CAB3452 Appendix A:

Vehicle purchase business justification:

Business justification for the proposed purchase of nine 12t specialist food waste vehicles is set out below. Assessments of finance, carbon reduction costs, depot infrastructure, availability, and reliability of vehicle options to introduce the new service has led the council to recommend the initial operation of food waste via HVO fuelled collection vehicles. The intention is that as reliability, infrastructure capacity and vehicle availability increase the food waste fleet will move over to electric vehicles.

a. Strategic case:

Implementing a separate food waste collection will allow full compliance with the requirements of the Environment Act 2021 as well as supporting a number of local, regional and national policies which encourage greater participation in recycling, reduction in carbon footprint and a healthier district for residents. It should be noted that this is a legal requirement not an optional service.

Moreover, the introduction of the new food waste service aligns with Council priorities as set out below.

Tackling the climate emergency and creating a greener district	Strongly supports this priority
Vibrant local economy	Supports this priority
Living well	Supports this priority
Your Service, Your Voice	Supports this priority

b. Economic case:

Introducing a separate food waste recycling service will allow our residents to measure the amount of food waste they produce and take active steps to buy less and use more. This will save them money and result in reduced residual waste. Food waste that is incinerated as part of residual waste requires much more energy to burn due to the higher water content of this waste. Conversely, any food scraps that are recycled can contribute to the circular economy through anaerobic digestion to generate fuel or be composted to make soil improver.

Simply recycling food waste could save the district circa 1,900 tCO_2e per year.

Along with introducing the new service, the project aims to implement an education and behaviour change campaign to support residents to access the new service and make the most of it – saving money, reducing waste and recycling more.

Summary of benefits:

- Households save money by buying less and using more.
- Residents reduce their carbon footprint by wasting less and recycling more.
- Food waste is recycled to produce valuable fuel / gas and soil conditioner.
- Improved partnership working and resource sharing with other Local Authorities to promote a joined-up message.
- Recycling food waste could save the district circa 1,900 tCO_2e per year.

The social value of introducing a separate food waste collection service is high. But to achieve the benefits outlined above, there will be costs to the council. These are not necessarily direct financial costs but indirect costs such as: a commitment of time and effort to continue to run an effective service post-implementation and maintain a high standard of communications with residents to get the best recycling rates possible and to support residents to save money and reduce waste.

Having established the benefits of starting to collect food waste for recycling, the Council commissioned the Association of Public Service Excellence (APSE) to review the vehicle models available for this type of service.

After careful consideration of the available vehicles in the UK market, APSE concluded that the market for diesel and HVO operated vehicles is well established and offers substantial choice while only one supplier of electric food waste vehicles would be suitable to perform the rounds required in Winchester.

Although this EV supplier is experienced in the EV market; it should be noted that they are not an OEM (Original Equipment Manufacturer) and as such, assemble the vehicles using a variety of manufactured parts rather than manufacturing the entire vehicle themselves. Consideration would need to be given to the warranty arrangements for such a vehicle.

APSE compared the difference in whole life costs broken down for Diesel vehicles, Diesel vehicles using HVO fuel and Electric vehicles. This included anticipated fuel costs for the mileage to be covered annually, fixed overheads such as road tax and servicing, maintenance, parts, and labour as well as initial purchase price and interest payments.

Because the vehicles are still very new to the market, the current lifespan of a 12.5t electric food waste truck remains untested, however, rental of these vehicles has an anticipated lifespan of 7 years. For this reason, the comparison was made over a vehicle lifespan of 7 years rather than the usual 8 years which is standard for diesel and HVO powered vehicles of this type.

APSE concluded that there will be a cost premium in running electric vehicles, rather than diesel / HVO fuelled vehicles. The difference is set out below:

Table 1 Vehicle whole life costs

Vehicle and fuel type	Total Vehicle Costs over 7 years
12t Diesel fuel	£374,628
12t HVO fuel	£397,070
12.5t Electric	£515,232

The cost of the vehicles is not the only consideration the Council has given to the vehicle type. It has also reviewed the availability of a power supply at the depot to charge electric vehicles. Following a thorough review of the available supply, the Council has been informed that only a small number of electric vehicles could be accommodated using the current power supply, with an additional cost of circa £50,000 to cover the infrastructure costs.

To allow a full fleet of EV's to charge at the depot in future, it is likely that a new sub-station and an increased power supply will need to be installed/ secured. This would constitute a significant capital investment, is not totally within the council's control and requires further investigation.

The reliability of the vehicles is another factor that is considered vital to the decision on vehicle type. Diesel vehicles using HVO have been in use for many years and have well documented lifecycle and maintenance schedules. Should a breakdown occur, the parts are readily available, and maintenance could be completed in-house. Electric vehicles of this type are not old enough to have completed a full lifecycle and do not have a complete documented maintenance schedule.

To understand the implications of this and gather further evidence, the Council has contacted other local authorities who are using these electric food waste trucks. Although the feedback regarding the supplier was very positive, we were cautioned to allow extra time for repairs as these could often take longer than for diesel vehicles and may require specialist services. We were also cautioned to have diesel vehicles as spares / back up to allow suitable cover if the electric vehicles encountered issues during the first few months of operations, which was commonly reported. Biffa has also said that they would not take responsibility for the associated risks of having electric food waste vehicles, this risk and liability would therefore sit with the council should issues occur.

These reliability concerns around electric vehicles will likely be resolved in time as the vehicle market matures and more vehicles of this type are produced and refined.

However, in light of the considerable carbon savings/environmental benefits as well as social benefits associated with providing a food waste recycling service, having a reliable service using dependable, tried and tested and readily available vehicles operated on a low carbon fuel is considered the best approach.

Options have been reviewed and ranked in a table as set out below. This clearly demonstrates that although the council is on a journey to full electrification of the waste fleet, a service operated on HVO will provide excellent carbon savings and a reliable interim solution while electric vehicles are further developed.

Table 2 Options appraisal – Types of vehicles:

Option		Indicative Capital Costs + 10% contingency	Carbon emissions	Service vehicle reliability	Risk of not achieving timescale	Additional costs of implementation	Total
Maximum score		3	3	3	3	3	15
1	HVO x 9	9 x HVO = **£1,336,500** 3	**3.15** tCO_2e per year (9 x 12t HVO) 1	HVO operated vehicles are very reliable, tried and tested. 3	Standard vehicles with multiple manufacturers. 3	No additional infrastructure costs 3	13
2	Elec x 2, + 7 x HVO	£699,600 (2 x EV) + £1,039,500 (7 x HVO) = **£1,739,100** 2	**2.45** tCO_2e per year (7 x 12t HVO) 2	2 EVs is slightly better than 3 but still increases risk of service disruption as they are an untested system. 2	Only one company supplying EVs. Risk slightly reduced due to fewer EVs. 2	**£50k** for EV infrastructure. Additional costs to de-risk Biffa. 1	9
3	Elec x 3 + 6 x HVO	£1,049,400 (3 x EV) + £891,000 (6 x HVO) = **£1,940,400** 1	**2.1** tCO_2e per year (6 x 12t HVO) 3	3 EVs increases risk of service disruption as they are an untested system. 1	Only one company supplying EVs. Higher risk due to more EVs. 1	**£50k** for EV infrastructure. Additional costs to de-risk Biffa – more EVs results in more costs. 1	7

c. Commercial case:

The Council currently has a long-term contract with Biffa for all its waste collection services. To make the most of Biffa's superior buying power and well-established supply chain, it is proposed that Biffa procure the vehicles required for the food waste service. Under the existing contract, Biffa are responsible for the acquisition and maintenance of all vehicles. It is proposed that Biffa will also procure the bins and caddies required for the service.

The council have received grant funding towards the capital costs of the new food waste service (vehicles and bins) and will use this funding to pay the capital costs of the vehicles and other assets necessary for the service from Biffa. Because the funding from DERFA does not cover all the costs necessary for the new service, the council proposes to top up the payment using the capital allocation of £1.78m which was set aside for 25/26 for this purpose. The capital cost for the food waste vehicles will be re-charged to the council by Biffa at cost with no additional mark up.

d. Financial case:

In April 2024 the council received £1,382,034 of non-ringfenced capital funding to support the purchase of capital assets required for the new food waste service under the New Burdens Doctrine. Although the amount allocated does not cover all the costs, it does subsidise the allocated £1.78m set aside in the council's budget for 25/26.

The costs reported in this business case fall within the agreed budget and are set out in full below. It should be noted that although the indicative costs for bins and caddies are included these are not going to be purchased until 2025. The table below demonstrates that all the capital costs, vehicles, bins and caddies as well as infrastructure to charge 1 electric RCV can be afforded through the capital allocation of £1.78m mentioned above.

Options considered:
Biffa have provided estimated costs based on the following three options for procuring the new food waste vehicles:

a) Biffa procure but the Council own the food waste vehicles and lease these to Biffa for use in the new service.
b) Biffa procure and own the food waste vehicles, although these would have to transfer to the Council should the Council not extend the current contract which would incur further costs.
c) A short-term lease of the vehicles is arranged.

When considering the additional costs involved in options b and c it is recommended to proceed with option a – the Council owning the food waste vehicles. This is a change to the current contract where a price is charged per household inclusive of vehicle and financing costs.

Table 3 - Financial Appraisal of options considered:

Food Waste Vehicle Purchase options	Costs to 2029 (£m)	Costs to 2033 (£m)
Option 1 - WCC purchase the 9 food waste vehicles	0.185	0.319
Option 2 - Biffa purchase the 9 food waste vehicles	0.233	0.785
Option 3 - Biffa lease the 9 food waste vehicles	0.480	1.578

Assumptions used in the above estimates:

a) In order to evaluate all options on the same basis option 1 is forecast based on prudential borrowing. If the government funding is allocated to the vehicles in full then there would be no borrowing requirement.
b) Options 2 and 3 are estimated using a forecast annual inflation uplift of 3% and household growth of 2%. This is because the contract is based on a £ figure per household which is then inflated on a monthly basis for household growth and annual basis for inflation.

c) It is assumed that the government funding could be utilised in option 3. Current guidance states that the funding must be used for capital expenditure, and this would rule out the option. Additional clarification is being sought from Defra.

It has been assumed at this stage that all of the government grant funding will be applied to the food waste vehicles rather than in line with the splits provided alongside the confirmation of funding. This will be reviewed further before the vehicles are delivered and paid for in 2025. The table above also assumes that options 2 and 3 are uplifted annually by forecast increases in contract inflation of 3% and household growth of 2%.

Table 4 - Recommended options including additional capital asset costs:

Capital Asset	Estimated cost plus contingency
Vehicles	£1,336,500
kitchen caddies	£86,730
kerbside caddies	£221,760
communal food waste collection bins	£85,313
Infrastructure to support 1 EV	£30,000
Total capital costs	**£1,760,303**

e. Management case:

This project is managed in accordance with the project and programme methodology used by Winchester City Council. This is adapted from Prince2, APM and the Better Business Cases Method. All governance requirements are satisfied through regular Team and Board meetings as well as quarterly submission of highlight reports to the Programme and Capital Strategy Board (PAC), Scrutiny Committee and Performance Panel.

Conclusion:

There is strong business justification for the purchase of nine 12t specialist food waste vehicles to enable separate food waste collections to commence in line with the government deadline of 31st March 2026.

Although the cost of vehicle procurement can be passed to the Council via the existing contract mechanism and charged over a longer period of time, financial appraisals have concluded that the most cost-effective solution for the procurement

of these vehicles is for the Council to pay the capital purchase price as a lump-sum pass-through cost from Biffa.

Biffa have agreed to procure the vehicles on behalf of the Council at cost, with no mark-up. This will allow the Council to benefit from Biffa's extensive knowledge of this market, their superior buying power, their existing relationships with suppliers, as well as benefiting from their experiences and lessons learned elsewhere in the UK.

The vehicles can then be leased back to Biffa for use in the food waste collections service. Biffa will be liable for maintenance and repair of these vehicles and if the contract is not extended in 2029, the vehicles will be returned to the council as a capital asset with a net book value of circa £700,000. These vehicles can then be sold at market rate or utilised in a food waste service with another contractor.