



Cross Pavement Solution Pilot

Use of a cable cover for EV charging at homes without a driveway



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Decarbonising our Transport System

Transport is the second largest emitting sector in Northern Ireland. Decarbonising our Transport System is a core element of both the Executive's Energy Strategy and the Climate Change Act (NI) 2022 which sets the legal target for net-zero greenhouse gas emissions by 2050. The transition from diesel and petrol vehicles towards zero-emission vehicles is recognised as one of the key measures that will assist in achieving net zero in the transport sector.

In October 2024, the Northern Ireland Assembly approved/passed the amendment for the Vehicle Emissions Trading Scheme Order 2024. This scheme is designed to encourage the sale of zero-emission vehicles and aligns with the UK Government's commitment to end the sale of new petrol and diesel cars and vans by 2035. From that date, all new cars and vans must be zero-emission at the tailpipe. The legislation came into effect on 1 January 2025 and requires vehicle manufacturers to sell an increasing proportion of zero-emission cars and vans each year—reaching 80% for cars and 70% for vans by 2030.

The transition to electric vehicles (EVs) is a multi-decade journey. The Department is not asking people to buy an EV immediately but rather encouraging them to consider one when they naturally come to replace their car.



Purpose and Scope of the Pilot

Electric Vehicles:

As of December 2025, there were more than 1.3 million registered vehicles in Northern Ireland. Of these, 4.23% (48,400) are Battery Electric or Hybrid (EV) vehicles, including 44,444 cars.

Numbers are expected to continue rising following the introduction of the Zero Emission Vehicle (ZEV) Mandate and the Vehicle Emissions Trading Schemes (VETS) (Amendment) Order 2024, which came into effect in January 2025 and supports the phased transition away from petrol and diesel vehicles to 2030/2035.

Charging your EV at home:

Home charging remains the most cost-effective option for EV owners in Northern Ireland. It is estimated that throughout Northern Ireland approximately 80% of current and potential EV owners have access to a driveway or other curtilage suitable for home charging. However, around 20% (approximately 4,800 EV owners, or 2.3 in every 100 car owners) do not have direct access to off-street parking.

This challenge is more pronounced in Belfast, where approximately 60% of households do not have access to a driveway (Steer Group Report, 2021). For these households, the ability to safely charge an EV at home is limited, as it is currently an offence to place a cable across a footway without Departmental consent. This restriction presents a barrier to EV adoption for those without off-street parking.

Kerbside charging only for homes without a driveway.

The primary aim of the cross-pavement charging policy is to support EV owners who do not have access to a driveway but are able to park at the kerbside outside their property.

The policy applies only to properties:

- Without access to off-street parking; and
- Where the vehicle can be parked directly outside the property.

It does not apply:

- Where a driveway or off-street parking is available; or
- Where parking is located away from the immediate frontage of the property.

Where a property has a driveway that is considered unsuitable, the Department will direct applicants to Article 80 provisions, under which consent may be sought to alter the access to facilitate safe off-street parking and charging.

The Cross-Pavement Solutions Pilot

Two cross-pavement solutions were introduced in September 2025:

The first involves the installation of a permanent channel through the existing Street Works Licence process. This established process facilitates the installation of engineered channels within footways, as well as the reinstatement of the pavement should the solution no longer be required.

The second solution is the use of a Temporary Cable Protector, introduced under a rolling six-month pilot. This option permits the temporary deployment of a cable protector via an application process for consent, enabling the Department to monitor usage and undertake ongoing evaluation.

Key Criteria and Pilot Approach

The Department for Infrastructure is the sole road authority in Northern Ireland, responsible for public roads, footways, bridges, and streetlights. This responsibility includes making sure pavements are free from trip hazards and other defects as far as reasonably practical for public safety reasons. Therefore, the Pilot is guided by the principle that residents should be able to charge their vehicles at home safely, without creating a hazard or obstruction on the footway.

The Department will:

- Assess applications for the use of a cable cover whilst considering:
 - the ability to charge safely without impeding footway users;
 - potential hazards and impacts on all pavement users, particularly older people, individuals with disabilities, and those with dependants;
- Continue to engage with stakeholders, including Inclusive Mobility and Transport Advisory Committee (IMTAC), EV Association Northern Ireland (EVANI) and the EV Consumer Working Group; and
- Undertake ongoing monitoring and evaluation as the Pilot continues.

The Pilot - Outcome

The temporary use of a Cable Cover for EV charging at homes without a driveway:

Cable protectors are relatively low cost and therefore may be more attractive to homeowners in need of such solutions for home charging. The nature of the temporary placing and removal of these cable protectors places the liability and responsibility with the user.

The Scheme introduced on 30 September 2025, received 14 applications for consent to use a cable cover in the first six months to 30th March 2026 of which 12 were granted consent, one home was not suitable for cross pavement solutions, and one has been asked for further information on insurance.

Cross Pavement Solution Surveys

The Department was keen to engage individuals interested in these solutions and those who have applied to use the solutions therefore officials sought feedback through a short survey from residents who have enquired or applied for either option. While the permanent engineered channel was not part of the Pilot, we did include those who pursued the channel to capture the reasons why residents chose the more expensive option and for comparative purposes. The response to the surveys was small, however they did provide an insight into how the Cross Pavement Solutions have been received.

A Safety and Pedestrian site visit in collaboration with the Electric Vehicle Consumer Working Group (EVCWG) was held to gather feedback in terms of accessibility, safety, cost, and practicality.

Key Finding from the Cable Cover User

We surveyed applicants to capture user experiences of the cross-pavement cable cover solution for on-street EV charging, identifying strengths, barriers, and opportunities to support wider EV uptake. Seven responses were received with results showing that they were 100% satisfied or very satisfied with the solution. All respondents reported no issues with the cable covers in terms of a trip hazard, complaints from pedestrians or neighbours, weather-related problems and there were no other concerns identified. Whilst the cable covers have only been in use up to six months, this early feedback suggests the infrastructure is safe, durable, and fit for purpose. Cost accessibility was the primary success factor. The main reasons for choosing cable cover were:

- Most affordable option,
- Least disruptive and
- Suitable for street layouts.

The process to apply was rated easy or very easy with timelines typically meeting or exceeding expectations.

Awareness levels of the solution varied significantly with information accessed via multiple channels (DfI, installers, social media) indicating there is scope for stronger, more consistent promotion.

Overall, the scheme has been met positively with strong satisfaction, ease of use and affordability making this option a success. The Department acknowledges that there is work to be done in developing consistent messaging and promoting the availability of solutions.

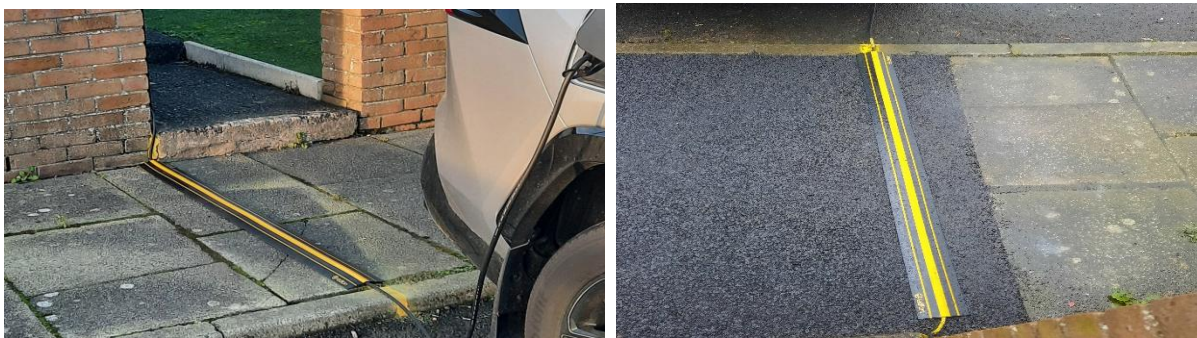


Photo 1 & 2: Temporary Cable Cover Solution

Key Findings from those who chose an Engineered channel

Nine applicants completed the initial enquiry form for the engineered channel, and all were referred to section offices for stage two of the process. Following referral; one channel was installed, one is currently processing to installation, three applicants chose not to proceed with this solution and three were unable to proceed due to site constraints; an existing drainage channel running along the rear of the footway, the proximity of uninsulated powered apparatus and existing utility apparatus

The survey of applicants (two responses) indicated that those who selected the engineered channel did so primarily because of its perceived safety and permanence. Respondents rated pedestrian safety as a top priority and viewed the flush, built-in nature of the channel as a more secure and accessible solution than the cable covers.

However, participants highlighted the high cost as a significant barrier, with installations ranging from £1,000 to over £2,500. While the respondents felt the cost was somewhat justified, affordability remained a concern. There was a strong suggestion that financial support, such as grants or interest-free loans would improve uptake of the engineered solution.

Another key finding was the complexity and slow pace of the application and approval process. Even where respondents were motivated and had installers ready, delays of several months were reported. While staff engagement was viewed positively, the process itself was described as cumbersome and in need of streamlining, with calls for clearer guidance and faster approvals.

Overall, those opting for the engineered channel prioritised safety, reliability, and long-term usability, but identified cost and administrative delays as the main deterrents to wider adoption. Respondents deemed this as the most appropriate long-term solution.



Photo 3 & 4 : Permanent Channel Solution

Key Findings from those who expressed an interest but have not applied

In the initial six months from the launch of the Pilot the Department had over 40 enquires on cross pavement solutions, these did not lead to an application to either solution. We surveyed this group and received six responses.

Based on the small sample of respondents who enquired but did not proceed with an application, several consistent themes emerged.

A key finding is that cost, uncertainty, and process complexity are the main barriers to uptake. While respondents were attracted to cross-pavement solutions due to their lower cost compared to alternatives and the ability to charge at home, many expressed concerns about overall affordability, unclear cost breakdowns, and potential additional expenses such as insurance. There was also notable uncertainty around the approval process, with several respondents highlighting a lack of clear guidance and slow or unclear procedures as a deterrent.

Safety and liability concern also played a significant role in decision-making. Respondents were particularly concerned about the potential impact on pedestrian safety, including trip hazards, as well as their own liability for any incidents occurring on the footway. These concerns were often coupled with requests for stronger Departmental endorsement, clearer safety evidence, and real-life case studies to provide reassurance.

Practical barriers were also evident, particularly in relation to parking availability and accessibility. Some respondents noted that inconsistent access to parking outside their property would make it difficult to use a cross-pavement solution effectively, while others, highlighted challenges around pavement accessibility and the absence of designated parking spaces as limiting factors.

Overall, while there is clear interest in cross-pavement charging solutions and recognition of their benefits, uptake is being constrained by a combination of cost concerns, lack of clarity, safety considerations, and practical usability issues. Respondents indicated that measures such as lower fees, financial support, faster approvals, and clearer guidance would be key to improving uptake.

Safety and Pavement User Assessment

The Department, in collaboration with the Electric Vehicle Consumer Working Group (EVCWG) visited the NIHE depot at Cloughfern to review cross-pavement charging solutions. The purpose of the visit was to enable members to assess the options in practice and provide input to the Department for Infrastructure's (DfI) six-month evaluation.



Photo 5 : 1 permanent engineered channel and several temporary cable covers solutions.

The EVCWG is coordinated and chaired by the Consumer Council and comprises representatives from a range of organisations, including Choice Housing, the Disabled Drivers Association, Disability Action, Guide Dogs NI, the Inclusive Mobility and Transport Advisory Committee, the Northern Ireland Housing Executive, Northern Ireland Trading Standards, the Rural Community Network, and the Royal National Institute of Blind People. Following the visit, the group submitted a report to the Department outlining its findings.

The report examined a range of cross-pavement EV charging solutions for households without driveways, comparing a permanent engineered channel and several temporary cable covers in terms of accessibility, safety, cost, and practicality. While the permanent engineered channel was not part of the Pilot, it was included in the report for comparative purposes.

Overall, the group supports the provision of home-charging solutions, recognising their cost-effectiveness and convenience. However, it emphasises that any approach must prioritise safety and accessibility, particularly for disabled users and other vulnerable pedestrians.

Key Findings from the User Assessment Report

The user assessment found that the engineered (permanent) cross-pavement channel offers the highest level of safety and accessibility, as it sits flush with the pavement and minimises disruption to pedestrians. This makes it particularly suitable for users with mobility or visual impairments. However, this option is significantly more expensive and introduces a permanent alteration to the footway, raising concerns around maintenance, drainage, long-term durability, and responsibility for upkeep.

Temporary cable covers provide a more affordable and flexible alternative, typically costing between £50 and £100 and intended for use only during charging. However, all such options introduce some level of obstruction and potential trip hazard. Two options tested were considered unsuitable due to their height, difficulty of use, and increased safety risks. Among the remaining designs, two models; with smoother profiles and improved visibility show some potential, although issues such as cable movement, and ease of use require further refinement.



Photo 6 : Two temporary cable cover models with smoother profiles

Safety and accessibility emerged as key concerns across all options. Any obstruction on the pavement can present a hazard, particularly for wheelchair users, guide dog users, and those with visual impairments. Risks are not limited to the cover itself but also include loose or poorly managed cables. Suggested mitigations include ensuring cables are kept straight and secured, improving visibility through colour and markings, and providing clear guidance on safe usage.

Overall, no single solution fully addresses all challenges, highlighting a trade-off between cost, safety, and practicality. While permanent channels offer the safest option, their cost and permanence may limit uptake, whereas temporary covers provide flexibility at the expense of increased risk. The findings support further exploration of improved temporary designs, alongside continued monitoring and evidence gathering, with a clear priority on minimising risks to pedestrians while enabling access to home EV charging for those without driveways.

Monitoring and Results

Overview

The cable cover provides a practical, low-cost temporary solution compared to the significantly higher cost of engineered cable channels, which require street works licensing and installation. Its temporary nature minimises disruption to pavement users and as no works are required on the footway therefore there are no associated or ongoing maintenance costs.

Importantly, monitoring and feedback indicate no reported issues with the cable covers, including trip hazards, complaints from pedestrians or neighbours, or weather-related impacts. No other concerns were identified, suggesting the solution is operating safely and effectively in practice.

Lessons Learned

- The cable cover scheme is an effective enabler today, with no safety or usability concerns reported by users to date.
- Consideration should be given to introducing clear specifications or requirements for cable covers
- There is interest in permanent solutions; however, these are often perceived as financially prohibitive, highlighting the need for further investment and policy support to deliver a sustainable, long-term option for on-street EV charging
- There is scope for stronger and more consistent promotion to raise awareness of the solution and the application process.
- The Department should continue to review solutions on the market, as current cross-pavement options do not meet the needs of all households without driveways.

Conclusions and recommendations.

Conclusion

The scheme is highly successful in enabling EV adoption for households without driveways with no issues identified at this early stage. Cable covers are delivering strong satisfaction, ease of use, and affordability. However, to scale impact, policy focus should shift toward:

- Increasing awareness and promotion
- Reducing financial and regulatory barriers
- Supporting transition to permanent infrastructure solutions

The Department should continue to:

- Seek the views of users of the solutions and the wider public; a further six months will strengthen the evidence base and inform policy
- Review market solutions to support households not currently covered in accessing low-cost, convenient home charging

Recommendations

The cable cover scheme is an effective enabler and should be continued, with ongoing review. A further six months will strengthen the evidence base and support informed decision-making.

In the short term, the Department will:

- ✓ Provide enhanced online information and guidance on EV transition, including cross-pavement solutions
- ✓ Increase awareness and promotion of available solutions
- ✓ Expand engagement, noting survey responses were limited and should target a wider audience
- ✓ Monitor developments in other regions of the UK and the Republic of Ireland