

Residents Parking Consultation
Hanover & Elm Grove

**Considerations for the increase of
Plug-in Vehicle ownership in our community**

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Background

As a family concerned with climate change, the increase in global temperatures this year^[1] and state of arctic sea ice^[2] has been alarming. It's a global problem which everyone needs to help tackle. Even as a small family, there are a few things we have been able to do to reduce our carbon footprint, such as change our energy providers to renewable sources, install insulation and other energy saving measures at home and try to use transportation that produces less emissions. This year was the year that we decided to buy an electric car. It took 12 months of research, a big financial investment and a small lifestyle change but we've managed to do it. It feels good to travel knowing that we are contributing less to climate change (we have saved approx 742lbs CO₂ since September) and helping to reduce inner city pollution which affects everyone's health^[3].

The biggest problem we have found in owning an electric car is charging it. With the majority of UK households charging is simply not an issue - owners park their cars in their driveways, charging at home using their own electricity supply. Financial support is available in the form of a Government grant for the cost of a home charger. This is perfect because the car charges at night, at home, and is in no way an inconvenience. However, living in a terraced house in Hanover with no off-street parking means that this option is not available. The remaining option of support provided by Government is for us to apply to the council to install a residential on-street charge point using an available Government grant. However, Brighton council is not participating in this scheme because it is "*not considered to provide value for money*"^[4]. So, we are unable to gain any support from the Government's charge point grants, our only option for charging is to use existing public chargers. This goes against the grain somewhat of electric vehicle ownership - the largest proportion of electric vehicle charging is done by their owners at home.

Brighton's chargers are currently undergoing a much needed facelift, with faster charging points being installed^[5] and this is great news. However, Brighton's public charge points are what's referred to as "destination chargers" - places people go to and have the convenience of charging whilst they are there. What's more, parking in the charging spaces is free, meaning that they are often used for parking over the necessity of charging and as such, busy during the day. Practically speaking, they're not places you can rely on to go and charge. For example, the last time I drove in to town to charge during the day, the first available charger I found was the 9th one I visited, it was 20

minutes later and it wasn't in town. This isn't an uncommon situation, something we encounter frequently. Charging overnight at these destination chargers, when they are less busy, requires a 15-30 minute walk and leaving our car quite far away from our home. This means that security becomes a concern, not to mention negating somewhat the convenience of owning a car. These are all inconveniences that arise from owning an electric vehicle without our own off street parking, we certainly didn't expect things to be perfect before buying the car but we are hoping things will improve whilst we own it. Besides, we want to be the change that we wish to see in the world! As I can see, there are currently no provisions in Brighton & Hove for *residential* charging.

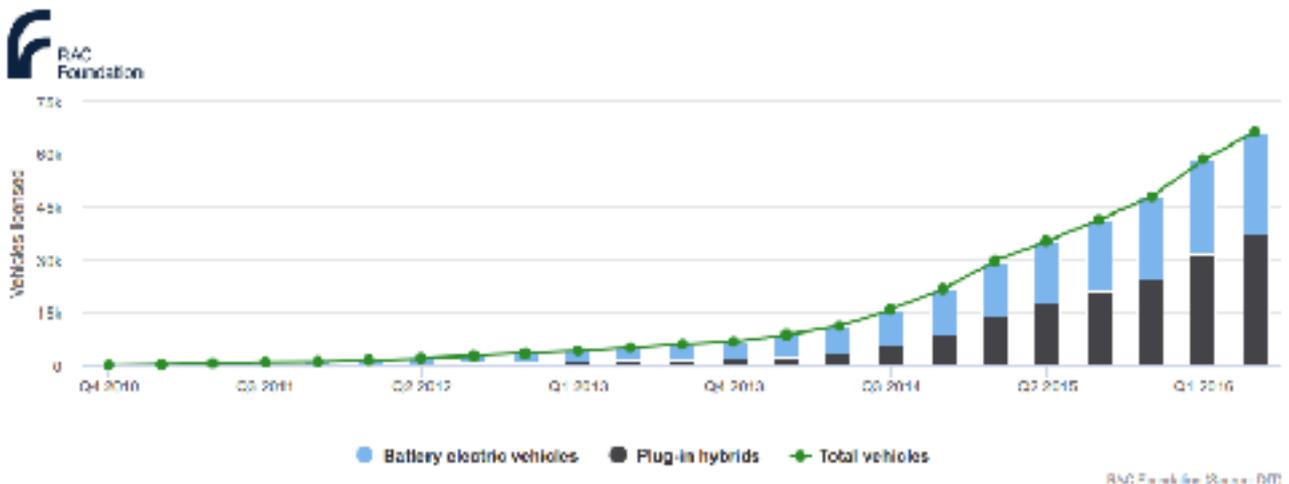
Receiving the Hanover & Elm Grove parking consultation for 2017 I was surprised to see no mention of, or apparent consideration for the charging of plug-in vehicles. I could understand this if the plans were short term, but I'm aware that this is "*the neighbourhood we are likely to have for quite some time*"^[6]. I would like to see parking plans for Hanover & Elm Grove that reflect a strong understanding of the direction in which personal transport is changing; an ambition for improving the health and environment of our future community by encouraging low emission vehicles; and a clear demonstration of commitment to our country's legal obligation to reduce carbon emissions under the Climate Change Act^[7].

In a densely populated area like Hanover & Elm Grove, where few residents have access to off-street parking, Plug-in vehicle charging is inextricably linked to parking, plans for one should not be considered without the other. I may be mistaken, there might be information I'm not aware of, but the absence of any plug-in vehicle chargers from this long term parking plan gives me cause for concern. I would like to take the opportunity of this consultation to present my personal views and suggestions regarding the subject of plug-in vehicle charging and parking in Hanover, along with evidence to back up my reasoning.

Concerns

As crazy as it may seem now, within the next 30 years we will likely see the introduction of a ban on the sale of new petrol and diesel cars. As cleaner vehicles become cheaper and technology improves, as with steam trains in the 20th century, this transition is inevitable. Plans for bans such as this are already being discussed in The Netherlands for 2025^[8], Germany for 2030^[9] and others as countries start to take stricter measures to meet their climate emissions targets and improve the air quality in cities and built up areas. Our own Government has outlined its goal that Ultra Low Emission Vehicles (ULEVs) should make up nearly all of the national fleet by 2050^[10]. To reach this goal, the Committee on Climate Change has said that by 2020 ULEVs should make up 9% of the national fleet^[11]. The Department for Transport's August projections currently put the likely 2020 fleet share figure at 3-7%^[12].

Sales of plug-in vehicles in the UK are growing steadily, with a dramatic increase in sales over the past two years^[13]. Currently, plug-in vehicles make up 1.3% of UK Car Sales for January - November 2016^[14]. This might not sound like much but 3 years ago that same period accounted for 0.15% of the market^[15]. With the growing number of plug-in vehicles on the roads, it's going to be increasingly important for areas without off street parking to have residential charging facilities available.



If we look at data for *only* electric vehicles (EVs), ignoring hybrid plug-in vehicles, Government data from the Department of Transport shows that last year in 2015, Electric cars made up 0.08% of the UK fleet^[16]. This equates to at least 2 electric vehicles last year owned in the Hanover & Elm Grove area. So, right now we can estimate that there are only a few cars at the moment requiring charging and without access to any residential charging facilities^[26].

Projections from the UK's National Atmospheric Emissions Inventory put electric vehicles (not including plug-in hybrids) at 0.5% of the national fleet by 2020^[17], this is a very conservative estimate when considering the targets set by the Committee on Climate Change. So, in three years time, Hanover & Elm Grove streets should be accommodating 17 electric vehicles, most of which not having access to off street parking. This is generalising but we're not taking in to account a likely larger number of plug-in hybrid vehicle owners who will also be seeking occasional charging outlets. So, the figure is almost certain to be higher than that, as people try to reduce their emissions or switch to these cars which cost less to run. This figure is already double the number of free-parking chargers currently available in the town centre and represents just a small segment of car owners in the Brighton & Hove area.

Residential plug-in vehicle charging in areas without off-street parking is an important issue and will only become more important in the coming years. Towns and cities with busy roads are the places where pollution affects health most and the places where low emissions vehicles are needed to combat that. Whilst ownership of plug-in vehicles may benefit the owners with reduced costs, they also offer benefits to the community as a whole. Electric vehicles do not have noisy engines, moving around with almost no noise at all. In Hanover where noisy cars spend minutes squeezing in to parking spaces just metres from bedrooms often late at night, a car that makes such little noise can make a real improvement to the environment. They don't have an exhaust producing any emissions. With facilities to charge, most plug-in hybrids can operate in an electric mode too with no emissions until they switch to their petrol engine. No emissions mean a better air quality to breathe and cleaner streets without soot.

If local authorities do not make plans for residential charging, then as a community we're missing a chance to improve our health and environment; and as a country we will likely miss our emissions targets to combat climate change. This is a chance for us to lead as a community.

Solutions

I hope the background information I've provided helps to underline my concerns for the future of Hanover & Elm Grove which aren't reflected in the parking consultation. I'd like to suggest some of my own ideas towards how residential plug-in vehicle charging might be possible throughout Hanover & Elm Grove.

Street charging from owners own electricity supply

This is still a grey area for charging an electric vehicle at home and poses some challenges. It requires a charger to be installed at the property out of reach of the public, and then a cable to go safely between the owners house and their car, ensuring it is not in breach of the Highways Act^[18]. It also requires the owner to be able to park outside or within reasonable distance to their home. However, it does have cost benefits: there is minimum cost for the Council and charging can be done at the owners expense. Owners able to do this may be willing to pay for any necessary equipment.

There are a few examples of ways to achieve this and points to note:

Cable from property to car: Cable guards

Relatively cheap and inexpensive for the owner. To ensure safe use of a cable across a public highway, cable guards such as those used by highway contractors are used to prevent any trip hazard. EV owners with little choice may use this method, although it can never be recommended and is seen as a last resort because in the event of an accident, it exposes the vehicle owner to any legal or insurance claims.



Cable from property to car: Drainage channel

Property owners have a responsibility to channel water away from their property with drainage channels^[19]. These drainage ducts or channels can be used to safely allow temporary passage of a cable from a building to the kerbside.



An example of this is in Exeter, where an EV owner has been permitted by Devon County Council to install a buried duct within the footway to temporarily accommodate a cable to the car when needed, providing it is installed by an accredited contractor at the owners expense^[20].



Allowing reserved EV parking outside homes

Once a cable is able to travel safely to the vehicle from the property, parking availability is required. Similar to disabled parking reservations, a reserved parking bay is added to ensure parking outside of the owners home. This has a significant advantage for the property owner being able to park outside their own home, which would be a great help in encouraging plug-in vehicle ownership in Hanover.



One example is in Philadelphia, U.S.A, where the Philadelphia Parking Authority will, upon approval of an application, install a kerbside charger in front of an owners home with electric vehicle parking signage. The cost of this was given directly to the owner of the vehicle^[21].

On street charging with Lamp-post outlets

This month, electric vehicle charge point manufacturer Rolec announced a new product called *EV: StreetCharge*^[24] which allows for installation of on-street charging integrated in to lamp posts. It's one of the first of its kind to hit the market in the UK. The product has been designed alongside BEI Lighting and Fabrikat, manufacturers of lamp posts and lighting equipment who work directly with businesses and local authorities^[25].

These chargers are perfect for integrating in to existing infrastructure, where lamp posts carry sufficient electricity to support the additional demand.



The charging posts can optionally include pay-to-charge features and can be a revenue generator for local councils to cover costs or the businesses which run them.

I've spoken to Naomi Nye at Rolec who is happy to take questions or queries about the product and can also provide quotes for local authorities, her number is 01205 724754.

Hounslow Council is currently taking part in a 3 year trial with Transport for London and installing lamp post charge points from requests by residents (more information available here: <http://bit.ly/hegev26>).

Private parking at businesses

The Workplace Charge Scheme (WCS) was recently introduced by the government^[22] and allows support for the up-front costs of installing charge points at places of work.

Some businesses in the UK have made arrangements with local residents, allowing them to use private car parking spaces for charging their vehicles outside business hours^[23].

This could be promoted to local businesses as a way to maybe generate revenue or simply act to fulfil their corporate social responsibility.

Perhaps Council buildings within the Hanover & Elm Grove area could also be assessed and considered for housing charging points for use outside working hours.

Suggested residential charging locations

The Council currently hosts destination charging locations around the town centre, shops, car parks and sports centres.

It's fair to say that charging points can be installed on any street with adequate electrical infrastructure, but there are some locations in Hanover & Elm Grove which may be more suitable for similar charging setups to the ones in town.



Hanover Community Centre

At the centre of Hanover, the Community Centre's car park could offer destination chargers during the day and, if made accessible at night, be available for overnight residential charging. Perhaps this venue would be eligible for the WCS grant scheme^[22].



Pepperpot / Queens Park Terrace

The end of this road, approaching Queens Park Road currently features a 3 car taxi rank which could be reduced in size to accommodate a charging bay.



Islingword Road / Beaufort Terrace

This area at the base of the Southern Water reservoir is currently somewhat of a hodge-podge of brick walls, steps, paving stones. It could be redeveloped in a way that would accommodate a charging bay, reposition the seating bench, provide a clearer access way to the green and improve the aesthetic of the

area. Additional costs would be needed for the landscaping however.



Lewes St / The Greys Pub car park

Unclear who owns this car park, but there may be adequate space for some charging bays here.

In summary

- A predicted 17 electric vehicles owned in Hanover & Elm Grove within 3 years
- As a long term plan, the parking consultation fails to outline considerations of future needs of local plug-in vehicle ownership
- The Council not signed up to Governments on-street vehicle charging grant and strategy for residential charging is unclear
- Huge health and environmental benefits from encouraging low emissions vehicle ownership in the community

Please feel free to contact me to discuss any of this report.

I am open to helping with this issue, keen to assist the council with any plans and even financially contribute to any trials of residential charging near my home.

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