

Truckstop operator guidance for eHGV charge point installation

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Document history

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Disclaimer

This document is intended to provide general guidance for truckstop operators and other service providers serving the strategic road network (SRN) when considering and planning the provision of charging for battery electric heavy goods vehicles (eHGVs).

This guidance is provided “as is” for general information only and does not constitute legal, technical or professional advice. National Highways makes no representations or warranties of any kind whether express or implied regarding the adequacy, accuracy or completeness of the information provided.

Truckstop operators and other service providers must obtain their own independent legal, technical and professional advice before undertaking any action, decision, works or investments related to the subject matter discussed in this guidance. It remains the responsibility of service providers to ensure all relevant industry standards and regulatory requirements are met at all times, and industry processes are followed.

To the fullest extent permitted by law, National Highways accepts no liability for any loss, damage, cost or expense arising from the use of or reliance on this guidance.

A note on technologies:

UK Government and National Highways policy on decarbonisation is ‘technology neutral’. This means that Government is not mandating any specific technology with which decarbonisation should be achieved. Instead, it is allowing and encouraging industry and operators to adopt the appropriate technology that is the most commercially viable and meets their business needs.

Whilst we recognise that hydrogen and other zero-emission technologies will serve a role in transport decarbonisation, this guidance focuses solely on **battery electric HGVs**, which represents the most mature zero emission HGV technology at the time of writing.

This guidance does not consider refuelling infrastructure for other zero-emission HGVs, such as hydrogen fuel-cell vehicles or overhead catenary HGV systems.

Executive summary

National Highways has produced this guidance for truckstop operators serving the strategic road network (SRN), to provide a practical introduction to planning, delivering and managing eHGV charging infrastructure.

This guidance is the first of its kind and will be updated as the UK eHGV market and road fleet develop over time.

This guidance has been structured around three overarching themes:

- **Understand charging needs:** how much charging is needed, when people will use it, what types of charge points are needed and how this varies for short break, long break and overnight charging.
- **Understand your site:** identifying options for how to lay out your site, space requirements, and key planning considerations.
- **Delivering eHGV charging:** understanding who you may need to speak to and work with to take a project forward, including during operation.

Drawing on these themes, this guidance highlights several practical considerations for truckstop operators looking to provide eHGV charging, including:

- The layout, space requirements and customer facilities for eHGV truckstops will differ from those at traditional truckstops. For example, parking bay layouts are different, as more space is required for the charging infrastructure.
- Early engagement with delivery partners is valuable, helping you access the right support to quickly understand whether eHGV charging is feasible on your site.
- Safety considerations for managing eHGV truckstops differ from traditional truckstops, with new requirements linked to electrical infrastructure (for example batteries, high-voltage cables, transformers) and ongoing operation.

Introduction

What is the strategic road network (SRN)?

The SRN is the largest piece of infrastructure in the country. It comprises more than 4,500 miles of motorways and major A roads in England, which are at the core of our national transport system. Managed by National Highways, the SRN is the primary artery for road freight, with two-thirds of road freight depending on the SRN to move goods across the country.

Why is eHGV charging on the SRN coming?

The UK has committed to reaching Net Zero by 2050. This includes decarbonising transport, which remains the sector with the highest greenhouse gas emissions in the UK as of 2023. HGVs account for 16% of these UK's emissions, and 33% of emissions from the SRN.

To support its Net Zero obligations, after consultation, in 2021 the UK Government announced target phase out dates for the sale of new non-zero emission HGVs. These dates have been set at 2035 for vehicles up to and including 26 tonnes, and 2040 for those above 26 tonnes.

Purpose of this guidance

Introducing eHGV charging at truckstops can involve changes to existing sites and operations as battery-electric HGVs become more widely used over time. This guidance is intended to help truckstop operators understand the key considerations and typical processes involved.

This guidance provides a high-level, practical introduction to planning and delivering eHGV charging infrastructure at truckstops serving users of the Strategic Road Network (SRN). It also signposts further information to support operators at different stages of considering or providing eHGV charging.

Additional information

There is additional technical information available to support this guidance document and provide an in-depth look at the topics discussed. You can find this, alongside a checklist, and a full glossary of terms on the National Highways Knowledge Repository. This can be found on the [National Highways Strategic Charging Infrastructure \(SCI\) portal](#).

How can National Highways help?

This guidance forms part of National Highways' wider role in supporting the safe and efficient operation of the SRN, and its commitment to achieving Net Zero. Further information on how National Highways can support truckstop operators, including where engagement may be required, is provided later in this guidance.

This guidance is part of National Highways' work to support the transport sector in the move towards low carbon vehicles and accelerate the delivery of public eHGV charging on the SRN.

National Highways has created a public 'repository' of external guidance, information and advice hosted on the [National Highways Strategic Charging Infrastructure \(SCI\) portal](#). Here you can find a guide for truckstop operators, along with a range of guidance on providing charging for battery-electric cars and vans.

For any general queries after having read this guidance, please contact the National Highways Strategic Charging Infrastructure (SCI) team at StrategicChargingInfrastructure@nationalhighways.co.uk.

1. Your journey to eHGV charging

1.1. Understanding the eHGV charging journey

Delivering eHGV charging at a truckstop typically involves considering a range of interrelated factors, including site layout, electricity grid capacity, planning requirements and day-to-day operation. Decisions in one area can have implications for others, and the overall approach will vary depending on the characteristics of each site.

There is no single route to delivering eHGV charging. Truckstop operators may explore these considerations in different orders, revisit earlier decisions as designs develop, or progress multiple elements in parallel. The right approach will depend on factors such as existing site constraints, customer demand and available grid capacity.

1.2. Key organisations involved

As part of this journey, truckstop operators may need to engage with a range of organisations, including:

- electricity network operators and connection providers
- charge point operators or equipment suppliers
- local planning authorities
- landowners and neighbouring stakeholders

The roles and responsibilities of these parties, and when engagement may be required, will differ by site and are explored in more detail later in this guidance.

1.3. How this guidance is structured

The remainder of this guidance is organised around three core themes that reflect the main considerations involved in delivering eHGV charging:

- **Site considerations** – understanding physical constraints, layout and planning requirements
- **Grid connections** – understanding how electricity supply options can affect feasibility, cost and timescales
- **Operation and maintenance** – understanding ongoing responsibilities for safe and reliable operation

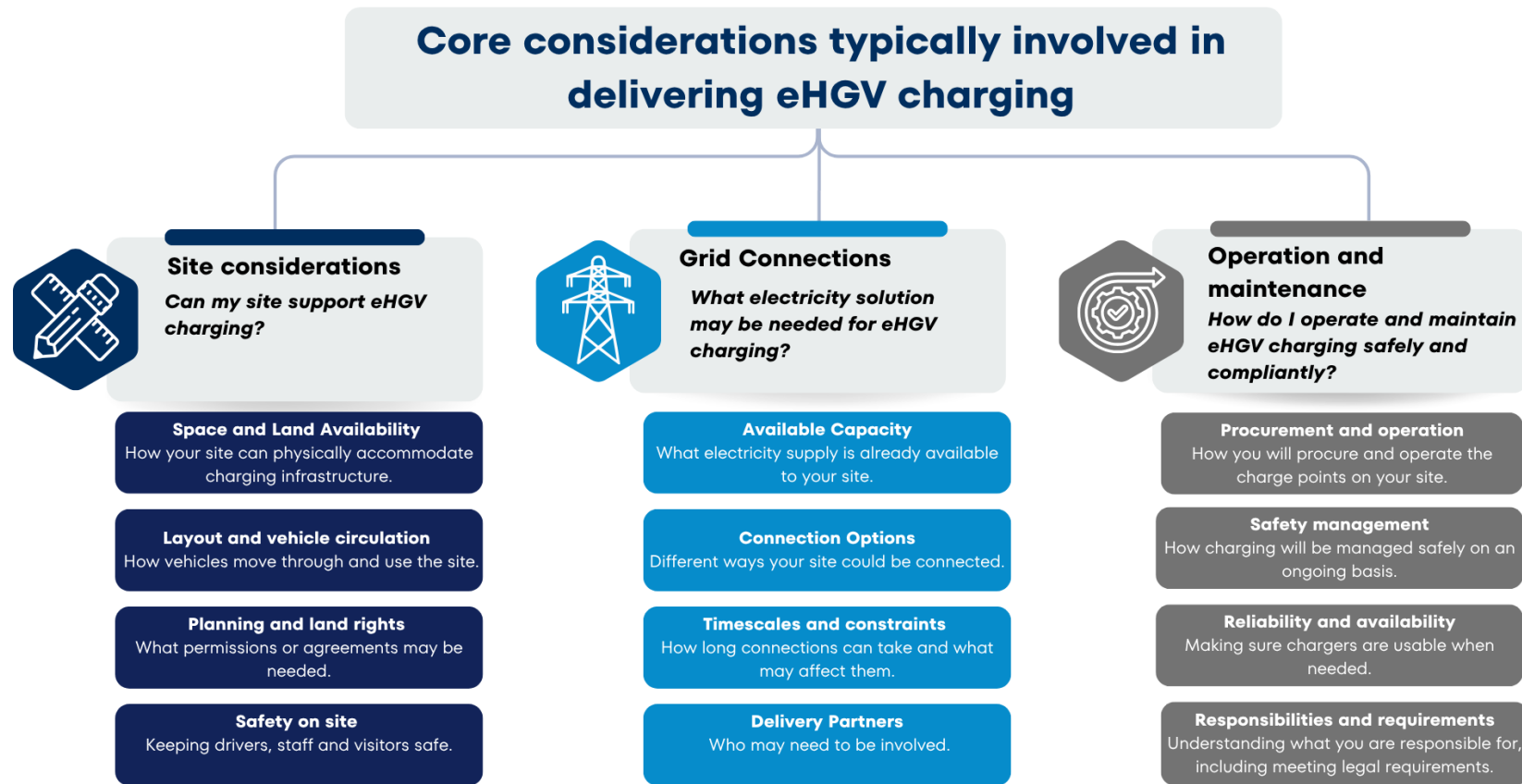


Figure 1-1 Core considerations when delivering eHGV charging

Together, these sections are intended to help truckstop operators build an informed picture of what may be involved for their site. A readiness checklist is provided later (**Appendix A**) in the guidance to support reflection and next steps.

2. Site considerations

2.1. Purpose of this section

This section is intended to help truckstop operators understand the characteristics of their site in the context of eHGV charging, and to identify realistic options for how charging infrastructure might be accommodated.

This section focusses on:

- how the site is used
- who uses it
- what space is available
- planning considerations
- safety considerations

These site characteristics will shape what may be feasible for a given site and will inform later consideration of grid connection options and delivery approaches (see **Section 3**).

2.2. How is your site being used?

This subsection focusses on understanding how your site is currently used, and how existing customer behaviour and dwell patterns may translate into different charging needs for eHGVs.

The aim is to describe patterns of use rather than to finalise demand forecasts or technical solutions. Many of the considerations below can be explored at a high level and refined over time as plans develop.

2.2.1. How site use can affect charging requirements

Delivering charging facilities for eHGVs may require site changes. Depending on your circumstances, this could include:

- upgrading your grid connection (discussed further in Section 03).
- adjusting site layout and parking to accommodate charging infrastructure.
- updating day-to-day operations to reflect new charging behaviours, safety requirements and maintenance needs.
- engaging with customers and fleet operators to understand behaviour changes and charging expectations.

These changes can be complex. Where possible, enabling and preparatory works could be considered alongside wider site renovation or long-term planning activities, as this may help reduce costs and disruption and make future deployment easier. Even if eHGV charging is a longer-term future goal, early assessment of your site's suitability can make future deployment easier and more cost-effective.

As battery ranges and vehicle technology evolve, driver behaviour and charging needs are also likely to change. Early engagement with drivers and fleet operators, alongside high-level scenario planning, can help ensure future choices remain aligned with long-term operational and business needs.

Understanding how your site is currently used provides an important foundation for considering what forms of charging could realistically be supported.

2.2.2. Understanding demand for charging

To understand the most appropriate charging solutions for your site, it is helpful to develop an early picture of the likely demand for charging. At this stage, the aim is not to produce a definitive forecast, but to build a reasoned understanding of how demand may vary and change over time, which can be refined as plans develop.

Understanding likely demand may involve drawing on information such as:

- historical diesel fuelling and parking activity
- dwell times and peak usage periods
- expected changes in vehicle types and customer behaviour
- wider industry trends and growth expectations

Where possible, it can be helpful to consider demand over the longer term (often 20-25 years). Where site-specific constraints make this impractical, a shorter horizon (for example a minimum of 10 years) can still provide a useful starting point. Developing this early view can support longer-term planning and help avoid the need for multiple changes over time.

Understanding likely demand for charging can help inform:

- land use and space requirements
- the indicative number and power rating (in kilowatts (kW)) of charge points
- later discussions about grid connection options which follow as a result of available capacity (see **Section 3**)

Different customers will have different charging needs, influenced by factors such as vehicle range, payload, dwell time and operational schedules. Common eHGV charging scenarios include short breaks, longer rest stops and overnight stays, each of which may require different charging speeds and infrastructure.

Identifying the likely mix of charging scenarios at your site will help develop a clearer picture of the types of charging that may be required and, at a later stage, what levels of electricity supply you may need to consider.

Figure 2-1 provides illustrative examples of typical eHGV charging scenarios:

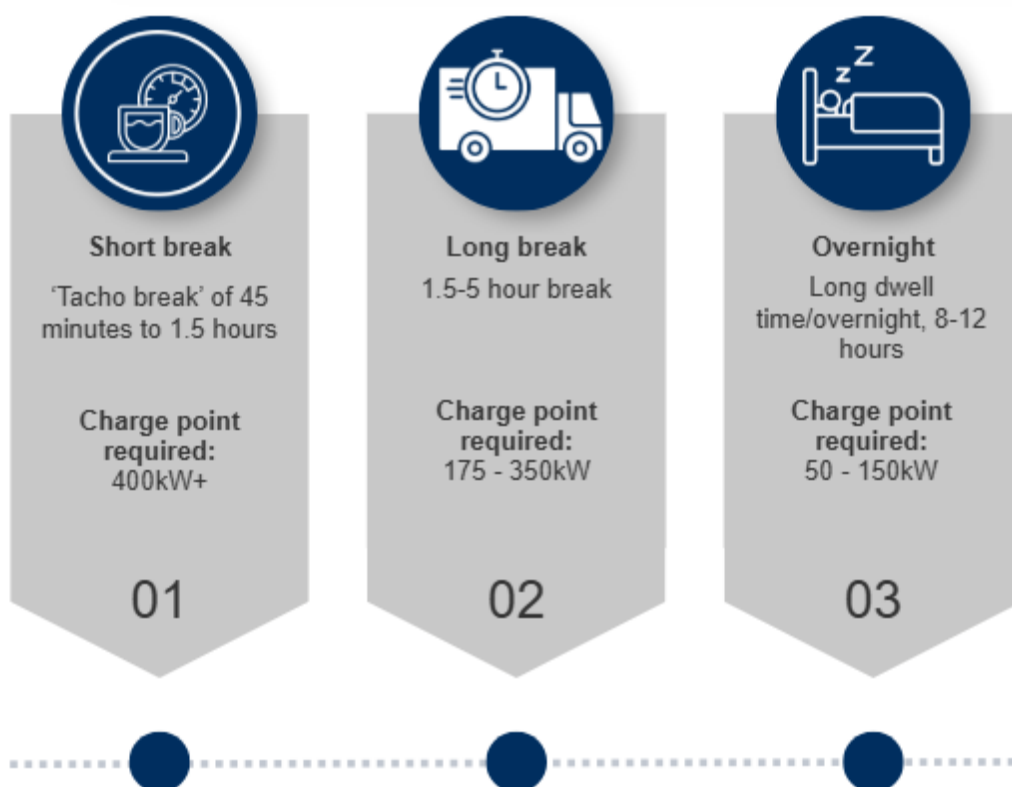


Figure 2-1 – Illustrative eHGV charging scenarios

2.2.3. What do I need to consider?

In summary, the key points to take away from this section are:

- **How your site is currently used**, including dwell times, customer behaviour and peak periods, will strongly influence the types of charging that may be needed.
- Different **charging scenarios** (such as short stops, longer rest breaks or overnight stays) can create very different patterns of demand for charging.
- Developing an **early, realistic view of likely demand** can help inform future decisions on site layout, space requirements and charging provision.
- This understanding provides a useful foundation for later consideration of grid connection options and delivery approaches, which are explored in **Section 3**.

2.3. Land use and planning

Understanding how your site is used and the likely demand for charging provides a good starting point for considering land use and planning. Different customer behaviours and patterns of use (such as short stops, longer breaks or overnight stays) can have different implications for how space is used.

Introducing eHGV charging will often require changes to how land is used within a site. In some cases, this may include repurposing existing lorry parking areas to accommodate charging bays and associated electrical infrastructure.

There is a national shortage of secure HGV parking, and any reduction in parking capacity is therefore likely to be scrutinised. Proposals that affect overnight parking provision should be carefully justified and aligned with local planning policy, which typically places a strong emphasis on maintaining adequate facilities for HGV drivers.

Most sites will also require planning permission. Any development beyond minor works (known as ‘permitted development’) involves:

- Formal review of the proposal
- Consultation with relevant stakeholders (including National Highways)
- Decision to be made by the local planning committee

Compared to minor site changes or typical refurbishment works, operators should expect longer timelines and will need to engage the relevant [Local Planning Authority](#), particularly where proposals involve substantial changes to site layout or new electrical infrastructure. Early dialogue with the local planning authority can help develop site requirements and initial designs and reduce the risk of delays as these evolve.

Planning permission and land rights are not typically required at the earliest stages of the grid connection process (**Section 3**), meaning activities can often progress in parallel.

2.3.1. Impact on the SRN

It is likely that construction on or near your facilities may impact on the operation of the National Highways network. Most scenarios where this is the case include instances where your truckstop connects directly to a motorway or all-purpose trunk road (APTR) or is near to a junction on the SRN.

In these cases, your proposals will require review and input from National Highways’ spatial planning teams, to ensure any disruption to the SRN is planned for and mitigated where possible. National Highways can provide early advice on what will be required in support of your planning application, and additional information on potential solutions.

General guidance on working with National Highways on planning application matters can be found on the [National Highways Spatial Planning Portal](#).

2.3.2. What do I need to do?

- Confirm any land constraints and what planning permission may be required for your site.
- Assess the impact on HGV parking (particularly overnight provision) and document how capacity will be maintained.
- Start early engagement with the Local Planning Authority.

2.4. Site layout and design

Once land use and planning considerations are understood, you can begin to think about what eHGV charging could mean for site layout and design. At this stage, the aim is not to produce a final design, but to understand the types of physical changes that may be required and how these could affect safe and efficient operation of the site.

Site layout design should reflect how customers are expected to use charging, alongside existing site activities. Charging associated with short stops, longer breaks or overnight stays may place different demands on space, circulation and parking, and these should be considered together rather than in isolation.

2.4.1. Vehicle access, circulation and queuing

eHGV charging equipment and bays typically require more space than conventional fuel infrastructure. Layouts need to allow for safe access by large vehicles, including sufficient space for turning, manoeuvring and queuing at busy times. Poorly considered layouts can create safety risks, congestion or operational disruption.

Designs should consider:

- how vehicles enter, move around and exit the site
- whether eHGVs can access charging bays without excessive reversing
- where vehicles may queue if chargers are occupied, and whether this could obstruct circulation routes or site access

2.4.2. Charging bays and parking arrangements

Charging bays should be sized and positioned to accommodate articulated vehicles safely. Where possible, layouts that minimise reversing are preferred; in line with [British Standards Institute \(BSI\)](#) best practice, this typically means a **drive-through charging bay** configuration, which allows vehicles to enter and exit in a forward direction, improving site safety and ease of use.

The layout in Figure 2-2 provides an illustrative example that aligns with the BSI code of practice for the design and implementation of publicly accessible charging sites for battery electric HGVs¹.

¹ [BSI Code of Practice: flex-2071.pdf](#)

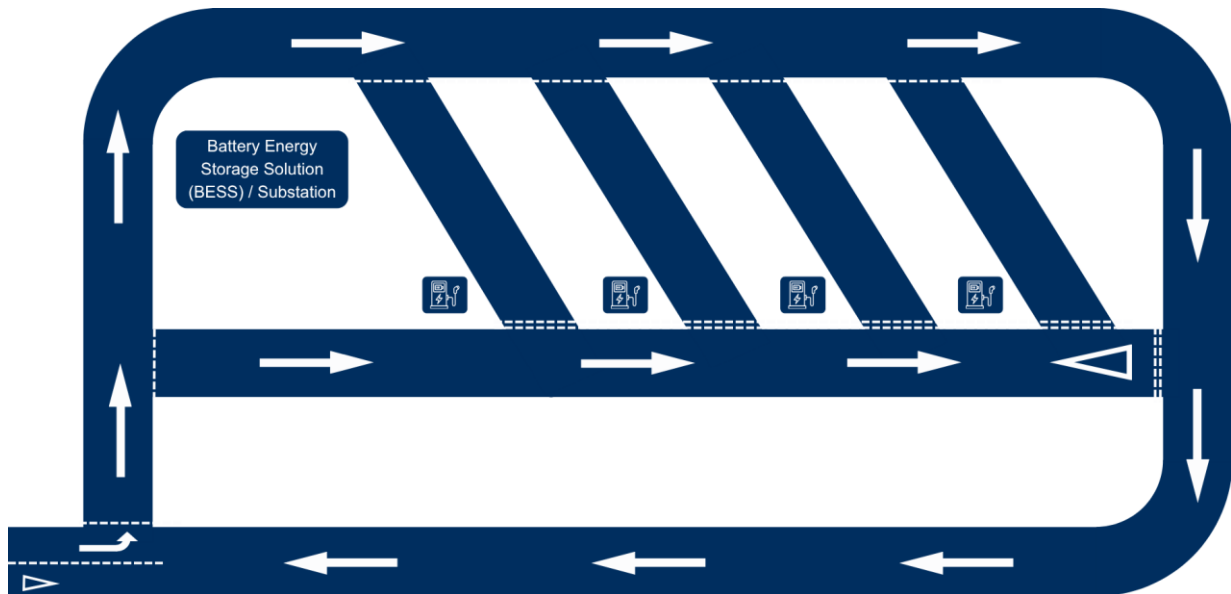


Figure 2-2 Exemplar plan of eHGV charging site with drive-through bays

2.4.3. Charging islands and equipment placement

A key part of the design is the charging island - the space between bays that houses the charge point and cable. Charging islands must:

- be wider than the charge point itself to provide a safe operating area for drivers
- not be positioned to sit within a vehicle's swept path during entry or exit, to avoid trailer overhangs and ensure vehicles can manoeuvre safely
- include clear visual cues guiding drivers on when to start turning
- provide robust physical protection and markers (bollards for example) that are sized and positioned so they are clearly visible from the cab as drivers eye level is approximately 1.5 m above ground

Safety and operational considerations

Safety must be built in from the start of this process, rather than treated as an afterthought. As a minimum, layouts should provide:

- safe space around electrical equipment
- clear separation between vehicles and pedestrians
- adequate lighting for night-time use
- compliance with fire safety distances

In addition to these core principles, truckstop operators should carry out site-specific risk assessments and ensure compliance with all relevant standards. Further information is also available via the Energy Network Association ([ENA](#)) and Independent Network Association ([INA](#)).

Where additional support is required, operators may wish to engage specialist planning, design or engineering consultants to help interpret and apply relevant safety and compliance requirements for their site.

2.4.4. What do I need to do?

- Develop an indicative bay and charging island layout that accommodates HGVs, with protected equipment zones and safe pedestrian routes.
- Test access, manoeuvring and swept paths for the largest vehicles expected to use the site, minimising reversing where possible.
- Consider how queuing and future expansion could affect circulation routes and site operation as demand grows.
- Carry out site-specific risk assessments and identify relevant safety and compliance requirements.

2.5. Parallel operation of diesel fuelling and eHGV charging

In most cases, truckstops are expected to introduce eHGV charging gradually, operating diesel and electric services in parallel. This presents opportunities to prepare your site for the future, and introduces new operational, safety and space considerations.

Figure 2-3 - Operational and safety considerations for operators introducing electric charging below highlights some of the key issues you may need to consider when planning this transition.







 <p>Safe site circulation</p>	<p>Charging areas must be clearly separated from diesel fuelling zones, particularly where high-power electrical equipment is installed.</p>
 <p>Traffic flow and dwell time</p>	<p>eHGVs may remain on site longer than diesel vehicles. Charge point locations and parking layouts should minimise conflicting vehicle movements. Virtual queuing or smart-flow technologies may help reduce on-site queues.</p>
 <p>Phased implementation</p>	<p>A staged rollout provides flexibility where existing layouts are constrained, allowing infrastructure to scale with evolving demand.</p>
 <p>Safety and compliance</p>	<p>Some legacy layouts may not support safe parallel operation. Additional regulatory or safety measures may therefore be required.</p>
 <p>Temporary closure for full refit</p>	<p>In some cases, advanced closure for a full refit may be an option. In these cases, help may be available to plan for and mitigate the commercial impact of temporary closure from DNOs, professional and industry bodies such as the Energy Networks Association (ENA), and future guidance developed and shared on the National Highways SCI Portal.</p>
 <p>Site constraints</p>	<p>Recognising that some sites may not accommodate eHGV charging feasibly, in which case relocation to a site with suitable grid capacity may be more viable. Help is however likely to be available if relocation is an option that suits your needs and long-term aspirations as a business.</p>

Figure 2-3 - Operational and safety considerations for operators introducing electric charging

The most appropriate approach will vary by site.

2.5.1. What do I need to do?

- Decide on an appropriate rollout approach (for example: smaller pilot projects, phased expansion or wider site refit).
- Plan how diesel and electric services will operate alongside each other, ensuring safe circulation, clear separation between fuelling and charging areas, and effective management of vehicle queues.
- Consider how the chosen approach supports flexibility over time, including the ability to expand charging provision or adapt site layouts as demand grows.

2. SITE CONSIDERATIONS

WHAT THIS MEANS FOR YOU

- Understanding your site today is the first step to unlocking viable eHGV charging in the future.
- How trucks use your site and when they need to charge determines what charging you need. This includes type of charge point, number of charge points required, and site layout and grid connection requirements.
- Look at your existing customer base and determine potential future eHGV charging needs.
- Strong recommendation by the BSI for pull-through bays for eHGVs. Other eHGV charging configurations are available where pull-throughs are met with site spatial or layout constraints.
- Finding the configuration that suits your site and future ambitions will help you realise your charging delivery potential.

3. Grid connections

3.1. Purpose of this section

This section builds on the site considerations set out in **Section 2** and explains how grid connection options and available electricity capacity may affect the feasibility, cost and timescales of providing eHGV charging.

It provides:

- an overview of how the electricity network supplies power to a site
- a high-level explanation of the grid connection process
- an outline of the types of decisions truckstop operators may need to consider when exploring connection options

This section is intended to support early understanding and informed discussion. It does not provide technical design advice or replace engagement with electricity network providers.

3.2. Key organisations involved in electricity connections

Delivering electricity from the wider network to a truckstop site involves several organisations, each with distinct responsibilities. Understanding these early can help make later conversations clearer and more efficient.

In summary:

- **Transmission network operators** manage the high-voltage electricity network that moves power around the country.
- **Distribution network operators (DNOs)** own and operate the local electricity networks and are typically the primary point of contact for new or upgraded connections. Your local DNO can be found using the Energy Networks Association [website](#).
- **Independent distribution network operators (IDNOs)** may provide alternative local distribution solutions in some circumstances. A list of IDNOs is maintained by the [Office of Gas and Electricity Markets \(Ofgem\)](#)².
- **Independent connection providers (ICPs)** can design and construct certain parts of a grid connection, subject to adoption by a DNO or IDNO. A list of ICPs in your area is available from [LRQA](#).
- **Truckstop operators** are responsible for infrastructure on their own site, including the final connection from the electricity meter to charge points.

The roles of these organisations, and where responsibilities typically sit, are illustrated in the next section.

² [List of all electricity licensees including suppliers](#)

3.3. From pylon to charge point – how does the grid work?

Understanding how electricity is delivered from the wider network to your site can help clarify who is responsible for different parts of the connection and when you may need to engage them.

Figure 3-1 below shows the typical route electricity takes from the transmission network through local distribution networks and onto a truckstop site. It highlights:

- the different parts of the electricity system involved
- which organisations are responsible for each stage
- where the boundary of the truckstop operator’s responsibility typically sits

In general:

- National and local electricity network operators are responsible for the wider electricity network.
- The truckstop operator is responsible for all infrastructure on their own site, including the final connection from the electricity meter to the charge points.

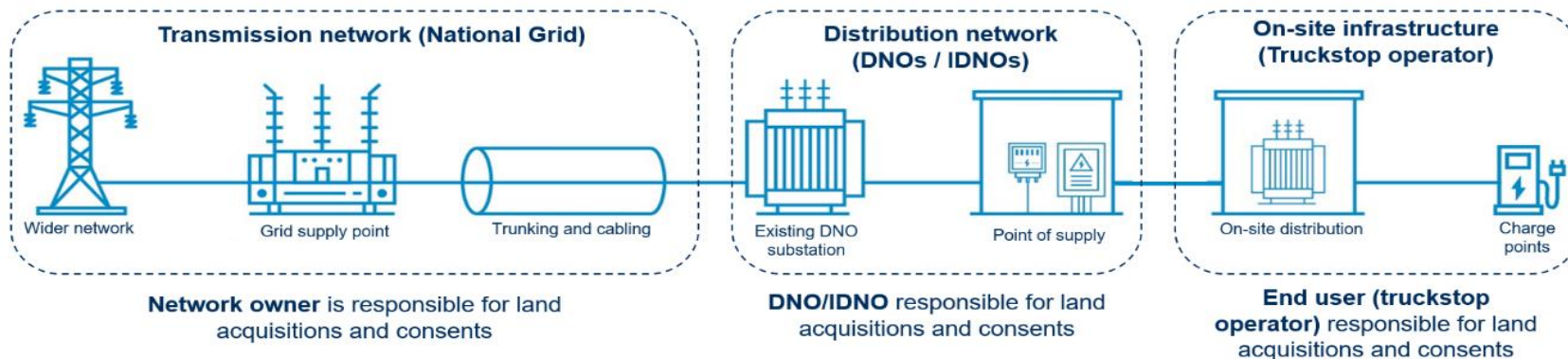


Figure 3-1 - Process by which electricity is supplied from the wider electricity network to a truckstop site

3.4. Grid connection size and scope

Before deciding what type of grid connection may be required, it is important to have a broad understanding of how much electricity the site is likely to need. This is sometimes referred to as 'electricity demand'.

To check whether an upgraded connection is needed and appropriate, an electricity demand forecast is needed. This forecast may not be detailed but should provide a reasoned, high-level indication of likely 'peak' power needs and how these may change over time.

To prepare this, you should consider the following factors which typically influence power needs:

- the types of charging expected to take place (for example overnight, rest break or short stay charging)
- the number of charge points being considered and their power ratings
- how many charge points are likely to be used at the same time
- the site's existing electricity use

Considered together, this information will help you understand:

- whether the existing electricity connection is likely to be sufficient or may need upgrading
- the potential scale of any new connection
- whether early discussions with network providers are needed to explore feasibility, costs and timescales.

3.5. What do I need to know about the grid connection process?

While every site is different, the process for securing a grid connection follows a broadly similar structure across the country. The nature and scale of any upgrades required will depend on factors such as location, existing network capacity and anticipated demand.

In most cases, grid connections are delivered by your local DNO. However, in some circumstances, site operators may also choose to contract with an IDNO to design and deliver the 'contestable' works associated with the connection, as explained below.

Grid connection works are typically split into:

- **non-contestable works**, which must be undertaken by the DNO (for example works on the existing distribution network); and
- **contestable works**, which may be undertaken by either the DNO or an accredited third party, for example being delivered through an IDNO.

Regardless of the delivery route chosen, a useful starting point is the [Transport Connections Guidance tool](#) developed by the Energy Networks Association (ENA) in collaboration with the UK DNOs. This provides an overview of the steps involved before submitting a connection application and outlines what information is typically required.

3.5.1. Distribution network operator (DNO) delivery route

Where a site progresses the grid connection through the DNO delivery route, a formal connection application is submitted to the local DNO.

Following application submission:

- The DNO will review the request.
- If the project is considered viable, they will issue a connection offer (often referred to as a connection quote).

A connection offer typically sets out:

- the scope of works required to connect the site (including non-contestable works and any contestable elements the DNO proposes to deliver)
- costs and payment milestones
- any conditions, assumptions or constraints associated with the connection.

The connection offer must be formally accepted before detailed design and construction works can proceed.

Alternative delivery approaches, including contracting with an IDNO for contestable works, may follow different commercial and procurement routes and are not based on the DNO connection offer process described above.

Figure 3-2 overleaf provides an overview of the typical stages involved in obtaining and accepting a connection offer.

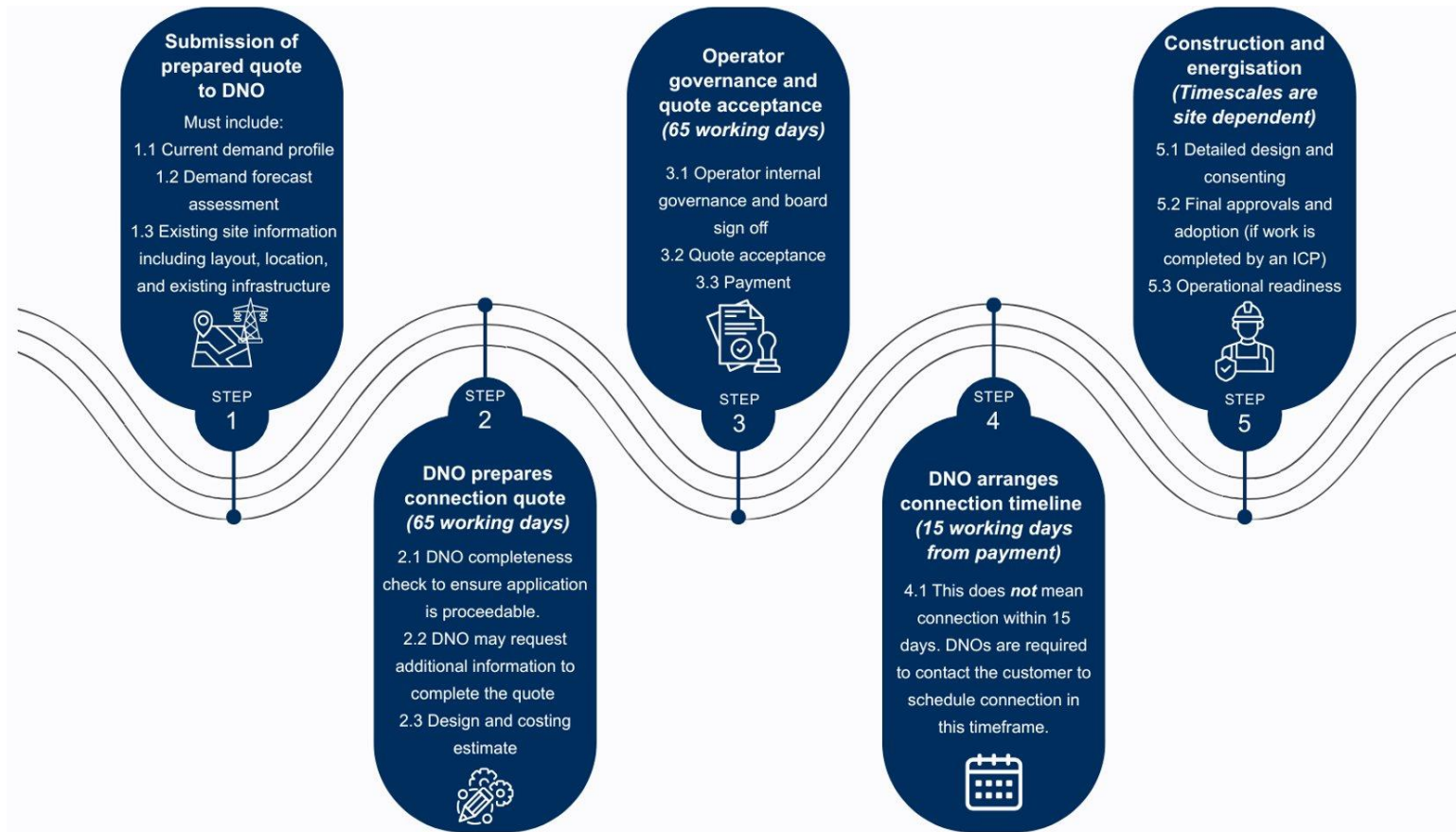


Figure 3-2 Process for obtaining a connection quote for an extra high voltage (EHV) connection

3.6. What support is available when progressing your application?

3.6.1. Pre-application support

Some DNOs have dedicated pre-application customer support teams who can guide you through the process, help you understand what type of connection upgrade is needed, provide quotations and manage the delivery of the work.

You may also choose to speak to technical specialists such as consultants or an independent connection provider (ICP) to support this process.

3.6.2. Connection surgeries

A connection surgery is a technical workshop where a DNO provides dedicated support in scoping the grid connection required. These can be requested by going to the "Connections" page of a DNO to request one. The workshop will cover:

- existing network capacity, and potential capacity needed
- connection criteria, including voltage levels, reinforcement works, and timing
- location constraints and the point of connection
- potential for flexible or smart connections to minimise the upgrade required.

Whilst a connection may be designed and built by an ICP instead of the DNO, a connection surgery provides a forum for early engagement with the DNO to understand the specifics around your site, potential timescales, and connection options. This collaborative approach can save time and cost.

3.7. Summary – what do I need to consider?

Figure 3-3 outlines some of the points you will need to consider when applying for a grid connection upgrade.



Figure 3-3 - Considerations when applying for grid connection

3. GRID CONNECTIONS *WHAT THIS MEANS FOR YOU*

- Many sites will need an upgraded grid connection to support installation of eHGV charging infrastructure.
- Grid connection processes are standardised, though a site specific approach will be taken, as each site varies in complexity and requirements.
- Demand assessment and connection application support is available – from DNOs directly, an ICP, consultants, or via IDNOs who may offer an end-to-end service.

4. Operation and maintenance

4.1. Purpose of this section

This section explains the key considerations for operating and maintaining eHGV charge points once they are installed on your site. It focuses on practical issues such as operating models, legal requirements, maintenance arrangements and safety, rather than detailed technical specifications.

4.2. How to procure and operate eHGV charge points

There are different ways to procure and operate eHGV charge points, and the more appropriate approach will depend on your site, business model and appetite for operational involvement. In practice, there are two common operating models:

- **Operating charge points yourself (often referred to as a ‘white-label’ solution):** You procure, operate and maintain the equipment, and use either in-house or off-the-shelf charge point management software to run the service under your own brand.
- **Partnering with a charge point operator (CPO):** The CPO delivers charging services on your site under commercial terms (CPOs are private companies and not regulated by Ofgem). A good source of information on what CPOs do, the services they offer can be found at the ChargeUK³ site [here](#).

Regardless of the operating model chosen, you retain responsibility for ensuring that customers using your site receive a reliable and high-quality charging service.

In some operating models, operators may choose to use a charging station management system. These systems monitor charge point availability, help identify faults and manage customer access. The uses and complexity of these systems vary between sites and operating arrangements.

4.3. What you are legally required to do when operating charge points

The [Public Charge Point Regulations 2023](#) set out legal requirements for anyone operating public EV and eHGV charge points in the UK, with the aim of making charging simple, reliable and fair for drivers. Operators must:

- display prices clearly in pence per kilowatt-hour (p/kWh)
- offer contactless ‘pay as you go’ options without requiring account or app sign-up

³ChargeUK is a trade association representing companies which work to deliver EV and eHGV charging infrastructure in the UK, including CPOs. ChargeUK currently has over 30 members but does not represent all CPOs.

- enable roaming (roaming lets drivers charge and pay using their existing charging app or card, even if your site is run by a different operator to theirs) by working with at least one roaming provider
- keep charge points working at least 99% of the time
- provide free 24/7 customer support
- share key data (location, availability, prices) so drivers can easily find chargers.

Together, these requirements are designed to remove common frustrations and give users confidence when charging away from home.

4.4. What to consider for day-to-day operations and maintenance

There are a number of contractual and operational considerations associated with day-to-day eHGV charge point operation.

4.4.1. How to procure and operate charge points

Though not required, most truckstops choose to partner with a CPO, typically through a service level agreement (SLA) that sets KPIs to ensure compliance with the Public Charge Point Regulations 2023.

If operating a white-label solution, you are responsible for sourcing, operating and maintaining the charge points, and for meeting all regulatory requirements. This includes the Public Charge Point Regulations 2023 and other standards.

4.4.2. Staff and training

Introducing eHGV charging will have implications for truckstop staff. Depending on how charging services are operated, training may be needed to support safe and effective day-to-day operation. This may include:

- safety training related to the operation of high-power electrical equipment.
- charge-point-specific operational training, such as fault reporting, basic troubleshooting or use of monitoring systems.

4.4.3. Maintenance

eHGV charge points require maintenance by suitably qualified engineers.

- If partnering with a CPO, maintenance is usually covered in the SLA.
- For white-label operation, you must procure maintenance services yourself.
- On-site electrical infrastructure may also require maintenance.

Responsibilities for maintenance are split as follows:

- **Infrastructure up to the electricity meter** (for example transformers, point of connection cabling and substations) is the responsibility of the DNO or IDNO.

These organisations will undertake maintenance periodically according to their own processes.

- **Infrastructure on the customer side of the meter** (for example, on-site cabling (from the meter) and junction box) is typically the responsibility of the landowner or truckstop operator. Maintenance can be fulfilled by an IDNO or another specialist provider if contracted.

4.5. Safety considerations when operating eHGV charge points

Safety must be considered as a priority for any installation and management of eHGV charge points. Headline safety considerations for eHGV truckstops are shown in Figure 4-1 below. This is not an exhaustive list and should be treated as a starting point.

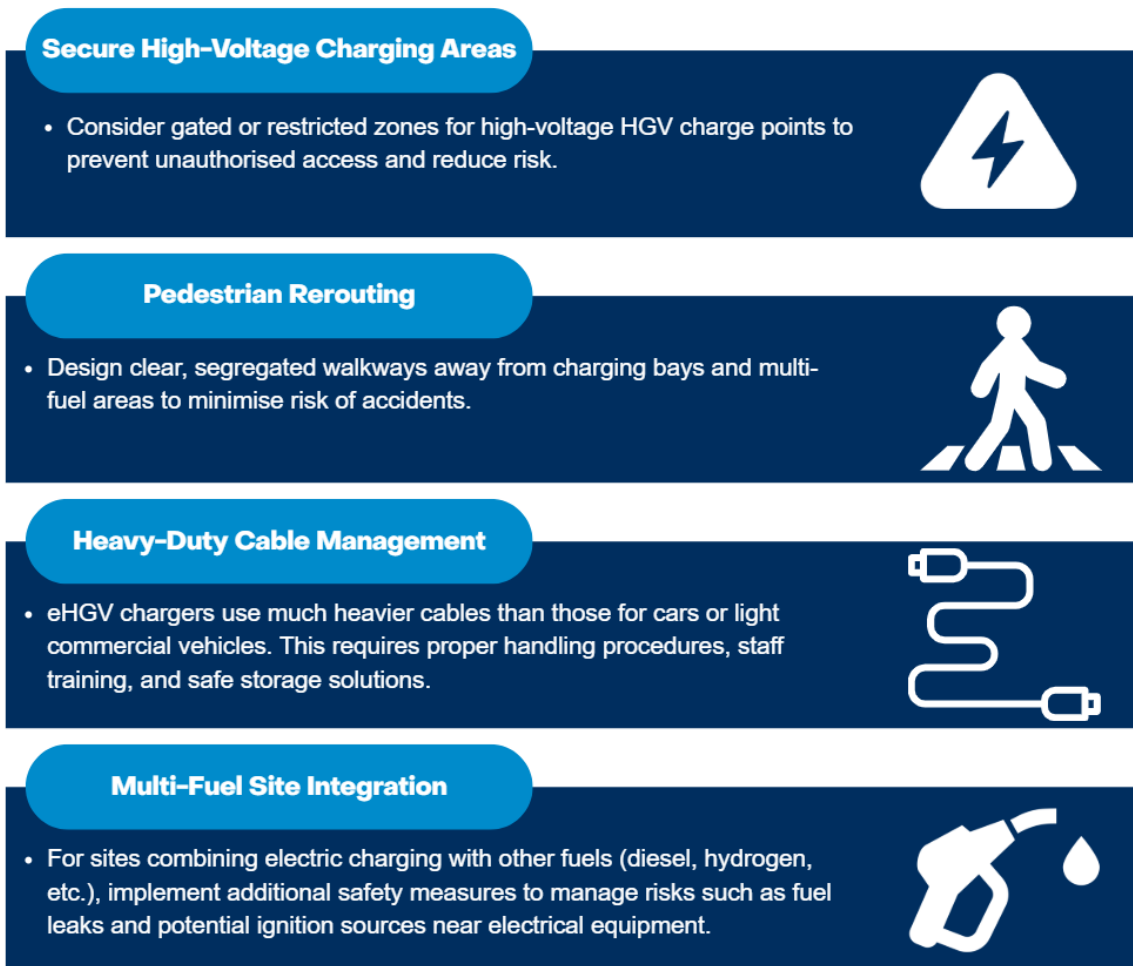


Figure 4-1 - Key safety principles to consider at eHGV charging sites

4. OPERATIONS AND MAINTENANCE *WHAT THIS MEANS FOR YOU*

- eHGV charging can be delivered either through a white-label model (operator procures and runs charge points) or by partnering with a charge point operator (CPO) under a service agreement.
- All eHGV charge points must comply with the Public Charge Point Regulations 2023 including uptime and payment methods.
- Training, maintenance, and high-voltage safety must be addressed early in transition plans. The move to eHGV charging introduces high-voltage operational considerations, requiring operators to assess training needs and safety implications as a core part of transition planning.

Appendix A. Are you ready to start delivering eHGV charging on your site?

The checklist below gives an overview of what you may need to consider when looking at providing eHGV charging. How many of these questions you are able to answer now will give you an idea of how ready you are today – and what you may still need to consider.

A.1. Connection readiness checklist

No.	Consideration	Tick box
1	Have you done an initial check of how much eHGV charging your site might need, now and in the future?	<input type="checkbox"/>
2	Have you assessed the anticipated types of charging, or use-cases ⁴ that will be most common on your site?	<input type="checkbox"/>
3	Have you reviewed your existing site to understand spatial, operational and safety constraints, including circulation, dwell times and interactions with existing diesel fuelling operations?	<input type="checkbox"/>
4	Have you considered whether your site is likely to support phased delivery of eHGV charging, or whether more significant reconfiguration, temporary closure or relocation may need to be explored?	<input type="checkbox"/>
5	Have you identified and engaged with the key stakeholders relevant to your site, including fleet operators, charge point operators, landowners, DNOs, and National Highways where applicable?	<input type="checkbox"/>
6	Have you engaged with your local planning authority to understand any relevant local planning policy considerations or early requirements associated with eHGV charging?	<input type="checkbox"/>
7	Have you identified the preferred charge point types and power ratings that best align with your anticipated use-cases, customer needs and dwell times?	<input type="checkbox"/>

⁴ For the purpose of this document 'use-cases' refers to the makeup of expected users at a site. This can be formed of overnight charging, break charging, or ultra-rapid charging. These will determine power and grid connection requirements.

No.	Consideration	Tick box
8	Have you considered the charging connector standards required including compatibility with current and expected future eHGV fleets?	<input type="checkbox"/>
9	Have you reviewed the relevant British Standards and codes of practice, including BSI Flex 2071, to inform charging bay design, site layout and safety requirements?	<input type="checkbox"/>
10	Have you developed a preferred site layout that incorporates the appropriate charging bays, circulation routes, safety considerations and customer facilities?	<input type="checkbox"/>
11	Where drive-through bays are not feasible, have you assessed alternative charging bay configurations and considered the operational and safety implications?	<input type="checkbox"/>
12	Have you confirmed whether your proposed eHGV charging works are likely to require full planning permission, or whether any elements may fall under permitted development rights?	<input type="checkbox"/>
13	Have you identified any land ownership, wayleave or easement requirements associated with grid connections, substations or site reconfiguration, including engagement with third-party landowners where required?	<input type="checkbox"/>
14	Have you engaged with your local DNO to identify potential grid connection options, indicative costs and likely lead times to support your anticipated charging demand?	<input type="checkbox"/>
15	Where appropriate, have you explored options with IDNOs or ICPs to understand alternative delivery models for contestable works or customer sole-use assets?	<input type="checkbox"/>
16	Have you identified the on-site electrical infrastructure required (e.g. substations, transformers, cabling, switchgear) and how these assets will be delivered, adopted and maintained?	<input type="checkbox"/>
17	Have you considered the sequencing of grid connection works and on-site construction, including how delays to either could affect programme delivery and site operations?	<input type="checkbox"/>

No.	Consideration	Tick box
18	Have you planned for installation, testing and commissioning of charge points and associated infrastructure prior to energisation, with clear roles and responsibilities defined?	<input type="checkbox"/>
20	Have you determined your preferred operating model for eHGV charge points (e.g. partnership with a charge point operator or a white-label solution), including commercial and contractual implications?	<input type="checkbox"/>
21	Have you ensured that your proposed charging operation will comply with Public Charge Point Regulations, including payment methods, pricing transparency and reliability requirements?	<input type="checkbox"/>
22	Have you defined the service level agreements, performance standards and maintenance arrangements required to ensure reliable ongoing operation of eHGV charge points?	<input type="checkbox"/>
23	Have you identified any training requirements for site staff, including safe operation of high-power electrical equipment and customer support for eHGV charging?	<input type="checkbox"/>
24	Have you confirmed ongoing maintenance responsibilities for charge points and on-site electrical infrastructure, including the split of responsibilities between the truckstop operator, CPO, DNO or IDNO?	<input type="checkbox"/>
25	Have you undertaken a headline safety risk assessment for the establishment and operation of eHGV charging at your site, and identified how key risks will be managed in line with relevant standards, including HSE, FCC, BSI, and other bodies?	<input type="checkbox"/>

Appendix B. Stakeholders and typical responsibilities

Throughout your journey to introduce eHGV charge points, it will be important to speak to and engage with key stakeholders and potential suppliers early on, as well as throughout the process. A list of key stakeholders and their roles can be found below. Who should be involved in each step is detailed throughout this document.

Stakeholder	Definition / Role	Considerations
Distribution network operator (DNO)	Responsible for building, maintaining, repairing, and upgrading the electricity distribution network that connects homes and businesses to the national transmission grid. This includes power lines, substations, and transformers. Each DNO operates in a specific geographical area of the UK.	A DNO will be your primary contact regarding grid connections and upgrades. More information can be found in Section 3 .
Independent distribution network operators (IDNOs)	Build, own, and operate local electricity distribution networks, often in new developments or specific areas, independently of the regional DNOs. They introduce competition into the electricity distribution sector, potentially offering more cost-effective solutions for new connections and network extensions.	May be engaged as an alternative to utilising your regional DNO. More information can be found in Section 3 .
Independent connection providers (ICPs)	ICPs are accredited companies which build electricity connections and networks, including the 'contestable' works of a grid connection (designing new connections, digging trenches, and installing switches and transformers). ICPs do not operate the connections they build. They are 'adopted' by a DNO or IDNO after completion, and confirmation they meet required standards.	Engaging with an ICP may help you design and build your grid connection and may provide more customised solutions than working solely with a DNO or IDNO. More information can be found in Section 3 .

Stakeholder	Definition / Role	Considerations
Charge point operators (CPOs)	CPOs are responsible for building and managing eHGV vehicle charging infrastructure. They can contract with site operators to implement	<p>CPOs may be contracted to operate charge points on your site. This is not the only option, however, is a common solution. Engagement with a CPO can help you understand the options available to you.</p> <p>More information can be found in Section 3.</p>
Charge point manufacturers (Charge point OEMs)	Companies which design and manufacture the physical charge point units used for EV and eHGV charging.	<p>If you are looking to install charge points operated under your own brand, you will need to source charge points from an OEM or distributor. This is often called a 'white label' solution.</p> <p>More information can be found in Section 4.</p>
National Energy Systems Operator (NESO)	The organisation responsible for planning and operating the electricity system in Great Britain, ensuring secure, reliable, and efficient energy delivery.	Where a connection of greater capacity than a DNO can accommodate is required, it may be required to understand the options for a transmission network connection and engage NESO.

Stakeholder	Definition / Role	Considerations
National Highways	<p>National Highways is the government-owned, arm's-length company charged with operating, maintaining and improving England's motorways and major A-roads. Our ambition is to ensure our major roads are more dependable, durable and most importantly are safe.</p>	<p>National Highways can support through supplying strategic guidance, new market entrants information, and information on site constraints, and options to overcome barriers to energisation.</p> <p>National Highways must also be consulted if grid connection infrastructure requires drilling under the motorway or A road.</p>
<p>Landowners</p>	<p>A landowner is a person, entity (corporation), or government body holding legal title, or an interest in, real property. A landowner can hold a freehold estate (absolute ownership) or a leasehold estate (long-term lease).</p>	<p>If you are not the freeholder, you will need to engage with them to ensure permissions are granted for works on site.</p> <p>Adjacent landowners may also need to be consulted if grid connection infrastructure needs to pass through their land, or if you are looking to expand your site.</p> <p>More information can be found in Section 2.</p>

Stakeholder	Definition / Role	Considerations
Local planning authorities (LPAs)	The local government body (typically a district, borough, or unitary council) responsible for managing land use, planning policy, and deciding on planning applications within its jurisdiction.	<p>Planning permission from your LPA may be needed in order to make upgrades to your site. This is especially likely if you are making large scale changes or implementing a new grid connection.</p> <p>More information can be found in Section 2.</p>
Fleet operators and customers	Those who will utilise your eHGV charge point.	<p>Engagement required to understand their current needs and driver behaviours – and how these might change with the transition to eHGVs. This will help determine your use-cases, and charge point requirements.</p> <p>More information can be found in Section 2, and is relevant to grid capacity in Section 3.</p>