

Report to: Cabinet

Date: 9 June 2022

Title: Waste and recycling services – fleet replacement strategy

Report of: Tim Whelan, Director of Service Delivery

Cabinet member: Councillor Julie Carr, Cabinet member for recycling, waste and open spaces

Ward(s): All

Purpose of report: The purpose of this report is to introduce and seek approval for the replacement strategy for the waste and recycling fleet to circa 2035. This is against a backdrop of new and emerging technologies; alternative fuels and energy vectors; the council’s ageing vehicles and net zero 2030 ambition.

Decision type: Key

Officer recommendation(s): That Cabinet approves the plans presented:

- (1) To replace six currently-hired recycling vehicles with second-hand vehicles from summer 2022.**
- (2) To re-purpose and upgrade the remaining refuse and recycling collection vehicle (RCV) fleet from April 2023, subject to approval by Full Council.**
- (3) To use renewable diesel as an alternative to regular diesel from April 2023, subject to due diligence.**
- (4) To procure a new electric vehicle fleet for food waste collections in 2023, subject to approval by Full Council.**
- (5) To install temporary chargers at the depot in 2023 until such time as charging infrastructure is in situ as part of the depot redevelopment.**
- (6) To procure an electric vehicle fleet for street cleansing fleet from 2025/26, subject to a further report to Cabinet and Full Council supported by a business case.**
- (7) To secure zero emission at tailpipe vehicles for the RCV fleet by 2030, to align with the council’s net zero target, subject to a further report to Cabinet and Full Council supported by a business case.**

Reasons for recommendations: **Recommendations to Cabinet for waste and recycling vehicle procurement required from 2022/2023, to support ambitions for an ultra-low emission fleet by 2030.**

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1 Introduction

- 1.1 The council fleet provides vehicles for functions such as refuse and recycling, garden waste, trade and clinical waste collections, street cleansing and bulky item collections. This report considers the replacement strategy for Lewes District Council's diesel-fuelled collections and street cleansing fleet.
- 1.2 The fleet accounts for approximately 57% of the council's carbon emissions profile.
- 1.3 Food waste is currently collected in a pod on the refuse collection vehicle (RCV). This leads to uneven payloads between the two waste types, refuse and food waste, reducing optimum payload capacity. It has long been the ambition of the service to move to a small, separate and dedicated food waste fleet to future proof the service, facilitate further round optimisation and allow for increased quantities of food waste collections.
- 1.4 The purpose of this report is to outline the replacement pathway for the waste and recycling fleet to circa 2035. The detail is presented in the report at Appendix 1 'Vehicle Replacement Strategy, April 2022' and the tables at Appendix 2 affording more intel in respect of predicted capital costs and fuel/carbon savings. This is against a backdrop of new and emerging technologies; fuels and energy vectors; ageing vehicles; the council's net zero 2030 ambition.
- 1.5 The immediate priority is to upgrade the current fleet at Robinson Road depot from where the Lewes District Council's waste service (LDCWS) operates. Industry standard replacement schedules for these collection vehicles are a 7–10-year cycle and most of our vehicles are beyond the end of economic life. It is business critical to secure a fit for purpose fleet to be in-situ for LDCWS from April 2023 that will see us through for the next 5 years, ahead of the council's net zero 2030 milestone.

2 Proposal

- 2.1 The proposal is a hybrid of diesel/renewable diesel for our RCV fleet and electric vehicles (EVs) for food waste collections (April 2023) and street cleansing (2025/26) for the short to medium term (see Appendix 1, section 'Bridging the Gap').
- 2.2 Officers propose to make immediate purchase of second-hand RCVs following Cabinet in June, to replace 6 vehicles currently on hire, thus saving on significant hire costs that are presently being incurred.
- 2.3 As new technologies and alternative fuel options become economically viable, alongside the provision of a depot infrastructure that can support our fleet, the service will switch to ultra-low emission vehicles for the RCV fleet by 2030, to align with the council's net zero target.
- 2.4 There will be associated work at the depot to provide appropriate infrastructure and facilities, although this is a separate project managed by the Commercial Business and Development team.

3 Outcome expected and performance management

- 3.1 The adoption of this vehicle replacement strategy will support LDC's net zero 2030 ambition, using renewable diesel (subject to due diligence) to reduce carbon emissions in the interim before moving to a fully ultra-low emission fleet. There will be expected carbon savings of up to 90% on conventional diesel tailpipe emissions and this will be monitored on a delivery by delivery basis as the exact factor may vary with each consignment.
- 3.2 Having a dedicated food waste fleet will encourage participation in the service, with residents having increased confidence in our mission to improve recycling rates across the district. Electric vehicles for food waste provide an early signal of our intention to decarbonise the fleet, while also facilitating the reduction of the diesel RCV fleet by one vehicle and allowing for further optimisation of rounds over time.
- 3.3 A new fleet, alongside an improved depot, will positively impact on staff morale at Robinson Road.

4 Consultation

- 4.1 Key staff are engaged with the vehicle replacement strategy.
- 4.2 There have also been extensive consultations with suppliers and discussions with other local authorities for best outcomes on fleet and fuel.

5 Corporate plan and council policies

- 5.1 Lewes District Council's climate change and sustainability strategy seeks to ensure that the council is net zero carbon and fully climate resilient by 2030. This informs the vehicle replacement pathway proposed in this report.

- 5.2 The aim of the vehicle replacement strategy is to achieve an ultra-low emission fleet by 2030.
- 5.3 The intention is to use renewable diesel in the interim period. Manufactured from 100% renewable and sustainable waste products renewable diesel is a paraffinic drop-in fuel that can be used as a replacement for diesel, meeting EN15940 (British specification) standards. It is made using waste fats and oils (typically these are used vegetable-based cooking oils, but it may also contain animal processing waste products). Unlike conventional biodiesel, hydrogen (rather than methanol) is used as a catalyst, which makes renewable diesel cleaner burning and ensures a long shelf life.

6 Business case and alternative option(s) considered

- 6.1 While ultra-low emission solutions are developing at a rapid pace, there are significant advantages in delaying decisions on new vehicle types (i.e. EV or hydrogen fuel cell) until the market stabilises. LDCWS can position itself to procure the best fit vehicles from 2028/29 when the market has matured, prices have normalised, and the most appropriate fuel or energy sources are in place locally.
- 6.2 Given current uncertainty re 'consistent collections' (Environment Act 2021) with secondary legislation yet to be issued, there is further good reason to delay making decisions on the choice of RCV.
- 6.3 In the interim period, 2023 – 2029, LDC will rely on renewable diesel for the diesel fleet so long as that is deemed securely available, financially viable and environmentally sustainable, in order to reduce emissions.
- 6.4 In addition, LDC will procure separate 3.5 tonne electric food collection vehicles, which will come with a 5-year warranty. With Cabinet's approval, the purchase order will be made in summer 2022, to take account of long lead-in times for these vehicles. These must be in place at the time we move to the refurbished refuse RCVs as the latter will not carry food pods.
- 6.5 This report seeks to ensure adequate financial provision is made in capital allocations for waste service vehicles for the period 2022 to 2030 against a range of complex and inter-connecting circumstances.
- 6.6 There will be revenue implications for a) switching from conventional to renewable diesel and b) installing 6 temporary chargers at Robinson Road for the food waste EVs at an estimated cost of up to £1,000 each plus connection costs up to £10,000.
- 6.7 At Appendix 1 options are presented with associated costs for the immediate term: to upgrade, purchase or lease vehicles. The recommendation is to re-use and upgrade the current fleet and purchase new electric food vehicles for 2023. There will be adequate charging provision at the depot for the latter.

- 6.8 In addition, as part of the 'bridging the gap' solution, it is recommended to purchase a new electric street cleansing fleet in 2025/26, once the appropriate charging facilities are in place as part of the depot redevelopment.
- 6.9 A decision on the new RCV fleet for 2028/29, type to be determined, will be based on the market position and local infrastructure at the time.
- 6.10 With Cabinet's approval, there will be an immediate move to purchase second hand RCVs at a cost of circa £120k each to replace the vehicles currently on hire, necessitated by complete failure of 6 recycling vehicles that have reached end of life. Ideally this purchase will take place in July 2022 in order to save against current hire charges (around £6k a week). While this clearly has revenue budget implications for the current financial year the real-time benefit relates to the budget years up to 2029/30.

7 Financial appraisal

- 7.1 The current Capital Investment Programmes for the Council does not include a provision to replace six currently hired recycling vehicles with second-hand vehicles from summer 2022 and upgrade the remaining refuse and recycling collection vehicle (RCV) fleet from April 2023 with re-purposed vehicles. An option appraisal has been undertaken for all of the proposed vehicle acquisitions that compared two acquisitions options.

The capital outlay might need to be funded through either diverting existing capital resources and/or borrowing from the PWLB, which is the cheapest option for all of the proposed vehicle acquisitions. The Council will be able to borrow at a lower interest rate than what might be offered by the leasing companies. The wider financial implications will need to be incorporated into the overall Council's revenue budget and capital programme to ensure that the long-term financial implications are monitored accordingly.

The proposed vehicle replacement financial analysis is attached as Appendix 3 (exempt report) detailing the vehicles identified for replacement and the associated costs.

8 Legal implications

- 8.1 Any procurement undertaken following approval of officer recommendations in this report must comply with the Council's Contract Procedure Rules, including (where applicable) the Public Contract Regulations 2015.

Lawyer input date: 02.05.22

Legal ref: 011043-LDC-OD

9 Risk management implications

- 9.1 Headline risks include:
- The poor condition of the current fleet
 - Delays in the decision-making process
 - delays in the above impacting on speed of executing tender process
 - delays in the above impacting on placing our orders

- Missing “slots” on the successful supplier(s) fleet production line
- Supply of alternative fuels against the ongoing conflict in Ukraine
- Cost of alternative fuel (renewable diesel)
- Potential cost of ultra-low emission RCV fleet

9.2 The vehicle replacement strategy is designed to mitigate these risks. Officers are engaging with industry and researching options to secure the best fit for LDC now and in the future.

9.3 New vehicle technologies are rapidly developing, primarily in the form of electric powered vehicles. Hydrogen vehicles, i.e. fuel cell electric vehicles (FCEVs) powered by hydrogen, are now available (2 are operational in this country, see Appendix 1) but limited at present by hydrogen production and the infrastructure that is required to supply and deliver it. Making timely decisions to meet the immediate requirements of the service while predicting future needs and available options is a speculative exercise.

9.4 We have engaged current and potential suppliers for the earliest opportunity to trial new fleet specifications (electric vehicles, hydrogen vehicles and renewable diesel), for all our service areas (refuse, recycling and food waste collections, street cleansing fleet including mechanical sweepers). This will be on an on-going basis as technology develops, thereby affording us peace of mind that our business decision in respect of associated procurement is sound, informed and timely. Through this active approach, we anticipate encouraging these same suppliers to maintain pace on the evolution of the optimum solution.

9.5 In the context of limited resources and emerging technologies which may be effective but often initially expensive, the route to decarbonisation of the council fleet is a significant challenge.

10 Equality analysis

10.1 Air quality in Newhaven and Lewes Town (both Air Quality Management Areas): a co-benefit of this plan will be a reduction in emissions in Newhaven, Lewes town and across the district, which will improve air quality and contribute to better health outcomes for the local community.

10.2 Staff will be given appropriate training on utilising new equipment.

11 Environmental sustainability implications

11.1 There is a carbon benefit to re-using and upgrading the current fleet to extend its life until the council is ready to purchase new ultra-low emission RCVs – noting that, based on the current data available, approximately 5-8% of an HGV’s whole life carbon emissions can be attributed to production.

11.2 Plans to purchase EVs for the smaller fleet (food waste and street sweepers) align with the aim to reduce carbon emissions. As the council procures 100% renewable energy RCVs, the tail pipe emissions for these vehicles will fall to zero immediately.

- 11.3 Renewable diesel will be used as an alternative to diesel over the next circa five years if readily available, financially viable and sustainably sourced, in order to reduce emissions and the impact of waste collections on air quality. This will see tailpipe carbon emissions reduced by up to 90% and indirect emissions from production should be reduced by a similar value.
- 11.4 The ultimate goal of running ultra-low emission RCVs by 2029 will meet the council's net zero 2030 target. The carbon trajectory of the LDCWS operations is set out at Appendices 1 and 2.

12 Contribution to Community Wealth Building

- 12.1 The new hydrogen hub at Newhaven will afford local training opportunities in vehicle maintenance using the latest technology, which LDCWS will promote in servicing its own fleet.

13 Appendices

- Appendix 1 – vehicle replacement strategy
- Appendix 2 – supporting tables
- Exempt Appendix 3

14 Background papers

The background papers used in compiling this report were as follows:

- None