# Electric Vehicle Charging Cable "Crossing-Over" Pilot

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| To: | Highways & Transport Committee |
| Meeting Date: | 5 March 2023 |
| From: | Executive Director Place & Sustainability |
| Electoral division(s): | All |
| Key decision: | No |
| Forward Plan ref: | n/a |
| Executive Summary: | Enabling Electric Vehicle charging cables to "cross-over" the footway will help to reduce a barrier to the uptake for residents without off-street parking by alleviating the cost of charging.<br><br>A risk-based review of the options has been undertaken and a proposal for a limited, timebound pilot scheme is outlined in the report. |
| Recommendation: | The Committee is recommended to:<br><br>a) Note the progress to date and the issues surrounding cable crossing-over, including the opportunity cost associated with not allowing crossing-over.<br><br>b) Agree to the further development and roll out of the pilot as outlined at Section 3 of this report.<br><br>c) Delegate authority to the Executive Director Place and Sustainability in consultation with the Chair and Vice Chair of the Committee to launch the pilot, subject to provision of further technical advice and securing suitable licencing (or other contractual) arrangements.<br><br>d) Delegate authority to the Executive Director Place and Sustainability in consultation with the Chair and Vice Chair of the Committee to award and execute any contracts required to deliver the pilot. |

Officer contact:

Name: Sarah Hatcher
Post: Principal Transport and Infrastructure Officer
Email: sarah.hatcher@cambridgeshire.gov.uk

# 1. Creating a greener, fairer and more caring Cambridgeshire

1.1 **Ambition 1:** Net zero carbon emissions for Cambridgeshire by 2045, and our communities and natural environment are supported to adapt and thrive as the climate changes:
The pilot support residents to swap to electric vehicles by providing a means for residents who do not have off-street parking to use their own domestic electricity supplies which are often significantly cheaper than public chargers. This will help support decarbonisation of transport in the county.

If successful, there may be a wider environmental benefit through providing a mechanism for home charging that might dissuade people from turning front gardens into driveways which has negative impact on biodiversity, flooding, adaptation and heat island effect.

1.2 **Ambition 2:** Travel across the county is safer and more environmentally sustainable
The pilot supports the transition to more sustainable transport through provision of cheaper home charging. There may also be a benefit should fewer EV chargers be required on the highway causing less potential interference with active travel/wider transport plans.

1.3 **Ambition 4:** People enjoy healthy, safe, and independent lives through timely support that is most suited to their needs
In the long term it is people with mobility challenges who are most likely to still require private cars and therefore need appropriate means to decarbonise those vehicles. Should the pilot be successful it provides the council and residents another option to support these individuals through the services that would be provided.

1.4 **Ambition 5:** People are helped out of poverty and income inequality
If successful, the pilot will provide a cheaper solution than public chargepoints. As the sale of new petrol/diesel vehicles will wind down and stop by 2035, access and costs of charging will become an increasing challenge for the Council. This pilot explores a solution for the long term that overcomes future fuel poverty challenges.

# 2 Background

2.1 Transport accounts for around 27% of Cambridgeshire's carbon footprint, with cars' contribution forming over half of this. Electric Vehicles (EVs) have a key role to play in meeting the Council's ambitions regarding achieving net zero for the County.

2.2 Charging using home electricity supplies can be significantly cheaper than public charging, through a combination of lower taxation levels, domestic sector cost-caps and emerging preferential EV domestic supply tariffs that are not available to the commercial sector.

2.3 However currently only those residents with off-street parking are able to take advantage of these lower electricity costs. This is shown to be putting off for many transitioning to EVs.

2.4 EV "crossing-over" is the trailing of a cable across the footway from a domestic electricity supply to a vehicle parked adjacent on the highway. If unmanaged this could introduce a range of safety, equity, and risk / liability issues.

2.5 Section 178 of the Highways Act states that “no person shall fix or place any … cable, wire or other similar apparatus over, along or across a highway without the consent of the highway authority for the highway”. This provision is designed to ensure safe conditions on the highway.

2.6 On 5th December 2023 the Highways & Transport Committee approved an On-Street Electric Vehicle Infrastructure Policy (“the Policy”) which sets out what is, and is not, acceptable on the highways with regards to EV charging infrastructure. The policy currently prohibits the use of cable crossing-over. However, the benefits of being able to use domestic energy supplies was acknowledged, and Committee agreed a recommendation for officers to explore the range of cable management solutions available on the market and develop a proposal for a pilot to inform the future Policy.

2.7 This paper outlines the proposed pilot, seeking approval to proceed with its development and deployment.

# 3 Main Issues

3.1 There are a number of challenges that must be considered when thinking about trailing a cable across the footway, regardless of the mechanism used. These include:

- Equality and Accessibility: Any solutions that involved implementing new infrastructure on the footway have the potential to impede footway users, with a further potential to disproportionately impact those with protected characteristics or reduced mobility.
- Introduction of trip or electrical hazards: Linked to the above, allowing electrical cables across the footway could increase risks of trips/falls. There is also a low likelihood of increasing electrical hazards, particularly if residents are using damaged, “daisy chained” or over-loaded cables.
- Licencing and liability – A licence, or other formal agreement, must be provided to a resident (or property) by the Highways Authority to give the relevant permissions and rules that must be adhered to when using any solution. Transfer of liability should an incident occur as a result of these rules not being followed is a key element. However, there is uncertainty over the appropriate contractual arrangements for this – alternatives to provisions within the Highways Act may be required. Currently, different authorities are taking different approaches as there is no clear mechanism within the legislation.
- Introduction of new assets across the footway may make established maintenance activities (e.g., footway slurry sealing) harder, more costly and/or more time consuming.
- Other practical challenges – including:
    - inability within current Highways Authority powers to designate parking bays to individuals outside their homes.
    - ensuring residents use any solution correctly and safely.
    - home safety regarding use of 3-pin cables to charge; and
    - planning permission requirements around installation of EV chargers.

3.2 The development of the pilot has taken a risk-based approach, attempting to balance the risk of not supporting home-charging with the issues outlined above. To date, work to inform this approach has included:

- Research and options appraisal informed by conversations with other Highways Authorities that are already allowing crossing-over; current best practice guidance; workshops and events with other Highways Authorities, Energy Savings Trust and DfT; and legal review of the Highways Act to ascertain appropriate licensing approaches. Officers are also exploring opportunities to visit LAs with crossing-over solutions already in situ.
- Conversations with the market to understand the various solutions available, costs and how some of the issues identified in paragraph 3.1 have been managed through the solution design. The intention is to hold a formal supplier/market engagement day as part of the procurement process.

**Pilot Design:**

3.3 The pilot will operate across the whole of the County, to ensure that the solutions are tested across a range of streetscapes and housing types. Residents will be invited to take part on a first come – first served basis, and assessed for suitability, until the maximum number is reached for that District area. Where possible, people with protected characteristics will be proactively sought to join the pilot as they may provide valuable insight into the assessment of the pilot's success.

3.4 Eligibility and suitability criteria will be developed and informed by the constraints of the solution available. It is likely that homes that open straight onto the footway, particularly where the footway is already narrow, will be ineligible to participate, as the addition of a charger and plug will further narrow a footway and impinge on pedestrian access. In these locations provision of public EV chargepoints may be the only viable option.

3.5 There are a range of different crossing-over solutions available, each with their own pros- and cons. Following market research and building off the experiences of other Local Authorities, this pilot will test a single option in the first instance.

3.6 The pilot will be deployed in a two phased approach, to enable early issues to be detected before too much deployment has taken place. Phases will be broken down as shown in

| 3.7 | **Target no. homes in each District** | **Duration** |
|---|---|---|
| **Project Set up** | **-** | 3 months |
| **Phase 1** | Ten | Recruitment & Selection= 2 months<br>Deployment activities = c.4 months<br>Operation & Evaluation = 3 months |
| **Phase 2** | Further 40 | Recruitment & Selection = 3 months<br>Deployment activities = c.9 months<br>Operation & Evaluation = 3 months |
| | **Total targeted = 250** | **Total duration = 24 months** |

3.8 below and progression will be based upon the success of the previous phase (see paragraph 3.9 on Feedback and Monitoring).

3.9 The numbers targeted assume appetite is reasonably high and equally distributed across the County – the split across District areas could be changed during the pilot if required. If there is demand beyond the levels noted above, consideration will be given to whether it would be appropriate to increase the numbers, in the context of this being a trial.

3.10 A general principle that a home with a driveway available for the resident(s) to use will not be eligible for this pilot will be adopted. This is to ensure support is focussed on those who have no other means the charge off the highway.

**Table 1: Phased design of the proposed pilot, with indicative timeframes.**
(The testing of deployment timeframes is part of this pilot, so timeframes may change).

| | **Target no. homes in each District** | **Duration** |
|---|---|---|
| **Project Set up** | **-** | 3 months |
| **Phase 1** | Ten | Recruitment & Selection= 2 months<br>Deployment activities = c.4 months<br>Operation & Evaluation = 3 months |
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| | **Total targeted = 250** | **Total duration = 24 months** |

3.11 Feedback and monitoring of the pilot will take place throughout. Participants will be asked to provide their views on a range of criteria including application process, costs, comments on the solution they are testing and any suggestions for improvements. Consideration will also be given to undertaking a targeted survey of residents in areas where the pilots are taking place to understand any concerns from those using the footway but not part of the pilot. The results will be used to shape next steps and inform decisions on wider roll out.

3.12 Following Phase 2, a report will be prepared, and feedback provided to Committee.

**Delivery mechanism**

3.13 The pilot has been designed to enable residents to apply to participate in the pilot and obtain advice and guidance as to how best to implement charging systems that cross over the highway. This will be subject to further design before we launch the pilot.

3.14 Procurement: Any works on the highway would be delivered through compliant procurement arrangements

3.15 Enforcement for correct usage of the solution will be possible, with penalties built into the licence/contractual mechanism for improper use.

**Funding and Resourcing**

3.16 The pilot has been designed to test both the crossing-over solution and the implementation and funding mechanism that will be required should large-scale deployment be agreed in the future. It follows the principles of other paid-for services that residents may apply for on the highway, such as for dropped kerbs or access protection marking.

3.17 Residents will be required to pay the full cost of the crossing-over solution, from application through to installation. There may be variance in costs at different sites based upon site specific needs – for example, longer channels will be required for wider pavements. Officers continue to explore options to reduce this between site cost variation as much as possible and to explore alternative funding that may be used to subsidise the cost to the resident.

**Risks**

3.18 See full risk register appended to this report. There are a number of risks presented, and these should be viewed as a balance between the risks associated with not piloting solutions and the risks the pilot may introduce.

3.19 The risks associated with not undertaking the pilot (and potentially not allowing full scale roll-out) are significant. See risks A, B and C. These can be manged through deployment of the pilot project.

3.20 There are several risks that may be introduced onto the highway should the pilot – and later full scale roll out – go ahead. These are numbered 1-11. Generally, these can be mitigated. However, the potential negative impact of large numbers of pavement channels on routine preventative maintenance (risk 2) remains a high and therefore the pilot will examine potential solutions to addressing these risks.

3.21 Generally, there are higher risks from "doing nothing" than from undertaking a pilot and mitigating the key issues through pilot design.

**Other Considerations:**

3.22 Planning permission for chargers
The installation of a home EV charger will be encouraged but is not essential. Should a resident wish to install an EV charger on their home to enable faster and safer charging when "crossing-over", it will be that resident's responsibility to secure planning permission. As the vehicle being charged is located on the public highway, the charger falls outside of permitted development and planning permission will be required in all cases. Officers are liaising with colleagues in the Local Planning Authorities to understand their position on such installations.

3.23 Parking in proximity to the property
There are currently no powers available to Highways Authorities to designate parking spaces to any individual, property or vehicle. As such, it is possible that even with crossing over solutions installed, residents may still be unable to use them on some occasions. However, evidence from pilots in other areas suggests residents have been cooperative with each other regarding swapping parking spaces to allow each other to charge. Expectations around this will need to be managed.

**Pilot closure**

3.24 A managed process will be required at the end of the pilot phase. Following a review of the pilot evaluation three options will be available:

| Option | Decision Requirement | Impact on deployed solution |
|---|---|---|
| Pilot deemed a success and larger scale deployment is recommended | A decision to support larger scale deployment will be required by Environment & Green Investment Committee | none |

| Option | Decision Requirement | Impact on deployed solution |
|---|---|---|
| Pilot deemed unsuccessful and no further deployment will take place | A decision to cease the pilot and not support further deployment will be required by Highways & Transport Committee | none |
| Pilot deemed unsuccessful and installed solutions are to be removed and contractual arrangements with residents terminated | A decision to cease the pilot, not support further deployment and to remove deployed solutions will be required by Highways & Transport Committee | Solution to be removed by the Council at cost. Resident may need to be refunded for part or all of the pilot fees. |

# 4 Alternative Options Considered

4.1 Alternative options that have been considered include:

- **Do nothing** –
  Rows 1-11 of the risk appraisal in Appendix 0 set out the risks the council will continue to be exposed to should a solution to trailing a cable across the footway not be found. The unmitigated risk levels exceed the Council's risk appetite and therefore require pro-active mitigation that will be highly limited in the absence of this pilot.
- **Delivery of a pilot via a procured third-party mechanism**
  While turn-key solutions are available on the market, these vary dramatically in terms of cost, the service level provided, solution specification and maintenance requirements. This option has been explored however it becomes challenging to specify a specific solution that Officers consider most appropriate for the highway in terms of managing many of the risks highlighted in the risk register, particularly installation quality and managing the licencing/contractual arrangements. Even with these options, application and survey fees as well as licencing applications would be required. As such, this is not the recommended option at this time.
- **Licencing the use of cable protectors**
  Other highways authorities are trialling the provision of licences to cross-over with the use of a cable protector or other protection to limit the trip hazard. This option has a number of challenges associated with it, particularly around: enforceability of correctly applied mats/covers; accessibility as pedestrians will still be required to step/wheel over the cable; and the temporary nature of the solution coupled with high chances of tampering by third parties. As such, this option is not recommended at this time.

# 5 Conclusion and reasons for recommendations

5.1 The format and pilot recommended provides the best compromise between deployment of a solution to cable crossing-over while managing the potential risks the solutions introduce onto the public highway. Taking a more cautious pilot approach should help manage the Council's risk exposure, between the "do nothing" risk and the risks associated with supporting a larger scale deployment at this time.

# 6 Significant Implications

## 6.1 Finance Implications

There is currently no funding allocated to this pilot. As such the pilot is designed to be self-funding with recipients of the solution covering the full associated cost of provision. While intended to be funded, there remains a potential impact on staff capacity due to the potential uplift in applications to process and sites to visit.

Should the pilot be unsuccessful, and the solution require removal, then the council will need to fund this process. It is possible that the council will also need to re-imburse the resident for some or all of the costs paid to install. While the likelihood of this happening is low, budget to cover this has not yet been identified.

## 6.2 Legal Implications

Pathfinder are reviewing the Highways Act to identify the appropriate legal mechanism to licence or contract use of the solution to the resident. There is no clear pathway and different Highways Authorities are taking different approaches. Any mechanism will incorporate appropriate measures to pass on liability for incidences occurring from miss-use of the solution to the resident. This work is ongoing.

## 6.3 Risk Implications

As the Highways Authority, the council has a duty of care to maintain the safety and usability of roads that are kept at public expense. The pilot has been designed to manage the risk of this duty being challenged, and analysis strongly suggests that the risk to the Council is greater should no pilot be delivered. See 0 and 0 for full details.

## 6.4 Equality and Diversity Implications

An Equality Impact Assessment has been completed for this project – Ref CCC583651929. There are no significant potential equality implications identified at this time, however, impacts on those with protected characteristics is a key element that will be monitored through the pilot.

## 6.5 Climate Change and Environment Implications (Key decisions only)

Should the pilot be successful it will provide Cambridgeshire residents with another option to charge their vehicles, thereby supporting the transition to EVs and net zero.

# 7 Source Documents

## 7.1 None

# Appendix: 1 High Level Risk Register, using the Council's corporate risk matrices

| | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| A | Inaction on crossing-over solutions | Residents using unapproved methods to trail cables across footways / trailing cables across footways with no permissions (in breach of Highways Act) | • Lack of alternative solutions provided by the Highways Authority<br>• Poor accessibility and/or high costs of public EV chargers | • Trip hazard introduced to the highways<br>• Legal challenge on lack of solutions or as a result of enforcement<br>• Legal challenge are as result of trips/falls on the footway due to the Council's lack of enforcement<br>• Legal challenge under the Equalities Act<br>• Long term, potentially nationally significant reputational damage<br>• Those with protected characteristics and/or reduced mobility are disproportionately impeded from using the footway | 5 | 5 | 25 | • Enabling residents to trail cables in a safe manner<br>• Improved provision of EV chargers | 2 | 2 | 4 |
| B | Inaction on crossing-over solutions | Residents without driveways dissuaded from switching to EV due to a lack of charging infrastructure | • Higher costs of public charging make EV financially less attractive than ICE<br>• Insufficient EV charging solutions made available to residents | • Local (and national) net zero and air quality targets are missed<br>• Long term, potentially nationally significant reputational damage | 4 | 5 | 20 | • Enabling residents to trail cables in a safe manner<br>• Improved provision of EV chargers | 2 | 1 | 2 |
| C | Inaction on crossing- | Reputational damage and confidence of key and national | • Continued refusal to allow crossing-over despite desire from local partners and other LA allowance of | • Other transport related partnerships are undermined due to perceived in action<br>• The Council is unprepared for | 5 | 5 | 25 | • Enabling residents to trail cables in a safe manner<br>• Improved provision of EV chargers | 2 | 1 | 2 |

| | | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| | over solutions | partners (e.g. District Councils, DfT etc) is undermined | it | emerging national policy on EV crossing-over (see The Plan for Drivers, Oct 2023)<br>• Funding opportunities are missed or more challenging | | | | | | | |
| 1 | Provision of crossing-over solutions | Inappropriate legal instrument used to licence solutions | • Lack of clear method within the Highways Act to licence trailing cables<br>• Inability to identify a satisfactory licence to utilise<br>• Liability to effectively transfer liability to the homeowner/property | • Liability is not adequately transferred from the Council to the resident<br>• The Council is exposed to leagl challenge and liability should incidences occur | 4 | 3 | 12 | • Taking legal advice<br>• Reviewing approaches taken by other Highways Authorities<br>• Integrating public liability insurance requirements into the licence/contract with the resident/property | 2 | 2 | 4 |
| 2 | Provision of crossing-over solutions | Solutions impede delivery of routine and planned preventative maintenance on the footway | • Solutions require changes to existing maintenance processes or solutions prevent existing practices from taking place | • Significant cost uplift associated with footway preventative maintenance and/or inability to continue existing maintenance practices, leading to greater and more significant maintenance requirements<br>• Technical and/or financial impediment to highways schemes where a footway is involved | 5 | 4 | 20 | • Limiting the number of gullies that may be deployed and/or only installing gullies after a maintenance activities take place<br>• Removal and reinstatement of gullies built into preventative maintenance works packages<br>• Integration of a committed sum from the resident contributing to the increased maintenance costs to the council<br>• NOTE: control measures are generally unsatisfactory and have significant cost and reputational implications | 4 | 4 | 16 |

| | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| 3 | Provision of crossing-over solutions | Solutions introduce new trip or electrical hazard onto the footway and/or those with protected characteristics or reduced mobility are disproportionately impaired from using the footway | • The installed solution (fixed or temporary) is itself a trip hazard due to its design, installation and/or poor maintenance<br>• Residents do not use the solution correctly and/or do not maintain it correctly, introducing a trip or electric hazard on the footway<br>• Residents do not remove the charging cable after use, leaving it in-situ within the crossing-over solution<br>• Residents use damaged or sub-standard cables, introducing an electrical hazard | • Trips or electrocution of individuals using the footway, including resulting claims against the Council<br>• Damage to other vehicles and property | 4 | 4 | 16 | • Continued monitoring of best practice to inform the council's approach<br>• Only solutions specifically designed for use by EV charging cables and in the public footway will be considered. Solutions which are as automatic and require the user to do a little as possible will be preferable. i.e. a channel with a automatic closure would be preferable to one which the user has to manually close them.<br>• Solutions have an Equalities Impact Assessment undertaken to identify and manage any issues<br>• Instructions for use and appropriate enforcement and liability insurance requirements are included in the licensing arrangements, with ability to revoke licence for repeated miss-use, including reminder for Rule 239 of the Highway code.<br>• Individual sites are assessed for suitability and requirements for using the solution are built into the enforceable agreement/license contract | 3 | 2 | 6 |
| 4 | Provision of crossing-over solutions | Solutions are not reinstated correctly following other street works by | • Third parties do not adequately understand complexities or reinstatement methodology | • Rectification costs to the Council<br>• Residents are unable to use the solution and/or trip hazards are introduced<br>• Lengthy/costly disputes with utilities to enforce reinstatement | 4 | 2 | 8 | • Licences/contracts to include provision requiring reinstatement<br>• Local Highways Officers, as part of routines checks following licenced works, to check reinstatement is suitable | 3 | 1 | 3 |

| | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| | | third parties (e.g. utilities) | | • requirements<br>• Reputational damage with residents and utilities | | | | • Stock of replacement solutions available for utilities to purchase if required | | | |
| 5 | Provision of crossing-over solutions | Resident expectation of having a dedicated parking space adjacent to their home to charge and/or an EV charger on their home | • Lack of clear communications detailing what is and is not included with having a crossing-over solution installed | • Reputational damage as residents believe they have paid for a service they are not receiving<br>• Increase in existing tensions relating to residential parking, where residents feel neighbours are parking in "their space" | 4 | 4 | 16 | • Clear messaging is provided to residents a parking space on the highway is not included as part of the solution nor can it be obtained under current highways authority powers.<br>• Inform residents that parking disputes relating to parking in front of properties or requests for parking bays will not be dealt with by the council<br>• Clear statement of what is and is not included in a scheme and signposting where other permissions may be required - e.g. planning permission for a charger | 1 | 1 | 1 |
| 6 | Provision of crossing-over solutions | Provision of a new service (i.e. gullies etc) introduces new resource and capacity pressures with insufficient resource to support | • Inability to adequately estimate additional resource requirements due to innovative nature of the project<br>• Inability to set fees to residents that cover costs while not activating to dissuade interest in the solutions | • New financial burden on the highways directorate<br>• Roll out is delayed, leading to reputational damage<br>• Residents do not take up the solution due to cost | 4 | 3 | 12 | • Review of existing capacity and timelines for new processes and deployment are built around this capacity<br>• Develop a clear pricing schedule, built up from individual stages of the resident's application pathway, providing clarity to residents on the reasons for the costs | 4 | 2 | 8 |
| 7 | Provision of crossing- | Perceptions of privatisation of the pubic | • Large scale roll out of solutions begin to dominate the public | • Complaints and reputational damage<br>• Legal challenge | 3 | 3 | 9 | • Individual sites will be assessed to ascertain the best positioning of the solution being mindful of potential | 1 | 2 | 2 |

| | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| | over solutions | highway in serving specific individuals who can afford an EV, undermining the mandate for the public highway to be managed and maintained for all users | footway<br>• Costs of EVs do not reduce as anticipated and cost parity with ICE is not achieved, meaning some residents are priced out of the market and large-scale use of the public footway for EV solutions is not equitable. | | | | | further deployment<br>• Close monitoring of deployment and seeking views on appetite for the solutions to understand potential future issues<br>• Enforcement of solution use and licencing to minimise impact on the footway<br>• Monitoring EV uptake across the County to understand if certain areas or individuals are excluded<br>• Traffic Regulation Orders (TROs) will not be provided to limit spaces associated with a crossing-over solution to electric vehicles only. | | | |
| 8 | Provision of crossing-over solutions | Expectations on suitable locations for cross-over solutions and length of time from order to install are not inline with expectations from the public | • Expectations are raised as to where cross pavement channels can be installed<br>• The length of time from resident ordering the channel to it being installed is likely to be significant | • Complaints and reputational damage<br>• Legal challenge | 3 | 3 | 9 | • Information provide to residents will be clear on where channels can and cannot be installed<br>• Information will be clear on the likely length of time to install from placing the request | 1 | 2 | 2 |
| 9 | Provision of crossing-over solutions | Resident moves away from the property and the channel remains | • Resident moves out of property | • Channel is incorrectly used my new resident | 4 | 2 | 8 | • Legal agreement is linked to the property rather than the resident<br>• Legal agreement states that if the resident moves they pay for the channel to be removed or ensure the new | 4 | 1 | 4 |

| | | | | | | | | | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| # | Element | Risk Description | Triggers/ Causes | Impacts | L | S | Risk | Control Measure | L | S | Risk |
| | | in the public highway. | | | | | | resident signs the agreement | | | |
| 10 | Provision of crossing-over solutions | Pilot is unsuccessful and removal of solutions is required | • Change in national policy and/or legislation that moves away from crossing-over as a solution<br>• Use/miss-use of the solutions leads to multiple incidences/accidents | • Costly removal of solutions and "making - good" are required at cost to the council<br>• Management of refunds to residents who have purchased the crossing-over solution and licence/contract<br>• Reputational damage | 3 | 4 | 12 | • Pilot is designed with other risks mitigated to support a successful outcome<br>• Maintaining a watching brief on national policy changes to enable early action if required | 2 | 2 | 4 |
| 11 | Provision of crossing-over solutions | Cost of solution to the resident are prohibited | • Cost-recovery pricing structure means a high upfront cost to the resident to install the solution | • Low uptake of solution, undermining efficacy of the approach<br>• Reputational damage where other LAs are subsiding installation costs or allowing cheaper solutions<br>• Only those residents able to afford the solution can access it, introducing a new equity challenge on the highway | 4 | 4 | 16 | • Costs are, as far as possible, clearly advertised up-front and full breakdown provided<br>• Options for grant funding are explored, though may not be available at all times | 4 | 3 | 12 |