

REPORT TO BANFF AND BUCHAN AREA COMMITTEE – 26 NOVEMBER 2019

ELECTRIC VEHICLE CHARGE POINTS IN ABERDEENSHIRE

1 Reason for Report / Summary

- 1.1 This report has been prepared to inform members of the Transport Scotland funded Electric Vehicle charge point installation programme for Aberdeenshire.

2 Recommendation

The Committee is recommended to:

- 2.1 Note the information provided relating to the installation programme for EV charge points.**

3 Purpose and Decision-Making Route

- 3.1 The first round of Government funding made in 2011 to Local Authorities for Electric Vehicle (EV) charge points allowed Aberdeenshire Council to install its first 50kw unit in Laurencekirk. Since that time, the Council has received funding on successive years such that the Aberdeenshire network totals some fifty units.

This report has been prepared at the request of the Banff and Buchan Area Committee to provide an update on the EV charge point installation programme.

4 Discussion

- 4.1 The uptake of Electric Vehicles (EV) and Low Emission Vehicles (LEV) across Scotland has been steadily increasing and has been supported by Transport Scotland's Road Map to EV Adoption, now in its second iteration. EV and LEV use has increased as the availability of vehicles improves, and manufacturers strive to tackle range anxiety by significant improvements to battery storage capacity. To tackle charging anxiety, the Scottish Government has committed to continue the roll out of publicly available EV charge points across Scotland which currently stands at over 1000 units.
- 4.2 Aberdeenshire Council has developed a good working relationship with funding partners Transport Scotland and as a consequence has been able to deliver over fifty fully funded charging points across the area in a relatively short period of time. The previous financial year has seen the completion of an ambitious project to provide charging opportunities along the A947 Dyce to Banff Corridor in recognition that this was a key strategic route to the north of Aberdeenshire. The following sites were installed as part of the 18/19 funding programme:

- Newmachar (22kw and 22kw)
- Oldmeldrum (22kw and 50kw)
- Fyvie (22kw and 22kw)
- Turriff (22kw and 50kw)
- Banff (22kw and 50kw)

4.3 The programme for 19/20 is currently underway following a £300k funding award to further bolster the EV network. Officers are now working to deliver EV charge points at the following locations:

- Alford Community Campus (22kw & 50kw)
- Inch (22kw)
- MacDuff Aquarium (22kw)
- Ellon town center (50kw & 22kw)
- Fraserburgh Hannover St: (22kw & 50kw)
- Peterhead York Street (22kw and 50kw)
- Inverurie Community Campus (22kw and 50kw)
- Aboyne (50kw)

4.4 Alongside the above Transport Scotland funded programme, officers from the Strategy Development team liaise and engage with other internal teams and external groups to advise on EV installations considering location, electrical supplies, feasibility and available grants.

4.5 By way of example, officers are currently engaging with Council colleagues working on the Bridge Street car park improvement scheme to ensure that EV charging has been included as part of these works. Similarly, regular communication takes place with colleagues involved in the design of community campus sites and council depots to ensure that charging is provided for council fleet vehicles.

4.6 Officers have also recently been in contact with community representatives in Alford, Pitmedden and Portsoy to see how the Council can support additional charging opportunities.

Location Considerations

4.7 The installation of grant funded charge points is limited in scope to the conditions attached to the grant. Publicly funded charge points need to be sited on publicly owned land, sufficiently close to the main road network and be available 24 hours a day.

4.8 The charge posts are linked to a back-office system operated by Charge Place Scotland on behalf of Transport Scotland. This system allows live data to be captured from each site and remote maintenance and software upgrades to be carried out. For the back office to function, the EV charge points need to be located where there is a 'good' to 'excellent' mobile data signal strength.

- 4.9 Charge posts installed are typically 22kw or 50kw units and require a metered connection to mains electricity; the 50kw units requiring a three-phase supply. This level of electrical loading can result in Distribution Network Operator network capacity upgrades including transformers and cabling which has to be considered when choosing installation sites.
- 4.10 Officers engage with the planning service regarding installations as there are areas where the installation of the units are not considered under permitted development rights. In addition, there are areas within particular settlements which are identified as 'conservation areas' and as such require additional planning engagement.

Planning for the Future

- 4.11 Officers can access the back-office system to monitor EV charge point usage and use this data to help plan future EV infrastructure based on demand. Beyond this, GIS mapping is also used to identify areas where EV charge point coverage is limited and will be aiming to bolster the network in these locations.
- 4.12 A monitoring report prepared in September 2019 has been appended to this report which provides useful information on charging sessions and network availability.
- 4.13 With EV battery technology improving and a range of EV's emerging in the market with ranges of over 250 miles, the issues associated with range anxiety are diminishing; it is considered that vehicles with a range of 300 miles will be comparable to the current range of Internal Combustion Engine vehicles. Going forward, the focus is now on charger availability at charging sites and it is anticipated that additional units will be installed to create 'hubs' at well utilised locations.

5 Council Priorities, Implications and Risk

- 5.1 This report helps deliver against the following Council Priorities:
- Council Priority 2 - Have the best possible transport and digital links across our communities;
 - Council Priority 11 - Protect our special environment, including tackling climate change by reducing greenhouse gas emissions.
- 5.2 The table below shows whether risks and implications apply if the recommendation(s) is(are) agreed.

Subject	Yes	No	N/A
Financial		X	
Staffing		X	
Equalities			X
Fairer Scotland Duty			X

Town Centre First			X
Sustainability			X
Children and Young People's Rights and Wellbeing			X

- 5.3 An equality impact assessment is not required because this report does not require any decision making.
- 5.4 There are no financial or staffing implications associated with this report as the report is for information purposes and not decision making.
- 5.5 There are no risks arising directly from the current report

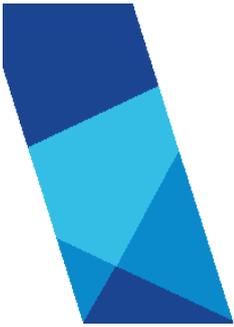
6 Scheme of Governance

- 6.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this and their comments are incorporated within the report and are satisfied that the report complies with the Scheme of Governance and relevant legislation.
- 6.2 The Committee is able to consider this item in terms of Section B1.2 of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to a matter which impacts on the Banff and Buchan Area.

Stephen Archer
Director of Infrastructure Services

Report prepared by Chris Menzies, Transportation Strategy Development Team
Leader
Date 1/11/19

List of Appendices: Electric Vehicle Charging Information (September 2019)



Aberdeenshire
COUNCIL



From mountain to sea

Briefing Note

ELECTRIC VEHICLE CHARGING POINTS

September 2019

Revision 1	Initial publication: June 2018
Revision 2	2019 Update: September 2019

Location

The Map below is the Aberdeenshire Council prepared charging map which illustrates Council installed equipment. The location of all EV charge points available to the public can be found at www.chargeplacescotland.org. This web information is available publicly with the Sat Nav of many EV's preloaded with the information. Mobile Apps are a useful resource for EV owners and drivers.

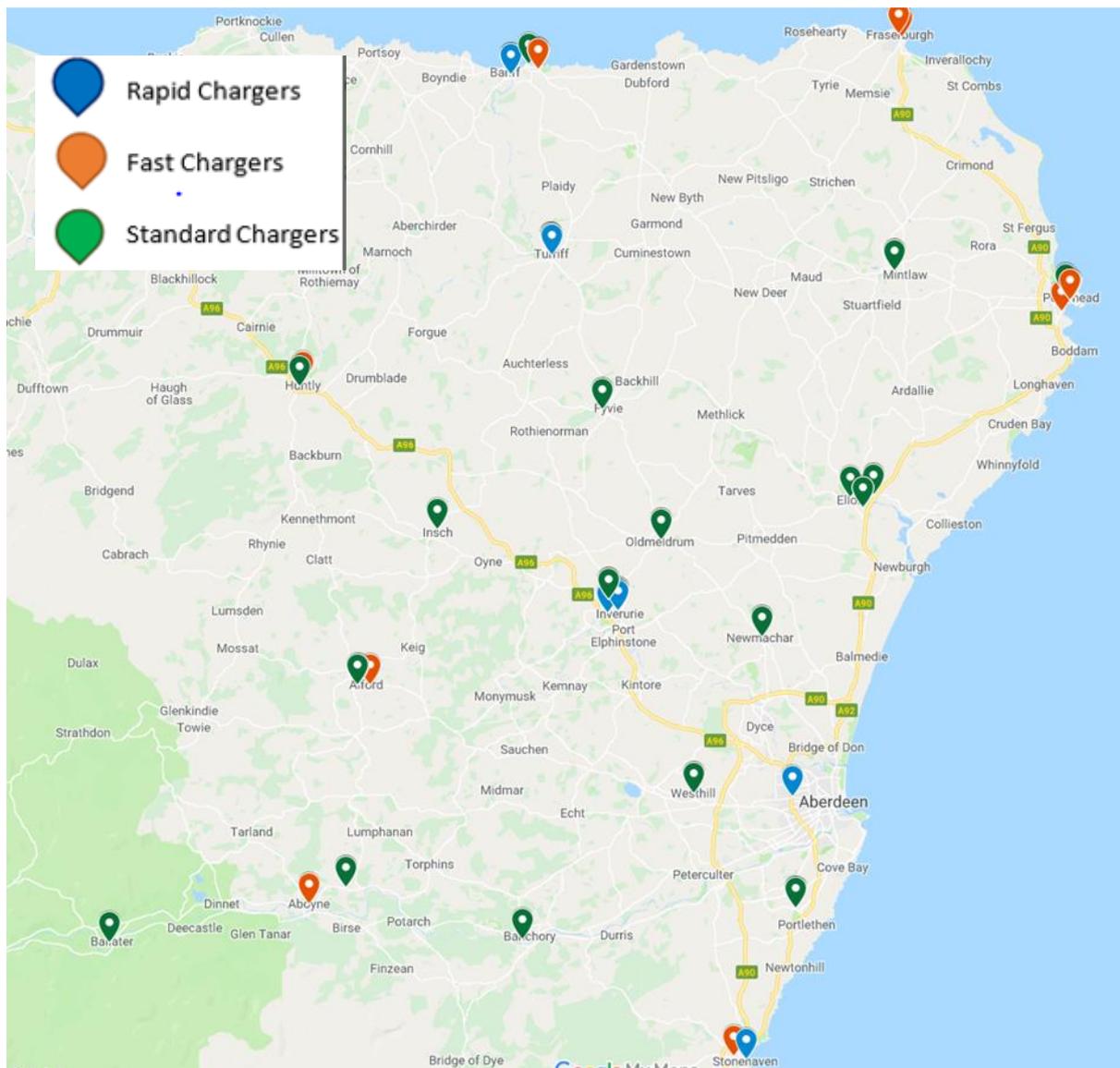


Figure 1: Map of current electric vehicle charging network operated by Aberdeenshire Council as of Sept 2019

Electric Vehicle Charging Locations by Type

Town	Location	Type	Outlet	Number of Parking Spaces
Aboyne	Station Square Car Park	Rapid	50kW	2
Aboyne	Craigwell Repair Depot	Fast	22kW	2
		Fast	22kW	2
Alford	Village Car Park	Rapid	50kW	2
Ballater	Church Square	Fast	22kW	2
Banchory	Bellfield Car Park	Fast	22kW	2
<i>Banff</i>	<i>Bridge Street Car Park</i>	<i>Fast</i>	<i>22kW</i>	<i>2 (tbc)*</i>
Banff	Bridge Road Car Park	Fast	22Kw	2
		Rapid	50Kw	2
Braemar	Balnellan Road	Rapid	50kW	2
Braemar	Balnellan Road	Fast	22kW	2
Ellon	Station Road Library Car Park	Fast	22kW	2
Ellon	Park & Ride	Rapid	50kW	2
		Fast	22kW	2
Fraserburgh	Seaforth Street	Rapid	50kW	2
Fyvie	P&R Site	Fast	22Kw(2no)	4
Huntly	Market Muir Car Park	Fast	22kW	1
Huntly	Nelson Street Car Park	Rapid	50kW	1
Inverurie	Gordon House	Standard	7kW	1
Inverurie	Burn Lane Car Park	Rapid	50kW	2
		Standard	7kW	1
		Standard	7kW	tbc

		Rapid	50kW	2
		Fast	22kW	2
		Fast	22kW	1
Inverurie	Harlaw Repair Depot	Fast	22kW	2
		Fast	22kW	2
		Fast	22kW	2
Laurencekirk	Robson Street Car Park	Rapid	50kW	2
Laurencekirk	Robson Street Car Park	Fast	22kW	2
Macduff	Macduff Repair Depot	Fast	22kW	2
		Fast	22kW	2
Mintlaw	Mintlaw Repair Depot	Fast	22kW	2
		Fast	22kW	2
Newmachar	Axis Centre	Fast	22Kw(2no)	4
Oldmeldrum	Baker Street	Fast	22Kw	2
		Rapid	50Kw	2
Peterhead	Buchan House	Standard	7kW	1
Peterhead	Lido Car Park	Rapid	50kW	2
Stonehaven	Station Car Park	Rapid	50kW	2
Stonehaven	Market Square	Standard	7kW	1
Turriff	High Street	Standard	7kW	1
Turriff	The Wynd Car Park	Fast	22Kw (2no)	4
		Rapid	50Kw	2
Westhill	Westhill Library	Fast	22kW	2
		Fast	22kW	2

Aberdeen City	Woodhill House	Standard	7kW	1
		Standard	7kW	1
		Standard	7kW	1

Table 1: Current electric vehicle charging network operated by Aberdeenshire Council. Highlighted Blue are new chargers.

**Pending development of the car park by others.*

Operation

Charging Time

There are generally three types of charge points available. These units will deliver a charge which is determined by the nature of the Electric Vehicle visiting the charge point. Pure Electric Vehicles, for example the Nissan Leaf, can draw either a DC or AC charge while Hybrid vehicles such as the Mitsubishi Outlander are limited to drawing an AC charge.

- Rapid: 30 minutes for 80% charge (43-50kw) AC
- Fast: 3-4 hours for 100% (7-22kw) AC or DC
- Standard: 6-12 hours for 100% (3.6kw) AC

The type of charge points provided are also often referred to as Transit or Destination. In this case the former is typically a 50kw unit to allow on route charging while the latter term relates to the lower kW units which deliver a slower charge, ideal for town centres and car parks where stays are typically longer.

Typical Usage

The following chart has been compiled based upon information extracted from the Charge Place Scotland back office system and represents the charge events associated with the Council installed chargers.

Total Usage

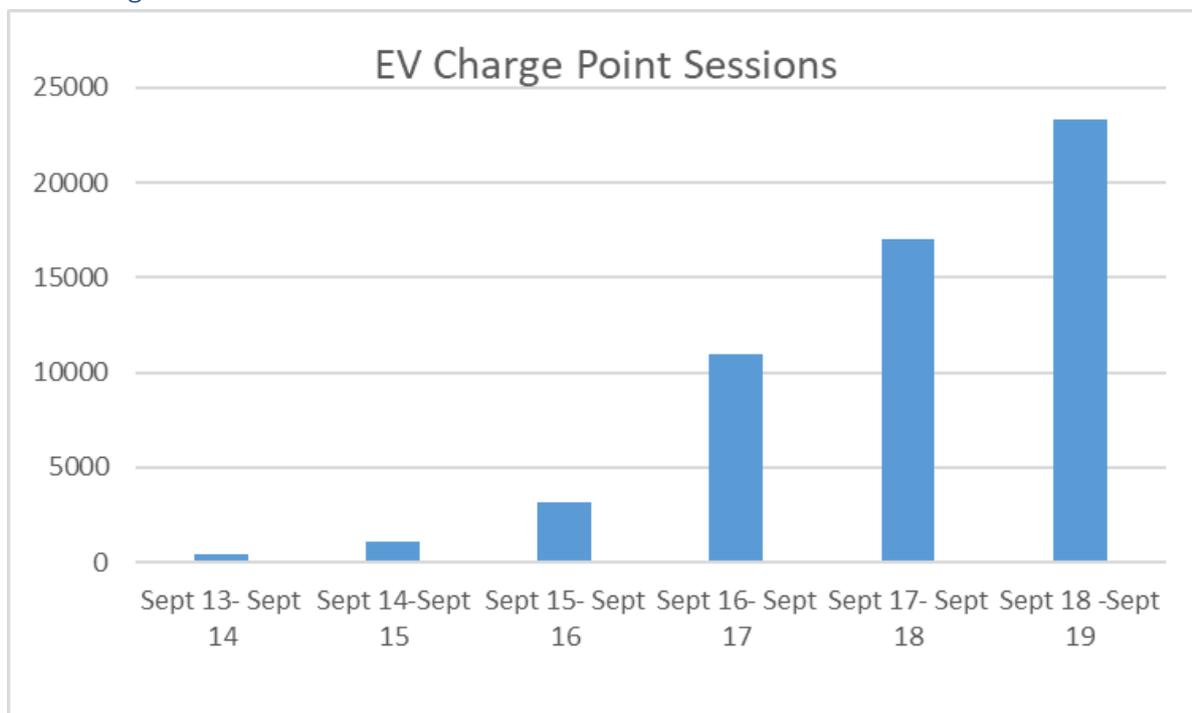


Figure 0: Breakdown of charge events by year September 2013-2019

Sources of Funding

Public facing charges have been previously funded via the Scottish Government 'Plugged in Places' grant. This grant has now been updated by the 'Charge Place Scotland' grant which remains Government funded. In securing the grant, Aberdeenshire Council engage with partners in

Transport Scotland to discuss aspirations for an evolved network and consider the Government approach set out in Transport Scotland's 'Switched On Scotland' document
www.transport.gov.scot/media/30506/j272736.pdf

The Council has in the past been able to draw upon the Aberdeenshire Council Carbon Initiatives fund which has been utilised to fund Depot Charging and support the aspiration to increase the number of low emission vehicles in the Councils fleet.

2018/19 Grant Award

The following Grant was made available to the Council for Financial Year 2018/19:

- £55,000 towards 1 x 50kW and 1 x 22kW chargers at Banff
- £55,000 towards 1 x 50kW and 1 x 22kW chargers at Oldmeldrum
- £70,000 towards 1 x 50kW and 2 x 22kW chargers at Turiff
- £30,000 towards 2 x 22kW chargers at Fyvie
- £30,000 towards 2 x 22kW chargers at Newmachar

This grant has been awarded following engagement with the Council to support aspirations to enhance the charging opportunities along the A947 corridor. This work has been completed with the exception of Oldmeldrum where SEE have had to revisit the location and install a larger power supply to accommodate the units. This was an unforeseen issue with the DNO. Works expected to be complete by the end of September 2019.

In addition to the above a further £36k was made available following a request to upgrade the older 'Elektromotive' units installed at Council office locations and a small number of on street sites. This upgrade work has been completed with the exception of Woodhill House location where Planning Permission was sought (and granted in June 2019) to revise the existing parking layout to better accommodate the units. Civils works expected to commence FY 19/20.

2019/20 Grant Award

The following grant award was made available to the Council for Financial Year 2019/202:

- £30,000 towards the installation of 2 x 22kW Charge Points at Inverurie Community Campus, Inverurie
- £50,000 towards the installation of 1 x 50kW and 1 x 22kW Charge Points at Ellon Community Campus, Ellon
- £50,000 towards the installation of 1 x 50kW and 1 x 22kW Charge Points in Peterhead Town Centre / Academy site, Peterhead
- £50,000 towards the installation of 1 x 50kW and 1 x 22kW Charge Points at Alford Community Campus, Alford
- £50,000 towards the installation of 1 x 50kW and 1 x 22kW Charge Points in Fraserburgh Town Centre, Fraserburgh
- £15,000 towards the installation of 1 x 22kW Charge Point in Inch Town Centre, Inch
- £15,000 towards the installation of 1 x 22kW Charge Point at Macduff Aquarium, Macduff
- £40,000 towards the installation of 1 x 50kW Charge Point at Banchory Sports Village, Banchory
- £55,500 towards the procurement of extended warranty and maintenance packages and SIM card contracts for existing Charge Points hosted by Aberdeenshire Council until 31st December 2022

At the time of reporting, a Business Case has been approved for the above works and Framework suppliers contacted to ensure supply availability. A supplier has been identified and a framework award is expected in early September. Site surveys have been completed and a cabling services check has been completed. DNO quotes have been obtained in advance to provide the supply

contractor with a good opportunity for rapid installations and the DNO to programme the works early in the contract.

Hillside EV Programme

Developer Obligations funding has been used to procure six 22kw units and two 50Kw units for the Hillside area of Portlethen. Site investigation work has been completed to determine the location of the units and cabling supply checks have been finalised. The DNO have been approached to provide quotations for the supply of service to support the EV charge points.

Existing Council EV Fleet

- 8 x Nissan eNV200 Vans (electric)
- 2 x Nissan Leaf Cars (electric)
- 1 x Kia Soul (electric)
- 1 x Kia e-Niro (electric)
- 2 x Mitsubishi Outlander PHEV (hybrid)
- 2 x Toyota Mirai Cars (hydrogen)
- 1 x Mitsubishi Canter 7.5t RCV (diesel/electric hybrid)

Other Work

NE250e

The Transportation Strategy team raised the potential for a North East 250 route capable to support Electric Vehicles as a unique selling point for the North East region. This idea has been taken forward by the NE250 partners and Strategy officers are providing assistance alongside colleagues in Economic Development to help the NE250e vision be realised.

Low Emission Vehicle Training Module

An ALDO training module is being developed by Strategy officers to help encourage employees to drive more fuel efficiently. This module will allow the Council to monitor the no of employees taking the training, with follow up surveys to determine and ,monitor success and ideally CO2 reductions.

Schools Engagement

An EV class training module has been developed by strategy officers and is designed to support the 'Embedding Active and Sustainable Travel into Education' (EASTiE) school resource pack. The one hour session includes quiz and presentation on renewable energy and transport flowed by a workshop to build an Electric Vehicle. Pupils and staff are then given the opportunity to view a real EV to complete the session. The sessions are design to raise awareness amongst young people who can be powerful parental influencers.

Community Events

A series of community events are hosted with businesses where staff are engaged and encouraged to find out more about EV and Hybrid EV's.

Next Steps 2019+

- Super Depot Charging – the installation of 50kw charging units across the Councils new Super Depots as and when the depots are developed.
- Network Enhancements – existing sites will be monitored to determine peak usage to support a programme of the installation of additional units at key sites. This is ongoing. Initial works suggest that the Charge Place Scotland Grant will be used to further support

more remote communities with a charging option and bolster the areas where demand is high.

- Charging for Charging – the Council does not currently charge for EV charge point usage, in line with Government aspirations to support the emerging technology. However although sales are still relatively low they are increasing and the technology is becoming more main stream and a decision needs to be taken on charging. Officers will be currently reviewing charging options and a report to this effect is being prepared for a March 2020 launch of charging.

END