


MHA Authority	Nottinghamshire County Council (DCC)
Project Number	60647865
Project Title	Nottinghamshire On Street Electric Vehicle Charging Study
Client Contact	Vicky Lewis
Client Details	Senior Local Transport Plan Officer, vicky.lewis@nottscc.gov.uk
Brief Project Description (300 Characters)	<p>Electrification of the private vehicle fleet has been confirmed with the Government signalling the end of new petrol and diesel vehicles by 2030. This will result in an increasing number of electric cars and demand for EV charging; however, approximately 26% of houses do not have access to off-street parking at home.</p> <p>AECOM was therefore commissioned to provide NCC with a better understanding of:</p> <ul style="list-style-type: none"> • practical and policy issues surrounding implementing on-street parking infrastructure. • locations where on-street EV infrastructure may be required in the future. • types of on-street charging infrastructure currently available. • an evaluation of the different types of infrastructure available and their practicality in both urban and rural settings; and • specific issues faced in rural communities when providing / considering EV infrastructure. <p>The report will be used to identify locations in Nottinghamshire for potential trials of the most appropriate on-street EV infrastructure in a variety of settings (rural and urban; residential, commercial, retail).</p>
Full Project Description	<p>Electrification of the private vehicle fleet has been confirmed with the Government signalling the end of new petrol and diesel vehicles by 2030. This will result in an increasing number of electric cars and demand for EV charging; however, approximately 26% of houses do not have access to off-street parking at home. AECOM was therefore commissioned to provide NCC with a better understanding of:</p> <ul style="list-style-type: none"> • practical and policy issues surrounding implementing on-street parking infrastructure. • locations where on-street EV infrastructure may be required in the future. • types of on-street charging infrastructure currently available. • an evaluation of the different types of infrastructure available and their practicality in both urban and rural settings; and • specific issues faced in rural communities when providing / considering EV infrastructure.  <p>On-Street EV charging is less well developed in the UK than off-street charging. As part of the work, a number of local highway authorities were contacted to determine their experience of deploying on-street EV charging such that lessons learned could be collated for Nottinghamshire. In addition, the major EV charging manufacturers were contacted to</p>

understand the range of products available and the advantages and disadvantages of the main product types.

Table 3.4: Bollards Product Summary

Criteria	BP Pulse	Char.gy	CityEV	ROLEC	Ubitericity
Example Image					
Name of Product(s)	+ BP Pulse 7	+ Char.gy Bollard Solution	+ Name TBC, heritage and modern design options.	+ Removable Bollard "StreetServ.EV"	+ SimpleSocket Bollard
Approximate Cost per Unit	Agreed through the D2N2 scheme. £1,890 excluding civils, installation.	+ Two Business Models available to councils detailed in section 3.2.	+ Fixed bollard product approx. £1,680 (TBC), excluding civils, installation.	Removable bollard product approx. £1,300 excluding civils, installation.	Approximately £3,000 total (£1,750 for bollard, c. £1,250 for installation).
Power	+ Standard Type 2 Sockets; + Dual outputs; + 3.6kW, 7kW or 22kW.	+ Standard Type 2 Sockets + Up to 7.7kW	+ Standard Type 2 Sockets + Pending ELEXON approval 7kW (based on Cityline 100)	+ Standard Type 2 Sockets + Up to 7.2kW	+ Standard Type 2 Sockets + 1-Phase = 3.7kW + 3 Phase = 11kW
Management Platform	+ BP Pulse platform (D2N2); + Can work with third parties, although this is not preferred.	+ Uses the char.gy platform, website: pay-as-you-go and subscription models.	+ Flexible, can offer 1 st Party or work with a 3 rd Party	+ Flexible, can offer 1 st Party or work with a 3 rd Party	+ Flexible, can offer 1 st Party or work with a 3 rd Party
In Current Use?	+ Supplier for the Go Ultra Low (GUL) D2N2 Network including on-street taxi rank in Nottingham City; + Also supply Highways England, have a network of chargers throughout the UK.	+ Supplier in London TFL Go Ultra Low Framework; and + Coventry City Council	- Not currently, product pending ELEXON approval expected Q1 2021.	Examples of EV products in use at: + Boston, Lincolnshire Borough Council (ROLEC based in Boston); + Croydon Borough Council.	+ Portsmouth City Council; + London, Transport for London Supplier.
Branding Options	+ Go Ultra Low (GUL) D2N2 Network	N/A	+ Yes	+ Yes	N/A
Other Notes	+ Existing supplier for the Go Ultra Low (GUL) D2N2 network (though NCC do not have to use this supplier).			+ Designed to be stored away when not in use.	+ This is a satellite bollard that requires a street lighting column power supply within less than 3m distance

Following this, an assessment was undertaken to determine where demand for on-street EV charging was likely to first emerge in Nottinghamshire. This was based on a logit model that was developed using demographic data, propensity to switch to renewable energy, and information relating to location of likely on-street parking within the County. This work allowed potential trial locations in a variety of places to be identified: urban conurbations, market towns, rural towns, and rural fringe.

Work was also undertaken to rank Local District Centres in terms of on-street charging serving commercial properties, and taxi ranks.

Innovation

AECOM developed a Logit model. The propensity for drivers to switch to electric vehicles is a developing area of academic research. There is therefore no standard approach to estimating this emerging market; however, the logit model developed by AECOM produced results that matched to the ad hoc requests for on-street charging that had been received to date from NCC.

Can this be applied to other MHA projects?

Lean Delivery / Efficiency Savings

n/a

Efficiency Savings:

Can this be applied to other MHA projects?

Sustainability

Enabling the switch to EV charging of the private vehicle fleet is a key part of the Government's Decarbonisation of Transport Strategy.

Awards / Customer Satisfaction

MHAPSP 3 360 degree Performance Feedback?

Overall score: 8.4

Address of Site

Nottinghamshire, UK

Multiple Site Project:

Project Capital Value (if applicable)

Estimated: n/a

At Completion: n/a

Fee Value	Estimated: £19,000	At Completion: £19,000
	See above.	
MHA PSP3 Delivery Team	Project Manager:	Ross Paradise
	Delivery Manager:	Daniel Godfrey
	Framework Manager:	Jason Clarke
Project Manager Contact Details	Daniel Godfrey daniel.godfrey@aecom.com	
Other Useful Information		
Image References (Images to be provided separately)	<input type="checkbox"/> Description & file name of any images provided n/a	
Completion Certificates (to be provided separately)	<input type="checkbox"/> Have we requested & are they available? n/a	
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