



# Telford & Wrekin Ultra-Low Emission Vehicle (ULEV) Strategy

August 2018

# Contents

Forward.....	3
1 Introduction.....	3
2 Purpose, vision and objectives .....	4
3 Overview of Current Situation.....	5
4 Action Plan .....	7
5 Monitoring, Review and Next Steps.....	11
Appendix A – Information on Ultra-low Emission Vehicles (ULEV).....	12
Appendix B – Policy Context – National & Local.....	15
Appendix C – Funding .....	17
Appendix D – Telford Ultra-low Emission Vehicle (ULEV) Data.....	20
Appendix E – Electric Vehicle charging points in Telford.....	22
Appendix F – Issues and Barriers.....	24



## Forward

Telford & Wrekin Council recognises the significant benefits of ultra-low emission vehicles (ULEV), particularly in relation to air quality and public health, and that usage of ULEVs by residents and demand for charging infrastructure are increasing.

Whilst the expectation is that most ULEV owners will choose to charge at home, we want to see a coordinated network of charging points that will give residents and visitors the confidence to use ULEVs in Telford. To achieve this, we are developing a strategy that will evaluate and support the options for a growing public charging network.

### 1 Introduction

Figures published by the Society of Motor Manufacturers and Traders (SMMT) each month show that electric car sales in the UK have risen dramatically over the past few years. While only around 500 electric cars were registered per month nationally during the first half of 2014, this has now risen to an average of almost 4,000 per month during 2017.

The Department for Transport ([DfT](#)) reported that in the year to June 2017, 45,509 new ultra-low emission vehicles (ULEVs) were registered for the first time in the United Kingdom, an increase of 27% on one year before and 71% on two years previously. As a percentage of new car registrations, averaged over 2017, electric cars now represent around 1.8 per cent of the total new car market in the UK. This number is expected to increase to between 3 and 7% by 2020.

With the announcement of the ending production of new petrol and diesel cars from 2040, (part of the Government's [Air Quality](#) strategy), the [Automated and Electric Vehicle Act 2018](#) coming into law, the launch of the Government's [Road to Zero](#) strategy, improvements in battery life and range, as well as more car manufacturers announcing new electric and hybrid car models, ULEV ownership is expected to rise rapidly from the mid-2020s onwards.

The Government has set the ambitious target for at least 50% of all new car sales to be ultra-low emission by 2030, and 40% of all new vans. It is expected by 2050 that nearly all cars and vans will be zero emission vehicles (ZEVs).

This rise in ULEVs, is likely to lead to an increase demand for public charge points despite the expectation that most ULEV owners will charge at home overnight. The public charging network will enable ULEV owners who don't have access to off-street parking to charge, while also allowing ULEV owners to complete longer journeys and address range anxiety, the worry that the battery will run out of power before the destination or a suitable charge point is reached.

While there are great benefits from switching to ULEVs such as reduced greenhouse gas emissions, improved air quality and reduced noise, there are a number of issues and barriers to overcome such as affordability, mileage range, vehicle choice, changing technology, ongoing cost and funding.



## 2 Purpose, vision and objectives

### Purpose

The Ultra-low Emission Vehicle Strategy sets out how the Council will support and encourage growth in the ULEV market. The Action Plan will guide priorities and funding to those measures that are considered to be the most effective methods to encourage and support ULEVs.

### Vision

The vision for this strategy is:

*To enable residents, visitors and businesses to use electric vehicles through ensuring a reliable, safe, and convenient public charging network.*

### Objectives

The objectives of this strategy are to:

- respond to the growing demand for electric vehicle infrastructure and services,
- support an integrated network of electric vehicle charge points to match current and future demand, parking situations and budgets
- encourage and support faster adoption of electric vehicles amongst the public through working with partners and organisations to encourage uptake of available government grants.
- create a realistic, deliverable Action Plan with schemes and initiatives for improving provision to support the advance of ultra-low emission vehicles in the market; and
- to align the Strategy with the Telford & Wrekin Local Plan, the Local Transport Plan and the Council's wider sustainable transport agenda.



### 3 Overview of Current Situation

Currently there are 18 charge point devices hosting 31 connection sockets (some are double socket devices) at 11 different locations, according to Zap-Map as of 31<sup>st</sup> March 2018. Zap-Map is the most comprehensive UK wide map of charge points enabling electric vehicle drivers to locate, navigate to and update charge points for the benefit of the electric vehicle community.

Of these, five locations are public and six offer restricted access e.g. customer/visitor only.

Five public charge point locations are around and within Telford town centre, while the other six locations are in Wellington, Brookside, Coalbrookdale, Hortonwood and Telford Services adjacent to Junction four of M54. Further details of the locations can be found in Appendix E – Electric Vehicle charging points in Telford.

Table 1 – Charge point location type in Telford

Location	Number of locations
Hotel / B&B	2
Motor dealership	3
Motorway Services	1
Public car park	2
Supermarket	1
University	1
Business	1
TOTAL	11

There are also a number of workplaces in Telford providing ULEV charge points for staff use only.

Furthermore home owners and workplaces can share their charging points with the public through joining a network such as [zap-home](#) or [zap-work](#). This allows the charge point owner to earn money by sharing their unit while it's not in use. The number of Telford residents or workplaces joining these networks is unknown as only registered users of the peer to peer network can access the information via the app.



## Ownership in Telford & Wrekin

Since 2012 the number of ULEVs licensed in Telford & Wrekin have been steadily increasing. The latest vehicle statistics held by DFT show 172 ULEVs have been licensed in Telford & Wrekin which equates to approximately 0.18% of all cars and vans licensed within Telford & Wrekin.

In neighbouring local authority areas the number of ULEVs ranged from 136 licensed in Newcastle-under-Lyme to 434 in Shropshire. Birmingham has the largest number of licensed ULEVs in the West Midlands shown in the table below and in Appendix D – Telford Ultra-low Emission Vehicle (ULEV) Data.

Table 2 – Number of ULEVs in local authorities near to Telford.

Local Authority	Number of licensed ULEVs by 2017 Q4
Shropshire	434
South Staffordshire	142
Stafford	200
Newcastle under Lyme	136
Wolverhampton	160
Stoke on Trent	246
Birmingham	12,247

Table 3 below shows the number of licensed ULEVs for each local authority at the end of 2017 compared to the number of licensed cars and light goods vehicles at the end of 2017. Going forward uptake will be monitored on an annual basis.

As the Table 4 shows the neighbouring local authorities have a slightly higher percentage of ULEVs licensed as Telford & Wrekin. However Birmingham has the highest percentage at 1.93%.

For Telford & Wrekin to match this, an additional 1,649 ULEVs would need to be licensed, to take the total to 1,821 – showing the need for this strategy and investment in charging infrastructure.

Table 3 – Number of ULEVs compared to cars & light goods vehicles in local authorities near to Telford.

[Data source DFT Vehicle Statistics Tables VEH0103 and VEH0105](#)

Local Authority	Number of licensed ULEVs by end of 2017	Number of licensed cars and light goods by end of 2017	Percentage of ULEVs
Telford & Wrekin	172	94,314	0.18%
Shropshire	434	172,921	0.25%
South Staffordshire	142	68,867	0.21%
Stafford	200	79,566	0.25%
Newcastle under Lyme	136	67,002	0.20%
Wolverhampton	160	117,324	0.19%
Stoke on Trent	246	125,301	0.20%
Birmingham	12,247	778,004	1.93%



## 4 Action Plan

Action	Progress so far	Timescale
<p>1 Review current funding opportunities and consider applying to Department For Transport (DFT) / Office for Low-Emission Vehicles (OLEV) grants if applicable.</p> <p>Current grants include:</p> <ul style="list-style-type: none"> <li>→ Workplace charging scheme</li> <li>→ On-street residential charge point scheme</li> <li>→ Ultra-Low Emission Taxi Infrastructure Scheme: round 2</li> </ul>	<p>Transport Officers attended Office for Low-Emission Vehicles (OLEV) workshop February 2017. On-street grant now includes council owned car parks that are accessible to residents 24 hours a day. Funding is available until 2019/2020. Currently reviewing the scheme to establish whether to apply.</p> <p>We will also use upcoming parking consultation exercises to ascertain demand for on-street charging to support any future funding bids.</p> <p>Deadline to apply to Ultra-low Emission Taxi Infrastructure Scheme – round 2 is 26<sup>th</sup> October 2018. Currently reviewing application requirements.</p>	<p>Annually and as required</p>
<p>2 Carry out analysis of installing and maintaining charge points</p>	<p>There are a number of models that could be used. Provide charge points for free (cost implication for the Council), charge a fee (may not cover all the costs) or allow a charge point company to maintain and operate the charge point. Currently the charge point at Wellington Civic Centre is free. If Telford &amp; Wrekin Council were to operate charge points we would need to consider the operational costs involved and whether implementing a fee would cover these costs and potentially create a revenue stream. A standardised Telford &amp; Wrekin approach would be of benefit.</p> <p>This work will initially focus on attracting partner organisations to work with Telford &amp; Wrekin and assessing that offer.</p>	<p>Annually</p>



3	<p>Identify possible locations for charge points across the borough. This will involve considering the following:</p> <ul style="list-style-type: none"> <li>• Demand</li> <li>• Feasibility such as the cost of installation</li> <li>• Security of car parks</li> <li>• Turnover of existing car parks</li> <li>• Availability of land to create parking spaces for charging to help minimise impact on existing parking capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Car parks and leisure centres in Ironbridge, Newport, Oakengates, Southwater and Wellington</li> <li>• Darby House and/or Addenbrooke House in Telford Town Centre</li> <li>• Local centres – Dawley, Donnington, Hadley, Madeley, St George’s and Ironbridge</li> <li>• Private destinations</li> </ul>	By August 2019 and then reviewed annually
4	Monitor requests for public charge points across the borough	Through Telford & Wrekin website, social media and contact centre. A criteria for appraising such requests will be developed during 2018. Going forward electric charge points will also be included in any parking consultations across the Borough.	Ongoing
5	Review government policy and recommendations on ULEVs	In July 2018, the Automated and Electric Vehicles Act 2018 came into law and Government released its Road to Zero strategy. We will continue to monitor and review policies and strategies.	Ongoing
6	Work with partners to help facilitate the provision of charge points across the borough ensuring that standard charging posts and easy to use and convenient payment systems are installed.	Within the Automated and Electric Vehicles Act, there is the provision that regulations may impose requirements in connection with payment methods and connecting components (which may include technical specifications). Until these regulations come into force, advice will be taken from charge point providers to ensure that charge points installed are of the correct standard and have convenient payment systems that ensure the charge point is accessible 24 hours a day. When this information becomes available it will be shared with The Local Planning Authority and partners such as The Marches LEP, Shropshire Chamber of Commerce and other networks deemed necessary.	Ongoing



7	Raise awareness of ULEVs through working with organisations to encourage the update of grants and provide relevant advice where appropriate through signposting and possible promotional events.	<p>Contact the following organisations to see how we can work together to raise awareness.</p> <p>Nationally</p> <ul style="list-style-type: none"> <li>• <a href="#">Go Ultra Low</a> is a joint government and car industry campaign providing information on switching to an electric vehicle.</li> <li>• <a href="#">EST</a> – Energy Savings Trust can also provide information and independent advice.</li> </ul> <p>Locally</p> <ul style="list-style-type: none"> <li>• <a href="#">Shropshire Chamber of Commerce</a> – is dedicated to sharing opportunities, knowledge and expertise to companies of all shapes and sizes</li> <li>• Local environmental groups and tourism groups</li> </ul>	Ongoing
8	Review current parking strategy for the Borough and parking management policy of Council employee car parks, to ensure consideration is given to ULEV charge points and appropriate parking bays.	Currently being investigated.	Ongoing
9	Integrate ULEVs as part of the Council's wider sustainable transport agenda alongside the promotion of public transport, walking and cycling.	<p>Consideration of opportunities to promote ULEVs will be included in the next reviews of</p> <ul style="list-style-type: none"> <li>• Telford &amp; Wrekin Local Plan</li> <li>• Telford &amp; Wrekin Local Transport Plan</li> <li>• Telford &amp; Wrekin Transport Growth Strategy</li> </ul>	Ongoing
10	When making bids for external funding, include allowance for ULEV infrastructure within the funding bid.	A guidance note will be issued to Service Areas (Highways, Estates & Investments, BiT and Leisure) making capital funding bids to highlight the match funding opportunities for the installation of charging points.	Ongoing



11	Provide planning advice given to residential and commercial developers regarding making provision for charge points to be installed or installing charge points	An advice note will be issued to Development Management Officers to provide to developers regarding the installation of charging infrastructure.	By end of 2018 and reviewed annually
----	---	--	--------------------------------------



## 5 Monitoring, Review and Next Steps

This strategy will be reviewed annually and will be undertaken across the Council including Commercial Services and the Strategic Planning Team.

Next review August 2019

The measures of success will be an increase in the number of charging points across the borough coupled with a growth in ownership of electric vehicles.

Telford & Wrekin Council's next steps are to start development work towards achieving the outcomes described in the action plan. Whilst the expectation is that most drivers will choose to charge their ULEV at home, development and promotion of a charging network in Telford & Wrekin will facilitate and encourage greater uptake of ULEV amongst people living in the borough and make it easier for owners of ULEV to visit or work in the borough.



## Appendix A – Information on Ultra-low Emission Vehicles (ULEV)

Ultra-Low Emission Vehicles run on electricity all or some of the time. There are several different types: -

- **All-electric EVs, or Battery Electric Vehicles (BEVs)** is where the battery is the only power source. Most current (non-luxury) models have a quoted range of 80-120 miles (130-190 km). In practice, range varies according to driving style, terrain and the use of auxiliary equipment such as heating/air conditioning.
- **Plug-in Hybrids (PHEVs)** can switch between running on electricity or fossil fuels. They typically have a smaller battery, and therefore a lower battery powered range of between 10-40 miles (15-60 km). However their maximum range is equivalent to a petrol car.
- **Hybrids (HEVs)** which do not plug in, such as the Toyota Prius, have a much smaller battery which is recharged while driving. HEVs can drive in electric mode for a few miles.
- **Fuel Cell Vehicles** generate their own electricity on-board from a fuel such as hydrogen, and do not need to plug in to the electricity grid to recharge. Re-fuelling is similar to a petrol car.

### Charging Units

**Rapid** charging units (43, 50, or 120kW) can provide an 80% charge in around 30 minutes. These are typically found at motorway service stations and suited for those travelling long distances.

**Fast** charging points (7-22kW) can fully recharge some models in 3-4 hours and are the most common type found at workplaces, shopping centres and leisure destinations.

**Slow** charging points (up to 3kW) are used for longer charging times, around 6-8 hours and are mostly installed at residential properties and used overnight.

There are two types of EV charging process: AC (alternating current) and DC (direct current).

AC charging is carried out via an on-board device on the car, usually called 'the charger'. This on-board charger controls the entire charging process and also may put a limit on the rate of charge. The maximum rate will vary from car to car. Every battery electric vehicle (BEV) or Plug-in Hybrid electric vehicle (PHEV) on the road will accept an AC charger.

The other type of EV charging process is DC charging, which bypasses the on-board AC charger to charge the battery directly. The charge is controlled by the roadside charge point, via the battery electronic management unit on the vehicle. DC charging is used exclusively for rapid charging; nearly all BEVs can accept DC rapid charging.

It is also worth noting that almost all rapid charger points currently installed, even when fitted with multiple connectors, can deliver only 50 kW through one connector at one time. If a second vehicle arrives, either it must wait until the first vehicle has finished (the case at nearly all charge points) or it can connect immediately, but the charge point downrates to 25 kW per connector, which nearly doubles the charge time and therefore largely negates the benefits of rapid charging.

### Connectors

There are three different types of connector.

- 50 kW CHAdeMO (DC charging) connector - Japanese origin and is fitted to cars such as the Nissan Leaf and Mitsubishi Outlander. A separate connector for AC charging is required on these vehicles.



- 50 kW Combined Charging System (CCS) (DC charging) connector - European origin and is used by all European designed vehicles which have rapid charging capability. The CCS connector includes a Type 2 AC connector, so only a single charging port is required on the vehicle for both DC and AC charging.
- Type 2 AC connectors are found on all public fast charges while public slow chargers can have Type 2 connectors, J1772 connectors, Commando or even 13 amp three-pin domestic sockets.

### Public Charging Networks

Most ULEV owners will charge their vehicle at home or if available at work, but public charging networks will provide additional ULEV charging support, and the opportunity to extend journey distances. There are a number of networks across the UK.

[POLAR](#) – is the largest public charging network in UK with 6,000 public charging points which also includes [Plugged in Midlands](#). There are two options, Polar Instant and Polar Plus. There are currently three sites in Telford that are part of the Polar network. One site is public and the other two are restricted use.

[POLAR Instant](#) is pay as you go network operated through a smart phone app that enables electric vehicle owners to use the polar network across the country directly from their smart phone without the need for a RFID (Radio Frequency Identification) card or pre-registration to a “scheme”.

Users create an account and credit it with £20 or £40. Each time they use a charge point a £1.20 admin fee is taken. Some charge points may also charge an additional 9p per kWh.

[POLAR Plus](#) is a membership scheme, with a monthly charge of £7.85, with the first three months free. It is then free to use the charge points on the network though some may have an additional charge and also provides access to [Charge Your Car](#) network.

In addition POLAR Plus has a reward scheme, where users collect 10 points every time they charge on the POLAR network in a different town each month. The points can then be used to bid for an electric vehicle experience which is a week with one of their fleet of electric vehicles.

[Charge Your Car](#) – is a network of EV charge points all over the UK which includes Energise, GMEV, Source West and ChargePlace Scotland. There is one site in Telford that is part of this network. To access this network, users need to register to receive an Access Card (RFID card). The annual fee for the card is £20 and plus an access fee and fee per kWh.

[Open Charge Pod Point](#) – There are 900 Open Charge Pod points (though none in Telford at the moment) and they are accessed via an app. The network is free to join.

[Ecotricity](#) – There are around 300 charge points that almost covers the entire motorway network and some A roads. EV drivers access the charge points via the app. The cost is 17p per unit of electricity and £3.00 connection fee.

[Zeronet](#) - is a national network of pay-as-you-go charge points, created by the Zero Carbon World charity for the hospitality industry. The Best Western Hotel in Ironbridge has a charge point that is part of this network.



[Telsa Supercharger network](#) – Telsa’s network of supercharges are located on the motorway network specifically for Telsa’s vehicles. Each owner receives 400 kWh of free credit, enough for 1,000 miles.

There are also a number of other smaller networks often covering specific geographical areas of the UK. For example in Scotland there is [Chargeplace Scotland](#), while in Northern Ireland, there is [ecarNI](#). [Shell Recharge](#) is a rapid charge network at designated Shell petrol stations, and [Genie point](#) covers Cornwall, Hampshire and Lake District.

### Non Networks Charge Points

Some charge points are operated by tokens such as the charge points at Wellington Civic Centre and Brookside Central Community Centre. Tokens are available from reception at both buildings during opening times only.

Charge points operated by tokens are reliant on a nearby facility such as a community centre or leisure centre, providing an administration service to distribute tokens and take payments. Often these facilities are not open 24/7 which therefore restricts the availability of the charge point.

Ideally public charge points need to be available 24/7 especially those in residential areas as they provide ULEV owners with no off-street parking or charging facility, the opportunity to charge their vehicle.

Both charge points are 7kW which on average can provide 30 miles per hour of charge and could fully charge an electric vehicle from flat in approximately 4 hours.

Location	Cost	Cost per mile	Time limit	Availability
Wellington Civic Centre	Free	£0.00	3 hours	Reception opening times vary but open all week
Brookside Central	£1.50 per hour	£0.05*	No limit	Reception open Monday-Friday 9am-5pm

\*based on 7kW charge point providing 30 miles of charge in a hour



## Appendix B – Policy Context – National & Local

### National Policy

The UK Government have issued a number of policy documents and in the 2018 the Automated and Electric Vehicle Bill received royal ascent and became an act of parliament releasing further funding investment into new driverless and zero-emission vehicle technology to boost the Industrial Strategy, estimating that such technology may bring £28bn to the UK economy by 2035.

The Government has set the ambitious target for 50% of all new car and 40% of all new van sales to be ultra-low emission and expect almost every car and van to be zero emission by 2050.

- [Making the Connection: the Plugged-In Vehicle Infrastructure Strategy](#) published in 2011. At the time of this strategy, the Government envisaged most EVs being recharged overnight, at homes or in vehicle depots.
- [Driving the future today: a strategy for ultra-low emission vehicles in the UK](#), 2013  
The strategy's vision is that almost every car and van in the UK should be an ultra-low emission vehicle by 2050.
- [UK plan for tackling roadside nitrogen dioxide concentrations](#), 2017  
Statutory air quality plan for nitrogen dioxide (NO<sub>2</sub>), setting out how the UK will be reducing roadside nitrogen dioxide concentrations. This includes ending the sale of petrol and diesel car and vans by 2040 and for almost every car and van on the road to be a zero emission vehicle by 2050
- [The Clean Growth Strategy, Leading the way to local carbon future](#), October 2017  
The strategy has identified six sectors. Accelerating the Shift to Low Carbon Transport focuses on transport and this sector is currently responsible for 24% of UK Emissions.
- [Automated and Electric Vehicle Act 2018](#), July 2018  
The AEV Act received Royal Ascent on 19th July 2018 and will see a massive improvement in electric chargepoint availability and will improve consumer confidence in charging their vehicles by making sure that public chargepoints are compatible with all vehicles, standardising how they are paid for and setting standards for reliability.

It will also bring automated vehicle insurance in line with longstanding motor insurance practice, ensuring that motorists are covered both when they are driving, and when the driver has legitimately handed control to the vehicle.

- [The Road to Zero](#),  
Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018  
The strategy's long term ambitions are to put the UK at the forefront of the design and manufacturing of zero emission vehicles, and for all new cars and vans to be effectively zero emission by 2040.

This will be achieved through a number of policies that will:

- reduce the emissions from vehicles already on the road;
- increase the uptake of the cleanest new vehicles, reduce emissions from heavy goods vehicles (HGVs) and road freight;
- put the UK at the forefront of design and manufacturing of zero emission vehicles;
- support the development of one of the best electric vehicle infrastructure networks in the world;
- And support local action.



## Local Policy

The Council's own policies supporting EVs include:

### Local Transport Plan 2011-2026

The Council's Local Transport Plan (2011-2026) acknowledges the challenge of accommodating future growth in travel demand without increasing carbon and other vehicle emissions and that to achieve this the Council will need to work in partnership across the borough to put in place the necessary infrastructure to encourage the use of electric and other low carbon vehicles.

Local Transport Plan (LTP) Policy 16 states the Council will initiate trials of new vehicle technology for its own vehicle fleet where there is likely to be a cost saving, and will monitor progress on the roll-out of low carbon vehicles to decide when to facilitate the provision of the necessary infrastructure such as charging points to electric vehicles.

### Telford & Wrekin Local Plan 2011-2031

The Local Plan strongly supports the provision of accessible sustainable travel in the Borough, through Policy C1 'Promoting alternatives to the car', for a range of users. Policy C1 will enable the Council to secure developer contributions towards improving bus services, walking and cycling networks and rail station facilities (including enhanced vehicle and cycle parking).

The Local Plan acknowledges the role of electric vehicle charging points and this is referenced within the Parking Standards (Appendix F). Where new planning applications are received the Council would be supportive, where appropriate, of efforts to install electric vehicle charging infrastructure and will be happy to explore opportunities to do this with developers.

### Permitted Development

Where existing development is concerned the General Permitted Development Order (2015) (Part 2, Class D) allows for the installation of wall mounted and upstand charging points "within an area lawfully used for off-street parking", provide certain conditions are met (see GPDO 2015, page 25). This allows for infrastructure to be installed without necessarily requiring planning permission, thus enabling destinations such as supermarkets to install charging points as and when demand arises.

## Regional Policy

[The Marches Local Enterprise Partnership](#) (LEP) is a partnership of business, education and the local authorities of Herefordshire, Shropshire and Telford & Wrekin. The LEP's vision for the Marches is of a strong diverse and enterprising business base, operating in an exceptional and connect environment, where the transfer of technology and skills, foster investment and economic growth.

The Marches LEP has produced a draft [Energy Strategy](#) which identifies the role ultra-low emission vehicles (ULEVs) have to play in a low carbon transport system and economy. The growth in ULEVs will change consumer demand for electricity and increase the demand for electric vehicle charge points at workplaces, shopping and leisure destinations. The local authorities including Telford & Wrekin will play an important role to promoting and supporting increase usage of ULEVs.



## Appendix C – Funding

To encourage the uptake of ultra-low emission vehicles and in particular electric vehicles, there are a number of funding grants available:-

- Plug-in car, taxi and van grants

The Government is assisting with the cost of buying EVs with its plug-in grants, launched in 2011. Further guidance can be found here - <https://www.gov.uk/plug-in-car-van-grants>

- Homecharge

The homecharge scheme, launched in April 2015, provides that customers who are the registered keeper, lessee or have primary use of an eligible ULEV may receive up to 75% (capped at £500, including VAT) off the total capital costs of a domestic charge-point and associated installation costs. An approved installer must be used and the installer claims the grant, while the vehicle owner pays the difference. Starting prices to install a charge point (including the grant) is £279.00.

Further guidance can be found here - <https://www.gov.uk/government/publications/electric-vehicle-homecharge-scheme-guidance-for-customers-version-21>

- Workplace charging scheme

This scheme is a voucher-based scheme that provides support towards the up-front costs of the purchase and installation of electric vehicle charge-points, for eligible businesses, charities and public sector organisations. Applicants can apply for a grant of £500 for each socket up to a maximum of 20 across all sites.

Applicants must maintain the chargepoint for a minimum of three years and ensure measures are in place to provide usage data to Office for Low Emission Vehicles (OLEV) (in an anonymised form and in accordance to data protection legislation) to guide future policy development

The cost of a charge point varies depending on the type from £750.00 for a wall mounted unit to £30,000 for a rapid charge point.

Additional costs include installation (which are unknown till a ground survey is carried out), hosting and commissioning fees (applicable to charge points with communication capability), maintenance and any additional pieces of equipment such as guards for ground mounted charge points or contactless cards. These all dependant on which supplier and/or network you choose.

Further guidance can be found here - <https://www.gov.uk/government/publications/workplace-charging-scheme-guidance-for-applicants-installers-and-manufacturers>

- On-street Residential Charge Point Scheme

Local Authorities can receive a grant to part fund (75%) the capital costs relating to the procurement and installation of on-street electric vehicle chargepoint infrastructure in residential areas that lack off-street parking and adhere to OLEV technical specifications. The funding has been expanded to include publically owned car parks accessible to residents 24/7.



OLEV will provide up to £7,500 per chargepoint installation and each project should not exceed more than £100,000 in OLEV funding (applications exceeding this will be reviewed on a case by case basis). Grants will be paid by OLEV in arrears upon completion of the project

Applicants will have to demonstrate commitment to meeting on-street residential charging need, and will need to secure a minimum of 25% of capital funds via sources other than OLEV funding. In addition they will be responsible for estimating and controlling project costs and delivery.

Capital funding will be provided for the installation of the chargepoints. The capital items that are eligible for claim are limited to:

- The purchase cost of charging unit
- The purchase cost of electrical components related to the chargepoint
- The cost of civil engineering works related to the installation
- Labour costs of the installation
- Hardware costs of the installation

Where applicable:

- The capital costs of a parking bay and traffic orders (road markings and signage)

The Local Authorities application must meet the application criteria, including:-

- Locating the chargepoints in residential area,
- Demonstrating there is no other option for resident to charge at home,
- Establishing need exists or is anticipated and could be met through proposed charging infrastructure
- Providing reliable access to charging points which should be available for use on a 24/7 basis.
- Chargepoints must be added to the National Chargepoint Registry (NCR)
- Must install a chargepoint capable of at least charging vehicles with Type 2 connections and meets the OLEV's technical specifications

For more details view [Grants to provide residential on-street chargepoints for plug-in electric vehicles Guidance for Local Authorities](#)

- Ultra-low Emission Bus Scheme

Local authorities and operators in England and Wales can bid for a share of a £48 million fund, which they can use to buy new ultra-low emission buses as well as the infrastructure to support them. The funding is available from 2018/19 to 2020/21. The deadline for applications is 30<sup>th</sup> June 2018.

<https://www.gov.uk/government/publications/low-emission-bus-scheme>

- Ultra-Low Emission Taxi Infrastructure Scheme: round 2

Local authorities can now bid for grants in the second round of the Ultra-Low Emission Taxi Infrastructure Scheme. The deadline for applications is 26 October 2018.

<https://www.gov.uk/government/publications/ultra-low-emission-taxi-infrastructure-scheme-round-2>



Currently there are no grants for installing charge points on private car parks. Though it may be possible to recover the costs of installing a charge point and generate income through applying charges.

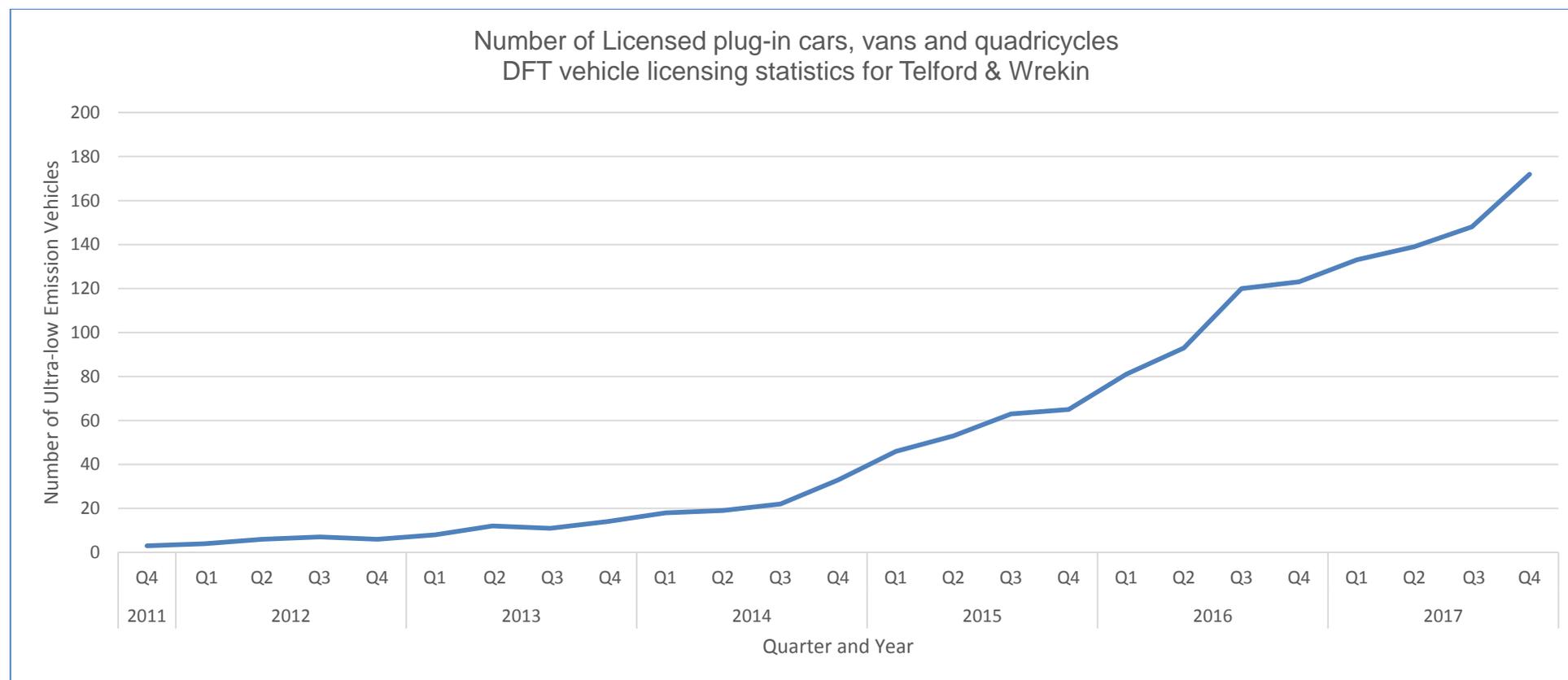


## Appendix D – Telford Ultra-low Emission Vehicle (ULEV) Data

Plug-in cars, vans and quadricycles licensed at the end of quarter, UK, by local authority of registered keeper from 2011 Q4

(Table VEH 0131 - Vehicle Licensing Statistics (<https://www.gov.uk/government/collections/vehicles-statistics>))

2011	2012				2013				2014				2015				2016				2017			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3	4	6	7	6	8	12	11	14	18	19	22	33	46	53	63	65	81	93	120	123	133	139	148	172



Data from DFT Vehicle Licensing Statistics showed in 2017 there were 1000,645 licensed vehicles in Telford & Wrekin.

Of this total, 85,600 are cars and 8,700 are light goods vehicles (4 wheeled vehicles for transporting goods, weighing under 3.5 tonnes), giving a total of 94,314.

By Quarter 4 of 2017, 172 plug-in cars, vans and quadricycles had been licensed. This represents 0.18% of all cars and light good vehicles licenced during 2016 in Telford & Wrekin.

The table below shows the number of licensed plug-in cars, vans and quadricycles across the West Midlands at the end of 2017 Q4. (Source Table VEH 0131 - [Vehicle Licensing Statistics](#))

Local Authority	Number of licensed plug-in cars, vans and quadricycles at end of Q4 2017 since 2011
United Kingdom	143,918
England	129,005
West Midlands Region	19,916
Herefordshire UA	327
Shropshire UA	434
Stoke-on-Trent UA	246
Telford and Wrekin UA	172
Staffordshire	1,318
Cannock Chase	256
East Staffordshire	163
Lichfield	189
Newcastle-under-Lyme	136
South Staffordshire	142
Stafford	200
Staffordshire Moorlands	123
Tamworth	109
Warwickshire	1,206
North Warwickshire	135
Nuneaton and Bedworth	112
Rugby	185
Stratford-on-Avon	467
Warwick	306
West Midlands (Met County)	14,994
Birmingham	12,247
Coventry	323
Dudley	331
Sandwell	219
Solihull	1,492
Walsall	222
Wolverhampton	160
Worcestershire	1,215
Bromsgrove	262
Malvern Hills	174
Redditch	103
Worcester	129
Wychavon	412
Wyre Forest	135
Lower Tier Local Authority unknown	4



## Appendix E – Electric Vehicle charging points in Telford

Source [www.zap-map.com](http://www.zap-map.com) and National Charge Point Registry UK [www.national-charge-point-registry.uk](http://www.national-charge-point-registry.uk)

Location	Address	Number of devices	Number of sockets	Device Details	Type	Charging Network	Other Information
Best Western Valley Hotel	22 Buildwas Road, Coalbrookdale, Telford, TF8 7DW	One	One	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Slow	ZeroNet	Hotel guests only
Wellington Civic Office & Leisure Centre	Civic & Leisure Centre short stay car park, Wellington	One	Two	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Fast	Token operated	3 hour limit Free tokens available from reception. <a href="#">Opening times vary</a>
Asda Telford	Malinsgate Telford TF3 4HZ	Two	Four	Rating:3kW Supply:16A Socket: Type 2 Mennekes	Slow	POLAR	Parking charge may apply. 3 hour limit
Greenhouse Nissan dealership	Stafford Park Telford TF3 3BD	One	Two	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Fast	Nissan Dealerships	Free to use for eligible customers only. Check with dealership
Greenhouse Toyota	Stafford Park 1, Telford TF3 3BD	Two	Four	Rating:3kW Supply:16A Socket: Type 2 Mennekes	Slow	POLAR Plugged-in Midlands	Free to use for eligible customers only. Check with dealership
Greenhouse Renault	Stafford Park 1 Telford TF3 3BD	One	One	Rating:3kW Supply:16A Socket: Type 2 Mennekes	Slow	Reanult Dealership	Free to use for eligible customers only. Check with dealership
University of Wolverhampton Telford Campus	Shifnal Road, Telford Campus, Telford, TF2 9NT	One	Two	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Fast	POLAR Plugged-in Midlands	Staff, Students and Visitors only
Brookside Central Community Centre	Bembridge, Telford, TF3 1ND	One	Two	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Fast	Token Operated	Public. Tokens available from reception open Monday-Friday 9am-5pm. £1.50 per hour.



## Appendix E Continued – Electric Vehicle charging points in Telford

Source [www.zap-map.com](http://www.zap-map.com), [National Charge Point Registry UK](http://National Charge Point Registry UK), [POLAR network](http://POLAR network) and [Charge Your Car](http://Charge Your Car)

Location	Address	Number of devices	Number of sockets	Device Details	Type	Charging Network	Other Information
Welcome Break Telford Services	M54 A464 Priorslee Road, Shifnal, Shropshire	Six	Two	Rating:43kW Supply:63A Socket: Type 2 Mennekes	Rapid	Ecotricity	Public
			Two	Rating:50kW Supply:125A Socket: JEVS (CHAdeMO)	Rapid	Ecotricity	Public
			Two	Rating:50kW Supply:125A Socket: CCS (Combo)	Rapid	Ecotricity	Public
			Four	Rating:120kW Supply:Telsa Socket: Telsa Type 2	Rapid	Tesla Supercharger	For Tesla owners
Busch Ltd	Hortonwood 30 Telford, TF1 7YB	One	Two	Rating:7kW Supply:32A Socket: Type 2 Mennekes	Fast	Charge Your Car	£0.30 per kWh, with minimum charge of £5.00 Available to public 8.00am to 4.30pm Monday to Friday
Clairmont Guest House	54, Haygate Road Wellington Telford TF1 1QN	One	One	Unknown	Slow	NA	B&B guests only



## Appendix F – Issues and Barriers

### Identifying users and demand

Who will use the charge points? Are they needed?

It is still expected that most ULEV owners will charge at home over night and with the average electric car able to travel 80 to 100 miles on one charge, those travelling short distances are unlikely to need to charge during their trip.

However ULEV owners travelling further over 35-40 miles to Telford may prefer to charge before the journey home. Popular visitor attractions may wish to consider providing charge points.

### Affordability

Even with the Government plug-in grant up to £4,500, a new Nissan Leaf 2 has a starting price of approximately £22,000, while the Renault Zoe has a starting price of approximately £14,000 and a monthly charge for the battery.

In a recent [BBC news article](#) Justin Benson, the UK head of automotive at the consultancy firm KPMG, stated he believed that the biggest thing holding back the adoption of electric cars is not the charging network, but the price of the cars themselves and the lack of a certainty about their value second-hand.

In addition 20.6% (13,748) of households in Telford & Wrekin have no access to a car (2011 Census data), so this strategy needs to support the Council's wider sustainable transport agenda.

### Choice

Nearly all car manufacturers are expected to release new models in to the market from 2020 and ULEV ownership is expected to rise rapidly from 2025.

### Changing Technology

Technology in this field is improving quickly. People may be cautious about investing in a technology that may become out of date quickly, especially with regard to the number of miles a vehicle can travel on one charge known as the vehicle's range. For example the Nissan Leaf 2 has a much improved range compared to Nissan Leaf 1 and a higher capacity battery will be available in approximately 18 months which will give the car a range of more than 310 miles.

(<http://www.autoexpress.co.uk/nissan/leaf/100743/new-nissan-leaf-2018-prices-specs-release-date>)

### Range Anxiety

Range anxiety, the fear that the electric vehicle does not have enough charge to complete the journey, has been identified as one of main barriers to purchasing an electric vehicle. Currently the average electric vehicle can travel 80 to 100 miles on one charge though this depends on the battery size and how the vehicle is driven.

Battery technology is improving and newer electric vehicles are being advertised with larger range. For example 2018 Nissan Leaf 2 official range is 151 miles, and it has been announced within approximately 18 months this could increase to 310 miles. (See news article above).

For the daily commute, shopping and leisure activities, the range the electric vehicle can drive isn't an issue but for longer distances, range anxiety is of a concern.



DFT National Travel Survey 2016 states average car commute is 2,500 to 2,900 miles per year, based on 253 working days in 2018, that gives a daily commute of 9.9 to 11.5 miles.

## Charging costs

It is still likely to be cheaper to charge at home overnight. Charging when out may depend on which network the ULEV owner decides to use or become a member of. There are currently three networks and ULEV owners may need to be members of all three to access charge points across the country.

## Funding

Where the Council bids for charging points all the grant currently available require additional revenue funding and there will be a maintenance cost once the charge points are installed. Despite the government grants if applicable, there is still a significant investment required from the Local Authority. Charge points can cost between £750 for a type 2 wall mounted charger to £30,000 for a rapid charger. Other costs include, ground survey, ground works (connection to electricity supply if available), installation, annual maintenance, hosting, commissioning, capital replacement and operational costs.

## On-street space / off-street space

Installing charge points on street or in public car parks raises a number of questions.

- Will people want to give up valuable on street parking spaces so that electric vehicles can charge?
- Will residents be happy to have electric vehicle chargepoint and associated parking space outside their house?
- Who will monitor the vehicles to ensure once they are charged they vacate the space?
- Will owners remember to return to their vehicle once charged to move to a parking space and will there be a parking space available for the electric vehicle once it is charged?
- Who will monitor to ensure only electric vehicles use the designated charge point charging parking spaces? If a petrol or diesel car parks in the electric vehicle charging space how can that vehicle be moved quickly?

Further thought needs to be given for ensuring that on-street and off-street charging provision is delivered in such a way that minimises the impact on existing parking provision.

In public car parks this could be the use of incidental land to provide additional parking spaces or the use of long stay parking so as to maintain short stay capacity.

