

### Electric Vehicle charge options - pros and cons.

There are three main types of charging available, Slow, Fast and Rapid. They all have their own pros and cons that need to be considered.

**Slow charger (around 3kw) £4-5K** to supply and install a public electric vehicle charger, capable of charging two cars at the same time (one charger per two parking spaces). Where the power network is already in the vicinity and has capacity.

A Typical 65kw full electric family car would take **16hrs to charge 75%**

#### Pros

- Cheapest type of charger to install
- Most (96%) of the TMBC identified car parks have the power capacity to support 2-3 slow chargers without major works
- Could be useful to residents without off-street parking or people who work wanting to charge their car overnight or whilst they work.
- The electric used would be around 60p per hour.
- Almost all cars can use this type of charger
- Possibility of OLEV grant being available

#### Cons

- Slow turnaround of charger use
- Charging time not suitable for use in short stay car parks
- Not very useful for people visiting the shops without enough power to get home in an hour or so.
- KCC indicate the suppliers aren't keen to supply this type of charger
- Once usage is at full capacity, some users might miss out on a required evening charge

**Fast Charger (7-22kw) £8-10k** to supply and install a public electric vehicle charger, capable of charging two cars at the same time (one charger per two parking spaces). Where the power network is already in the vicinity and has capacity.

A Typical 65kw full electric family car would take **2hrs (22kw) to 7hrs (7kw) to charge 75%**

#### Pros

- Cost per charger unit fairly low
- Average and acceptable charging times. If using the higher specification of chargers (20kw), it could be added in short stay (up to 4hrs) car parks.
- KCC indicate suppliers more likely to supply and support this type of charger with maintenance, payments and back office support
- Popular with people visiting the area for shopping or leisure
- Almost all cars can use this type of charger
- Possibility of OLEV grant being available

#### Cons

- Only 41% of the TMBC identified car parks have the power capacity to support 2-3 fast chargers without major works
- The electric used would be around £1.40 - £4.40 per hour
- Turnaround once charged. (If someone starts charging at 5pm they might be done by 8pm. They might then leave their car in the space all night, preventing anyone else using it)

- Residents without off-street parking might not like the idea of moving their car to free up the charger after a few hours.

**Rapid Charger** (around **50kw**) **£25-30k** to supply and install a public electric vehicle charger, capable of charging two cars at the same time (one charger per two parking spaces). Where the power network is already in the vicinity and has the capacity.

A Typical 65kw full electric family car would take **just less than 1hrs to charge 75%**

#### Pros

- Good charge time and premium service delivered to user
- Most likely to be delivered and managed via a third party supplier
- KCC indicate suppliers are keen to supply and support this type of charger with maintenance, payments and back office support
- Possibility of profit share from suppliers

#### Cons

- Cost per charger unit is high
- Only 10% of the TMBC identified car parks have the power capacity to support 2-3 fast chargers without major works
- Long term commitments required to provide rapid charging through third party suppliers
- Premium service provided but the prices will need to reflect this (likely to cost more to end user)
- Turnaround once charged. (Customer may need to move their car to different space after charging, even if they want to stay in the area for longer)
- Not all electric vehicles can use this type of charger. This is for newer and older expensive cars.
- Residents without off-street parking, might feel they are paying for a premium service when all they want is a cheaper slower service.