

Cabinet Report

Report of Head of Housing and Environment

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Wards affected: All

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To: CABINET

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Joint South Oxfordshire and Vale of White Horse Waste and Street Cleansing Vehicle Procurement Strategy

It is recommended that Cabinet:

- a) Note the contents of the report on why the council needs to be procuring new waste vehicles, and the factors which influence the future carbon footprint of the fleet and the process that officers will use for the future procurement of waste and street cleansing vehicles.

Implications (further detail within the report)	Financial	Legal	Climate and Ecological	Equality and diversity
	Yes	No	Yes	No
Signing off officer	Emma Creed	Pat Connell	Heather Saunders	Abigail Witting

Purpose of Report

1. To inform cabinet members of the current issues facing the councils in modernising and sustaining the waste and street cleansing operational fleet, and to outline the process that officers will use for the future procurement of new waste collection and street cleansing vehicles. The process is designed to ensure that vital waste collection and street cleansing services continue by providing suitable vehicles at the right time, in a way that the council can afford, whilst aiming to reduce the carbon
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footprint of the service where this can be realistically achieved by the technologies available and is within the capacity of the waste depot to support.

Corporate Objectives

2. The council has a role in the efficient and effective provision of waste collection and street cleansing services as they are waste collection and litter authorities which places a statutory requirement on second tier local authorities, and fits with the following corporate objectives:
 - 5. Working in Partnership,
 - 4 Building Stable Finances
 - 2. Tackling the Climate Emergency

Background

3. Vale of White Horse District Council (working jointly with South Oxfordshire District Council) as a second tier local authority, has responsibilities under the [Environmental Protection Act 1990](#) (EPA) for the collection of household waste. It also has responsibility to maintain the clean nature of its streets as litter authority. These are amongst the highest profile services the councils provide, as they affect all households and have a significant impact upon the climate change outcomes of the districts. The council also has a legal obligation to manage its finances in a prudent way, and to reduce its carbon footprint.
 4. The council currently contract out the EPA responsibilities to Biffa, which in turn operates approximately 100 road registered vehicles and a range of plant and equipment to deliver the front-line services – refuse, recycling, food waste, garden waste, bulky waste collections, street cleansing and container deliveries from the Culham depot. The current contract with Biffa is due to expire in June 2026, as is occupation of the current depot. Beyond that date the contract and depot are subject of different pieces of work and will be presented in forthcoming individual reports, due in Summer/Autumn 2024
 5. The council is currently investigating options to provide a new depot from summer 2026, and part of the requirements from such a site will be the ability to be more flexible about the types of fuels that future vehicles use, so that the council can continue to respond to the rapidly evolving developments in this area regarding low and zero emission vehicles.
 6. When operational, most of the vehicles in the current fleet burn diesel in internal combustion engines (ICE).
 7. As set out in the latest annual greenhouse gas reports, waste collection is the biggest contributor to carbon emissions – Vale 49.8%. Biffa used approximately 900,000 litres of diesel whilst operating the vehicles across both districts in 2022/23. The burning of this fuel releases harmful emissions, including carbon dioxide into the atmosphere, which contributes towards climate change.
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8. The UK Government introduced 'The Climate Change Act 2008' which committed the UK to an 80% reduction in carbon emissions relative to 1990 levels by 2050. In June 2019, further legislation was passed which extended that target to 'at least 100%'.
 9. The Government had brought in a ban on the sale of conventional petrol - and diesel-powered cars, and small vans by 2030 (this has recently been delayed until 2035) and a ban on the sale of petrol- and diesel-powered heavy goods vehicles (HGVs) weighing up to 26 tonnes currently set for 2035. However, it is expected that such vehicles will continue to be operated, and have fuel available, for several years beyond this date due to the life span associated with them.
 10. The council has declared a climate emergency and has currently made a commitment to be carbon neutral in their own operations by 2030. This will have an impact on waste and street cleansing service vehicles purchased over the next few years as, under current life expectations, vehicles purchased from now are expected to still be operational beyond this date.
 11. Under the existing contract, Biffa are responsible for purchase, maintenance, and ownership of circa 100 vehicles required to provide the services (refuse, recycling, food waste, garden waste, bulky waste collections, street cleansing and container deliveries). However, from June 2024 Biffa will no longer purchase, or permanently replace, any vehicles were they to become non-viable to operate. Instead, the councils will become responsible for procurement and ownership of new vehicles and lease them to Biffa for use on the frontline services. As a result, the council, jointly with South, have taken the decision to purchase new vehicles directly, so to have more control over the acquisitions and ensure that the assets can easily transfer to the new provider from 2026 (should that not be Biffa).
 12. In order to understand the condition of the current vehicle fleet, in spring 2023 the council commissioned an independent survey from a specialist company called Refuse Vehicle Solutions (RVS), which identified that nine vehicles (across both council areas) needed replacement as a matter of urgency in 2024, with the remaining 87 vehicles needing replacement over a rolling programme of up to five years.
 13. Following a formal procurement process, an order was placed in October 2023 to replace the nine identified vehicles, eight of which are being replaced with internal combustion engine (ICE) diesel powered vehicles and one is being replaced with an all-electric fuelled vehicle. The vehicles ordered have circa 6-8 month build lead times and so are expected to arrive around June 2024. The costs are jointly shared with South.
 14. The decision to replace the vehicles was taken after officers completed a thorough assessment using the following criteria:
 - Ability to meet the operational need
 - Financial and procurement method to obtain vehicles
 - Ability to replace the identified trucks immediately upon delivery
 - Vehicle specifications
 - Timescale for delivery
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- Ability to store vehicles and fuel at the depot that will be used until summer 2026
- Type of fuel required to operate the vehicles
- Fuelling infrastructure at the current depot

This assessment was provided in appendices which accompanied the 'Delegated Authority' (DA) decision papers. This route was approved by Cabinet in decisions made on 09 March 2023.

15. In order to take advantage of bulk buying discounts with fuel providers and to secure significantly cheaper prices than those seen at domestic fuel providers, the new depot (once determined) will need to be able to store and provide whatever fuel or fuels are chosen to effectively and sustainably operate the vehicles during the medium to long term, whilst also reducing the carbon footprint of the fleet as much as practicable at any given time. Through the period of transition to a fully decarbonised fleet, and likely beyond, there will be the need for multiple fuel sources to be supported due to the different needs of different vehicles.
16. The new depot, shared with South, will provide the opportunity for a liquid store of diesel, liquid hydrogen, hydrotreated vegetable oil (HVO), electrical connection to provide effective charging provision on site or a combination of those fuels. For diesel, hydrogen and HVO, this would be a bunded fuel tank(s) but for electric, a survey of the proposed new depot site and subsequent grid applications will identify the current and potential electrical supply capacity, and this will be built into the build specification to ensure that the new depot is future-proofed and able to adapt to the changing fuel requirements as the council moves to decarbonise the fleet.

Vehicle Specification, Selection and Procurement Process

17. The following strategic steps will be used by officers to guide the procurement of new waste and street cleansing vehicles. They are placed in the decision order by which officers would normally take them into account:
 - a) Enable the council to continue to meet the statutory obligations placed on it to undertake household waste collections and perform street cleansing services.

The council has a statutory obligation to ensure that waste and recycling collection, and street cleansing services are provided to every household, and it would fail in this duty, and in their duties to all residents, if it was unable to undertake the hundreds of thousands of doorstep collections provided on a weekly basis, along with keeping the streets clean. The council therefore must undertake all endeavours to ensure that collections continue to take place and the high performing services are maintained. A failure to operate well-functioning collection and street cleansing services would not only put the council at risk of legal challenge and reputational damage, but also potentially result in some valuable resources not being recycled, but instead ending up being incinerated.

Therefore, having the correct vehicle specification to provide the correct vehicles to complete the service, is the most critical element of vehicle procurement.

This will include only buying vehicles where suitable fuelling options are in place at the relevant depot from the projected start of the vehicle's operation.

- b) Meet the capital and revenue budgets agreed by Full Council.

The council can only purchase vehicles which it can afford to do so under its capital and revenue budget programme as set by Full Council.

- c) Operational efficiency to minimise the number of vehicles required.

The council will work with the operator of the vehicles to minimise the number of new vehicles required by ensuring that collection rounds are efficient, and that technology is used to enable this wherever possible. We will also look to ensure that the vehicles are maintained effectively to ensure they remain clean and efficient for as long as possible and aim to extend the lifespan of the vehicles to minimise their total lifetime carbon footprint.

- d) Once the preceding steps have been taken, and where vehicles need to be purchased, officers will look to purchase and operate vehicles with the lowest overall carbon footprint that meets operational needs, recognising that certain fuels will have higher upfront capital costs, but in turn may have lower ongoing revenue costs. Where vehicles purchased are internal combustion engine (ICE), the procurement process will look to ensure that they are as clean and fuel efficient as reasonably possible, noting that wherever it is viable to do so in terms of financial and operational considerations, the intention is to secure vehicles that will assist the council to meet their net zero objectives.

18. Details on the different fuel types available for waste collection and street cleansing vehicles and operational options to reduce carbon emissions, are provided in Appendix 1 and are summarised below:

- a. There are four main types of fuel available for use in large commercial vehicles – internal combustion engine (ICE) diesel and petrol powered, hydrogen fuel cell electric vehicles (FCEV) battery electric vehicles (BEV) and Hydrotreated Vegetable Oil powered (HVO).
- b. The type of fuel used makes up a large proportion of the carbon generated, but there are also other factors to consider including the route and service the vehicle is going to be used on, how efficiently it is being used and the ancillaries which are fitted to it such as the types of tyres and bin lifts.
- c. To optimise the efficiency of the waste collection and street cleansing vehicle fleet at any one time, it will be important to not only select the correct fuel type, but also take advantage of the other measures available which will help reduce carbon emissions.

Process for Vehicle Replacements

19. It is anticipated that household waste collections and street cleansing services will continue to be required in the medium to long term, and therefore further vehicle purchases will also be required to facilitate this. To effectively manage the procurement of replacement front line waste and recycling collection, and street
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cleansing vehicles, the following processes to support the procurement process is proposed:

20. At the outset, an annual assessment of the current fleet would be completed prior to budget setting, as part of a specific fleet replacement programme, to understand the number and type of vehicles which require replacement and on what timescale.
 21. This information would then be used by officers from the waste, climate, and procurement teams to conduct a high-level assessment of the vehicle market, to understand the technological advancements and therefore the types of vehicles that are available. This will include the individual maintenance needs and costs, together with the best form of ownership (buy new, buy used or lease) and any restrictions that are likely to be in place at the time the vehicle would become operational, such as depot fuelling infrastructure. If the decision is that vehicles are to be purchased (either new or second hand) or leased, this will result in a high-level business case which will outline the range of options available, along with any subsequent revenue impacts that would result, for example by moving to a more or less costly fuel option.
 22. This assessment would be informed not only by the council's own knowledge but would draw on the data and experience of other councils that the Vale of White Horse and South Oxfordshire are in contact with. This contact allows the councils to benefit from access to 'real world' information regarding the latest hydrogen and battery powered electric refuse and street cleaning vehicles available. Likewise, the councils have also agreed to provide reciprocal information and data on our own electric vehicles as this becomes available. Appendix 1 details a recent update provided to joint scrutiny on a joint bid to Innovate UK from South Oxfordshire and the Vale of White Horse for funding to deliver a national pilot of revised software to support deployment of a latest generation Electric Refuse Collection Vehicle (eRCV).
 23. The outcome of the above assessment, would then be included as part of the capital budget setting process and, should Cabinet recommend this, the Full Council would be asked to agree any revised capital allocation, if different from that already agreed with the Capital programme, for the forthcoming financial year.
 24. Within these approved financial parameters, officers would then define the most suitable vehicle specification for each vehicle needing replacement prior to conducting a robust formal procurement, aiming to meet the decision-making order as outlined within this report. As with all procurements, the final stage of the process before the procurement is commenced would be a live review or reassessment of all relevant information and previous decisions points, to ensure that the procurement remains the most viable and appropriate available at the time it is commenced. Such an approach, known as a 'Gateway' point, is inherent with all of the council's procurements.
 25. Once a procurement has been undertaken, officers would produce an Individual Cabinet Member Decision (ICMD), for approval by the relevant Cabinet Members, which would:
 - d. Outline the procurement undertaken, and why it is in line with this strategy,
 - e. Confirm the number and type of vehicles required and any infrastructure changes, and
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f. Formally enable the procurement to proceed.

26. As outlined, consideration will always be given to purchase vehicles which do not use diesel as a fuel. However, where the current technology or restrictions of the depot do not enable that to happen the focus would always be to ensure the most efficient and lowest polluting vehicle fuels available are specified for the acquisition.
27. In line with the overarching council's procurement strategy and processes, as part of reviewing the options available for a particular type of vehicle, consideration would also be given to the environmental credentials of the vehicle manufacturers and suppliers of vehicles, to understand their commitment to reducing carbon, both in manufacturing and ongoing supply arrangements.
28. The new process would follow the following indicative timeline for each of the annual vehicle procurements cycles – 2025/26 through to 2027/28. However, officers will continually look for opportunities to make service improvement or savings for the councils outside of this timetable, such as bringing forward capital expenditure for replacements of vehicles earlier to save revenue or buying second hand or leasing vehicles. As mentioned above, this cycle would always be informed not only by the council's own data, but that from other councils who utilise hydrogen fuel cell or battery powered refuse and street cleaning vehicles.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fleet appraisal procurement																								
Fleet appraisal																								
High level assessment of vehicle market																								
Budget setting process																								
Finalise vehicle specifications																								
Approval of business case and authorisation to procure																								
Procurement exercise																								
Individual Cabinet Member Decisions (ICMD)																								
Orders placed																								
Vehicles arrive (pending manufacturer timescales)																								

Financial Implications

Capital Budget Provision

29. The current capital budget provision identified over the next 4 years within the MTFP of each council for vehicle replacement is set out below. However, the numbers, and profiling of this budget is only indicative at this stage, and an annual review will be undertaken as part of the annual budget setting cycle in line with the approach outlined within this strategy.

#	2024/25	2025/26	2026/27	2027/28
South Oxfordshire	£950,000	£1,750,000	£1,500,000	£1,500,000
Vale of White Horse	£950,000	£1,750,000	£1,500,000	£1,500,000

approved as part of budget setting in 2024.

Legal Implications

30. There are no legal implications directly related to this report, proposed process or supporting appendix, the provision of waste collection and street cleansing services are a statutory function of 2nd tier local authorities and having the necessary vehicles in place to deliver the service, is therefore paramount.

Climate and Ecological Emergency Implications

31. Waste collection is the biggest contributor to carbon emissions as set out above. Route management and other efficiency actions are ongoing and will continue to reduce emissions in the future.
32. Research and trials to identify how low carbon vehicles can fit the districts' geography are a high priority moving forward. Financing vehicles with a high upfront capital cost but attractive whole life costs, needs further investigation to inform future acquisition decisions and officers are engaged directly with other councils to ensure that the latest information is available to them on an ongoing basis.
33. All vehicles have their own climate impacts however, battery electric vehicles are likely to be the best low carbon option in future, subject to acceptable solutions being found to secure suitable operational range, fuelling infrastructure and cost.

Equality implications

34. There are no equality implications related to this report or supporting appendices.

Risks

35. With a largely ageing waste collection and street cleansing vehicle fleet, it is necessary to replace vehicles as they become unviable to maintain/repair, in order to protect the statutory service provision. By not supporting the recommendation to introduce a new strategic approach for reviewing technological advancement within the waste fleet industry and ordering the correct vehicle, able to perform the intended function, for a price which is affordable and which positively contribute towards the councils climate aspirations, there is a risk that the wrong vehicles may be purchased which would have a negative impact on the service, budget and/or carbon reduction aspirations of the council.
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Alternative Options

36. With high maintenance costs of keeping the current fleet in service falling on the councils under the new open book budget arrangement from June 2024 (where the councils are directly responsible for the costs of the services, plus management overhead and operating profit), there is no 'do nothing' option that would enable the council to continue to meet legislative requirements around service provision.
37. The council could choose to substitute vehicles needing replacement with leased equivalents and let technological advancements improve in the sector, which would hopefully reduce the high value initial outlay required to purchase FCEV or BEV vehicles compared with ICE equivalents. However, this option would bring with it significantly higher associated revenue costs, potentially increased carbon because hire companies traditionally use older fleet, which have their own reliability risks and no clarity on when a viable solution would be available.
38. As outlined as Appendix 1 officers have submitted a proposal for Ministry of Transport funding, through Innovate UK's Transport Decarbonisation Demonstrators fund, to carry out an initial trial of around 12 weeks of an eRCV, in partnership with an external logistics optimisation software company and an eRCV manufacturer. If successful, this trial will provide valuable real-world information on the effectiveness of a battery powered waste collection vehicle operating in the council's geography.
39. Officers are also in contact with those of several other local authorities who are willing to share information on their most up to date experience of both hydrogen and battery powered electric vehicles.

Conclusion

40. Although the end of diesel-powered heavy goods vehicles will happen, the replacement timetable has not yet been fully defined and the geographies of the councils won't change. At this point in time, whilst continuing to constantly assess all options, there are no viable alternatives to HGVs at Euro 6 ICE for the larger fleet and incorporating other measures as shown at Appendix 1 of this report together with effective carbon offsetting for their journey towards net zero carbon, noting that this position will be constantly reviewed so that a move away from ICE by the council can be achieved at the earliest realistic time.
 41. There are advantages and disadvantages with all vehicle fuel types, but these need to be balanced with the needs of the frontline services, together with whole life costs and affordability, alongside the development of a new depot, which will significantly increase the options available to the council.
 42. It is not considered that the councils (similarly for most mixed fleets in the UK) will have a single fuel type for the entire vehicle fleet in the short to medium term. Instead, it is envisaged a mix of battery electric vehicles (BEV), hydrogen fuel cell electric vehicles (FCEV) and internal combustion engines (ICE) and/or hydrotreated vegetable oil powered (HVO) along with a range of other measures may be the practical solution over the short term, as over time the council moves to a full carbon neutral position in line with its wider objectives.
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43. The adoption of this vehicle strategy provides a clear process for officers to follow, which will enable them to review the needs of the service, together with the latest options available within the industry and their respective costs, in order to present to members, so that an informed decision on capital budget allocation can be made each year. As outlined, officers will keep technological advancements in the industry under constant review and are actively engaged with pilots, and other local authorities which are conducting trials of alternative fuelled vehicles, so that the latest information is available when the Cabinet member is asked to make decisions on acquisition.
44. It is therefore recommended that the process for vehicle replacements, as set out in this report be noted by Cabinet in preparation for the 2024 fleet assessment review and replacement, which will contribute to the capital and revenue budget setting process for 2025/26 and beyond.

Appendices

Appendix 1 – Supporting information.
