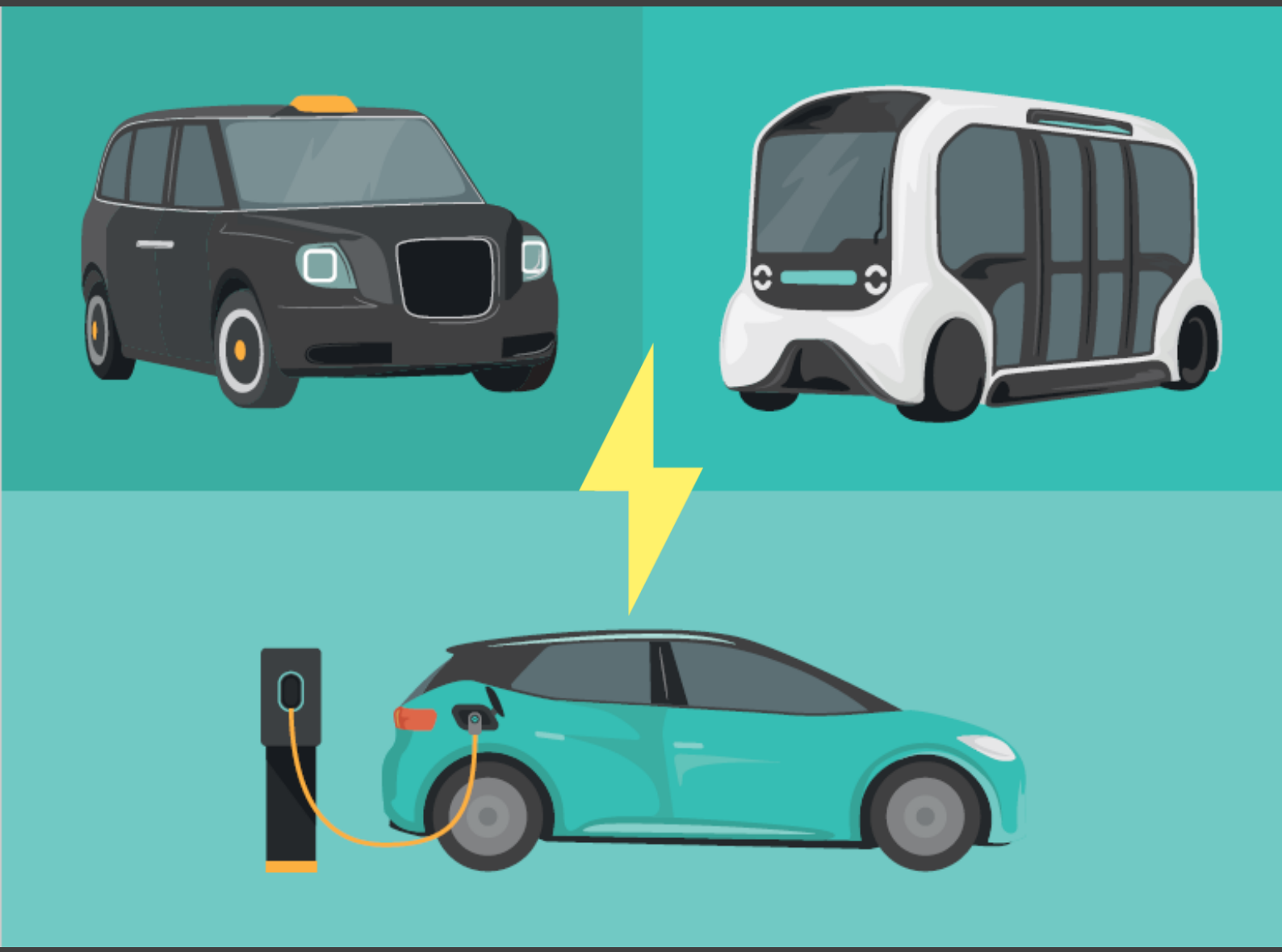
Solihull's Electric Vehicle Strategy

Going Electric – Updated July 2022



UKCENTRAL SOLIHULL

Solihull METROPOLITAN BOROUGH COUNCIL

Foreword

In July 2018 the Government published its Road to Net Zero Strategy, an ambitious roadmap towards delivering zero emissions transport across the UK.

Road traffic currently accounts for nearly 40% of the borough's overall greenhouse gas emissions, so making the switch to electric vehicles is going to be an essential part of our own journey towards net-zero. By accelerating the switch away from fossil fuelled vehicles we have an exciting opportunity to drive improvements in air quality that will benefit the health and economy of Solihull and alongside future technologies and automation radically change the way we travel.

Our Electric Vehicle (EV) strategy seeks to encourage wider adoption of EVs across the borough and tackle some of the current barriers slowing down this transition. It also looks at how we can help change people's perceptions of electric vehicles and what support we can give through local planning, licencing and regulations. Of course we can't make this happen by ourselves but there are key actions that we can, and are, taking as a Council that will make a real difference. We are already playing a key role in facilitating the roll out of much needed EV charging infrastructure, including on-street charging for those that can't charge at home. In March 2022 we set a short-term target to increase the number of public chargers put in place by the Council tenfold from 60 to 600 by 2025 and in September we'll publish our updated Action Plan which will show the progress we've made and our ambitious delivery programme for the next two years and out to 2030.

Solihull is leading the way on EV uptake in the West Midlands and is the ideal location for early investment in charging infrastructure. From ground-breaking trials, using our very own electric self-driving shuttle, to ambitious plans at the NEC, to deliver of one of Europe's largest EV charging hubs, we are gearing up for an exciting shift towards a cleaner more efficient age of road transport.

Councillor Andy Mackiewicz

Cabinet Portfolio Holder for
Climate Change, Planning and Housing

Councillor Ken Hawkins

Cabinet Portfolio Holder for
Environment and Infrastructure

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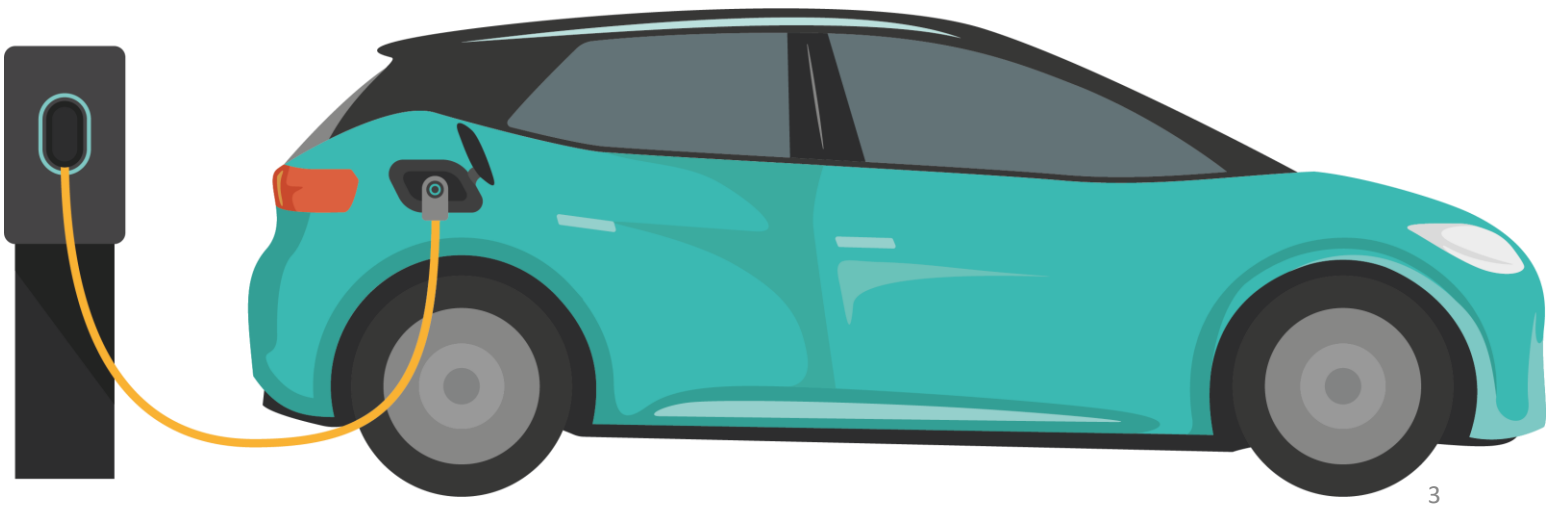


1. Introduction and Scope

"Going Electric" was first published in 2020 in response to the twin challenge of vehicle tailpipe emissions affecting local air quality and driving climate change.

The central aim of the strategy is to ensure that when any fossil fuel powered vehicle owned or operated in Solihull is sold or scrapped, should it need replacing, it is replaced with a vehicle with zero harmful tailpipe emissions.

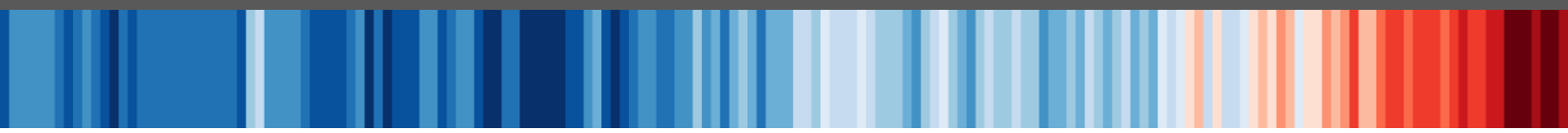
Solihull's Net Zero Action Plan identifies that more than a third of the borough's greenhouse gas (GHG) emissions come from roadgoing transport. Whilst we know that the best route to avoiding a significant proportion of these emissions is to encourage modal shift away from low occupancy vehicles in favour of active travel, public transport and travel avoidance, we know that some low occupancy methods of powered travel are likely to remain in high demand for the foreseeable future, and that we must do something now to avoid the associated emissions.

The market for powered vehicles is global and is dependent on changing external influences such as technology development, economies of scale and government policy, but it has become clearer than ever that, since this strategy was originally published, the electric vehicle (EV) is the most viable route to mass adoption of an alternative to fossil fuelled vehicles for the UK in the near term across most vehicle classes.

A long-term approach and continued commitment from the Council is required to support the development of the local EV market and to ensure that access to charging infrastructure is not a barrier to entry. We have therefore committed to reviewing our EV Strategy every 2 years whilst we're on the early part of the adoption curve and until at least 2030. The transition away from combustion engines is happening quickly and at an increasing rate, so we've separated the EV Action Plan out from this document and put it on our website to ensure that it is live and can be transparently updated as progress is made in between strategic reviews.

The scope of this strategy is therefore to address the transition of roadgoing transport within Solihull away from fossil fuels in the short term and through the next decade.

2. Background and Policy Context



"Global warming, reaching 1.5°C in the near-term, would cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans….Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages" - IPCC Sixth Assessment Report, 2022.

The need to act on climate change has been clear for decades, but progress to date has been too little and too slow. UK Government has set a legally binding target to achieve Net Zero emissions of greenhouse gases by 2050, but it is clear that leaving action until then will exacerbate impacts, so we need to make significant reductions in emissions in the short term, not least in respect of roadgoing transport. Perhaps the greatest progress made by the UK so far has been in decarbonising the electricity supply where between 1990 and 2019, emissions fell by 44%. In 2021, Government committed to decarbonise the electricity system by 2035.

In October 2019, the Council agreed a target to achieve Net Zero carbon emissions from the Council's own activities, buildings, transport, resources and waste by 2030, a commitment reaffirmed in the Solihull Net Zero Action Plan (NZAP).

The Council continues to leverage it's position as a key enabler for decarbonisation, with all Council operations, including those subcontracted out for third party delivery, expected to be Net Zero in the same timeframe. As part of the NZAP and the Going Electric Action Plan, we're working to develop the rules and tools that will go beyond our own operations and extend to all services licensed or permitted by the authority.

Private vehicle usage represents the primary mode of travel across Solihull and accounts for a significantly higher proportion than the national average, with more than 75% of journeys to work undertaken using single-occupancy vehicles. This poses several challenges for Solihull, including: high carbon emissions, increased air pollution, increasing levels of congestion and negative impacts on physical activity. Furthermore, the population of Solihull is expected to increase substantially over the coming years, with the Solihull Local Plan allocating sites for significant commercial and residential development, such as Arden Cross.

As well as challenges, the transition to ultra low emission vehicles presents opportunities for Solihull and the wider region, with its rich transport and industrial heritage, to be at the heart of future mobility solutions, creating high quality green jobs and sustainable growth without compromising local air quality or losing our skilled electrical and automotive workforce.

[Warming Stripes graphic courtesy of showyourstripes.info, University of Reading]

3. Strategic Alignment and Objectives

Going Electric is designed to support Solihull's efforts to decarbonise transport, improve air quality and contribute to green economic growth.

Government set out the UK 2050 Net Zero Strategy in October 2021, and has subsequently published its Electric Vehicle Infrastructure Strategy.

The West Midlands has already gone further with a WMCA plan to achieve Net Zero across the region by 2041. WMCA is also developing an Infrastructure for Zero Emissions Vehicles Strategy which aims to ensure electric vehicles can charge whilst transiting across and through the region on the key road network.

Here within Solihull, this strategy sits alongside the Council's transport Strategy - Solihull Connected, the Solihull Net Zero Action Plan and Clean Air Strategy.

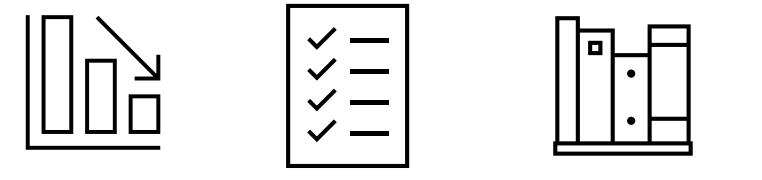
The electric vehicle infrastructure focus for Solihull is on charging at home, in the workplace, at destinations and on-street, to ensure vehicles can be charged at a speed appropriate to the desired dwell time and where it is most convenient without having to make a journey specifically for charging.

All of this comes within the context of the Council Plan and is managed in conjunction with the growth and development programmes being delivered through UK Central and the Urban Growth Company.

Our objectives:

- Air Quality – reduce hazardous pollutants originating from road vehicles that have severe impacts on residents' health
- Carbon Emissions - reduce greenhouse gas emissions from road vehicles that are contributing to climate change
- Economic Development – supporting local economic growth through job creation, reduced transportation costs and increased disposable income for residents as well as advancing the image and reputation of Solihull

More details on the Action Plan to deliver on these objectives, plus tools and guidance to support local residents and businesses can be found on our website.



4. Electric Vehicle Growth Forecast

"9,568"

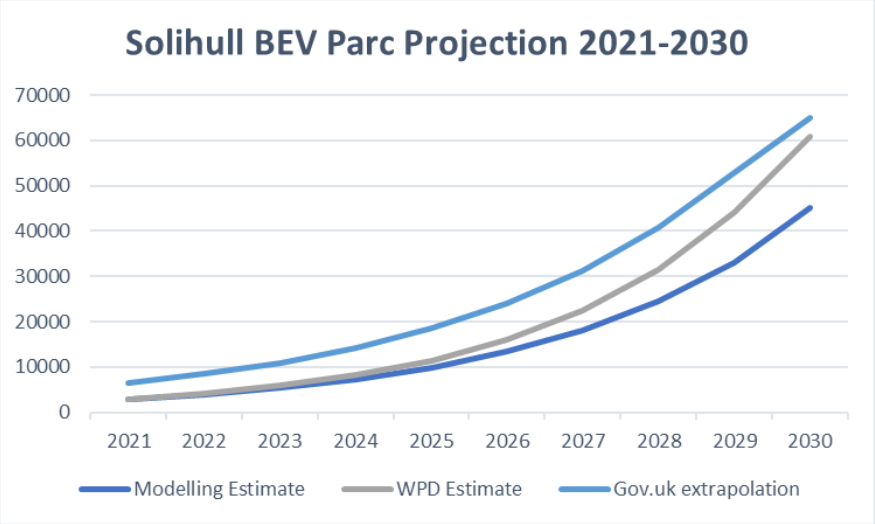
– Total plug-in cars registered to Solihull addresses, Q1 2022

Source: DfT veh0142

Sales of electric cars continue to increase year on year with more electric cars sold in the UK in 2021 than the previous five years combined. This growth rate is expected to accelerate and the first half of 2022 saw battery electric vehicles (BEVs) making up 14.4% of new car registrations according to the Society of Motor Manufacturers and Traders (SMMT).

Solihull had the highest proportion of EV ownership anywhere in the Midlands at the end of 2021 and is forecast to stay ahead of the national EV adoption curve. By 2030, our conservative modelling indicates that close to 40% of all cars kept within the Borough will be BEVs, with estimates from Western Power Distribution (WPD), the local Distribution Network Operator (DNO), and extrapolation of Department for Transport (DfT) data indicating this figure may exceed 50% in the same timeframe.

Whichever forecast proves to be closest to reality, Solihull must act quickly and decisively to ensure that the charging infrastructure to support this swift transition is in place ahead of demand arising to keep the residents and businesses of Solihull on the move.



Whilst the transition to electric cars is well underway, the market for electrified vans, trucks, buses and specialist vehicles is some way behind. Things are however starting to change and over the next two years we expect to see an increasing breadth of choice in longer range battery electric vans, with the Council's own fleet of vans being transitioned between now and 2025.

The world of heavier vehicles is not quite technologically or commercially ready to indicate a particular winning technology, but battery electric and hydrogen fuel cell electric vehicles are increasing in both number and range providing more realistic options for operators, which indicates that we'll likely start to see increasing numbers on the streets of Solihull and the UK more widely within the next decade.

5. Key Focus Areas

Firstly, it is important to acknowledge that simply switching from one vehicle powertrain to another will not achieve the broader Transport and Connectivity, Net Zero and Air Quality objectives that the Council intends to deliver. Modal shift away from single occupancy powered vehicles towards reduced or avoided travel, active travel and public and shared transport is the clear priority for the Council.

We do however accept that it simply isn't practicable to entirely redesign our way of life to eliminate the need for travel by powered means or deliver on modal shift for everyone within the timescales that the climate emergency requires.

This strategy identifies key areas where the Council will focus its efforts to encourage uptake of electric and other zero harmful tailpipe emission vehicles to accelerate the shift away from combustion as a means of powering transport.

The approach is based on helping to overcome identified barriers to EV uptake based on an understanding of the areas where the Council can achieve maximum impact.

Our key focus areas are:

- Charging Infrastructure
  - Home Charging
  - Workplace and Depot Charging
  - Public Charging
- Council Operations and Resources
- Communication, Advocacy and Outreach
- Public Transport
- Shared Transport
- Commercial, Industrial and Agricultural Vehicles
- Planning, Regulation and Guidance

5.1 Charging Infrastructure

5.1.1 – Home Charging

Various reports indicate that over 80% of EV charging happens at home, often overnight when cheaper electricity tariffs are available. A specialist overnight EV electricity tariff can save drivers with a home charger more than two thirds compared to charging during the day on a standard tariff. Landlords can now get support through the EV ChargePoint grant for landlords. Tenants in Solihull Community Housing properties can contact us via goingelectric@solihull.gov.uk to express an interest in having an EV charger installed.

Whilst the EV Homecharge Grant, which offered a significant discount on the cost of purchasing a home charger, may no longer be available, the whole life benefits of charging at home still far outweigh the upfront cost of installing a charger. Many dealerships and leasing companies now include the cost of a home charger in the vehicle purchase or lease price, and company car and van drivers may benefit from free installation through their employer.

Charging at home is, for most, the cheapest and easiest way to charge. With the typical range of a new EV now over 200 miles, and with the average driver covering around 125 miles per week, most cars will only need charging every few days. Over 10,000 homeowners with chargers have discovered that their home charger can help other EV drivers who can't plug in at home through plug-sharing services like Co Charger.

The Council does not currently permit trailing cables across public footpaths and verges for safety reasons. Innovative solutions to reduce the risk, such as cable gulleys and bollards fed from a home supply, are being considered as alternatives to public charging for those without off-street parking.

Around 71% of homes in Solihull have the space to park off-street and could therefore enjoy the benefits that home-charging brings.

For those that can't charge at home or use a neighbour's charger, workplace or public charging may currently be the best solution.

5.1 Charging Infrastructure

5.1.2 – Workplace and Depot Charging

For those that can't charge at home, the workplace can be the next best solution. Employers offering workplace charging may be a more attractive option for existing and prospective employees as drivers increasingly go electric. We encourage employers across Solihull to install workplace charging wherever on-site parking is available to help reduce grey fleet emissions.

Workplace charging need not be expensive to install, with many charge point operators now offering a fully, or partially, funded solution for employers and fleet owners where the employer puts up either none or small proportion of the capital investment. Through the Workplace Charging Scheme up to £350 per charger installed can be claimed back from Government, and employers may be able to generate an income stream by offering workplace charging that is cheaper to use than public charging whilst still covering the cost of electricity supplied and associated operational and maintenance costs.

Many fleet operators, like Royal Mail (pictured), are already transitioning to fully electric vehicles and installing chargers across their depots and other workplace locations.

We encourage fleet operators operating in Solihull, or with drivers who live here, to make the transition to electric as soon as suitable vehicles are available (in most cases they already are), but also to install their own charging facilities where possible. Early engagement with the DNO and charging provider can help optimise for the needs of the fleet.

Operating an electrified fleet can pose real challenges. Data is the fleet managers friend, so services like Basemap's EVR Solution and other vehicle tracking and routing tools can help provide assurance that routes and duty cycles are planned with charging opportunities in mind to minimise downtime and coincide charging with visits back to base or rest stops.

For some fleet operators, charging at a depot or workplace simply isn't viable so other solutions may need to be adopted such as shared depot charging, where organisations charge vehicles at a shared depot through a charging space booking system to guarantee an available space when it's needed. Others may rely on the transit charging network, e.g., for longer routes or where vehicles operate 24/7 shifts and need the shortest charging time possible.

To help understand the Council's own workplace and depot charging needs, and to gauge the potential demand for shared charging depots, the Council is establishing a Workplace and Depot Charging Working Group with the first meeting planned for autumn 2022.

5.1 Charging Infrastructure

5.1.3 – Public Charging

We can only achieve the aims of Going Electric if every vehicle has access to the right charging infrastructure. This means that public charging infrastructure is essential and that it must be accessible for all. We're working with charge point operators and landowners to ensure that public charging is safe, secure and accessible and can be used without the need for multiple apps and RFID cards. Wherever possible we'll require roaming payment methods or contactless with simple to understand user tariffs and no separate payment for parking.

Transit Charging

Transit charging keeps vehicles on the move on longer journeys providing under half hour charging speeds. Within the West Midlands transit charging sits strategically with the Combined Authority e.g., through EV-CATS, but the Council plays a key local role in linking organisations together, planning and ensuring transit charging is appropriately located and complementary to other categories of charging.

Case Study – NEC EV Hub

"The hub's forecourt will contain ultra-fast 300KW DC chargers capable of charging 32 EVs at any one time. Served by 16 high speed DC chargers, each will be able to fully-charge a vehicle in 15-30 minutes, plus a solar canopy will help to generate electricity for the hub. Maximising on the locational benefits of the Campus, the hub will also be accessed via a new entrance from the main Campus through road, just off junction 6 of the M42 and close to the M6." – thenec.co.uk

Destination Charging

Most vehicles spend most of the time parked. Up to 95% for many cars. That dwell time is the ideal time for most to be charged, i.e., whilst the driver is doing something else. Destination car parking provides the opportunity to match desired dwell time with charging speed ensuring that car parks and nearby businesses achieve their desired turnover and drivers get a charged car without making a trip specifically for charging.

Supermarkets, retail parks, pub chains and public car parks are already offering charging across the borough and the Council plans to install up to 500 destination chargers by 2026, that's 3 times more than the total number of public chargers in Solihull at the start of 2022!

Nearby Charging

For those without off-street parking and for whom destination charging might not always be the right fit, nearby charging facilities will be required. Nearby chargers offer slower charging speeds suited to overnight charging at the lowest possible cost. They may be on-street, in recessed parking bays, communal parking areas or free local car parks and will typically be within a 5 minute walk of home. For those with mobility issues, they may be nearer still.

The Council had 44 on-street chargers in Q1 2022 and a further 18 nearby chargers located in car parks. Up to 1000 nearby chargers are set to be installed by 2030 to ensure every resident in Solihull has convenient and affordable access to EV charging facilities.

5.2 Council Operations and Resources

Most vehicles in the Council's fleet are leased rather than owned. We have found that the total operating cost for battery electric cars and small vans over a standard 5-year lease term is already comparable with or lower than petrol and diesel alternatives, even on our short duty cycles, and we've started making the switch to electric as leases expire, with around 20% of the core fleet expected to be EV by mid 2023.

"The new van is great. It does everything we need …and is a big step forward from the old diesel van. The range is fine for our use and we're charging it one to two times a week overnight" – Fleet Driver, of our Highways Team's new Toyota Proace City Electric van (pictured)

The market for medium and large vans, and for specialist vehicles, is lagging behind that for cars and small vans, with total operating costs assessed as not currently competitive over a 5-year lease term for the relatively low mileage covered by those vehicles in our fleet. We expect costs and availability to improve over the next two years, so we've contracted shorter 2-3-year lease terms for those vehicles that were scheduled for replacement in 2021/22 and will replace these with EV equivalents by the end of 2025.

Companies delivering services on behalf of the Council will be required to make the switch to zero tailpipe emissions vehicles as contracts are awarded and renewed, with all vehicles delivering Council services expected to emit 0g CO_2e/km by the end of 2030. This change has already started happening with the Parking Enforcement Team putting electric cars and mopeds into operation in 2022, making overnight use of Council owned chargers in the Town Centre car parks whilst they are closed overnight.

Charging infrastructure is perhaps the greatest challenge for the Council fleet, with known power constraints at locations where vehicles are currently kept when not in use. Whilst some progress has been made, with several chargers already installed at the Council House and with more planned at Moat Lane Depot, we know we'll need to conduct a comprehensive analysis of future demand and supply requirements. From autumn 2022, and working with colleagues from Solihull Community Housing and other public sector organisations, the Workplace and Depot Charging Working Group will start to explore what our future charging demand is and how we'll cater for it.

Planning for and delivering the aims of this strategy requires specialist technical and commercial knowledge, so the Council aims to recover costs through a combination of cost savings, where our own electric vehicles cost less to run and maintain, revenue sharing from public charging on Council owned and operated land, and funding through the Department for Transport's Local Electric Vehicle Infrastructure resource funding allocation.

5.3 Communication, Advocacy and Outreach

Since we launched our online resident and business surveys in 2020, we've had 475 responses and lots of follow up conversations and site visits. The surveys were designed to help the Council understand views and potential demand for public EV charging.

In addition to charge point requests, common views coming through from both surveys were:

- The up front costs of electric vehicles is too high
- Lack of information/understanding putting drivers/fleets off making the switch
- Lack of confidence in charging infrastructure & practicality of EVs

From residents there were also concerns raised about charging infrastructure reducing on-street parking availability for non-EVs. Some respondents expressed concerns that EVs were no better or even worse than ICE vehicles for the environment.

Ready for 2023 we're working on an interactive tool for residents and businesses to flag up where they'd like to see future charging infrastructure put in place. In the meantime, you can still get in touch with us by email at goingelectric@solihull.gov.uk.

We understand the concerns that have been raised and the need for more information to be shared to give drivers and business the confidence they need to go electric. Some of these points are addressed in this updated strategy. There is also an increasing body of Government and industry guidance available that dispels many of the misconceptions about EV's and guides drivers through the electrification journey and vehicle and charger funding available.

In addition to surveys and direct contacts from residents, businesses and representatives, we have also responded to a high volume of freedom of information (FoI) requests relating to chargers installed, Council vehicles and future plans for electrification.

Much of the requested information is readily available internally and is not commercially sensitive so from autumn 2022 we'll start to publish EV statistics and our full Going Electric Action Plan on the Council website.

Our Sustainable Travel team promote cleaner greener methods of travel for staff and the public. Recognising that savings can be made by moving to smaller lighter vehicles, in 2021/22 the Council partnered with Shirley based Silence Urban Mobility to offer electric moped trials.

We're exploring whether and what other incentives might further help those who cannot avoid using low occupancy private vehicles, such as car sharing and salary sacrifice schemes. Our Action Plan outlines those we're carrying forward and those we've already explored.

Council Officers are also working in consultation with elected representatives to encourage EV uptake and understand the often very specific needs in different parts of the Borough, across Council departments through the Solihull EV Forum, and with businesses and other organisations through the Solihull Sustainability Visioning Group.

5.4 Public Transport

In July 2021 the government published the Transport Decarbonisation Plan, which details the government's intended strategic direction for decarbonising the transport sector. The paper details the intention to move mobility away from motor vehicles (irrespective of fuel propulsion system) firstly to active travel (e.g. cycling, scooting and walking) and secondly to public mass transit (e.g. bus, train and tram).

"Some bus operators have already begun to invest in new, green electric and hydrogen buses, supported in the main by government initiatives such as the Green Bus Fund and the Low and Ultra-Low Emission bus schemes in England and the Scottish Ultra-Low Emission Bus scheme. Many local transport authorities have also begun to move to, or plan for, zero-emission fleets, for example in England through the current Zero Emission Bus Regional Areas (ZEBRA) scheme and the Government's All Electric Bus City scheme - where Coventry is becoming the UK's first all-electric bus city. However, there is much more to do. Only 2% of Britain's local bus fleet is zero-emission today – so it is vital that we go further and faster." – DfT Consultation on Phase out date for sales of non-zero emission buses, March 2022.

The Council is awaiting the outcome of the DfT consultation before working with WMCA and the Enhanced Partnership to set a date for the requirement for all new buses licensed for operation in Solihull to be zero emission, and we'll include an action within the Going Electric Action Plan to set a firm deadline for both new and existing buses to be zero tailpipe emissions.

Minibuses within the Council's own fleet will be electric by 2030, and we're working with West Midlands Rail Executive and the rail operators to reduce emissions from trains passing through Solihull.

Solihull MBC was the first UK Local Authority to buy an autonomous electric shuttle. Trial runs at the NEC and Birmingham Airport have given insights into how zero emission autonomous transport might play a role in modal shift without the expense and inflexibility that fixed path systems face.

We'll continue exploring electrified autonomous vehicles with further trials already being planned.

5.5 Shared Transport





With increased homeworking looking set to stay after the pandemic, many drivers are reconsidering whether they need their own car at all.

Through our Solihull Connected Transport Strategy the Council is working to ensure that transport is not only cleaner, but that congestion is reduced, places are better linked by public transport and active travel routes, and individual car ownership and use reduces.

The future of travel may look very different to what we know today, and not just because it's been electrified!

Ride sharing services have become almost ubiquitous and have started to displace taxi use for many pre-planned journeys. In future, with connected autonomous vehicles (CAVs) this may go even further with a fleet of self-driving people carriers across a range of sizes available on demand, as well as pre-planned routes, where and when needed, all communicating with each other to minimise overall energy use and downtime. They'll likely charge themselves on the go or at designated wireless charging hubs and may even be automatically cleaned at a drive through CAV wash. But, we're not there yet.

For those that drive less than 5000 miles a year, or who only occasionally make journeys that aren't a good match with public transport, there are already options that can negate the expense of owning and maintaining a personal car.

Whilst electric bikes and scooters have seen a huge uptake, they won't be suitable for everyone or every leg of a trip. That's where multi-modal hubs and other services like liftshare, short term subscriptions like Warwickshire based ONTO and car clubs may offer a solution that's cheaper overall than owning a car and more convenient than traditional car hire.

For those that don't want to drive or ride themselves, public transport can deal with large volumes of passengers and take a dozen or more cars off the road for each lap of a planned route. Mini-cabs and ride hailing services may be a better fit for other pre-booked trips, or traditional taxis for non-booked trips and those with accessibility needs.

Through Solihull Connected we'll advance shared transport alongside public transport, and through Going Electric we'll start to introduce electrified options for car club vehicles, including small and medium vans, the first of which is set to be established by the end of 2022.

We're also engaging with drivers and operators to reset the licensing rules to ensure that new and existing taxis and private hire vehicles reach $0gCO_2/km$ well ahead of national requirements, with future emissions standards and cut-off dates expected to be announced early in 2023. For some, this will involve a change of vehicle, whilst others may opt for a conversion, replacing a petrol or diesel engine with a battery electric drivetrain.

5.6 Commercial, Industrial and Agricultural Vehicles

Electrification of specialist and heavy vehicles brings a very different set of challenges when compared with lighter road going vehicles.

Ships, boats, aeroplanes and trains are not within scope of this strategy but are each subject to significant scrutiny around their current and future emissions. These and other heavy vehicles may need to adopt an alternative zero emission approach that avoids or minimises the need for heavy batteries.

For vehicles with relatively short duty cycles, or where proximity to a power source and recharging facilities is favourable, electrification will still likely be the optimal solution.

Colleagues at Nottingham City Council have established a broad fleet of commercial vehicles over several years alongside the Nottingham Electric Vehicle Services (NEVS) centre which services not only Council fleet vehicles but privately owned vehicles too. Many of Nottingham's refuse collection routes are now served by electric refuse collection vehicles (RCVs) with staff reporting that the vehicles are less stressful to operate, complete routes up to 45 minutes quicker than an equivalent diesel RCV, and return to depot with battery capacity to spare. Solihull has recently refreshed it's fleet of RCVs and is not due another refresh until 2030 by which time we are confident that battery electric RCVs will be comfortably capable of meeting the duty cycles for all routes across the borough.

Smaller industrial vehicles such as road sweepers and mini-diggers are already available and will feature in use across Council led projects and services in increasing numbers.

Heavier machines, and those that operate in remote settings are more challenging to electrify. Derbyshire based JCB recently introduced a hydrogen combustion engine, which may solve at least the greenhouse gas emissions for larger plant if fuelled with green hydrogen produced by renewable electricity. With the construction activities around HS2 and the UK Central Hub set to endure and accelerate across the coming years the emissions from construction plant is a key area of focus that contractors will be expected to mitigate through new and existing contracts.

With over half the borough in a rural setting, eliminating the emissions from farming and land management is another important challenge, and one which the Council aims to support. Whilst some plant operators, hauliers and farmers have already embraced the introduction of recycled and biofuels, these will not provide the level of emissions avoidance needed in the medium and long term. Due to the nature of its niche applications, the market for agricultural vehicles is likely to benefit from developments brought about through other vehicle types, rather than advancing swiftly as a category in its own right.

The Council is exploring opportunities to work with industry, agriculture and academia to advance zero emission technologies across all road and off-road applications.

5.7 Planning, Regulation and Guidance

Planning permission is typically not required for the installation of a wall mounted electrical outlet for recharging of electric vehicles if the area is lawfully used for off–street parking. Subject to some further rules, the same applies for outlets mounted on a pedestal or post.

This typically means that if you have, or can construct a driveway, car park or garage then chargers may be installed under permitted development rights provided the regulations and guidance applied as a result of The Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) are followed.

Regulations came into effect in June 2022 which require new chargers to have smart functionality, allowing the charging of an electric vehicle when there is less demand on the grid, or when more renewable electricity is available. The regulations also ensure that charge points meet certain device-level requirements, enabling a minimum level of access, security and information for consumers.

Also coming into effect in June 2022 are the requirements of Approved Document S under the Building Regulations 2010 which sets out the requirements for electric vehicle charging for new buildings, major renovation works and relevant building work on existing buildings.

Approved Document S sets out the number of charging spaces that must be provided for new developments. Where it is established that dedicated charging cannot reasonably be provided for each individual dwelling / building shared or public charging may be required. The Council will ensure that the requirements of the regulations are applied, as appropriate, to all developments and masterplans to ensure the future housing stock is ready for an electrified transport future.

In addition to the rules set at a national level the Council has produced draft Supplementary Planning Documents and Guidance which include for the installation of electric vehicle charge points and enabling infrastructure which will be published alongside the updated Local Plan by 2023.

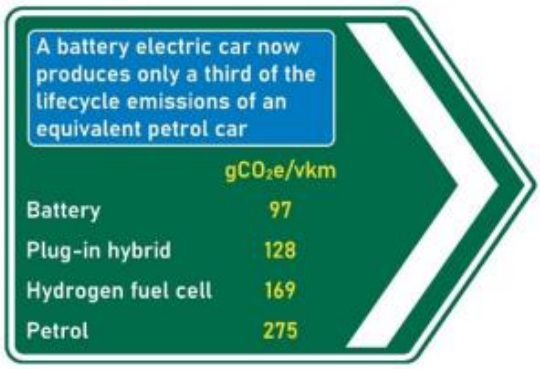
Current local Planning and Building Control policies, documents and guidance can be accessed via the Solihull.gov.uk website.

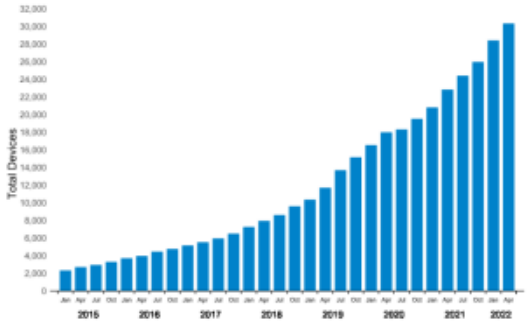
6. Keep Going Electric

When we launched 'Going Electric' in 2020, the future of zero emission transport still seemed hard to grasp. Would the cars of the future have batteries or fuel cells, or would we still be burning fuels, perhaps green hydrogen or carbon neutral synthetic fuels, to keep us moving?

The direction of travel is much clearer now. We know that battery electric vehicles will dominate the car and van market in the UK for years to come, although there may still be a role for hydrogen and synthetic fuels in niche applications.

There are still many common misconceptions about EV's which the Government have fact checked and published a Q&A guide to address.





Growth in UK public charging devices since 2015. Source: DfT statistics

Heavier transport is still in the storming stage as manufacturers and researchers innovate and bring forward new technological developments that should see viable zero emission options for all vehicle types within the next decade.

We encourage the trialling and commercial roll out of zero emissions vehicles and their associated infrastructure within Solihull and the wider region including alternative fuels, on-site energy production and on-street running of novel and autonomous prototypes.

Whether you're a local resident or business, a public sector organisation or just transiting through Solihull by train or on the key road network, we're working to ensure that regardless of your mode of transport, it should be emission free as soon as possible and by 2041 at the very latest.

You can keep up to date with our progress against the Going Electric Action Plan here Electric Vehicle Strategy (solihull.gov.uk)

And you can contact us at goingelectric@solihull.gov.uk for impartial advice and support on your Going Electric journey

We'll update this strategy and associated information at planned intervals until at least our 2030 EV planning horizon, by which time we hope the market will be so well established that we won't need it anymore!

7. References & Links

Page 1	Solihull EV Strategy landing page - https://www.solihull.gov.uk/About-the-Council/Electric-Vehicle-Strategy Front cover design © SMBC
Page 2	Road to Net Zero - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf Image "Cllr Andy Mackiewicz" - courtesy of SMBC Image "Cllr Ken Hawkins" - courtesy of SMBC
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Page 6	UK Net Zero Strategy - https://www.gov.uk/government/publications/net-zero-strategy UK Electric Vehicle Infrastructure - https://www.gov.uk/government/publications/uk-electric-vehicle-infrastructure-strategy WMCA Net Zero Plan - https://www.wmca.org.uk/news/green-light-for-region-s-ambitious-net-zero-carbon-plan-with-funding-for-new-capital-projects/ Solihull Connected Strategy - https://www.solihull.gov.uk/About-the-Council/Solihull-connected Solihull Clean Air Strategy - https://www.solihull.gov.uk/Environment-and-animals/Air-quality-monitoring-in-Solihull Solihull Council Plan - https://www.solihull.gov.uk/About-the-Council/The-Council-plan UK Central - https://www.investinukcentral.com/ Urban Growth Company - https://www.ugcsolihull.uk/
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Page 18	Q&A Guide "Common misconceptions about electric vehicles" - https://www.gov.uk/government/publications/common-misconceptions-about-electric-vehicles Images - courtesy of Office for Zero Emission Vehicles & Department for Transport
Page 19	None
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