Reigate & Banstead
BOROUGH COUNCIL
Banstead I Horley I Redhill I Reigate

Signed off by	Director of Place
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To	Executive
Date	Thursday, 14 December
Executive Member	Portfolio Holder for Neighbourhood Services

Key Decision Required	Y
Wards Affected	(All Wards);

Subject	Options for the reduction in Carbon emissions from the Council's fleet of diesel-powered vehicles

Recommendations

That the Executive:

(i) Approve the inclusion of £0.250million Capital Programme growth for the purchase of one electric refuse collection vehicle, funded from prudential borrowing, in the final budget report to Executive on 1 February 2024.

(ii) Agree to delegate authority to award the vehicle supply contract(s) for the four refuse collection vehicles identified for replacement in 2023/24 (one EV garden waste vehicle, two diesel garden waste vehicles and one split body waste & recycling vehicle) to the Head of Neighbourhood Services in consultation with the Chief Finance Officer, the Executive Member for Neighbourhood Services and the Executive Member for Finance, Government & Organisation; following the undertaking of a procurement exercise in line with the Council's Contract Procedure Rules.

(iii) Endorse the transition of the existing diesel refuse collection vehicle fleet to run on Hydrotreated Vegetable Oil, noting the financial implications

that were included within the draft budget proposals reported to Executive on 16 November 2023.

Reasons for Recommendations

The Council's vehicle fleet makes a substantial contribution to the Council's carbon emissions. The purchase of one electric refuse collection vehicle (RCV) as part of our ongoing fleet replacement programme represents a measured approach to beginning to transition to low carbon RCVs recognising the currently high cost of these vehicles.

The use of HVO in the refuse collection vehicle fleet provides a cost effective means of reducing carbon emissions until such time as these existing vehicles can be replaced with low carbon alternatives.

Executive Summary

The Council's Environmental Sustainability Strategy commits the authority to work towards a target of net zero operational carbon emissions by 2030. The Council runs a large fleet of vehicles, which is responsible for a large proportion (55%) of the Council's overall operational carbon emissions. This paper makes two main substantive recommendations to secure a reduction in carbon emissions from our fleet.

Reducing the carbon emissions from our existing vehicle fleet (Recommendation iii)

It is recommended to move from running our existing refuse collection vehicle (RCV) fleet on diesel to running the vehicles on Hydrotreated Vegetable Oil (HVO). This would be used as an interim measure until such time as vehicles in the RCV fleet can be replaced with electric or other low carbon alternatives.

HVO has the potential to reduce carbon emissions from these vehicles substantially. A conservative estimate of 76% reduction has been assumed for the calculations within this report. With our RCVs currently consuming 61% of the diesel used by the Council, running them on HVO instead has the potential to reduce our total Council-wide operational carbon emissions by at least 25%.

While offering the potential for substantial carbon emissions reduction, HVO does come at a higher 'per litre' cost than diesel, although it remains a cost effective means of reducing emissions in the immediate term. It also offers some air pollution reductions over diesel. On this basis, the transition to running our bin lorries on HVO as an interim measure is considered to make this a socially and environmentally appropriate investment for the Council.

Starting to transition our heavier vehicles to alternative fuels via fleet replacement (Recommendation i)

The Council operates a rolling programme of fleet replacement. While this means that moving to low carbon vehicles will take time, it also offers the opportunity to take a measured and phased approach to transition, allowing us to apply real-world experience to inform future decisions.

The Council currently owns and operates 28 RCVs. Four of these vehicles are due for replacement in 2023/34, including three 'single-body' green waste collection vehicles.

Trials have been undertaken which suggest that single body electric RCVs are now available and viable for the collection of green waste. Split body electric RCVs (which we use to collect other waste streams) are not yet available for purchase.

Electric RCVs come at a considerable cost premium to diesel RCVs (costing over 2 times the price). However, they bring advantages over and above using diesel or HVO-fuelled vehicles, emitting zero tail pipe carbon and air pollutant emissions and also bringing noise reduction advantages for operatives and residents.

This report therefore recommends replacing the three garden waste RCVs with one electric RCV and two diesel RCVs (to be run on HVO). The purchase of one, rather than three, electric vehicles is recommended because:

- Taking a precautionary approach is merited as this will be the first EV RCV that the Council will be operating
- There are capacity constraints associated with vehicle charging infrastructure at the Depot currently; and
- Both purchasing and running costs associated with an EV are higher than diesel/HVO vehicles at the moment.

This approach will enable the Council to gain real-world experience of running an electric RCV, and means we will be able to monitor actual (rather than predicted) running and servicing costs; while retaining 'traditional' vehicles at the same time brings greater service resilience in the event of any issues. This real world experience will help inform our future decision-making as more RCVs come up for replacement in the years to come.

The specification for the vehicle meets the service delivery needs of Garden Waste collections in terms of payload, vehicle size, and ability of the vehicle to access all areas of the borough currently serviced.

Recommendation (ii) flows from recommendation (i) and relates to the procurement process for the 3 garden waste RCVs and one waste & recycling RCV identified for replacement in 2023/24.

Statutory Powers

1. The Council is the statutory Waste Collection Authority (WCA) for the borough. The Environmental Protection Act (1990) created a statutory duty for WCAs to arrange for the collection of household waste within their area.
2. The Climate Change Act 2008 and subsequent amendments set out much of the UK's policy response to climate change, including a legally binding target for the UK to reach net zero carbon emissions by 2050.
3. The Government has recently published its final Resources & Waste Strategy approach. Whilst this has longer term implications for the Council's Waste & Recycling operations, it does not impact on the proposals within this report. As part of the announcement, the Government confirmed that Councils can still charge for garden waste collections; therefore we can continue to operate the service as we do currently, bringing in a significant income stream for the Council.

Background

4. The Council runs a large fleet of vehicles, numbering 123 at the time of writing. This includes vehicles used by services including waste & recycling, parking, cleansing, Transport, JET, and greenspaces.

5. The Council's vehicle fleet is responsible for a large proportion of the Council's carbon emissions. The most recent Environmental Sustainability (ES) Annual Report reported that of the Council's operational carbon emissions, our fleet account for 55% (down from 61% in our baseline reporting year of 2019/20).

6. Our adopted Environmental Sustainability (ES) Strategy includes a performance indicator to transition all our vehicles to electric by 2035. This target remains in place despite recent Government announcements about the end date for the sale of new internal combustion engine vehicles.

7. **Approach to fleet replacement:** The Council has in place a Fleet Replacement Strategy which explains the approach taken to replacing and upgrading our fleet. Vehicles are replaced on a rolling basis in line with a Fleet Replacement Schedule maintained by the Council's Transport Team.

8. The Fleet Replacement Strategy explains that:

   a. the Council will procure vehicles through tender, direct award, purchase under the procurement threshold or lease, and

   b. in line with the Council's ES Strategy and operational needs, make use of lower carbon solutions where these are widely available and have been market tested.

9. The starting point for fleet replacement is therefore that vehicles with the lowest possible carbon emissions that can practically be used for the functions required will be sought. Having a rolling replacement programme in place means that expenditure is not incurred by replacing vehicles before the end of their useful life - however this also does constrain the Council's ability to make progress on reducing vehicle carbon emissions via vehicle replacement only. This progress is further constrained by the fact that both electric and hydrogen technologies for heavier vehicles are in their infancy and the vehicles that are on the market now are not able to fully deliver against our current operational requirements.

10. This paper therefore considers two opportunities to reduce our vehicle fleet carbon emissions:

    a. Firstly, the opportunity to reduce emissions from our existing vehicle fleet until such time as they can be replaced by electric or other low carbon equivalents, and

    b. Secondly, the opportunity to start to transition some of our heavier vehicles to electric as they come up for replacement.

Key Information

Reducing the carbon emissions from our existing vehicle fleet

11. As noted above, vehicle emissions currently make up 55% of the Council's overall operational carbon emissions, and as vehicles are only replaced on a rolling basis, relying on vehicle replacement to reduce those emissions would mean that we would only be able to reduce those emissions slowly over the coming years. Replacement

of the full fleet in order to expedite the reduction in Carbon emissions would only be possible if significant capital allowance was made available.

12. The Transport and Sustainability Teams have therefore explored the alternative of Hydrotreated Vegetable Oil (HVO) as an interim solution. This has the potential to reduce carbon emissions from our existing fleet until such time as vehicles can be replaced with low carbon alternatives.

13. HVO is a type of biofuel created using waste products such as used cooking oil. It is sometimes referred to as renewable diesel, and is a fossil fuel free alternative to mineral diesel, which has the ability to deliver up to 90% reduction in greenhouse gas emissions. It is compatible with most modern diesel engines, although currently comes at a higher cost than diesel.

14. **Options:** All 28 of the Council's 26-tonne refuse collection vehicles (RCVs) have been confirmed as being compatible with HVO without any modification. These vehicles use the greatest proportion of diesel, around 61%. Table 1 below compares two options, running these vehicles on diesel (Option 1) and running them on HVO (Option 2), providing information about both cost and carbon implications.

Table 1: HVO options

	Cost per litre (£) [(1)]	**Fuel consumption (l)** (based on 2022/23 figures)	**Total cost (£)**	**Reduction in carbon emissions/yr (tCO2e)** based on an assumed 76% reduction[(2)]
Option 1: Continue to run 26t RCVs on Diesel	1.28	288,329	369,061	0
Option 2: Run 26t RCVs on HVO	1.70	288,329	490,159	497
Cost uplift associated with HVO / year	0.42	-	121,098	n/a

(1) figures correct as of 25/10/23. Note that the HVO figures included are the lowest of those quoted by three suppliers.

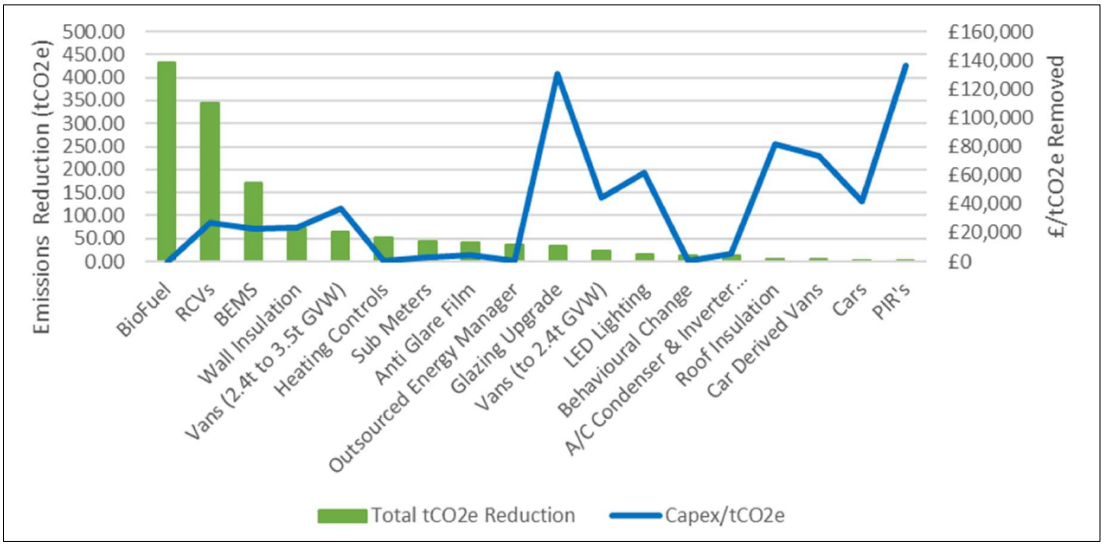
(2) A 76% reduction has been recommended as it is the lower end of carbon reduction percentages quoted by suppliers. See also para 18 which provides more information about conversion factors.

15. While HVO comes at a higher cost than diesel, it offers the potential for substantial carbon emissions reductions. Option 2 would require approx. £121,000 additional revenue spend per year. The current revenue fuel budget is £562,200.

16. Assuming that only the 26 tonne RCV fleet is run on HVO, this alone has the potential to reduce the Council's operational carbon emissions by in the region of 25%. In the medium term, we will liaise with manufacturers to explore switching other compatible vehicles in the fleet to HVO, as well as specifying that all new vehicles purchased are HVO compatible.

17. While this reduction in carbon emissions comes at an additional revenue cost, work undertaken by consultants for the Council highlighted that biofuels are an extremely cost effective means of reducing carbon emissions for the Council relating to fleet vehicles. This is illustrated in Graph 1 below (which is based on HVO delivering an estimated carbon reduction of 76%).

Graph 1: Cost effectiveness of different carbon reduction measures (source: Optopia)



18. **Explaining our carbon reduction calculations:** For the purposes of this paper, we have assumed that HVO offers a 76% carbon saving compared to diesel. This is a conservative figure, based on the lower end of carbon reduction percentages quoted by suppliers, and informs our estimate that using HVO in our RCVs will lead to a total reduction in Council carbon emissions of 25%. Government carbon conversion factors (which we use for our annual carbon emissions reporting) assume a greater carbon saving, as follows:

    - Diesel: 654 tCO2e
    - HVO: 9.1tCO2e

    Using *these* figures, the carbon emissions reduction associated with transitioning our RCVs to HVO would be greater, at 33% of the total Council carbon footprint. However, it is also important to note that in applying this reporting methodology, we are required to recognise and be transparent about the impact of the carbon released through combustion of the fuel as an 'outside of scope' impact (ie not within the organisation's emissions total but displayed separately).

19. **Co-benefits:** Adoption of any low carbon fuel option will have benefits to residents in the form of improved air quality. This is particularly salient when we consider that our fleet of RCVs primarily operate in residential areas and are likely to be the only HGVs that regularly enter these areas. HVO has the benefit of reducing particulate matter by around 33% and nitrogen oxides by around 8%.

20. Switching to HVO for some of our most 'visible' vehicles – such as RCVs – demonstrates to residents that the Council is investing to make progress towards its net zero by 2030 target. Subject to practical considerations, there may also be the opportunity to work with partner organisations for them to access HVO for their vehicles as well.

21. **Preferred Option:** On the basis of the above, Option 2 – that is, to transition all 28 of the Council's 26-tonne refuse collection vehicles to running on HVO – is recommended. While representing a more costly fuel option, the carbon reduction

and other benefits are considered to make this a socially and environmentally appropriate investment for the Council. More information about the financial implications of this recommendation are included at paragraph 63-67.

22. **Implementing HVO:** The above options are based on a straightforward switch from diesel to HVO for compatible vehicles requiring no conversion of those vehicles. An allowance has been made in the draft revenue budget proposals for 2024/25 for the uplift in fuel costs associated with HVO of £0.132 million.

23. Capital investment will also be required to install an additional fuel tank to store HVO. The cost of the tank, associated security measures and groundworks is estimated at £0.035 million. This will be funded through a call on the existing capital programme allocation for Environmental Sustainability Projects (of which £0.236 million currently remains).

24. **Managing risks:** Some concerns have been expressed about the use of HVO, particularly in relation to the source of the feedstock and whether increased use of HVO will lead to the conversion of agricultural land and drive deforestation and habitat loss by the planting of palm oil crops. This risk will be mitigated by ensuring that the supplier from which we procure HVO guarantees that the feedstock is only waste products. HVO and other biofuels will have a place for harder-to-decarbonise industries (such as aviation and marine) in the future and as demand from those sectors ramps up, we will be exiting the market by updating our fleet with alternatively fuelled vehicles (see below).

25. At the moment it is planned only to use HVO in our diesel RCVs, as these have been confirmed by the manufacturers as being compatible with the fuel. The compatibility of other diesel vehicles within our fleet has not been confirmed, and using the fuel in non-compatible vehicles may damage the fuel components, so running these other vehicles on HVO at the moment is not being recommended. In the medium term we will explore using the fuel in other diesel vehicles subject to manufacturers' confirmation of compatibility (if alternative fuelled low carbon equivalents are not viable or available).

26. If costs for HVO become prohibitive, it is possible to switch back to using conventional fuels in our vehicles (however any choice to do this would need to be balanced against the negative environmental impacts).

Starting to transition our heavier vehicles to alternative fuels via fleet replacement

27. As noted in the background section of this report, the Council's fleet replacement strategy requires replacement vehicles with the lowest possible emissions that can practically be used for the functions required to be sought.

28. Replacement of lighter vehicles within the fleet to electric alternatives is already taking place and funded from within the agreed capital programme. To date the fleet includes 13 electric or hybrid vehicles.

29. For the heavier vehicles within our fleet (primarily the Waste & Recycling vehicle fleet), the choice to transition to electric vehicles is less clear cut given considerations such as cost, and the more limited specification of vehicles that are available on the market today.

30. **The Refuse Collection Vehicle (RCV) fleet:** The Council currently owns and operates 28 RCVs. Vehicles are purchased outright via competitive tender rather than leased as this proves more cost effective for the Council. All vehicles are serviced and maintained in-house.

31. The RCV fleet currently contributes about 654tCO2e to our carbon emissions per year - approx. 61% of all Council vehicle carbon emissions and 33% of all council operational carbon emissions.

32. **Replacement schedule:** The current capital programme allocation for fleet replacement is £7.46 million over 5 years (2023/24 to 2027/28). This is based on like-for-like replacement of vehicles when they come up for renewal – that is, replacement of diesel vehicles with diesel vehicles.

33. The three single-body RCVs operated by the Waste & Recycling service for green waste collection are currently due for replacement (in 2023/24). In addition, one other split-body RCV, used for the collection of household waste and recycling, now requires replacement as part of our rolling fleet replacement programme, however this will be a like-for-like replacement as there are currently no split body electric RCV's being offered for trial by manufacturers.

34. In 2024/25 a further two RCVs are due for replacement; beyond this date, no further RCVs are expected to be replaced until 2027/28 and 2028/29.

35. **Electric RCV trials:** In line with the Fleet Replacement Strategy, a number of trials of electric RCVs have been carried out in recent years. The most recent trial identified that electrically powered RCVs are now viable for the collection of garden waste, the trial vehicle having performed well against diesel vehicles doing similar work. There are currently no electric vehicles available to trial on our 'core' waste & recycling rounds as split body electric vehicles are not available at the moment. We are continuing to talk to suppliers to determine when these types of vehicle might come to market.

36. One electric green waste RCV has the potential to reduce the Council's total operational carbon emissions by around 1.2% compared to a diesel vehicle (3% of total emissions from the RCV fleet). However electric vehicles come at a considerably higher capital cost.

37. **Options:** As noted above, operational requirements mean that electric RCVs are not yet viable for collection vehicles dealing with waste and recycling streams other than garden waste.

38. Options for the replacement of the three green waste RCVs (where electric alternatives are considered viable) are set out in Table 2 below.

Table 2: Replacement options for three green waste RCVs

	Capital cost (£) (1)	**Total annual Running costs (£)** (2)			**Annual reduction in carbon emissions (tCO2e)** (3)
		Diesel	**HVO**	**Electricity**	
Option 1: Purchase 3 diesel vehicles (run on diesel)	676,629	37,934	Not applicable	Not applicable	0

Option 1a: run 3 new diesel vehicles on HVO		Not applicable	50,381		53
Option 2: Purchase 1 electric and 2 diesel vehicles (run on diesel)	903,899	25,290	Not applicable	28,300	24
Option 2a: run 2 new diesel vehicles on HVO plus one EV		Not applicable	33,589	28,300	59
Option 3: Purchase 3 electric vehicles	1,358,439	Not applicable	Not applicable	84,900	70

(1) Capital cost assumptions based on supplier quotations and subject to confirmation through the procurement process
(2) Running cost assumptions based on 2022/23 mileage and fuel costs as at 25/10/23, and the daytime electricity tariff secured from Oct 2023 – Oct 2025
(3) Assuming 76% CO2e reduction associated with use of HVO rather than diesel (see para 18); Net carbon emissions from charging an electric vehicle are 0 due to renewable tariff being in place.

39. It should be noted that – subject to recommendations about HVO being supported – all new diesel RCVs purchased could be run on HVO, thus reducing each vehicle's carbon emissions, although with higher running costs associated with the cost uplift from diesel to HVO (also outlined above).

40. **Co-benefits:** As outlined above, the adoption of any low carbon fuel option will have benefits to residents in the form of improved air quality, and particularly where the vehicles operate in residential areas. The co-benefits associated with electric vehicles are greater than with vehicles run on HVO. Fully electric vehicles have a zero-emissions rating, which includes air pollutants. Electric vehicles thus offer greater benefits for air pollution than using HVO. For this reason and to help reduce local air pollution, there is an action in the latest Borough Air Quality Status Report to electrify the Council's vehicle fleet in order to reduce air pollutants.

41. As well as air pollution, electric vehicles are considerably quieter than their diesel/HVO counterparts, which would bring additional benefits in terms of resident amenity, and will also improve operational conditions for crew members.

42. Beginning the transition to electric RCVs provides an opportunity to reassure residents that the Council is continuing on a path to transition to low carbon vehicles. Consistent with our electric parking vans, any electric RCVs would carry appropriate messaging.

43. **Preferred option:** Taking the carbon benefits, cost considerations, operational requirements and co-benefits into account, for the green waste RCVs, the preferred option is to proceed with the purchase of one electric and two diesel vehicles (the diesel vehicles to be run on HVO, subject to this also being supported). Graph 1 earlier in the report demonstrates that (whilst coming at a high capital cost) electric RCVs still represent a highly cost effective way of reducing the Council's carbon emissions. More information about the financial implications of this recommendation are included at paragraph 63-67.

44. This preferred option represents a measured approach to transitioning to low carbon RCVs, and reflects the approach that a number of other authorities are taking. It provides a positive signal about the Council's direction of travel, whilst also enabling the Waste & Recycling service to familiarise itself with operating an electric vehicle. It also means that the Council can use this experience to inform the development of a plan to install further EV charging infrastructure at the Depot. And it enables us to continue to review and consider other emerging technologies such as Hydrogen as alternative longer term options for our heavier fleet vehicles.

45. **Implementation:** Subject to agreement of the required capital funding uplift, the new green waste RCVs (one electric and two diesel), plus the fourth RCV that is also due for replacement in 2023/24, will be procured via competitive tender or direct award (via a framework) in line with the Council's Contract Procedure Rules (CPRs). The value of the purchases will be in excess of £250,000, which means that under the CPRs, approval to procure falls to the Executive. Given the detail in within this report (including financial), and to expedite the purchase of new vehicles, it is recommended that the Executive delegate authority to enter into contracts for the purchase of the four vehicles to the Head of Neighbourhood Services. This would be in consultation with the Portfolio Holder for Neighbourhood Services along with the Chief Finance Officer and the portfolio holder for Finance, Governance, and Organisation, and subject to procurement in accordance with the CPRs.

46. Based on recent trials it is understood that the current charging infrastructure at the Depot will support the charging of one electric RCV without further investment, however this position will be formally clarified before any purchase is made.

47. It should be noted that current electricity prices mean that running costs for an electric RCV will initially be higher than a diesel vehicle. In the medium to long term, it is expected that diesel costs will continue to increase and electricity costs decrease as the nation continues to transition towards net zero. Based on the energy tariff that the Council has secured between October 2023 and October 2025, it is estimated that it will cost an additional £0.016 million per year to charge an electric RCV compared to a diesel equivalent. This is a worst case scenario cost based on daytime charging rates – in reality, some charging is likely to take place utilising lower night-time rates. Compared to running a diesel equivalent vehicle on HVO the cost differential would be £0.012m. In the immediate term, any revenue cost pressure in 2023/24 will be accommodated within existing service budgets or funded through a call on the Environmental Sustainability Reserve. Subject to agreement of Recommendation (i) in this report, revenue growth to fund additional associated charging costs can be included in the final budget for 2024/25.

48. As noted above, the operation of one electric RCV will enable us to assess the best approach to transitioning the remainder of the RCV fleet as they come up for replacement. For example, the vehicle can be seconded to other waste collection services to establish its suitability for collecting different waste streams i.e.. for use in the collection of trade waste, bring site collections, and flats collections.

49. By way of example, Table 3 below summarises the Waste & Recycling Service's HGV replacement dates along with indicative pricing for both diesel and electric replacement vehicles[1].

[1] Note that this is not a comprehensive list of all council vehicles, it only relates to our RCVs. Pricing has been estimated based on current market prices with a 5% inflationary adjustment each year.

Table 3: Indicative comparison of cost of RCV fleet transition

	23/24 £m	24/25 £m	25/26 £m	26/27 £m	27/28 £m	28/29 £m	29/30 £m	30/31 £m	Total £m
Diesel	0.883	0.446	-	-	2.404	2.575	1.200	-	7.508
Electric	1.835	0.940	-	-	-	5.356	2.512	-	15.633
Cost uplift (electric vs diesel)	0.952	0.494	-	-	-	2.781	1.132	-	7.945
Number of RCVs	4	2	-	-	-	9	4	-	28

50. Decisions about the future purchase of electric vehicles will be made in consultation with the relevant Executive Member, and any additional capital funding requests will either be incorporated via the annual budget setting process or as a stand-alone report (as is the case here).

51. **Managing Risks:** A phased transition of vehicles as proposed mitigates the risk associated with the adoption of relatively new technology. The phased transition also introduces the ability for us to plan future fleet replacement and charging infrastructure installation based on real-world experience.

52. Taking a phased approach to the transition to electric RCVs also means that the Council will be able to monitor the running (revenue) costs associated with differently powered vehicles (HVO and electric). Although running costs of electric vehicles are expected to reduce, if this does not turn out to be the case, the revenue impact on the Council will be lessened compared to Option 3.

53. Agreement of the recommended option will enable procurement to proceed. This will mitigate the risks associated with the current green waste RCVs reaching the end of their serviceable life (that is, becoming no longer viable for repair). Should this occur, it would put at risk the Council's ability to deliver a high quality garden waste collection service, which currently generates considerable income for the Council. (In 2022/23 the green waste collection service achieved a gross revenue of approx. £1.7 million). An effective garden waste collection service also contributes to the Council's positive recycling rates and reduced borough-wide carbon emissions as garden waste that is composted or anaerobically digested generates less carbon than if it is disposed of as general waste.

Options

54. The options available to the Executive are set out below:

Recommendation 1: Electric RCVs

55. Option 1: Approve the inclusion of an increase to the capital programme in the final 2024/25 budget report to allow for the purchase of one electric green waste RCV. This option is recommended as electric RCVs represents a cost effective way of reducing the Council's carbon emissions - as well as delivering other benefits compared to HVO (including reduced air pollution and noise reduction). Starting to implement the transition to electric with one vehicle represents a measured and pragmatic approach whereby the Council can use its experiences in running the

vehicle to inform the development of a plan to transition the rest of the fleet and invest in appropriate charging infrastructure.

56. Option 2: Do not approve the inclusion of an increase to the capital programme in the final 2024/25 budget report to allow for the purchase of one electric green waste RCV. In this event, all three green waste RCVs purchased will be diesel, in line with the existing capital programme. This option is not recommended as it represents a missed opportunity to begin to transition our green waste fleet at a time where the technology exists to do so, a missed opportunity to secure wider co-benefits, and to demonstrate our commitment to moving to fully low carbon fleet.

57. Option 3: Approve the inclusion of an increase to the capital programme in the final 2024/25 budget report to allow for the purchase of three electric green waste RCVs. This option is not recommended as there is currently insufficient certainty that the Depot has the capacity to charge three electric RCVs.

Recommendation 2: Delegation of authority to agree purchase

58. **Option 1:** Agree to delegate authority to the Head of Neighbourhood Services (in consultation with the Executive Member for Neighbourhood Services along with the Chief Finance Officer and the portfolio holder for Finance, Governance, and Organisation, to enter into contracts for the purchase of the 4 RCVs that are due for replacement in 2023/24. This option is recommended as it will remove the need to bring a further report back to the Executive, and will therefore expedite the purchase of the required vehicles and minimise risk to service disruption. The recommendation is considered appropriate given the level of detail about the purchase (including financial detail) set out in this report.

59. **Option 2:** Do not agree to delegate authority for the purchase of the 4 RCVs. This option is not recommended as it will result in a longer period before purchase contracts can be entered into, increasing the risk of issues arising with failure of the current vehicles. If executive chose to go with this option, rather than delegate authority, as per option one, a report will be brought back to a future Executive meeting seeking agreement to enter into purchase contracts for the vehicles in question.

Recommendation 3: HVO

60. **Option 1:** Endorse the transition to HVO for compatible vehicles with in the RCV fleet. This option is recommended as HVO provides a cost effective means of reducing carbon emissions from our vehicles in the short term (as a transition fuel while other options are developed), which are the greatest source of operational carbon emissions.

61. **Option 2:** Do not endorse the transition. This option is not recommended as it represents a missed opportunity to reduce council carbon emissions at a time when action is needed to mitigate climate change.

Legal Implications

62. No legal implications have been identified associated with the recommendations in this report.

Financial Implications

63. Headline information about the financial implications of the different options for HVO and electric RCVs that have been considered are set out in the earlier sections of this report. This section focuses on the financial implications of the recommended options.

Capital Programme implications of the recommended approach

64. The recommendations within this report would require capital investment over and above the existing approved capital programme of £0.250 million (based on current cost quotations received and subject to a procurement exercise). Table 4 provides more information.

Table 4: Capital expenditure associated with recommended options

	2023/24 £m	**2024/25 £m**	**2025/26 £m**	**2026/27 £m**	**2027/28 £m**	**2028/29 £m**	**Funding source**
HVO tank and installation	0.035	-	-	-	-	-	Existing capital programme allocation for Environmental Projects
1 electric RCV (green waste)	-	0.210	-	-	-	-	Existing capital programme for Vehicle Replacement
	-	**0.242**	**-**	**-**	**-**	**-**	**Additional capital programme growth**
2 diesel RCVs (green waste)	-	0.420	-	-	-	-	Existing capital programme

65. As noted in the earlier sections of this report, proceeding with the recommended options will provide the Council with real-world experience of operating an electric RCV and help inform a decision on the best approach to transitioning the remainder of the RCV fleet to low carbon alternatives. Those longer term choices fall outwith the remit of this report, however Table 3 above presents an indication of the costs associated with different vehicle solutions in the future.

Revenue Budget implications of the recommended approach

66. The recommendations within this report would result in an estimated additional £0.180 million revenue expenditure per year, based on the following cost uplift assumptions:

    (i) £0.121m per year from using HVO to fuel vehicles rather than diesel. Information available at the time of writing suggests that ethically sourced HVO currently costs £1.70 per litre compared to £1.28 per litre for diesel.

    (ii) £0.016m per year from using electricity to fuel one electric RCV rather than diesel. This is a prudent estimate based on the daytime electricity tariff secured from October 2023 to October 2025.

    (iii) £0.043m per year of additional borrowing costs associated with the additional capital investment required to purchase one electric (as opposed to diesel) RCV.

67. Table 5 summarises additional revenue budget costs (and funding sources) associated with the recommended options over the next 5 years. Note that no allowance has been included for fuel cost inflation over time.

Table 5: Revenue expenditure associated with recommended options

	2024/25 £m	2025/26 £m	2026/27 £m	2027/28 £m	2028/29 £m	Funding source
Total RCV fleet fuel costs (diesel)	0.562	0.562	0.562	0.562	0.562	Existing approved budget
HVO uplift	0.121	0.121	0.121	0.121	0.121	**Revenue budget growth**
EV charging costs uplift associated with 1 electric RCV	0.016	0.016	0.016	0.016	0.016	**Revenue budget growth**
Servicing costs associated with 1 electric RCV	£0.022 over vehicle lifetime (8yrs)					Existing approved budget
Borrowing costs to fund the additional capital expenditure associated with purchase of 1 EV (1)	0.043	0.043	0.043	0.043	0.043	**Central treasury management budget growth**
Total Revenue Budget Growth	**0.180**	**0.180**	**0.180**	**0.180**	**0.180**	

(1) Borrowing cost associated with £0.242m *additional* capital spend; based on a PWLB maturity loan at 5.48% interest and Minimum Revenue Provision costs over 8 years (est vehicle lifetime). Borrowing cost associated with full purchase cost of vehicle (£0.452m) = £0.082m per annum

Equalities Implications

68. No equality implications have been identifies as arising from the recommendations within this report.

Communication Implications

69. No direct communications implications have been identified as arising from the recommendations within this report.

70. However, subject to the recommendations being agreed, the transition to HVO and a new electric RCV will be promoted with an explanation of why the Council is taking this action.

Environmental Sustainability Implications

71. The carbon reduction potential of the different options considered are set out in the earlier sections of this report.

72. The Council's Environmental Sustainability Strategy sets a target for the Council to reach net zero operational (scope 1 and 2) carbon emissions by 2030.

73. The recommendations within this report to use HVO in [tbc] compatible vehicles has the potential to reduce the Council's total carbon emissions by between 25-33% (around 497 – 645 tCO2e per year).

74. The purchase of one electric RCV rather than a diesel 'like-for-like' replacement have the potential to reduce annual Council carbon emissions by around 24 tCO2e per year (1.2% of total carbon emissions).

75. The option of purchasing three electric RCVs is not preferred for the reasons outlined above however if this option were pursued (and a solution for vehicle charging were implemented) it would contribute to a reduction in Council carbon emissions of around 70 tCO2e per year.

76. It will be important that the Council continues to investigate options for the continuing transition of fleet vehicles to low carbon alternatives (be that electric or other alternative fuels such as hydrogen) and also works to ensure that appropriate charging infrastructure is in place.

Risk Management Considerations

77. As noted in the earlier sections of this report, replacing end of life waste & recycling vehicles is essential to ensure continued high standards of service and to make sure the Council can continue to benefit from the levels of income currently generated by the paid-for garden waste service. In the event that the recommendations within this report are not agreed, diesel replacement vehicles will be sought and funded from the existing capital programme.

78. The use of HVO in compatible vehicles is now relatively widespread within the sector, with nearby authorities already using this diesel alternative. Informal conversations have been held with authorities already using HVO to inform this report's recommendations. Confirmation has also been sought and received from the manufacturers of our vehicles that they are compatible with HVO without modification.

79. There is a small risk that HVO becomes more costly or there are supply chain issues, in this event vehicles can revert back to diesel use (although carbon savings will cease to be realised).

80. Adopting new technology comes with risk. The proposed approach of a phased transition enables the Council to gain real-world experience to inform its future transition plans. Having vehicles that are powered by different means also provides service resilience.

81. There is a risk that the Depot is not suitable for large scale electric RCV charging. A phased transition guards against this risk; as noted above one trial electric RCV has successfully been charged at the Depot, although this will be checked and clarified before any purchase is made. There is a project running to investigate the infrastructure and electrical capacity requirements for further expansion of electric vehicle fleet.

82. There is a risk that for larger vehicles such as RCVs, in the medium to longer term, hydrogen becomes the fuel of choice for vehicle manufacturers. The recommendations within this report do not preclude transitioning other vehicles within the fleet to hydrogen or other low carbon solutions.

83. There is a reputational risk for the Council from not pursuing low carbon options in relation to our vehicle fleet. Every diesel vehicle purchased now will be in service beyond 2030 (Councils net zero target) and therefore emissions from these vehicles will need to be offset, which will come at a cost (although this cost has not yet been quantified).

Procurement/Contract Management and Subsidy Considerations

84. There are no procurement, contract management or subsidy considerations arising as a direct consequence of this report.
85. Procurement of fuel and vehicles is undertaken by the Transport team in line with the Council's Contract Procedure Rules (CPRs).
86. The CPRs stipulate that contracts awarded above a value of £250,000 must have Executive authorisation to award the contract. Thus the purchase of the RCVs requiring replacement in 2023/24 requires Executive authorisation.
87. As noted at paragraph 45, it is recommended that Executive delegate authority - in this instance alone - for the purchase of the 4 RCVs due for replacement in 2023/24. This means that a subsequent report would not be required to be brought back to the Executive; rather the purchase contracts would be entered into by the Head of Neighbourhood Services in consultation with the Executive Member for Neighbourhood Services along with the Chief Finance Officer and the Executive Member for Finance, Governance, and Organisation. The reasons for this recommendation are set out in the Options section of this report, at paragraphs 58 and 59 above.

Consultation

88. Members of the Executive have been informally consulted in the preparation of this report.

Policy Framework

89. The recommendations set out in this report support objectives within the Corporate Plan, specifically, that the Council will "reduce its own environmental impact" including by seeking to reduce emissions while also recognising that "our decision making will sometimes need to balance competing priorities and reflect the financial constraints we face as a Council".
90. The Environmental Sustainability Strategy is a subsidiary document to the Corporate Plan – the recommendations within this paper contribute to the target in the ES Strategy to reach net zero operational (scope 1 and 2) carbon emissions by 2030, the action to continue to transition the Council's vehicle fleet to be fully electric, as well as the objective to limit air pollution.

Background Papers

1. Corporate Plan 2025 - https://www.reigate-banstead.gov.uk/info/20205/plans_and_policies/280/reigate_and_banstead_2025

2. Environmental Sustainability Strategy - Our approach to environmental sustainability | Our approach to environmental sustainability | Reigate and Banstead (reigate-banstead.gov.uk)