Public Document Pack

Highways and Transport Committee

Agenda

Date:	**Monday, 19th July, 2021**
Time:	**10.30 am**
Venue:	**Balcony Suite, Glasshouse, Alderley Park, Congleton Road, Nether Alderley, Macclesfield, SK10 4TF**

PLEASE NOTE-The meeting is open to the public but due to social distancing restrictions public attendance is limited and priority will be given to those people wishing to speak at the meeting with the remaining availability being allocated on a first to arrive basis. Masks will need to be worn by anyone entering or leaving the venue but not whilst seated.

The agenda is divided into 2 parts. Part 1 is taken in the presence of the public and press. Part 2 items will be considered in the absence of the public and press for the reasons indicated on the agenda and in the report.

It should be noted that Part 1 items of Cheshire East Council decision-making meetings are live audio recorded and the recordings are uploaded to the Council's website.

PART 1 – MATTERS TO BE CONSIDERED WITH THE PUBLIC AND PRESS PRESENT

1. **Apologies for Absence**

   To note any apologies for absence from Members.

2. **Declarations of Interest**

   To provide an opportunity for Members and Officers to declare any disclosable pecuniary and non-pecuniary interests in any item on the agenda.

3. **Public Speaking/Open Session**

   In accordance with paragraph 2.24 of the Council's Committee Procedure Rules and Appendix on Public Speaking, set out in the Constitution, a total period of 15 minutes is allocated for members of the public to put questions to the committee on any matter relating to this agenda. Each member of the public will be allowed up to two minutes each to speak, and the Chair will have discretion to vary this

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where they consider it appropriate.

Members of the public wishing to speak are required to provide notice of this at least three clear working days' in advance of the meeting.

4. **A537 Safer Road Fund Scheme** (Pages 3 - 10)

To consider a report accepting a Government grant to enable the implementation of a major road safety scheme for the A537.

5. **National Bus Strategy - Enhanced Quality Partnership** (Pages 11 - 104)

To consider a report on the National Bus Strategy - Enhanced Quality Partnership.

6. **Electric Vehicle Charging Strategy** (Pages 105 - 224)

To consider a report approving the Council's strategy for the roll out of electric vehicle charging points across the Borough.

7. **Local Transport Delivery Plans-Update Report** (Pages 225 - 252)

To consider a report on the progress on the development and implementation of the Council's Local Transport Delivery Plans and the proposals to be taken forward within each town following the recent public consultation exercise.

8. **Highways & Transport Budget 2021/22** (Pages 253 - 264)

To receive a report on the capital and revenue budgets for 2021/22.

9. **Membership of the Public Rights of Way (PRoW) Committee** (Pages 265 - 268)

To consider a report on the Membership of the Public Rights of Way (PRoW) Committee.

10. **Work Programme** (Pages 269 - 278)

To consider the work programme and determine any required amendments.

Membership: Councillors Susie-Akers Smith, Mike Benson, Craig Browne (Chair), Liz Braithwaite, Barry Burkhill, Laura Crane (Vice Chair), Hazel Faddes, Allen Gage, Les Gilbert, Mike Hunter, Mike Sewart, Don Stockton and Phil Williams

Cheshire East Council

Working for a brighter future together

Highways and Transport Committee

Date of Meeting:	19 July 2021
Report Title:	Department for Transport funded Safer Road Fund Scheme – A537
Report of:	CLT Lead Officer: Andrew Ross – Director of Infrastructure and Highways
Report Reference No:	HT/04/21-22
Ward(s) Affected:	Sutton and Macclesfield East

1. Executive Summary

1.1. This report seeks approval to deliver a Safer Road Fund Scheme on a section of the A537 Buxton Road 'Cat & Fiddle' between its junction with the Silk Road in Macclesfield and the Cheshire East boundary with Derbyshire ("the Scheme") that will help reduce the number of road traffic collisions and associated casualties on this important route, including the number of people killed or seriously injured. The Scheme is fully funded by the Department for Transport (DfT) grant received by the Council.

1.2. It is proposed that the Scheme is procured and delivered through the Council's Highway Design, Maintenance and Construction Service contract 2018 ("the Highway Service Contract").

2. Recommendations

2.1. Approves the delivery of the A537 Buxton Road, Macclesfield Safer Road Fund road traffic collision and casualty reduction scheme through the Highway Service Contract, subject to the Ringway Jacobs target costs for the scheme satisfying the Council's best value requirements.

2.2. Authorises the Director of Infrastructure and Highways in consultation with the Highways and Transport Committee Chair to take all necessary actions to implement the Scheme using the funding provided by the Department for Transport.

3. Reasons for Recommendations

3.1. The Government has established a Road Safety Fund as part of its ongoing investment in the national transport infrastructure. The aim of the funding is to provide financial resources to local authorities to help upgrade some of the local roads across the country where the risk of fatal and serious collisions is highest. The Department for Transport worked with the Road Safety Foundation to identify these roads and invited the relevant local highway authorities to submit funding bids to upgrade and improve their roads to help reduce casualties from road traffic collisions and improve road safety.

3.2. The Department for Transport identified three roads in Cheshire East:

A532 West Street, Crewe
A536 Congleton to Macclesfield
A537 Buxton Road, Macclesfield

3.3. The Council prepared and submitted a successful bid for each scheme which would enable the design and delivery of improvements to these roads to bring road safety benefits for residents and users of the public highway in the borough.

3.4. A successful paper was presented to Cabinet in February 2020 that resulted in approval to proceed with the A532 and A536 schemes. The A537 scheme was listed in that paper but approval was not sought at the time as the funding from the Department for Transport had not been received. The funding for the A537 scheme has now been provided to the Council.

3.5. At the time of the Council's bid submission to the DfT, the five year collision data showed that between 2012 and 2017 there had been 69 personal injury accidents, 1 fatal,19 serious and 40 slights. Causal factors in collisions included loss of control, particularly on bends, excessive speed for the conditions and exceeding the speed limit.

3.6. The proposed scheme seeks to improve road safety for all users on this key transport and leisure route in the borough, particularly where collision cluster sites have been identified. The aim is to reduce the number of collisions and casualties, especially the numbers killed and seriously injured and to reduce the risk of a near miss or collision for all road users on this route.

3.7. The original average speed camera system was introduced in 2010/2011 and helped deliver a significant reduction in the number of collisions and casualties. The existing cameras are now over 10 years old and operate in a varied and harsh environment. The plan is to replace them with the latest camera system technology which will enable monitoring and

enforcement in clear conditions but also during periods of poor day time visibility and in night conditions, something that isn't possible with the existing cameras.

3.8. Alongside the camera upgrade there are a range of engineering measures planned, including road surface treatments to improve skid resistance, upgrading existing and installing new safety barrier to reduce the severity of a collision where vehicles could leave the road on sections of steep embankment. Road sign and road marking renewals will also help to clearly delineate the route.

3.9. The road safety improvements planned on the A537 'Cat & Fiddle route form part of the highway services work to deliver safer and well maintained roads as part of the Council's key priority of delivering 'A thriving and sustainable place' set out in the Council's Corporate Plan 2021-25.

3.10. The Scheme is on the existing public highway and the proposed works will be contained within its boundaries and do not require the purchase of private land to facilitate the works.

3.11. The improvement works for each of the Scheme is within the scope of the Council's Highway Service Contract in all respects, including geographic, work types and financial limits.

3.12. The Highway Service Contract includes key requirements to provide value for money, efficient service delivery and innovation. Ringway Jacobs's performance is monitored closely and tracked through a performance framework. The Contract is an "open book" type contract that provides for Council staff to have access to all costs and supporting information. This enables the Council to undertake checks and audits to ensure that the contract is delivering services and schemes that provide good value for money and are subject to good contract and financial management.

4. Other Options Considered

4.1. The delivery of all highway maintenance and improvement works on the public highway network in Cheshire East up to a limit of £5M (indexed linked) should be delivered though the Council's highway service contract.

4.2. If the Highway Service Contract cannot demonstrate best value, the Council could explore alternative delivery options such as undertaking separate procurement exercises for each of the individual schemes or using a suitable framework.

4.3. This would require resource from the Council's Highways and Infrastructure, Procurement and Legal teams, as well as a new authority to proceed on this basis.

5. Background

5.1. As part of the preparation for the recent procurement of the Highway Service Contract, the highway service specification was reviewed and developed based on the learning gained from the previous 2011 Highway Service Contract and developments in the industry over the previous seven years.

5.2. One of the improvements was to increase the value of capital works that could be delivered through the Highway Service Contract up to a value of £5m indexed linked (the previous contract only allowed for works upto £250k). The reason for this was to enable smaller value highways and infrastructure schemes on the highway network to be delivered through the Highway Service Contract, with the aim of improving the efficiency of delivering such schemes and provide benefits for the delivery of the wider highway service.

5.3. The efficiencies include not needing a separate Council-led procurement exercise for each Improvement Scheme. Instead the Improvement Schemes are directly delivered through the Highway Service Contract saving time and procurement costs. Through the Contract the improvement scheme is delivered by Ringway Jacobs who, as the Council's integrated Service Provider in a long term contract to maintain the public highways in the borough, have a vested interest in ensuring the quality of works for the long term.

5.4. In October 2018 the Council awarded the Highway Service Contract to Ringway Jacobs Limited after a robust and competitive procurement process in full compliance with the Council's Contract Procedure and the EU procurement rules.

5.5. This contract delivers the Council's annual revenue and capital funded highway maintenance programmes and as part of this provides for the delivery of highway and infrastructure schemes up to £5m index linked.

5.6. Before a task order for an improvement scheme is placed under the Highway Service Contract, Ringway Jacobs must demonstrate to the Council, on an open book basis, that the proposed price represents best value for the Council. To do this Ringway Jacobs may competitively tender works with their supply chain and/or demonstrate the cost effectiveness by comparison to industry benchmarking information. Ringway Jacobs are required to undertake benchmarking of the Highway Service Contract costs for provision of schemes, services and professional service costs with other Ringway Jacobs highway service contracts, and Jacobs professional service contracts, as well as industry-wide costs for similar works and services and share these with the client team for consideration. This

benchmarking was identified in the Highway Service Contract bid submitted by Ringway Jacobs and is an important contract monitoring and value for money audit tool for the Council during the contract.

5.7. Once the task order to instruct the work is issued, the costs are monitored and reviewed on a monthly basis and tracked against budgets to ensure good project and financial management. The costs can be audited, as determined, by officers from the Highways & Infrastructure Client team, Finance and Audit teams to ensure correct charging and delivery of schemes and services to provide best value to the Council.

5.8. The Council has established the Minor Improvement Schemes Board to manage the delivery of this type of highway improvement. Each improvement scheme has an identified Senior Responsible Owner ("SRO") and Project Sponsor. They report to the Board on progress, change, risk and any other issues requiring key project decisions. This Safer Road Scheme will be delivered through these governance arrangements.

6. Consultation and Engagement

6.1. The Scheme is predominantly in Sutton ward with an advanced information sign replacement in Macclesfield East ward and will provide wider benefits for all residents and non-residents of Cheshire East who use this cross border route into the Peak District.

6.2. As with the other Safer Road Fund schemes information on the proposed works will be shared with the local ward members when ready.

6.3. Part of the scheme sits within the Peak District National Park and we will be keeping the Authority advised of the scheme.

6.4. Details of the bid submitted to the Department for Transport are available on the Council's website via the following link: A537 Safer roads fund bid (cheshireeast.gov.uk)

7. Implications

7.1. Legal

7.1.1. As set out in the body of this report, the Scheme can be compliantly procured via the Highway Service Contract. If the Highway Service Contract is not used, further advice from Procurement and Legal Services will be required on the most appropriate procurement route and a new authority to proceed on the chosen route will be needed.

7.1.2. If a Task Order is issued under the Highway Service Contract for this Safer Road Fund Scheme, the Task Order will incorporate conditions of contract as set out in the Highway Service Contract.

7.2. Finance

7.2.1. The Safer Road Fund scheme is included in the Addendum of the Council's capital programme approved as part of the Medium Term Financial Strategy in February 2021. The Section 151 Officer has approved the scheme to move to the main capital programme under delegated powers.

7.2.2. The scheme will be fully funded by Department for Transport grant of £2.49m.

7.3. Policy

7.3.1. The Scheme is in line with the aims and objectives set out in the Council's current Corporate Plan

7.4. Equality

7.4.1. An Equality Impact Assessment will be undertaken for the scheme as part of the process to design and deliver the scheme in line with the Council's current policy and practise and take account of the needs of all residents and users of the public highway.

7.5. Human Resources

7.5.1. There are no implications because of this report.

7.6. Risk Management

7.6.1. All highways and infrastructure projects have inherent risks, and these will vary for each scheme. The project teams for this scheme will deliver it in full compliance with the Construction Design Management (CDM) 2015. These seek to address and minimise risk from the early stage of design through to completion of construction on site and subsequent whole life maintenance requirements.

7.6.2. The project management requirements include the development of a risk register and this will be monitored and updated as risks are identified and mitigated to minimise their impact on the safe and efficient delivery of the scheme. All risks will have assigned owners who are responsible for mitigating and managing them.

7.7. Rural Communities

7.7.1. The scheme is designed to improve the efficiency and safety of this important route which is open to use by all residents and visitors to the borough. The scheme affects the rural section of the A537 between Macclesfield and the county boundary providing essential connectivity for rural communities with the wider borough and national road network beyond.

7.8. Children and Young People/Cared for Children

7.8.1. There are no direct implications for children and young people.

7.9. Public Health

7.9.1. The reduction in the number of killed and seriously injured as a result of road traffic collisions on the public highway in Cheshire East is a key aim of the Council and external stakeholders.

7.9.2. The Safer Road Fund scheme is being implemented to enhance road safety for motorised and non-motorised users on the public highway network within the borough. These road safety improvements aim to help reduce the number of fatal and serious road traffic collisions on the A537 between Macclesfield and the County boundary and deliver public health benefits for residents and users of the public highway.

7.10. Climate Change

7.10.1. The Safer Road fund scheme is within the existing highway boundaries and is designed to support delivery of the Council's strategic outcomes in the Corporate Plan by improving highway condition to enhance road safety for all road users.

7.10.2. Road safety enhancements help reduce the number of road traffic collisions and minimise disruption and congestion on the highway associated with such events. Road safety improvements can also encourage drivers to travel at lower and more appropriate speeds for the roads and conditions which can contribute to a reduction in vehicle emissions.

7.10.3. The road safety enhancements planned will help to promote lower and more appropriate vehicle speeds on this route into the Peak District National Park. The route is popular with cyclists and is also crossed by various public rights of way. Creating a safer route for all road users can help encourage greater use of more sustainable forms of transport and contribute to healthier lifestyles that benefit the environment.

Access to Information	
Contact Officer:	Paul Davies, Contract Operations Manager, Highway Service Paul.davies@cheshireeast.gov.uk 07748 650204
Appendices:	n/a
Background Papers:	'Department for Transport funded Safer Road Fund Schemes' Paper to Cabinet 10 March 2020 A537 Safer Road Fund Bid on Council web page: A537 Safer roads fund bid (cheshireeast.gov.uk)

Cheshire East Council

Working for a brighter future together

Highways and Transport Committee

Date of Meeting:	19 July 2021
Report Title:	National Bus Strategy - Enhanced Partnerships and Bus Service Improvement Plans
Report of:	Andrew Ross, Director of Highways & Infrastructure
Report Reference No:	HT/02/21-22
Ward(s) Affected:	All wards in Cheshire East

1. Executive Summary

1.1. The local bus network in Cheshire East is facing a number of critical challenges arising from a persistent and structural decline in patronage; compounded by more recent loss of ridership during the COVID-19 pandemic. Recovery of patronage could be prolonged as passengers consider using bus services again. These pressures are set in a context where Government's Covid funding support to local bus is unlikely to be sustained indefinitely whilst the Council has budget limits on its support to existing bus services. These circumstances are not unique to Cheshire East and are key influences in the recent publication of a new National Bus Strategy, "*Bus Back Better*" published on 15 March 2021.

1.2. The new National Bus Strategy sets out opportunities to address the challenges facing local bus networks alongside a set of obligations for local transport authorities to establish Enhanced Partnerships and produce Bus Service Improvement Plans (BSIP). The success of the Council's response to the national strategy will directly assist in delivering the following strategic aims and objectives in the Council's Corporate Plan 2021-25.

1.2.1. **OPEN** - undertaking consultation and engagement with the bus industry, key stakeholders and the public will ensure that the Councils response to preparing a BSIP and developing an Enhanced Partnership with bus operators meets the Government's stated requirements and maximises the prospect on securing

funding for bus networks in Cheshire East. Active and open engagement with the bus sector is a pre-requisite for developing successful partnership working arrangements.

1.2.2. **FAIR** – the approach to partnership working and evidence-sharing with the commercial bus operators is expected the help the Council address some of the gaps and inconsistencies in the provision of local bus services across the Borough.

1.2.3. **GREEN -** through our responses to the National Bus Strategy the aim would be to develop proposals that improve the local bus network and ensure it plays a stronger role in meeting the transport needs of local communities, encouraging greater reliance on local bus as a viable alternative, and more sustainable mode of transport across the Borough. Achieving these outcomes will contribute to the Councils stated aims for reducing carbon impacts and improving local air quality.

1.3. The purpose of this report is to ensure the Council meets its obligations as set out in the National Bus Strategy and in so doing seeks Committee endorsement of the Enhanced Partnership approach and approval of the development of the BSIP. Committee is also invited to confirm whether a Member Advisory Panel be established to support the development and delivery of these plans in line with the Department for Transport's programme.

1.4. Work had already commenced on preparing a Cheshire East Bus Strategy prior to the release of the National Strategy. This work provides strong evidence to inform, support and underpin the development of the Enhanced Partnership Plan and BSIP.

1.5. The national strategy sets an expectation for all Local Transport Authorities (LTAs) to commit to establishing Enhanced Partnerships under the provisions of the Bus Services Act 2017. A partnership should spread across the LTA's whole area and all bus operators must co-operate with the LTA throughout the process.

1.6. The aim of an Enhanced Partnership is to improve the coverage, quality and reliability of local bus services with virtually all aspects of service quality deemed in scope, except single fares which remain a commercial consideration. A partnership could cover bus timetables and multi-operator ticketing and, if it wishes to do so, take over the role of registering bus services from the Traffic Commissioners. The aim is to seek the agreement of bus operators on all aspects, but they do have a right to object during a statutory consultation exercise.

1.7. Securing an effective and successful Enhanced Partnership in the borough would very likely influence future funding opportunities for bus and local transport improvements. Engagement with bus operators is

essential, followed by more formal discussions as an Enhanced Partnership Plan and the BSIP are formulated.

1.8. The Council published a notice of intent to proceed with the development of an Enhanced Partnership on 30 June 2021, in accordance with the national guidelines. Further guidance on the nature of Enhanced Partnerships is awaited from the UK Department of Transport.

1.9. Local authorities are also required in the National Strategy to publish a BSIP by 31 October 2021. This document must set out the local bus outcomes for the borough and thereafter it will be developed alongside the emerging Enhanced Partnership agreement and scheme. This work needs to commence immediately and would involve extensive partnership working with key stakeholders across the borough, in particular bus service providers and users, as well as any Member Advisory Panel.

1.10. The outcomes the plans would seek to deliver would relate to achieving local transport and bus networks for residents and businesses that are safer, support thriving urban and rural economies and contribute to the goal of being carbon neutral by 2025. More directly, an Enhanced Partnership and BSIP will enable improvements to be made to the speed and efficiency of public transport and encourage more residents to make fewer car journeys, thus contributing to Council and community carbon reduction.

1.11. The BSIP and Enhanced Partnership will be developed alongside Local Transport Delivery Plans for each of our towns, to ensure clarity and consistency whilst supporting a wider range of regeneration initiatives, town centre vitality and the visitor economy.

1.12. Funding of £100,000 has been made available to each LTA by the Government to support the development of BSIP. The availability of this funding was set out in a letter from Baroness Vere to all LTA Chief Executives on 15 March 2021. The Council has been granted full access to this funding.

2. Recommendations

2.1. The Highways and Transport Committee is recommended to:

2.1.1. Endorse the commitment to an Enhanced Partnership for local buses and publication of the relevant notifications.

2.1.2. Approve the development of a Bus Service Improvement Plan, in consultation with bus operators, passenger groups and other stakeholders from across the borough.

2.1.3. Confirm the establishment of a Member Advisory Panel to guide the development of the Bus Service Improvement Plan and the Enhanced Partnership.

2.1.4. Note that the initial Bus Service Improvement Plan will be reported to this Committee in September in order to meet the Department for Transport's programme.

3. Reasons for Recommendations

3.1. An Enhanced Partnership will enable the development of a Cheshire East Bus Strategy in the form of a Bus Service Improvement Plan. This will guide future investment and ensure that future bus operations are in accordance with the expectations of the Department for Transport.

3.2. This recommendation has been put forward because having an Enhanced Partnership is a prerequisite of any future funding. Without an Enhanced Partnership in place, Cheshire East and bus operators will lose access to funding streams including future COVID-19 recovery funds, Bus Service Operator Grant (BSOG) and opportunities that arise as a direct result of the new National Bus Strategy and the Comprehensive Spending Review.

4. Other Options Considered

4.1. The National Bus Strategy outlines three options for local authorities including bus franchising, establishing an enhanced partnership with bus operators and, by default, a do-nothing option.

4.2. The National Bus Strategy outlines that support will be provided for Local Transport Authorities (LTA) wishing to access franchising powers. However, Franchising powers are only available automatically to Mayoral Combined Authorities (MCA). Without an elected Mayor in place, the council's current status creates a challenge for the local implementation of bus franchising. Franchising at this time is not considered to be a realistic option for Cheshire East. The financial and operational implications of a move to bus franchising have not been assessed at this time.

4.3. An alternative option is to do nothing, setting aside the opportunity to develop an Enhanced Partnership. This would likely lead to the loss of a number of existing revenue support mechanisms for local buses, including Bus Service Operator Grant (BSOG) and Covid Bus Service Support Grant. Therefore this option would not see bus operations continuing their current level of service and further passenger decline would be anticipated. This option would also close the door on any future funding prospects, including COVID-19 recovery funds and those made available as part of the national strategy. Therefore this option has been discounted

5. Background

5.1. At present the bus industry within Cheshire East is facing a number of important challenges, including a decline in patronage, budget constraints affecting the council's ability to support bus services and more recently reduced ridership as a result of the COVID-19 pandemic.

5.2. In recent years bus patronage across the borough has declined progressively and consistently. In 2016/17, there were approximately 4.5 bus passenger journeys per resident with bus patronage declining by 22% since 2009/10. These statistics place Cheshire East within the bottom five Local Authorities for the lowest number of passenger journeys per head and amongst the lowest number of trips per head of resident population in England.

5.3. Before the COVID-19 outbreak, Cheshire East bus network was facing significant challenges regarding utilisation and the financial viability of a lot of the services in terms of commercial sustainability. During the early stages of the pandemic, the industry demonstrated some resilience as services were able to adapt and maintain at least some level of service relevant to patronage levels before Government help was provided.

5.4. However, as a result of reduced utilisation, the profitability of running bus services has been a significant challenge and serious questions have been raised whether the resilience is there for operators to withstand falling profitability associated with a crisis alike to COVID-19.

5.5. As bus service patronage continues to fall year on year and services become less financially viable, there is a risk that services across Cheshire East will be deregistered which could have lasting impacts on communities.

5.6. Over the last 6 months, the Council has been developing an evidence base to inform, support and underpin the development of a draft bus strategy. This evidence base compiles a range of quantitative and qualitative data as well as policies and strategies from various documents, policy levels, stakeholders and sources. It aims to summarise the current situation and provide a holistic overview of the wider political, economic, environmental, social and operational context of bus transport in Cheshire East. This evidence base will be used to build a Bus Service Improvement Plan (BSIP), in accordance with the National Strategy, to evaluate and strengthen the local bus network.

5.7. The Council has also recently received funding from DfT, as part of the Rural Mobility Fund (RMF), to trial a Demand Responsive Transport (DRT) service within rural Cheshire East. This service will be continually monitored, and data collection will be used to evaluate the viability of maintaining or expanding this service to cover a wider area of the borough. The potential for DRT in Cheshire East will be considered further during the development of a BSIP; during which, bus operator and stakeholder consultation and collaboration will be sought.

5.8. On the 15th March 2021 the UK Government released a National Bus Strategy for England. This strategy sets out the vision and opportunity to deliver better bus services for passengers across England, through

ambitious and far-reaching reform of how services are planned and delivered.

5.9. As part of the National Bus Strategy, the UK Government outlines that support will be provided for any Local Transport Authority (LTA) who wishes to access franchising powers and has the capability and intention to use them at pace to deliver improvements for passengers.

5.10. Franchising powers are only available automatically to Mayoral Combined Authorities (MCAs). Notwithstanding this, franchising powers can be granted to other LTAs through secondary legislation.

5.11. At present, Cheshire East is a unitary authority and is therefore responsible for all local government functions within the area. A requirement for devolution and franchising, is the introduction of a mayor, elected directly by local people in areas covered by combined authorities. Without an elected Mayor in place, the Council's current status creates a challenge for the local implementation of bus franchising.

5.12. However, franchising is not the only route to better and more locally accountable bus services determined within the national bus strategy. An Enhanced Partnership (EP) can also be employed, as a statutory arrangement under the 2017 Bus Services Act, to allow the LTA to take over the role of registering bus services from the Traffic Commissioners.

5.13. The main difference between Enhanced Partnership and franchising is that operators within an Enhanced Partnership have greater role, working with LTAs to develop and deliver improvements and contributing to how bus services should be improved. Compared to franchising, Enhanced Partnerships also offer more flexibility.

5.14. Once an Enhanced Partnership has been established, all LTAs are expected to produce and publish a local Bus Service Improvement Plan (BSIP), detailing how the LTA propose to use their powers to improve services.

5.15. The timescales Government has set for the development of Bus Improvement Plans (October 2021) and Enhanced Partnerships (April 2022) are very challenging. However, DfT officials indicate that there is believed to be a unique opportunity to strengthen cooperative working between commercial bus companies and local authorities as the country recovers from the pandemic. As the industry has received large scale financial support throughout the pandemic there is a need and a will to jointly plan what the future of local bus travel looks like.

6. Consultation and Engagement

6.1. The first task will involve early engagement with Bus Operators, passenger groups and other key stakeholders such as town and parish councils. These discussions will outline the parameters of the partnership, consideration of policies and what Cheshire East would like a future bus

network to look like. There will also be a focus on any key issues and considerations to fine tune the approach and outline the requirements and expectations of an enhanced partnership.

6.2. To establish an enhanced partnership, a Notice of Intent is required detailing approval by the LTA to proceed with the development of an Enhanced Partnership. The Committee is recommended to endorse this Notice of Intent at its meeting on 19th July.

7. Implications

This section details how the recommendations will impact on the council in a variety of different ways.

7.1. Legal

7.1.1. In developing and implementing an Enhanced Partnership Plan and BSIP the Council must have regard to the transport needs of all of the residents in the borough, which may include disabled persons, persons who are elderly or have mobility problems and mothers with young children . Development of plans will need to be in accordance with statutory and legal requirements for Community Engagement, Equalities Impact Assessment and Strategic Environmental Appraisal.

7.1.2. Members must be fully aware of the equalities implications of the decisions they are taking. This will ensure that there is proper appreciation of any potential impact of any decision on the Council's statutory obligations under the Public Sector Equality Duty. As a minimum, this requires decision makers to carefully consider the content of any Equality Impact Assessments produced by officers.

7.1.3. Before implementing the Enhanced Partnership plan the Council should consult with local bus operators, various organisations including the chief of police for the area to seek their views on the planned proposals.

7.1.4. The Secretary of State my issue secondary legislation and additional guidance in relation to the Enhanced Partnership plans and schemes, the Council must have regard to the guidance.

7.2. Finance

7.2.1. £100,000 has been made available from the Government for each LTA to support with the development of Bus Service Improvement Plans, Cheshire East has been granted access to this funding in full and will use it to produce a BSIP in advance of the end of October 2021 deadline.

7.2.2. The Enhanced Partnership Plan and BSIP will be implemented using funding provided by the long term funding commitments of

the National Bus Strategy and the COVID-19 Bus Services Support Grant (CBSSG). This will be covered in a future report.

7.3. Policy

7.3.1. Cheshire East corporate documents and strategies stress the importance of an enhanced public transport and bus network for attaining key strategic objectives such as improving local transport, reducing air pollution, achieving carbon neutrality, enabling housing and employment growth, improving quality of place and protecting the environment. They support improvements to local bus transport both in terms of infrastructure and service provision and call for the development of a bus strategy. Developing a Bus Service Improvement Plan an Enhanced Partnership will help to achieve these goals.

7.3.2. At a National level, establishing an Enhanced Partnership will ensure that the council fulfils its duty as the Local Transport Authority in accordance with the responsibilities outlined within the National Bus Strategy.

7.3.3. On a regional and subnational level, the Cheshire & Warrington LEP acknowledges the importance of buses for public transport in its transport strategy and LEP Bus Strategy. The LEP bus strategy should be aligned with the BSIP where possible to ensure any duplication of work is avoided. The South-Eastern Manchester Multimodal Strategy (SEMMS) and Greater Manchester's Transport Delivery Plan also acknowledge the importance of public transport and call for the coordination of cross boundary services, particularly following a commitment to bus franchising within Greater Manchester.

7.4. Equality

7.4.1. An Equality Impact Assessment has been commenced and will develop further as the Enhanced Partnership evolves. This will build upon the EIA developed for the Cheshire Bus Strategy. Further Equality Impact Assessments will be undertaken for specific bus schemes and investment programmes as they come forward.

7.5. Human Resources

7.5.1. There are no direct implications for Human Resources.

7.6. Risk Management

7.6.1. A Project Board has been established chaired by the Director of Infrastructure and Highways to ensure appropriate project

governance and strategic direction. A project risk register has been developed and maintained, detailing mitigation measures.

7.6.2. Separate consultative meetings were held with Bus Industry contacts. The frequency of these meetings was determined following initial early discussions and are used to understand any external risks associated with each bus operator.

7.7. Rural Communities

7.7.1. The Corporate Plan outlines targets to reduce areas of the borough not served by public transport. The Council has already demonstrated a commitment to this through its successful bid for DfT funding as part of the Rural Mobility Fund, a Demand Responsive Transport (DRT) service is proposed as a result of this funding. Depending on the success of this service, DRT will be considered as an option for connecting rural communities and will be discussed with bus operators and reflected in the future Bus Service Improvement Plan.

7.7.2. The Corporate Plan also identifies the desire for thriving and active rural communities by 2025. Delivering improved accessibility to services and employment opportunities by improved bus connectivity supports this target. Any issues and opportunities for rural communities will be identified throughout the process of developing an Enhanced Partnership and Bus Service Improvement Plan.

7.8. Children and Young People/Cared for Children

7.8.1. The Corporate Plan outlines that some of the biggest pressures are in children's services, particularly placements for looked after children and services for children with special educational needs, including home to school transport.

7.8.2. The development of Bus Service Improvement Plans will seek opportunities to increase the scope for home-to-school travel to be accommodated on conventional bus networks, thereby reducing the need for bespoke transport provision.

7.9. Public Health

7.9.1. By enhancing bus provision in Cheshire East, with well-planned reform, this provides an affordable transport choice for young people that enables greater connectivity to additional learning and job/training opportunities.

7.9.2. Cheshire East is a prosperous place, but there are pockets of deprivation in communities related to income, health and life chances. Improved bus services will enable a greater proportion of residents to access important services such as health care

facilities. This will therefore help to address the Corporate Plan target to reduce health inequalities across the borough.

7.9.3. There is also a desire to support communities by reducing loneliness. Improved bus connectivity will enable residents of all backgrounds to move around the borough more freely and engage with activities to improve mental and physical health.

7.9.4. The Enhanced Partnership will also consider the impact of transport on issues affecting public health, most notably Air Quality and the contribution of Public Transport to health and wellbeing.

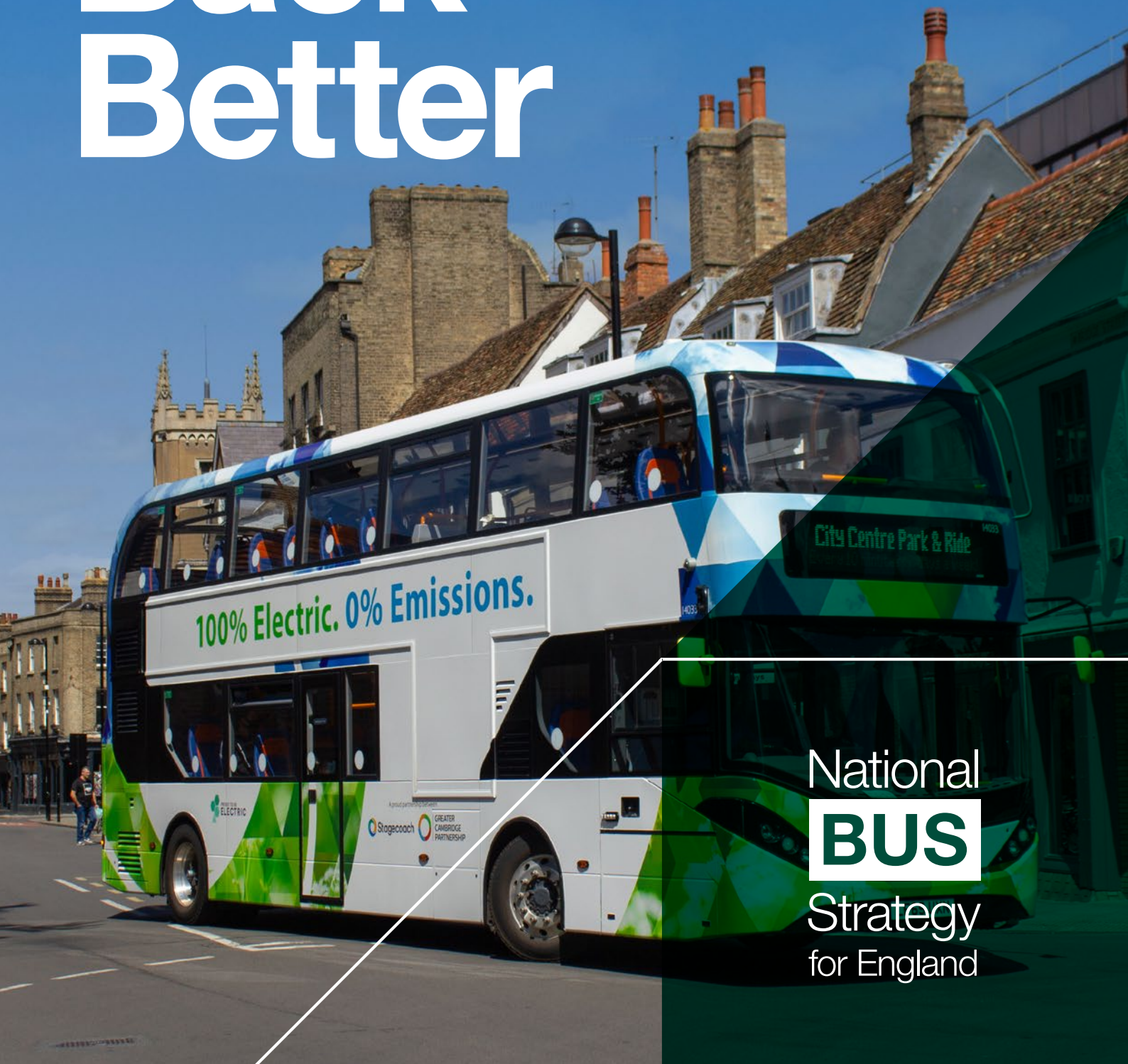
7.10. Climate Change

7.10.1. Cheshire East have committed to be carbon neutral by 2025 and to influence carbon reduction across the borough. The Corporate Plan outlines a desire to improve the speed and efficiency of public transport and encourage more residents to make fewer car journeys. Developing an Enhanced Bus Partnership with operators will help to strengthen the existing bus provision, delivering consistent and efficient services that can better compete with the private car.

Access to Information	
Contact Officer:	Richard Hibbert, Head of Transport Strategy Richard.hibbert@cheshireeast.gov.uk 07866 157324
Appendices:	Appendix One-National Bus Strategy “Bus Back Better”
Background Papers:	None

Department for Transport

Bus Back Better



National BUS Strategy for England

Contents

Prime Minister's Foreword

I love buses, and I have never quite understood why so few governments before mine have felt the same way. A couple of years ago, I unintentionally broke the internet with the widely-mocked, but true, statement that one of my hobbies is making models of buses. As mayor of London, I was proud to evict from the capital that mobile roadblock, the bendy bus, and to replace it with a thousand sleek, green, street-gracing New Routemasters.

Buses are the country's favourite mode of public transport too – used for twice as many journeys as trains, from thousands more stopping-places across the country. They get teenagers to college. They drive pensioners to see their friends. They connect people to jobs they couldn't otherwise take. They sustain town centres, they strengthen communities and they protect the environment. They are lifelines and they are liberators.

Some people ask what levelling-up means in practice, and what difference it will really make to people's lives. This is part of what it means. As we build back from the pandemic, better buses will be one of our major acts of levelling-up.

As successive mayors showed in London, buses are the easiest, cheapest and quickest way to improve transport. In only a few years, policies started by my Labour predecessor and which I built on transformed the service. With frequent buses, low fares, and priority lanes to glide past traffic, we made London's bus network a natural choice for everyone, not just those without cars. Usage rose by more than half.

Outside London, with a few exceptions, that lesson has not been learned. For governments of all colours before this one, the bus has been last in the queue, with a fraction of the investment and political attention given to other, shinier things. Traffic has increased, but bus priority has stagnated, and some councils are actually taking bus lanes out. As services get slower, they become more expensive to run and less attractive to passengers. It is a classic vicious circle, which we intend to break.

Last year, we announced £3bn of new funding to level up buses across England towards London standards. This strategy describes how we will use that money. Just as we already have in the capital, we want main road services in cities and towns to run so often that you don't need a timetable. We want better services in the evenings and weekends, to reflect people's 24-hour lives and to provide safe, reliable transport for key workers. In places unserved or barely served by conventional buses, such as rural villages and out-of-town business parks, we want more demand responsive services with smaller vehicles.

We want simple, cheap flat fares that you can pay with a contactless card, with daily and weekly price capping across operators, rail and tram too. We want a network that feels like a network, with easy-to-understand services, consistent high standards and comprehensive information at the touch of a phone. We want 4,000 new green buses, and many others, running faster and more reliably in special lanes. As in London, all that will need councils, who control the roads, and bus operators to work together.

Our job has changed because of Covid. In some ways it is harder. Bus use has dropped, though by less than on the railways. In some ways it is easier. The industry has had almost £1bn in emergency funding, and will need significant public support for some time to come. The deal for operators is that we will give you that support, and the measures to unstick traffic that you have wanted for years – but in return, we need your cooperation and partnership to deliver the policies in this strategy.

In every way, the pandemic has made our job more urgent. We must build back greener, minimising pollution and tackling the congestion that clogs up our towns and cities. But as the country recovers, this strategy looks to the long term.

Introduction

Our vision for the future of buses

Buses are at the centre of the public transport network, making 4.07 billion journeys in England in 2019/20[1], more than twice as many as the railways.

They bring people to jobs, study and local services; they liberate people who are old, young, disabled and isolated; they save millions of tonnes of carbon and pollution, and thousands of miles of traffic jams. The double-decker bus is a symbol of Britain.

Yet for decades, buses have been largely ignored by policymakers. Unlike rail, road aviation, cycling or walking, there was not – until now – a national strategy for buses. And unlike rail or road, buses have never – until now – had long-term funding commitments. Almost uniquely in the developed world, bus operators themselves, outside London, decide where most services are run and what to charge.

Services can be confusing, split between different companies who do not accept each other's tickets or, in some cases, acknowledge each other's existence. Traffic congestion has made buses slower, less reliable and costlier to run. Public subsidy has fallen. The industry faces new structural challenges which it cannot meet alone, such as the rise of ride-hailing. Usage in most places keeps falling.

And then came COVID-19. Bus use has held up more strongly than rail in the pandemic, but as with the railways it has accelerated the challenges to an operating model that was already in trouble. Few services could now survive without emergency state support. If we are not to abandon entire communities, services cannot be planned purely on a commercial basis.

COVID-19 has caused a significant shift from public transport to the private car. To avoid the worst effects of a car-led recovery – cities and towns grinding to a halt; pollution, road injuries, respiratory illness and carbon emissions all rising – we need to shift back quickly, by making radical improvements to local public transport as normal life returns. Buses are the quickest, easiest and cheapest way to do that.

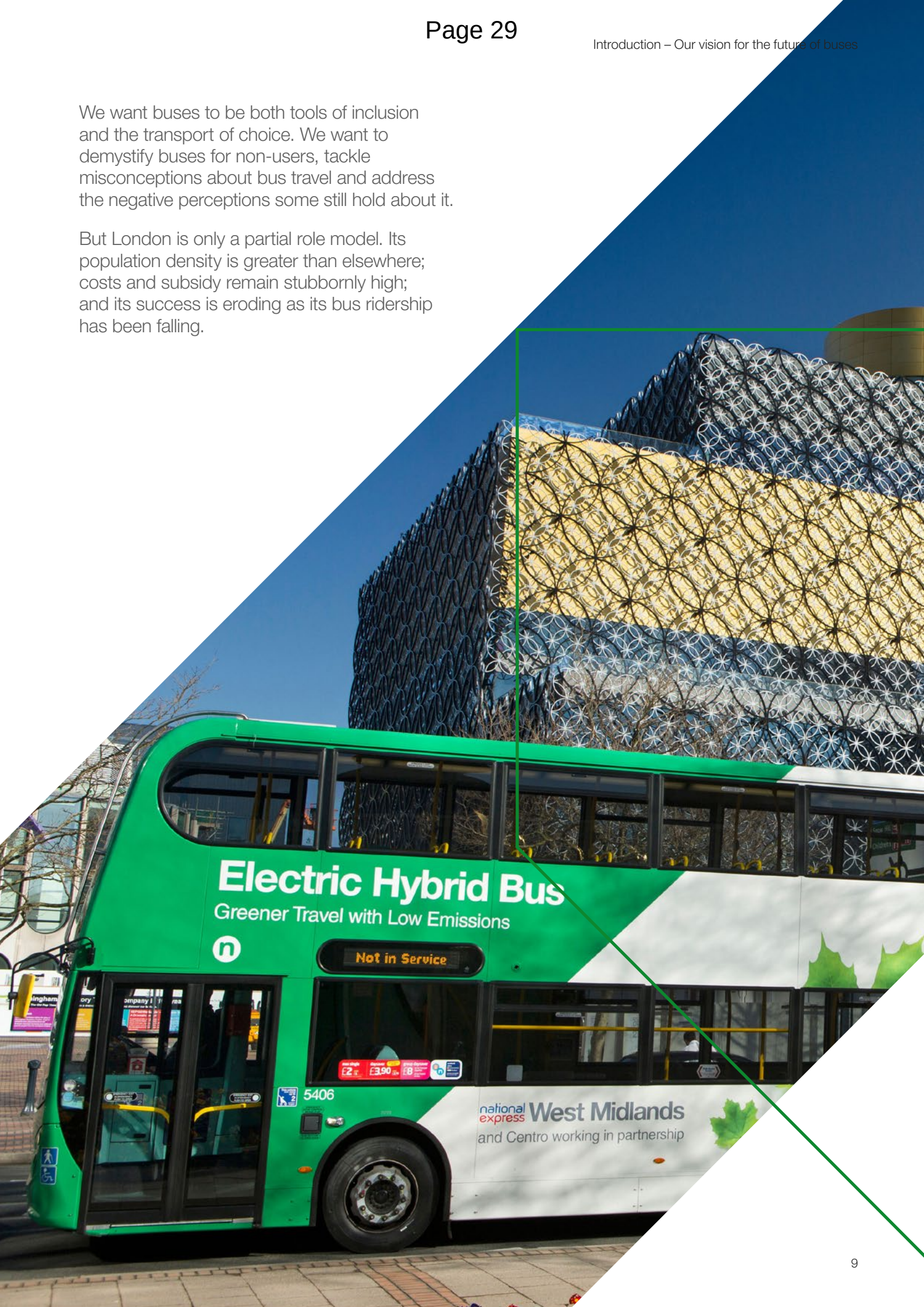
Even before the pandemic started, the Government had committed £3bn of new money during the current Parliament to improve buses outside London. Armed with that transformational funding, this National Bus Strategy will build back better. Its central aim is to get more people travelling by bus – first, to get overall patronage back to its pre-COVID-19 level, and then to exceed it. We will only achieve this if we can make buses a practical and attractive alternative to the car for more people.

To achieve our goal, this strategy will make buses more frequent, more reliable, easier to understand and use, better co-ordinated and cheaper: in other words, more like London's, where these type of improvements dramatically increased passenger numbers, reduced congestion, carbon and pollution, helped the disadvantaged and got motorists out of their cars.

We want the same fully integrated service, the same simple, multi-modal tickets, the same increases in bus priority measures, the same high-quality information for passengers and, in larger places, the same turn-up-and-go frequencies. We want services that keep running into the evenings and at weekends.

We want buses to be both tools of inclusion and the transport of choice. We want to demystify buses for non-users, tackle misconceptions about bus travel and address the negative perceptions some still hold about it.

But London is only a partial role model. Its population density is greater than elsewhere; costs and subsidy remain stubbornly high; and its success is eroding as its bus ridership has been falling.



Wherever and whenever bus patronage grows, there are likely to be bus operators and local government working together to deliver improvements for passengers.

Buses in London, unlike the rest of England, are franchised. Transport for London determines the network of services which are provided, under contracts for specific routes, by private sector operators. Franchising does not necessarily have to replicate this route-by route tendering. Less onerously, contracts can be let for different parts of a city or to a single operator for a whole network, with significant co-design opportunities for that operator. This is the model of the successful LibertyBus franchise in Jersey. Franchising powers are only available automatically to Mayoral Combined Authorities (MCAs) but can be provided to other Local Transport Authorities (LTAs) through secondary legislation. We will support any LTA which wishes to access franchising powers, and which has the capability and intention to use them at pace to deliver improvements for passengers.

But franchising is not the only route to better and more locally accountable bus services. An Enhanced Partnership is a statutory arrangement under the 2017 Bus Services Act which can specify, for example, timetables and multi-operator ticketing, and allows the LTA to take over the role of registering bus services from the Traffic Commissioners. The main difference versus franchising is that operators in an Enhanced Partnership have a much greater role, working with LTAs to both develop and deliver improvements for passengers and having a real say on how bus services should be improved. Enhanced Partnerships also offer significantly more flexibility than franchising.

By the end of June 2021, we expect all LTAs, except MCAs which have started the statutory process of franchising bus services, to commit to establishing Enhanced Partnerships across their entire areas under the Bus Services Act, and all operators to co-operate with the LTA throughout the process. LTAs which also wish to pursue franchising may do so – but they should commit to implementing Enhanced Partnerships in the meantime until the franchising process, which can be lengthy, is complete. LTAs which are not mayoral combined authorities and wish to pursue franchising will need to satisfy the Secretary of State that they have the capability and resources to do so, and that it will better deliver service improvements for passengers.

From 1 July 2021, only LTAs and operators who meet these requirements will continue to receive the COVID-19 Bus Services Support Grant (CBSSG) or any new sources of bus funding from the Government's £3bn budget. The terms and conditions of CBSSG already make clear that it is discretionary. The new funding will also be discretionary. As part of wider reform of the Bus Service Operators Grant – see below – we will consult on linking payment of that reformed grant to these commitments. By the end of October 2021, we expect all LTAs to publish a local Bus Service Improvement Plan, detailing how they propose to use their powers to improve services. We expect actual delivery of Enhanced Partnerships by April 2022. From that date, the new discretionary forms of bus funding from Government will only be available to services operated, or measures taken, under an Enhanced Partnership or where a franchising scheme has been made. In addition, only services operated under these statutory agreements will be eligible for the reformed Bus Service Operators Grant, subject to consultation. The Secretary of State may disapply these rules or the deadline of April 2022 in individual cases, on an exceptional basis; we will also ensure that no operator is disadvantaged through any failure to establish an Enhanced Partnership due to actions beyond their control.


shining across your city
City & Weston 17
via Hospital & Woolston
PROUDLY TRANSPORTING NHS WORKERS
1549
bluestar
HJ63 JKY

We expect that the majority of LTAs will choose these Enhanced Partnerships rather than franchising as their end state, though others will proceed to franchising. We value the crucial role that bus operators have and believe that partnerships will allow LTAs to harness their knowledge and entrepreneurial skills. As we describe later, partnerships will work best if they deliver benefits and incentives to both sides. We will publish updated guidance on Enhanced Partnerships in the coming weeks.

Just as important as new operating models, are other measures to drive quality and efficiency. We want to create a virtuous circle: increasing usage, but also reducing operating costs so better services can be sustained without permanently higher subsidy. In cities and other congested places, the key intervention will be significantly more ambitious bus priority schemes, making services faster, more reliable, more attractive to passengers and cheaper to run.

To benefit from the funding in this strategy, LTAs in such places will be expected to implement ambitious bus priority schemes and draw up ambitious Bus Service Improvement Plans. Statutory traffic management guidance will be updated to make promoting bus reliability an integral part of highway authorities' Network Management Duty. As we have already announced, the remaining elements of Part 6 of the Traffic Management Act 2004 – which allow local authorities to enforce moving traffic offences – will be commenced this year and we will consult shortly on increasing MCAs' powers over key roads in their areas, where they are not already the highway authority.

To further our commitments in the Government's green ten-point plan, we will support the purchase of at least 4,000 new zero emission buses, more than a tenth of the fleet[2]. We will also set a date for ending the sale of new diesel buses in the UK. This, too, will reduce costs, since an electric bus is much cheaper to operate than a conventional one.

And in lower-density, often rural areas, not served or barely served by conventional buses, we will support new forms of provision, such as demand responsive travel in smaller vehicles. These innovations in service may be how we improve evening and Sunday services in places which currently lack them, integrated with conventional buses during the day.

As well as spending more money, we will fundamentally reform how it is spent. The main current funding stream, the Bus Service Operators Grant (BSOG), is a fossil fuel subsidy. The new funding regime will take a holistic approach targeted at the delivery of the policies in this strategy and other specific benefits: growing patronage, increasing efficiency, improving the environment and securing modal shift from the private car.

Much of the work to improve services and manage the new funding streams will be done by local authorities, whose capacity varies significantly. We will therefore provide £25 million in 2021/22 to support partnership and franchising development, including a Bus Centre of Excellence.

Just as buses are central to the public transport network, bus reform is central to this Government's objectives. We are acting not just because buses are the easiest, cheapest and quickest way of improving transport – but because the bus is key to two of our wider priorities: net zero and levelling up.

During a challenging time for public transport, it might seem strange to predict a prosperous future for the bus. From crisis, however, comes opportunity.

1

Chapter 1

The opportunity


EMERGENCY EXIT

Buses are the easiest, cheapest and quickest way to improve transport. Building a new railway or road takes years, if not decades. Better bus services can be delivered in months. Experience shows that relatively small sums of money, by the standards of transport spending, can deliver significant benefits.


welcome
aboard
Brighton Hove
WELCOME
ABOARD

Since COVID-19, the need has become more urgent. In many places, roads already operated at or close to capacity before the pandemic. There is a risk that when full economic life returns, the move away from public transport during the crisis will cause unmanageable levels of car traffic, slowing some areas to a crawl, holding back the economic recovery and creating a severe risk to health. Bus services can be improved relatively quickly to draw people back to public transport. They can also be reconfigured more easily than railways to meet any post-COVID change in travel patterns, such as a greater number of suburban, local and orbital journeys in cities.

The bus sector includes many examples of success and innovation. Despite years of decline, the quantity of bus services in many places remains quite good, at least during the working day. But because buses have been neglected, their future is fragile and there remains substantial scope for improvement. Our task is both to unlock the substantial untapped potential in the existing service, by making it easier to understand and use; and to improve it, making it more reliable, more frequent and cheaper, and making more use of new forms of provision such as demand responsive transport.

Buses are key to delivering wider government priorities

Buses can play a greater role in enabling access to work or more productive work. 44% of bus trips are for work or education, compared with 27% of solo car journeys[3]. Buses can help drive better employment outcomes for disabled people, and in cities outside London, 77% of jobseekers do not have regular access to a car, van or motorbike. Having found employment, affordable bus travel helps ensure that work pays and can be sustained for everyone[4]. But local bus fares have risen by 1.4% a year in real terms since 2010[5].

Buses can improve productivity more widely, for instance by reducing congestion which affects all road users and costs urban economies at least £11bn a year[6].

Buses can be key to levelling-up; users are disproportionately from less advantaged social groups and places. Improved services will strengthen communities, sustain town centres and connect disabled and isolated people. But buses should not be seen, or promoted, only as transport for those without an alternative. There is clear evidence that they can be made attractive enough to draw people away from their cars.

For this reason, buses are vital to ensuring the economy meets Net Zero carbon emissions and driving the green transformation. In congested areas, substantial modal shift away from the car will soon be needed if clean air targets and the Government's broader climate goals are to be met. The only mode capable of sufficient expansion in the time available is the bus. We need more people to choose the bus for their journeys; we need to reverse the declines of the past.

Bus spending works and is high value for money

A Department for Transport (DfT) analysis of 33 major bus schemes found an average benefit-cost ratio of 4.2; in other words, they delivered benefits worth more than four times their cost[7]. Buses generate a significant proportion of benefits which accrue to other road users and to society at large.

The challenge: a cycle of decline

Our system isn't working. With some encouraging exceptions, bus services have been in decline for a long time, as we have become an increasingly car-focused society. In many areas, we are stuck in a vicious cycle where ever-increasing congestion slows down buses and makes them less attractive, pushing people further towards the car and compounding the problem.

The way the bus industry works, with few incentives for operators and local authorities to work together, has made it harder to cope with these trends, or to act strategically. Since 1986, almost uniquely in the developed world, buses in Britain (outside London) have been organised on a predominantly commercial basis, with operators themselves deciding where to run and what to charge.

Following that change, profitable routes and times of day were flooded with buses at the expense of other routes and times; services became unstable and confusing; the quality of vehicles fell and fares in many places rose sharply. Services which could not be run commercially, previously cross-subsidised from the profits of busier routes, now had to be supported by the taxpayer. The money available for this fell substantially over the last ten years, causing severe cuts to supported services; some councils now spend nothing at all. The worst excesses of the "bus wars," which saw streets choked with rival vehicles, are long over, but the legacy remains.

Examples of some barriers to delivering better bus services

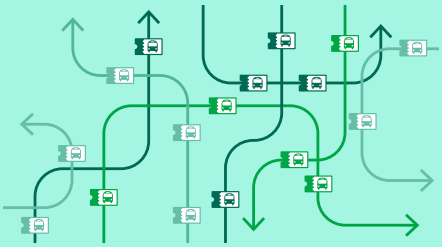
Limited cooperation

In a busy seaside resort, there are two sizeable **rival bus networks** that **don't acknowledge each other's existence**. They:

- publish **separate city maps**, showing only their own services, giving potential users including visitors the impression that **some areas of the city are completely unserved**;
- they use the **same route numbers for entirely different routes**; and
- on the busiest routes, served by both operators, there can be **overcapacity at certain times of the day**.

There is a multi-operator ticket, but it is **more expensive** and **hard** to find out about.

On numerous routes across the country, evening and daytime services are operated by different bus companies, many of which **do not acknowledge each other's existence** or even accept each other's tickets. Some operator timetables **don't display each other's services**, which gives the impression there are **no services** at different times of the day.



Lack of evening services

Large areas of even major cities have **only one or two buses an hour in the evenings**, even though late-night and shift-working are becoming commonplace. Lots of bus services in **rural areas cease as early as 5 or 6pm**.

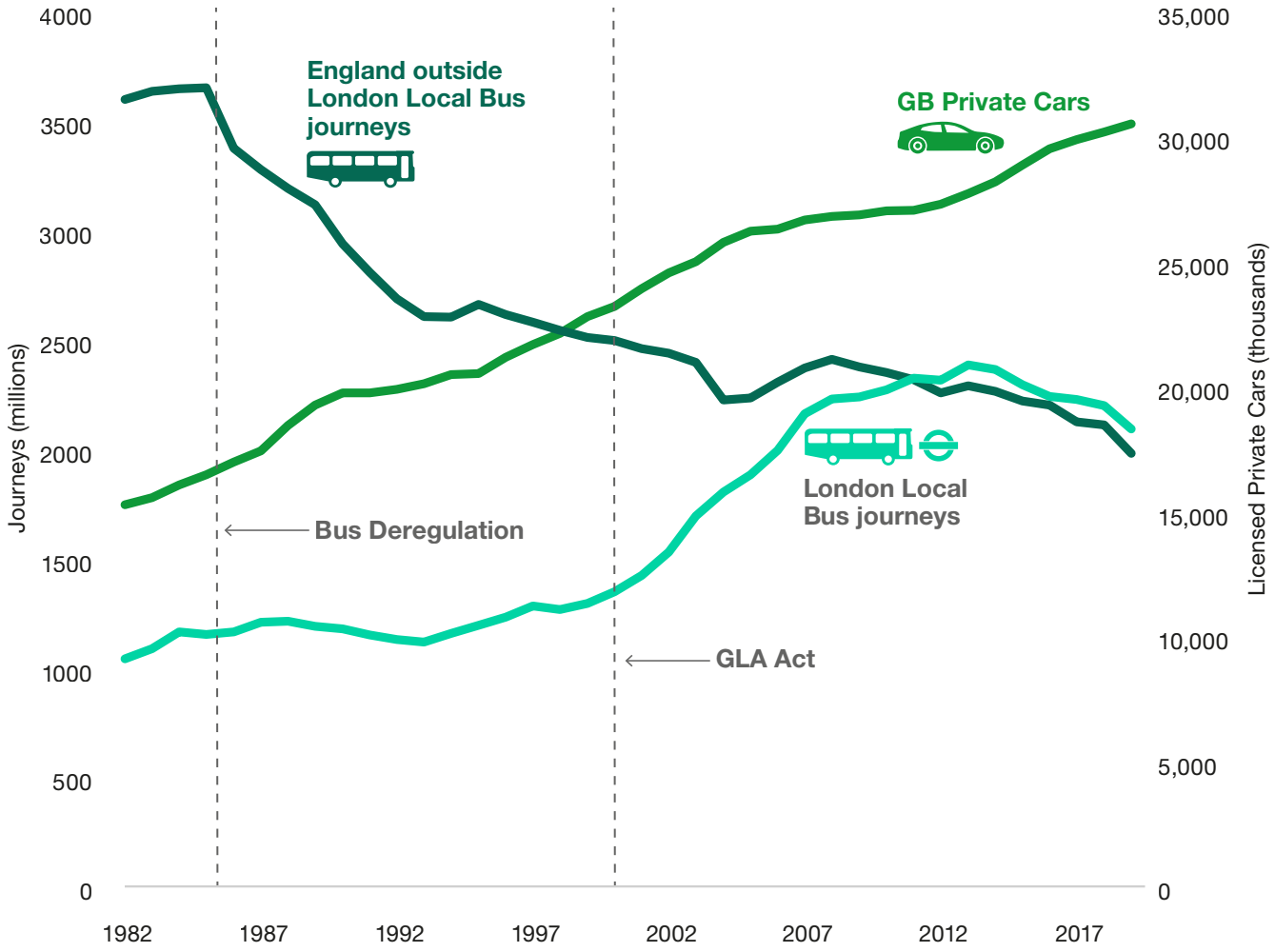
Complex ticketing

In a major northern city, bus passengers are faced with the choice of **many different weekly or monthly tickets**, which have different names and conditions attached to them. This can be **confusing** and makes it **difficult for passengers to choose** the best option for them. There are six different weekly tickets but none that gives travel on all the city's public transport networks.

Poor integration

In one Home Counties town with generally excellent bus services, **misguided landscaping and redevelopment** around the railway station **moved bus stops further away**.

Bus Use and Car Ownership 1982–2019[8]



GLA (Greater London Authority) Act 1999 established authority for the Greater London Authority, the Mayor of London and the London Assembly to make provision about transport and road traffic in and around Greater London.

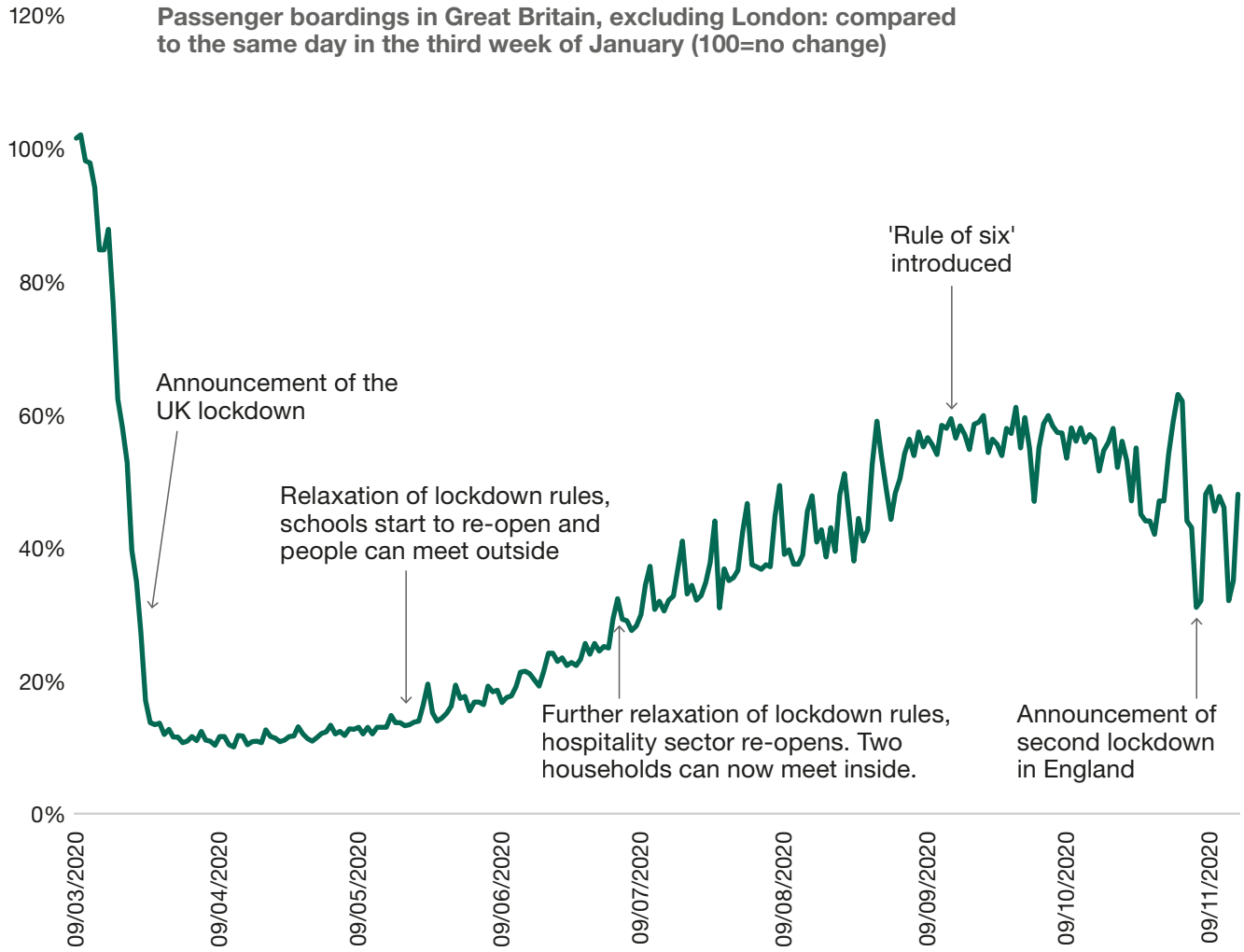
In rural areas, more dispersed, lower density populations make it challenging to deliver widespread timetabled services run by traditional buses. Services often take long and indirect routes, to serve as many people as possible, but they become an unattractive alternative for passengers with access to a car. Services invariably need funding from LTAs and, when money is tight, funding for bus services is deprioritised. Services get cut, and people are even more likely to buy a car, reducing the potential demand for buses even further.

If we are to meet our legal obligation to deliver Net Zero carbon emissions and have thriving communities, we have to reverse these cycles.

This is made more challenging by the impact of COVID-19 on the bus sector. With over £1bn of financial support provided by the Government during the pandemic so far, the sector has provided the essential services for people who have needed to keep using public transport, including key workers. But the lasting impact on bus use remains unknown, with passenger numbers expected to fall from pre-COVID levels – at least initially.

The COVID-19 pandemic has had a huge impact on bus use in 2020

During the first lockdown passenger boardings fell to approximately 10% of those on the same day in the third week of January. As restrictions were eased passenger boardings increased[9].



The impact of COVID-19 is both a significant risk and an opportunity. It has meant much greater co-operation between many LTAs and bus operators which we cannot afford to lose. While relationships and capacity still need to be built and improved, there can simply be no return to the situation, seen in too many parts of England, where services were planned on a purely commercial basis with little or no engagement with, or support from, LTAs.

The next year provides a unique chance to change the way in which local authorities and operators work together and deliver significant improvements for passengers. That is why we are seeking urgent action.

Examples of success

Across England there are pockets of hope – places where significant growth has been seen despite the national trends. We know what can work and how the cycle can be broken. It needs LTAs and bus operators to work together to put passengers first. Where operators understand their passengers, offer great customer service and have clean, modern fleets; and LTAs invest to give buses priority on busy roads and junctions, and put buses at the heart of their local transport planning.

Brighton & Hove

Partnership working between Brighton and Hove Council and local operators is cited as a key reason why the area has the highest bus use per head in England outside of London, with 167 journeys per person made between 2019–2020[10]. It has created a platform for co-operation and innovation, and shared initiatives on greening fleets and modernising the passenger experience.

Within the partnership, the council has focused on bus priority measures, improved passenger waiting areas and real-time information displays. The operators have focused on improving service frequencies, creating value for money fares and tickets, investing in new buses and improving customer training and marketing.

Picture:
Brighton and Hove Buses

Picture: The Harrogate Bus Company

The Harrogate Bus Company

The 36, a premium bus route linking Ripon and Harrogate with the City of Leeds, offers a sophisticated and comfortable service which has transformed the passenger experience and encouraged people to make the switch to bus. Achieving consistent growth, the number of passengers using the 36 has nearly doubled over 15 years.

Along with a high frequency timetable, the spacious and comfortable buses, which include USB power outlets, superfast WiFi and a glazed panoramic roof, have earned the route 36 service a customer satisfaction score of 97% and more than 50% of customers, who have a car available, choose to use the 36 instead[11].

Picture: Bristol s Metrobus

Bristol's Metrobus

The metrobus network was built with an investment of £235m – including £113m from the Department for Transport. Metrobus is a bus rapid transit system comprising three limited-stop routes in the Bristol urban area that use bus lanes and segregated busways.

There are 90 metrobus stops with new high-profile shelters and 'iPoints' that provide real-time information and sell tickets. The network uses new low-emission biomethane buses in a bespoke livery, and all ticket sales take place off-bus to ensure quick boarding. Minimum frequencies and maximum fares are specified.

Projects which have grown patronage

The West Midlands is a good recent example of how revenue and capital subsidy by operators and government can arrest general decline. Bus use has been stabilised by a series of corridor and route enhancement schemes:

- 2.5km of bus lanes on B425 Lode Lane, Solihull, was an investment of £4.5m and delivered a 11% boost to patronage.
- £800k of route enhancements on Harborne Road delivered a 4% rise in patronage.

In addition, half-price travel for under-18s and low-fare zones for all, including cutting the price of a DaySaver ticket by c.25%, brought an extra 4,000 journeys a day[12].

In Crawley, West Sussex, the Fastway scheme – a series of bus priority measures along two core routes, linking Horley, Gatwick airport and Crawley, has delivered patronage growth of 160% over ten years as well as an increase to customer satisfaction and reduced journey times. Assessments estimate a benefit-cost ratio of at least 4.67[13].

So the cornerstone of this strategy is a roll out of this model for success – bringing together LTAs and their bus operators in every part of England to set out plans to improve local bus services and break the vicious cycle of decline.

Our plan is backed by transformative, long-term funding. The £3bn for buses in England outside London, which was announced by the Prime Minister in February 2020, will initially be invested in:

- Supporting new and increased services – with at least £300m of funding to support the sector recover from the pandemic in 2021/22.
- Giving LTAs the skills and people they need to deliver this strategy – with £25m of the £300m allocated in 2021/22.
- Bus priority schemes to speed up journeys – with the first schemes delivered in 2021/22.
- Accelerating the delivery of zero emission buses with £120m in 2021/22.

The bulk of the £3bn transformation funding will be paid after the transformational changes begin in April 2022.

Chapter 2

The buses we want


HANDS
FACE
SPACE

Our goal is to get bus use back to what it was before the pandemic. Then we want to increase patronage and raise buses' mode share. We can only do these things by ensuring that buses are an attractive alternative to the car for far more people.


the air filter bus: for serious air lovers
Eastleigh
272
breathe
bluestar
HF69 CNC

That means making them:

- **More frequent:** Turn up and go services, where passengers don't need a timetable, should be provided on major urban routes. Feeder services, using conventional buses or smaller vehicles, can boost the frequency of connections from places away from main roads, connecting to the major routes with integrated ticketing. In low-density areas and at low-demand times of day, demand responsive vehicles can provide much higher levels of service than conventional fixed bus routes.
- **Faster and more reliable:** Buses must have greater priority on urban roads. LTAs will be given new powers to enforce traffic regulations. They will be expected to promote bus reliability, and to implement ambitious bus priority schemes, to receive new funding. These must be planned to complement walking and cycling schemes. We will consult shortly on increasing Metro Mayors' powers over key roads in their areas, where they are not already the highway authority.
- **Cheaper:** We want to see more low, flat fares in towns and cities, lower point-to-point fares elsewhere, and more daily price capping everywhere.
- **More comprehensive:** Overprovision on a few urban corridors with dozens of competing buses every hour should be reduced to boost under provision elsewhere. More services should operate in the evenings, weekends, and at night, and to smaller towns and villages, sometimes using new forms of demand responsive transport.
- **Easier to understand:** All public transport across England – bus, light rail and conventional rail – should be easy to access via journey planning websites and apps, with everything passengers need to know at their fingertips, including times, accessibility information, fares and live running. The data is already available; we want to see it used. Additionally:
  - Bus stops should show accurate information about the services stopping there. Every town, city and rural area should have easy to access, up to date maps, showing all local bus services.
  - Each local area should have a common numbering system, to avoid two routes with the same number in the same place, and bus stops should be named consistently by operators running the same bus routes.
  - Local branding that reflects the community and not the operator should be adopted, though successful existing brands such as Harrogate's 36 should not be sacrificed.
  - Routes should, as far as possible, be the same in the evenings and weekends as they are in the daytime.
  - Routes should be as easy as possible to understand, with simple, high-frequency trunk services rather than lots of low-frequency services combining together.
  - All operators which run the same route should accept the same tickets, use the same route number and be shown on the same timetable.
  - Timetable changes should be minimised and co-ordinated across operators, so they happen at the same time.
  - There should be heavy promotion and marketing to familiarise non-users with their local buses, to demystify the service for non-users, and introductory offers to promote the service to them.


Bus Stop
Keresley Road
The Scotchill
Towards City Centre
16 16A 43W
61 735
ptmjd to 84268 or www.netwm.mobi
Contactless NOW LIVE
Coventry single
£2.20
£1 city hop
Coventry all day unlimited travel
£4
£8 £5 after 6pm
4397

- **Easier to use:** Common tickets, passes and daily capping should be available on all services irrespective of operator, at little or no premium to single-operator fares. All buses should accept contactless payment. Tickets and fares should be simple; flat fares should increasingly be standard in urban areas. Bus stations should be protected from closure and redevelopment and improved.
- **Better to ride in:** Comfortable, high-spec, modern buses will help make using the bus more appealing. Passengers should feel safe on board. Buses should offer end to end accessibility and provide ample areas for pushchairs and luggage in addition to the wheelchair space, so that everybody can travel with confidence. They should also offer audible and visible information, in addition to WIFI and charging as standard – allowing people to work and interact online whilst they travel, and make better use of their time. In holiday and scenic areas, much more should be done to promote buses to visitors, with the views from the top deck an attraction in themselves.
- **Better integrated with other modes and each other:** More bus routes should serve railway stations, as is standard in most European countries, and integrate with cycling and walking routes and networks. Additionally:
  - Railway stations should be hubs for connecting services with high quality stops close to station entrances. Schemes that move buses further away from stations should not be allowed.
  - Passengers should not have to buy a new ticket when changing buses. Easy through ticketing should be available between bus operators and other transport modes.
  - Our ambition is for an integrated ticketing approach to allow you to buy a through journey for local bus, rail and metro with a single tap on your smartphone.
  - Full information on local bus services should be posted in railway stations, and the rail industry should promote bus links.
  - Park-and-ride schemes should be expanded, and more rural bus services should carry bikes.
- **Greener:** We will support the introduction of at least 4,000 more zero emission buses.
- **Accessible and inclusive by design:** Disabled people must be able to use bus services as easily as other passengers. Making buses more accessible (not just the vehicles themselves, but also bus stops, bus stations, and by providing excellent customer service) will benefit other passengers too. Next stop announcements, for example, will help everyone know where the bus is going and when they've reached their stop.
- **Innovative:** We want to harness the entrepreneurial skills of the best operators to constantly strive for innovation in the market.
- **Seen as a safe mode of transport:** The sector must strive for the highest safety standards, upheld by the Traffic Commissioners. Marketing should emphasise the features that support personal safety, for example CCTV onboard and at bus stops and data that allows passengers to know when a bus is arriving so they do not have to wait in the street. This should be supported by more demand responsive services in the evenings and late at night.

We want bus services that mean fewer journeys are needed by private car. We want buses across the country to become the transport of choice for people with other options, as they already are in some places. Our changes therefore need to tackle negative perceptions by non-users. We will have failed if we do not address the perceptions which deter people from buses:

Passenger Satisfaction

The latest Transport Focus 'Annual Bus Passenger Survey' gives headline satisfaction figures of between 76% and 95% for local bus services in England outside London[14].

We know that people's top priorities for improvement – from among people who both do and don't use buses – include:

Source: Transport Focus, Bus Passengers' priorities for improvement survey, published September 2020.

We want to see any negative views and misconceptions surrounding bus use, which include the examples below, addressed by up to date and easy to access information about local bus services.

Won't the bus journey take a long time?

How do I safely take my children with me?

I don't understand where my local routes go.

Is there a service I can use to get home late evening and at weekends?

Where do I go to find the time of my next bus service?

How do the fares work and can I use contactless to pay?

How do I know if my bus service is accessible?

I'm worried about my personal safety.

I'm worried I may get stuck somewhere.

3

Chapter 3

Delivering better bus services


5 62 77 T1
Tickets
Litter

Strong bus networks connect our communities, getting people to jobs and services, giving them opportunities, and boosting economic growth and inclusion. This chapter sets out the collaborative approach that will give us stronger, better planned networks, and how Government will support local transport authorities and operators to deliver.

Today's bus sector

Since 1986, the bus market in England outside London has been deregulated. Prior to COVID-19, around 87% of local bus service mileage outside London was run on a commercial basis by hundreds of private sector bus operators[15]. These operators decide where and when to run commercial services, invest in the buses and facilities, and set their own fares, with only a very limited role for LTAs*.

Before the pandemic, the 20% of services which were not run commercially were 'tendered' for and subsidised by LTAs if they considered them 'socially necessary'. Prior to COVID-19, the sector received funding from central Government through concessionary fares funding, the Bus Service Operators Grant, community transport grants and support to subsidise socially necessary services.

This model doesn't always work for passengers. There is often no incentive for integrated ticketing, or for operators to run services that are not profitable outside of peak hours. LTAs may not have the budget to provide additional or replacement services, or the skills and resources to understand where they are needed. And there is little or no visibility for the public of the role that LTAs play in supporting buses or data by which the local electorate can hold their councillors or Mayor to account for their part in improving bus services.

LTAs can do something about this. Over the past 20 years they have been given increasing powers to work with bus operators to improve services and ensure that they work for passengers and local communities. Most recently the Bus Services Act 2017 gave LTAs the potential for much greater influence over bus services in their area –underpinned by new types of statutory partnerships with operators and the ability to franchise services. Franchising powers are automatically available to Mayors of Combined Authorities and can be made available to other types of local authority, where needed, through secondary legislation.

COVID-19 has meant greater co-operation between LTAs and bus operators and a more transparent approach to the costs and revenues of running bus services. We want to build on this close working to drive the recovery of the bus sector.

Building back better – recovering from the pandemic

The Government has provided an unprecedented amount of support for the bus sector during the pandemic. Through the COVID-19 Bus Services Support Grant (CBSSG) and the Bus Service Operators Grant (BSOG), the Government had announced over £1 billion of support by the end of 2020. CBSSG will remain in place as long as it is needed. We are clear that we will continue to support the sector to run the services needed to get our economy back on track.

CBSSG is discretionary, as will be future bus funding from the £3bn. From 1 July 2021, CBSSG and any successor funding to it; funding to transform services as outlined in this Strategy; and potentially, subject to consultation on wider reform, the reformed Bus Service Operators Grant, will only be available to LTAs, outside of London, who have committed to entering into Enhanced Partnerships or started the statutory process of franchising services, and to operators who co-operate with the process. Since franchising can take several years, we expect those LTAs who want to start down that road to commit to establishing an Enhanced Partnership in the meantime, unless they have begun the process of implementing franchising already (as in Greater Manchester, for instance).

* Upper tier local authorities (usually combined authorities and county councils) and unitary authorities. Combined authorities are local government entities set up by two or more neighbouring councils wishing to co-ordinate responsibilities and powers over services, including aspects of transport, housing and social care. If the authority has a directly elected Mayor it is a Mayoral Combined Authority.

We want to see the commitment to these partnerships realised, so from April 2022 only LTAs with an Enhanced Partnership or who have begun following the statutory process to decide whether to implement franchising, will be able to access the new discretionary streams of Government bus funding. From that date, the new discretionary forms of bus funding from Government will only be available to services operated, or measures taken, under an Enhanced Partnership or where a franchising scheme has been made. In addition, only services operated under these statutory agreements will be eligible for the reformed Bus Service Operators Grant, subject to consultation. The Secretary of State may disapply these rules or the deadline of April 2022 in individual cases, on an exceptional basis; we will also ensure that no operator is disadvantaged through any failure to establish an Enhanced Partnership due to actions beyond their control. We will also take into account an LTA's performance with respect to the policies set out in this strategy when considering funding allocations for wider, non-bus local transport schemes.

By the end of October 2021, we expect all LTAs to publish a local Bus Service Improvement Plan. These new plans must set out how they will use their Enhanced Partnership or franchising scheme to deliver an ambitious vision for travel by bus, meeting the goals and expectations in this strategy and driven by what passengers and would-be passengers want in their area.

Hertfordshire's Enhanced Partnership

Hertfordshire County Council introduced 'intalink', England's first Enhanced Partnership agreement in April 2020.

The partnership's objectives include prioritising bus services in traffic, closer integration of the bus network including upgrading bus infrastructure; improving the image of bus travel and using data and information.

These objectives aim to keep passengers informed about available services, increase service frequencies and improve reliability and co-ordination with other modes to encourage residents to make bus their first choice to get around their local area.

Plans must be developed in collaboration with local bus operators, community transport bodies and local businesses, services and people. They will be living, transparent documents, with targets. LTAs will need to routinely publish six-monthly progress reports against these targets. Plans will demonstrate how bus services are integrated with other types of transport in their area such as connectivity to train stations, making journeys simple and stress-free for customers. They must take account of cycling and walking schemes, complementing these forms of travel and not competing with them. We will publish detailed guidance on preparing a Bus Service Improvement Plan shortly, and update our existing guidance on Enhanced Partnerships and franchising.

LTAs may also join together to produce joint plans and partnership or franchising arrangements and should be looking to do so where local economies and travel to work areas overlap significantly. We would expect to see shared arrangements across any areas wishing to become new or expanded Mayoral Combined Authorities in the future.

To support LTAs in forming partnerships and developing plans, we will make £25m available in financial year 2021–22.

Summary of what LTAs and bus operators must do to access CBSSG from 1 July and transformational funding from April 2022

- **By the end of June 2021** LTAs will need to commit to establishing Enhanced Partnerships under the Bus Services Act or the LTA should begin the statutory process of franchising services. Operators in those areas should cooperate with those processes.
- Those LTAs who do not have access to franchising powers at present, but consider that it is the best route to adopt in the interest of passengers and that they have the capability and resources to deliver it, should progress with the implementation of an Enhanced Partnership alongside applying to the Secretary of State for access to franchising powers.
- **By the end of October 2021** each LTA will need to publish a local Bus Service Improvement Plan. Each plan will need to be updated annually and reflected in the authority's Local Transport Plan* and in other relevant local plans such as Local Cycling and Walking Infrastructure Plans (LCWIPs).
- **From April 2022**, LTAs will need to have an Enhanced Partnership in place, or be following the statutory process to decide whether to implement a franchising scheme, to access the new discretionary streams of bus funding. Only services operated or measures taken under an Enhanced Partnership or where a franchising scheme has been made will be eligible to receive the new funding streams.

Bus Service Improvement Plans will:

- Be developed by LTAs in collaboration with local bus operators, community transport bodies and local businesses, services and people.
- Cover the LTA's full area, all local bus services within it, and the differing needs of any parts of that area (e.g. urban and rural elements).
- Focus on delivering the bus network that LTAs (in consultation with operators) want to see, including how to address the under provision and overprovision of bus services and buses integrating with other modes.
- Set out how they will achieve the objectives in this strategy, including growing bus use, and include a detailed plan for delivery.
- Be updated annually and reflected in the authority's Local Transport Plan.
- Influence the share of the £3bn of transformation funding each LTA receives.

We expect Bus Service Improvement Plans to:

- Set targets for journey times and reliability improvements (for the LTA as a whole and in each of the largest cities and towns in its area) – to be reported against publicly at least every six months.
- Identify where bus priority measures are needed, including consideration of Bus Rapid Transit routes to transform key corridors and how traffic management can be improved to benefit buses.
- Set out pressures on the road network, air quality issues and carbon reduction targets which improved bus services could address, and set out actions working with operators to transform the local bus fleet to zero emission.
- Drive improvements for passengers by:
  - Setting targets for passenger growth and customer satisfaction (to be reported against publicly at least every six months).
  - Setting out plans and costs for fares, ticketing and modal integration. Initially, we expect LTAs and bus operators to develop plans to enable multi-operator ticketing, where plans do not exist. Over time we will expect LTAs to work across transport modes towards enabling a multi-modal ticketing scheme.
  - Considering the impact of roadside infrastructure (e.g. bus stops and shelters) on passenger safety, security and accessibility.
  - Considering how a coherent and integrated network should serve schools, health, social care, employment and other services.
  - Taking into account the views of local people.
  - Committing to a Bus Passenger Charter (BPC) that sets out what passengers can expect from bus operators delivering local bus services across their area. BPC's should include commitments on the accessibility of bus services.

* All local transport authorities in England are required to have a Local Transport Plan (LTP) relating to transport to, from and within their area. It is a practical document which sets out in detail the authority's transport policies over a given period. This includes local objectives, strategy and an implementation plan highlighting what measures will be taken to achieve local plans.

Bus Service Improvement Plans will need to explain:

- How current services meet or fall short of the expectations listed above.
- How the improvements needed will be delivered through the Enhanced Partnership/franchising schemes and the LTA's and operators' investment plans.
- The financial support that the LTA is providing for subsidised public bus services, listing the numbers of routes and route mileage supported.
- How traffic management and investment are used to prioritise buses. In Mayoral Combined Authorities (MCA) this will include the extent of the MCA's role over a Key Route Network and how that is used to prioritise bus services.

Franchising

Franchising can be an effective way of correcting a market failure and we support its use where it is in the best interests of passengers. Used well, franchising can harness the knowledge and expertise of the private sector and improve service levels, customer satisfaction and overall patronage.

Franchising does not always require the scale of LTA resource and planning seen in London. There are also strong models of franchising in the Channel Islands and other countries which capitalise on the strengths of private sector route planning, marketing and investment as part of the tendering process whilst ensuring stronger local accountability and financial incentives to prioritise bus services for the local authority.

The franchising powers within the Bus Services Act can currently be used by MCAs at any time, but only by other LTAs with the Secretary of State's consent and new secondary legislation. We support the use of franchising and will allow any LTA which has the capability to do so to pursue franchising where it would not needlessly delay the provision of better services.

This will include demonstrating the capability in traffic management necessary to ensure buses are prioritised appropriately.

The Secretary of State will reserve the right to refuse an application for franchising if he believes a LTA does not, or will not, have the capability and resources to deliver the franchised model chosen; or that an Enhanced Partnership would deliver the improvements proposed more quickly and cost-effectively.

Those LTAs which do not have access to franchising powers at present, but consider that it is the best route to adopt in the interest of passengers and that they have the capability and resources to deliver it, should progress with the implementation of an Enhanced Partnership alongside applying to the Secretary of State for access to franchising powers. An LTA may move from an Enhanced Partnership to franchising later, subject to the conditions above.

We will also strengthen our statutory guidance on Enhanced Partnerships and franchising – making it easier for operators and LTAs to focus on what they want to achieve.

LibertyBus Franchise in Jersey

The Government of Jersey introduced a new bus franchising model in 2013 which was awarded to LibertyBus, a subsidiary of the HCT Group. LibertyBus is responsible for all routes, which call at approximately 800 stops around the island.

The franchise has created a long-term partnership which both parties can invest in, bringing together local authority and industry knowledge and skills with the aim of improving customer service to achieve better passenger satisfaction, which as of February 2020 scored 8.3 out of 10. Between 2012 and 2017 ridership has increased by 38% and the contract price has decreased by 11%[16].

Picture: HCT LibertyBus

The offer for bus operators and LTAs

Operators will gain things they have long sought: first, the certainty of continued support through what are likely to be several years of recovery; and second a commitment by councils and Government to tackle some of the biggest threats to the future of their operations, above all traffic congestion.

LTAs will have access to significant new Government funding streams and powers to make a difference in their areas, and significant assistance to build up their capabilities to exercise those powers. LTAs' performance in exercising these new responsibilities will be taken into account when allocating this and other DfT funding.

The Government intends to bring forward the English Devolution and Local Recovery White Paper in due course, detailing how the UK government will partner with places across the UK to build a sustainable economic recovery.

We are clear that successful partnerships should work for both parties, with incentives and benefits for both, and that where new franchising proposals are developed, they should harness the commercial skills and expertise of bus operators, such as seen in Jersey.

We will use part of the £25m fund for supporting LTAs to establish England's first Bus Centre of Excellence (BCoE), enabling the delivery of a long-term programme of activities and support. The centre will be co-sponsored by the Department, and training will be managed and delivered by experts from across the bus sector. This will focus on: public transport service planning and network design, performance oversight, contract procurement and competitive tendering, design and development of bus priority measures, and wider traffic management measures to improve local bus performance.

We will tailor our approach to ensure that the needs of differing LTAs, their officers and elected members of local authorities, are sufficiently met, recognising that a single approach will not work everywhere. Our approach will be based on evidence: we will work with stakeholders in local government, the bus industry and professional institutions to ensure we understand the gaps in capacity and capabilities across the sector. We want to ensure that all parties are well placed to develop and deliver Enhanced Partnerships, franchising and Bus Service Improvement Plans and drive forward the productive partnerships needed to make a step change in bus services.

We will also support a peer network of senior leaders working to deliver bus transformation, to support the sharing of experience and solutions across the private and public sector.

Partnership guidance will also clarify how unexpected circumstances, such as the COVID-19 pandemic, should be handled – to minimise the additional work that LTAs need to take to reach a franchising decision.

Devolution

In line with previous devolution of bus funding to Transport for London and Transport for Greater Manchester, we will work to devolve Bus Service Operators Grant (BSOG), including once it has been reformed, to MCAs and other LTAs who request it. This will form part of wider work to reform BSOG (see page 48) and will not be in place for financial year 2021–22.

In return, we expect all LTAs to:

- agree Enhanced Partnerships or to be following the statutory process to decide whether to implement franchising;
- commit to significant improvements in traffic management, including bus priority measures, active travel measures and control of roadworks.
- drive forward other relevant Government policies such as air quality improvement and, where relevant, the implementation of Clean Air Zones; and
- in addition, MCAs should develop (along with their constituent member authorities) a Key Route Network, subject to consultation and legislation, to include development of bus priority measures and improved bus performance.

Delivering better bus services

This investment and changes to how the bus sector works will drive improvements for passengers. These are set out on the following pages.

Intensive services and investment on key corridors

In densely populated areas, Enhanced Partnerships and franchising agreements should ensure that key radial roads have buses so often – every few minutes – that passengers never need a timetable. Evening services on these roads should be at least every 15 minutes. On these routes, wherever physically possible, there should be significant investment in bus priority – bus lanes, at a minimum. See below for more about bus lanes and priority measures.

Bus Service Improvement Plans should also carefully consider network design – for example, whether local needs are best met through infrequent “branch” services of main routes which provide through journeys at the expense of frequency, or through high-frequency feeder routes connecting to the main line service instead, with through ticketing at no extra charge.

On a few corridors, the legacy of the 1980s “bus wars” is overprovision, with dozens of buses per hour, including with duplicate competing services which do not accept each other’s tickets. This is wasteful, polluting and can paradoxically make services slower and less attractive. Planning should make sure that services are appropriately spread between corridors, avoiding significant over and under provision.

There must be significant increases in bus priority

The key to making buses more attractive is making them faster and more reliable.

In Bus Service Improvement Plans, we expect to see plans for bus lane on any roads where there is a frequent bus service, congestion, and physical space to install one. Bus lanes should be full-time and as continuous as possible. They should be part of a whole-corridor approach, including other physical measures such as:

- Traffic signal priority;
- Bus gates, which allow buses to enter a road that prohibits access to other traffic; and;
- Clear and consistent signage.

We will not support opening bus lanes to electric cars or vans, which would quickly erode their benefits to bus users. Intensive and granular focus on the precise conditions of each road can pay dividends, as some places have shown. Issues such as bus stop locations and spacing, residential parking policy, and removal of buildouts and pinchpoints should all be considered. Non-residential parking will not generally be an efficient use of roadspace on such routes.

Loading's impact on bus lanes must be minimised, and to achieve this hours should be restricted, or loading bays inset or re-provided close by, away from the main carriageway. LTAs should consider physical changes to roads' footprints to allow the provision of continuous bus lanes. Where there is insufficient space for a bus lane, LTAs should consider point closures of some main roads to private cars, allowing through traffic on other main roads nearby.

Robust enforcement of traffic restrictions can bring benefits for buses through less congestion. As we have already announced in Gear Change: A Bold Vision for Cycling and Walking, we will this year commence authorities' enforcement powers under the remaining elements of Part 6 of the Traffic Management Act 2004. These powers will allow local authorities, rather than the police, to enforce against a range of moving traffic offences which can help ease congestion and help buses make progress more quickly. We will issue guidance to local authorities about the powers, including on the importance of ensuring citizens are properly informed about them, and the need for traffic signing to be properly designed and placed, so that it is clear to drivers what restrictions are in force. As we stated in Gear Change, we will consider issuing warnings for a limited period after introduction or for a first offence.

The Government will refresh its statutory guidance to local authorities on traffic management, to provide up to date and relevant advice. Statutory traffic management guidance will be updated to expect enhanced bus reliability as an integral part of highway authorities' Network Management Duty. We will also consider how to facilitate sharing of good practice and experience in delivering bus priority schemes.

As set out in "A Better Deal for Bus Users" in September 2019, all new road investments in England which receive central UK government funding are now required to either support bus priority measures or explain why doing so would not be necessary or appropriate in that instance. All funding bids now need to explicitly address this issue.

We will also support bus rapid transit and other such schemes which lie between conventional bus and light rail, aiming to bring the benefits and user experience of light rail to bus corridors at significantly lower cost. See page 66.

Key Route Networks

Most Mayoral Combined Authorities (MCAs) now have a Key Route Network (KRN) of the most important local roads for which they share powers to operate and manage with Local Highways Authorities. The Government plans to consult on strengthening the KRN approach. Whilst some KRN designations exist at present, Mayors are limited in their powers, particularly over the allocation of road space.

Our intention is to increase their powers over their KRNs, similar to the powers that apply already in London and enable integrated highways and transport authority status at Combined Authority level for these roads, and we will consult on this. As with other local authorities, MCAs and their constituent members will be expected to implement ambitious bus priority programmes and other roadspace reallocation measures, using all relevant powers available to them. As explained earlier in the section about Bus Service Improvement Plans, future Government funding will recognise the level of ambition demonstrated by local authorities.

Superbus networks for "intermediate" areas – neither fully urbanised nor deeply rural

A Superbus network provides higher frequency, lower fare services; it can deliver the type of change we want to see. Places such as South Northumberland, County Durham, Lancashire, and the East Midlands, with their patchworks of small industrial towns and large villages, have not had the advantages of metropolitan transport authorities but are ideal bus territories that could really benefit from the Superbus concept. We particularly encourage ambitious Bus Service Improvement Plans in these types of places and remain committed to supporting the first, low fare Superbus network in Cornwall.

More comprehensive 'socially necessary' services

Currently, LTAs can step in to ensure that 'socially necessary' services are provided where there are gaps in the commercial network. But outside specific categories, there is no obligation on LTAs to fund these crucial services. Across England, there are significant differences in provision, from reasonably generous to almost nothing, but the trend is sharply downward. Many communities have lost their daily bus services altogether. Others have services for only a few hours a day, suitable perhaps for a short shopping trip but not for work or longer-distance journeys. Others might have relatively good services in the daytime but no service at all in the evenings. This has a serious impact on people's ability to find and travel for work.

Partnerships and franchising arrangements must deliver more comprehensive services, including those which are socially or economically necessary. This includes services to smaller and more isolated places, and more services in the evenings and at weekends. Without services at the times people want, people will not use the bus. Lack of a whole-day service reduces the number of passengers in the daytime too, preventing people from using the bus if they are unable to get back in the evening.

We will issue new guidance on the meaning and role of 'socially necessary' services, expanding the category to include 'economically necessary' services for the first time. This recognises the vital role that buses have in getting people to work at all times of the day and night. This guidance will set clear expectations of what we want to see. To drive forward the levelling-up agenda, this will include provision for economically disadvantaged areas. Making sure that people are connected to centres of employment, broadening their choice of work and education, is both socially and economically important.

Through Bus Service Improvement Plans we expect LTAs to work with operators to set the daytime, evening and Sunday service levels that different communities need. In some cases, these services could be provided by demand responsive transport, integrated with the conventional buses, where they exist. Places that are economically disadvantaged, including smaller industrial towns and isolated housing estates, should also be included in that thinking to connect them better to centres of employment, broadening opportunities and the choice of work, education and leisure for those who live there. We will also expect to see better services being provided to places of employment off existing main bus routes, such as out-of-town industrial estates and factories. Again, this could be done with integrated demand responsive transport geared to shift times. There is a role to play for employers in helping with this.

If this cannot be achieved by agreement, we will consider statutorily requiring the provision of socially necessary bus services, including those which improve people's access to employment.

We will modernise the Bus Service Operators Grant (BSOG)

Almost £260 million per year is paid in BSOG to operators of eligible bus services and community transport organisations. This includes a core element to recover some of their fuel costs, and incentive-related payments. It benefits passengers by helping operators keep fares down, and enabling operators to run services that might otherwise be unprofitable, particularly in rural areas. It is cost effective, delivering high value for money[17] with each £1 spent generating between £2.70 and £3.70 in benefits, including wider economic and social impacts.

However, the outcomes incentivised by a fuel-based subsidy are not right for the twenty-first century and the environmental challenges we face; and the BSOG incentive payments are outdated, focusing on delivering outcomes that should have become standard many years ago. We will reform BSOG to better meet Government priorities, which will support environmental objectives, levelling up the country, and provide better passenger journeys.

We will consult in 2021 on the details of a modernised BSOG. We will set out our detailed plans in that consultation, but we are considering:

- moving the main element of BSOG from fuel consumption to a distance rate which would address the current problem where base BSOG is not paid to electric vehicles (except for a small incentive payment);
- updating the low carbon incentive to better meet environmental objectives. The existing incentive started in 2009 so is based on comparisons to a Euro III bus;
- an additional amount for rural bus services;
- new incentives for demand responsive transport, which could encourage the delivery of services, and bus use, in rural areas;
- efficiencies from administrative changes such as payments in arrears; and
- ending payments for 'dead' mileage between depots and the start or finish of passenger services; and
- making the reformed BSOG available only to LTAs and operators in an Enhanced Partnership, or where franchising is being actively pursued.

We will make sure that future local transport is joined up

We are committed to reforming future local transport funding to better support local leaders deliver their priorities and achieve key objectives, such as levelling up and decarbonisation. We will better coordinate local transport funding by engaging local areas about their investment priorities in the round and their overall strategy for improving transport infrastructure. This will enable better strategic planning and more joined up infrastructure projects across local transport networks.

Local Transport Plans (LTPs) will become the focus of transport funding discussions between central and local government. LTPs should set out holistic place-based strategies for improving transport networks, proposed projects for investment and ultimately how key objectives will be achieved. In particular, LTPs should include clear plans for how interventions across local transport modes will drive decarbonisation in their area. To ensure investments achieve their intended aims, LTPs and business cases in future will need to demonstrate local commitment to deliver certain measures. For example, this strategy sets out what we require of Bus Service Improvement Plans and local commitment to bus franchises or Enhanced Partnerships. Bus Service Improvement Plans must be fully aligned with wider Local Transport Plans.

Reading Buses

Reading Buses is owned by Reading Borough Council and has been transporting passengers for over one hundred years. It has one of the youngest and most environmentally friendly fleets in the UK, and in the Autumn 2019 Transport Focus Bus Passenger Survey, Reading Buses' passenger satisfaction score was 92%[18].

Bus usage has grown through consistent partnership working between the Council and bus company, resulting in Reading having the second highest bus use in England, outside London, per head of population in 2019/20 – with an average of 137.5 annual bus trips per person[19]. Total bus use in Reading borough had grown to over 22m journeys in 2018/19 before the pandemic, an increase of almost 40% in the last 6 years[20].

Picture: Reading Buses

The Government is committed to transforming local transport, and its recent publication "Gear Change: A bold vision for cycling and walking" sets outs its plans to transform the role cycling and walking play in our transport system. "Gear Change" and this strategy complement each other. Cycling, walking and using the bus are all part of the Government's agenda to deliver a transport system that works for everyone, where walking cycling and taking the bus are a natural choice for shorter journeys.

As set out in Gear Change, we will carry bikes on more bus routes. Buses and cycles together can allow more journeys which are otherwise only possible by car, recognising that far more people live near a bus stop than a rail station. In many rural areas, where demand is lower, we will work with bus operators to allow a limited number of bikes on board, in addition to onboard wheelchair space, on appropriate routes, as a few rural bus routes already do. A handful of urban routes also allow bikes, using external racks. We will investigate extending this provision further. The Cycling and Walking Investment Strategy Investment Model also reveals that bus route enhancements also have an impact in generating additional walking trips.

We will review whether it remains right that local authorities cannot set up new bus companies

The Bus Services Act 2017 prevents further municipal (that is, local authority-owned) bus companies being set up from scratch. While this is not an absolute barrier, as Local Authorities can already purchase an existing bus or coach company, we believe this part of the legislation is ripe for review. There are only a handful of municipal bus companies at present, but there are some strongly performing examples among them.

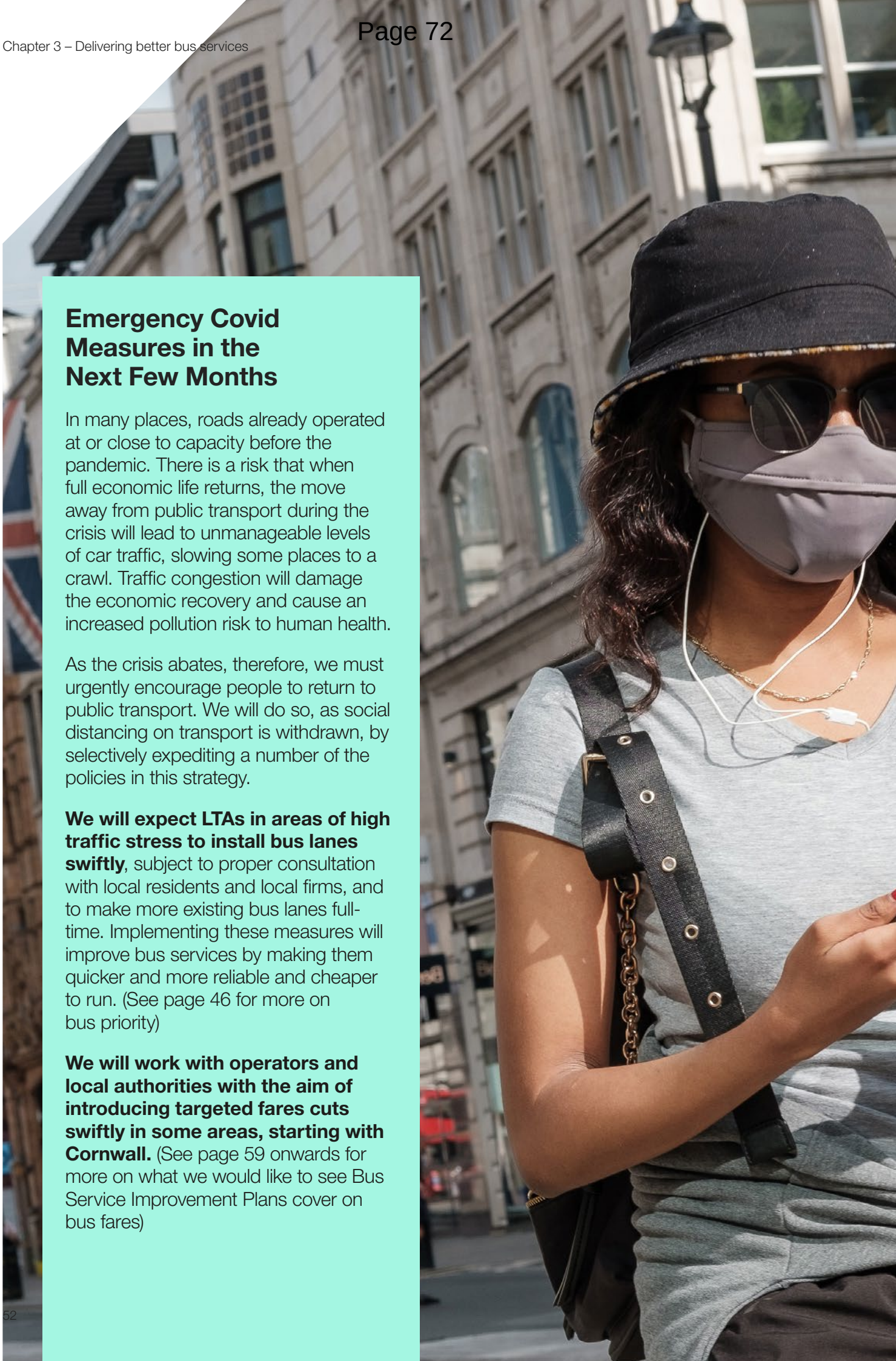
Future-proofing our regulatory framework for more flexible services

The Future of Transport Regulatory Review aims to address the opportunities and challenges that technology is having on our traditional concepts of transport. The first Call for Evidence[21] of the Regulatory Review examined the legislative framework around on-demand, flexible bus services which currently pre-dates the advent of the smartphone. The key findings from this were published in December 2020, and many responses emphasised the need for regulation to be focused on the desired outcomes for the user rather than the service itself. Learnings from the bus sector must feed into the review.

The Law Commissions have been undertaking a review of Automated Vehicles (AVs),[22] looking at the regulatory framework for the safe deployment of automated vehicles in the UK. The second consultation of this review, the findings of which were published in May 2020, specifically considered how highly automated vehicles might be used for passenger transport. In their third consultation paper in December 2020, the Law Commissions proposed a system that unifies passenger and freight licensing to reflect the modular design of highly automated vehicles (with no human on-board). Passenger AVs would be subject to stricter requirements than freight AVs but both would be founded on the same requirements necessary for a vehicle with no responsible person on-board. We will review how legislation that separately covers buses, taxis, private hire vehicles and light rail may be brought together to reflect the blurring boundaries between these forms of travel, within the Future of Transport Regulatory Review. This will give service providers a clear, long-term, regulatory framework, which will allow new forms of service to be provided to passengers by removing obstacles to innovation and allowing greater flexibility.

We want to stimulate innovation and enable it to thrive. Regulation itself will change, as it always has. But our goals will not change. We want transport to be cleaner, safer, healthier, greener, cheaper, more convenient, and more inclusive. Our approach will be underpinned as far as possible by the following Future of Transport principles:

1. New modes of transport and new mobility services must be safe and secure by design.
2. The benefits of innovation in mobility must be available to all parts of the UK and all segments of society.
3. Walking, cycling and active travel must remain the best options for short urban journeys.
4. Mass transit must remain fundamental to an efficient transport system.
5. New mobility services must lead the transition to zero emissions.
6. Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.
7. The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers.
8. New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.
9. Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.



Emergency Covid Measures in the Next Few Months

In many places, roads already operated at or close to capacity before the pandemic. There is a risk that when full economic life returns, the move away from public transport during the crisis will lead to unmanageable levels of car traffic, slowing some places to a crawl. Traffic congestion will damage the economic recovery and cause an increased pollution risk to human health.

As the crisis abates, therefore, we must urgently encourage people to return to public transport. We will do so, as social distancing on transport is withdrawn, by selectively expediting a number of the policies in this strategy.

We will expect LTAs in areas of high traffic stress to install bus lanes swiftly, subject to proper consultation with local residents and local firms, and to make more existing bus lanes full-time. Implementing these measures will improve bus services by making them quicker and more reliable and cheaper to run. (See page 46 for more on bus priority)

We will work with operators and local authorities with the aim of introducing targeted fares cuts swiftly in some areas, starting with Cornwall. (See page 59 onwards for more on what we would like to see Bus Service Improvement Plans cover on bus fares)


THANK
YOU

Chapter 4

Delivering for passengers

Buses for Everyone: We will set a high bar for standards enabling buses to be used by all.


7 DOGS
HEAD STREET
SHOP
CONVENIENCE STORE
BET
Martlesham Tesco
via Kesgrave
66
Ipswichreds
69008
AU05 DMV

In 2018, the Government consulted on proposals to use powers introduced by the Bus Services Act 2017 to mandate the provision of audible and visible route and next stop announcements on local bus services, in order to help disabled passengers to travel with greater confidence. Subject to final analysis, we will make these Accessible Information Regulations by summer 2022, ensuring passengers can board any bus with confidence and that they will know when to alight when their destination is reached. We will increase the funding for the smallest bus companies to ensure their passengers benefit from improved onboard information by at least £1.5m in 2021–22.

We will make sure that apps can provide passengers with accessibility data about bus stations and stops so they can make informed travel choices regarding accessibility of services. Recognising roadside information and hard copy formats are also important for many passengers.

We will expect LTAs to explicitly consider inclusivity and to review the impact of roadside infrastructure on passenger safety, security and accessibility as part of their Bus Service Improvement Plans.

We will also review the impact of roadside infrastructure on passenger convenience, comfort, safety, security and accessibility, seeking to understand the factors which permit or encourage greater bus usage, and those which turn potential passengers away. We will also consider how we can use this understanding to empower passengers to make informed journey choices, and to support LTAs to provide facilities which encourage greater bus use.

We will ensure that buses funded by Government provide an enhanced level of accessibility: including additional flexible space for a second wheelchair user or passengers with pushchairs, hearing loops, space for assistance dogs, and audible and visible information.

We will review eligibility for free bus travel for disabled people to ensure that we are improving equality of opportunity and helping disabled people participate fully in public life. We will also look to digitalise the concessionary bus pass for older and disabled people in England, giving passengers the option to store their permit on a smartphone.

We will digitally transform the bus service registration process, ensuring it is optimised for passenger information purposes and is suitable for the provision of new innovative services. In addition, we will consider setting minimum standards for registration in the future to ensure buses are providing what passengers want. We will deliver a comprehensive review of the Public Service Vehicle Registration Regulations under which operators register their services, to ensure they are fit for purpose for the 21st century.

We will review key regulations to improve accessibility. This includes the Public Service Vehicles Accessibility Regulations 2000 (PSVAR) by the end of 2023, ensuring that future decisions on accessibility standards are based on an up-to-date understanding of passenger need. We will consult in 2021 on draft amendments to the Public Service Vehicles (Conduct of Drivers, Inspectors, Conductors and Passengers) Regulations 1990, to ensure that the wheelchair space and priority seats are made available for passengers who need them. We will continue to work with the Driver and Vehicle Standards Agency (DVSA) to ensure that non-compliance is identified, and effective action is taken in response.

Accountability for local services also means accountability for promoting access for all. We expect each Local Transport Plan to include measures that improve accessibility for older and disabled people, including: designing appropriate networks which minimise walking distances to key destinations and streamline inter-connectivity, promoting high-quality customer service through appropriate and consistent training, modernising vehicles and upgrading supporting infrastructure to facilitate independent accessible journeys.

The design of bus infrastructure improvements should be informed by the experience of disabled people and consulted on with a range of passengers; particular care should be taken when implementing bus priority measures to ensure that they do not impede access for disabled people reliant on private motor vehicles, taxis and private hire vehicles.

We will continue to fund free off-peak bus travel for disabled people, free off-peak travel for pensioners and free travel to and from school for children who live beyond walking distance. We will not fund travel for people who are not necessarily disadvantaged, such as blanket free travel for unaccompanied children or older people below the state pension age.

Fares must be lower and simpler

Average bus fares have risen by 403% since 1987*, compared to 325% for rail fares and 163% for motoring costs[23]. Lower and simpler fares attract passengers. They should be seen as an investment not just in transport but in town centres, in social inclusion and in a greener future. We will expect to see fares policy as an integral part of Bus Service Improvement Plans.

Within cities and towns, we want low flat fares (or maximum fares and daily price caps) to be the norm, as in London. Flat fares speed boarding and are easier for passengers and potential passengers to understand. We want to see lower single fares and more low daily price capping. We will also expect Bus Service Improvement Plans to consider youth fares; initiatives such as the youth fares implemented in Merseyside had a positive impact on patronage and we want to see this replicated across the country.

* DfT buses fares data weighted together with coach fares data collected by the Office for National Statistics.

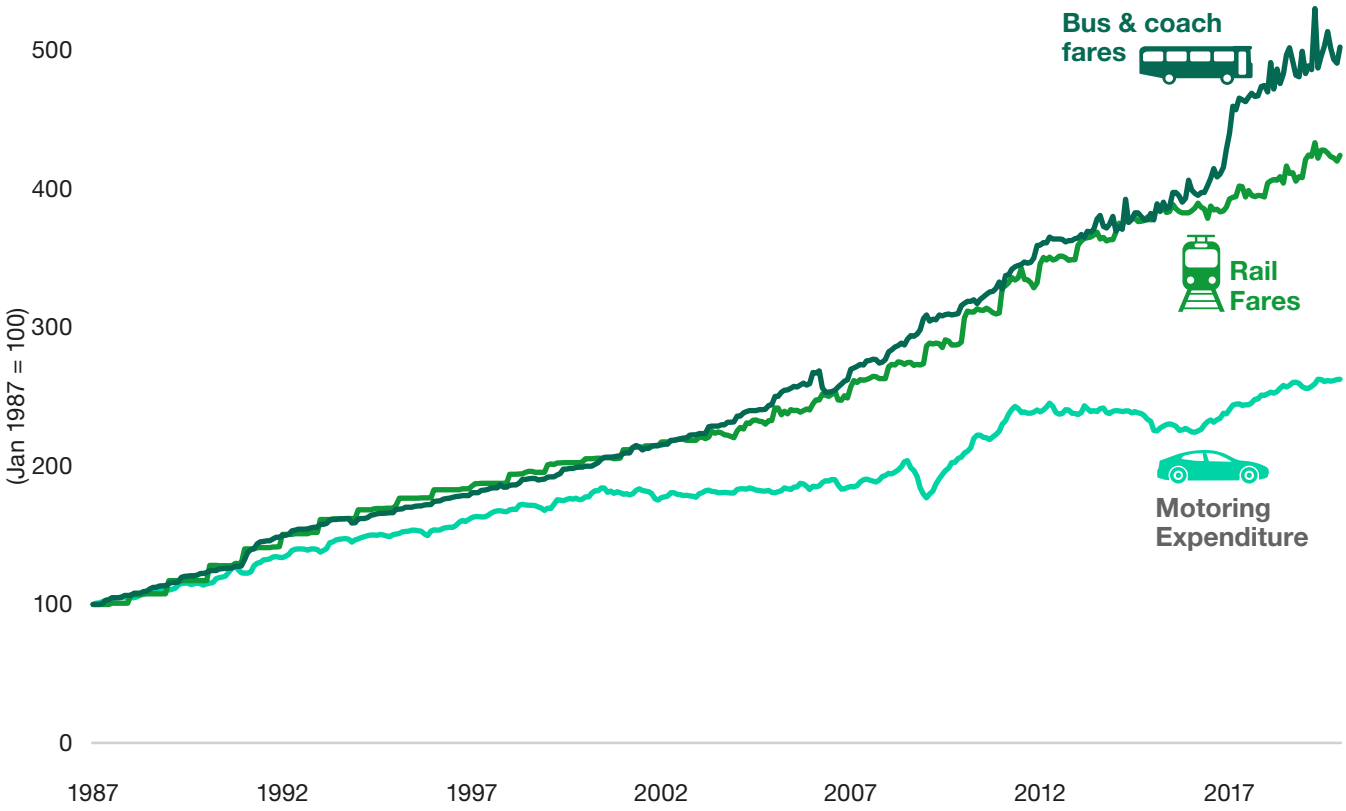
There must be seamless, integrated local ticketing between operators and we want to see this across all types of transport

We know that passengers value the integrated and simplified service found in London, with no fuss multi-modal and multi-operator tickets and the same high-quality information for passengers – and we want LTAs to work towards replicating this seamless experience everywhere. There are many places where we can see that integrated multimodal ticketing drives up use of public transport. In the West Midlands, the SWIFT scheme which connects bus, tram and train has enabled passengers to travel on public transport in a seamless manner. The West Midlands is one of the few areas nationally, that pre-pandemic, had reported significant increases in ridership.

Merseyside – ‘MyTicket’

Across the Liverpool City Region, the introduction in 2014 of ‘MyTicket’ priced at £2.20, which allows under 19s unlimited day travel on any bus, has been one of the key drivers of fare paying passenger growth. By 2019, the number of bus journeys made by young people had increased by 168%[24]. Initiatives like this give young people a great value and easy to understand ticketing offer, which can encourage bus use from an early age and increase the likelihood of these people remaining bus users throughout their adulthood.

Retail Prices Index (RPI): Bus and coach fares, rail fares and motoring expenditure, 1987–2019[25]



We want to see multi-operator ticketing everywhere, covering all bus services at a price little if at all higher than single-operator tickets, then to extend this to tickets that cover all travel modes (bus, light rail/metro, rail). Approximately 75% of places do now have multi-operator tickets allowing travel on all bus services in the area but they are not always well advertised and can be significantly more expensive than single-operator tickets.

Nowhere outside London has multi-modal daily and weekly price capping using contactless debit or credit cards, and only a few places have multi-operator daily price capping using contactless. We want partnerships and franchising agreements to change this. We expect to see all Bus Service Improvement Plans setting out how they will deliver no-fuss, multi-operator tickets and price caps on contactless credit and debit cards, at little or no premium to single operator fares. We will expect all operators to work with LTAs to deliver this.

We will work with transport technology providers, app developers, bus operators and LTAs to ensure that any technology to support this is developed strategically, and money is not wasted on different technology solutions for different places. As rail ticketing and fares systems are updated, we will also consider opportunities for facilitating integrated electronic ticketing with buses.

84% of buses in England already accept contactless payment[26]. To drive even greater adoption of contactless across the industry, we will use CBSSG to incentivise operators to adopt the technology. In the longer term, to ensure the industry reaches, and then maintains the standard of 100% contactless, we will consider making it a condition of bus service registration and BSOG eligibility.

Given the growing importance of contactless on buses, we do not believe that there is any need to integrate or unify the many existing bus smartcard products. Their usage will decline as contactless uptake rises. But we also believe that operators should continue to accept cash for now: there is a risk that otherwise we will deter or exclude passengers who, for any reason, may not have usable debit or credit cards. Price-capping will obviously not be available to those who pay cash, but paper day tickets should be.

Through ticketing should also be easier. A degree of through ticketing between bus and rail is already available under the PlusBus scheme, although its coverage and availability are limited. We will promote PlusBus better, and work towards extending the range of destinations available under it and making PlusBus tickets available as e-tickets and mobile tickets, so users can start their journey with a bus trip without needing to have paper tickets posted out or collected in advance from a railway station.

We want to see through fares for any journey across England involving bus, rail and light rail easily available, not only on journey planning websites, but also on smartphones as standard, and will work with industry to secure this.

Service patterns must be integrated with other modes

More bus routes and demand responsive services should serve railway stations and for easy connections between modes, bus services should be timed to connect with trains. For example, in Cornwall, the railway line running through the county will act as the spine of the transport network and the new Superbus services will align with it. We will work towards the inclusion of bus services in rail journey planners as standard.

Buses must also work better with each other. There are many instances of poor connections and uncoordinated timetables. Bus Service Improvement Plans should detail plans for ensuring that in places (often rural) where services are regular, but not frequent, connectivity is maximised. Hub models can connect services, with buses all arriving and departing at the hub town within the same ten or fifteen-minute window each hour, ideally all servicing the same centrally located bus or railway station.

We will support people into work

Currently, only some bus operators accept the Jobcentre Plus Travel Discount Card. This card is provided by Jobcentre Plus advisers to those unemployed claiming Jobseekers Allowance or Universal Credit, and it gives 50 per cent off selected rail tickets and some operators' bus fares. We want to make the card accepted by all operators and will work with them to deliver this. We will also explore relaxing the eligibility criteria so the card is available to more claimants.

Services must be simpler and easier to understand

A key deterrent to using buses is that they are, or are perceived as, confusing. We have already described some negative features of the market, such as rival networks which do not acknowledge each other's existence, and which use the same route numbers for wholly different services. Bus Service Improvement Plans must eradicate this. We want to see common numbering systems, and routes that are as far as possible the same in the evenings and weekends as they are in the daytime. All operators which run the same route should accept the same tickets, use the same route number and be shown on the same timetable. Timetable changes should wherever possible be co-ordinated, and at set, relatively infrequent points in the year.

Bus Service Improvement Plans should consider whether to simplify routes; for example, considering whether networks should have more high-frequency major route services rather than lots of low-frequency services combining. Route variations and letter suffix routes should be reduced.

Networks often try to provide infrequent through services to everywhere or divert buses away from the main route to serve smaller places, reducing speed and convenience for people travelling between a route's major points. As described, on high-frequency services more use could instead be made of good hub-and-spoke connections, with frequent feeder buses connecting into frequent major routes and through ticketing. This becomes possible if frequency and reliability improve.

Bus Service Improvement Plans should consider questions of network design like this – and as with all elements of the plan, show how stakeholders and communities will be engaged in the thinking.

Bus information

It is too difficult for non-users to find where buses go. Information online is often incomplete, misleading or hard to locate. But bus operators now have a legal obligation to publish timetable and running data, and we will be providing funding for predictions information which will inform the passenger how many minutes away their bus is from the bus stop and on average how long the journey will take.

Nottingham's Hucknall Connect

The Hucknall Connect service operated by Trent Barton offers local Hucknall residents in Nottingham an easy route into the city centre by connecting them to their local tram station and the main bus routes.

Their connect ticket option includes a full day's travel on Connect in Hucknall and the tram.

Picture: Trent Barton

Bus Journey Information

Transport for the West Midlands (TfWM) is part of the West Midlands Combined Authority, chaired by the Mayor of the West Midlands. It is the UK's third largest public transportation authority, responsible for a region encompassing the major cities of Birmingham and Coventry, with a population of 2.9 million people and in 2019/20 accounted for 246.6 million passenger journeys.[27]

To improve customer experience and increase use of public transport, TfWM has invested significantly in the provision of accurate passenger information, supporting operators and the developer community to include timetable and location data for bus tram and rail delivered to journey planning applications, websites and third-party developers as well as to 1,800 real time information displays at bus stops and stations.

However, this is a challenging task, with more than thirty bus operators, six train operators as well as a tram operator running services they use many different systems each providing data in different forms and formats, at different frequencies and with varying levels of accuracy.

The Bus Open Data Service was launched in November 2020 and the statutory obligation to publish data was introduced on 1 January 2021, with national datasets currently being built for timetables, fares and location. None of the most commonly-used public transport journey planning apps and websites yet provide comprehensive, accurate, England-wide local bus information and there are many other apps that only include some operators.

This may mislead potential passengers into thinking that there are no services to the place they want to go. A number of apps and websites give inaccurate information when tested. Web searches for particular routes often also bring up old timetable PDFs which have since changed. Every town, city and rural area should have published, up to date maps.

We will continue to work with app providers and search engines to support the creation of transport apps using this data. We will aim for the apps to show every service, including fares and running information, and support inclusive and accessible journey planning, and will provide guidance through our upcoming Mobility as a Service Code of Practice. We want passengers to be able to plan, buy and show tickets on their smartphone for any journey, including through trips on buses and other transport modes, though this will not be achievable immediately.

Information at bus stops is often poor. They should be viewed as free advertising sites for the bus, including the opportunity to promote services' frequency and price, and should include full timetable information.

Picture: KPMG

Networks must feel like a whole system which works together

One of the distinguishing features of London's bus network is that it feels like a network, a coherent, consistent, strongly-branded operation which gives people confidence in using it. Passengers know that a bus will be along in a few minutes, what the fare will be and what the experience will be like. They know that at an interchange there will be a poster guiding them to the next bus or a train. Typefaces, liveries, logos create an impression of unity. Most successful consumer businesses, such as retailers and airlines, aim to create similar levels of consistency and brand identity. LTAs, in their Bus Service Improvement Plans, should consider strong network identities. There are already successful examples of individual, eye-catching route branding in different parts of the country. Route branding can still work well as part of a wider network identity.

We will promote buses, aiming to demystify them and improve their image

Research shows that many people have negative perceptions about buses but are often pleasantly surprised when they try them. We, as Government, have a role to play in promoting the use of buses, to attract both previous and new users onto buses, working closely with the LTA, bus operators and trade bodies to reverse the decades of decline in customer numbers. To do this, we will support an industry led Back to Bus campaign this year to promote the reformed network and address misconceptions, encouraging people to use the bus. This may include signposting people to apps and websites, targeted local promotions encouraging non-users to give buses a try, such as free day vouchers, try-before-you-buy, refund guarantees if a passenger is dissatisfied and a period of free travel for people who have started new jobs or bought new homes. We will also showcase services focussing on the quality of experience for commuters, including charging points, comfortable seats and other perks.

In popular tourist areas such as the West Country and the national parks, often blighted and congested by too many cars, we want Bus Service Improvement Plans to show how far more will be done to promote buses to visitors, with improved services, easily accessible information, park-and-ride sites and special tickets. Scenic railways, such as the Settle-Carlisle and West Highland lines, are now significant tourist attractions and wealth generators in their own right. We see no reason why several of Britain's equally splendid bus routes should not be marketed in the same way.

We will give bus passengers more of a voice and a say

Bus Service Improvement Plans must include a passengers' charter giving bus users rights to certain standards of service, including punctuality, vehicle cleanliness, proportion of services operated, information and redress.

We want to see mechanisms for redress at a local level and means to ensure these standards are met, which could include forums such as Bus Advisory Boards being set up. At a national level, we will consult on the appropriate standards and mechanisms by which these can be enforced, and a review of the consumer landscape to determine the appropriate body to supervise them.

We will continue to work with the bus industry to increase awareness of bus passenger rights including those specific to disabled passengers, and how complaints can be made. We will also continue to promote the adoption of best practice in disability awareness training: we will publish the high-level training framework to drive up standards of customer service of drivers and on-board staff who seek to understand passengers' access needs, and who tailor the support they provide accordingly.

Picture: Tees Flex Service

Tees Valley – Tees Flex Service

The new Tees Flex service, which has been funded by the Tees Valley Mayor and Combined Authority, was introduced in February 2020. It is operated by fully accessible minibus vehicles and caters for on-demand and pre-bookable journeys for residents in more isolated communities across Darlington & Stockton, Hartlepool, and Redcar & Cleveland.

The service has created new links which can now be accessed for the cost of a bus fare and passenger numbers have remained strong even during the COVID-19 outbreak. The service can be easily pre-booked via a smartphone app, website or over the telephone. Passengers can request pick-up and drop-off points within the serviced area, and to destinations including train and bus stations, along with hospitals outside of the area.

More demand responsive services

In lower-density areas and at less popular times, conventional fixed-route buses can never compete with the attractiveness or flexibility of the car. But now, aided by technology, demand responsive services can – offering a more personal, on-demand service, taking people from their doors or closer to their doors than a regular bus.

Demand responsive services are not a perfect solution to every challenge. Several of the large operators have tried and failed to operate them commercially. They must strike a balance: on the one hand, providing a service which is responsive and frequent enough to be useful and on the other, not running too much mileage, with little environmental advantage over the car or subsidy advantage over conventional buses.

They will never replace frequent urban and inter-urban routes, as too many vehicles would be needed.

But they could be particularly useful to improve provision in the countryside and in the evenings and on Sundays, including serving large workplaces with anti-social hours, such as hospitals, tackling the bugbear of hospital car parking. Because they are more door-to-door, they can overcome the concerns of some users, particularly women, about taking public transport at night.

We have already established a Rural Mobility Fund to trial more demand responsive services and have awarded funding to 17 pilot projects. We will consider expanding this work, including piloting non-rural services. We expect all demand responsive services to be fully integrated with the mainstream network, accepting the same tickets and passes, using the same or similar branding and shown on timetables and journey planning apps and websites. We also expect them to be provided using accessible vehicles, including provision for a wheelchair user.

On demand bus services in Sevenoaks

In Sevenoaks, Kent, an area with very high car ownership but also high levels of rail commuting, some local bus services have been replaced by demand responsive vehicles during the COVID-19 outbreak, while demand for services has been lower and social distancing in force.

These services have improved passengers' access to buses, which are easily bookable via a smartphone app, so residents can continue to make essential journeys to shops, work and medical facilities at no extra cost beyond a regular bus fare.

Picture: Go Coach

We want to ensure that the needs of rural transport users are given equal consideration to those in urban areas. We have piloted projects targeting rural areas specifically. We are committed to improving the connectivity of isolated rural communities and those with infrequent and unreliable services. We have been seeking views and evidence on what could be incorporated into a Future of Transport: rural strategy. This strategy will set out how innovations and technological developments in transport can be harnessed in rural communities. We want improved rural transport to support economic growth and development in rural communities.

Rural Mobility Fund

We have awarded funding to 17 pilot projects of this £20m funding scheme: the successful schemes will trial innovative, demand responsive solutions to transport challenges that rural, and suburban, areas often face.

"Total Transport"[28]

In 2016 we allocated £7.6 million to 37 separate schemes run by 36 local authorities to pilot Total Transport solutions; these were focussed on rural areas. "Total Transport" is about finding ways of commissioning public sector funded transport so that passengers get a better service with less duplication of resources. This can include services like non-emergency patient transport, adult social care transport and home to school transport. Considering all these streams together can allow networks to be designed so they complement each other, reduce administrative overheads by centralising commissioning, and achieve overall cost efficiencies.

We will support more Bus Rapid Transport networks

Bus Service Improvement Plans should include consideration of Bus Rapid Transit (BRT) networks on key corridors. BRT is a hybrid between bus and light rail, using high-capacity buses on segregated, bus-only roadways with stops more like light rail stations. Unlike light rail, however, buses can leave the segregated busways and use conventional roads. BRT could be a game-changer for bus networks. It can deliver a large proportion of the benefits of rail-based schemes at much lower cost, as demonstrated in schemes such as Cambridgeshire Guided Busway, Belfast Glider and Leigh-Salford-Manchester Busway.

BRT systems feature comfortable vehicles, fast journey times, real time passenger information and high-quality waiting environments. Costs are typically much lower than for rail-based schemes, owing to fewer engineering, planning and land acquisition constraints.

Passenger journey times can be lower than those on rail-based systems due to increased frequencies. In a number of large South American cities, they can carry tens of thousands of passengers per direction, per hour, equivalent to conventional rail lines. Journey times are optimised when travelling on segregated infrastructure. However, buses are able to run on conventional roads and are therefore not constrained by the infrastructure: they can steer around roadworks and are not dependent on the provision of a fully-segregated alignment. The Cambridgeshire system is a good example of mixed operation.

We think Glider-style BRT has great potential, and our ambition is to see the development of proposals for up to five Glider-style systems in England's towns and cities. We will work with local authorities and operators as local Bus Service Improvement Plans are produced to identify potential locations for system trials. These services could be protected from other competition through bus franchising powers (which are flexible and can cover routes at a local level not just wider geographies) – so they could be tendered like rail or light rail services.

Picture: Translink Glider

Bus Rapid Transport – Belfast's Glider

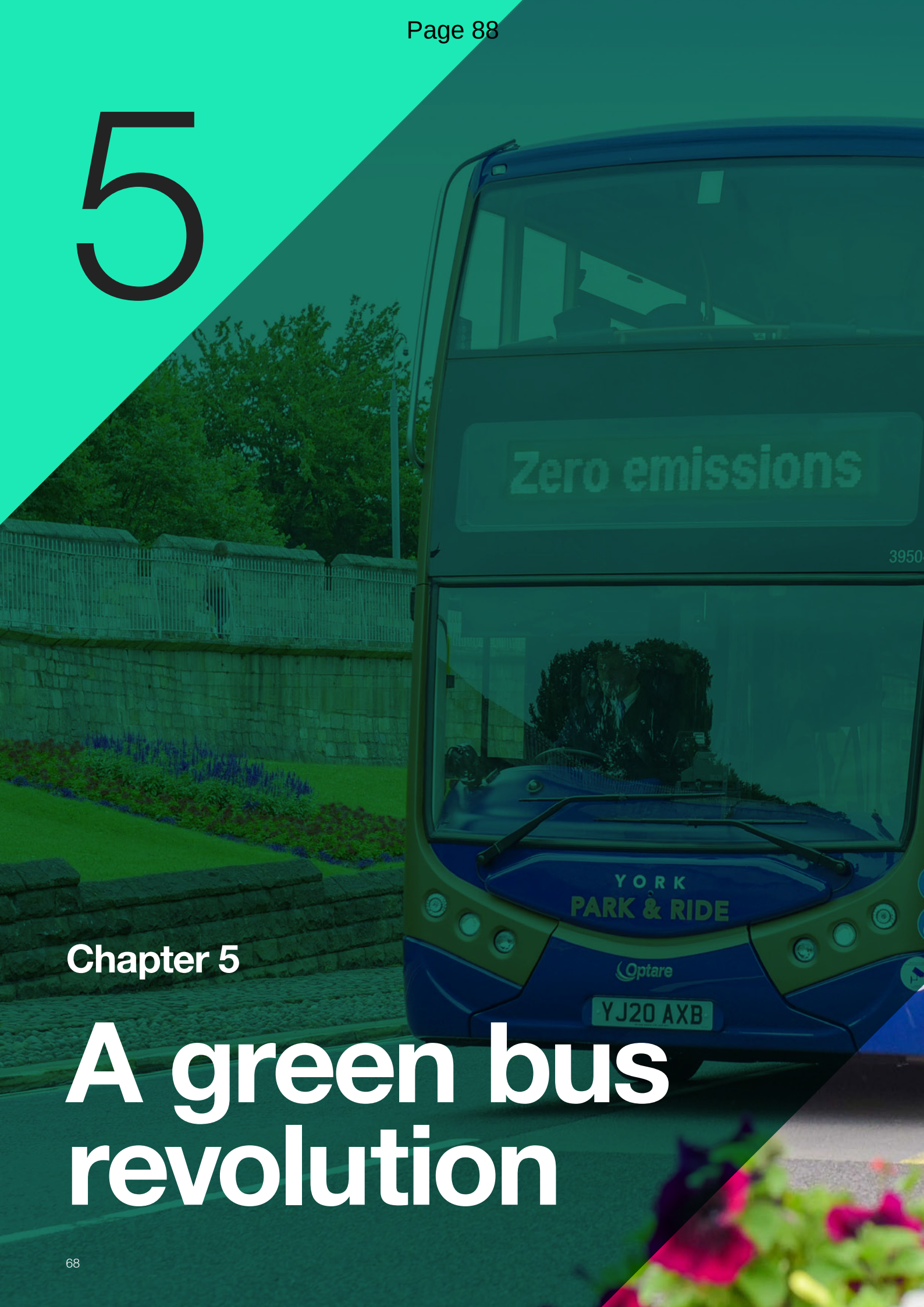
Translink's cross-city Glider services are operated by tram-style vehicles, which have three sets of doors on each vehicle for speedy alighting and boarding. The Glider provides an inclusive environment, including separate areas for wheelchair users and passengers with pushchairs, step free boarding and audible and visible stop announcements.

Key Features:

- Tram style stops with a shelter, benches and perches.
- Dedicated bus lanes throughout the route.
- Real time passenger information at all stops.
- 30% fewer stops than conventional bus, on average 400m apart to improve predictability and reliability of the service.
- Services spaced apart for maximum frequency and reliability, arriving every 7–8 minutes in either direction, so that passengers know they will never have long to wait.
- Additional facilities at the terminus, including a waiting room with seating and toilets.
- Sheltered bike storage to encourage cycling and free parking for cars to encourage park & ride into the city centre.
- Priority road maintenance – ensuring a high quality of surface for the bus lanes and improving drainage all along the route.

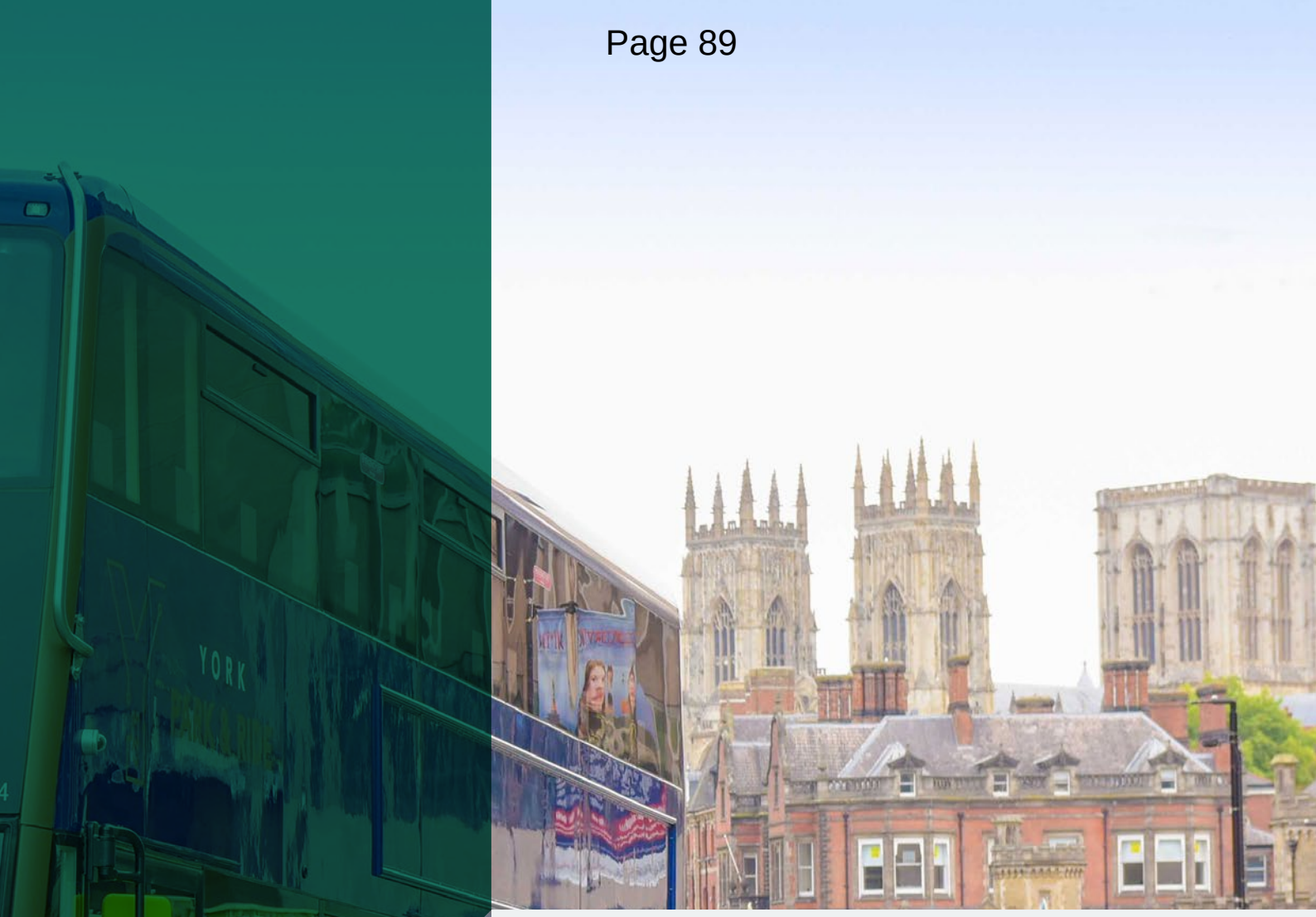
Construction costs for Bus Rapid Transit systems, such as Glider, are typically at least 50% lower than traditional light rail/tram schemes.

5



Chapter 5

A green bus revolution


YORK


WS15 ZEB

The UK has one of the most ambitious approaches in the world to achieving net zero by 2050. Our Transport Decarbonisation Plan (to be published shortly) will set out measures to help achieve this, with significant local air quality improvements preventing thousands of early deaths each year.


100%
ELECTRIC
ZERO
EMISSIONS
14031
14031

Zero emission bus services, that meet the needs of passengers and communities, and attract passengers from other forms of transport, are at the heart of our plans.

New vehicles offer more than environmental benefits – with more comfortable journeys and a reduction in vehicle noise and vibration they provide an opportunity to attract new users. The added incentive is that we expect that zero emission buses will achieve operating cost savings in the longer term, which can be reinvested in more frequent services, lower fares and other improvements for passengers.

Where we are

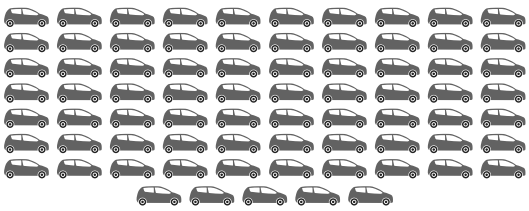
UK bus operators have invested over £1.3bn in cleaner and greener buses over the last five years, supported by £89m funding through the Government's Low and Ultra-Low Emission bus schemes*. However, there is much more to do. The majority of these vehicles are hybrid or gas-powered and only around 2% of England's bus fleet is fully zero emission today[29]. This represents 4% of London's fleet and 1% of the fleet in England outside of London[30]

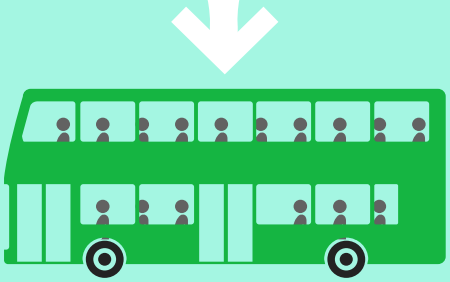
Bus operators share our ambitions to achieve a zero emission bus fleet. Many have committed to purchase only ultra-low or zero emission buses from 2025, and to start this process by 2023 in some urban areas, if there is continued Government support towards the extra purchase and fuel infrastructure costs[31].

3%

of transport greenhouse gas emissions in the UK are produced by **Buses and Coaches**

A fully-loaded double deck bus can take **75 cars off the road,** helping to reduce congestion and reduce the impact of transport on the environment





Each zero emission bus saves around per year

100% NO_x

23 kilograms

70% CO_2

46 tonnes

0

In June 2019, Parliament passed legislation requiring the Government to achieve **'Net Zero' Greenhouse gas emissions by 2050**

The Roadmap to Net Zero Bus Services

Five principles underpin our roadmap to a zero emission fleet. They are:

- We will consider all technologies fairly, assessing their cost, contribution to decarbonisation and utility.
- We will provide the financial support and incentives needed for the market to scale up quickly.
- We will take a place-based approach to investment wherever appropriate.
- Both operators and LTAs must play their part.
- We will ensure our plans for buses lead to overall carbon reductions.

We will consider all technologies fairly

Zero-emission buses can run on electric batteries or hydrogen fuel-cells. Battery-electric has dominated zero emission bus purchases to date, but both technologies have strengths in different circumstances. On current technology, battery-electric is a more efficient user of energy, but hydrogen can lend itself better to longer journeys in rural areas. We will consider all technologies fairly and our ambition is that:

- Fuel must be green: in the future we want to see carbon-free fuel being used;
- Zero emission first: low or ultra-low emission vehicles should only be purchased where a zero emission vehicle is not a viable operational alternative.

We also understand that local decarbonisation roadmaps may include transitional technologies such as biofuels and hybrids, which can help support decarbonisation of fleets while zero emission technology develops its capability.

This work will be aligned to the consultation on the date for the phase out on the sale of diesel buses. See page 75.

We will provide the financial support to scale up quickly

The high upfront capital costs of vehicles and energy infrastructure can act as a barrier to the rapid adoption of new zero emission buses. In the short term we will play our part by providing funding to address this challenge.

We will support the market to scale up by:

- giving the certainty to create a sustained pipeline of vehicle orders, allowing British bus manufacturers to invest, production volumes to increase and the costs of vehicles to fall.
- ensuring that we support new funding and financing models needed to deliver our ambition, including new types of vehicle leasing and maintenance arrangements, as part of a vibrant financing strategy.

As a first step we will invest an unprecedented £120m in zero emission buses in 2021/22. This is in addition to £50m from 2020/21 to deliver the first All-Electric Bus Town or City.

It will also launch the Zero Emission Bus Regional Area (ZEBRA) scheme, bringing together LTAs, bus operators, energy companies and other stakeholders to develop financial and commercial models of delivering zero emission buses at scale, with government and non-government funding.

Based on experience in these pathfinder areas, we will then scale up to deliver the Prime Minister's commitment to 4,000 new zero emission buses. This unprecedented investment, the single biggest of its kind for zero emission buses, will also help safeguard thousands of jobs in Britain's bus manufacturing industry.

We are clear that our support must focus on green vehicles and as such Government funding will not incentivise the continued use of diesel buses. As a principle, our reform of grant funding for bus services* will ensure it is no longer paid on the basis of fuel used and instead will incentivise the take up of zero emission vehicles.

We will take a place-based approach to investment wherever appropriate

De-carbonising the bus fleet requires investment in both fuelling infrastructure and vehicles. Taking an area-based approach to infrastructure investment allows more innovative solutions to be considered – such as:

- allowing for more effective land use and spatial planning;
- adopting plans to address local issues such as air quality; and
- utilising the technology solutions that work for the economies and topography of the area.

This approach allows a more strategic approach to energy networks which can provide longer term savings.

The All-Electric Bus Town or City competition demonstrated significant interest across England in rolling out zero emission buses quickly and at scale. The Department expect to announce funding for the first All Electric Bus Town or City by the end of 2020/21.

We will build on existing interest to identify locations that are ready this year deliver hundreds more zero emission buses. This will utilise the £120m announced at the Spending Review for the roll-out of zero emission buses. To drive forward our ambitions, we will learn from this early investment to inform models that will support scaling up of investment, exploring private financing and leasing options. This aligns with the work on the UK Government's new national infrastructure bank.

As we committed in "Gear Change" we will create at least one zero emission city. We are looking for at least one small or medium-sized city which wants to create a zero emission transport system, with extensive bike lanes, a zero emission bus fleet, and a ban on nearly all petrol and diesel vehicles in the city centre, with deliveries made to consolidation hubs and the last mile being done by cargo bike or electric van.

We will shortly announce details of the ZEBRA scheme and how this can be part of local areas' decarbonisation plans.

Both operators and LTAs must play their part

We expect decisions on the local transition to zero emission fleets to be taken collaboratively through local bus partnerships.

Local authorities:

- will have expectations for the outcomes they want to see and when;
- will work with energy providers to integrate the needs of buses into wider fuel infrastructure plans and identify best energy provision solutions; and
- may play a central part in funding and financing arrangements.

Bus operators:

- should always take the lead in specifying the technical requirements for vehicles – ensuring that they meet passengers' needs;
- should develop an understanding of the energy requirements of decarbonising their fleet so that the best energy provision solutions can be identified; and
- will often provide or secure the majority of the investment required.

We will ensure our plans for buses lead to overall carbon reductions

We are committed to achieving an all zero emission bus fleet in the future and will set a legal end date for the sale of new diesel buses, and set an expectation for when the entire bus fleet will be zero emission. We will consult on potential dates this year. A key factor will be ensuring these ambitions do not make bus services more expensive to operate overall, otherwise fares will rise or services will be cut – potentially leading to greater overall carbon emissions as more journeys are made by car.

At a local level we will expect every LTA that wishes to receive funding from the Department for local transport projects to develop ambitious strategies, targets and measures for cutting carbon from transport in their area. We will expect all LTAs to work with bus operators and energy providers to include ambitions to decarbonise the local bus fleet in their Bus Service Improvement Plans. We want to see local standards for zero emissions set in partnership and franchising schemes ensuring that commitments to invest are delivered.

Bus2Grid – An example of a smart charging approach

In January 2018, the Office for Low Emission Vehicles and the Department for Business, Energy and Industrial Strategy awarded almost £30 million, through an Innovate UK vehicle-to-grid programme, where electric vehicles can supply electricity to the grid at times of high energy demand.

Bus2Grid is part of this programme and is exploring the commercial value and social benefits to the energy and passenger transportation systems. The project will develop services to support National Grid, local Distribution Network Operators (DNOs), bus operators and transport authorities and at the same time will consider bus fleet consumer engagement approaches necessary for its commercial implementation. Bus2Grid claims to be developing the “world’s largest bus to grid site” and is bolstered by a diverse project consortium, including: SSE Enterprise, automotive manufacturer Build Your Dreams (BYD), the Distribution Network Operator UK Power Networks (UKPN) and the University of Leeds.

The project is a first of a kind large scale, multi-megawatt, demonstration of vehicle-to-grid technology in electric bus depots located in London. This process is managed by an aggregation platform that enables the 28 e-bus batteries to interact with the energy system by charging or exporting energy to support the grid in times of high energy demand.

Appendix

COVID recovery 2021–22


Fares

In March 2020, the COVID-19 pandemic had the potential to severely impact and reduce the bus network. Both the request to travel less and the new social distancing requirements posed significant questions of viability on the bus network across the country. During the first lockdown, passenger numbers fell to approximately 10% of those before the pandemic[32] However, through the joint efforts of Local Transport Authorities (LTAs), bus operators and central government, vital bus services were supported, enabling frontline workers to get to their jobs, children to return to education and the public to make the essential journeys needed.

To support this effort, the Government has provided an unprecedented amount of support for the bus sector. Through the discretionary COVID-19 Bus Services Support Grant (CBSSG) Restart, and by continuing to pay out Bus Service Operators Grant (BSOG) at pre-COVID-19 levels, the Government had announced over £1 billion of support by the end of 2020. This has been essential to keep bus services running when, with reduced capacity due to social distancing, the vast majority of buses would otherwise have operated at a loss or would have stopped running entirely.

The efforts of LTAs and bus operators were also substantial over the year. Together, they have worked flexibly to adapt service levels to work for their local areas, adapted to the challenge of children returning to school in September, and worked to manage sickness absence and conduct winter planning. This, combined with the continued concessionary fare funding support from local government, has been central to the transport response to the pandemic. We will build on these successful partnerships to drive not only recovery of the sector but also to improve services for passengers and bring more people onto buses.

CBSSG Restart

We will continue to provide CBSSG until the funding is no longer needed. To ensure services remain responsive to local demand whilst ensuring social distancing requirements are met, all operators receiving CBSSG are expected to continue to work closely with LTAs to agree service levels.

Local collaboration is a key tenet of this emergency funding. As a condition of receiving CBSSG, DfT can ask operators to demonstrate on request that consultations on service levels have taken place, and that reasonable requests from LTAs for service changes have been considered in good faith. DfT can deny or recover CBSSG payments from operators who have not engaged adequately with LTAs. From 1 July 2021, CBSSG and future funding streams will be available only to LTAs, outside of London, who have committed to entering Enhanced Partnerships or who have started the statutory process of franchising services, as set out in the Bus Services Act 2017; and to operators who are cooperating with those processes.

We also expect operators to run cost-effective services which are delivering value to the local area. As CBSSG has provided financial support for operators that have lost passenger revenue as a result of reduced demand, operators cannot achieve pre-tax profits on their bus services in receipt of CBSSG.

Over the coming months, we will be reviewing the terms and conditions of CBSSG to begin to rapidly deliver the policies set out in this strategy. Initially, we will be using this funding to drive the roll-out of contactless ticketing machines. However, we will also look at how we can encourage engagement on the rest of the strategy, including strengthening the role of LTAs in decisions on the services needed.

We will continue to provide CBSSG as long as necessary. Passenger numbers are likely to remain depressed for some time as confidence in public transport returns and new travel patterns bed-in. Further funding (outside of London) will only be available to LTAs who have committed to entering Enhanced Partnerships, and operators who cooperate with the process. It will also be available to LTAs that have started the statutory process towards franchising, or which have applied to the DfT for powers to do so.

This provides LTAs and operators with a significant opportunity. As service patterns and networks are reset, there is no better time to simplify fares and ticketing or address the traffic bottlenecks which can reduce operating costs on key routes.

What is needed during 2021–22 will be agreed locally, but we expect LTAs and operators to continue to work together to:

- maximise the number of services provided, supporting them and re-growing the customer base;
- prevent a scaling back of services to just the most profitable routes: focusing on the entire network and planning for the longer term;
- work towards agreeing the Bus Services Improvement Plans needed for October 2021 (see Chapter 3);
- ensure bus services meet the changing needs of local communities and do not change suddenly or unexpectedly;
- explore innovative approaches such as demand responsive transport; and
- deliver noticeable improvements for passengers, particularly around bus priority measures, information provision, fares and ticketing.

Funding will be used to achieve the objectives in this strategy, including bus priority measures in areas of high traffic stress, tendered services, support for existing services or set payments to operators similar to CBSSG Restart funding. We expect the majority of the funding will be used to support services, though the funding is not designed to replicate CBSSG and we understand operators and LTAs may need to make difficult decisions about the network they continue to run. Further information will be published once we have greater certainty about any follow-on funding and have confirmed how this will be delivered. Once Bus Service Improvement Plans are in place then the LTA must ensure it is clear how any funding drives delivery of these plans.

We want to see the commitment to these partnerships realised. From April 2022, only LTAs with an Enhanced Partnership in place, or following the statutory process to decide whether to implement a franchising scheme, will be able to access new streams of Government bus funding; and only services operated, or measures taken, under Enhanced Partnerships or where a franchising scheme has been made will be eligible for these discretionary funding schemes. The Secretary of State may disapply these rules or the deadline of April 2022 in individual cases, on an exceptional basis; we will also ensure that no operator is disadvantaged through any failure to establish an Enhanced Partnership due to actions beyond their control.

Concessionary fares funding

Throughout the COVID-19 pandemic the continued contribution from local authorities to support the bus network in the form of English National Concessionary Travel Scheme payments has ensured that, along with our CBSSG funding, buses have continued to operate full networks and support essential journeys. The vast majority of local authorities have continued to use their pre-existing budgets to pay concessionary fares at pre-COVID levels, despite the significant fall in concessionary travel which has supported operators to maintain routes and service levels. As the pandemic response continues, we are asking local authorities to continue to make these payments in line with the guidance we have issued and we will be laying a statutory instrument to support them to do so, to explicitly strengthen the legal basis for these payments.

Further to this, however, we also expect that once social distancing rules are relaxed, local authority funding to operators will need to remain above the actual level of concessionary patronage for a period of time, in order to protect services and maintain sufficient service levels. While the bus market is recovering, we will still look to Local Authorities to contribute to the operation of their bus markets, though to a decreasing extent. We are working with Local Authority organisations, through the Urban Transport Group, the Association of Transport Coordination Officers, the Association of Directors of Environment, Economy, Planning & Transport and the Local Government Association, and with bus operators, through the Confederation of Passenger Transport and the Association of Local Bus Company Managers, to develop how best we can re-establish the link between concessionary journeys and concessionary fares payments as quickly as possible.

In doing so, we want to ensure that we do so in such a way that concessionary fare payments work effectively for local authorities and bus operators. To this end, we will be reviewing how these payments will work in this recovery period. We will also review the current appeals process, reimbursement guidance and, by extension, the reimbursement calculator, following the impact of COVID-19 on travel patterns.

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Cheshire East Council

Working for a brighter future together

Highways and Transport Committee

Date of Meeting:	19 July 2021
Report Title:	Cheshire East Electric Vehicles Charging Infrastructure Strategy
Report of:	Andrew Ross, Director of Highways and Infrastructure
Report Reference No:	HT/05/21-22
Ward(s) Affected:	All wards

1. Executive Summary

1.1. In May 2019 the Council committed to being carbon neutral by 2025 and work to encourage all businesses, residents, and organisations in Cheshire East to reduce their carbon footprint.

1.2. The Environment Strategy 2020-2024 outlines the Council's plans for becoming carbon neutral by 2025 and includes a commitment to producing an Electric Vehicles Infrastructure Strategy.

1.3. Additionally, the Council is committed to improving air quality, as outlined in the 2018 Air Quality Action Plan. Enabling a wider and more rapid transition to electric vehicles is expected to make a significant contribution to these outcomes.

1.4. The purpose of this report is to provide the Committee with an update on work done to develop a robust evidence base and strategic approach to the future provision of Electric Vehicle (EV) charging points in the borough.

1.5. The report contributes to the following priority outcomes identified in the Corporate Plan:

1.5.1. GREEN – through proposals that would improve EV charging provision across the Borough, the Council will encourage the early adoption of electric vehicles which will positively contribute both to our response to the climate emergency and to reducing the incidence of air quality problems, especially in urban areas.

1.5.2. **FAIR** – the proposals are intended to create greater consistency and availability of access to EV charging, removing some of the long-standing barriers to purchase and use of electric vehicles within the Borough**.**

1.6. The Council has already invested in providing a number of electric vehicle charge points however there are extensive gaps in current provision within Cheshire East. Notably, there is a lack of provision in the Macclesfield area and in areas of other towns where houses do not have off- street parking. In areas of the borough that do have EV charge points, current provision may be insufficient to support a more rapid uptake of electric vehicles in future years.

1.7. The following objectives have been identified as priority outcomes from the production of the draft Cheshire East EV Charging Strategy:

- To contribute towards improved air quality and reduced carbon emissions from transport;
- To support the uptake of electric vehicles by individuals, business and organisations within Cheshire East;
- To guide the provision of infrastructure that is planned, safe, easy to use and represents good value for money both on installation and throughout its life;
- To overcome inequalities in infrastructure provision, enabling our communities to transition to electric vehicles in a timely way;
- To ensure infrastructure makes a positive contribution to the streetscape through sensitive placement and appearance, avoiding negative impacts on other road users, particularly pedestrians; and
- Supporting electric vehicles in the context of a wider transport system that encourages mileage reduction, active travel and public transport.

1.8. These objectives have guided the development of the strategy and are expected to guide implementation of future infrastructure programmes.

1.9. The strategy assesses potential locations for future EV charge points against a framework of investment criteria including:

- The contribution to serving residential, destination and on-route charging needs;
- Site security and ambient surveillance levels;
- Cost effectiveness of connection to the electricity network;
- Avoiding conflicts with commercially provided charge points e.g. at supermarkets; and
- Projected uptake of electric vehicles in the surrounding area.

1.10. This investment framework has been used to assess potential locations in Council car parks across the borough.

1.11. The results provide a high degree of confidence that there is a reliable basis for determining quick wins in Cheshire East that are deliverable, affordable and likely to meet the needs of local users.

1.12. The strategy also sets out a range of commercial models that are available to the Council to deliver EV charging infrastructure. The preferred approach is one that retains an element of control over the location of sites and their operation whilst working collaboratively with the private sector to leverage investment funding and access up-to-date technologies throughout the life of a contract or concession. The scope of such an agreement would, in principle, include the installation, maintenance and operation of electric vehicle infrastructure on behalf of the Council.

1.13. Indicative timescales for further development and delivery of the EV Charging Strategy are outlined below:

- Market testing and public engagement (August – October 2021);
- Soft market testing to identify opportunities for “quick wins”. (Oct 2021)
- Refine EV strategy and develop a preferred delivery mechanism (October – November 2021);
- Seek Committee approvals for the above (November 2021);
- Prepare high level business case to consider the case for capital investment as part of the highways capital programme(November - January 2022);
- Prepare procurement documentation (Dec – Jan 2022);
- Budget setting relating to Business Case at Council (Feb 2022);
- Seek final committee approvals for the above (Mar 2022); and
- Launch procurement exercise and implementation of quick wins (April 2022).

2. Recommendations

2.1. The Highways and Transport Committee is recommended to:

2.1.1. Approve the draft Cheshire East Electric Vehicles Infrastructure Strategy (detailed in Appendix 1) as a basis for consultation and engagement;

2.1.2. Approve a market testing exercise for a concession approach to delivering EV charging infrastructure;

2.1.3. Note the next steps for the development and delivery of the EV Infrastructure strategy as set out in paragraph 1.13 and that further reports will be submitted to committee to seek necessary approvals.

3. Reasons for Recommendations

3.1. Enabling the transition to electric vehicles is anticipated to make a significant contribution to meeting the Council's commitments to the environment.

3.2. The provision of electric vehicle charging infrastructure will directly support delivery of the 'a council which empowers and cares about people' and 'a thriving and sustainable place' priorities identified in the Council's Corporate Plan 2021-2025.

3.3. The provision and maintenance of EV Charging Points is a rapidly growing area of the public utilities sector, requiring a number of sector-specific and technological capabilities. There is a need for the Council to undertake thorough market-testing before entering into any agreement with a supplier. Market testing will ensure the needs of the Council and the opportunities for service provision and revenue generation are fully understood.

3.4. Market testing will ensure that the Council fulfils its obligation to secure best value from any relationship with the commercial sector whilst seeking maximum benefit from enabling provision of EV Charging Points at key locations across the Councils car parking estate.

4. Other Options Considered

4.1. The option of leaving the provision of electric vehicle charging infrastructure wholly to the private sector has been considered. Although this option would minimise financial commitments on the Council this is expected to result in an unbalanced charging network with substantial gaps in provision, most notably in some of our more rural or deprived communities. Also, this approach would not realise the benefits of providing charging infrastructure on Council owned land, some of which is located in attractive locations for charging electric vehicles, risking a slower uptake in the borough. This option is not the preferred approach at this time.

4.2. The option of the Council taking full ownership and responsibility for investment, installation, maintenance and operation of charge points has been considered. This option would have the benefit of retaining full control of the network, however this would also expose the Council to significant financial risks. As noted in the strategy, the rate of uptake of electric vehicles is uncertain and is likely to be constrained over the short to medium term by the higher purchase cost of electric vehicles and limited supply of vehicles due to manufacturing constraints. This option is not the preferred approach at this time.

4.3. Alternative options may be re-assessed when we have the outcomes of the market-testing exercise.

5. Background

5.1. The Council adopted a new Local Transport Plan (LTP) in October 2019 with key actions including providing electric vehicle charging infrastructure through seeking external funding from government and working collaboratively with commercial partners. At the national level the UK Government has committed to the phasing out sales of new Internal Combustion Engines by 2030.

5.2. The Council has previously invested in the installation of electric vehicle charge points in a range of locations, part funded by central government. Despite this there are still gaps in provision of charge points in the borough, most notably in the Macclesfield area.

5.3. Presently, there is relatively low uptake of electric vehicles in Cheshire East (2,119 registered plug-in vehicles in quarter 3 of 2020). Nevertheless, this is comparatively higher than for similar sized local authorities, potentially reflecting the relative affluence of some Cheshire East communities. There is anticipated to be significant growth in electric vehicles in the coming years, particularly from the mid-2020s when price parity with internal combustion engine vehicles is achieved and manufacturing capacity matches demand. Without timely investment in charging infrastructure to ensure a balanced and reliable network, there is a risk the transition to electric vehicles will be delayed.

5.4. Due to the rapid changes in vehicle and charging technology, uncertainty regarding the pace of uptake in electric vehicles, and interplay with demographic factors, an evidence-led strategy has been developed. This strategy provides a strong evidence base to underpin future decisions regarding the timely provision of charge points in Cheshire East.

5.5. A range of measures are considered in the strategy and priorities have been identified for the short, medium and long term as noted below:

Measure	Short term (0 – 2 years)	Medium term (2 -5 years)	Longer term (5+ years)
Providing charging points at key destinations (e.g. town centres, retail sites, major employment sites).	✓	Continuous monitoring of charge point usage and commercial provision to determine when / if further phases of Council-led charge points are required	
Providing on-street charging points to support residents with limited access to parking and home charging, with a focus on off-street car parks and consolidated on-street community hubs.	✓		
Providing on-route charging points to serve the Major Road Network.	✓		
Introduce charge points for the Council's own fleet and grey fleet.	✓		
Continuous engagement and joint working with the District Network Operators (Scottish Power Electricity Networks, Electricity North West, Western Power Distribution) to bring forward cost effective charge points and strategic strengthening of the power network, particularly in Macclesfield and Congleton where capacity is constrained. Investigation could also be conducted into the potential for distributed renewable energy solutions for supporting EV charging in areas of constrained power supplies.	✓	✓	✓
Engage with taxi industry and providing charging infrastructure for taxis in convenient locations.	✓ (focusing on rapid chargers)	✓ (focusing on rapid chargers)	✓ (potential for wireless inductive chargers)
Engage with bus operators and consider providing charging infrastructure for buses.		✓	✓
Encourage and where possible support the introduction of commercially provided charging forecourts.	✓	✓	✓
Introduce charge points for HGVs should appropriate technology come forward.			✓

5.6. As part of the next phase of work, site selection for delivery of charge points will be considered further with the aim of providing a balanced network in a timely way to support demand for charging. This will draw on evidence contained in the strategy, detailed cost estimates of connecting to the electricity network and discussions with stakeholders.

6. Consultation and Engagement

6.1. In preparing the strategy engagement has occurred with Council service areas to ensure a joined-up approach with adjacent work programmes. Significant engagement has also occurred with District Network Operators (Scottish Power Energy Networks, Electricity North West and Western Power Distribution) to identify cost effective locations for connecting to the electricity grid and longer-term requirements for strategic network strengthening.

6.2. Options for electric vehicle charging infrastructure were included within the Local Transport Delivery Plans consultation between December 2020 and March 2021. Further to this a specific consultation is planned on this draft strategy subject to committee approval. Feedback from this consultation will be used to inform the final shape of the strategy and future delivery of charging infrastructure. Further public consultation and engagement is planned for specific charging infrastructure sites as these are brought forward, including any statutory Traffic Regulation Order consultations.

6.3. The timeline for implementing the recommendations set out in this report includes an opportunity for further public engagement on the EV Charging Strategy during August to October 2021. This engagement will provide an opportunity for local residents and stakeholders to share views on the options for rolling out EV Charging facilities and, in so doing, help to inform the procurement of a suitable supplier.

7. Implications

7.1. Legal

7.1.1. In developing and implementing electric vehicle charging infrastructure, the Council should have regard to the transport needs of disabled persons and of persons who are elderly or have mobility problems. Development of plans will need to be in accordance with statutory and legal requirements for Community Engagement and Equalities Impact Assessment.

7.1.2. Members should be fully aware of the equalities implications of the decisions they are taking. This will ensure that there is proper appreciation of any potential impact of any decision on the Council's statutory obligations under the Public Sector Equality Duty. As a minimum, this requires decision makers to carefully consider the content of any Equality Impact Assessments produced by officers.

7.1.3. Legally enforceable Traffic Regulation Orders will be required for enacting parking restrictions for bays at which charging infrastructure is installed. Statutory consultation is required before making any Traffic Regulation Order including amending existing Traffic Regulation Orders.

7.1.4. The Council has a duty under section 122 Road Traffic Regulation Act 1984 to provide suitable and adequate on and off street parking and must be mindful of that duty when proposing new Traffic Regulation Orders or amending existing Traffic Regulation Orders.

7.2. Finance

7.2.1. The development of this Cheshire East Electric Vehicles Infrastructure Strategy and subsequent market testing is funded from the established annual budget for the Strategic Transport & Parking service.

7.2.2. Operation of the existing network of EV charging infrastructure is expected to be funded from a range of sources including: LTP Integrated Transport Block funding; Community Infrastructure Levy; Section 106 & 278 Agreements; external Government grant funding and the Council's capital and revenue funding.

7.2.3. Following market testing with potential suppliers and wider public engagement to finesse the strategy and identify likely funding requirements, additional approvals will be sought through the Council's budgetary processes.

7.3. Policy

7.3.1. Development of the Cheshire East Electric Vehicles Infrastructure Strategy is being undertaken to ensure there is a consistent policy-fit with all relevant adopted and emerging local policies including: the Local Transport Plan, Corporate Plan 2021 – 2025; regeneration masterplans for Crewe and Macclesfield; Town Vitality Plans; and Car Parking Strategy.

7.4. Equality

7.4.1. An Equality Impact Assessment (Appendix 2) has been drafted for the Cheshire East Electric Vehicles Infrastructure Strategy to ensure that the needs and impacts on residents are understood, especially individuals or groups with identified protected characteristics.

7.5. Human Resources

7.5.1. There are no direct implications for Human Resources.

7.6. Risk Management

7.6.1. Development of the EV workstream will report to Project Board chaired by the Head of Strategic Transport. Officers from procurement, finance, estates, public health and highways will be invited to attend to ensure appropriate project governance and strategic direction. A project risk register is maintained detailing mitigation measures.

7.7. Rural Communities

7.7.1. As part of the strategy public car parks operated by the Council in Principal Towns, Key Service Centres and Local Services Centres have been considered. These locations are anticipated to act as hubs for surrounding areas.

7.8. Children and Young People/Cared for Children

7.8.1. No direct implications for children and young people have been identified.

7.9. Public Health

7.9.1. The strategy has been aligned with the Council's stated policies and action plans relating to Air Quality management. This considers the impact of transport on issues affecting public health, most notably air quality and the contribution that electric vehicles can make to reducing tailpipe air pollutants.

7.10. Climate Change

7.10.1. The Council has committed to becoming carbon neutral by 2025 and to encourage all businesses, residents and organisations in Cheshire East to reduce their carbon footprint. The strategy aims to support the transition away from internal combustion engines that burn fossil fuels. This coupled with decarbonisation of energy generation is anticipated to play a major role in meeting the UK's targets for reducing greenhouse gases.

Access to Information	
Contact Officer:	Richard Hibbert, Head of Strategic Transport Richard.hibbert@cheshireeast.gov.uk 07866 157324
Appendices:	Appendix One: Cheshire East EV Charging Strategy (draft)
Background Papers:	None

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CEC EV Charging Infrastructure Strategy

Strategy Report

Rev 1

June 2021

Working for a brighter future together

Cheshire East Council

CEC EV Infrastructure Strategy

Project No:	_JC00000A0
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0	28/04/21	Draft	LS	EM	JD
1	10/06/21	Amended Draft	LS	EM	JD

Contents

Abbreviations

Abbreviation	Meaning
AEVA	Automated and Electric Vehicles Act
BEV	Battery Electric Vehicle
CCC	Committee on Climate Change
CEC	Cheshire East Council
CO_2	Carbon Dioxide
COP	Conference of the Parties
DNO	Distribution Network Operator
EPBD	Energy Performance in Buildings Directive
E-REV	Extended Range Electric Vehicles
EV	Electric Vehicle
FCEV	Fuel Cell Electric Vehicles
HGVs	Heavy Goods Vehicles
ICE	Internal Combustion Engine
IEC	International Electrotechnical Commission
IMD	Index of Multiple Deprivation
kWh	Kilowatt Hours
LA	Local Authority
LCV	Low Carbon Vehicle
LGVs	Light Goods Vehicles
N_2O	Nitrous Oxide
NCR	National Charge Registry
OSCP	Open Smart Charging Protocol
OZEV	Office for Zero Emission Vehicles
PHEV	Plug-in Hybrid Electric Vehicle
PIV	Plug-in Vehicle
PM 2.5	Particulate Matter 2.5
SAE	Society of Automotive Engineers
SMMT	The Society of Motor Manufacturers and Traders
TRO	Traffic Regulation Order
UK	United Kingdom
V2G	Vehicle to Grid
VAT	Value Added Tax
WPD	Western Power Distribution

Executive Summary

Why develop an electric vehicle infrastructure strategy for Cheshire East?

The UK is facing a climate emergency and is committed to reducing greenhouse gas emissions to net zero by 2050 in response to recommendations from the Committee on Climate Change. The Council noted that Parliament had declared a climate emergency in May 2019 and committed to becoming carbon neutral by 2025. Additionally, the Council is committed to improving air quality as outlined in the 2018 Air Quality Action Plan. The biggest contributor to climate change and air pollution with Cheshire East is road transport. Macclesfield, Knutsford, and Wilmslow have the highest emissions from road transport in the borough. This is indicative of a relatively high car use and low public transport use relative to other areas; 43% of households in Cheshire East have 2 or more cars against a UK average of 29%. This will be increasingly important considering an expected 15% growth in population. Although significant activity to decarbonise will be led nationally, the Council has a role to play in aiming to minimise the carbon intensity of our transport system.

Enabling the transition to electric vehicles is anticipated to make a significant contribution to meeting these aims. The Council has already invested in providing a number of electric vehicle charge points however there are key gaps in current provision within Cheshire East. Notably, there is a lack of provision in the east of the borough including the Macclesfield area, and other gaps in provision in towns and rural areas. The current supply of charge points is likely to be insufficient to support the future uptake in electric vehicles.

Electric vehicles have zero tailpipe emissions and this strategy will also support Cheshire East's aims to improve air quality as set out in the Cheshire East Air Quality Management Plan (2018). The UK government's ultimate vision as set out in "The Road to Zero Strategy" published in July 2018 is that every new car and van sold in the UK should be zero emission by 2040, and that the entire UK road fleet should be effectively decarbonised by 2050. However, on the 18th of November the government brought forward the timeframe to 2030 through the following steps:

- Step 1 will see the phase-out date for the sale of new petrol and diesel cars and vans brought forward to 2030.
- Step 2 will see all new cars and vans be fully zero emission at the tailpipe from 2035 (ending the sale of Plug-in Hybrid electric vehicles).

EVs are an alternative to petrol and diesel vehicles which reduce emissions, particularly in congested urban areas where stopping and starting, idling and over-revving of petrol/diesel vehicles in queues produces high concentrations of emissions. EV use an electric drivetrain to provide power to the wheels rather than carbon-based fuels, so they generate zero exhaust emissions and less noise whilst driving. In spite of the increased electricity requirement, EV have a lower whole-life carbon footprint than petrol/diesel vehicles and given the UK's progress towards and remaining plans for greener electricity generation these benefits will increase further in the future. EV also produce less noise pollution and encourage a smoother driving style than petrol/diesel which increases driving efficiency by reducing the power

required per km driven and causing lower particulate emissions from brake and tyre wear.

There are a range of actions that are needed to decarbonise transport such as increasing the numbers of people walking, cycling and using public transport as set out in Cheshire East's Local Transport. Transitioning the remaining vehicle fleet to EV will have an important role to play in complementing this modal shift.

Objectives of the Strategy

Through engagement with industry stakeholders, Cheshire East officers, and a review of relevant data, strategies and policies, the following objectives for the strategy have been set:

- To support the uptake of electric vehicles by individuals, businesses, and organisations within Cheshire East
- To contribute towards improved air quality and reduced carbon emissions from transport
- To guide the provision of infrastructure that is safe, easy to use and represents good value for money both on installation and throughout its life
- To help ensure infrastructure makes a positive contribution to the streetscape through sensitive placement and appearance, avoiding any negative impacts on other road users, particularly pedestrians
- To seek to overcome inequalities in infrastructure provision, enabling our communities to transition to electric vehicles in a timely way
- Supporting electric vehicles in the context of a wider transport system that encourages mileage reduction, active travel and public transport

The above objectives have guided the development of this strategy and will continue to guide implementation of the key measures set out within it.

The Current Situation

Buying and driving an EV can feel intimidating for many people and there is a general lack of awareness about the benefits and practicalities of driving an EV.

Range of vehicles – one common perceived barrier to driving an EV is the real world range of vehicles before recharging is needed. Approximately 64% of the plug-in vehicle models available in UK have a battery capacity of less than 20 kWh which equates to less than 80 miles, however this includes plug-in hybrid vehicles that have predominately petrol engines to extend the vehicle range. However, all the new models announced to reach the market beyond 2020 are battery electric vehicles with capacities above 30 kWh equating to 120+ miles. This demonstrates the trend towards increasing battery capacity, intended to meet consumers' demand for increased range per charge and to tackle the continuing reports of range anxiety by potential adopters.

New buyers of EV are experiencing much greater range than the early adopters upon which much research was based. Ranges have gone from less than 100miles to 200+miles. 250 miles electric range is more than adequate for the vast majority of

UK drivers daily driving requirements which are below 20 miles per day, meaning they don't need to recharge every day. Even company car users whose annual mileage is quoted as 17,500 miles typically don't exceed 70 miles daily so electric range should be adequate for most daily mileage requirements.

Charging of vehicles – one of the most often cited barriers is the lack of charging infrastructure. All plug-in vehicles require infrastructure to recharge their on-board batteries, by connecting the vehicle to an external electricity supply, most commonly the electrical grid or to an electrical storage facility. Currently, there is a range of charging infrastructure types and connectors which differ across vehicle manufacturers and models, however all manufactures (with the exception of Tesla) are working towards the Open Smart Charging Protocol meaning charging types and connectors will become standardised in the coming years.

Plug-in vehicle charging technology is evolving rapidly. Prior to 2016 most technology charged at 3kW alternating current (called slow charging), which was adequate to fully recharge most batteries (typically up to 24kWh) overnight. With the development of vehicles came fast 7kW alternating current charging, and with the introduction of higher capacity batteries, direct current fast, rapid, and ultra-rapid charging technology has since become available that (providing the vehicle is compatible) recharges vehicles much quicker.

Approximately 80% of vehicle charging is currently conducted at home locations where energy costs are lower, with top up charging taking place when required at destinations or on-route.

Uptake of EVs in Cheshire East

Figures from the Department for Transport and National Chargepoint Registry show that 2,119 plug-in vehicles were registered in Cheshire East in the third quarter of 2020. At this time there were 33 publicly available chargepoints at 80 outlets. This meant there was a total of 64 vehicles per charge point and 26 vehicles per outlet. Forecasts suggest that if current progress continues 5,776 ULEVs could be licensed in the Cheshire East area by 2025. We believe that significant changes are likely in battery technology to greatly increase energy density, battery life and vehicle range around 2025. This trend coupled with reaching price parity between EV and petrol / diesel could have a major impact on Plug-In Vehicle demand and a more rapid pace of transition to EV is anticipated from approximately 2025 onwards.

Current Charging in Cheshire East

Key to developing a forward-looking strategy for electric vehicles is understanding the current level of charging infrastructure in Cheshire East.

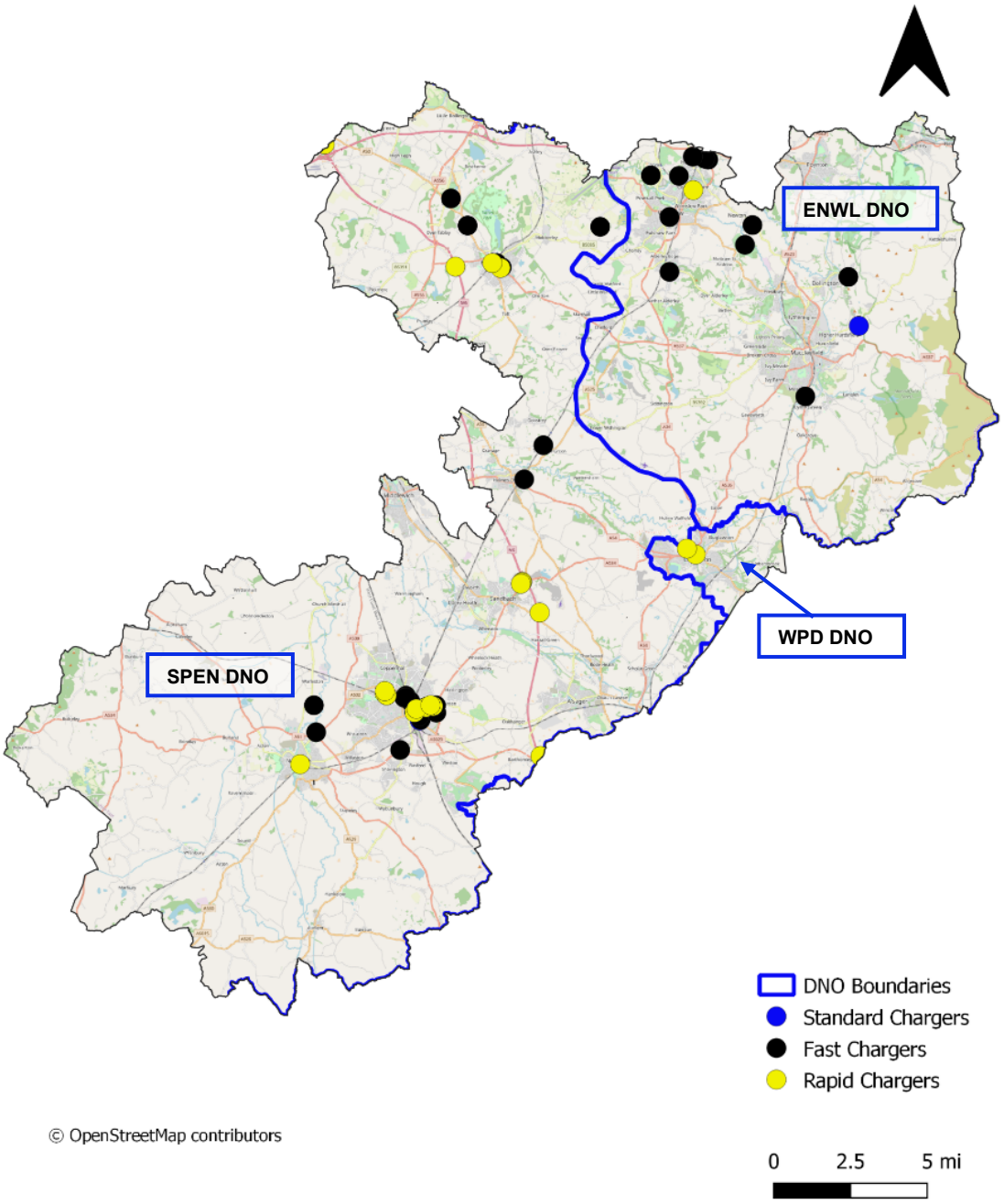


Figure Existing Charging Infrastructure and DNO boundaries

The existing charging infrastructure in Cheshire East includes Sandbach motorway services, which are currently served by the Ecotricity network and feature two rapid chargers on each side of the motorway. A survey of rapid chargers in Cheshire East also revealed that the private sector is installing chargers including some KFC, Morrisons, Lidl, Sainsburys, Shell and BP locations, as well as other establishments such as hotels and a health club.

There is a notable lack of charging infrastructure in the east of the borough and the Macclesfield area in particular, with no 'rapid' chargers and few 'fast' chargers in operation at the time of writing. Initial discussions with the District Network Operators for Macclesfield and Congleton have also identified these areas as having

constrained capacity in the electricity network which may limit the ability to provide EV charging infrastructure.

The Plug-In Vehicle per outlet ratio in Cheshire (26) is above the UK average of 16 (at time of writing in February 2021). However, this figure is substantially lower than other comparative areas such as Dorset, Cheshire West and Chester, and East Riding of Yorkshire, where current ratios vary between 49 to 64.

Analysis has also been conducted to understand areas of Cheshire East that have high concentrations of flats and terraced houses in which residents are unlikely to have the ability to recharge electric vehicles. This type of housing is located in the denser urban areas, including Macclesfield, Crewe, Nantwich, Knutsford, and Wilmslow.

Measures Proposed in this Strategy

A number of measures are proposed in this strategy to support the transition to electric vehicles in Cheshire East as set out below.

Measure	Short term (0 – 2 years)	Medium term (2 -5 years)	Longer term (5+ years)
Providing charging points in car parks at key destinations (e.g. Town Centre, train stations, retail parks, major employment sites).	✓	Continuous monitoring of charge point usage and commercial provision to determine when / if further phases of Council-led charge points are required	
Providing on-street charging points to support residents with limited access to parking provision and home charging with a focus on off-street car parks and consolidated on-street community hubs.	✓		
Providing on-route charging points to serve the Major Road Network.	✓		
Providing off-street charging points to support residents with limited access to parking provision and home charging.	✓		
Introduce charge points for the Council's own fleet and grey fleet.	✓		

Measure	Short term (0 – 2 years)	Medium term (2 -5 years)	Longer term (5+ years)
Continuous engagement and joint working with the District Network Operators (Scottish Power Electricity Networks, Electricity North West, Western Power Distribution) to bring forward cost effective charge points and strategic strengthening of the power network, particularly in Macclesfield and Congleton where capacity is constrained. There is also an opportunity to investigate how distributed renewable energy solutions such as solar power may contribute to addressing power constrictions.	✓	✓	✓
Engage with taxi industry and providing charging infrastructure for taxis in convenient locations.	✓ (focusing on rapid chargers)	✓ (focusing on rapid chargers)	✓ (potential for wireless inductive chargers)
Engage with bus operators and consider providing charging infrastructure for buses.		✓	✓
Encourage and where possible support the introduction of commercially provided charging forecourts.	✓	✓	✓
Introduce charge points for HGVs should appropriate technology come forward.			✓

Site Selection

This strategy assesses potential locations for providing future EV charge points against a framework of investment criteria including:

- The contribution to serving residential, destination and on-route charging needs;
- Site security and ambient surveillance levels;
- Cost effectiveness of connection to the electricity network;
- Avoiding conflicts with commercially provided charge points e.g. at supermarkets; and
- Projected uptake of electric vehicles in the surrounding area.

This framework was used to assess potential locations in Council car parks, in Principal Towns and Key Service Centres and at Local Service Centres, plus a number of on-street locations with limited off-street parking. The results provide a

high degree of confidence that there is a reliable basis for determining quick wins in Cheshire East that are deliverable, affordable and likely to meet the needs of local users. This assessment framework can be updated to inform future phases of work in subsequent years.

Commercial Models

The strategy sets out a range of commercial models that are available to the Council to deliver EV charging infrastructure. The preferred approach is one that retains an element of control over the location of sites and their operation whilst working collaboratively with the private sector to leverage investment funding and access up-to-date technologies throughout the life of a contract or concession.

Next Steps

As part of the next phase of work, site selection for delivery of charge points will be considered further with the aim of providing a balanced network in a timely way to support demand for charging. This will draw on evidence contained in this strategy, detailed cost estimates of connecting to the electricity network, and discussions with stakeholders.

1. Introduction

Cheshire East Council is committed to reducing carbon emissions and improving air quality as outlined in the *Cheshire East Borough Council Air Quality Action Plan (AQAP) (2018)*. CEC noted that Parliament had declared a climate emergency in May 2019 and committed to being carbon neutral by 2025 and work to encourage all businesses, residents, and organisations in Cheshire East to reduce their carbon footprint. This EV Charging Infrastructure Strategy has been developed to directly support CEC's aim of reducing carbon emissions by accelerating the transition to electric, and supports the ambitions outlined within the Cheshire East Local Transport Plan 4 Strategy.

1.1 Structure

Following this introduction, this strategy consists of the following chapters:

- **Chapter 2: Policy Review –** A review of current national, regional, sub-regional and local policy and legislation in relation to electric vehicles and charging infrastructure
- **Chapter 3: Technology Review –** A review of electric vehicle and charging technologies
- **Chapter 4: Cheshire East EV Charging Baseline –** A review of background data regarding of EVs in Cheshire East, including key trends and future likely developments and demographic data
- **Chapter 5: Strategic Priorities** − Outlines the measures to be implemented as part of this strategy, including consideration of sequencing and future uncertainties
- **Chapter 6: Prioritising Charging Locations –** Sets out the proposed locations for charging infrastructure in car parks, as well as leading areas for consideration of on-street residential charging points
- **Chapter 7: EV Charging Commercial Models –** Details potential options for how charging infrastructure can be delivered and maintained, alongside analysis underpinning these options
- **Chapter 8: Next Steps –** Outlines a high-level timeline of recommended measures and key strategic actions to be taken

2. Policy and Legislation Review

There are many policies and strategies at national, regional, sub-regional and local levels that are creating an increasingly supportive framework for the transition to EV as outlined in the following sections. Selected key examples are summarised in this chapter, helping to set out the policy and legislative foundation for this strategy.

2.1 Recent National and International EV Developments

During November 2020, the UK Government made announcements on new domestic (UK) policy with reference to the climate challenge. These announcements also feed into the UK's hosting of the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in November 2021. The detail behind these announcements are not yet final, but the implications of the broad announcements in relation to EVs and specifically Cheshire East is set out here.

The prevailing strategy of the UK government up to November 2020 regarding emissions was to commit to reducing greenhouse gas emissions by at least 80% of 1990 levels by 2050 through the Climate Change Act 2008[1]. It's now net-zero by 2050, and 6th carbon budget requires a 78% reduction by 2035. The inclusion of shipping and aviation will also mean a focus on domestic emissions such as transport. The UK's transport sector has made the least contribution to a reduction in emissions to date (<2%), making it a prime target for future regulation.

The European Union's Directive for Alternative Fuels Infrastructure requires Governments to adopt national policy frameworks for infrastructure roll-out. The UK Government has also committed to achieving at least these goals following its departure from the EU. Grams of CO_2 per km driven is the primary measure used by the EU to enforce improvements in new car and van fleet emissions. EU regulations enable fines on vehicle manufacturers based on their average new car sales emissions. The current maximum threshold for new car sales is 135g CO_2/km driven, reducing to 95 g CO_2/km from 2021. The EU recently announced even tighter targets for new cars and vans to be achieved by 2030 through its Clean Mobility package.

The UK Government's ultimate vision is that every new car and van sold in the UK will be zero emission by 2030. The UK's current objectives are set out in "The Road to Zero Strategy" published in July 2018[2] . To this end, the UK's Committee on Climate Change (CCC) targeted the Ultra-Low Emission Vehicle (ULEV) market to reach 9% share of new vehicle sales by 2020 and 60% by 2030. The UK did indeed exceed its 2020 target, with Battery Electric Vehicles (BEVs) and Plug-In Hybrid Electric Vehicles (PHEVs) totalling 10.7% market share in December 2020.[3]

1 UK Government, https://www.legislation.gov.uk/ukpga/2008/27/contents

2 UK Government, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf

3 Society of Motor Traders and Manufacturers (SMMT), December 2020, https://www.ezoomed.com/blog/ev-knowledge/uk-new-car-registrations-smmt-december-2020/#:~:text=in%20the%20UK.-,UK%20New%20Car%20Registrations%20SMMT%20December%202020%20(credit%3A%20SMMT),cars%20were%20registered%20in%202020

For the first time, Ministers, and representatives from some of the world's largest and most progressive car markets have come together to form a new Zero Emission Vehicle Transition Council. Hosted by the COP26 President, Alok Sharma, the Council met to discuss how to accelerate the pace of the global transition to zero emission vehicles. These Ministers and representatives have agreed to collectively address some of the key challenges in the transition to ZEVs, enabling the transition to be faster, cheaper, and easier for all. The Council was made up of Ministers and representatives from California, Canada, Denmark, European Commission, France, India, Italy, Japan, Mexico, Netherlands, Norway, Spain, South Korea and Sweden, the United Kingdom.

Following the Council meeting, a joint statement was released stating that road emissions currently account for over 10% of global greenhouse gas emissions, and emissions are continuing to rise. Therefore, the rapid transition to zero emissions vehicles is vital to meeting the goals of the climate Paris Agreement. The globe is currently not on track and consequently the pace of the transition needs to dramatically increase. In addition to greenhouse gas emission reductions, this transition will generate job and growth opportunities, improve air quality, improve public health, boost energy security, and assist in balancing electricity grids during the transition to clean power.

The joint statement stressed the importance of the roles of cities and regions in helping to determine the pace of the global transitions to zero emissions vehicles. The Zero Emissions Vehicle Transition Council stated its aims to act as a forum to coordinate global efforts to overcome strategic, political, and technical barriers, accelerate the production of zero emission vehicles, and increase economies of scale. Specific opportunity areas for collaboration include aligning the future of the road transport sector with the Paris Agreement goals, ensuring the transition to zero emissions vehicles is global, ensuring the lifecycles associated with zero emissions vehicles is sustainable and inclusive, and coordination innovation efforts. The final and most relevant to this strategy is ensuring that enabling infrastructure is in place, including EV chargepoints.

2.2 Key National Strategy and Policy

The following key UK strategies and policies help to set the foundation for EV growth and promotion in Cheshire East:

- *End of sales of new petrol and diesel cars by 2030 (2020)* – Step 1 will see the phase-out date for the sale of new petrol and diesel cars and vans brought forward to 2030. Step 2 will see all new cars and vans be fully zero emission at the tailpipe from 2035 (ending the sale of Plug-in Hybrid electric vehicles).

- *Policy paper: Government vision for the rapid charge point network in England*, published (2020) − The following are key applicable extracts:

    - By 2023, the aim is to have at least 6 high powered, open access charge points (150 - 350 kilowatt capable) at motorway service areas in England, with some larger sites having as many as 10-12. The government is confident this will be more than enough to meet demand from electric vehicles by this date. These high-powered charge points are able to charge up to 3 times faster than most of the charge points currently in place and can deliver around 120-145 miles of range in just 15 minutes for a typical electric vehicle.

- By 2030, it is expected that the network to be extensive and ready for more people to benefit from the switch to electric cars. We are planning for there to be around 2,500 high powered charge points across England's motorways and major A roads.

- By 2035 it is expected there will be around 6,000 high powered charge points across England's motorways and major A roads.

- *Decarbonising Transport: Setting the Challenge (2020)* − Sets out in detail what Government, business, and society will need to do to deliver the significant emissions reduction needed across all modes of transport, creating a pathway to achieving carbon budgets and net zero emissions across all modes of transport by 2050.

- *Emerging DfT Buses Strategy and Electric Bus Towns Fund (2020)* – The DfT has invited expressions of interest from local authorities to receive significant capital funding to transition local bus fleets to EVs.

- *Highways England Road Investment Strategy 2&3 (2020)* – Documents present the long-term vision for what the Strategic Road Network should look like in 2050, and the steps to help realise this alongside an investment plan. The document notes that the rise of electric vehicles is essential to achieving the target of net-zero carbon emissions by 2050, but also has the potential to encourage increased travel on our road network as the costs of driving fall.

- *Climate Change Commission's (CCC's) Sixth Carbon Budget (2020)* − Sets the limit on allowed UK territorial greenhouse gas emissions over the period 2033 to 2037. It is the CCC's duty under the Climate Change Act to advise on it by the end of 2020, following which it must be legislated by the middle of 2021. A chapter in associated Methodology Report focusses on surface transport and recommends a swift and sharp increase in EV infrastructure to facilitate EV take up.

  - Reduced demand − Around 10% of the emissions saving in the Balanced Pathway in 2035 comes from changes that reduce demand for carbon-intensive activity. Particularly important in these scenarios are slower growth in flights and reductions in travel demand. Reduced demand can result from reduced miles travelled and modal shift to lower-carbon modes. While changes are needed, these can happen over time and overall can be positive for health and well-being.

  - Surface transport is currently the UK's highest emitting sector. In the CCC's Sixth Carbon Budget Balanced Pathway, options to reduce emissions, including take-up of zero-emission technologies and reduction in travel demand, combine to reduce surface transport emissions by around 70% to 32 Mt CO_2e by 2035 and to approximately 1 Mt CO_2e by 2050 (See illustration in Figure 2-1 below).

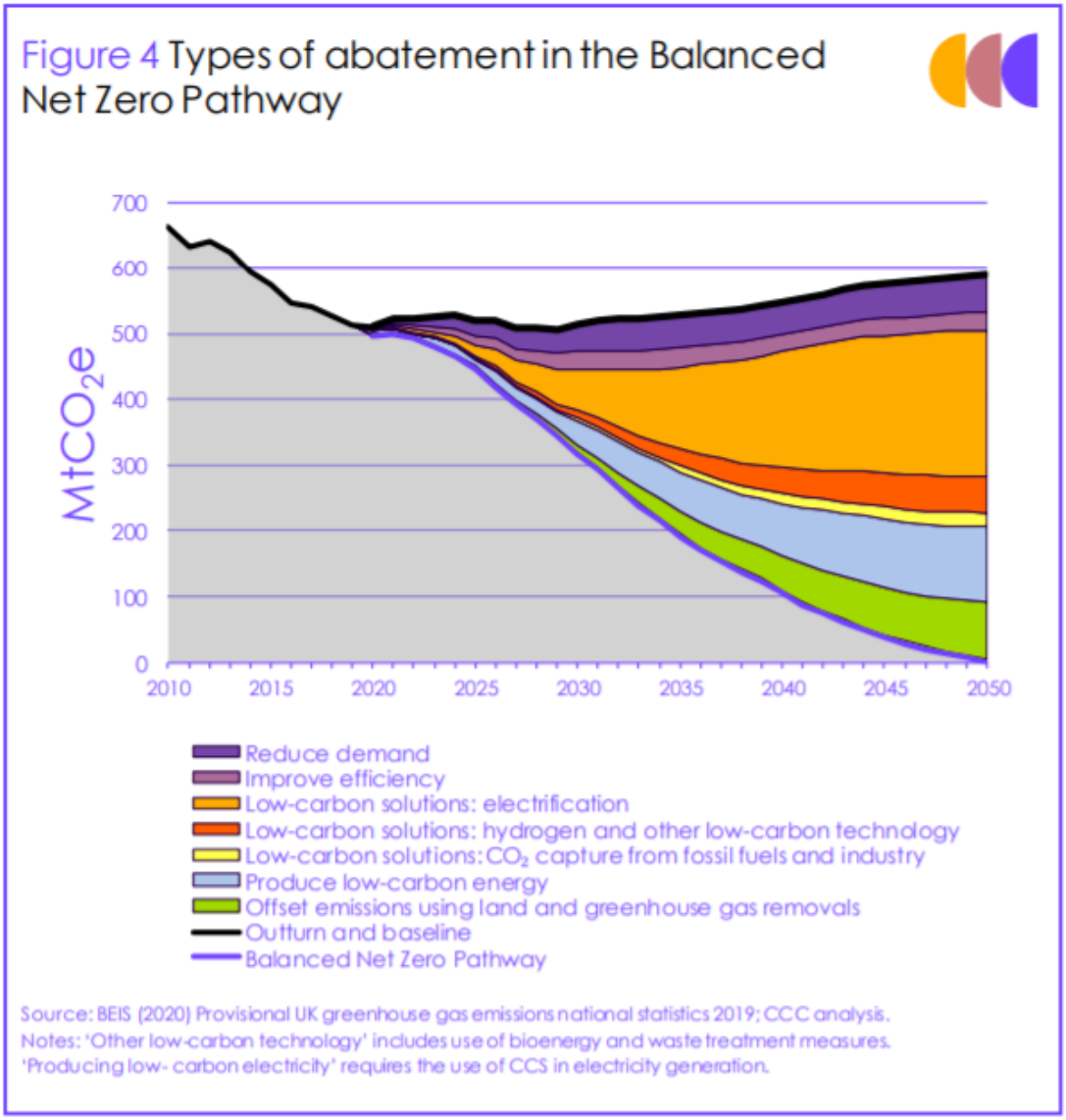


Figure 2-1 Sources of abatement in the Balanced Net Zero Pathway for the surface Transport sector (UK CCC)

- *National Planning Policy Framework (2019)* – Local parking standards for developments should consider adequate provision for EV charging in safe, accessible, and convenient locations.
- *Planning Practice Guidelines Paragraph 008 (2019)* – Planning conditions and obligations can be used to secure air quality mitigation, including infrastructure to promote modes of transport with a low impact on air quality, such as EV charging points.
- *DfT's Future Mobility: Urban Strategy (2019)* – Sets out the Government's strategy for tackling the challenges of urban mobility, including through a £400m funding package for EV charging points.
- *Energy Saving Trust's 'Positioning charge points and adapting parking policies for electric vehicles' (August 2019)* – Provides guidance on the installation of charge points along footways and the use of parking bays. Recommends a clear footway width of 1.5m and placement of chargers at the front of

pavements to avoid tripping hazards and away from areas with significant other street furniture. Alternatively, kerbs should be built out to maintain footway accessibility.

- *Committee on Climate Change (2019)* – In June 2019, the Government passed new laws to support a target of net zero emissions by 2050 in response to recommendations from the Committee on Climate Change (CCC).

- *DEFRA Clean Air Strategy (2019)* – Sets out the Government's plan to tackle all sources of air pollution, making our air healthier to breathe, protecting nature and boosting the economy.

- *Future Mobility Zones (2019)* – Outlines the Government's commitment to fostering experimentation and trialling through launching four Future Mobility Zones with £90 million of funding. The zones aim to demonstrate a range of new mobility services, modes, and models. They focus on significantly improving mobility for consumers and providing an exportable template to allow successful initiatives to be replicated in other areas.

- *Automated and Electric Vehicles Act (2018)* – Promotes the development and deployment of autonomous and electric vehicles, through large-scale investment in electric charging points and new rules ensuring vehicle compatibility, payment standardisation and guaranteeing reliability.

- *OLEV Road to Zero Strategy (2018)* – Outlines the ambition that every new car and van sold in the UK should be zero emission by 2040, and that the entire UK road fleet should be effectively decarbonised by 2050. However, on 3rd February 2020 the government brought the ban on new ICE car sales forward to 2035 which also prohibits the sale of new hybrid vehicles. This target was further strengthened in November 2020 to end new ICE car sales in 2030 (PHEVs in 2035).

- *DfT Future of Mobility: Urban Strategy (2018*) – This strategy sets out the approach that Government will take to seize the opportunities from the changes happening in urban transport. It sets out the benefits which the Government aims for mobility innovation to deliver and the principles that will help to achieve this.

- *Air Quality Plan for Nitrogen Dioxide (NO_2) in the UK (2017)* – Sets out how the UK aims to reduce roadside nitrogen dioxide (NO_2) through a requirement for development of local plans for interventions in targeted areas where the problem is most severe.

- *Clean Growth Strategy (2017)* – Outlines how the government intends to implement its industrial strategy, focussing on clean growth and lower carbon emissions. It notes that the low carbon economy is predicted to grow 11% a year from 2015-2030, with transport a key sector in delivering this growth.

- *UK Industrial Strategy: Building a Britain fit for the future (2017)* − Sets out how the Government plans to build 'a Britain fit for the future' through helping businesses create better, higher-paying jobs with investment in the skills, industries, and infrastructure of the future. A key 'grand challenge' is decarbonising the economy to enable clean growth and capitalising on the opportunities to develop world leading skills and businesses in the field of future mobility.

- *Driving the Future Today: A strategy for ultra-low emission vehicles in the UK (2013)* – Lays out the Government's strategy for every UK car and van to be ultra-low emission by 2050, supported by greater roll-out of EV charging points than envisaged in 2011.

- *Carbon Plan (2011)* – Sets out the Government's plan of action for reduction of carbon emissions, including noting the importance of transport in meeting this goal.

- *Making the Connection: The Plugged-In Vehicle Infrastructure Strategy (2011)* – Sets out principles for where and when the Government envisaged electric vehicles would be charged. This would primarily focus on overnight at homes and vehicle depots, reducing demand for electricity during the daytime and the need for expenditure on infrastructure.

- *Manual for Streets 2 (2010)* – Highlights the need to design footpaths to ensure accessibility and safety but does not address charging point placement specifically.

- *Climate Change Act (2008)* – Commits the UK to reducing emissions by at least 80% by 2050. This has since been amended to include a target of net zero emissions by 2050 (2050 Target Amendment – Order 2019).

The electrification of transport should also be seen as part of a package of policies to support the decarbonisation of transport including demand management through sustainable and active travel (such as cycling and walking promotion), and the potential adoption of alternative fuels including hydrogen, more likely focussed on heavier utility vehicles.

2.3 Regional Strategy and Policy

The following regional strategies and policies contribute towards the foundation for EV growth and promotion in Cheshire East:

- *Cheshire & Warrington Draft Transport Strategy* – Improved accessibility will be essential for the unlocking of strategic and wider development sites for housing and employment as well as relieving the many congested areas of our local and strategic transport networks. The Strategy notes that working with partners to explore technical and digital innovations will assist with the management of the existing network, with an increased uptake in EV supporting this aspect of the strategy.

- *Cheshire & Warrington Energy and Clean Growth Strategy* – Sets out the energy challenges facing the sub-region and how, in collaboration with industry and key public-sector partners, the challenge of delivering 'affordable energy and clean growth' can be met. The Strategy notes that the LEP has a role in promoting low carbon technologies as a key factor in making new development sustainable, such as providing EV charging infrastructure.

- *Cheshire and Warrington Local Industrial Strategy* – Outlines what evidence suggests are the strengths, weaknesses, threats and opportunities for the Cheshire and Warrington economy and how the UK's Industrial Strategy can be implemented within the sub-region.

2.4 Local Strategy and Policy

The following existing local strategies and policies help set the foundation for EV growth and promotion in Cheshire East:

- *Cheshire East Local Transport Delivery Plans (2020)* – Outline the issues and options for each of the 11 town areas in Cheshire East and were consulted on between December 2020 and March 2021. Measures to support the uptake of EVs are included in the reports for each town area.

- Enabling the transition to EV will contribute to the following priority outcomes identified in the Council's *Corporate Plan (2020)*:

  - *GREEN - through proposals that would improve EV charging provision across the Borough, the Council will further encourage the early adoption of electric vehicles which will positively contribute both to our response to the climate emergency and also to reducing the incidence of air quality problems, especially in urban areas.*

  - FAIR – the proposals are intended to create greater consistency and availability of access to EV charging, removing some of the long-standing barriers to purchase and use of electric vehicles within the Borough.

- *Cheshire East Council Environment Strategy 2020-2024 (2020)* – Outlines the council's response to their climate emergency declaration and becoming carbon neutral by 2025. The strategy highlights the commitment to producing this EV Infrastructure Strategy to outline the ambition to increase electric charging infrastructure provision and seek funding opportunities and initiatives which encourage the uptake of electric vehicle usage.

- *Cheshire East Carbon Neutrality Action Plan (2020)* - outlines the approach the Council will take to decarbonise its operations set out in the Environment Strategy, including a target to decrease fleet and grey fleet emission by approximately 30% by 2025. This will require electrification of the fleet and provision for business travel, which will both benefit from and impact on wider EV charging strategies, and has been informed by reviews conducted by the Energy Savings Trust;

  - *Cheshire East Council Fleet and ULEV Review (2020)* – Outlines a benchmark of the greenhouse gas emissions and energy costs of the road transport fleets and provides a series of recommendations for creating a ULEV fleet.

  - *Cheshire East Council EVCI Review (2020)* – Addresses the potential capacity to introduce charging infrastructure at CEC workplace sites and provides a series of recommendations for introducing charging on council sites.

  - *CEC Grey Fleet Review (2020)* − Covers the environmental impact and financial cost of grey fleet travel by Cheshire East Council employees and provides recommendations to improve grey fleet management.

- *Cheshire East Local Transport Plan 4 (LTP4) (2019)* − outlines a long-term strategy for travel and transport within Cheshire East. The LTP4 was adopted during October 2019 and covers the period of 2019 to 2024. The LTP4 includes

a high-level parking strategy that highlights the potential to install on-street charging points, alongside the wider roll out of EV infrastructure.

- *Draft Economic Strategy for Cheshire East (2019)* – outlines that the UK Industrial Strategy predicts that the clean growth/low carbon economy is estimated to grow by 11 per cent per year through to 2030 (four times faster than the rest of the economy) and could deliver between £60 billion and £170 billion of export sales of goods and services by 2030. The sector in Cheshire East is sizable with over 5,000 employees and £0.5bn in sales as far back as 2011, the Council will support the further development of this sector, working with the Local Enterprise Partnership to deliver the Energy Strategy and clean growth aspects of the Local Industrial Strategy, supporting innovation by all businesses, promoting energy and climate resilience, and accelerating market development of energy and low carbon technologies such as heat and power networks and smart technologies. This will help to realise an ambition to create a competitive and sustainable economy while reducing rather than increasing overall carbon emissions.

- *Cheshire East Council Air Quality Action Plan (AQAP) (2018)* – Outlines the action Cheshire East Council will take to improve air quality between 2018 and 2023. Road traffic contributes to poor air quality across the borough, which has led to the creation of several AQMAs in Cheshire East that are subject to specific targeted measures to reduce air pollution. The AQAP also recommends a holistic integrated approach including a focus on low emission transportation.

  - An updated AQAP will be published by the council at the end of 2021.

- *Cheshire East Council Low Emission Strategy (LES) (2018)* – The LES includes several recommended policy measures for improving air quality in the borough including planning measures to promote LEVs.

  - To encourage the uptake of electric vehicles in the CEC area, one “rapid charge” point will be provided per 10 residential dwellings and/or 1000m2 of commercial floorspace. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be provided. Development proposal should also consider discounted on- and off-street parking for LEVs and dedicated LEV.

- *Cheshire East Council Local Plan (2017)* – The Local Plan is the Statutory Development Plan for Cheshire East and is the basis for determining planning applications. This Local Plan Strategy document sets out the overall vision and planning strategy for development in the borough and contains planning policies to ensure that new development addresses the economic, environmental, and social needs of the area. It also identifies strategic sites and locations that will accommodate most of the new development needed.

  - The Policy CO 2 outlines that to enable business growth through transport infrastructure the council will support new developments that are (or can be made) well connected and accessible by:

    vi. Providing recharging points for hybrid or electric vehicles in major developments in order to reduce carbon emissions.

- *Publication Draft Site Allocations and Development Policies Document (2019)* – outlines a specific set of requirements for developers in INF3 which states that

for major developments one charge point should be installed for each new dwelling (new build or change of use) and one charging point for every five parking spaces for non-residential purposes. This reflects the governments proposed approach.

2.5 Summary

This review has shown that there is support for Cheshire East Council's transition to electric vehicles at all spatial levels, and an increasingly supportive policy and legislative framework is emerging. Specific aspects of the above policies and strategies have also informed later chapters of this document covering the evidence base and option development.

3. Technology Review

This chapter summarises the various electric vehicle and charging technologies available, as well current trends in the development of this technology.

Throughout this chapter, and indeed the wider strategy, the term 'EV' is used for simplicity even though in most cases only plug-in EVs are referred to. In general, EVs that use an electric drivetrain to power the wheels produce lower tailpipe emissions, less noise and encourage a smoother driving style than ICE vehicles. EVs have additional benefits in urban areas where stopping and starting, idling, and over-revving of ICE vehicles in queues produces high concentrations of emissions.

3.1 Electric Vehicle Trends

The UK is facing a climate emergency and consequently is committed to reducing greenhouse gas emissions by at least 80% from 1990 levels by 2050 through its Climate Change Act 2008. However, in June 2019 the government passed new laws tightening this target to net zero by 2050[4] in response to recommendations from the Committee on Climate Change (CCC). Currently there is a major industry / purchasing shift from diesel to petrol engines as diesel is now categorised as 'dirty'. Both have environmental impacts and deleting both options (in combination with uptake of other sustainable options such as active travel and public transport) will improve both air quality and carbon emissions.

Diesel engines emit less CO_2 and greenhouse gases than petrol engines. This happens because of the particular type of fuel and the internal efficiency of the diesel engine. More specifically, the fuel used in diesel engines has a higher compression ratio than petrol and it also performs better than petrol engines. As a result, less fuel is used to travel the same distance, thus reducing CO_2 emissions. Most estimations indicate that diesel engines emit about 10% less than the petrol engines of the same category. However, petrol results in lower emissions than diesel in terms of many other sources of pollution, such as fine particles (like PM10 and PM2.5), NO_2 and NOx.

Carbon dioxide (CO_2) is the main component of greenhouse gas emissions, which traps heat in the atmosphere causing global climate change. The transport sector currently generates the highest proportion of CO_2 emissions in the UK, due to the increasing miles driven by Internal Combustion Engine (ICE) vehicles that burn carbon-based fuels and consequently emit CO_2 from their exhausts. The transport sector has made the lowest contribution to UK greenhouse gas emission reduction, only achieving a 4.6% from 1990 to 2019[5], making it a prime target for future regulation.

Nitrous oxide (N_2O) is also a contributor (as is methane) to climate change, but CO_2 is the largest contributor, and is therefore the main focus of legislation to reduce its impact. Nitrous oxide is released naturally from soils and water bodies as part of

[4] https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future/energy-white-paper-powering-our-net-zero-future-accessible-html-version

[5] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf

microbial processes. The two major man-made sources are from agriculture and manufacturing, however, it is also released from power stations and road transport.

An important note is that fine particle emissions (PM 2.5) also originate from brakes and tyres. EVs have the benefit of regenerative braking to increase engine efficiency and reduce particulate emissions from braking compared to ICEs, but tyre wear will be similar to ICEs. This is why reducing total vehicle use is the best long-term option for clean air.

EVs are an alternative to ICE vehicles using an electric drivetrain to power the wheels rather than carbon-based fuels, so they generate zero exhaust emissions whilst driving. EV uptake in the UK is still at the early adopter stage led by relatively affluent, environmentally conscious buyers who are keen to adopt new technologies and reduce their personal transport impacts. Research shows that EV consumers prefer to charge at home overnight or at work during the day, which suggests a low current demand for public recharging services. Most early EV adopters have off-street parking enabling them to charge at home overnight, although this capability is greatly curtailed in some residential areas. However, vehicle consumers generally value “refuelling” convenience very highly, so a failure to roll-out sufficient public recharging facilities may curtail future mass-market EV uptake. Indeed, surveys of both EV and non-EV drivers still identify the need for greater availability of public charging facilities as a key requirement for growing EV adoption. However, it is important to note that due to the short and decreasing timeframe before ICE vehicles are banned, we will soon most past early adopters. Accordingly, this strategy considers plausible future scenarios for wider EV uptake and infrastructure requirements to support this.

The government reflects this need for charging provision in its “Road to Zero Strategy” and can now legislate to require its provision using the “Automated and Electric Vehicles Act” (AEV Act). A caveat to prevailing thought is that early purchases were generally to people with an identified charging provision. New buyers of EV are experiencing much greater range than the early adopters upon which much research was based. Ranges have gone from less than 100miles to 200+ miles. A new situation has arisen where large-scale private finance is going into rapid charge hubs to maintain the current behaviour of going to a fixed point to ‘fill up’. With such a low national population of battery electric vehicles projected to be circa 162,000 by the end of 2020 (SMMT) which is 0.46% of the UK car population, the normalising of driver behaviour is some way off. What is known, however, is that there will have to be a mix of provision, though the ratios of the type of chargers and charger numbers are yet to be established. Currently there is provision for a national network but no detailed Government strategy to achieve one.

3.2 Electric Vehicle Technologies

EVs use an electric drivetrain to provide power to the wheels rather than carbon-based fuels, so they generate zero exhaust emissions and less noise whilst driving. In spite of the increased electricity requirement, EVs have a lower whole-life carbon footprint than ICE vehicles and given the UK’s progress towards and remaining plans for greener electricity generation these benefits will increase further in the future. EVs also produce less noise pollution and encourage a smoother driving style than ICEs, which increases driving efficiency by reducing the power required per km driven and causing lower particulate emissions from brake and tyre wear.

3.2.1 EV Terminology

UK policy is technology neutral, encouraging the development and uptake of all forms of transport to reduce urban air pollution and greenhouse gas emissions. Ultra-Low Emission Vehicles (ULEVs) is the vehicle definition currently targeted for road transport emissions reduction – however, there are many acronyms used to refer to vehicles that are capable of emitting lower emissions than pure ICE vehicles.

Only those electric vehicles that plug into an electricity supply to recharge the battery are relevant to the EV recharging infrastructure discussed in this 'EV Charging Infrastructure Strategy'. As discussed below, the specific vehicles that require EV charging points are Plug-In Vehicles, or PIVs, incorporating Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs). By 2030, sale of new HEVs (the only EVs that do not plug-in) will have been banned, so the simplified term 'EV' will by then refer only to BEVs and PHEVs. For simplicity, this document refers to 'electric vehicles' (EVs) rather than Plug-In Vehicles (PIVs), though charging infrastructure is only required for PIVs rather than for all EVs.

Figure 3-1 below shows different types of electric vehicles, with only the three contained within the red box being of relevance in terms of EV charging infrastructure.

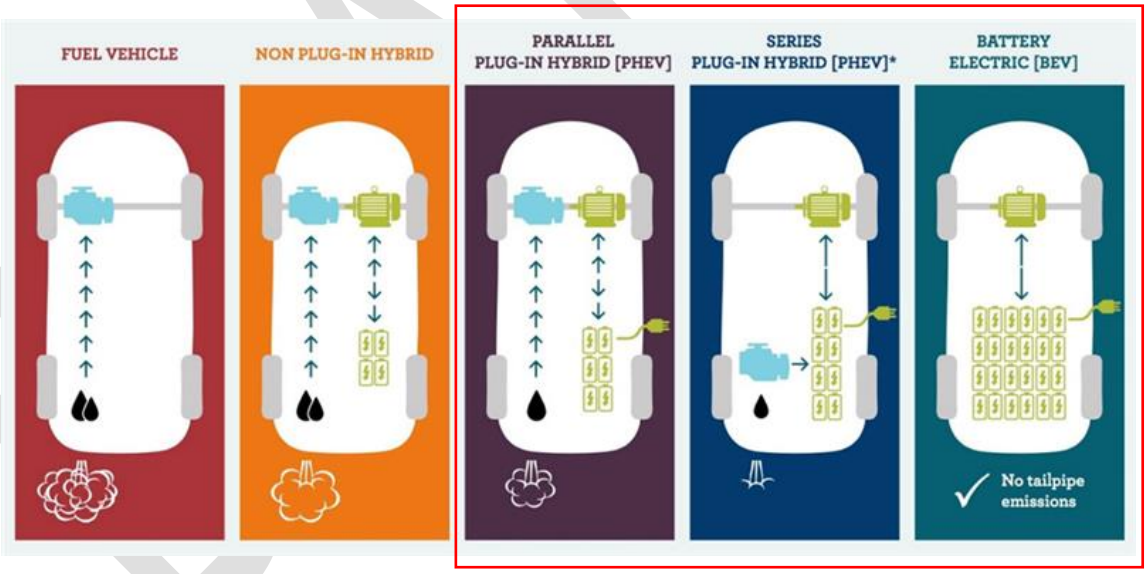


Figure 3-1 Vehicle Types (source: Better NZ Trust)

A brief explanation of each of these terms for different types of electric vehicles is provided below.

- **Electric Vehicles (EVs)** – EVs are vehicles driven by an electric motor and powered by a battery, which can be plugged into an electricity source to recharge. Full EVs have no combustion engine, and therefore zero tailpipe emissions, producing 0 grams CO_2/km when driven – these pure EVs are sometimes referred to as Battery Electric Vehicles (BEVs). Hybrid Electric Vehicles (HEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) are the other main forms of EVs.

- **Plug-In Vehicles (PIVs)** – A collective term used to cover all vehicles that can be plugged into an external electrical outlet to recharge their battery. PIVs form

a subset of ULEVs, which includes both BEVs and PHEVs. All PIVs require recharging infrastructure to recharge their batteries, so understanding this category's needs is key when planning charging networks. Statistics for total licensed PIVs by local authority are published quarterly. However, UK targets do not focus on PIVs but rather on 'Ultra-Low Emission Vehicles' (ULEVs), a more relative term that can be redefined as emission standards improve.

- **Hybrid Electric Vehicles (HEVs)** – Hybrids use more than one form of on-board energy to achieve propulsion, usually a petrol or diesel engine plus electric motors and a battery. Some hybrid vehicles use the electric motor to make more efficient use of petroleum fuel, but the motor cannot power the vehicle alone. Other hybrids operate using petrol/diesel or electric power alone, although usually only for short distances due to the size, weight, and cost of the two powertrains required. The controversial 'self- charging hybrid' falls into this category. Consultation is ongoing to as to whether these vehicles will be banned post 2030. This is an important point as a favourite of mini-cab and private hire drivers is the Toyota Prius hybrid.

- **Plug-in Hybrid Electric Vehicles (PHEVs)** – Plug-in hybrids combine a plug-in battery and an electric motor with an ICE, either of which can be used to drive the wheels. The means of propulsion therefore dictates the amount of tailpipe emissions produced. All PHEVs plug-in to recharge their battery. Hybrids that use a series drivetrain only receive mechanical power from the electric motor, which is run by either a battery or a fuel-powered generator. In hybrids with parallel drivetrains, the electric motor and internal combustion engine can provide mechanical power simultaneously.

In addition to the main terms listed above, for clarity a number of additional EV-related terms are defined below.

- **Ultra-Low Emission Vehicles (ULEVs)** – This term is used in the UK to refer to any motor vehicle emitting extremely low levels of emissions, currently set at 75g CO_2/km driven or less. UK targets are set for ULEV uptake and statistics are reported quarterly at local authority level.[6]

- **Alternative Fuel Vehicles (AFVs)** – These are vehicles that run on substances other than solely conventional petroleum gas or diesel. Alternative fuels include electric, solar, biodiesel, ethanol, propane, compressed air, hydrogen, liquid natural gas and liquid petroleum. All types of EVs are AFVs. Because this term focuses on the way a vehicle is propelled rather than its emission levels, there is no guarantee that an AFV is necessarily less polluting than a conventional ICE.

- **Extended Range EVs (E-REVs)** – These are plug-in hybrids where only the motors can be used to drive the wheels. In most respects the vehicle behaves like an EV, recharging the battery using an external supply, but a small combustion engine is also available as an on-board generator to recharge the battery if required. This vehicle type may be on its way out of use though, with BMW recently having removed its only E-REV model from its range in favour of larger capacity EVs.

[6] https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01

Fuel Cell Electric Vehicles (FCEVs) – These are vehicles that use a fuel cell, instead of or in combination with a battery, to power the electric motor. The fuel cells generate electricity to power the motor, generally using oxygen from the air along with compressed hydrogen. Hydrogen must be stored and transported from the production site to the refuelling station, making it an expensive infrastructure solution. While FCEVs are not considered within this study, they have been included in this section to complete the EV offering. If FCEVs come into wider usage over the next few years, they will be able to benefit from the EV charging network assuming the same types of power adapters are used.

3.2.2 EV Technology Roadmaps by Vehicle Type

The UK Automotive Council has developed long-term technology roadmaps[7] for electric passenger car, bus, and commercial vehicle technology, representing the vision of vehicle manufacturers to 2040. These roadmaps show electric drivetrain technology as a focus area for passenger cars and light vans to 2050, given the drivers towards reducing emissions. Ignoring early teething issues in terms of specific vehicle types being brought to market, it is likely that charging infrastructure will be required for the majority of vehicles in the overall fleet for the next several decades. The roadmap nuances across the different vehicle types are described in more detail below.

Cars

The passenger car technology roadmap applies to private consumer vehicles, taxi and private hire fleets, car share, individual business, and pool cars. Many EVs are now available to support these use cases with many more models scheduled for release by manufacturers in the coming years. However, this increasing model choice must be widely promoted to encourage consumers to consider adoption due to various concerns outlined later in this strategy.

Vans

Light vans can also make use of EV and hybrid technologies, providing an important opportunity for reducing urban emissions from local delivery solutions and business vans. New van sales have a higher average emission target than cars, of 147g CO_2/km by 2020. However, relatively few EV van models are currently available in the UK and only in very low volumes. Manufacturers such as Nissan, Renault and Citroen offer EV vans and have recently been joined by new models from LDV and Mercedes, with Ford, VW and LEVC announcing models coming soon to the UK.

Heavy Duty Commercial Vehicles

Heavy duty commercial vehicles remain a challenge for EV technology primarily due to their weight, payload and range requirements. Several companies are now investing in alternative technology solutions to reduce emissions from heavy freight, with some focussing on creating all-electric powertrains and hydrogen FCEVs while others are adding self-driving features and new fleet logistics systems to standard rigs to improve efficiencies and emissions.

[7] https://www.automotivecouncil.co.uk/technology-group-2/automotive-technology-roadmaps/

Buses

A variety of EV technologies are already used on buses, including battery electric, hybrid, plug-in hybrid, hydrogen fuel cell and biomethane models, enabling operators to choose appropriate low carbon technology solutions to meet their needs. The UK Government has provided funding towards the deployment of low emission buses through the Department for Transport's Low Emission Bus schemes and Clean Bus Technology fund. There are two main types of electric bus − those that take power continuously from a source outside of the bus whilst travelling (e.g. overhead wires), and those that use energy stored on-board (usually in batteries). Hybrid electric buses use a combination of ICE and electric propulsion.

3.3 EV Availability

Since only vehicles that plug-in to charge the battery are relevant to recharging infrastructure, in this section we provide a summary of current plug-in car availability in the UK.

There were 47 plug-in car models available on the UK market (as of April 2019): 22 plug-in hybrids (PHEV) and 25 full battery electric models (BEV) as shown in Figure 3-2. A further 11 models were set to launch in 2019, with another 25 announced beyond then, all of which are BEVs. There are no new PHEVs in the pipeline, and many PHEVs previously available in the UK were discontinued in 2019, highlighting the manufacturers' continuing shift in focus from PHEV to BEV in line with tightening EU new car sales emissions targets.

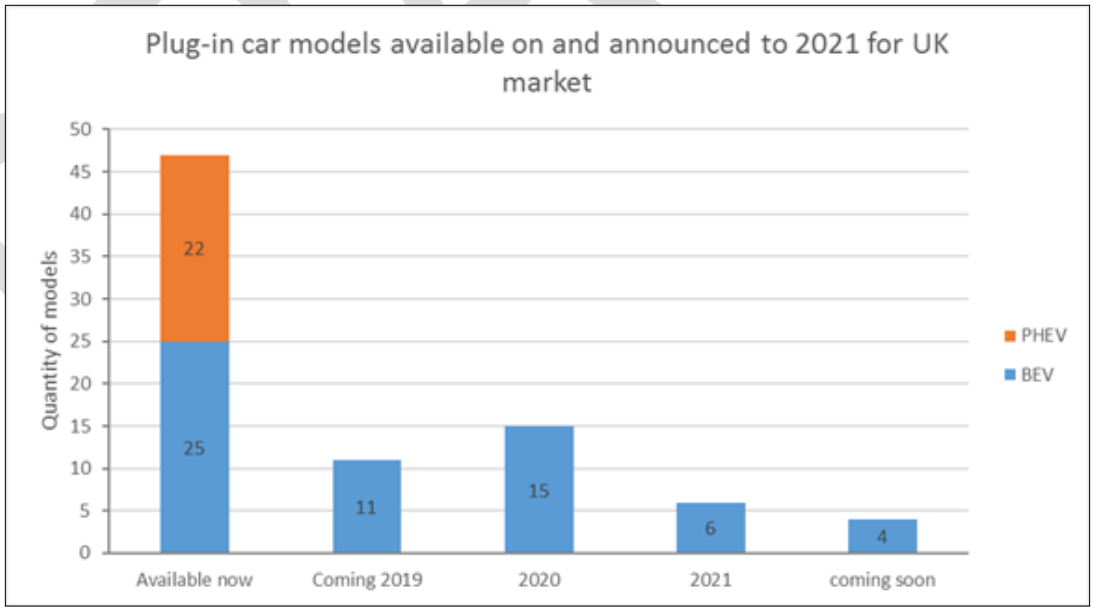


Figure 3-2 EV Plug-in cars available or announced to 2021 for UK (data from EV database) [8]

In contrast to the future BEV focus, the majority (68%) of plug-in EV sales in the UK to date have been PHEV according to the European Alternative Fuels Observatory (EAFO),[9] as shown in Figure 3-3. This existing fleet of PHEVs will continue to need

[8] https://ev-database.uk/

[9] https://www.eafo.eu/

charging facilities going forward. The recent dominance of PHEVs in the UK market is similar to most European countries – however, other countries such as Norway and the Netherlands have seen the opposite due to their more favourable BEV incentive schemes. It will be interesting going forward to see how the UK's split between BEVs and PHEVs changes following the recent changes to UK vehicle incentives in favour of BEVs and the lack of new PHEV models coming to market.

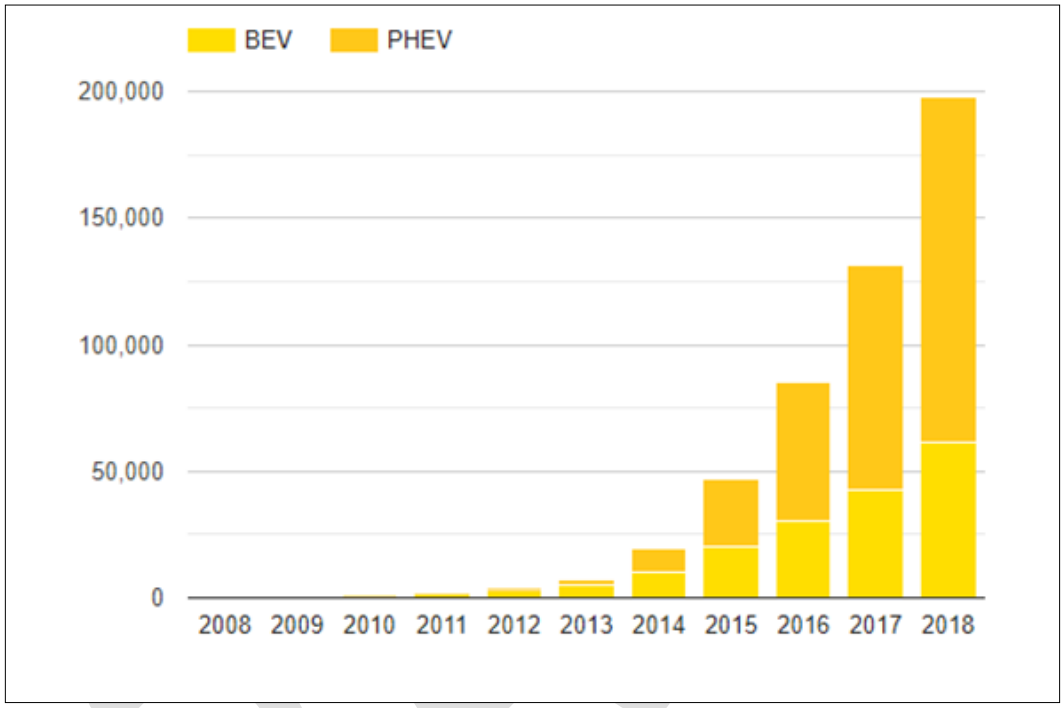


Figure 3-3 BEV v PHEV sales in the UK to 2018 (chart reproduced courtesy of EAFO)[10]

EV model prices generally remain high as summarised in Figure 3-4, although estimates provided by EV Database suggest a concentration of new BEV models coming by 2021 priced at under £40K with battery capacities up to 60kW.

[10] https://www.eafo.eu/countries/united-kingdom/1758/summary

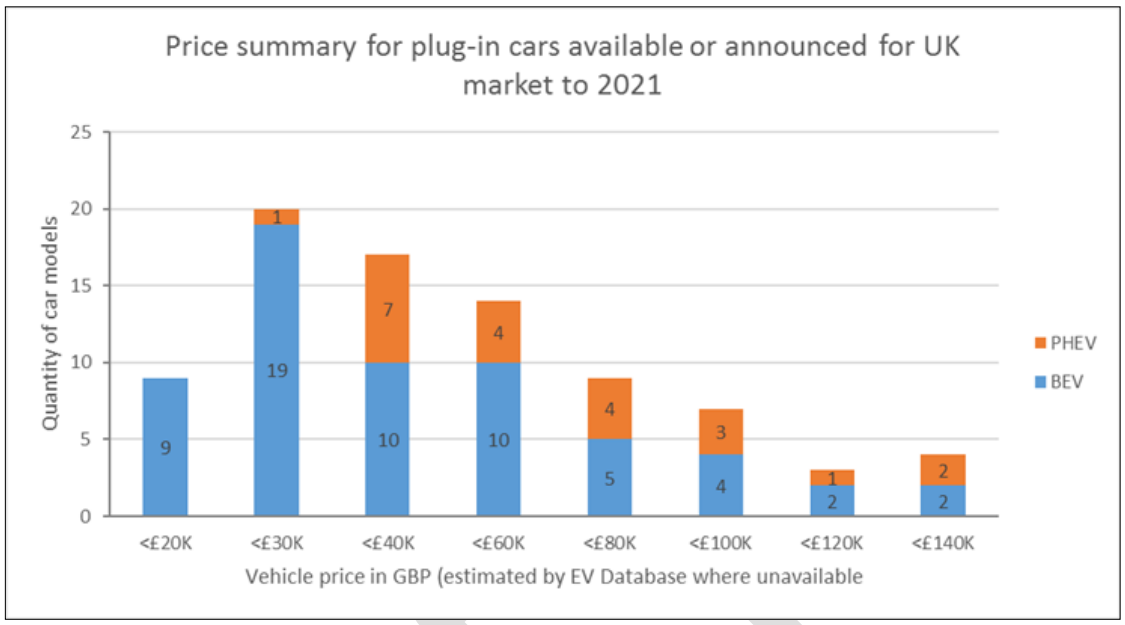


Figure 3-4 Prices for EV Plug-in cars announced to 2021 for UK (data from EV Database)

The second-hand EV market is still very small, making up less than 0.2% of auction sales in 2018,[11] and most independent second-hand dealerships leave this limited EV market to the franchised dealers. Second-hand dealers report the usual concerns about lack of recharging infrastructure alongside poor real range and value for money as reasons for this. However, the Go Ultra Low campaign supported by Energy Savings Trust and others has sought to dispel these myths, and continuing regional awareness raising activities are required to get the message out. One likely influence to boost sales of EVs is the future adoption of clean area zone charges, being considered for a number of the UK's larger cities, including Greater Manchester.

3.3.1 Battery Capacity

Some 60% of the EV plug-in models available on the UK market as of April 2019 had a battery capacity of less than 20 kWh, as shown in Figure 3-5. However, it is important to note here that all the PHEV models sit in this category. Nonetheless, all the new models announced to reach the market by 2021 are BEVs with battery capacities above 30 kWh, as shown in Figure 3-6. This demonstrates the trend towards increasing battery capacity, intended to meet consumers' demand for increased range per charge and to tackle the continuing reports of range anxiety by potential adopters.

[11] https://www.motortrader.com/surveys/market-report-electric-vehicles-used-market-10-10-2018

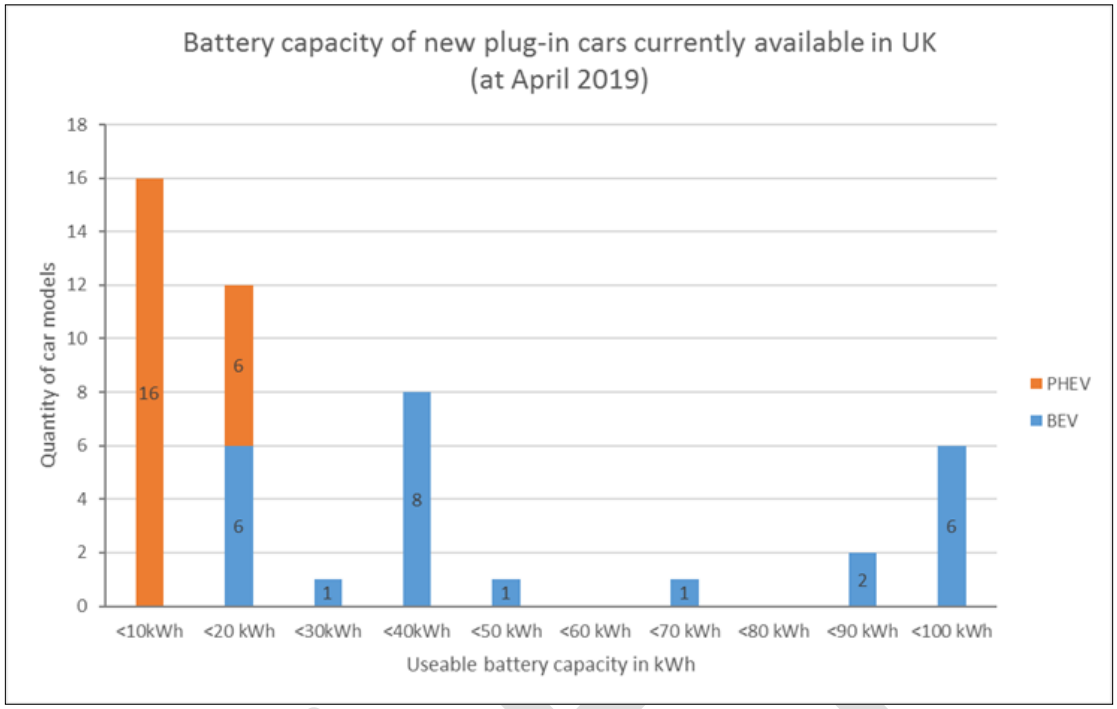


Figure 3-5 Battery Capacities of Plug-in Cars Currently Available in the UK (using data from the EV Database)

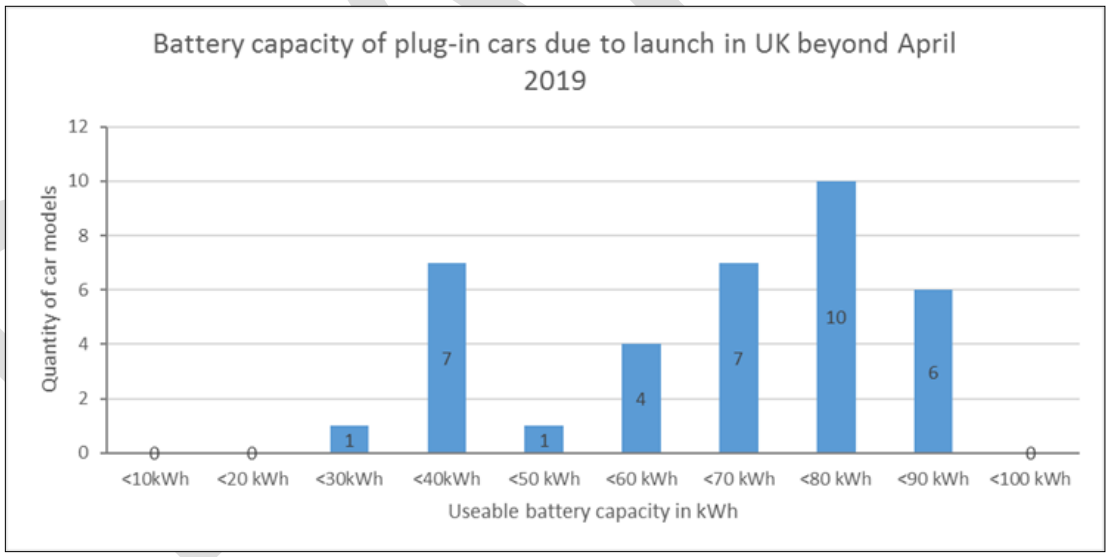


Figure 3-6 Battery capacities of plug-in cars yet to launch in the UK (using data from the EV Database)

Although the quoted range on a full battery varies by EV plug-in model, and in practice also varies with driving style and conditions, the examples in Table 3-1 below provide some context regarding range for some currently popular EVs.

Table 3-1 Examples of battery capacity and range of currently popular EVs

EV Model	Battery Capacity	Range
Renault Zoe R110 ZE40	41/50 kWh	160/200 miles

Nissan Leaf	40/62 kWh	140/250 miles
Hyundai Kona	39 kWh	155 miles
BMW i3 120 Ah	37.9 kWh	145 miles
Tesla	60/100 kWh	300/400 miles

The following vehicles due to become available on the UK market in 2021 show that both battery capacity and maximum range is increasing:

- Mercedes-Benz EQV − A potential range of 252 miles of range with a price around £70,000.
- Lexus UX300e − A potential range of 196 miles of range with a price around £43,000
- Mazda MX-30 − A potential range of 130 miles of range with a price around £25,000
- BMW 1X3 − A potential range of 285 miles of range with a price around £not available
- Volkswagen ID3 − A potential range of 205 miles (48 kWh), 261miles (58 kWh), 342 miles (77 kWh) of range with a price from £32,000
- Volkswagen ID4 − A potential range of 323 miles of range with a price around £55,000
- Nissan Ariya − A potential range of 310 miles of range with a price around £not available
- Skoda Enyaq iV − A potential range of 316 miles of range with a price around £30,000
- Hyundai Ionic 5 − No pre-released details
- Kia 2021 EV − A potential range of 310 miles of range with a price around £ not available

3.3.2 EV Charging Capabilities

EV charging technology is evolving rapidly. Prior to 2016, most EVs charged at 3kW AC (called slow charging), which was adequate to fully recharge most batteries (typically up to 24 kWh) overnight. Then with the development of vehicles with 7kW on-board chargers came fast 7kW AC charging, and with the introduction of higher capacity batteries, the 11kW and 22kW AC fast charging technology has since come to market. Figure 3-7 illustrates the AC recharging capabilities of the EV plug-In models for the UK to 2021. This figure demonstrates the low power charging capabilities of PHEVs. When combined with the fact that PHEVs also have lower capacity batteries (Figure 3-5), along with the lack of new PHEV models due to arrive on the market (Figure 3-6), the implication is that PHEVs do not appear likely

to contribute heavily towards demand for public charging facilities in the near future compared to BEVs.

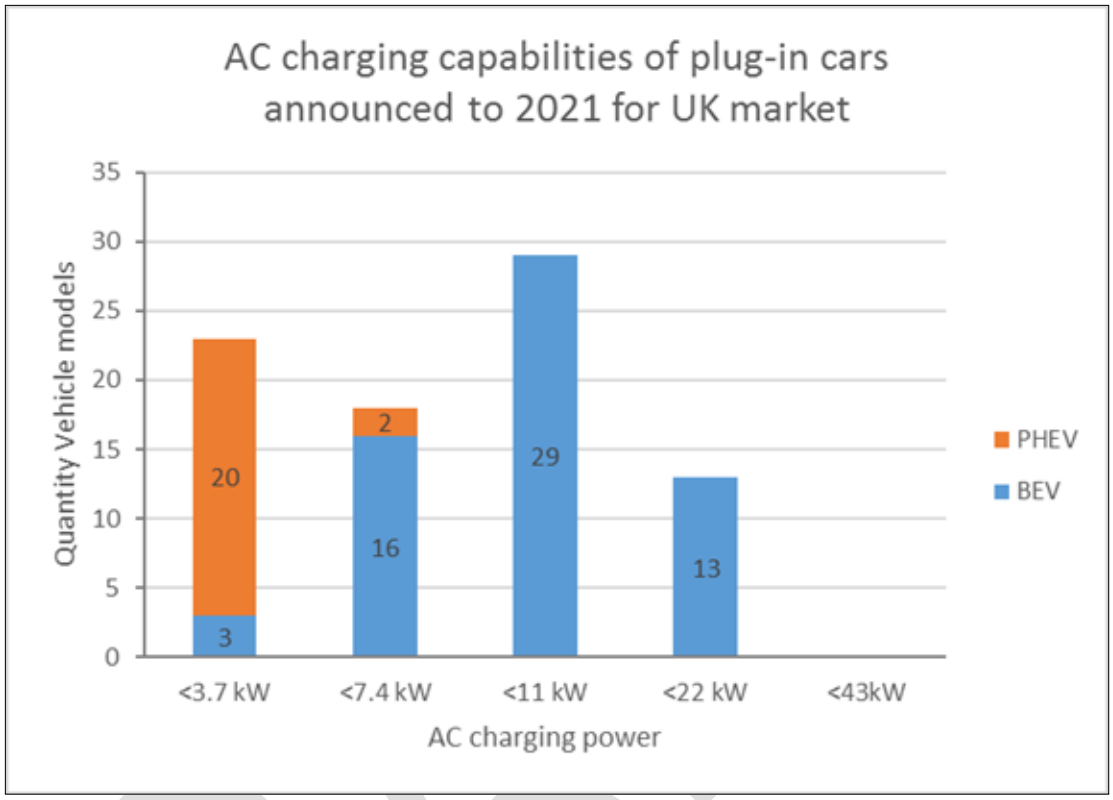


Figure 3-7 – AC Charging Capabilities of PIV in the UK (data from EV database)

Rapid charging DC technology developed in parallel with AC technology, giving consumers a faster method to recharge. However, only some plug-in models were equipped with this capability prior to 2016. In contrast, all new plug-in models due to be available in UK to 2021 are rapid charge capable. Most vehicle manufacturers now use the CCS or CHAdeMO DC socket/plug for rapid charging. Only legacy Renault Zoe cars now use the 43kW AC rapid charging system, and Renault has recently changed to CCS DC rapid charging for future plug-in models. In parallel, Tesla developed its own Supercharger technology to suit their bespoke battery solution, charging their vehicles at 120kW power. Tesla superchargers were the first examples of high-power chargers to appear in the UK, but they can only be used by Tesla vehicles.

The latest development in charging technology introduces charging at powers between 100kW and 350kW DC, referred to as ‘high-power charging’ − but few such plug-in vehicles are currently available in the UK, and most of these are currently high-priced executive cars. The majority of high-power charging solutions use the CCS DC socket/plug; however, a few have maintained the CHAdeMO socket/plug. The roll-out of high-power chargers at 150kW+ for public use is now beginning in the UK, and most are designed to also deliver 50kW DC charges to rapid chargeable vehicles to combat the current lack of high-power charging demand.

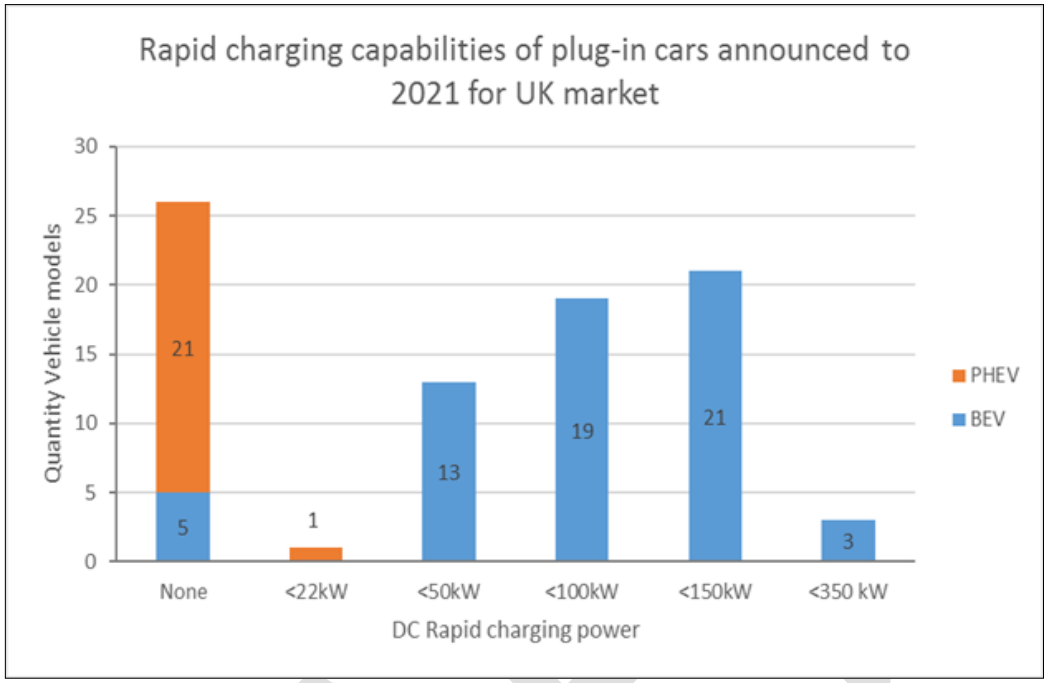


Figure 3-8 Rapid Charging Capability of PIV for UK to 2021 (using data from EV database)

Figure 3-8 illustrates the rapid recharging capabilities and Figure 3-10 shows the rapid charging connectors associated with the UK plug-in models to 2021. This shows the trend towards increasing rapid charging powers to provide acceptable recharging times for higher capacity batteries, addressing consumers' concerns over the comparative convenience of recharging over refuelling. Figure 3-9 illustrates the future prominence of the DC CCS connector for rapid charging, which falls in line with the minimum public charging requirements set out in the EU's Alternative Fuels Directive (2014).[12]

[12] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0094&from=en

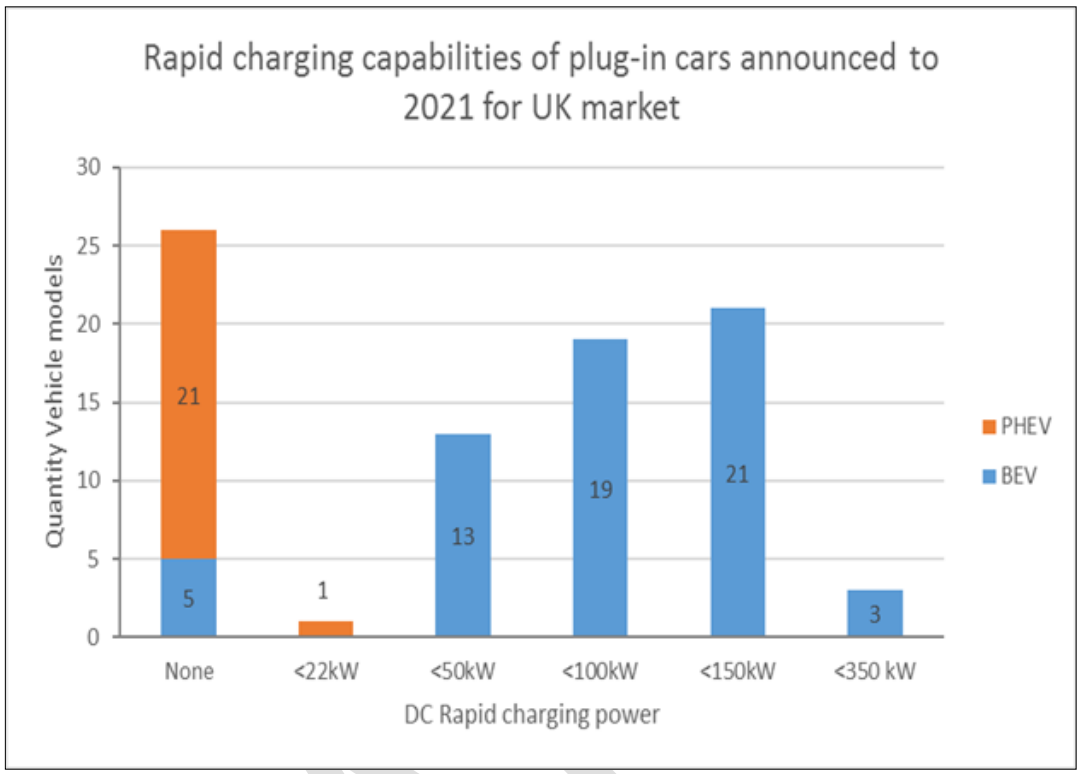


Figure 3-9 Rapid Charging Capability of PIV for UK to 2021 (using data from EV database)

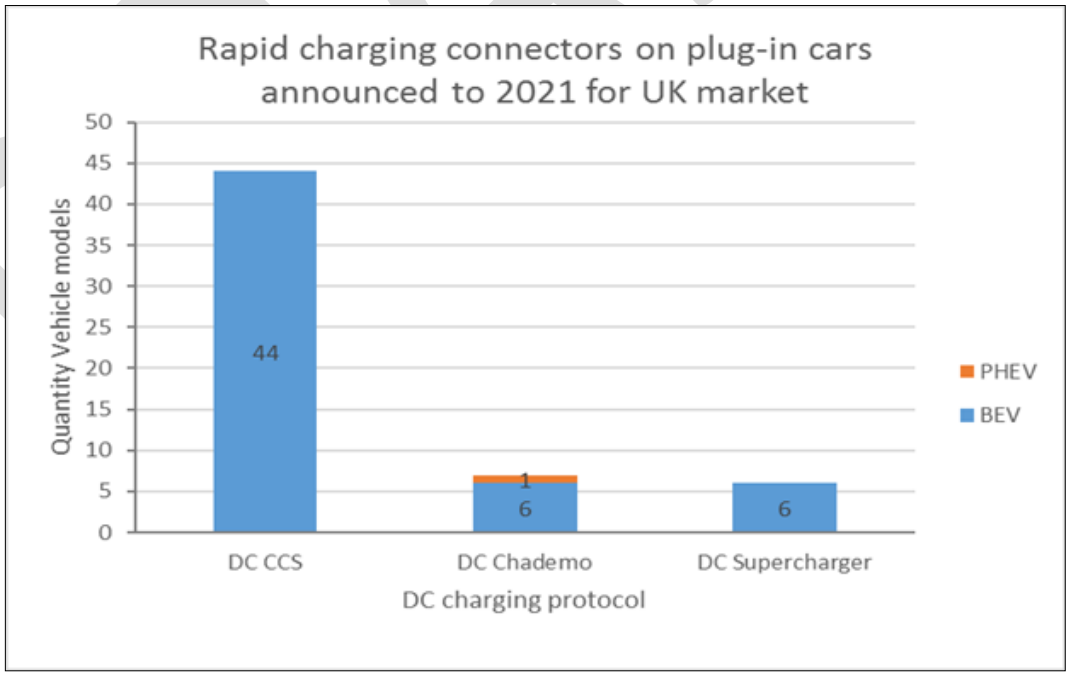


Figure 3-10 Rapid Charging Connectors for PIV in UK to 2021 (using data from EV database)

It is important to note that only 55% of all plug-in vehicles sold in the UK to date can be rapid charged, so slow and fast AC charging solutions will continue to be required in the UK to support the recharging needs of the existing EV fleet. Of those rapid chargeable plug-in vehicles currently on UK roads, approximately 70% require the CHAdeMO connector, so new rapid chargers installed over the next 5 years will

require both DC CCS and CHAdeMO connectors. However, it appears the rapid 43kW AC connector will have very low and declining demand going forward.

3.3.3 Plug-in Vehicle Supply Constraints

Consumers currently report long waiting times for plug-in vehicle (PIV) purchases, and there have been instances of models removed from sale for periods in the UK due to an excess of demand over supply. These unconfirmed reports further reduce consumer confidence in this nascent market where many consumers still perceive plug-in vehicles to be inferior to ICE vehicles in terms of price and utility. They also hamper the effects of efforts to raise awareness of the benefits of PIVs, and speculation and negativity in the press further hinders the transition from ICE to lower emission vehicles.

The lack of production capacity is a global issue, originating in vehicle production plants and battery production facilities across the world. Vehicle manufacturers are in unprecedented territory, facing a demand for product transition at global government level based on emission reduction requirements. Indeed, the EU has set increasingly stringent regulations and associated fines to drive vehicle manufacturers to reduce the emissions of new car and van sales in Europe. However, the technology trajectory is still uncertain, the associated costs and plant changeover timelines are high, and both battery technology and supply are a key determinant. This presents major financial and reputational risks for vehicle manufacturers since one of the key constraints (batteries) is out of their control.

The UK Government is also concerned about the strength of the automotive industry, as it is an important contributor to UK employment, exports and GDP. Nissan introduced the Leaf in 2011, manufacturing all European volumes of battery and vehicle at its UK plant. The first model had a limited 24 kWh battery, which was a risk with the limited charging infrastructure available at that time. However, this led the way in Europe and was soon followed by Renault, Mitsubishi, BMW, VW and Tesla, and higher battery capacities are now becoming the norm. These market leaders are only now beginning to increase PIV model range but have yet to make significant volumes to satisfy the potential demand across the whole of Europe. Many vehicle manufacturers have made little or no significant impact on EV availability to date, although there is much talk in the press about new models to come with little evidence of significant production volumes for the UK.

The current lack of production volume is posing a problem for both legislators and supporting businesses. The UK government has responded by offering purchase incentives for ULEVs since 2011; however, these have been reduced over the last 3 years and now apply only to the cleanest PIVs available. More favourable incentives in countries such as Norway have driven PIV demand to such an extent that vehicle manufacturers could be confident to redirect large percentages of European PIV production volumes there. Norwegian vehicle incentives include exemptions from the country's 25% Value-Added Tax (VAT) on vehicle purchase, free parking and ferry use, as well as use of bus lanes. These were complemented by the introduction of municipal charging facilities and a national network of rapid chargers. The UK does not at present hold such an incentive-based allure for the limited PIV supply, even though it is the second largest vehicle market in Europe. In addition, the use of incentives would have limited effect if there is a supply constraint.

The availability and cost (though less so than a few years ago) of Lithium-ion (Li-ion) batteries are limiting factors in PIV supply. Consequently, vehicle manufacturers are

considering whether to make or buy the batteries for their models. Tesla has chosen to manufacture its own batteries and has launched associated energy business opportunities. Nissan set up its own European battery manufacturing facility to guarantee early supply for its vehicle production, but this has recently been sold. Most PIV manufacturers chose to rely on battery suppliers; however, battery manufacturing capacity within Europe is currently a small proportion of global volume, and Chinese companies own the majority. Li-ion technology is also limited in terms of the opportunity to increase energy capacity and reduce cost, so new technologies are required to achieve a step change as PIVs take over the vehicle fleet. Appropriate volume-ready technologies are not forecast to reach the PIV market until 2025 to 2030, and many new battery manufacturing plants will then be required to supply the PIV volumes required to meet European targets, requiring significant investment and long-range planning. There is therefore still a substantial risk that PIV supply will stand in the way of achieving transport emission reduction targets in the UK.

Once the low battery volumes are split between European countries based on likely PIV sales, and then further by region, this leaves very low supply volumes likely for each local authority area until production capacity increases significantly. Regions and LAs have little or no control over vehicle manufacturers' PIV allocations and compete against major cities such as London and Paris. However, meaningful incentives such as grants supported by public charging facilities and financial dis-incentives such as Low Emission Zones have been shown to increase demand in some countries, leading to increased proportion of PIV volumes produced by manufacturers such as Tesla and Nissan. In Norway, for example, incentives were very significant initially however this level of incentive has not been matched anywhere else.

3.4 EV Charging Technology

Although 'electric vehicle charging points' are often discussed as the technology that is required to allow EVs to recharge, there is a lot of other technology involved in the process. This section explains the need for recharging infrastructure, and summarises the technologies used in the UK.

3.4.1 The need for recharging infrastructure

All Plug-in Vehicles (PIVs) require recharging infrastructure to recharge their on-board batteries, by connecting the vehicle to an external electricity supply, most commonly the electrical grid (the electricity transmission network) or an electrical storage facility. Electric Vehicle Supply Equipment (EVSE) is the collective term used to refer to all equipment used to deliver energy from the grid to a PIV. EVSE includes plugs, sockets, conductors, power outlets and devices that allow communication between the recharging apparatus and the vehicle.

All PIVs require some form of EVSE to recharge their batteries, situated at suitable locations, over a suitable duration and at appropriate times of day or night to meet users' requirements. In a departure from the driver's expectation, built up from years of filling with diesel/petrol, the vehicle dictates how power is drawn from the grid and therefore controls the speed of recharge, not the EVSE equipment. Consumer preferences and habits also have a role to play in recharging behaviour, and many consumers still consider current recharging durations as a limitation of PIV. However, different recharging equipment types are now available to suit different

use cases. Consumer preferences have not yet been established, which is a challenge when planning a service such as a charging network.

There is much debate about who should provide recharging infrastructure, and several different solutions have now been implemented by public and private organisations in the UK and across Europe. There are many stakeholders interested in recharging infrastructure, for many different reasons, making it a complicated marketplace with often conflicting objectives.

There are two clear types of market operators − the first group believes that every house should have a domestic or on-street charger, while the second group believes that rapid charge hubs in central locations are the way forward. The answer is that both are correct up to a point. What no one yet knows is the likely split between home, workplace, destination and in-transit charging that UK EV users will seek over the next decade or more.

3.4.2 Charge Points

The most well-known element of EVSE is the charge point – also called a charging post, charging point or charging station. There are many specifications of charge point in the marketplace, differentiated by power output, communication protocol, type, and number of charging outlets. They can typically be installed mounted onto a wall or as free-standing units installed in the ground. Most ground mounted charge points can be installed with retention sockets to ease swap out for future maintenance, repair, or replacement. Figure 3-2 provides a summary of the different types of charge point currently available in the marketplace.

Table 3-2 Types of EV Charge Point

Common Charge Point Names	Power Output (kW)	Current / Supply Type	Socket / Plugs	Charging Duration (24kW battery)	Use Cases
Slow	<7	AC	Type 2 Socket	6-8 hours	Destinations
Fast	7 – 22	AC	Type 2 Socket	4-6 hours	Destinations
Rapid	43 -50	AC	AC – Type 2	30 minutes to 80%	On-route
		DC	DC – CHAdeMO		
		DC	DC – CCS Captive cables with plugs attached		
High Power	100	DC	Tesla 120kW	TBC depending upon vehicle	On-route
		DC	CCS 150kW+		

Charge point design is evolving rapidly. Six years ago, only single outlet 3kW AC slow charge points were available. This suited early EVs, which were only capable of drawing a 3kW power supply. The earliest charge points provided a standard domestic socket for a 3-pin plug but concerns over long plug-in times led to development of the now globally recognised Type 2 socket. Then with the emergence of vehicles with 7kW on-board chargers came fast 7kW AC single-phase charge points, with three-phase 22kW alternatives, multiple outlets, and power sharing capabilities.

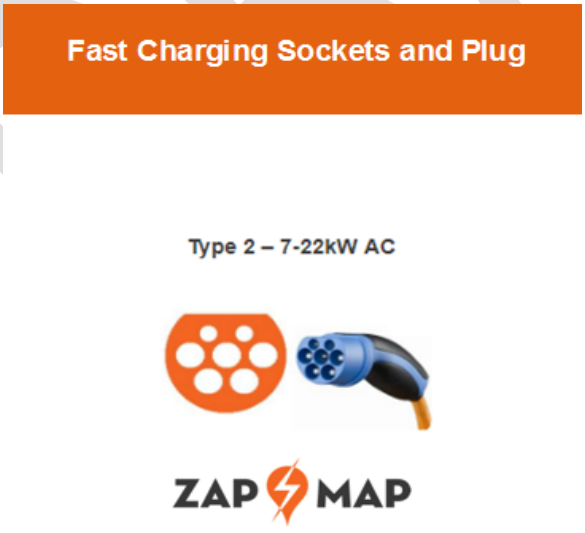
This was followed by the development of rapid chargers rated at 50kW, which were initially only suited to a few PIV models, but now have multi-standard variants widening their use to most rapid charge-enabled vehicles. In parallel, Tesla developed its own bespoke Supercharger technology supplying their vehicles at 120kW.

Tesla superchargers were the first examples of high-power chargers to appear, but they could only be used by Tesla vehicles. The wider roll-out of 150kW+ charge points for public use is now beginning, but the few vehicles designed to draw such high-power are high-priced executive models. To combat this business model limitation, high-power charge points are designed to be backwards compatible, so they can also deliver 50kW DC charges to rapid chargeable vehicles.

3.4.3 Charging connectors

The International Electrotechnical Commission (IEC) standard 62196 specifies the plugs, sockets and outlets required for conductive recharging, covering charging modes, connection configurations and safety requirements for the operation of EV and recharging facilities. EV recharging connectors are specialised for automotive use.

PIV cars and light vans are supplied with a charging cable used to connect the vehicle to slow or fast charge points. This cable has a plug specific to the vehicle on one end, and a suitable plug on the other end to connect to slow/fast charge points in the UK. Some vehicles have separate charging sockets for slow/fast and rapid charging solutions, whilst some manufacturers have standardised around one vehicle-side socket for all charging solutions. Figure 3-11 and Figure 3-12, taken from the Zap-Map website, show the variety of charging connectors (plugs) and sockets used for the different types of PIVs in the UK.



Charging cables are typically supplied with a Type 2 plug to connect to slow and fast charge points in the UK.

Charging cables are also available fitted with standard UK 3-pin plugs intended for infrequent use where Type 2 charging solutions are not available, incorporating power protection limiting delivery to 3kW due to the risk of 3-pin plugs overheating when delivering power over prolonged periods.

Figure 3-11 Type 2 socket and plug for slow and fast charging in UK

Rapid and high-power chargers do not use the cable supplied with the vehicle. Instead, these chargers are fitted with tethered cables and connectors that plug directly into the vehicle due to the high power being delivered. There are four socket/plug formats used for rapid and high-power charging in the UK, as shown in Figure 3-12.

Most vehicle manufacturers use the CHAdeMO or CCS DC socket/plug for rapid and high-power charging. Only Renault retains the 43kW AC system. Tesla's 120kW supercharger socket/plug was designed to suit their bespoke battery solution. Tesla provides superchargers for public use.

Figure 3-12 Sockets and plugs for rapid and high-power charging in UK

3.4.4 Charging Protocols

The charging protocol governs how the vehicle communicates with the recharging equipment, and potentially through the charge point with a wider network of equipment and services such as payment systems, energy, communications, and other services. The use of the Open Charge Point Protocol (OCPP) is promoted as the best way to enable the functionality required for widely available and accessible recharging networks of the future. If all vehicle and charging manufacturers adopt the same communications protocol, then the global recharging network will become accessible by all PIV drivers, be flexible to needs of various stakeholders and cost less to run as new developments are shared easily and quickly. The use of a common protocol can enable communication between any recharging equipment and any wider system in the future.

The latest version available for use is OCPP 2.0, but version 1.6 is most commonly specified in procurement exercises in the UK currently and has been adopted across most of Europe, the USA and Asia. Most slow and fast chargers intended for public use in the UK are now OCPP compatible, but some old charge point models are not upgradeable and therefore risk becoming obsolete. This highlights the need to consider future proofing in recharging infrastructure deployment plans.

A further development, the Open Smart Charging Protocol (OSCP), could enable direct communication between the electrical grid operator and the charge point. This potential functionality is highly valued by grid operators who need to monitor and control peak loading and timing implications for peak demand management, in order to maintain electricity provision for all.

3.4.5 Smart charging

Electric mobility will become an integral part of the UK's smart energy environment because the electrification of transport is key to decarbonising the economy. So smart charging solutions are a key enabler of a sustainable recharging market in the UK. Smart charging could benefit both consumers and electricity networks by

incentivising consumers to shift recharging demand to less expensive periods when there is plentiful clean, renewable electricity available, in turn reducing the need for expensive electricity network reinforcement.

Regular (non-smart) charging commences as soon as the PIV is plugged in, drawing the maximum amount of power available from the supply until the battery is fully charged. For large fleets, this could overload the available power supply causing practical power outages on-site and financial penalties from the energy supplier. Alternatively, smart charging allows the monitoring and management of the charging session to enable remote control of when, for how long and how rapidly the PIV recharges. Smart charging uses the OCPP charging protocol (v1.6 and beyond) to maximise charging flexibility and to mitigate the need for high-cost power supply upgrades. Although smart charging increases recharging infrastructure cost somewhat, it can provide multiple benefits:

- **Power peak reduction:** schedule and automatically control each vehicles' charging cycle to avoid peak power demand times and avoid exceeding maximum power supply capacity.
- **Reduce investment costs:** make optimal use of the existing power supply by controlling the charging speed of each charge point to prioritise specific vehicles and balance the available power across chargers to ensure each vehicle is fully charged ready for the next shift's activity.
- **Energy cost reduction:** cost-effectively schedule charging times to take advantage of time-of-use energy tariffs to reduce operating costs.
- **Increase flexibility:** use prioritised load balancing to deliver only the energy required to suit each vehicles' next shift requirement, and allow for extended shifts, increased range, late start/finish times, etc.
- **Demand response:** respond instantly to dynamic energy pricing and accelerate or reduce the energy consumption of the fleet accordingly to reduce operating costs.
- **Integration of batteries and renewable energy sources:** use stationary batteries as energy stores, charging them from renewable generation sources and/or when energy cost is low, and subsequently use that stored energy to recharge vehicles when energy costs are high.
- **Reduce manual labour:** removes the time-consuming and error-prone need to manually plug/un-plug vehicles at specific times.
- **Improve PIV battery health:** smart charging results in slower charging over the battery's life-cycle, preserving its state of health and reducing long-term operating costs and environmental impacts.

There are currently three levels of smart charging available:

- Basic load balancing distributes the available power capacity equally between all charge points to prevent overloading and high energy costs at peak times.
- Scheduled/static load balancing can also optimise charging schedules to take financial benefit from time of use energy tariffs.

- Dynamic load balancing can combine both static and dynamic data such as bus routes, next day plans and dynamic energy pricing to ensure the entire fleet is charged in time for individual departure at the lowest cost.

3.5 Emerging Wireless / Induction Charging Technology

It is clear that the EV industry has seen substantial technological development in recent years. Another advancement already in train is induction, or wireless, EV charging. Induction charging is fairly simple − electricity is transferred through an air gap from one magnetic coil in a transmitter pad to a second magnetic coil fitted to a receiver pad on the vehicle. All that is required is that the vehicle is positioned in the right place so that the coils are aligned, and charging will begin.

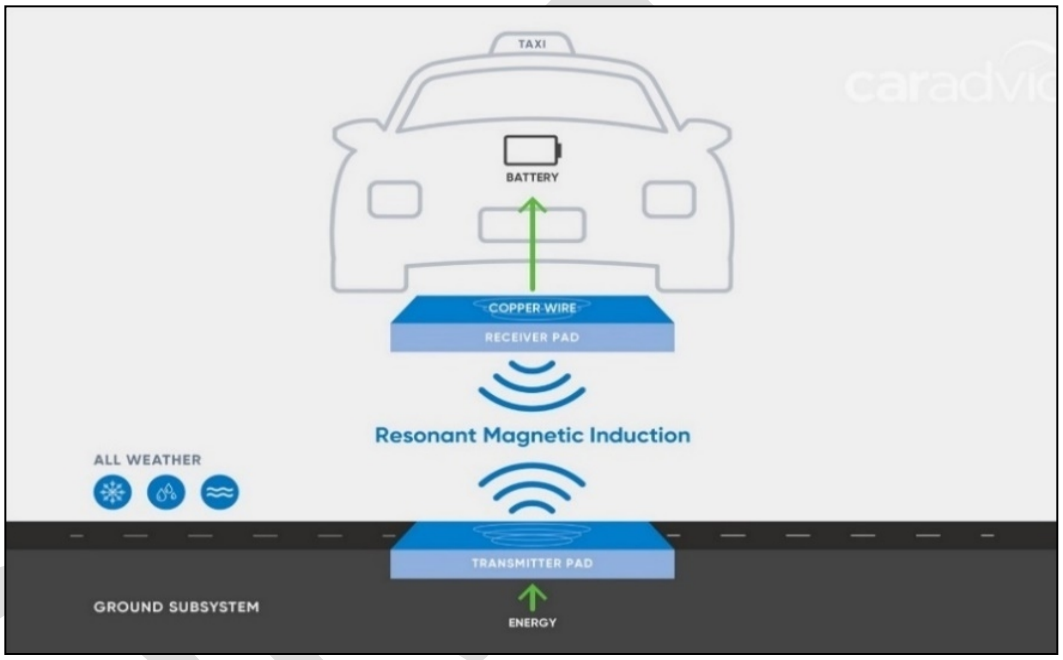


Figure 3-13 Induction charging

Wireless EV charging via magnetic resonance technology delivers the same power, efficiency levels and charge speeds as conventional plug-in charging methods. Charging can be done through water, snow, ice, concrete, granite, etc, without any concerns regarding cable connections. Most Level 1 or 2 consumer plug-in EV chargers operate in the 88% to 95% efficiency range end-to-end, from grid to the battery. Leading wireless EV charging technologies today operate in that same range, at 90% to 93% efficiency.

Wireless charging also makes always-available bi-directional charging possible. Making EVs available as local on-demand energy storage is critical as utility companies look for an increased mix of renewables in the electrical grid. Bi-directional charging, otherwise known as vehicle-to-grid (V2G) technology, can help utilities handle increasing peak demand. For V2G to work seamlessly, the cars need to always be available on demand, and the reality is that most owners don't plug in when their battery is well-charged. Wireless V2G solves that as whenever the vehicles are parked, that stored power is available, and provides a new source of value for the EV owner. Wireless charging will be crucial in the successful introduction of autonomous vehicles.

3.5.1 Induction Trials

A number of trials of induction charging are currently underway:

- **England, Nottingham:** Wireless charging for electric taxis waiting in their rank is to be trialled in Nottingham. The UK Government is putting £3.4m towards fitting five charging plates outside the city's railway station. The six-month pilot project will see 10 electric taxis fitted with the necessary hardware, and the scheme could be rolled out more widely if successful. Officials said electric vehicles were 'vital' to improving city air quality and making charging convenient was key. The Department for Transport said wireless charging was more convenient and avoided the clutter of cable charging points. (*Source: BBC News online)*

- **Scotland, Edinburgh:** Heriot-Watt University, located near Edinburgh, Scotland, is planning a trial of wireless charging using electric delivery vans. It is a joint project with the City of Edinburgh Council and Flexible Power Systems (FPS), and will involve specially adapted vans, with charging equipment from Momentum Dynamics. Innovate UK provided funding for the trial. The trial will also explore the concept of charging hubs, which could be shared among multiple fleet operators. "The project is testing the sharing of charging hubs among logistics, retailers, local government and university-owned commercial vehicles," said FPS Managing Director Michael Ayres. "These charging hubs require high use to be economically viable. The project uses powerful wireless charging to shorten the time vehicles need to be in the charging hubs." (*Source: The Scotsman)*

- **Germany, Cologne:** In the German city of Cologne, an inductive (wireless) charging project for taxis is being set up called the Taxi Charging Concept for Public Spaces (TALAKO, based on the German title). This is part of the SMATA feasibility project, launched in October 2020. For the new TALAKO project, six LEVC (London Electric Vehicle Company) electric taxis are to be converted for inductive charging. LEVC is responsible for making the famous London electric taxi cabs specially developed for the taxi industry. The vehicle has an electric range of 130 km and a range extender on board to extend the range by 500 km if necessary. When the Cologne project is in operation, six vehicles will be able to charge simultaneously. *(Source: electrive.com)*

- **Norway, Oslo:** Jaguar Land Rover will provide 25 Jaguar I-PACE models to Cabonline, the largest taxi network in the Nordics. The brand's performance SUV has been designed to enable Momentum Dynamic's wireless charging technology, making it the ideal vehicle to drive the initiative. A team of engineers and technicians from both Momentum Dynamics and Jaguar Land Rover were engaged to help in testing the solution, and Cabonline signed up to operate the fleet as part of Oslo's ElectriCity programme. Taxi drivers need a charging system that does not take them off route during their working hours. Multiple charging plates rated at 50-75 kilowatts each are installed in the ground in series at pick-up-drop-off points. This allows each equipped taxi to charge while queuing for the next fare. The system, which uses no cables and is situated below ground, requires no physical connection between charger and vehicle, engages automatically and provides on average 6-8 minutes of energy per charge up to 50kW. *(Source: jaguarlandrover.com)*

It is not clear at this time how the COVID-19 pandemic may have affected the progress of these trials.

3.5.2 Wireless Induction Charging Capability of EVs

Most, if not all, of the top vehicle manufacturers have stated that they are likely to offer wireless charging capability in the future. However, wireless charging is yet to be built into any model of PIV to date. BMW had planned to offer this technology on its 530e plug-in hybrid saloon back in 2018, but this decision was reversed, and the current generation battery does not support it. In Germany, it was a €3205 (£2700) option for consumers.

It is difficult at this time to ascertain when this technology would be likely to be introduced. Availability of relevant infrastructure will surely play a major role in determining possible introduction.

Further thoughts to be answered or considered regarding wireless / induction charging:

- If wireless charging is initially offered as an aftermarket add-on, then the required vehicle retrofit may have an impact on both vehicle warranty and insurance. The cost of installing the required infrastructure may suggest that installation will only be feasible as a hub consisting of multiple charging bays rather than single charge points in and around cities.

- The chicken and egg scenario − will car manufacturers want to introduce this option on vehicles if insufficient infrastructure exists? Likewise, will anyone want to introduce the infrastructure if no vehicles exist to use it? The vehicle manufacturers had to 'invest' in the current EV charging infrastructure, so are they likely to want to do it again?

- To go mainstream, wireless charging will need international standards. The Society of Automotive Engineers (SAE) recently announced the first global standard for wireless EV charging, which could help accelerate the technology's rollout. The standard, SAE J2954, applies to inductive charging systems up to 11 kilowatts. As with existing SAE standards for other charging methods, J2954 will harmonise new systems, allowing for increased interoperability between hardware and vehicles from different manufacturers.

4. Cheshire East EV Baseline

This section describes the existing levels of EV uptake, the level of charging infrastructure and electricity supply network in Cheshire East, as well as a comparison against the EV charging progress being made by similar local authorities within the UK. In order to inform potential future locations of charging infrastructure, this section also presents a review of the key factors that can influence charging demand in Cheshire East, including areas of limited off street parking, household type and income levels across the borough, as well as commuter journey patterns.

4.1 Cheshire East PIV Uptake

Since the volume of PIVs registered in an area drives the demand/viability for recharging services, we have summarised the current vehicle statistics for the Cheshire East area using the latest available DfT data, which reports vehicle uptake by LA area to Q3 2020. We would like to make it clear at this point that charging services are those which include domestic chargers. Research on the embryonic EV market has not yet established the longer term ratio charging which will be undertaken between home, work, destination and in transit. This ratio determines the viability of any charging network either private or public. For the purposes of this report we have used the following demographic data.

Table 4-1 shows PIV uptake to Q3 2020 in the Cheshire East area. The table is arranged in order of PIV registered as a percentage of all vehicles in the area and presents Cheshire East and UK overall figures for comparison. PIV registration is slightly below the national average but as ratio where 100% is full adoption comparing 0.87% with 0.97% is not significant.

Table 4-1 Cheshire East PIV Adoption

District / Area	Total Cars & Light Goods Vehicles registered 2019	Total PIV registered Q3 2020	PIV as % of vehicles registered Q3 2020
Cheshire East	243, 432	2, 119	0.87%
UK	36, 620, 814	355, 872	0.97%

Table 4-2 summarises the population and vehicle density figures for Cheshire East and the UK, gross Disposable Household Income (GDHI) and percentage of dwellings without off-street parking. Lack of off-street parking space in residential areas limits the ability of PIV drivers to recharge their vehicles at home and suggests the requirement for more public charging facilities in the future as PIV uptake rises. However, the nomis website dwelling data is not available at Cheshire East districts level, so we have been presented only the Cheshire East figures here.

Table 4-2 Relevant Demographic Data for Cheshire East

District / Area	Estimated Population Mid-2019	Vehicles / head of population	% of Terraced homes and flats unlikely to have off street parking	£ GDHI
Cheshire East UA	384, 152	0.634	10.89%	£24, 524
UK	66, 796, 807	0.55	22.07%	£21, 109

Table 4-2 demonstrates that Cheshire East has a higher than average number of vehicles per head, a higher gross disposable household income per head, and the area's percentage of dwellings without off-street parking is far lower in comparison with the UK average. This last fact suggests that most PIV drivers may be able to charge at home. Since UK PIV adoption is still in the Early Adopters profile of affluent consumers, it is therefore likely that most Cheshire East early PIV adopters will be able to charge at home in the short to medium term. As PIV uptake grows towards the UK's objectives and where Cheshire East residents without off-street parking adopt PIV there is likely to be a demand for public charging facilities.

4.1.1 ULEV Targets

The UK's Committee on Climate Change (CCC) has targeted the ULEV market to reach 9% share of new car and van sales by 2020 and 60% by 2030. The related total ULEV registration targets for the UK by those dates are:

- 680, 000 ULEV licensed by 2020.
- 4, 600, 000 ULEV by 2025.
- 13, 600, 000 ULEV by 2030.

However, no systematic ULEV targets have yet been set for UK regions or LAs to enable comparison of their relative performance against these UK goals. Therefore, we have calculated proportionate targets for the Cheshire East area as relevant percentages of the CCC's targets for 2025 and 2030 in order to compare progress. The percentage used reflects the Cheshire East area's contribution to the 2020 total UK vehicle fleet. First forecasts were calculated for the areas' total vehicle fleet by 2025 and 2030 as shown in Table 4-3.

Table 4-3 Calculated total vehicles forecasts and corresponding ULEV forecasts

District / Area	Total Vehicles as of % of UK Total	2020		2025		2030	
		Total Vehicles Forecast	ULEV Target	Total Vehicles Forecast	ULEV Target	Total Vehicles Forecast	ULEV Target
Cheshire East	0.65%	243, 730	4, 436	272, 592	30, 009	311, 125	88, 723
UK	100%	52, 027, 922	680, 000	84, 868, 992	4, 600, 000	120, 614, 162	13, 600, 000

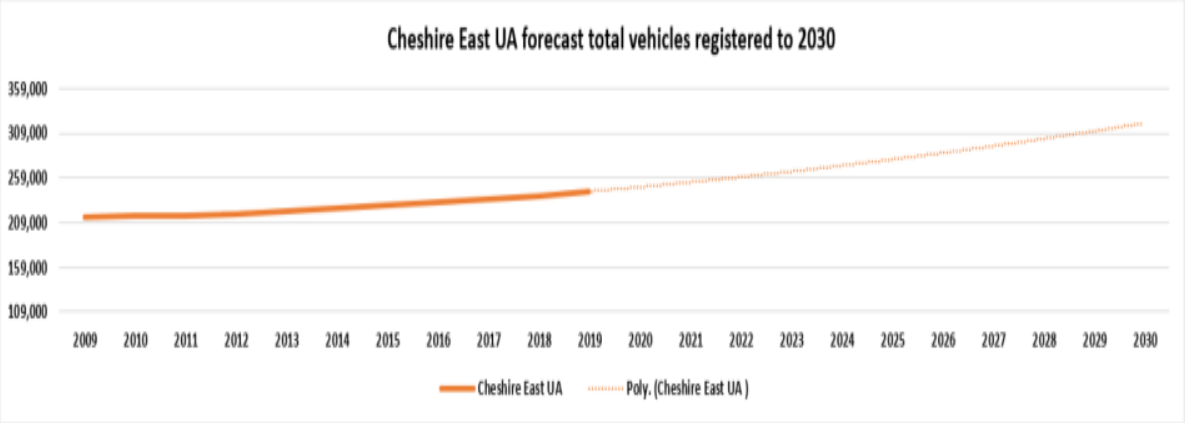


Figure 4-1 Cheshire East total vehicles forecast to 2030

Error! Reference source not found. forecasts how the number of ULEV may increase in the area based on historical uptake to date. Forecasts suggest that if current progress continues 5,776 ULEVs could be licensed in the Cheshire East area by 2025. We believe that significant changes are likely in battery technology to greatly increase energy density, battery life and vehicle range around 2025. This trend coupled with reaching price parity between EV and petrol / diesel could have a major impact on Plug-In Vehicle demand and a more rapid pace of transition to EV is anticipated from approximately 2025 onwards.

Table 4-4 Registration Projections Post 2020

PIV	Baseline	Do nothing scenario			20% increase scenario		
Area	Q3 2019	Q4 2020	Q4 2025	Q4 2030	Plus 20%	Plus 20%	Plus 20%
Cheshire East	2, 119	1, 841	5, 717	14, 552	2, 210	6, 860	17, 462

Looking at the CCC targets for Q4 2025 (30,009) and Q 4 2030 (88,723) it is clear from Table 4-4 that without a serious step change CEC will not hit the targets by a significant margin.

4.2 Existing Charging Infrastructure / Electricity Supply Network

The National Charge Point Registry (NCR) is the official UK database of information on public charge points. It was established by the UK Government in 2011 to provide a public database of all public-funded charge points across the UK, in support of the Government's objective to promote the use and sales of ULEVs. They also encourage privately funded chargers available for public use to be registered on this database, but this is not compulsory. Another useful source of information on charging infrastructure is Zap-Map.com, a mapping application that builds on NCR data but includes other data as well in a very user-friendly format.

Zap-Map was the first major driver-facing development made using the NCR. Zap-Map was originally a static source of information for drivers to use to locate charge points in a required area. Each charge point is identified by a colour coded pin on the map, with further information available in dropdown boxes specifying its quantity and type of outlets, its operator, address, and cost to use. It also enables drivers to report on the status of outlets which was created as an early method of sharing more "real-time" information about status (in or out of service). However, since then network operators have begun to make agreements with Zap-Map so that live status information can also be provided through Zap-Map. Drivers find this single source of information particularly useful when moving between areas and network operators.

Zap-Map cannot enable access and therefore use of charge points, so drivers still require an appropriate access tool (Tag, RFID card, App, contactless card in some cases) to begin and end charging transactions, which is provided by the Network Operator of each charge point.

Figure 4-2 illustrates recent Zap-Map data from different regions of England. This data suggests the North West region is comparable to other regions outside of the populous South East, namely the West Midlands, East of England and South West.

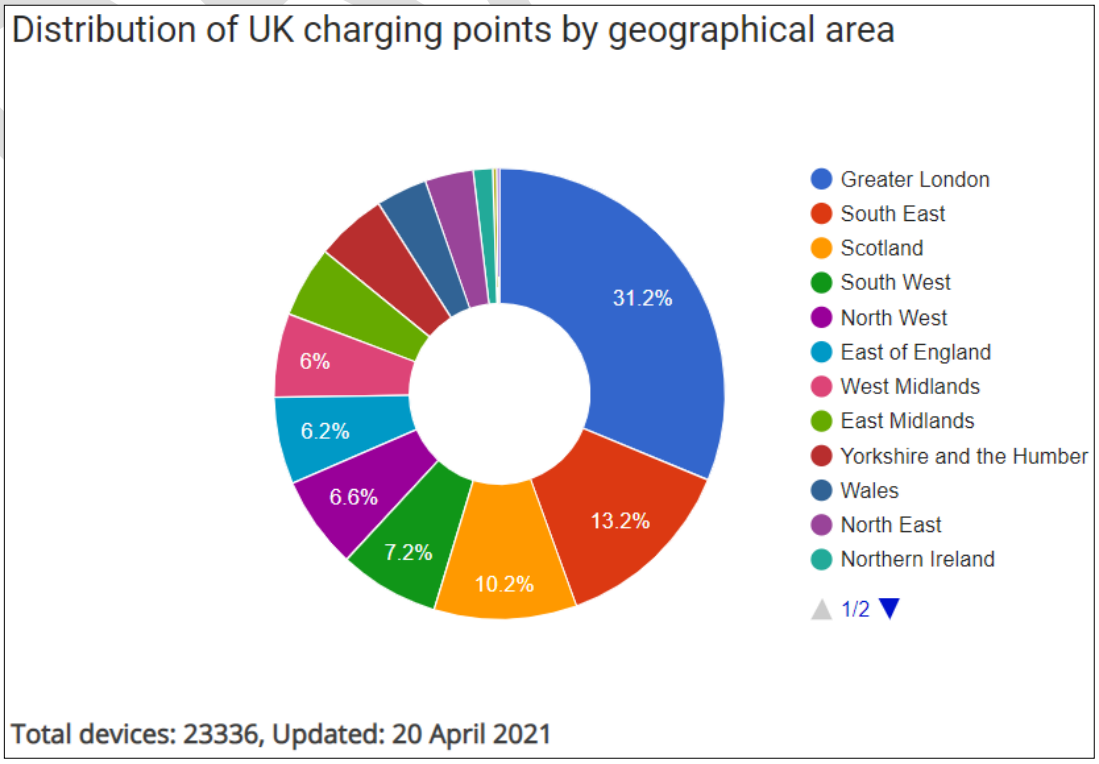


Figure 4-2 Total Connectors by Nation and Region (source: Zap-Map)

According to the National Charge Point Registry (NCR), the UK has 22,123 charging outlets provided for public use, while Zap-Map (Figure 4-3) reports 39,697 connectors from 23,036 devices in 14,728 locations.

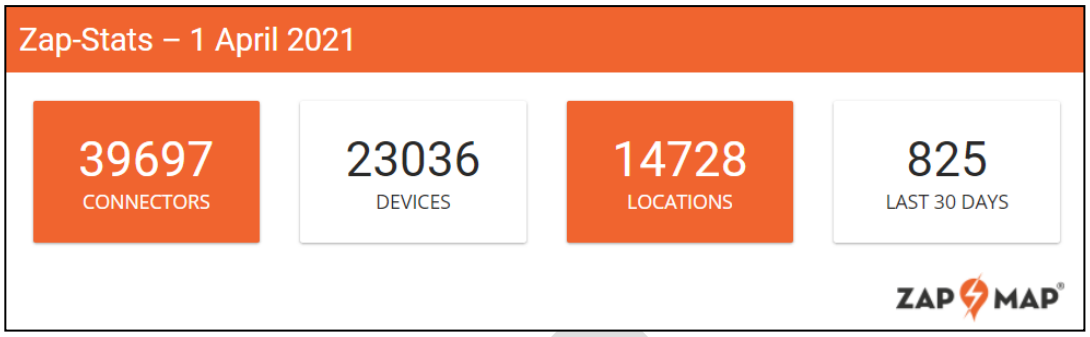


Figure 4-3 UK Publicly Accessible Charge Points Summary

In December 2020, the NCR included a total of 80 charging connectors available within the Cheshire East area, only 1.1% of the UK total. Since the NCR is **not** a live database, this figure does **not** report the current operational status of those charge points (i.e. in or out of service or even still in place). To access status information, it is necessary to refer to the appropriate Network Operators' website or in some cases to Zap-Map, as information provider. Therefore, a physical count of Zap-Map has been undertaken to sense check NCR figures. 23 rapid chargers were found within the Cheshire East area in Zap-Map. As each rapid charger has a minimum of 2 connectors (CCS and CHAdeMO), this tallies with the 45 number registered in NCR.

Table 4-5 CEC Publicly Accessible Charge Points in Cheshire East (Source: NCR)

Charger Type	Quantity of Outlets
Fast up to 22kW AC	19
Rapid 43kW AC	16
Rapid 50kW+ DC	45

Figure 4-4 shows the locations of the existing EV charging points in Cheshire East. This map has been created using NCR and Zap-Map data, where the only available information are their charging speed/wattage and their coordinates.

The figure also shows the boundaries of the three distribution network operators (DNOs) covering parts of Cheshire East:

- Western Power Distribution (WPD)
- Scottish Power Energy Networks (SPEN)
- Electricity North West Limited (ENWL)

It is important to identify the electricity network provider covering an area where EV charging infrastructure is proposed. This is because every DNO has different procedures that must be followed in proposing a potential location, and successful engagement with the DNO can reduce costs incurred in proposing locations where network capacity is too low to facilitate an additional charger. Relevant procedures and recent engagement with each of these DNOs are discussed in more detail in Chapters 6 and 7.

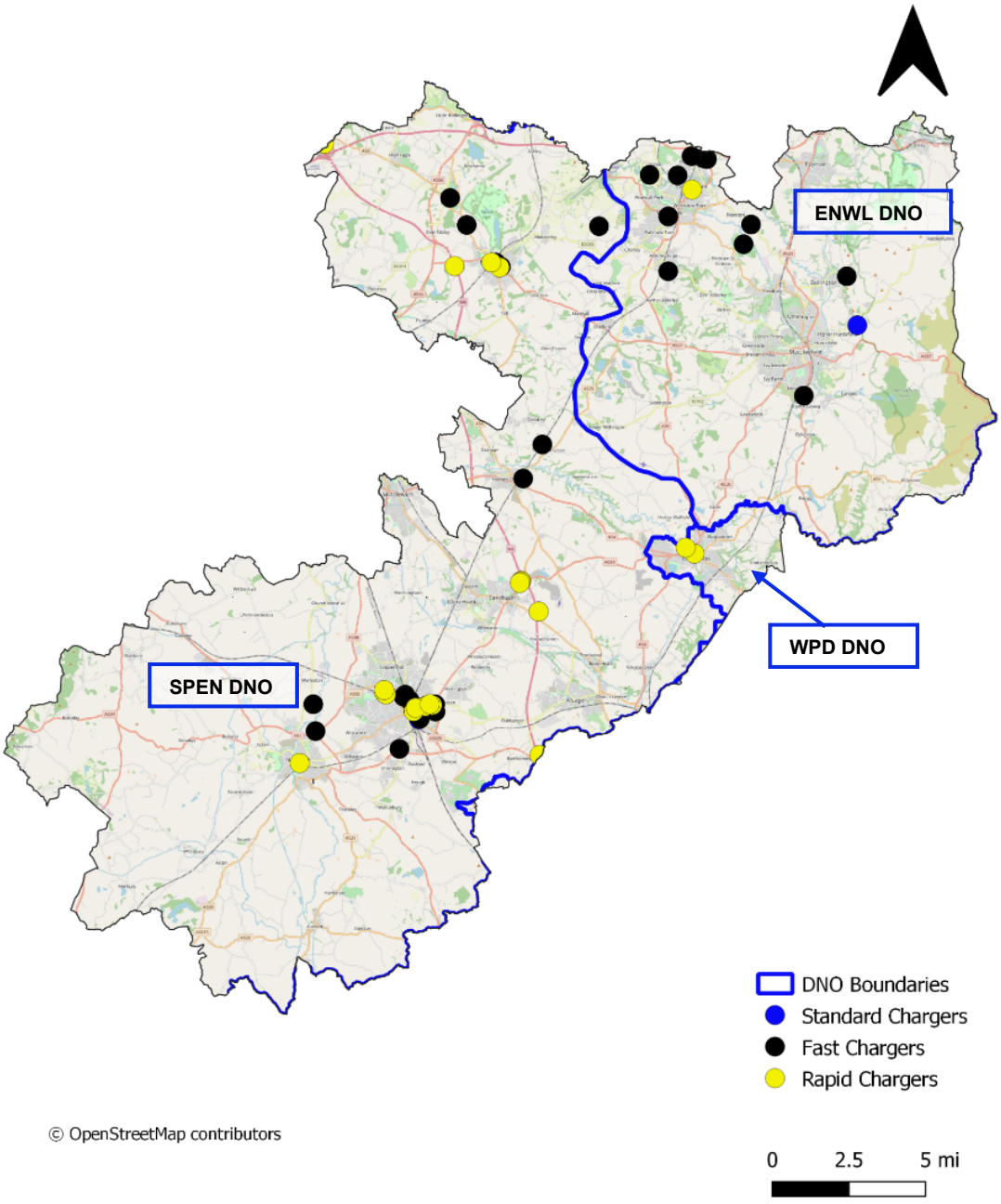


Figure 4-4. Existing Charging Infrastructure and DNO boundaries

The existing charging infrastructure in Cheshire East includes Sandbach motorway services, which are currently served by the Ecotricity network and feature two rapid chargers on each side of the motorway. A survey of rapid chargers in Cheshire East also revealed that the private sector is installing chargers including some KFC, Morrisons, Lidl, Sainsburys, Shell and BP locations, as well as other establishments such as hotels and a health club.

There is a notable lack of charging infrastructure in the east of the borough and the Macclesfield area in particular, with no ‘rapid’ chargers and few ‘fast’ chargers in operation at the time of writing.

Initial discussions with the respective District Network Operators for Macclesfield and Congleton have also identified these areas as having constrained capacity in

the electricity network. This issue could limit the potential to provide EV charging in these areas and is a key area for future investigation to develop solutions to overcome these constraints.

In order to understand where the existing level of infrastructure provision in Cheshire East sits against other authorities, Table 4-6 shows a comparison of Cheshire East charge points against a number of similar sized authorities in terms of population. The existing PIV per outlet ratio in Cheshire (26) is above the UK average of 16. However, this figure is substantially lower than other comparative areas such as Dorset, Cheshire West and Chester, and East Riding of Yorkshire, which current ratios vary between 49 to 64.

Table 4-6 Cheshire East Area Charging Outlets Against Comparative Areas (Source: NCR)

District/Area	Population (mid-2019)	Total PIV registered Q3 2020	Number of Charge Points	Total Number of Outlets	Total vehicles per charge point	Total vehicles per outlet
Cheshire East UA	384,152	2,119	33	80	64	26
Cheshire West and Chester	343,071	1,291	9	23	143	56
East Riding of Yorkshire	341,173	897	5	12	179	64
Wakefield	348,312	799	19	48	42	17
Leicester	354,224	624	30	55	21	11
Coventry	371,521	694	145	237	5	3
Bournemouth, Christchurch, and Poole	395,331	1,294	42	93	31	14
Dorset	378,508	1,855	15	38	124	49
United Kingdom	66,796,807	355,872	12,334	22,123	29	16

The data presented in Table 4-6 above suggests that at present there is limited correlation between the numbers of charging outlets and Plug-In Vehicle (PIV) registrations.

4.3 Baseline conditions influencing future demand

A range of key factors can influence charging demand in different areas, including access to off-street parking spaces, demographics, and key traffic routes. As such, a review of these factors has been completed for the Cheshire East area in order to inform potential future locations of charging infrastructure.

4.3.1 Household Type

Not every household in Cheshire East has access to off-street parking, which can accommodate individual charging points. People without access to off-street parking

might therefore be discouraged to shift to EVs because of this reason. This section of the report presents the local household access to off-street parking and identifies potential areas where higher demand for on-street charging demand may exist.

To carry out this analysis, Census (2011) household data has been gathered. This has included a review of household characteristics to identify types of dwellings likely to have access of driveways and garages. The following dwelling types were considered to have limited off-street parking availability:

- Whole house or bungalow: Terraced (including end-terrace)
- Flat, maisonette or apartment: Purpose-built block of flats or tenement
- Flat, maisonette or apartment: Part of a converted or shared house (including bed-sits)
- Flat, maisonette or apartment: In a commercial building
- Caravan or other mobile or temporary structure

The output of this analysis has been mapped, and Figure 4-5 shows the density of dwellings with limited off-street parking in the principle towns and key service centres in Cheshire East, along with the existing charging points.

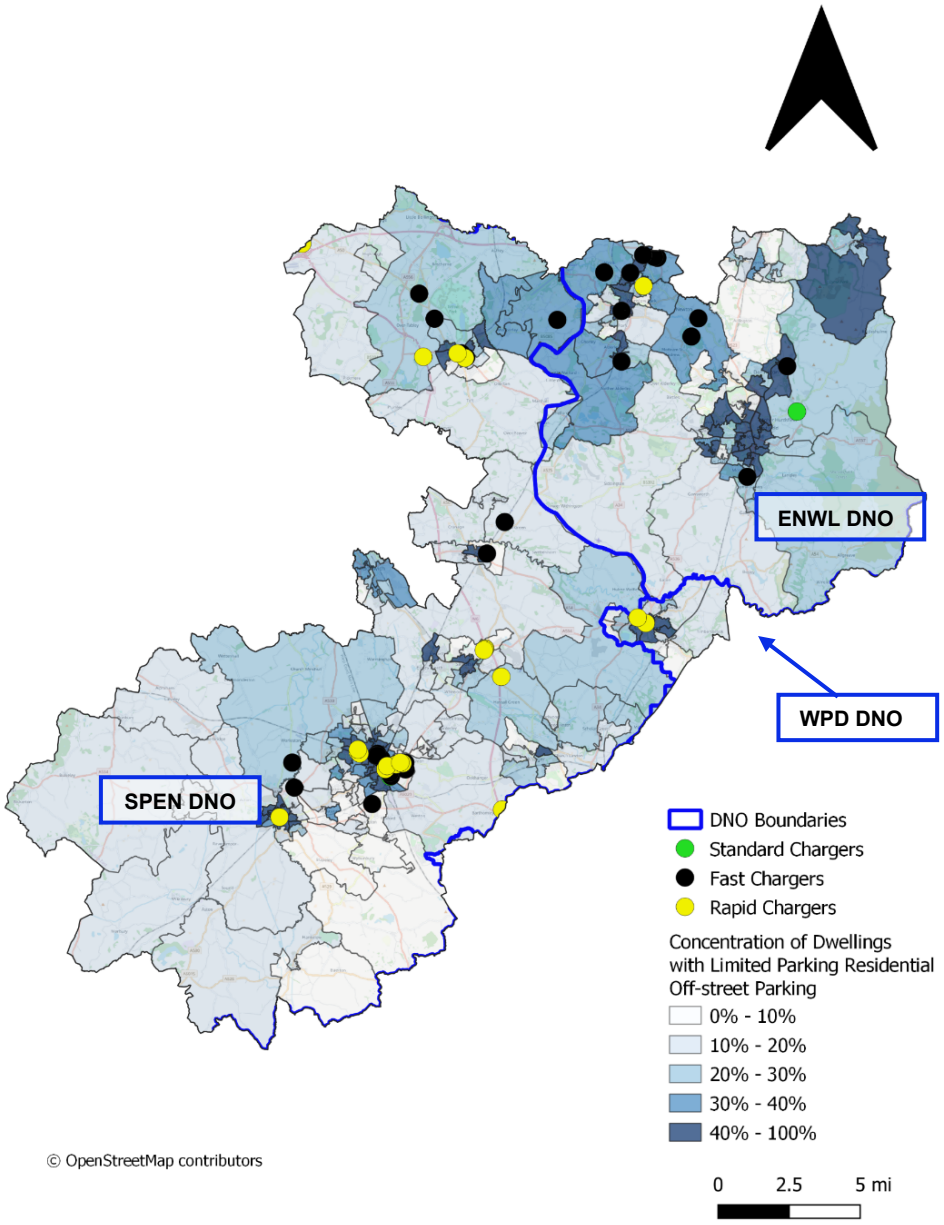


Figure 4-5 Existing Charging Points and Limited Off-Street Parking Availability

As expected, the majority of areas without off-street parking are located in the denser urban areas, examples include Macclesfield, Crewe, Nantwich, Knutsford and Wilmslow. The area to the north-east of Poynton is located around a countryside area and the Macclesfield canal, so may represent a high concentration of dwellings with limited off-street parking due to caravans and boat houses.

4.3.2 Demographic Analysis

There is an established link at present between income levels and the uptake of EVs in large part due to the higher cost of EVs versus Internal Combustion Engines and the limited second-hand market. Price parity for EVs is expected to be achieved by the mid-2020s due to the falling price of batteries and increasing supply of vehicles. For the purposes of understanding where stronger uptake of EVs may come forward, data regarding income levels has been analysed, however this strategy also considers how a balanced network can be provided across the borough.

Figure 4-6 shows the Index of Multiple Deprivation (IMD) across Cheshire East. The IMD is the official measure of relative deprivation for small areas in England and ranks every area from 1 (most deprived area) to 32,844 (least deprived area).

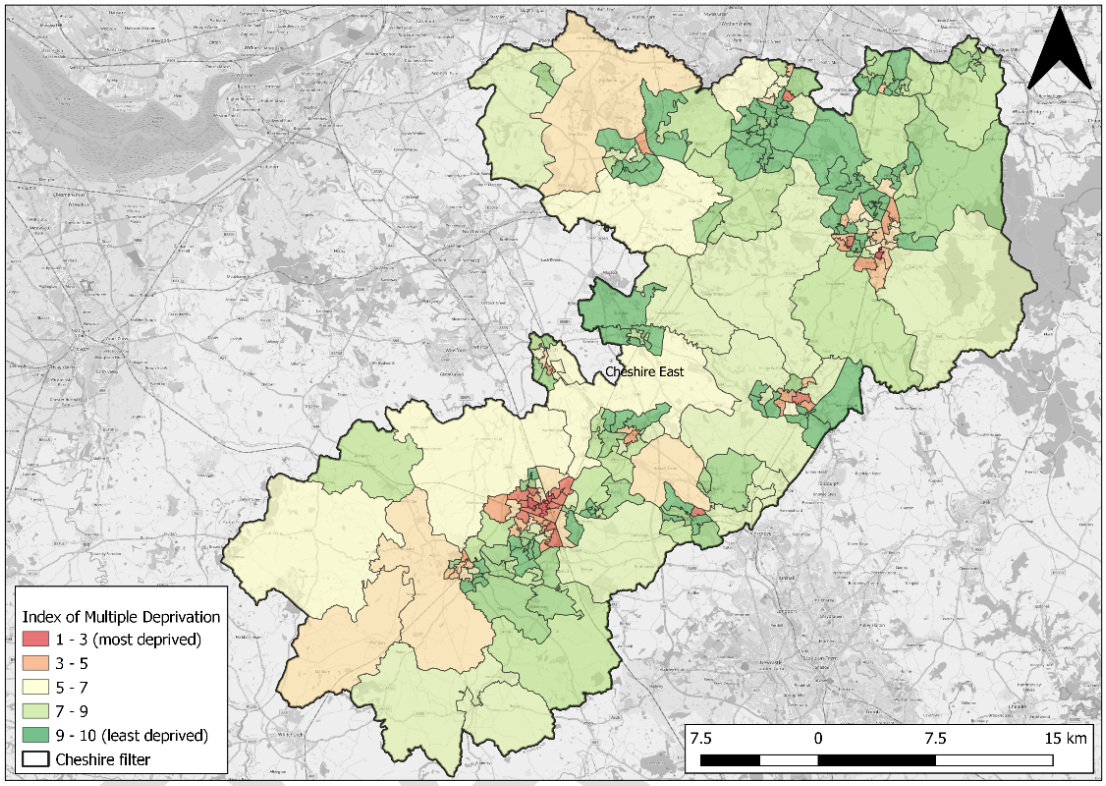


Figure 4-6 Index of Multiple Deprivation in Cheshire East

This figure suggests the most deprived areas of Cheshire East include Crewe, Congleton, and Macclesfield, while the least deprived areas are outside of the principal towns and in the North of Cheshire East including Wilmslow, Knutsford, and Holmes Chapel.

4.3.3 Commuter Journeys

To understand the possible demand for rapid charging, an analysis of commuter journeys has been undertaken to identify key routes across the borough and between adjacent areas. These routes are expected to experience a higher volume of traffic and there may be a requirement for EV top up charging.

Analysis of travel to work data contained in Cheshire East's Local Transport Plan has been pulled through into this strategy to understand the dominant movements to and from Cheshire East. The spatial nature of journeys in and out of Cheshire East is displayed in Figure 4-7 below.

From this analysis, it can be seen a high number of commuting trips to and from Cheshire West and Chester. Journey flows to and from the north, mainly Manchester and Stockport, are also high, with lower traffic demand to/from the south and east of Cheshire East.

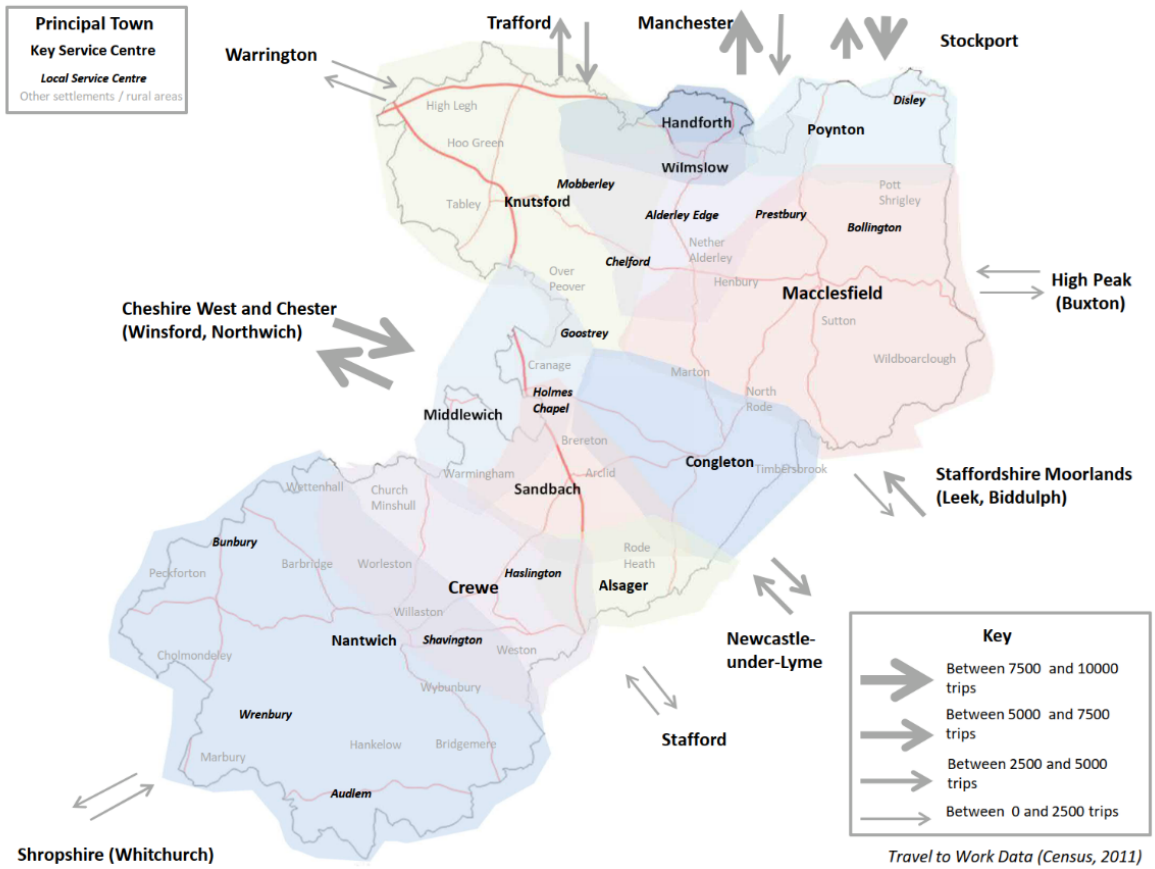


Figure 4-7 Travel to Work flows (Census, 2011)

The amount of charging points should also be influenced by the mode share and distance travelled. Table 4-7 and Table 4-8 summarise the information extracted from Travel to Work data within the Census 2011, which gives an idea of these two key factors within Cheshire East. This data alongside information regarding demographics has been fed into the classification tool presented in the next section 4.3.

Table 4-7 Commuter Mode of Transport (Census 2011)

Mode	Principal Towns / Key Service Centres										
	Alsager	Congleton	Crewe	Handforth	Middlewich	Poynton	Knutsford	Macclesfield	Nantwich	Sandbach	Wilmslow
Work from Home	7%	9%	4%	7%	8%	9%	12%	7%	11%	6%	10%
Under-ground, metro, light rail, tram	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Train	2%	3%	2%	5%	2%	5%	2%	3%	2%	3%	5%
Bus, minibus, or coach	2%	1%	3%	2%	1%	1%	1%	2%	1%	2%	1%
Taxi	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%
Motor-cycle, scooter or moped	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	0%
Driving /passenger in a car or van	76%	75%	71%	73%	79%	71%	72%	71%	73%	78%	72%
Bicycle	1%	1%	5%	2%	2%	4%	4%	2%	3%	2%	1%
On foot	6%	9%	12%	9%	7%	7%	9%	13%	9%	8%	9%
Other method of travel to work	1%	1%	0%	1%	1%	1%	1%	1%	1%	0%	1%

Table 4-8 Distance Travelled to Work (Census 2011)

Mode	Principal Towns / Key Service Centres										
	Alsager	Congleton	Crewe	Handforth	Middlewich	Poynton	Knutsford	Macclesfield	Sandbach	Wilmslow	Nantwich
Less than 2km	9%	18%	23%	16%	12%	11%	13%	23%	16%	14%	13%
2km – 5km	7%	9%	27%	17%	6%	10%	8%	16%	6%	11%	7%
5km – 10km	21%	6%	11%	17%	18%	22%	12%	11%	24%	16%	20%
10km – 20km	26%	28%	11%	20%	21%	23%	23%	14%	18%	22%	14%
20km – 30km	6%	8%	5%	4%	11%	5%	10%	9%	7%	6%	7%
30km – 40km	4%	5%	4%	2%	5%	2%	3%	2%	6%	2%	5%
40km – 60km	3%	2%	3%	2%	2%	2%	2%	1%	2%	2%	5%
Over 60km	4%	3%	3%	3%	3%	2%	3%	2%	4%	4%	4%
Work from home	12%	14%	8%	12%	14%	15%	20%	13%	11%	16%	17%
Other	7%	8%	6%	7%	7%	8%	7%	7%	7%	7%	7%
Average Distance (km)	18.2	17.6	14.8	16.8	21.1	16.4	19	15	18.2	19.4	20

4.4 Classification Tool

Jacobs has developed a Spatial Distribution Model to inform a classification tool which ranks the suitability of potential charging sites based on three usage cases for EV charging: residential, destination and on route.

The model is fundamentally based upon answering two basic questions:

- How many electric vehicles will there be?
- Where will those electric vehicles charge?

The answers to both questions are informed by a series of interconnected models, which can be independently altered to suit the needs of the specific question being answered.

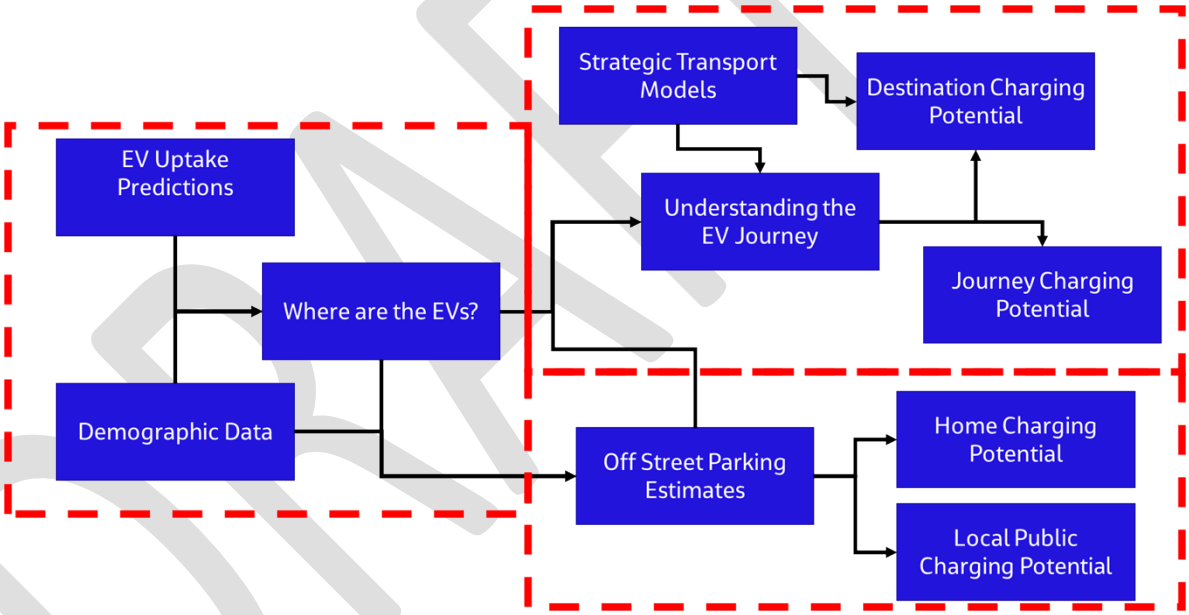


Figure 4-8 The Broad Structure of the EV Model

Figure 4-8 shows the broad structure of the EV classification model. The model is broken down into three separate components, each of which deals with a separate independent component of the overall model. As part of this model, data regarding travel patterns, demographics and housing stock type in Cheshire East has been used to assess the suitability of potential locations for hosting charge points. Appendix A gives further information on how the model has been developed and deployed for this study. Output from the model has informed the appraisal of potential sites as detailed in Chapter 6.

5. Strategic Priorities

This chapter sets out the objectives of this strategy, measures that could contribute to meeting these objectives, and an assessment of what measures are most appropriate to be taken forward in the short, medium and long term.

5.1 Strategy Objectives

Through the stakeholder workshop the following objectives have been agreed for this strategy:

A stakeholder workshop was carried out where the following objectives were agreed for this strategy:

- To support the uptake of electric vehicles by individuals, businesses, and organisations within Cheshire East
- To contribute towards improved air quality and reduced carbon emissions from transport
- To guide the provision of infrastructure that is safe, easy to use and represents good value for money both on installation and throughout its life
- To help ensure infrastructure makes a positive contribution to the streetscape through sensitive placement and appearance, avoiding any negative impacts on other road users, particularly pedestrians
- To seek to overcome inequalities in infrastructure provision, enabling our communities to transition to electric vehicles in a timely way
- Supporting electric vehicles in the context of a wider transport system that encourages mileage reduction, active travel and public transport

These objectives have guided the development of this strategy and will continue to guide implementation of the key measures set out within it.

5.2 Summary of Measures

Table 5-1 below outlines EV infrastructure measures that could contribute to meeting the proposed objectives of this strategy. The rationale and future uncertainties for each proposed measure are also noted.

Table 5-1 Potential Measures

Theme	Potential Measure	Rationale for Measure	Future Uncertainty
Increase number of charging points	Increase provision of rapid charging infrastructure for taxis in convenient locations.	Taxis contribute to air quality issues and carbon emissions, particularly near taxi ranks and key routes into town centres. Engagement with the Hackney carriage (HC) and Private Hire Vehicle (PHV) industry elsewhere in the UK shows that quick top-up charging using rapid chargers in convenient locations is important to enable taxi transition to EV.	If technology around wireless charging develops further into a commercial proposition for taxis, charging infrastructure could be incorporated within taxi ranks or feeder areas.
	Provide charging infrastructure for buses.	In line with the Government's Bus Back Better strategy there is a desire to strengthen local buses and accelerate the move away from diesel to zero-emission buses. The strategy for England reflects the government support to Net Zero bus services.	There is still some uncertainty regarding whether electric or hydrogen will become the dominant technology for buses. Additionally, there is also uncertainty regarding the sustainability of local bus networks in some areas of the country and the capacity to incorporate new technology.
	Provide charging points at car parks for key destinations (e.g. Town Centre, railway stations station, retail parks, leisure centres, libraries and at major employment sites).	Evidence shows that the public highly value the opportunity to top-up at publicly accessible charge points to complement the bulk of charging which is carried out at home. Without the public charging infrastructure in place, this could delay the uptake of EVs. Evidence demonstrates that some of the most popular publicly accessible locations for charging EV are key destinations where drivers can park for a significant period of time. A high proportion of current vehicles (and in the short term) are anticipated to be plug-in hybrids which have relatively short ranges and older BEVs have relatively small batteries. Therefore, top up charging at key destinations will support journeys to work and for other everyday purposes such as retail and leisure, at least in the short term.	There is uncertainty regarding the rate of EV uptake due to manufacturing capacities. In addition, price parity between EV and ICE is not expected until the mid-2020s which may continue to affect rates of transition. With increasing battery sizes and range the requirement for destination charging may reduce in the medium to long term.
	On-route charging points on the Major Road Network.	As noted above, the opportunity for top up charging is highly valued, particularly for when longer distance journeys are	With increasing battery sizes and quicker charging times via higher powered chargers the requirement

Theme	Potential Measure	Rationale for Measure	Future Uncertainty
		required. Without the infrastructure in place, this could delay the uptake of EVs.	for charging at home may reduce with a move to a situation similar to Internal Combustion Engine refuelling. At present there is no firm evidence for this scenario however and the situation should be monitored as EV technology develops.
	Provide charging points to support residents with limited access to off-street parking provision and charging, focussed on community hub locations.	Homes in areas with limited off-street parking may not have the option to introduce a household charging point and therefore will require alternative public charging points. From the baseline analysis there are notable areas of flats and terrace housing clustered in the town centres which are likely to require on-street charging or alternative public charging car parks close to homes. Focussing on consolidated community hub locations would be more feasible than committing to installing charge points in front of all properties.	
	Introduce charging forecourts.	Significant sized charging forecourts are being trialled in a number of locations on a commercial basis. At present the business case for larger and more extensive hubs is uncertain due to questions regarding the uptake of EV in the short to medium term and how owners will charge their vehicles in the future.	
	Introduce charge points for the council's own fleet and potentially the grey fleet.	This will support the uptake of EVs within the Council's own fleet and any grey fleet.	Price parity is not anticipated to be achieved by the mid-2020s however lower operating costs may offset this higher vehicle cost.
	Introduce charge points for HGVs.	HGVs comprise a significant proportion of traffic and are contributing to air quality issues and carbon emissions. However, at present there is a lack of commercially available EV options for HGVs.	There is significant uncertainty regarding whether electric or hydrogen technology can serve HGVs in the future, what shape this technology would take and the timescales involved.
Engagement with the District Network Operator	Continuous engagement and joint working with Scottish Power through the	Scottish Power are currently conducting the "Charge" project that merges electricity and transport planning to create an over-arching map of where EV charge points will be required and where they can be best accommodated by the electric grid. The project will also determine where future upgrades to	As noted above, significant uncertainties regarding the supply and uptake of vehicles alongside the availability of V2G technology will affect the level of power required

Theme	Potential Measure	Rationale for Measure	Future Uncertainty
	"Charge" project, and similar engagement with Electricity North West and Western Power Distribution. Investigation of potential for distributed renewable energy solutions.	electricity supply capacity are required to futureproof the network and feed into future business cases to secure investment as part of broad network development. If these locations can be identified this will avoid costly investment later which hinders the business case for charging infrastructure. The project is in progress with an end date of December 2022 and there is an opportunity for CEC to use the recommendations in this strategy and subsequent detailed planning to position the Council at the forefront of EV infrastructure provision in the region. Similarly, engagement with Electricity North West and Western Power Distribution will be crucial to overcome some of the key electricity power constraints within the Cheshire East area.	from the grid. Joint work with the DNOs should explore the impact of varying uptake scenarios to inform an assessment of likely upgrades to the network. There was a large degree of uncertainty regarding the ability to address key network constraints in areas such as Macclesfield and Congleton in a timely way to support EV uptake. Alongside engagement with DNOs opportunities for distributed renewable energy such as solar could be investigated.

5.3 RAG Assessment and Sequencing

Following on from the identification of the potential measures, a **R**ed-**A**mber-**G**reen assessment has been conducted for effectiveness against the strategy objectives, and for deliverability. This is reported in the table below alongside a recommendation for whether the measures are brought forward in the short, medium or long term.

Table 5-2 RAG Assessment of Potential Measures

Theme	Potential Measures	Effectiveness	Deliverability	RAG Rating Justification	Sequencing
Increase number of charging points	Increase provision of rapid charging infrastructure for taxis in convenient locations			A greater number of strategically located charging points for taxis could encourage EV uptake giving drivers confidence that reliable and accessible charging infrastructure is in place. This measure would benefit from being developed as part of a broader EV Taxi Strategy. Although charging infrastructure cannot currently be sited on taxi ranks engagement with the taxi trade can identify locations at which breaks are regularly taken where rapid charging infrastructure could quickly recharge batteries.	Short – medium term
	Provide charging infrastructure for buses			Further engagement is required with industry stakeholders to determine the deliverability of transitioning buses to EV. Detailed consideration would also be required as to whether there is scope to install charging infrastructure at bus depots.	Medium term
	Provide charging points at car parks for key destinations (e.g. Town Centre, railway stations station, retail parks, leisure centres, libraries			Providing charging infrastructure at key locations will give people the confidence to transition to EV. A mixture of slower and rapid charge points could be delivered at particular sites depending on the length of stay of users. OZEV grants are available for employers and these could be promoted through existing CEC communication channels with employers.	Short term

Theme	Potential Measures	Effectiveness	Deliverability	RAG Rating Justification	Sequencing
	and at major employment sites).				
	On-route charging points on the Major Road Network			This option is deliverable due to Council land ownership and partners (e.g. supermarkets and commercial companies) who are looking to increase charging infrastructure. This is also likely to be a need for fleet vehicles who need to charge whilst out on the job. Public surveys point to the availability of top up charging being key to the uptake of EVs however there is some uncertainty regarding how well these charge points would be utilised in practice.	Short term
	Provide on-street charging points to support residents with limited access to parking provision and home charging, with a focus on community hubs.			This measure would increase the visibility of charging infrastructure and may increase confidence amongst residents for investing in EVs. However, introducing on-street charging may be met with resistance from some residents, particularly if EVs have parking priority in spaces with charging infrastructure. For this reason, focussing on consolidated community hub locations is recommended. Concerns have been raised regarding cables trailing across pavements and solutions will be needed to ensure charging infrastructure does not negatively impact on accessibility for highway users. Detailed planning and engagement is required to identify feasible locations.	Short to medium term

Theme	Potential Measures	Effectiveness	Deliverability	RAG Rating Justification	Sequencing
	Provide off-street charging points to support residents with limited access to parking provision and home charging			As above, this measure would provide a charging solution for people who do not have off-street parking to charge their vehicle. This measure would be more deliverable, for instance using council-owned car parks, but there may be challenges with off-street parking being distant from residential units that may affect the attractiveness of this charging infrastructure.	Short term
	Encourage and where possible support the introduction of charging forecourts			Due to uncertainties regarding the uptake of EV in the short to medium term there is a question mark regarding the business case for large charging hubs. There is evidence that drivers prefer the use of hubs due to availability and convenience. In the short term it is recommended that smaller clusters of charging infrastructure are provided (linking to the use cases outlined above) to give users the confidence a charge point will be available for use. The Council could however engage with partners who may seek to develop larger facilities on a commercial basis.	Recommendation to engage with commercial partners to seek charging forecourts to be brought forward by the commercial sector
	Introduce charge points for the Council's own fleet and potentially the grey fleet			This could be considered as part of the Council's plan to shift its own fleet to EV with infrastructure provided at key sites.	Short term
	Introduce charge points for HGVs			Due to there being limited commercially available EV options for HGVs this measure is not recommended at this time, however the situation should be kept under review to understand future developments for electric or hydrogen technology.	Long term
Engagement with the District	Continuous engagement and joint working with			Although this strategy is identifying feasibility for the short-term provision of sites it is clear from initial discussions with the DNOs that strategic investment is	Continuous engagement recommended

Theme	Potential Measures	Effectiveness	Deliverability	RAG Rating Justification	Sequencing
Network Operator	Scottish Power through the "Charge" project, and similar engagement with Electricity North West and Western Power Distribution. Investigation of potential for distributed renewable energy solutions.			required in particular for Macclesfield and Congleton to address a general lack of electricity capacity in the network. Additionally, further network strengthening may be required more widely within the borough in the longer term to support the large scale uptake of EVs. Investigation of the potential for distributed renewable energy solutions could be conducted to address constrained power supply at key locations.	

6. Prioritising Charging Locations

In Chapter 5 provision of EV charging infrastructure was confirmed as one of a number of potential measures that will be pursued as part of this strategy to encourage the uptake of EVs in Cheshire East. Chapter 4 set out Cheshire East's baseline EV context including where charging points exist as well as the demographic factors affecting likely future EV charging demand across the borough. This information has been taken into account in identifying the highest priority locations for installation of new EV charging infrastructure in Cheshire East, as set out in this chapter.

The review of potential sites carried out for this strategy began with council-owned car parks, as well as broader areas where on-street charging infrastructure will be considered. Some of the car parks considered are located so as to be attractive to people wishing to charge their EVs whilst visiting leisure and shopping areas, or for commuters wishing to charge while at work. Others are better located for residential use, or even for mid-journey topping up along key routes through the borough. And many of the recommended car park locations could serve more than one of these use cases.

These various types of uses were considered as part of the key criteria for the assessment of each potential site, along with the security of the location, energy grid capacity, and whether demand for the proposed charging point would be impacted by other existing or likely future commercial charging facilities. Before setting out the highest priority car park locations, this chapter begins with a discussion of the three main use cases for EV charging infrastructure: Destination, Residential, On-Route charging.

6.1 EV Charging Use Cases / Location Types

In considering where EV charging infrastructure should be located, it is necessary to consider the different reasons why drivers may find themselves seeking a charge in each location. The following sections explore the main types of uses in more detail, including issues to consider when addressing the demand.

6.1.1 'Destination' charging

'Destination' charging occurs in public locations where there is a high footfall of people typically spending two hours or more. This could include high streets, leisure and cultural facilities, tourist attractions, shops, and retail outlets. At these locations, at least a 'Fast' charger (7-22kW) would be needed, though in some cases a 'Rapid' charger (up to 50kW) may be more suitable. For destination charging, the preferred locations are off-street, prime town centre locations and points of interest.

A focus on destination charging in town centres would be a key recommendation for the foundations of a joined-up strategy across the area. If the town centre locations do not have charge points present, a strategic option would be to begin by installing one 'double-headed' charge point per location (able to charge two vehicles simultaneously, and to monitor subsequent demand. By taking a phased approach, the charging network can be grown according to demand, providing a visible asset to the community but also avoiding under-utilisation. There are many benefits of

focusing on town centres, as charge points can support multiple use cases including workers, shoppers and visitors, some residential areas, as well as raising the profile of EVs.

For ease of installation and operation, car parks in council ownership are ideal. However, it is important that charge points be placed in visible locations – at the entrance of car parks where possible – and not tucked away where they are difficult to find. There is sometimes a trade-off required in terms of identifying the most affordable way to connect a charge point to the electricity grid, so the exact site of each charging point must be considered on a case-by-case basis.

Next steps

- Review proposed high-priority car park locations to assess parking regulations, opening times, space availability and accessibility
- Agree approach to parking fees, charging fees, enforcement and maintenance
- Undertake site surveys to identify exact locations and costs
- Engage further with the relevant DNO to confirm power capacity and secure a quote for connection to the grid
- Undertake procurement for proposed charge points, followed by installation
- Promote availability of charging points through resident communications as well as Zap-Map and other databases

6.1.2 'Residential' charging

'Residential' charging focuses on provision for residents without access to off-street parking where charging at home is not possible. Residential charging is often located in areas where there is a high percentage of terraced housing and apartments / flats where there is no dedicated parking facility. This is more of an issue with many PHEVs that cannot charge rapidly using destination chargers during normal use of the vehicle. At residential charging locations, the charge point type is usually 'Fast' (7kW). The preferred location for this type of provision is either on-street parking or in appropriate local car parks (for overnight charging).

Residential charging community hubs could be considered for some areas where they are needed to enable those without access to a driveway or garage to charge near home. The focus should initially be on areas that performed well in terms of the 'Residential Assessment' within the modelling exercise (see Appendix B), where residents are expected to be more likely to purchase an electric car but where access to private off-street charging may be a barrier.

Next steps

- Investigate opportunities for OZEV residential charging grants to secure funding for chargers in specific residential locations (further information provided in Chapter 7)

- Carry out procurement, and a number of the same steps as for Destination charging locations

- Promote to developers the implications of new building regulations for developments (consultation outlined in further detail in Appendix C) to accelerate the private provision of residential chargers for new homes

6.1.3 'On-route' charging

As described in Chapter 4, the modelling exercise carried out as part of this strategy has considered where journeys are being taken to, from and through any part of Cheshire East. Also in consideration are factors such as the likelihood of the driver of each journey to choose an EV for their journey (based on a demographic analysis of their residential area), how far they are travelling, and where other charging opportunities exist. There may also be a requirement for top-up charging for fleet and grey fleet vehicles during daily operations. The result is a picture of where EV drivers are likely to find themselves in need of a top-up charge while driving within (or through) Cheshire East.

Motorway services are the ideal form of 'on-route' charging, and such facilities already exist within Cheshire East on the M6 near Sandbach. These facilities are usually installed by private sector operators without the need for local authority support or involvement. However, where gaps exist in the charging network such as along the A34, A51 and A6, and suitable council-owned car parks exist in convenient locations, 'Rapid' charge points (50kW or more) could be provided to satisfy this demand.

Next steps

- Consider highest priority car park locations suiting on-route charging demand, and procure and deliver charge points where suitable as per Destination charging as discussed earlier

6.1.4 'Commuter' charging

'Commuter' charging occurs in any public car park that links to an alternative form of transport such as a railway station, transport interchange or park-and-ride facility. Providing commuter charging in these types of location could have the benefit of removing cars from town centre locations and encouraging the majority of the journey to be taken by public transport, thus being consistent with multi-modal sustainable transport strategies.

Due to the likely length of stay, slower charging can be provided at these locations. There is little difference in cost between 'Slow' (3kW) and 'Fast' (7kW) charging, and the average EV battery size is increasing along with the time required to achieve a full charge. 'Fast' (7kW) charge points are therefore considered most suitable at locations where commuters are likely to wish to charge.

Council-owned car parks have been considered for their appeal to potential 'commuter' chargers as part of the modelling exercise carried out within this strategy. However, where a commuter car park is not council-owned, it may be

possible to engage with the station owner regarding the provision of charging infrastructure there.

Next steps

- Consider highest priority car park locations suiting commuter charging demand, and procure and deliver charge points where suitable as per Destination and On-route charging as discussed earlier

6.2 Recommended Charging Locations

Providing on-street EV chargers is more expensive than off-street, and requires a longer lead-in time particularly due to the need to consult the public on a Traffic Regulation Order (TRO) to reserve the parking bay for the exclusive use of drivers wishing to recharge their EV. For this reason, the first opportunity to explore for installation of EV charging infrastructure within the borough is the council's many car parks located throughout the borough. The next section sets out the car parks that have been determined to be the most suitable locations for EV charging points.

On-street charging points also have a role to play, particularly where off-street provision is unfeasible. The best areas for implementation of on-street charging points are therefore considered immediately following the discussion of car park charging locations.

6.2.1 Car Park Charging Locations

As outlined above, the assessment completed has allowed for recommendations to be made as to which car park locations should be taken forward for further consideration. Table 6-1 below shows a total of 39 high-ranking specific car parks spread out across 17 areas within Cheshire East. Table 6-2 presents the same proposed car park locations by town, rather than by overall suitability to allow for a balance network to be provided.

The full assessment of car parks is set out in Appendix B, including scores for each of the key criteria:

- Likely demand resulting from nearby leisure and shopping destinations
- Likely demand resulting from nearby employment destinations
- Likely demand resulting from nearby residential areas (taking into account demographics as well as housing types and presence of off-street parking)
- Likely on-route demand resulting from journeys passing nearby
- Avoiding conflicts with existing or likely forthcoming commercially provided charge points
- Security of the location
- Capacity of the energy grid to power new charging points within the car park

Appendix B includes the assessment of 14 other potential car park locations that were considered as part of this analysis, but which were not determined to be among the most suitable car parks within each town. In addition, several other sites were considered but eliminated before the assessment began, due to the possibility of future re-development or practical issues such as limited size of the car park.

One specific car park site that was omitted from the analysis was the Royal Arcade multistorey car park in Crewe, which is in the process of being developed. This car park is almost certainly a very suitable location for a charging hub, and should be considered in more detail as part of the scheme's development for 'fast' chargers.

Table 6-1 Highest Ranking Car Park Locations

Overall rank	Car Park	Town
1	Spring Street	Wilmslow
=2	Exchange Street	Macclesfield
=2	Gas Road	Macclesfield
=2	Railway Station	Macclesfield
=2	Pickford Street	Macclesfield
=2	The Carrs	Wilmslow
=3	South Drive (additional charge points should monitoring data show high utilisation)	Wilmslow
=3	Broadway Meadow	Wilmslow
=3	Princess Street	Knutsford
=4	Fairground	Congleton
=4	Antrobus Street	Congleton
=4	Back Park Street	Congleton
=4	Civic Hall	Poynton
=4	Princess Street*	Congleton
=4	Booths Knutsford	Knutsford
=5	Springfields	Prestbury
=5	South Street	Alderley Edge
=5	Tatton Street	Knutsford
=5	Victoria Centre	Crewe
=6	Community Centre	Disley
=6	King Street	Knutsford
=6	Shirleys	Prestbury
=7	Delamere Street	Crewe

Overall rank	Car Park	Town
=7	London Road	Holmes Chapel
=7	School Road	Handforth
=7	Westfields	Sandbach
=7	Fairview	Alsager
=7	Wilmslow Road	Handforth
=8	Snow Hill	Nantwich
=8	Pool Bank	Bollington
=8	Station Road	Alsager
=8	Cheshire Street	Audlem
=8	Chapel Street	Sandbach
=8	Civic Way	Middlewich
=9	Civic Centre/Library (Rapid chargers to complement current Type 2 chargers)	Crewe
=9	Scotch Common	Sandbach
=9	Brookhouse Road	Sandbach
=10	Love Lane (additional charge points should monitoring data show high utilisation)	Nantwich
=10	Civic Hall	Nantwich

* Rapid chargers are currently being moved from the Princess Street car park in Congleton, so the reasoning behind this decision should be understood before any further charge points are considered at this location.

It can be seen from Table 6-1 that towns like Wilmslow, Macclesfield and Congleton appear more likely to experience greater demand for charging facilities than some of the other towns appearing lower down in the table, e.g. Nantwich, Sandbach and Crewe. However, there is likely to be some level of demand in every town, so it is intended that investment will be spread across the borough to some extent. Following a period of monitoring, the areas where demand is highest may require further investment to increase the number of chargers available. At that stage it will need to be determined if more chargers should be added to existing charging hubs in those towns, or whether new charging hubs should be created to broaden the coverage of the charging network in the town.

Table 6-2 lists the potential car park sites in alphabetical order by town, and includes an initial assessment of whether rapid or fast chargers should be considered for the site, or both. This assessment is based on the length of stay that would be likely at each location, with destination and on-route demand indicating a need for rapid chargers, and residential and employment / commuting locations being able to benefit from a number of less expensive and slower chargers to serve those likely to stay longer or overnight. In most cases, it appears worth providing both types of chargers.

Table 6-2 Highest Ranking Car Park Locations by Town

Town	Town Priority	Car Park	Rapid	Fast
Alderley Edge	1	South Street	✓	✓
Alsager	1	Fairview	✓	✓
	2	Station Road	✓	✓
Audlem	1	Cheshire Street	✓	
Bollington	1	Pool Bank	✓	✓
Congleton	=1	Fairground	✓	✓
	=1	Antrobus Street	✓	✓
	=1	Back Park Street	✓	✓
	4	Princess Street*	✓	✓
Crewe	1	Victoria Centre	✓	✓
	2	Delamere Street	✓	✓
	3	Civic Centre/Library**	✓	✓
Disley	1	Community Centre	✓	✓
Handforth	1	School Road	✓	✓
	2	Wilmslow Road	✓	✓
Holmes Chapel	1	London Road	✓	✓
Knutsford	1	Princess Street	✓	✓
	2	Booths Knutsford	✓	✓
	3	Tatton Street	✓	✓
	4	King Street	✓	✓
Macclesfield	=1	Exchange Street	✓	✓
	=1	Gas Road	✓	✓
	=1	Railway Station	✓	✓
	=1	Pickford Street	✓	✓
Middlewich	1	Civic Way	✓	
Nantwich	1	Snow Hill	✓	✓
	2	Love Lane***	✓	✓
	3	Civic Hall	✓	
Poynton	1	Civic Hall	✓	✓
Prestbury	1	Springfields	✓	✓
	2	Shirleys	✓	✓
Sandbach	1	Westfields	✓	✓
	2	Chapel Street	✓	✓
	=3	Scotch Common	✓	
	=3	Brookhouse Road	✓	
Wilmslow	1	Spring Street	✓	✓
	2	The Carrs	✓	✓
	3	South Drive***	✓	✓
	4	Broadway Meadow	✓	✓

* Rapid chargers are currently being moved from the Princess Street car park in Congleton, so the reasoning behind this decision should be understood before any further charge points are considered at this location.
** Rapid chargers could complement current Type 2 chargers at Crewe Civic Centre / Library car park.
*** Additional charge points could be considered should monitoring data show high utilisation of existing points at Nantwich Love Lane or Wilmslow South Drive car parks.

The assessment of grid capacity is indicative at this stage, with all Distribution Network Operators (DNOs) currently working to improve the strategic information they offer about grid capacity to assist in the process of shaping charging networks. Based on the information available to date, it appears that grid capacity throughout

Macclesfield and Congleton is constrained. If this is the case, it may be difficult to provide rapid chargers in the highest-priority car park locations (or indeed in any council-owned car parks or even in on-street locations) within these towns. Both towns are high priorities for charging point provision due to a lack of existing infrastructure at the moment, but collaborative working with the DNOs covering these towns (ENW for Macclesfield and WPD for Congleton) may lead to the identification of car parks that are suitable for rapid chargers, or otherwise the most suitable car parks for 22kW fast chargers.

Installing EV charging infrastructure is not just for facilitating the charging of vehicles – it also helps to provide assurance to potential EV buyers that they will be able to charge their EV should they make their purchase. Providing at least one charger in each key town or local area may not maximise use of the resulting charging network, but would be beneficial in unlocking the potential demand for EVs and helping potential buyers to overcome their hesitations. Depending on the supplier and the commercial model underlying the network, this decision may need to be made with the supplier during the procurement process (discussed further in the following chapter).

6.2.2 On-Street Charging Locations

In addition to the car park locations prioritised above, on-street charging provision is considered for residential areas where council-owned car parks are unlikely to be suitable, and where demand from residents is likely to be particularly high due to demographic factors as well as a lack of off-street parking.

The modelling exercise carried out as part of this strategy has highlighted that the highest priority areas for potential provision of on-street charging points include parts of Alderley Edge, Wilmslow and Macclesfield. The assessment focused on propensity of residents to purchase an EV, areas where a higher than average number of homes were of a type that would often not have access to their own off-street parking (where private chargers could be installed), and gaps in existing charging point provision (including consideration of the likelihood of the private sector providing charging infrastructure nearby in the future, as discussed later in this chapter).

Table 6-3 Highest priority residential areas for on-street charging

Rank	Town	Residential Area
1	Alderley Edge	East of Town Centre
2	Wilmslow	Town Centre
3	Macclesfield	Town Centre
=4	Alsager	North East of the Town Centre
=4	Nantwich	Town Centre
=4	Knutsford	North of Town Centre
=7	Holmes Chapel	North and East of Town Centre
=7	Handforth	Town Centre
9	Congleton	Town Centre
10	Sandbach	Town Centre
11	Crewe	Town Centre/East/South

Provision of on-street residential chargers is not likely to be a quick or affordable process, so finding the right delivery partner or partners is essential. The

procurement process will specify the need for suitable hardware and ongoing management solutions.

6.3 Future EV Charging Provision

As part of future work to develop and implement EV charging infrastructure, other use types and users can be considered. Taxis, buses and workplaces are some examples of areas that the council may be able to influence and support. An indicative guide to charging for these use types is provided below. The section concludes with a high-level assessment of potential locations within the borough where commercial charging points may be likely to be provided.

6.3.1 Taxis

Some council-owned car park locations could serve taxis in the future, and in the future, it may be possible to provide on-street ultra-rapid charging at taxi ranks and stands. Charging provision for taxi drivers tends to require at least a 'rapid' solution due to the fact that taxi drivers require minimal downtime so as not to impact on their shift. In some towns and cities where electric taxi uptake has been small, a lack of dedicated charging for taxis has been at fault. Other cities, including London, have provided charging points for exclusive use by taxi drivers to help support uptake. Above all, charging put in place to support the taxi trade should be easily accessible.

Engagement with local taxi companies would be required before any infrastructure can be provided specifically for the taxi industry. At present, the OZEV grant for taxi infrastructure scheme is closed.

Next steps

- Engage with local taxi companies to understand EV transition strategies and highest priority locations
- Explore opportunities for securing funding through the next round of OZEV taxi funding when announced

6.3.2 Buses

Most bus operators running electric buses would only make the transition to electric if they could provide their own charging infrastructure within a depot or bus station for overnight charging. For this purpose, even slower chargers may be adequate. However, some bus services may require topping up once or twice during a typical day using rapid chargers in locations that are more convenient to the route being run.

Engagement with bus service providers would be required to understand the most appropriate places for charging facilities to be provided, as well as any future plans to roll-out EV fleets within Cheshire East.

Next steps

- Engage with local bus operators to understand their current and potential future charging needs including locations and charging constraints

6.3.3 Workplaces

Workplace charging is an ideal alternative for EV drivers who drive to work but do not have access to off-street parking at home. Workplace charge points could be used for both fleet vehicles as well as employees and visitors, and OZEV workplace grants are still available for any individual businesses wishing to install charge points. Charge points at workplaces can be 'Fast' (7kW) due to the long stays that are likely for employees.

The council has little control over workplace car parks other than its own. To be seen to be leading by example, it may be possible to promote the council's own achievements in making the transition to EVs.

Next steps

- Understand the implications for new development areas of changes in building regulations (see Appendix C), and communicate this to developers
- Integrate the findings of the council's fleet review into the charging strategy, which has identified further opportunities to convert vehicles to electric.
- Integrate the work on charging requirements for new Council fleet and grey fleet EVs and identify suitable locations at council offices, as well as charger types for specific uses
- Seek workplace grants to support new charge points, and promote the fund to other large employers to encourage them to access their own grants

6.3.4 Potential Commercial Charge Point Sites

Many private companies with car parking space are beginning to pursue the opportunity to either make money by offering charging infrastructure (such as motorway services or petrol stations), while others are seeing the potential to attract customers to their core business by offering free or discounted EV charging. Although this portion of the EV charging network is likely to happen largely on its own without council involvement, the council may be able to accelerate the process to help more people make the transition to an EV faster. In addition, knowing more about the plans these companies may have to roll-out charging infrastructure will help to avoid any duplication of infrastructure, or investment in chargers that are unlikely to be used.

The following land uses are those most likely to increase their charging point offer in the near future:

- Supermarkets
- Service / petrol stations

- Privately-managed car parks
- Other large retail / shopping centres

An analysis of these land uses within the Cheshire East area has been undertaken to identify potential commercial sites where existing car parking space could well see additional charge points in the future. This was only a high-level analysis, and electricity network capacity has not been considered.

A list of the identified potential sites is presented in

Table 6-4 and mapped in Figure 6-1 below.

Table 6-4. List of potential Commercial Charge Point sites

Town	Commercial Site	Land Use
Crewe	Morrisons	Supermarket
	Marks and Spencer	Supermarket
	ASDA	Supermarket
	Wickes	Other big retail
	Tesco Extra	Supermarket
	B&Q	Other big retail
Macclesfield	Tesco Superstore	Supermarket
	Sainsburys	Supermarket
	The Grosvenor Shopping Centre	Other big retail
	ALDI	Supermarket
	B&Q	Other big retail
Alsager	Sainsburys Local	Supermarket
Congleton	Morrisons	Supermarket
	ALDI	Supermarket
	Brown Street Car Park	Private car park
	Tesco	Supermarket
	Shell	Petrol station
	Marks and Spencer	Supermarket
Handforth	Tesco	Supermarket
	Tesco Petrol Station	Petrol station
	John Lewis	Supermarket
	Lidl	Supermarket
	Trek Bicycle	Other big retail
	Best Western Pinewood Hotel	Other
Wilmslow	BP	Petrol station
	Shell	Petrol station
	Waitrose	Supermarket
	Sainsburys	Supermarket
Knutsford	Shell	Petrol station
	Station Garage	Other
	ALDI	Supermarket
	BP	Petrol station
	Boots	Other big retail
	Sainsburys Local	Supermarket
	SPAR Euro Garage Knutsford	Other big retail

Town	Commercial Site	Land Use
Middlewich	Tesco Superstore	Supermarket
	Morrisons	Supermarket
	LIDL	Supermarket
	Shell	Petrol station
Nantwich	Marks and Spencer	Supermarket
	Morrisons	Supermarket
	ALDI	Supermarket
	Wall Lane Car Park	Private car park
Poynton	ALDI	Supermarket
	Waitrose	Supermarket
Sandbach	B&M	Other big retail
	Waitrose	Supermarket
	ALDI	Supermarket
	Ashfield Way Car Park	Private car park
	McDonald's	Other big retail

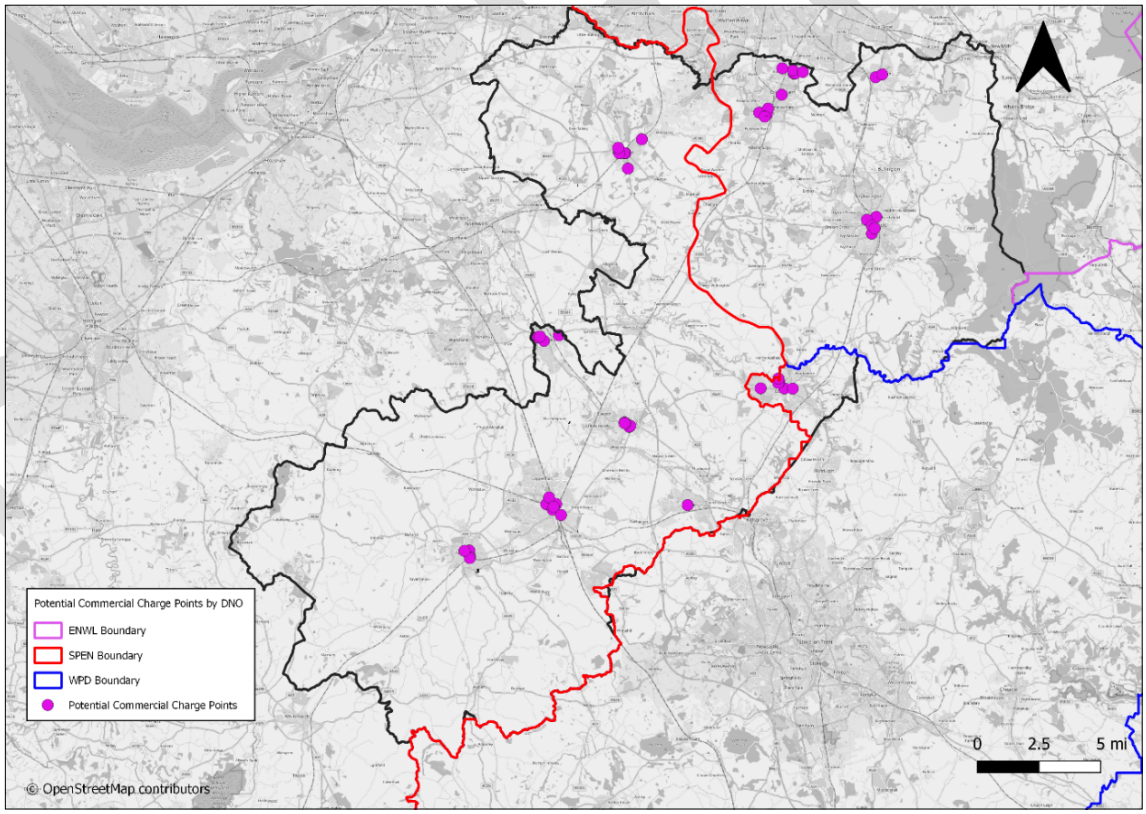


Figure 6-1 Potential Commercial Charge Points by Distribution Network Operator

This high-level analysis of potential commercial charge points was completed in parallel with the assessment of car park charging locations. Proposed car park locations that were in close proximity to any of these sites were marked down slightly to reflect the risk of a future commercial charge point undermining demand for a council-installed charge point. However, it may still be worth considering locations that are near these commercial sites, especially if after engagement it becomes clear that the owner has no plans to pursue EV charging infrastructure in the near future.

6.3.5 Council Fleet Charging

There is an opportunity for the Council to lead by example and work towards achieving net zero emissions by transitioning fleet vehicles to electric for cars and light vans (with an alternative hydrogen powertrain being considered for heavy goods vehicles).

The Council and its main service providers, have a number of charging points already available for both fleet and grey fleet (business use). These sites, and others across the borough are also currently being investigated to assess the practciality of increasing or adding charging points.

Location	Type	Current Provision
Environmental Hub, Middlewich (ANSA)	Depot	2 Fast Chargers
Brunswick Wharf (Ringway Jacobs)	Depot	2 Fast Chargers
RJ - Macclesfield Depot (Ringway Jacobs)	Depot	
West Park (ANSA)	Depot	
Wardle Depot (Ringway Jacobs)	Depot	2 Fast Chargers
Crewe Crematorium	Depot/Destination	
Macclesfield Cemetery	Depot/Destination	
Westfields, Sandbach	Office/Destination	2 Fast Chargers
Macclesfield Town Hall	Office/Destination	2 Fast Chargers
Delamere House, Crewe	Office/Destination	2 Fast Chargers

The following locations are also being assessed to provide a strategic network of charging points for the Council's fleet during the day and for those vehicles parked overnight in town centres. However, not all of these locations will be required.

Location	Type
Sandbach Leisure Centre	Destination/Worktime
Holmes Chapel Leisure Centre	Destination/Worktime
Congleton Leisure Centre	Destination/Worktime
Macclesfield Leisure Centre	Destination/Worktime
Poynton Leisure Centre	Destination/Worktime
Wilmslow Leisure Centre	Destination/Worktime
Nantwich Swimming Baths	Destination/Worktime
Shavington Leisure Centre	Destination/Worktime
Tatton Park	Destination/Worktime
Alsager Library	Destination/Worktime
Civic Way Car Park for Middlewich Library	Destination/Worktime
Fairground Car Park for Congleton Library	Destination/Worktime
Wilmslow Library	Destination/Worktime
Knutsford Library	Destination/Worktime
Nantwich Library	Destination/Worktime
Jordangate Multi Storey Car Park	Overnight/Worktime
Crewe Multistorey/Delamere Street	Overnight/Worktime

Although these charging points will primarily be to support the conversion of the councils fleet, including the grey fleet (business travel), a number of these sites overlap with those being considered for the provision on public charge points and

we will coordinate between these two workstreams as part of the next phase of feasibility, design and procurement activities.

7. EV Charging Commercial Models

This chapter details potential options for how charging infrastructure can be purchased, installed, and maintained, including funding opportunities and other considerations at delivery stage.

The long-term financial business model for recharging services relies fundamentally on the demand generated by the number of EVs in the marketplace. A successful model needs to create value both to the charge point owner (to help them make a return on their investment), and to the driver (who wishes to use the service at a price they believe is reasonable). The challenge therefore lies in balancing supply and demand to achieve an acceptable return on public investment, as well as achieving local emission reduction objectives.

Much of the UK's charging infrastructure has historically been supported by capital grants from government and provided free-to-use to drivers to encourage the conversion to EV. However, public funding is becoming less readily available and private investors require an acceptable return on their investment, which is difficult to define in this evolving market. Since it is proving difficult to change from free-to-use to fee-based charging services in some areas of the UK, it is recommended new charging facilities have a fee applied from the outset. A fee encourages consumers to recognise the value of the service and provides revenue for ongoing maintenance and operation. However, if fees are considered to be too high, this limits demand for charging services and could slow-down EV uptake, ultimately limiting emissions reduction.

Appendix D details a range of considerations that will need to be assessed in developing the preferred commercial model, and in testing the market for preferred models amongst potential operators.

7.1 Summary of UK EV Commercial Models

There is a continuous spectrum of differing commercial models that could be followed in delivering or expanding an EV charging network.

Table 7-1 outlines the key features of three models, setting out how they work and the risk implications for a Local Authority.

It is important to note that although a particular commercial model might be preferred, it cannot be known if a specific model is possible in a specific area until market research and/or an actual procurement process have been carried out.

In reality, multiple commercial models could coexist in a single Local Authority area. For instance, existing charging points from an early pilot project might remain in operation under the direct management of a Local Authority (model 1 ‘In-House Management’ below), while new charging points might be ‘purchased’ or implemented in partnership with a newly procured private-sector charging network operator (model 2 ‘Partnership’ below). Meanwhile, using private land without the approval or even the awareness of the LA, multiple private-sector network operators could build up charging networks of their own (model 3 ‘Commercially-Led’ below).

Table 7-1 Summary of EV charging commercial models – UK

Model	Features / *Risk*
1. **In-House Management** – LA selects locations, purchases charging points and keeps any revenue	• Purchase could include installation and ongoing maintenance • OZEV grant funding could be used for residential on-street charging points • Potential to ensure equity through providing in areas of market failure. • Appropriate for workplace and fleet installations where demand is assured. • Income for the authority. • *If under-utilised, financial risk falls on the LA* • *Interoperability with other provision needs to be factored in.*
2. **Partnership / Concession –** LA leases public highway or off-street parking bays to private suppliers / operators	• Annual permit price plus possible up-front charge • Operator selects own locations and LA consults / approves / makes traffic order • LA may receive a small share of revenue from each charge point annually • Likely to be more suitable for rapid / fast chargers near key destinations • Publicly-owned car parks / land could be considered under this model • *Financial risk divested to suppliers / operators, but interested operators may be limited in some areas*
3. **Commercially-Led** – Private-sector suppliers use private land with limited or no LA involvement	• Rapid / ultra-rapid charging points purchased and installed on private property (such as petrol station forecourts, private car parks, supermarkets, highway services, etc) • Requires sufficient capacity in the electricity network • *No financial risk to LA however this approach will likely lead to gaps in provision where locations are less commercially attractive*

In the early years of UK charger deployment, the Public ownership model was favoured for slow and fast chargers due to the availability of capital funding for councils from Office for Low (now Zero) Emission Vehicles (OLEV / OZEV). However, this model left councils with an ongoing operating cost burden without the funds to support it, causing poor reliability and availability with the associated customer dissatisfaction. Recognising this, private charging suppliers began offering to cover the operation and maintenance costs if the council or private organisation paid the capital and electricity costs. In this way the council can maintain asset ownership while passing on responsibility for operation and maintenance for a fixed period, usually with the option of extension, in the supplier's contract. This requires a Service Level Agreement (SLA) with the clear requirements for maintenance response and reporting, against which performance should be monitored.

Meanwhile, Public-Private-Partnership models (PPP) were used to establish national networks of rapid chargers, led by vehicle manufacturers with some funding from the European Union and the UK government. The PPP model is now favoured by many councils for all public charging provision. This is a form of model 2 in

Table 7-1.

The tax-payer has ultimately funded much of the UK's existing slow and fast local charging infrastructure to date, through government grants and local government funding, but vehicle manufacturers and charging suppliers have also invested in charging infrastructure. A number of charge point manufacturers, such as Podpoint in the UK and Fastned in Holland, have launched Crowdfunding schemes with some success to fund their networks. In the case of some privately-owned recharging networks such as Ecotricity's Electric Highway, revenue from other assets was used to cover the network's operation initially whilst demand was low. However, over time users have increasingly begun paying a charge for the charging service received.

7.2 Funding

The UK Government's early grants to kick-start charging deployment have reduced in recent years, and Government is keen to encourage private investors into the market. There are a number of funding opportunities that CEC can consider, as outlined in the following sections.

7.2.1 EV Charging Infrastructure Investment Fund (CIIF)

This Public-Private fund launched in 2018 provides a £200M cornerstone investment by government to be matched by the private sector. The Fund is now managed on a commercial basis by a private sector fund manager, Zouk Capital. CIIF supports faster expansion of publicly accessible EV charge points along key road networks, in urban areas and at destinations. Its intention is to increase capital invested in the sector to increase EV adoption. The fund is planned to have a 10-year life, up to March 2030.

7.2.2 OZEV's On-street Residential Charging Grant

This grant offers LAs 75% funding towards the capital costs of procuring and installing charge points for residential areas, which must be available 24/7 and have dedicated parking bays covered by Traffic Regulation Orders (TROs). The council must provide 25% match funding and cover the ongoing operating and maintenance costs. This presents an opportunity for LAs wishing to provide charging facilities in areas where off-street parking is limited.

7.2.3 OZEV's Workplace Grant

This grant is a voucher-based scheme designed to provide eligible applicants with support towards the upfront costs of the purchase and installation of EV charge points. The contribution is limited to the 75% of purchase and installation costs, up to a maximum of £350 for each socket, up to a maximum of 40 across all sites for each applicant. Although not able to be directly accessed by a local authority, promotion of this grant scheme to employers within Cheshire East could help to complement the public charging network with workplace-based charge points, thus helping to spread the demand.

7.3 Procurement options

The procurement process is an opportunity to secure the most suitable chargers for each location, customer, and function. For instance, lamppost and bollard chargers may be adequate for many residents, while ultra-rapid chargers may be required on movement corridors and fast chargers will help customers in and around town centres. Below are some options for how to go about selecting a charging point provider or set of providers.

7.3.1 Work with an existing framework contract

Crown Commercial Services (CCS) and Eastern Shires Purchasing Organisation[13] (ESPO) both have framework contracts in place that allow any UK local authority to source charging points through them. These options are worth exploring, as the time and resource requirement of carrying out your own procurement may be avoidable if the offers available from providers through these frameworks are acceptable for Cheshire East and the relevant bidders are willing to extend their provision to an additional buyer / partner. This option provides the following benefits:

- Provides access to market leading suppliers with a verified track-record in the industry
- Offers optional elements and full turnkey solutions
- Ensures compliance with UK procurement legislation
- Has direct call-off options
- Is suitable for lease or purchase of single or high-volume quantities
- Is likely to save time and financial resource compared to carrying out in-house procurement

A hybrid approach would be to carry out a mini-competition between those suppliers named on one of these contracts, which may lead to further benefits being offered by bidders particularly keen to be appointed.

An additional option would be calling off Greater Manchester's EVCI framework that is available to associate members of the Association of Greater Manchester Authorities such as Cheshire East Council. As above this would have the benefit of avoiding the costs and timescales associated with procurement however this would need to be balanced off with the negatives of having less control over the contract.

7.3.2 Undertake in-house procurement

As part of conducting a procurement process use can be made of documentation used for other past procurements by neighbouring or other similar LAs, amending for the local circumstances where necessary. Purchase and install lamppost / bollard chargers and fast chargers for residential areas, business areas and town

[13] https://www.espo.org/Frameworks/Fleet-Highways/636-Vehicle-Charging-Infrastructure

centres, perhaps match-funded by an OZEV grant, with operation by the charger operator and some level of shared revenue. Maintenance may remain the responsibility of Cheshire East Council. There would be a low or no commitment for the chargers to remain in the location selected. Ultra-rapid chargers would potentially in future be installed along key corridors under similar agreements. Planning consent would be potentially easier to achieve, but the council would have larger up-front costs and take greater commercial risk.

7.3.3 Seek exclusive operators for each type of charger

Firms offering different types of charger can be invited to tender for exclusive operating contracts for their chosen type of charger. Cheshire East Council could request firms to offer prices for either installation, or combined installation, operation and maintenance, of new charging points, or for contracts where the provider will fund, install, operate, and maintain new charging points. Firms could be invited to choose the locations where they would like to install charging points, which effectively pushes the risk of choosing a poor location onto the operator (e.g. failing to secure planning permission or failing to achieve sufficient demand for installed chargers). There would be lower commercial risk for the council, with revenue share potentially still available. The council would likely be asked to commit to allowing the operator to use the site for a number of years, with the parking space likely to be devoted to EV charging.

7.3.4 Seek exclusive operator/s for a full charging package

One firm, or multiple firms under a lead operator, could be sought to offer all desired types of chargers for Cheshire East. The details of this approach would be similar to the previous approach, the main difference being that bidders would likely consist of consortia rather than individual providers. Again, there would be lower commercial risk for the council, with revenue share potentially still available. The council would likely be asked to commit to allowing the operator to use the site for a number of years, with parking spaces in fast charger locations likely to be devoted to EV. Firms may be attracted to this idea as they would not be competing with other firms for charging revenue and grants, but there may not be any existing examples of this model within the UK.

7.3.5 Invite interest from all suppliers

Rather than excluding some suppliers through a procurement process, the council could invite interest from any supplier who wishes to operate a charging point in Cheshire East (with proposed locations needing to go through a planning procedure and review by legal teams and the relevant DNO). A revenue-sharing agreement could be negotiated, with lower risk for the council. The council might be asked to commit to allowing the operator to use the site for several years, with the parking space likely to be devoted to EV charging. This approach is likely to require more internal resource to manage requests for new locations when compared to working with an exclusive partner or partners.

7.3.6 Revenue and rent

Where exclusive charging point parking spaces are used, firms could be charged a form of rent for parking spaces used or operate on a peppercorn lease with a

revenue share agreement arranged with the council (this latter agreement may be more encouraging to private firms).

7.3.7 Choosing locations or leaving this to the provider/s

It is possible for the LA to choose the locations where its charging points would be installed in some of the options listed here, whereas other procurement and management models require this choice to be left at least partially in the hands of the operator. If operators / suppliers choose where they would like to place chargers, subject to council approval and other guidelines to be stated in the procurement documentation, this pushes the risk onto the operator but probably reduces the revenue that can be generated for the council. Alternatively, councils can choose to select all specific locations and prescribe these to the providers. The risk of the latter approach is that some providers may not be willing to take the risk of council-selected sites not leading to enough revenue or may insist on only installing and charging for the maintenance of charging points.

A hybrid approach would be to package up a number of busier (more attractive) sites alongside a number of less desirable sites so that the more popular locations help to cross-subsidise the less popular ones. The risk here is that the provider is less enthusiastic about providing additional chargers to expand the network quickly.

7.3.8 Ultra-rapid charging

If the council owns land near trunk roads through Cheshire East such as the M6 or M56, ultra-rapid chargers could be provided as part of EV forecourts at locations along these routes where energy links and capacity are good. Encouraging private investment in ultra-rapid EV infrastructure, working with business and Highways England, could be a key objective of the strategy. A planning procedure and review by legal teams may be necessary, although the risk of objections may reduce given charger locations would be out of town or at existing service stations. A revenue-sharing agreement could be negotiated. However, it is more likely that the private sector will provide ultra-rapid chargers on privately-owned land unless the council-owned land is particularly conveniently located for specific destinations where charging demand is expected to be high.

7.4 Tender evaluation

Regardless of the selected procurement option, it is critical to give importance to the tender evaluation to ensure that the scoring mechanism for the selection process rewards providers whose products help to deliver the objectives of this strategy. For instance, flexible products that can be kept up to date and easily replaced when technology improves in the future would be encouraged, whereas hard-to-use products or those that are not accessible to people of all abilities would lose points and therefore be less likely to be selected. Higher-quality products are likely to save money and time in the long run, so are worth paying more for.

Scoping the procurement process in detail should include consultation with key partners, including the DNO. It will be important for tenderers to outline how they will seek to manage the demand for charging across the day and discourage charging during peak energy consumption periods. Related to this, tenderers can be asked to

outline their approach to charging (in terms of both technology and pricing), and how this benefits potential customers.

Overall, it is important to provide enough detail in procurement documentation so that tenderers know what is sought or most desired, without being so prescriptive as to eliminate all tenderers from eligibility (or interest). Flexibility allows tenderers to propose their preferred approach, and if that approach delivers the objectives of this strategy and is acceptable to the council, then the resulting partnership is more likely to be successful for both parties. Appendix D includes a list of the minimum information that should be provided to the tenderers.

7.5 Contract type

The form of contract required will depend upon the council's desired level of involvement. The following options exist:

- Where minimal in-house experience exists, a "Design and Build" contract procurement exercise could be undertaken. Here the specification contains only high-level functional details of the sites to be installed to, plus the quantity and type of charge points required.
- Where in-house technical experience is available, the specification could be far more detailed with some or all of the layout and electrical design works performed in-house and provided to the bidders.
- Alternatively, a specialist project manager could be contracted to oversee these aspects of the project, particularly where both the client and contractors have limited EV experience.

If revenue can be generated through the charging network, the contract for any partnership will need to consider the details carefully. Some examples and issues are set out in Appendix D.

7.6 Preferred Commercial Model

After consideration of the potential models available the preferred approach is one that retains an element of control over the location of sites and their operation whilst working collaboratively with the private sector to leverage investment funding and access up-to-date technologies throughout the life of a contract or concession. Engagement is due to be conducted as part of the finalising this strategy with the commercial sector to identify a detailed commercial model for deployment of infrastructure.

8. Next Steps

This strategy sets out the key recommended measures to be pursued by Cheshire East Council in supporting the creation of an effective EV charging network across the borough. The strategy seeks to consider the private sector's likely role in creating parts of this network, focusing the council's attention and resources on those aspects of the network that are unlikely to be served adequately by the private sector without guidance and a contribution of resources from the council.

8.1 Key Measures for the Short, Medium and Long Term

Along with charging infrastructure provision, there are a number of other measures that the council can pursue to help support EV uptake across the borough. Table 8 1 below outlines the potential measures that have been identified, including the timeframe within which they will be considered and pursued.

Table 8-1 Proposed sequencing of key measures

Measure	Short term (0 – 2 years)	Medium term (2 -5 years)	Longer term (5+ years)
Providing charging points in car parks at key destinations (e.g. Town Centre, train stations, retail parks, major employment sites).	✓	Continuous monitoring of charge point usage and commercial provision to determine when / if further phases of Council-led charge points are required	
Providing on-street charging points to support residents with limited access to parking provision and home charging with a focus on off-street car parks and consolidated on-street community hubs.	✓		
Providing on-route charging points to serve the Major Road Network	✓		
Providing off-street charging points to support residents with limited access to parking provision and home charging	✓		
Introduce charge points for the Council's own fleet and grey fleet	✓		

Measure	Short term (0 – 2 years)	Medium term (2 -5 years)	Longer term (5+ years)
Continuous engagement and joint working with the District Network Operators (Scottish Power Electricity Networks, Electricity North West, Western Power Distribution) to bring forward cost effective charge points and strategic strengthening of the power network, particularly in Macclesfield and Congleton where capacity is constrained. There is also an opportunity to investigate how distributed renewable energy solutions such as solar power may contribute to addressing power constrictions.	✓	✓	✓
Engage with taxi industry and providing charging infrastructure for taxis in convenient locations.	✓ (focusing on rapid chargers)	✓ (focusing on rapid chargers)	✓ (potential for wireless inductive chargers)
Engage with bus operators and consider providing charging infrastructure for buses.		✓	✓
Encourage and where possible support the introduction of commercially provided charging forecourts.	✓	✓	✓
Introduce charge points for HGVs should appropriate technology come forward.			✓

Chargers purchased and installed should be easily accessible, reliable and well-maintained, whilst the equipment and operating specifications will require some level of future proofing to prepare for future industry change and expansion.

EVs can contribute to reducing local emissions, but they cannot assist in reducing congestion – this is a problem in urban centres and key highways throughout the area. It is therefore important that this strategy does not encourage additional private car ownership where public transport is the sustainable transport focus. Rather, this strategy is intended to encourage the switch to EV for existing private and business car and van owners.

The proposed charger types for each priority location has considered the likely dwell time of users – i.e. rapid chargers for shorter stay destinations and fast or even slow chargers for commuter and residential locations where stays are likely to be longer. Council-owned sites such as car parks and council offices in urban and residential areas are the initial focus of this strategy, taking advantage of quick wins that are within their control, whilst encouraging private stakeholders and partners to participate in a programme of charging roll-out in the future.

For residential areas, research shows that EV drivers prefer the convenience of charging at or close to home overnight, or at work during the day. The UK Government's recent consultation on charging requirements for new residential buildings with off-street parking should be taken into account in new planning applications, although the responsibility for provision will fall onto house builders. For residential areas without off-street parking, shared publicly-accessible recharging facilities will be required. However, it is likely that more centralised locations such as car parks, which can be installed more quickly and at lower cost, represent better value for money at this stage than attempting to install a substantial network of on-street charging points.

Charging hubs in off-street locations for residential use can also perform better than on-street chargers in terms of addressing potential streetscape concerns and footpath obstructions in residential streets. Residential on-street charging facilities risk social exclusion critiscism for reallocating already limited parking spaces to EV charging bays, and incur additional enforcement costs to maintain accessibility. Residential charging hubs can take a number of different forms: multiple slow or fast chargers located in existing parking areas which are unutilised overnight, e.g. public sector buildings or schools. The aim would be to allow commuting employees to charge at these hubs during the day, with residents of nearby homes able to access them at night. As we are still in the early adopter phase, it is important to open dialog with car dealerships to understand if sales are impacted by a lack of off-street parking.

It is recommended that tariffs are applied for use of charging infrastructure. However, the details of these tariffs will be subject to many factors. Establishing a tariff up-front avoids the need to add a charge later once EVs make up a majority of the overall UK vehicle fleet. Fees may change over time, starting lower to ensure they do not create a barrier to EV adoption.

8.2 Design of charging hubs

When designing charging hubs, the following issues will be considered:

- **Site survey –** A physical survey of proposed charging sites will be carried out to ensure the location is suitable.
- **Physical space –** Enough physical space must be allocated to the charging hub to allow the chargers and electrical cabinets to be installed and maintained whilst retaining safe pedestrian access.
- **Layout –** Location and orientation of charging bays must accommodate the quantity of charger outlets proposed. Locations for each charger and feeder cabinet must be assigned to ensure the number of chargers purchased will indeed fit in the space. Underground cable routes and distances must be taken into account. All locations should be recorded.
- **Obstructions –** Any underground services, trees or existing street furniture that may cause obstructions will be identified, along with any mitigating actions.
- **Lighting –** Establish whether sufficient lighting is available to allow use of the chargers without daylight, including consideration of personal security and perceived security, with additional lighting installed if required.

- **Health and safety –** Specialist advice will be secured regarding electricity and earthing systems to ensure all installations are safe as well as compliant with relevant standards.

- **GPRS signals –** For the purposes of monitoring, maintenance and payment, it is essential that an adequate mobile signal is present at each proposed location.

The first steps in implementing this strategy are recommended to be as follows:

- Engage with key stakeholders and carry out public consultation on this strategy
- Seek funding for new charging points via government grant applications
- Carry out market testing and procurement of a delivery partner or partners
- Agree proposed priority locations with delivery partner/s once appointed
- Oversee delivery of the first tranche of charging infrastructure and monitoring usage
- Investigating and pursuing the other key measures to increase EV uptake

8.3 Stakeholder Engagement

EV stakeholders are many and varied, each with their own interests and objectives affecting the EV charging market. The council is planning to engage with stakeholders as this strategy is finalised and implemented including:

- **Vehicle users** with personal and/or business needs (including taxi and bus operators)
- **Suppliers** of equipment and charging services
- **Landowners** – promote the EV charging opportunities available to landowners through Local Authority business forums, workshops, and events
- **Electricity suppliers** – through Local Authority centralised electricity procurement
- **DNO grid operators** – Investigate localised areas of power constraint and availability before surveying proposed charging locations
- **Neighbouring LAs and Town/Parish councils** – Seek to work alongside neighbours as well as parish councils to develop a consistent strategy that works for everyone's emissions reduction objectives. Each organisation will have its own priority locations, but users are likely to span the entire area, so consistent and interoperable charging methods, access and payment tools, fees and parking arrangements are preferable.
- **Local community** – Consult with the community through the development of the strategy, share information, raise awareness, and improve understanding of the need of an EV charging infrastructure strategy.

9. References

Limited residential off-street parking

- Data on dwelling types was gathered from dataset on https://www.nomisweb.co.uk/: **KS401EW - Dwellings, household spaces and accommodation type**
- The following dwelling types were considered to have limited off-street parking availability (i.e. likely absence of driveways and garages):
  - Whole house or bungalow: Terraced (including end-terrace)
  - Flat, maisonette or apartment: Purpose-built block of flats or tenement
  - Flat, maisonette or apartment: Part of a converted or shared house (including bed-sits)
  - Flat, maisonette or apartment: In a commercial building
  - Caravan or other mobile or temporary structure
- The total of each dwelling type was calculated for each CEC LSOA and displayed as a % of the total number of dwellings

Car ownership data / income data

- EV ownership calculation – this can be used to calculate an estimate as a number or percentage on a postcode district level
- VEH0134 (see tables VEH0134b and VEH0134c) : Licensed ultra low emission vehicles by postcode district: United Kingdom (ODS, 936KB) – used for the total numbers of ULEVs, BEVs and PHEVs
- VEH0122: Licensed vehicles by postcode district and body type (ODS, 3.27MB) – used for total number of cars in the postcode
- The numbers for relevant postcodes were converted to LSOA before plugging them into GIS

Charging point locations

- National Charge Point Registry was used for charge point coordinates
- https://data.gov.uk/dataset/1ce239a6-d720-4305-ab52-17793fedfac3/national-charge-point-registry

Distance to charge points

- https://www.gov.uk/government/statistical-data-sets/journey-time-statistics-data-tables-jts

Appendix A: Development of EV Charging Model

This appendix details how potential demand for EV charging across Cheshire East was assessed.

EV Uptake

The usage potential for any charging site will depend on a number of different factors, but the most important driver will be the total number of electric vehicles. This is not a static number, either spatially or temporally, and so it is important to develop a model which can handle both the variation in location and by the year of interest.

To understand how the vehicle fleet will transition to EVs, it is necessary to create a model for how a new technology will diffuse into an already existing fleet. The diffusion of the new vehicle models will be governed by two important characteristics.

- The rate at which new vehicles are purchased. This determines the "churn" of vehicles within the fleet overall. If few new vehicles are being purchased (due to a recession, say) then there will be a substantial slowdown in the transition to EVs as the population of vehicles is not being replaced.
- The probability of new vehicle purchases being an EV. If the fleet is to transition to EVs then the probability of each new vehicle being an EV, should increase to 100%. This is the 2030/2035 target that has been introduced by the UK government.

To answer the first question, the data for income per MSOA and the ratio of new vehicle to existing vehicle registrations was used to generate a probability of new vehicle purchase. This variable alters with income due to the strong relationship between average income and new vehicle purchase rates.

To answer the second question, a choice model was used. A choice model is a technique for providing a systematic method of choosing between multiple options, each of which may have benefits associated with it.

The form of the logit choice model used in this work is a Binary Logit Choice Model, with changing variables over the two alternatives. This form of the model allows us to calculate the probability of choosing between two distinct options available to the purchaser. The general form of this model is shown below.

$$P(C_1) = \frac{\exp(\lambda U_1)}{\exp(\lambda U_1) + \exp(\lambda U_2)}$$

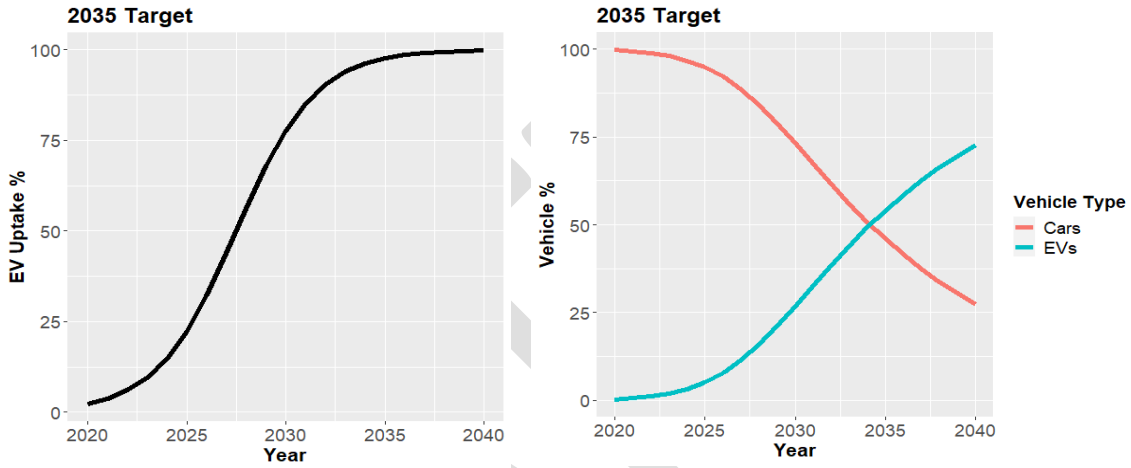
Here, C_1 represents Option 1, U_1 represents the Utility of that choice (defined below) and λ is a parameter used to determine the sensitivity to change for the utility values within the logit choice model.

The utility in this case is defined through a combination of income and EV price.

From this model it is possible to create a stock flow equation which governs the movement of vehicles into and out of the vehicle fleet.

$$Fleet_{2021} = Fleet_{2020} + New\ Vehicles_{2021} - Scrapped\ Vehicles_{2020}$$

Essentially, the fleet in 2021 is governed by the fleet in 2020 plus all new vehicles from 2021, minus those vehicles scrapped in 2020. The new vehicles will be composed of a mix of ICE and EV.



How the probability of EV uptake, plus the total fleet % varies with time

In the above graphs, we can see how the number of EVs in the fleet lags behind the 2035 goal. Even though 100% of all vehicles by 2035 will be EVs, the fleet still will only contain approximately 50% EVs.

Local Charging Potential

To understand how local charging may vary, it is necessary to include spatial variation in the model, the differing demographics across the area is used. For spatial variation in EV uptake, the two most important demographics are:

- The total number of vehicles within each OA as this determines the baseline probability of owning a vehicle. This ensures that inner city areas, with fewer vehicles in general, are not over-represented.

- The income levels of each area determine both the probability of purchasing a new vehicle, and also the probability of that vehicle being an EV due to the price differential.

The income for each area is fed into the overall EV uptake model to generate an individual EV uptake prediction for each area of interest. The total number of vehicles within each OA provides a hard cap on the number of EVs.

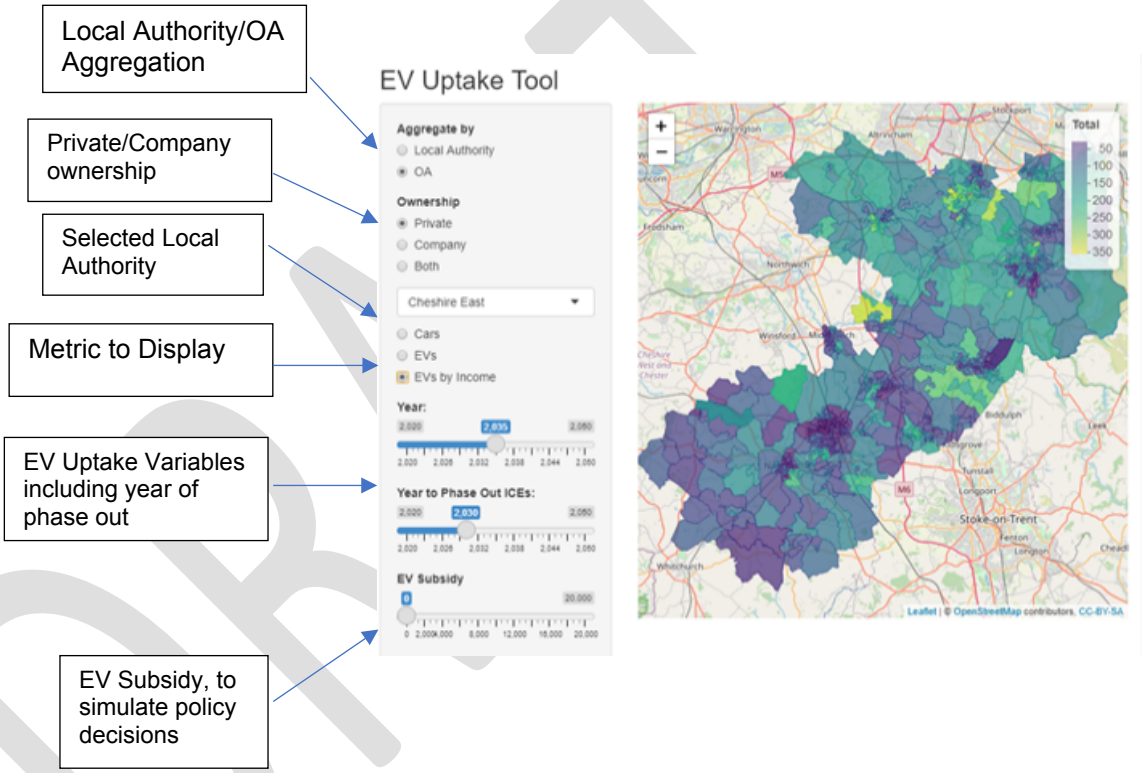
However, this simply provides the total number of EVs for each area, it does not contain any information on where we expect those electric vehicles to charge, for this we need to include information on the ability of the EVs to charge at home.

Almost all research has shown that, if given the choice, people will overwhelmingly prefer to charge their EVs at home. However, this is not possible if there is no off-street parking, and so it is also necessary to assess this capability within the model.

This has been achieved through using the house type from the census data to form a broad understanding of the dwelling type and the capacity for off street parking. For example, if most houses are detached, then we would expect more off-street parking.

This information is combined with EV uptake to form an overall assessment of public charging potential.

The model combines each of the previous elements into a single UI.



Elements of the Model

The interactive model is designed to display the data generated by the underlying model and to enable proof of concepts for each idea to be quickly tested.

For example, the above image shows the total number of EVs within Cheshire East, with the income distribution model, a 2035 phase out, no EV subsidy and for the year 2030.

Journey Charging Potential

Understanding the potential for charging within a journey, is a different and much more in-depth proposition than for localised charging. In addition to accurately assessing the general uptake and distribution of electric vehicles, it is also necessary to understand where those vehicles are going to be driving and the probability of those vehicles charging on the way.

This data will be used to generate information on each link within the Major Road Network (MRN) within the area of interest.

The basic process used to generate the traffic flow for each link is as follows:

1. Determine the shortest path between the origin-destination (OD), in terms of the road network. The shortest path has been determined by creating a graph network from the road network, and then using an A* Pathing algorithm to determine the shortest journey time between the OD pair.

2. For each OD pair, create a data point with the OD information and the full path information. This information will contain an identifier for the OD pairs which will allow us to alter the EV demographics of the OD pairs, without needing to rerun the shortest path algorithm.

3. For each network link, sum up the total number of vehicles that use this link, aggregated by the necessary factors that we believe are important in determining the propensity to charge.

From this data, it is then possible to map predicted number of vehicles, segregated by the factors that it is believe will determine the given probability of any vehicle to charge on the vehicle network.

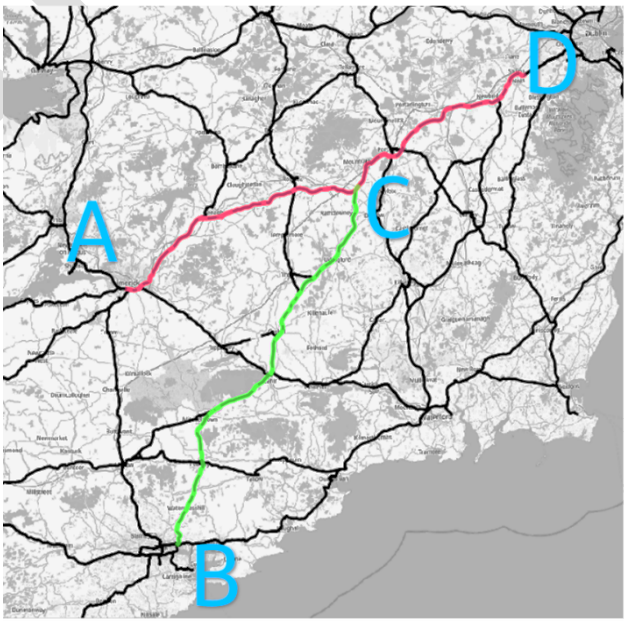
By aggregating routes derived from Origin-Destination pairs, we can derive a likely fleet population for every link on the road network

A:C Each link on this route is populated by a fleet determined by the vehicle population at A

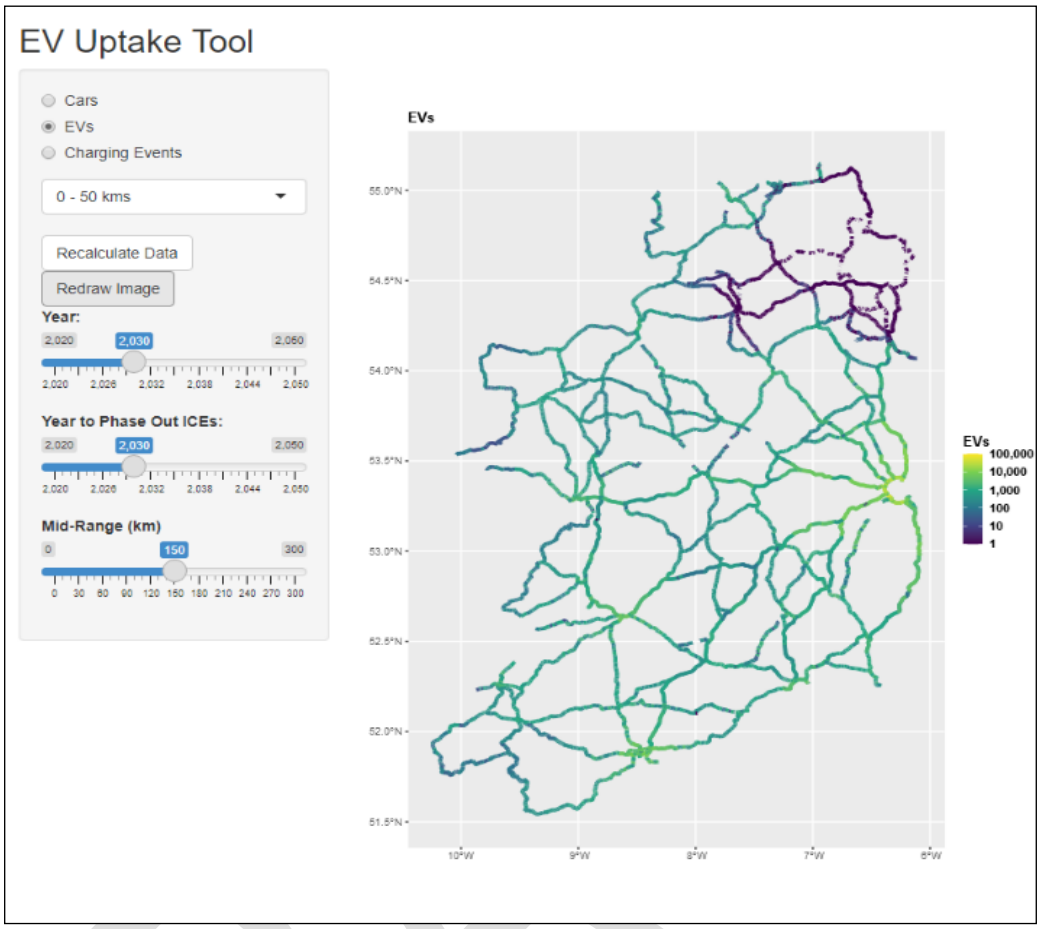
B:C Each link on this route is populated by a fleet determined by the vehicle population at B

C:D Each link on this route is populated by a fleet determined by the vehicle population at both A and B

This is replicated for each possible set of Origin-Destination pairs



A schematic of the process used to derive aggregate journey statistics



Example of Road Network Analysis

From this data, it is then possible to generate a complete picture of the number of Electric Vehicles which will be expected on any link with the network as a whole.

By connecting the network data, with the detailed origin EV uptake data, it is possible to construct a complete model of the movements of vehicles within the network.

An example of this complete network is shown above for the road network of Ireland. This particular model shows the results for all 0-50km journeys and as might be expected, the vehicle flow is more concentrated around the major population centres. If the 50-100 kms journeys were selected, then this would expand out into the connecting roads between those centres.

The data from this model feeds into understanding the potential for capturing journey charging events.

Assessing Model Outputs

It is possible to utilise the EV Uptake model to systematically create metrics which can be used to assess the suitability of different potential charge point locations.

Due to the ongoing uncertainty around all EV metrics, it was decided to assess the metrics on a purely ranking order. This would allow for a relatively easy comparison between different sites under potential different EV uptake scenarios, and also

removes the necessity to decide what constitutes a “good” level of EV uptake. Each site is ranked from 0-6 with 0 representing the lowest ranked sites, and 6 the highest.

Whilst the generation of each individual metric is an objective process, the ranking and weighting of each metric is fundamentally subjective and relies upon a degree of knowledge as to the appropriate level of importance for each assessment. This is captured within the assessment longlist through the inclusion of a series of adjustable weights for each metric, allowing for a rapid iteration through the subjective assessment process whilst maintaining the objectivity of the previous metric derivations.

The data used within the assessment has been aggregated (or generated) at the LSOA level, as there is an abundance of data available at this level whilst also providing that data at the required spatial fidelity.

In addition to the directly derived model assessment outputs, we have also incorporated two manual assessments for security of location and the existence of other charge points within the area. These two assessments are more subjective than the quantitative model assessments.

Journey Assessment

Within the Journey Assessment we are assessing the potential for each site to capture charging events from vehicles which are in the middle of a journey. Essentially, this assessment is geared towards drivers who may be undertaking a longer journey who will need to stop and charge their vehicle en-route to their destination.

This will likely lead to a fundamentally different usage profile than would be expected for those using local public charging infrastructure. There would typically be a preference for rapid/ultra-rapid charge stations combined with a potentially greater willingness to pay a premium for the speed of charge.

A typical example of the sort of charge point which would service this need, would be the Braintree all electric forecourt operated by Gridserve.

The data used to generate this assessment comes from the Journey Profiling component of the model, with additional input on the likely EV uptake for the origin points generated by the EV Uptake component of the model. Due to the ranking nature of the assessment (rather than being based on an absolute value) the assessment is based on the number of EVs passing through any particular link within the assessment LSOA, rather than a direct calculate of the number of charge points.

Job Assessment

If a vehicle is going to take on a significant amount of energy, then it needs to either use a rapid charging system or remain in the same position and use a charge point with a lower capacity. In addition to when the vehicle is parked at home, the other major time when a vehicle will be stationary is when the vehicle is parked whilst the driver is at work. So, by assessing the total number of jobs within a particular area, it is possible to understand the potential level of charging demand.

However, when compared to journey charging, the typical charge point needed for employment based charging will be of a lower necessary capacity as the vehicle will remain connected to the charge point for longer.

The distribution across time for work-place charging will typically follow the arrival and departure patterns of workers, with an unmanaged charging profile peaking in the morning.

The data used to determine this is derived from the census data and as such is aggregated to the MSOA level. However, typical MSOAs will be approximately 1km across within a typical urban area and so can be used to assess charge point areas.

The metric used is the total number of jobs within each MSOA.

Retail/Leisure Assessment

In addition to work-place charging, a second possibility for longer term parking is from retail and leisure-based transport. This is parking induced by either shopping or leisure opportunities such as the cinema or sports events.

The typical dwell time for retail/leisure will be typically less than for employment based charging. Whilst the maximum dwell time could be comparable, the average and minimum time will be substantially less. There is therefore a greater opportunity for a mix of more standard, fast, and rapid chargers.

As well as the retail/leisure area being the fundamental destination, it may also be possible to use the charging area to develop a limited retail/leisure area.

The data used in this assessment was derived from the census data at the MSOA level, similarly to the Job Assessment. However, the breakdown of different employment types has been used to generate the data for Retail/Leisure compared to the general employment levels.

The metric used is the total number of Retail/Leisure jobs within each MSOA.

EV Uptake Assessment

The EV Uptake Assessment uses the raw EV numbers generated by the model, aggregated from the OA level to the LSOA level to understand how EV numbers increase across Cheshire East. Whilst it would be possible to use the OA numbers, there can be quite extensive OA variation across an LSOA.

Whilst there is an extensive amount of detail which goes into the generation of this data the fundamental metric is straightforward, it is simply the number of total EVs in each LSOA.

Whilst it would be possible to generate a more sophisticated model of EV uptake, incorporating such factors as total EVs per person, total EVs per standard vehicle etc., the level of charging necessary will be essentially entirely dependent on the raw EV total and so it is this simpler metric which is used.

The metric used is the total number of Electric Vehicles within each LSOA.

H

EV Off-street Assessment

Although the total charge required within an area, will be determined by the total number of EVs, understanding the location type of chargers required, necessitates a greater degree of understanding of the metrics involved. If the EVs are concentrated within areas with extensive off-street parking then it may not be necessary to provide localised public charging, as that need will already be met privately.

Therefore, it is necessary to understand not just the total number of vehicles within each LSAO, but also the total number of dwellings without off-street parking as it is this number, when compared to the total number of EVs, which will determine the need for localised public charge points.

This information is already contained within the model, using the house type as a proxy to determine the probability if a particular house has on or off street parking.

The metric used is the number of Electric Vehicles per Off-Street parking space within each LSOA.

Security of location

The Security of Location is a metric designed to look at the general safety/security of each charge point, with particular consideration given to the perceived safety of the user rather detailed statistics about the actual level of potential risk within the area.

This metric does not consider the potential for accidents within the site.

The assessment was performed through a combination of Google Street View searches plus satellite imagery to identify possible issues which may lead to either a greater confidence in the site or be a cause for concern. For example, a site which is well lit and in full view of offices is likely to be of perceived greater security than a dark charge point which is hidden from view.

The metric is an individual assessment for each charging point, rather than at the LSOA level.

Charging Conflicts

The final assessment looks at the potential for conflicts with existing or planned future charge points. This is an important assessment as an area which is highly rated in other aspects, may not actually need a charge point if there is already sufficient provision within the local area.

For example, in Wilmslow the South Drive Short Stay car park scores incredibly highly across all the potential assessments and so would be an ideal place for a charge point. Unfortunately, there is already an existing rapid charge point within the car park itself.

This is an assessment criterion which will require careful weighting as the existence of current charge point does not necessarily preclude the installation of an additional charge point, particularly if the current charge point is well used.

Similarly, to security, the metric used is a manual assessment for each potential location rather than at the LSOA level.

Combining Model Assessments

After each location has been assessed, both through the model and through the manual assessment process, the scores are combined within an Excel Spreadsheet. This allows for the weighting to be directly applied to the scores and adjusted in-situ. A typical example of this is shown in the table below.

An example of the scoring system used within the assessment

			Weighting				
1	1	1	1	1	1	1	
Journey Assessment	Job Assessment	Retail/ Leisure Assessment	EV_Assessment	EV_Offstreet_Assessment	Security of location	Charging Conflicts	Score
1	4	4	5	5	5	0	24
1	4	4	5	5	4	3	26
1	4	4	5	5	4	3	26
1	4	4	5	5	2	3	24
1	4	4	5	5	4	2	25
3	4	4	1	0	3	5	20
3	2	4	0	1	2	1	13

The final score is then used to perform the initial assessment of the potential charge point sites.

Appendix B. EV Charging Point Long List – Car Parks and On-Street Areas

Overall Rank	Car Park	Town	Town Rank	Capacity (spaces)	Type of Settlement	DNO Supplier	Jobs Assessment	Retail/Leisure Assessment	Highest Destination Score	EV Off-street Assessment	Journey Assessment	EV Assessment	Security of location	DNO Capacity	Charging Conflicts	Score	Charger Type/s
1	Spring Street	Wilmslow	1	308	Key Service Centre	ENW	4	5	5	5	5	5	5	4	1	30	Rapid + Fast
=2	Exchange Street	Macclesfield	=1	107	Principal Town	ENW	5	5	5	5	4	3	5	2	5	29	Rapid + Fast
=2	Gas Road	Macclesfield	=1	45	Principal Town	ENW	5	5	5	5	4	3	5	2	5	29	Rapid + Fast
=2	Railway Station	Macclesfield	=1	57	Principal Town	ENW	5	5	5	5	4	3	5	2	5	29	Rapid + Fast
=2	Pickford Street	Macclesfield	=1	110	Principal Town	ENW	5	5	5	5	4	3	5	2	5	29	Rapid + Fast
=2	The Carrs	Wilmslow	2	60	Key Service Centre	ENW	4	5	5	5	5	5	2	4	3	29	Rapid + Fast
=7	Duke Street	Macclesfield	5	261	Principal Town	ENW	5	5	5	5	4	3	4	2	5	28	
=7	South Drive Short Stay	Wilmslow	3	330	Key Service Centre	ENW	4	5	5	5	5	5	5	3	0	28	Rapid + Fast
=7	Broadway Meadow	Wilmslow	4	100	Key Service Centre	ENW	4	5	5	5	5	5	4	3	1	28	Rapid + Fast
=7	Sunderland Street	Macclesfield	6	40	Principal Town	ENW	5	5	5	5	4	3	4	2	5	28	
=7	Waters Green	Macclesfield	7	42	Principal Town	ENW	5	5	5	5	4	3	4	2	5	28	
=7	Town Hall	Macclesfield	8	80	Principal Town	ENW	5	5	5	5	4	3	4	2	5	28	
=13	Leisure Centre	Wilmslow	5	100	Key Service Centre	ENW	4	5	5	5	5	5	2	4	1	27	
=13	Princess Street	Knutsford	1	54	Key Service Centre	SPEN	4	4	4	5	1	5	4	5	3	27	Rapid + Fast
=13	Fairground	Congleton	=1	97	Key Service Centre	WPD	5	5	5	4	5	3	4	5	1	27	Rapid + Fast
=13	Rex/Hoopers	Wilmslow	6	132	Key Service Centre	ENW	4	5	5	5	5	5	2	4	1	27	

Overall Rank	Car Park	Town	Town Rank	Capacity (spaces)	Type of Settlement	DNO Supplier	Jobs Assessment	Retail/Leisure Assessment	Highest Destination Score	EV Off-street Assessment	Journey Assessment	EV Assessment	Security of location	DNO Capacity	Charging Conflicts	Score	Charger Type/s
=13	Antrobus Street	Congleton	=1	84	Key Service Centre	WPD	5	5	5	4	5	3	3	5	2	27	Rapid + Fast
=13	Back Park Street	Congleton	=1	98	Key Service Centre	WPD	5	5	5	4	5	3	2	5	3	27	Rapid + Fast
=13	Victoria Centre	Crewe	1	482	Principal Town	SPEN	5	5	5	5	3	3	5	3	3	27	Rapid + Fast
=20	Civic Hall	Poynton	1	204	Key Service Centre	ENW	3	4	4	4	1	4	5	3	5	26	Rapid + Fast
=20	Christchurch	Macclesfield	9	82	Principal Town	ENW	5	5	5	5	4	3	2	2	5	26	
=20	South Street	Alderley Edge	1	47	Local Service Centre	ENW	1	3	3	5	2	5	4	2	5	26	Rapid + Fast
=20	Whalley Hayes	Macclesfield	10	258	Principal Town	ENW	5	5	5	5	4	3	3	1	5	26	
=24	Princess Street	Congleton	4	90	Key Service Centre	WPD	5	5	5	4	5	3	3	5	0	25	Rapid + Fast
=24	Booths Knutsford	Knutsford	2	261	Key Service Centre	SPEN	4	4	4	5	1	5	5	3	2	25	Rapid + Fast
=24	Springfields	Prestbury	1	61	Local Service Centre	ENW	1	2	2	4	4	5	4	1	5	25	Rapid + Fast
=24	Community Centre	Disley	1	40	Local Service Centre	ENW	0	2	2	5	2	5	4	2	5	25	Rapid + Fast
=24	Delamere Street	Crewe	2	99	Principal Town	SPEN	5	5	5	4	3	3	2	5	3	25	Rapid + Fast
=29	Commercial Road	Macclesfield	11	59	Principal Town	ENW	4	3	4	4	3	3	3	2	5	24	
=29	South Drive Long Stay	Wilmslow	7	45	Key Service Centre	ENW	4	5	5	5	5	5	1	3	0	24	
=29	Tatton Street	Knutsford	3	144	Key Service Centre	SPEN	4	4	4	5	1	5	4	2	3	24	Rapid + Fast
=29	Shirleys	Prestbury	2	61	Local Service Centre	ENW	1	2	2	4	4	5	3	1	5	24	Fast only

Overall Rank	Car Park	Town	Town Rank	Capacity (spaces)	Type of Settlement	DNO Supplier	Jobs Assessment	Retail/Leisure Assessment	Highest Destination Score	EV Off-street Assessment	Journey Assessment	EV Assessment	Security of location	DNO Capacity	Charging Conflicts	Score	Charger Type/s
=29	Westfields	Sandbach	1	95	Key Service Centre	SPEN	2	4	4	2	3	3	3	5	4	24	Rapid + Fast
=34	King Street	Knutsford	4	125	Key Service Centre	SPEN	4	4	4	5	1	5	4	1	3	23	Rapid + Fast
=34	London Road	Holmes Chapel	1	32	Local Service Centre	SPEN	2	2	2	3	2	3	3	5	5	23	Rapid + Fast
=34	Snow Hill	Nantwich	1	247	Key Service Centre	SPEN	5	5	5	3	0	4	4	4	3	23	Rapid + Fast
=34	Cheshire Street	Audlem	1	59	Local Service Centre	SPEN	0	2	2	0	4	3	3	5	5	22	Rapid only
=34	Chapel Street	Sandbach	2	100	Key Service Centre	SPEN	2	4	4	2	3	3	3	3	4	22	Rapid + Fast
=39	Fairview	Alsager	1	288	Key Service Centre	ENW	2	3	3	3	1	4	0	5	5	21	Rapid + Fast
=39	West Street	Congleton	5	216	Key Service Centre	WPD	5	5	5	2	5	3	2	3	1	21	
=39	Scotch Common	Sandbach	=3	140	Key Service Centre	SPEN	2	4	4	1	3	3	4	2	4	21	Rapid only
=39	Brookhouse Road	Sandbach	=3	147	Key Service Centre	SPEN	2	4	4	1	3	3	2	4	4	21	Rapid only
=43	Station Road	Alsager	2	60	Key Service Centre	ENW	2	3	3	4	0	5	2	1	5	20	Rapid + Fast
=43	Civic Way	Middlewich	1	84	Key Service Centre	SPEN	4	4	4	0	3	3	3	2	5	20	Rapid only
=43	Civic Centre/Library	Crewe	3	89	Principal Town	SPEN	5	5	5	4	3	3	0	5	0	20	Rapid + Fast
=46	School Road	Handforth	1	48	Key Service Centre	ENW	3	3	3	3	0	2	4	4	3	19	Rapid + Fast
=46	Pool Bank	Bollington	1	71	Local Service Centre	ENW	2	2	2	5	0	3	2	2	5	19	Rapid + Fast
=46	Love Lane	Nantwich	2	124	Key Service Centre	SPEN	5	5	5	2	0	4	3	5	0	19	Rapid + Fast
=46	Thomas Street	Congleton	6	46	Key Service Centre	WPD	2	3	3	0	3	3	3	5	2	19	

Overall Rank	Car Park	Town	Town Rank	Capacity (spaces)	Type of Settlement	DNO Supplier	Jobs Assessment	Retail/Leisure Assessment	Highest Destination Score	EV Off-street Assessment	Journey Assessment	EV Assessment	Security of location	DNO Capacity	Charging Conflicts	Score	Charger Type/s
=46	Wrexham Terrace	Crewe	4	102	Principal Town	SPEN	2	5	5	1	3	3	2	3	2	19	
=51	Wilmslow Road	Handforth	2	56	Key Service Centre	ENW	3	3	3	3	0	2	2	5	3	18	Rapid + Fast
=51	Civic Hall	Nantwich	3	151	Key Service Centre	SPEN	4	4	4	2	0	4	4	3	1	18	Rapid only
53	Chapel Street	Congleton	7	52	Key Service Centre	WPD	5	5	5	1	1	3	2	3	2	17	
On-street areas (scores for on-street areas only used off-street assessment, EV assessment and charging conflict criteria)																	
1	East of Town Centre	Alderley Edge	N/A	On Street	Local Service Area	ENW	Not assessed for residential chargers			5	N/A	5	For later assessment		5	15	Slow / Fast
2	Town Centre	Wilmslow	N/A	On Street	Key Service Area	ENW				5		5			4	14	Slow / Fast
3	Town Centre	Macclesfield	N/A	On Street	Key Service Area	ENW				5		3			5	13	Slow / Fast
=4	North East of the Town Centre	Alsager	N/A	On Street	Key Service Area	SPEN				3		4			5	12	Slow / Fast
=4	Town Centre	Nantwich	N/A	On Street	Key Service Area	SPEN				4		4			4	12	Slow / Fast
=4	North of Town Centre	Knutsford	N/A	On Street	Key Service Area	SPEN				4		5			3	12	Slow / Fast
=7	North and East of Town Centre	Holmes Chapel	N/A	On Street	Local Service Area	SPEN				3		3			4	10	Slow / Fast
=7	Town Centre	Handforth	N/A	On Street	Key Service Area	ENW				5		2			3	10	Slow / Fast
9	Town Centre	Congleton	N/A	On Street	Key Service Area	WPD				2		3			4	9	Slow / Fast
10	Town Centre	Sandbach	N/A	On Street	Key Service Area	SPEN				1		3			4	8	Slow / Fast
11	Town Centre/East/South	Crewe	N/A	On Street	Principal Town	SPEN				1		3			2	6	Slow / Fast

Appendix C. Building Regulations Consultation

Over the summer of 2019, the UK government, under the provisions of the Automated and Electric Vehicles Act (AEVA), consulted on how to adopt the EU's EPBD into UK law. The EPBD sets out requirements for the minimum provision of charging infrastructure in new and existing residential and non-residential buildings. The outcome of this consultation is yet to be announced but will likely impact the requirements for provision of EV charging infrastructure within Cheshire East.

A summary of the consultation proposals is provided in **Error! Reference source not found.**. The proposals for non-residential buildings are intended to ensure that existing and new key destinations and workplaces are able to accommodate growing EV volumes. The proposals for residential buildings aim to increase the likelihood of homeowners purchasing ULEVs by updating the Building Regulations to require EV charging infrastructure in all new homes, where appropriate.

UK Government Consultation Proposals for EV Charging Provision in Residential and Non-Residential Building

UK Government's Consultation Options			
Requirement	**Residential New Buildings**	**Non- Residential New Buildings**	**Non- Residential - Existing Buildings**
Charge points	At least 1 Charge point (min 7kW) for all parking spaces	1x Charge point for each new or majorly renovated non-residential car park with >10 spaces	1 x Charge point installed for every non-residential car park with >20 spaces
Ducting	Ducting for all parking spaces	Ducting for one in 5 parking spaces for each new or majorly renovated non-residential car park with >10 spaces	No additional ducting
Timing	From date regulation comes into force	From date regulation comes into force	By 1st Jan 2025

Appendix D. Revenue Generation Options

Many PIV owners and drivers compare the fees levied for public charging services against their home electricity tariff to assess value for money. They also consider the comparative charging cost against ICE refuelling cost, since most PIV drivers have chosen the PIV to replace an ICE for the expected reduction in operating cost, as well as for environmental reasons. Therefore, PIV charging tariffs must be chosen carefully to reflect the relative convenience of the service on offer.

Public charging costs currently vary between network operators, and also by charge point type and membership/PAYG schemes. Some operators still provide free charging services, whilst others charge by duration (per hour), although most drivers favour pricing per unit of electricity received (kWh). Many operators now charge a fixed connection fee in addition to their per kWh tariff. Some operators offer membership schemes with monthly fees attracting low per kWh rates, although most also offer a pay as you go (PAYG) facility in line with current UK Government capital funding requirements. Some examples of current offerings by leading players in the UK EV Charging market are provided in Table 9-1 below.

Table 9-1 Examples of EV Charging Network Offerings October 2019

Network Operator	Charger Type	Fees / kWh	Other Fees
POLAR	Slow, fast, rapids	12p/kWh	Subscription = £7.85/month Most chargers free to use
Electric Highway	Rapids	39p/kWh	19p/kWh for Ecotricity home energy customers
Shell Recharge	Rapids	39p/kWh	30p/kWh through Shell Recharge App
Genie Point	Fast, rapids	30p/kWh	£1 or 50p connection fee for Rapid/Fast chargers. £10 overstay fee > 4 hours. Higher fees inside London.
Charge Your Car (CYC)	Slow, fast, rapids	Various from FREE	£1 connection fee. Recharging fees set by each charge point owner – flat fee OR per kWh, overstay etc.

Tariffs should reflect the perceived benefits of the charging service being provided (convenience, reliability, availability, and price) to ensure use, so great care must be taken to set fees which are acceptable to PIV drivers. These vary depending upon the perceived value of the charging service provided. Typically, lower fees are charged for slow and fast charging services, than for rapid services. In recognition of the higher value associated with the rapid use case, network operators tend to charger higher fees for rapid charging, the highest price currently being charged in the UK is 39p/kWh for rapid.

The results of a 2018 study of the North East Combined Authority's EV charging estate are useful in providing some examples of potential charging network revenue. Using the total electricity delivered in 2018, we calculated the revenue if users had been charged at a comparative level to UK home electricity prices i.e. charging fees =15p/kWh. This fee would have produced a revenue of £72,284 over the period.

Regular revenue from charging services could clearly assist the charging network owner in maintaining, growing, and upgrading the charging network to meet future demand and technical capabilities.

Further examples of potential revenues are provided for illustration purposes in Table 9-2, at a range of public charging tariffs. This revenue must be sufficient to cover the ongoing operating costs of power, land lease, maintenance, operation, customer service and any network development requirements to meet customer needs, which should grow as PIV uptake increases.

Table 9-2 Potential EV Charging Revenues (for illustration only)

Potential electricity revenues			**Electricity tariffs/kWh**				
2018 Use	**Average Energy (kWh)**	**Number of Charge Events**	**14p**	**25p**	**30p**	**35p**	**40p**
Fast chargers	7.66	29,774	£34,210	£57,017	£68,421	£79,824	£91,228
Slow chargers	7.77	4,402	£5,131	£8,551	£10, 261	£11, 971	£13,681
Rapid chargers	9.53	23,045	£32,943	£54,905	£65,886	£76,867	£87,848
Revenue			£72,284	£120,473	£144,567	£168,662	£192,756

One alternative commercial model is for the LA to require the network operator to pay all OPEX costs, taking responsibility for the costs of powering, operating, and maintaining the network and therefore setting an appropriate fee with the LA's agreement, and the network operator then makes a payment per transaction back to the LA. If a p/kWh payment from each charging transaction was required, this would result in the following example revenue based on 2018 use:

- @ 1 p/kWh - Revenue = £ 4,817
- @ 2 p/kWh - Revenue = £ 9,634

Alternative means of generating revenue could include charging for parking and other services whilst recharging a PIV. If parking charges are introduced at most fast and slow public locations this may provide a greater revenue than the pence per transaction model. The duration of fast and slow charging events often reflects the duration of parking rather than the energy delivery period, so this would provide recompense for the parking service being provided as well as the charging service. Combined fees can be levied by the network operator, recompensing the parking operator accordingly.

It is therefore recommended that appropriate fees are agreed with the procured network operator, varying by charger type and potentially by location.

Cheshire East Council

Working for a brighter future together

Highways and Transport Committee

Date of Meeting:	19 July 2021
Report Title:	Local Transport Delivery Plans
Report of:	Andrew Ross, Director of Infrastructure and Highways
Report Reference No:	HT/03/21-22
Ward(s) Affected:	All wards

1. Executive Summary

1.1. Following a period of consultation the Council adopted a new Local Transport Plan (LTP) in October 2019. The strategy considers all forms of transport over the period of 2019-2024 and outlines the role transport will play in supporting the long-term goals of Cheshire East.

1.2. To complement these strategic actions, the Council is developing Local Transport Delivery Plans to identify priority schemes to support towns and surrounding areas. Plans are being developed for the two principal towns (Crewe and Macclesfield) and nine Key Service Centres (Alsager, Congleton, Handforth, Middlewich, Nantwich Knutsford, Poynton, Sandbach, Wilmslow). This also includes surrounding areas to ensure all parts of the borough are included in at least one Delivery Plan.

1.3. This report outlines progress towards developing Local Transport Delivery Plans. The plans will identify how a coordinated and integrated transport network can be delivered, covering all forms of transport including walking, cycling, buses, rail and road traffic.

1.4. The Local Transport Delivery Plans will build on the Council's current highways and transport investment programmes into active travel, public transport and local road networks and guide future investment at a local level. The plans will also act as an enabling document to help secure additional external funding opportunities.

1.5. Critical to the success of the Local Transport Delivery Plans is ensuring integration with other investment programmes to support delivery of the

Council's Corporate Plan 2021-2025. The report contributes to the following priority outcomes identified in the Corporate Plan:

1.5.1. **GREEN –** through proposals that would improve sustainable travel across the Borough, the Council will further encourage the uptake of walking, cycling, public transport and electric vehicles. This will positively contribute both to our response to the climate emergency and also to reducing the incidence of air quality problems, especially in urban areas.

1.5.2. **FAIR** – the proposals are intended to create improved accessibility to schools, employment, key services and leisure opportunities. The plans are considering how accessibility can be improved in both urban and rural areas across the Borough.

1.6. Close attention is being paid to ensuring transport improvements are complementary to regeneration plans in Crewe and Macclesfield, including investment coming forward through the Crewe HS2 Hub, Future High Streets Fund and Town Investment Plan programmes. Transport improvements are also being closely aligned to Town Vitality Plans being developed across the borough.

1.7. The plans are being developed in collaboration with Town and Parish Councils with a strong focus on supporting delivery of Neighbourhood Plans and other local priorities.

1.8. A review of key evidence and issues has been conducted for each Local Transport Delivery Plan area. Following this a public consultation on a range of scheme options for improving the transport network took place between December 2020 and March 2021.

1.9. Feedback from stakeholders is being reviewed and technical assessments are being conducted to understand whether options:

- Align with boroughwide and local objectives for transport;
- Are locally supported;
- Are likely to be deliverable; and
- Are likely to offer value for money.

Following this assessment, packages of scheme options will be identified for delivery in the short, medium and longer term.

1.10. Further targeted engagement with Cheshire East Councillors and Town / Parish Councils is planned during 2021 to shape the final Local Transport Delivery Plans for each area. The final set of Delivery Plans is planned to be submitted to the Highways and Transport Committee for consideration in March 2022.

2. Recommendations

2.1. That the Highways and Transport Committee:

2.1.1. Notes progress made towards developing an evidence base and options for the Local Transport Delivery Plans;

2.1.2. Approves the methodology in Sections 1.9 and 1.10 to shape the Local Transport Delivery Plans.

2.1.3. Notes that the final set of Local Transport Delivery Plans will be presented for approval at a future meeting of this Committee.

3. Reasons for Recommendations

3.1. The 11 Local Transport Delivery Plans will provide locally specific priority schemes to support towns and surrounding areas. This will complement the strategic actions set out in the adopted Local Transport Plan 2019-2024.

3.2. The Local Transport Delivery Plans will directly support delivery of the 'a council which empowers and cares about people' and 'a thriving and sustainable place' priorities identified in the Council's Corporate Plan 2021-2025.

4. Other Options Considered

4.1. The option of not progressing Local Transport Delivery Plans has been considered. This has been discounted on the basis that local transport requires a coordinated and integrated plan to support boroughwide and local objectives.

5. Background

5.1. The Council adopted a new Local Transport Plan (LTP) in October 2019. The strategy considers all forms of transport over the period of 2019-2024 and outlines the role transport will play in supporting the long-term goals of Cheshire East. The LTP strategy includes a comprehensive set of actions to address strategic transport challenges for Cheshire East including:

- Protecting and improving our environment;
- Supporting growth and economic strength through connectivity;
- Ensuring accessibility to services;
- Promoting health, wellbeing and physical activity;
- Maintaining and managing our network assets; and
- Improving organisational efficiency and effectiveness.

5.2. Local Transport Delivery Plans are now being developed to complement these strategic actions, setting out priority schemes to support towns and surrounding areas.

6. Consultation and Engagement

6.1. A public consultation on a range of scheme options for improving local transport networks took place between December 2020 and March 2021.

This consultation set out the Council's understanding of objectives for improving local areas, issues, and options to improve the transport network. The consultation used an interactive mapping system to present information in a user-friendly format. Materials were made available to stakeholders in alternative formats where requested including printed materials posted to stakeholders. To enable all interested stakeholders to view materials and comment given the pandemic restrictions, the consultation period was extended by two months from the end of January to the end of March 2021. Full details of the consultation material can be viewed by following this link.

6.2. In total, 1,041 responses were received, including 881 online survey responses, 31 paper survey responses, and 129 email responses.

6.3. An executive summary setting out the consultation methodology and high-level outputs of the consultation is included in Appendix 1.

6.4. Consultation feedback is now being reviewed to inform assessment of options and shaping the final Local Transport Delivery Plans.

7. Implications

7.1. Legal

7.1.1. As the statutory Local Transport Authority, the Council is required to maintain an up-to-date Local Transport Plan that provides a strategic framework for planning and delivery of improvements in local transport provision. It must develop and implement policies for the promotion and encouragement of safe, integrated, efficient and economic transport to, from and within Cheshire East. The Local Transport Delivery Plans will form part of the Local Transport Plan framework and in part discharge this legal duty.

7.1.2. In developing and implementing Local Transport Delivery Plans, the Council must have regard to the transport needs of disabled persons and of persons who are elderly or have mobility problems. Development of plans will need to be in accordance with statutory and legal requirements for Community Engagement, Equalities Impact Assessment and Strategic Environmental Appraisal.

7.1.3. Members must be fully aware of the equalities implications of the decisions they are taking. This will ensure that there is proper appreciation of any potential impact of any decision on the Council's statutory obligations under the Public Sector Equality Duty. As a minimum, this requires decision makers to carefully consider the content of any Equality Impact Assessments produced by officers.

7.1.4. There is no statutory duty to consult on proposals to change the way in which a local authority carries out its duties but there is an expectation enshrined in case law that any local authority making

decisions affecting the public will do so fairly and in a way that cannot be said to be an abuse of power.

7.2. Finance

7.2.1. Upon adoption by the Council, the new Local Transport Delivery Plans will provide a framework to inform the annual capital programme for transport and highways. The Delivery Plans will be implemented utilising funding from a range of sources including: LTP Integrated Transport Block funding; Community Infrastructure Levy; Section 106 & 278 Agreements; the Council's capital and revenue funding, one-off funding programmes and external funding.

7.2.2. All funding approvals for schemes identified in Local Transport Delivery Plans will be made through the Council's existing budgetary procedures.

7.3. Policy

Development of the Local Transport Delivery Plans is being undertaken to ensure there is a consistent policy-fit with all relevant adopted and emerging local policies including: the Local Transport Plan, Corporate Plan 2021 – 2025; regeneration masterplans for Crewe and Macclesfield; Town Vitality Plans; Cycling Strategy 2017; Education Travel Policy; Sustainable Modes of Travel to School Strategy; Speed Management Policy; and Car Parking Strategy.

7.4. Equality

7.4.1. An Equality Impact Assessment (Appendix 2) has been completed for the LTP to ensure that the needs and impacts on all residents are understood, especially individuals or groups with identified protected characteristics.

7.5. Human Resources

7.5.1. There are no direct implications for Human Resources.

7.6. Risk Management

7.6.1. A Project Board has been established chaired by the Head of Strategic Transport to ensure appropriate project governance and strategic direction. A project risk register is maintained detailing mitigation measures.

7.7. Rural Communities

7.7.1. The Local Transport Plan includes detailed consideration of transport issues in rural areas throughout the Borough. In principal, the objectives and issues highlighted in the Plan apply throughout

the Borough, including all of our rural areas. However, it is also recognised that there can be specific challenges that are of heightened importance in rural areas. Consideration of these is aided by the place-based approach to the planning process. This has put greater emphasis on how our key towns act as service centres which must be accessible to residents of rural areas. As part of the place-based approach, Delivery Plans consider rural areas surrounding towns.

7.8. Children and Young People/Cared for Children

7.8.1. Specific transport issues relating to children and young people are incorporated into the Local Transport Plan. Development of the Local Transport Delivery Plans has taken full account of the Sustainable Modes of Travel to Schools (SMOTS) strategy and identified options to improve journeys to schools and education.

7.9. Public Health

7.9.1. The Local Transport Plan and Delivery Plans have been aligned with the Council's stated policies and action plans relating to Air Quality management. They consider the impact of transport on issues affecting public health, most notably air quality and the contribution that walking and cycling can make to health & wellbeing. The Local Transport Plan has been coordinated with the Council's wider strategic approaches to addressing public health outcomes.

7.10. Climate Change

7.10.1. The Council has committed to becoming carbon neutral by 2025 and to encourage all businesses, residents and organisations in Cheshire East to reduce their carbon footprint. The Council's Environment Strategy 2020-2024 includes a commitment to produce an Electric Vehicles Infrastructure Strategy and supports the strategic objective to increase sustainable transport and active travel. The Local Transport Plan and Delivery Plans have been aligned with wider Council strategies and includes the key objective 'protecting and improving our environment'. The Local Transport Plan includes a wide range of actions to reduce the need to travel and to promote greater reliance on sustainable travel including walking, cycling, public transport and zero emission vehicles. The Local Transport Delivery Plans have a strong focus on identifying sustainable travel improvements that are required to decarbonise the transport system including encouraging walking and cycling, improving local buses and public transport, and transitioning vehicle fleets to electric vehicles.

Access to Information	
Contact Officer:	Richard Hibbert, Head of Strategic Transport Richard.hibbert@cheshireeast.gov.uk 07866 157324
Appendices:	Appendix 1: Consultation Executive Summary Appendix 2: Equalities Impact Assessment
Background Papers:	None

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An executive summary to Cheshire East Council's

Local Transport Delivery Plan Surveys

DRAFT

Introduction

Purpose of the surveys

Cheshire East Council are working on developing a series of Local Transport Delivery Plans following the adoption of the Cheshire East Local Transport Plan 2019 - 2024 (LTP) in October 2019. As part of this process, between 23rd November 2020 and 31st March 2021, Cheshire East Council ran eleven surveys, one for each major town and key service centre as follows:

- Alsager
- Crewe
- Congleton
- Handforth
- Knutsford
- Macclesfield
- Middlewich
- Nantwich
- Poynton
- Sandbach
- Wilmslow

Respondents were invited to view the draft plans, which set out a range of options designed to improve the transport network and support the recovery of town centres. Respondents could provide comments on the draft objectives and associated schemes and there was also an opportunity to suggest further objectives and or schemes if they considered that any key ones had been missed.

The draft plans were presented via an interactive story to aid respondents in visualising where draft scheme options were in relation to each town.

This executive summary provides a summary of the number of responses received during the survey process and the next steps.

Methodology and number of responses

The surveys were mainly hosted online, due to the current Covid-19 restrictions, with paper versions being made available upon request. As libraires continued to remain closed for the duration of the period, the feedback period was extended by two months to enable printed materials to be issued and returned. A number of respondents preferred to email their response, and these will also be included as part of the analysis.

The surveys were promoted via:

- A press release at the beginning of the period, a reminder release in early January and then a further press release at the end of January to promote the extension of the period to the end of March.
- Promotional information hosted on the Council's home, consultation and transport webpages;
- Email briefings to CEC Councillors, Town / Parish Councils and MPs;
- Emails to statutory bodies and all known community groups and umbrella organisations;
- Social media promotion through the Council's Facebook and Twitter channels; and
- Reaching out to harder to reach groups through the Council's Connected Communities teams.

In total, 1,041 valid responses were received, including:

- 881 online survey responses
- 31 paper survey responses
- 129 email responses

A breakdown of responses by area is shown in Table 1 below: -

Table 1:

LTP Area	Online Survey Responses	Paper Survey Responses	*Email References	Total
Alsager	39	-	4	
Congleton	56	-	17	
Crewe	59	-	8	
Handforth	21	-	13	
Knutsford	119	29	14	
Macclesfield	122	-	15	
Middlewich	90	2	11	
Nantwich	70	-	16	
Poynton	149	-	12	
Sandbach	75		9	
Wilmslow	81	-	11	
Poynton Relief Road / B5358	-	-	12	
Overall borough / general	-	-	4	
Total response	**881**	**31**	**129**	

* Some emails responses referred to more than one area and therefore email references will add to more than the total response.

Appendix 1 provides information on the number of views the interactive story received for each area.

A breakdown of demographics for the online & paper surveys can be viewed in Appendix 2.

Next Steps

The Research and Consultation team will now start the process of analysing all the views and comments received during the survey process in liaison with the Transport team. Results of this analysis will be published later on in the year.

Appendix 1 – Interactive Story: Number of views

The draft plans were presented via an interactive story to aid respondents in visualising where draft scheme options where in relation to each town. The below table (Table 2) shows how often each towns page within the Local Transport Plan story site was viewed. Whilst we cannot detect if this was by separate individuals it still indicates that engagement was reasonable for each area.

Table 2:

Area	Views	Average Views per Day
Alsager	861	6.67
Congleton	801	6.21
Crewe	852	6.6
Handforth	480	3.72
Knutsford	931	7.22
Macclesfield	944	7.32
Middlewich	567	4.4
Nantwich	642	4.98
Poynton	1113	8.63
Sandbach	653	5.06
Wilmslow	675	5.23
Overall Hub Page	**7137**	**55.33**

Appendix 2 – Demographic breakdown of respondents (online & paper surveys)

A number of demographic questions were asked at the end of each survey to analysis to be undertaken to assess if there was a wide range of views from across different groups, these results can be seen in Tables 3 to 8. All of the questions were optional and therefore won't add up to the total number of responses received.

Table 3: Number of survey respondents by representation

	Count	Percent
As an individual (local resident)	544	88%
As an elected Cheshire East ward councillor, or town/parish councillor	29	< 5%
On behalf of a local business	14	< 5%
On behalf of a group, organisation, or club	16	5%
As an elected member of Cheshire East	< 5	< 5%
Other	9	< 5%
Grand Total	**616**	**100%**

Table 4: Number of survey respondents by gender

	Count	Percent
Male	312	54%
Female	222	39%
Other gender identity	< 5	< 5%
Prefer not to say	37	6%
Grand Total	**572**	**100%**

Table 5: Number of survey respondents by age group

	Count	Percent
16-24	18	< 5%
25-34	32	6%
35-44	80	14%
45-54	85	15%
55-64	113	20%
65-74	161	28%
75-84	50	9%
85 and over	< 5	< 5%
Prefer not to say	37	6%
Grand Total	**579**	**100%**

Table 6: Number of survey respondents by ethnic origin		
	Count	**Percent**
White British / English / Welsh / Scottish / Northern Irish / Irish	505	88%
Any other White background	9	< 5%
Asian / Asian British	< 5	< 5%
Black African / Caribbean / Black British	< 5	< 5%
Mixed: White and Black Caribbean / African / Asian	< 5	< 5%
Other ethnic origin	7	< 5%
Prefer not to say	46	8%
Grand Total	**573**	**100%**

Table 7: Number of survey respondents by religious belief		
	Count	**Percent**
Christian	254	45%
Buddhist	< 5	< 5%
Muslim	< 5	< 5%
Other religious belief	15	< 5%
None	201	36%
Prefer not to say	86	15%
Grand Total	**560**	**100%**

Table 8: Number of survey respondents by limited activity due to health problem / disability		
	Count	**Percent**
Yes	77	13%
No	452	79%
Prefer not to say	42	7%
Grand Total	**571**	**100%**

Report produced on 22nd April 2021 by the Research and Consultation Team, Cheshire East Council, Email RandC@cheshireeast.gov.uk for further information.

EQUALITY IMPACT ASSESSMENT

TITLE: Local Transport Plan – Town Delivery Plans

VERSION CONTROL

Date	Version	Author	Description of Changes
21.04.2020	**1**	Debby Taylor	**N/A**
02.07.2020	**2**	**Debby Taylor**	**Update**
11.08.2020	**3**	**Debby Taylor**	**Update**
23.09.2020	**4**	**Debby Taylor**	**Update**

CHESHIRE EAST COUNCIL - EQUALITY IMPACT ASSESSMENT

Stage 1 Description: Fact finding (about your policy / service /

Department	*Place*		**Lead officer responsible for assessment**		*Debby Taylor*	
Service	*Strategic Infrastructure*		**Other members of team undertaking assessment**		*N/A*	
Date	**23.09.2020**		**Version 4**			
Type of document (mark as appropriate)	**Strategy**	**Plan**	**Function**	**Policy**	**Procedure**	**Service**
Is this a new/ existing/ revision of an existing document (please mark as appropriate)	**New**		**Existing**		**Revision**	
Title and subject of the impact assessment (include a brief description of the aims, outcomes, operational issues as appropriate and how it fits in with the wider aims of the organisation) **Please attach a copy of the strategy/ plan/ function/ policy/ procedure/ service**	**Local Transport Plan – Town Delivery Plans** **Background** The LTP Strategy that was approved by Council in October 2019 provides a framework for how the Council will work together with partners to achieve success in each of the following areas: • **Delivery of new infrastructure:** new transport infrastructure will be delivered where it will bring most benefit to residents and businesses. • **Network performance and asset management:** the transport network will be well maintained and operate efficiently. • **Service redesign and delivery:** transport and Council services will offer excellent value with efficient and responsive services. • **Partnership working:** joint working across sectors to address key strategic challenges and delivering engagement/promotion activities. The LTP strategy considers the travel needs and transport problems affecting Cheshire East. It sets out evidence to support the Council's policies, proposals, and priorities for local transport infrastructure and services. The Borough-wide strategy covers all modes of transport and links into a wide range policy contexts and infrastructure schemes, ranging from local to national.					

	The LTP has been guided by the Council's Corporate Plan[1] which identifies six outcomes to improve the lives of all residents: 1. Our local communities are strong and supportive; 2. Cheshire East has a strong and resilient economy; 3. People have the life skills and education they need in order to thrive; 4. Cheshire East is a green and sustainable place; 5. People live well and for longer; and 6. A responsible, effective and efficient organisation. Following adoption of the LTP Strategy, work has commenced on developing Town Delivery Plans to translate the borough-wide strategy into the context of individual areas. These Delivery Plans will be prepared for the 2 Principal Towns, Crewe and Macclesfield and 9 Key Service Centres, Knutsford, Nantwich, Sandbach, Wilmslow, Alsager, Congleton, Handforth, Middlewich and Poynton . Crucially these plans will also cover the surrounding areas to ensure every part of the borough is covered in at least one Delivery Plan. The Local Town Delivery Plans will identify how best to apply the Borough whole LTP strategy at a local level through tailored plans for each area. They will develop an evidence base and identify local transport objectives by identifying a locally specific mix of potential transport projects / initiatives. They will aim to appraise and prioritise packages of schemes against LTP objectives and deliverability post consultation. At this stage no schemes will be planned or delivered as part of the current work programme. Delivery Plans will initially identify projects / initiatives with future work to plan, design and deliver investment. As such future EIAs will be needed for planning and delivery of projects / initiatives.
Who are the main stakeholders and have they been engaged with? (e.g. general public, employees, Councillors, partners, specific audiences, residents)	With an estimated population of 378,900, Cheshire East is the third biggest unitary authority in the North West, and the sixteenth largest in the country The age profile of Cheshire East according to the latest data as of April 2019 is as follows:

[1] Cheshire East Council, *Corporate Plan 2016 - 2020*

0 - 15	16 - 64	65 +
67,400	226,100	85,300

The Ethnic breakdown in Cheshire East according to the 2011 CENSUS

White	* 357, 940	96.7%
(*Includes White - Other	9,122	2.46%
Mixed - Multiple Ethnic groups	3,873	1.0%
Asian/Asian British	6,060	1.6%
Black/African/Caribbean/Black British	1,402	0.4%
Other ethnic group	852	0.2%

Nationality Breakdown in Cheshire East according to the 2011 CENSUS

English only	243,425	65.77%
British only identity	60,134	16.25%
English and British only identity	42,460	11.47%
Polish	4,073	1.10%
Scottish only	3,411	0.92%
Welsh only	3,212	0.87%
Irish or Other, and at least one UK identity	1,576	0.43%
Irish only	1,378	0.37%

- The general public (including residents and visitors to the Borough);
- Cheshire East Council stakeholders;
- Public transport operators;
- Local businesses/organisations;
- Schools and education establishments;
- Neighbouring local authorities;
- Governmental bodies (e.g. Local Enterprise Partnership);
- Statutory transport bodies (e.g. Department for Transport and Transport for the North).

	• Partner organisation, such as:
	  • Poynton Area Community Partnership
	  • Chelford, Handforth, Alderley Edge & Wilmslow (CHAW) Partnership
	  • Congleton Connected Partnership
	  • Holmes Chapel (Dane Valley) Commercial Community Partnership
	  • Knutsford Neighbourhood Partnership
	  • Upton Priory Neighbourhood Partnership
	  • Weston Neighbourhood Partnership
	  • Moss Rose Neighbourhood Partnership
	  • Hurdsfield Neighbourhood Partnership
	  • Sandbach Connected Communities Partnership
	  • Middlewich Partnership
	  • Alsager Partnership
	  • Crewe Partnership
	  • Nantwich Partnership
	
	• Town and Parish Councils;
	• Umbrella organisations for people with specialist transport needs; such as:
	• Space4Autism
	• * Disability Information Bureau (DIB)
	• * Cheshire Centre for Independent living
	• * Deafness Support Network
	• * ADCA Medical Transport Service
	• * Congleton Disabled Club
	• * Care4CE
	• * Leonard Cheshire Disability
	• * The Stroke Association
	• Transport interest groups; Such as:
	• Crewe & District Bus Users Group
	• Transition Wilmslow
	• Active Travel Congleton
	• Travel Cheshire

	• Environmental groups; • MPs; and • Emergency services.
What consultation method(s) did you use?	Public consultation and engagement is planned for each Delivery Plan, however given guidelines on social distancing during the Covid-19 pandemic, person to person engagement may not be feasible. We can however look to mitigate against any issues using the below approach: • Consultation will be primarily via digital means: website, emails, press releases, Teams meetings with Town / Parish Councils and other appropriate stakeholders • Online survey asking for feedback on: > Objectives identified for each town > Long list of options identified for each town > Opportunity for respondents to note any other options not already identified • Producing a hard copy of the relevant plan to be distributed to libraries. • Engaging with the Connected Communities teams to engage hard to reach groups and reaching out to known umbrella groups – printed materials can be sent out to specific groups if required. • Information can be made available in alternative languages if required and there is also a translation service available on Cheshire East Website. • The ERSI Story Consultation Portal adheres to accessibility standards and is screen reader accessible.

Stage 2 Initial Screening

Who is affected and what evidence have you considered to arrive at this analysis? (This may or may not include the stakeholders listed above)	All residents of Cheshire East may be impacted by the projects which are eventually delivered as part of the Local Transport Plan strategy. • Local Businesses / employers • Transport Operators • People who live / work in the borough • Education / training providers • Anyone with a travel need in the borough
Who is intended to benefit and how?	The LTP includes a number of key investment themes which are outlined below alongside their impact on protected characteristics in order to identify who is intended to benefit from the strategy. Protected characteristics include: • Age; • Disability; • Gender; • Race/ethnicity; • Sexual orientation; • Gender reassignment; • Marriage/Civil partnership; and • Pregnancy/Maternity • Religion & belief
Could there be a different impact or outcome for some groups?	There is a potential for varying impacts on some groups: • **Young People** – can be vulnerable to social exclusion through reliance on public transport, walking & cycling. Personal security and the cost of public transport can be a barrier. Also, the desire to access public transport during evenings / weekends where availability is less • **Elderly** – reliant on public transport and can face particular challenges relating to physical access to public transport. Also fear of crime can be a barrier • **Disabled** - can face particular challenges relating to physical access to public transport. Access to transport information is a potential barrier restricting, for instance, deaf and visually impaired people .Access to disabled parking can also be a challenge • **Gender** – women are likely to be more reliant on public transport than men which can impact on their access to services. Fear of crime can be more of an issue for women. • **Racial Groups** – access to appropriate transport information could be a barrier through language difficulties and the ability to read / understand timetables

	• **Deprivation** – lack of access to a car can be a common cause of social exclusion. Cost of public transport can be an issue for those on low income who tend to be reliant on this form of transport and walking / cycling
Does it include making decisions based on individual characteristics, needs or circumstances?	Potentially yes. Some groups may be impacted to a greater or lesser degree dependant upon the recommendations and actions that emerge from the Town Centre Transport Plan consultation once it has been completed. Where individual projects that could potentially make changes to the town centres are taken forward as a result of the consultation process, individual EIA's can be undertaken at that stage to ensure appropriate checks are carried out
Are relations between different groups or communities likely to be affected? **(eg will it favour one particular group or deny opportunities for others?)**	No
Is there any specific targeted action to promote equality? Is there a history of unequal outcomes (do you have enough evidence to prove otherwise)?	There is no specific targeted action to promote equality other than to ensure that the public consultation is robust and can demonstrate open engagement with all of the 9 protected characteristics. This EIA will be re-evaluated after consultation to take into account any comments from the public.

Is there an actual or potential negative impact on these specific characteristics? (Please tick)

Age	**Y**		**Marriage & civil partnership**		**N**	**Religion & belief**	**N**
Disability	**Y**		**Pregnancy & maternity**		**N**	**Sex**	**N**
Gender reassignment		**N**	**Race**		**N**	**Sexual orientation**	**N**

What evidence do you have to support your findings? (quantitative and qualitative) Please provide additional information that you wish to include as appendices to this document, i.e., graphs, tables, charts	**Consultation/ involvement carried out**	
		No
Age	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. Age UK Cheshire East can be notified of the relevant consultations as can local schools, youth organisations, social and voluntary groups etc. Town and Parish Councils will be engaged to help inform local stakeholders.	

EQUALITY IMPACT ASSESSMENT

Disability	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues**.** A list of Disabled groups and societies has been assembled and will be included in the notified parties when consultations take place. Contact details will be given to anyone experiencing difficulties in contributing to the consultation process if, for example, they need large print or wish to request the text in braille.		
Gender reassignment	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. No NHS gender identity clinics have identified in the Borough which could be specifically included in the consultation, however East Cheshire NHS can be included in the list of stakeholders to be notified when consultations take place. There is also a staff LGBT + network group. BodyPositive in Crewe can be consulted - they have a trans group, there is also a trans membership of Utopia LGBT youth group based at The Hub on Market Street in Crewe . Also the organisers of Macc Pride, Congleton Pride and Nantwich Pride can be contacted.		
Marriage & civil partnership	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. It is intended that consultation material will be advertised / available in all local registry offices		
Pregnancy & maternity	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. Consultation material will be made available in local hospitals and clinics, also several websites have been identified for inclusion on the Consultation material will be made available in local hospitals and clinics, also several websites have been identified for inclusion on the stakeholder list.		
Race	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. It is intended that contact details will be made available to anyone who is likely to have difficulty in contributing to the consultation and require text in a language other than English. Consultation can be shared by the Communities team amongst the BAME population. Consultation can be shared with BAME staff by EDI Officer.		
Religion & belief	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. It is intended that local religious groups of all types will be included in the consultation		
Sex	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues.		

Sexual orientation	No particular negative impacts have been identified at this stage, however public consultations are intended to be undertaken which could potentially raise some issues. It is intended that groups including Stonewall, the Lesbian, Gay, Bisexual and Transgender Charity, The LGBT Support Service, The Youth Service Utopia Group / Body Positive / Local Pride Organising Committees and the CEC Staff LGBT forum, VibranCE will form part of the stakeholder list to be notified as part of the consultation.		
Proceed to full impact assessment? (Please tick)	**Yes**		**Date: TBA**
Lead officer sign off		**Date**	
Head of service sign off		**Date**	

If yes, please proceed to Stage 3. If no, please publish the initial screening as part of the suite of documents relating to this issue

EQUALITY IMPACT ASSESSMENT

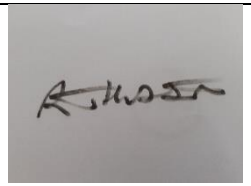
Stage 3 Identifying impacts and evidence

This section identifies if there are impacts on equality, diversity and cohesion, what evidence there is to support the conclusion and what further action is needed

Protected characteristics	**Is the policy (function etc….) likely to have an adverse impact on any of the groups?** **Please include evidence (qualitative & quantitative) and consultations** *List what negative impacts were recorded in Stage 1 (Initial Assessment).*	**Are there any positive impacts of the policy (function etc….) on any of the groups?** **Please include evidence (qualitative & quantitative) and consultations** *List what positive impacts were recorded in **Stage 1** (Initial Assessment).*	**Please rate the impact taking into account any measures already in place to reduce the impacts identified** ***High:*** *Significant potential impact; history of complaints; no mitigating measures in place; need for consultation* ***Medium:*** *Some potential impact; some mitigating measures in place, lack of evidence to show effectiveness of measures* ***Low:*** *Little/no identified impacts; heavily legislation-led; limited public facing aspect*	**Further action (only an outline needs to be included here. A full action plan can be included at Section 4)** *Once you have assessed the impact of a policy/service, it is important to identify options and alternatives to reduce or eliminate any negative impact. Options considered could be adapting the policy or service, changing the way in which it is implemented or introducing balancing measures to reduce any negative impact. When considering each option you should think about how it will reduce any negative impact, how it might impact on other groups and how it might impact on relationships between groups and overall issues around community cohesion. You should clearly demonstrate how you have considered various options and the impact of these. You must have a detailed rationale behind decisions and a justification for those alternatives that have not been accepted.*
Age	No	No	N/A	
Disability	No	No	N/A	
Gender reassignment	No	No	N/A	
Marriage & civil partnership	No	No	N/A	

Pregnancy and maternity	No	No	N/A	
Race	No	No	N/A	
Religion & belief	No	No	N/A	
Sex	No	No	N/A	
Sexual orientation	No	No	N/A	
Is this change due to be carried out wholly or partly by other providers? If yes, please indicate how you have ensured that the partner organisation complies with equality legislation (e.g. tendering, awards process, contract, monitoring and performance measures)				

Stage 4 Review and Conclusion **ASSESSMENT**

Summary: provide a brief overview including impact, changes, improvement, any gaps in evidence and additional data that is needed N/A			
Specific actions to be taken to reduce, justify or remove any adverse impacts	**How will this be monitored?**	**Officer responsible**	**Target date**
Please provide details and link to full action plan for actions			
When will this assessment be reviewed?			
Are there any additional assessments that need to be undertaken in relation to this assessment?			
Lead officer sign off		**Date**	
Head of service sign off **Richard Hibbert** **Head of Strategic Transport & Parking**		**Date** **23 November 2020**	

Please publish this completed EIA form on the relevant section of the Cheshire East website

EQUALITY IMPACT ASSESSMENT

Working for a brighter future together

Highways & Transport Committee

Date of Meeting:	19 July 2021
Report Title:	Highways & Transport Budgets 2021/22
Report of:	CLT Lead Officer: Alex Thompson, Director of Finance & Customer Services
Report Reference No:	HT/06/21-22
Ward(s) Affected:	All wards and all members will be affected and impacted by the content of the MTFS and Corporate Plan.

1. Executive Summary

1.1. The Corporate Plan and Medium Term Financial Strategy (MTFS) for Cheshire East Council for the four years 2021/22 to 2024/25 was approved by full Council on 17th February 2021.

1.2. Cheshire East Council provides in the region of 500 local services every day. During 2020/21 the Council drafted and consulted on a new Corporate Plan to articulate a vision of how these services will make Cheshire East an Open, Fairer and Greener borough. The MTFS matches forecast resources to the costs associated with achieving the Council's vision.

1.3. The Finance Sub Committee meeting on the 1st July 2021 approved the allocation of the approved capital and revenue budgets, related policy proposals and earmarked reserves to each of the service committees.

2. Recommendations

2.1. To note the decision of the Finance Sub-Committee to allocate the approved capital and revenue budgets, related policy proposals and earmarked reserves to the Highways & Transport Committee, as set out in Appendix A.

2.2. To note the MTFS timelines, as set out in paragraphs 5.9 – 5.12.

2.3. To note the supplementary estimates and virements as set out in Appendix B.

3. Reasons for Recommendations

3.1. The Highways & Transport Committee has the responsibility for the oversight, scrutiny, reviewing of outcomes and performance, budget monitoring and risk management of the Directorate of Highways & Infrastructure including: Transport Policy; Transport Commissioning; Car Parking; Highways; Infrastructure and HS2.

3.2. Finance Sub-Committee met on 1st July and set out the budgets in accordance with the above responsibilities.

4. Other Options Considered

4.1. Not applicable.

5. Background

5.1. All councils are legally required to set a balanced budget each year. The Budget Setting Process 2021-2025 was developed and endorsed by the Cabinet and Corporate Leadership Team in May 2020 and the MTFS was approved by full Council in February 2021.

5.2. Page 17 of the MTFS includes a Report from the Chief Finance Officer in line with the Section 25(1) of the Local Government Finance Act 2003. This report confirms that the MTFS is balanced and that the Chief Finance Officer is satisfied with the robustness of the estimates and the adequacy of the financial reserves of the Council. The report also highlights the factors taken in to account in arriving at this judgement including relevant financial issues and risks facing the Council during the medium term.

5.3. Finance Procedure Rules set limits and responsibilities for movement of funds within this balanced position, treating reserves as part of this overall position. Any movement within this balanced position is treated as a virement. To increase the overall size of the MTFS requires a supplementary estimate, which must be backed with appropriate new funding and approved in line with the Procedure Rules.

5.4. On 19th November 2020 the Council resolved to cease operating the existing Leader and Cabinet model of governance and implement a committee system model of governance to take effect from the Annual Council meeting on 4th May 2021.

5.5. To support accountability and financial control the 2021/22 budget is being reported across the Committees based on their associated functions. This report sets out the allocation of the revenue and capital budgets and earmarked reserves to the Highways & Transport committee in accordance with its functions.

5.6. Each committee Function has been associated with a Director budget. Budget holders are responsible for budget management. Where a team supports multiple Directors (most notable in Corporate Services) the budget remains with the Director and is not split, for example, Governance and

Democratic Services are aligned to the Corporate Policy Committee even though the activity of the team is split across all teams.

5.7. The financial alignment of budgets to each Committee is set out in Table 1 with further details on the Highways & Transport Committee budgets in Appendix A.

Table 1: Revenue and Capital Budgets allocated to service committees as per the approved MTFS

Committee	Expenditure £m	Income £m	Net Budget £m	Total Capital Budget £m	Total Rev + Cap £m
Adults and Health	178.348	-59.304	119.044	**1.434**	**120.478**
Highways and Transport	23.090	-11.849	11.241	**90.996**	**102.237**
Children and Families	74.100	-5.906	68.194	**22.683**	**90.877**
Economy and Growth	32.692	-10.866	21.826	**31.459**	**53.285**
Environment and Communities	52.512	-10.613	41.899	**11.220**	**53.119**
Corporate Policy	112.635	-76.421	36.214	**6.451**	**42.665**
Finance Sub Committee	19.340	-6.662	12.678	**7.030**	**19.708**
			-311.096	**-171.274**	**-482.370**
Original Budget (MTFS Feb 21)	**492.717**	**-181.621**	**0.000**	**0.000**	**0.000**

5.8. The 2021-25 MTFS includes a net revenue budget of £311.1m and an approved capital programme of £171.3m for the financial year 2021/22. Further details on the schemes within the capital programme for the Highways & Transport Committee are provided in Appendix A.

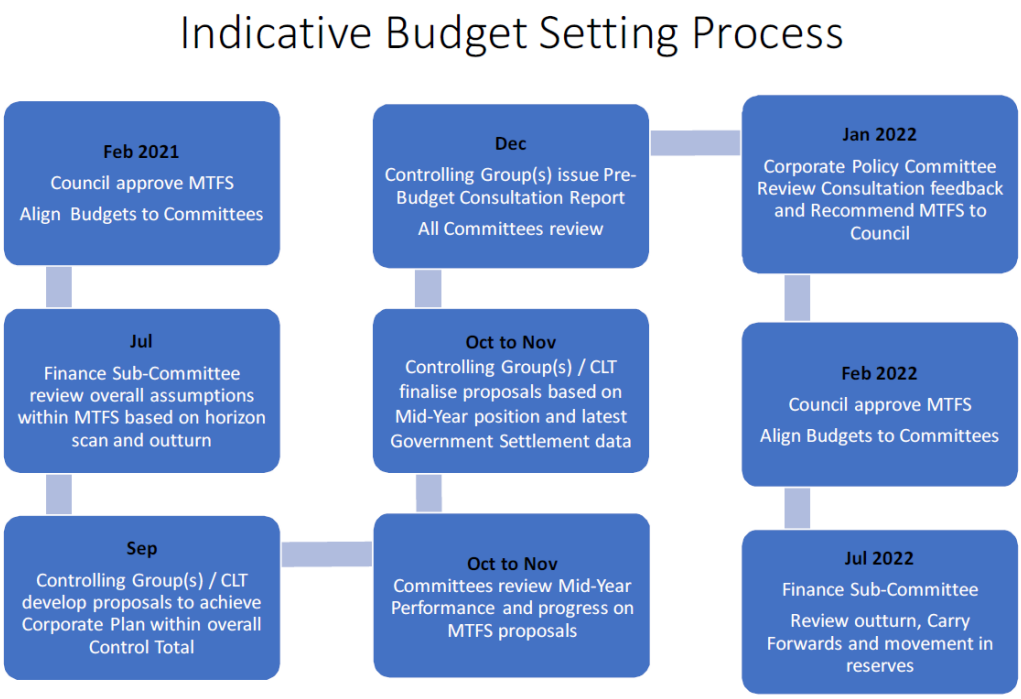
MTFS Timelines

5.9. Council wide budget control rests with the Corporate Policy Committee (and Finance Sub Committee) and Council. Budgets have been aligned with service committees to facilitate expenditure assurance but committees do not hold 'a budget'. Responsibility for budget management remains with officers but the Committee is responsible for assuring the budget is spent on delivering the objectives set out in the policy framework of the Corporate Plan.

5.10. The new budget process will provide each committee with a review of the mid year position and the opportunity to comment on future proposals relating to their areas, by individual service area, which can be considered with the new budgetary consultation process and will be considered by Corporate Policy Committee for recommendation to Council.

5.11. Sessions will be arranged for all members in advance of the wider consultation on proposals. This will increase opportunities for all members to engage with the process to review the Medium Term Financial Strategy. Members will be invited to attend sessions that will allow them to share ideas to support development of future proposals in an informal setting. This approach was well received when trialled in 2019, but, due to circumstances, could not be re-run in 2020.

5.12. The budget setting process is set out below:



6. Consultation and Engagement

6.1. The annual business planning process involves engagement with local people and organisations. Local authorities have a statutory duty to consult on their Budget with certain stakeholder groups including the Schools Forum and businesses. In addition, the Council chooses to consult with other stakeholder groups. The Council continues to carry out stakeholder analysis to identify the different groups involved in the budget setting process, what information they need from us, the information we currently provide these groups with, and where we can improve our engagement process.

6.2. Cheshire East Council conducted an engagement process on its Medium-Term Financial Plans through a number of stages running from December 2020 to Council in February 2021.

6.3. The budget consultation launched on-line on the 2nd December 2020, included details of the proposals against each (draft) Corporate Plan aim. This consultation was made available to various stakeholder groups and through a number of forums.

7. Implications

7.1. Legal

7.1.1. The legal implications surrounding the process of setting the 2021 to 2025 Medium Term Financial Strategy were dealt with in the reports relating to that process.

7.2. Finance

7.2.1. Contained within the main body of the report.

7.3. Policy

7.3.1. The Corporate Plan sets the policy context for the MTFS and the two documents are aligned. Any policy implications that arise from activities funded by the budgets that this report deals with will be dealt within the individual reports to Members or Officer Decision Records to which they relate.

7.4. Equality

7.4.1. The Council needs to ensure that in taking decisions on the Medium Term Financial Strategy, the Budget and the Corporate Plan, the impacts on those with protected characteristics are considered. The Council undertakes equality impact assessments where necessary and continues to do so as proposals and projects develop across the lifetime of the Corporate Plan. The process assists us to consider what actions could mitigate any adverse impacts identified. Completed equality impact assessments form part of any detailed Business Cases.

7.4.2. Any equality implications that arise from activities funded by the budgets that this report deals with will be dealt within the individual reports to Members or Officer Decision Records to which they relate.

7.5. Human Resources

7.5.1. Any HR implications that arise from activities funded by the budgets that this report deals with will be dealt within the individual reports to Members or Officer Decision Records to which they relate.

7.6. Risk Management

7.6.1. Financial risks are assessed and reported on a regular basis, and remedial action taken if and when required. Risks associated with the achievement of the 2021/22 budget and the level of general reserves were factored into the 2021/22 financial scenario, budget and reserves strategy.

7.7. Rural Communities

7.7.1. The report provides details of service provision across the borough.

7.8. Children and Young People/Cared for Children

7.8.1. The report provides details of service provision across the borough.

7.9. Public Health

7.9.1. Public health implications that arise from activities that this report deals with will be dealt with as separate reports to Members or Officer Decision Records as required.

7.10. Climate Change

7.10.1. Any climate change implications that arise from activities funded by the budgets that this report deals with will be dealt within the individual reports to Members or Officer Decision Records to which they relate.

Access to Information	
Contact Officer:	Alex Thompson Director of Finance and Customer Services (Section 151 Officer) alex.thompson@cheshireeast.gov.uk
Appendices:	**A** - Allocation of capital and revenue budgets, earmarked reserves and policy proposals to service committees B – Supplementary Estimates
Background Papers:	The following are links to key background documents: Medium Term Financial Strategy 2021-25

Appendix A – Allocation of capital and revenue budgets, earmarked reserves and policy proposals to service committees.

2021/22 Highways & Transport Committee MTFS page 173	Exp £m	Inc £m	Revenue Budget £m	Capital Budget £m	Total Rev + Cap £m
Strategic Transport & Parking	6.737	-6.569	**0.168**	0.459	**0.627**
Highways & Infrastructure	15.633	-5.178	**10.455**	84.915	**95.370**
HS2	0.720	-0.102	**0.618**	5.622	**6.240**
Total	**23.090**	**70.949**	**11.241**	**90.966**	**102.237**

Highways and Transport Committee

CAPITAL PROGRAMME 2021/22 - 2024/25

Scheme Description	Forecast Expenditure					
	Prior Years £000	Budget 2021/22 £000	Budget 2022/23 £000	Budget 2023/24 £000	Budget 2024/25 £000	Total Budget £000
Committed Schemes - In Progress						
Highways and Infrastructure						
A500 Dualling Scheme	8,503	825	0	0	0	**9,328**
A51/A500 Corridor Nantwich	237	13	0	0	0	**250**
A54/A533 Leadsmithy St, M'wich	129	335	99	0	0	**563**
A556 Knutsford to Bowdon	358	146	0	0	0	**504**
A6 MARR CMM - Disley	1,641	280	200	0	0	**2,122**
A6 MARR CMM Handforth	460	140	200	0	0	**800**
A6MARR Design Checks & TA	333	140	0	0	0	**473**
Air Quality Action Plan	328	44	0	0	0	**372**
Alderley Edge By-Pass Scheme	60,255	356	0	0	0	**60,611**
Car Parking Improvements (including Residents Parking	273	20	28	0	0	**321**
Congleton Link Road	69,289	4,654	2,111	3,383	11,005	**90,443**
Crewe Green Link Road PH2	24,898	850	0	0	0	**25,748**
Crewe Green Roundabout	7,021	240	238	0	0	**7,500**
Crewe HS2 Hub Project Dev	7,078	5,622	0	0	0	**12,700**
Flowerpot Phs 1 & pinch point	1,002	3,565	919	15	0	**5,500**
Highway Pothole/Challenge Fund	8,171	200	0	0	0	**8,371**
Highways Contract Team Programme Delivery	272	145	0	0	0	**417**
Highway S106 Schemes	993	494	34	0	0	**1,520**
Highway S278 Schemes	2,168	647	104	0	0	**2,919**
Hough Bridge	290	0	10	0	0	**300**
Jack Mills Way	280	20	0	0	0	**300**
Macclesfield Movement Strategy	31	0	69	0	0	**100**
Middlewich Eastern Bypass	12,955	12,563	0	0	0	**25,518**
Middlewich Rail Study	0	0	20	0	0	**20**
North-West Crewe Package	6,375	17,876	10,921	128	1,200	**36,500**
Old Mill Rd/ The Hill Junction	108	640	576	0	0	**1,325**
Parking Meters	0	350	0	0	0	**350**
Part 1 Claims	36	38	38	0	0	**112**
Pay and Display Parking Meters	531	89	0	0	0	**620**
Poynton Relief Road	17,163	17,326	6,638	349	9,180	**50,657**
Programme Management	659	100	0	0	0	**759**
Roundabout London Rd Holmes Chapel (S106)	75	339	189	0	0	**603**
Safer Roads Scheme A532	427	603	0	0	0	**1,030**
Safer Roads Scheme A536	450	1,777	83	0	0	**2,310**
Sustainable Travel Access Prog	1,445	1,679	0	0	0	**3,124**
Sydney Road Bridge	10,249	0	252	0	0	**10,501**
Winter Service Facility	299	109	436	0	0	**843**
Total Committed Schemes - In Progress	**244,784**	**72,224**	**23,165**	**3,875**	**21,385**	**365,433**
New Schemes						
Highways and Infrastructure						
Integrated Transport Block - LTP		1,987	1,987	1,987	1,987	**7,948**
Maintenance Block - LTP		8,409	8,409	8,409	8,409	**33,636**
Incentive Fund - LTP		1,751	1,751	1,751	1,751	**7,004**
Managing and Maintaining Highways		6,000	0	0	0	**6,000**
Traffic Signs and Bollards - LED Replacement		625	625	0	0	**1,250**
Total New Schemes		**18,772**	**12,772**	**12,147**	**12,147**	**55,838**
Total Capital Schemes	**244,784**	**90,996**	**35,937**	**16,022**	**33,532**	**421,271**

Budget Policy Proposal	2021/22 £000	2022/23 £000	2023/24 £000	2024/25 £000
[90] Community Transport	-25			
[88] Parking Strategy – Review of Charges	-327	-955		
[23] Urban Grass Cutting	-67			
[24] Improving customer experience – Highways correspondence	-50	-50		
[33] Commercialisation of the Highway Service Contract	-80			
[87] Carbon Reduction - Replacement of existing illuminated signs and bollards with LED units		30	-4	-31
[89] Local Supported Buses	-33	-117		

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Appendix B – Supplementary Estimates

Table A - Supplementary Estimates less than £1,000,000

Committee	Year	Type of Grant	£000	Details
Highways & Transport	2020/21	Covid-19 Bus Services Support Grant (Restart) - Tranche 4 (Specific Purpose)	183	Covid-19 Bus Services Support Grant can only be spent on supporting bus services that have been affected by or need to be adjusted because of the impact of Covid-19. It is to be used as additional support on top of normal funding for local bus services, not as a replacement of that funding.
Highways & Transport	2021/22	Covid-19 Bus Services Support Grant (Restart) - Tranche 5 (Specific Purpose)	12	Covid-19 Bus Services Support Grant can only be spent on supporting bus services that have been affected by or need to be adjusted because of the impact of Covid-19. It is to be used as additional support on top of normal funding for local bus services, not as a replacement of that funding.
Highways & Transport	2021/22	Covid-19 Bus Services Support Grant (Restart) - Tranche 6 (Specific Purpose)	36	Covid-19 Bus Services Support Grant can only be spent on supporting bus services that have been affected by or need to be adjusted because of the impact of Covid-19. It is to be used as additional support on top of normal funding for local bus services, not as a replacement of that funding.
Highways & Transport	2020/21	Better Deal for Buses - Rural Mobility Fund (Specific Purpose)	5	Additional funding provided to local authorities to support them with the development of their business cases and to deliver programme-wide monitoring and evaluation.
Total Grants £1m or Below			**236**	

Table B - Recommendation to Council - Supplementary Estimates over £1,000,000

Committee		Type of Grant	£000	Details
Highways & Transport	2020/21	Rural Mobility Fund (Specific Purpose)	1,260	The Rural Mobility Fund is part of the government's better deal for bus users. The primary objective of the fund is to trial demand-responsive transport solutions in providing transport services which work better for local residents of rural and suburban areas.
Total Grants over £1m Recommendation to Council			**1,260**	

Cheshire East Council

Working for a brighter future together

Highways and Transport Committee

Date of Meeting:	19 July 2021
Report Title:	Appointment of Members to the Public Rights of Way Sub Committee
Report of	David Brown, Director of Governance and Compliance
Report Reference Number:	HT/24/21-22
Wards Affected:	No specific wards

1. Executive Summary

1.1. The Council at its annual meeting on 4th May 2021 approved the political representation on its main committees. The appointment of certain sub-committees, working groups, panels and boards is a matter for the relevant service committees. This report concerns the Public Rights of Way Sub Committee of which the membership is required to be appointed by the Highways and Transport Committee. Where political proportionality is applicable, the agreed conventions and methods of calculation have been applied.

2. Recommendation

2.1. That the Committee appoints the Public Rights of Way Sub Committee referred to in this report, agrees the political representation on, and the method of making nominations to it, as set out in paragraph 3 of the report.

3. Background

A. Bodies which report to the Highways and Transport Committee

1. Public Rights of Way Sub Committee

The Constitution provides that the lead service committee in respect of the Public Rights of Way Sub Committee will be the Highways and Transport Committee. The Public Rights of Way Sub Committee will meet on a quarterly basis, report to the Highways and Transport Committee on at least

an annual basis, and review its terms of reference annually in order to establish if they are fit for purpose or need amending. Any recommendations would be reported to the Highways and Transport Committee.

The appointment of the Public Rights of Way Sub Committee (7 Members) is the responsibility of the Highways and Transport Committee, which also needs to agree the mechanism for the nomination of Members to the Sub Committee.

It is proposed that the Highways and Transport Committee agree to the appointment of members to the Public Rights of Way Sub Committee in line with the following, and that the nominees to the Sub Committee be notified to the Head of Democratic Services and Governance:

3 Conservative
2 Labour
2 Independent

4. Implications of the Recommendations

4.1. Legal Implications

4.1.1. The Local Government (Committees and Political Groups) Regulations 1990, made pursuant to the Local Government and Housing Act 1989, make provisions in respect of the political group representation on a local authority's committees in relation to the overall political composition of the Council. The legislation applies to the decision-making committees and sub-committees of the Council.

4.1.2. The legislation requires that, where proportionality applies, and seats are allocated to different political groups, the authority must abide by the following principles, so far as is reasonably practicable:

4.1.2.1. Not all of the seats can be allocated to the same political Group (i.e. there are no single group committees).

4.1.2.2. The majority of the seats on the body are to be allocated to a political Group with a majority membership of the authority.

4.1.2.3. The total number of seats on all ordinary committees and sub committees allocated to each Political Group bears the same proportion to the proportion on the full Council.

4.1.2.4. The number of seats on each ordinary committee allocated to each Political Group bears the same proportion to the proportion on full Council.

4.1.3 The proposals contained in this report meet the requirements of the legislation.

4.1.4 The 1990 Regulations require Political Group Leaders to notify the Proper Officer of the Groups' nominations to the bodies in question.

4.2. **Finance Implications**

4.2.1. That there are no financial requirements that require an amendment to the Medium Term Financial Strategy.

4.3. **Policy Implications**

4.3.1. That there are no direct implications

4.4. **Equality Implications**

4.4.1. There are no direct implications for equality.

4.5. **Human Resources Implications**

4.5.1. There are no direct human resource implications.

4.6. **Risk Management Implications**

4.6.1. Failure to comply with the Act and Regulations when appointing its committee memberships would leave the Council open to legal challenge.

4.7. **Rural Communities Implications**

4.7.1. There are no direct implications for rural communities.

4.8. **Implications for Children & Young People/Cared for Children**

4.8.1. There are no direct implications for children and young people/Cared for Children.

4.9. **Public Health Implications**

4.9.1. There are no direct implications for public health.

4.10 **Climate Change Implications**

4.10.1. There are no direct climate change implications.

5. Ward Members Affected

5.1. There are no specific ward implications.

6. Access to Information

6.1. The background papers relating to this report can be inspected by contacting the report writer.

7. Contact Information

7.1. Any questions relating to this report should be directed to the following officer:

Name: Brian Reed
Job Title: Head of Democratic Services and Governance

Highways and Transport Committee Work Programme

Committee Date	Report title	Purpose of Report	Report Author/ Senior Officer	Consultation and Engagement Process and Timeline	Equality Impact Assessment Required and Published (Y/N)	Part of Budget and Policy Framework (Y/N)	Corporate Plan Priority	Exempt Item and Paragraph Number (Y/N)	Ref No
19 July 2021	National Bus Strategy – Enhanced Quality Partnership	To provide Government with the Council's response to the National Bus Strategy - The report seeks approval for an enhanced quality partnership approach to improving bus services in the Borough.	Richard Hibbert/ Andrew Ross	Y	N	Y	A thriving and sustainable Place	N	HT/02/21-22
19 July 2021	Local Transport Delivery Plans – update report	To provide Committee with progress on development and implementation of the Council's Local Transport Delivery Plans - The report will set out proposals to be taken forward within each town following the recent public consultation exercise.	Richard Hibbert/Andrew Ross	Y	Y	Y	A thriving and sustainable Place	N	HT/03/21-22

Highways and Transport Committee Work Programme

19 July 2021	A537 Safer Road Fund Scheme	To accept a Government grant to enable the implementation of a major road safety scheme for the A537 - The scheme costs over £1m and a decision is required to accept the grant and implement the scheme.	Chris Hindle/ Andrew Ross	N/A	N	Y	A thriving and sustainable Place	N	HT/04/21-22
19 July 2021	Electric Vehicle Charging Strategy	To approve the Council's strategy for the roll out of electric vehicle charging points across the borough - The report highlights different approaches to delivering this service and recommends a preferred option for approval.	Richard Hibbert/ Andrew Ross	N	N	Y	A thriving and sustainable Place	N	HT/05/21-22

Highways and Transport Committee Work Programme

19 July 2021	Highways & Transport Budget 2021/22	To receive a report on the capital and revenue budgets for 2021/22 To note or approve virements and supplementary estimates as required.	Jo Wilcox/ Alex Thompson	N/A	N	Y	Open and Enabling Organisation	N	HT/06/21-22
19 July 2021	Appointment of Members to the Public Rights of Way Committee	To appoint the membership of the Public Rights of Way Committee.	Brian Reed	N/A	N/A	N/A	Open and Enabling Organisation	N	HT/24/21-22
21 Sept 2021	HS2 Programme Update	To provide Committee with the latest position on the delivery of HS2 in the borough and what work is ongoing to maximise the economic and social benefits derived from this major project.	Hayley Kirkham/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/07/21-22

Highways and Transport Committee Work Programme

21 Sept 2021	Cheshire East Local Bus Strategy and Improvement Plan	To approve the Council's local bus improvement plan for submission to the Department for Transport.	Richard Hibbert/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/08/21-22
21 Sept 2021	Highways Service Improvement plan	To inform Committee of the progress made in improving the highways service in relation to value for money, customer experience and reporting management information.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/09/21-22
21 Sept 2021	Road Safety Report	To inform Committee on road safety issues/statistics.	Paul Davies	tbc	tbc	N	A thriving and sustainable Place		HT/25/21-22

Highways and Transport Committee Work Programme

21 Sept 2021	Flowerpot Junction Improvement Scheme	Authorise to make Compulsory Purchase Orders and Side Roads Orders for the delivery of the Flowerpot Junction Improvement Scheme. Approve the forward funding of the additional developer contributions in accordance with the capital programme.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/26/21-22
16 Nov 2021	LCWIP Implementation Report	To approve the delivery programme within the LCWIP.	Richard Hibbert/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/10/21-22
16 Nov 2021	Highways and Transport 2022/23 Draft Programme	To approve the block funding allocations for Highways and Transport services in the forthcoming year.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/11/21-22

Highways and Transport Committee Work Programme

16 Nov 2021	Middlewich Eastern Bypass – Final Business Case approvals	To approve the final business case for submission to DfT of the Middlewich Eastern Bypass scheme.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/12/21-22
16 Nov 2021	Speed Management Strategy HT/14/21-22	To approve the Speed Management Strategy.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		
16 Nov 2021	HS2 Programme Update	To provide an update on the HS2 programme including Phases 2a and 2b line of routes and developments in and around the proposed Crewe hub station.	Hayley Kirkham/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/15/21-22
16 Nov 2021	Strategic Infrastructure Programme – Minor Improvement Scheme approvals	To approve the proposed programme of Minor Improvements across the Borough.	Chris Hindle/Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/16/21-22

Highways and Transport Committee Work Programme

16 Nov 2021	Finance Mid-Year Review	To receive an update on the financial position for 2021/22 To note or approve virements and supplementary estimates as required.	Alex Thompson/ Jo Wilcox	N	N	Y	An open and enabling organisation	N	HT/17/21-22
16 Nov 2021	Update on Parish and Town Council Pilot 'Top Up Services' Scheme	To update Committee on the take up of the Parish and Town Council Pilot "Top up services" scheme.	Chris Hindle/ Ian McLellan	tbc	tbc	Y	A thriving and sustainable Place		HT/27/21-22
13 Jan 2022	Sustainable Transport – 2021/22 Programme Update	To provide an update on the programme of Sustainable Transport initiatives and improvements across the Borough.	Richard Hibbert/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/18/21-22
13 Jan 2022	Local Transport Delivery Plans – Approvals	To approve the Local Transport Delivery Plans.	Richard Hibbert/Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/19/21-22

Highways and Transport Committee Work Programme

13 Jan 2022	Third Quarter Finance Review	To receive an update on the financial position for 2021/22 To note or approve virements and supplementary estimates as required.	Alex Thompson/ Jo Wilcox	N	N	Y	An open and enabling organisation	N	HT/20/21-22
13 Jan 2022	MTFS	Respond to Budget consultation (Highways & Transport).	Jo Wilcox/ Alex Thompson	Y	Y	Y	Open and Enabling Organisation	N	HT/21/21-22
13 Jan 2022	A500 Dualling – Final Business Case approvals	To approve the final business case for submission to DfT of the A500 Dualling scheme.	Chris Hindle/ Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/13/21-22
2 March 2022	Highways and Transport 2022/23 Programme approval	To approve the programme of activities for Highways and Transport services in the forthcoming year.	Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/22/21-22
2 March 2022	Pavement parking policy	To approve the proposed pavement parking policy for the Borough.	Richard Hibbert/Andrew Ross	tbc	tbc	Y	A thriving and sustainable Place		HT/23/21-22

Highways and Transport Committee Work Programme

TBC	Car parking Policy	To seek approval regarding the proposed plans to implement a revised car parking policy for the Borough.	Richard Hibbert/Andrew Ross	Y	Y	Y	A thriving and sustainable Place	N	HT/01/21-22

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