

Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	CES Policy Development & Scrutiny Panel	
MEETING DATE	27 March 2025	EXECUTIVE FORWARD PLAN REFERENCE: <i>[Cabinet reports only]</i>
		E XXXX
TITLE:	Fleet Electrification Update	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report:		
None		

1 THE ISSUE

- 1.1 Through the 2023-2027 Corporate Strategy, the Council has restated its commitment to lead the UK in climate and nature action, building a sustainable future for Bath and North East Somerset - net zero, nature positive by 2030.
- 1.2 Fleet accounts for almost half of our remaining carbon footprint. Within this, Heavy Goods Vehicles (HGVs) account for 70% of emissions despite only making up 28% of the fleet. With most of the HGV fleet due for renewal in the short term, we can decarbonise a sizeable proportion of the fleet, ahead of the 2030 deadline.

2 RECOMMENDATION

The Panel is asked to;

- 2.1 Note the report below, setting out an update on the approach being taken to deliver the Councils fleet replacement plan and reduce carbon emissions.

3 THE REPORT

- 3.1 Fleet managers have commissioned technical advice on future options from the Energy Savings Trust (EST), including assessment of technological options and of EV charging infrastructure requirements for a future (Electric Vehicle) EV fleet. The EST study concluded that:

- (1) Of the vehicles where replacement is planned, many can be replaced by an electric equivalent. 65% (112) of the diesel fleet are directly suited for replacement with Battery Electric Vehicles.
 - (2) There is a business case for replacement of EV HGVs as the savings from transitioning away from diesel will offset most of the higher capital cost over the vehicles' lifetime.
- 3.2 It is important to note the EST study assumed the vehicles would be charging from Grid; the cost of charging may reduce further if we invest in further solar generation and battery storage at depot locations, but this will need its own business case to be established and is outside of this update.

Refuse Collection Vehicle Replacement (RCV) 2025

- 3.3 12 RCVs are at end of life in 2025. Inflation on like for like diesel replacement has been significant since these vehicles were purchased in 2017.
- 3.4 Upgrading 12 RCVs with electric variants and a provisional capital budget £6.9m includes £2.6m in addition to the base forward plan for a like-for-like replacement programme.
- 3.5 Associated infrastructure in 2025 is included within the agreed budget for 2025/26. The operational life needs to be confirmed in the business case for the of vehicles. The current diesel fleet have an assumed a 7-year life, but the EST report has advised an 8–10-year life for electric batteries. 10-year costing are shown in the below table (section 5.3)
- 3.6 An EV refuse trial is currently underway testing models from different manufacturers. One of the vehicles trialled so far (the Dennis) has given confidence in using the vehicles for most routes but less confidence around using the trucks for a very rural 90- mile round. Trials of the Mercedes Econic truck are imminent in the early part of 2025. Initial submissions from the manufacturer indicate they have a high degree of confidence in the range and resilience of their vehicles. This will hopefully be confirmed by a successful trial. Lead times for vehicles are circa Q1 2026.
- 3.7 This uncertainty requires the Waste Service to implement a phased introduction to the full replacement of 12 electric trucks. To manage the impacts of this phased implementation, we aim to extend life of existing fleet or using short term leases for other replacements whilst operational impacts are fully investigated and understood.

Recycling truck replacement in 2027

- 3.8 A similar decision is required for 2027 for all recycling trucks. Trials have been arranged for the latest higher capacity eRomaquips in 2025.
- 3.9 The aim of the trail is to understand whether we may potentially reduce the total numbers of trucks required in 2027 from the existing 30 vehicles due to the ability of the new vehicle to carry more recycling, thus reducing the number of vehicles needed to cover the area. However, until the trails are completed it is not possible to confirm

Charging infrastructure

- 3.10 Investment is required in charging infrastructure to allow transition to an EV Fleet. The EST study showed that some sites, such as Radstock Road Depot and Locksbrook South, will require grid upgrades to meet increased energy demand. Others like Parkside Cleansing Hub have sufficient existing.
- 3.11 This will require a coordinated programme of work to deliver the required infrastructure, which is not currently resourced within the Council, and will need to be prioritised to deliver confidence around fleet renewal decisions in the future.

4 STATUTORY CONSIDERATIONS

- 4.1 The vehicle replacements included within the plan aim to significantly reduce the carbon emissions from the Councils fleet in line with the commitment to lead Bath and North East Somerset to an environmentally sustainable, low carbon and climate resilient future.

5 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 5.1 To deliver the necessary changes it is necessary to establish a Fleet Decarbonisation Programme with dedicated Project Manager to develop infrastructure plan to support EV transition. The funding for this post is included within the budget for FY25/26.
- 5.2 To support the decision to move towards a low carbon fleet, the work undertaken includes estimates on the whole life costings and carbon savings of the various vehicle and fuel types. Early assessments suggest that the cost per mile for electric vehicles are higher than diesel and Hydrotreated Vegetable Oil (HVO) options but further specific work is needed to fully understand the business case before the transition is commenced. An indicative cost assessment is included below for reference.

Table 8-6 Estimated costs (over 1 year and 10 years) based on WLC for replacement of a single 26 tonne HGV, with 8,526 average annual mileage

Cost summary	Renault Trucks 27 tonne (300kWh)*	Renault Trucks 26 tonne (Diesel)	Renault Trucks 26 tonne (Using HVO)	Comments
Estimated purchase price	£396,000	£190,000	£190,000	
Battery residual value	(£29,000)	n/a	n/a	
Chassis residual value	(£19,800)	(£13,300)	(£13,300)	BEV RV with battery
Estimated annual SMR cost (ex. tyres)	£9,520	£13,600	£13,600	Sourced from discussions with B&NES. BEV at 70% of the cost of diesel
Annual vehicle road fund licence / levy	£0	£584	£584	Levy £0 for BEV
Estimated annual energy cost	£10,080	£16,914	£20,703	Electricity £0.245 a kWh, diesel £125 a litre, 28p/litre** cost premium for HVO
Estimated annual AdBlue cost	n/a	£328	£328	£0.75 a litre, 3.5% of diesel volume
Total annual cost (dividing one-off costs over 10 years)	£54,340	£49,096	£52,885	
Total cost over 10 years	£543,400	£490,960	£528,850	
Cost per mile	£6.37	£5.76	£6.20	
Annual CO ₂ e emissions	6.0 tonnes	38.7 tonnes	6.1 tonnes***	Based on 2024 emissions factors – BEV figures will reduce each year

5.3

6 RISK MANAGEMENT

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

6.2 Individual vehicle replacements will be assessed to ensure that the replacement vehicles are suitable for the tasks as required. Where suitable vehicles are not available, any additional options to reduce the carbon impact will be explored.

7 EQUALITIES

7.1 No adverse impacts have been identified from the fleet replacement programme.

8 CLIMATE CHANGE

8.1 As noted above, the vehicle replacements included within the plan aim to significantly reduce the carbon emissions from the Councils fleet.

9 OTHER OPTIONS CONSIDERED

9.1 To continue to use the current vehicles: This option was discounted as the vehicles are replaced at end of life. Continued use will result in further service disruption and failure due to reliability issues.

9.2 To replace all vehicles like for like with diesel vehicles: This option was discounted in line with the Councils Climate Emergency Declaration and aims.

9.3 To consider using diesel vehicles with HVO, (as per the table): This was discounted at the time of the survey as although the cost was currently similar to that of electric, historically HVO prices have been subject to volatility. Additionally, there was a procurement challenge to achieve supply chain transparency, including the transportation of the HVO itself, with the result that the sustainability benefits of HVO are complex and not always straightforward.

10 CONSULTATION

10.1 This report has been agreed by the S151 Officer and the Monitoring Officer or their representatives in accordance with Council policy.

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Background papers	None
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