

Executive Report

Ward(s) affected: n/a

Report of Director of Environment

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Date: 22 October 2019

Replacement of Dial a Ride mini buses

Executive Summary

The Council's Dial a Ride (DAR) mini buses are approaching five years of age and the Community Care Service has asked us to review replacement options.

We have looked at three options:

1. Replace with a new electric fleet
2. Replace "like for like"
3. Delay replacement of the fleet for 2-3 years

The conclusion reached is that electric vehicles provide a beneficial environmental solution at an affordable financial cost.

Recommendation to Executive

- (1) That Option 1 – the proposed purchase of ten new electric Mini Buses for the DAR service – be approved.
- (2) That the transfer of £820,000 from the provisional to the approved capital programme, be approved.

Reasons for Recommendation:

To ensure an up to date and reliable fleet for this service and reduce the Council's vehicle emissions.

1. Purpose of Report

- 1.1 To provide the Executive with the information necessary for it to review the options available in relation to the replacement of the Council's DAR fleet.

2. Strategic Priorities

- 2.1 This proposal contributes towards a sustainable local environment by the use of non-polluting electric vehicles for one of the Council's front-line services. We calculate there

will be a reduction of CO2 emissions from fuel of 52,400kg per year (or 366,800kg CO2 over the life of the vehicles). There would be an improvement in air quality and a positive impact on the Council's reputation.

3. Background and Issues

- 3.1 The ten DAR minibuses are approaching five years of age and this is the earliest point we would consider replacement. At five years, in good condition, we would expect a high resale value. After this time reliability and value will decline.
- 3.2 The Service would like to introduce fully electric vehicles. Following market research, we have identified new electric vehicles that we believe could replace the current diesel-powered vehicles. The procurement and build process would take approximately one year.
- 3.3 Diesel vehicles are cheaper to purchase but electric vehicles are cheaper to run. The cost of a new diesel minibus is approximately £50,000 compared to an electric minibus at approximately £79,000. There is a further cost of £30,000 required to be spent on charging infrastructure. In total, a fleet of ten DAR vehicles with charging infrastructure would cost an additional £320,000 to purchase.
- 3.4 However, when the cost of fuel and servicing for the diesel variant over the life of the vehicle is taken into account, the cost difference reduces significantly. For example, at an annual mileage of 13,000 miles, a diesel-powered vehicle would cost £2,400 to fuel. An equivalent electric powered vehicle would cost £400 to cover the same distance. This saving of £2,000 per vehicle, per year plus other savings on road tax, servicing and maintenance means that the operating cost of an electric fleet will be around £187,000 less over a seven-year life. This produces a net additional cost of £133,000 over a 7-year life (£1,900 per vehicle per year).

The calculations are set out in table 1 below:

Table 1 – comparison of diesel versus electric DAR minibus replacement

	Option 1 (Electric) £	Option 2 (Diesel) £
Purchase cost	790,000	500,000
Fuel	28,000	168,000
Infrastructure	30,000	Nil
Servicing	5,000	30,000
Road fund licence	Nil	22,000
Total Over 7 Years	853,000	720,000
Additional cost per year of electric fleet	£19,000 or £1,900 per vehicle	

- 3.5 The average daily mileage of our minibuses is 50 miles, which means we would not need to charge the buses every day. This, along with multiple charging options available on the Council's property estate means the risk of services being affected by loss of power is low.

4. Consultations

- 4.1 This electric fleet option has been developed in collaboration with the Community Care Services Manager

5. Equality and Diversity Implications

- 5.1 This duty has been considered in the context of this report and it has been concluded that there are no equality and diversity implications arising directly from this report.

6. Financial Implications

- 6.1 Option 1 – There are increased capital costs of around £320,000 associated with the purchase of electric vehicles over conventional diesel models. These include the vehicle purchase price and installation of charging infrastructure. However, we anticipate operational savings on fuel and servicing of approximately £187,000 over the 7-year expected life of the vehicles. This means that the net additional costs of moving to this approach are in the region of £19,000 per year for the fleet of ten mini buses.
- 6.2 Option 2 – Replacing the fleet like for like is the “as is” model and would be in line with current and medium-term financial projections.
- 6.3 Option 3 – Extending the life of the current fleet is possible and at five years old this is the earliest we would generally consider replacing a fleet. It is not unusual for a fleet like this to last reliably for at least seven years; however, the operating costs of the fleet are likely to increase, and reliability and residual values will decline. Offset against this would be the benefits of delaying a purchase and the related savings of interest on the capital required to replace the fleet. However, if we decide to delay replacement, we would expect the total fleet operating costs for the next two years to be broadly in line with existing budgets. There will still be a need to replace this fleet within 2-3 years.
- 6.4 If Option 1 is agreed, we will apply for funding support from the Salix fund. This fund provides interest free loans for energy efficiency projects and is available to all public sector organisations including schools and academies, higher and further educational institutions, emergency services, hospitals, leisure centres, local authorities and the NHS. Early discussions with Salix have received positive feedback and an indication that we are likely to be successful in attracting interest free capital funding of approximately £170,000.
- 6.5 We anticipate a capital receipt for the existing fleet when we replace them. This is likely to generate between £100,000 and £150,000. Capital receipts from vehicle sales are returned to our capital fund to reduce the need for future borrowing. This capital receipt along with the likely Salix funding actually means that in the event of Option 1 being approved the majority of extra capital investment needed for an EV fleet would come from capital receipts and an interest free loan, rather than from increased borrowing.

7. Legal Implications

- 7.1 Procurement of the vehicles will be undertaken in accordance with the Council's Procurement Procedure Rules.

8. Human Resource Implications

- 8.1 There will be a need to undertake some training due to the change in vehicle and driving style needed to maximise the benefits and range of an electric vehicle.

9. Summary of Options

- 9.1 Option 1 - replace current fleet of buses with new Electric vehicles
Option 2 - replace current fleet of buses with new Diesel vehicles
Option 3 - delay replacement of the fleet for 2-3 years

10. Conclusion

- 10.1 There are environmental benefits from procuring electric vehicles. These include a reduction in CO2 emissions from fuel of 52,400kg per year (or 366,800kg CO2 over the life of the vehicles). There would be an improvement in air quality and a positive impact on the Council's reputation.
- 10.2 There are infrastructure costs involved with the transition to electric vehicles. Although this cost will need to be met at some point in the near future in any case with the planned removal of purely fossil-fuelled vehicles from the market by 2040. The infrastructure can be used for other electric vehicles purchased in the future.
- 10.3 Option 1 is financially more expensive, but it is affordable, especially as Salix funding and capital receipts will significantly reduce the additional borrowing requirement. We are conscious that the price gap between conventional and electrically powered vehicles is likely to narrow over time so a delay on financial grounds is possible, but the investment will be necessary at some point in the near future. So, we can delay (Option 3), using the existing fleet, for a further 2-3 years but must replace the fleet within three years to minimise any risk to service delivery.
- 10.4 Option 2 would effectively commit the Council to at least five more years of diesel power for this fleet and given the speed of change in the industry and the Council's commitment to reducing our emissions, this would be the least optimal choice.
- 10.4 On balance, the climate change contribution and setting a strong positive example are important factors when stacked against the additional costs. Option 1 is therefore recommended.

11. Background Papers

None

12. Appendices

None