WARWICK DISTRICT COUNCIL	**Executive – 13th January 2016**	**Agenda Item No. 13**

Title	Electric Vehicles and Charging Infrastructure
For further information about this report please contact	Susan Smith Sustainability and Climate Change Officer susan.smith@warwickdc.gov.uk 01926 456721
Wards of the District directly affected	None
Is the report private and confidential and not for publication by virtue of a paragraph of schedule 12A of the Local Government Act 1972, following the Local Government (Access to Information) (Variation) Order 2006?	No
Date and meeting when issue was last considered and relevant minute number	Not applicable
Background Papers	OLEV 'ULEV Readiness' grant offer letter

Contrary to the policy framework:	No
Contrary to the budgetary framework:	No
Key Decision?	No
Included within the Forward Plan?	Yes
Equality Impact Assessment Undertaken	No

Officer/Councillor Approval		
Officer Approval	**Date**	**Name**
Chief Executive/Deputy Chief Executive	17/12/15	Chris Elliot
Head of Service	17/12/15	Richard Hall
CMT	21/12/15	Chris Elliot / Andrew Jones / Bill Hunt
Section 151 Officer	17/12/15	Mike Snow
Monitoring Officer	17/12/15	Andrew Jones
Finance	17/12/15	Mike Snow
Portfolio Holder(s)	22/12/15	Cllr Moira-Ann Grainger
Consultation & Community Engagement		
n/a		
Final Decision?		Yes
Suggested next steps (if not final decision please set out below)		

1. Summary

1.1 The Council has secured funding from the Department of Transport's Office of Low Emission Vehicles (OLEV) to cover 75% of the cost of leasing five electric vehicles for use as pool cars for an initial period of two years and installing associated charging infrastructure. Executive is asked to approve the expenditure to cover the non-funded project costs, which it is anticipated will be recouped through avoided business mileage payments.

2. Recommendations

2.1 It is recommended that approval be given for expenditure of approximately £27,000 to cover the Council's contribution to the costs of leasing and operating five electric vehicles and installing charging infrastructure, funded from the 215/16 Contingency Budget.

2.2 Executive is requested to note that, under the terms of the external funding secured for this project, the vehicle models as set out in paragraph 8.1 were stipulated by the funders.

3. Reasons for the Recommendation

3.1 Warwick District Council has secured 'ULEV Readiness' funding from the Department of Transport's Office of Low Emission Vehicles (OLEV) to cover 75% of the cost of leasing five electric vehicles for a period of two years and installing associated charging infrastructure.

3.2 The funding process required an assessment to be carried out by the Energy Saving Trust on behalf of OLEV of the Council's business travel needs and the current electric vehicle market, in order to identify the most suitable models. As a result of this process an offer was made to the Council, with vehicle types and models being proscribed.

3.3 Under the terms of the funding, the vehicle types were proscribed, based on an. The Council was not involved.

3.4 If the Council wishes to take up the funding offer, the additional required project expenditure, including the remaining 25% of the vehicle lease and charging infrastructure costs together with vehicle insurance and fuel/electricity, must be met.

3.5 The Council's contribution will be offset by savings in staff mileage claims. It is estimated that, over the two-year life of the project, approximately 66,000 miles currently claimed as business travel will be displaced, resulting in net savings of approximately £3,400, as detailed in Section 5.

3.3 By providing an alternative form of transport to employees' own vehicles for the purpose of business travel, the project will support the current staff terms and conditions review.

3.4 The initiative will provide an opportunity for the Council to trial both the use of pool cars and electric vehicle technology at minimal financial risk.

3.5 The use of electric vehicles will reduce the Council's impact on local air quality, thereby making a positive contribution to meeting air quality objectives, as detailed in Warwick District Council's Air Quality Action and described in Section 4.1.2 below.

3.6 The project will provide an opportunity for the Council to show local leadership on the use of sustainable forms of transport and to gain positive publicity.

3.7 Use of these vehicles will result in a predicted reduction in the Council's carbon footprint of approximately 20 tonnes of CO_2 over the 2-year lifespan of the project.

4. Policy Framework

4.1 Policy Framework

4.1.1 *Sustainable Community Strategy*

This proposal is fully consistent with the Sustainable Community Strategy (SCS). In particular, the aims, priorities and actions of the Sustainability cross-cutting theme of the SCS include the following:

- Improve the energy efficiency of our operations. This is motivated by the need both to reduce carbon dioxide emissions in order to combat climate change and to achieve cost savings. This initiative will make a contribution to both of these;
- Ensure our services adapt to and have greater resilience to the impacts of climate change. By having available vehicles that utilise alternative fuel sources, the organisation will achieve a level of resilience, for example as a result of decreased availability of conventional fuels;
- Promote sustainable transport options to the wider community and to our own staff.

4.1.2 *Air Quality Action Plan*

The Council recently published a new Air Quality Action Plan, the purpose of which is to detail how nitrogen dioxide levels will be reduced in Warwick District in order to meet national air quality objectives. The plan sets out seven broad actions, including Action 2: actively promote low emission vehicles and supporting infrastructure. A number of associated measures have been identified, including to 'move the Warwick DC fleet to electric vehicles where practicable'.

The Low Emission Guidance for Developers published in April 2014 forms part of the Air Quality Action Plan. It includes details of electric charging infrastructure required to be provided for new development.

4.1.3 *Strategic approach to sustainability and climate change*

Warwick District Council's strategic approach to sustainability and climate was approved by Executive in January 2015. One of the strategic aims identified is to 'address our own impacts relating to sustainability and ensure our physical assets and operations remain resilient in the face of a changing climate'. This is backed up by a number of key objectives, including objective 2.4: to reduce transport-related carbon dioxide emissions. For each objective an action plan

detailing how it is to be achieved has been produced. The plan for objective 2.4 includes an action (2.4.4) to assess the business case for electric vehicles.

4.2 **Fit for the Future**

The proposed initiative aligns with the three strands of Fit for the Future as follows:

- Service – the introduction of pool cars will contribute to more effective service delivery by making available an alternative form of transport to the use of employees' own vehicles, thereby increasing business resilience, particularly in times of crisis;

- People – this project is wholly consistent with bringing about cultural change within the organisation;

- Money – this project is predicted to result in cost savings, as described in Section 5 below, thus contributing, albeit in a modest way, to the financial sustainability of the organisation.

4.3 **Impact Assessments**

It is not considered that these proposals have any adverse impact on equality considerations.

5. **Budgetary Framework**

5.1 This proposal does not impact on the Council's Budgetary Framework. Overall, the project is predicted to give approximate net savings to the Council of approximately £3,400, which represents the difference between the outlay to purchase and operate the vehicles and charging infrastructure, and the avoided business mileage costs. However, the required financial contribution cannot be met using existing budgets.

5.2 A summary of the project whole-life costs is given in Table 5.2.1.

Table 5.2.1: Project whole-life costs

	2 x Nissan Leaf Visia+ (with on-board charger)	2 x BMW i3 REX	1 x Peugeot Partner 636 SE 67	Total
Lease (24 months)[1]	**£12,212**	**£16,944**	**£7,152**	**£36,308**
Charge points (one-off cost)[2]	**£9,300**	**£4,700**	**£5,000**	**£19,000**
Other				
- Charging cables (one-off cost)[3]	£230	£260	£115	£605
- Insurance[4]	£3,600	£3,600	£1,800	£9,000
- Electricity / fuel[5]	£640	£1,600	£296	£2,536
- Lining and signing bays (one-off cost)[6]	£200	£200	£100	£500
- Vehicle livery (one-off cost)[7]	£200	£200	£100	£500
Total other	**£4,870**	**£5,860**	**£2,411**	**£13,141**
Total (all costs)	**£26,382**	**£27,504**	**£14,563**	**£68,449**
Met by:				
ULEV Readiness Funding[8]	**£16,134**	**£16,233**	**£9,114**	**£41,481**
WDC contribution	**£10,248**	**£11,271**	**£5,449**	**£26,968**

Notes:

1. Lease costs are based on look-up values obtained from the Crown Commercial Services Vehicle Lease and Fleet Management framework portal (framework RM3710) and as such are actual but maximum prices. The quoted values include service, maintenance and repair, plus breakdown cover. (Note that these vehicles attract £0 Vehicle Excise Duty.) However, the intention is to run a mini-competition using RM3710, so the prices achieved should be lower than these. At the end of the two-year lease period, the Council will have the option of either returning the vehicles or negotiating an extension.

2. Charge point costs are based on a quote provided by EDF as part of the fleet review process. They include installation, provision of telemetry, maintenance and a three-year warranty. As with the vehicles, the intention is to go out to the market, so the quoted costs are a maximum and it is likely that better prices will be achieved in practice.

3. Charging cable prices were obtained by carrying out an online search and represent the most favourable that could be found at the time. However, as with the leasing and charge point costs, in reality a better price may be achieved.

4. Insurance costs are based on the Council's rates for its existing fleet.

5. Electricity and fuel costs are based on the estimated mileage for each vehicle (see Table 5.3.1), converted to electricity / fuel usage (assuming 26.3 kWh/100 miles and 45mpg respectively). A unit cost of £0.11/kWh for electricity and £1.05/L for petrol (for BMW i3 cars only, as the other models are fully electric) was then applied.

6. Bay marking costs are based on information supplied by Housing and Property.

7. Vehicle livery costs assume the use of magnetic Warwick District Council logos and are approximate, being based on the price of the same logos utilised on other Council vehicles.

8. ULEV Readiness funding covers 75% of vehicle leasing (2-years) and charge point costs.

In addition to the items referred to in Table 5.2.1 the vehicles are required to be fitted with telemetry, in order for data relating to usage to be collected. Under the terms of the funding, they are also required to display the 'Go Ultra Low' logo. However, as both of these items are 100% funded (and their cost is not yet known), they are not included in the analysis above.

5.3 Details of the avoided mileage costs are shown in Table 5.3.

Table 5.3.1: Avoided business mileage costs

	2 x Nissan Leaf Visia+ (with 6.6kW on-board charger)	2 x BMW i3 REX	1 x Peugeot Partner 636 SE 67	Total
Assumed annual mileage[1]	5,000 per vehicle 10,000 total	9,000 per vehicle 18,000 total	5,000	33,000
Equivalent daily mileage (based on 250 working days per year)	20 per vehicle	36 per vehicle	20 per vehicle	
Assumed business mileage rate for displaced mileage[2]	£0.46	£0.46	£0.46	
Avoided annual mileage costs per vehicle	£2,300	£4,140	£2,300	
Total avoided mileage costs over lease period	**£9,200** (for 2 vehicles)	**£16,560** (for 2 vehicles)	**£4,600**	**£30,360**
WDC contribution (from Table 5.2.1)	**£10,248**	**£11,271**	**£5,449**	**£26,968**
Net savings	**-£1,048**	**£5,289**	**-£849**	**£3,392**
Annual break-even mileage	5,570 per vehicle 11,140 total	6,126 per vehicle 12,250 total	5,923	29,313
Daily break-even mileage (based on 250 working days per year)	22 per vehicle	25 per vehicle	24 per vehicle	

Notes:

1. Annual mileage driven in each vehicle was estimated by looking at existing business mileage data and discussing existing and likely future staff business travel patterns with relevant team leaders (Lifeline and Neighbourhood teams in particular).

2. The assumed mileage rate is a weighted average of mean current rates paid and the proposed future (HMRC) rate, calculated on the basis that the proposed vehicles will be available from April 1st 2016, whilst the recommendations of the terms and conditions review will not be implemented until Q2 2016-2016 at the earliest.

5.4 It is proposed that the £27,000 costs of the scheme shown in table 5.2.1 are met from the current Contingency Budget which currently has a balance of £100,800. The savings in mileage shown in table 5.3.2 will be monitored throughout the year and included in future Budget Review reports.

5.5 It will be noted that the anticipated mileage savings do not exceed the lease charges for the period. Consequently, without the grant funding, the scheme would not be financially viable. The scheme will need to be reviewed within the two year period taking into account actual mileage savings to confirm whether there will be any financial benefit in this scheme or a similar one continuing beyond the initial two year period.

6. Risks

6.1 The main risks of the proposals and their associated mitigation measures are shown in Table 6.1.1 below:

Table 6.1.1: Risks and mitigation measures

Risk	Mitigation measure(s)
Vehicles do not get anticipated level of usage and therefore savings are lower than anticipated	Estimates of mileage assumed for business case are conservative. In practice they are likely to be higher, particularly in the case of the Lifeline team Continually monitor vehicle usage, and gain support of service heads to encourage their teams to utilise the vehicles, targeting specific service areas / roles where a pool car is likely to yield maximum savings Ensure robust procedures are put in place to ensure that the vehicles are properly managed and that responsibilities are clearly defined
Costs are higher than anticipated, therefore reducing savings achieved	Vehicle leasing costs should in practice be lower than the costs used for the business case presented here, as the assumed costs are based on individual framework look-up costs, whereas in practice economies of scale should be achievable.
Technology proves to be unreliable, resulting in the vehicles being unavailable for significant periods	Technology is now relatively mature, and vehicles of this type have a good track record in terms of their reliability Ensure that the contract for supply of the vehicles is set up in such a way as to ensure that the organisation is protected against non-availability of vehicles

7. Alternative Option(s) considered

7.1 This is a funded project covering the specific vehicles detailed in this report. It should be noted that, under the terms of the funding, the Council was not offered a choice of vehicles.

7.1 Therefore the only alternative option would be not to proceed with the project. This option is discounted on the basis that, not only would it contradict the Council's agreed Strategic Approach to Sustainability and Climate Change and the Air Quality Management Plan, but it would also result in a lost opportunity to trial the use of pool cars and electric vehicles.

8. Background

8.1 The ULEV Readiness funding process involved a review, carried out by an external consultant, of the current and predicted future vehicle fleet and staff business travel, as a result of which recommendations were made on the number and types of vehicle to be offered. They are as follows:

a. Two Nissan Leaf Visia+ cars (fully electric with on-board charger to enable faster charging), for use as general pool vehicles by staff based at Riverside House

b. One Peugeot Partner 636 SE 67 van (fully electric), for use as a pool vehicle by the Housing and Property Neighbourhood Team

c. Two BMW i3 REX cars (electric with a range-extending petrol engine), for use as pool vehicles by Lifeline staff based at Acorn Court

8.2 In addition, charging infrastructure is offered as follows:

d. One double post-mounted 32 Amp unit located at Riverside House, for the Nissan Leaf cars

e. One single post-mounted 16 Amp unit located at Riverside House, for the Peugeot van

f. One double wall-mounted 32 Amp unit located at Acorn Court, for the BMW i3 cars.

8.3 Under the terms of the funding, we are required to procure the vehicle leases and charging infrastructure during the current financial year. The intention is to use Crown Commercial Services Vehicle Lease and Fleet Management Framework (RM3710) to procure the vehicle leases, as recommended by the funder, in order to secure best value.

8.4 It is anticipated that the two Nissan Leaf cars will be allocated to specific service area managers who will then become responsible for their day-to-day operation, including organising regular vehicle checks (tyre pressures, etc) and valeting as well as maximising their use. The Council, through Health & Community Protection, already has an account with a local garage for the dog warden and pest control vans to use their car wash so this would be extended to include the additional vehicles. The Environmental Sustainability Manager

will act as contract manager, given that Health & Community Protection will have carried out the procurement. This role will include monitoring usage of the vehicles, energy data collection/reporting to ULEV, arranging annual servicing/ad-hoc maintenance, and keeping road tax up to date. In respect of servicing, the chosen supplier will be expected to collect the vehicles from Riverside House and return them.