



# Scaling on Street Charging Infrastructure

## D6.8 Timeline of installations with partner and stakeholders' input

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## 1. Introduction

This report sets out an analysis of the charge point installation timeline from the day a site is suggested, to the first EV charge session. One of the key challenges affecting the UK Government is a slow installation of charging points. It also affects the SOSCI delivery partners who are attempting to overcome a range of commercial, environmental, and technical barriers to get charge points installed. The report aims to understand:

- 1) issues which slow down the installation of sites
- 2) which stakeholders have the biggest impact - Local Authorities or site owners?
- 3) the reasons sites are not progressed to installation (e.g. electricity connection costs, lack of commercial case)

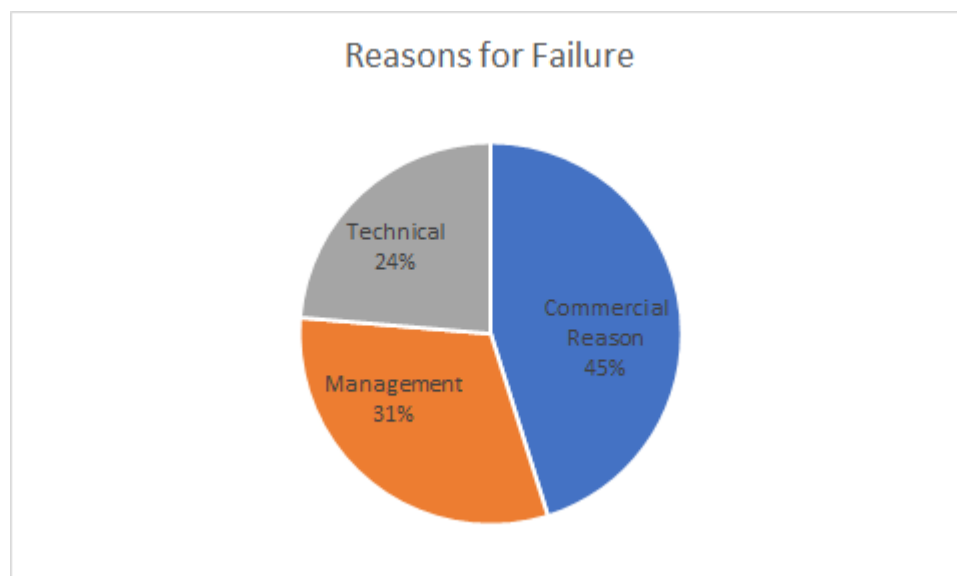
Data is drawn from the SOSCI partners on West of the Pennines in the first part of the report and East of the Pennines in the second part.

## 2. West of Pennines - Analysis of Sites that have not Progressed

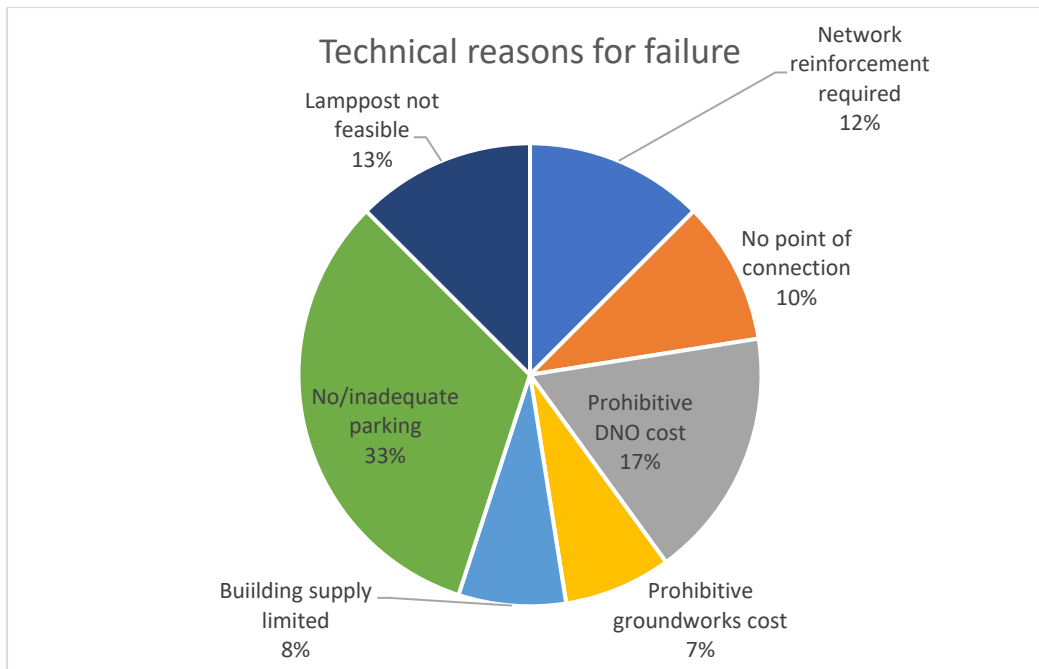
This section summarises the list of sites that have been suggested on the Charge my Street website but have not progressed. The main reasons have been placed into the following categories:

- 1) **Technical** - normally the electrical supply is insufficient - Network reinforcement required; no point of connection; prohibitive DNO cost; prohibitive groundworks cost; building supply limited; no / inadequate parking; lamppost not feasible; Highways problems.
- 2) **Management** - the site host has decided not to progress when there is local opposition due to pressure on parking / traffic or no owner / management engagement.
- 3) **Commercial** - Alternative charge point nearby; no target housing; agreement with a national chain like a supermarket already has a deal in place

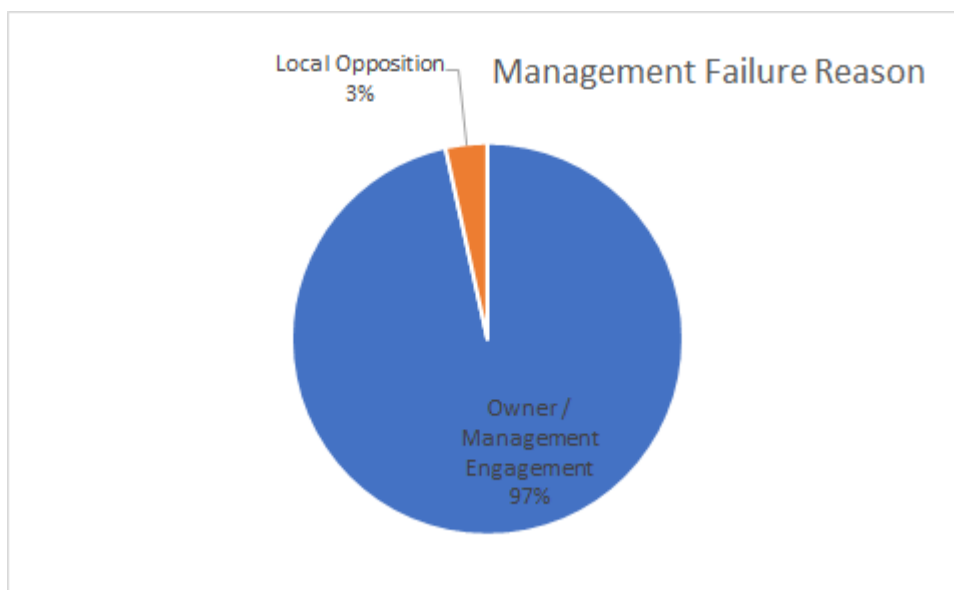
In total 179 sites which did not progress were analysed.



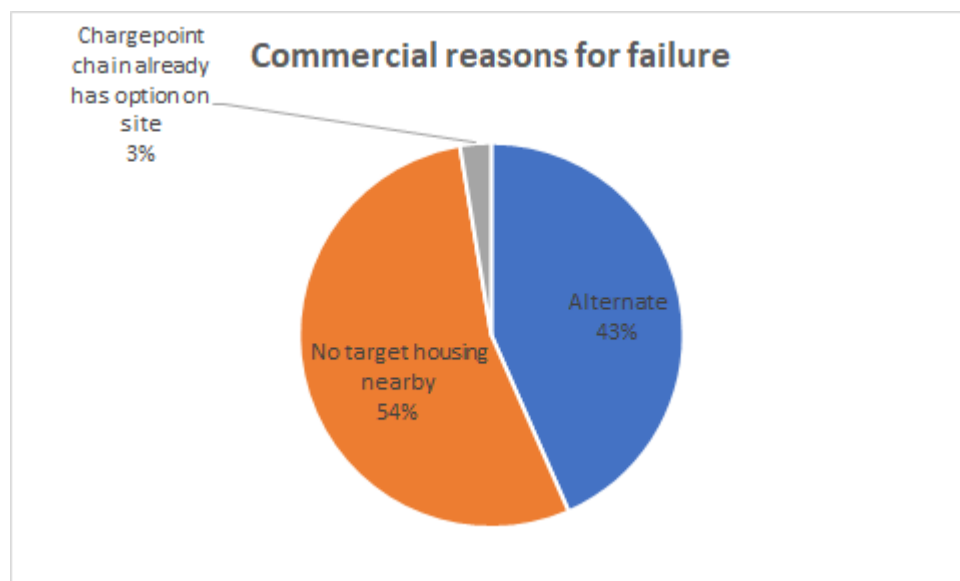
Approximately a half of sites failed due to commercial reasons, with a quarter subject to technical and management problems.



Approximately a half of the sites were not viable due to electrical issues - DNO supply was impossible, too costly or the building supply was not sufficient. A third of cases struggled due to inadequate parking and while lamppost charging was popular with 13% of suggestions, it was outside the scope of the SOSCI project. Some people had suggested lampposts however, these were not feasible (complexities of dealing with County Council on permissions and power).



The main management issue was around engagement with the owners and managers of sites. In most cases, the site users and owners needed to reach consensus, but this proved challenging across many sites. There was only local opposition in a couple of cases.



The main commercial reasons for failure were:

- 1) lack of target housing (terraces, flats, rented accommodation)
- 2) an alternative charge point provider within a 5-minute walk

As there are many areas without charge points, CMS prioritises sites which do not have a charge point within 5-minute walk.

### 3. Timeline from Suggestion to Install Completion

The CMS website logs the exact time when a person suggests a site. It is then evaluated against a set of core criteria by the project team. If it fails this test, it is marked as a failure on the website and the suggester is e-mailed with the reason.

If the site progresses, survey visits take place, and a rough estimate of costs and design is developed by the team. Negotiation then takes place with the site host and when the contract is signed, the works commence, and the charge point is installed (with new electricity supply if required).

#### 3.1. Suggestion

A key part of CAfS work has been to reduce the number of inappropriate sites suggested.

A questionnaire asks for information against criteria up front. Typical sites are farm shops with no nearby housing and relative short stays by visitors that make them more appropriate for rapid destination charging.

#### 3.2. Survey

Most site hosts are unaware what is involved in hosting a charging point. Case studies, videos and FAQs on the website go into detail but most people want a site a visit to understand where it will go and ask questions. This is also important to build trust between the site host and the team. They are taking a risk with their reputation as it will impact on how other people use their site.

Details about usage of the host's existing power supply can only be ascertained by an electrician's visit. Several factors such as proximity to power, available parking, and impact on non EV users at the host site all need to be considered. Quotes for a new electricity supply are also obtained in

some cases - and the electricity connection company can be a bottleneck, taking months to come back with quotes.

At the end of this stage, a consensus is reached on a proposal - either to progress or it is not viable.

In most cases the host site representative will then consult with other stakeholders within their governance structure - be it parish councillors, other members of a management team or village hall committee.

Several sites have dropped out at this stage - following a survey but before a contract has been signed. This could be due to high electrical connection costs or a reluctance to "lose" parking spaces.

### **3.3. Contract**

When the site appears to be commercially promising and can be delivered within reasonable cost parameters, the contract is put forward to the host organisation. In some cases this precipitates further discussion within the governance structure as it becomes "real." Parish Councillors and community run organisations with trustees and committees tend to use this hard decision point to obtain further clarifications on details. As these are raised at monthly meetings, the process becomes increasingly drawn out with each response generating further questions.

Some hosts wish to include additional elements into the tenancy agreement based on their solicitor's views. While this generally does not cause a problem, it does slow down the process.

Land Registry checks take place while the contract is being drawn up and this has created a problem 3 times when the site host cannot prove they own the land or are not the landowner.

Few sites have dropped out at this stage, following site hosts deciding they could not sign the contract. The longest delay was Dent Parish Council which took 9 months to agree to sign off the contract.

### **3.4. ENWL Install**

The electricity company - Electricity North West Limited have slowed down the process in several cases. They will not visit a site until the feeder pillar is in place and this can take 2 weeks. They then take another month to carry out installation.

### **3.5. Site Installation**

The BAY team are very responsive and able to move quickly to deliver sites as are the groundworks teams. There have been some delays in scheduling with site hosts and last-minute changes to location in a car park which have increased the costs. This has happened twice at Mellor & Thwaites village halls.

Meter installation has also introduced delays of up to 7 weeks before the installation.

Bay marking has proved difficult.

### **3.6. Completion**

Configuration of the charge point with the tariffs and adding to zap-map, national charge point register. At some sites, a formal launch has taken place which typically is scheduled a month after commissioning.

### 3.7. Installation timeline

The diagram below shows 4 charging points and the stages where delays were greatest from the IUK CEVEN project.

**Boot & Shoe** is a private pub which is part of the Thwaites Chain and the contract was time consuming to agree. The electricity connection ordering and install were also time consuming.

**Alston** was quick to approve a contract, and no new electrical connection was required so it was operational quickly. There were difficulties after installation with members of the host organisation and parish council asking for more information, but this did not hamper the installation.

**Broughton in Furness** also used the building electricity supply, but the connectivity was extremely problematic, taking several months to sort out.

**LBGC** was contractually difficult, due to council ownership of the land, but quick to install.

The main trend is that agreeing the contract was the most time-consuming element across all the sites. This can increase if third parties like Local Authorities and Parish Councils need to sign off contracts, as their legal teams generally like to alter and rewrite leases.

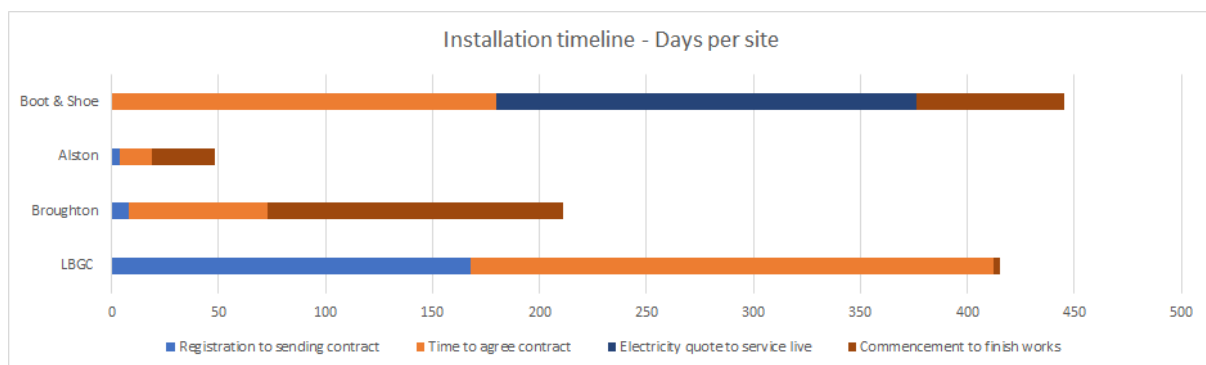


Diagram 1 – Installation timeline

Diagram 2 shows the number of days from registration to the site being fully operational and delivering its first charge on the SOSCI project.

The blue bar is the period taken to agree the contract with the host site and the orange bar is the period for installation. There are some caveats with this data - in some cases hosts have had discussions with CMS team before they registered on the website. In other cases, the charge point went live but no charge sessions took place as there was no EV driver available to test it out for a couple of weeks.

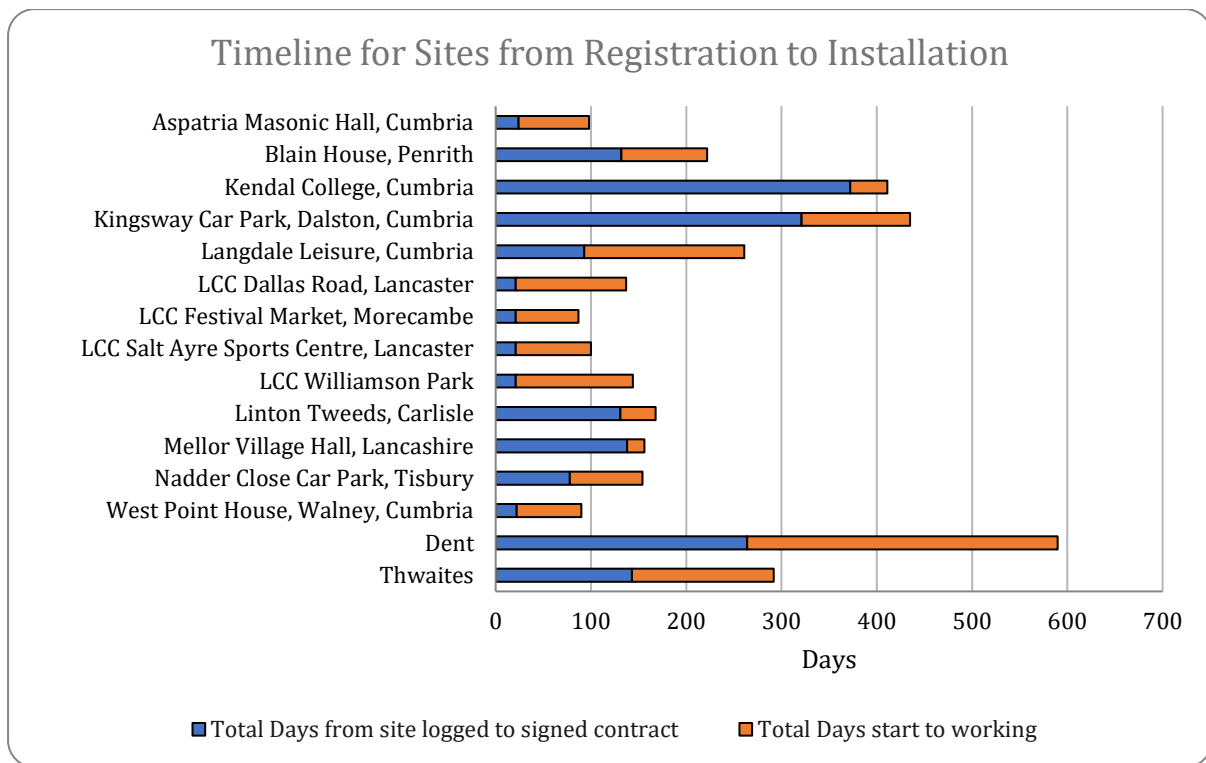


Diagram 2 – Timeline for Sites from Registration to Installation

The sites which have been installed in less than 100 days have all got their own power supply. COVID has been an issue with some of the sites such as Langdale Leisure where staff were furloughed.

Key ingredients for a quick install are:

- 1) ability to use existing power supply
- 2) hosts who are aligned with the CMS philosophy and able to sign a contract quickly
- 3) limited groundworks and complexity

Comparing both projects, improvements have been made on SOSCI but site hosts and signing contracts remain the biggest area of uncertainty.

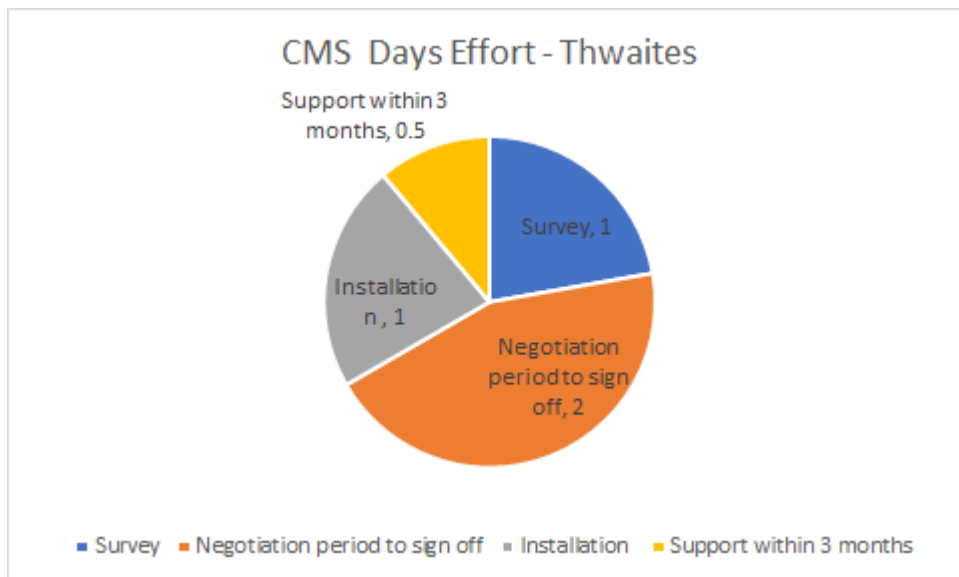
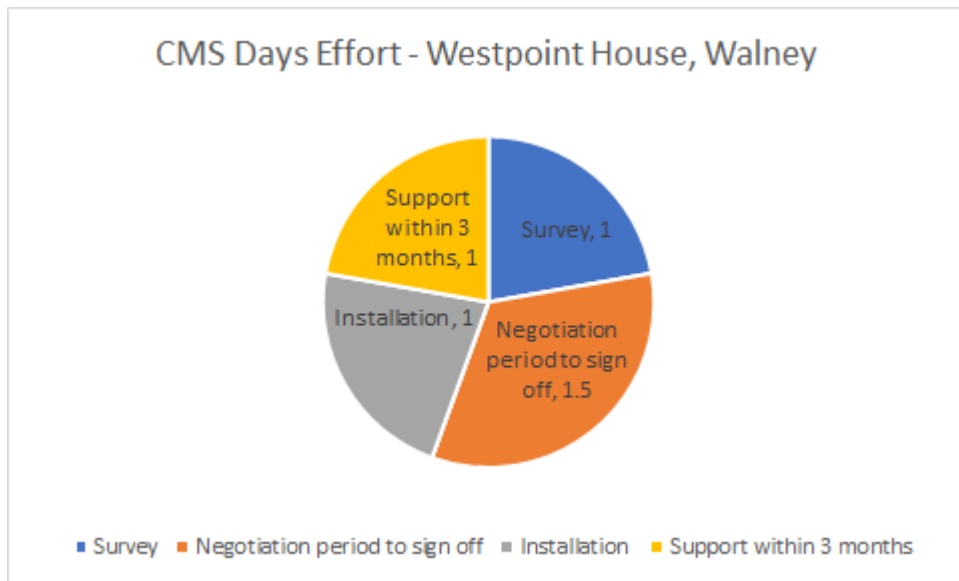
In March, the team met to review the contract and assess ways in which it could be simplified to expedite the approval process. Several suggestions were incorporated, removing some sections which were deemed unnecessary and adding in elements to provide additional protection for Charge my Street over the length of tenure. This is now being assessed by a solicitor before being offered to other groups.

Most community organisations access legal advice through a committee member who is a solicitor. Each solicitor comes back with comments, normally on different sections of the contract, which normally reflects their specialism in law. This was the case in both Thwaites and Dent installations. Dent also required sign off by Yorkshire Dales National Park Authority.

### 3.8. Staff time

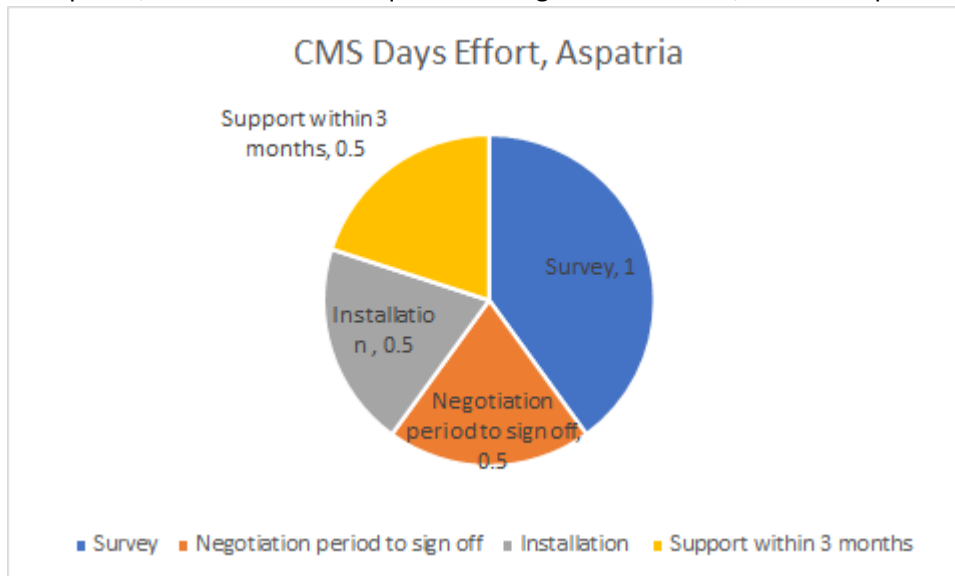
The effort expended on the installation process has been tracked for a sample of the installations.





The first installation at Westpoint House in June 2020 had 4.5 days effort as did the last installation carried out at Thwaites Village Hall in April 2021.

At Aspatria, the site which was quickest to sign off and install, the whole process took 2.5 days.



The engagement time is ranging from 2.5 to 6 days on the sites which have been connected to date with an average of 3.3 days. The average time which installers are working on a site is 3.6 days and 1.3 days for groundworkers.

### 3.9. South Lakeland District Council (SLDC)

At SLDC, survey work has been completed, procurement has taken place. However, the project will be reviewed by Cabinet in May, so no sites have yet been installed and contracts have not been signed.

### 3.10. Carlisle City Council (CCC)

CCC completed procurement in November 2020 and works commenced in January 2021. Electricity connections started being installed in March 2021 and are on-going in May 2021. Contracts have not been signed.

## 4. Durham Analysis of Sites that have not Progressed

Durham County Council owned all the sites which were suggested so technically, the installation process should have been shorter. However, there have been challenges managing processes within Durham County Council particularly between teams with responsibilities that touch on EV charging (legal, procurement, assets, parking). GK have worked with the SOSCI lead to overcome issues raised by the teams but it has slowed down the process of getting charge points installed.

Delays from the local authority involve a 4-6-week timeframe for title deeds. A planning application for a change of land if the area is not concrete and already used for parking.

From the start of the project (1/11/19) to the approval of the contract to replace the first EV charging point was 51 weeks.

From the contract sign off to charge points being open for business took 6 weeks on average for batch 1. These had electricity supplies in place.

For batch 2, new connections were required, and the process stretched out to 13 weeks on average. Batch 2 were all building supply and therefore required a physical site survey inside. Many of the buildings have only just started to open due to covid-19.

Within Batch 2, 14 sites were progressed to a detailed point of connection costing (at a cost of £270 per site) with the local DNO, Northern Powergrid:

- 3 Sites were then discounted, based on land ownership issues and wayleaves.
- 1 further site was discounted, based on extremely high connection costs (Expected cost from NPG online tool of £3,000, real quoted cost of £16,306).
- 1 further site has been postponed to Batch 4 due to a more complex installation requirement and significant traffic management issues.
- The average cost increase from NPG's online connection calculator to a firm Point of Connection (POC) quote was £4,598.
- The average DNO cost for the 9 sites which are proceeding is £6,753. This is significantly higher than experienced by GK for other areas of the UK - our average DNO cost across 137 sites with SSE has been £2,002.

## 5. Conclusions

At its core, the SOSCI community-led charge point programme is a) about scaling up the community-led charge point approach to become a regional and potentially national network, and b) a testbed intended to deliver valuable learning about how this approach can be made most effective.

Experience gained on the SOSCI project over the past 18 months has highlighted a range of important considerations:

1. It is vital to establish and follow a clear enquiry handling process, which seeks to progress individual enquiries in the most efficient way possible, from first nomination on through to installation where a location proves to be suitable.  
The process must include a series of clear decision gates, used to assess whether a nominated location should proceed to the next stage of consideration, including commercial and technical feasibility. The agreed enquiry process should then be followed consistently by project partners and should also be reflected in communications and web presence offered to the public about how the project operates and how individual enquiries will be handled. Clearly this process can and should be subject to on-going refinement, based on experience gained with individual sites.
2. Naturally, the project aims to maximise the conversion ratio of charge points installed to enquiries received. The on-going challenge is to target public engagement to attract suggestions of 'quality' charge point host sites which fully meet eligibility criteria, primarily through upfront self-screening to help ensure an interested location fits with the project's scope and objectives.

While minimum criteria are already clearly outlined, the project continues to explore ways to strengthen the screening process, seeking to minimise the staff time spent in assessing and responding to speculative enquiries which in some cases clearly have no fit with the project.

3. The SOSCI project aims to scale up the community-led charge point approach, evolving an initial trial of 4 charge points into a regional network comprising 100s of charging locations. As far as possible an 'off the shelf' approach helps to ensure enquiries are processed as efficiently and effectively as possible, particularly as the number of host site enquiries increases exponentially. This includes the default position of as far as possible adopting:
  - a common enquiry process
  - consistent documentation, including engagement resources, lease contracts, and handover documents covering charge point operation and maintenance
  - (as far as is technically feasible) standard technical solutions for installed charge points

Deviating from a standard offer at any stage risks increasing the overall time required to manage and progress individual site cases substantially and may add to the on-going administration burden for operating a growing network of commissioned charge points.

4. In line with the testbed nature of the SOSCI programme, full recording and tracking of data and timelines is essential, to compile a complete and accurate case history for each site nominated. Capturing and analysing early experience as part of an active lessons learned culture contributes directly to on-going improvements in the approach.

Review and analysis necessarily includes:

- suitable charging locations where hosts ultimately decided not to proceed, to understand how the SOSCI offer might in some cases be made more attractive
- nominated sites which may quickly prove to be ineligible v. project criteria, given that unsuitable locations still deliver valuable experience and learning
- driver usage data for commissioned charge points, as part of understanding the success or otherwise of existing locations on the network, which may influence decisions on whether to proceed with new site nominations