

Agenda Item	12
Report No	ECI/47/21

THE HIGHLAND COUNCIL

Committee: Economy & Infrastructure

Date: 2 December 2021

Report Title: Consultation Response – Building Regulations: Energy Standards – EV Charging Provision

Report By: Executive Chief Officer Performance & Governance

1. Purpose/Executive Summary

1.1 The Scottish Government has consulted on Electric Vehicle Charge Points for New Residential and Non-Residential Buildings as part of a wider consultation entitled 'Scottish Building Regulations: Proposed changes to Energy Standards and associated topics, including Ventilation, Overheating and Electric Vehicle Charging Infrastructure. This first part considers future EV Infrastructure when an application is made to Planning and Building Standards, covering domestic and non-domestic buildings whether new-built or refurbishment. This report summarises the Council's response to the consultation.

2. Recommendations

2.1 Members are invited to homologate the response to this consultation.

3. Implications

3.1 **Resource** – there are no resource implications arising from this report.

3.2 **Legal** – there are no legal implications arising from this report.

3.3 **Community (Equality, Poverty, Rural and Island)** – there are no direct community implications arising from this paper. However, issuing this response demonstrates the Council's commitment to transport decarbonisation within the region and the positive benefits of ensuring an improved EV network for residents in Highland.

3.4 **Climate Change / Carbon Clever** – there are no direct climate change implications arising from issuing this consultation response. However, a change in Scottish Government Guidance when applying for planning or building standards applications

will benefit the climate by promoting transport decarbonisation and localised transport strategies.

3.5 **Risk** – as the need for EV infrastructure increases, there will likely be pressure on the Council to take action which may require additional resources to meet the commitments.

3.6 **Gaelic** – there are no Gaelic implications arising from this report

4. Background

4.1 This consultation from the Scottish Government is to consider further improvements to the technical standards set within the Building (Scotland) Regulations 2004 to limit greenhouse gas emissions and energy use, both in new buildings and where work to existing buildings takes place. The review considers the technical, commercial and wider policy implications of improvements to energy standards and offers proposals, as part of broader action by the Scottish Government on climate change, to further the ambition to achieving net zero emissions by 2045. A key aspect of the consultation relates to proposals on the provision for electric vehicle charging infrastructure or facilities in buildings, and the Council's response to this element is the focus of this report.

4.2 This paper briefly summarises the consultation and provides the response at **Appendix 1**, which was submitted to the Scottish Government by officers ahead of the EV Infrastructure deadline of 26 November 2021. Consultation supporting documents can be found here: <https://www.gov.scot/publications/scottish-building-regulations-proposed-changes-energy-standards-associated-topics/pages/7/>.

5. Consultation Summary - Energy Standards – EV Charging Provision

5.1 The transport sector is the largest emitter of greenhouse gases in Scotland, accounting for 29% of all emissions in 2019 with road transport making up the majority of those emissions at 66%. The Scottish Government's Climate Change Plan update (CCPu), published last December, set out the pathway to meet Scotland's statutory greenhouse gas emission reduction targets by 2032. This includes an aim to phase out of the need for new petrol and diesel cars, and vans by 2030.

5.2 The transition to Electric Vehicles (EVs) will contribute significantly to these goals and, with demand for EVs growing rapidly, the Scottish Government want people to have access to convenient and reliable EV charging infrastructure at home, at work and when out and about.

5.3 The consultation aims to gather views to help inform the requirements the Scottish Government intends to set out in legislation and to develop supporting guidance for the installation of EV charge points and enabling infrastructure in residential and non-residential buildings going forward.

5.4 The consultation makes several proposals which can be summarised as follows:-

- Establishing guidance for the installation of EV charge points and ducting infrastructure in parking spaces for new residential and non-residential buildings;
- All new residential buildings with a parking space to have at least one EV charge point socket of minimum 7kW output power rating (exemptions would apply);

- For residential buildings with more than 10 car parking spaces, ducting must be installed in each space to support future installation of an EV charge point (exemption applies where the cost of installation exceeds 7% total renovation cost);
- New non-residential buildings with more than 10 car parking spaces; 1 in every 2 spaces must have ducting installed and 1 in every 10 must have an EV charge point socket installed with minimum 7kW output rating;
- Non-residential buildings undergoing major renovation; 1 in every 2 must have ducting installed and 1 in every 10 must have an EV charge point socket with minimum 7kW output rating. Exemption where cost exceeds 7% of total renovation cost;
- By 1 January 2025, existing non-residential buildings with more than 20 parking spaces - 1 in every 2 spaces must have ducting installed and 1 in every 10 must have an EV charge point socket installed with minimum 7kW output rating.

5.5 The consultation also sought views on the following:-

- Preferred options relating to non-residential buildings with car parks of more than 20 spaces and how this could be properly monitored and enforced;
- Proposed provision for charge points at accessible parking spaces; and
- Proposed exemptions

6. Submitted Council Response

- 6.1 The Council's response was drafted by officers from Climate Change & Energy Team and Planning & Building Standards. The response considers the challenges faced within Highland being a rural location with many electricity supplies requiring upgrading, and it is therefore recognised that the recommendations being presented are likely to come with a significant cost to many parts of the region. The response provides comments and questions around how the guidance would be enforced, queries whether there would be funding for developers, businesses and organisations installing the infrastructure as part of a new or renovation application, and the benefits of installing infrastructure and ducting for future provision.
- 6.2 The response highlights that affordability of installing infrastructure is a concern. The response also challenges the Scottish Government's strategy to go further in its commitment to decarbonise the transport industry by promoting active travel, rather than only focussing on a direct transition from petrol/diesel vehicles to electric.
- 6.3 As noted in section 5 above, the Scottish Government structures its action on future EV infrastructure around five key areas and asks for comments on their actions under these. The main points or issues arising from the response, can be summarised as follows:-
- There is a question as to whether Building Standards will require the actual charging unit to be installed, and if so, would charge points be standard across all vehicle types. As a potential solution, if only cabling is required, this would allow provision to be more flexible and allow the end user to supply what they require (e.g., EV car, e-bike, electric wheelchair).
 - Further consideration from the Scottish Government is required where the cost and arrangement of installation is currently a disincentive to EV adoption, and particularly how this could be supported and subsidised.

- It is unclear from the consultation document as to which body would be required to retain maps of duct routing in the future as well as where responsibility of adding additional chargers on communal spaces would sit.
- In terms of further support for existing non-residential buildings, the suggested provision goes beyond the current Building Standards regime and would presumably require separate legislation to enact.
- It is unclear where monitoring and enforcement would fall under the proposed changes e.g., the Council can currently enforce and monitor parking within its own estate, but not private sector.
- The design and cost tolerances for future installation provision are a concern within Highland and it is anticipated that costs will exceed 7% of total major renovation costs. Clarification is sought on the definition and scale of the term 'major renovations'.
- It would be beneficial to ensure that sufficient systems, education, and resources are in place to ensure correct use of EV charge points in any future strategy.
- Clarification from the Scottish Government is sought on the promotion of active travel and active communities, to reduce vehicles overall therefore better promoting active lifestyles.

7 Next Steps

- 7.1 The Scottish Government will review responses to the consultation and the issues raised during engagement with stakeholders, to inform development of the final version of the proposed changes to published standards and guidance set under Building Regulations, which it is anticipated will be published in 2022.

Designation: Executive Chief Officer Performance & Governance

Date: 1 November 2021

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Response to the Scottish Government Scottish Building Regulations: Proposed Changes Consultation

Consultation documents:

<https://www.gov.scot/publications/scottish-building-regulations-proposed-changes-energy-standards-associated-topics/pages/7/>

Comments on EV Charging Infrastructure raised during webinars and consultation question format detailed below.

Consultation Questions:

1. What are your views on our policy goal to enable the installation of electric vehicle (EV) charge points and ducting infrastructure (to facilitate the future installation of EV charge points) for parking spaces in new residential and non-residential buildings parking?

Please provide a summary of your views below:

Scotland is faced with a considerable challenge of reducing its carbon emissions from transport. It is clear that Electric Vehicles are expected to have a major part to play overall, which in turn will require a considerable increase in charging infrastructure. The Highland Council welcomes the fact that Scottish Government is considering means of achieving this transformation at scale. The fact that this is being considered for addition to Building Standards is welcomed in broad principle as it has potential to establish it as part of a standard rather than merely having a 'planning policy requirement' where full compliance with any one policy is not guaranteed and is subject to multiple policy considerations and each case on its merits.

Notwithstanding this, The Highland Council has some concerns. Whilst noting that the proposals for new residential buildings logically only require EV charge point socket(s) to be installed in the case of dwellings that have (car) parking space(s), it could be counter-productive if the proposed standards are applied nationally in the currently proposed 'simple' form. This could play a role in continuing to embed car use for decades to come, even in places where there is potential to create or transform to ones with much less dependence on the private car. The case and concern is particularly strong in urban areas. Car travel (regardless of whether EV or combustion engine) is at the bottom of the sustainable transport hierarchy and the National Transport Strategy is clear about priorities particularly in urban areas. The proposed change to Building Standards seems to focus on promoting and enabling car ownership and travel rather than also pursuing other measures in the interest of reducing travel and achieving modal shift. Seen in isolation, it could sustain demand for and continued growth in private car ownership. It is vital that this is not the sole focus of the country's strategy.

The Highland Council is currently developing its Transport Strategy for the region's most populated area, the Inner Moray Firth, informing the review of the Local Development Plan. In the Inner Moray Firth area, the majority of the region's housing needs will be met in existing towns and the City of Inverness. This strategy reflects the need to reduce car-dependence and ensure that people are able to live in the healthiest, most sustainable way possible, including not having to rely on the use of a car for everyday journeys. Through this work it has been essential that the modal hierarchy set out in the National Transport Strategy can be achieved.

Whilst this hierarchy is most compatible with urban areas, it is also deliverable in the Inner Moray Firth area, which has a range of rural, semi-rural and urban settlements. The Council's approach acknowledges the role of EV private cars and charging for those at homes (and at mobility hubs) in rural areas, whilst seeking much less dependence on private cars of any type within the city of Inverness. The particular needs of those who need to travel by car in urban areas, for mobility or work-related reasons must be accommodated, but it should be done in a focused, limited way that does not generate an unintended consequence of a largescale shift to EV (a perceived sustainable travel behaviour) in urban areas. This is important because cars support an inactive lifestyle and negatively impact on safety and quality of places, whilst also taking up a lot of the available public space between buildings, typically to move a single person around. Moreover, in most circumstances increased car use leads to congestion which, despite fuel source, has further negative impacts on quality and sense of place, as well as safety and efficiency of the wider transport network.

Highland is looking to follow Transport Scotland's modal hierarchy, including particularly significant shift for urban areas: the case for doing so must be as strong or stronger in the country's larger urban conurbations where much of the development to which the proposed Building Standards would apply.

The Scottish Government, if it continues to pursue EV infrastructure in Building Standards, should consider whether there needs to be additional exceptions/exemptions, for example for developments that fall within a particular category of urban area or travel zone, perhaps identified through the Local Transport Strategy and/or Local Development Plan, where there is a specific strategy to create or transform to a place where there will be little or no need to possess a private car. That would of course require a degree of certainty over the package of measures that would be in place instead e.g., individual property based and communal charging for electric bikes, wheelchairs and mobility scooters, 'mobility hubs' with (electric) car and bike share schemes, public transport and active travel connections. With sufficient confidence in the delivery of such place and of substantially reduced car dependence and ownership, it is argued that EV car charging infrastructure need not be sought as a matter of course.

2. What are your views on the following preferred options?

Building Type	Scottish Government preferred options
New residential buildings	All dwellings with a parking space to have at least one EV charge point socket with minimum 7kW output power rating
	Exemption to requirement to install EV charge point if additional cost of electricity grid connection exceeds £2,000.
	If exemption applies, ducting infrastructure to be installed in each car parking space.
Residential buildings undergoing major renovation	For buildings with more than 10 car parking spaces, ducting to be installed in each residential car parking space to support the future installation of an EV charge point.
	EV charge point sockets to be installed, with minimum 7kW output power rating, in as many residential car parking spaces as the electrical capacity of the building post-renovation allows.
	Exemption applies if the cost of installing recharging and ducting infrastructure exceeds 7% of total major renovation cost.
New non-residential buildings	For buildings with more than 10 non-residential car parking spaces, <ul style="list-style-type: none"> - 1 in every 2 non-residential parking spaces to have ducting installed and - 1 in every 10 non-residential parking spaces to provide an EV charge point socket with minimum 7kW output power rating.

Non-residential buildings undergoing major renovation	For buildings with more than 10 non-residential car parking spaces, <ul style="list-style-type: none"> - 1 in every 2 non-residential parking spaces to have ducting installed and - 1 in every 10 non-residential parking spaces to provide an EV charge point socket with minimum 7kW output power rating. Exemption applies if the cost of installing recharging and ducting infrastructure exceeds 7% of total major renovation cost.
Existing non-residential buildings	By 1 January 2025, for buildings with more than 20 non-residential car parking spaces, <ul style="list-style-type: none"> - 1 in every 2 non-residential parking space to have ducting installed and - 1 in every 10 non-residential parking spaces to provide an EV charge point socket with minimum 7kW output power rating.

In residential properties, it is not clear whether the proposed Building Standards require the actual charging unit to be installed; or whether charge points will be standard across all cars. If just the cabling run is required, this could leave the provision more flexible, allowing the end user to use the supply for whatever they require (e.g., EV car, bike, electric wheelchair, mobility scooter, etc). If the cost and arrangement of installation of the charging unit (when required) could be a disincentive to EV adoption, consideration could be given separately by The Scottish Government to how this could be supported and subsidised.

Once communal parking chargers are installed in housing schemes, it is unclear whether the units are meant to be adopted by the Council as they are within the adopted road. If so, is there an agreed list of acceptable makes/models & inspection regime set up to control/manage) and if one is damaged would the Council be responsible for making safe/replacement. There are also questions around who pays for the electric; whether it would be part of the site factoring (assuming there is one); how and when the passive provision is activated; and how ownership of shared duct chambers is to be managed.

Clarity is needed around who would retain maps of the duct routing (Council, factor or developer) in the future; and who would be responsible for adding additional chargers on communal spaces (THC or individual property owners) - noting this could involve working within the adopted road; Consideration needs to be given to whether this would be cost prohibitive for individuals.

The regimes outlined for 'Existing non-residential buildings' to install EV plant regardless if building work is undertaken, goes beyond the Building Standards regime and would therefore, presumably, need separate legislation to enact (similar to the DDA regs and smoke alarm regs).

3. Do you agree with the Scottish Government's preferred options for the exemptions as set out below?

Exemption	Scottish Government preferred options
Buildings owned and occupied by SMEs.	No intention to apply.
Building permit applications or equivalent applications have been submitted by 10 March 2021.	Not applicable as date of exemption has passed.
If ducting infrastructure required would rely on micro-isolated systems and if this would	No intention to apply.

Exemption	Scottish Government preferred options
lead to substantial problems for local energy system operation and endangering grid stability.	
Cost of recharging and ducting infrastructure exceeds 7% of total major renovation cost.	Apply to both residential and non-residential buildings undergoing major renovations.
A public building is already covered by comparable requirements according to transposition 2014/94/EU.	No intention to apply.

If no, please explain why you disagree below:

The requirements around the exemptions bring a whole new realm into Building Standards and typically one which is not considered at that stage – we are not aware of small-scale developers/householders contacting the electricity supplier to ascertain grid capacity as part of the Building Standards regime. Also, this process could add significant delay to the system and assumes the Council has the technical knowledge to consider.

Within Highland, it is likely the cost will exceed 7% of total major renovation cost due to the enhanced cost of upgrading substations or networks. Clarity is needed on what would be classed as ‘major renovations’ to a building. It could be suggested that if the renovations in a building are granted and electricity supply is needed or being upgraded, ducting should be installed at this stage also.

4. What are your views on how our preferred option relating to existing non-residential buildings with car parks with more than 20 spaces could be properly monitored and enforced, given that the Building (Scotland) Regulations will not apply?

Please provide a summary of your views below:

The monitoring and enforcement of EV charge points will be a challenge. Sufficient systems, education and resources will need to be in place to ensure correct EV charge point use – whether that be to seek to avoid and otherwise address hogging or blocking, or misuse of accessible charge points.

It is unclear under whom would the monitoring and enforcement would fall. Local Authorities can enforce and monitor car parking within their estate, but not private. This could initiate a further push-back from private owners to install infrastructure, and therefore monitor/enforce.

The regimes outlined for ‘Existing non-residential buildings’ to install EV plant regardless if building work is undertaken, go beyond the Building Standards regime and would therefore, presumably, require its own legislation to enact, which would also require its own entirely separate consultation exercise in order to ensure that all of the relevant stakeholders are targeted (it is suggested that the current consultation will not have done so). Given this, it has to be questioned the merits of this proposal being included within this Building Standards Consultation.

5. What are your views on the proposed provision for charge points for accessible parking spaces? Do you have examples of current best practice for the provision of charge points for accessible parking spaces?

Please provide a summary of your views and any relevant information below:

Accessible spaces have 1.2m hatched rest areas on all sides of a 2.4x4.8m parking space, allowing circulation around the vehicle and between it and the charger. The central hatched area could be slightly wider, or the device set back further and with flush foundations.

At present there is guidance for the number of parking spaces required for any new building with a percentage allocated as accessible parking. In some case spaces need to be allocated to dwellings with a number of unallocated visitor spaces. If spaces are now being allocated to EV charging, will the Council need to ask for these as additional spaces over and above the required spaces or would some of the required spaces to EV need to be re-allocated. The concern is that the number of parking spaces available for general non-EV use is being reduced. As best practice, the Council tries to ensure that there are sufficient accessible bays where new EV charge points have been installed.

6. We welcome any other comments you may wish to make on EV charging provision (e.g. the minimum standard of EV charge point or safety within the built environment).

Please provide your comments below:

- Grid reinforcement costs can be significant, and this has a direct impact on the feasibility of EV infrastructure. In order to maximise the number of charge points, dynamic load management (DLM) could be considered. These standards specify charge points with a minimum 7kW output power rating, however it may be worth considering DLM and lowering this to charge points with a capability of 7kW.
- For existing non-residential buildings, the installation of EV charge points may result in significant layout changes to existing car parks (e.g. bay realignment, footpath, kerbing and street furniture) and this will have financial and environmental impacts. It is worth considering the expansion of the wider public network and whether the retrofit of existing buildings will be required in all areas.
- For rural, remote areas, could a caveat be included such as 'where reasonable and practical in design terms, not cost terms'. In rural areas, the percentage of residents with off street parking is higher, so work-place need is less; this could feed into a wider transport strategy of better public transport whilst installing for provision of those still requiring private transport.
- Is there going to be grant funding or will the installations be funded by the relevant party? i.e. business owner, new-build company.
- How will costs and design tolerances be interpreted where an island or very remote rural location is concerned? Should there be a percentage based upon the rural classifications (<https://www.arcgis.com/apps/Cascade/index.html?appid=5995961d1100460e9e756aceda84e633>) that allow Highland Council to be considered for in this respect. The region covers both island and mainland; but the mainland often suffers from costs generally associated with island living i.e. premiums on networks, upgrades etc.
- Who will run and maintain the infrastructure? And therefore, if private or public land is sold, does the ducting and any infrastructure associated become the buyer's?