

Rhondda Cynon Taf County Borough Council

Electric Vehicle Charging 'Implementation Plan'

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1.0 Introduction and Context

1.1 Introduction

Rhondda Cynon Taf County Borough Council is committed to promoting and, where appropriate, enabling a comprehensive charging network, by increasing the provision of electric vehicle charging points across the County Borough.

As such, it is the intention of this Electric Vehicle Charging Implementation Plan and subsequent Internal Delivery Plan and Public Facing Action Plan to set out the Council's expectations for the increased provision of charging infrastructure across the County Borough. The documents will provide information, advice, and guidance to potential developers on the installation planning process for different site types, with a primary focus on off-street charging locations across the County Borough.

1.2 Our Vision and Objectives

The EV Charging Implementation Plan has been produced following the publication of an [Electric Vehicle Charging Strategy](#). The Strategy identifies desired outcomes and aspirations which aim to coordinate a County Borough wide approach to promote and encourage the development of a robust electrical vehicle charging network in the short, medium, and long term. The purpose of this Implementation Plan is to set out how the Council intends to support the delivery of charging infrastructure across the County Borough and recommends the short, medium, and ongoing actions required, as highlighted in Figure 1, see Appendix. The Implementation Plan is based on the ten ambitions clearly stated within the Electric Vehicle Charging Strategy, see Appendix Figure 2.

It is the aim of the Implementation Plan to:

- Identify key themes to support the Council's delivery of charging infrastructure across the County Borough.
- Provide guidance and advice on best practice to develop a comprehensive network of electric vehicle charge points that both responds to existing demand for EV infrastructure and provides for and accelerates the uptake of electric vehicles in the future.
- Establish a clear set of actions to drive the delivery of the Council's EV Charging Ambitions set in figure 2.

2.0 Delivery of EV Charging Infrastructure

There is a need to scale up the EV charging infrastructure significantly to enable the growth of electric vehicle ownership. Whilst the clear ambition would be to have EV charging facilities in every area of the County Borough, the short term rollout of EV chargers will initially focus on the installation of charging infrastructure at off-road destination sites. Under the [Cardiff Capital Region Transport Authority \(CCRTA\)](#), the Council is in the process of installing publicly accessible charge points at 31 Council car parks.

The Council recognise the need to establish a recommended order of processes that installers should follow in the delivery of charging infrastructure. As such, these steps will be identified and summarised in the form of a Delivery Model applicable to off-street charging. Using this model will ensure the necessary processes are adhered to in supporting the delivery of charging infrastructure across the County Borough. In conjunction with this, a Pre-Installation Checklist of questions to consider will be developed to guide installers through the installation process.

This Implementation Plan identifies five key themes to set out the considerations that should be made when installing charging infrastructure, see sections 2.1 to 2.5. These themes will be used to inform the development of the Delivery Model and Pre-Installation Checklist.

2.1 Site Selection

An analysis of site suitability will need to take place when assessing locations for EV charging installations to ensure each site meets the crucial requirements. Key considerations that should be made in assessing site suitability include target use, the current provision of charge points in the area, accessibility, and parking bay availability.

2.1.1 Baseline Review of Current Charging Provision and Opportunities for Expansion

The expected growth rate in Ultra Low Emission Vehicle (ULEV) ownership throughout the UK, Wales, and RCT emphasises the need to increase charging provision across the County Borough to match demand. To set a baseline, a mapping exercise will be undertaken to set out the locations of EV charge points both installed and pending across Rhondda Cynon Taf. The map will be used to inform potential developers of the current provision of charging infrastructure to help identify potential future EV charge point locations.

In addition, the Council is working with the Cardiff Capital Region Transport Authority to roll out charge points at Council-owned car parks across the County Borough. Figure 3, see appendix, illustrates a summary of the current schemes that are delivering EV charge points across the County Borough. This includes the Cardiff Capital Region Transport Authority, new school developments, Council fleet depots, and non-domestic buildings.

2.1.2 Identification of available funding sources

The [Office for Zero Emission Vehicles \(OZEV\)](#) has a set of grant funding schemes that may be available to help cover the costs of purchase and installation of EV charging infrastructure. The funding schemes available, as of August 2022, are summarised in Figure 4, see appendix.

2.2 Site Design & Accessibility

There are several considerations that should be made in the design and layout of the charge point, parking bay, and additional infrastructure to ensure safety, accessibility, and ease of use.

2.2.1 Public Charging at Council-Owned Car parks

Destination charging, primarily within Council-owned car parks and other sites including Leisure Centres, Parks, and Cultural attractions, is expected to play a key role in the future provision of charge point infrastructure. Car park charging will provide one of the most expedient ways for users to charge their vehicles. It is the Council's ambition to examine and assess its portfolio of Council-owned land, to encourage the rollout of EV charging infrastructure on current assets, and maximise availability and accessibility, eliminating the barriers to electric vehicle uptake.

The installation of charge points in all new public car park developments should permit compliance with accessibility standards set out by the Department for Transport (DfT) in partnership with [Motability](#). The new BSI PAS:1899 Accessibility Standard for EV Charging Infrastructure is expected to be launched in Autumn 2022. PAS 1899:2022 is a new specification on accessible public charge points for electric powered vehicles. It covers the design and placement of charge points, including the location spacing and surrounding environment, as well as the information, signals and indicators to be provided. Accessibility is not restricted to the disabled as it will also include non-driving less-abled people who need to use the charging points and the ageing population in the UK.

The provision of sufficient signage and parking bay markings should be considered to raise public awareness, and to ensure the parking bays are reserved for the use of electric vehicles only. When installing signage, a decision will have to be made on the specified time allowance for vehicles to park within the bay. Following the delivery of this Implementation Plan, a set of best practice guidance will be produced to guide the appropriate installation of charging infrastructure.

2.2.2 School Carpark Charging

Under Policy 12 of [Future Wales: The National Plan 2040](#), all new schools are required to include a minimum of 10% of all parking spaces for EV charging. In addition, the Council will be investigating all other school car parks to determine their suitability for retrofitting EV charging facilities. Whilst these EV charging units will predominantly be used by school vehicles e.g. minibuses and by school staff, there is the potential for these charging units to be made available for residents to use outside of school opening hours. However, this presents a challenge in that allowing public access to the charging units, school buildings, and grounds must also be kept secure. There may be a potential to develop a more open, 'outer cordon' where the charging units are located and a securer 'inner cordon' protecting the school pupils and buildings.

2.2.3 Visitor, Customer and Workplace charging at Private, Third Sector and Council Sites

The UK Government is supporting the rollout of workplace charging by subsidising the cost of installing EV charging units through the Workplace Charging Scheme. [Planning Policy Wales 11](#) (PPW11) sets out the Welsh Government's expectation that the planning system should encourage the provision of ULEV charging points as part of any new development. For non-residential, new, and substantially refurbished developments, there is a minimum requirement for 10% of parking spaces to have provision for EV charging.

The transition of the Council Fleet to ULEV domination will require the availability of charging infrastructure near to where vehicles are stored, for example within depots. The Council's plan to transition from an Internal Combustion Engine, (ICE), fleet to an Ultra-low Emissions Vehicles, (ULEV), fleet over the next 6 years will be facilitated in line with the ULEV Transition Plan.

Whilst the Council fleet will predominantly be charged overnight, the Council will consider the feasibility of allowing staff to use the charge points during the working day where this is deemed both practicable, safe, and secure. While recognising that there may be good opportunities to provide charge points on Council land, there are also considerable challenges, not least the capacity of the local electricity supply network and the need for an ongoing maintenance regime, to ensure all charging units are in a safe and usable condition.

2.2.4 Residential Charging

Welsh Government planning requirements have been updated to ensure that all new domestic properties with off-street parking must be EV charging ready, i.e. that the electrical connections are already available in the property, although it will be for new homeowners to decide when to install the actual charging units.

Rhondda Cynon Taf, like most of South Wales, is broadly characterised by rows of terraced housing and narrow congested roads and thus presents challenges when deciding how to guide the expansion of the EV charging network. Installers should consult with Sections [162](#), [133](#) and [152](#) of the Highways Act for further information relating to the legal position an individual will face when considering residential charging infrastructure.

The Council recognises the importance of providing charging infrastructure throughout the County Borough, in both residential and public locations. As such, the Council will take the necessary steps to ensure that charge point provision is provided in locations with limited opportunities for EV charging at destination sites and will examine the potential opportunities to create charging facilities close to residential areas. This approach will seek to alleviate the issues around accessibility and safety concerns associated with on-street residential charge point installation.

2.2.5 Accessibility and Welsh Language Requirements

As an inclusive Council, we are committed to promoting equality of opportunity and access in all aspects of our activities, including within the area of EV charging provision. In developing and implementing the rollout of charging infrastructure, the Council will ensure it meets its obligations under the [Equality Act 2010](#) and [Welsh Language \(Wales\) Measure 2011](#) and make decisions with due regard to the need to eliminate unlawful discrimination and advance equal opportunity.

2.3 Initial Electrical Installation

The Council recognises that the electrical capacity across the County Borough is varying in quality and strength. As such, the ability to rollout charging infrastructure is ultimately dependent on the capacity of the local electricity network to support it. The Council will ensure early engagement with Western Power Distribution (WPD) to determine the sufficiency of grid capacity and the cost implications of upgrading the network if needed. The

Council will also assess its potential for the development and utilisation of renewable energy generation across its estate in providing power for charging hubs.

2.3.1 Active and Passive Charge Point Provision

When choosing the type of charge point technology to install at the chosen site, installers should also consider the scalability of charging technology, along with their associated costs. Typically, installers will have to assess the suitability of installing an active or passive charge point. Active charging points are fully wired and connected, complete with the required electrical capacity and are ready to use to charge any given vehicle at designated parking bays. Passive charging points have the necessary infrastructure provision in place to ensure the simple installation and activation of a charging point at a future date. Arrangements that must be made in advance of designating a space for passive EV charging use, should include the necessary underlying infrastructure, such as capacity in the local electricity distribution network, cable highways to the parking bay(s), and other such considerations.

2.4 EV Charging Unit

2.4.1 Charging Type Suitability

Considerations should be given to the usage and purpose of the site when choosing the appropriate charging infrastructure to install. Information on the different speeds of charge points is provided in Figure 5, see Appendix. It is expected that fast charge points will become the standard for charging infrastructure across the County Borough due to their suitability for charging across a large range of site types, together with electrical supply network issues. This Implementation Plan does not consider the use of trickle and slow charging infrastructure in the roll out across the County Borough as their slow charging speeds render them largely unsuitable for public charging use.

2.4.2 Analysis of Cost

All costs related to the supply, installation, operation, and maintenance of the charge point infrastructure will need to be considered and appropriately resourced. The estimated costs per EV charge point for a range of vehicles referenced throughout the Strategy and Implementation Plan are presented in Figure 6, see Appendix. In addition to the cost per charge point further costs will be accrued for the charger management system, annual maintenance, protective bollard or kerbs, groundworks and signage and potential network upgrades of the site's maximum import capacity (kVA).

2.5 Operation & Security

2.5.1 Council Enquiries Contact

The Council will establish a single point of contact for all enquiries relating to the installation of charge points on Council-owned land (EVCharging@rctcbc.gov.uk). Furthermore, the Council will assess the need for additional resources within the Council's staffing structure to aid the delivery of EV charging infrastructure.

Security is of paramount importance to the rollout of charging infrastructure to ensure security and wellbeing. As such, all installations should consider and implement appropriate CCTV coverage of the area, sufficient lighting to ensure visibility during poor weather and at

night and the availability of a helpline to enable all users of the charge point to seek help and support if needed.

3.0 Diverse Charging Opportunities

Though the Council is not directly responsible for the operation of bus, minor vehicle and car club transport, the Council hopes to continue to engage with partners in aim of realising all available funding opportunities and facilitating the growth in charge point provision across the County Borough.

3.1 Taxi Charging

Taxis (Hackney Carriages and Private Hire Vehicles) in RCT are licensed by Rhondda Cynon Taf County Borough Council as the Licensing Authority. The Council will support the work carried out by the Cardiff Capital Region Transport Authority (CCRTA) to establish a charging network for electric taxis across the region, The Council will work in partnership to identify key locations where the most advantageous charge points can be installed to facilitate the usage of EVs by taxi operators.

3.2 Bus Charging

Although the Council does not operate any public service buses, the Council will periodically consult with local bus operators, should the need arise for charging points at our principal bus stations. As a Council, we will also work with contractors providing outsourced services such as home to school transport to ensure sufficient charging infrastructure is provided, should the need arise. We will continue to review technological advancements in partnership with bus operators, Government, and industry to develop a vision for a clean bus fleet that is commercially feasible and sustainable.

3.3 Minor Vehicles

This section will relate to the charging of E-Motorcycles, E-Mopeds, E-Bicycles and Mobility scooters. Some E-Motorcycles and E-Mopeds have the potential to recharge at public charging stations using Slow (3 – 7 kW) units. However, E-Bicycles and mobility scooters are limited in that they can only be recharged using a standard 3-pin socket and cannot use public charging stations.

The Council will ensure that consideration is given to all modes of Minor Vehicle transportation by investigating options to provide indoor public charging facilities for the detachable batteries only. This would require that the vehicles (E-Bikes and Mobility Scooters) be parked up and secured as normal whilst battery charging facilities are made available within publicly accessible buildings or sites, (e.g. public libraries or parks buildings).

3.4 Car Clubs

The Council will continue to work with the Cardiff Capital Region City Deal (CCRCD) Team to support the development of EV Car Clubs in Rhondda Cynon Taf. The encouragement of such schemes will enable positive socio-economic benefits by increasing access to electric vehicles for those who do not have the means or inclination to purchase one. The Council will also consider the opportunity of such Car Clubs amongst its grey fleet.

4.0 Public Facing Action Plan

In support of delivering the 'Ambitions' set out within the EV Charging Strategy, see figure 2, the commitments set out in the Council's Climate Change Strategy, and the successful rollout of charging infrastructure across the County Borough, a Public Facing Action Plan and an Internal Delivery Plan have been developed.

The purpose of the Public Facing Action Plan will be to establish actions and measures which will be used to monitor improvements in the delivery of charging infrastructure throughout the County Borough by providing updates on progress against the Action Plan. This will include:

- The number of electric vehicle charge points installed across the County Borough.
- The number of ULEV owned across the County Borough.
- The proportion of electric vehicles within the Council's owned fleet.
- The number of enquiries from members of the public regarding EV charge point installations.

The purpose of the Internal Delivery Plan is to set out the actions, progress milestones and their expected timeframe for completion, as required by each Service Area of the Council.

The Internal Delivery Plan details the following information:

- Action description
- Action reference number
- Sub-action/ Milestone
- Sub-action/ Milestone reference number
- Delivery Date
- Accountable Officer
- Service Area Responsible

Glossary

Vehicle Types:

Electric Vehicle (EV) - Term used to encompass all vehicles that use electricity as a fuel source.

Ultra-Low Emission Vehicle (ULEV) - A vehicle that produces less than 75g of Carbon Dioxide for each kilometre driven.

RCV Fleet – Refuse Collection Vehicle.

HGV Fleet – Heavy goods vehicles. A 4-wheeled vehicles constructed for transporting goods. Must have a gross weight of 3.5 tonnes or less.

LGV Fleet – Light goods vehicles. Larger vehicles constructed for transporting goods. Must have a weight greater than 3.5 tonnes.

Battery Electric Vehicles (BEV) - A vehicle that runs entirely on electricity powered by a battery and charged using a dedicated charge point using mains electricity supply.

Hybrids - Combustion engine and electric propulsion motor. Battery charged through regenerative braking, very low zero emission range.

Grey Fleet – Any vehicles that do not belong to a company or organisation, but which are used for business travel. This may include a vehicle purchased via an employee ownership scheme, a privately rented vehicle, or a privately owned vehicle.

Charging:

Trickle Charge - The slowest form of charge at less than 2kW using a 3-pin plug. Time intensive, usually used for at-home overnight charging.

Slow Charge - Typically charge at less than 7kW and generally used for overnight charging of BEVs and top ups for hybrid vehicles, with a charge-up time of 8- 12 hours. Faster charging times and better safety features than 3-pin plugs.

Fast Charge - Typically charge at 7- 22kW with faster charging times which enable users to make better use of off-peak energy tariffs. Typical charge-up time of 1.5- 5 hours.

Rapid/ Ultra Rapid Charge - Typically charge at 43- 350kW with an average charge time between 15- 45 minutes. These are generally located at service stations and public locations.

Kilowatt (kW) - A measure of working power available.

Kilowatt Hour (kWh) – A measure of energy stored or used, also used to measure EV battery energy use.

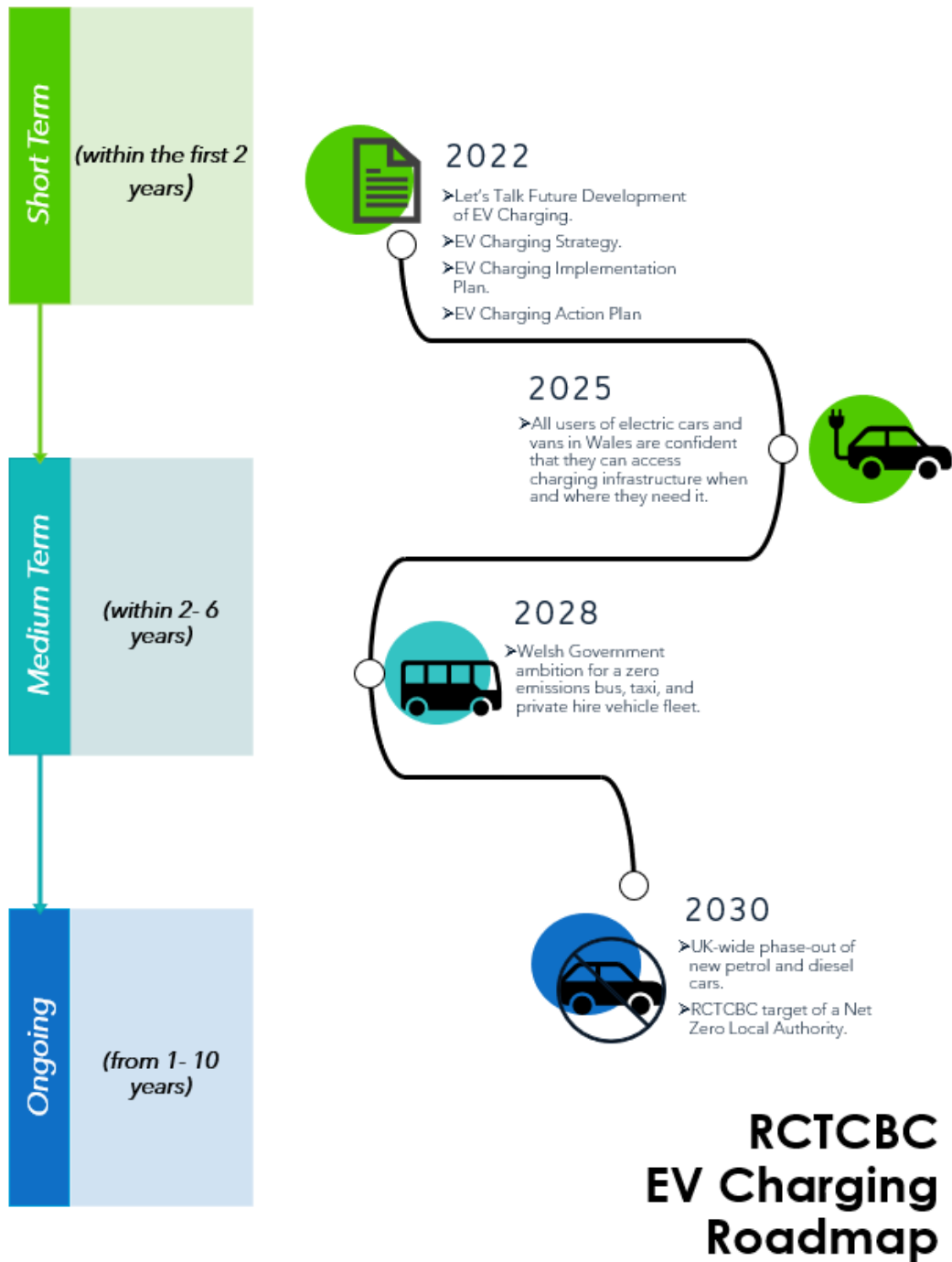


Figure 1: RCTCBC EV Charging Road Map.

EV Charging Strategy Ambitions

Section	Ambition	Priority/ Timescale
A.1	Develop an Implementation Plan to roll out an EV Charging infrastructure aligned to future demand with suitable speed and power chargers for all vehicles including cars, taxis, buses, e-motorcycles, e-bicycles, mobility scooters.	
A.2	Establish the need for EV Infrastructure by working with partners, where applicable, to secure external funding opportunities and help meet demand.	
A.3	Review our Planning Policies, whilst working with landowners and developers to ensure the EV charge point opportunities are identified and pursued, to promote sustainable methods of transportation.	
A.4	Monitor air quality, to evaluate the relationship between increased EV uptake and improved air quality, expectantly reducing the harmful effects of air pollutants on public health.	
A.5	Develop a series of models for funding, deployment, and management.	
A.6	Identify all suitable locations for potential 'Destination Charging' sites.	
A.7	Identify suitable locations for 'Workplace Charging' across all RCT sites and work with other sectors, where applicable, to increase workplace charging, to meet demand as appropriate.	
A.8	Work with residents to raise awareness and establish the best means of charging vehicles where planning, physical and/or technical constraints mean that their preferred method of charging is not feasible or achievable.	
A.9	Explore potential opportunities for introduction of car clubs within the County Borough.	
A.10	Transform our fleet towards more sustainable methods of transportation, in a planned and practical way.	



Figure 2: RCTCBC Electric Vehicle Charging Ambitions.

Current EV Charge Point Schemes Utilised by RCTCBC



CCRTA: The CCRTA plan to install public-use EV charging points at 31 publicly accessible car park sites across Rhondda Cynon Taf.

New School Developments: The Council's Local Development Plan requires all new school car parks to provide a minimum of 10% active charging units with the aspiration of installing an additional 10% of passive charging units.



Council Depots: The Council have secured funding from Welsh Government Energy Service (WGES) and aim to focus spending on installing charging units within the Council's depot sites for fleet vehicle charging.

Non-domestic buildings: The Welsh Government's Future Wales Planning Policy Plan 2040 sets out that all new or substantially refurbished non-domestic buildings with dedicated parking will be required to have at least 10% of parking spaces allocated for EV charging.



Figure 3: Current schemes delivering EV charge points across Rhondda Cynon Taf County Borough Council.

Funding Schemes

The Office for Zero Emission Vehicles has a set of grant funding schemes that are available to help support the costs of purchase and installation on EV charging infrastructure.

Workplace Charging Scheme (WCS)

This scheme is available to businesses, charities and public sector organisations. Covers 75% of the total costs of purchase and installation at off-street facilities with parking spaces dedicated wholly for staff and/ or fleet vehicle parking.

It will be the responsibility of the Charge Point Owner to maintain the charge point for a minimum of 3 years.

Maximum of £350 per charge point unit.



Maximum of 40 charge point units across all sites per applicant.



Further information available [here](#)

On-Street Residential Charging Scheme (ORCS)

This scheme is available to Local Authorities. Covers 60% of eligible capital costs for on-street EV charge points in locations where residential off-street charging is unavailable.

In areas where on-street charging is difficult to achieve, applications for car park sites owned by the local authority near residential areas will be considered.

Maximum of £13,000 per charge point installation.



Projects with a completion date before 31st March 2023 will be considered.



Further information available [here](#)

Electric Vehicle Charge Point Grant

This scheme is available for flat owner-occupiers and people living in rented properties. Covers 75% of the costs of one charge point for properties with designated off-street parking.

The customer must own a qualifying vehicle.

Maximum of £350 per charge point installation.



Further information available [here](#)

All information provided is correct as of August 2022.

Figure 4: Available Funding Schemes from the Office for Zero Emissions Vehicles (OZEV), as of August 2022.



Assessment of Charging Type Suitability



Fast (7kW)

Approx. Charging Time: 5 hours

Approx. Connection Cost: £1,000 – 3,000

Approx. Connection Lead Time: 4 – 8 weeks

Network & Third Party Considerations: Likely upgrade to service cable and local mains

Appropriate sites include:

- Residential areas
- Domestic premises with off-street parking
- Top-up charging at places of work



Fast (22kW)

Approx. Charging Time: 1.5 hours

Approx. Connection Cost: £3,500 – 12,000

Approx. Connection Lead Time: 8 – 12 weeks

Network & Third Party Considerations: Street works and permissions

Appropriate sites include:

- Car parks
- Places of work
- Domestic premises with off-street parking

Please note: the installation of fast charge points on domestic premises would require a three phase supply or capacity upgrade.



Rapid (43kW+)

Approx. Charging Time: 45 minutes

Approx. Connection Cost: £3,500 – 12,000

Approx. Connection Lead Time: 8 – 12 weeks

Network & Third Party Considerations: Street works and permissions

Appropriate sites include:

- Shops and supermarkets
- Near busy 'A' roads or motorways

Suited to on the go charging and charging at short dwell time locations due to their rapid charging speeds.

Figure 5: An Assessment of Charge Point Type Suitability, Connection Costs and Connection Timescales for Fast (7kW), Fast (22kW) and Rapid (43kW+). Source: [WPD EV Strategy April 2020](#).

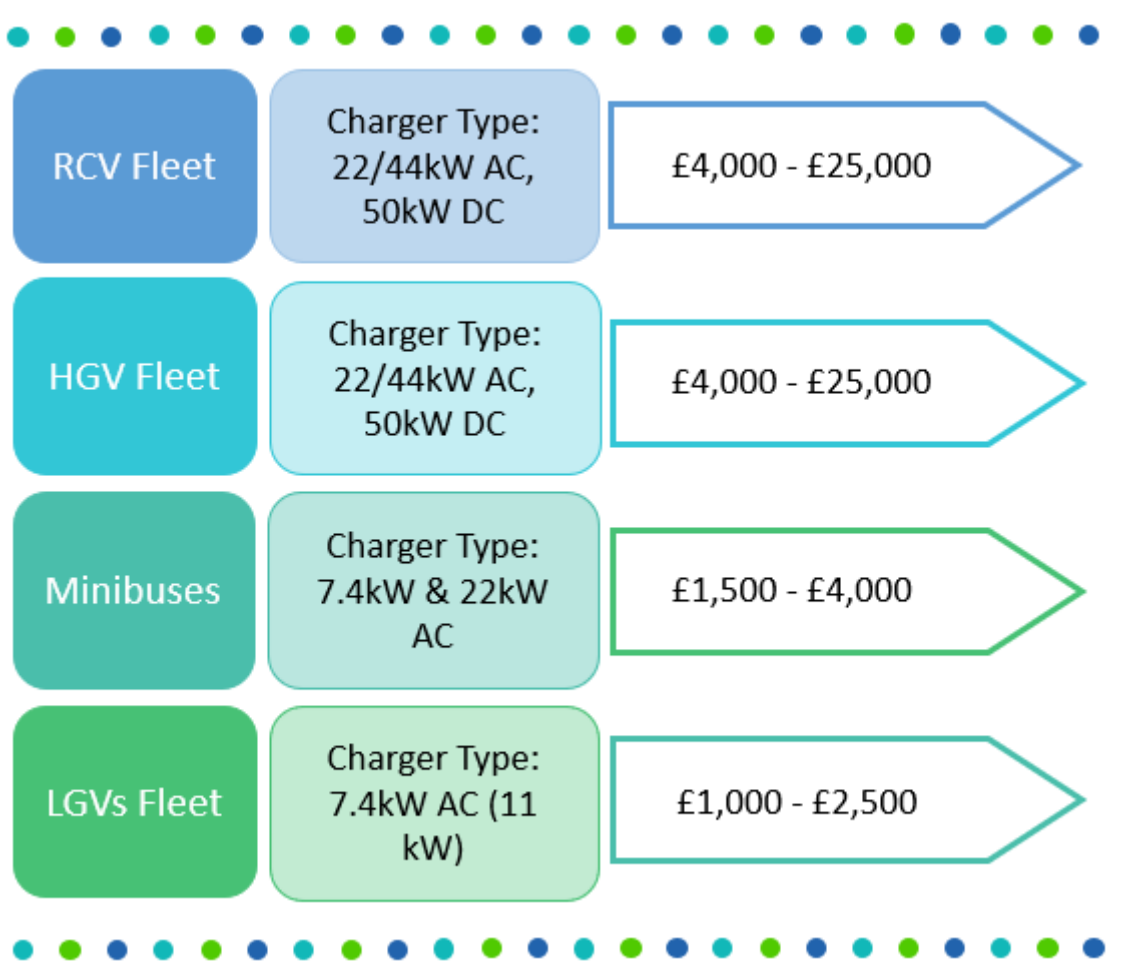


Figure 6: Charge point Cost Estimates per Vehicle Class.