Transport and Environment Committee

10.00 am, Tuesday, 12 January 2016

Delivery of the Local Transport Strategy 2014-2019: Proposals for a Pilot of On–Street Electric Vehicle Charging Points in the Marchmont and Sciennes Area

Item number	7.4
Report number	
Executive	
Wards	10 - Meadows/Morningside 15 - Southside/Newington

Executive summary

At its meeting on 17 March 2015, Committee authorised the Director of Services for Communities to proceed with preparations for a pilot of on-street electric vehicle charging, in partnership with Transport Scotland and to report back with details of the pilot scheme. This report, on the preparations and public consultation has been drafted in response to this remit from Committee.

Links

Coalition pledges	P50, P51
Council outcomes	CO18, CO22, CO26
Single Outcome Agreement	SO2

EDINBVRGH
THE CITY OF EDINBURGH COUNCIL

Report

Delivery of the Local Transport Strategy 2014–2019: Proposals for a Pilot of On–Street Electric Vehicle Charging Points in the Marchmont and Sciennes Area

Recommendations

1.1 It is recommended that the Committee:

1.1.1 notes the outcome of the public consultation in the Marchmont and Sciennes Community Council area on the potential locations of charging points;

1.1.2 authorises the installation of on-street electric vehicle charging points as a pilot scheme in the Marchmont and Sciennes Community Council area; and

1.1.3 gives approval to commence the statutory procedures to make the necessary Traffic Regulation Order variations in support of the installation of on–street charging points in the pilot area, which will be subject to further consultation.

Background

2.1 At its meeting on 17 March 2015, Committee agreed a report entitled "*Delivery of the Local Transport Strategy 2014-2019: Priorities for Installing On-Street Electric Vehicle Charging Points in Edinburgh*". This authorised the Director of Services for Communities to proceed with preparations for a pilot of on-street electric vehicle charging, in partnership with Transport Scotland and to report back with details of the pilot scheme.

2.2 Strategically, sustainable transport is one of the five programme areas included in the city's Sustainable Energy Action Plan (SEAP). The pilot project will help encourage electric vehicles and increase the number of charging points across the city, a key part of the Council's contribution to the SEAP.

Main report

3.1 Electric vehicle users can access free and publicly available off-street charging points in a variety of locations in Edinburgh. Furthermore, electric vehicle users with driveways and private parking can obtain funding grants from the Energy Savings Trust for the installation of domestic charging points. Employers can also use Energy Savings Trust grants to install charging points at workplaces. On a national, strategic, level, Transport Scotland has funded a network of rapid chargers at sites close to trunk roads which support long distance journeys made by electric vehicles. Examples include Ingliston and Hermiston Park and Ride sites.

3.2 One group not specifically catered for are those residents in, or visiting, areas of high density development. They are unlikely to have access to driveways or private parking facilities, on which to locate charging points.

3.3 A pilot of on–street electric vehicle charging has been proposed in the Marchmont and Sciennes Community Council area. The objective of this pilot is to assess:

- the demand for electric vehicle charging points in a high density area;
- approaches to maintaining a turnover of spaces for charging;
- public reaction to the pilot scheme;
- the streetscape impacts;
- issues involved in power supply; and
- the impact on drivers with mobility problems.

3.4 The report to Committee, on 17 March 2015, proposed that car club parking bays should be part of the pilot project. It is therefore proposed that the City Car Club form part of this pilot scheme.

3.5 A public consultation, on the proposed pilot of on-street electric vehicle charging points within the Marchmont and Sciennes Community Council area, south of Warrender Park Road and Sciennes Road, took place from 19 October to 18 November 2015. The area to the north of Warrender Park and Sciennes roads was part of the consultations on the Parking Action Plan, which may involve changes to the parking places. This consultation was therefore designed around the Parking Action Plan.

3.6 The consultation featured on the Council's consultation hub and included an online questionnaire and two public drop-in events. The consultation generated 77 responses of which 84% supported the proposed pilot scheme. Of these 71% were Residents' Parking Permit holders and 19% were City Car Club members. Analysis of the survey results is included in Appendix 1.

3.7 The consultation process, which involved the City Car Club, identified the general locations where the demand for electric vehicle charging is concentrated. The final locations will be determined following discussions with the Area Roads Manager, Street Lighting, Parking Operations and utility companies.

3.8 The United Kingdom Department for Transport's Vehicle Statistics team defines ultra low emission vehicles as those with tailpipe emissions of less than 75g/kilometre of carbon dioxide. It is able to provide information on the number of ultra low emission vehicles in the Edinburgh area, 129 as at March 2015, but not for a smaller area. Therefore, as part of the public consultation, people were asked if they are already electric car users, of those surveyed eight, 10%, indicated that they were owners of electric vehicles. This figure can be compared with the survey results at the end of the pilot period, to ascertain if more people resident in the pilot area own electric vehicles. 75% of the respondents felt that the pilot scheme would lead them to consider owning an electric vehicle.

3.9 A map of the consultation area, showing the areas of demand for both the publicly accessible and car club vehicle charging points is attached, as Appendix 2. The proposed parking fees and permitted time for charging at each bay are detailed in Appendix 3.

3.10 The location of on–street charging points could affect the desire of blue badge holders to become electric vehicle users. If a disabled person feels that the charging points are too far from their home, they will be more likely to continue using conventional vehicles. To inform the Equalities and Human Rights Impact Assessment, the consultation included a question for blue badge holders. However, no current Blue Badge Holders responded to the consultation.

3.11 A detailed plan and programme for the pilot scheme is attached as Appendix 4.

3.12 Transport Scotland has agreed, in principle, to fund 50% of the cost of this pilot in the 2016–2017 financial year. As with previous grants of this type from Transport Scotland, electricity is provided free of charge for the duration of the pilot.

3.13 Advice from Transport Scotland is that no more than five, two–headed, charging points should be installed in a pilot scheme of this size. The proposal for the pilot is to use two, adjacent, parking bays at five locations, to act as charging only areas.

3.14 It is anticipated that, in line with the current practice for electric vehicle charging points purchased by the Council, those in the pilot scheme will be purchased with a maintenance warranty of up to two years.

3.15 When parking spaces are allocated to the charging of electric vehicles, there is the risk that the spaces may be occupied by conventionally powered vehicles. Authorisation to commence the process of making Traffic Regulation Orders is therefore being sought to reserve these spaces for plug–in electric vehicles.

3.16 Monitoring arrangements will be put in place to collect and collate information on the pilot scheme. A public consultation will be undertaken after the pilot has been in place for a year. A further report on progress will be made to Committee in autumn 2017, including the public reaction to the pilot. It will also include proposals for implementing the further installation of on – street charging points, a review of the tariff for electricity used at charging points, both within the Marchmont and Sciennes pilot area and the rest of the Council area. It will also cover ongoing maintenance arrangements.

3.17 In the longer term, there is a possibility that the demand for electric vehicle charging starts to exceed the capacity available. If this situation should develop, consideration will be given to the introduction of a formal booking system for access to charging points.

Measures of success

4.1 The pilot scheme will be successful if the monitoring process identifies solutions to the challenges discussed in paragraph 3.3, for use in defining the way forward with on–street electric vehicle charging for the Council and Transport Scotland. During the pilot, quantitative information on use of charging points will be collected through back office functions and qualitative reactions assessed through correspondence from residents and visitors to the area. Following the first year of operation a more formal assessment of public reaction will be carried out.

Financial impact

5.1 The installation costs of the pilot scheme are estimated at £40,000. Transport Scotland has agreed in principle to contribute 50% of the cost. The remaining balance will be met from the Planning and Transport budgets, spread over the 2015-2016 and 2016–2017 financial years. Vehicles parked in the electric vehicle charging bays will be required to pay parking fees applicable in the area.

5.2 Each of the charging points will be equipped with a new, metered, electricity supply. This consumption can be compared with the back office information on electricity consumed to ensure specific payments for the pilot scheme can be made to the selected supplier. The cost of the electricity consumed for charging during the pilot will be monitored. This will help inform future policies on providing charging points in other areas of the city.

5.3 The cost of electricity used for charging vehicles, during the pilot period, is projected to be around £1,250 in the 2016–2017 and £2,400 in the 2017–2018 financial years. It will be met from a Planning and Transport revenue budget. Should the take up of electric vehicle charging points become widespread the resource implications of this would be re-considered.

Risk, policy, compliance and governance impact

6.1 The recommendations in this report fit with the City's Sustainable Energy Action Plan, which was ratified by the Council in November 2015.

6.2 If the recommendations in this report are not accepted the impact would be:

- a reduced ability to meet the targets in the Council's Local Transport Strategy 2014-2019; and
- a reduction in progress in meeting air quality targets.

Equalities impact

7.1 If authorised, a pilot of on-street electric vehicle charging points will be a step in the process of promoting the use of low emission electric vehicles and thereby reduce the emissions of air pollutants from road traffic. This, in turn, will reduce the adverse health impacts of these pollutants.

7.2 Disability: to mitigate any impact on mobility impaired car uses. When planning the detail of installing on-street electric vehicle charging, consider needs of people with mobility difficulties who need to use plug-in cars.

Sustainability impact

8.1 The impacts of this report in relation to the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties have been considered, and the outcomes are summarised below. Relevant Council sustainable development policies have been taken into account and are noted at Background Reading later in this report.

8.2 The proposals in this report will reduce carbon emissions because it will encourage the uptake of plug–in electric vehicles, which can use electricity from renewable sources, linking with the city's SEAP.

8.3 The proposals in this report will contribute to increasing the city's resilience to climate change impacts, because on-street charging points offer a dispersed pattern of supplying renewable energy. The dispersal will reduce the risk of electric vehicles being unable to obtain any power in the event of disruption by climate change impacts.

8.4 The proposals in this report will help contribute to achieve a sustainable Edinburgh because the enhanced use of electric vehicles, in place of internal combustion engined vehicles, will reduce emissions of air pollutants from road traffic. This will promote personal wellbeing by reducing the health impacts of road transport.

8.5 The proposals in this report will help achieve a sustainable Edinburgh because encouraging the use of electric vehicles will enhance security of energy supply, as the electricity can be generated from renewable sources within the United Kingdom.

8.6 The proposals in this report will help achieve a sustainable Edinburgh because a pilot of on–street electric vehicle charging points, in a densely developed urban area, will assist in identifying issues that need to be addressed in encouraging the use of plug–in electric vehicles.

8.7 Relevant Council sustainable development policies have been taken into account and are noted at Background Reading later in this report.

Consultation and engagement

9.1 A public consultation has been carried out, in the Marchmont and Sciennes Community Council area, on the potential locations for on–street electric vehicle charging points.

Background reading/external references

Local Transport Strategy 2014–2019:

http://www.edinburgh.gov.uk/downloads/file/878/local_transport_strategy_2014-2019

Climate Change Framework:

http://www.edinburgh.gov.uk/downloads/file/2027/city_of_edinburgh_council_climate_change_framework_2007

Sustainable Edinburgh 2020:

http://www.edinburgh.gov.uk/info/20142/sustainable_development_and_fairtrade/841/sustainable_edinburgh_2020

Transport 2030 Vision:

http://www.edinburgh.gov.uk/downloads/download/120/transport_2030_vision

Sustainable Energy Action Plan

www.edinburgh.gov.uk/seap

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Links

Coalition pledges	**P50** - Meet greenhouse gas targets, including the national target of 42% by 2020.
	P51 - Investigate the possible introduction of low emission zones.
Council outcomes	**CO18** - Green – We reduce the local environmental impact of our consumption and production.
	CO22 - Moving efficiently – Edinburgh has a transport system that improves connectivity and is green, healthy and accessible.
	CO26 - The Council engages with stakeholders and works in partnership to improve services and deliver on agreed objectives.
Single Outcome Agreement	**SO2** - Edinburgh's citizens experience improved health and wellbeing, with reduced inequalities in health.
Appendices	**Appendix 1**: Results of the Public Consultation on a Pilot of On-Street Electric Vehicle Charging.
	Appendix 2: Map of the Marchmont and Sciennes Community Council area, showing areas of demand for on–street electric vehicle charging points.
	Appendix 3: Proposed parking fees, permitted time for charging and the City Car Club.
	Appendix 4: Plan and Programme for the Pilot of On–Street Electric Vehicle Charging.

Appendix 1: **Results of the Public Consultation on a Pilot of On-Street Electric Vehicle Charging.**

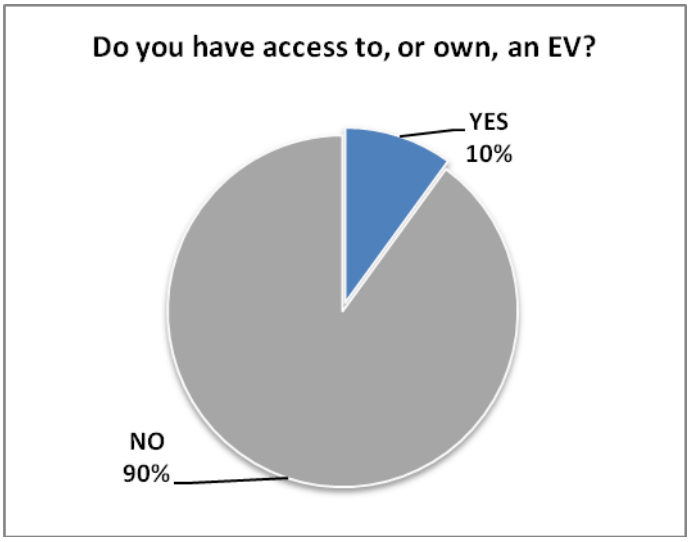
The Council consulted the public on the proposals from 19 October to 18 November 2015. The main component of the consultation was an online survey.

The highlights of the main survey content are analysed and summarised below;

Question;

Does anyone in the property own or have access to an electric vehicle?

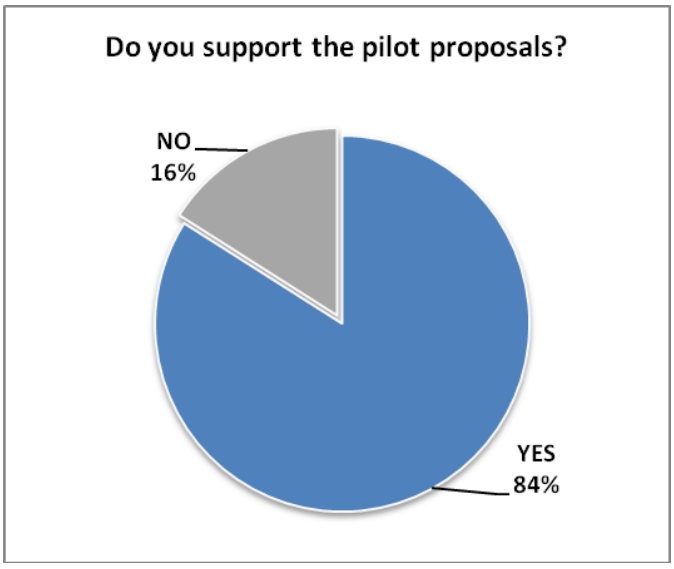
Responses;



Question;

Would you like the option to have electric vehicle charging point facilities in your local area?

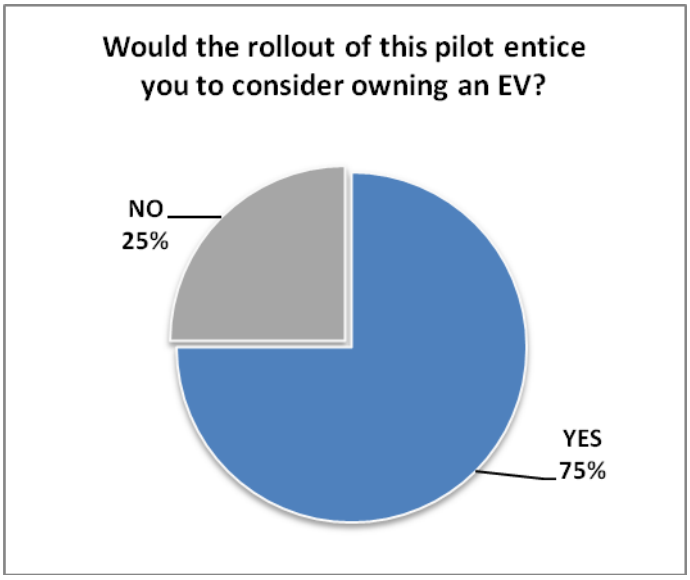
Responses;



Question:

Would the installation of electric vehicle charging point facilities in your area entice you, or anyone else in your household, to consider owning an electric vehicle?

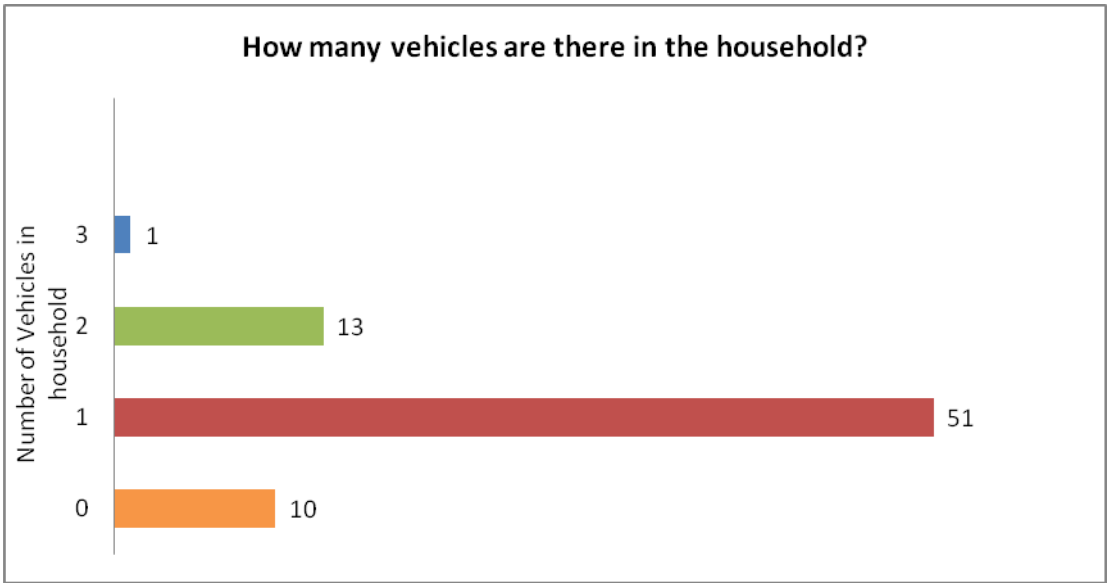
Responses;



Question;

How many vehicles (including business vehicles) are there in the household?

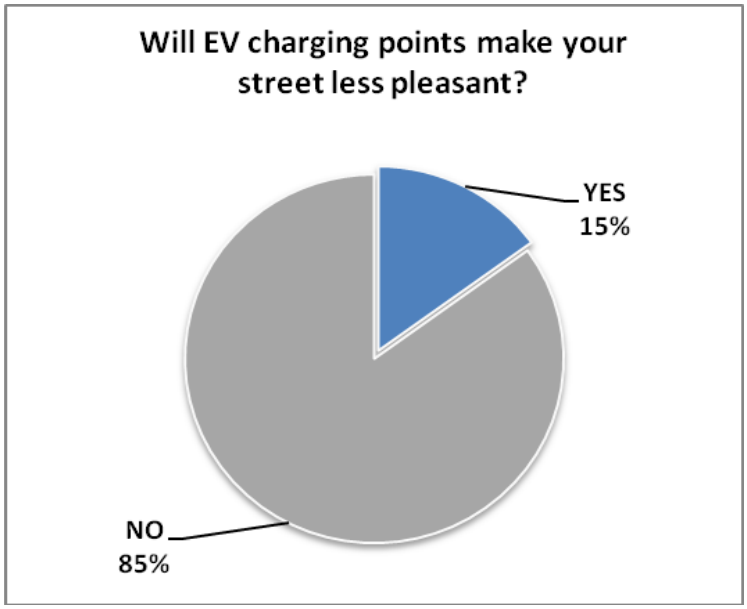
Responses;



Question;

Would the installation of on-street charging point facilities make streets in your area less pleasant, particularly to cycle or walk along?

Responses:

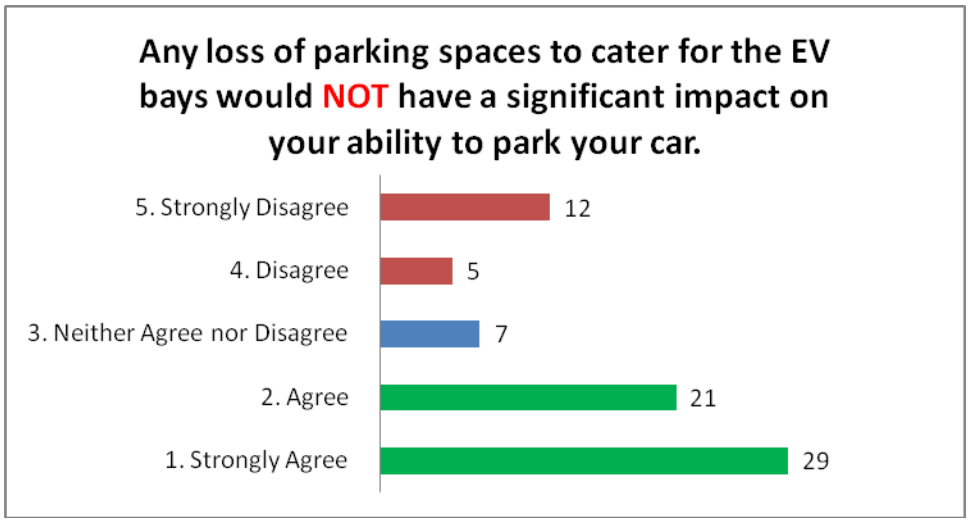


Statement:

It is perceived that the loss of a few residents parking bays, to make way for the electric vehicle bays (a maximum of eight, spread over the Marchmont and Sciennes area and no more than two per each selected street) would not have a significant impact on residents' ability to park their car? Do you;

☐*Strongly Agree* ☐*Agree* ☐*Neither Agree nor Disagree* ☐*Disagree* ☐*Strongly Disagree*

Responses:



Question:

Are you, or anyone in the property?

Responses;

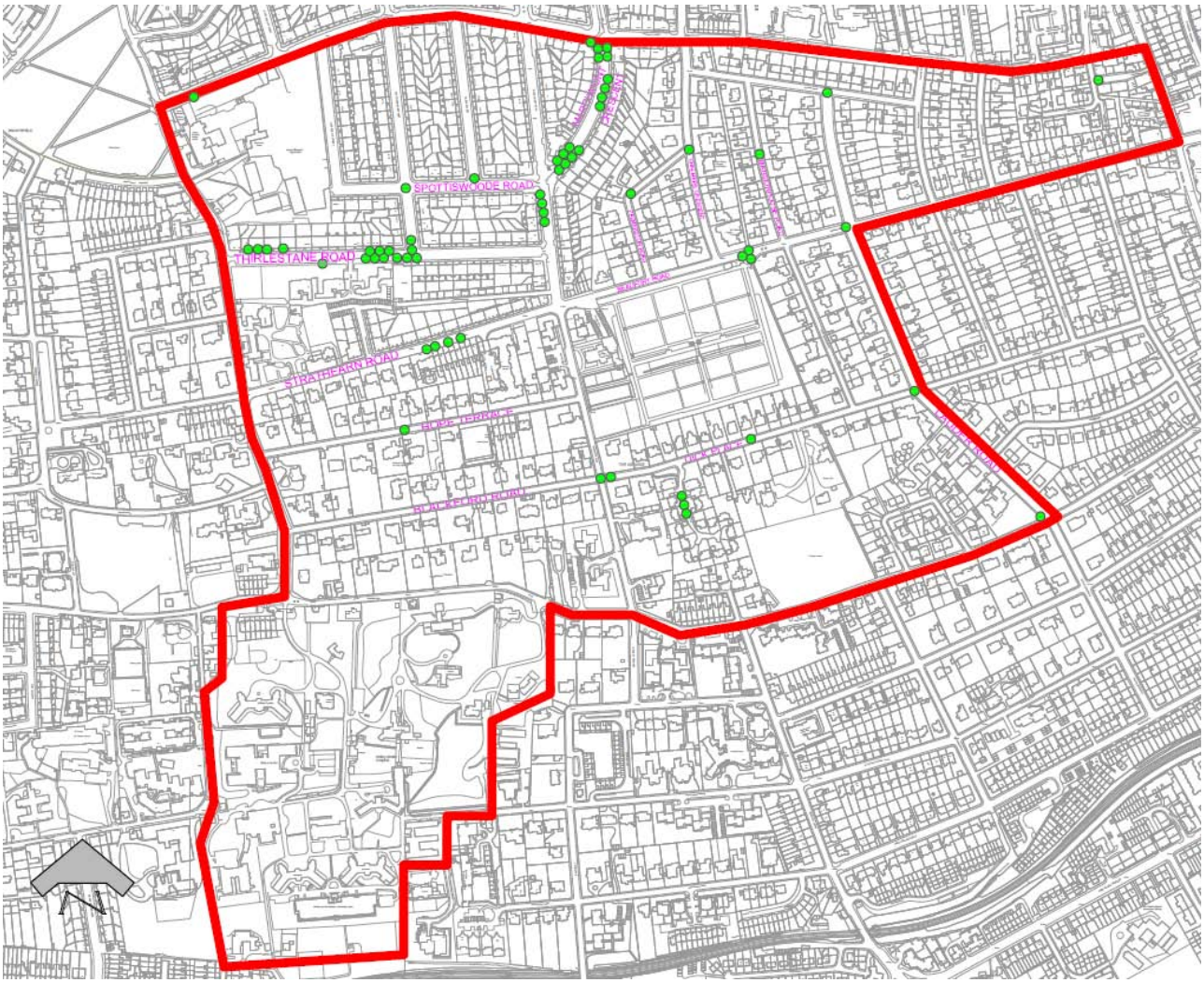
	Yes %	No %
A Resident Permit holder	**71**	**29**
A City Car Club member	**19**	**81**

Question;

Respondents were asked if charging points where to be located on-street in the Marchmont & Sciennes area, where would be their most preferred location?

Responses;

A total of 58 locations where suggested by respondents; each one is listed on the plan below (as a green circle).

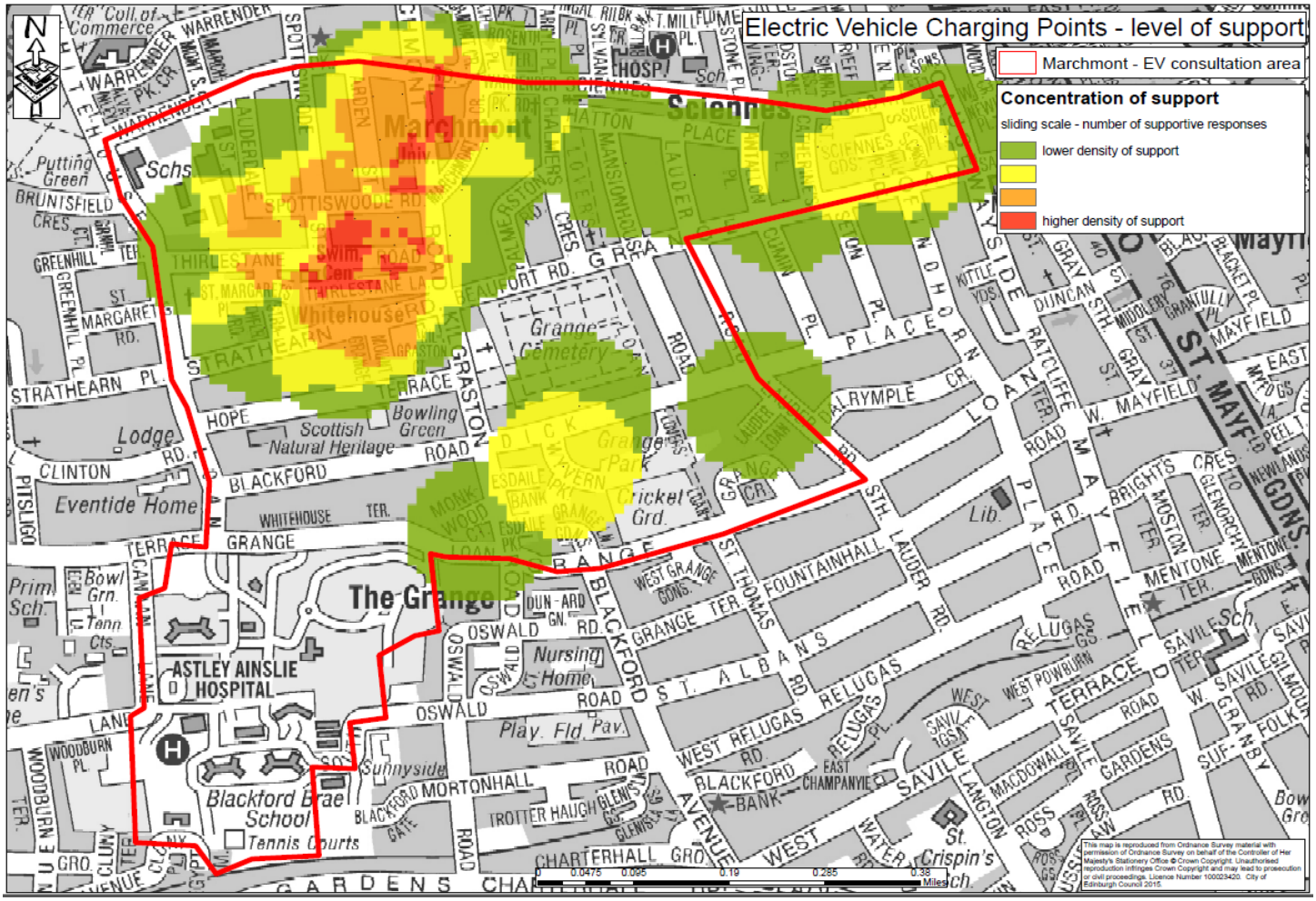


Question:

Do you support the proposals of pilot?

Responses;

84% of respondents stated support the rollout of the pilot in their area, 16% did not. A plan below shows the areas for support on a sliding scale of support.



Appendix 2: **Map of the Marchmont and Sciennes Community Council area, showing areas for demand for on–street electric vehicle charging points.**

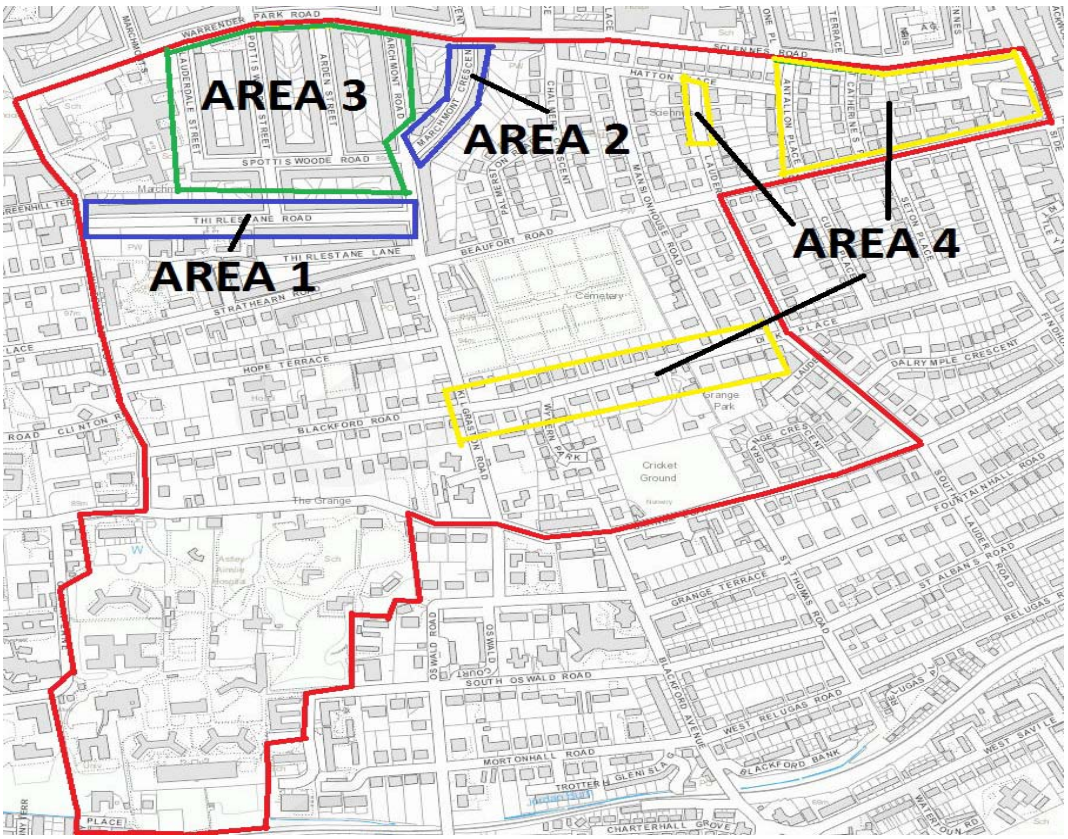
The consultation process identified the general locations where the demand for electric vehicle charging is concentrated. Discussions with stakeholders, such as the local Community Council and Car Club operator were also key in identifying the desirable charging point areas. With consideration to the above, the final locations will be determined following discussions with the Area Roads Team, Street Lighting & Parking Sections and utility companies.

Note: A series of equality questions were also asked, such as age, gender and religious belief. The results of which have been considered as part the Equalities Rights Impact Assessment process.

A map showing the proposed areas marked for site investigation and further stakeholder consultation, for both the publicly accessible and car club vehicle charging points, is shown below.

Legend:

- Area 1 & 2 - Thirlestane Road and Marchmont Crescent were the most popular location suggestions made by the public. Both streets also have existing links to City Car Club provision, therefore, making them candidates for further investigation.
- Area 3 – These areas contain high density housing and also proved popular with the public.
- Area 4 – Typically, on-street parking demand is less pressured is these locations.



Appendix 3: **Proposed parking fees, permitted time for charging and the City Car Club.**

Parking Restrictions

The Marchmont and Sciennes area is situated within the Council's extended parking zone; and in broad terms, parking restrictions for the electric vehicle (EV) pilot operation would closely align with existing parking regulation for conventional parking bays in that area.

The standard parking tariff in the Marchmont and Sciennes area is £1.20 per hour, with parking restrictions operating from 08:30am to 5:30pm, Monday to Friday. Although, during the pilot users will not pay for electricity, users will need to pay for parking, at the same rate as conventional vehicles. If the parking tariff for conventional vehicles should change, that for the electric vehicle bays will also be changed by the same amount.

The management and enforcement of the EV only bays during the pilot would be performed by Council parking attendants.

To maximise EV bay availability, the implementation of a maximum length of stay, to ensure EV turnover, has been considered. Modern electric vehicles can be charged from empty to 80% in around two hours. It is therefore proposed to set the maximum length of stay time as four hours and assess the effectiveness of this time period throughout the pilot.

During unrestricted hours (17:30 - 08:30 and at weekends) parking would be free and no maximum length of stay would apply.

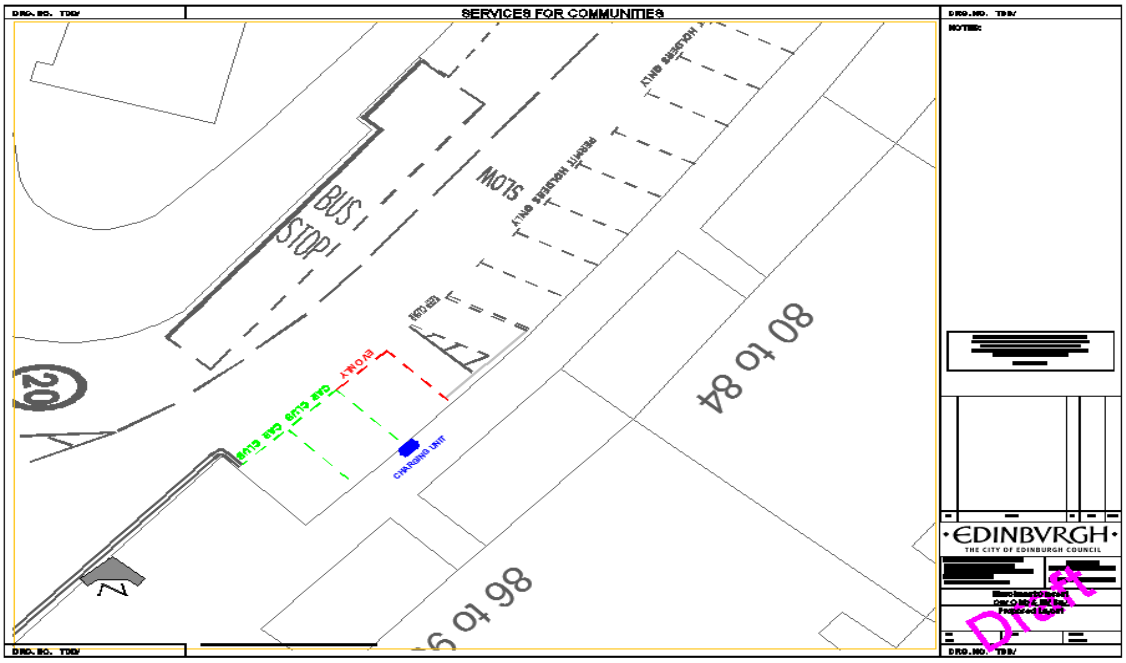
City Car Club

The report to Committee on 17 March 2015 proposed that car club parking bays should be part of the pilot project. It is therefore proposed that the City Car Club form part of the pilot scheme.

Currently, two car club parking bay locations are sited within the pilot's boundary (at Thirlestane Road and Marchmont Crescent). Therefore, the Council propose to install charging units at both of these locations. Any car club parking bays equipped with on-street electric vehicle charging facilities will retain the Council's charging regime. Furthermore, as the charging units are dual headed, the charging unit will not be exclusively reserved for City Car Club use; it will also serve the adjacent area which will be converted into a publically accessible EV only space. The following two plans illustrate how this duel operation layout would work in an on-street environment.

The below plan shows the existing street layout on Marchmont Crescent (City Car bays highlighted in green).

The next plan shows an indicative street layout on Marchmont Crescent, detailing the proposed EV facilities.



The new EV bay is highlighted in red, with the kerbside EV charging unit sited between the City Car Cub and EV only bay, depicted in blue. In this arrangement the unit serves both the nearest City Car Club bay and the neighbouring publicly accessible EV only bay.

The previous plan is only an indicative layout. The specific site details will be formed in consultation with the Local Roads Team, Street Lighting & Parking sections and utilities companies. In additional, the implementation of all the EV pilot bays will be subject to a statutory consultation.

Below is an example of a typical example of an on-street charging unit.

Appendix 4: Plan and Programme for the Pilot of On–Street Electric Vehicle Charging.

The installation costs of the pilot scheme are estimated at £40,000. Transport Scotland (TS) has agreed in principle to contribute 50% of the cost. The remaining balance (£20,000) will be met from the Transport Policy and Planning budgets, spread over the 2015-2016 and 2016–2017 financial years.

Activity.	Date.	Status/Action
Preparation for Public Consultation.	September 2015.	Complete.
Undertake Public Consultation.	October - November 2015.	Complete.
Analyse results.	November 2015.	Complete.
Determine areas for further consideration.	November 2015.	Complete.
Report consultation results and pilot proposals to T&E Committee.	January 2016	Complete.
Set up pilot Project Board.	January 2016.	Complete.
Initiate TRO Process.	January 2016.	Pending Committee Decision.
Procure charging points and electricity supplies.	Commencement from January 2016.	Performed in partnership with TS.
Install charging point units, test and commission.	Sept/October 2016.	Once procured, install before TRO implementation.
Amend on-street signage and lining.	October 2016.	N/A
Publicise availability.	November 2016.	Utilise Council & TS Communication recourses.
TRO commences.	November 2016.	N/A
On – street charging available.	November 2016.	N/A
Initial quality control measures.	December 2016.	N/A
Start monitoring exercise.	January 2017.	Monitor throughout the pilot.
Pilot period ends.	December 2017.	Monitoring period ends.
Analysis of monitoring results.	January 2018.	To be reported to Committee.