

## Appendix 2 Carbon Impact Assessment

### Rotherham Electric Vehicle Charging Infrastructure Expansion

Will the decision/proposal impact...	Impact	If an impact or potential impacts are identified			
		Describe impacts or potential impacts on emissions from the Council and its contractors.	Describe impact or potential impacts on emissions across Rotherham as a whole.	Describe any measures to mitigate emission impacts	Outline any monitoring of emission impacts that will be carried out
Emissions from non-domestic buildings?	No impact	-	-	-	-
Emissions from transport?	Reduces emissions	<p>Potential sites for the installation and commissioning of additional EV charging infrastructure have been chosen to facilitate the take up of electric vehicles by taxi/private hire operators and private individuals (both residential and public provision). These emissions are outside the scope of the Council's greenhouse gas emissions inventory and 'Net Zero 2030' (NZ30) emissions accounting.</p> <p>There will be a short term carbon impact from the Council's contractors, during the construction phase.</p>	<p>In 2021, car travel accounted for 20% of <b>all</b> greenhouse gas emissions in Rotherham, or ca. 54% of emissions from the transport sector. This project will encourage and enable conversion to EV by private motorists, businesses, taxi and private hire operators.</p> <p>For an average-sized car, the electricity used in a battery electric vehicle has a carbon footprint of 0.05 kg carbon dioxide equivalent per mile, or 30% of the carbon impact from a petrol or diesel car. As UK grid electricity is decarbonised through increased renewable generating capacity, the relative carbon</p>	<p>Transport aims to be minimised during construction phase through liaison with contractors.</p>	<p>Amount of EV charging will be monitored and recorded, to estimate the actual carbon saving from the Council's managed EV charging infrastructure. Between April 2019 and February 2022, an estimated 18.4 tonnes CO<sub>2</sub> emissions were avoided.</p> <p>Contractors will be required to report project emissions.</p>

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			impact of battery EV's is projected to fall to 10% of a petrol or diesel car by 2030, further decreasing to 3%, by 2040.		
Emissions from waste, or the quantity of waste itself?	No impact	-	-	-	-
Emissions from housing and domestic buildings?	No impact	-	-	-	-
Emissions from construction and/or development?	Impact unknown	There will be an initial impact from 'embodied' carbon emissions during construction, however these should be considered minimal over the project lifetime, compared with business as usual.	Minimal	Contractors will reduce emissions and environmental impact where possible.	Liaison with Council officers will include monitoring of activities to ensure minimal impact. Emissions from construction are currently excluded from the Council's NZ30 greenhouse gas emissions inventory.
Carbon capture (e.g. through trees)?	Nil	-	-	-	-
<p>Identify any emission impacts associated with this decision that have not been covered by the above fields:  Encouraging and enabling transition to Electric Vehicles (EV) will reduce emissions not only of carbon dioxide, but also of greenhouse gas emissions methane and nitrous oxide, and other pollutants such as NOx</p>					

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Please provide a summary of all impacts and mitigation/monitoring measures:

- Conversion of fossil fuelled transport to EV has a direct impact on reducing local CO2 emissions.
- Electricity used for EV Charging will be measured and reported using the Charge Point Management System (CPMS).
- Established conversion factors will be applied for carbon reporting purposes.

Supporting information:	
Completed by: (Name, title, and service area/directorate).	Andy Wilson, Energy Efficiency Officer, Asset Management Service, Regeneration and Environment
Please outline any research, data, or information used to complete this [form].	<p>Experience of delivering and managing existing solar EV Charge Point installations within the existing operational estate.</p> <p>GHG Emissions Conversion Factors 2023 (condensed set), Department for Energy Security and Net Zero</p> <p>Data Table 1, Greenhouse Gas Emissions in Appraisal (November 2022, the former Department for Business, Energy and Industrial Strategy)</p> <p>UK local authority and regional greenhouse gas emissions national statistics: 2005-2021, Department for Energy Security and Net Zero</p> <p>SCRTM1 Emissions Analysis (SYSTRA, 2022)</p>
If quantities of emissions are relevant to and have been used in this form please identify which conversion factors have been used to quantify impacts.	<p>CO2 Savings through conversion to EV calculated as follows:</p> <ul style="list-style-type: none"> <li>* Assumes fuel mix 50% petrol, 50% diesel</li> <li>* Usage 1kWh = 5km (3.1miles)</li> <li>* Average CO2 emission diesel: 160g/km</li> <li>* Average CO2 emission petrol: 173g/Km</li> </ul> <p>Source: Shell Recharge</p>
Tracking [to be completed by Policy Support / Climate Champions]	Tracking Reference: CIA 140

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