



Rialtas na hÉireann
Government of Ireland

zevi Zero Emission
Vehicles Ireland

Universal Design Guidelines for Electric Vehicle Charging Infrastructure

Executive Summary

May 2024



Introduction

Zero Emission Vehicles Ireland (ZEVI), an office of the Department of Transport, has developed the Universal Design Guidelines for Electric Vehicle (EV) Charging Infrastructure (also referred in this document as ‘the Guidelines’ or ‘the Universal Design Guidelines’) to support the [National Electric Vehicle Charging Infrastructure Strategy 2022-2025](#) and its commitment to delivering a national EV charging network across the country.

These Guidelines encourage anyone associated with the installation or operation of the EV charging infrastructure to adopt the Universal Design principles but recognise there may be real-world limitations in some instances. In locations such as quasi-home charging at on-street neighbourhood charging stations, not all the recommendations proposed in these Guidelines may be achievable. Further guidance in relation to Site Selection and Design at these locations and the appropriate infrastructure and mitigation measures to be adopted will be provided to local authorities.

These Guidelines are not legally binding but are provided as technical assistance to help entities design, install and operate EV charging infrastructure that is accessible for everyone. However, European Standards (EN), Irish Standards (I.S.), and Irish Statutory Instruments (S.I.) should be adhered to when applicable.

What is Universal Design?

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size or disability. This includes public places in the built environment such as buildings, streets or spaces that the public have access to; products and services provided in those places; and systems that are available including information and communications technology (ICT).



Why are the Universal Design Guidelines required?

The public network of EV chargers should be accessible to everyone. In Ireland, there are currently no specific guidelines that provide Universal Design recommendations for the design, installation and operation of EV charging infrastructure.

To address this issue, Universal Design Guidelines for EV Charging Infrastructure have been developed. These Guidelines aim to make EV charging infrastructure accessible to all users, summarising key considerations when designing, installing and operating EV charging infrastructure.

How were the Universal Design Guidelines developed?

To develop these Guidelines, Zero Emission Vehicles Ireland (ZEVI) progressed through two phases:

1. Initial review, stakeholder engagement and publication of the Guidelines; and
2. Analysis of public consultation responses, further engagement and drafting of the Guidelines.

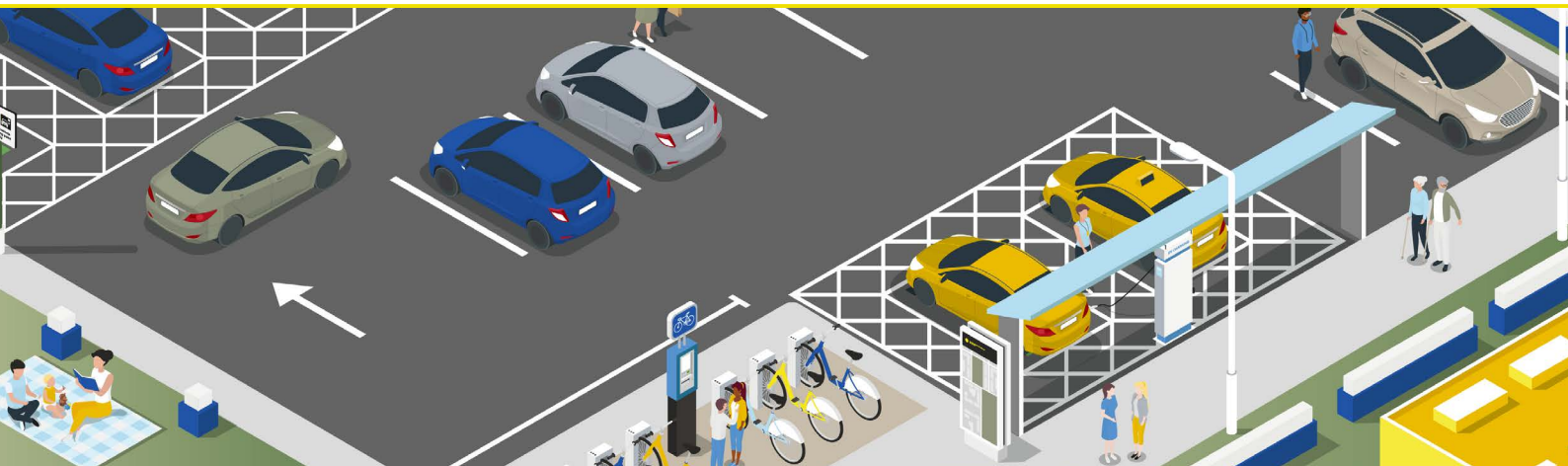
Stakeholder engagement was crucial along the entire process, and ZEVI worked with subject matter experts, EV user groups, disability associations (with a particular focus on Disabled Persons Organisations), and other stakeholder groups to develop this document.

The purpose of this engagement has been to:

Involve key stakeholders from the early stages in the development of the document.

Gather additional information on EV charging infrastructure requirements based on user experiences and needs.

Obtain feedback and agreement on the content of the Guidelines.



What topics do the Universal Design Guidelines cover?

The Universal Design Guidelines focus on accessible electric vehicle charging infrastructure (fast and slow) for light passenger vehicles and aim to ensure that charging stations are designed to be inclusive for all users.



These Guidelines present recommendations for the following:

Charging Station Design

This includes the design and component specifications of accessible charging station infrastructure and their immediate surroundings.



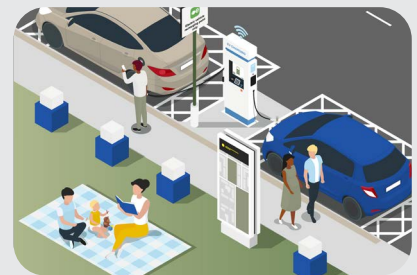
Site Design

This includes the physical aspects of the environment surrounding the charging station including its location, placement and spacing of the charging station



Information and Communications

This includes the information and communications (physical and digital) a user has access to before, during, and after a charging process.

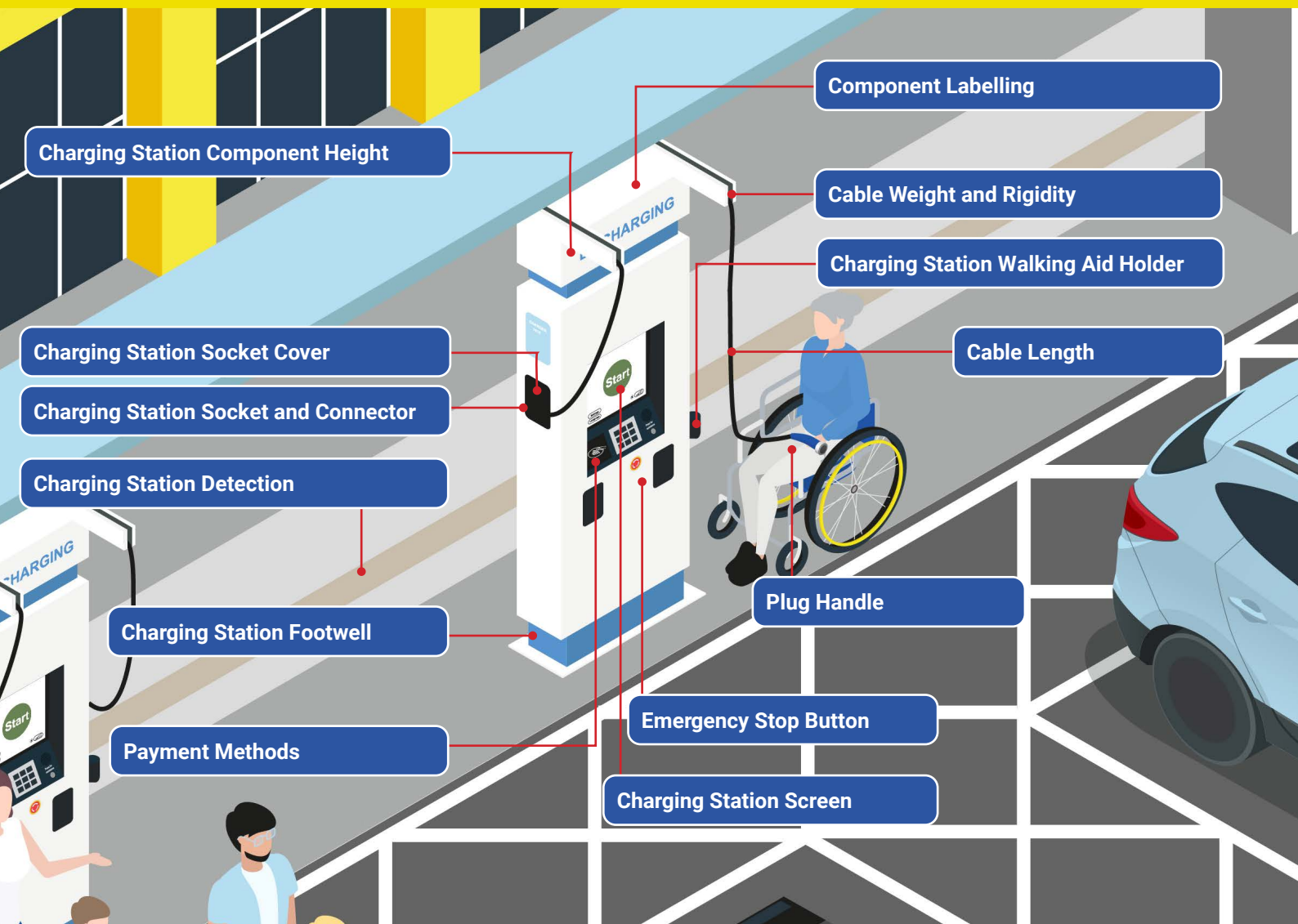


For each of the elements covered across the three sections, ZEVI has proposed a recommendation based on European Standards (EN), Irish Standards (I.S.), Irish Statutory Instruments (S.I.), national and international best practice and research. Each recommendation is accompanied by corresponding references to these standards and research sources.

Charging Station Design

This section covers aspects related to the Universal Design of the charging station components. These Guidelines will ensure a cohesive and consistent design approach is taken to charging stations across Ireland making them easy to use. This section will also help manufacturers and procurers of charging infrastructure in identifying minimum user requirements for charging station hardware.

Elements for Charging Station Design



Site Design

This section covers aspects related to the Universal Design of the environment around the charging station. These Guidelines will assist planners, designers and installers of electric vehicle (EV) charging infrastructure in developing more universally designed spaces. This section will enhance the user experiences of both EV drivers and passengers as well as other road users.

Elements for Site Design



Information and Communications

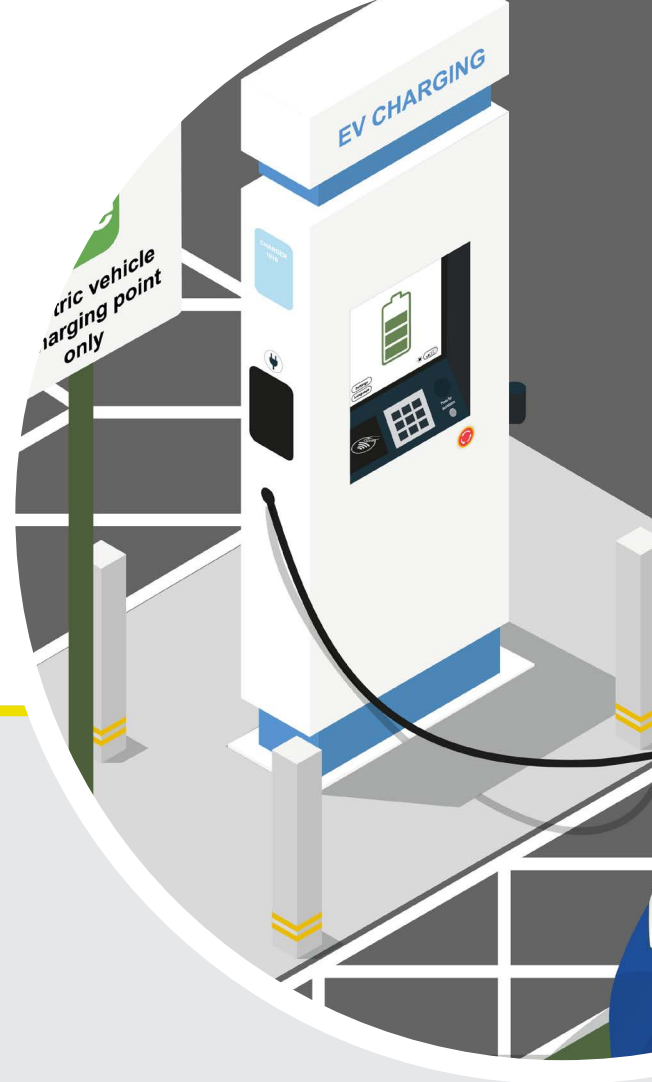
This section covers aspects related to the information and communication associated with the electric vehicle (EV) charging process. These Guidelines will contribute to improving user awareness and experience before, during and after recharging. Additionally, this section will support charge point operators and government organisations in ensuring that clear, consistent and accessible information is available to the public.

Elements for Information and Communications

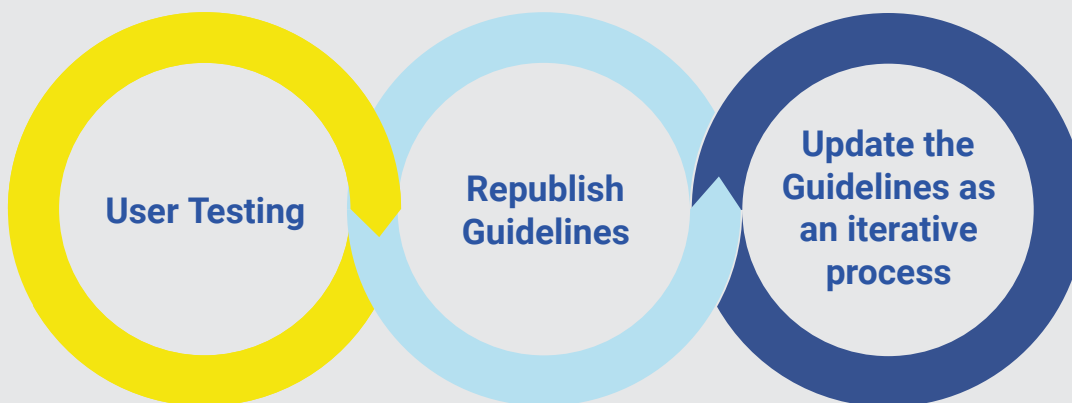


What is next?

The Universal Design Guidelines provide a continuing framework for expanding access to more inclusive charging infrastructure across Ireland.



To ensure accessible electric vehicle charging infrastructure, and build on these Guidelines, the following actions are now proposed:





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