Executive **13 July 2023**

Report of the Director of Place
Portfolio of the Executive Member for Economy and Transport

LEVI Pilot Funding for Askham Bar HyperHub

Summary

1. The "York Public EV Charging Strategy", which was launched in March 2020, sets out the approach for delivering York's EV charging network up to 2025. Key to the 3-tier approach to assisting residents without off street parking and servicing a number of other user groups is the implementation of ultrarapid EV charging stations known locally as HyperHubs.

2. The UK Government's "Local Electric Vehicle Infrastructure" (LEVI) fund supports local authorities in England to work with the chargepoint industry, to improve the roll out and commercialisation of local charging infrastructure. These public chargepoints will help residents who don't have off-street parking and need to charge their electric vehicles (EVs).

3. CYC was invited to submit a bid for funding as part of the pilot for the LEVI scheme for Hyperhub 4 at Askham Bar Park and Ride. The bid was successful, but due to local elections, a decision on whether to accept the funding has been deferred until July 2023.

4. A Hyperhub in this location is crucial as it closes the gap in provision on the Southern side of the City. There are some risks related to this site in terms of landownership and to mitigate this it is proposed that a staged approach is taken to the delivery. This will start with work to test feasibility and better understand the land issues.

Recommendations

5. The Executive is asked to:

   Option 1 (recommended):

   Accept the LEVI funding offer of £1,243k in principle recognising

the ultimate need for the £669k match funding and to agree at this stage to match fund £60k for a phase 1 business case and feasibility study, allocated from within current transport budgets. Officers will report the results of the feasibility to a future Executive meeting and will then request a further decision on proceeding with delivery dependent on the outcome of the feasibility study;

Reason: To continue to deliver on the public EV charging strategy to meet objectives in terms of uptake of Electric Vehicles and climate change and carbon reduction;

Background

6. The “York Public EV Charging Strategy”, which was launched in March 2020, sets out the approach for delivering York’s EV charging network up to 2025. The 3-tier approach, utilises fast chargers in council owned long stay car parks, strategically located rapid chargers and dedicated ultra-rapid charging Hubs, known as HyperHubs. The three Tiers work together to offer a comprehensive and attractive charging solution for residents without off-street parking and multiple EV user groups.

7. Two HyperHubs were opened in 2022, at Monks Cross and Poppleton Bar, each providing 4x 175kW Ultra-rapid chagers, 4 x 50kW chargers, 102kWp Photovoltaic (PV) panels and 500 kW battery storage on site. Both Hubs have been very well used over the first year of operation, averaging 2,900 charging sessions per month. In terms of kWh of charging, the HyperHubs deliver around 90% of all EV charging conducted on CoYC’s charging Network each month. This equates to 60 tonnes CO2e reduction per month.

8. The UK Government’s “Local Electric Vehicle Infrastructure” (LEVI) Fund supports local authorities in England to work with the chargepoint industry, to improve the roll out and commercialisation of local charging infrastructure. These public chargepoints will help residents who don’t have off-street parking and need to charge their electric vehicles (EVs).

9. The fund includes: Capital funding to contribute to the costs of delivering chargepoints, as well as capability funding for local authorities to employ and train new staff specifically to plan and deliver chargepoint infrastructure. The LEVI Fund builds on the existing On-Street Residential Chargepoint Scheme (ORCS).

10. CYC was invited to submit a bid for funding for a fourth HyperHub as part of the pilot for the LEVI scheme. The bid was successful, but due to local elections, a decision on whether to accept the funding has been deferred until July 2023.

11. The application made was for Hyperhub 4 at Askham Bar Park and Ride. Note that due to City of York Council's involvement and good relationship with the funders, the initial condition of match funding from the private sector was revised in order for the Council to investigate whether the match funding through City of York Council investment could be made, consistent with the own and operate model at the existing park and ride sites at Monks Cross (Hyperhub 1) and Poppleton Bar (Hyperhub 2) and the proposed site at Union Terrace car park (Hyperhub 3) in the City centre (see Annex B – Analysis of charging infrastructure coverage).

12. In terms of the site proposed for Hyperhub 4, Askham Bar park and ride, this is strategically well positioned and completes the rapid charging EV offer in terms of providing residents without off street parking EV charging provision with the gap in provision being to the South of the City. To meet the City's carbon reduction targets and accelerate the take up of Electric Vehicles across the City it is key there is provision to the South of the City. Like Monks Cross and Poppleton Bar, the strategy of the locations for the park and rides sites in terms of servicing different geographies and supporting journeys is the same for the positioning of the Hyperhubs, so Askham Bar is ideal for a proposed site as the site is principally in the Council's ownership (i.e. land purchase would not be necesary).

13. In terms of risk, given the legal challenges at Monks Cross and Poppleton in terms of land and access, a view has been taken initially on risks at Askham Bar and it is felt that this scheme, due to current arrangements around land ownerships and lease arrangements (initially there are six different parties in the mix), may be much more complex than Hyperhub 1 and Hyperhub 2. As the site is geographically favourable, taking the site through feasibility would be a sensible approach as it is possible that it is not feasible at all.

14. In the application to the LEVI fund, the funding awarded on the basis of a project with an estimated cost of £1,912k. The LEVI award is 65% of the total amount, £1,243k, with a match funding requirement of £669k which Members would need to agree to be added to the Capital

programme at the point Members were satisfied as to the deliverability of Hyperhub 4.

15. In accordance with the Capital Projects protocol Members do not commit to deliver finances to a project until a full business case and a high degree of certainty of deliverability is achieved. Due to the complexities the land issue and only outline budget evaluation available at this stage it is proposed that subject to determination of deliverability CYC confirm its intention to deliver Hyperhub 4 thereby securing the Dft funding but effectively reserving the right not to proceed.

16. As this project is very well aligned to the National Local and regional ambition of de carbonising the Transport Network officers are asked to explore as part of developing the business case opportunities for other match funding sources including devolution funds.

Strategic approach

17. In 2020 City of York Council published the Public EV Charging Strategy (Annex A) which sets out our approach to providing public infrastructure for all user groups, with a particular focus on providing charging options for residents without off-street parking.

18. The Strategy sets out:

- Continued public ownership of the York EV Network (own and operate model)
- Delivery of a right sized Network which leaves room for commercial operators (there are 11 commercial networks in York)
- Commitment to set a fair tariff with the day to day costs of the Network covered by users – Fast 20 p/kWh, Rapid and Ultra Rapid 25 p/kWh
- Provide charging options for residents without off-street parking and delivery of a Network that supports multiple user groups.
- This leads to three tiers of infrastructure.

19. Tier 1 – Fast chargepoints in Council owned long stay car parks – these are commonly within 10 minute walk of residential areas without off-street parking. These also serve commuter, visitor, and tourist user groups during the day whilst providing resident facilities overnight.

20. Tier 2 – distributed 50 kW Rapid chargers – these are distributed around the City providing Rapid options for all user groups, including

residents without off-street parking who don't want to/can't use overnight charging facilities.

21. Tier 3 – HyperHubs; award winning, dedicated Ultra Rapid charging options designed specifically for EV charging in urban areas. These provide an alternative for residents without off-street parking, by providing access to Ultra Rapid facilities which can be used as an alternative or as a supplement to Tier 1 and Tier 2. Each HyperHub offers four 50 kW Rapid and four 175 kW Ultra Rapid chargers under a canopy structure, with 24/7 access. The compact nature of the design allows HyperHubs to be delivered in urban areas. The first two HyperHubs are open and serving customers at strategically located sites covering the North West and North East of the ring road, a third City Centre HyperHub is progressing through planning and has a confirmed budget. HyperHub four (the focus of this bid) will serve the Southern ring road. Thanks to the compact geography of York the ring road locations directly serve both through traffic and local residents, providing excellent coverage.

22. The three Tiers work together to offer a comprehensive and attractive charging solution for residents without off-street parking and multiple user groups. For example concerns over access to Fast chargepoints is mitigated by having access to Rapid and Ultra Rapid charging options. By providing options ranging from Fast to Ultra Rapid within a single Network, ease of access is assured.

23. Key resident areas covered – please see B3 for more details. HyperHub 4 is the final strategic site that needs to be delivered in order to provide complete coverage of all significant terraced street areas without off-street parking.

Options

Option 1 (recommended):

Accept the LEVI funding offer of £1,243k in principle recognising the ultimate need for the £669k match funding and to agree at this stage to match fund £60k for a phase 1 business case and feasibility study, allocated from within current transport budgets. Officers will report the results of the feasibility to a future Executive meeting and will then request a further decision on proceeding with delivery dependent on the outcome of the feasibility study;

Option 2

Agree to halt the project in terms of its current approach and funding sources and look to deliver through an alternative route. This would mean turning down the LEVI award. This approach may affect any future bids to the LEVI fund. The next tranche will be announced in the summer.

Analysis

15. Chargepoint Network Growth:

Figure 1 below breaks down the number of charging devices by speed or power rating over the past six years. The four speeds or power ratings that are tracked are defined as slow (3-6kW), fast (7-22kW), rapid (25-99kW) and ultra-rapid (100kW+).

The charging network is made up of different types of charge points for different use cases.

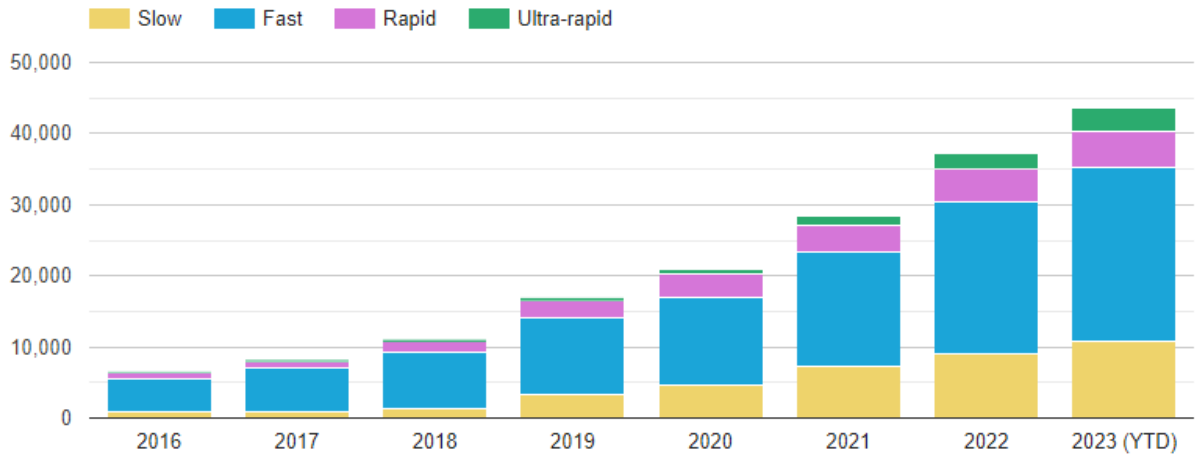

Figure 1: Number of public UK chargepoints by speed, 2016 to 2023. Source: Zapmap database

16. Figure 1 focuses on the number of charging devices, rather than the capacity to deliver electricity. This masks the fact that devices with different power rating provide a significant difference in capacity. For instance, while rapid and ultra-rapid chargers only make up around 20% of total devices, they account for around 60% of the total capacity.

17. The Monks Cross and Poppleton Bar HyperHubs have been well used over the first year of operation, averaging 2,900 charging sessions per month. In terms of kWh of charging, the HyperHubs deliver around 90% of all EV charging conducted on CoYC's charging Network each month. This equates to 60 tonnes CO2e reduction per month. York's Public EV

Charging Strategy is a key component of the wider carbon Reduction Strategy. Completion of the planned infrastructure roll out is essential if these targets are to be achieved.

18. Impact on National Grid:

Figure 2 below compares the UK energy demand on the National Grid, with charger demand at the Monks Cross and Poppleton Bar HyperHubs and average solar generation over a 24 hr period:

- Peak energy demand for the UK National Grid occurs between 16:00 and 20:00 each day.
- Peak demand for charging at the HyperHubs occurs between 11:00 and 15:00. This coincides with peak solar generation, which reduces the impact on the grid throughout the busiest period.
- The HyperHub's impact on the National Grid, during periods of high demand, is further reduced by the battery storage system, which utilises stored energy to supplement charging sessions during the evening as solar output reduces.

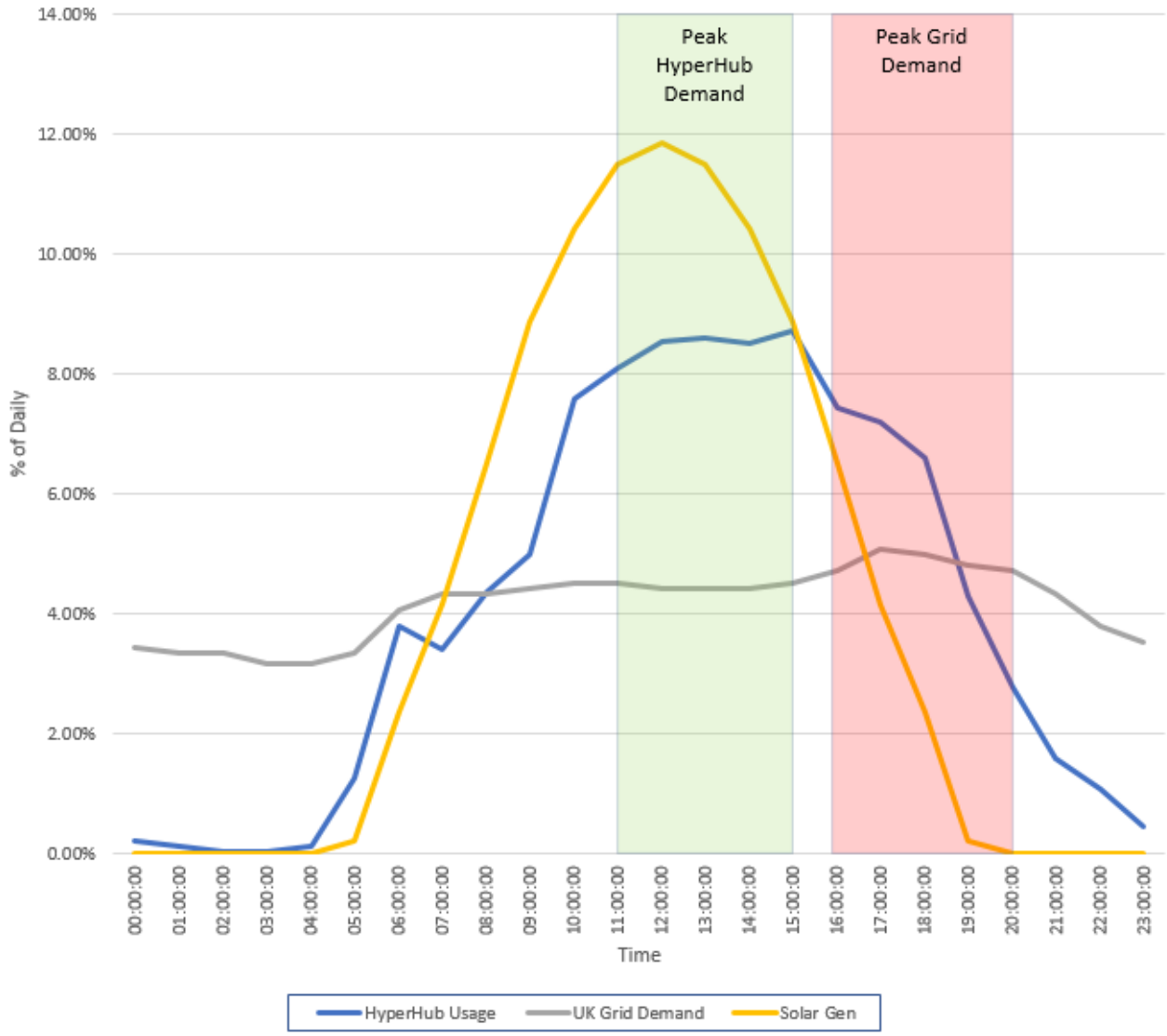

Figure 2: Comparison of Grid Demand with Charging Demand

19. The HyperHub will include 102kWp Solar PV installed on four canopies which cover the charging hub and the fast chargers within the park and ride car park. The solar system will generate around 80,000kWh of electricity per year. By incorporating renewable energy generation into the design, the HyperHubs will:
    - produce zero carbon power which can be used directly in the charging process.
    - create less demand on the National grid during periods of high charging demand.
    - Help to reduce the cost of charging for the user.

20. Enabling Renewable Energy Generation:
    In addition to storing power for use in the charging, the HyperHubs batteries will be integrated into GridBeyond's Grid frequency response

network, which helps enable renewable energy generation around the UK by providing Grid Frequency Response services. The frequency balance of the National Grid wavers as generation from renewable energy sources changes due to changing weather conditions and demand. The HyperHub's batteries assist with stabilising the grid quickly, providing millisecond response times to changing conditions and charging or discharging to keep the frequency within required tolerances.

21. Option 1 is the recommended option and allows the progression of the scheme with the lowest risk from the perspective of investing in the delivery project and because of the potential options around feasibility. These are around legal issues around land ownership and leases and the consequential effect on the financial case of protracted or insurmountable issues in this area.

22. There would remain a piece of work to do pull together a funding package for the delivery stage but Officers would have more opportunity to do this and present back a proposal to Members with the conclusions of the feasibility.

23. Option 1 would enable the Council to continue delivery against the EV strategy.

24. Handing the funding back presents a reputational risk in terms of the Council relationship with the DfT with respect to LEVI funding.Officer are preparing for the next round of funding.

Consultation

25. NEVIS: OZEV have extensively modelled the demand for EV charging infrastructure across the UK to meet the expected increase in EVs on UK roads. The results of this modelling have been compiled into the "National EV Insights and Strategy" (NEVIS) chargepoint tool. NEVIS modelling for York aligns closely with the Council's current strategy and deployment of public charging facilities, in both the number of chargepoints and their location. NEVIS data strongly supports the need for a 4th rapid and ultra-rapid charging facility (HyperHub) located on the Southwest side of the city. The Askham Bar Park & Ride site is an ideal location for such a facility.

26. EVCI: Transport for the North (TfN) have developed their own EV charging demand model, the "Electric Vehicle Charging Infrastructure (EVCI). EVCI

data identifies the need for rapid and ultra-rapid charging facilities on the Southwest side of the city.

27. LEVI Support Body: All applications to the LEVI fund are subject to scrutiny by a support body who assess the viability of the proposal and the impact on targeted user groups.

28. Energy Saving Trust (EST): EST were consulted during the development of York's 2020-25 EV Charging Strategy.

29. Motability and Designability: PAS 1899 Accessibility Standard, released in 2022, sets out design standards for accessible charging for disabled users. Despite being designed 2 years prior to the release of PAS 1899, The HyperHubs meet or exceed almost all of the recommended design considerations detailed in PAS 1899. York's HyperHubs are considered to be two of the most accessible charging facilities in the UK to date. The accessibility features of the Monks Cross and Poppleton HyperHubs have been included in the design for the Askham Bar Hyperhub and Motability and Designability will be consulted to further enhance the accessibility offering at the new site.

30. York Access Group will be consulted on the design of the proposed Askham Bar HyperHub.

31. Charge2Access are campaigning to improve accessibility to the UK's public charging network for disabled drivers. The group review charging facilities from an accessibility point of view and share information and experiences of good practise with Charge Point Operators. Charge2Access have agreed to consult on the HyperHub design and accessibility features.

Council Plan and policy framework

32. The council's commitment to providing high quality EV charging for residents and visitors is consistent with the 10 Year Plan for the city, known as York 2032 which recognises sustainability as a key priority for the city and confirms the ambition that York will be carbon neutral and contribute to the regional ambition to be carbon negative. In addition, the Climate Change Strategy 2022-2032 notes that with emissions from transport represent 27.9% of York's emissions and of this, 88% of emissions from car travel or public transport, the strategy

sets an objective to increase the share of vehicles on the road that are electric or hybrid.

33. The proposal is consistent with the emerging Council Plan which is committed to delivering net zero emissions by 2030 and delivering the actions set out in the Climate Change Strategy and delivering sustainable and accessible transport for all.

34. This is supported by the current Local Transport Plan LTP3 around increasing Increasing the proportion of alternatively fuelled (low emission) vehicles running within or through York and improving air quality.

35. In March 2020 the Executive approved the Council's Public EV charging strategy 2020 – 2025. This is included in Annex A of this report.

Climate: Providing high quality EV charging for residents and visitors and continuing to expand York's electric vehicle charging point network, including the construction of HyperHub facilities supports the uptake of electric vehicles which will reduce carbon emissions.

Health: This proposal could encourage more drivers to make the switch from petrol or diesel cars to e-vehicles which would then improve air quality leading to significant health benefits.

Affordability: A fundamental element of the public EV charging strategy is to build infrastructure and own and operate in order to have control over tariffs for York residents. The three tier approach in the strategy is the fast charge points (7kW) in public car parks, the distributed rapid charging points (50kW) and the Hyperhubs (50kW and 175kW). These all work together to provide value for money charging options (particularly for residents don't have off streets parking). The cost effectiveness is demonstrated in the current data where the average across the Country in May 2023 for rapid and ultra rapid charging is 74p/kWh and the Council tariff at the Hyperhub is 46p/kWh and for fast chargers 48p/kWh and the Council charge 35p/kWh.

Equalities and Human Rights: The Council needs to take into account the Public Sector Equality Duty under Section 149 of the Equality Act 2010 (to have due regard to the need to eliminate discrimination, harassment, victimisation and any other prohibited conduct; advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and foster good relations between persons who share a relevant protected characteristic and persons who do not share it in the exercise of a public authority's functions).

An Equalities Impact Assessment will be carried out as part of the feasibility study and the results included in the future report to Executive members. The first draft can be found in Annex C.

Implications

Financial

- The cost of the feasibility study is anticipated to be approximately £60k and will be funded from Transport budgets. This can be part charged against the grant should an affordable scheme ultimately be deliverable within the overall budget.
- Should the feasibility provide a deliverable scheme it will be necessary to identify the match funding required to draw down the £1,243k grant. This will either need to be taken from Highway and Transport budgets already agreed or new funding that could be considered as part of the 2024/25 capital budget process. This will be addressed in subsequent reports.
- Should the feasibility not lead to a deliverable scheme the cost will need to be classed as abortive and written off to Transport revenue budgets.

Human Resources (HR)

- No HR implications; Back-office system and maintenance all within current BP Pulse and Evo Energy Ltd Contracts.

Legal

A number of legal issues have been identified in a preliminary review of the site undertaken by the Council's legal services team. These include:

- It will be necessary to seek consent from a number of third parties to comply with restrictions on title which currently affect the property
- It may be necessary to engage with insurance brokers in the event of any unknown title matters that may interfere with the proposed development.
- It will be necessary to enter into discussions with the electricity undertaker relating to a proposed associated Substation Lease to support the installation of the necessary supporting electricity substation.

Crime and Disorder

- Review CCTV coverage of charging area
- Personal security in charging areas – well lit, CCTV coverage etc
- Site security – P&R main gates will be moved back behind HH entrance to allow 24 access to Hub. Fence line extended to ensure no vehicle access over verge

Information Technology (IT)

- Utilisation of existing Council fibre to facilitate charger comms

Property

- Camper Van parking area removed from P&R lease

Other

- Park & Ride services may include multimodal transport exchange facilities in future developments – consider substation capacity for future projects
- 10 Camper van parking spaces will be lost, leaving 81 spaces available at other Park & Rides

Risk Management

16. The project has a detailed risk register. This is a summary of the main risks. In brief:

- Legal land and lease challenges; may halt the project, abortive costs.
- Power related dependencies (this is the case with all EV charging
- projects)
- Reputational risk for CYC with DfT and the LEVI
- Financial risk of construction projects costs
- No provision on the South side of the City would leave a gap in
- provision in terms of the EV strategy

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Report Approved √ **Date** 29/06/2023

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Wards Affected: **All** √

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Background Papers:

https://www.york.gov.uk/EVChargingStrategy

Council approve 10-Year Plan (York 2032) Agenda for Council on Thursday, 15 December 2022, 6.30 pm (york.gov.uk) item 36

Executive approve Climate Change Strategy 2022-2032 Agenda for Executive on Tuesday, 22 November 2022, 5.30 pm (york.gov.uk) item 46

Annexes

Annex A: City of York Public Charging Strategy
Annex B: Analysis of Charging Infrastructure Coverage
Annex C: Draft Equalities Impact Assessment

List of Abbreviations Used in this Report

- DfT – Department for Transport
- DNO – Distribution Network Operator
- EST – Energy Saving Trust

- EV – Electric Vehicle
- EVCI - Electric Vehicle Charging Infrastructure
- kW – Kilowatt
- kWh – Kilowatt hour
- LEVI - Local Electric Vehicle Infrastructure
- NEVIS - National EV Insights and Strategy
- ORCS – On-street Residential Chargepoint Scheme
- OZEV – Office for Zero Emission Vehicles
- PV – Photovoltaic. PV materials and devices convert sunlight into electrical energy.
- PAS 1899:2022 Standards for providing accessible charging infrastructure for electric vehicles.
- TfN - Transport for the North