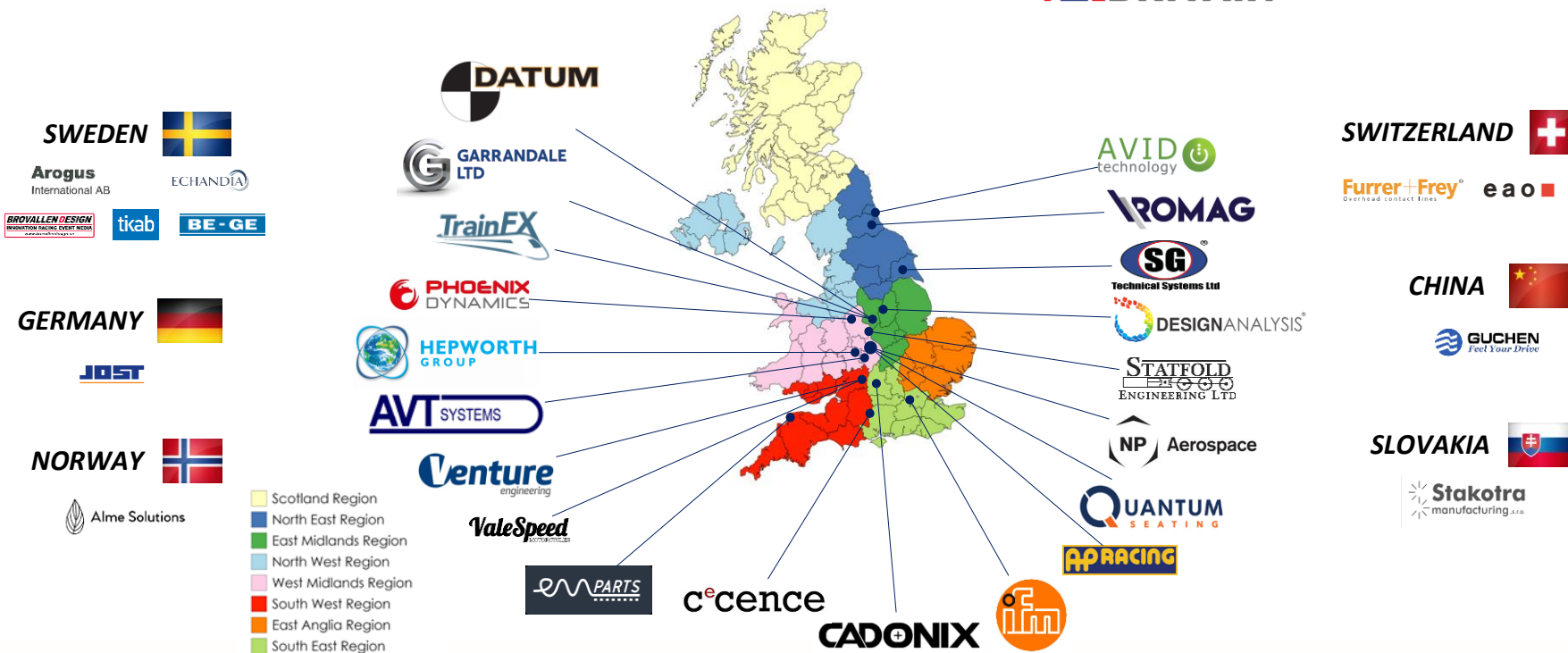
Project is heavily focused on supporting UK Industrial Capability by maximising local-content within the vehicle and track, supporting suppliers, SMEs and jobs

The Vehicle:

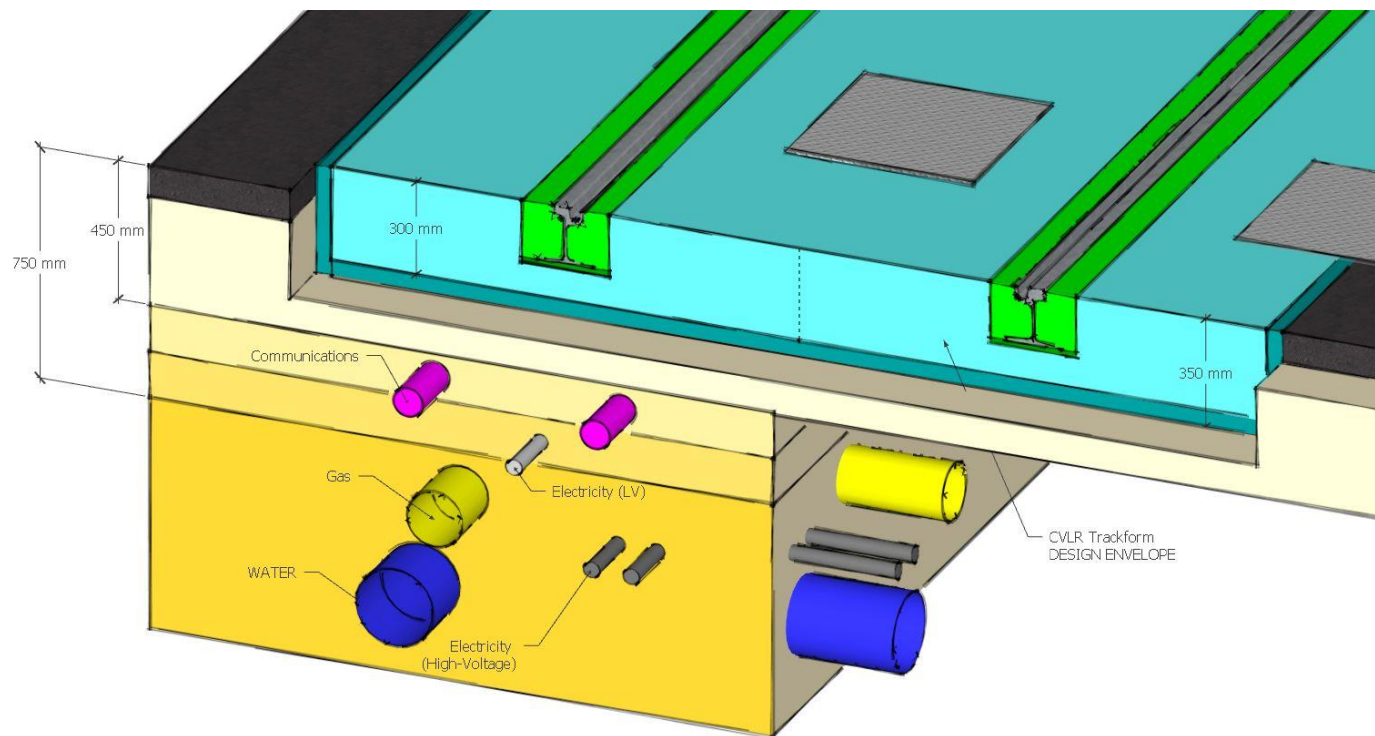
Material Spend Location



Supporting UK Industry

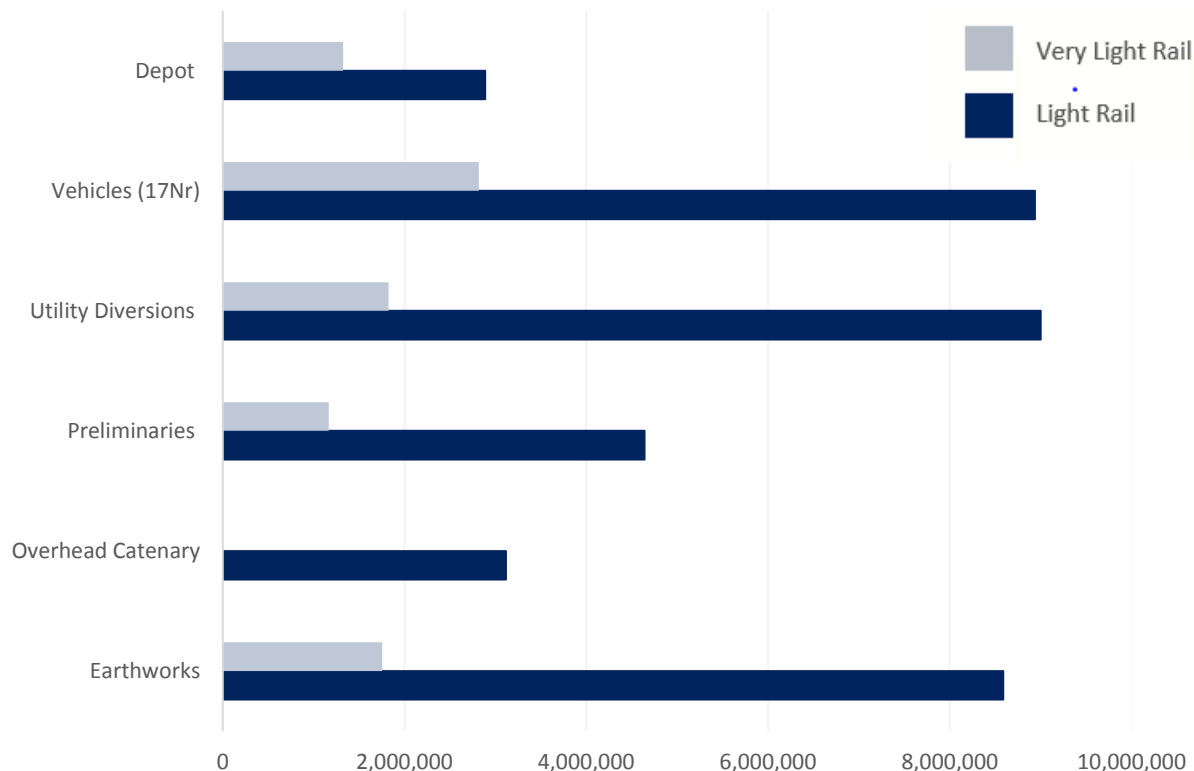


The Track



**Innovative, resilient, long life, shallow and affordable trackform.
Minimal excavation and laid over existing utilities to allow fast access for repairs**

Urban VLR vs Light Rail

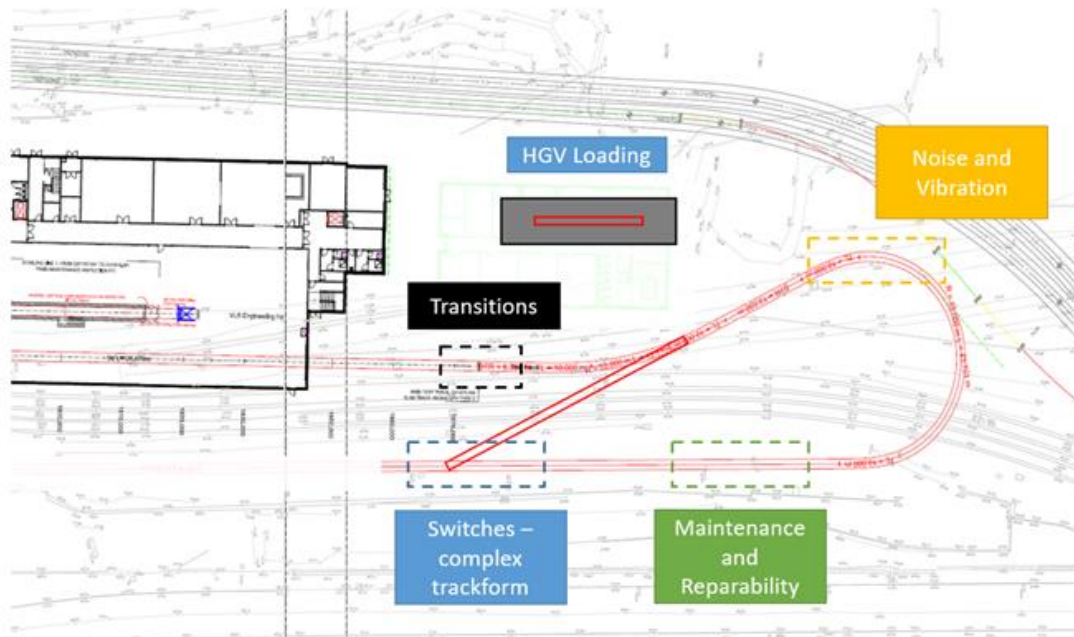


VLR opportunities

- Simplified depot
- Low cost vehicle
- No overhead catenary
- Minimal utility diversions
- Reduced preliminaries
- Reduced earthworks

Vehicle and Track Testing

Integrated Testing will be undertaken at the National Innovation Centre in Dudley



Aim is to investigate and prove:

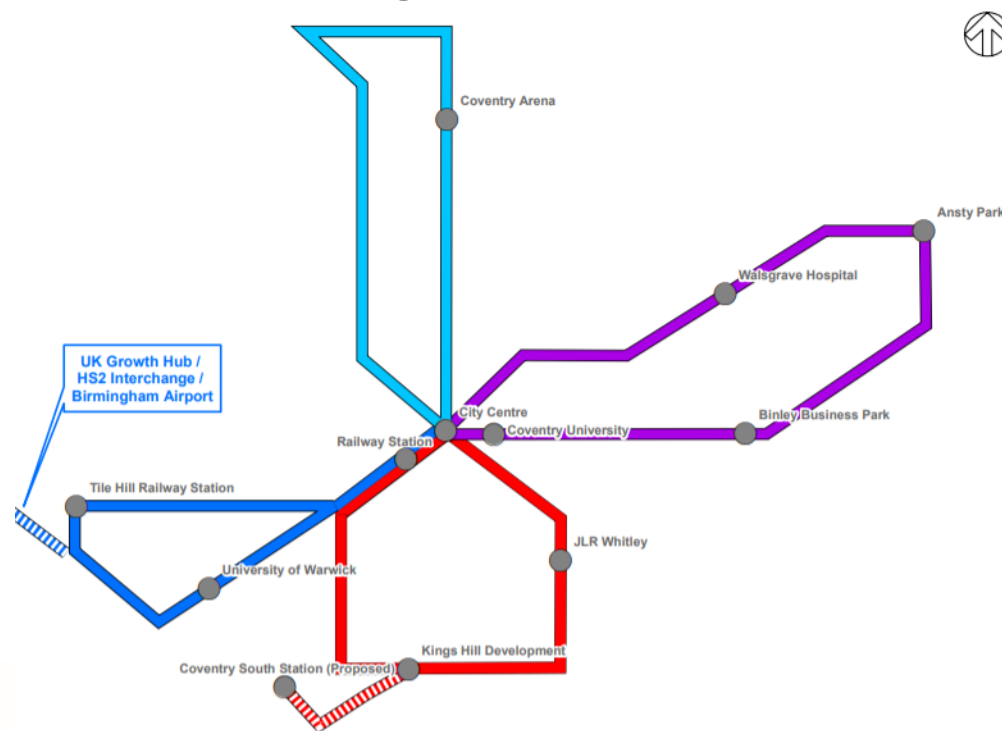
- vehicle performance on gradients, cants, tight curves
- noise and vibration, track durability
- utility access, repair and maintenance
- drainage
- costs

The National Innovation Centre – Dudley 2021



VLR First Route and Beyond

- First Route Rail Station to City Centre to UHCW
- Network to connect city centre to strategic locations
- Link to HS2



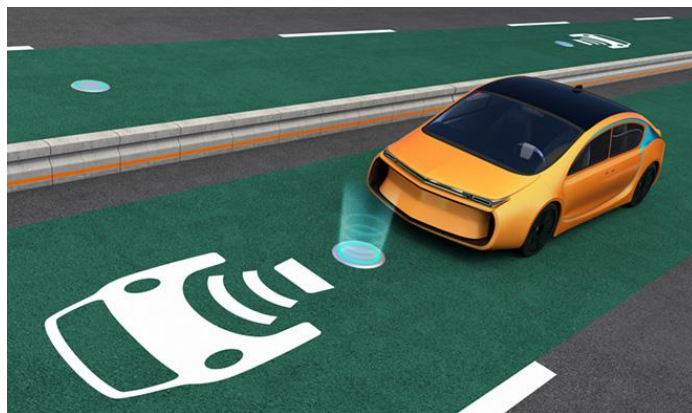
VLR Vehicle – Fit for a New Normal

- **Remote Control/ Autonomy** – this would enable a larger fleet to be deployed more cost effectively and would thereby reduce crowding by offering a frequent service
- **Air circulation** – optimal ventilation to minimise spread of viruses/ bacteria
- **Materials to reduce infection spread**- e.g. coating grab handles with a suitable material to render viruses inactive
- **Contactless** – passenger information and ticketing
- **Automated robotic cleaners** – to enable vehicles and platforms to be cleaned frequently at low cost.

Phasing and Timeframe

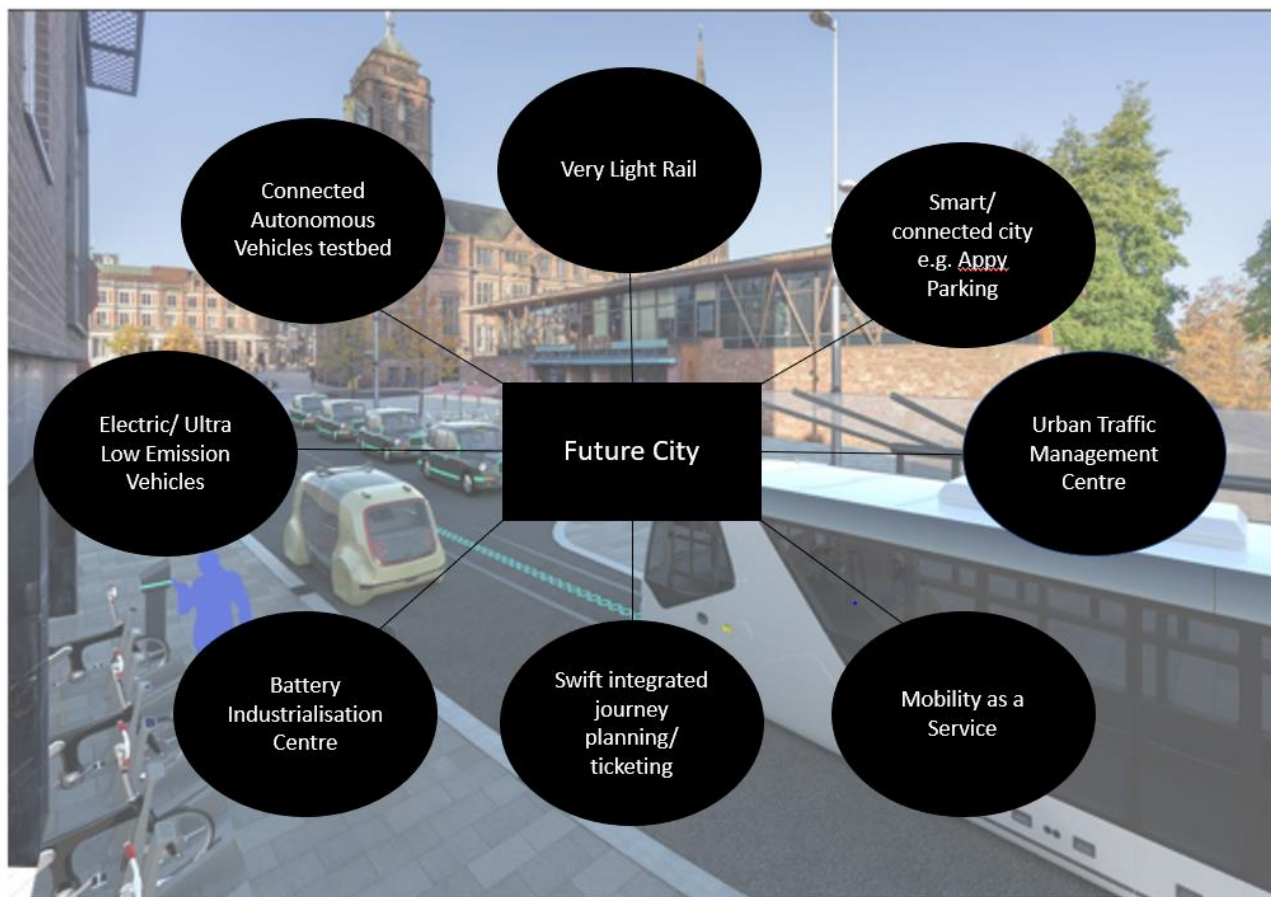
- **2018 to 2022 Research & Development Phase** – all R&D to completion of the test track & integrated system proving
- **2022 to 2024 Consenting & Planning Phase** – all concept design, business case and Transport and Works Act Order application and determination
- **2024 – 2025 First Route Phase**– detailed design and construction of a section of the first route

Future City Transport Modes



Future Coventry

Increasing Coventry's attractiveness as a place to live, work and study



Thank you for Listening

Any Questions?



COVENTRY & WARWICKSHIRE **GREEN BUSINESS** PROGRAMME

**MIDLANDS
ENGINE**



Denise Osborne **Marketing & Events Co-Ordinator** **Green Business Programme**

T: 024 7697 2046 W: coventry.gov.uk/greenbusiness

 [@cwgreenbusiness](https://twitter.com/cwgreenbusiness)  <http://bit.ly/greenbusinessprogLinkedin>



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European Union

European Regional
Development Fund

What is it?

- A support funded programme for SMEs and organisations in Coventry and Warwickshire to help business become more energy/resource efficient and make the most low carbon opportunities

Who?

- All small to medium size businesses (SMEs) in Coventry and Warwickshire
 - Employ fewer than 250 employees
 - Have an annual turnover of not exceeding €50 million and/or an annual balance sheet not exceeding €43million
 - Have at least 50% of sales through business to business



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Our Highlights

Helping businesses to reduce their impact on the environment through funding for energy efficiency and renewable energy powered solutions

- We have supported **240** companies since the Programme launched
- There have been over **13,000 tonnes** of CO2 savings
- Provided over **£2.78 million** in grant funding to support these businesses
- 60 new jobs have been created
- 1211 organisations have joined the Green Business Network



powered by
PIKTOCHART

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Phase 2– (2019-2021)

- Energy and resource efficiency grants - £1k-£50k (with 40% intervention)
- Free energy and resource efficiency audits to help identify energy, water and waste savings
- Continued free membership to the Green Business Network
- Access to other specialist support to enable growth and innovation
- Free events, workshops, webinars and 1:1 support

Extension – (June 2023)

- Confirmation that additional £1.14m grant funding
- Additional £118k revenue grants
- Provided by Coventry City Council & Coventry University Enterprises



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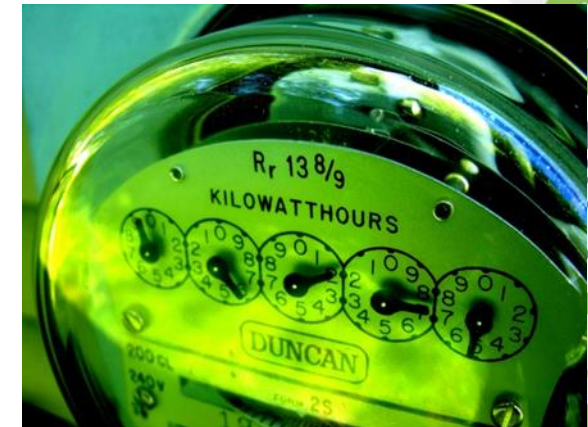
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Energy/Resource Efficiency Audits

Identify potential energy/resource efficiency measures

- Audit looks at: Building fabric, energy bills, heating, lighting, equipment, process, water, waste, behavioural
- Includes estimated capital costs, energy savings & payback periods – used to provide a business case
- Energy/resource efficiency report



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REMOTE ENERGY AUDITS

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GREEN BUSINESS
NETWORK

As lots of businesses continue to work and communicate online during COVID-19, the Green Business Programme team are now adapting to new ways of working through remote energy audits. You can either send us photos or a video of the types of items listed below.

Lighting and electrical

Lightbulbs (walls, inset, ceiling)

Ceiling tubes (fluorescent tubes)

Heating and insulation

Boiler(s)

Electric/oil/gas heaters

Timers (if applicable)

Air Con Units (if applicable)

Remote Energy Audits

As lots of businesses in our region continue to work & communicate online, we are adapting

- Energy advisor can work with your business remotely via online Teams – send us bills/photos/videos
- Download our handy guide on how a remote energy audit can work for you
- <https://bit.ly/cwremaudit>
- Completed several during the last few months



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- Energy/resource efficiency grants
 - Capital grants to improve energy/resource efficiency (Min £1K up to £50k)
 - Grants of 40%
 - Must save at least 1 tonne CO₂e per £1000 grant
- What can be supported?
 - Measures that save carbon
 - Typical measures include lighting - LED, heating, energy efficient equipment, transformers, power factor correction, renewable technologies, ventilation, refrigeration, recycling and waste - compactors, balers and crushers



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Green Business Network

Membership is free and offers a range of benefits:

- Events and workshops
- Monthly newsletter – news, events new legislation, case studies
- Membership certificate
- Expert advice
- Enhance green credentials to secure new business
- Networking and supply chain opportunities (Inclusion in Green Business Directory)
- Currently have 1211 other organisations you can network with
- Signposting to other grants
 - ▶ Business Support
 - ▶ Innovation
 - ▶ Skills 4 Growth

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BUSINESS
NETWORK



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European Union
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Development Fund

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Upcoming Events and Webinars

Upcoming GreenTalk LIVE webinars

- Date TBC – Green Homes Grant
- November – Energy Saving Trust
- December – City's Public Realm

For more information visit <http://bit.ly/cwgreenevents>



What we do

- Confidential environmental management assistance
- Provide bespoke registers of environmental and health and safety legislation
- Confidential site specific environmental legislation compliance audits
- Support clients with their environmental management systems to maintain ISO14001:2015

T: 02476 972060

E: businesssustain@coventry.gov.uk

<https://www.coventry.gov.uk/businesssustain>

Coventry's Climate Change Strategy

- UK Government announced its net-zero commitment by 2050
- Coventry's current strategy published in 2012 set a target to reduce carbon dioxide emissions by 27.5% by the year 2020. Coventry achieved this in 2014 (6 years early)
- The current Climate Change Strategy for the City ends in 2020 and is now under review



Coventry's Climate Change Strategy

The Council is very committed to tackling climate change in the City

- Head of Climate Change & Sustainability, Bret Willers is overseeing and developing our Climate Change work
- Strategy will ensure that Coventry is at the forefront of low carbon innovation
- Climate Change Strategy will require significant engagement with stakeholders in the City, including businesses, residents, universities, health providers and community groups



REMOTE ENERGY AUDITS

As lots of businesses continue to work remotely, the Programme team are now adapting to use photos or a video of the types of items

Lighting and electrical

Lightbulbs (walls, inset, ceiling)

Ceiling tubes (fluorescent tubes)

Adapted to new ways of working – 20 remote energy audits completed

Electric/oil/gas heaters

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The Green Business audits. You can either send

(if applicable)

Units (if applicable)

Digital transformation for environmental management e.g. air quality

Changes



Active Travel Plans – changing transport behaviour

New Station Car Park

- Circa 630 spaces on two levels, includes 150 non-rail spaces for
- Height adjustable lifts and open 24 hours a day
- The new car park will be adjacent to the New Station Building/Station Square
- EV charging points installed for opening, will increase up to 10 as demand rises



Hosted 6 Green Business webinars. 65 organisations per event. Partnership working in a new way

Creating biodiverse green spaces in our City



Opportunity to change the way people use our City in the future - places for people not cars



Opportunities

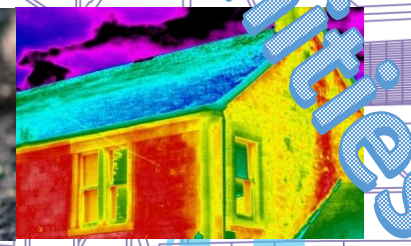
Business Sustain Register developed



Green Funding Opportunities



Addressing fuel & food poverty – food growing network



Climate Change & Sustainability during COVID-19

CDP A List City 2019

- The City has been recognised as a global leader on climate action and transparency
- To score an A, a city must have a city-wide emissions inventory
- Have set an emissions reduction target
- Published a climate action plan





Reducing our emissions across the City



Heatline – energy shipped from waste plant via 6.6km pipelines to major City Centre buildings.



Existing Street Lighting

New Street Lighting

HM Government

E-Scooter Trials

New laws could see people using e-scooters on UK roads



178 charge points have been installed
130 – Sept 2020



10 electric buses

Electric taxis operating in Coventry with more on the way.





EV charging and solar

and power plant

Low carbon research facilities

Hydroelectric power generation

Smart traffic management

Manufacturing

EV charging points

Retail

Smart LED lighting

Air source heatpumps

BREEAM excellent buildings

Anaerobic digestion

Low carbon power generation

Recycling

Low carbon buildings

Data Institute

Connected and autonomous vehicles

Electric buses and taxis

EV charging points

District heating

Energy storage batteries

Flexible industrial energy

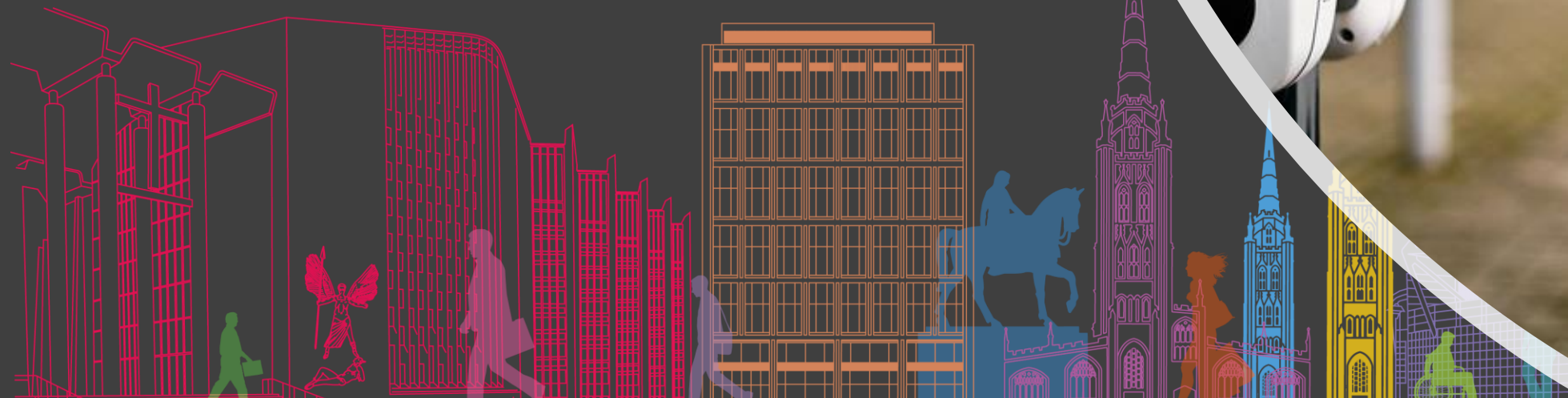
Waste to energy plant

Very light rail

PAULSTRAALD

Electric Vehicle Charging

- Coventry City Council have partnered with EO Charging
- Purchasing & installing electric vehicle chargers throughout the city and region
- Also £350 grants available for organisations to install an EV charger
- Up to 40 chargers can be claimed per company
- Find out more - <https://plugincoventry.org>



Park That Bike

- Transport for West Midlands have launched Cycle Parking
- Businesses can apply for free bike racks at their premises
- Encourage more cycling
- Apply at Transport for West Midlands



Key players in Coventry

- **Universities** - Coventry University and Warwick University
- **Schools and Colleges**
- **Utilities** – Severn Trent and E-On
- **Power** – Western Power & National Grid
- **Transport** – National Express & Avanti Trains
- **Automotive** – Jaguar & LEVC
- **Infrastructure** – BIC
- **Housing** – Orbit, Whitefriars & Developers
- **Health** - Public Health England, UHCW & Coventry and Warwickshire Partnership NHS Trust
- **Industry** – Amazon, Sainsburys Ansty Park, McDonalds Distribution Centre
- **Community** – Community Groups, Charities, Residents, Businesses
- **Regeneration & Culture** – City of Culture 2021, Historic Coventry & WWT



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Case studies of organisations that are going green



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3P innovation

- World-class engineering and process automation company based in Warwick
- Invested £395,000 to reduce carbon emissions
- £69k energy efficiency grant
 - LED energy efficient lighting throughout the building
 - New high efficiency gas fired modulating heaters that save 30% on fuel costs
 - High performance air conditioning system
 - New air compressor achieving savings of between 20% and 30%
 - Installation of solar panels
- Estimates saving 153.3 tonnes of CO2 emissions per year
- 290,000kWh of energy usage having been reduced



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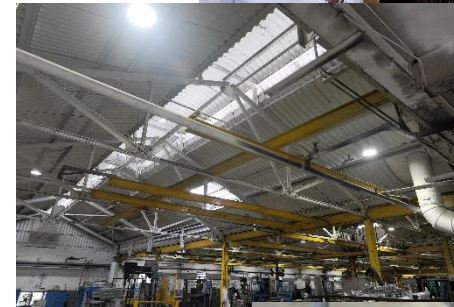
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Sarginsons

Aluminium Diecasting

- Were spending £370,000 per annum electricity and gas
- £26,000 energy efficiency grant
 - 2 recuperation gas furnaces
 - Variable speed air compressors and drying equipment
 - LED lighting throughout
 - Power Factor Correction
- Payback – 1.5 year
- 335 Tonnes CO2 saving/ annum
- Saving £50k per annum in energy bills



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Technoset

Engineering business based in Rugby

- Make their premises more eco-friendly and save them money on bills
- £47,000 energy efficiency grant (invested £117k)
 - LED energy efficient lighting throughout the factory
 - Extension of the heat ducting from Factory 2 into Factory 1
 - Installing a shut off switch on the roller shutter door
 - Installing a new solvent based component cleaning machine
- Technoset anticipates to see their energy bills drop by 33%
- Helping to reduce 62 tonnes of CO2 emissions per year.



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Green Business Programme

Contact us

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Twitter: [@cwgreenbusiness](https://twitter.com/cwgreenbusiness)

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