Pier House

Case Study

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In March 2020, Pier House Management Company approached Pod Point to install passive infrastructure for electric vehicle (EV) chargepoints. This would allow any resident to easily make the move to an electric vehicle in the future.

Highlights

- Pier House's residents car park is a large space with 127 parking bays.
- Principal designers Edward Pearce were involved from start to finish, completing an initial power assessment showing two spare 80 amp three-phase power supplies available to be used.
- In order to immediately triple the amount of bays that could be installed, Pod Point implemented its Array Charging load management system which reacts in real time, immediately shifting power between chargepoints based on demand.
- One active 7.2kW pay-as-you-go chargepoint has been installed with the initial infrastructure, to meet the immediate needs of a resident on-site and ensure grant funding could be claimed.
- In total, this infrastructure allows for an initial 42 bays to be provisioned with chargepoints. This offers a bespoke scheme allowing every flat owner to install their own Pod Point chargepoint at a reasonable cost.

Client Overview

Pier House (Cheyne Walk) Management Ltd is the head leaseholder of the apartment building. The Board is elected by the apartment owners and is responsible for the maintenance and upkeep of the building, as well as overseeing improvements such as the installation of EV charging infrastructure for the benefit of all residents.

Project Overview

Pod Point was approached in March 2020 by Pier House Company, via consultancy firm Edward Pearce, which Pod Point has worked with on a number of other similar projects. The company is committed to future-proofing the Pier House building, especially in the context of the Government's ban of the sale of new internal combustion engine (ICE) vehicles in 2030, as well as the further expansion to the Ultra Low Emission Zone (ULEZ) in August 2023. The installation of EV charging infrastructure is a long-term investment to keep the building up to expected standards in London over the coming years.

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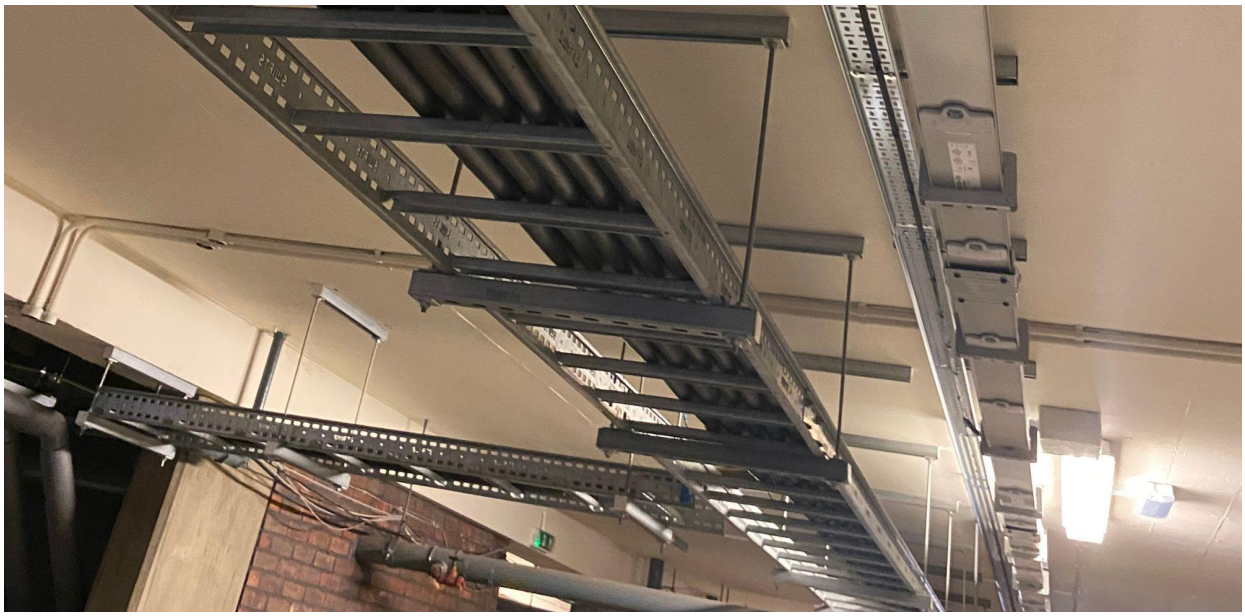
Challenges

March 2020 signified the beginning of the COVID-19 pandemic, which caused disruption across the UK and the world. Pod Point, Edward Pearce and Pier House were faced with the challenge of working remotely during a challenging social and economic period, in order to make progress with the installation. Initially, the principal designers, Edward Pearce, drew up the specifications for the job and put it out to tender. Pod Point submitted a bid and was successfully chosen by Pier House as the principal supplier and contractor.

After successfully winning the bid, Pod Point was given intent to proceed in 2021. Edward Pearce's initial power assessment of the site showed two spare 80 amp three-phase power supplies available to be used across the 127 parking bays. This limited power supply made it very difficult to design a system to install chargepoints at every single bay, and nearly impossible without a substantial financial contribution from the client.



Further to the limited power supply available, the site's layout posed additional challenges. The car park is large and split across two levels, with a wide, segregated area on the lower level which discreet cabling to the bays had to bypass.

Pod Point supported Pier House in finding a suitable government grant to apply for, in order to help cover the costs of the complex installation. However, despite receiving intent to proceed in 2021, the EV Infrastructure Grant for Residential Car Parks was not made available until the following year.

With the project being paused, Pod Point's original solution that was quoted in 2020 also had to be changed, bringing the installation up to date in line with the latest regulatory requirements, such as the Smart Charging Regulations which came into force in 2022.

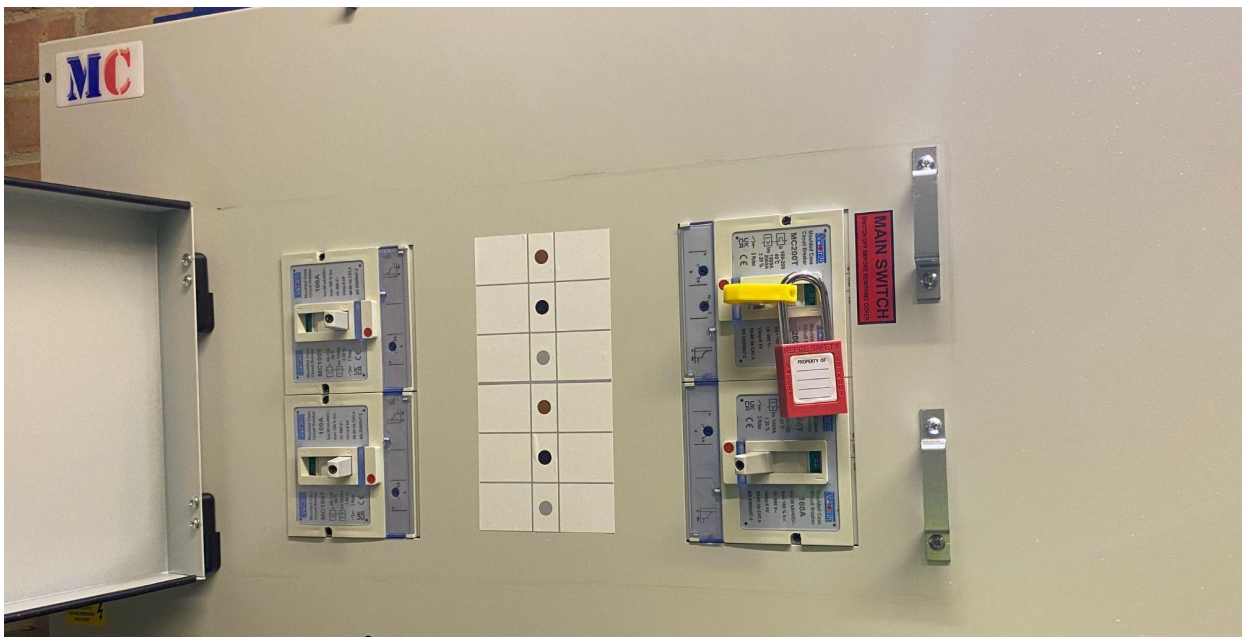
The Solution

Working in partnership with Pier House and Edward Pearce, Pod Point's engineers designed an affordable and bespoke solution, allowing every flat owner to install a chargepoint at a reasonable cost. With only two 80A three-phase power supplies available, Pod Point's engineers would have only been able to install chargepoints in up to 14 bays. However, by implementing two of Pod Points Array Charging load management systems, the amount of available bays that could be installed tripled to 42.

On a single 80A three-phase supply, seven 7.2kW chargepoints can be charged at once. By using Pod Point's load balancing system, up to 21 chargepoints can charge at once, aided by the system reacting in real time, immediately shifting power based on demand. Pod Point's engineers installed two Array Charging boxes, connected by busbar trunking that runs around the centre of the parking bays to discrete installation points. This system removed the need for cabling to go out to each individual bay from the main power supply, and laid the foundations for easy future expansion.

Pod Point's load balancing system was installed from the communal landlord supply. This required the implementation of a pay-as-you-go system to ensure that charging costs could be recovered from each resident. Pod Point's app-based Smart Reporting system ensures a simple, efficient and automated solution to this for the site and its management company.

Since the UK Government's EV Infrastructure Grant for Residential Car Parks was made available in May 2022, Pod Point has supported Pier House in claiming back £21,000 off the cost of the installation. Their claim is still in progress at the time of writing, after the system moved from paper-based to digital.

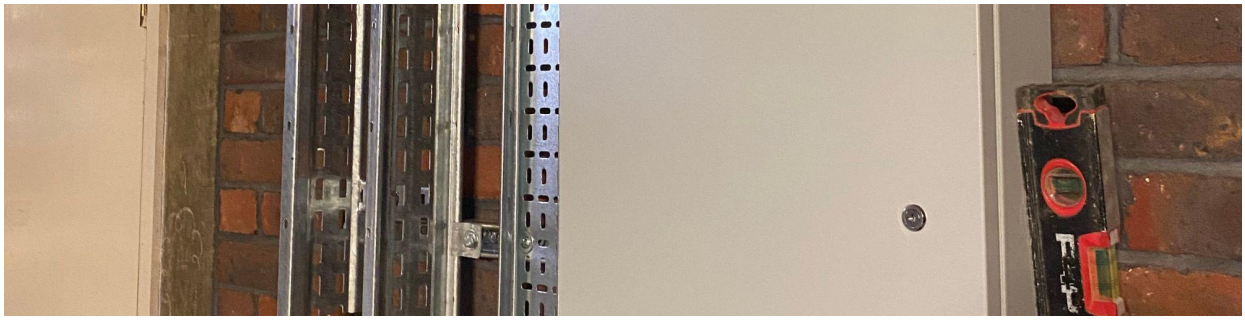


The Results

In total, the infrastructure for an initial 42 passive bays has been installed at Pier House, which can be expanded to 127 in the future with queuing technology. This offers a bespoke scheme allowing every flat owner to install their own Pod Point chargepoint in the future at a reasonable cost. Pier House now has a unique home charging offering, which for properties in central London where parking space is limited, is difficult to achieve.

Furthermore, using Pod Point's Array Charging system and future queuing technologies, Pier House is prepared for any further expansion to its infrastructure. As the ULEZ widens across London and the government's ban on the sale of new internal combustion engine (ICE) vehicles approaches, it's never been more important for London properties to be future-proof.

One active 7.2kW pay-as-you-go chargepoint has been installed already with the initial infrastructure. The charger was installed to meet the immediate needs of one resident on-site, allowing them to charge their EV safely and efficiently at home.



Barry White, Chairman of Pier House (Cheyne Walk) Management Ltd said:

"The Board was mindful of the increasing constraints on petrol and diesel vehicles in London and the necessity to plan for the future.

Pier House has a large car park with dedicated spaces for each flat. There is also the considerable advantage of sufficient capacity in the landlord's electricity supply. It therefore became possible to envisage each flat having home charging which would be difficult and costly to achieve in other locations in London.

Our advisors Edward Pearce, consulting engineers, and Pod Point created a bespoke scheme allowing every flat owner to install their own chargepoint at a reasonable cost. The Board views this scheme as a long term investment which will enable Pier House, with its superb location and facilities, to retain its position as a prestigious building in the heart of Chelsea."

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