Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	**Cllr. Sarah Warren, Cabinet Member for Climate and Sustainable Travel**	
MEETING/ DECISION DATE:	**On or after 11 March 2023**	EXECUTIVE FORWARD PLAN REFERENCE: E 3451
TITLE:	**EV Charging – Cable Channel Trial**	
WARD:	All wards	
AN OPEN PUBLIC ITEM		
List of attachments to this report: Appendix 1 - Equalities Impact Assessment Appendix 2 - Risk Assessment		

1 THE ISSUE

1.1 Executive Forward Plan Reference E3394 delegated the decision to:

- agree on a proposed trial of electric vehicle (EV) charging cable channel products, which when installed into the footway enable residents to charge an EV on-street from their home energy supply;

to the Cabinet Member for Climate and Sustainable Travel.

2 RECOMMENDATION

Subject to funding being secured from the Green Recovery Fund, the Cabinet Member is asked to:

2.1 Delegate approval to the Director of Sustainable Communities, in consultation with the S151 Officer, to accept £182,250 of the Green Recovery Fund grant from the West of England Combined Authority. These funds will be spent in line with a change request to an approved full business case for an electric vehicle project.

2.2 Delegate approval to implement the proposals set out within this report to the Director of Sustainable Communities in consultation with the Cabinet member

for Climate and Sustainable Travel and the S151 Officer in accordance with the requirements of the Grant Funding Agreement.

2.3 Agree to proceed with the proposed trial of EV cable channels. The trial details in summary are:

- Three different cable channel models trialled in-situ on public footways.
- Twenty units/model trialled, making a total of sixty participants in the trial.
- Trial units in-situ for twelve months, to be subject to full annual weather cycle.
- Trial Project is expected to take 18 months in total, to start when funding is released, which is expected April'23 at earliest.
- Trial monitoring and participant surveys to inform decisions on the nature of a cable channel offer and council approval of offering to residents.
- Participants may be required to open chargers to public via 3rd party community charging services, to increase trial impact to public EV users.

2.4 Note that a trial is necessary to:

- Identify commercial products that enable on-street EV charging from home energy supply.
- Allow residents with no off-street parking to access the lowest cost most convenient charging option, mitigating social equity issue around charging access.
- Provide an alternative to the dangerous practice of trailing charging cables across footways, an activity which is increasing, and for which B&NES has limited enforcement capability.
- Provide performance and operational data, informing B&NES future policy regards product approval, asset ownership, maintenance, and costs.

2.5 Note that the trial costs will be covered by the WECA Green Recovery Fund, enabled via change request to Full Business Case. Initial trial costings identify:

- Capital costs £64,170
- Revenue costs £94,308
- Contingency (15%) £23,772
- Total trial costs £182,250

2.6 The trial will proceed in consultation with product suppliers, participants, and B&NES officers, and as such will be subject to necessary modifications from the trial details in this document. To facilitate required oversight, trial criteria will be delegated to Director of Sustainable Communities, in consultation with the member with responsibility for Climate and Sustainable Travel.

3 THE REPORT

3.1 Overview of EV Charging Infrastructure

The UK EV Charging Infrastructure Strategy (HMG, 2022) identifies a vision for 2030:

- Everyone can find and access reliable public charge points wherever they live.
- Effortless on and off-street charging for private and commercial drivers is the norm.

3.2 To achieve this vision, we need EV Charging Infrastructure (EVCI) which can be identified in the following groupings:

- Off-street home charging
    - Example: Vehicle parks off-street on drive and uses a 7kW charger unit installed with the residential energy supply.
    - Comments: Very convenient, offers lowest cost tariffs and has been historically enabled by OZEV grants.
    - Status: Widely adopted and enabled by commercial offerings. Provides approx. 85-90% of current UK charging activity.
- Off-street public charging
    - Example: Revive network of fast and rapid chargers installed in B&NES car parks.
    - Comments: A wide range of public charging networks exist with highly variable tariffs and reliability.
    - Status: Free market driven network development brought growth through focusing on commercially attractive areas, creating charging deserts in rural and poorer areas.
- On-street public charging
    - Example: Slow & fast chargers integrated into new street furniture or existing lampposts.
    - Comments: Multiple technology options are available, and many examples of deployment within other local authorities. Well suited to provision by commercial Charge Point Operator (CPO), allowing deployment at scale with necessary long-term capital investment.
    - Status: Minimal provision for anticipated huge future demand. LA uncertainty in granting long term concessions and practical implications on streetscape.
- On-street home charging

- Example: Channel installed within the footway to house cable charging EV parked on-street.

- Comments: Technical solutions in development and need successful trials for deployed at scale in UK. Potential huge demand from 33% UK households with no off-street parking.

- Status: Lack of this EVCI driving unacceptable practice of trailing charging cables across footways, with safety and access implications.

3.3 Only a combination of all EVCI types will enable B&NES to achieve the UK strategy vision. The diversity of users, vehicles, context and physical practicalities demand a range of EVCI solutions be available. However, the UK strategy goes on to identify the current disparity in meeting the future vision:

- Off-street EVCI is developing at pace

- On-street EVCI is developing too slowly

3.4 **Status of EV Charging Infrastructure in B&NES**

The status of EVCI in B&NES mirrors the national situation described previously.

3.5 The availability of EVCI in B&NES is below UK average. The Department for Transport (DfT, 2022) measures chargers per resident across the UK as metric of progress:

- UK average: 45.2 units / 100k population

- B&NES average: 41.3 units / 100k population.

3.6 WECA (2022) have reported on the level to which residents rely upon on-street parking, with the UK average at 33%, while B&NES is 27%. Dense urban areas have higher percentages; thus, we could assume Bath city is more like the Bristol average of 37% reliance on on-street parking.

3.7 Anecdotal evidence from resident communications demanding action from B&NES supports that we do not have sufficient EVCI, especially on-street charging for residents.

3.8 The draft B&NES Electric Vehicle On-Street Charging Strategy was written in July 2020 and published online in May 2022. It recommends “Identification of the most appropriate infrastructure and technology and systems for on-street EV charging in B&NES”. The proposed trials are a critical part of meeting this recommendation.

3.9 B&NES activities to date in creating EVCI have been building public off-street ECVI in our car parks, with chargers operated through the Revive network. This process was carried out in conjunction with the other West of England LA’s, sharing knowledge and learning between officers. Go Ultra Low West (GULW) funding was used to build the Revive public charging network.

3.10 The lack of any on-street home EVCI solution disadvantages residents with no off-street parking. It also leads to the dangerous activity of charging via

trailing cables across the public footway, which creates unacceptable trip hazards and accessibility issues. This activity is prohibited under Highways Act 1980 and the Health and Safety at Work Act 1974. However, enforcement currently relies on a strongly worded letter from highways dept. which is balanced against the resident's personal risk assessment of liability to any accident claims.

3.11 The UK EVCI Strategy (HMG, 2022, p7) acknowledges that reliance on commercial deployment has led to "significant regional disparities in deployment…[due to] potentially low utilisation or high connection costs". It commits to "support local government to develop charge point strategies and scale up the rollout of public charge points on local streets". This will be enabled from 2023 onwards by the Local Electric Vehicle Infrastructure (LEVI) fund.

3.12 Multiple CPO's have expressed interest in a concession for the B&NES region as areas within it offer excellent commercial viability, especially Bath with high affluence and reliance on on-street parking. WECA are working on a West of England wide concessionary deal as part of the joint LEVI bidding process.

3.13 Considering all the above focusing efforts to enable an On-Street Home Charging solution needs to be a priority.

3.14 **On-Street Home Charging Options**

The technology options for on-street EVCI have been summarised in the WECA EV charging investment proposal (WSP, 2022) which identifies cable channels as the preferred low-cost option to trial for on-street home charging. EV cable channels are identified as having the following benefits:

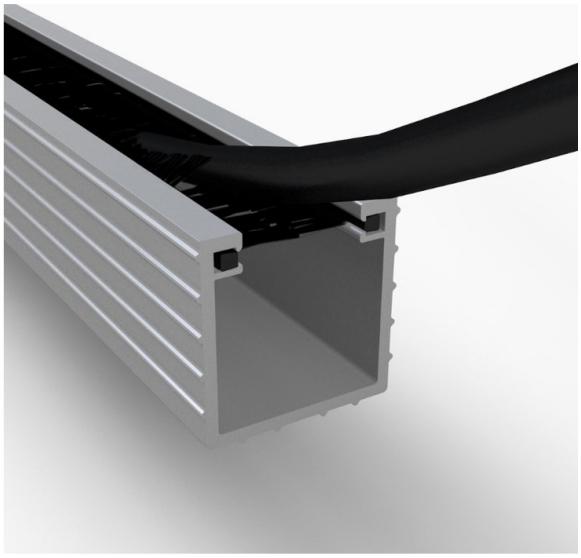
- Allow wider adoption of low emission vehicles, working towards Net-Zero goals.
- Reduce demand on public charging provision, which has higher build costs.
- Compatible with on-street public charging options.
- Offers potential new income streams from sales, installation, and licensing charges.

3.15 **Soft Market Testing**

Market analysis for comparative products identified five available options:

3.16 Stormguard Cable Channel

Description: Aluminium channel 'U' section with pair of bristle strips to retain charging cable. Located into cut and chiselled channel in footway pavement and secured into position with mastic or mortar.



Comments: No trials or BS highways specification testing conducted. Commercially available via online purchase, unit best suited for private land use and no evidence of customer support.

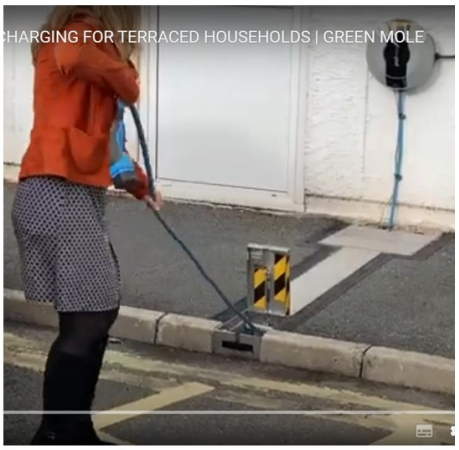
3.17 Kerbo Charge

Description: Rigid PVC channel, with integrated self-closing lid. Located into cut and chiselled channel in footway pavement and secured into position with mastic or mortar. Received InnovateUK funding. Offered as part of a full solution including instal and oversight of licensing with LA for customer (and potentially charger install).

Comments: Initial trial ongoing with Milton Keynes Council. Material choice and self-closing lid suggest robust unit with minimal reliability issues. Unit to pavement securing methodology has unknown reliability and potentially unsightly. Kerbo Charge offer the cable channel as part of a package which can also include home charger unit, installation, 3rd party charging app and ongoing maintenance (cable channel may not be available separately). Pricing comparison using suggested retail price difficult as it uses an alternative Product Service System model. However, supplier has quoted unit cost for trial, without home charger supply.

3.18 Green Mole

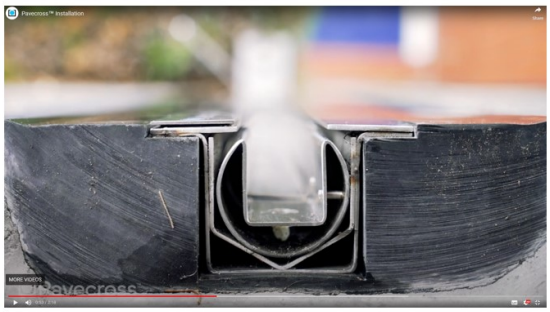
Description: A steel cable channel permanently housing a tethered cable for house charger unit. The cable is extracted under tension and retracted into channel automatically. Unit fitted in situ by removal of deep channel in footway pavement and secured in place by backfill of pavement material. Surface flush with footway is sheet steel with grip patterned surface.

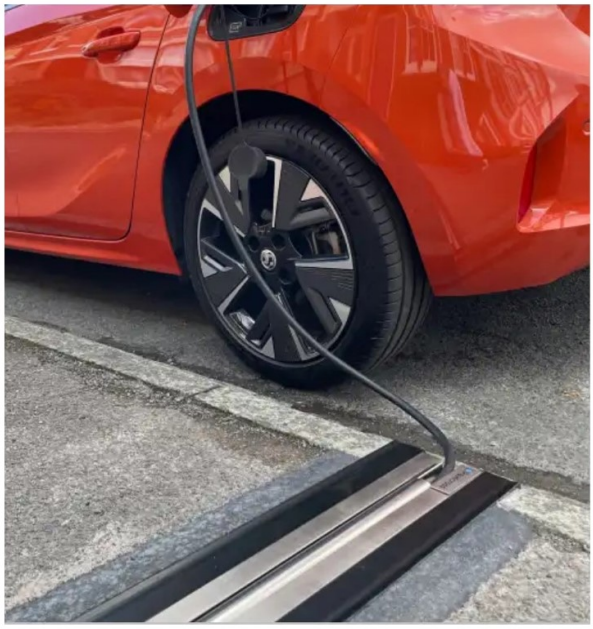


Comments: Developed as collaboration between civil engineering firm and academia (Liverpool John Moores & Salford Universities). Production capacity and level of public trials unclear.

3.19 Pavecross

Description: Cable channel unit constructed of formed steel sheet. Cable is placed within a rotating inner channel that locks cable in position when closed and leaves no surface gap to footway pavement. Lockable channel access. 75mm deep civils into footway pavement, with cable channel unit secured within rubber filled trench.





Comments: Currently undergoing public trials within Shropshire LA. This unit removes the risks associated with the gully gap permanently left open at the

footway surface by other concepts. Chargepave propose a business model where the LA only adopts the rubber trenching (made form the same material as rubber kerbs), while the cable channel unit is owned by the resident and maintenance is conducted with supplier support. Chargepave is being promoted in conjunction with 3rd party charging options.

3.20 Gul-e

Description: Channel constructed from aluminium sheet and box section. Channel closure and cable retention provided by thick bristle strip. Unit fitted in situ by removal of oversized channel in footway pavement and secured in place by backfill of pavement material. Surface flush with footway fitted with anti-slip taping.

Comments: Developed product in second iteration. Received InnovateUK funding. Second trials completed in Oxfordshire and trials currently ongoing with other LA (Durham, Bedford). Robust construction and fitting methodology minimising risk of maintenance issues. Previous trial documentation shared by ODS to support trial development.

3.21 **Product Comparison**

All solutions show obvious inspiration from the heritage cast iron drainage gullies still seen on some conservation streets. These designs specifically meet the requirements of households with only on-street parking, allowing them access to home EV charging, whilst addressing long standing concerns associated with such provision, including:

- Removes cable trip hazard from footway surface.
- Does not introduce accessibility issues from uneven, raised surfaces.
- Allows convenient home charging of an EV parked in the adjacent carriageway.
- Allows access to cheapest EV charging via supply from home energy tariffs.

- Addresses the social equality issue of home EV charging being preserve of those households with access to off-street parking.

3.22 Table 1 below lists the different cable channel products, describing cost, production readiness level, public trials undertaken, and positive and negative factors. The table has been assessed for features that stand out in comparison as having positive or negative impact on the trial. Features marked green are highly positive and those in red are highly negative. Products with red features are not viable for participation in a public trial at this stage.

	Cost	Production Level	Trials Level	Positive Factors	Negative Factors
Stormguard	£35/unit	Commercial	None; Straight to market.	Low cost; simple construction; commercially availability.	No testing or trials for instal on public highway; adds footway gap.
Kerbo Charge	£999/unit instal (not including home charger)	Limited	Public; Milton Keynes LA	Simple operation; No footway gap; minimal install civils; Kerbo accept unit maintenance liability; InnovateUK funded; bespoke app enables 3rd party charging.	Potentially prescriptive business model; unknown material & design durability.
Green Mole	£3000+VAT	Prototype	Prototype installation.	Cabled housing minimises operational trip hazards; ease of use (assumed).	High cost; high potential for maintenance issues; deep civils instal footprint.
Pavecross	£1500 inc VAT (with home charger)	Limited	Public; Shropshire LA.	No footway gap, no deep civil; LA only adopts rubber base fitting; promotes 3rd party charging.	Potentially prescriptive business model; unit cost unclear; impact of moving parts on maintenance
Gul-e	£500/unit & £350 instal	Limited	Public; LA x4.	Innovate UK funded; robust construction; 2nd iteration; good customer	Adds footway gap; deep civils instal footprint;

				support; most trials completed.	

3.23 **Table 1: Comparison of cable channel products**

3.24 Based on the soft market testing and product comparison the Gul-e, Kerbo and Pavecross solutions are suitable for trials on public footways in B&NES.

3.25 **Officer Consultation**

B&NES officers from Highways, Planning, Active Travel and Equalities teams were consulted for information and comments on the use of cable channels to enable on-street EV home charging. Reponses from officers are summarised below:

3.26 Supporting factors:

- Demand for on-street home charging will only grow with transition to EV and increasing deployment of clean air zones, so we should start to tackle this now.
- Trailing charging cables across the footway is a solution being commonly adopted by residents and a dangerous activity risking public injury and liability claims. An alternative, safer option is needed to halt the increase in trailing cables, limit liability action and legitimise enforcement.

3.27 Potential issues:

- Maintaining good cable channel operational practice by participants.
- Ensuring fitting of cable channels is secure and doesn't damage existing utilities sited in footway.
- Unit ownership, responsibility for maintenance and future requirements on officer time to maintain footways where cable channels fitted.
- Impact of wider adoption on utilities work carried out along length of footways where multiple cable channels fitted, specifically the ability and willingness of sub-contractors to make good the cable channel fitting once contracted job completed.
- Ensuring operational procedures in place to manage cable channel ownership and maintenance responsibilities when the installing resident move to another property.
- Requirement for B&NES officers to act should the company supplying cable channels and associated services go out of business.

3.28 **Lifecycle model**

The key choice in the cable channels lifecycle model is regards product ownership, which directly informs responsibility for the products lifetime maintenance. Most other issues arising around the cable channel will be guided by this decision. Each of the products identified for trial are offered with a preferred lifecycle model.

3.29 Council adoption – Safe Choice, low risk but requires initial investment. Model for Gul-e product, and the rubber trenching component of the Pavecross.

3.30 The footway is already adopted by the council, therefore we also adopt the cable channel that is put in place there. Installation is completed by B&NES designated contractors, currently Volker Highways.

3.31 Positive factors:

- The council maintains full control over the footway.
- Opportunity to develop income streams from licensing, installation and annual maintenance fee.
- Will be forced to adopt in the future anyway if a resident or third party fails to fulfil their maintenance responsibilities.

3.32 Negative factors:

- Requires officer time and continued funding which is not currently available.
- Cable channels are new products with unknown maintenance requirements, therefore difficult to estimate future associated costs.

3.33 Resident ownership – Easy Choice, but high risk. Model for the cable channel component of the Pavecross product, and the Kerbo Charge product (late life).

3.34 The resident purchases the cable channel and is responsible for its maintenance. Installation via approved contractors under license from B&NES.

3.35 Positive factors:

- Maintenance is not the responsibility of the Council, reducing financial and officer pressures.

3.36 Negative factors:

- Maintenance is the responsibility of the resident, increasing risks of it not being conducted to acceptable levels.
- If the resident sells the house or moves out the cable channel will be left with no clear ownership or maintenance liability.

3.37 3rd Party ownership – Attractive choice, medium risk. Model for the Kerbo Charge product (early life).

3.38 A third party, usually the business retailing the solution, adopts the cable channel and its associated maintenance. Installation depends on business model but must be via approved contractors.

3.39 Positive:

- Liability for maintenance is held by a commercial entity. This makes contacting them in an emergency for quick action more practical and reliable.

- Council or resident is not liable for maintenance costs. Limits future demands on officer time.

3.40 Negative:

- All businesses offering cable channel products selected for trial are relatively new start-ups. This means they have a limited track record on performance and their potential to fold is assumed to increase.

3.41 **Supporting Information**

Information will be utilised which helps navigate a response to the problematic issues identified with cable channels. Manufacturers information and previous trials documentation has helped inform this trial proposal. The Gul-e specifically has undergone two trials with Oxfordshire councils during its development, with ODS allowing B&NES access to documentation and survey results.

3.42 **Trial Proposal**

It is proposed that the EV charging cable channel trial will conform to the following details. Note that the development and delivery of the trial may dictate that these details change:

3.43 Trial Gul-e, Kerbo and Pavecross products.

3.44 Run trial with cable channels in situ for 12 months, providing understanding of impact of all four seasons weather types.

3.45 Install 20x trial units for each product, with only one cable channel product installed per participating household, requiring 60 participants in total.

3.46 Participants be drawn from public volunteers, selected against trial requirements.

3.47 As much as possible participant selection will represent the diversity of the regional community, especially regards Equality Act 2010 protected characteristics.

3.48 Residents with pre-existing enquiries to B&NES regards on street EV charging provision will be contacted to propose participation and their applications be prioritised.

3.49 Market the trial to public generating volunteer applications and communicating the efforts of B&NES to address the demand for EV charging.

3.50 Volunteers be assessed against set of criteria to identify suitable participants. Criteria reflects technical requirements for products and desired range of install scenarios. Sample criteria below:

- On carriageway parking at property frontage accessible via footway

- Prove regular use of EV (own, loan, business)
- Residence is not a listed building and/or have pennant flagstone paving on the footway, due to conservation issues with cutting paving slabs and potential visual impact of charger unit on building.

3.51 Participants will need to agree to fulfil the following conditions:

- Have a 7kW home smart charger unit fitted prior to trial commencement.
    - Meets OZEV standards for workplace charger grant and is highly suited to the role home charging.
    - Charging via a 13A 3 pin socket is unsuitable for the continuous high levels of energy required for EV charging and has been shown to regularly cause cable melting and fire risk. This is to be prohibited within trial activities.
- Terms of use of charging cable channel, to include:
    - Charging cables only left in channel when charging vehicle
    - Ensuring charging cable is secured safely through regular checks.
    - Minimise cable length from channel to vehicle (suggested maximum 1.5m) and secured away from footway surface.
- Participate in community charging where viable, allowing neighbours to share usage of home charger.
    - Community charging is enabled through 3rd party systems, usually via smartphone apps (e.g. Co-Charger, Octopus Energy, etc)
    - Financial recompense for access to charging is organised via the 3rd party system.
    - This is an excellent way to:
        - Increase the impact of the trial for minimal cost.
        - Kickstart wider adoption of community charging within B&NES
        - Minimise demand on wider charging infrastructure

3.52 For the trial to provide the necessary learnings the range of trial locations must represent the different scenarios for cable channel use and install, including:

- Footway paving types – tarmac; paving slabs; bricks; etc.
- Built environment – city/rural; compact terrace/large detached; lower/higher area affluence; etc.

- House curtilage - doorway onto footway, garden is short/long, garden with/without barrier, etc.

- Kerb to carriageway arrangement, to include stone and concrete kerbs, varying kerb height, etc.

- On-street parking arrangement, to include RPZ, parking restrictions, no restrictions, etc.

- Traffic flow on carriageway, to include 20 and 30 mph limits, medium and high flow, etc.

- User behaviour, to include high mileage commuter, frequent local trips, long term parker, etc.

3.53 Participants contribute 50% of the costs of cable channel unit purchase and installation. This is match funded by the trial project. A financial commitment from the participant will provide investment in the trial. Combined with a contribution from the trial project this is hoped to promote continued co-operation and completion of follow up surveys. Enquiries from public show demand from residents and trial uptake is expected to be high.

3.54 Unit ownership throughout the trial follows that prescribed in the business model associated with each cable channel product. This is to understand the wider implications of that business model should the product be considered for wider deployment throughout the B&NES region:

- Gul-e: council adoption.

- Kerb Charge: early life third party ownership, late life resident ownership.

- Pavecross: council adoption of rubber location trench and resident ownership of cable channel unit

3.55 No allocated parking will be provided as part of this trial. Doing so would reduce already limited on-street public parking, and show favouritism to EV drivers.

3.56 **Trial Outputs**

Trail participants will be required to keep a charging diary and complete an end of trial survey. This data will be supported with survey information captured from Highways officers and interviews with contractor staff carrying out installations. Fortnightly review meetings will be held by B&NES officers once instals commence, to assess latest information and impact upon trial plans.

3.57 The data from surveys and interviews will be used to assess and compare the trial cable channel units and their performance. Data analysis will provide scorings in key performance criteria for each of the cable channel products. The product scorings will inform the B&NES decision on a way forward, alongside observations on operational, economic, legal and equalities issues.

3.58 Two trial products will not be adopted as a B&NES approved option. The trial sites with these units installed will have the products removed and the

approved product fitted. This approach will remove the varied operational demands on B&NES that would be associated with managing multiple in-situ product types.

3.59 The selected product will be offered to residents within identified operational procedures regards product ownership, liability, and terms of use. Cable channels will be applied for via web portal in a similar manner as dropped kerbs. Granting a license to install will follow a successful inspection of the site by B&NES officers recommending viability, agreement on the terms of use and receipt of necessary funds.

3.60 **Trial Costs**

The preparation of this report and development of the trial proposal has been undertaken by the Electric Vehicle Infrastructure Lead and the costs have been covered within sustainable communities project budgets.

3.61 **Trial Capital Costs**

Capital costs will consist of units and installation: Note installation costs will necessarily vary depending on the footway pavement material, site context and contractor.

3.62 Gul-e

- Unit & install quoted: £850
- All trial units: £850 x 20 = £17,000
- Including 50% costs from participant: £17,000 x 0.5 = £8,500

3.63 Kerbo Charge (*quoted cost also includes unit maintenance costs)

- Unit & install quoted: £999
- £999 x 20 = £19,980
- Including 50% costs from participant = £9,990 (* inc. maintenance)

3.64 Pavecross (estimate, depends on negotiated business model)

- Unit & install quoted, with charger install: £1,500
- Estimated cost of charger and instal: £600
- Unit and install estimate: £1,500-£600 = £900
- All trial units: £900 x 20 = £18,000
- Including 50% costs from participant = £9,000

3.65 Retrofit (40x trial sites, in-situ trial product removed and fitted with preferred product)

- Average unit & install costs: £917

- Retrofit actions: £917 x 40 = £36,680

3.66 Total trial project capital costs:

- £8,500 + £9,990 + £9,000 + £36,680 = £64,170

3.67 **Trial Revenue Costs**

The proposed trial project is expected to require officer input for 18 months, from initial communications and volunteer recruitment, through to a decision on deployment and transfer to operational staff. Estimates of officer time needed in support of the trial identify a requirement for both a senior and assistant level officer over the trial project.

3.68 The level of officer time will change over the trial project length. This has been estimated as a percentage full time equivalent undertaken each month, for each officer role. Using officer charge rates that include centre overheads a total trial revenue cost of £94,308 has been identified.

3.69 **Total Trial Costs**

Incorporating 15% contingency rate.

- Capital costs = £64,170
- Revenue costs = £94,308
- Contingency (15%) = £23,772
- Total Trial costs = £182,250

3.70 **Funding**

It is proposed that all trial costs be funded by the West of England Combined Authority (WECA) Green Recovery Fund (GRF) electric vehicle charging project. The GRF is going through WECA full business case approval in February to March 2023. The WECA GRF project manager is confident that Gul-e trial costs are suitable for incorporation within the GRF activities, enabled through the change request process and with the support of the ‘senior director scrutiny panel’, which includes B&NES Sustainable Communities Director.

3.71 **Recommendations**

3.72 Regards the EV charging cable channel trial:

- Proceed with trial proposal as detailed in this document.
- To facilitate required oversight of any necessary modifications of the trial details through delegation to Director of Sustainable Communities, in consultation with the member with responsibility for Climate and Sustainable Travel.

3.73 Regards the decision on future offer of cable channel installs for B&NES residents:

- Be informed by the findings from the trial, and if a cable channel offering is selected, that it provides the best balance of council, resident and commercial interests.

- Adopt policy which:

    - Minimises risk to B&NES, especially around future highways maintenance activities

    - Where possible develops income streams for B&NES

4 STATUTORY CONSIDERATIONS

4.1 Most public footways are part of the adopted highway, for which B&NES has responsibility. This provides B&NES the authority to make decisions that impact these footways and their safe use, such as introducing cable channels.

4.2 As previously identified in section 3.1, HMG have identified strategic goals for the availability and accessibility of EV charging for everyone. Trialling cable channels which enable on-street home charging are a necessary activity in working towards these goals.

5 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

5.1 The total budget for the project is estimated at £182,250 which includes 15% contingency. These costs are identified in sections 3.60 to 3.69 in this report and comprise revenue budget of £108,454 and capital budget of £73,796.

5.2 The project will be funded from the WECA Green Recovery Fund electric vehicle project and will be accessed via a change request to an approved full business case.

5.3 An alternative funding source would be the Local Electric Vehicle Infrastructure funding from OZEV, for which a West of England bid is being generated by WECA for submission in Q3 2023/24.

5.4 Extra officer capacity needs to be identified and allocated to support the trial.

6 RISK MANAGEMENT

6.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

6.2 The latest Risk Assessment document has been supplied for publishing as an attachment to this report. This is a live document which will be updated through further related activities and informed by ongoing trial findings.

7 EQUALITIES

7.1 An Equalities Impact Assessment (EQIA) has been completed under the guidance of the B&NES equalities team.

7.2 The latest EQIA document has been supplied for publishing as an attachment to this report. This is a live document which will be updated through further related activities and informed by ongoing trial findings.

8 CLIMATE CHANGE

8.1 Enables decarbonisation of transport sector (UK sector with greatest GHG emissions), where use of private vehicle is only option. Enables use of vehicles with zero tailpipe emission for cleaner air quality. Total lifecycle impacts of an EV are lower than equivalent ICE vehicle (ICCT, 2021) and will continue to decrease as the UK energy sector is decarbonised, which further reduces the impacts from the vehicle use phase. ICE vehicles are locked into GHG emissions in use phase due to their reliance on fossil fuels.

8.2 Adoption of electric vehicles for private vehicle use is only a part of the necessary transition to more sustainable transport. Other B&NES projects work towards the promotion and adoption of the preferred transport modes of public transport and active travel.

9 OTHER OPTIONS CONSIDERED

9.1 As previously identified in section 3.14, WECA assessed the technology options for on-street home charging and identified cable channels as the favoured solution necessary of investigation.

9.2 As previously identified in sections 3.2 – 3.3, a range of EV charging infrastructure is necessary to achieve future UK strategic goals. Cable channels would be one element, alongside complimentary charging infrastructure such on-street public chargers located in street furniture. These other on-street options are planned to be introduced in collaboration with commercial charge point operators (CPO's) through negotiated concessions, as described in section 3.12 & 5.3.

10 CONSULTATION

10.1 The proposed trial detailed in this report has been developed with comments and feedback from B&NES officers in Highways Maintenance, Active Travel, Equalities and Planning teams. It has then been reviewed and approved by the Strategic Management Team and reviewed by an Informal Cabinet.

10.2 Public engagement has been through questions and requests from public directly to B&NES residents about EV charging, mainly in the form of emails to the local MP and council members, along with questions to open council. Most questions focus on the key topics:

- Identifying their only EV parking option is on-street and they need to access home charging, then requesting permission to trial cables across the footway to enable home charging.

- Requesting information on when on-street public EV chargers will be installed, and that chargers be placed on their street.

10.3 This Single Member Decision report has been signed off by the Director of Sustainable Communities and the Member for Climate and Sustainable Transport. It has also been cleared by the S151 Officer and Monitoring Officer.

Contact person	Dr. Alex Rowbotham, Electric Vehicle Infrastructure Lead
Background papers	• Bath & North East Somerset Council. (2020) B&NES On-street electric vehicle charging strategy. Draft. Prepared by Jacobs. Web Source • Department for Transport. (2022) EV charging device statistics from 2019. Web Source • Her Majesties Government. (2022) Taking Charge: The Electric Vehicle Infrastructure Strategy. Web Source • International Council on Clean Transportation. (2021) A global comparison of the life-cycle GHG emissions of ICE and electric passenger cars. Web Source • West of England Combined Authority (2022). WECA Electric Vehicle Charging Investment Proposal. Prepared by WSP. Internal document.
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