national highways

Strategic Charging Infrastructure Guidance

Standard Project Steps for Installing Chargepoints in SRN Service Areas

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Introduction

This document outlines the standardised process for installing electric vehicle (EV) chargepoints in Service Areas across the Strategic Road Network (SRN). It is designed to provide a clear, step-by-step framework for project teams, stakeholders, and delivery partners, ensuring a consistent approach from site identification through to operational readiness.

The process is divided into five key phases — **Optioneering, Design and Approvals, Pre-Construction, Construction and Installation, and Handover and Operation** — each with defined activities, stakeholder inputs, and indicative timelines. This structured approach helps to:

- Align stakeholders early and address technical, commercial, and environmental considerations.
- Streamline approvals and procurement processes.
- Reduce project risks by incorporating connectivity, cybersecurity, and contingency planning.
- Ensure compliance with safety, quality, and performance standards.

1. Optioneering

Step 1: Optioneering (~8–12 weeks)

1.1 Site Identification and Assessment:

- Evaluate locations based on traffic flow, accessibility, and proximity to the SRN.
- Analyse demand and engage stakeholders.
- Secure initial agreements with landowners and service station operators.

1.2 Technical and Environmental Feasibility:

- Conduct site surveys and Environmental Impact Assessments (EIA).
- Assess grid connection feasibility and capacity.
- Evaluate planning permission needs.

1.3 Stakeholder Consultation:

- Engage local authorities, National Highways, and utility providers.
- Inform the public about construction timelines and impacts.
- Coordinate updates with operators and authorities.
- Address land use, safety, and traffic concerns.

1.4 Funding:

- Secure funding for the project.

2. Design and Approvals

Step 2: Design and Approvals (~2–4 weeks)

2.1 Concept Design Development:

- Draft preliminary designs for layouts, connections, and facilities.
- Confirm technical specifications and infrastructure needs.

2.2 Detailed Design Approvals:

- Finalise designs with stakeholder feedback.
- Submit planning applications and secure permits.
- Obtain approvals from National Highways and relevant authorities.

2.3 Procurement Strategy:

- Create procurement plans for contractors, equipment, and materials.
- Issue tenders and evaluate proposals.

3. Pre-Construction

Step 3: Pre-Construction (~4–6 weeks)

3.1 Site Preparation:

- Secure access agreements and operational licenses.
- Prepare the site, including groundwork and clearance.

3.2 Grid Connection:

- Finalise agreements with DNOs, iDNOs, or ICPs.
- Schedule grid connection and power supply installations.

3.3 Data Cables and Connectivity Assessment:

- Assess data cable needs.
- Consider SIM or mobile connectivity for remote payments.
- Ensure compatibility with payment platforms.

3.4 Cybersecurity Assessment:

- Assess network and payment security.
- Implement safeguards and conduct penetration testing.

3.5 Emergency Response Planning:

- Develop contingency plans for outages and failures.
- Install backup power systems.
- Train teams for rapid response.

4. Construction and Installation

Step 4: Construction and Installation (~6–12 weeks)

4.1 Civil and Electrical Works:

- Set up signage and traffic management.
- Install foundations, cabling, and electrical infrastructure.
- Assemble and install chargepoint hardware.

4.2 Testing and Commissioning:

- Conduct electrical and operational testing.
- Ensure compliance with safety and performance standards.

5. Handover and Operation

Step 5: Handover and Operation (~4–8 weeks)

5.1 Final Approvals and Handover:

- Complete inspections and obtain certifications.
- Hand over the site to the operator.

5.2 Operational Readiness:

- Activate systems, including payment and monitoring software.
- Train maintenance staff and set up support services.