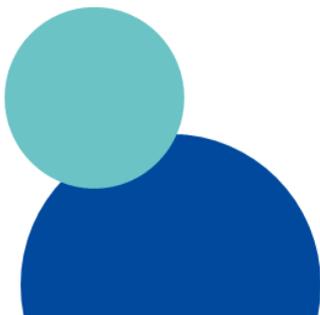


Waverley Borough Council
Electric Vehicle Strategy
2021-2026

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Electric Vehicle Strategy 2021-2026

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Executive Summary

This strategy realises the potential demand for electric vehicles (EV) and addresses the concerns of EV users. Our vision is that, by 2026, Waverley’s residents and businesses will be able to use electric vehicles every day and for any purpose. They will be

confident that they will be able to recharge them quickly and conveniently, taking advantage of their lower cost operation and in doing so helping improve air quality.

Both Surrey County Council and the UK Government are promoting the uptake of ultra-low emission or electric vehicles as a means of reducing pollution in cities and towns. Waverley Borough Council supports this movement and will procure ultra-low emission or preferably electric vehicles for its own fleet at the earliest opportunity and request that contractors do the same. An increasing number of Waverley residents have been requesting electric vehicle charging points near their homes in the borough.

Our strategic objectives are to:

- Reduce greenhouse gas emissions at the vehicle exhaust.
- Reduce emissions of harmful nitrogen oxides (NOx) and particulate matter (PM) emissions. Fewer exhaust emissions mean improved air quality and therefore better public health.
- Make a proportionate contribution to the reduction of greenhouse gases and work towards carbon neutrality by 2030.
- To manage change to ensure Waverley remains a thriving and sustainable community in the future

Our target audience for this strategy is:

- Our residents, visitors and businesses.

By 2026, we need to have significantly less polluting traffic on our roads, contributing to an improvement in air quality across the borough and significant reductions in carbon emissions.

Introduction

The majority of vehicles in Waverley today run on either petrol or diesel fuel. Petrol and diesel are known to cause pollution, which is harmful to public health and contributes to climate change. However, the situation is changing due to the improvements in technology and a push towards lower emissions. An electric vehicle generates zero carbon emissions at point of use however even when considering the lifecycle of the electricity there are significant carbon savings.

Over the last few years the demand for electric vehicles has greatly increased. Figures published by the Society of Motor Manufacturers and Traders (SMMT) show that there were 3,500 plug-in car registrations in 2013. This figure has increased to approximately 373,600 plug in cars by October 2020 ¹. The Climate Change Commission in its 6th Carbon Budget² predicts that 43% of cars on the road by 2030 would need to be electric in order for a balanced pathway to net zero. Klynveld Peat Marwick Goerdeler (KPMG) working for Surrey County Council have estimated that across Surrey 1600 fast chargers and 100 rapid chargers would be needed by 2025.

Both vehicle manufacturers and Governments are working to build interest in the use of alternative fuels. In Waverley there has been an increasing interest in availability of electric vehicle charging points due to more widely available EV technology and reduced costs of electric vehicles. To cater for the forthcoming increase in electric vehicle use, Waverley is committing to invest in EV infrastructure so that the borough is prepared for the future.

Waverley Borough Council has an important role to play in supporting growth in electric vehicles, including: creating a supportive policy environment; enabling the creation of new charging facilities for electric vehicles; promoting their benefits to a wider audience including by incentivising with differential parking charges in our car parks; working with our partners and private enterprises to encourage wider take up; and with educational campaigns. Waverley will lead by example by ensuring our own activities use cleaner technology at the earliest opportunity where it is practical and offers the taxpayer good value for money.

Waverley is an area that is well-suited to adopting electric vehicles and the council is keen to help realise this potential through this strategy, and make sure Waverley remains a thriving and sustainable community in the future..

¹ <https://www.nextgreencar.com/electric-cars/statistics/>

² <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

Waverley Borough Council is pleased to present its first Electric Vehicle Strategy as a way of supporting the growth in electric vehicle use in the borough and nationally.

Policy Context

National

The UK's Road to Zero Strategy sets out the Government's aim for all new cars and vans to be effectively zero emission. In November 2020 it was announced by the Government that the end to the sale of new petrol and diesel cars would be brought forward from 2040 to 2030. The government expects this transition to be industry and consumer led, supported in the coming years by the measures set out in the strategy.

Regional - Surrey County Council

Surrey County Council declared a climate emergency in July 2019. The motion states that the council will commit to lowering emissions to zero by 2050. All districts and boroughs have committed to reducing their carbon emissions, many declaring climate emergencies too.

There are 27 Air Quality Management Areas across the whole of Surrey. Surrey County Council in their Climate Emergency Strategy have committed to work with all districts and boroughs across the county in a joint working approach to decrease emissions from transport.

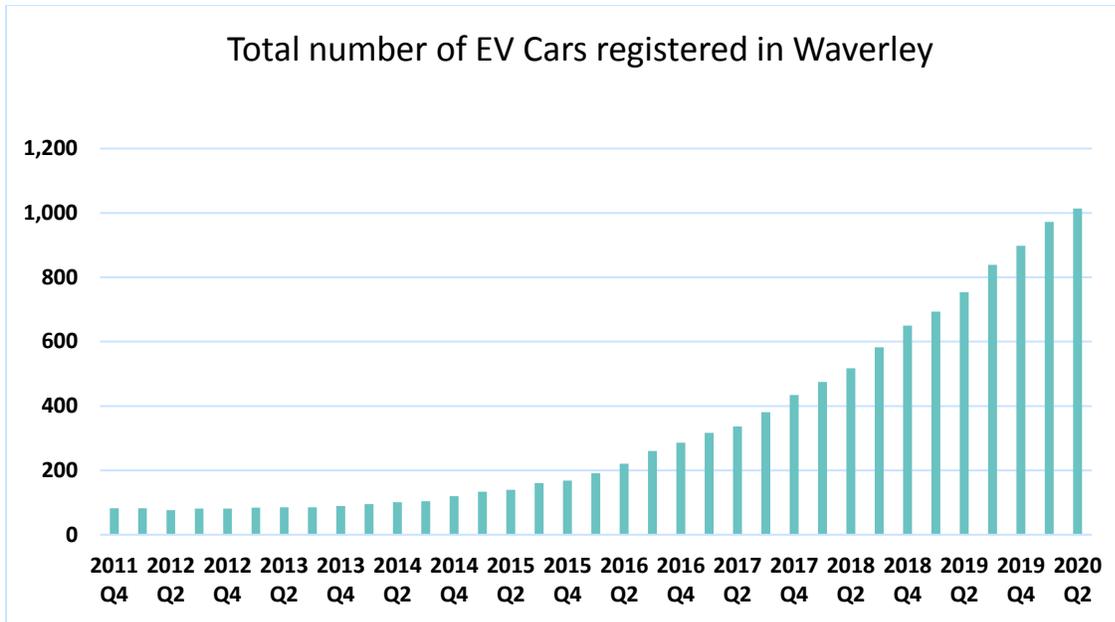
Local - Waverley

Waverley Borough Council declared a climate emergency in September 2019. The motion states that the council will commit to becoming a carbon neutral council by 2030, while supporting the local area to also become carbon neutral. The Council recognises that this is an ambitious but realisable target. Transport accounted for 40% of the emissions across Waverley in 2015. In our Carbon Neutrality Action Plan Waverley committed to facilitating the switch to electric vehicles.

A study from Nottingham University in 2020 estimated that if all vehicles were electric, UK carbon emissions would fall by 12%. It is estimated that an average new car run on petrol travelling 20,000km in a year is responsible for almost 2 and a half tonnes of CO₂ in a year. Encouraging a switch to electric vehicles has enormous benefits in reducing the carbon footprint in Waverley.

Demand for EV charging

The chart below demonstrates the rapid growth in registered EVs in Waverley between Quarter 4 in 2011 and quarter 2 2020.



Source: Department for Transport Statistics – Vehicle Licensing Statistics (Table VEH0132)
<https://www.gov.uk/government/collections/vehicles-statistics>

As the number of registered vehicles is only expected to rise, it is important that Waverley Borough Council delivers this strategy to provide the infrastructure required to support the growth in the EV car market, anticipating and shaping the level of future demand. SSE with the National Grid have calculated the number of EV chargers that would be required in Waverley to meet the Governments Net Zero target by 2050. The diagram below covers the period of this strategy.³

Number of EV chargers required for Net Zero trajectory						
Site	2021	2022	2023	2024	2025	2026
Car parks (public and private)	21	29	33	42	48	56
Destination	91	91	95	112	144	170
Domestic on-street	0	1	30	69	142	182
En-route / local charging stations	5	9	14	16	22	29
En-route national	0	0	0	0	0	0
Fleet/depot	0	0	1	3	5	9
Off-street charger	1673	2466	3501	4853	6560	8701
Workplace	25	47	75	108	140	186

³ <https://www.ssen.co.uk/WorkArea/DownloadAsset.aspx?id=19430>

As of November 2020, Waverley has the second highest Electric Vehicle ownership in Surrey and EV registrations in Waverley have doubled in two years.

Aims and objectives

The aim of this strategy is to:

Develop a borough wide approach to encourage the transition from petrol and diesel vehicles to electric vehicles as part of a sustainable transport system, to make sure Waverley remains a thriving and sustainable community in the future.

In order to fulfil this aim we have set ourselves the following objectives:

As the owner of car parks, properties and land:

- Encourage the uptake of EVs amongst Waverley resident, visitors and businesses by the provision of an easily accessible, convenient and affordable public charging infrastructure across the borough.
- To consider interventions and incentives that will actively encourage a modal shift and make it more appealing to use EV over petrol and diesel vehicles on our roads.
- To respond flexibly to fast-paced developments within the EV sector, keeping residents and businesses up to date on those developments via the Waverley website.

As a local authority and employer:

- To lead by example by using EV technology to reduce our environmental impact and work with our contractors and staff to do the same.

As a licencing authority:

- To engage, inform and encourage Waverley taxi drivers to switch to a more sustainable vehicles over time.
- Working with SCC identify and install EV chargers at key locations suitable for taxi drivers.

As a planning authority:

- Use the Surrey County Council Vehicular and Cycle Parking Guidance (January 2018) or any subsequently updated local guidance to ensure EV charging points are designed into new developments

- Use conditions on planning applications to ensure that EV charging points are delivered on new developments

Finance

Installing and maintaining charge points and switching pool vehicles to electric may create an additional cost to the council, at a time when funding is constrained. Opportunities for external funding will be pursued when they are available. Further projects will be supported by a business case and be submitted for appropriate approval as opportunities arise.

Alignment with existing strategies

This strategy forms one part of Waverley's response to our Climate Emergency declaration and should be considered alongside and read in conjunction with the following strategies:

- Climate Neutrality Action Plan
- Staff Travel Policy
- Hackney Carriage and Private Hire Policy
- Clean Air Strategy and Air Quality Action Plan
- Local Plan Part 1
- SCC EV Strategy
- Vehicular and Cycle Parking Guidance
- HRA Asset Management Strategy

Electric Vehicle Chargers

Currently there are four main types of chargers:

Slow	<ul style="list-style-type: none">• Typically rated up to 3kW. Often used to charge overnight• 8-10 Hours
Fast	<ul style="list-style-type: none">• Typically rated 7kW or 22 kW. Tend to be installed in car parks, leisure centres and properties with on and off street parking• 3-4 hours
Rapid	<ul style="list-style-type: none">• Typically rated 43kW+. Only compatible with EVs with rapid charging capacity. Tend to be installed in short stay car parks.• 30-60 minutes
Ultra Rapid	<ul style="list-style-type: none">• Typically rated 120 kW+. Typically found in service stations• A few minutes

Existing EV charging network across Waverley

Council owned EV chargers

In 2019 Waverley Borough Council commenced a programme to roll out EV chargers across the borough. It was identified that in this first phase at least one rapid charger would be installed in four council owned car parks, one in each of our major hubs. To date (December 2020) three of those chargers have been installed in

- Crown court (Godalming),
- High Street (Haslemere)
- Stocklund Square (Cranleigh).

Two further car parks will have chargers installed in early 2021

- Riverside 3 (Farnham)
- South Street Car Park (Farnham)

Each car park will have one rapid charging unit that can charge two cars at the same time. A further two fast chargers will be installed in Riverside 3 which will enable a further four cars to charge at the same time.

Further EV chargers will be installed in the Brightwells Yard multi-storey car park when it opens in July 2021. There will be

- 18 public chargers (with capacity for a further 18)
- 48 EV chargers in the residential area

Three fast chargers have also been installed in the Burys car park in Godalming and are available for the council owned vehicles, staff and tenants. When the car park is open in the evenings and at weekends the charger is available to the general public.

Waverley housing department have also been looking at opportunities to install EV chargers for our tenants and residents. A fast charger has been installed and is available for Waverley tenants and local residents on Queensway, Cranleigh.

In 2019 Waverley joined Guildford, Woking, Spelthorne and Surrey County Council in an on street EV charger pilot scheme. As part of the pilot it is hoped that 10 on street chargers will be installed across each participating borough. The first three of these chargers are due to be installed in Waverley in early 2021.

All EV chargers in our car parks are currently being installed by our contractor Engie EV Solutions and on street chargers under the Hampshire Framework by Joju. Both contractors operate in neighbouring boroughs within Surrey and Hampshire.

[All public chargers across Waverley](#)

The number of charging points across the borough are increasing but not all of them are public. Many existing ones are owned by hotels, are private or work based chargers. A map of current EV chargers across the borough can be found on Zap Map (<https://www.zap-map.com>)

The current level of public charging provisions is too small to meet the projected level of demand. Charge points in car parks and overnight resident chargers will need to be increased to cater for the demand. Most of Waverley's residents do not have access to off-street parking, on-street parking charge points will be required to meet the additional demand.

Developing a public network across Waverley

To encourage the uptake of electric vehicles in a proportionate and sustainable way whilst ensuring value for money the development of the Waverley EV charging network

will be approached in a phased way. This will ensure that sufficient EV chargers are installed to promote the switch to electric vehicles whilst ensuring all residents are catered for.

Car Parks and on street

Phase 1 - 2019-2021

Six rapid chargers (50kW) will be installed in Godalming, Haslemere, Cranleigh and Farnham. The number of rapid chargers in each hub will be determined by the size of the hub and the potential demand at that time. Further chargers will be installed as demand grows and in consultation with local Towns and Parish Councils.

Phase 2 – 2021-2022

Waverley working with SCC will install 10 on street fast chargers, borough wide, in streets with no off street parking. Sites will be considered based on essential criteria which includes, a request by a resident for a charger, a street with no off street parking, availability of power supply, width of pavement, air quality in the area and existing parking restrictions.

Phase 3 – 2021-2022

Four fast chargers will be installed at long stay car parks in town centres and near railway stations which are used by commuters, local businesses and can be used by residents overnight. Where there are no suitable car parks but where there is a demand for EV charging for commuters and businesses Waverley will work with SCC and Town and Parish Councils to identify suitable sites and to install on street fast chargers.

Phase 4 – 2022-2023

Waverley will work with Places Leisure to identify Leisure Centre car parks or neighbouring car parks that are suitable for chargers and the type and number that should be installed.

Phase 5 – 2023-2024

Waverley will work with SCC, Town and Parish Councils and other relevant land owners to identify suitable sites for EV chargers near our Parks and Countryside hubs. Availability of power supply will be critical and the option to power by renewable energy will be considered where there is a limited supply. The size and quantity will be assessed based on potential demand.

Concurrent across all phases

All new car parks will be required to install EV chargers in accordance with planning requirement. It is expected that chargers will be installed based on the length of stay

- Rapid (50kW) chargers for short stay car parks. Rapid chargers can charge up to 80% of the battery capacity but will enable a car to travel approximately 43-50 miles on a 20 minute charge
- Fast chargers (3-7kW) for long stay car parks which will enable a car to travel approximately 3.7-22 miles on a 20 minute charge.⁴

As Waverley owned existing car parks are refurbished the requirement to install EV chargers will be considered depending on size and potential demand.

Developing a network in Waverley and on Waverley BC owned developments

New Builds

All new builds will require EV charging in accordance with Local Plan Part 1 Policy ST1, Neighbourhood plans and Surrey County Council Vehicular and Cycle Parking Guidance. However the capacity to install EV charger should be considered at design stage. Where possible advice should be sought from the area DNO on the availability of power from the local substations or the requirement for the installation of a new substation before going through the planning process.

All new Waverley owned houses with off street parking will be install with an EV charger. For properties with communal car parks the number of chargers installed will be in proportion to the size of the car park and include the possibility to increase the number of chargers as demand grows.

For developments with no off street parking, EV chargers/infrastructure will be installed in proportion to the number of properties being built and potential demand.

Existing Waverley Developments

To ensure that existing Waverley tenants can switch to electric vehicle if they wish to do so requests from residents to install chargers at properties with off street parking will be considered by the Asset Management Team.

⁴ <https://www.r-e-a.net/wp-content/uploads/2020/03/Updated-UK-EVSE-Procurement-Guide.pdf>

The installation of fast EV chargers/infrastructure in communal car parks should be rolled out in proportion to population and demand for EV chargers or as required in a planning requirement.

On street EV chargers/infrastructure should be installed on streets with no off street parking in proportion to population and demand from residents.

Future direction with regard to EV will also be part of the future development of the Asset Management Strategy which is currently being updated.

Electric Vehicles

Types of electric vehicles

The UK has seen a surge in demand for ultra-low emission vehicles, including EVs. In December 2020 16.5% of new registered cars were battery electric vehicles and 6.9% were plug-in hybrid⁵. The pace of demand and ever changing technology means that by 2026 this is expected to have increased significantly. The majority of ULEVs are electric cars.

These cars are broken down into three types:

- Battery Electric Vehicles (BEVs)
- Plug-in Hybrid Electric Vehicle (PHEV)
- Hydrogen Fuel Cell Electric Vehicles (FCEV)

Demand for Electric Vehicles

The demand for electric vehicles is expected to increase rapidly in coming years as the initial cost to purchase a vehicle reduces and availability of different vehicles improves. As the government have now brought forward the date that marks the end of the sale of new petrol and diesel vehicles to 2030 the demand is expected to increase rapidly in the coming years.

⁵ <https://www.smmf.co.uk/vehicle-data/car-registrations/>

Transport Sectors

E Cargo bikes

Waverley BC working with Town and Parish Councils, local businesses and the Chamber of Commerce are currently working on a project to trial Ecargo bikes with some of our small business enterprises.

Taxis

The Hackney Carriage and Private Hire Policy is currently being reviewed and updated. This section will be updated once completed.

Waverley lead by example

Waverley owned vehicles

Waverley currently owns one electric vehicle and have committed in their Climate Neutrality Action Plan to transition the council owned fleet to electric vehicles where a suitable vehicle is available when vehicles are due to be replaced.

Staff owned vehicles

The staff travel policy is currently under review. This section will be updated once completed.

Contractor vehicles

The requirement for contractors to use electric vehicles for work on behalf of Waverley where a viable electric vehicles option is available, will be added to new procurement specifications as a desirable criteria.

For existing contractors the option to switch to electric vehicles should be incorporated in renewal discussions of any contracts where viable electric vehicles are readily available.

Challenges and proposed solutions

Available power capacity on the local electricity network varies across the borough and is typically limited in built-up areas.

To make sure that the local electricity network is not over capacity, the council will work with energy providers and the DNOs to determine the best installation locations. By taking this strategic approach the council hopes that the installation of EV chargers will have a minimal effect on the local network.

Costs of upgrading the local electricity network to unlock spare capacity is often too high to justify new EV charge points. To unlock spare capacity the council would have to invest in a new substation which can cost upwards of £250,000.

There will be financial implications to the council for removing of charge points if they become damaged, obsolete or a charge point supplier folds.

Dependent on our contract with the supplier, we may be liable for repairs to damaged/vandalised charge points.

Installing and maintaining charge points may create an additional cost to the council, at a time when funding is constrained.

EV charging periods requires a dwell time greater than conventional refueling. Potential charging site must be able to accommodate this and provide services for EV users during this period.

Certain charge point sites can be constrained by planning/heritage/conservation restrictions.

Utilities (gas, electric, and telecom) cables and pipes tend to be located either under the pavement or close to the edge of the carriageway, which may preclude installation of new charge points in some locations. It may also be expensive to dig up the ground to reach the cables.

Targets and monitoring

The monitoring plan in this chapter sets out how the Council will keep track of the delivery of its overall strategy visions, objectives and actions.

Target	Measurement	Baseline	Target
Expansion of charging network	Number of charging point locations	4 locations by 31 st March 2021	At least 30 locations by 2026
Use renewable energy to power charging points	Number of charging points powered by a renewable or green energy	0	To have at least 50% of all charging points to be charged by renewable or green energy.

Waverley's licensed taxis to switch to EV	Number of licensed taxis that have switched to EVS	2 EV 20 Hybrid	New applications to be ULEV from 2023, all applications ULEV by 2030
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Annual delivery indicators	
Indicator	Measurement
Number of charging points implemented (broken down by type)	Council data
Air quality improvements	Reductions in NOx and PM across the borough
Number of charging points provided in new developments	Council planning data

Review

This document represents the first iteration of the council's Electric Vehicles Strategy. This strategy will be periodically updated to ensure that it remains fit for purpose.

Given that EV technology is rapidly evolving, it is envisaged that this strategy will be revisited in approximately 1 years' time to keep it up to date with the latest developments and review progress against the actions outlined.