



## Agenda

**Meeting:** Executive

**Members:** Councillors Carl Les (Chairman), Gareth Dadd, Derek Bastiman, Michael Harrison, Simon Myers, Janet Sanderson, David Chance, Keane Duncan, Greg White and Annabel Wilkinson.

**Date:** Tuesday, 2nd May, 2023

**Time:** 11.00 am

**Venue:** Meeting Room 3, County Hall, Northallerton, DL7 8AD

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### Business

**7. North Yorkshire Council Electric Vehicle Public Charging Infrastructure Rollout Strategy – Report marked 'To Follow' (Pages 3 - 74)**

**Recommendations:**

That Executive agrees:

- i) To note the update on the North Yorkshire Council EV public Charging Infrastructure Rollout Strategy following public consultation Page 13 NYC – 2 May 2023 - Executive North Yorkshire Council Electric Vehicle Public Charging Infrastructure Rollout Strategy
- ii) To approve the EV Rollout Public Charging Infrastructure Strategy, including a concessionary delivery model for EVCP rollout subject to any legal requirements identified by the Assistant Chief Executive (Legal and Democratic Services)
- iii) To the publication of the 2020 EV Charging Deployment Study and the 2022 EV Rollout Public Charging Infrastructure Strategy on the NYC website.

**Members are reminded that in order to expedite business at the meeting and enable Officers to adapt their presentations to address areas causing difficulty, they are encouraged to contact Officers prior to the meeting with questions on technical issues in reports.**

Barry Khan  
Assistant Chief Executive  
(Legal and Democratic Services)

County Hall  
Northallerton

Tuesday, 25 April 2023

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## North Yorkshire Council

### Executive

2 May 2023

## North Yorkshire Council Electric Vehicle Public Charging Infrastructure Rollout Strategy

### Report of the Corporate Director - Environment

#### 1.0 PURPOSE OF REPORT

- 1.1 To provide an update on the North Yorkshire Council Electric Vehicle (EV) Public Charging Infrastructure Rollout Strategy following public consultation
- 1.2 To recommend the Executive agrees to adopt the EV Public Charging Infrastructure Rollout Strategy and to use a concessionary delivery model as standard for electric vehicle charge point (EVCP) rollout
- 1.3 To recommend the publication of the 2020 EV Charging Deployment Study and the 2022 EV Infrastructure Rollout Strategy on the NYC website
- 1.4 To recommend the Executive notes and agrees key next steps as highlighted in section 13.1

#### 2.0 SUMMARY

- 2.1 This report provides a background and update on the EV Public Charging Infrastructure Strategy development and makes recommendations about what actions need to be taken to reach our vision of creating a decarbonised North Yorkshire where zero emission mobility is accessible and convenient to all, recognising the unique rural nature of our county, improving quality of place through better local air quality and health. A comprehensive network of EVCPs will support the uptake of EV's for residents, visitors and businesses over the next 10 years, accelerating the transition to zero emissions vehicles across North Yorkshire bringing new skills and investment to the local economy.
- 2.2 Transport is the biggest contributor to the climate crisis, accounting for over a third of all carbon dioxide emissions in the UK, with road vehicles causing most of these emissions<sup>1</sup>. To reduce our carbon impact, the priority is for people to choose to travel by walking, cycling or public transport, as set out in our Local Transport Plan, however, we recognise there will always be a need for some trips to be made by private vehicles, particularly given the large rural nature of the county, meaning the car is often the only means of transport. Where private vehicle trips are necessary, we are committed to reducing our carbon impact by accelerating the shift from petrol and diesel to electric vehicles (EVs).

#### 3.0 BACKGROUND

- 3.1 In April 2020 North Yorkshire County Council (NYCC), jointly with the Local Enterprise Partnership (LEP) commissioned the Electric Vehicle Charging Deployment Study. The study identifies measures NYCC, and the district/borough councils and National Park Authorities (NPAs) can, or should, be taking to overcome barriers to electric vehicle charge point (EVCP) rollout. The study also identified the number of EVCPs required between now and 2030 based on a forecasted uptake of Electric Vehicles (EV) at that time.

<sup>1</sup> <https://www.ons.gov.uk/economy/environmentalaccounts/articles/climatechangeinsightsuk/february2023>

- 3.2 The next phase of work is to establish where charge points should be located, how we can overcome the aforementioned barriers to delivery and what policy changes need to take place to achieve this. The development of the EV Public Charging Infrastructure Rollout Strategy (referred to herein as ‘the Strategy’) commenced in October 2021, funded by the NYCC Beyond Carbon Pump Priming fund, and completed in draft format in October 2022. The draft Strategy can be found at **Appendix A**. In November 2022 we launched a public consultation (which ran from 16 November to 18 December 2022) regarding the ten actions identified in the Strategy with a view to making appropriate changes to the draft and then recommending Members adopt it and make some key decisions about budget and next steps. The recommendation is now that Members adopt it.
- 3.3 Following the adoption of the Strategy, we will use it as our guide for network planning across North Yorkshire, which will lead to mass rollout of EVCPs. It is important to note that it is expected that the contracts for EVCPs that have already been developed by the former Districts and Boroughs, primarily in public car parks in market towns and urban centres, which have transferred, as a result of local government reorganisation, to NYC and will inform the network plans. The existing contracts that are in place will remain unchanged.
- 3.4 The EV Public Charging Infrastructure Rollout Strategy is a 10-year plan (2020-2030), front loaded with the majority of EVCPs delivered in the first five years.
- 3.5 Concurrently we are continuing to deliver the Local Electric Vehicle Infrastructure (LEVI) Pilot scheme and pursuing other funding opportunities for delivery of public EVCPs.
- 3.6 Key Outputs from 2020 Electric Vehicle Charging Deployment Study  
The 2020 Electric Vehicle Charging Deployment Study identified the key barriers to delivery as:
1. Grid Constraints/Capacity and associated grid connection costs
  2. The rural nature of large parts of North Yorkshire
  3. The volume of on-street parking, particularly in residential areas
- 3.7 There were 12 recommendations made based on the evidence gathered in the study, and forecast EV uptake and EVCP requirements:
1. Accelerate charge point deployment to promote EV uptake
  2. Focus on establishing good charge point coverage and plugging gaps
  3. Deliver the right solution for the right location
  4. Make the most of available funding opportunities
  5. Take a balanced approach to delivering charging infrastructure, inviting private investment but retaining control
  6. Let the private sector take the strain and carry the risk
  7. Seek LEP funding to deliver chargers reliant on public funding
  8. Leverage scale via a County-wide procurement
  9. Promote EV charging at tourist destinations
  10. Undertake promotional activities and awareness raising
  11. NYCC should take a county wide co-ordination role
  12. Establish a North Yorkshire EV Forum and EV strategy to be adopted by all partner authorities
- 3.8 In Q3 2020 there were 2,287 EVs registered in North Yorkshire and 142 publicly available chargers. This study predicted North Yorkshire would need an additional 615 publicly available charge points by 2030 (448 of which need to be delivered by 2025) this was based on a forecast 95,070 people across the region registering EVs by 2030. See figure 1.0 below.

Figure 1.0

Forecast Publicly Funded EVCP Requirement	2020	2025	2030
Fewer EVCPs per EV (High Ratio)	-38	178	300
Mid-range EVCPs per EV (Mid Ratio)	-12	448	615
More EVCPs per EV (Low Ratio)	37	687	1,317

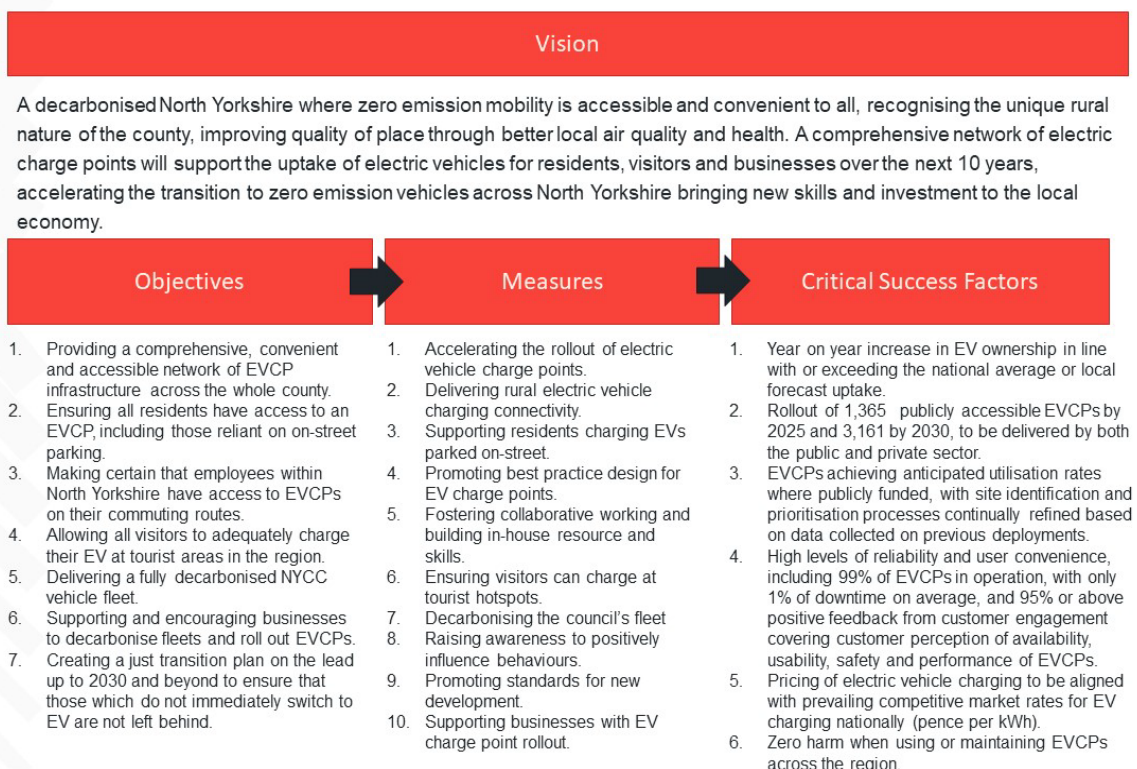
#### 4.0 Key Outputs/updates from 2022 EV Public Charging Infrastructure Rollout Strategy

4.1 The key outputs from this work are:

- An EV Infrastructure Rollout Strategy which includes the following key outputs;
  - A vision, objectives and priority measures
  - A revised forecast of EVCP's required by 2030
  - A budget figure to achieve this
  - A review of options to serve households without off-street parking including cable gullies and trailing cables
  - A policy review
  - A transition plan for beyond 2030 – to ensure no one is left behind
- Technical advice to aid planning
- Priority site selection detailing where EVCPs should be delivered

4.2 The vision, objectives and priority measures can be found in figure 2.0 below. In the Strategy document each of the measures has a detailed recommendation which outlines how the objectives can be achieved.

Figure 2.0 – Vision, objectives, measures and critical success factors



- 4.3 The Strategy confirms there were 3,969 electric vehicles registered (up from 2,287 in Q3 2020) and 225 publicly available EV Charge Points (up from 142 in Q3 2020) in North Yorkshire as of Q3 2021. The slow rise in EV chargers compared with EV uptake is likely attributed to the aforementioned issues regarding the rural nature of North Yorkshire, high grid connection costs and capacity issues making the sites commercially unattractive (even when offset with more lucrative sites), and the volume of on-street parking across the county.
- 4.4 The strategy forecasts that 3161 public charge points are required by 2030 (1,365 of which need to be delivered by 2025). It is anticipated that the public sector will need to fund 1529 of the overall charge point requirements by 2030 at an approximate cost of £10.3m. This figure is based on a mid-range estimate of forecast EVCP's as well as mid-range costs per unit. The overall requirement is circa 900 more chargers than was forecast in 2020 but this reflects the significant increase (74%) in uptake of EV's between 2020 and 2021. See Figure 3.0 below

	2020 Existing	2022 Existing	2020 Forecast to 2030	2022 Forecast to 2030
EV Ownership (North Yorks)	2287	3969	95,070	134,271
EV Chargers (North Yorks)	142	225	615	1529

- 4.5 In a previous report, seen by the Executive on 8 November 2022<sup>2</sup>, it was noted that the £10.3m is an estimate which includes grid connection costs but does not include grid upgrades and assessments which would need to be carried out by the Distribution Network Operator (DNO), Northern Powergrid, to calculate the costs for upgrades at each new EVCP site. Quotes received to date range between £2,400 to £636,000 depending on the site constraints, number and type of chargers proposed. However, since these estimates were received Ofgem completed a significant code review<sup>3</sup> and as a result have changed regulation for grid reinforcement and upgrade work to existing apparatus (so does not cover requirements for a new substation).
- 4.6 From 1 April 2023 a customer wanting to connect to the network for a 'demand' purpose will no longer be responsible for paying for any reinforcement or upgrade work needed to the existing shared network assets. The connecting customer, NYC in this case, will therefore only be responsible for paying connection costs. The reinforcement costs will instead be covered by the DNO, who will recoup these via Distribution Use of System (DUoS) charges up to a high-cost threshold of £1720/kWA. Above this threshold, the connecting customer will be responsible for paying the excess reinforcement costs. This will reduce the financial pressure on NYC budgets or the need to seek other investment.
- 4.7 The Strategy highlights actions NYC can take to address the grid capacity and connection issues that are highlighted in the 2020 Study as a barrier to the rollout of EVCPs; NYC and the LEP already has a good working relationship with the main local Distribution Network Operator (DNO), Northern Powergrid, and we will continue working closely with them to align our strategy for the rollout of EVCPs with their business planning for grid capacity upgrades (this is still necessary despite the upfront costs being removed).
- 4.8 We will also investigate and deliver innovative ideas to address the challenges of delivering EVCPs in rural areas. The successful bid for £2m of Local Electric Vehicle Infrastructure (LEVI) funding will enable us to bring down the total number of chargers required by 70 which was approved at the BES Executive Members meeting of 16 June 2022. We will co-locate Electric Vehicle Charge Points (EVCP) with battery storage powered by renewables. We are committing to deliver 10 chargers over two rural sites in each of our seven areas.

<sup>2</sup> [Electric Vehicle Public Charging Infrastructure Report Appendices.pdf \(northyorks.gov.uk\)](#)

<sup>3</sup> <https://www.ofgem.gov.uk/publications/access-and-forward-looking-charges-significant-code-review-decision-and-direction>

These will provide a solution that can be tested and, if successful, rolled out more widely to overcome the challenges of delivery of EVCPs in rural areas.

- 4.9 Also included in the report is a review of options to serve households that do not have access to publicly available off-street parking, solutions to overcome this have been identified including lamp column/kerbside charging, nearby overnight charging hubs and permitting trailing of cables and cable channels over the footway. We are regularly asked by the public to consider trailing cables/cable channels to enable them to charge an electric vehicle at their home, however, a review of the outcome of existing pilots (which are still ongoing) and policy changes are needed and any proposals will need to take into account any provisions of the Highways Act 1980 as regards potentially the obstruction of highways and streets by the infrastructure. Therefore, the Strategy highlights that we will investigate this further before making a decision on how to proceed. Private charging issues and the feasibility of whether residents who only have on street parking provision will be permitted to charge via their home supply will be considered as part of this work.
- 4.10 To roll out the infrastructure needed to support EV uptake across North Yorkshire there are a range of deployment models that we can adopt. **Appendix B** describes the different models available to us and the advantages and disadvantages for each.
- 4.11 The majority of public EVCPs delivered in North Yorkshire to date have been funded by public sector grants from the Office for Zero Emission Vehicles (OZEV). However, private sector partnerships and revenue share arrangements have become increasingly common. There are a range of models adopted by our former district/borough authorities Harrogate Borough Council (HBC), for example, adopted a public ownership model whereas Scarborough Borough Council developed a concessionary model and Ryedale District Council a mix of concessionary, where they achieved a percentage return on the profits from usage, and privately owned models with a guaranteed revenue return on an annual basis, or a share of the profit (whichever was higher).
- 4.12 Where the commercial case does not appeal to the private sector, it is expected that some form of public sector support will be required to make the investment case. However, in recent conversations with OZEV and their administering partners local authorities are being encouraged to accelerate the commercialisation of, and investment in, the local charging infrastructure by the private sector, so that it is not entirely left to the public sector. As a result, the Strategy recommends that the concessionary model is adopted; where we will seek central government grant funding to provide a public sector contribution towards the installation costs but will expect a charge point operator to provide additional capital funding and to cover the costs of operating and maintaining the charge points for an agreed period of time. This approach balances the potential risks and revenue generation opportunities for NYC. A procurement exercise will be undertaken to select a Charge Point Operator/s (CPO).
- 4.13 Alongside the Strategy a site selection exercise was undertaken identifying ten priority locations in two of our seven districts, so there are still five districts to review.
- 4.14 Although not highlighted in the strategy, once we have mapped the other areas, NYC can develop a 'connectivity map' for North Yorkshire overlaying the map of priority sites with grid capacity and broadband availability as well as highlighting existing public sector EVCPs in the areas at or nearby the priority sites which would enable us to view the 'gaps' in connectivity. We can also include key employment sites, to identify where we can encourage strategic partnerships to ensure a comprehensive network of EVCPs is delivered, and, by linking with existing strategies and plans such as the tourism modelling work and the digital strategy we can build a stronger strategic plan for delivery.
- 4.15 Finally, the Strategy includes an objective to create a Just Transition plan to ensure no one in the county is left behind once the ban on the sale of new Internal Combustion Engine (ICE) vehicles is enforced in 2030. This involves ensuring charging infrastructure is



available to those in areas that may otherwise not be able to make the change to an electric vehicle. We will look to collaborate with the private sector at a regional scale to best build a portfolio of more and less desirable sites, ensuring equity of provision and reduce the emergence of gaps in the network.

## 5.0 FUNDING AND RESOURCING

5.1 Government has created several grant schemes to help enable the charging of EVs at home, in the workplace and on local streets, as summarised at **Appendix C**.

5.2 The Local Electric Vehicle Infrastructure (LEVI) is a £400m scheme operated by the Office for Zero Emission Vehicles (OZEV) and supported by £50m resource funding (£10m has already been allocated to fund a LEVI pilot scheme). LEVI has been set up to address three key challenges:

1. Consumer experience
2. Pace of rollout
3. Charging for long journeys

And there are two key objectives:

1. Delivering a step-change in the scale of deployment of local, primarily low power, on-street charging infrastructure across England
2. Accelerating the commercialisation of, and investment in, the local charging infrastructure sector

5.3 There are three main strands of this fund:

1. LEVI pilot fund – delivery of innovative EVCP delivery projects
2. LEVI capability fund – to increase local authority resourcing for the planning and delivery of EV Infrastructure.
3. LEVI Capital fund – to support deployment of infrastructure ahead of need

5.4 LEVI pilot fund - We made a successful bid to the LEVI Pilot fund securing £2m towards the delivery of a £2.2m scheme which will provide 70 EVCP's (more information can be found in the BES Executive Report from 16 June 2022). We will co-locate Electric Vehicle Charge Points (EVCP) with battery storage powered by renewables over two rural sites in each of our seven areas. These will provide a solution that can be tested and, if successful, rolled out en masse to overcome the challenges of delivery of EVCPs in rural areas.

5.5 Officers currently working on LEVI Pilot scheme delivery have reached a knowledge gap on how renewable technologies work together, as a result NYC has undertaken a recruitment exercise for an EV Delivery Manager. Through a corporate cross checking of skills exercise it was established that we could recruit someone to the post internally from the Technology and Change service, this gives us greater flexibility than external recruitment and reduces the financial risk to the project, the candidate has been selected and begins their post on 24 April 2023.

5.6 Further, OZEV decided to upscale the LEVI Pilot fund and asked for expressions of interest. The focus shifted from innovation to schemes which can offer high volume rollout of EVCPs. NYC suggested that we could deliver 82 chargers, at locations identified in the site selection exercise, undertaken as part of the Strategy, for an additional £1,237,000. We have been successful in achieving this funding which means we have received a total of £3.237m from the LEVI Pilot fund. These EVCP's are expected to be delivered within the same funding window, so by 31 March 2025.

5.7 LEVI capability fund – The capability fund launched on 27 February 2023, and we will use this funding to cover the costs of the EV Delivery Manager and supporting officer time. This is not a competitive fund and local authorities (LA's) have been given an indicative allocation and will have to provide a business case as justification. We have received £88,920 funding from this fund to date.



- 5.8 LEVI capital fund - OZEV have also announced the LEVI capital fund on 30 March 2023. This will enable rollout of a much greater number of chargers than we have been able to attract funding for so far. Again, this is an allocation not a competitive bidding process and LAs will be asked if they can spend the money in the financial year 23/24 or financial year 24/25. We are likely to go with the latter given we still have some site selection development work to do. NYC received an indicative allocation of £4.88m and a further £405,080 capability funding and is invited to complete an expression of interest by 26 May 2023.
- 5.9 Other funding - The Devolution Deal 'Net Zero Fund' was launched on 3 January 2023. The fund is made up of £1m project development funding and £6m capital grant funding available for projects which help meet their Net Zero ambitions as set out in their Routemap to Carbon Negative. The deadline for submissions was 6 February 2023. NYC has bid to Net Zero for one revenue and one capital EV related project.
- 5.10 The capital scheme is for EVCP delivery in the locations that were identified as part of the site selection exercise completed as part of the Strategy. We bid for £502,000 to deliver 53 chargers over 14 sites. The revenue scheme is to undertake actions from the EV Strategy; to map the priority locations in each of the other five district/borough areas, to develop a 'connectivity map' and start working on some of the actions that require attention now. We bid for £80,000 for the revenue project.
- 5.11 All applications will be assessed and prioritised based on the assessment criteria detailed in the Prospectus for the Net Zero Fund<sup>4</sup>. This will inform the production of a prioritised list and longer-term pipeline of projects. The shortlisting of prioritised projects has been agreed and both projects have made the list with further information for revenue scheme /applications for capital schemes requested. The submissions have to be submitted by 9 and 31 May respectively. Please note that funding cannot be issued until a Combined Authority for York and North Yorkshire has been formally established. It is anticipated that formal funding agreements for the Net Zero Fund will be issued in December 2023 with a spend deadline of 31 March 2025.
- 5.12 Finally, we look to other funds that may become available including the Shared Prosperity Fund and the Rural Prosperity Fund which will support bids from local authorities looking to enhance place.

## **6.0 CONSULTATION UNDERTAKEN AND RESPONSES**

- 6.1 The consultation ran from 16 November to 18 December 2022 generating 440 responses, it sought feedback, via online survey (although some people chose to respond directly via email), on the proposed EV actions from the Strategy. The purpose of the consultation was to allow local organisations and members of the public to have their say on the rollout of EV charging infrastructure across the county in relation to the proposed actions and share their views on what they feel are the key challenges to EV use. For the reader, the foreword detailed the background and noted NYC's vision and objectives.
- 6.2 Of the 440 responses, the largest number of respondents had multiple vehicles per household (48%) and whilst 44% of respondents already own an EV, more than half (56%) don't. Of those that do already own an EV, 89% have a Battery Electric Vehicle (BEV). EV owners were then asked to describe the top three challenges they faced; the largest proportion of respondents cited a lack of charge points, charger reliability and access to charging points as their biggest challenge.
- 6.3 Other key points raised in the public consultation report include:

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1. **Vehicle range** - The majority of EV owners that responded (52%) have a vehicle with a range between 201-300 miles, however, there are a notable 14% of respondents that have a range of fewer than 100 miles (and in the winter this is reduced, on average, by around 15-20%) indicating that there are still a significant number of respondents that may have range anxiety on some longer journeys and place the importance of finding a charger as being higher than for those with longer range EVs.
2. **Parking and charging** - The vast majority of EV owners (91%) have a private garage or driveway for parking, while the next largest group (6%) were those with on-street parking. This suggests that without a private garage or driveway, EV ownership is low, probably due to the cost and inconvenience of charging at a public location, so a solution for on-street parking needs to be sought. This is supported further with the responses to the question where we asked where people usually charge their EV and the vast majority of respondents (86%) charge at home.
3. **Current EVCP challenges** - We asked EV owners 'What frustrates you most about the current network of EV chargers?' and the lack of EVCPs, EVCP reliability and the complexity of the charging process are the top responses.
4. **EVCP proximity to home** - Respondents were asked whether there were any EVCPs within walking distance of their home and 77% said that there were not. Of those that said there was an EV charging point within walking distance, 14% of the respondents said that it was between 5-10 minutes away, while 5% said it was less than a 5-minute walk away. This suggests that for 95% of respondents, they do not have or do not know about any local charging infrastructure within easy walking time from their home so awareness raising is important.
5. **Travel Distance** - Results indicate that 31% of respondents make a single journey (i.e., in one direction) of over 50 miles on a regular basis (once a week or more) this means that around a third of respondents need to consider where they can charge on longer distance journeys on a regular basis.
6. **EV Enablers** - We asked non-EV owners to 'let us know the top three things that would enable you to own an EV' with cost and affordability of EVs being the number one enabler followed by greater availability of EVCPs and improved range of EVs.

6.4 In terms of public attitudes toward the 10 measures that are proposed (see paragraph 4.2, Figure 2 above) as part of the Strategy it is clear that in all cases, there are more supportive attitudes than opposing attitudes. In all cases the majority (more than 60% per measure) of respondents either support or strongly support the measures.

6.5 Respondents were asked to explain a little more about their responses to the previous question on their support for the different Strategy actions. The responses to this question were coded but some interesting views and issues raised regarding the Action Measures in the Strategy include:

1. Consideration should be given to inconsiderate use of charging points (people charging too long or leaving their cars in the space when their charge has finished)
2. There is a need to move away from private vehicle use, including by tourists, and NYC should encourage more public transport use
3. The electricity supplying the EVCPs should come from low carbon sources (renewables)
4. There should be a provision of slower chargers, particularly in tourist areas, where people are expecting to remain a long time – they should not have to rush back to unplug.
5. The EV replacement of NYC fleet vehicles should not be done before those vehicles are outdated / ready to be replaced.
6. There should be more detail on the timescales for the Strategy and when it is planned for the measures to be implemented
7. There is a need to make charging less complex in order to encourage uptake

6.6 Finally, respondents were asked whether they felt that they would be more likely to own an EV if the actions in the Strategy were implemented. Around 37% of respondents said that this was not applicable to them as they already owned an EV. Of the remaining

respondents, it is a relatively even split between those that felt that they would (22%) and those that felt that they would not (21%).

- 6.7 The responses have been analysed and, whilst greater consideration needs to be given in certain areas of the Strategy, to fully address some of the views and issues raised by respondents, nothing raised as part of this consultation fundamentally changes the proposed action plan or Strategy recommendations. Changes that were made include reference to:
- Providing a stronger emphasis of the desirable travel hierarchy and the relationship of EV's with other sustainable transport options (active travel)
  - Delivery of EVCPs on council-owned land and consideration for deployment in Park and Ride sites
  - Consolidation of EV parking policies, payments and enforcement in EV parking spaces
  - Ensuring high quality maintenance contracts are in place
  - Penalties for people who do not vacate a charging bay once a full charge is delivered.

## 7.0 CONTRIBUTION TO COUNCIL PRIORITIES

7.1 This document will serve as a daughter document to the North Yorkshire Local Transport Plan which is currently under review. The existing, and fourth, North Yorkshire Local Transport Plan (LTP) was adopted in 2016 and has been in place since. The LTP, which sets the policy and investment approach for highways and transport within the county, focusses on five key national policy objectives, within the local policy to manage, maintain and improve the county's transport network and facilities.

7.2 Policy at a national and international level has shifted focus, with an increasing emphasis on the impact of carbon on our world, and the climate. There have been significant and marked changes in the uptake of low and zero emission vehicles, and a shift towards the infrastructure required for automated vehicles and future mobility. The EV Public Charging Infrastructure Strategy will play a key role in achieving the national and local ambitions associated with sustainable investment and green growth.

## 8.0 ALTERNATIVE OPTIONS CONSIDERED

8.1 Alternative options have been considered and consulted on (both internally and externally) throughout the EV Strategy Development process and the final strategy option is a result of the feedback received from key stakeholders (including members of the public) and the experience of officers.

## 9.0 FINANCIAL IMPLICATIONS

9.1 Though there are a range of models adopted by our former district/borough authorities it is recommended that a concessionary model where EVCPs are installed and funded by the public sector, or part funded by public and private sector, and operated and maintained by a Charge Point Operator (CPO) for an agreed period under a profit share arrangement is adopted on the basis that there is a share of the income, the private sector CPO is incentivised and there is reduced risk for the public sector.

9.2 The delivery of the Strategy is heavily dependent upon securing access to government and charge point operator capital funding. Failure to secure external funding puts the delivery of the Strategy at risk. Full details of the current known available funding sources are set out in section 5 and summarised in the table below:

Stream	Purpose	Funding	Delivery	Status
LEVI Pilot Funding	Capital funding for innovative delivery of EVCPs	£2m	70 chargers powered by renewable	Successful

			technology linked to battery storage	
LEVI Pilot Upscaling	Capital Funding for extension of pilot scheme however funding focussed on rollout at scale given Ofgem regulation due 1st April which means that we do not pay for upgrades and reinforcement work to existing assets (still pay for new infrastructure)	£1.237m	80 chargers at an additional 17 sites not powered by renewables but some on-street charging	Successful
LEVI Capability Fund	Revenue funding to increase local authority resourcing for the planning and delivery of EV Infrastructure	£88.9k	Funding for an EV Delivery Manager and partial time supporting roles	Successful
LEVI Capital Fund	Capital Funding to support deployment of infrastructure ahead of need.	£4.8m capital + £465k revenue	Mass rollout of EVCP's	Pending Application
DD Net Zero Funding	Capital delivery of Net Zero Schemes	£502k	53 chargers at 20 locations across Scarborough and Richmondshire	Shortlisted – pending full business case submission
DD Net Zero Funding	Revenue funding for Net Zero Schemes	£80k	Next Steps for the EV Strategy Work	Shortlisted – pending additional information submission
Total		£8,539,000 Capital £553,980 Revenue		

9.3 There are no specific financial implications arising from the recommendations in this report. Adoption of specific strategies and funding streams will have financial implications, and these will be the subject of further reports for approval in line with financial regulations at the relevant time.

## 10.0 LEGAL IMPLICATIONS

10.1 Part 2 of The Local Government (Structural Changes) (Transitional Arrangements) (No.2) Regulations 2008 provides for the continuity and responsibility for functions.

10.2 In the event that partnering opportunities arise to assist in delivering the future strategy the Council's Procurement and Contract Procedure rules, Public Contracts Regulations 2015 and subsidy control rules will be adhered to.

10.3 At the present time the final concessionary delivery model for ECVP roll out is not known however the finalised model must be in compliance with the Public Concession Regulations where relevant and the Local Government Act 2003, the Localism Act 2011 and any other relevant regulations or legislation in respect of any profits generated.

10.4 It is acknowledged that legal implications may arise in relation to funding and at project planning in delivery of the Strategy and implementation stages, as well as consideration of any statutory barriers in relation to highway infrastructure proposals. Further consideration will be required as part of the feasibility investigation of the charging of EVs on the public highway by residents using home power supplies, and also of other legal implications as the delivery of the Strategy evolves.

## **11.0 EQUALITIES IMPLICATIONS**

11.1 Consideration has been given to the potential for any equality impacts arising from the recommendations. It is the view of officers that at this stage the recommendations do not have an adverse impact on any of the protected characteristics identified in the Equalities Act 2010 or the Council's additional agreed characteristics. A copy of the Equality Impact Assessment screening form is attached as **Appendix D**. However, it is worth noting that delivery of the Strategy will require a full equalities impact assessment.

## **12.0 CLIMATE CHANGE IMPLICATIONS**

12.1 A climate change impact assessment has been carried out, see **Appendix E**. Accepting the recommendation will have no direct climate change impact.

## **13.0 CONCLUSIONS**

13.1 The following conclusions are proposed:

1. That the EV Rollout Public Charging Infrastructure Strategy be used as our guide for network planning across North Yorkshire, and lead to mass rollout of EVCPs.
2. A concessionary model approach to delivery is preferred where we will seek central government grant funding to provide a public sector contribution towards the installation costs but will expect a charge point operator to provide additional capital funding and to cover the costs of operating and maintaining the charge points for an agreed period of time.
3. That we publish both the 2020 Electric Vehicle Charging Deployment Study and the 2022 Electric Vehicle Infrastructure Rollout Strategy on the NYC website.
4. The key next steps linked to our funding bids are:
  - a. Map the priority locations in each of the other five areas
  - b. Create a 'Connectivity map' for North Yorkshire including priority locations for EVCP's, EVCP's already delivered by the former district/borough councils overlaid with grid capacity, broadband availability, and key strategic employment/tourism sites, so we have a comprehensive map of EVCP in North Yorkshire.
  - c. Deliver on actions from the Strategy including creating a just transition plan and investigating solutions the challenges associated with on-street parking.

## **14.0 REASONS FOR RECOMMENDATIONS**

14.1 The recommendations are fundamental to enable North Yorkshire Council to reach its vision of creating a decarbonised North Yorkshire where zero emission mobility is accessible and convenient to all, recognising the unique rural nature of our county, improving quality of place through better local air quality and health. A comprehensive network of EVCPs will support the uptake of EVs for residents, visitors and businesses over the next 10 years, accelerating the transition to zero emissions vehicles across North Yorkshire bringing new skills and investment to the local economy

## **15.0 RECOMMENDATIONS**

- 15.1 That Executive agrees:
- i) To note the update on the North Yorkshire Council EV public Charging Infrastructure Rollout Strategy following public consultation

- ii) To approve the EV Rollout Public Charging Infrastructure Strategy, including a concessionary delivery model for EVCP rollout subject to any legal requirements identified by the Assistant Chief Executive (Legal and Democratic Services)
- iii) To the publication of the 2020 EV Charging Deployment Study and the 2022 EV Rollout Public Charging Infrastructure Strategy on the NYC website.

**APPENDICES:**

- Appendix A – Electric Vehicle Infrastructure Rollout Strategy
- Appendix B – Deployment Models
- Appendix C – Government Funding Opportunities
- Appendix D – Equality Impact Assessment
- Appendix E – Climate Change Implications

**BACKGROUND DOCUMENTS:**

None

KARL BATTERSBY  
Corporate Director of Environment  
County Hall  
Northallerton  
03 April 2023

Report Author – Keisha Moore, Senior Transport Planning Officer  
Presenter of Report – Keane Duncan, Executive Member for Highways and Transportation

Note: Members are invited to contact the author in advance of the meeting with any detailed queries or questions.





**North Yorkshire  
County Council**

# **ELECTRIC VEHICLE INFRASTRUCTURE ROLLOUT STRATEGY**

Final Report

**North Yorkshire County  
Council**

70089530



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## Quality Control

Issue/revision	Draft Report	Final Report
Date	01/03/2022	28/09/2022
Prepared by	GG RC	GG RC
Checked by	CH	CH
Authorised by	MC	CH
Project number	70089530	70089530



**North Yorkshire**  
County Council

# Introduction

## *Purpose of this document*

North Yorkshire County Council (NYCC) is committed to tackling climate change. We support the Government's aim for the UK to be net carbon neutral by 2050 and the York and North Yorkshire Local Enterprise Partnership's ambition for North Yorkshire to be the first carbon-neutral region in the UK by 2034 and carbon negative by 2040. As a council, we aim to lead the way by ensuring our own operations are carbon neutral by 2030 at the latest.

Transport is the biggest contributor to the climate crisis, accounting for over a third of all carbon dioxide emissions in the UK, with road vehicles causing most of these emissions. To reduce our carbon impact, the priority is for people to choose to travel by walking, cycling or public transport, as set out in our Local Transport Plan 4. However, we recognise there will always be a need for some trips to be made by private vehicles, particularly given the large rural nature of the county, meaning the car is often the only means of transport. Where private vehicle trips are necessary, we are committed to reducing our carbon impact by accelerating the shift from petrol and diesel to electric vehicles (EVs).

Whilst many consumers will charge their EVs at home, there is a need for a publicly accessible charging network for those who need to charge at or en route to their destination, for those who have no access to electric vehicle charge points (EVCPs) at home or work, and to help quell any anxiety related to charging and driving range. Over half of drivers surveyed by Government found that the lack of adequate EV charging infrastructure is the biggest barrier constraining people to switch to EVs.<sup>1</sup> The focus of this strategy is to ensure there is sufficient publicly accessible EVCPs across North Yorkshire to encourage drivers to transition to EVs between now and 2030, when the Government has announced there will be a national ban on the sale of petrol and diesel cars.

However, delivering EVCPs in North Yorkshire is not easy. Despite the rural nature of the region, there are areas where households have no access to off-street parking and creative ways are needed to ensure those reliant on parking on-street can adequately and reliably charge their vehicle. Grid capacity is a key constraint, with high grid connection costs especially in the county's rural areas, negatively impacting the viability of delivering EVCPs.

This strategy sets out ten priority action areas to overcome these barriers to delivering EV charging infrastructure and details how many public charge points should be delivered and where. This strategy will not only support residents in a transition to EVs, but also those that work and visit the region to ensure no one is left behind. The strategy will allow us to understand where EVCPs are likely to be provided by the private sector and where the public sector will need to install infrastructure to ensure an equitable distribution of charge points is achieved.

The strategy builds upon the EV Charge Point Deployment Study we produced in 2020. The study identified measures NYCC, and the districts, boroughs and national park authorities can, or should, be taking to overcome barriers to EVCP delivery and sets out a series of recommendations. The priority action areas set out in this strategy build upon these recommendations to provide our approach for accelerating the rollout of EV infrastructure across North Yorkshire over the next years.

We have developed this strategy in collaboration with the district and borough authorities of the region – Craven, Hambleton, Harrogate, Richmondshire, Ryedale, Scarborough and Selby, and two National Park Authorities – North York Moors and Yorkshire Dales, recognising not only the existing two-tier structure and different responsibilities for on street (NYCC) and off street (district and borough authorities) parking, but also the Unitary Authority that will come into effect in April 2023, creating a

single new council for everyone in North Yorkshire. Collaborative working is key to realising the scale of change required over the lifetime of this strategy.

We recognise that people who live in sparsely populated rural areas need to travel for school, employment, shopping, and health facilities. This raises many significant issues such as accessibility, affordability and social inclusion. 98% of North Yorkshire is classed as sparse or super sparse and this presents unique challenges in delivering EV charge points and encouraging our residents to make the switch to EV. We cover this in Section 5.2.

EVs will not only reduce our overall carbon emissions but will bring wider benefits to North Yorkshire. EVs have no tailpipe so do not emit any exhaust gases, reducing local air pollution and improving public health. This strategy sets our commitment to realising these benefits and to support a transition to EVs through the delivery of reliable and accessible charging infrastructure.



<sup>1</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/847653/Summary\\_Report\\_of\\_Wave\\_4\\_of\\_the\\_Public\\_Attitudes\\_Tracker.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/847653/Summary_Report_of_Wave_4_of_the_Public_Attitudes_Tracker.pdf)

**Table 1-1: Definition of key terms**

Abbreviation	Definition
EV	<b>Electric Vehicle</b> – any vehicle that uses electricity for propulsion including PHEVs and BEVs.
EVCP	<b>Electric Vehicle Charging Point</b> – a location where EVs can plug-in and charge.
ULEV	<b>Ultra Low Emission Vehicle</b> – any vehicle that emits less than 75g of CO2/km from the tailpipe.
PHEV	<b>Plug-in Hybrid Electric Vehicle</b> – a vehicle that can be plugged in and charged but also has a petrol engine.
BEV	<b>Battery Electric Vehicle</b> – fully powered by electricity and has to be plugged in to charge.
CPO	<b>Charge Point Operator</b> – a provider and operator of EVCPs.
ICE	<b>Internal Combustion Engine</b> – the traditional method of vehicle propulsion using fossil fuels and creating harmful emissions.

Abbreviation	Definition
ICE'd	A reference to a EVCP being blocked from use by an internal combustion engine vehicle parking in such a way that hinders access
DNO	<b>Distribution Network Operator</b> - a company that owns and operates the infrastructure that connects properties to the electricity transmission network.
OZEV	<b>Office for Zero Emission Vehicles</b> – a team working to support the transition to zero emission vehicles, part of the Department for Transport.
HGV	<b>Heavy Goods Vehicles</b> – any truck weighing over 3.5 metric tonnes, generally those used to deliver large quantities of cargo.
AC	<b>Alternating Current</b> - an electric current which periodically reverses direction and changes its magnitude continuously with time.
DC	<b>Direct Current</b> – an electric current which flows in one direction.
OCPP	<b>Open Charge Point Protocol</b> – an open-source application protocol for communication between EVCPs and charge point management systems, as opposed to proprietary protocols which lock users into their system.



**North Yorkshire**  
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# VISION, OBJECTIVES AND PRIORITY ACTION AREAS



# VISION, OBJECTIVES AND PRIORITY ACTION AREAS

A shared vision for the acceleration of EV uptake and delivery of supporting charging infrastructure across the county has been developed. This vision is ambitious, reflecting the scale of action we need to take from now until 2030 to tackle climate change.

**VISION:** A decarbonised North Yorkshire where zero emission mobility is accessible and convenient to all, recognising the unique rural nature of the county, improving quality of place through better local air quality and health. A comprehensive network of electric charge points will support the uptake of electric vehicles for residents, visitors and businesses over the next 10 years, accelerating the transition to zero emission vehicles across North Yorkshire bringing new skills and investment to the local economy.

To support this vision, seven key objectives have been identified:

- 1. Providing a comprehensive, convenient and accessible network of EVCP infrastructure across the whole county.**
- 2. Ensuring all residents have access to an EVCP, including those reliant on on-street parking.**
- 3. Making certain that employees within North Yorkshire have access to EVCPs on their commuting routes.**
- 4. Allowing all visitors to adequately charge their EV at tourist areas in the region.**
- 5. Delivering a fully decarbonised NYCC vehicle fleet.**
- 6. Supporting and encouraging businesses to decarbonise fleets and roll out EVCPs.**
- 7. Ensuring those who do not immediately switch to an EV are still supported, by providing them with the facilities and awareness to make the change when they are ready.**

The vision and objectives are focused on the work we need to do to support the transition of vehicles to zero emissions. This strategy will sit alongside our wider work and priority to encourage trips to be by walking, cycling and public transport as much as possible.

To meet our vision and objectives, we are committed to ensuring that by 2030 no resident within North Yorkshire with a reliance on on-street parking is more than a 10-minute walk from a publicly accessible electric vehicle charging point.

## *10 priority action areas*

We are confident that the vision and objectives will be deliverable through the following ten priority action areas we have identified.

### **1. Accelerating the rollout of electric vehicle charge points**

- Install on and off-street chargers in areas not served by the private sector in order to ensure EVCP network coverage is equitably distributed across North Yorkshire.
- Install a mix of fast and rapid chargers to meet the needs of different types of EV drivers.
- Plan a network of chargers across NYCC that aims to ensure that any resident without access to private off-street charging is within 5-10 minutes' walk of a public EVCP.
- Seek government funding and commercial partnerships to minimise cost to NYCC.

### **2. Delivering rural electric vehicle charging connectivity**

- Ensure coverage of EVCPs in rural areas and appropriate EVCP provision at rural locations that cater for long distances.
- Lead funding bids and capitalise on rural character as a unique selling point for unlocking funding.
- Work in partnership with the DNO to ensure alignment with business planning for upgrades.
- Encourage innovative solutions for EVCPs, such as combining microgeneration and battery storage.



# VISION, OBJECTIVES AND PRIORITY ACTION AREAS

### 3. Supporting residents charging EVs parked on-street

- Take a proactive approach to delivering targeted charge point deployments in areas of demand for on-street EV charging, achieving a good base level of coverage, where all residents who need it have convenient access to a public charger. This will include:
  - Residents' charging hubs in nearby car parks, featuring rapid chargers where there are gaps in the privately funded network and supporting amenities are in place.
  - On-street chargers.
- Investigate the feasibility of permitting trailing cables and installing cable channels as short-term measures.
- Establish a user-friendly website to invite expressions of interest from residents to provide valuable insights into localised demand.
- We will construct a compelling case for investment from OZEV's to be launched Local EV Infrastructure (LEVI) fund.
- Engage with the market to ensure our approach attracts the best tenders from prospective operators, who will work as long-term partners with Local Authorities, and in the best interests of our residents.

### 4. Promoting best practice design for EV charge points

- Develop NYCC guidance on the key elements of building an EVCP network.
- Create a distinctive NYCC EV charging brand.

### 5. Fostering collaborative working and building in-house resource and skills

- Audit teams and skills to ensure resources are fully utilised. Introduce a dedicated EV Lead Officer role to coordinate EV programmes, groups and resources.
- Expand the NYCC internal working group to include EV officers from each authority, to share knowledge and to develop standards
- Engage with rural landowners, parish councils and town councils to minimise the knowledge gap and encourage EVCP investment.

### 6. Ensuring visitors can charge at tourist hotspots

- Ensure coverage of EVCPs in areas of significant tourism, providing the right speed of charger that serve tourists needs depending on the location. Seek to secure grants for hard-to-reach areas, working with the Coastal Tourism Advisory Board.
- Work with the hospitality industry and tourist attractions, as well as small business advisory groups, providing advice on the installation of EVCPs on their premises.
- Install EVCPs in prominent positions with universally recognisable designs that are easy to locate by tourists.

### 7. Decarbonising the council's fleet

- Undertake a comprehensive fleet review, including wider scope for vehicle rationalisation. Identify suitable phasing for EVs into fleet.
- Undertake a review of depots and car parks where vehicles would be charged and undertake feasibility assessments of prioritised sites for charging infrastructure.

- Prepare an action plan setting out the short, medium and long term phasing out of ICE vehicles.

- Update procurement processes to specify EVs going forwards, introduce in a phased approach based on preceding review. Introduce requirements for EVs for Council supply chains.

### 8. Raising awareness to positively influence behaviours

- Carry out a marketing campaign promoting the benefits of EVs and 'myth busting'.
- Expand the NYCC EV website to become a valuable resource for all residents wishing to switch to EV, for example, to provide better understanding EVs and charging infrastructure and what funding is available.
- Appoint a local 'EV Champion' to promote the use of EVs in North Yorkshire.

### 9. Promoting standards for new development

- Develop more ambitious, collective EVCP standards across North Yorkshire for some non-residential land uses.
- Build up internal awareness and understanding of the amended Building Regulations for delivering EVCPs.
- Work with developers and landowners to interpret and apply new building regulations and planning policies.

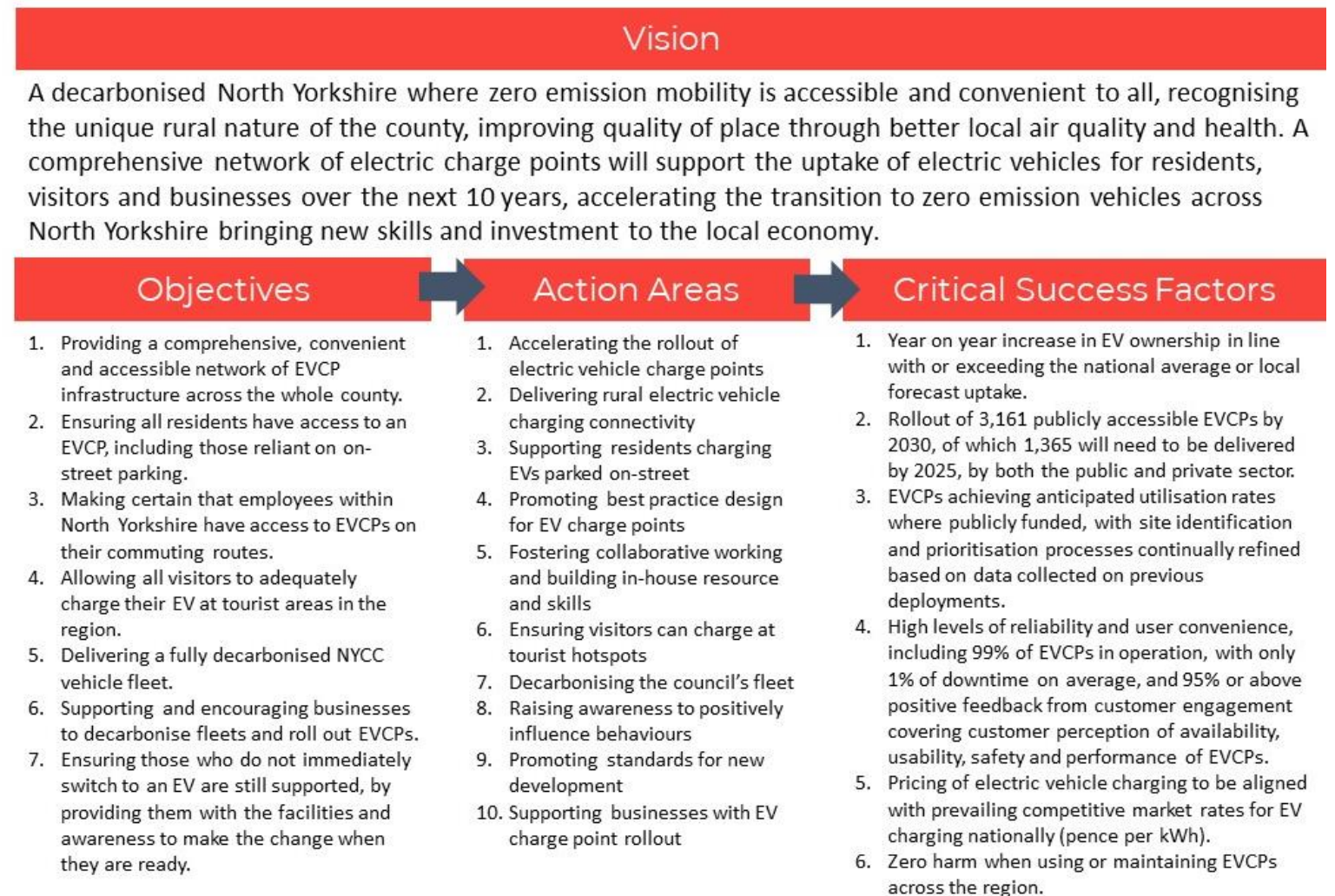


# VISION, OBJECTIVES AND PRIORITY ACTION AREAS

## 10. Supporting businesses with EV charge point rollout

- Supporting businesses with guidance, advice and information sharing, for example, sign posting and actively promoting available funding sources from the likes of OZEV.
- Hosting EV business focus events throughout the year.
- Investigate the scope for introducing a Right-to-Charge policy with property managers.
- Engage proactively with those managing business parks and retail parks.
- Engage with freight and logistics sector.

**Figure 2-1: North Yorkshire EV Infrastructure Rollout Strategy**





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# CONTEXT

### Policy Review

This strategy sits within a framework of policies. These policies and legislations, particularly at national government, have changed rapidly with new strategies published in recent years. This section sets out the key international, national and regional policy and legislative documents that supports the transition to EVs and the delivery of a comprehensive network of EVCPs across North Yorkshire.

**The Paris Declaration (2015)** sets an international goal of keeping global average temperatures to well below 2°C above pre-industrial levels, and ideally within 1.5°C. Reducing carbon emissions and consumption of fossil fuels are recognised as key steps for achieving this goal. The UK is a signatory of the Paris Declaration.

Decarbonisation of the transport sector is critical for the UK meeting the Paris goals. The Government has committed to achieving net zero emissions across all transport modes by 2050 within the **Decarbonising Transport, Setting the Challenge (2020)** report, which sets out support for the transition to zero emission vehicles through provision of charging infrastructure as a strategic priority. Later in 2020 the Government set out its **Ten Point Plan for a Green Industrial Revolution**, announcing a commitment to end the sale of new petrol and diesel vehicles by 2030, and that all new cars and vans will be required to be fully zero emissions at the tailpipe by 2035. In this plan the Government commits to investing £1.3 billion to accelerate the roll out of charging infrastructure.

The Government released its **Transport Decarbonisation Plan** in June 2021 setting out actions needed to decarbonise the entire transport system in the UK in order to deliver net-zero emissions across all transport modes by 2050. The Government commits to phasing out all new non-zero emission road

vehicles, from motorbikes to HGVs, by 2040, and ensuring infrastructure is not a barrier in the transition to net-zero vehicles.

Building upon The Ten Point Plan for a Green Industrial Revolution, the Government's **Net Zero Strategy: Build Back Better (2021)** contains policies and proposals which aim to decarbonise the UK and reach net zero by 2050. The transition to EVs is identified as central to decarbonising transport, and a key policy of the strategy is introducing a zero-emission vehicle mandate, which will set targets for a percentage of manufactures' new car and van sales to be zero emission from 2024.

Regional policies also support the transition to zero emission vehicles. Key objectives of the North Yorkshire Local Transport Plan 2016-2045 are protecting the environment and preventing climate change. It details how transport can impact emissions and highlights the way in which new technologies, such as EVs, can mitigate the effects. Therefore, NYCC will support measures to promote environmentally friendly forms of transport including provision for EVs. The plan sets out that NYCC is developing a policy which will consider the provision of infrastructure for EVs in North Yorkshire.

Legislative changes are also occurring to support the delivery of electric vehicle infrastructure through updates to the Building Regulations announced in December 2021. The new legislation means that all new residential development, including dwellings created from a change of use, must have at least one charging point per dwelling with associated parking, and all new non-residential buildings with more than 10 parking spaces must have a minimum of one charge point and cable routes for one in five of the total number of spaces. The new regulations also cover residential and non-residential uses undergoing major renovation. These changes mean that developments must legally provide EV charge points.

The Office for Zero Emission Vehicles (OZEV) released a **National EV Charging Strategy** in March 2022, which sets the vision to remove charging infrastructure as a barrier – both real and perceived – to EV uptake, with the goal for 300,000 public charge points by 2030. The strategy focuses on accelerating the rollout of rapid chargers on the strategic road network and transform local on-street charging. The strategy launches a £500m infrastructure support programme to deploying local charge points at scale, including a £10m pilot scheme. The strategy also sets out a dedicated local authority support programme to ensure local authorities have the required resource and expertise to rollout EV charging infrastructure.

The policy review shows there is significant support for investment in EV infrastructure at national and regional level. Further information on the policy context can be found within the NYCC Electric Vehicle Charging Deployment Study 2020.





# CONTEXT

## CURRENT EV REGISTRATIONS

### Current EV Registrations

The current uptake of EVs across North Yorkshire is low. According to the latest DfT statistics, there are currently 3,969 EVs registered in the region<sup>2</sup>, which equates to only 1.14% of all vehicles. When compared to the rest of the UK, the vehicle fleet in North Yorkshire has less EVs than the national average of 1.64%.

However, uptake in North Yorkshire has been rising rapidly year on year. In 2015 (Q3) there were only 270 EVs, which equates to an increase of almost 15 times in six years, as shown in Table 3-1. This is a similar rate of increase as recorded for the UK as a whole. This rise is forecast to continue until 2050 when almost all vehicles will be electric.

The uptake of EVs is unequally distributed across the region (Table 3-2). In Harrogate 1.71% of vehicles are electric, above the national average, whereas in all other local authority areas the percentage of electric vehicles is below the national average (0.57-1.14%).

The authority with the greatest number of EVs registered is Harrogate (1,964) which equates to 40% of the total EVs registered in North Yorkshire, whereas Richmondshire only has 6% (316) (Figure 3-1).

Figure 3-2 (next page) shows the spatial distribution of EVs across North Yorkshire. In general, there are greater numbers of EVs in urban areas than in rural areas, with a particularly high number in Harrogate, Scarborough, Ripon and Selby.

There are two key types of EVs owned by residents in North Yorkshire: Battery Electric Vehicles (BEVs), which are fully powered by electricity, and Plug-in Hybrid Electric Vehicles (PHEVs), which utilise a combination of electric and internal combustion engines. In North Yorkshire, 55% of EVs are BEVs (2,183) and 43% are PHEVs (1,707) (3% are unknown). This is comparable to the UK fleet as a whole (52% BEVs, 44% PHEVs, and 4% unknown).

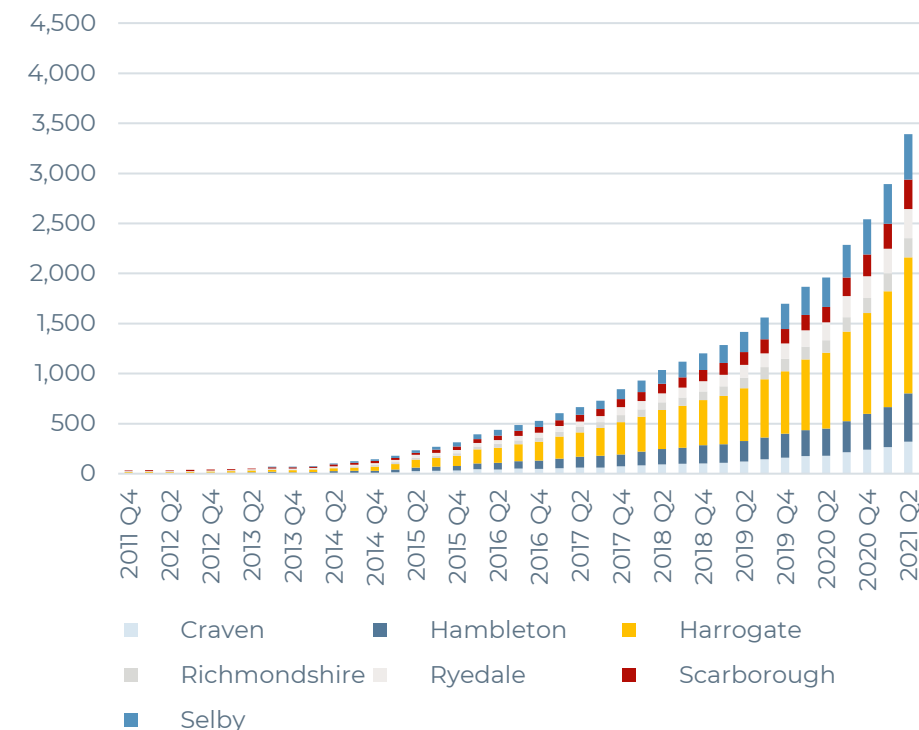
**Table 3-1:** Change in registered EVs (DfT, 2021)

		2021 Q3	2020 Q3	2019 Q3	2018 Q3	2017 Q3	2016 Q3	2015 Q3
UK	EV Ownership	644,818	373,227	245,139	183,445	130,225	85,099	48,492
	% Change	73%	52%	34%	41%	53%	75%	-
North Yorkshire	EV Ownership	3,969	2,287	1,561	1,118	731	485	270
	% Change	74%	47%	40%	53%	51%	80%	-

**Table 3-2:** Change in registered EVs (DfT, 2021)

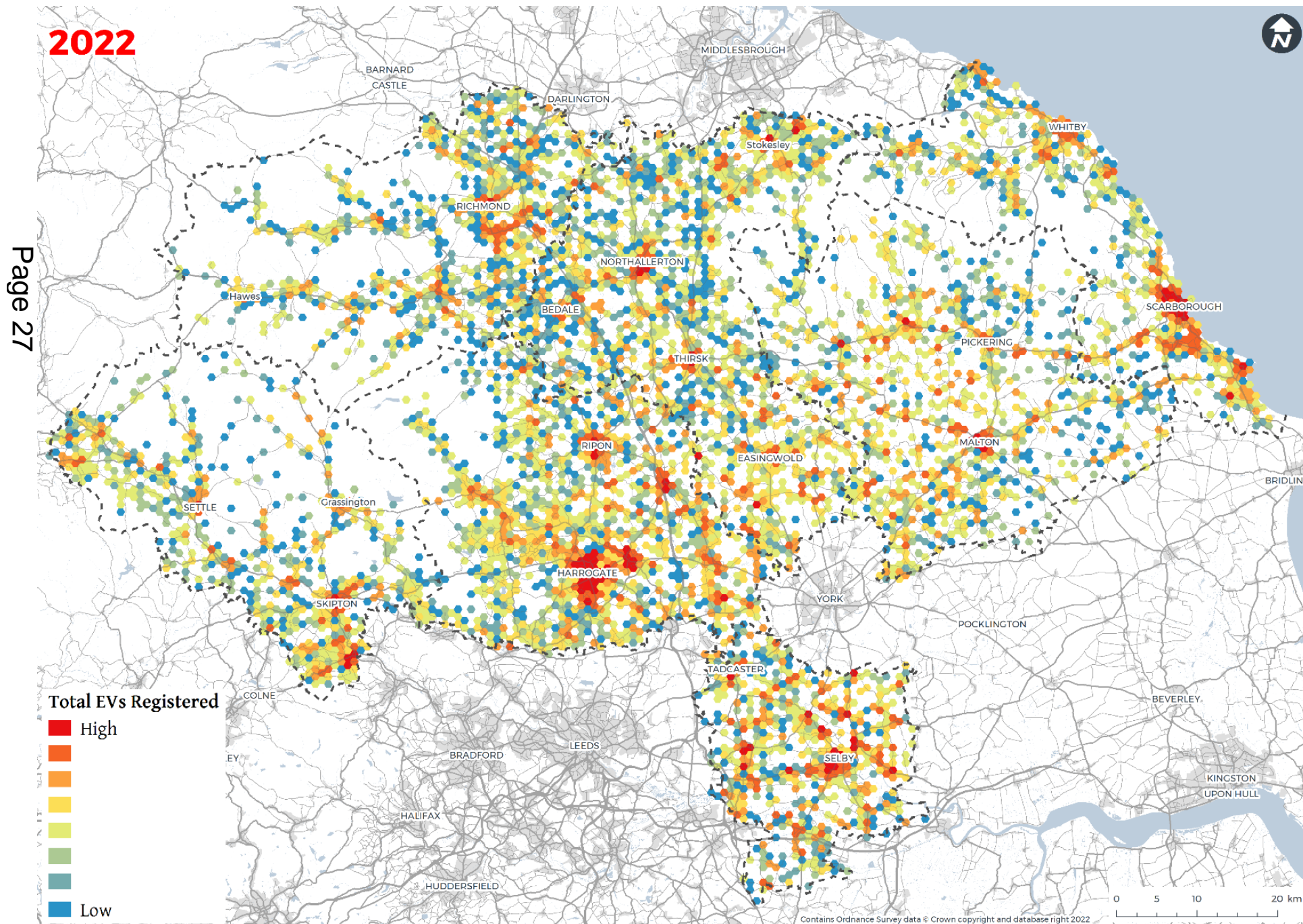
	Registered EVs	% of total vehicles EV
Craven	371	1.12%
Hambleton	551	1.06%
Harrogate	1,596	1.71%
Richmondshire	226	0.87%
Ryedale	358	0.99%
Scarborough	340	0.57%
Selby	523	1.06%
<b>North Yorkshire</b>	<b>3,969</b>	<b>1.14%</b>

**Figure 3-1:** Registered EVs (DfT, 2021)



<sup>2</sup> Department for Transport. Table VEH0132a. 2021 Q3 (<https://www.gov.uk/government/collections/vehicles-statistics>)

Figure 3-2: Distribution of registered electric vehicles



# CONTEXT

## EXISTING EV CHARGE POINTS

### Existing EV Charge Points

Across the UK, there are currently 29,740 EVCPs located at 18,639 locations, which is an increase of 263% over the last five years<sup>3</sup>. These chargers are comprised of 26% slow chargers, 56% fast chargers, 14% rapids and 5% ultra-rapid chargers.

Whilst there has been a substantial increase in recent years, the proportion of EVCPs available per kilometre of road will need to increase further to match the rising number of EV's on the road. We will also need to ensure that all the charging devices are reliable, safe and user-friendly for all driver groups.

In North Yorkshire, the number of publicly accessible EVCPs is low but has been growing year on year. Between 2020 and 2022 the number of EVCPs has risen from 142 to 226 units. The existing number is comprised of 45 rapid chargers, 180 fast chargers and a single ultra-rapid charger. It should be noted that, whilst these chargers are described as publicly accessible on the National Charge Point Registry, some are, in practice, partially restricted, i.e., only available to customers of shops with car parks open at set hours or installed at B&Bs that only provide access to their guests.

Both the public and private sector have been engaged in the installation of charge points, although to date the majority of units installed have been privately funded. At the time of writing NYCC has not yet installed any EVCPs as we are waiting for the completion of this strategy and its recommendations to inform the next steps. As set out in Table 3-2, Harrogate District Council has provided the most units. However, there are a number of plans in place to install new EVCPs across the partner authorities.

EV charging provision is unequally distributed across the county, as shown in Figure 3-3 (next page). There remain many areas in North Yorkshire that do not have any EVCP provision yet in place. The locations of existing EVCPs can be found at <https://www.zap-map.com/live/>.

Using data provided by the DfT, we can compare EVCP provision in North Yorkshire to other local authority areas in the UK. DfT data shows that Harrogate and Ryedale are in the top 40% of UK authorities in regard to total number EVCPs. However, Selby, Richmondshire and Scarborough fall into the bottom 20%. Craven and Hambleton sit between these two categories.

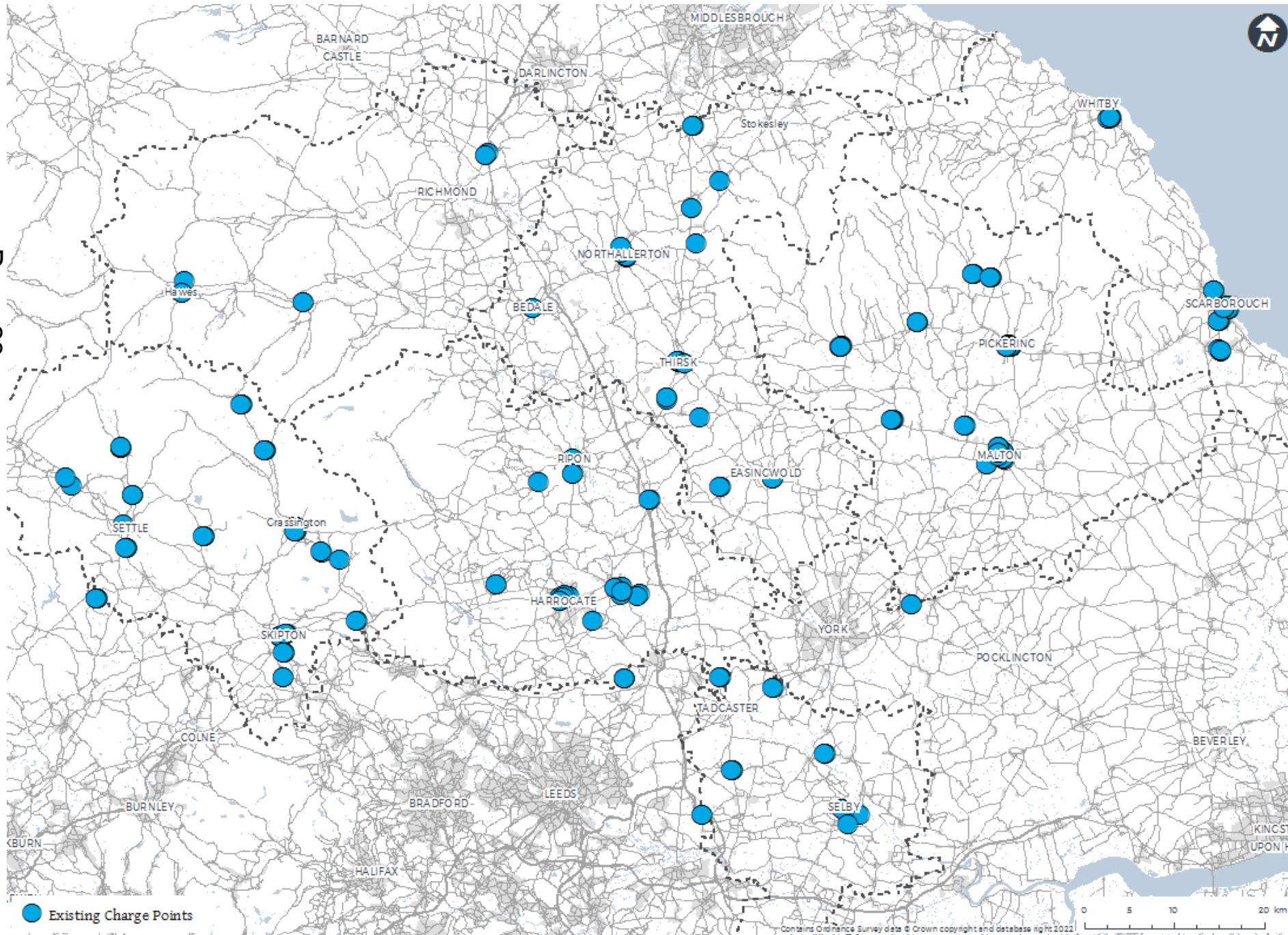
**Table 3-2: Existing EVCP provision by local authority**  
(Source: DfT, January 2022)

Authority	Existing charge points		
	Fast	Rapid	TOTAL
Craven	25	4	29
Hambleton	28	10	38
Harrogate	44	12	56
Richmondshire	10	10	20
Ryedale	47	4	51
Scarborough	19	1	20
Selby	7	4	11
<b>North Yorkshire</b>	<b>180</b>	<b>45</b>	<b>225</b>

<sup>3</sup> <https://www.zap-map.com/statistics/> (February 2022)



**Figure 3-3:** Existing publicly available EVCPs in North Yorkshire (Source: National Charge Point Registry and Open Charge Map)







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# **FUTURE EV DEMAND AND CHARGING REQUIREMENTS**

# FUTURE EV DEMAND AND CHARGING REQUIREMENTS

## EV UPTAKE

### EV Uptake

The rapid rise in the number of EVs is expected to continue, driven by consumer demand and government legislation which is set to ban the sale of ICE vehicles from 2030.

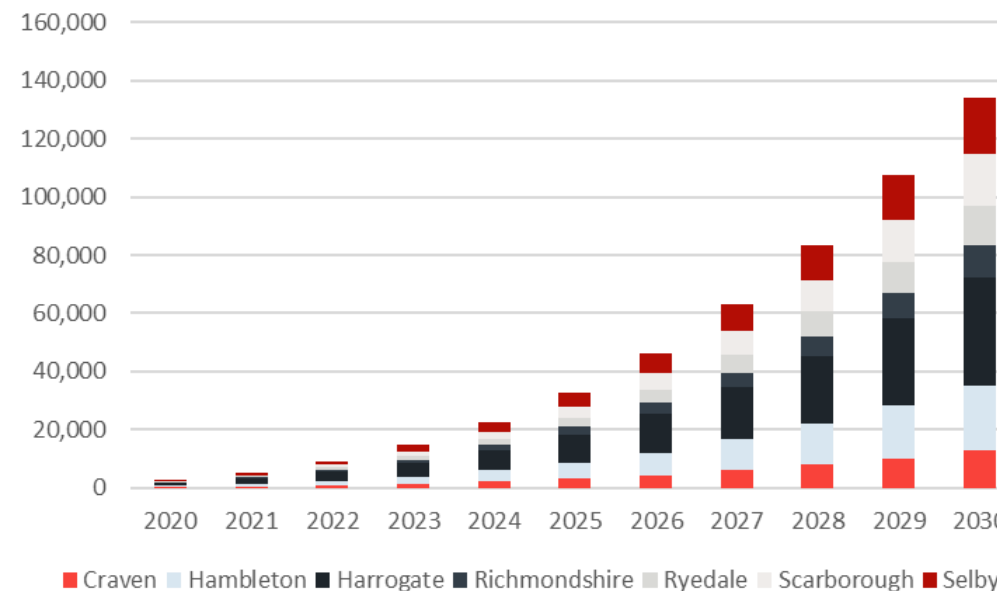
Modelling has been undertaken to forecast the level of EV uptake expected across North Yorkshire up to 2030.

Firstly, national trends in EV uptake were calculated by averaging a range of industry forecasts, combined with information on the impact of upcoming EV model launches by vehicle manufacturers and national government policies. Further data was then used to calculate specific uptake values for North Yorkshire. This data includes trends in total vehicle sales, vehicle age and turnover rates, the localised propensity to purchase an EV of the local population, vehicle ownership levels and reliance on on-street parking, to provide an objective and measured assessment of EV uptake across the region.

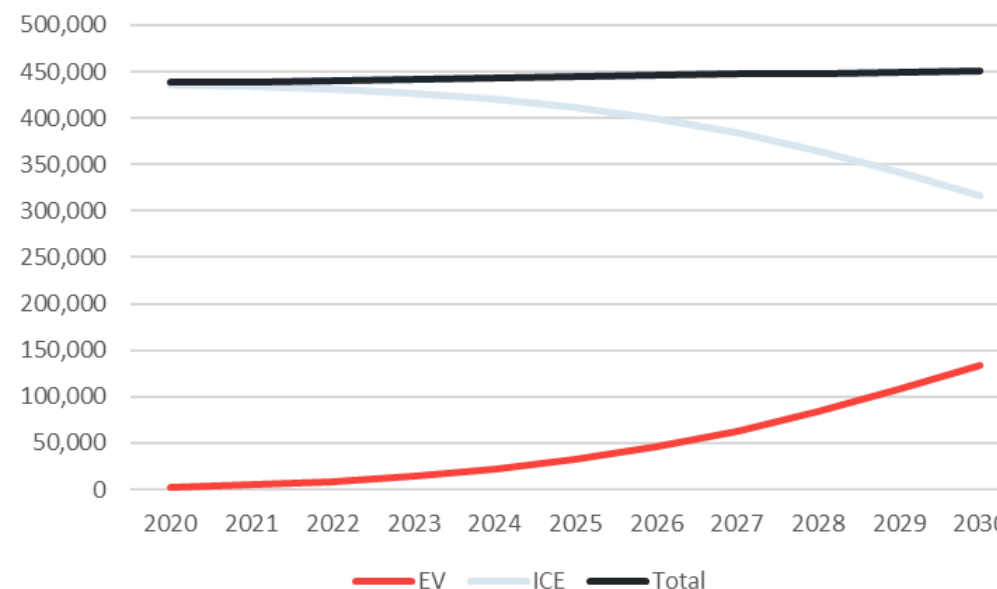
The proportion of EVs registered within North Yorkshire is forecast to rise from 0.6% (2,516 vehicles) in 2020, to 7.4% (32,705 vehicles) in 2025 and then 29.7% (134,271 vehicles) in 2030. The distribution of EV uptake across the region, by 2030, will be unequal, see Figure 4-1. Harrogate District will have the greatest proportion of EVs registered, relative to ICE vehicles, with 31.4% (37,086 vehicles) of their total vehicles, whereas Scarborough District will have the smallest proportion of EVs with 26.8% (17,967) of vehicles being EVs.

Over the coming years, the share of total vehicles made up by ICE vehicles is forecast to decline (Figure 4-2), as shown by the blue line, and the proportion of EVs will increase rapidly, as shown by the red line. By 2050, almost all vehicles will be electric (95.8%), with the exception of a small number of HGVs and classic vehicles which cannot practically be converted to an electric drivetrain.

**Figure 4-1: EV uptake by district**



**Figure 4-2: Increase in EVs as a proportion of the North Yorkshire vehicle fleet**



# FUTURE EV DEMAND AND CHARGING REQUIREMENTS

## REQUIREMENTS FOR EVCPs TO 2030

### Requirements for EVCPs to 2030

As the number of EVs in North Yorkshire increases there will be a greater requirement for publicly accessible EVCPs. Modelling has been undertaken to forecast the number of EVCPs required up to 2030, using the forecast EV uptake values presented in Section 4.1.

To inform the model a wide range of variables were calculated, including:

- Charging habits – use of public vs private charging and rapid vs slow chargers.
- Off-street parking availability.
- Trends in vehicle technologies – which will increase range and efficiency.
- Trends in charger technologies – which will increase charging speeds.
- Vehicle mileage and ownership trends.
- Uptake of PHEVs and BEVs.
- Ratio of PHEV miles in electric mode.

By combining information on all of the above, an accurate indication of the charging requirements could be calculated.

In total, it is forecast that **by 2030 there will be a total requirement for 3,161 publicly accessible EVCPs across the region consisting of a mix of fast and rapid chargers**, 1,365 of which will need to be delivered by 2025 (Table 4-1 and Figure 4-3). It is anticipated that the 3,161 EVCP's will be delivered by a mix of public and private sector organisations, representing the mid-range modelling scenario.

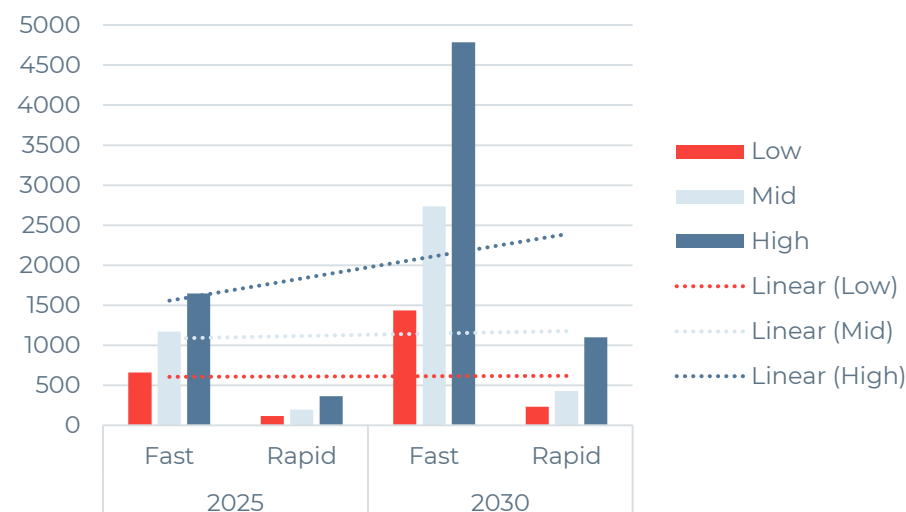
Table 4-2 presents these forecasting EVCP requirements by local authority and Figure 4-4 shows where demand for these EVCPs is forecast to exist in 2030.

The cost to procure an EVCP varies based on a number of often highly localised factors and therefore it is not possible to define a single price per unit. The cost of the units themselves varies depending upon the supplier chosen. The location chosen then presents unique design and installation costs, including the need for a traffic regulation order if placed on the public highway rather than off-street. However, the largest variable is the cost of providing a power connection. If there is not sufficient capacity for the charger, then upgrade works must be completed to the local grid.

Assessments will be carried out by the DNO to calculate the grid upgrade costs at each new EVCP site. Quotes received to date range between £2,400 to 636,000 depending on the constraints number and type of chargers proposed.

It is forecast that public sector funding of approximately £10.3 million is required to contribute towards the delivery of the forecast charge point requirement of 3,161 EVCPs by 2030. This assumes the mid-range EVCP provision modelling scenario and mid-range costs per unit, as well as an assumption that around 50% of EVCP funding overall coming from the private sector for fast chargers (AC) and 80% for rapid (DC) chargers.

**Figure 4-3: Forecast EVCP requirements**



**Table 4-1: Forecast EVCP requirements**

		Lower-range EVCPs	Mid-range EVCPs	Higher-range EVCPs
2025	Fast	658	1,171	1,646
	Rapid	117	195	364
2030	Fast	1,435	2,734	4,784
	Rapid	233	427	1,098
<b>Total by 2030</b>		<b>1,668</b>	<b>3,161</b>	<b>5,882</b>

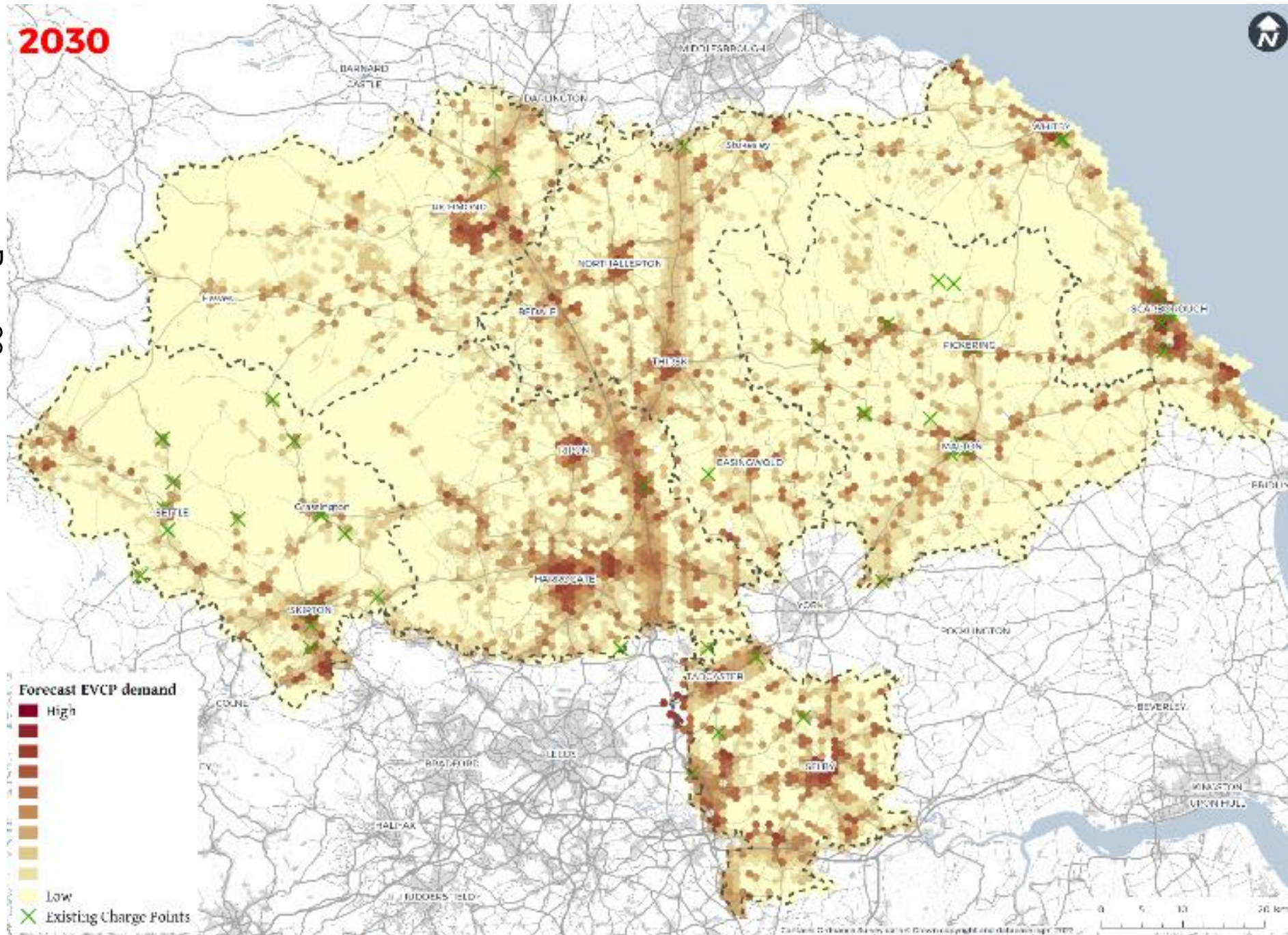
**Table 4-2: Forecast EVCP requirements (mid-range) by local authority**

Authority	Forecast EVCP Requirement (mid-range)		
	Type of charger	2025	2030
Craven	Fast	110	257
	Rapid	18	40
Hambleton	Fast	195	455
	Rapid	32	71
Harrogate	Fast	322	756
	Rapid	54	118
Richmondshire	Fast	98	226
	Rapid	16	35
Ryedale	Fast	118	275
	Rapid	20	43
Scarborough	Fast	157	366
	Rapid	26	58
Selby	Fast	171	399
	Rapid	29	62
North Yorkshire	Fast	1,171	2,734
	Rapid	195	427
<b>TOTAL</b>		<b>1,366</b>	<b>3,161</b>



# FUTURE EV DEMAND AND CHARGING REQUIREMENTS

Figure 4-4 – Areas of demand for publicly accessible EVCPs





**North Yorkshire**  
County Council

# **ELECTRIC VEHICLE INFRASTRUCTURE PRIORITY ACTION AREAS**



# PRIORITY ACTION AREAS

## ACTION 1: ACCELERATING THE ROLLOUT OF ELECTRIC VEHICLE CHARGE POINTS

### Action 1: Accelerating the Rollout of Electric Vehicle Charge Points

A key aim of this strategy is to increase the rollout of EVCPs across North Yorkshire. This network will provide the infrastructure required for widespread use of EVs.

A large number of drivers will rely on publicly accessible EVCPs in the future, including those reliant on on-street parking, visitors to the region and those topping up to extend their range mid journey.

Section 4 outlines the total numbers of EVCPs that will need to be delivered by 2030 to support the projected uptake in electric vehicles. The private sector will be able to install the majority of chargers in many instances, but there will remain a significant deficit of infrastructure in areas that are less commercially attractive, which will be left to the public sector to install.

The private sector focuses on areas of high demand for EV charging, where they can guarantee good utilisation rates. These sites are the most profitable and will ensure a strong return on their investment. The areas of highest demand are generally focussed in affluent urban areas or at high footfall destinations such as railway stations, supermarkets and town centres, where top-up charging will occur. Conversely rural and low-density residential areas are less attractive to the private sector.

Over time, as demand increases, costs fall, and commercial viability improves, the ratio of publicly funded to privately funded chargers will shift. By 2030 it is anticipated that approximately 50% of fast chargers and 10% of rapid chargers may still require some degree of public funding, with the remainder fully funded by the private sector. However, initially, the investment by the public sector will be far greater.

If the public sector does not intervene to install EVCPs in areas where the private sector does not wish to invest, then it is unlikely that a reasonable level of coverage will be achieved and the uptake of EVs in some areas will be slowed.

Figure 5-1 (page 23) shows the result of modelling which indicates where demand for EVCPs will be greatest by 2030. In areas of lower demand, publicly funded chargers will most likely need to be installed to ensure EVCP network coverage is equitably distributed across North Yorkshire. This is a key part of ensuring a just transition from ICE vehicles to EVs for all North Yorkshire residents, workers and visitors.

We will plan a network of on and off-street chargers across North Yorkshire, which will ensure that any resident without access to private off-street charging is within a 10-minute walk of a public EVCP.

Our modelling anticipates that of the 3,161 publicly accessible EVCP required by 2030 across the region, 1,529 of these we anticipate will need public funding to deliver, representing a mid-range scenario. Of these, 724 EVCPs will need to be publicly funded by 2025 (Table 5-1).

Modelling carried out for this study indicates that the cost of providing the public charging infrastructure up to 2030 may be in the region of **£10.3 million** in public sector funding to ensure good coverage and equitable access to chargers is provided. Wherever possible and appropriate, we will seek to minimise cost to NYCC by applying for grant funding or by partnering with the private sector through a concessionary business model, with the majority of funding (70-80%) for charging infrastructure is expected to come from the private sector by 2030.

**Table 5-1: Forecast publicly funded EVCP requirements**

	Publicly Funded Charge Point Requirement		Estimated Public Funding Requirement (£m)	
	2025	2030	2025	2030
<b>Lower-range EVCPs</b>	348	748	£2.37	£5.10
<b>Mid-range EVCPs</b>	724	1,529	£4.88	£10.30
<b>Higher-range EVCPs</b>	1,120	2,762	£8.23	£20.30

Table 5-2 shows the requirements by each separate local authority area.

We will install a mix of both fast and rapid EVCPs located strategically to meet the varying needs of drivers. When topping up mid-journey rapid chargers which allow EVs to recharge in 30-40 minutes are the most appropriate choice. Alternatively in residential settings where charging takes place mostly overnight, a fast charger which requires 6-8 hours to charge a vehicle is more suitable.

# PRIORITY ACTION AREAS

## ACTION 1: ACCELERATING THE ROLLOUT OF ELECTRIC VEHICLE CHARGE POINTS

**Table 5-2:** Forecast publicly funded EVCP requirements (mid-range) by local authority

Authority	Forecast Publicly Funded Charge Point Requirement		
	Type of charger	2025	2030
Craven	Fast	32	69
	Rapid	3	4
Hambleton	Fast	55	121
	Rapid	5	7
Harrogate	Fast	93	201
	Rapid	8	11
Richmondshire	Fast	28	60
	Rapid	2	3
Ryedale	Fast	34	72
	Rapid	3	4
Scarborough	Fast	45	97
	Rapid	4	5
Selby	Fast	49	105
	Rapid	4	6
North Yorkshire	<b>Fast</b>	<b>332</b>	<b>725</b>
	<b>Rapid</b>	<b>27</b>	<b>39</b>
<b>TOTAL</b>		<b>724</b>	<b>1,529</b>

### Proposed tasks:

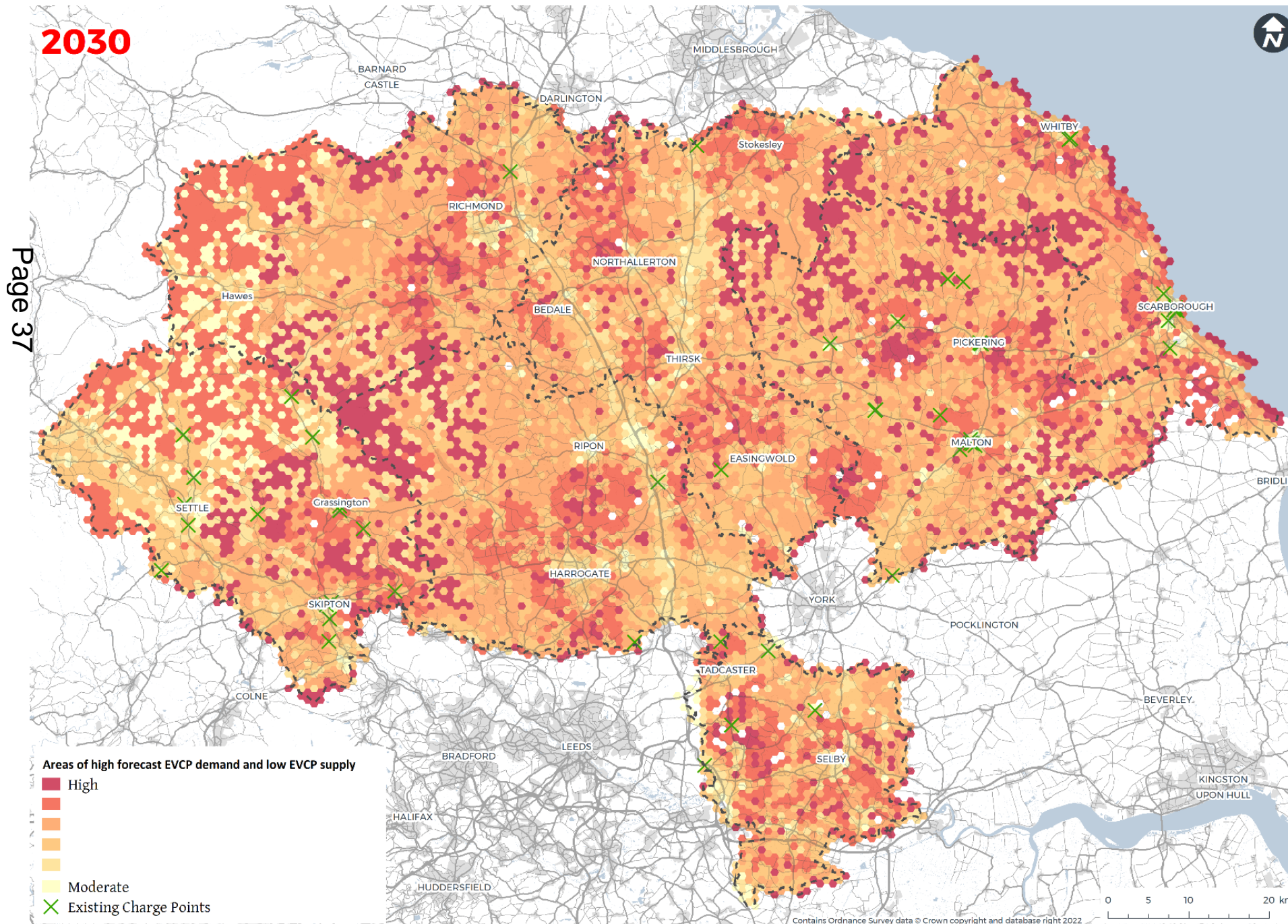
1. Install on and off-street chargers in areas not served by the private sector provision in order to ensure EVCP network coverage is equitably distributed across North Yorkshire.
2. Install a mix of fast and rapid chargers to meet the needs of different types of EV drivers, transitioning from 2022, 2025 and 2030 requirements.
3. Plan a network of chargers across NYCC that aims to ensure that any resident without access to private off-street charging is within 10 minutes' walk of a public EVCP.
4. Seek government funding and commercial partnerships to minimise cost to NYCC.



# PRIORITY ACTION AREAS

## ACTION 1: ACCELERATING THE ROLLOUT OF ELECTRIC VEHICLE CHARGE POINTS

Figure 5-1: Areas expected to require public sector funding of EVCPs



# PRIORITY ACTION AREAS

## ACTION 2: DELIVERING RURAL ELECTRIC VEHICLE CHARGING CONNECTIVITY

### Action 2: Delivering Rural Electric Vehicle Charging Connectivity

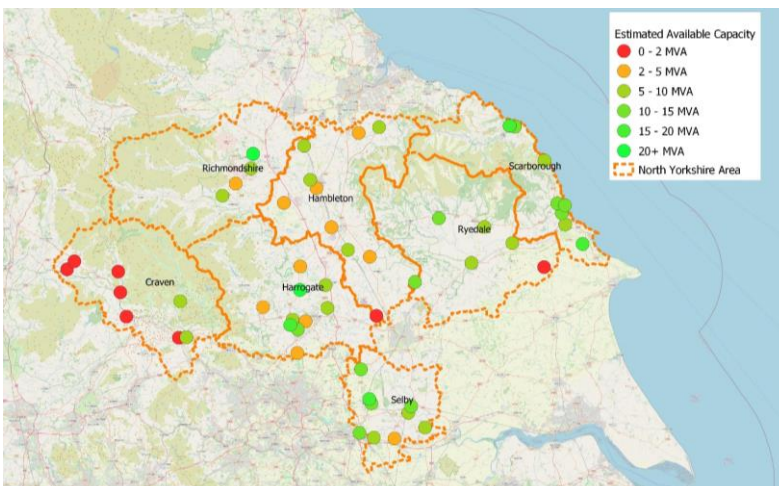
North Yorkshire is characterised by its rural nature, with 98 percent of the county's landscape classed as very sparse (13%) or super-sparse (85%). Population density is five times below the national average, with just 76 people per square kilometre compared to the English average of 430. Approximately 46 percent of North Yorkshire is designated as either a National Park or an Area of Outstanding Natural Beauty (AONB).

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The rural nature of North Yorkshire results in a number of transport issues, including a higher car dependency due to a lack of public transport options and the need for long drives. Range anxiety – a concern over battery charging running out before the next EVCP can be reached – is exacerbated by such long trips. Full coverage of EVCPs across North Yorkshire's rural areas is critical to reduce range anxiety and serve those that live in rural areas, as well as people visiting or travelling through them.

However, sparse population in rural locations means low footfall for EVCPs located in these areas. Low demand means a poor utilisation rate and a weak business case in terms of commercial return on investment.

**Figure 5-2: Primary substation capacity**



Not only is demand lower in rural areas, but grid connection costs tend to be higher, further impacting commercial viability. Rural areas often suffer from low capacity of the electrical grid and, therefore, connection costs can be significant and cost prohibitive. North Yorkshire has over 50 primary substations and a significant proportion of primary substations show no/limited spare capacity, particularly in the Craven District (Figure 5-2). Should capacity not be available on the network, expensive infrastructure upgrades may be required to install EVCPs.

These issues of high connection costs and low utilisation rates means that the private sector is typically less interested in delivering rural EVCPs. As such, there is a risk of 'charging deserts' across North Yorkshire's rural areas, deterring EV uptake.

We are committed to ensuring there is full coverage of EVCPs across rural areas of North Yorkshire, particularly where there is little appetite from the private sector to provide publicly accessible EVCPs. NYCC will lead funding bids and seek to use public funding for enabling works in targeted areas with high connection costs/poor commercial prospects. We will work with rural communities in particular to set out a clear case for a coherent and subsidised network of EVCPs.

Our vision is for North Yorkshire to be a trailblazer for electric vehicle connectivity and innovation, combining the delivery of EVCPs with piloting other transport initiatives, such as EV mobility hubs and 'on-demand' transport. We want to capitalise on the rural nature of North Yorkshire as a unique selling point for funding opportunities to trial innovations for rural communities transitioning to zero emissions. We are committed to leading funding bids and working with the districts, boroughs and national park authorities, to assist in funding proposals.

NYCC already has a good working relationship with the main local DNO - Northern Powergrid – who own and operate the connections to the electricity grid. We will continue working closely with the DNOs to align our strategy for the rollout of EVCPs with the DNOs' business planning for grid capacity upgrades. Partnership working with the DNOs will streamline grid capacity and charging demand assessments.

Finally, we will investigate and deliver innovative ideas to address the challenges of delivering EVCPs in rural areas, such as co-locating EVCPs with battery storage and renewable generation. Innovations such as building solar canopies will be promoted for sites with constrained grid capacity where appropriate. Battery storage can act as a buffer – charging at a low rate during off-peak times or when on-site renewable generation is available, and then discharging to support the grid connection when demand exceeds the site's capacity limit. On-site generation from renewables and battery storage can be used to reduce the peak demand of the installation, avoiding or at least deferring costly grid upgrades, as well as providing communities with greater resilience in the case of power outages.

#### Proposed tasks:

1. Ensure coverage of EVCPs in rural areas and appropriate EVCP provision at rural locations that cater for long travel distances.
2. Lead funding bids and capitalise on rural character as a unique selling point for unlocking funding.
3. Work in partnership with the DNO to ensure alignment with business planning for upgrades.
4. Encourage innovative solutions for EVCPs, such as combining local generation with renewables and battery storage.



# PRIORITY ACTION AREAS

## ACTION 3: SUPPORTING RESIDENTS CHARGING EVS PARKED ON-STREET

### *Action 3: Supporting Residents Charging EVs Parked On-Street*

Whilst North Yorkshire is a predominantly rural county, the region also features areas of terraced housing, historic buildings, flats and other properties which do not have access to off-street parking (21% of households), and so are reliant on public EV charging infrastructure.

The ability to charge an EV cheaply and conveniently at home is one of the major attractions of switching to an EV. Conversely, being more reliant on the public charging network is well known (through consumer surveys) to be a major concern of would-be EV adopters, and so presents a significant barrier to uptake.

Figure 5-3 (page 28) highlights areas forecast to have the highest demand for public EVCPs by 2030. These areas are both highly reliant on on-street parking and are also forecast to be areas of high EV ownership, relative to the rest of North Yorkshire. The red points represent areas where demand is highest, with orange, yellow and blue areas having relatively lower demand.

In order to support and enable EV uptake in these areas, prospective EV owners will need to be able to access convenient publicly accessible charge points, to remove any barriers posed to those without access to off-street parking, which will otherwise stifle EV uptake.

The towns of Harrogate and Knaresborough stand out as being the areas of greatest demand, whilst some demand is also forecast in parts of Scarborough, Ripon, Northallerton and Malton, as well as a number of other smaller settlements.

There are a variety of potential charging solutions available to cater to the demand for public chargers in these areas, including:

- Conventional on-street chargers with dedicated EV only bays;
- Lamp column / kerbside charging, with or without dedicated EV only bays;
- Residents overnight charging hubs in nearby off-street car parks;
- Rapid charging hubs in the wider area; or
- Permitting the trailing of cables or cable channels over the footway.

Each area will need to be considered on its own merits, based on the particular characteristics, opportunities and constraints within each.

For example, where available, a suitable off-street car park can provide a more readily deliverable and cost-effective means of providing chargers for residents overnight charging hubs, particularly if there will be demand from daytime visitors, but it is then otherwise underutilised overnight. However, the car parks will need to be appropriately placed within close proximity to the homes without off-street parking, accessible 24 hours, well lit, safe and secure. The feasibility for installing chargers and the power supply connection costs would then need to be established. As such it is likely that off-street parking-based charging only represents a solution in particular areas.



# PRIORITY ACTION AREAS

## ACTION 3: SUPPORTING RESIDENTS CHARGING EVS PARKED ON-STREET



**Rapid charging hubs** present a more versatile solution as they can serve a far wider area and more vehicles per charge point, more akin to a petrol station. However, they are potentially less convenient to the user, as they are required to travel to an intermediate location, unless it can be tied into a trip to a supermarket or alike. They are also typically more expensive for the user, and place a greater strain on the vehicles' battery and on the grid, as the charging happens at higher power outputs, and during the daytime rather than overnight.

**On-street chargers** present a convenient solution the users, in that they can charge where they already park in close proximity to their home. However, on-street chargers often prove to be the most challenging to deliver, as they must vie for space in what is already often a congested street environment, where footways are narrow, or basements, trees and other street furniture prevent deployment. They also typically require Traffic Regulation Orders to designate EV only parking bays, which can be contentious amongst the wider public, especially where parking is limited and already a source of frustration. The commercial case is also less attractive to commercial operators than rapid chargers, as the turnover of vehicles and power delivered is lower, so has more limited scope to cover overheads and pay down the installation costs.

**Lamp Column chargers** can present an attractive lower cost solution in areas where conventional on-street chargers are challenging to deliver, or where there are particular concerns regarding street clutter. The lamp columns must be suitable and located at the kerbside rather than set back from the kerb, though it is possible to install satellite bollards at the kerbside which are still powered via the lamp columns supply connection. Their power output can be more limited relative to conventional chargers, though it is still adequate for overnight charging in most instances. If installed in sufficient numbers they can obviate the need to

introduce dedicated EV only bays, though this will lessen the utilisation if they are regularly blocked by ICE vehicles and, as with conventional on-street chargers, may then struggle to cover their operating costs and pay down the installation costs.

**Trailing Cables and Cable Channels** represent a further potential solution, and a low-tech low-cost option, enabling residents to charge from their own domestic charge point. However, doing so introduces potential trip hazards on the public footway, and there is uncertainty over potential liabilities incurred. Safety matting can help to a degree. At present most councils do not permit trailing cables, however Norfolk County Council and Hampshire County Council are two exceptions<sup>4,5</sup>. They have both provided clear guidance to residents on how and when they are permitted to trail cables across the footway. Norfolk requires a site assessment and licence to be issued before this is possible. Stipulations include that the property does not have access to off-road parking and is more than a 5 minute walk from the nearest public EVCP.

Another approach being trialled in places like Oxford is the introduction of cable channels, which remove the trip hazard element, although potentially creates differing challenges with regard to ownership and maintenance responsibilities. A further limitation with each of these approaches is they require the resident to be able to park immediately outside their home, within reach of the charge point. This is likely to be practical in some areas but could prove difficult in areas of high parking demand and could become a potential source of contention with neighbours. An EV only bay cannot be introduced where a publicly accessible charger is not available.



<sup>4</sup> <https://www.norfolk.gov.uk/business/licences-and-permits/ev-cable-permission>

<sup>5</sup> <https://www.hants.gov.uk/transport/electric-vehicles/ev-charging-guidance>



# PRIORITY ACTION AREAS

## ACTION 3: SUPPORTING RESIDENTS CHARGING EVS PARKED ON-STREET

In short, each solution has limitations, and their suitability is subject to local conditions, so a blend of solutions will be called for across North Yorkshire streets.

Whilst there is a keen appetite to invest in EV charging infrastructure from the private sector, with a number of large operators having established themselves, commercial charge point deployments are typically focused on destinations and intermediate sites (i.e. service stations, petrol stations, roadside cafes), where demand is high, with high traffic volumes or reasonable dwell times.

On-street residential chargers are challenging to deliver on a commercial basis, and so are generally grant funded, although some CPOs are now promoting larger scale fully funded partnerships.

### Addressing the Issues

We will take a proactive approach to delivering targeted charge point deployments in areas of forecast demand for on-street EV charging, with a view to achieving a good base level of coverage across the study area, where all residents who need it have convenient access to a public charger.

Where available, residents' charging hubs in a nearby car park can offer a good solution, potentially also featuring some rapid chargers where there are also some local amenities. Otherwise, on-street chargers in the form of lamp column chargers or kerbside chargers provide a convenient solution for residents, and if deployed widely, can mitigate the requirement for TROs.

We will investigate the feasibility of both permitting trailing cables or installing cable gullies, to allow residents to charge vehicles parked on the public highway from their home power supplied. However, these are very much seen as a pragmatic, interim measures for now, with the aspiration being to ensure

there is a comprehensive rollout of public charging infrastructure.

In addition to using our detailed forecasts of demand for public EV charging requirements, we also will seek to invite expressions of interest from residents, via a user-friendly website.

### Actions

We will remove barriers posed to those without access to off-street parking, which will otherwise stifle EV uptake, focusing on the towns of Harrogate and Knaresborough as the areas of greatest demand, whilst some demand is also forecast in parts of Scarborough, Ripon, Northallerton, Malton, as well as a number of other smaller settlements.

There are a number of well-placed council owned car parks, which correspond to anticipated gaps in charger provision. Car parks are the logical place to start for the Councils and NPAs. Sites will be prioritised on the basis of forecast demand and where gaps in private sector provision are anticipated.

Whilst there continues to be a significant role for LAs in funding or part funding charge point provision, they should seek to take the opportunities to secure grant funding where available to supplement any existing budgets. The Local EV Infrastructure (LEVI) fund, which is to be launched by OZEV in Spring 2023, will provide an important route to securing funding. We will put together a compelling case for investment, drawing on the strong evidence base and analysis we have already developed.

We will engage with the market to ensure our delivery approach attracts the best tenders from prospective operators, who will work as long-term partners with Local Authorities.

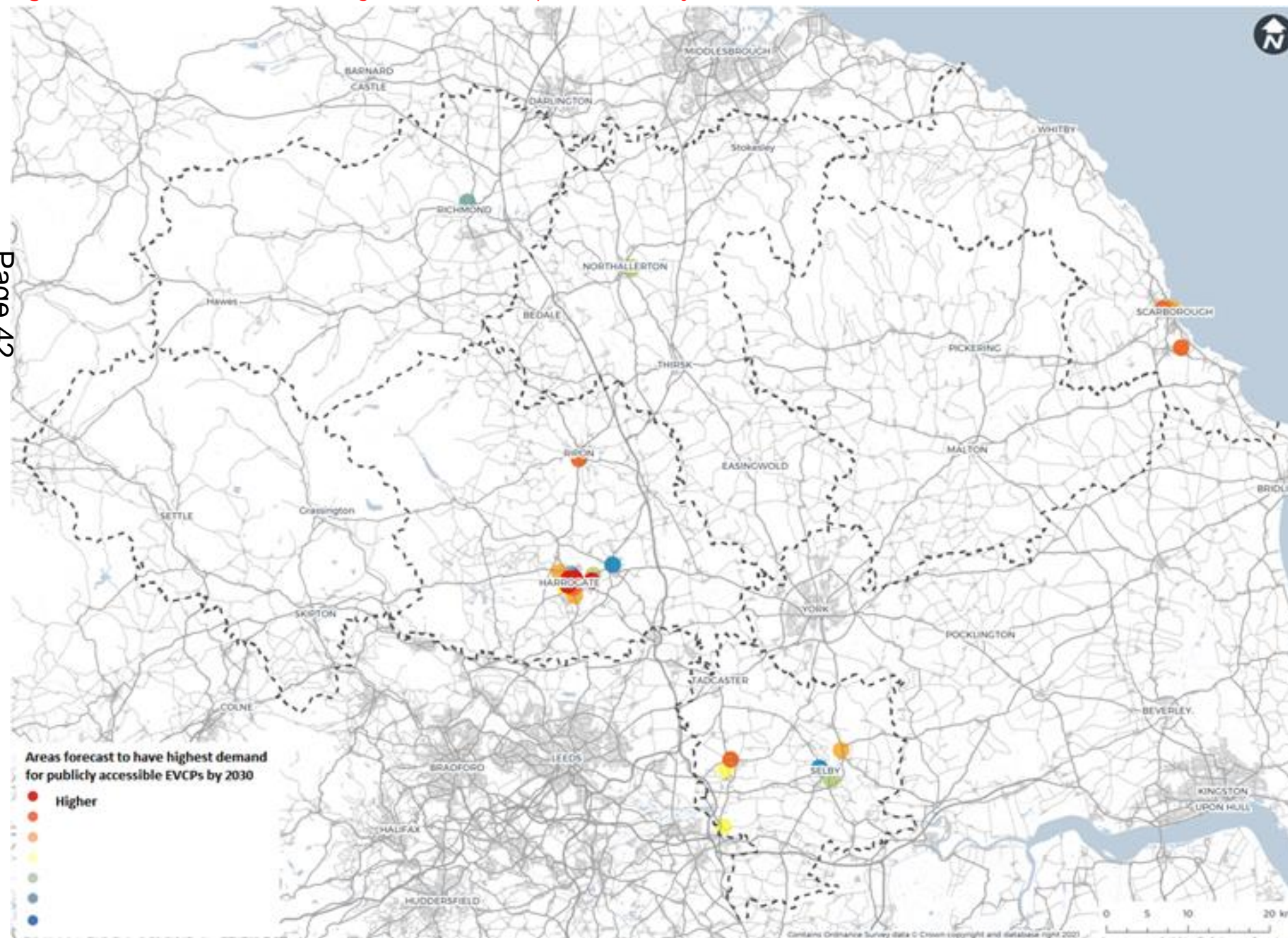
### Proposed tasks:

1. Take a proactive approach to delivering targeted charge point deployments in areas of demand for on-street EV charging, achieving a good base level of coverage, where all residents who need it have convenient access to a public charger. This will include:
  - a) Residents' charging hubs in nearby car parks, featuring rapid chargers where there are gaps in the privately funded network and supporting amenities are in place.
  - b) On-street chargers.
2. Investigate the feasibility of permitting trailing cables and installing cable channels as short-term measures.
3. Establish a user-friendly website to invite expressions of interest from residents to provide valuable insights into localised demand.
4. We will construct a compelling case for investment from OZEV's to be launched LEVI fund.
5. Engage with the market to ensure our approach attracts the best tenders from prospective operators, who will work as long-term partners with Local Authorities, and in the best interests of our residents.

# PRIORITY ACTION AREAS

## ACTION 3: SUPPORTING RESIDENTS CHARGING EVS PARKED ON-STREET

**Figure 5-3:** Areas forecast to have highest demand for public EVCPs by 2030





# PRIORITY ACTION AREAS

## ACTION 4: PROMOTING BEST PRACTICE DESIGN FOR EV CHARGE POINTS

### *Action 4: Promoting Best Practice Design for EV Charge Points*

The aim of this strategy is to not only to promote full coverage of EVCPs across North Yorkshire but to ensure these EVCPs are of a high quality to fully meet the needs of users. Low quality public charge point provision across much of the UK means that drivers are not confident that they can charge when required and has become a barrier to EV uptake. These issues have been exacerbated by a lack of consistent standards and guidelines on how to best design, procure, install and maintain EVCPs.

To date the provision of EVCPs has been led by the local district, borough and national park authorities. They have each developed their own approaches to EV charging based upon the resources and experience available.

To support officers and to ensure high standards across the region, we will develop guidance on all of the key elements of building an EVCP network. This guidance will draw on best practice from elsewhere but will be refined to suit the local needs of North Yorkshire. It will be developed collaboratively by EV officers and stakeholders across the districts, boroughs and national park authorities. This guidance will include details on site selection, site design, charger specifications and procurement.

In terms of site selection, choosing where to locate EVCPs should be carried out systematically, using an evidence-based approach to ensure an efficient and equitable distribution of chargers. The guidance will set out a step-by-step guide for this to be replicated across the county.

For site design, the provision of EVCPs both on and off-street will be carefully considered and design principles will be developed in the guidance. These

principles will include, amongst other points: maintaining minimum footway widths so chargers do not obstruct wheelchairs and push chairs; providing accessible charge points that can be operated by disabled users; and avoiding trailing cables that could pose a trip hazard. 'London's electric vehicle charge point installation guidance' provides a useful reference point.

A specification will be defined for use during the procurement of all new EVCPs by NYCC. This will ensure consistency and quality across the network. It will clearly lay out the requirements, including charging speed, accessible design for disabled users, interoperability, payment systems, reliability and value for money.

Across North Yorkshire there are already a number of competing networks in operation, and they each require a separate app, contactless RFID card or other payment method. For example, a tourist visiting North Yorkshire might currently have to install one app to charge at a public EVCP whilst staying in Harrogate and then install another app to charge at an EVCP operated by a different network whilst on a day trip to Scarborough. This could be complicated by a lack of mobile reception to download additional apps. We will ensure interoperability between all local authority funded chargers by specifying that EVCPs operate to the OCPP standards (Open Charge Point Protocol). This will allow them to be accessed via a single aggregator app rather than requiring separate payment methods for each supplier.

When installing charge points in the public realm it is important to be sensitive to the local environment. North Yorkshire encompasses a diverse range of communities and environments, with many unique characteristics. The guidance will account for special variants including installations in conservation and dark sky areas which have specific design criteria.

To raise awareness of the network, we will create a distinctive NYCC EV charging brand which will make all EVCPs clearly identifiable to users. This branding will also be available for use on wayfinding signage and within marketing materials. If users begin to associate the NYCC EV charging brand with high quality charging provision it will raise confidence in their ability to charge away from the home.

#### **Proposed tasks:**

1. Develop NYCC guidance on the key elements of building an EVCP network.
2. Create a distinctive NYCC EV charging brand.



# PRIORITY ACTION AREAS

## ACTION 5: FOSTERING COLLABORATIVE WORKING AND BUILDING IN-HOUSE RESOURCES AND SKILLS

### *Action 5: Fostering Collaborative Working and Building In-House Resources and Skills:*

To achieve the scale of ambition of this strategy it is important we have available the appropriate skills and resources to deliver EV charging infrastructure across North Yorkshire.

We are committed to ensuring we have the expertise within the council needed to make investment decisions in EVCPs in this fast-moving landscape. The Local Government Reorganisation, which comes into effect in 2023, provides an opportunity to pool existing talent and bring together all our EV skills, knowledge and experience from across NYCC and the districts and boroughs of North Yorkshire, so that existing capabilities can be utilised and appropriate resourcing put in place. The reorganisation will create new ways for the council to unlock funding from central Government, through devolved funding and competitions such as the Levelling Up Fund, so it is important that the right teams are in place to support this.

We will therefore undertake an audit to determine which teams across NYCC and the districts, boroughs and national parks have EV skills and capabilities to ensure that all resources are fully utilised. We will introduce a dedicated EV Lead Officer to coordinate EV programmes, groups and resources so that North Yorkshire stays ahead of the rapidly evolving EV industry.

We will also expand the NYCC internal group to include representatives from each of the district and borough councils to share knowledge between all districts on a regular (bi-monthly) basis. This working group will allow officers to collaborate, share knowledge, good practice and materials, workshop common issues, develop design standards, and promote information sharing. The forum will allow us to pool expertise and learn from each other, such as lessons learned from EVCP procurement exercises in other areas of North Yorkshire. The forum will also create an opportunity for joint funding initiatives.

We are also keen to work in collaboration and partnership with external key stakeholders to encourage broader investment in EV infrastructure across North Yorkshire. We will engage with Parish Councils, local businesses, hotels and rural landowners to promote the delivery of EVCPs on their land and ensure the right type and amount of charging infrastructure is delivered. We have been engaging with the main DNO for North Yorkshire – Northern Powergrid – in the preparation of this strategy and we will seek to work in partnership to align with the DNO's business planning and streamline grid capacity and charging demand assessments. The DNO will also be invited to the North Yorkshire EV Forum as a regular attendee, and we will invite other key external stakeholders at appropriate agenda items.

#### **Proposed tasks:**

1. Audit teams and skills to ensure resources are fully utilised. Introduce a dedicated EV Lead Officer role to coordinate EV programmes, groups and resources.
2. Expand the NYCC internal working group to include EV officers from each authority, to share knowledge and to develop standards.
3. Engage with rural landowners, parish councils and town councils to minimise the knowledge gap and encourage EVCP investment.



# PRIORITY ACTION AREAS

## ACTION 6: ENSURING VISITORS CAN CHARGE AT TOURIST HOTSPOTS

### *Action 6: Ensuring Visitors Can Charge at Tourist Hotspots*

North Yorkshire ranks as one of the top UK regions for tourism, seeing 4.9 million overnight tourist trips per year before COVID-19.<sup>6</sup> North Yorkshire includes popular tourist areas of Scarborough & Whitby, Harrogate and the North York Moors and Yorkshire Dales National Parks.

Tourism is key for North Yorkshire's economy. In Scarborough alone tourists generated £610.5m for the local economy in 2019. The Scarborough Visitor Economy Strategy targets an increase of 5% by 2030 in the value of the tourist economy for Scarborough.

Across the whole North Yorkshire area, we estimate that there are currently an extra 1.15 million cars per week on the roads during the peak tourist seasons of Easter and summer. By 2030, if 20% of these are EVs, this will equal 230,000 extra EVs per week in North Yorkshire during peak tourist seasons.

In order for the tourist economy in North Yorkshire to continue to thrive, it is important for the region to have a reliable and comprehensive provision of charge points at key destinations, to serve visitors to the region and cope with additional tourist demand during peak season. Not doing so will, and already is, deterring visitors with EVs from visiting the region or choosing North Yorkshire as a holiday destination. A lack of charging infrastructure will also make it more challenging for residents to use publicly available EVCPs when there is an increase in demand due to the large number of tourists in the area at peak seasons.

Building good EV infrastructure is also important for tourism by attracting a new category of 'green tourism'. Full coverage of EV infrastructure at tourist hotspots has the potential to attract more environmentally conscious visitors from across the country.

However, EVCP availability in tourist areas is currently low. Figure 5-4 shows the region's tourist hotspots and that many of them see minimal EVCP availability. National Parks cover a large area of the region, but key towns within them have no chargers. There are also large sections of the Scarborough coastline with minimal EVCP coverage. Beachside destinations such as Staithes and Robin Hood's Bay would be ideal sites for EVCPs to cater for day visitors, and have been identified as priority sites for EVCPs in Section 4.

Low coverage of EVCPs in these areas can be attributed primarily due to a lack of private sector investment in areas where demand is highly seasonal: the large visitor numbers in summer may not outweigh low utilisation over the rest of the year, impacting commercial returns.

In addition, whilst many hotels, BnBs and holiday lets feature off-street parking, which could enable convenient overnight charging for visitors, few currently offer EV charging facilities. This could be due to a lack of awareness of available grants or issues with grid capacity and challenges of installations due to ground conditions.

We will aim to ensure a full coverage of EVCPs in tourist hotspots across North Yorkshire, recognising the importance of visitor charging despite the seasonality in utilisation. We will work with partners, such as the Coastal Tourism Advisory Board, to secure grants for these tourist areas which may otherwise struggle to attract investment.

Not only will we focus on the number of EVCPs to be provided at tourist hotspots, but also the type and speed of chargers. Whilst standard chargers are appropriate for hotels where cars will be left to charge overnight, rapid or ultra rapid chargers may be required for locations where tourists stop for a short period before continuing on. This is especially important as 86% of tourism in Scarborough and 46% in North York Moors, comprises of day trips. Those visiting North Yorkshire for even a few hours may need a place to charge their vehicle before driving back home.

We will also work with hotels, BnBs, National Parks, museums and other tourist attractions to give advice on the installation of EVCPs where they have off street parking, encouraging investment in charging infrastructure to serve future tourists. Attention will also be given to smaller accommodation providers, including cottages and holiday lets, to ensure they receive advice on the use of their off-street parking space. We will liaise with small business advisory groups to ensure they remain abreast of broader developments in EV infrastructure and funding. We will also encourage collaboration for joint requests for chargers from the market to create efficiencies in EVCP installation. Where new tourist attractions are created, adequate EV charging must be provided or tourists with EVs will be dissuaded from visiting North Yorkshire.

We also recognise that the design and placement of EVCPs is a significant factor for accessibility to tourists. In line with measure 5 of this strategy – promoting best practice design for EV charge points – we will work with charge point operators to ensure EVCPs are universally recognisable to travellers and that they are positioned in prominent locations to avoid any difficulty in searching for them. Accessibility also includes functionality in areas with low cellular reception.

#### **Proposed tasks:**

1. Ensure coverage of EVCPs in key tourist destinations and stop-overs, providing the right speed of charger that serve tourists needs depending on the location. Seek to secure grants for hard-to-reach areas, working with the Coastal Tourism Advisory Board.
2. Work with the hospitality industry and tourist attractions, as well as small business advisory groups, providing advice on the installation EVCPs on their premises.
3. Install EVCPs in prominent positions with universally recognisable designs that are easy to locate by tourists.

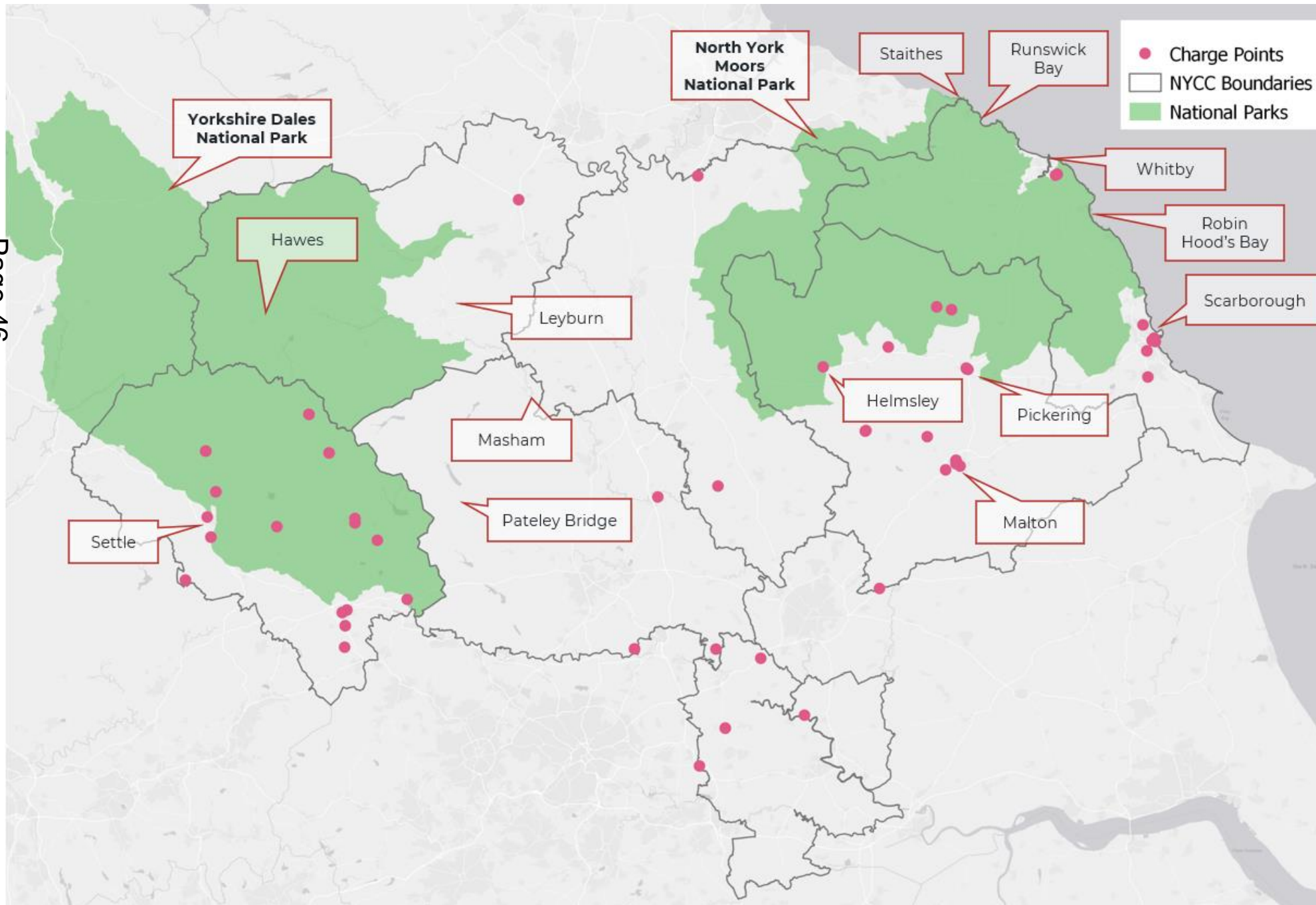
<sup>6</sup> <https://www.visitbritain.org/destination-specific-research>



# PRIORITY ACTION AREAS

## ACTION 6: ENSURING VISITORS CAN CHARGE AT TOURIST HOTSPOTS

Figure 5-4: Tourist destinations in North Yorkshire



# PRIORITY ACTION AREAS

## ACTION 7: DECARBONISING THE COUNCIL'S FLEET

### *Action 7: Decarbonising the Council's Fleet*

To accelerate the uptake of EVs across North Yorkshire, we will lead by example by transitioning our fleet to zero emission vehicles, where possible, by 2030. This will not only contribute to achieving our wider decarbonisation goals for our own operations to be carbon neutral by 2030, but this transition will send a strong message of confidence in EVs to the community, encouraging people to purchase an EV themselves.

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Electrification of fleet vehicles can be challenging due to greater upfront costs. However, there are medium-term savings in running costs which offset this, with electricity costing significantly less than petrol or diesel as a source of fuel.

A phased approach will be needed to 'green' the council's fleet. Government ambition is that all new Heavy Goods Vehicles (HGVs) will be zero-emission by 2040, ten years later than the target 2030 for light duty vehicles. This recognises that HGVs are more challenging to transition to zero emissions than light duty vehicles and, as such, may require more time and planning, with alternative fuels such as hydrogen potentially also having a role to play in as the market evolves.

To begin the process of decarbonising and 'greening' our fleet, we will first undertake a comprehensive review of NYCC's vehicles. This review will include scope for vehicle rationalisation, with the aim of removing polluting fleet vehicles due to inefficiencies. This review will also identify which of our fleet vehicles can be more readily decarbonised, such as light duty vehicles, resulting in a phasing plan. Focusing on areas where suitable zero emission vehicle alternatives are readily available and more affordable will deliver total cost of ownership (TCO) savings because EVs are cheaper to run over a lifetime than petrol or diesel vehicles.

We will also undertake a review into our depots and car parks where council vehicles spend a significant amount of time and therefore could present opportunities for charging. We will undertake feasibility assessments of sites prioritised for charging infrastructure.

We will then prepare an action plan detailing the actions involved in our fleet decarbonisation. This plan will include short, medium and long-term activities involved in the phasing out of ICE vehicles and the introduction of electric vehicles.

To ensure that future fleet vehicles are zero emission, we will update our procurement processes specifically related to electric vehicles during fleet renewal. We will also add requirements for EVs in Council supply chains, so that when procuring goods or services vehicles involved align with this strategy.



#### Proposed tasks:

1. Undertake a comprehensive fleet review, including wider scope for vehicle rationalisation. Identify suitable phasing for EVs into fleet.
2. Undertake a review of depots and car parks where vehicles would be charged and undertake feasibility assessments of prioritised sites for charging infrastructure.
3. Prepare an action plan setting out the short, medium and long-term phasing out of ICE vehicles.
4. Update procurement processes to specify EVs going forwards. Introduce requirements for EVs for Council supply chains.





# PRIORITY ACTION AREAS

## ACTION 8: RAISING AWARENESS TO POSITIVELY INFLUENCE BEHAVIOURS

### *Action 8: Raising Awareness to Positively Influence Behaviours*

One of the key barriers to widespread EV adoption is consumer education. EVs are still a relatively new technology, and many drivers are yet to fully understand the advantages of EVs, or may have been misinformed, or are uncertain about the practicalities of running a different type of vehicle. Whilst the “early adopters” – people who typically use a new product or technology before others – are proactively seeking out this information, the average driver may be more inclined to continue with what they know unless proactively informed about the alternatives. We have an opportunity to take the lead raising awareness and informing our residents of the benefits of EVs, and the practicalities of EV ownership and charging, in order to accelerate the transition to zero emissions across North Yorkshire through marketing campaigns, and by providing freely available resources.

We will carry out a marketing campaign across North Yorkshire to educate and inform residents of the benefits of EVs, promoting the environmental, economic and technological benefits of EVs. The campaign will also include a number of ‘myth busting’ facts to refute common misconceptions of EV ownership, such as EV range. We will leverage multiple mediums to engage the widest possible audience including our own existing online, social media and print channels.

We will carry out pop-up events in local communities where residents can ask questions, receive advice and test drive EVs. These events could be run in collaboration with charities, non-governmental organisations and private companies.

The NYCC EV website will be expanded to become a valuable resource for all residents wishing to switch to EV or looking to utilise a publicly accessible EVCP within the region. This can include; types of EVs, benefits of EVs, how to charge an EV, available grants, as well as news and information about the North Yorkshire charging network.

We will also develop an online platform, linked to the NYCC EV website, where all expressions of interest in public charge points can be registered in one central location. Ideally this will include an interactive map, allowing users to pinpoint where they wish to see chargers installed. This approach has been successfully applied by Transport for London and a number of other local authorities.

In addition, we will appoint a public figure and local resident with an interest in EVs to act as the North Yorkshire EV Champion. They will act as a figure head for the marketing campaign and help to change public perceptions. This approach has been successful in other local authority areas.

At this early stage in the rollout of electric vehicle charging infrastructure in North Yorkshire, it is important that EVCPs are installed in areas of high demand. This will ensure good utilisation and maximise the benefit to the local community from the investments made. To understand where the demand is focused on a street-by-street level, it is important to collect information from residents and businesses. This data can be continuously analysed to understand where new chargers should be installed. This is of particular importance for on-street residential chargers and community charging hubs in off-street car parks. To date this information has been collected inconsistently across the separate district, borough and national park authorities.

#### **Proposed tasks:**

1. Carry out a marketing campaign promoting the benefits of EVs and ‘myth busting’.
2. Expand the NYCC EV website to become a valuable resource for all residents wishing to switch to EV, for example, to provide better understanding EVs and charging infrastructure and what funding is available.
3. Appoint a local ‘EV Champion’ to promote the use of EVs in North Yorkshire.



# PRIORITY ACTION AREAS

## ACTION 9: PROMOTING STANDARDS FOR NEW DEVELOPMENT

### *Action 9: Promoting Standards for New Development*

New developments have a key role in providing both publicly accessible and private charging infrastructure across North Yorkshire. It is important for developers to integrate EVCPs into new developments to ensure people can charge their EV at home, work or places they visit by car.

Historically, planning policies have been used to ensure EVCPs are provided within new developments. In North Yorkshire, planning powers currently lie with the districts, boroughs and national park authorities to set planning policies for EVCPs to be delivered across a range of land uses. Each authority has set different EVCP standards within their Local Plans, which are at varying stages of adoption. This lack of clarity and consistency in policies and standards across North Yorkshire is a key challenge for developers submitting planning applications for new developments with EVCPs.

However, from June 2022 the requirement for EVCPs in new developments has been made a national legal mandate. The Government has amended the UK's Building Regulations to require all new residential developments to install EVCPs at parking spaces. For all new non-residential developments with more than 10 parking spaces, the amended Building Regulations require a minimum of one EVCP and cable routes for one in five of the total number of parking spaces. Further requirements for EVCPs are also mandated for buildings undergoing major renovations.

Whilst these amended Building Regulations do, in some way, negate the need for further EVCP standards to be set out in planning policies, we believe there is potential for the requirements to be more ambitious, particularly for non-residential new developments and major renovations.

We therefore aim to update local planning policies to set more ambitious standards, recognising that the Local Government Reorganisation will bring all the local districts, boroughs and national park authorities under one new council with one planning policy framework. We will look to other best practice to set ambitious policy standards that go beyond the building regulations. For example, in London planning policies set the standard for rapid EV charging at retail park developments with car parking, which goes beyond the mandated new Building Regulations.

The new regulations are a significant change in the delivery of EVCPs and we will work with staff in NYCC and across the districts, boroughs and national park authorities to build up awareness, understanding and application to new developments. It is important that relevant staff have the technical knowledge about the types of chargers that should be mandated for new developments to ensure the right chargers are delivered at the right location. We will aim to build internal knowledge and expertise, recognising that staff will be brought together as one council under the Local Government Reorganisation.

We will also work externally with developers to ensure the new regulations are interpreted and applied correctly but also that more ambitious planning policies are integrated within new developments.

#### **Proposed tasks:**

1. Develop more ambitious, collective EVCP standards across North Yorkshire for some non-residential land uses.
2. Build up internal awareness and understanding of the amended Building Regulations for delivering EVCPs.
3. Work with developers and landowners to interpret and apply new building regulations and planning policies.



# PRIORITY ACTION AREAS

## ACTION 10: SUPPORTING BUSINESSES WITH EV CHARGE POINT ROLLOUT

### *Action 10: Supporting Businesses with EV Charge Point Rollout*

A key piece of feedback from stakeholders consulted in preparing this strategy was the need to ensure measures are included to promote EV uptake and EV charge point roll-out amongst local businesses.

Commuting to a place of work, travelling for business and the use of fleet vehicles account for a large proportion of vehicle miles. As such, businesses have a particular role to play in both supporting and promoting the transition to EVs.

Companies that operate fleet vehicles can act directly by transitioning to EVs. They can also influence their wider supply chain by stipulating low emissions vehicles are used when procuring goods and services from suppliers.

Businesses can support their employees to transition to EVs by providing support such as salary sacrifice vehicle leasing schemes for EVs, which will offset the cost of funding a new vehicle. They can also provide EV chargers in their off-street-car parks, which can help remove barriers to staff who would otherwise be unable to charge their vehicle from home if, for example, they do not have access to off-street parking.

Whilst NYCC cannot seek to directly deploy charging infrastructure in local businesses, we recognise we have an important role to play in supporting them with guidance and advice. For example, sign posting and actively promoting available funding sources from the likes of OZEV.

We will establish a page on our website and host a number of business-focused events throughout the year – targeting differing areas and industries. We will seek to work with key business groups across the region, such as the York & North Yorkshire Local Enterprise Partnership, Local Chambers of Commerce, and the Coastal Tourism Advisory Board, amongst others, to ensure effective engagement.

We also recognise that we can play a helpful co-ordinating role, bringing together stakeholders where there may be a shared benefit. For example, in some areas, businesses may be able to open up their chargers overnight for use by nearby residents without access to off-street parking, using platforms such as ZapWork.

Businesses who rent their premises can struggle to obtain permission to install the EV chargers they require to switch to EVs. This is often due to inertia amongst landlords, who are deterred due to uncertainty around the technology and lack of understanding about the practicalities and also the level of demand. Therefore, effective engagement with property managers is critical to provide the information and education required. We will seek to provide support for tenants who encounter non-responsive landlords and encourage them to facilitate reasonable requests for EV chargers. In instances of very high delivery costs. We will investigate the scope for introducing a Right-to-Charge policy, which would give tenants the right to install an EVCP for their own use as long as they cover all associated costs. This could potentially be enforced using financial incentives or penalties via mechanisms such as business rates.

We will also seek to engage proactively with those managing business parks and retail parks, with a view to supporting knowledge sharing and funding bids. This is an efficient way of reaching many businesses and potentially achieving larger scale deployments.

Further specific business groups we will seek to engage with are the freight and logistics sector, in order to build up a particular understanding of their challenges with fleet electrification, and where there may be a role for the NYCC in enabling this, for example through bidding to take part in trials of innovative technologies. The York freight forum has carried out research into the origin and destination of freight activity within North Yorkshire, and there are further opportunities to use this to inform the planning for charging and refuelling needs.

#### **Proposed tasks:**

1. Supporting businesses with guidance, advice and information sharing, for example, sign posting and actively promoting available funding sources from the likes of OZEV.
2. Hosting EV business focus events throughout the year.
3. Investigate the scope for introducing a Right-to-Charge policy with property managers.
4. Engage proactively with those managing business parks and retail parks.
5. Engage with freight and logistics sector.





**North Yorkshire**  
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# DELIVERY STRATEGY



## *Delivery Strategy*

To roll out the infrastructure needed to support EV uptake across North Yorkshire there are a range of deployment models that we can adopt. This section sets out the different delivery models and funding opportunities available to deliver EVCPs. We will work with the different authorities to discuss these deployment options and agree a preferred commercial and delivery model for the county.

### **Delivery Models**

The majority of public EVCPs to date across North Yorkshire to date have been funded by public sector grants from the Office for Zero Emission Vehicles (OZEV). However, private sector partnerships and revenue share arrangements are becoming increasingly common. There are a number of delivery models available for rolling out charging point infrastructure, and the advantages and disadvantages of each are summarised in Table 6-1. In broad terms, the greater the share of the risk taken on by the local authority through a public model, the greater their potential revenue share and control.

#### *Public sector model*

Publicly funded charge points are typically operated under an 'own and operate' model where the authority fund the installation, enabling work and operating costs. By doing this, the authority also retains the revenues generated by the EVCP, as well as owning the charge point and electrical connection. Revenue generated could be reinvested into delivering more EVCPs or used for other green transport projects across North Yorkshire.

A public sector delivery model would typically still involve a charge point operator (CPO) to operate and maintain the charge points. The cost of the CPO may be covered taking a share of the revenue generated, or on a fixed rate basis regardless of utilisation.

#### *Concessionary model*

A concessionary delivery model is where the investment is part funded by both the public and

private sector. This model may entail the local authority completing the enabling works and electrical connection, for the CPO to then install and operate the charger.

A concessionary model can enable a balanced approach to delivering charging infrastructure, using grant funding alongside private sector investment to expand the local charging network and ensure adequate coverage.

In addition, by packaging up a number of sites and inviting concessionaires to operate the sites to agreed terms, authorities can seek to offset the less commercially viable sites with others that are more attractive to operators. This avoids a scenario where an authority is left with only the hard to deliver sites, which are likely to be loss making, though the share of revenue will be significantly lower than in fully public owned model.

#### *Private sector "fully funded" model*

In many settings, EVCPs are delivered on a commercial basis entirely by the private sector. Under this model chargers are installed on a fully funded basis, whereby all capital and operational costs are covered by the private sector, with a percentage of the revenue passed to the host, as well as leasing fees paid to the host for the space occupied by the charger and bays. This model requires the least investment from the authority and in turn, presents the least exposure to financial risk. However, it also offers the least opportunity for revenue generation, and more limited control.

Commercial EVCPs are typically delivered in destinations and intermediate sites with the most commercial opportunity, and rapid chargers are the most likely to be commercially deliverable due to their levels of utilisation. From a local authority perspective, this may provide further limitations, for example, only commercially attractive sites will be of interest to an investor operating under this model, meaning local authorities may be left with only the commercially challenging sites, and no lucrative sites to parcel them up with when seeking to leverage private sector investment for wider deployments.

The private sector delivery model is also challenging as it is very much predicated on the charger being well utilised to recover the investment, which in many cases, requires a long-term contract, and the enabling works are not cost prohibitive. Examples of where the private sector may fail to deliver are areas with low turnover, including on-street charging and chargers in rural areas, or areas with high grid connection costs. These areas are most likely to require some form of public sector funding support to improve the investment case.

#### *Proposed approach*

In order to scale up the EV infrastructure network to meet the forecasted charging demand, both public sector funding and private sector investment will be required. Where the commercial case does not appeal to the private sector – i.e. areas where the utilisation is likely to be modest or the delivery costs are high, such as rural areas – it is expected that some form of public sector support will be required to make the investment case.

We will therefore pursue a concessionary model with the private sector where we will seek central government grant funding to provide a public sector contribution towards the installation costs but will expect a charge point operator to provide additional capital funding and to cover the costs of operating and maintaining the charge points for an agreed period of time. This approach balances the potential risks and revenue generation opportunities for NYCC.

We will look to collaborate with the private sector at a regional scale to best build a portfolio of more and less desirable sites, ensuring equity of provision and reduce the emergence of gaps in the network.

### **Funding**

As there continues to be a significant role for public sector delivery models, we will seek opportunities to secure additional grant funding. The Government has created several grant schemes to help enable the charging of EVs at home, in the workplace and on local streets, as summarised in Table 6-2.

**Table 6.1:** EVCP delivery model options

Delivery Model	Description	Potential income	Potential risks	Advantages	Disadvantages	Local authority case studies
<b>Public ownership</b>	Paid for and owned by the public sector, with capital and maintenance costs recouped from usage charge. Operations contracted to a private sector CPO.	<b>Highest</b>	<b>Highest</b>	<ul style="list-style-type: none"> <li>Highest potential income.</li> <li>Revenue can be reinvested to deliver more EVCPs.</li> <li>Full control over locations and pricing.</li> </ul>	<ul style="list-style-type: none"> <li>Requires significant grant funding.</li> <li>Highest risk in terms of utilisation, ongoing liability and maintenance costs.</li> </ul>	The West of England local authorities own and operate the Revive network of EVCPs, fully funded by the OZEV backed Go Ultra Low West programme. The authorities have subcontracted Siemens Mobility Ltd to supply the infrastructure and CPO ENGIE EV Solutions to run the operations. Registration to use the Revive network is free, meaning drivers only pay for the electricity they use. As the local authorities own, operate and maintain all of the Revive network they received all revenue, which is available to reinvest back into the network.
<b>Concessionary model</b>	Charge points are installed and funded by the public sector, or part funded by public and private sector, and operated and maintained by a CPO for an agreed period under a profit share arrangement.			<ul style="list-style-type: none"> <li>Some income shared.</li> <li>CPO incentivised.</li> <li>Reduced risk for public sector.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced income share compared to full ownership.</li> <li>Tender process may be more complex than public ownership.</li> <li>Needs to be a relatively large number of sites.</li> </ul>	Transport for London (TfL) set up the Source London EV charging network in a commercial partnership with CPO BluePoint to deliver and operate EVCPs on a concessionary basis. Source London allows London local authorities to partner with BluePoint by providing the land for BluePoint to install EVCPs on an annual rental fee basis. TfL then fund the enabling works. Source London is now the capital's largest charging network.
<b>Private ownership</b>	All costs are borne by the CPO, with a long-term lease/licence over which the CPO can recover their costs.	<b>Lowest</b>	<b>Lowest</b>	<ul style="list-style-type: none"> <li>Lowest risk. Rental agreements can provide guaranteed income over a number of years.</li> <li>CPO heavily incentivised to provide good end user experience.</li> </ul>	<ul style="list-style-type: none"> <li>Many areas currently unlikely to be commercially viable without public investment.</li> <li>Lowest potential income.</li> <li>Least control and ability to incorporate wider goals.</li> </ul>	Mid Devon District Council signed an agreement with CPO Instavolt to install 50kW rapid EVCPs on a fully funded basis on council land aimed at tourists visiting the local area. Instavolt offers long term leases with third parties and rent as a profit share with no capital or revenue funding required from the Council.

**Table 6.2:** EVCP funding options

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<p><b>The Local EV Charging Infrastructure (LEVI)</b> fund is due to be launched in Spring 2023, with £500m of funding for delivering publicly accessible EV chargers, including a £10m pilot programme. It is expected that the scheme will be the successor to the ORCS funding, with greater flexibility so that rapid chargers and larger deployments can also be delivered through this funding.</p>	<p><b>The Electric Vehicle Homecharge Scheme (EVHS)</b> provides grant funding of up to 75% (up to a maximum of £350) towards the cost of installing electric vehicle charge points at domestic properties. From April 2022 the scheme is only available for homeowners who live in flats or people in rental accommodation (flats or single-use properties i.e. house).</p>	<p>Vehicle owners can get a discount on the price of new low-emission vehicles through a government grant administered by OZEV – also known as a <b>plug-in grant</b>. The grant will pay for 35% of the purchase price for these vehicles, up to a maximum of up to £1,500 for cars, £2,500 for wheelchair accessible vehicles, £500 for motorcycles, £150 for mopeds, £2,500 for small vans, £5,000 for large vans, £7,500 for taxis. For small trucks the grant will pay for 20% of the purchase price, up to a maximum of £16,000 and up to £25,000 for large trucks.</p>	<p><b>Workplace Charging Scheme grant (WCS)</b> is a voucher-based scheme open to businesses, charities and public sector organisations to support the upfront cost of EVCPs. The grant provides a up to a maximum of £350 for each socket, up to a maximum of 40 across all sites for each applicant.</p>	<p>The <b>On-Street Residential Chargepoint Scheme (ORCS)</b> for local authorities, provides 75% of the capital costs of procuring and installing the chargepoint and an associated dedicated parking bay. The scheme has been amended to increase the fund per chargepoint from £7,500 limit to £13,000 in cases where connection costs are high. Projects with a completion date of no later than 31 March 2023 are considered.</p>
<p>Through the <b>Local Government Reorganisation</b>, the new council will have access to devolution funding as a devolved administration. The new council will need to negotiate a funding deal with central Government, which will include providing for EV infrastructure. This funding will be available from 2024 when the Local Government Reorganisation takes place.</p>	<p>The <b>Charging Infrastructure Investment Fund (CIIF)</b> is a £400m investment fund – with up to £200m raised from the private sector to be match funded with a further £200m from the UK Government. The dual policy objectives of the CIIF are to enable faster expansion of public EV charging networks and to increase the amount of capital invested in the sector via a catalytic effect. The fund was announced in the Autumn Budget 2017.</p>	<p>The <b>Rapid Charging Fund (RCF)</b> provides a £950 million commitment to ensure there is a rapid-charging network to meet long-term consumer demand ahead of need. The fund will cover a 'portion' of electricity connection and upgrade costs at strategic sites across the road network where these would otherwise be 'prohibitively expensive and uncommercial'. The fund is not yet open for applications with details expected shortly</p>	<p>The <b>Ultra Low Emission Taxi Infrastructure Scheme</b> competition funds low emission taxi charge points and was completed in 2 rounds. Round 1 was awarded in February 2017 and a second round was awarded in January 2019.</p>	



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## **NEXT STEPS**



## Next steps

The North Yorkshire EV Infrastructure Rollout Strategy has been prepared to ensure the charging infrastructure is in place to support and accelerate the uptake of EVs across the county by 2030 and beyond.

This strategy sets out ten priority action areas to ensure all those that live, visit or do business in North Yorkshire are able to charge their EV. For the next steps, Table 7.1 sets out these actions and corresponding tasks and timeframes. The timeframes listed in the table relate to the following years:

- Short term – between now and April 2023 when we will be a new council through the Local Government Reorganisation.
- Medium term – from April 2023 and April 2025 when, as a new council, we will have access to funding such as the Government’s Levelling Up Fund and a devolution deal.
- Long term – 2025 and beyond.

As set out in this strategy, we anticipate a steep growth in EV uptake and corresponding demand for EVCPs in the coming years. As such, many of the tasks listed are proposed in the short to medium term to ensure that we are proactively planning for and delivering infrastructure now to meet our 2025 requirements.

It is important that we measure and monitor our progress in delivering these actions and achieving the overall vision and objectives of this strategy. We have therefore identified a number of critical success factors to determine whether we are delivering successful outcomes in rolling out EVCP infrastructure across the region. The critical success factors are:

1. Year on year increase in EV ownership in line with or exceeding the national average or local forecast uptake.

2. Rollout of 3,161 publicly accessible EVCPs by 2030, of which 1,365 will need to be delivered by 2025, by both the public and private sector.
3. EVCPs achieving anticipated utilisation rates where publicly funded, with site identification and prioritisation processes continually refined based on data collected on previous deployments.
4. High levels of reliability and user convenience, including 99% of EVCPs in operation, with only 1% of downtime on average, and 95% or above positive feedback from customer engagement covering customer perception of availability, usability, safety and performance of EVCPs.
5. Pricing of electric vehicle charging to be aligned with prevailing competitive market rates for EV charging nationally (pence per kWh).
6. Zero harm when using or maintaining EVCPs across the region.

We propose a regional monitoring approach where data collected will be used to evaluate performance against these critical success factors to then identify areas for improvement and adaptation. This process will allow for updates and refinements to this strategy to incorporate lessons learned and ensure the actions are being achieved.

### Beyond 2030

Over the coming months we will look to create a just transition plan for beyond 2030 to ensure those who do not immediately switch to an EV are not left behind. We recognise that the 10 priority action areas identified in this strategy are a starting point to do this, and the just transition plan will build upon and develop the following priorities:

- Removing the need to buy an ICE – deliver EVCPs equitably by ensuring network coverage across North Yorkshire, including in rural areas and on street.

- Encouraging/influencing behaviour change – facilitate pilots of EV car club schemes to encourage uptake of EVs.
- Leading by example – decarbonise the council’s fleet and incentivise staff to make the switch to EVs.
- Updating planning requirements – ensure every new build house with associated parking has a charger.
- Resolve barriers to grid capacity and connection costs – lobby and work closely with the DNO.
- Supporting the skills shift – support young people into skilled jobs through investment in the energy and automotive sectors in our region.



**Table 7-1: EV Infrastructure Rollout Action Plan**

Priority Action Areas and Proposed Tasks	NYCC's role (Enable/ Lead)	Action by	Recommended Timescales
<b>1. Accelerating the rollout of electric vehicle charge points</b>			
Install on and off-street chargers in areas not served by the private sector in order to ensure EVCP network coverage is equitably distributed across North Yorkshire.	Enable	NYCC working in partnership with districts, boroughs and national park authorities	Short, medium and long term
Install a mix of fast and rapid chargers to meet the needs of different types of EV drivers.	Enable	NYCC working in partnership with districts, boroughs and national park authorities	Short, medium and long term
Plan a network of chargers across NYCC that aims to ensure that any resident without access to private off-street charging is within 10 minutes' walk of a public EVCP.	Lead	NYCC working in partnership with districts, boroughs and national park authorities	Short term
Seek government funding and commercial partnerships to minimise cost to NYCC.	Lead	NYCC working in partnership with districts, boroughs and national park authorities	Short term
<b>2. Delivering rural electric vehicle charging connectivity</b>			
Ensure coverage of EVCPs in rural areas and appropriate EVCP provision at rural locations that cater for long distances.	Lead	NYCC Transport Rural districts, boroughs and national park authorities	Long term
Lead funding bids and capitalise on rural character as a unique selling point for unlocking funding.	Lead	NYCC Transport	Short term
Work in partnership with the DNO to ensure alignment with business planning for upgrades.	Enable	NYCC Transport DNO	Medium term
Encourage innovative solutions for EVCPs, such as combining microgeneration and battery storage.	Lead	NYCC Transport LEAP	Medium term

**Table 7-1: EV Infrastructure Rollout Action Plan (cont.)**

Priority Action Areas and Proposed Tasks	NYCC's role (Enable/ Lead)	Action by	Recommended Timescales
<b>3. Supporting residents charging EVs parked on-street</b>			
Take a proactive approach to delivering targeted charge point deployments in areas of demand for on-street EV charging, achieving a good base level of coverage, where all residents who need it have convenient access to a public charger. This will include:			
<ul style="list-style-type: none"> <li>Residents' charging hubs in nearby car parks, featuring rapid chargers where there are gaps in the privately funded network and supporting amenities are in place.</li> <li>On-street chargers.</li> </ul>	Lead	NYCC Transport	Short term to Medium Term
Investigate the feasibility of permitting trailing cables and installing cable channels as short-term measures.	Lead	NYCC Transport	Short term
Establish a user-friendly website to invite expressions of interest from residents to provide valuable insights into localised demand.	Enable	NYCC Transport	Short term
We will construct a compelling case for investment from OZEV's to be launched LEVI fund.	Lead	NYCC Transport OZEV/ EST	Short term
Engage with the market to ensure our approach attracts the best tenders from prospective operators, who will work as long-term partners with Local Authorities, and in the best interests of our residents.	Enable	NYCC Transport CPOs	Short term to Medium Term
<b>4. Promoting best practice design for EV charge points</b>			
Develop NYCC guidance on the key elements of building an EVCP network.	Lead	NYCC working in partnership with districts, boroughs and national park authorities	Short term
Create a distinctive NYCC EV charging brand.	Lead	NYCC Transport	Short term



**Table 7-1: EV Infrastructure Rollout Action Plan (cont.)**

Priority Action Areas and Proposed Tasks	NYCC's role (Enable/ Lead)	Action by	Recommended Timescales
<b>5. Fostering collaborative working and building in-house resource and skills</b>			
Audit teams and skills to ensure resources are fully utilised. Introduce a dedicated EV Lead Officer role to coordinate EV programmes, groups and resources.	Lead	NYCC Transport	Short term
Expand the NYCC internal working group to include EV officers from each authority, to share knowledge and to develop standards.	Lead	NYCC Transport	Medium term
Engage with rural landowners, parish councils and town councils to minimise the knowledge gap and encourage EVCP investment.	Enable	NYCC Transport External stakeholders	Medium term
<b>6. Ensuring visitors can charge at tourist hotspots</b>			
Ensure coverage of EVCPs in areas of significant tourism, providing the right speed of charger that serve tourists needs depending on the location. Seek to secure grants for hard-to-reach areas, working with the Coastal Tourism Advisory Board.	Enable	NYCC Transport Coastal Tourism Advisory Boar	Long term
Work with the hospitality industry and tourist attractions, as well as small business advisory groups, providing advice on the installation of EVCPs on their premises.	Enable	NYCC Transport Tourism operators	Short term
Install EVCPs in prominent positions with universally recognisable designs that are easy to locate by tourists.	Enable	NYCC Transport	Long term
<b>7. Decarbonising the council's fleet</b>			
Undertake a comprehensive fleet review, including wider scope for vehicle rationalisation. Identify suitable phasing for EVs into fleet.	Lead	NYCC Transport	Short term
Undertake a review of depots and car parks where vehicles would be charged and undertake feasibility assessments of prioritised sites for charging infrastructure.	Lead	NYCC Transport	Medium term
Prepare an action plan setting out the short, medium and long term phasing out of ICE vehicles.	Lead	NYCC Transport	Medium term
Update procurement processes to specify EVs going forwards, introduce in a phased approach based on preceding review. Introduce requirements for EVs for Council supply chains.	Lead	NYCC	Long term

**Table 7-1: EV Infrastructure Rollout Action Plan (cont.)**

Priority Action Areas and Proposed Tasks	NYCC's role (Enable/ Lead)	Action by	Recommended Timescales
<b>8. Raising awareness to positively influence behaviours</b>			
Carry out a marketing campaign promoting the benefits of EVs and 'myth busting'.	Lead	NYCC Transport	Short term
Expand the NYCC EV website to become a valuable resource for all residents wishing to switch to EV, for example, to provide better understanding EVs and charging infrastructure and what funding is available.	Lead	NYCC Transport	Short term
Appoint a local 'EV Champion' to promote the use of EVs in North Yorkshire.	Lead	NYCC Transport	Short term
<b>9. Promoting standards for new development</b>			
Develop more ambitious, collective EVCP standards across North Yorkshire for some non-residential land uses.	Enable	NYCC working in partnership with districts, boroughs and national park authorities	Long term
Build up internal awareness and understanding of the amended Building Regulations for delivering EVCPs.	Enable	NYCC working in partnership with districts, boroughs and national park authorities	Short term
Work with developers and landowners to interpret and apply new building regulations and planning policies.	Enable	NYCC working in partnership with districts, boroughs and national park authorities	Long term
<b>10. Supporting businesses with EV charge point rollout</b>			
Supporting businesses with guidance, advice and information sharing. For example, sign posting and actively promoting available funding sources from the likes of OZEV.	Enable	NYCC	Short term
Hosting EV business focus events throughout the year.	Lead	NYCC	Short term

**Table 7-1:** EV Infrastructure Rollout Action Plan (cont.)

Priority Action Areas and Proposed Tasks	NYCC's role (Enable/ Lead)	Action by	Recommended Timescales
<b>10. Supporting businesses with EV charge point rollout (cont.)</b>			
Investigate the scope for introducing a Right-to-Charge policy with property managers.	Lead	NYCC working in partnership with all districts, boroughs and national park authorities	Medium term
Engage proactively with those managing business parks and retail parks.	Enable	NYCC	Medium term
Engage with freight and logistics sector.	Enable	NYCC	Medium term
<b>Delivery strategy</b>			
Work with different authorities to agree a preferred commercial and delivery model for the county.	Lead	NYCC working in partnership with all districts, boroughs and national park authorities	Medium term





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## Delivery Strategy

To roll out the infrastructure needed to support EV uptake across North Yorkshire there are a range of deployment models that we can adopt. This section sets out the different delivery models and funding opportunities available to deliver EVCPs. We will work with the different authorities to discuss these deployment options and agree a preferred commercial and delivery model for the county.

### Delivery Models

The majority of public EVCPs to date across North Yorkshire to date have been funded by public sector grants from the Office for Zero Emission Vehicles (OZEV). However, private sector partnerships and revenue share arrangements are becoming increasingly common. There are a number of delivery models available for rolling out charging point infrastructure, and the advantages and disadvantages each are summarised in Table 6-1. In broad terms, the greater the share of the risk taken on by the local authority through a public model, the greater their potential revenue share and control.

#### Public sector model

Publicly funded charge points are typically operated under an 'own and operate' model where the authority fund the installation, enabling work and operating costs. By doing this, the authority also retains the revenues generated by the EVCP, as well as owning the charge point and electrical connection. Revenue generated could be reinvested into delivering more EVCPs or used for other green transport projects across North Yorkshire.

A public sector delivery model would typically still involve a charge point operator (CPO) to operate and maintain the charge points. The cost of the CPO may be covered taking a share of the revenue generated, or on a fixed rate basis regardless of utilisation.

#### Concessionary model

A concessionary delivery model is where the investment is part funded by both the public and

private sector. This model may entail the local authority completing the enabling works and electrical connection, for the CPO to then install and operate the charger.

A concessionary model can enable a balanced approach to delivering charging infrastructure, using grant funding alongside private sector investment to expand the local charging network and ensure adequate coverage.

In addition, by packaging up a number of sites and inviting concessionaires to operate the sites to agreed terms, authorities can seek to offset the less commercially viable sites with others that are more attractive to operators. This avoids a scenario where an authority is left with only the hard to deliver sites, which are likely to be loss making, though the share of revenue will be significantly lower than in fully public owned model.

#### Private sector "fully funded" model

In many settings, EVCPs are delivered on a commercial basis entirely by the private sector. Under this model chargers are installed on a fully funded basis, whereby all capital and operational costs are covered by the private sector, with a percentage of the revenue passed to the host, as well as leasing fees paid to the host for the space occupied by the charger and bays. This model requires the least investment from the authority and in turn, presents the least exposure to financial risk. However, it also offers the least opportunity for revenue generation, and more limited control.

Commercial EVCPs are typically delivered in destinations and intermediate sites with the most commercial opportunity, and rapid chargers are the most likely to be commercially deliverable due to their levels of utilisation. From a local authority perspective, this may provide further limitations, for example, only commercially attractive sites will be of interest to an investor operating under this model, meaning local authorities may be left with only the commercially challenging sites, and no lucrative sites to parcel them up with when seeking to leverage private sector investment for wider deployments.

The private sector delivery model is also challenging as it is very much predicated on the charger being well utilised to recover the investment, which in many cases, requires a long-term contract, and the enabling works are not cost prohibitive. Examples of where the private sector may fail to deliver are areas with low turnover, including on-street charging and chargers in rural areas, or areas with high grid connection costs. These areas are most likely to require some form of public sector funding support to improve the investment case.

#### Proposed approach

In order to scale up the EV infrastructure network to meet the forecasted charging demand, both public sector funding and private sector investment will be required. Where the commercial case does not appeal to the private sector – i.e. areas where the utilisation is likely to be modest or the delivery costs are high, such as rural areas – it is expected that some form of public sector support will be required to make the investment case.

We will therefore pursue a concessionary model with the private sector where we will seek central government grant funding to provide a public sector contribution towards the installation costs but will expect a charge point operator to provide additional capital funding and to cover the costs of operating and maintaining the charge points for an agreed period of time. This approach balances the potential risks and revenue generation opportunities for NYCC.

We will look to collaborate with the private sector at a regional scale to best build a portfolio of more and less desirable sites, ensuring equity of provision and reduce the emergence of gaps in the network.

### Funding

As there continues to be a significant role for public sector delivery models, we will seek opportunities to secure additional grant funding. The Government has created several grant schemes to help enable the charging of EVs at home, in the workplace and on local streets, as summarised in Table 6-2.

Table 6.1: EVCP delivery model options

Delivery Model	Description	Potential income	Potential risks	Advantages	Disadvantages	Local authority case studies
Public ownership	Paid for and owned by the public sector, with capital and maintenance costs recouped from usage charge. Operations contracted to a private sector CPO.	Highest	Highest	<ul style="list-style-type: none"> <li>Highest potential income.</li> <li>Revenue can be reinvested to deliver more EVCPs.</li> <li>Full control over locations and pricing.</li> </ul>	<ul style="list-style-type: none"> <li>Requires significant grant funding.</li> <li>Highest risk in terms of utilisation, ongoing liability and maintenance costs.</li> </ul>	The West of England local authorities own and operate the Revive network of EVCPs, fully funded by the OZEV backed Go Ultra Low West programme. The authorities have subcontracted Siemens Mobility Ltd to supply the infrastructure and CPO ENGIE EV Solutions to run the operations. Registration to use the Revive network is free, meaning drivers only pay for the electricity they use. As the local authorities own, operate and maintain all of the Revive network they received all revenue, which is available to reinvest back into the network.
Concessionary model	Charge points are installed and funded by the public sector, or part funded by public and private sector, and operated and maintained by a CPO for an agreed period under a profit share arrangement.			<ul style="list-style-type: none"> <li>Some income shared.</li> <li>CPO incentivised.</li> <li>Reduced risk for public sector.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced income share compared to full ownership.</li> <li>Tender process may be more complex than public ownership.</li> <li>Needs to be a relatively large number of sites.</li> </ul>	Transport for London (TfL) set up the Source London EV charging network in a commercial partnership with CPO BluePoint to deliver and operate EVCPs on a concessionary basis. Source London allows London local authorities to partner with BluePoint by providing the land for BluePoint to install EVCPs on an annual rental fee basis. TfL then fund the enabling works. Source London is now the capital's largest charging network.
Private ownership	All costs are borne by the CPO, with a long-term lease/licence over which the CPO can recover their costs.	Lowest	Lowest	<ul style="list-style-type: none"> <li>Lowest risk. Rental agreements can provide guaranteed income over a number of years.</li> <li>CPO heavily incentivised to provide good end user experience.</li> </ul>	<ul style="list-style-type: none"> <li>Many areas currently unlikely to be commercially viable without public investment.</li> <li>Lowest potential income.</li> <li>Least control and ability to incorporate wider goals.</li> </ul>	Mid Devon District Council signed an agreement with CPO Instavolt to install 50kW rapid EVCPs on a fully funded basis on council land aimed at tourists visiting the local area. Instavolt offers long term leases with third parties and rent as a profit share with no capital or revenue funding required from the Council.



Table 6.2: EVCP funding options

<p><b>The Local EV Charging Infrastructure (LEVI)</b> fund is due to be launched in Spring 2023, with £500m of funding for delivering publicly accessible EV chargers, including a £10m pilot programme. It is expected that the scheme will be the successor to the ORCS funding, with greater flexibility so that rapid chargers and larger deployments can also be delivered through this funding.</p>	<p><b>The Electric Vehicle Homecharge Scheme (EVHS)</b> provides grant funding of up to 75% (up to a maximum of £350) towards the cost of installing electric vehicle charge points at domestic properties. From April 2022 the scheme is only available for homeowners who live in flats or people in rental accommodation (flats or single-use properties i.e. house).</p>	<p>Vehicle owners can get a discount on the price of new low-emission vehicles through a government grant administered by OZEV – also known as a <b>plug-in grant</b>. The grant will pay for 35% of the purchase price for these vehicles, up to a maximum of up to £1,500 for cars, £2,500 for wheelchair accessible vehicles, £500 for motorcycles, £150 for mopeds, £2,500 for small vans, £5,000 for large vans, £7,500 for taxis. For small trucks the grant will pay for 20% of the purchase price, up to a maximum of £16,000 and up to £25,000 for large trucks.</p>	<p><b>Workplace Charging Scheme grant (WCS)</b> is a voucher-based scheme open to businesses, charities and public sector organisations to support the upfront cost of EVCPs. The grant provides a up to a maximum of £350 for each socket, up to a maximum of 40 across all sites for each applicant.</p>	<p><b>The On-Street Residential Chargepoint Scheme (ORCS)</b> for local authorities, provides 75% of the capital costs of procuring and installing the chargepoint and an associated dedicated parking bay. The scheme has been amended to increase the fund per chargepoint from £7,500 limit to £13,000 in cases where connection costs are high. Projects with a completion date of no later than 31 March 2023 are considered.</p>
<p>Through the <b>Local Government Reorganisation</b>, the new council will have access to devolution funding as a devolved administration. The new council will need to negotiate a funding deal with central Government, which will include providing for EV infrastructure. This funding will be available from 2024 when the Local Government Reorganisation takes place.</p>	<p>The <b>Charging Infrastructure Investment Fund (CIIF)</b> is a £400m investment fund – with up to £200m raised from the private sector to be match funded with a further £200m from the UK Government. The dual policy objectives of the CIIF are to enable faster expansion of public EV charging networks and to increase the amount of capital invested in the sector via a catalytic effect. The fund was announced in the Autumn Budget 2017.</p>	<p>The <b>Rapid Charging Fund (RCF)</b> provides a £950 million commitment to ensure there is a rapid-charging network to meet long-term consumer demand ahead of need. The fund will cover a 'portion' of electricity connection and upgrade costs at strategic sites across the road network where these would otherwise be 'prohibitively expensive and uncommercial'. The fund is not yet open for applications with details expected shortly</p>	<p>The <b>Ultra Low Emission Taxi Infrastructure Scheme</b> competition funds low emission taxi charge points and was completed in 2 rounds. Round 1 was awarded in February 2017 and a second round was awarded in January 2019.</p>	

Figure 4.0 – Central government EV funding allocations

<p><b>The Local EV Charging Infrastructure (LEVI)</b> fund is due to be launched in Spring 2023, with £500m of funding for delivering publicly accessible EV chargers, including a £10m pilot programme. It is expected that the scheme will be the successor to the ORCS funding, with greater flexibility so that rapid chargers and larger deployments can also be delivered through this funding.</p>	<p><b>The Electric Vehicle Homecharge Scheme (EVHS)</b> provides grant funding of up to 75% (up to a maximum of £350) towards the cost of installing electric vehicle charge points at domestic properties. From April 2022 the scheme is only available for homeowners who live in flats or people in rental accommodation (flats or single-use properties i.e. house).</p>	<p>Vehicle owners can get a discount on the price of new low-emission vehicles through a government grant administered by OZEV – also known as a <b>plug-in grant</b>. The grant will pay for 35% of the purchase price for these vehicles, up to a maximum of up to £1,500 for cars, £2,500 for wheelchair accessible vehicles, £500 for motorcycles, £150 for mopeds, £2,500 for small vans, £5,000 for large vans, £7,500 for taxis. For small trucks the grant will pay for 20% of the purchase price, up to a maximum of £16,000 and up to £25,000 for large trucks.</p>	<p><b>Workplace Charging Scheme grant (WCS)</b> is a voucher-based scheme open to businesses, charities and public sector organisations to support the upfront cost of EVCPs. The grant provides a up to a maximum of £350 for each socket, up to a maximum of 40 across all sites for each applicant.</p>	<p><b>The On-Street Residential Chargepoint Scheme (ORCS)</b> for local authorities, provides 75% of the capital costs of procuring and installing the chargepoint and an associated dedicated parking bay. The scheme has been amended to increase the fund per chargepoint from £7,500 limit to £13,000 in cases where connection costs are high. Projects with a completion date of no later than 31 March 2023 are considered.</p>
<p>Through the <b>Local Government Reorganisation</b>, the new council will have access to devolution funding as a devolved administration. The new council will need to negotiate a funding deal with central Government, which will include providing for EV infrastructure. This funding will be available from 2024 when the Local Government Reorganisation takes place.</p>	<p>The <b>Charging Infrastructure Investment Fund (CIIF)</b> is a £400m investment fund – with up to £200m raised from the private sector to be match funded with a further £200m from the UK Government. The dual policy objectives of the CIIF are to enable faster expansion of public EV charging networks and to increase the amount of capital invested in the sector via a catalytic effect. The fund was announced in the Autumn Budget 2017.</p>	<p>The <b>Rapid Charging Fund (RCF)</b> provides a £950 million commitment to ensure there is a rapid-charging network to meet long-term consumer demand ahead of need. The fund will cover a 'portion' of electricity connection and upgrade costs at strategic sites across the road network where these would otherwise be 'prohibitively expensive and uncommercial'. The fund is not yet open for applications with details expected shortly</p>	<p>The <b>Ultra Low Emission Taxi Infrastructure Scheme</b> competition funds low emission taxi charge points and was completed in 2 rounds. Round 1 was awarded in February 2017 and a second round was awarded in January 2019.</p>	

Initial equality impact assessment screening form			
<p>This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.</p>			
Directorate	Environment		
Service area	H&T		
Proposal being screened	NYC Electric Vehicle Public Charging Infrastructure Strategy		
Officer(s) carrying out screening	Keisha Moore		
What are you proposing to do?	To provide an update on the North Yorkshire Council Electric Vehicle Public Charging Infrastructure Rollout Strategy ask Members to adopt the strategy and adopt a concessionary delivery model for EVCP rollout		
Why are you proposing this? What are the desired outcomes?	To realise a decarbonised North Yorkshire where zero emission mobility is accessible and convenient to all, recognising the unique rural nature of our county, improving quality of place through better local air quality and health, A comprehensive network of EVCPs will support the uptake of EV's for residents, visitors and businesses over the next 10 years, accelerating the transition to zero emissions vehicles across North Yorkshire bringing new skills and investment to the local economy		
Does the proposal involve a significant commitment or removal of resources? Please give details.	No		
<p><b>Impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or NYCC's additional agreed characteristics</b></p> <p>As part of this assessment, please consider the following questions:</p> <ul style="list-style-type: none"> <li>To what extent is this service used by particular groups of people with protected characteristics?</li> <li>Does the proposal relate to functions that previous consultation has identified as important?</li> <li>Do different groups have different needs or experiences in the area the proposal relates to?</li> </ul> <p>If for any characteristic it is considered that there is likely to be an adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your <a href="#">Equality rep</a> for advice if you are in any doubt.</p>			
Protected characteristic	Potential for adverse impact		Don't know/No info available
	Yes	No	
Age		X	
Disability		X	
Sex		X	
Race		X	
Sexual orientation		X	
Gender reassignment		X	
Religion or belief		X	
Pregnancy or maternity		X	
Marriage or civil partnership		X	
<b>NYCC additional characteristics</b>			
People in rural areas		X	



People on a low income		X	
Carer (unpaid family or friend)		X	
<b>Does the proposal relate to an area where there are known inequalities/probable impacts</b> (e.g. disabled people's access to public transport)? Please give details.	No.		
<b>Will the proposal have a significant effect on how other organisations operate?</b> (e.g. partners, funding criteria, etc.). <b>Do any of these organisations support people with protected characteristics?</b> Please explain why you have reached this conclusion.	No		
<b>Decision (Please tick one option)</b>	EIA not relevant or proportionate:	<input checked="" type="checkbox"/>	Continue to full EIA:
<b>Reason for decision</b>	In all cases, the schemes being developed should enhance, not inhibit, people's ability to access travel options and opportunities. This includes people with reduced mobility. The charging infrastructure will meet the necessary standards and legislation for accessibility allowing people with reduced mobility to use the points.		
<b>Signed (Assistant Director or equivalent)</b>	Barrie Mason		
<b>Date</b>	21/04/23		

## Climate change impact assessment

The purpose of this assessment is to help us understand the likely impacts of our decisions on the environment of North Yorkshire and on our aspiration to achieve net carbon neutrality by 2030, or as close to that date as possible. The intention is to mitigate negative effects and identify projects which will have positive effects.

This document should be completed in consultation with the supporting guidance. The final document will be published as part of the decision making process and should be written in Plain English.

If you have any additional queries which are not covered by the guidance please email [climatechange@northyorks.gov.uk](mailto:climatechange@northyorks.gov.uk)

**Please note: You may not need to undertake this assessment if your proposal will be subject to any of the following:**

Planning Permission  
Environmental Impact Assessment  
Strategic Environmental Assessment

However, you will still need to summarise your findings in in the summary section of the form below.

Please contact [climatechange@northyorks.gov.uk](mailto:climatechange@northyorks.gov.uk) for advice.

<b>Title of proposal</b>	<b>NYC Electric Vehicle Public Charging Infrastructure Strategy</b>
<b>Brief description of proposal</b>	<b>To adopt the NYC Electric Vehicle Public Charging Infrastructure Strategy as a key policy document</b>
<b>Directorate</b>	<b>BES</b>
<b>Service area</b>	<b>Highways and Transportation</b>
<b>Lead officer</b>	<b>Keisha Moore</b>
<b>Names and roles of other people involved in carrying out the impact assessment</b>	
<b>Date impact assessment started</b>	<b>03/04/2023</b>

**Options appraisal**

Were any other options considered in trying to achieve the aim of this project? If so, please give brief details and explain why alternative options were not progressed.

Alternative options have been considered and consulted on (both internally and externally) throughout the EV Strategy Development process and the final strategy option is a result of the feedback received from key stakeholders (including members of the public) and the experience of officers.

**What impact will this proposal have on council budgets? Will it be cost neutral, have increased cost or reduce costs?**

Please explain briefly why this will be the result, detailing estimated savings or costs where this is possible.

The adoption of the strategy should increase the funding available to the Council for transport schemes, it will be a daughter document to the Local Transport Plan, which is under review, which enables Local Authorities to attract funding. See Local Transport Plan Review report for more information

<https://edemocracy.northyorks.gov.uk/documents/s13178/Local%20Transport%20Plan%20Review.pdf>



<p>How will this proposal impact on the environment?</p> <p><b>N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.</b></p>	<p><b>Positive impact</b> (Place a X in the box below where</p>	<p><b>No impact</b> (Place a X in the box below where</p>	<p><b>Negative impact</b> (Place a X in the box below where</p>	<p>Explain why will it have this effect and over what timescale?</p> <p>Where possible/relevant please include:</p> <ul style="list-style-type: none"> <li>• Changes over and above business as usual</li> <li>• Evidence or measurement of effect</li> <li>• Figures for CO<sub>2</sub>e</li> <li>• Links to relevant documents</li> </ul>	<p>Explain how you plan to mitigate any negative impacts.</p>	<p>Explain how you plan to improve any positive outcomes as far as possible.</p>
<p>Minimise <b>greenhouse gas emissions</b> e.g. reducing emissions from travel, increasing energy efficiencies etc.</p>	Emissions from travel	*				
	Emissions from construction		*			
	Emissions from running of buildings		*			
	Other		*			
Minimise <b>waste</b> : Reduce, reuse, recycle and compost e.g. reducing use of single use plastic		*				
Reduce <b>water</b> consumption		*				
Minimise <b>pollution</b> (including air, land, water, light and noise)	*					

<p>How will this proposal impact on the environment?</p> <p><b>N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.</b></p>	<p><b>Positive impact</b> (Place a X in the box below where</p>	<p><b>No impact</b> (Place a X in the box below where</p>	<p><b>Negative impact</b> (Place a X in the box below where</p>	<p>Explain why will it have this effect and over what timescale?</p> <p>Where possible/relevant please include:</p> <ul style="list-style-type: none"> <li>• Changes over and above business as usual</li> <li>• Evidence or measurement of effect</li> <li>• Figures for CO<sub>2</sub>e</li> <li>• Links to relevant documents</li> </ul>	<p>Explain how you plan to mitigate any negative impacts.</p>	<p>Explain how you plan to improve any positive outcomes as far as possible.</p>
<p>Ensure <b>resilience</b> to the effects of climate change e.g. reducing flood risk, mitigating effects of drier, hotter summers</p>	*					
<p>Enhance <b>conservation</b> and wildlife</p>		*				
<p>Safeguard the distinctive characteristics, features and special qualities of <b>North Yorkshire's landscape</b></p>	*					
<p>Other (please state below)</p>		*				

**Are there any recognised good practice environmental standards in relation to this proposal?** If so, please detail how this proposal meets those standards.

N/A

**Summary** Summarise the findings of your impact assessment, including impacts, the recommendation in relation to addressing impacts, including any legal advice, and next steps. This summary should be used as part of the report to the decision maker.

Approving the strategy will have no climate change impact. Prior to construction of any EVCPs, a report will be written and an associated climate change impact assessment completed. The intended overall outcome of the bid, if successful, is to have a positive impact by encouraging and facilitating greater use of electric vehicles.

**Sign off section**

This climate change impact assessment was completed by:

<b>Name</b>	<b>Keisha Moore</b>
<b>Job title</b>	<b>Transport Planning Officer</b>
<b>Service area</b>	<b>Highways and Transportation</b>
<b>Directorate</b>	<b>Environment</b>
<b>Signature</b>	<b>Keisha Moore</b>
<b>Completion date</b>	<b>03/04/2023</b>

**Authorised by relevant Assistant Director (signature):** Barrie Mason

**Date:** 21/04/23

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