

INSTAVOLT



Design and Access Statement

Rev A

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McDonald's - Glasgow London Road

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Introduction

InstaVolt Ltd are proposing to install two electric vehicle charging stations at McDonald's, Glasgow London Road. InstaVolt is leading the way in Electric Vehicle (EV) charging infrastructure, helping to make the UK an easier place to own and operate an electric vehicle.

The proposed EV charging stations use the latest cutting-edge technology to provide rapid charging to any EV. They can charge a vehicle by up to with 120 miles of range in around 15 minutes and is able to deliver up to 120kW charging. Each charge point is supported by a 24-hour telephone helpline.

Planning Statement - Why do we need electric vehicles?

The UK has binding climate agreements to reduce the levels of CO₂ emissions by at least 80% of 1990 levels by 2050. The Government has set out its plan of action for greenhouse gas reduction in the Carbon Plan (December 2011). The plan identifies that transport has a critical role in meeting the Climate Change Act (2008) obligations. The CO₂ emissions of a car are directly proportional to the quantity of fuel consumed by an engine. While there has been progress in reducing emissions of air quality pollutants from vehicles, there has been less progress in reducing CO₂ from cars despite improvements in engine efficiency¹. This is where electric vehicles come in as crucial to help reduce CO₂ emissions. Electric vehicles do not produce any exhaust emissions during their operation and as such the government is pushing for the increased adoption of electric vehicles to help decarbonise our economy. As the number of electric vehicles on the road increases so the need for infrastructure – number of charging points - required to support the vehicles is also increased. The charging units proposed here will provide a small part of this crucial infrastructure.

In November 2020 the government announced 'The Ten Point Plan for a Green Industrial Revolution'. The plan is designed to accelerate the UK's path to net zero carbon emissions. Point 4 on this plan is 'Accelerating the Shift to Zero Emission Vehicles' and sets out plans to ban the sale of all new petrol and diesel cars from 2030 to promote the uptake of electric vehicles. Point 4 also highlights the need to accelerate the rollout of electric vehicle charging infrastructure to support the growing number of electric vehicles. This application is a key part of providing the necessary infrastructure to help deliver the governments plan.

The Technology

InstaVolt's primary goal is to provide a fast and reliable rapid charge network. In order to deliver this goal, the rapid chargers used by InstaVolt are 120kW chargers which are manufactured by BYD. InstaVolt only use the latest DC rapid charging technology on its sites. Each station is equipped with two connecting plugs; CHAdeMO and CCS. These are the two most common types of connectors used on all EV's for DC charging. This means the chargers are open and available to all EV drivers. To further ensure ease of use and open accessibility, the chargers accept contactless payment, meaning there is no need to sign up to any apps or subscription service, just tap and go. A 10-inch LCD touchscreen lets drivers interact with instructions, information or promotions.



Figure 1: Example charging unit

The Site and Installation

The proposed site is at McDonald's, Glasgow London Road. The site has a car park associated with the premises. It's within this car park we are proposing as the ideal location for two charging stations. This site has plenty of space for two charging units whilst not interfering with day to day movements around the carpark or impacting on the surrounding spaces.

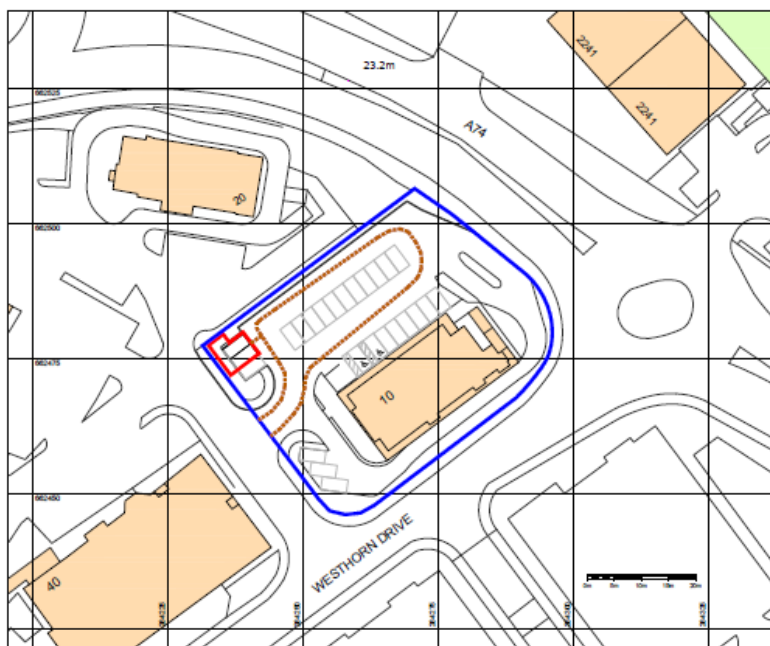


Figure 2: Location Plan

Two charging units will be installed, one to service each EV charging parking space. Along with the two EV charging units there will be a feeder pillar. The feeder pillar is a green box which provides the point of connection from the EV charging units to the local grid. Parking bays will be clearly marked on the ground using line painting.

The existing access into the site will be suitable for the installation and ongoing operation of the site.

The units are safe and secure and will have 24 hour monitoring. Should an issue occur with a unit, our control centre will be notified and an engineer dispatched to site. In addition to this, there is a telephone number which users of the units can call for 24 hour support.

As the proposed installation for two EV charging stations is small, all waste can be removed during/at the end of the working day and will be recycled where necessary. The whole installation should only take around 1 week, and if all waste is removed daily there should not be any build-up of waste.

Flood Risk Assessment

The proposed installation will not have any impact on the hydrodynamic regime which currently exists on the site. The existing parking spaces are already concrete and this will not be changed. There will be a small amount of concrete installed for the foundations of the units, however this will be less than 4.5m² in total and therefore will not have any impact on the surface runoff associated with the site. The drainage which already occurs on the site will continue to operate as normal and will not be effected by the development. Given the scale of the development is small and the change to surface materials is very minor, there will be no impact on the existing hydrodynamic regime and therefore no increase in flood risk to the surrounding area.

Conclusion

The two proposed EV charging units at McDonald's, Glasgow London Road will provide essential infrastructure for the area and will utilise the latest DC rapid charging technology which is accessible for all EV drivers to use. Countries across the world are making a move away from fossil fuels and towards the electrification of the transport system. The UK has binding climate agreements to reduce the levels of CO₂ emissions by at least 80% of 1990 levels by 2050, of which, the proposed EV chargers will provide crucial infrastructure to enable this transition to a low carbon economy.