



# Coventry – City of Culture...and Innovation

Communities and Neighbourhoods Scrutiny Board - Thursday 31st March 2022

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# Strategic context

	Organisations	Environmental targets	Key strategies
<b>International</b>	Various Governments	<ul style="list-style-type: none"> <li>Limit global temperature rises to 2 degrees Celsius (v pre-industrial levels)</li> </ul>	<ul style="list-style-type: none"> <li>Paris Agreement</li> <li>UN Sustainable Development Goals</li> </ul>
<b>National</b>	Department for Transport	<ul style="list-style-type: none"> <li>Net zero by 2050</li> <li>50% of city centre journeys to be walking or cycling by 2030</li> </ul>	<ul style="list-style-type: none"> <li>Decarbonising Transport</li> <li>Gear Change (Walking and Cycling strategy)</li> <li>Bus Back Better (Bus strategy)</li> <li>10 Point Plan for a Green Industrial Revolution</li> </ul>
<b>Regional</b>	Transport for West Midlands/ Midlands Connect	<ul style="list-style-type: none"> <li>Net zero by 2041</li> </ul>	<ul style="list-style-type: none"> <li>#WM2041 (Climate Change Strategy)</li> <li>West Midlands Local Transport Plan (to be finalised Summer 2022)</li> </ul>
<b>Local</b>	Coventry City Council	To be confirmed – but must be at least as ambitious as existing regional/national targets	<ul style="list-style-type: none"> <li>Climate Change Strategy (in development)</li> <li>Transport Strategy (to be finalised Summer 2022)</li> </ul>

# Coventry's emerging Transport Strategy

- Built around four overarching objectives – informed by existing international, national and regional strategies
- Achieving these requires a significant change to the way we travel:
  - Away from car dependency – draft strategy is explicit that in future most people will not need to own a car to access the services they need
  - Towards walking, cycling and public transport first
- Main areas of activity:
  - 'Step change' in the city's public transport system (including Very Light Rail)
  - Much better infrastructure for walking and cycling
  - Targeted investment in the road network (i.e. not aimed at simply creating capacity for more cars)
  - Widespread electrification (of public and private transport)
  - Changes to the way we transport freight
  - Encouraging 'behaviour change'

1. Supporting the city's economic recovery and enabling long-term growth

2. Delivering a sustainable, low carbon transport system

3. Ensuring equality of opportunity

4. Maximising health and wellbeing

# The Electric City

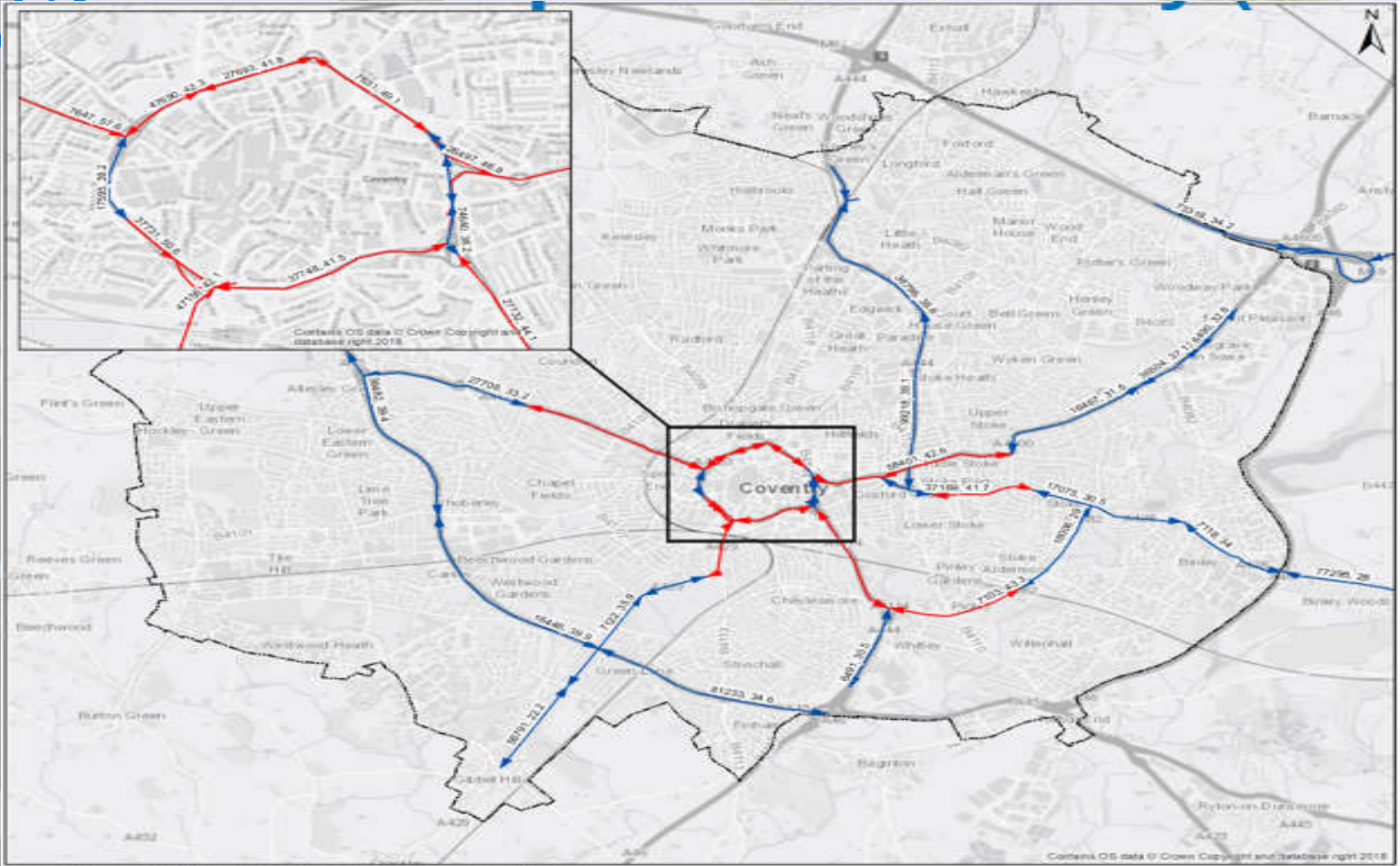
## Why Electrify Coventry?

- Climate Change Strategy
- Coventry Local Air Quality Action Plan
- Boost jobs and growth in local economy
- Zero carbon transport system
  - Very Light Rail
  - Electric buses
  - Electric taxis
  - Electric vans
  - Public EV charging network
    - Plug in Charging
    - Static Charging
    - Pantograph Charging and
    - Dynamic Charging of Vehicle



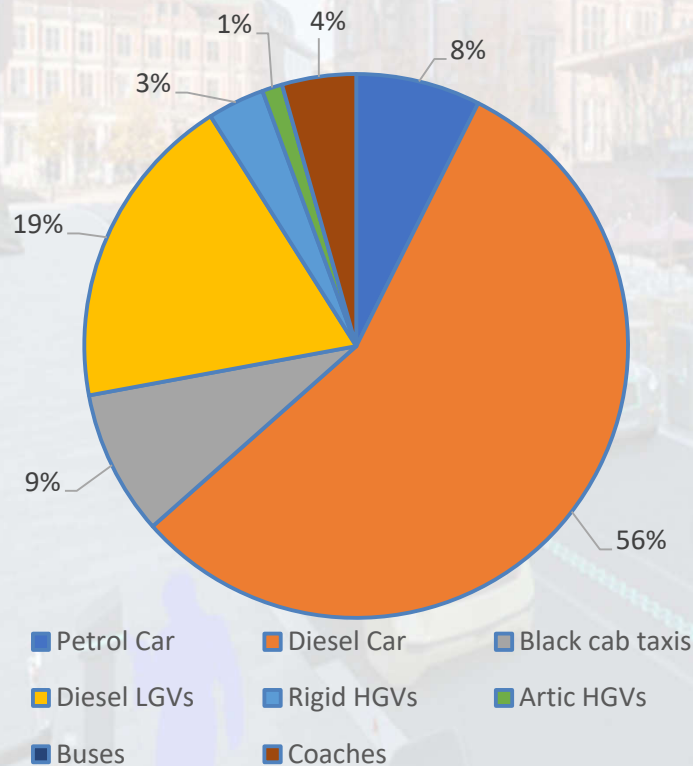


# Modelled NO<sub>2</sub> exceedances (2021- updated AQ modelling)

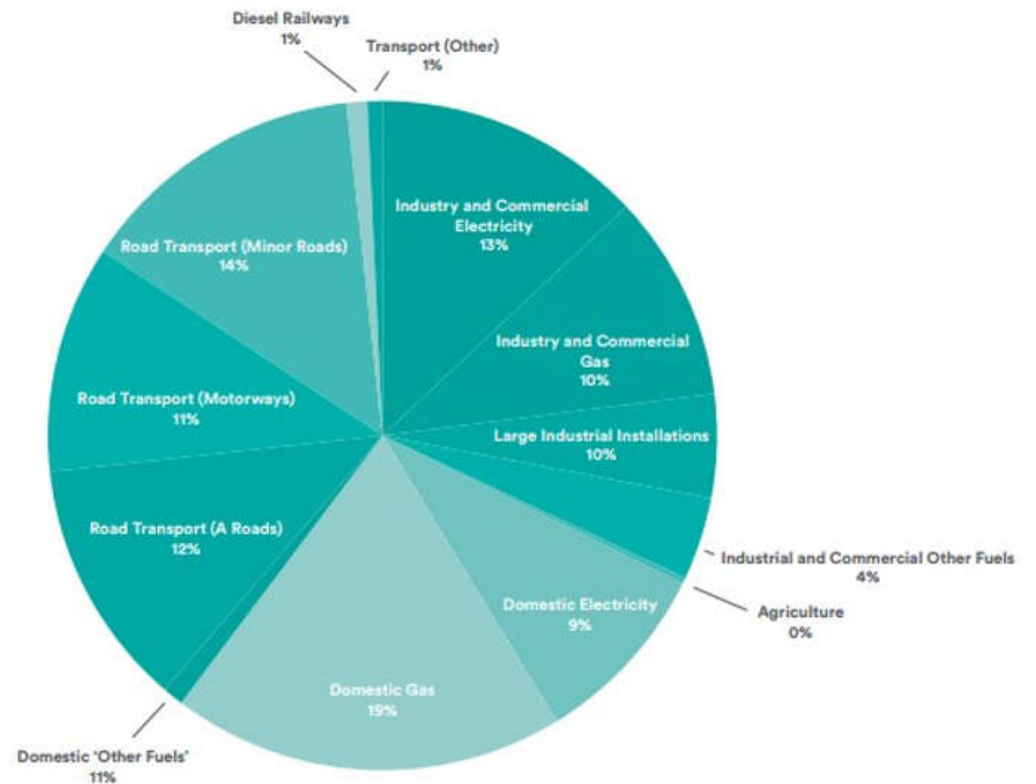


# The challenge for Coventry

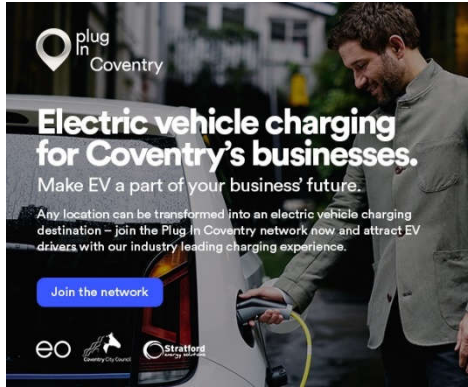
NO<sub>2</sub> by Source - SW quadrant ring road



2016 CO<sub>2</sub> Emissions (21 MtCO<sub>2</sub>) for WMCA area



# Reducing our emissions across the City



'Try before you buy' – electric fleet

468 charge points operational & 155 currently being installed



**Electric Bus City**



**Urban Air-Port & Coventry**

# Coventry City Council

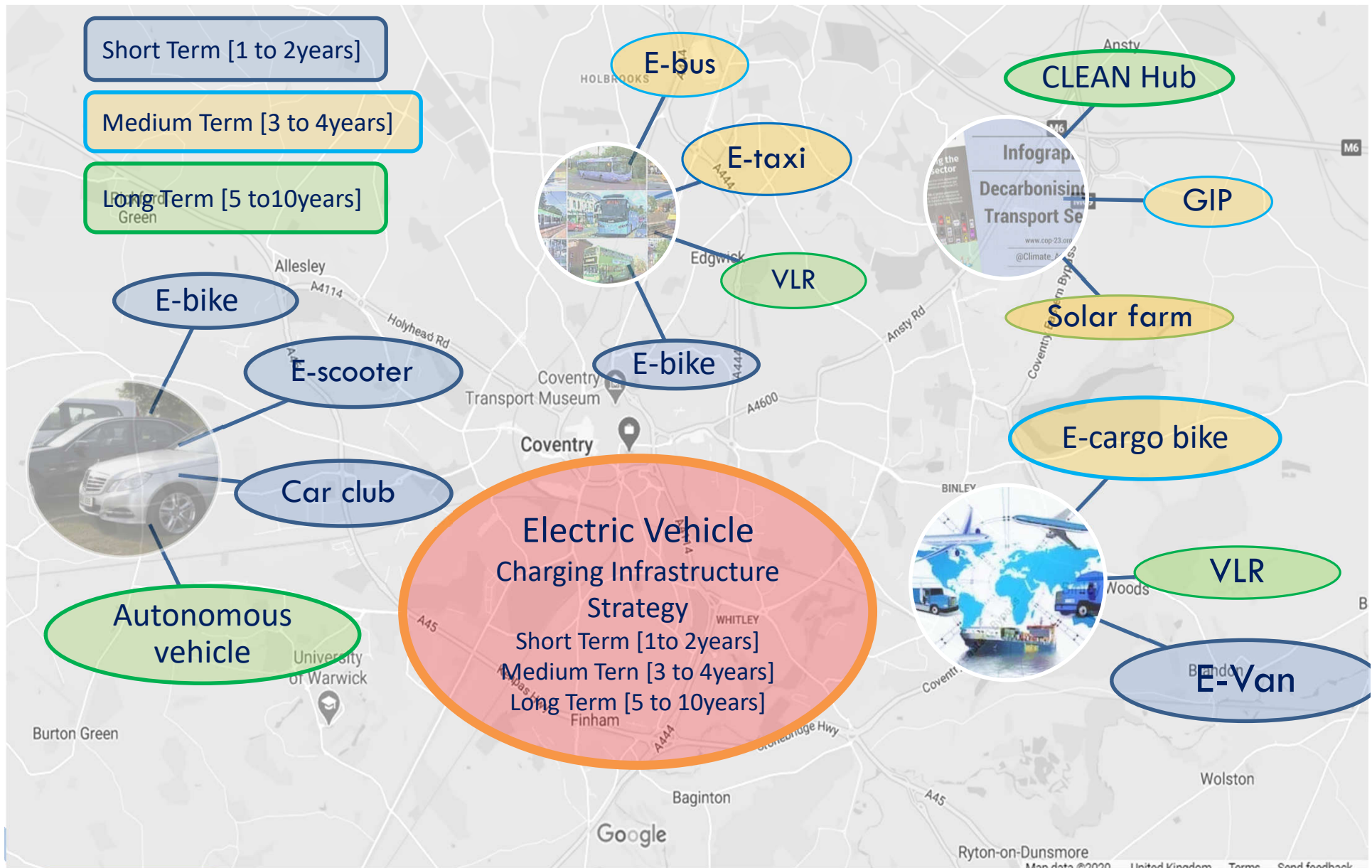
- Coventry has one of the most comprehensive EV charging networks outside London.
- Work Place Charging – 44 fast chargers at Council’s properties and Plug-in Coventry project to support charge point provision at business premises
- Ultra Low Emission Buses – Office for Zero Emission Vehicle (OZEV) grant funding of £2.255m for 10 electric buses in partnership with National Express – Launched end of August 2020
- All Electric Bus Town [AEBT] – Coventry secured funding of £50 million to fully electrify the bus fleet in the city and key corridors into Warwickshire – joint project with Warwickshire County Council and major bus companies. 130 double decker electric buses were ordered in January 2022 as first phase of the delivery programme.
- Electric Fleet First project – Coventry has been awarded funding by Highways England for a fleet of electric vans, pool cars and taxis for local businesses to try before they buy electric vehicles for their fleets.
- DynaCoV project – Dynamic Charging of Vehicles, a feasibility study project is underway, completed December 2021





# Developing an EV culture

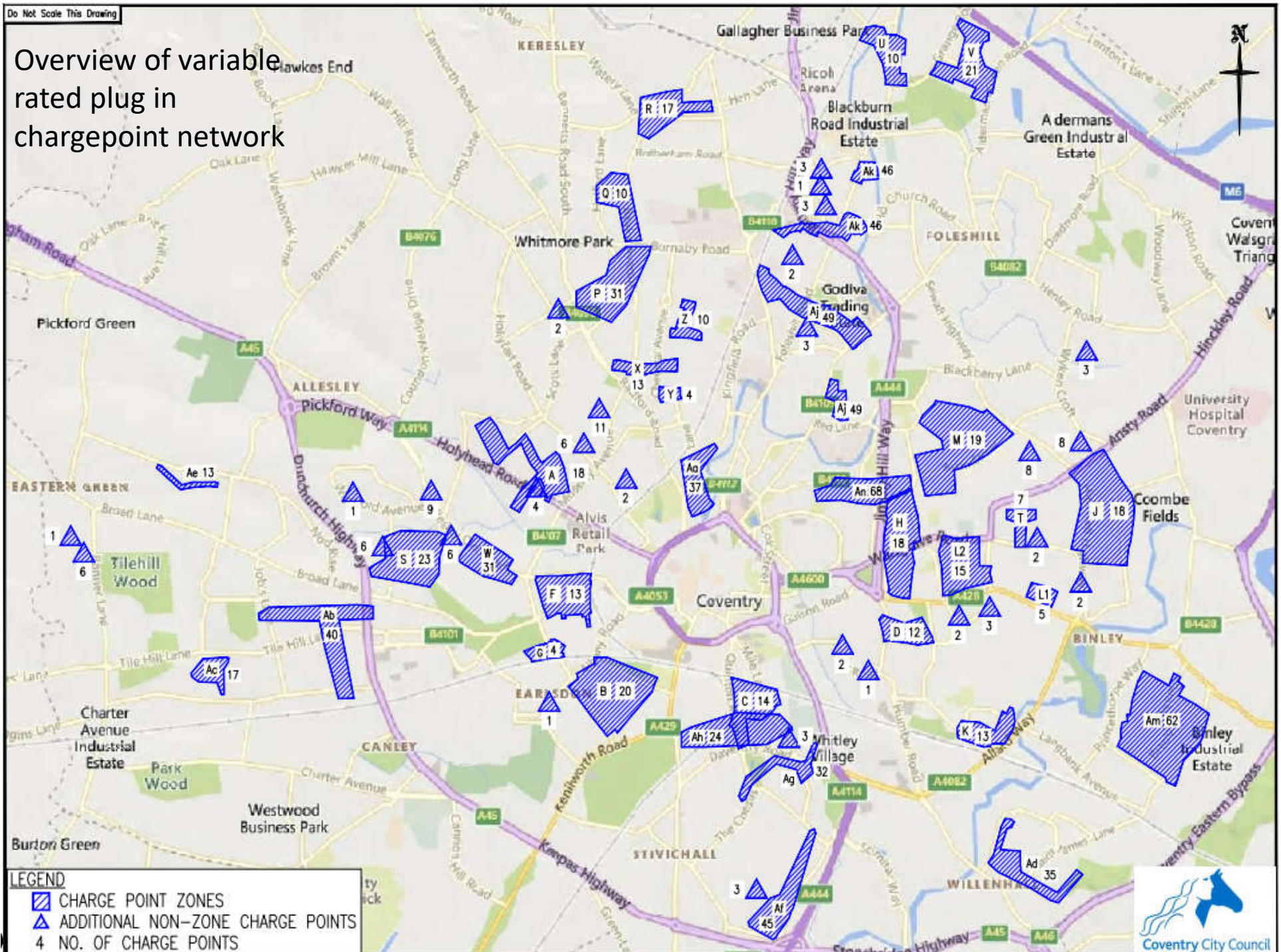
- Central Government Funding
- Private sector investment
- Holistic approach of extending EV charging infrastructure to the wider city
- Access to Charge points in the City of Coventry for Electric Taxi's [Hackney carriages]
- Promote increase use of EV cars through workplace charging, home charging and onstreet charging
- Improve Air Quality
- Future Proofing for Emerging Technology
- Combination of VLR, all electric buses and electric taxi's making a fully electric public transport system in Coventry from 2025



# EVC Eco System

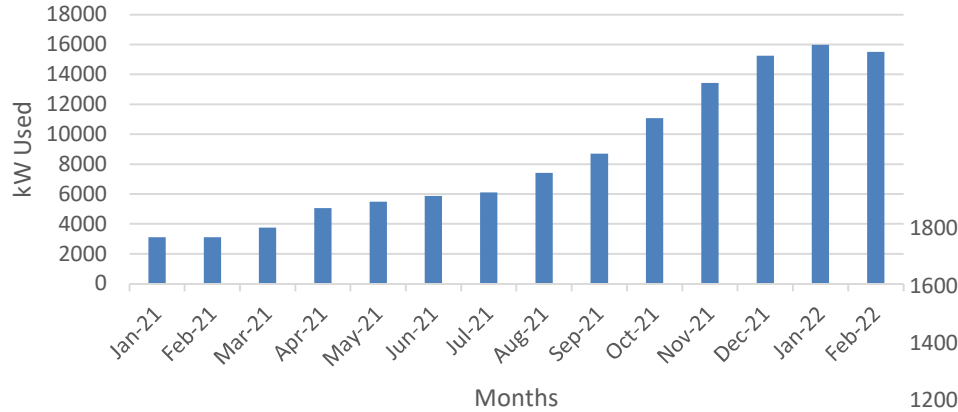
Do Not Scale This Drawing

# Overview of variable rated plug in chargepoint network

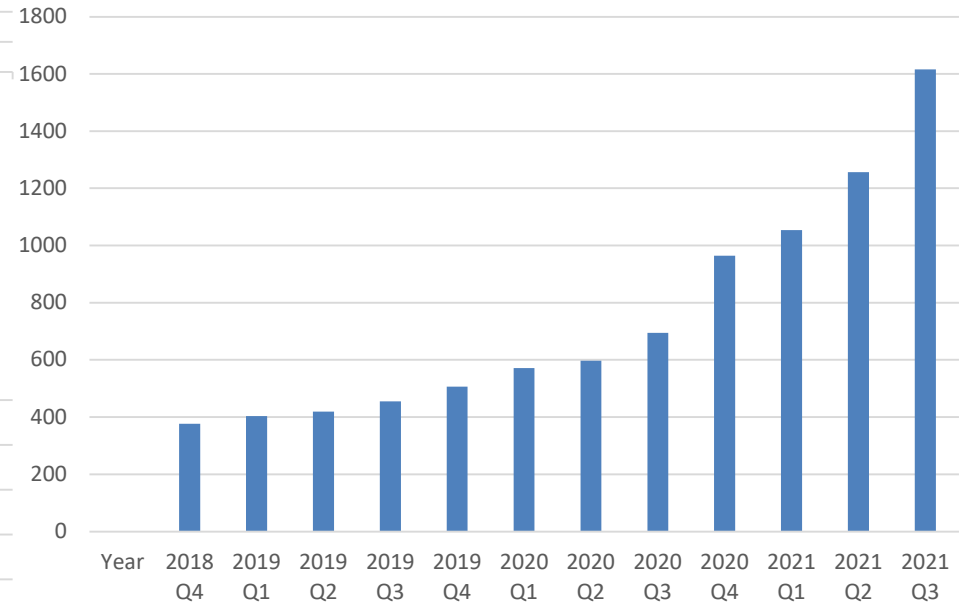


# Onstreet Residential Chargepoints

Home Charging

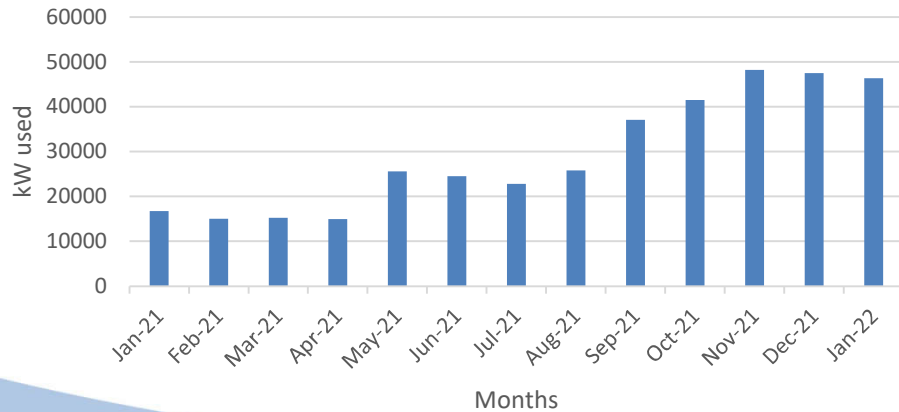


# Plug-in-cars Coventry



# Rapid Charger Usage

Opportunity Charging



Source: veh0131 - Plug-in cars and light goods vehicles Dft Stats 2021 Q2

# Ultra-fast Charging Hubs / Green Innovation Park

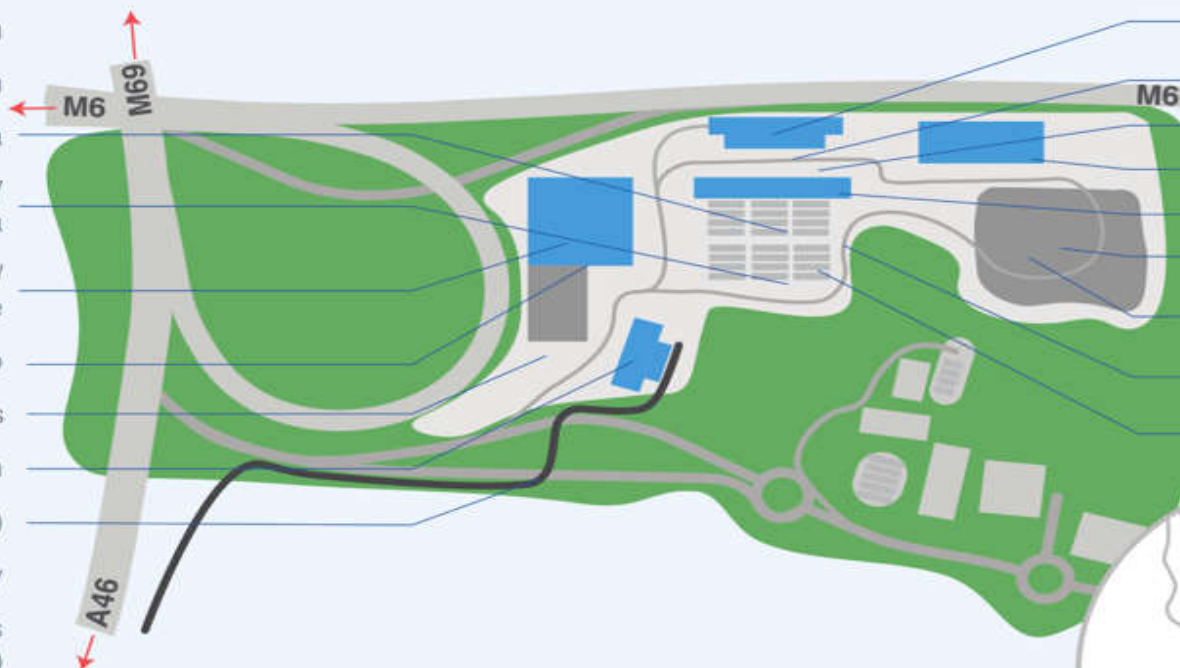
- Council working with partners to unleash the potential for ultra-fast charging hubs across Coventry.
- These state of the art facilities would provide volume charging facilities for all types of electric vehicles.
- Developing options for multi-fuel hubs including hydrogen and gas
- Opportunities for associated facilities and SME research hubs
- Energy generation and supply opportunities.



# Coventry & Warwickshire City Linking Energy and Network Hub (CLEAN Hub)



- Wind Energy Generation
- Solar Energy Generation
- Park & Ride carpark area
- Low/high power EV charging carpark area
- Consolidation centre/last mile
- Parcel pickup
- E-scooters/e-bikes
- VLR station
- Very Light Rail (VLR)
- Cycle-highway
- Flying goods vehicles (drones)



- Electric bus charge park
- Electric shuttle bus
- Bus stop
- Innovation zone
- Retail area
- Multi-fuel hub
- Hydrogen fuel production
- Battery Storage
- Static wireless charging bays









# EV - Future Works



CCC exploring 'car clubs' and 'lift-share'

Linked to future mobility pilot scheme which would allow people to trade in their older, polluting cars for mobility credits. Credits could be used on trains, buses, car clubs and bike hire.

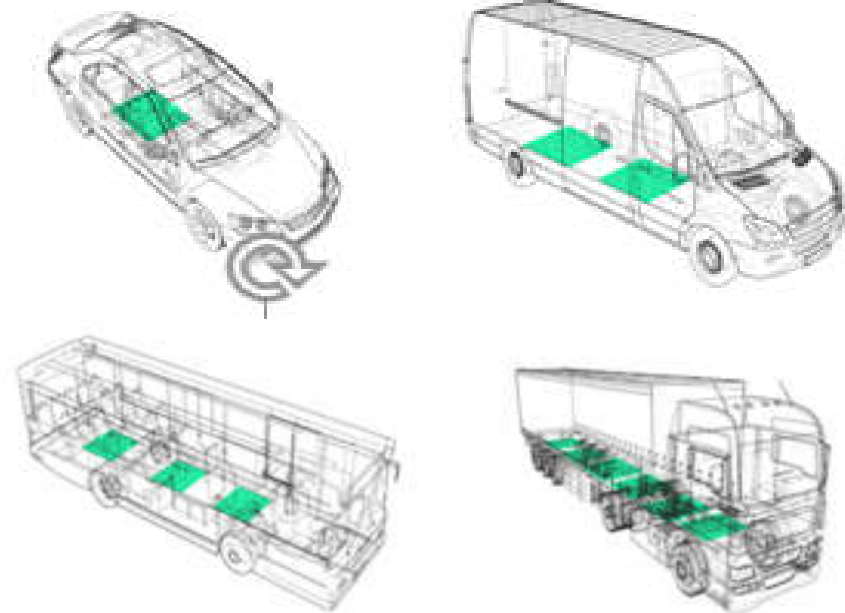
# EV - Future Works

Dynamic Wireless Power Transfer technology, where Inductive loops are laid under the road surface

These loops are capable of charging a moving vehicle as it passes over them

Receivers are fitted underneath a vehicle which allows it to accept a charge as it drives over the inductive loops.

DynaCoV project feasibility study was completed in December 2021, a project funded by Western Power Distribution [WPD]. Next phase is to undertake a demonstrator project once the funding is secured.



# Battery production facilities to help EV transition

**UK Battery Industrialisation Centre (UKBIC)** The £130 million UK Battery Industrialisation Centre (UKBIC) is a pioneering concept in the race to develop battery technology for the transition to a greener future. The unique facility provides the missing link between battery technology and successful mass production. Based in Coventry, the publicly-funded battery product development facility welcomes manufacturers, entrepreneurs, researchers and educators.



**Gigafactory Coventry Airport** Coventry Airport has been chosen as the preferred site across the West Midlands for a new Gigafactory facility. The recently submitted plans would deliver 5.7m sq ft of space for both battery production and recycling, would add £434m in GVA to the regional economy each year,



# Coventry Very Light Rail

- The Coventry Very Light Rail project is redesigning urban light rail to make it cheaper to install for smaller and medium-sized cities
- The track is much shallower than traditional rail, utilizing the latest materials science allowing it to be laid just 30cm in the road surface, minimizing the need for utility diversion
- The vehicle is battery powered and can be charged by a standard single decker bus charger, further minimizing installation of costly infrastructure



## Coventry: UK's first all-electric bus city

Coventry City Council is working with the West Midlands Combined Authority, the UK Government and National Express West Midlands on a pilot project to make Coventry the UK's first all-electric bus city.

Funding has been provided by the UK government, and Coventry City Council is working closely with National Express to ensure the necessary infrastructure is installed by 2025.

The West Midlands Combined Authority is also working closely with National Express on contractual and operational requirements.



# Electric Fleet Update

Coventry City Council  
04/02/2022



Coventry City Council



**national  
highways**

# Progress to date

## Key Stats

- ▶ 70 Vehicles purchased
- ▶ Over 300+ businesses and taxi drivers have registered interest on the scheme
- ▶ 131 trials have taken place to date
- ▶ 15 taxi drivers have already placed orders with LEVC for the Hybrid TX5
- ▶ 10 businesses actively looking at leasing electric vans with two businesses already converting to an e-van/e-car
- ▶ 2 businesses have purchased charging infrastructure for their workplace and used the grant funding towards this
- ▶ 320,000+ miles driven to date by businesses around Coventry.



## Progress within the council



▶ Whitley Depot charging bay improvement ✓



▶ Whitley Depot Rapid Charger ✓



▶ Road Map to a self-sustained green fleet

▶ Workshop staff EV training ✓

▶ In house electric MOTs and services ✓

▶ More depot charge points ✓

▶ Council commitment policy



## Additional notes

- ▶ 6 taxi drivers taken advantage of the DEFRA funding when trading in their EURO 4 taxi for a hybrid equivalent. Due to long lead-times of vehicles this number is likely to increase month by month as other drivers who have committed to purchasing hybrid vehicles are waiting on delivery.
- ▶ 2 businesses have placed orders for electric vehicles to replace their business vehicle that is currently petrol/diesel ran
- ▶ A further 10 businesses are actively looking at purchasing vehicles when their existing lease is due for renewal later this year
- ▶ 320,000 miles driven. According to some carbon emission sites, this equal to 190 tonnes of CO<sub>2</sub> savings but these are U.S sites and not 100% these calculators are accurate

<https://www.fleetnews.co.uk/costs/carbon-footprint-calculator/>



# Thank you

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