Merchant Taylors' School

Case Study

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Merchant Taylors' School, located in Northwood, Middlesex, sought to install EV chargepoints for staff and parents to use.

The entire project was managed by Pod Point from initial consultation through to installation and maintenance, with the work done during the school holidays to minimise disruption.

Highlights

- The team at Merchant Taylors' School had limited knowledge and experience of EV charging. Pod Point conducted a feasibility study to explore their requirements and expectations, before creating a bespoke and cost-effective solution designed to meet their needs.
- It was determined that the school's power supply could support a maximum of 24 7kW charging bays by utilising Pod Point's **Array Charging** technology. This load balances chargepoints on the existing supply, allowing sites to install up to 3x more chargers.
- Four 7kW **Twin Chargers** (eight sockets) were installed over the 2021 summer holiday period. Passive groundworks were undertaken to allow for another four 7kW Twin Chargers to be easily and cost-effectively added on to the installed Array Charging system at a later date.
- Merchant Taylors' School also wanted to be able to set a custom pricing tariff to cover the costs of their energy usage. This was done with Pod Point's back office **Smart Reporting system**, which gives the school full control over pricing, access rights, restrictions, and usage monitoring - without the administrative burden.
- The school used the **OZEV Workplace Charging Scheme (WCS)** to save £350 per socket they installed. This could also be claimed on additional sockets installed in the future.

Some of the chargers installed included 3/4G roaming routers, which acts as a central hub for the rest of the chargepoints to connect to. This allows Pod Point's Network Assurance team to remotely apply Over-the-Air software updates and perform simple fixes.

This reduces the need for future on-site visits and maintenance, further minimising disruption at the school whilst also removing the need for any connection with the school's local Wi-Fi network.

Project overview

Founded in 1561, Merchant Taylors' is an independent day school providing high quality education in Northwood, Middlesex for boys aged 3-18. As one of England's "great nine" Clarendon Schools, it has a prestigious reputation that it maintains to this day.

With electric vehicle (EV) adoption rapidly accelerating, Merchant Taylors' School felt it was the right time to invest in charging infrastructure, both to support any staff switching to EVs and to improve its own sustainability credentials.

However, with their limited knowledge of EVs and charging infrastructure, the school wanted a **full turnkey solution**, from initial consultation through to installation, provided by a single supplier.

Challenges

The work needed to be delivered during the 2021 summer holiday period to avoid causing disruptions at the school for staff and students.

Additionally, the school wanted a solution that was high quality and cost-effective, and was keen to understand all available grants along with **pricing models** that would help cover the costs of their energy usage.

However, they also needed the chargers to be secure and inaccessible to the general public, so that they would be available for any staff and parents that needed to use them.

Finally, Merchant Taylors School wanted a cost-effective means of being able to scale up by adding more chargers at a later date in line with future demand from its staff and parents.

The Solution

Merchant Taylors' School approached Pod Point due to the company's reputation and ability to take on and deliver the entire project, from initial consultation and surveying through to installation and ongoing maintenance.

To start with, Pod Point conducted a feasibility study for the school which explained the different types of EV charging available to them. These insights helped the school determine the right approach that would achieve their goals.

From this, Pod Point identified that the school's power supply could support a total of 24 individual 7kW charging sockets using a load management device - the Pod Point Array system. The Array system actively balances the load on the electrical supply created by charging multiple electric vehicles on connected charge points.

This allows up to 3 times more charge points to be fitted to the Array system than the electrical supply would normally allow and removes the need for expensive power upgrades. It also simplifies the process of installing additional EV chargepoints, easing future budgeting and enables a lower cost-per-bay as more chargers are added to the site.

Using the Array system, Pod Point's DBS-checked Experts installed a set of four 7kW Twin Chargers over the 2021 summer holiday period, giving the school immediate access to eight individual sockets. In addition, passive groundworks were completed to allow the school to simply install another four 7kW Twin Chargers in the future.

Doing this allowed Pod Point to help the school reduce future costs by removing the need for further site surveys. This also means the school can install additional chargepoints at any time during the academic year with minimal disruption to staff and students.

The school can also, if desired, install a further set of four 7kW Twin Chargers, to bring their total number of sockets to a maximum of 24. This would require additional groundworks, which again could be completed during the holiday periods to avoid disturbing classes and the school's daily operation.

The Result

From initial site visits to completion, Pod Point was able to install the chargepoints during the 2021 summer holiday period. This meant there was no inconvenience caused to teachers or other school staff.

Additionally, some of the chargepoints were installed with 3/4G roaming routers, which formed their own local network to transmit data through the hub unit's sim card connection to our cloud servers.

This allows Pod Point's Network Assurance team to monitor them and perform fixes and

Over-the-Air software updates. This can be implemented remotely, reducing the potential for future on-site maintenance. Doing this also removed the need to integrate with the school's on-site Wi-Fi.

The chargers' access controls were set within a private network so that they could not be used by members of the public. This gave the school the security they needed, ensuring the chargers could only be used by staff, with access restricted to individuals with a school email address.

In addition, ICE-deterring signage was supplied along with the chargers to stop the charging bays being blocked by non-EV driving staff.

Using Pod Point's back office Smart Reporting system, the school was able to set a custom pricing tariff. With a cost recovery pricing model, the school's chargepoint fee could be used to cover the costs of their energy usage.

Pod Point were also able to facilitate Merchant Taylors' School part-funding the cost of the installation by using the Office for Zero Emission Vehicles (OZEV) Workplace Charging Scheme (WCS). The WCS can be claimed by any business to reduce the cost of installing chargepoints by £350 per socket, up to a maximum of 40 sockets and a total maximum saving of £14,000*.

With the WCS grant, the school saved £350 on each of the eight sockets initially installed, and is still able to claim the grant on future chargepoint installations.

The Smart Reporting system also gives the school full visibility of utilisation levels. This allows the school to make data-driven decisions on when to proceed with installing additional chargepoints, which Pod Point typically recommends when utilisation levels reach around 70%.

**Correct at the time of writing.*

Ian Williams, Bursar at Merchant Taylors' School, said:

"Merchant Taylors' School is committed to incremental improvements across all areas of sustainability and electric vehicle charging was an important part of this. Pod Point was able to provide an effective solution which has been welcomed by staff and parents. We are pleased to have this facility in place, and we expect the number of electric vehicles on our site to increase as a result."

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