

# Limerick City & County Council

Electric Vehicle Strategy

December 2021

# Background

Decarbonising the transport and energy sectors is critical to transitioning to a carbon neutral economy.

In 2020 transport accounted for 17.9% of Ireland's greenhouse gas (GHG) emissions. Emissions from transport account for about 30% of the public sector's overall GHG emission.

At national level, increasing the number of electric vehicles ("EVs") on our roads is one of the Government's key interventions in the move to reduce fossil fuels energy consumption and GHG emissions. As such, the roll-out of charging infrastructure is critical in facilitating the increase in electric vehicles.

# National Targets

To deliver emission reductions by 2030, the level of ambition and supporting actions must increase and the rate of change must be significantly accelerated.

The Climate Action and Low Carbon Development (Amendment) Act 2021 commits Ireland to reach a legally binding target of net-zero emissions no later than 2050, and a cut of 51% by 2030 (compared to 2018 levels).

2021

Net-Zero

2050

2030

51% GHG emission reduction

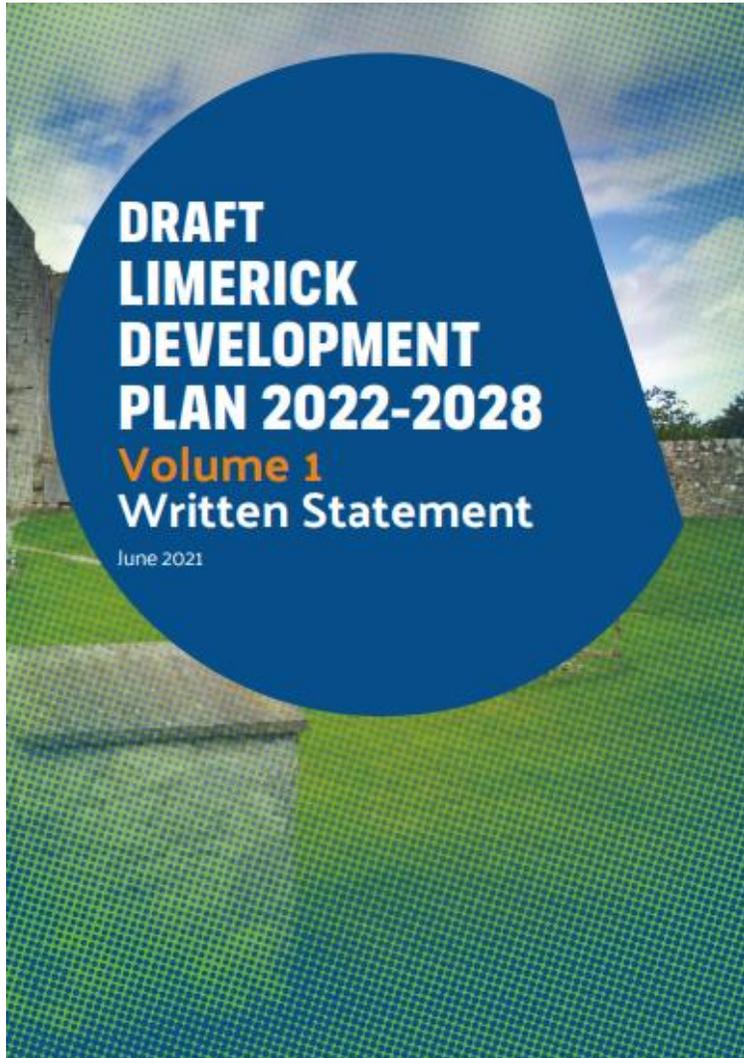
# Climate Action Plan 2021 - Targets for the Transport sector

- ▶ Provide for an additional 500,000 daily public transport and active travel journeys
- ▶ Develop the required infrastructural, regulatory, engagement, planning, innovation and financial supports for improved system, travel, vehicle and demand efficiencies
- ▶ Increase the fleet of EVs and low emitting vehicles (LEVs) on the road to 945,000, comprising of:
  - ▶ 845,000 electric passenger cars
  - ▶ 95,000 electric vans
  - ▶ 3,500 low emitting trucks
  - ▶ 1,500 electric buses
  - ▶ an expanded electrified rail network
- ▶ Raise the blend proportion of biofuels to B20 in diesel and E10 in petrol
- ▶ Reduce ICE kilometres by c. 10% compared to present day levels



# Climate Action Plan 2021 - Proposed Measures to Deliver Targets - Fleet Electrification

- ▶ The continued development of a reliable public charging network to stay ahead of demand, along with public investment to drive consumer confidence in the availability and reliability of public charging infrastructure.
- ▶ Ensure that additional electrical grid capacity is available to cater for this growing EV fleet.
- ▶ Offer a robust package of regulatory, taxation, engagement and subsidy measures to maintain a secure supply of models to our market in order to be able to compete with EU demand for supply of EV vehicles.
- ▶ Clear planning rules that facilitate the installation of EV charging stations, and increase the obligation, over time.
- ▶ Committing to transitioning the public transport fleet to low emission alternatives.
- ▶ Making conversion of fleets to EVs a central element of the mandate for all public bodies.



# Draft Limerick Development Plan

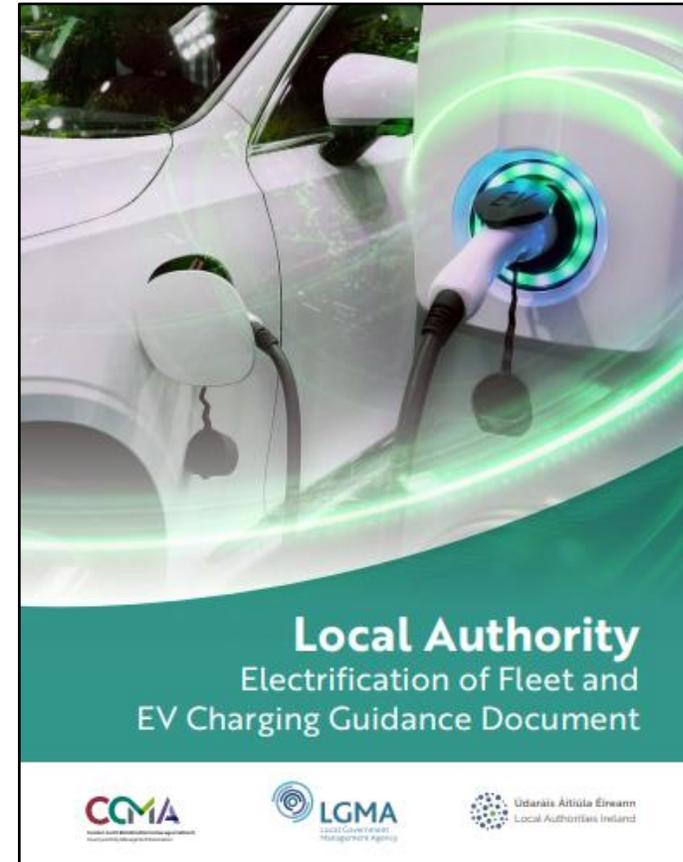
## Objective TR 026 Electric Vehicles

It is an objective of the Council to:

- a) Encourage the switch to Electric Vehicles and e-bikes through the roll-out of additional electric charging points at appropriate locations, throughout Limerick, in association with relevant agencies and stakeholders;
- b) Facilitate the provision of electricity charging infrastructure for electric vehicles, both on street and in new developments, in accordance with the Development Management Standards set out in Chapter 11.

# Local Authority Guidance Document

- ▶ In August 2021 the Local Authority Electrification of Fleet and EV Charging Guidance Document was published by the Local Government Management Agency (LGMA) on behalf of the County & City Management Association (CCMA).
- ▶ The document was prepared to provide information and recommendations for local authorities on the electrification of the LA fleet and the provision of public EV charging infrastructure.
- ▶ The document will also assist Local Authorities in developing their own Electric Vehicle Strategy



# Key Elements of the Guidance Document

The principle scope of the document is to assist LAs on emissions reduction.

The guidance document identifies two important areas where local authorities can make a significant contribution to the national decarbonisation effort:

- ▶ Electrifying the LA fleet (where technology, cost differential and resources allow; and
- ▶ Assisting with the provision of EV charging infrastructure.

# Role of the Local Authorities

## Championing EV fleets and charging infrastructure

- LAs can lead on the national climate action ambition for decarbonisation by electrifying their LA fleet, where feasible, and by providing infrastructure within LA areas to promote EV use and ownership, as well as reduce emissions.

## Electrification of the LA fleet

- Transitioning the LA fleet to EVs, especially the lower-powered vehicles like cars and vans, will contribute to reduced energy costs and lower GHG emissions by the sector.

## EV charging points

- LAs are in a position to lead in bridging the gap in the lack of charging infrastructure, to kickstart the roll out of electric charging facilities by assisting in increasing the number of EVCPs within their county and regional areas.

# Role of the Local Authorities

## Short term

- Each LA should consider the development of an EV and EVCP strategy for the deployment of EVs as part of their fleet and to assess the optimum locations of public EVCPs within their city and county boundaries.

## Medium to longer term

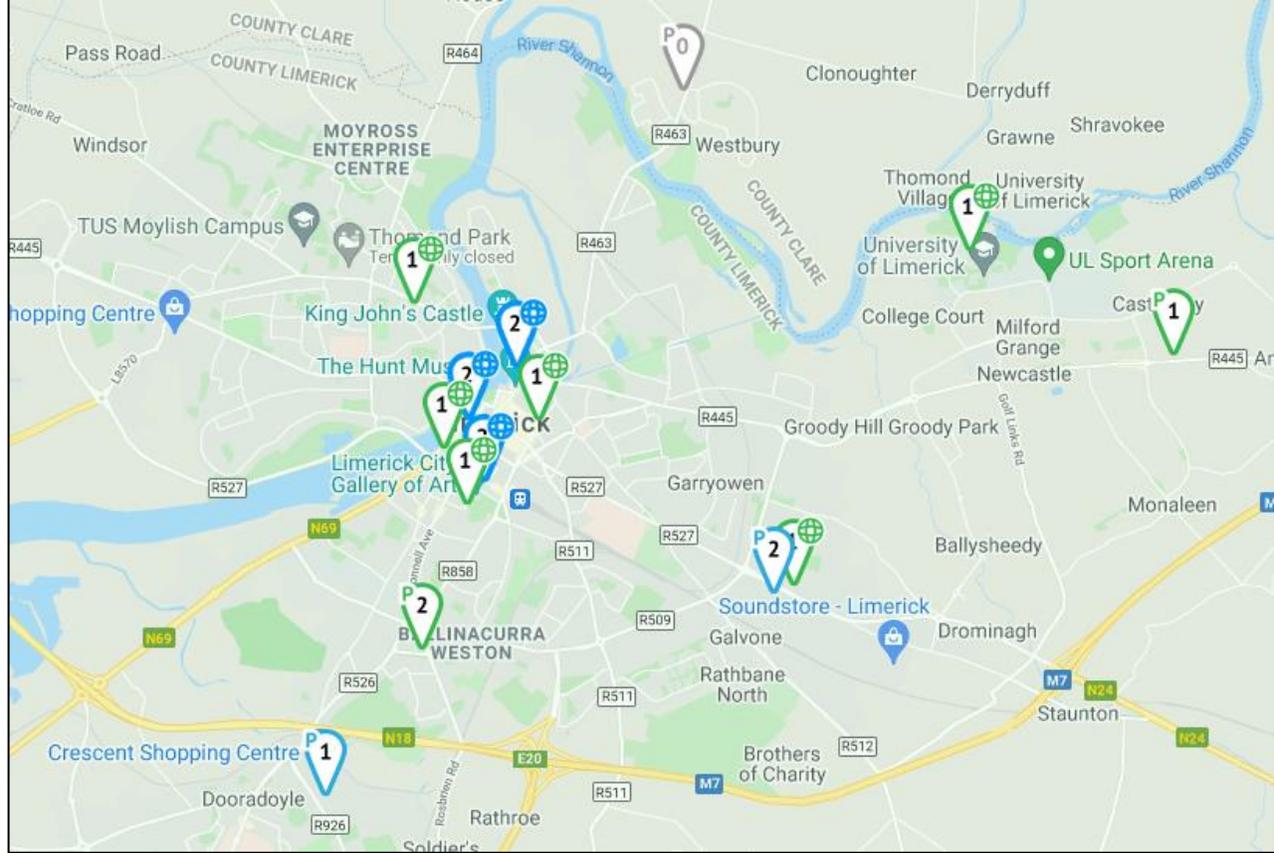
- The role of LAs will likely graduate to provide support and assistance to EVCP operators in the operation and maintenance of installed public charging facilities.

# Electrification of the LA Fleet

- ▶ **Procurement** - The OGP has drawn up fixed price procurement frameworks for the supply of long and medium range battery electric passenger cars and vans for public sector bodies.
- ▶ **Cost** - EV alternatives for small cars/vans are readily available, cost effective alternatives for larger heavy-duty vehicles are not widely available at comparable price points.
- ▶ **LA Fleet EV Charging Infrastructure** - Transitioning the LA fleet with EVs will necessitate the installation of charging points. This can be facilitated at depots, staff car parks, machinery and maintenance yards.
- ▶ Through the development of the LCCC EV Strategy the installation of EV Charge Points for the LA Fleet will be planned in order to optimise the setup. Will need to identify locations, determine power requirements, charger types, etc.

# Public EV charging infrastructure

- ▶ Through the development of the Limerick EV Strategy an **assessment of the need** for the infrastructure will be carried out. This will include mapping existing charger locations, examining current usage, modelling likely demand, drafting design for on-street chargers.
- ▶ **Planning Considerations** - Policy support in Draft Limerick Development Plan. 2021 Planning and Development Regulations - specified EV charging infrastructure exempt from the requirement to obtain planning permission.
- ▶ **Bye laws** - The installation of EV infrastructure may require the amendment of existing parking bye laws and/or the stipulation of new bye laws.
- ▶ Consideration of **business models** for operation of EVCPs - can range from a LA led approach, where LA has a significant involvement in siting, constructing, managing and maintaining the EV charging infrastructure, to a more market led approach where the provision of EVCPs would essentially be left to market forces.



# Existing Charger Locations

Map showing existing locations

# Types of Chargers

EV charge points can be broadly categorised as slow/standard charging (AC) and fast charging (DC).

Standard charging is most suitable for locations where a vehicle will be parked for periods in excess of 1 hour. While fast charging is where a driver may only want to be at the charge point for as short a time as possible, often only 20-30 minutes.

Standard charge points have a typical output of between 7.2kW - 22kW. Some can deliver up to 43kW.

Fast charge points are commonly configured for up to 50kW, however higher power ratings are also available.

# Examples of Chargers



# Characteristics of Different Chargers

<b>3-7kW AC lowest costs</b>	Suitable for residential and commercial charging	On-street or car parks	The upper limit (AC) for many vehicles	Least strain on available electricity infrastructure
<b>22kW AC medium costs</b>	Suitable for residential and commercial charging	On-street or car parks	Allows a faster charge to a limited number of vehicles accepting this level	Fewer charge points possible to a given electrical connection
<b>~50kW DC high cost</b>	Suitable for charging between approx. 30 minutes and 1 hour	Large form factor makes it less suitable for on-street	Vehicles should vacate charge point as soon as charging is complete	Compatible with vast majority of vehicles

# Cost

- Costing varies by location and charger type.
- Infrastructure and civil works have the highest project costs.

## Laois County Council

**EVCP description:** 22kw dual port EV charger

Total cost: approx.  
**€30,536.00 ex vat**

- Equipment charge: €4,500
- Civil / installation costs: 100mm 2 way ducts – €17,000 approx. to bring power from the nearest mini pillar
- New connection and upgrade from single to 3 phase including ESB service pillar and chamber: €8,000 approx.
- Protective post and socket and lining: €1100

## Dun Laoghaire Rathdown County Council

**EVCP description:** 1 x 7kW Smart Pole charger

**Total cost: approx. €14,000**

- Equipment: € 6,500 included lighting column EV charger and back office website managed by contractor.
- Civil/installation costs: approx. €7,000, ducting, traffic management, painting of car parking space and miscellaneous.
- No connection ESB & supply pre-existing metered supply with additional capacity.

# Funding

- ▶ The SEAI is administering a Charge Point Grant of €5k grant per charger
- ▶ A funding stream may be available through the Department of Transport for partial funding.
- ▶ We will explore other additional funding to supplement the costs.

# Next Steps

- ▶ Draft LCCC EV Strategy
  - ▶ Engagement with stakeholders including ESB Networks, Bus Operators, Delivery Operators, Manufacturers, Retail Providers, Car Park Owners.
  - ▶ Examine public EV Charging needs for Limerick and how should be achieved.
- ▶ Electrification of the LA Fleet
  - ▶ Develop a pilot programme at the Park Road Depot - Q1 2022
- ▶ Public EV Charging Infrastructure
  - ▶ Examine existing and undertake assessment of needs (identify potential locations for development / pilot).