



East Riding of Yorkshire Council  
**Local Transport Plan  
Strategy**  
2015 – 2029

Appendix E  
Public Electric Vehicle  
Infrastructure Strategy

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## I Introduction

- 1.1 The UK's Climate Change Act 2008 set out a long-term strategy for the UK's reduction of carbon dioxide (CO<sub>2</sub>) emissions. The government subsequently set out its plan of action for greenhouse gas reduction in the Carbon Plan in December 2011. The plan identifies that transport has a critical role in meeting the Climate Change Act obligations.
- 1.2 In 2011 the government published 'Making the Connection: the Plugged-In Vehicle Infrastructure Strategy'. At the time of this strategy, the government envisaged most EVs being recharged overnight, at homes or in vehicle depots. If such an approach was successful, this would have the benefit of balancing the demand for electricity across the day, increasing the energy savings offered by the uptake of EVs, while creating minimal infrastructure cost. Charging at work would be a second option for drivers. The strategy highlighted 'range anxiety', the concern about running out of battery while making a journey, as one of the key barriers to the uptake of EVs; a small number of public charge points were envisaged to be provided, primarily as top-up locations, preferably offered and funded privately.
- 1.3 In 2013, the government published 'Driving the future today: a strategy for ultra-low emission vehicles in the UK', in which it said that its vision was for almost every car and van in the UK to be an ultra-low emission vehicle by 2050, with the UK at the forefront of their design, development and manufacture. In this the government pledged to work with partners to achieve the switch to ultra-low emission vehicles, including expanding the provision of vehicle charging facilities beyond that envisaged in 2011.
- 1.4 In 2017 the government announced that the sale of all new diesel or petrol powered cars would be prohibited from 2040.
- 1.5 Drivers are increasingly shifting towards vehicles which run on an alternative fuel source as a more environmentally sustainable and often cheaper mode of transport. To encourage the use of zero emission vehicles successive governments have provided some financial support for those purchasing Electric Vehicles (EVs) and this has led to a slow but growing move towards this power source.
- 1.6 Local authorities have an important role to play in supporting the shift towards EVs, and East Riding of Yorkshire Council is committed to providing local residents and businesses in the area with a variety of options in terms of the way they choose to travel. To support this, this dedicated Public EV Infrastructure Strategy has now been developed, which will form part of the Council's Local Transport Plan (LTP) Strategy (2015-2029). As part of the development of a new three year LTP Implementation Plan, covering the period 2018/19-2020/21, there is also an opportunity to clarify and strengthen the Council's overall support for this mode by providing a corresponding budget to install additional supporting infrastructure across the East Riding.

## 2 Background

- 2.1 Air pollution is associated with a number of adverse health impacts and is recognised as a contributory factor in the onset of various conditions, including heart disease and cancer. Poor air quality particularly affects the most vulnerable in society, for example children and older people, and those with existing heart and lung conditions. Often pollution displays a strong correlation with indices of deprivation, with areas experiencing poor air quality frequently being among the less affluent.
- 2.2 Recent years have seen a welcome reduction in overall levels of air pollution in the UK but for some pollutants, particularly those linked with transport emissions, the rate of reduction has stalled. Although individual vehicles are now much less polluting, traffic growth has partially offset any improvement.

- 2.3 Evidence for the association between air pollution and a wide range of adverse health effects in the general population is undeniable; Public Health England (PHE) estimates 5.3% of all mortalities may be linked to long-term exposure to air pollution.
- 2.4 The principal air-quality pollutant emissions from petrol and diesel engines are carbon monoxide, oxides of nitrogen, un-burnt hydrocarbons and particulate matter. Road transport contributes around 25% of man-made carbon dioxide emissions and is the largest contributor of Nitrogen Dioxide and PM10s (airborne particulates associated particularly with diesel engines).
- 2.5 Detailed information on the contribution of cars to air pollution is provided by the Department for Transport via their [Vehicle Certification Agency](#) website.
- 2.6 Despite overall reductions, in recent years local air quality has become a significant issue with increasing concern over links to early mortality and poor health in the worst affected areas. The World Health Organisation (WHO) has published a useful [factsheet](#) summarising research. To clarify the results, the WHO provides the following statement: *“Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma.”*
- 2.7 As all Local Authorities, East Riding of Yorkshire Council has a key role in achieving public health improvement through the reduction of harmful emissions. The Environment Act 1995 places a Local Air Quality Management duty upon the Council and this is coordinated by the Public Protection Division who produce an Air Quality Annual Status Report.
- 2.8 Supporting low carbon travel, including EVs, contributes to one of the Council’s five corporate priorities, ‘Valuing Our Environment’ and several of the LTP’s overarching objectives. This also supports East Riding Local Plan Strategy Document policy S8 ‘Connecting People and Places’.
- 2.9 Where proscribed limits for certain pollutants are consistently exceeded, Local Authorities are required to declare Air Quality Monitoring Areas (AQMAs). To date it has not been necessary for East Riding of Yorkshire Council to declare any AQMAs, although some monitoring stations alongside the A63 have indicated higher than acceptable levels of some pollutants and these are being monitored.
- 2.10 In use, EVs are zero emission and provide the potential to greatly reduce pollution from road transport. Their actual impact does depend on the source of electricity generation used to charge the vehicle but with the increasing use of renewable energy this becomes less of an issue.
- 2.11 Currently the operational range of EVs is perceived as a serious restriction on their sale and use, with the best vehicles managing around 300 miles on a full charge. It is therefore important to support charging infrastructure to provide confidence in this mode.

### **National Coverage**

- 2.12 The last four years have seen a surge in demand for electric vehicles in the UK – new registrations of plug-in cars increased from 3,500 in 2013 to more than 130,000 by the end of December 2017. Electric vehicle registrations now make up just under 2% of all new vehicles registered in England. There has also been a huge increase in the number of pure electric and plug-in hybrid models available in the UK with many of the top manufacturers now offering a number of EVs as part of their model range. In summer 2017, Volvo announced that all of its new models from 2019 will be fully electric, or will include an electric motor as part of a hybrid system.
- 2.13 In late 2017 there were around 5,000 public EV charging locations in the UK, most having multiple connections. The network is growing quickly with many new developments including additional facilities.

- 2.14 There are four main EV charging types: Slow (up to 3kW) which is best suited for 6-8 hours overnight; Fast (7-22kW) which can fully recharge some EVs in 3-4 hours; and Rapid AC and DC (43-50kW) which are able to provide an 80% charge in around 30 minutes.
- 2.15 There are several businesses and organisations providing information on charging locations and types of charger available, for example the [Zap Map](#) website.

### Government Financial Support for EVs

- 2.16 Government support for electric cars and vehicles is currently provided through the Plug-in Vehicle Grant towards the purchase of vehicles, and the Electric Vehicle Homecharge Scheme to assist with costs of installation of a homecharger. Other grant schemes also exist for the installation of on-street residential chargepoints and the Workplace Charging Scheme.
- 2.17 In the Autumn 2017 Budget the government indicated a new £400m charging infrastructure fund, an extra £100 million in Plug-In-Car Grant, and £40 million in EV charging research and development. They also committed to a change in the law so that people who charge their electric vehicles at work will not face a benefit-in-kind charge.

## 3 Aim

- 3.1 The aim of the LTP Electric Vehicle Strategy is as follows:

The Council will support and encourage the use of EVs by installing a basic network of charging points across the East Riding.

## 4 Progress to Date

- 4.1 Through the Local Transport Plan the Council, in partnership with local town councils, has installed publicly accessible electric vehicle (EV) charging points at the following locations:
- Palace car park, Quay Road, Bridlington;
  - Swinegate car park, Swinegate, Hessle;
  - The Town Hall car park, South Lane, Hessle; and
  - Cross Hill car park, Driffield (due to be completed early 2018).
- 4.2 These complement other charging facilities available to the public in the East Riding operated by private organisations, such as Flemingate in Beverley. Some vehicle manufacturers such as Nissan and Tesla have also installed public charging points, although in certain circumstances these are restricted to the owners of those vehicles.
- 4.3 The charging points are free to use and drivers who are charging their electric vehicle are also exempt from pay and display charges at the above locations. This reflects the Council's ongoing commitment to supporting more trips to be made using sustainable transport and to reduce air pollution relating to vehicle emissions but charging policy will be kept under review as use is monitored. These points are included on a national map of charging points and have filled what was a significant gap in provision in the east coast area.
- 4.4 The Council's EV charging points are managed by Pod Point and are on the Pod Point Open Charge network. Between summer 2014 and summer 2017 there were over 1,100 uses of the Council's charging points, which is extremely encouraging and supports the case to install additional public charging points in other locations.

- 4.5 The charging points have a type 2 Mennekes socket with a single phase 7kw 32A AC supply. The EV and charging cable should be compatible with this connection type and supply. Each Pod Point can charge two vehicles at the same time. Access to the chargers is via a smart mobile phone app or the [Pod Point](#) website.

## 5 Consultation

- 5.1 The LTP Strategy was subject to a formal eight week consultation in November/December 2014. However, in developing this Strategy the following stakeholders were consulted in November and December 2017:
- Traffic and Parking team, who manage EV charging points in Council car parks;
  - Planning officers responsible for assessing new applications;
  - The Highway Asset Management team; and
  - The Council's portfolio holders for Operational Services and Strategic Asset Management, Housing and Environment.

## 6 Plans for the Future

- 6.1 As petrol and diesel powered vehicles are progressively phased out, demand for EV charging points should grow. With many of the East Riding's visitor attractions relying on day visits from northern cities, it is important to provide confidence that EV users will be able to charge their vehicles if necessary, encouraging clean journeys into and around the area.
- 6.2 Through the LTP Implementation Plan, the Council proposes to install additional charging points to provide a basic geographical network of facilities. The Council does not have the resources to create and manage wider provision and we look to government and the private sector to develop a more comprehensive network.
- 6.3 Additional EV charging points are likely to be based in the settlements identified through the settlement network in the Local Plan Strategy and located in Council operated car parks. These schemes will be subject to the LTP Implementation Plan Appraisal Process.
- 6.4 The use of new points will be closely monitoring to determine demand and the potential for additional facilities to be installed in the future. The new points will help to respond to a recent rise in requests from residents, town/parish councils and ward members for EV charging points in their area. Consideration will be given to locations which support EV taxi use.
- 6.5 The most critical factor in encouraging EV take-up in the East Riding is the network size and availability of suitable charging points. Too few options will stunt the growth of EV ownership and usage by residents, discourage visitors, and potentially impact on local businesses. Too many and there will be an issue with spaces left empty for long periods of the day and constraints on parking. Officers will work closely with local stakeholders prior to the installation of any points to ensure that these issues are fully considered and the correct balance reached.
- 6.6 On-street charging points have been considered but currently logistical and technical issues would make this difficult to achieve effectively and installation will not be pursued at present. The position will be monitored.
- 6.7 As local planning authority, the Council has a role in encouraging and, where appropriate, requiring new developments to provide EV charging facilities. National planning policy requires development to be sustainable and developers should look to provide facilities for the projected growth in EV use.

- 6.8 The government has indicated that it would consider making the provision of EV charging points mandatory for new residential development and required at conventional petrol stations. Detailed guidance is awaited.
- 6.9 The Automated and Electric Vehicles Bill currently passing through parliament proposes to impose a requirement on 'large fuel retailers' and 'service area operators' to provide rapid charging facilities for EVs. This forms part of the government's wider aim to promote the UK as an excellent place to do business

## 7 Addressing our Transport Priorities and Achieving the LTP Objectives

- 7.1 In Section B of the LTP the Council has identified a number of key transport challenges and priorities which must be addressed in order to achieve the six LTP objectives. Although the Public EV Infrastructure Strategy will help to address a number of these priorities and subsequently contribute towards the delivery of a number of objectives it will primarily address the priorities set out under objectives 2, 3 and 5, as follows:
- **Objective 2:** Support sustainable economic growth and regeneration by promoting trips by non-polluting vehicles.
  - **Objective 3:** Reduce carbon emissions by encouraging the replacement of polluting vehicles by zero emission EVs.
  - **Objective 5:** Support and encourage healthy lifestyles by helping to reduce emissions and improve air quality.