



Design and Access Statement

Rev A

25 August 2023

Co-Op – Earl Shilton

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Introduction

InstaVolt Ltd are proposing to install two electric vehicle charging stations at Co-Op – Earl Shilton car park. 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. Each charge point is supported by a 24-hour telephone helpline.

Planning Statement - Why do we need electric vehicles?

“The full transition to electric vehicles (EVs) will be one of the most important actions to achieve the UK’s Net Zero target” – The Climate Change Committee, 2020¹.

The UK has binding climate agreements to reduce the levels of CO₂ emissions by at least 100% 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 efficiency².

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

¹ <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-UKs-transition-to-electric-vehicles.pdf>

² <http://www.dft.gov.uk/vca/fcb/cars-and-carbon-dioxide.asp>

infrastructure to support the growing number of electric vehicles. This application is a key part of providing the necessary infrastructure to help deliver the government's plan.

In July 2021 the National Planning Policy Framework (NPPF), which promotes sustainable development, was revised, and sets out the criteria for sustainable transport. Section 9 of the NPPF - Promoting Sustainable Transport - states that applications for development should be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible, and convenient locations. This application will meet these national criteria as well as the Local Authorities' objectives for sustainable transport within their Planning Policies.

This is where electric vehicles are 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 does the need for the infrastructure - number of charging points - required to support the vehicles. Furthermore, having a robust network of chargers already in place should enable the ease of transition from petrol/diesel to electric for consumers in the near future. The charging units proposed here will help contribute to a much wider network nationally.

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 160kW 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 15-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 Co-Op – Earl Shilton, which has a car park associated with the premises. It is within this car park that we are proposing the installation of the charging stations. This site has sufficient space for the charging units and the location has been carefully selected to not interfere with day-to-day access, deliveries, movements around the carpark and existing utilities within the site. It will also have no detrimental impact on the surrounding spaces adjacent to the site.

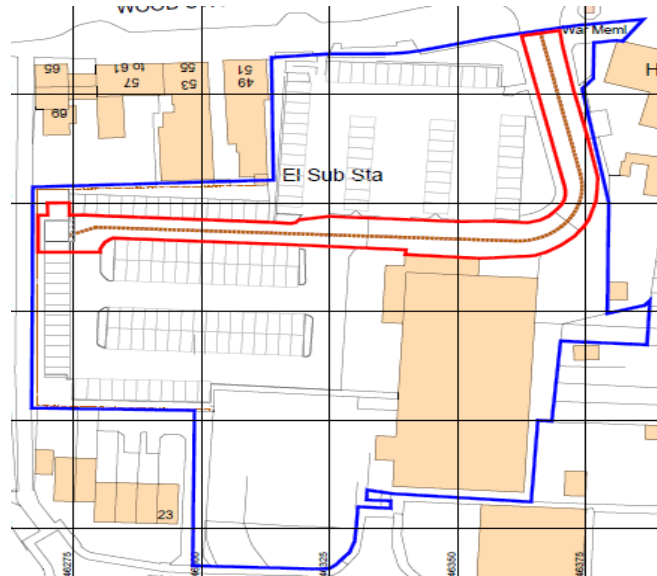


Figure 2: Location Plan

Two charging units will be installed, one to service each EV charging parking space. Along with the 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. The EV parking bays will be clearly marked on the ground using line painting.



Figure 3: Feeder Pillar RMC 2100

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

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 the 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 the 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 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 site is currently within Flood Zone 1 – Low probability of flooding.

The existing surface of the parking spaces are already tarmac, 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 area and therefore not have any impact on the surface water runoff associated with the site.

The drainage which already occurs on the site will continue to operate as normal and will not be affected 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 Co-Op – Earl Shilton 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 and the UK has binding climate agreements to reduce the levels of CO₂ emissions. With the planned increase in electric vehicle usage the infrastructure must be implemented at a larger scale. There are currently approximately 18,000³ public charging points for around 400,000 plug-in electric vehicles. In order to grow the UK's EV fleet to 23.2 million EVs by 2032, the Climate Change Committee estimates 325,000 public charging points will be required⁴.

These proposed EV chargers will provide crucial infrastructure to enable this transition to a low carbon economy and proactively grow our much needed EV infrastructure for the future.

³ Department for Transport (2020), Electric vehicle charging device statistics.

⁴ CCC (2020), The Sixth Carbon Budget – methodology report.