

## Electric Charge Points (ECP's)



### Introduction:

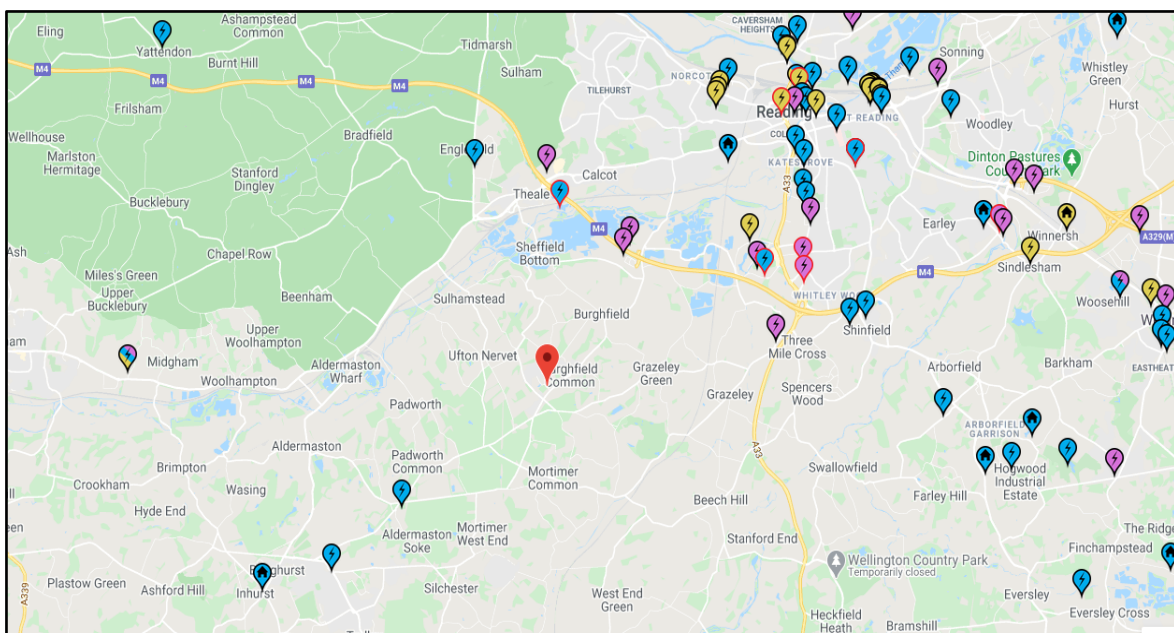
There is a concerted drive towards the use of electric or hybrid vehicles, currently mainly aimed at the car/small van market. The initiative is being pushed by the Government (Road to Zero Strategy: 2018:2) who have declared that all new cars are to be effectively zero emission by 2040. Government reasoning behind this initiative is due to air pollution and climate change.

Over the next few years, as more electrically driven cars are produced, purchase costs are expected to be reduced, resulting in a higher demand for ECPs to be installed. Drivers will then be able to 'top up' in exactly the same way as they do at fuel stations.

Currently most people who own an electric/hybrid car charge at home before their journey, however, once on the road there is a need to know where to 'top up'.

**Costs to Burghfield Parish Council would depend on the type of charger is installed.**

The map below shows the spread of ECP's in the surrounding locations of Burghfield:



*The colour illustrates charging speed; yellow = slow (<5kW), blue = fast (7-22kW), pink = rapid (43+kW). If there is more than one colour inside an icon then both charging speeds are available at that location.*

## Companies/Options:

There are many companies who provide both installation and/or managing of the charge points.

### **BP pulse:**

A nationwide network available via the bp pulse app, access card or contactless credit/debit card. BP pulse has a subscription service, where customers pay monthly for access to free charging on around half of bp pulse's points. bp pulse also has a pay-as-you-go service, making bp pulse's points available to those who are not subscribed to their membership tariff. Customers need to download a smartphone app, create an account, and load a minimum of £20 credit to get started. Thereafter, they can use bp pulse charge points on an ad hoc basis and pay per charge, with a minimum fee applicable.

### **Charge Your Car (CYC):**

The largest pay as you go service in the UK. CYC operate by providing a national charge point management system using a live status map. CYC state that they "enable charge point owners to set the tariff for each point, collect payment for usage and provide alerts in the event of a fault." Any installed ECP would have to be CYC approved as OCPP compliant.

### **Instavolt:**

They install and maintain their own rapid charge points, using the 'pay as you go' method with contactless cards, no need for apps or sign ups. Customers can call a freephone number and activate/pay for the charge over the phone. There is no membership cost, connection, or subscription fee. Currently a rapid charge costs the user 35p per kwh; this income goes directly to Instavolt. Partner-landlords receive a rental income for the use of the land for the units. Instavolt are responsible for all future maintenance and upgrade costs. However, this company only installs in high volume turnover areas, allowing an average charge time of 30 minutes per vehicle.

## Top Up Charging

The time it takes to charge an electric car can be as little as 30 minutes or more than 12 hours, depending on the size of the battery and the speed of the charging point. A typical electric car (60kWh battery) takes just under **8 hours** to charge from empty-to-full using a 7kW charging point. Up to 100 miles of range can be added in 35 minutes using a 50kW rapid charger.

Most electric car driver's plug-in to charge whenever they park, be it at home overnight or during the day at the supermarket, gym or their workplace. This is called top up charging rather which accounts for approximately 95% of the time to keep the battery topped up.

Public and workplace charging points typically range from 7kW to 22kW, ideal for top up charging.

Miles of range added per hour of charging				
3.7kW slow	7kW fast	22kW fast	43-50kW rapid	150kW rapid
Up to 15 miles	Up to 30 miles	Up to 90 miles	Up to 90 miles in 30 mins	Up to 200 miles in 30 mins

### Esso, Burghfield:

Euro Garages currently have 70 ECP's across the UK & Europe. There is a strategic plan to install rapid charging points across more sites, it is expensive and currently, there are no immediate plans to install an ECP at the Esso Garage in Burghfield Common.

## Questions/Things to Consider:

- Who will use the ECP?
- What are the benefits to the community/parish?
- Ongoing maintenance costs
- Additional insurance costs
- Vandalism of the units
- CCTV required?
- Monitoring of usage?

## Example of Cost – BP pulse

### **Option 1**

7kw single phase double socketed wall/post unit	£1,890.00
3 years data	£360.00
Commissioning cost)	£150.00
<b>Total</b>	<b>£2,400.00</b>

### **Option 2**

22kw three phase double socketed wall/post unit	£2,490.00
3 years data	£360.00
Commissioning cost)	£150.00
<b>Total</b>	<b>£2,990.00</b>

## How it works

### Remote frequency access card

This is a card similar to Oyster cards in the fact that they are held on top of the post for 2 secs to activate charging. There are two types of cards depending on whether you want to charge the person using the charging post or not:

1. With each communicating unit you must purchase two 'mastercards' these will work with just your post but are not linked to any accounts so will not be charged. You can buy as many 'mastercards' as you like for people/employees that you want to be able to use the post but do not want to charge (however you must purchase a minimum of two cards so we can commission the post).
2. The second type of card is subscription based on our Polar scheme. Each individual must apply for this directly with us so we can set up an account for them, it is free for 6 months then £7.85 per month after. This gives the person access to your post plus over 4000 other public charging points around the UK. 80% of these are free to use and the rest are charged at 9p per kwh.

***The second card option is necessary if you want to charge the users for the electricity being used, we then debit this from their account and pay it back to the owner of the charging point (minus an admin fee of £0.19).***

### Data Contract 36 months (£360 for 3 years):

This is necessary for a RFID controlled post. It means the unit is fitted with a SIM card that connects to our back office and authorises the cards being used to activate the charging. You can also use web access to view our back office chargevision. Also we can monitor the status of the post and solve any problems remotely.

Includes:

- Data Connection via GPRS
- Real time control and status reporting
- Event Logging of access and charging
- Remote reboot and problem solving
- Remote software upgrade capability

- Client web access to Chargevision via secure login
- Remote monitoring

After 36 months we will send an invoice to continue data for 12 months. Alternatively, you could opt for another 36 month data contract at a reduced cost.

**Additional Costs** - Premium Maintenance - £249 per year

<p><b>Includes:</b></p> <ul style="list-style-type: none"> <li>• Onsite maintenance</li> <li>• x2 onsite service inspections/year</li> <li>• 365 24/7 Telephone Support</li> <li>• Out of Hours engineer support</li> <li>• Electric vehicle charging points up to 22kW</li> </ul>	<p><b>Onsite inspections include:</b></p> <ul style="list-style-type: none"> <li>• Inspection for physical damage including decals and paintwork</li> <li>• Visual inspection of wiring</li> <li>• Check terminal connections</li> <li>• Check earthing connections and loop impedance</li> <li>• Check voltage and polarity</li> <li>• Check operation of main RCD/ RCBO</li> <li>• Check operation of all mechanical components and adjust as required</li> <li>• Check latch mechanisms operate correctly</li> <li>• Test RFID reader if present</li> <li>• Test power outlets</li> <li>• Clean unit</li> </ul>
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**Pod Point Ltd**

Product	Product Code	Product Description	Sales Price	Quantity	Total Price
Twin 7kW (Arch 2 with Router & 6mA Detection & Resettable RCD)	T7-S-03-BK-RO-6mA	7kW Arch 2 single phase twin charging post with 6mA DC + Resettable RCD + Router	GBP 1,775.00	1.00	GBP 1,775.00
Twin Post Mountable "Charge Here" Sign only	PP-M-190063-1	Post mounted "Charge Here" sign with post for Twin units	GBP 150.00	1.00	GBP 150.00
Twin Guard Rail with 2 Posts for Signs	PP-A-180029-1	Twin Guard rail with 2 posts for signs	GBP 250.00	1.00	GBP 250.00
Surface Mount Foundation - F-SUR	PP-M-130009-4	Surface Foundation Mount for Twin Unit	GBP 0.00	1.00	GBP 0.00
Fix & Commission	Mngd_Inst	Fix and commission of Solo & Twin units	GBP 540.14	1.00	GBP 540.14
Smart Reporting (3 Years)	PN-0010-3	3 year Data Fee + Management Information System	GBP 180.00	2.00	GBP 360.00
3 Year Warranty	3Yr_War	Three year onsite warranty according to General Terms and Conditions	GBP 0.00	2.00	GBP 0.00
UK Small Pallet	DEL_UK_Small_Pallet	Delivery	GBP 65.00	1.00	GBP 65.00
Subtotal					GBP 3,140.14
UK VAT					GBP 628.03
Total Amount					GBP 3,768.17

The quote is based on the enabling works being completed by your own trusted contractor before a Pod Point engineer's attendance to site.

Included as standard with the bundle, without additional cost are:

- 3 year on-site warranty
- 24/7 customer support
- Software updates
- Wi-Fi (4G where needed) communicating unit