East Lothian Council

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Document Title	Electric Vehicle Charging Infrastructure Update

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East Lothian Council

REPORT TO: Members' Library Report

MEETING DATE:

BY: Depute Chief Executive - Partnerships and Community Services

SUBJECT: Electric Vehicle Charging Infrastructure Update

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1 PURPOSE

1.1 To advise Members of the current position regarding the number and type of electric vehicle charging points within East Lothian and how the infrastructure has been funded and is being managed.

2 RECOMMENDATIONS

2.1 That Members note the introduction of 5 additional charging points and back office software as part of the Transport Scotland and Energy Trust Initiative to establish a country-wide charging infrastructure network to enable electric vehicles to be driven throughout Scotland.

2.2 That Members note the acceptance of the grant funding for this project and the conditions and statutory obligations that the Council will follow in respect of introducing charging points within the boundary of existing public road network.

2.3 That Members note that use of the charging units will initially be free to the public and car clubs at point of use; however, this will be reviewed through collection of data from the units in the longer term. East Lothian Council may wish to consider the introduction of a charge.

3 BACKGROUND

3.1 On 17th November 2011 grant aided funding was awarded by Transport Scotland for assistance in the purchase of electric vehicles and associated vehicle charging infrastructure. East Lothian Council, in discussion with the Community Planning Partners subsequently purchased 4 electric vehicles and installed 7 charging points – 6 public and one solely for council use - and associated infrastructure. £48K was used to subsidise electric vehicle provision and £ 47K for charging infrastructure.

3.2 The 4 vehicles were purchased by the Council and are primarily located at John Muir House. These are:-

a) 3 Nissan Leafs

b) 1 Ford Azure Connect

3.2 The 7 original charging points were all located on Council or partnership property out with the public road boundary. The sites are as follows:-

a) Community Centre, Bleaching Field, Dunbar

b) Community Centre, Grange Road, North Berwick

c) John Muir House , Haddington – rear of main building

d) Brewery Park Haddington – side of mail room

e) Brewery Park Haddington – located within garages – non public use

f) Sports centre, Newbigging, Musselburgh

g) Queen Margaret University, Queen Margaret Drive, Musselburgh

3.4 The existing charging infrastructure was provided by “Elektromotive Ltd”, Science Park Square, Falmer, Brighton, East Sussex who provide various specifications of equipment ranging from 3kw to 50kw rapid system for private and public access needs.

3.5 Back office software was supplied and installed by the manufacturer and is currently managed and monitored by Paul Ianetta, Manager, Service Manager-Engineering and Roads Services.

3.6 The use of the charging points is currently free of charge at point of use with the exception of the one located within the garages at Brewery park, Haddington, which is a private service.

3.7 On 17th September 2013 Transport Scotland offered further grant added funding to East Lothian Council for the rollout of electric vehicle charging infrastructure for the supply and installation of electric vehicle charging points as part of a wider Scotland network initiative. A further commitment was made in 2014 bringing the total to £82,000.

3.8 Advice from Transport Scotland requires each local Authority to place a rapid charger along the primary road network at approximately 35 mile (56km) intervals. Dunbar consequently is considered a strategic point on the network and identified as a suitable location. A further location at Wallyford has been identified as a reasonable site close to the strategic road network. The locations for the new units are:-

a) 2 bays at the end of the public road between ASDA and the garden centre off Spott road, Dunbar.

b) 2 bays in the Park and Choose car park at Haddington Road, Wallyford.

c) 2 bays to the rear of the former East Lothian Council offices, Quality Street, North Berwick.

d) 2 bays in Gracefield car park, Musselburgh

e) 2 bays in Haddington long stay car park

3.9 2 bays in Bleachenfield Car park All charging points must be located within the existing public road boundary and in compliance with Transport Scotland criteria close to the strategic road network.

3.10 An assessment of the suitability of each site must be undertaken to confirm; a). There is an identifiable need or there is significant community support for additional equipment b). the site is on a public road and maintained by the local roads Authority; c). a reasonably practicable connection can be made to an appropriate power supply; d). the locus is well lit or can be lit and is within an urbanised area. e). the site is not subject to pluvial or fluvial flooding; f). All necessary planning permissions have been obtained; g). The electric charging housing is discreetly coloured and appropriate to the built environment; h). The site is not subject to anti-social behaviour or persistent vandalism.

3.11 The national strategy (Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles) recognises that as this a fledgling industry little growth is likely without government support. Although It is envisaged private organisations will be forthcoming and should be encouraged through the development planning process and incorporated into Road Construction Consents to provide the necessary infrastructure, cognisance should be taken of the sustainable transport benefits and promoted through the Local Transport Strategy and considered as possible mitigation measures to address pollution and vehicular traffic emissions.

3.12 It is acknowledged that opportunities exist with partnering transport organisations to provide infrastructure at key facilities and interchanges. Park and Ride sites and at rail stations (supported by Community Rail Partnerships (CRP)) could be taken forward and Lothian Buses are actively engaged with Volvo to supply two 7900 Electric Hybrid stations in the Musselburgh area, which will allow the switching to electric power through the Air Quality Management Area.

3.13 The use of electric charging points will be closely monitored and the data analysed to understand demand and predict growth. Presently, a charging regime is not being proposed however, the cost of servicing and maintenance outwith the scope of manufacture warrant will have to be borne by East Lothian Council. It is proposed a “free at point of use” arrangement will be budgeted for 2015/16 but thereafter reviewed and the Council advised accordingly.

3.14 Electric car technologies are still in their infancy but significant developments are being made with battery life, power management and general car designs. Car manufacturers are predicting expediential growth and in the longer term, the price point will undoubtedly be lowered towards the mass market so encouraging commercial business venture into the charging market. Accordingly, the Council's responsibilities are only liable over the short term.

3.15 To facilitate the use of electric vehicle charging infrastructure on the public road network, each bay will be clearly marked on road "Electric vehicle only" and accompanied with an appropriately coloured surface treatment to clearly signify a charging point.(Ref 1). A parking "Electric vehicle recharging point only" sign (as per Schedule 3 – Advisory signs and road markings) shall go with the road markings. (Sign currently proposed under The Traffic Signs Regulations and General Directions 2015). To assist disabled user access, each bay will be a minimum of 4 metres wide; however, a local departure may be considered to allow only one bay following a site survey and recognised physical restrictions.

Ref1

Ref 2

3.16 In order to secure funding and to control parking and/or inappropriate use, an Order shall be promoted under the Road Traffic Regulation Act 1984 to restrict the length of stay and prohibit use of the bays by vehicles, other than by electric vehicles, for the purpose of re-charging of the vehicle. The length of stay will be determined by maximum time period for a slow charge. This will be confirmed upon purchasing of equipment. A permit holder scheme will be promoted for car clubs and individually electric vehicle owners prohibiting unsolicited parking. There is no permissible or competent way to designate a bay solely for the use by an individual organisation within the public road boundary.

3.17 The marketplace for Electric vehicle Charging infrastructure is relatively small but growing. Development by the major car manufacturers have resulted in 3 charging standards CCS, CHAdeMO and Type-2, which provide AC, low voltage and rapid charge options. The market is moving towards CCS standardisation in Europe, however, regional variations in North American and China may persist.

3.18 To mitigate replacement and/or obsolete equipment risks, a robust assessment of the performance specification quality returns has be undertaken as part of the procurement process. In this regard, there were 4 approved suppliers / installers for electric vehicle charging infrastructure:

a) ABB

b) APT Controls

c) Everwarm

d) Siemens

3.19 To meet the very restrictive delivery timescale, procurement of the equipment was made through the EST Framework. An assessment of the tender returns received recommended Everwarm as the preferred supplier.

3.20 Accordingly, 4 no. 22Kw units (including 3 years maintenance) have been purchased at £20,000, 2 no. 50Kw units (including 3 years warranty and maintenance) at £65,024, the cost of the enabling works is set at £2,682, the electricity supplies and connection costs from Scottish Power are £45,550 and the Civil Works (Road Services) is estimated to be £20,000.

3.21 The lead in times for Scottish Power connections varies considerable, however, it is expected the charging units will be made available for public use early summer 2015.

4 POLICY IMPLICATIONS

4.1 The recommendations will form part of the Council's Sustainability Policy for electric vehicles and charging infrastructure.

5 EQUALITIES IMPACT ASSESSMENT

5.1 An Equalities Impact Assessment has been completed and no negative impacts have been found.

6 RESOURCE IMPLICATIONS

6.1.1 Financial – Transport Scotland have provided funding for this project in two tranches to the value of £82,000 – this must be committed and spent by 31st March 2015.

6.1.2 The Energy Savings Trust has also identified funding for an additional two 22kw charging units currently estimated at £20,000 however it has been confirmed that the full costs of these two units will be approved.

6.1.3 Discussions with Transport Scotland have acknowledged a general under spend in the block grant and that the additional costs will be met by the fund.

6.2 Personnel - None

6.3 Other - None

7 BACKGROUND PAPERS

7.1 Transport Scotland letters of funding

7.2 Energy Savings Trust letter of funding

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DATE	21 November 2014