

CITY OF WOLVERHAMPTON COUNCIL	Cabinet 28 July 2021
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Report title	Adoption of Black Country Ultra-Low Emission Vehicle Strategy	
Decision designation	AMBER	
Cabinet member with lead responsibility	Councillor Steve Evans City Environment and Climate Change	
Key decision	Yes	
In forward plan	Yes	
Wards affected	All Wards	
Accountable Director	Ross Cook, Director of City Housing and Environment	
Originating service	Strategic Transport	
Accountable employee	Kester Sleeman	Graduate Management Trainee
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Report to be/has been considered by	Strategic Executive Board	17 June 2021
	City Housing and Environment	8 June 2021
	Leadership Team	

Recommendations for decision:

The Cabinet is recommended to:

1. Approve the final draft of the 'Black Country Ultra-Low Emission Vehicle Strategy' including the 2021 Advisory Note.
2. Delegate authority to the Cabinet Member for City Environment and Climate Change and the Leader of the Council in consultation with the Director of City Housing and Environment and the Director of Finance to:
 - a. Accept the grant funding from the Office for Zero Emission Vehicles (OZEV) and enter into the grant funding agreement if the On-street Residential Chargepoint Scheme (ORCS) bid is successful.
 - b. Create the appropriate supplementary budgets.

- c. Approve future delivery of chargepoint infrastructure in line with the targets identified in the Black Country Ultra-Low Emission Vehicle (ULEV) Strategy

Recommendations for noting:

The Cabinet is asked to note:

1. That the strategy was subject to a public consultation in August-October 2020, receiving 851 responses, with less than 20% believing the infrastructure targets were too ambitious, and less than 30% believing the emissions targets were too ambitious (35% of responses viewed the emissions targets as not being ambitious enough).
2. That any installations will be subject to public consultation with residents and business in the immediate vicinity of each location.
3. That the ORCS bid is due for submission to OZEV at the end of July 2021, and they predict a six-week turnaround for responses.

1.0 Purpose

- 1.1 This report summarises the findings of the Black Country ULEV Strategy, approved at Heads of Regeneration (HoR) and Association of Black Country Authorities (ABCA) Leaders and Chief Executives in February 2021. The report explains the targets identified in the Strategy. Finally, the paper details the proposed bid for the Council into the OZEV ORCS fund.

2.0 Background

- 2.1 As part of wide-reaching changes necessary to meet international (2015 Paris Agreement), national (2019 amendment to the Climate Change Act mandating net-Zero by 2050), regional (#WM2041, 2019) and local targets to mitigate the impacts of climate change, we must move away from fossil fuels as the primary means of powering road transport.
- 2.2 City of Wolverhampton Council declared a Climate Emergency in July 2019, committing itself to taking urgent action to reduce its CO₂e emissions to a net-zero position by 2028, and to support partners in the city to do the same in a similar timescale.
- 2.3 According to the Government's "The Road to Zero" Strategy (2018), "Although today's new cars are more efficient than those bought in 1990, transport greenhouse emissions have fallen just 2% since 1990. As a result, transport is now the largest sector for UK greenhouse gas emissions (27%), of which road transport accounts for over 90%. Road transport is one of the biggest contributors to poor air quality in some of the UK's towns and cities"
- 2.4 There are competing technologies for decarbonisation of road transport, but for private vehicles, Electric Vehicles (EVs) currently dominate the market. Hydrogen powered vehicles, Fuel Cell vehicles, and synthetic fuels all offer potential opportunities, and are being pursued as options for heavier vehicles, but currently they only occupy a tiny proportion of ULEV development and sales.
- 2.5 In 2020, after consultation, the government accelerated the transition away from petrol and diesel by bringing forward the ban on sales of Internal Combustion Engine (ICE) powered vehicles from 2040 to 2030 (with plug-in hybrid sales permitted until 2035).
- 2.6 In February 2020, Black Country Transport commissioned a ULEV strategy, vision and implementation plan from CENEX (a not-for-profit research organisation specialising in low- and zero-carbon vehicle technologies), which set out the challenges for the region to support the adoption of electric vehicles in line with the assumption that the ban would be brought forward to 2035. Earlier this year a supplementary report was produced to update the document in line with a 2030 ban.
- 2.7 The report identified that the Black Country, and Wolverhampton specifically, is lagging behind the national averages for both uptake of EVs (0.17% of vehicles in Wolverhampton are EVs, compared to 0.35% for the West Midlands, and 0.47% for the

UK) and the installation of the infrastructure necessary to support this transition (while Wolverhampton's rapid charging network is growing, there is very little provision of standard or fast chargers).

- 2.8 The report sets out a range of targets for infrastructure, and suggested policy changes to support, and accelerate the electrification of the vehicle parc in the Black Country, in order to reduce the transport derived CO_{2e} emissions for the region.

3.0 Progress

- 3.1 As part of an Innovate UK backed project, in partnership with Virgin Media, the Council has been working with Transport for West Midlands (TfWM) to work towards installation of on-street chargepoints to serve residential areas and local centres. While progress on this project has stalled due to commercial issues between private sector partners, considerable learning has already been achieved.
- 3.2 Conversations are underway with commercial partners to target installations of rapid charging infrastructure at key transit locations.
- 3.3 Installations of rapid charging infrastructure has taken place in the City Centre, Bilston, Tettenhall and Wednesfield.
- 3.4 Fleet and licensing reviews are underway to see how the Council can directly encourage the uptake of ULEVs in these areas.

4.0 The Black Country Ultra-Low Emission Vehicle Strategy

- 4.1 The initial draft strategy document was completed in May 2020, approved at ABCA in June 2020 and consulted on from 10/08/20 to 09/10/20, leading to the following recommendations:
- 4.2 By 2025:
- A. Installing an additional 380 standard and 110 fast charging sockets;
 - B. Coordinating with TfWM to support installation of additional rapid and ultra-rapid chargers;
 - C. Leading by example by procuring only EVs for all new council cars and vans;
 - D. Equipping all council offices, depots, car parks and sports facilities with charge points;
 - E. Publishing a local public transport decarbonisation action plan;
 - F. Requiring most taxi and private hire vehicles to switch to ULEV;
 - G. Using planning policy to deploy charge points at retail and business car parks;
 - H. Deploying measures to slow the growth of the vehicle parc (the number of vehicles in use across the Black Country); and

I. Establishing a programme to inform and encourage the public and businesses.

4.3 These changes would deliver the following benefits:

- A. A 1% reduction of transport CO₂ emissions;
- B. A 10% reduction of transport NO_x emissions;
- C. A 35% reduction of transport Particulate Matter (PM) emissions;
- D. An increase of the number of EVs to at least 4% of the vehicle parc;
- E. Over 90% of Black Country land area within 5 minutes' drive of a rapid charger; and
- F. Over 95% of urban areas within 500m of any public chargepoint.

4.4 The consultation received 851 responses (32.1% from Wolverhampton) and these consultees generally felt the targets for emissions and infrastructure in the Strategy were either appropriate or lacked ambition (more than a third). Given that the consultation was on the strategy before the 2030 ban was announced, this gives some reassurance that the updated targets would be generally popular.

4.5 Feedback from the consultation led to a slight watering down from the original target for all new taxi licenses to be for ULEV vehicles by 2023 to 'most' taxis and private hire vehicles to be ULEV by 2025.

4.6 A consultation was also distributed to business for feedback, but only one full response was received. The consultation responses received were disproportionately from white men aged 35-54, and consequently it was recommended that more work be done to better understand the needs of diverse residents as we commence implementation.

4.7 In 2020, the government announced that the previously published 2040 ban on sales of new petrol and diesel vehicles was to be brought forward to 2030 for pure ICE vehicles and non-plug-in hybrids, and 2035 for plug-in hybrid vehicles.

4.8 CENEX was commissioned to update their figures from the published report, in line with the new ban timescales, resulting in the following amendments:

- A. Installation of 761 standard, 214 fast, and 19 rapid and ultra-rapid chargepoints by 2025
- B. Installation of 3200 standard, 630 fast, and 196 rapid and ultra-rapid chargepoints by 2030

4.9 These updated figures would deliver the following benefits:

- A. A 4% reduction of transport CO₂ emissions;
- B. A 13% reduction of transport NO_x emissions;
- C. A 37% reduction of transport PM emissions;

- D. An increase of the number of EVs to at least 7.5% of the vehicle parc;
- E. Over 90% of Black Country land area within 5 minutes' drive of a rapid charger; and
- F. Over 95% of urban areas within 500m of any public chargepoint.

- 4.10 This updated report was approved by Heads of Regeneration and ABCA in February 2021.
- 4.11 A business case has also been written for this work, outlining the investment required in order to deliver the infrastructure improvements, and the benefits to the region of electrifying our passenger vehicle fleet.
- 4.12 CENEX advise that £5.7 million is invested in the Black Country ULEV programme by 2025 in order to support the infrastructure delivery (including chargepoints) and supporting measures. The monetised benefits of the subsequent emissions reduction by 2025 are valued at £21 million per year. The reduction in noise pollution by 2025 is valued at an additional £1.5 million per year. This funding is expected to come primarily from external sources, grant or private sector investment and will cover all four Black Country local authorities.

5.0 OZEV ORCS

- 5.1 With the Innovate UK backed Virgin Media Park and Charge (VPACH) project struggling to deliver benefits, we have shifted our attention to OZEV ORCS as the favoured model for delivery of the first 200 of the 761 standard chargepoints across the Black Country required by the ULEV strategy by 2025. ORCS removes Virgin Media as an intermediary between the Distribution Network Operator (DNO) and the Chargepoint Operator (CPO), resulting in a simpler model and either reduced costs to residents, or greater revenue opportunities for the council, when compared to VPACH.
- 5.2 The fund is designed to support delivery of any charging infrastructure that has a clear residential demand and provides 75% of the capital costs of installation. There is a £20 million national budget for the fund, and delivery is required by March 2023 for bids submitted in the 2021-2022 financial year. Priority is given to local authorities who have not previously received funding.
- 5.3 As such, the Council intend to put in an ambitious bid for the City of Wolverhampton (alongside similar bids for the three other Black Country local authorities). We are targeting the delivery of 50 sites across the borough, at an estimated total cost of £375,000. This requires £94,000 of match funding, which has been identified from within the Council's Transportation Capital Programme.
- 5.4 Development of the bid is well underway, with considerable work already complete on site selection, in particular. We have been in close discussions with Western Power Distribution (WPD) to ensure that the sites we take forward are viable from a grid connection perspective. We are also working with Wolverhampton Homes to identify

several sites that can support their residents while also supporting the transition of their fleet to EVs.

- 5.5 Engagement with residents will be required before any installations, but it is proposed that this process takes place after the grant funding has been secured. There is a degree of flexibility on locations after funding has been awarded if sites are later found not to be suitable.
- 5.6 Procurement will be led by TfWM once the bid has been submitted, and CWC procurement have been engaged in this process already. Procurement will be through one or more established frameworks for this type of infrastructure and will be for a value above the ORCS requirement, to allow additional call-off from the same operator if further funding is identified.
- 5.7 Each local authority will enter into its own concession contract with the operator. This contract will necessitate that the operator takes on the revenue costs for operation and maintenance of the chargepoints, reducing the risk to the council. Individual contracts will allow a degree of variation between local authorities as to how exactly they wish to operate the network within their area.
- 5.8 The contribution of capital through Council capital funding and from the ORCS programme will de-risk the chargepoints for the operator, allowing the local authority a greater level of control over locations, costs to the customer, potential level of profit-share and other contract terms.
- 5.9 The ownership of the chargepoints themselves will be retained by the Operator, but the underground infrastructure will be retained by the Council. Any costs arising due to damage to charging units will be the responsibility of the Operator.

6.0 Evaluation of alternative options

- 6.1 The Council could not adopt the ULEV Strategy, relying on its acceptance through Black Country Heads of Regeneration and the Association of Black Country Authorities, however this doesn't give the targets in the report the status that they require. Adopting the Strategy shows the focus the Council has on delivering the infrastructure required for the transition to Electric Vehicles and gives officers the confidence to proceed with investigating all available options for doing so.
- 6.2 The Council has attempted to deliver infrastructure through the VPACH project, but this has been unsuccessful.
- 6.3 There are operators willing to provide the necessary capital to install at zero cost to the council, but this gives them much greater control over locations for installations, as well as a larger share of the ongoing revenue.
- 6.4 We are looking to secure additional grant funding from other sources for further installations, but in order to meet our 2025 infrastructure targets we need to investigate all available options at this stage. Delivery through ORCS represents the first opportunity

to deliver chargepoints in residential areas of the City, but many more installations will still be required.

7.0 Reasons for recommendation(s)

- 7.1 Consultation has demonstrated that the residents of Wolverhampton are in favour of the aims of the Black Country ULEV strategy.
- 7.2 The benefits brought by the accelerated transition away from petrol and diesel vehicles are clear, and the costs to the Council are comparatively modest.
- 7.3 Given the government ban on the sale of ICE vehicles in 2030, we could not adopt this and assume activities to support the national target will take place anyway, however there is a risk that this will not be the case. The infrastructure targets in the strategy are ambitious and without concerted effort they will not be achieved. Adopting the strategy will give the focus required to meet these targets.
- 7.4 Further to this, leaving the delivery of infrastructure largely to market forces is likely to result in a poor geographic spread, with operators heavily focussing on more affluent areas, preventing less affluent residents from having the opportunity to switch to ULEVs. This is exacerbated by the fact that those more affluent residents who have off street parking can access very cheap electricity rates from their existing domestic connection, whereas public charging will always be more expensive, with costs rising relative to the speed of charging.
- 7.5 The ORCS bid is the first step in meeting the targets in the Strategy and begins to fill a sizeable gap in the chargepoint provision in Wolverhampton. It requires a relatively modest capital contribution from the local authority in return for delivering a considerable amount of infrastructure, across the entire city.
- 7.6 There are other options for delivery, including fully funded models from private operators, but ORCS offers a significant opportunity to de-risk early delivery of infrastructure, and to reduce the cost to residents, by heavily subsidising the installation costs.

8.0 Financial implications

- 8.1 Total capital expenditure to deliver up to 50 units across Wolverhampton to the total value of £375,000, this will be funded through the ORCS grant of £281,000, subject to the bid being successful and the required £94,000 of capital match funding, of which £50,000 has been approved within the 2021-22 Transport Capital Programme, with the remaining £44,000 to be covered from the 2022-23 Transport Capital Programme. Delivery will take place across two financial years, 2021-2022 and 2022-2023.
- 8.2 The financial risk associated with acceptance of the grant is not known at this time, however it is anticipated the terms will not be overly onerous, any implications will be detailed in the IEDN that will be drafted to secure the delegated approval as requested in this report.

- 8.3 The operator will be required to cover the operation and maintenance costs of the infrastructure, this will be facilitated through the procurement and operator contract. Revenue costs will only fall on the local authority in the event that the operator has to withdraw, and the risk associated with this can be mitigated within the concession contract. It is expected that if revenue costs do fall back to the Council, all income generated from the units will also be recovered by the Council and therefore these costs could be offset by the increased revenues.
- 8.4 Under a contract with an operator there is a potential for revenue to be returned to the local authority, with similar arrangements at other authorities returning a 50% profit share. There are also options available to forego this revenue in order to reduce the cost to residents, or to push for other changes to the contract, such as a shorter contract term.
- 8.5 Other business models have been considered by Black Country Heads of Regeneration for delivery across the region, with some involving greater risk in return for larger possible revenues (e.g. own and operate), and others further reducing the risk associated, but also minimising the control the Council can exercise over operation and the return for the local authority (e.g. lease). Through discussions with transportation, finance and procurement officers, the concession model has been selected as the preferred option due to the balance of risk and return.
- 8.6 The ULEV strategy identifies the requirement for a programme management role at a Black Country level to assist in coordinating the various aspects of delivery, and also to represent the four local authorities at a regional and national level in discussions around ULEV and other Transport Innovation topics. This is initially to be funded from the Black Country Joint Commissioning budget while external funding is sought and will be a part of the Black Country Transport team, reporting to the Black Country Director of Transport.
- 8.7 There is a recommendation from CENEX if for an additional 1FTE at each authority. The options are being explored to resource this within Wolverhampton.
[SB/19072021/K]

9.0 Legal implications

- 9.1 The Council will need to comply with the terms of the Grant Agreement and the conditions attached to the funding. Legal advice will be provided throughout the ORCS programme.
- 9.2 The Council will need to comply with its Contract Procedure Rules and the Public Contract Regulations 2015 for the procurement of an operator for the ORCS programme.
[SZ/16072021/P]

10.0 Equalities implications

- 10.1 33% of households in Wolverhampton do not have access to a private vehicle, and these households tend to have lower income levels, and are more likely to be from an ethnic minority, with particularly low vehicle access among Black and Mixed groups nationally.

Vehicle ownership is higher among men. Currently, ULEV owners are also disproportionately middle-aged white men. This raises concerns over the fairness of investing considerable funds and resource to the infrastructure required to support adoption.

- 10.2 Today, most ULEV owners have off-street parking. Many surveys have looked into the reasons why people are reluctant to adopt EVs, and the lack of public charging infrastructure and corresponding 'range anxiety' usually feature very near the top of the list. Owning a house with off-street parking follows the same pattern of inequalities as vehicle ownership, which may go some way to explaining why current ULEV owners are not representative of the wider population.
- 10.3 In order to attract the ~30% of residents in the Black Country without access to private off-street parking to adopt ULEVs, we need to provide far greater levels of public charging infrastructure, particularly in residential areas.
- 10.4 The benefits of a transition to ULEVs will be felt by all in the form of improved air quality, reduced noise and carbon reduction. Air quality and noise pollution disproportionately impact upon less affluent residents, and as such any improvements will benefit them disproportionately.
- 10.5 Also worth noting is that the responses to the consultation on the ULEV Strategy also came disproportionately from white men, and as such came with the recommendation that more work was done to engage with the diverse communities of the Black Country as we begin to deliver this infrastructure.
- 10.6 An equalities analysis for the ORCS bid is underway to try to identify and mitigate these issues specifically. Our work with Wolverhampton Homes hopes to improve the access to this infrastructure in areas which aren't seen to be likely to be 'early adopters' of ULEVs.
- 10.7 Any installations will take due consideration of accessibility for disabled drivers.

11.0 All other implications

- 11.1 The primary purpose of the transition to ULEVs is to reduce climate emissions. With the UK's current electricity grid balance and emissions associated with generation electric vehicles have considerably lower CO₂ emissions than equivalent petrol and diesel vehicles. The ULEV strategy identifies decreases in CO₂ emissions from the vehicle parc of 3.6%, 22.0%, 43.8% and 67.4% in 2025, 2030, 2035 and 2040, respectively.
- 11.2 There are no direct human resources implications from adoption of the strategy, however as Wolverhampton hosts Black Country Transport, if the programme manager role is filled as advised this new role will sit within Wolverhampton.
- 11.3 Currently the delivery of the ULEV strategy is heavily reliant on graduate trainees and secondees, so a more sustainable resourcing model would be very beneficial in the longer term.

- 11.4 There are no direct implications as a corporate landlord, as we are not suggesting passing any land onto other private or public organisations, as any charge points at this stage will be operated under concession.
- 11.5 There are suggestions in the strategy around rapid charging hubs, which may involve sale of council land to private sector operators, but this would need to be considered on a case-by-case basis.
- 11.6 Petrol- and diesel-powered vehicles are responsible for a large percentage of the harmful emissions within Wolverhampton and across the UK, with 80% of roadside NOx and 13% of PM2.5 emissions attributable to road transport.
- 11.7 Poor air quality is associated with approximately 40,000 premature deaths in the UK each year, and also causes and exacerbates a range of respiratory illnesses, possibly including COVID-19.
- 11.8 Last year for the first time a coroner ruled that illegal levels of air pollution, primarily from vehicle traffic, were a direct factor in the death of a nine-year-old girl in London, in 2013.
- 11.9 The ULEV strategy will support a shift away from polluting petrol- and diesel-powered vehicles, improving air quality across the region, and mitigating the health impacts of NOx and particulate emissions.

12.0 Schedule of background papers

- 12.1 The Road to Zero (2018) – Department for Transport.
- 12.2 West Midlands net-zero carbon emissions strategy (#WM2041 - 2020) and first Five-Year Plan (2021) – West Midlands Combined Authority.

13.0 Appendices

- 13.1 Appendix 1: Full report
- 13.2 Appendix 2: 2021 supplement