

Title	Meeting the Welfare and Parking Needs of Goods Vehicle Drivers and Riders, Briefing Report
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Number (ENG-TR)	ENG-TR.036
Date	June 2023
ISSN	2633-6839

MEETING THE WELFARE AND PARKING NEEDS OF GOODS VEHICLE DRIVERS AND RIDERS

Briefing Report

Technical Report ENG-TR.036

June 2023

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University of Westminster

This briefing report has been produced as part of the Centre for Sustainable Road Freight (SRF – EPSRC grant number EP/R035148/1). Further details about the SRF project are available at: <http://www.csrf.ac.uk/>

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and Riders – Briefing Report**

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1. Introduction

This briefing report investigates the parking and welfare needs of goods vehicle drivers and riders in the UK freight transport industry.

It investigates the overnight parking requirements of long-distance drivers and how, for a long period of time, these have not been adequately met and provided for by the public and private sectors. Despite the fact that policymakers have increasingly legislated against HGV overnight parking on-street since the 1970s on grounds of impacts on traffic, road safety and nuisance and disturbance to residents they have failed to ensure that sufficient overnight parking space, and which is of a suitable quality and price, has been provided for HGV drivers. This problem is becoming increasingly acute over time and is likely to be an important factor in the shortage of long-distance drivers.

The report also examines the day-time parking needs of goods vehicle drivers in order to comply with mandatory rest break legislation. It discusses the access to toilets and handwashing facilities required by all those delivering and collecting goods and providing services but which are unfortunately often not made available to them.

It also investigates the welfare needs of those providing goods collection and deliveries as part of the growth in online shopping (especially for parcels, groceries and meals) the vast majority of whom work in urban areas with some using motorbikes, mopeds, bicycles and cargo bikes as well as working on-foot in addition to those using vans and HGVS. This includes consideration of their needs for rest areas and safe, secure vehicle parking facilities. Those without enclosed vehicles require covered rest areas when waiting between job allocations and when taking breaks as well as safe, secure vehicle storage locations while they obtain food and drink in cafes and shops and when making deliveries.

In helping the reader to understand these issues, the report begins with an explanation of these parking and welfare needs of the various types of workers delivering and collecting goods and providing services. It also provides a history of the provision of overnight parking facilities for long-distance HGV drivers on motorways and other roads, explaining the views of successive UK Governments as well as the provision (or lack of) these facilities by local authorities and private sector operators.

Section 2 discusses the parking and welfare needs of goods vehicle drivers and riders, on-street parking regulations, drivers' hours regulations and the etymology of terminology used in the report including lorry parks and truckstops.

Section 3 provides a history of transport cafes and lorry parks in the UK.

Section 4 discusses the various types of lorry park to be found in the UK.

Section 5 discuss the economic, planning and other challenges and issues facing lorry park operators.

Section 6 provides insight into national government and local authority views on and responsibility for lorry parks. It includes a case study of the situation in Kent, where the overnight lorry park issues are most severe and actions taken by different levels of Government.

Section 7 explains the current system for providing lorry parks and other HGV parking facilities.

Section 8 discusses the findings of UK Government-commissioned audits of HGV overnight parking in England.

Section 9 presents the findings of surveys of users of overnight lorry park users concerning their suitability and quality.

Section 10 discusses the lorry park situation and actions taken in the European Union and the United States of America.

Section 11 provides views expressed by politicians and industry on lorry parks and Government policy concerning them since the severe worsening of the HGV driver shortage in 2020.

Section 12 presents the lorry park actions that the UK Government committed to taking in 2021.

Section 13 discusses the recommendations made by the House of Commons Transport Select Committee in 2021 concerning lorry parks in its inquiry into Freight Supply Chain, and the UK Government response to these recommendations in 2022.

Section 14 discusses other driver and rider welfare needs in the course of their work beyond overnight HGV parking.

Section 15 discusses the growing incidence of people living in LGVs (i.e. vans) and its potential impacts on public perception of road freight transport and on-street parking regulation.

Section 16 provides conclusions including the inadequacies and gaps in current provision of facilities for goods vehicle drivers and riders.

Section 17 provides recommendations about actions that can be taken by national and local government and industry to address deficiencies in overnight HGV parking and other driver/rider welfare needs.

In this report, dedicated facilities where HGV drivers can park their vehicles and rest in the course of their work are referred to as either 'lorry parks' or 'truckstops' depending on the source. The term 'lorry park' was being used in the UK by the late 1950s when these facilities first emerged. This term has the same meaning as 'truckstop' which is now also commonly used in the UK as a result of the proliferation of American culture (see **section 2.4** for further discussion of the derivation of the terms 'lorry' and 'truck'). The term 'HGV' is used in the report to refer to goods vehicles over 3.5 tonnes gross mass that make use of lorry parks, while 'LGV' is used to refer to light goods vehicles up to and including 3.5 tonnes (often commonly referred to as vans). The term HGV is more commonly used in UK industry and research to refer to these vehicles than lorry or truck.

This report has been produced as part of the Centre for Sustainable Road Freight (SRF – EPSRC grant number: EP/R035148/1). A slide set and summary report are also available from the SRF website that accompany this report. Further details about the SRF project are available at: <http://www.csrf.ac.uk/>

2. Goods vehicle parking and other driver welfare considerations

2.1 Parking and welfare needs of goods vehicle drivers and riders

Drivers of goods vehicles (both heavy and light goods vehicles - HGVs and LGVs), riders (using bicycles, cargo, bikes, mopeds and motorcycles) and on-foot goods and service providers (such as parcel porters and engineers) require various facilities and amenities as part of their working day. These facilities vary depending on the type of work that the driver/rider/on-foot provider is involved in. Whereas some operations involve driving long distances and being away from home for a night or more, others involve working near where the driver lives and then going home every night. Those drivers that spend nights away from home, by definition, require additional facilities than those who do not (including somewhere to park the vehicle, obtain food and drink, and toilet and washing facilities).

The law requires that goods vehicle drivers take rest breaks if they exceed specified hours of driving per day (which apply to most of those involved in goods delivery and collection work). Delivery personnel not using LGVs and HGVs will also require rest during the course of a working day. HGVs are fitted with tachographs to ensure that this happens regularly, while drivers of LGVs (often referred to as vans) are limited only to maximum working/driving hours, with no legal requirement or means of independently verifying any rest breaks (see **section 2.3** for further discussion of drivers' hours regulations). Goods vehicle drivers can also require stopping facilities when they are delayed by transport disruptions (such as traffic accidents, incidents causing road/route closures, and ferry service disruption).

All personnel using vehicles to provide goods or services also require places to park their vehicles during the course of their work. All drivers and riders need access to food and drink, and the use of toilet and hand washing facilities during the working day. Drivers and riders engaged in making instant deliveries of groceries and meals in urban areas that have been purchased online, as well as same-day parcel couriers, often have to wait between deliveries for their job to be allocated, and therefore require suitable waiting locations. Those driving LGVs in order to primarily provide a service rather than to collect or deliver goods (such as plumbers, electricians, utility engineers and builders) will visit fewer addresses per working day than those delivering or collecting goods, and therefore require fewer parking spaces but have longer vehicle dwell times at the parking locations they use.

Despite the fact that goods vehicle drivers, riders (of bicycles, cargo bikes, motorbikes, and mopeds) and on-foot personnel) delivering and collecting goods and providing services require stopping, resting and welfare facilities this does not mean that are necessarily provided in the locations in which they work by the businesses they work for, the businesses they collect to and deliver from, by private providers or by local authorities. In fact, many of these requirements of drivers, riders and on-foot personnel are currently not well provided for by either the private or public sector.

The key facilities and amenities required in the course of their work by those providing goods delivery/collection and servicing tasks are:

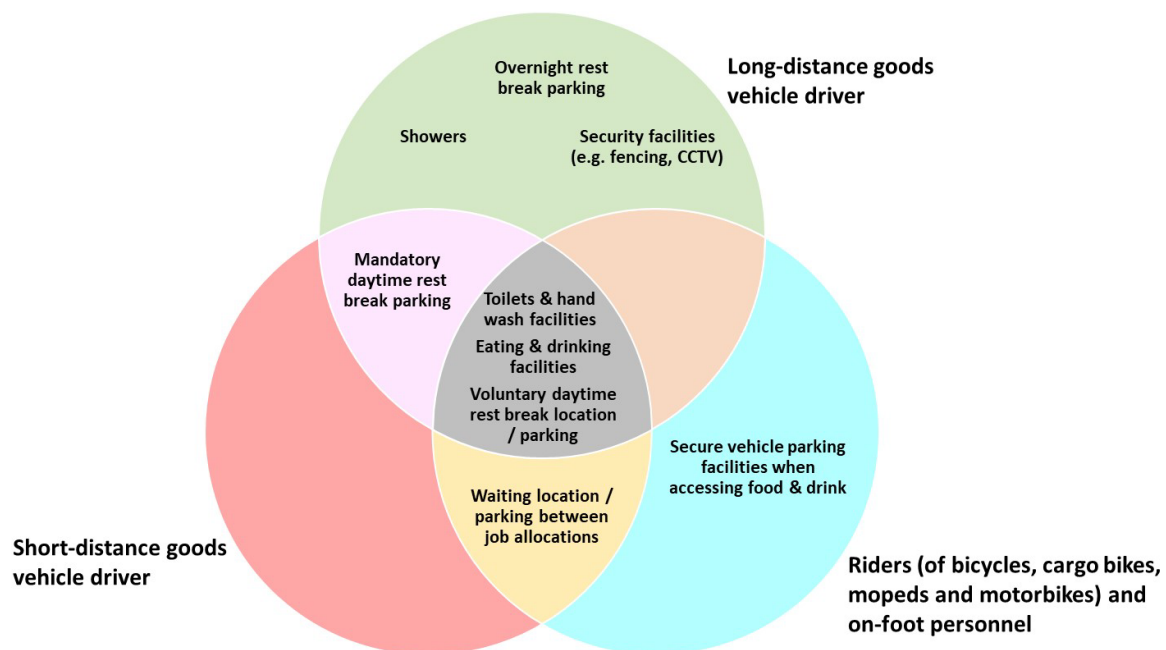
- Vehicle stopping space to carry out goods deliveries/collections or servicing work (either loading/unloading or parking depending on nature of work),
- Vehicle stopping places to take mandatory and other daytime rest breaks from work,
- Eating and drinking facilities,
- Toileting and washing facilities,
- Overnight vehicle stopping facilities.

These stopping, comfort and resting requirements can occur in a range of different instances as part of a driver's daily work:

- On the journey while driving the vehicle,
- Where deliveries/collections and servicing tasks are made,
- While waiting between job allocation / deliveries and collections,
- Overnight (if working but not driving – mostly required by long-distance HGV drivers).

Figure 1.1 shows the facilities required drivers, riders and on-foot personnel for stopping locations and welfare provision in various types of goods delivery/collection and servicing work.

Figure 1.1: Facilities required for vehicle stopping and welfare provision by drivers, riders and on-foot personnel in goods and servicing work



These vehicle stopping, resting and welfare requirements can be provided for at official, dedicated locations specifically equipped to provide for these facilities or in unofficial, non-specific locations.

Non-specific vehicle stopping locations (whether official or not - such as in lay-bys and at kerbsides in industrial estates) are often less safe and more likely to be associated with crime against the driver and their vehicle/goods carried. Secure parking locations (especially for overnight stops) helps to prevent theft of vehicles and cargo, as well as providing suitable and safe working conditions for drivers. The lack of access to toilet facilities for drivers, riders and on-foot personnel in the course of their work can result in them having to illegally relieve themselves in public places or use bottles for this purpose in their vehicles. Riders and on-foot personnel who have to wait in public places between job allocations (such as on streets or in public parks etc.) are subject to greater risk of crime (to them, their vehicles and loads) as well as having no protection from the weather (such as rain, wind and excessive sun).

The various vehicle stopping locations that may be used by a driver for daytime rest and overnight stops include:

- At a lorry park (either a Motorway Services Area, a Trunk Road Services area, an independent lorry park or a local authority lorry park),
- At a warehouse/distribution centre operated by the employer/hirer of the worker
- At a building occupied by shippers/receivers that deliveries / collections are made to and from or at which services are provided,
- At a distribution centre / operating centre provided by a freight transport operator that makes this available commercially or via a collaborative arrangement with others,
- On-street on the public road network (especially in a lay-by or at the kerbside on an industrial estate in the case of HGVs),
- In a public place (e.g. bench, park etc. for a cycle courier).

Some operators use independent lorry parks close to the area in which they live and/or work as an operational base, listing this as their home base on their Operator's Licence.

The locations at which refreshment and comfort (toilet and handwashing) facilities can be provided to drivers during their daily work include:

- At a lorry park,
- At a warehouse/distribution centre operated by the employer/hirer of the worker,
- At a building occupied by shippers/receivers that deliveries / collections are made to and from or at which services are provided,
- At a distribution centre / operating centre provided by a freight transport operator or other business with suitable off-street space that makes this available commercially or via a collaborative arrangement with others,
- In a private café, restaurant, shop or other private facility not connected to the driver's work (e.g. shopping centre etc.),
- At public toilets.

The greater the duration of stay of a goods vehicle, the more facilities that are ideally provided in a location (such as toilets, showers, food availability and driver/vehicle security). However this is not always the case, with even many lorry parks offering only basic facilities. In general, the shorter the vehicle stopping time, the shorter the distance that a driver will be able or willing to drive to access it. Some HGV operators inform the driver about where they should stop for daytime or overnight stops for reasons of cost, security, vehicle insurance requirements and route deviation, while others leave this to the discretion of the driver. For some drivers, the costs of using parking facilities and obtaining refreshments are paid for by those they are working for, while for other drivers they have to pay for these facilities themselves. This is likely to have an important bearing on the driver's parking location choices for breaks. Even if these driver expenses are paid for by those they are working for, if this takes the form of drivers having to pay these costs themselves and receiving fixed rates of expenses regardless of whether or not they were incurred, this can result in drivers choosing not to purchase these services and instead treat these expenses as income.

Suitable HGV parking facilities should exhibit the following criteria (British Parking Association, 2005):

- Must not obstruct the highway,
- Must have safe exit from and access to the highway,
- Surface must bear the axle, steering and braking loads,
- Area must be of shape and size to minimise manoeuvring to park,
- Cause minimum nuisance or hazard to third parties,
- Must be sufficient parking space when required,
- Must be on or close to arterial route (to minimise transit times, fuel consumption and environmental impact),

- Provide for drivers' personal needs (food quality/quantity, toilet, showers),
- Provide for operators' needs (security, fuel and basic service needs and cost),
- Be economically viable for private operation (or subsidised from public funds if benefits so justify,
- Provide a segregated area for hazardous vehicles,
- Offer simple payment method (so as to avoid exorbitant fines/clamping).

2.2 HGV on-street parking regulations

Control of parking on local roads is a matter for local highway authorities. It is not necessarily an offence for heavy goods vehicles (HGVs) to park on local roads including residential streets depending on the circumstances. It is deemed to be an offence for a goods vehicles (and any vehicle) to cause an obstruction while parked (with this decision depending on the size and type of the vehicle and the type and width of the road). An HGV over 7.5 tonnes gross weight can be parked on-street while loading and unloading as long as it is not parked on a verge, pavement or on land separating carriageways (unless given permission to do so by the police or if someone stays with the vehicle at all times.). For overnight on-street parking, the side and rear parking lights on an HGV over 7.5 tonnes must be left on during hours of darkness.

Local highway authorities can use Traffic Regulation Orders (TROs) to control the parking of HGVs over 7.5 tonnes on specified roads and lay-bys in their areas, and many have done so in relation to overnight parking on specific streets or areas since the 1970s, often as a result of complaints from the general public, due to obstruction and impacts on safety and traffic flow that they can cause, and also because of the negative effect they can have on the amenity (caused by noise impacts and visual intrusion, damage to carriageways kerbsides and footways, as well as loss of parking space for residents). Such overnight parking restrictions require the placing of signage on roads subject to these restrictions to inform drivers of the controlled vehicles and time of operation.

In addition, the operator of a goods vehicle over 3.5 tonnes requires an Operator's Licence. This licence has to specify the operating centre for the vehicle which must be deemed a suitable place by the licensing authority. If the operating centre proposed by the operator is on-street near their home, if this location is deemed unsuitable by the licensing authority, the police or those living close to the named address due to the safety or environmental impacts it will cause, then the licence can be refused or revoked.

Although many local highway authorities have imposed HGV parking restrictions on the streets under their control local, many have not ensured the alternative provision of off-street parking facilities. There are few local authority parking facilities (only 16 out of a total of 328 lorry parks in England in 2022) and even where these do exist they tend to provide only basic facilities (with 50% having offering only parking, and 25% having only parking and toilets in England in 2022). Local highway authorities are not legally required to provide such off-street parking facilities for goods vehicles.

Even taking account of lorry parks operated by the private sector, there is a substantial undersupply of HGV overnight parking spaces in England. This is likely to be due to high cost of suitable land, the investment required to develop and operate a lorry park, and the amount spent by HGV drivers when using these facilities. These factors make public and private sector provision of overnight parking in lorry parks commercially unattractive (see **section 5** for further discussion).

2.3 Drivers' hours regulations - breaks and rest periods

Goods vehicle drivers are subject to drivers' hours regulations. Drivers of HGVs (i.e. goods vehicles over 3.5 tonnes gross mass) must only drive for (Driver and Vehicle Standards Agency, 2022):

- 9 hours in a day (which can be extended to 10 hours twice per week),
- 56 hours in a week,
- 90 hours in any 2 consecutive weeks.

In terms of taking breaks and rests, the drivers of these HGVs must take (Driver and Vehicle Standards Agency, 2022):

- at least 11 hours rest every day (which can be reduced to 9 hours rest 3 times between any 2 weekly rest periods),
- an unbroken rest period of 45 hours every week (which can be reduced to 24 hours every other week),
- a break or breaks totalling at least 45 minutes after no more than 4 hours 30 minutes driving,
- a weekly rest after 6 consecutive 24-hour periods of working, starting from the end of the last weekly rest period taken.

All the driving of those using HGVs must be recorded on a tachograph. A break may be taken in a moving or stationary HGV, provided no other work is undertaken. Daily rest periods (i.e. of at least 11 hours every day) and reduced weekly rest periods (i.e. of 24 hours every other week) may also be taken in a HGV. However, the vehicle should have suitable sleeping facilities (either a bed or a bunk designed for sleeping on) and the vehicle should be stationary. If the HGV has no suitable sleeping facilities the driver should make other arrangements such as a hostel, hotel or boarding house. Regular weekly rest periods and any weekly rest of more than 45 hours are not permitted to be taken in a HGV and should be taken elsewhere such as in a hostel, hotel or boarding house. Cost for accommodation outside the HGV must be met by the employer (Driver and Vehicle Standards Agency, 2022).

'Multi-manning' is also permitted in which there are at least two drivers in the vehicle to do the driving. Regulations state that each driver must have a daily rest period of at least 9 consecutive hours but they may do so within the 30-hour period that starts at the end of the last daily or weekly rest period (rather than the normal 24 hour period). Organising drivers' duties in such a fashion enables a crew's duties to be spread over 21 hours. The maximum driving time for a two-person crew is 20 hours before a daily rest is required (although only if both drivers are entitled to drive 10 hours) (Driver and Vehicle Standards Agency, 2022).

HGVs used for longer journeys are often fitted with sleeper cabs or sleeper berths to provide accessible resting and sleeping space for the driver and prevent them from having to find and pay for bedroom accommodation at overnight stopping locations. Sleeper berths were first introduced in the United States in the 1920s and were located on the top or side of HGVs and were usually small and uncomfortable (National Transportation Safety Board, 2000). Sleeper cabs have improved greatly over time. Today, they are typically located behind the driver's cab and vary in terms of equipment and luxury from a space only just wide enough for a bed to a king-size single bed or bunk beds, and with equipment including TV, refrigerator, microwave, and games console.

Although LGVs (i.e. goods vehicle up to and including 3.5 tonnes gross mass) are not typically fitted with tachographs (unless driving overseas) professional drivers of these vehicles in the UK are also subject to drivers hours' rules. These stipulate that the daily driving limit is 10

hours per day and the driver must not be on duty (i.e. including not driving) for more than 11 hours in any working day on which they have driven). These LGV drivers/operators must record their hours as their vehicle are not typically fitted with tachographs (unless driving overseas) (Driver and Vehicle Standards Agency, 2022).

2.4 Definition and etymology of lorry parks and truckstops

As previously mentioned, dedicated facilities where goods vehicle drivers can park their vehicles and rest in the course of their work are referred to interchangeably as 'lorry parks' or 'truckstops' (or also 'truck stops' or 'truck-stops') in the UK. This is due to the common usage of both 'lorry' and 'truck' to refer to heavy goods vehicles (HGVs).

The term 'lorry' is thought to either derive from the verb 'lurry' (meaning 'to pull, tug' and of unknown origin) which first appeared in the 1570s or, as cited in notes dating to 1834, from a railway inventor in the early 19th century called Laurie. A lorry is defined as 'a long flat wagon without sides running on four low wheels. Also, a truck or wagon used on railways or tramways' (Oxford English Dictionary, 2022). The term is first recorded in 1838 in relation to moving luggage by rail: 'a luggage train was perceived...with three luries attached to it' (Oxford English Dictionary, 2022). The first known usage of the word 'lorry' to refer to a large motor vehicle for carrying goods by road appeared in 1911. 'Lorry' became the preferred term for a large goods vehicle in Britain as well as in countries in the British Empire including India, Malaysia, Singapore, Hong Kong, as well as in Ireland.

The term 'truck' first appeared in English in the early 1600s referring to a small-wheeled roller on which naval guns were transported. By the late 18th century it was also used to refer to a wheeled vehicle used for carrying heavy loads, with the same meaning in this sense as a lorry. The word is derived from the word 'truckle' (meaning 'wheel, roller or pulley') which is derived from the Latin 'trochus' (meaning 'iron hoop'), from the Greek 'trokhos' (meaning 'wheel'), and from the Greek 'trekhein' (meaning 'to run') (The Word Detective, 2009). It is first used in reference to a motor vehicle for carrying goods by road in America in the 1910s, which was a shortened form of 'motor truck' (which first appeared in American English in 1901) (Online Etymology Dictionary, 2022). 'Truck' is the preferred term for a heavy goods vehicles in Canada, Australia, New Zealand, Pakistan and South Africa, as well as in America.

Although the word 'truck' was originally used in the UK as an alternative to 'lorry' it was far less commonly used than the latter until the mid-20th century. The term 'truck' would appear to have entered more common usage after the Second World War, with it being the term used by combined US and UK military forces (as noted by Winston Churchill in 1943 - Online Etymology Dictionary, 2022). Today, the terms 'lorry' and 'truck' are used interchangeably in the UK as well as in other countries that formerly used 'lorry'. This has been achieved through its usage in American culture (including films, books and songs), as well as by the vehicle manufacturing industry.

Drivers of HGVs were originally referred to as 'lorry drivers' in the UK (first recorded use in the UK in 1926 (Oxford English Dictionary, 2022) and other countries that used the term 'lorry', while they were referred to as 'truck drivers' or 'truckers' in America and other countries using the term 'truck' (there is a record of the term 'truck driver' being used in a British newspaper in 1907 but it was uncommon). Today, again as a result of American culture, both 'lorry driver' and 'truck driver' are used interchangeably in the UK.

The first recorded use of the term 'lorry park' (meaning 'an open space or lot reserved for the parking of lorries') was being used in the UK by the late 1950s (Commercial Motor, 1957). 'Truck stop' (also written as 'truckstop' and 'truck-stop') has its first known recorded use in American in 1961, with its first common usage in the UK not appearing until the mid-1980s (Oxford English Dictionary, 2022; Commercial Motor, 1984).

In this report, the term 'heavy goods vehicle' (HGV) is used in preference to 'lorry' or 'truck' to refer to goods vehicles with a gross weight of over 3.5 tonnes, and 'light goods vehicle' (LGV) is used to refer to those up to and including 3.5 tonnes. These terms are more commonly used in UK industry and research to refer to these vehicles. Both 'lorry park' and 'truckstop' are used in the report to refer to these HGV parking facilities.

3. History of transport cafes and lorry parks

3.1 Transport cafes and hostels

In the early days of horse-drawn road freight, carriers used inns and taverns in towns as staging posts and using stabling, and eating, drinking and sleeping there. With the development and uptake of motorised goods vehicles, by the 1920s, drivers of these vehicles travelled the country's A-roads along which commercial proprietors provided transport cafes. Offering basic food and drink, these establishments came to be commonly known as 'caffs' and 'greasy spoons', some were brick buildings, some cabins, while others were made from converted vehicle bodies. The better equipped cafés provided on-site parking, toilets and washrooms with some also offering overnight accommodation. These were important facilities for the long-distance HGV driver, especially given the slow vehicle speeds (with maximum speeds of 20 miles per hour until 1957 and 30 miles per hour thereafter for HGVs with unladen weights over 3.5 tonnes), the long journeys they had to undertake, the physical effort of driving these vehicles and the lack of protection they provided from hot and cold weather. Strong tea and platefuls of carbohydrates and protein were standard fare (Armstrong, 2003). In the initial decades of long-distance HGV driving, drivers were often accompanied by mates who helped the driver and provided them with company. When mates became less common in the 1950s and 1960s, the transport café became an important place of contact with others for HGV drivers given the lonely nature of the work. These cafes were also frequently used as change-over points for drivers, with trailers swapped between vehicles to reduce each drivers' time spent on the road.

A 1950s study noted the welfare importance of these cafes to goods vehicle drivers and, given this and their relatively poor health and hygiene standards, suggested that these cafes should be approved and preferably regulated by the Ministry of Transport (Solomon, 1954). By the 1960s more than 1000 transport cafes were identified throughout the country in surveyed work. A 1960s study found that these cafes had generally become larger, more impersonal, cleaner and more expensive over the intervening decade. It divided cafes in two types: i) traditional ones that typically provided large helpings of meals of meat, potatoes and two vegetables, apple tart and custard and bacon sandwiches; and ii) newer ones that provided less generous portion sizes and focused more on fatty fried food (such as egg, bacon and chips). Early motorway service station cafes had begun to appear by this time, but some goods vehicle drivers reported avoiding them due to the higher prices and "lack of life". This 1960s study of road freight transport drivers in Britain found that they commonly stopped at transport cafes three times during each shift: the first after two to three hours of driving, the second in accordance with the legally required break after five and a half hours and the third later in the shift. Such common café stops were related to drivers making little provision for making hot drinks in their vehicles at this period. The study found younger drivers were most likely to use cafes, while older drivers were often prone to stop in lay-bys to consume pre-prepared sandwiches and tea from a flask (Hallowell, 1968).

This 1960s study also discusses overnight stopping facilities for long-distance goods vehicle drivers, explaining that these ranged from small houses where drivers slept in dormitories with several beds, to large transport hostels with small, individual 'cubicle' bedrooms also providing hot running water, showers and a television lounge. It describes the latter as "the height of luxury" for long-distance drivers. It explains that many drivers interviewed felt that most proprietors did what they could to make drivers feel comfortable and welcome, but that some ran poor, scruffy, dirty establishments. The author reflects that overnight accommodation in the late 1960s was generally better than what had preceded it but speculates that the profit margins for proprietors of these establishments must have been limited given what drivers were able and willing to pay for food, bed and breakfast (Hallowell, 1968). Employed long-distance drivers often received allowances for food, drink and overnight accommodation but these were limited in value and would not afford the better services on offer. It is also long

recognised that some overnight facilities provided prostitution services as well (Armstrong, 2003).

3.2 The emergence of lorry parks

Several factors led to changes in the management of HGV on-street parking and the provision of lorry parks. These include the growth in long-distance HGV journeys, the inadequacy of facilities offered and off-street parking space at many transport cafes and hostels, the rising number of complaints from the general public about the impacts of HGV parking in the vicinity of their homes, and the rising crime against HGVs and their loads when parked in insecure on-street locations.

The existing network of transport cafes and the facilities they offered in both urban and non-urban locations did not adequately provide for the needs of the growing number of long-distance HGV drivers who needed overnight stopping facilities. This resulted in a substantial growth in the number of long-distance HGV drivers parking on-street. These issues are discussed below.

Figure 3.1: Markham Moor lorry park and diner on the A1

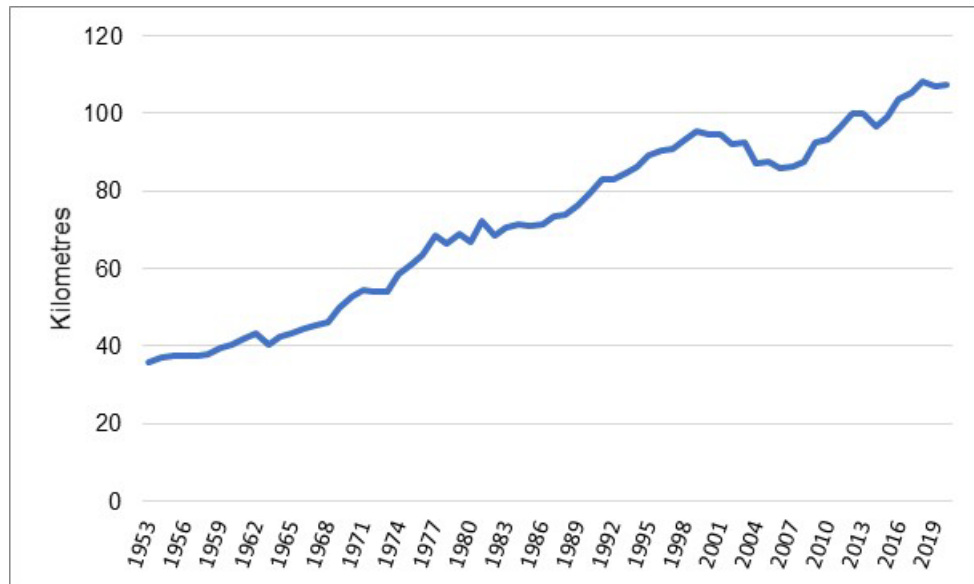


Source: Ian S, 2012,
https://commons.wikimedia.org/wiki/File:Markham_Moor_lorry_park_and_diner_-_geograph.org.uk_-_3049901.jpg

Increases in HGV carrying capacity (both in terms of weight and volume) as well as in vehicle maximum speeds, which reflected developments in vehicle engineering, reduced the costs of freight transport per unit of product moved. Maximum permissible vehicle lengths for articulated HGVs were increased by 6% in 1955, by a further 21% in 1964, and by a further 15% in 1968. Maximum permissible vehicle widths for articulated HGVs were increased by 7% in 1955, and by a further 3% in 1964. At the same time vehicle manufacturers were also producing vehicle trailers with greater height, for which there were no regulations other than the need for a stable vehicle and to be able to pass safely under road bridges. Therefore, both the area and volume of the carrying space in HGVs increased substantially. The maximum permissible gross weight of articulated HGVs increased by 9% in 1955 and by a further 33% in 1964. The maximum speed limit for articulated HGVs increased by 50% in 1957 (from 20 to 30 miles per hour) and was then increased by a further 33% on A-roads (to 40 miles per hour) and by 133% on the new motorways (to 70 miles per hour). These changes in vehicle

dimensions and speeds meant that, over time, it became possible for vehicles to carry greater loads and to cover journeys in less time, thereby reducing road freight transport operating costs. This reduction in the cost of HGV operations led to an increase in the average distance over which goods were transported by road freight transport since the 1950s and a growth in long-distance journeys requiring overnight stops. **Figure 3.2** shows the average length of haul (a proxy for the average journey distance over which goods are transported) since 1953.

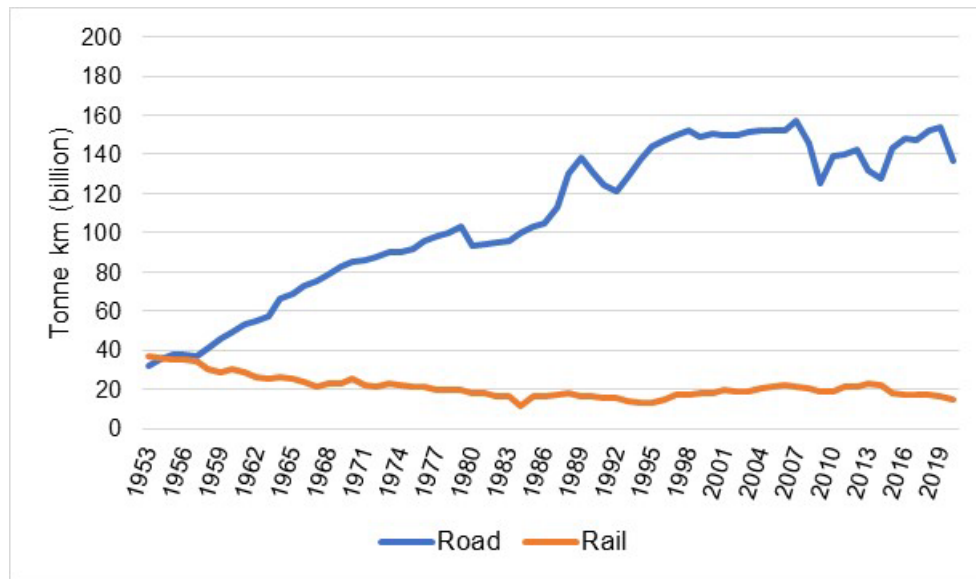
Figure 3.2: Road freight transport average length of haul in Britain, 1953-2020



Source: calculated from data in Department for Transport, 2021a.

These reductions in road freight transport costs, together with its end-to-end service and flexibility also led to road freight winning substantial volumes of long distance traffic from the railways. It also facilitated businesses to restructure their supply chains, relying on fewer but larger warehouses with the economies of scale this offers, served by HGVs travelling further between delivery and collection points. **Figure 3.3** shows the freight tonne-kilometres by road and rail since the 1950s reflecting these developments. Road tonne-kilometres surpassed those of rail in 1955 and have increased considerably since, whereas rail tonne-kilometres were lower in 2020 than in 1953. By 2020, the road and rail split of tonne-kilometres in Britain was 90% and 10%, respectively.

Figure 3.2: Goods moved by road and rail freight in Britain, 1953-2020 (tonne-kilometres)



Source: calculated from data in Department for Transport, 2021a.

The existing network of transport cafes and hostels serving long-distance HGV drivers and the facilities they offered did not provide for the needs of the growing number of long-distance drivers who needed reasonably priced overnight parking, sleeping and catering facilities. There was a shortage of such facilities and the number of beds required and the standards of many were not high, given what drivers could afford.

Some transport cafes offered off-street HGV parking, while others especially those in urban areas did not, with drivers instead using on-street parking. In addition, HGVs were commonly parked on-street overnight both by drivers on long-distance journeys as well by drivers and owner-operators who parked them near their homes. From the 1950s, some local authorities, acting on complaints about nuisance and other vehicle related impacts from residents about on-street parking of HGVs by drivers while they were using transport cafes, began to try to impose on-street parking restrictions on HGVs. For example, Catterick and Richmond councils attempted to introduce on-street parking restrictions for this reason in 1954. However, the Minister of Transport rejected the proposal stating that the reported nuisance did not warrant the proposed restrictions and would not in any case ameliorate it (Commercial Motor, 1954).

Concerns and complaints from members of the general public about the visual and noise impacts of HGVs parked on-street in urban and rural areas escalated through the rest of the 1950s and 1960s. However, until 1969, on-street parking restrictions could only be introduced by local traffic authorities on grounds of safety or traffic disruption, not on grounds of amenity. In 1964, Derbyshire County Council urged the police to address the problem of HGVs parked on-street and to prosecute if necessary (Commercial Motor, 1964).

From the early 1960s on, as the number of HGVs grew, an increased rate of HGV cargo and vehicle thefts took place. This was most common when vehicles were parked, especially overnight. This caused freight transport operators to become increasingly concerned about the security of their vehicles and the goods they carried for their customers. This led to calls from some operators for secure lorry parks.

Jointly, these issues led to the need for national government to consider on-street overnight HGV parking, and for national and local government as well as businesses to consider the

provision of stopping facilities for HGV drivers with off-street parking, sleeping and catering facilities. This led to the emergence of facilities referred to as lorry parks from late 1950s. Some were established by private businesses, some by local authorities and some with both acting together. In 1957, Liverpool Corporation considered establishing fenced lorry parks with night watchmen in three areas of the city as a response to HGV cargo theft (Commercial Motor, 1957). In 1962, a lorry park was opened by a hotel owner with National Car Parks. The lorry park with security guards was located in Camden with the hotel operating a shuttle bus for drivers to take them to the hotel in Islington for overnight accommodation. The RHA advised on and publicised the park, stating its benefits in improving security as well as reducing the impacts of on-street parking (Commercial Motor, 1962). In 1966, Birmingham City Council commissioned work for a lorry park with security guards, drivers' motel and restaurant (Commercial Motor, 1966a). Also in 1966, freight transport businesses in Stockport that were members of the Road Haulage Association (RHA) established a limited company to provide an experimental, temporary high-security, low-cost lorry park for 30 HGVs in conjunction with support from the local authority who were keen to reduce the impacts of on-street HGV parking. The leased site was securely fenced with café and sleeping facilities (Commercial Motor, 1966b, 1967a). However, these early lorry parks proved unpopular with freight transport operators. This resulted in the RHA rejecting a 1967 resolution from the Metropolitan and South Eastern Traffic area (i.e. London and the South East) urging it to sponsor lorry parks (preferably with security guards) in all major UK urban areas for overnight parking by long-distance HGV drivers. The RHA chose not to support such an approach as local authorities were said to be reluctant to provide space or resources for lorry parks due to a reported lack of use of those in existence by HGV drivers (Commercial Motor, 1967b).

The Greater London Council (GLC) began considering overnight parking provision for HGVs in 1966, working with London boroughs to identify solutions. This was in the aftermath of the London Borough of Barnet's application for the development of a lorry park being turned down by the UK Government. In 1967, the GLC unveiled a plan in which it would provide lorry parks with overnight accommodation and catering facilities throughout London and on trunk roads leading to London, together with new, strict HGV on-street parking controls throughout inner London, especially focusing on preventing HGV on-street parking generated by existing transport cafes, with applications for new cafes without off-street parking to be refused. GLC lorry park trials commenced in 1968 in conjunction with National Car Parks, which had been commercially operating six lorry parks in London since the mid-1960s (Commercial Motor, 1966c, 1967c, 1968).

The implementation of traffic legislation by the UK Government in 1969 permitted local authorities to apply to national Government to restrict on-street parking on amenity grounds (i.e. their visual and noise impacts in addition to the existing grounds of safety and traffic disruption). This led to local authorities, especially those in urban areas, introducing restrictions on HGV on-street parking on these grounds, gradually removing much former overnight parking space over the next few years. However, despite introducing night bans on HGVs parking on-street, relatively few local authorities introduced lorry parks to compensate for lost on-street parking space.

The main recommendation of the 1971 UK Government report of the Working Party on the Parking of Lorries was that a national network of lorry parks should be established for overnight and daytime use by long-distance HGVs, paying particular attention to security and to drivers' needs for a good standard of overnight accommodation. Also in 1971, the circular 'Roads 53/71' was issued by the UK Government which drew the report and its recommendations to the attention of local authorities. As part of the 1971 Highway Act, the Government announced that it would locate and buy sites to establish a national network of approximately 50-60 large secure lorry parks in England (outside of London), which would be leased to and operated by companies on its behalf, similar to Motorway Service Areas, with a view to selling these leases to operators in the longer term. It was expected that this national

network would have to provide capacity for 15,000 HGVs. Various companies and consortia expressed interest in winning these sites. The Government also announced that in addition to this national network of lorry parks provided by central Government, local authorities would be expected to provide smaller lorry parks (Commercial Motor, 1971; Department of the Environment, 1971; Speed, 1973).

However, in 1974, the UK Government announced that it was scaling back the ambition of this national network of lorry parks and then stated that it had no statutory powers to finance lorry parks which were, it said, entirely the responsibility of local authorities. Later in the same year, the Government stated that although lorry parks were much needed, few were being developed due to their commercial unattractiveness, as well as difficulty in obtaining suitable sites (Commercial Motor, 1974a, 1974b, 1974c). By 1975, the UK Government said that the plans for lorry parks in the 1971 report were unlikely to be realised, with the Under-Secretary in the Department for the Environment telling the House of Commons, "We must look for other and perhaps slightly more modest ways of tackling the problem". The Government had previously refused to grant planning permission for the development of a lorry park at the Port of Harwich, again stating that local authorities rather than national Government was responsible for meeting the demand for local HGV parking with some national Government grant money available (Commercial Motor, 1975).

By 1977, it was reported that the number of HGVs parking on-street in London had been reduced by three-quarters through the implementation of night-time parking restrictions. A similar situation occurred in urban areas across the rest of the country but with little off-street lorry park space provided by local authorities.

In addition to government's plans and policies concerning lorry parks, commercial operators set up independent lorry parks in or near urban areas and in close proximity to the trunk road network if these were deemed to be commercially viable.

3.3 Lorry parks serving the emerging motorway network

The gradual development of the motorway network in the UK from the late 1950s together with the provision of motorway services proved attractive to HGV drivers given the faster permitted vehicle speeds (70 compared with 40 miles per hour). However, when construction began on the first motorway, the M1, in 1958 no land or plans had been put in place to provide stopping locations with facilities to meet the needs of HGV drivers or other road users. Road freight operators and trade associations stated that they would have to avoid using the M1 due to its lack of stopping facilities and raised concerns about the assistance required by drivers whose vehicles had broken down. To prevent there being insufficient facilities for HGV drivers on this first motorway for their daytime and overnight stops that would require them to deviate off this road to independent, family-run transport cafes and lorry parks on A-roads, the UK Government had to take action. This led to the Government acquiring several small plots of land for potential service stations and surveying businesses about their preferred locations and their plans for such sites. The Government encountered difficulties obtaining planning permission for the development of these service stations due to objections by locals. Businesses were surveyed again, with the Government explaining it would only pay for the landscaping and parking areas, and asking respondents to suggest a site design and a rental price formula for the sites they were interested.

Figure 3.4: Lorry park at Hilton Park services on the M6



Source: Steve Daniels, 2009,
https://upload.wikimedia.org/wikipedia/commons/e/e7/The_lorry_park_at_Hilton_Park_services_-_geograph.org.uk_-_1576256.jpg

The Government subsequently decided that the two selected sites on the M1 would have facilities to refuel and repair vehicles, toilets, two transport cafés and a café or restaurant for the general public. Unlike the family-run transport cafes and lorry parks on A-roads, these plots of land for motorway services were operated by large businesses (who leased the land from the Government and then went about constructing buildings and parking areas to provide these services). These Motorway Service Areas provided services for both cars and HGVs. No motorway service stations were developed specifically for HGVs as these were known to generate less revenue than car and coach users. When motorway services opened on the initial motorways (M1, M2, M5 and M6) they were found to be far too small in size for the number of vehicles choosing to stop at them. The Department for Transport compulsorily purchased 21 parcels of land adjoining these new motorways with the intention that they would be used to provide motorway welfare facilities for drivers. After a review of these facilities in 1978, the private sector bodies operating them were provided with 50-year leases for these sites by the Department for Transport at a peppercorn rent (Moto Hospitality, 2021a).

Motorway Service Area operators became increasingly frustrated by the amount of space taken by HGVs, with some drivers remaining parked for long periods of time. By 1978, an inquiry by the UK Government into Motorway Service Areas led to the right for the first time for Motorway Service Area operators to charge for parking (known as the Prior Report). As a result, from 1979, the Government introduced an arrangement whereby Motorway Service Areas only had to provide two hours of free parking to all drivers (so they could have a break for road safety purposes) but could be charged for staying beyond two hours. In the initial period of Motorway Service Areas, the demand for overnight parking at them from HGV drivers was low as they offered no sleeping accommodation and instead drivers visited cafes and hostels for rooms. However, with the introduction of the sleeper cab, demand for overnight HGV parking increased, with drivers able to sleep in their vehicles. The Prior Report also called for more lorry parks to meet the demand. Some operators developed separate parking areas within motorway service areas for HGVs, together with separate overnight accommodation services for car and HGV drivers.

Shortly after the Prior Report was published, a new Government announced that it was no longer keen on its involvement in acquiring land and planning permission for these services

and its continued ownership of them. During the 1980s, the problem of lack of overnight parking space for HGVs worsened, with many Motorway Service Areas reaching their HGV capacity on a regular basis. In 1992, the UK Government deregulated the provision of motorways services, meaning that private businesses could own these sites and apply to open new ones, despite their planning and operating requirements remaining subject to government control. Motorway Service Area operators began to acquire both freehold sites and sites leased from commercial landlords rather than from the Government. Since 2008 it has been permitted for businesses to develop dedicated motorway lorry parks, but none have been established to date. Today there are almost 80 Motorway Service Areas in the UK, with the majority owned by private businesses. However, the leases on the 21 sites still owned by Government and leased to operators are coming up for renewal.

3.4 Summary

The rise of the motorways and the service stations along their entire length resulted in the gradual decline of transport cafés and some lorry parks along the A-road network. As they increasingly used motorways, HGV drivers became reluctant to travel far off the network to A-road facilities they used to frequent. However, some drivers have continued to prefer to use independent lorry parks on A-roads and in other non-motorway locations or the remaining local authority lorry parks, for reasons including their perceived service level, their lower prices and their convenience given the route being taken by the driver. Ever-more spacious and luxurious in-cab and onboard sleeper facilities for drivers have also resulted in far greater driver willingness to spend more rest time and overnight stops in their vehicles, at lorry parks or Motorway Service Areas, so even if using these places to park potentially not requiring a bedroom in a hotel or hostel.

Many former A-road transport cafes were converted to chain restaurants marketed for car travellers, including 'Little Chef' and 'Happy Eater' chains, which could serve four meals to a family with only a car parking space required, thereby proving far more lucrative proposition than aiming for individual HGV drivers whose vehicles took far more parking space. Today, most of the traditional transport cafes have disappeared. For refreshments, daytime and overnight stops, HGV drivers can choose between motorway services alongside the motorway network with direct access roads, lorry parks located on other major trunk roads, those lorry parks and remaining transport cafes located within a few miles of the Strategic Route Network (SRN)¹, local authority lorry parks (of which a few remain but which often provide only daytime refreshments if at all), and refreshment trailers in lay-bys.

Successive UK Governments over several decades have stated that they want no involvement in subsidising, providing land for, or operating lorry parks (either in Motorway Service Areas or other types), instead viewing them as a facility run by the private sector as profitable businesses. Local authority lorry parks have also declined in number, with them often not viewing it as a priority, concerned about the operational costs, and keen to realise the financial returns from development for other uses. Given the relative spending of car and HGV drivers and the space both types of vehicle require, Motorway Services Area operators are inevitably far more interested in providing space and services for the former rather than the latter. The cost of operating dedicated lorry parks on trunk and other A-roads together with the revenue they generate has led to some struggling to survive or closing and the land being developed for other uses, with relatively few new ones opening. Although the total HGV space available at all types of lorry park has risen in the last decade it continues to fail to provide sufficient space to accommodate all HGVs requiring overnight parking. In an audit of overnight HGV

¹ Strategic Road Network (SRN) - the road network in England maintained and operated by National Highways - formerly known as the Highways Agency. It includes all motorways and major trunk roads.

parking in England in 2022, 34% of HGVs were found to be parked in lay-bys and on-street in industrial estates rather than in lorry parks of any type.

In 2021/2, UK-registered articulated HGVs were responsible for 62% of tonnes lifted and 79% of tonne kilometres performed by all UK-registered HGVs on domestic journeys in Britain. The average length of haul for these articulated HGVs was 138 km compared with only 60 km for rigid HGVs (calculated from data in Department for Transport, 2023a). **Table 3.1** shows the breakdown of tonnes lifted and tonne kilometres performed by these UK-registered articulated HGVs in 2021/22. In 2020/21 50% of the tonne kilometres performed by these articulated HGVs had lengths of haul in excess of 200 km and 23% in excess of 300 km. By comparison, only 1% of tonnes lifted and 5% of tonnes moved by rigid HGVs had haul lengths in excess of 300 km in 2021/2. Overall, these articulated HGVs accounted for 93% of tonnes lifted and 93% of tonne kilometres of all UK-registered HGVs on journeys with haul lengths over 200 km in 2021/22 (calculated from data in Department for Transport, 2023a). It is articulated HGVs making these longer journeys that are most likely to make use of overnight parking facilities.

Table 3.1: Length of haul for UK-registered articulated HGVs on domestic journeys in Britain, 2021/2

	Length of haul (kilometres)						
	Up to 50km	Over 50km to 100km	Over 100km to 150km	Over 150km to 200km	Over 200km to 300km	Over 300km	All lengths
Tonnes lifted	22%	23%	18%	13%	15%	8%	100%
Tonne kilometres	4%	12%	16%	17%	27%	23%	100%

Calculated from data in Department for Transport, 2023a.

4. Types of HGV parking and lorry parks

Lorry parks are required to provide HGV drivers with safe parking facilities off the public road network. This has become increasingly important since the restrictions placed on overnight parking on many public roads since the 1970s (see **section 3.2**). Depending on the type of lorry park, it may also provide high levels of security and lighting (to help protect the driver and vehicle from theft or attack), together with personal hygiene (toilets and showers) and catering/shop facilities. As in-cab facilities and space have been designed into HGVs many drivers choose to sleep in their vehicles. Therefore, relatively few lorry parks provide accommodation.

The most recent survey of lorry parks in England commissioned by the Department for Transport categorises four types of lorry park: i) independent truckstop, ii) local authority truckstop, iii) Motorway Service Area, and iv) Trunk road service area (AECOM, 2022). A description of each of these types of lorry park is provided in **Table 4.1**.

Table 4.1: Description of types of lorry parks in England

Type	Description
Independent truckstop	Sites providing daytime and overnight HGV parking facilities that are usually independently owned and operated (or may be part of a specialist chain of sites). They are available to any freight driver (irrespective of company) and are typically exclusively for the use of freight vehicles but some may provide daytime rest and refreshment facilities for passenger traffic (car and coach). (Also includes cafes with parking for lorries – which may not have any facilities opened at night).
Local authority truckstop	Sites providing daytime and overnight HGV parking facilities that are under the control of a local authority. Typically basic toilet block amenities are provided and often an independently run café is co-located on the site. Sometimes a car park that is used for HGV parking at night, typically without any facilities.
Motorway services area (MSA)	Sites signed off the Motorway network providing daytime and overnight HGV parking facilities, typically but not exclusively operated by road-side facility chains. Separate HGV parking areas are provided but welfare facilities are common to all MSA traffic.
Trunk road services area (TRA)	Sites along the strategic road network (SRN) providing daytime and overnight HGV parking facilities. Separate HGV parking areas are provided but welfare facilities are common to all service area users. Whilst some sites are large, many are small with limited HGV parking and facilities limited to the forecourt shop and toilets.

Source: AECOM, 2022.

A 2009 report provides further insight into the typical differences between Motorway Service Areas, independent lorry parks (located on trunk and non-trunk A-roads and elsewhere) and local authority lorry parks (see **Table 4.2**).

Table 4.2: Description of types of lorry park in England

Facilities	Types of lorry park		
	Motorway Service Area (MSA)	Independent Lorry Park	Local Authority Lorry Park
Location	Located on the strategic road network (SRN) of motorways throughout the UK, therefore they are linked to the Highways Agency* remit	Normally located on the trunk road network of A roads throughout the UK	Normally located on the trunk road network of A roads throughout the UK. There are very few of these facilities in England. There are also a number of other local authority parking sites in urban areas that may operate as car parks during the day and cater for lorries at night. However, these are not usually formally designated and have small capacities
Dedicated or shared	Although parking bays are segregated they share facilities with other road users. Very few have dedicated lorry driver facilities.	These are normally dedicated to HGV parking, however sites that have a café may open up to other motorists depending on the level of security the site is aiming to achieve.	These are normally dedicated to HGV parking, however sites that have a café may open up to other motorists depending on the level of security the site is aiming to achieve.
Vehicle capacity	MSA will usually hold at least 40 vehicles.	The size will vary from 5 lorries up to 250. This shows the varying nature of independent lorry parks.	The size will vary from 5 lorries up to 250.
Pricing	Normally expensive to park.	They have the highest variance in price and in the standards that are provided.	They have the highest variance in price and in the standards that are provided.
Facilities	Normally has good security, CCTV, patrols etc although not normally a fence due to planning policy. This means people are free to move around who are not drivers.	Some independent sites will only have 'basic' facilities, the one constant factor is that they must provide overnight parking and have toilets to make it appropriate.	Some local authority run sites will only have 'basic' facilities, the one constant factor is that they must provide overnight parking and have toilets to make it appropriate.
Ownership	Normally form part of a large chain of private investors e.g. MOTO, Welcome Break, or Road Chef.	Normally they are privately owned and family run businesses.	These sites can be leased by the local authority and privately run. There are very few sites that are owned and also run by local authority.
Other points	Not all MSA cater for lorries.	These are not always associated with the Highways Agency* and may fall under the responsibility of the Local Authority.	These will fall under the responsibility of the Local Authority.

Note: Highways Agency now called National Highways.
Source: AECOM, 2009.

Figure 4.1: Lorry park at South Mimms Services on the A1M



Source: Antony, Dixon, 2011
https://commons.wikimedia.org/wiki/File:Lorry_park_at_South_Mimms_Services_-_geograph.org.uk_-_2698750.jpg

Figure 4.2: Lincoln Farm Lorry Park on the A452



Source: Robin Stott, 2011
https://commons.wikimedia.org/wiki/File:Lorry_park_adjoining_Lincoln_Farm_Caf%C3%A9_-_geograph.org.uk_-_2587354.jpg

A rating system based on facilities available at lorry parks was devised in 2017 to rate those audited for the Department for Transport (see **Table 4.3**). This rating system is based on a five-point scale which is broadly in line with the European Truck Park Area Certification system (called LABEL) (AECOM, 2022).

Table 4.3: Rating system used for lorry parks in audits for the Department for Transport

Site rating	Facilities	Description
0	No facilities	Basic rest area with no facilities.
1	Toilets	Basic rest area offering lorry drivers a place to park and access to toilets.
2	Toilets and café	Basic/medium rest area offering lorry drivers a place to park and access basic amenities.
3	Toilets, showers, and café	Medium level facility offering lorry drivers a place to park with basic amenities including wash facilities.
4	Toilets, shower, café, lighting, and security fence	Medium/high level facility offering a degree of secure and safe HGV parking whilst also offering reasonable facilities for lorry drivers.
5	Toilets, shower, café, lighting, security fence, accommodation, and CCTV	High end HGV parking facility offering lorry drivers a place to park security and safely whilst also enjoying extensive facilities.

Source: AECOM, 2022.

The earliest Motorway Service Areas (MSAs) were built by private operators on land leased to them for 50 years at a peppercorn rent by the Department for Transport. In 1992, the UK Government deregulated the provision of motorways services, meaning that private businesses could own these sites and apply to open new ones, despite their planning and operating requirements remaining subject to government control. Since this date, MSAs have been identified and acquired by operators in the same way as are other commercial developments but remain subject to planning approval (as for any other commercial development) and certain rules concerning minimum standards their location and impacts. These post-1992 MSAs have been both acquired on a freehold basis by operators as well as sites being leased from commercial landlords rather than from the Government.

Although MSAs contain facilities for HGVs, the drivers of these vehicles also make use of lorry parks on other roads. These have always been privately operated facilities. Government regulations in 2010 designated two types of lorry park that serves the SRN: (i) a lorry park on the motorway (which is signposted from a motorway) and a trunk road lorry park (which is signposted from a non-motorway trunk road). Although not designated by these regulations, there are also lorry parks which provides the necessary facilities but (either due to regulations or choice) is not signposted from the SRN which may be independently operated or run by a local authority.

The 50-year leases on the early MSA sites owned by the UK Government will begin to expire soon. The operators of these MSA have been discussing the extension of these leases with

the Department for Transport for several years. However, these discussions have not led to lease extensions to date. In late 2021, the Department for Transport told these MSA operators that they were commencing the valuation of these sites so that Ministers could then decide in 2022 whether to: i) leave as is (i.e. do nothing and leave the Leases to expire), ii) re gear (i.e. provide lease extensions for a further 50 years), iii) exit (i.e. sell the sites on the open market), or iv) income strip/fixed income (i.e. provide new leases with premium payment / rental income rather than peppercorn rents). Until they have certainty about lease extensions, these operators have been reluctant to further invest in these sites as, if these leases are not extended or not extended on the same terms, it would not be possible for them to recoup their investments. This under-investment has led to them often not being sufficiently large to cope with current traffic levels and the number of passengers requiring use of the facilities (Moto Hospitality, 2021a).

5. Challenges and pressures faced by lorry park operators

Private developers make the decision to develop Motorway Service Areas (MSAs) and other types of private parking facilities for HGVs (with the exception of local authority lorry parks of which there are few, and none of which has opened recently). These private developers make the decision about the location and size of the site, and, beyond the minimum Government standards, the facilities that will be provided, the level of security offered, and the method of privately funding it. The developer has to apply to the local planning authority for planning permission to carry out such a development. There is a substantial cost associated with preparing such planning applications. Many such applications are rejected due to unfavourable views from local residents about such prospective developments, and the cost of resubmissions and alterations required to proposed schemes in order to attempt to gain permission is often also considerable. In addition, substantial time is usually involved from the submission of a planning application to the announcement of the final decision by the local planning authority (see **sections 6** and **7** for further discussion of the planning system for lorry parks).

Given the attributes of modern lorry parks, they often require considerable land, which is expensive to acquire. The construction and infrastructure costs are also substantial given their power, water, sewerage, building and parking requirements. Operating costs can also be considerable given the staffing requirements and business rates for such sites. In addition, the financial returns to be made from operating MSAs and especially dedicated lorry parks is relatively low, given the profitability of the road freight transport sector together the space required per HGV parking space and the relatively low spend per driver/parked vehicle (given that these drivers are seasoned travellers who often prepare for their time away from home and are not especially well paid). MSAs and other roadside facilities catering to car users are typically more profitable than services provided to HGV drivers, as the latter usually travel with all their belongings, sometimes including food and drink, and therefore make fewer purchases of products and services when stopping either overnight or during the daytime. The main source of revenue from HGV drivers using lorry parks is usually the parking charge. Therefore, such HGV sites are often not deemed particularly financially attractive by private sector investors.

New lorry parks are estimated to have at least a twelve to fifteen year payback period which discourages developers (AECOM, 2022). Land that could be used for lorry parks is instead often used for other purposes, given the relative rates of financial return for other land uses. In addition, some lorry parks operators are encouraged to sell by developers who wish to acquire the site for other, more profitable development uses. For instance, the Orwell Crossing Lorry Park, located 12 miles from Felixstowe on the A14, closed in 2021 and is being developed as a 60 acre logistics park which is expected to create 1100 jobs. Some local authorities that ran lorry parks have closed these for redevelopment as more financially attractive uses. Such alternative land use development potential for prospective or existing lorry parks is often heightened by their proximity to the Strategic Route Network (SRN) and the quantity of passing traffic attracted by these major traffic routes with hotel, office, business park and retail park development options. Such development pressure has been greatest in the South East in close proximity to London and its surrounding home counties.

These same commercial issues (high land purchase prices, investment and operating cost requirements, and lack of sufficient expenditure by HGV drivers using them) also explain why there are so few local authority lorry parks (only 16 out of 328 lorry parks in England in 2022) and that even where these do exist they tend to provide only basic facilities (with 50% having offering only parking, and 25% having only parking and toilets in England in 2022). The number of these local authority lorry parks has reduced over time, with the authority selling the site and/or allowing a change of use on the site for its development for other more financially attractive purposes. This is due to local highway authorities not being legally

required to provide such off-street parking facilities for goods vehicles even if they have restricted on-street overnight HGV parking, together their lack of available funding and lack of prioritisation of their importance. As a result, few local authorities are considering developing lorry parks. As mentioned above, local authorities have also rejected many planning applications for new lorry parks by private developers and taken substantial periods of time to reach decisions for those they have eventually approved (often with expensive changes to proposals required).

6. Views on and responsibility for providing lorry parks

6.1 Views of local authorities and UK Government

A consultation exercise was carried out by AECOM in May 2008 on behalf of the Highways Agency to investigate opinions and experiences of English local authorities with regards to HGV parking. The work found that some local authorities did not research or maintain an understanding of the lorry park situation in their area, and that “many local authorities were not taking a very proactive role towards the management of their road network in regard to lorry parking”. The consultation work found that 20 out of the 37 responding local authorities were experiencing problems with unauthorised parking of HGVs on the Strategic Road Network (SRN). Thirteen responding local authorities stated that more lorry park provision was needed, and only 8 of the 37 local authorities were happy with the current level of HGV parking provided in their areas. The vast majority of Local Authorities (33 of the 37) believed the Highways Agency were at least partly responsible for lorry park provision in their jurisdictions, with five of them believing that the Highways Agency was wholly responsible for this. Only 11 of the 37 responding local authorities were involved in monitoring the lorry parks that operated in their areas. Twenty three of the 37 local authorities had a freight strategy but this did not necessarily cover HGV parking (AECOM, 2008a reported in AECOM, 2009).

A report carried out for the Department of Transport in 2009 noted that, “Several local authorities have reported problems with HGV parking in their jurisdictions, however many of these do not have strategies for managing HGV movements and parking. Most also believe that highways authorities and central government should be at least partially responsible for the provision of such facilities” (AECOM, 2009).

In 2008, the UK Government published a report that it described as “the first detailed analysis by the Department (of Transport) of the movement of major freight commodities on our national transport corridors. It sets out our understanding of the issues across freight modes and considers how government and industry can work together to facilitate effective freight movement and to mitigate its impacts” (Department for Transport, 2008, p.4). This report included consideration of HGV parking, noting that, “The Department is undertaking a research project on the provision of HGV parking in England. The project is being undertaken to consolidate existing research, which will lead to the clarification of roles and responsibilities across the public and private sectors. It is anticipated that it will feed into an action plan or strategy on lorry parking for implementation from 2009/10” (Department for Transport, 2008, p.4).

The report also explained that “The attitude of a local authority to.....lorry parking provision can have impacts on the ability of an entire supply chain to deliver at the most effective and efficient time (Department for Transport, 2008, p.85)

Prosaically, in the light of what has happened in Kent since its publication (see **section 6.3**), the report noted, “.....it was felt that Ro-Ro port capacity (particularly through Dover) could be full by 2018. Some stakeholders also expressed a view that port capacity needed to be matched by the capacity of associated infrastructure, including the key corridors to and from ports and secure waiting and lorry parking facilities close to ports” (Department for Transport, 2008, p.87)

The research project into HGV overnight parking referred to in the above Department for Transport report was commissioned from AECOM and published in 2009. It notes that, “The DfT are conscious that the provision of HGV parking facilities in England is often considered inadequate, by a variety of stakeholders, including lorry drivers themselves, their managers, other road users, associations, councils and residents of areas where lorries frequently park” (AECOM, 2009).

6.2 UK Government approach

Later in 2009, the Department for Transport published its 'Strategy for Lorry Parking Provision in England'. This strategy commended by stating "DfT understands that the provision of HGV parking facilities is a vital service that supports the national and international road freight operations which help facilitate the UK economy and its growth. Lorry parks help to ensure road safety, preserve local amenity, reduce opportunities for crime and address the general needs of HGV driver working conditions. It is therefore important such services have support on a national level that helps create an environment which reduces the current barriers hampering development, financial stability and adequate standards. To work towards this better environment for HGV parking a clear plan has to be in place that can be realistically and practically delivered. Creating this strategy for HGV parking is the first step towards a long-term solution. The strategy is also a response to the call from industry for a co-ordinated approach to policy" (Department for Transport, 2009).

Following this strong and supportive opening statement about the importance of HGV parking and the need for plan to deliver the parking facilities needed, the strategy went on to commit to six strategic objectives and related aims (see **Table 6.1**). Whilst the strategy did not foresee the national Government owning or operating lorry parks or pledge any specific level of Government funding to meet the objectives outlined in the strategy, it did commit the Government to far a greater level of planning and monitoring of the demand and supply for HGV parking; working with local authorities to emphasise their importance, ensuring that HGV parking requirements were prominently reflected in associated planning legislation, regional spatial strategies and local development plans; working with business to develop a more viable financial model for lorry parks that led to new sites opening and fewer closing; carrying out disseminating information to freight businesses and HGV drivers about the location of and facilities provided by lorry parks; and learning from European experience which in the case of several countries involves the provision of far higher driver welfare and safety features.

A general election in 2010 resulted in a change in UK Government. In June 2011, the Roads Minister, Mike Penning, announced that the new Government had introduced, "a change to the policy to permit the development of truckstops on the motorway network.....Proposals for dedicated truckstop facilities will now be considered in the context of existing and proposed rest facilities on the strategic road network (SRN), and will be determined on their individual merit. This will include truckstop facilities that can be accessed direct from motorways - motorway truckstops - which are a type of facility not permitted until now. Where there is evidence to demonstrate that demand for lorry parking exceeds supply, the development of truckstop facilities at existing service areas would be viewed favourably." (This was incorporated into DfT circular 01/2008 (April 2008) and subsequently incorporated, in a revised form, into DfT circular 02/2013 'The Strategic road network and the delivery of sustainable development' - Department for Transport, 2013).

The Roads Minister went on, "I am currently considering ways to reduce regulation, increase competition and improve still further the quality of Motorway Service Areas. To this end, I have instructed officials in my department to identify those elements of the policy that might instead be better determined at a local level through the current planning system. I have also instructed my officials to work with the Department for Communities and Local Government to consider how best to take these issues forward in the context of the national planning policy framework. Separately, we will produce an associated DfT technical note, setting out requirements in respect of road safety and operational issues. This approach accords with the government's twin aims of decentralisation and localism, reducing the burden of bureaucracy and strengthening local accountability. It will encourage competition and, through this, improve service for users" (Department for Transport, 2011b).

Table 6.1: Strategic objectives and related aims of the DfT’s Strategy, 2009

No.	Strategic Objective	Aim
1.	Build on the current understanding of HGV parking provision and investigate the demand requirements up to 2014 – 2019 and beyond if necessary.	Develop a lorry parking model to establish an evidence based approach that can target specific problem areas and inform decision making at national, regional and local levels. This would help to map parking hotspots associated with demand and capacity issues up to 2014 – 2019 and beyond if necessary. This research would underpin many elements of the strategy / action plan.
2.	Define the position of lorry parking policy at national, regional and local levels where required.	Encourage Councils to consider and support the need of lorry parking where it is required. Help to understand the position of lorry parking in the policy suite of documents including National Planning Statements (NPS), Policy Planning Guidance 13 (PPG13), Regional Spatial Strategies (RSS), Local Development Frameworks (LDF), Local Transport Plans (LTP), and 01/2008 ‘Policy on Service Areas and Road Side Facilities on Motorways and All-purpose Trunk Roads in England’.
3.	Support Industry by providing Best Practice Guidance and further information to help stabilise business.	The production of best practice guidance to increase the appropriate use of lorry parking and clearly define operator and driver responsibilities such as forward planning and expense payment structures. Improve service levels and working conditions for drivers. Improve financial return of lorry parks and to stimulate future investment.
4.	Create an environment where lorry parking schemes can be brought forward by the private sector as more feasible investment opportunities. To help to make lorry parking businesses more sustainable and competitive.	Improve the stability of lorry parking businesses. To encourage new developments and to reduce closures across the network. Review of lorry parking operating costs. To make lorry parking businesses more competitive and viable as investment opportunities.
5.	Increase awareness of existing lorry parking locations and encourage their appropriate usage.	Increase the awareness of areas in need of lorry parking. Reduce inappropriate parking and associated environmental and safety implications. Indirectly increase compliance to the driving time regulations. Encourage journey and contingency planning. Highlight the areas in greatest need of lorry parking provision, including locations that currently have no facilities.
6.	Encourage the development and use of secure lorry parking locations with an added intention of improving working conditions for drivers.	Reduce crime and terrorist opportunities and improve safety of drivers and lorry parking site staff. Utilise existing information from SETPOS and LABEL to encourage private investment in new developments and upgrades to increase security across the network. Provide guidance and information on available standards and how to achieve them.

Source: Department for Transport, 2009.

In November 2011, the UK Government published a more detailed HGV parking audit of the SRN in England (AECOM, 2011) than the work commissioned in 2009. In publishing this study, Roads Minister stated that: “Making this information available to drivers and operators will make it easier for them to know where facilities are available. It will also help developers and local councils who want to plug gaps in the market helping to boost growth in the sector. I hope that by providing better information we will see more high quality HGV parking facilities

in the places where they are most needed. This will improve safety for drivers and reduce disruption for local residents” (Department for Transport, 2011a).

After 2011, Government outputs concerning HGV parking in England come to a seeming halt until the Transport Select Committee 2015/16 inquiry into the road haulage industry (House of Commons Transport Select Committee, 2016a). In written evidence to that inquiry, the Department for Transport reiterated the view of the Roads Minister in 2011 (above) stating that, “The provision of roadside facilities is primarily a matter for the private sector and local authorities, who are best placed to judge local traffic conditions and needs. There is no specific disaggregated information available on Government spend on roadside facilities, although it is likely to be limited” (Department for Transport, 2016a). During the inquiry the Government was criticised for its (lack of) management of HGV parking.

Lack of provision of facilities for goods vehicle drivers is commonly cited by drivers and others as an important factor in the HGV driver shortage that has existed for many years.. In the 2015 Chartered Institute of Logistics and Transport (CILT) driver shortage survey, approximately 40% of respondents cited driver facilities as an important issue (Chartered Institute of Logistics and Transport, 2015a). In written evidence to the inquiry into the road freight transport sector in the UK by the House of Commons Transport Committee in 2015/16 (House of Commons Transport Select Committee, 2016a), the CILT noted, “at a UK level the lack of provision of secure parking with drivers’ rest facilities on key trunk routes”, explaining that unless improvements were made would affect road safety and result in the industry continuing to fail to recruit drivers (Chartered Institute of Logistics and Transport, 2015). In 2017, Logistics UK published a ‘Commercial Vehicle Driver’s Rest Facilities Charter’ in which it urged central Government to ensure that sufficient investment was made in in the road network for HGV driver facilities, and National Highways and local authorities to ensure that central Government guidance was adhered to when new road infrastructure is planned and developed thereby avoiding loss of lay-by provision or rest facilities. The charter argued that there must be “no further loss of overall (HGV parking) capacity and then progressively a gain as roads develop” (Logistics UK, 2017).

In its written evidence responding to the Transport Select Committee’s questions about lorry parks, the UK Government said that “The provision of roadside facilities primarily a matter for the private sector and local authorities, who are best placed to judge local traffic conditions and needs. There is no specific disaggregated information available on Government spend on roadside facilities, although it is likely to be limited.” It did, however, say that “ministers will be examining further what support the Government and Highways England can provide in relation to encouraging changes to Motorway Service Area operations and future investment in lay-bys and other HGV parking (Department for Transport, 2016a, 2016b). The Transport Select Committee’s inquiry also led to the Department for Transport commissioning another audit of HGV parking (AECOM, 2017).

It can only be assumed that the new Government elected in 2010 was rather less keen than its predecessor on the strategy for HGV parking provision that it inherited. Rather than delivering on the strategic objectives in **Table 6.1**, from the tone of the Road Minister’s statement in 2011 and the DfT’s written evidence to the Transport Select Committee in 2016 (see above) instead the Government decided that it did not see its role as taking charge of HGV parking issues and instead sought to devolve this responsibility to local authorities, who did not rise to the challenge.

There has been little change in terms of the approach taken by UK national Government or local authorities in addressing HGV parking facilities in recent years with the freight industry expressing concerns and disquiet about it (see **section 11**). Factors including amenity problems and other impacts caused by HGV parking in lay-bys and at kerbsides in industrial estates and lorry-related crime/theft have though led to HGV parking studies being

commissioned by some local authorities. An update on the most recent announcements and actions concerning lorry parks by the UK Government is provided in **sections 12 and 13**.

6.3 The situation in Kent and response of national and local government

Although overnight HGV parking shortages exist in many regions of the country, pressures have been greatest in Kent, due to a lack of lorry park space to meet demand which is driven by the number of HGVs coming into and out of the UK via the Port of Dover and the Eurotunnel in Folkstone to make deliveries (5,000-10,000 HGVs daily) and the delays they face at these intermodal crossing points on their return journeys. The South East region in which Kent is situated has the greatest number of lorry park spaces on or within 5 km of the SRN of all regions in England (3,729 spaces in 2022). Lorry parks in the South East were found to have an overnight utilisation rate of 94% in a 2022 audit (i.e. 94% of lorry park spaces were observed to be in use when the audit took place). This was a substantial increase on the 84% utilisation rate observed in the 2017 audit. Given that it is assumed in these audits for the Department for Transport that lorry parks become full at a utilisation rate of 85% this indicates the demand for lorry park space. Of all HGVs parking overnight in the South East in the 2022 audit, 28% of them were observed to be parking in lay-bys and at kerbsides in industrial estates rather than in lorry parks, providing further indication of the lack of lorry park capacity. If all of these HGVs were to be accommodated in lorry parks, the South East would have required an additional 1,700 lorry park spaces in 2022, more than any other region of England, with the majority of these required in Kent (analysis of data in AECOM, 2022 - see **section 8** for further details of this overnight HGV parking audit). Even as far back as 2014, modelling of the future lorry park capacity required in Kent indicated that, “with the ongoing increase in international freight traffic...there would need to be a huge uplift in parking provision to cope with all truck parking” (AECOM, 2014).

This lack of lorry park capacity in Kent has existed for many years. In 1988, ‘Operation Stack’, a contraflow traffic arrangement on the Dover-bound side of the M20 to cope with the build-up of HGV Channel crossing road traffic when delays occurred at the port and/or the Eurotunnel, was introduced. It was implemented on numerous occasions during its life. In 2015, the UK Government announced that proposal to provide a lorry park at Stamford West in Kent to replace Operation Stack. This was to cost £250 million and provide off-motorway parking for 3,600 HGVs including driver facilities. However, the proposal received many objections for local residents. In 2017 it was subject to a judicial review which ruled that it could not go ahead due to the lack of an environmental assessment prior to the review. This resulted in the Government dropping the plans. The proposed scheme also faced much objection from residents living near the site.

In 2018, in a speech updating Parliament on Operation Stack and HGV traffic in Kent, the Under-Secretary of State for Transport, Jesse Norman, told the House of Commons that the Government was announcing measures to lay-by and on-road parking by HGVs in Kent and elsewhere the country (see an explanation of the Kent TRO scheme below). As part of this speech, he also announced plans “increase overnight HGV parking capacity which could potentially add an additional 1,500 spaces” which, he hoped, would be delivered by the private sector. He set out three steps the Government would be taking to assist in this goal: (i) National Highways would analyse its landholdings in order to identify sites with the potential to be developed into lorry parks, and would give increased priority to the provision of HGV parking across the SRN (it had proposed funding needs for better HGV parking facilities to the Department for Transport which were being considered), (ii) that Jesse Norman and the Planning Minister Dominic Raab had written to local planning authorities to “draw their attention to the survey results, which show a strategic national need for more HGV parking and highlight shortages in specific areas”, and that Department for Transport was asking National Highways to “assist local authorities in actively identifying areas of HGV parking need and potential solutions, including in the context of specific planning applications where these

might help alleviate the situation”, and (iii) Department for Transport would “consider further steps to make it easier for local authorities to take enforcement action against hauliers who park inappropriately” and promote the trial approach on the A20 in Kent in other regions facing this problem (Department for Transport, 2018).

The HGV parking problem in Kent has become increasingly severe over time as goods importation levels increase, resulting in increases in HGV movement to and from mainland Europe and the pressure this places on the Ports of Dover, Ramsgate and Folkestone and the Eurotunnel and, more recently, since 2020 with problems caused by Covid and Brexit and the P&O ferry crisis in 2022. These sea ports and the Eurotunnel were responsible for handling 1.6 million powered HGVs leaving the UK for the EU in 2021. This represented 84% of all powered HGV crossings departing the UK (calculated from data in Department for Transport, 2021b, 2021c).

As mentioned above, in 2017 Kent County Council, Ashford Borough Council and the Department for Transport put in place an 18-month Experimental TRO to trial an overnight HGV parking ban between 20:00 and 07:00 covering the A20 between Charing and Ashford and four industrial estates in the borough. The trial permitted clamping of vehicles that contravened restrictions and a Penalty Charge Notices (PCN) that includes a £150 clamp release fee. The trial resulted in 2,754 HGVs being clamped, with HGV parking in the area falling by “61% with little displacement to neighbouring districts.” In 2019, the scheme became permanent (Ashford Borough Council, 2019).

Brexit-related concerns about delays due to document, vehicles and goods checks at the Dover Straits seaports and the Channel Tunnel led to the UK Government having to introduce the ‘Heavy Commercial Vehicles in Kent Order 2019’ as a multi-agency response plan managed by the Kent Resilience Forum (KRF) to keep traffic moving on the M20 during periods of severe cross-Channel disruption (Department for Transport, 2021d). Measures include Operation Brock (which replaced Operation Stack) which involves closing the Dover-bound side of the M20 for lorry queuing when major problems arise, and the use of an additional off-road facility at Ashford should HGV queuing on the M20 exceed 2,000 vehicles. In addition, the Dover TAP (a ‘temporary’ traffic management system introduced in 2015) attempts to prevent the town of Dover becoming congested with stationary traffic when the port is experiencing minor disruption. HGV parking in lay-bys and at the kerbsides on public roads in industrial estates close to residential property as well as on the M20 when Operations Stack and Brock have been in force has led to much resentment among locals residents in Kent (see **Figure 6.1**).

In January 2021, Kent County Council, in agreement with the Department for Transport, imposed a six-month Temporary TRO on HGV parking in lay-bys and roads in East Kent (with a small number of lay-bys on the A249 and A299 exempted for loading, unloading and 45-minute rest breaks) to address potential disruption due to Brexit. This was subsequently extended for 18 months. Enforcement is through a £35 Penalty Charge Notice which can be followed by vehicle clamping and £150 release fee. These restrictions were in force 24 hours per day, seven days per week. Kent County Council applied to extend this temporary scheme when it came to an end in 2021, but the Department for Transport rejected this application (BBC News, 2021a).

Figure 6.1: People's Vote March in London October 2018 including placard about HGV parking in Kent

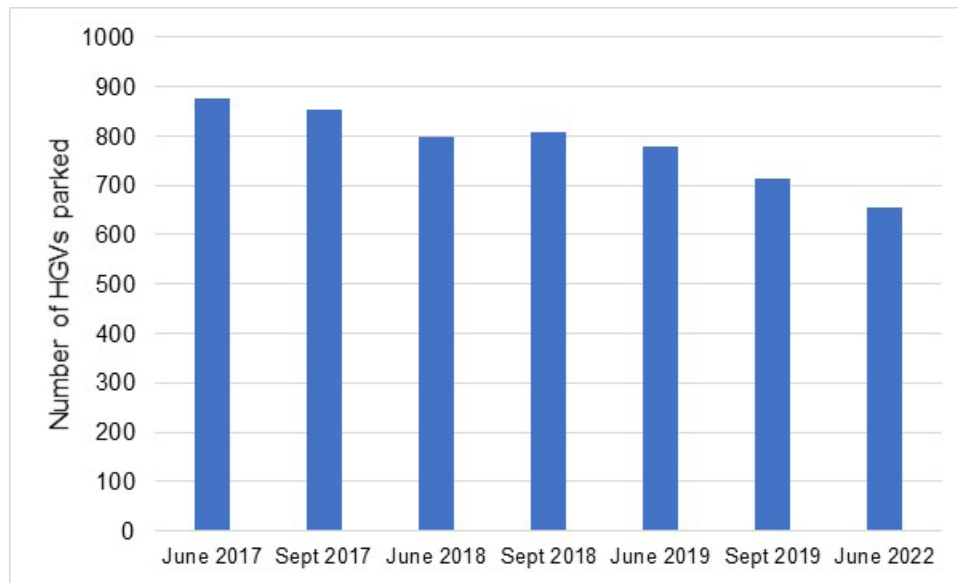


Source: https://commons.wikimedia.org/wiki/File:People%27s_Vote_March_2018-10-20_-_Visit_Kent,_lorry_park_of_the_UK.jpg

In December 2021, the Ashford International Truckstop in Kent was opened. It is located off the M20 and has a capacity for 650 HGVs and replaces an existing, smaller lorry park nearby which had a capacity of 300 HGVs. Owned by the GSE Property Group it comprises bedrooms for drivers, laundry facilities, kitchen, bar and games room (BBC News, 2021b). The opening of the lorry park came seven months after reports that the county's lorry parks had become "chronically overcrowded", with fights even breaking out between lorry drivers, exacerbated by the lay-by and road parking fines and clamping scheme discussed above (BBC News, 2021b, 2021c). Tariffs are £32.50 for a 2-24 hour stay. It is hoped that this larger lorry park will reduce on-street parking in the Henwood Industrial Estate which is not part of the area covered by the TRO that allows Ashford Borough Council to clamp HGVs and issue fines to vehicles parked illegally.

As shown in **Figure 6.2**, surveys of overnight parking by HGVs in Kent that involves surveying all main roads carried out by Kent County Council since 2017 (but stopped between June 2020 and September 2021 due to Covid-19) indicate measures have had an impact on the number of HGVs parked in lay-bys and on-street in industrial estates. Measures include the lay-by parking restrictions, clamping and fines regime around Ashford together with the introduction of the Ashford International Truckstop as well as the implementation of bollards on slipways on certain sections of the A2. HGV overnight parking in lay-bys was 16% lower in September 2019 than in September 2017, and 25% lower in June 2022 than in June 2017 (Kent County Council data quoted in AECOM, 2022).

Figure 6.2: Survey of overnight parking by HGVs in lay-bys and industrial estates in Kent



Source: Kent County Council data quoted in AECOM, 2022.

7. The system for providing lorry parks and other HGV parking facilities

As explained in **section 3.3**, until 1992, Motorway Service Areas (MSAs) were centrally planned controlled and owned by the UK Government. Following this date, MSAs have been identified and acquired by private initiative in the same way as are other commercial developments but remain subject to planning approval (as for any other commercial development) and certain rules concerning minimum standards their location and impacts. The UK Government stills owns the freehold for some MSAs and, since privatisation, leases them commercial operators. Many MSAs contain parking facilities for HGVs, but HGV drivers also make use of other lorry parks. The vast majority of these are privately operated, with the exception of a small number operated by local authorities (most of which only provide parking facilities).

Government regulations of 2010 designate two types of lorry park that serve the SRN: (i) a lorry park on the motorway (which is signposted from a motorway) and a trunk road lorry park (which is signposted from a non-motorway trunk road). Although not designated by these regulations, there is a third type of lorry park which provides the necessary facilities but (either due to regulations or choice) is not signposted from the SRN (and which is most likely to be an independent lorry park) located on another non-trunk A-road.

Planning permission for the development of lorry parks must be sought from the local planning authority by private developers proposing these schemes. The local authorities are provided somewhat limited assistance in ruling on these planning applications by a circular issued by the Department for Transport in 2013 (referred to as Circular 02/2013) which sets out the way National Highways (formerly known as the Highways Agency) “will engage with communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the strategic road network” including the provision of regulated roadside facilities for HGVs on the SRN (Department for Transport, 2013). This replaced earlier Department for Transport notes published in 2007 and 2008.

This 2013 Department for Transport note applies to all forms of development related to the SRN and the general responsibilities of National Highways, local authorities, developers and other stakeholders in planning for this and ensuring it meets UK Government policy aims. It focuses specifically on HGV parking in a few places within it. It notes that goods vehicle drivers are subject to statutory rest breaks and that MSAs and other roadside facilities perform an important road safety function by providing places where breaks can be taken in the course of a journey. It explains that service areas on the SRN have been “developed on the premise that opportunities to stop are provided at intervals of approximately half an hour. However the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer” and that National Highways recommends that the maximum distance MSAs should be no more than 28 miles. It explains that the maximum distance between “signed services on trunk roads” (i.e. including lorry parks) should also be at least every 30 minutes driving time (Department for Transport, 2013).

This note explains that the private sector is responsible for operating all these service areas and roadside facilities that meet the needs of goods vehicle drivers and other road users on the SRN. All “new and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation, which together set the framework within which local planning authorities would consider the planning proposals for such developments”, and that National Highways provides advice to local planning authorities on the impact of such proposed developments on the safety and operation of the SRN (Department for Transport, 2013).

This 28 mile maximum distance and this rather vague statement that local authorities should assess lorry park proposals using “relevant planning legislation and regulation” mean that local

planning authorities are provided virtually no specific assistance in ruling on such proposals and no advice on the quantity of HGV parking space required. It provides no help in cases where the existing overnight HGV parking spaces at MSAs are too few to meet demand such that additional facilities are required at distances of less than 28 miles between existing MSAs or extended facilities are required at existing MSAs. It also provides local authorities with no guidance on suitable distances between types of HGV parking facilities other than MSAs. This 2013 note goes on to say that new MSAs and lorry parks are meant to avoid an overall increase in vehicle trip mileage or impacts on safety or traffic congestion on the SRN and this is taken account of in any planning applications (Department for Transport, 2013).

Unlike MSAs and Trunk Road Services, other lorry parks signed from the SRN are allowed to be located up to 2 miles from the SRN rather than directly accessible from it as long as they meet the minimum requirements to be eligible for road signing from the SRN, as long as this does not involve vehicles travelling through residential areas (Department for Transport, 2013). Two hours of free parking must be provided at all stopping locations on the SRN, after which parking can be charged but cash payments must be accepted (Department for Transport, 2013). See **Table 7.1** for the 2013 requirements – revised requirements issued in December 2022 are provided in **Table 13.1** in **section 13**.

Table 7.1: Minimum requirements for the various types of roadside facility that may be eligible for signing from the SRN in Circular 02/2013

	Motorway		All-purpose trunk road service area*	Truckstops on Motorways	Truckstops signed from SRN	Truckstops on all-purpose trunk roads
	Service area	Rest area				
Open 24 hrs a day 365 days a year	M	M	N/A	M	N/A	N/A
Open minimum 12 hours per day between 8am and 8pm every day except Christmas Day, Boxing Day and New Year's Day.	N/A	N/A	M	N/A	M	M
Free parking for up to 2 hours minimum for all vehicles permitted to use the road served by the facility.	M	M	M	M	M	M
Free toilets/hand washing facilities with no need to make a purchase.	M	M	M	M	M	M
Shower and washing facilities for HGV drivers, including secure lockers in the shower/washing area.	M	P	P	M	M	M
Fuel	M	P	M	M	P	P
Hot drinks and hot	M	P	P	M	P	P

food available at all opening hours for consumption on the premises.						
Hot drinks and hot food available 8am to 8pm for consumption on the premises.	N/A	P	M	N/A	M	M
Access to a cash operated telephone.	M	M	M	M	M	M
Use as an operating centre for the purposes of the Goods Vehicles (Licensing of Operators) Act 1995 or the Public Passenger Vehicles Act 1981.	Prohibited	Prohibited	Prohibited	Prohibited	P	P

Notes:

M = Mandatory

P = Permitted

N/A – not applicable

* Limited to a single or exceptionally 2 adjoining interconnected premises, accessed directly from the trunk road or directly from a junction on the trunk road.

'Truckstop' is an alternative term for 'lorry park'.

Source: Department for Transport, 2013.

Figure 7.1: Overnight parking in lay-by, West Yorkshire



Source: Ian S, 2011

https://commons.wikimedia.org/wiki/File:Parking_up_for_the_night_-_geograph.org.uk_-_2497778.jpg

The 2013 note provides a method for calculating goods vehicle parking requirements at these roadside facilities. For HGV parking at MSAs, the parking requirement is 0.5% of the average daily flow of goods vehicles for the peak month (based on the most recent complete year of traffic data). At TRAs, there is a minimum of two HGV parking spaces (Department for Transport, 2013).

The National Planning Policy Framework (NPPF) was altered in 2018 to include an encouragement of local authorities to work with neighbouring authorities and providers on logistics infrastructure provision including roadside facilities. However, It only states that “Planning policies and decisions should recognise the importance of providing adequate overnight HGV parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance. Proposals for new or expanded distribution centres should make provision for sufficient HGV parking to cater for their anticipated use” (Ministry of Housing, Communities and Local Government, 2021). However, under the current planning system local authorities do not need to consider HGV parking directly, as there is no specific policy outlining what should be considered. In the NPPF and the Department for Transport circular on the SRN and HGV parking provision discussed above, there is no detailed planning policy or guidance to assist local authorities in making decisions about HGV parking facilities to take account of the strategic need for and importance of these facilities. This results in local authorities making decisions based on local issues and also often being especially influenced by objections from residents who are not keen on the development of these facilities near where they live.

Figure 7.2: Overnight parking at the kerbside in an industrial estate, Kingston Upon Hull



Source: Ian S, 2013

https://commons.wikimedia.org/wiki/File:Polish_lorries_parked_up_for_the_night_-_geograph.org.uk_-_3653653.jpg

Obviously, not all overnight HGV parking takes place in lorry parks, with off-street parking space at warehouses and freight transport operators' premises also used, together with kerbside parking in industrial estates and lay-bys (i.e. on-street parking) also used by some drivers. Parking an HGV on-street overnight is not an offence unless there is a Traffic

Regulation Order (TRO) or byelaw in force that prohibits it, or the HGV is parked in a dangerous manner (see **section 2.2**). Often, the Police will not 'move on' all vehicles that should not be parked in lay-bys due to lack of Police resources and the knowledge that some drivers asked to move their vehicle will simply go to another similar location. Therefore, the Police usually only 'move on' HGVs parked in lay-bys if they are deemed to pose a risk to road users or are damaging the road infrastructure. Local highway authorities have a duty under Section 41 of the Highways Act 1980 to maintain the highways network and associated assets in their area that are under their control (i.e. those that are not part of the SRN managed by National Highways which comprises motorways and some A roads). This includes local authority responsibility for lay-bys, on local roads in their area. Each local highway authority is responsible for assessing the need for repair of its local road infrastructure based on its resources. The siting and design of roadside lay-bys is laid out in the Design Manual for Roads and Bridges (National Highways, 2021).

Sections 6 and **7** have highlighted the lack of commitment from both the national UK Government and local authorities in terms of their planning and strategy for HGV parking facilities in recent times (despite the strategy published by the Department for Transport in 2009 which led to little material difference). Both national and local government appear to take the view that it is a problem that the private sector must address and resolve, despite the impacts that it has on driver welfare, road safety and crime against HGVs and their loads. The shortage of overnight parking has been cited as one of the factors resulting in the long-term HGV driver shortage, which became even more severe and prominent from 2020 onwards following the onset of the Covid-19 pandemic and Brexit (Piecyk and Allen, 2021).

See **section 13** for a discussion of the new circular issued by the Department for Transport in December 2022 which contains some revisions to Circular 02/2013 discussed in this section, including an updated version of **Table 7.1** (in **Table 13.1**).

8. Government-commissioned audits of HGV overnight parking in England

This section summarises and compares the findings of the audits of overnight HGV parking on and close to the SRN in England that were commissioned by the Highways Agency in 2006 and the Department for Transport in 2011, 2017 and 2022 to better understand how the situation is changing over time (AECOM, 2009, 2011, 2017, 2022). The categorisation used for lorry parks and their facility ratings in these audits has become increasingly well-defined over time, with the published results becoming increasingly disaggregated according to these categorisations. For each audit the list of lorry parks to be included is reviewed and updated.

All of these HGV overnight parking audits have been carried out using the same methodology, surveying HGV parking both on and up to 5 kilometres from the SRN in England. There will be some industrial estates and lay-bys more than 5 km from the SRN that these audits do not capture. In the most recent (2022) audit, survey work was carried out between 18:00 and 02:00 on Tuesdays, Wednesday and Thursdays throughout the month of March 2022 (with it also having been carried out in March in previous audits to aid comparison).

The Department for Transport has also commissioned another piece of work that is being carried out to better understand how levels of HGV parking “fluctuate throughout the year and if there are regional differences in seasonal fluctuations” (AECOM, 2022).

8.1 Overnight HGV parking capacity, prices and ratings in lorry parks

A total of 4,396 overnight parking locations were audited in 2022 of which 328 were lorry parks, 827 were industrial estates, and 3,241 were lay-bys. Although lorry parks only comprised 7% of parking sites audited, they comprised 66% of all parked HGVs observed during the audit given their capacity compared to on-street parking in industrial estates and lay-bys (AECOM, 2022).

Table 8.1 shows the breakdown of these 328 lorry parks by type and HGV parking capacity. In terms of the number of lorry parks, these are relatively equally divided between (in order of importance) Motorway Service Areas (MSAs) with lorry parks, independent lorry parks and Trunk Road Service Areas with lorry parks, with local authority lorry parks only accounting for 5%. However in terms of HGV parking capacity, independent lorry parks and MSAs with lorry parks are most important (with 44% and 40%, respectively), followed by Trunk Road Service Areas (12%) and local authority lorry parks (4%).

Table 8.1: The number and HGV parking capacity of lorry parks surveyed in 2022 by type

Type	Number of lorry parks	% of lorry parks	HGV parking capacity	% of HGV parking capacity
Independent lorry park	104	32%	7,390	44%
Local authority lorry park	16	5%	609	4%
Motorway Service Area	114	35%	6,688	40%
Trunk Road Service Area	94	29%	2,074	12%
Total	328	100%	16,761	100%

Source: data in AECOM, 2022.

Five per cent of lorry park locations were found to provide no facilities with only parking space available in the 2022 audit (these were mostly local authority car parks used for HGV parking overnight – these were given a facility provision rating of 0), 15% provided only toilets (given

a rating of 1), 22% provided toilets and catering (given a rating of 3), 35% provided toilets, showers and catering (given a rating of 4), 16% provided toilets, showers, catering, lighting and a security fence, while 7% provided toilets, showers, catering, lighting a security fence and CCTV (given a rating of 5). A greater proportion of local authority lorry parks are rated 0 or 1 (i.e. with few if any facilities), with 50% having a rating of 0 and 25% a rating of 1. In terms of lorry parks with a rating of 4 or 5 (i.e. with the most facilities including a security fence) these account for 39% of independent lorry parks, 25% of Motorway Service Areas (MSAs), 19% of local authority lorry parks and 3% of Trunk Road Service Areas (AECOM, 2022).

London and the North East have the highest proportion of lorry parks with a provision of facilities rating of 0 (20% and 17% of lorry parks, respectively). West Midlands and the North West have no lorry parks rated as 0. At the other end of the spectrum, Yorkshire & Humberside and the North West have the highest proportion of lorry parks with a rating of 5 (19% and 14% of lorry parks, respectively). In terms of lorry parks with a rating of 4 or 5, Yorkshire & Humberside has the most (44% of lorry parks), followed by the North West (44%), The East Midlands (28%) and the West Midlands (22%).

The overnight parking charge tends to vary with facilities provided, type of lorry park and location. The average, minimum and maximum parking charge by type of lorry park is shown in **Table 8.2**. MSAs have the highest average parking charges (£28.16). This is due to factors including HGV drivers not having a choice of other nearby facilities (with a distance of up to 28 miles between MSAs), having to provide services 24 hours per day, 7 days per week (and the labour costs of doing so), cross-subsidies between busier and less busy sites operated by any one business, and (unlike independent lorry parks) not being allowed to be specified as vehicle operating centres by HGV operators. Average parking charges for all types of lorry park were highest in 2022 in the West Midlands (£25.69), Eastern region (£25.28) and the South East (£24.86) and lowest in the North East (£16.48) and Yorkshire & Humberside (£20.48) (AECOM, 2022). These difference are due to factors including supply and demand, facilities offered, and labour and other cost variations.

Table 8.2: Overnight parking charge by type of lorry park, 2022

Type	Average	Minimum	Maximum
Independent lorry park	£21.36	£4.50	£38.40
Local authority lorry park	£11.67	£2.50	£24.00
Motorway Service Area	£28.16	£14.99	£35.00
Trunk Road Service Area	£15.89	£8.00	£28.00

Note: Based on the price for parking only (i.e. without any meal or shower services included). Source: data in AECOM, 2022.

8.2 Utilisation of lorry parks for overnight HGV parking

Table 8.3 shows the lorry parks spaces available, the number of HGVs that were observed parking overnight and the utilisation rate of the 328 lorry parks in the 2022 audit by region. This shows that the utilisation of overnight parking spaces across the whole of England was 83%, with it being highest in the Eastern region (95%), South East (94%), and East Midlands (92%).

Table 8.3: Utilisation of overnight parking spaces in lorry parks, 2022

Region	HGV parking spaces in lorry parks	Number of HGVs parked overnight in lorry parks	Overnight utilisation of lorry parks (%)
Eastern	2,009	1,906	95%
West Midlands	2,228	1,871	84%
South East	3,729	3,488	94%
Yorkshire & Humber	1,954	1,292	66%
East Midlands	2,661	2,443	92%
South West	1,466	932	64%
North East	320	165	52%
North West	2,107	1,686	80%
London	287	133	46%
England	16,761	13,916	83%

Notes:

Average utilisation per region masks individual lorry parks where demand exceeds supply.

The surveys were undertaken at 'average' times of year, utilisation figures would be higher in peak periods.

Source: AECOM, 2022.

Of the HGVs observed parking overnight in lorry parks in the 2022 audit, 44% were parked at Motorway Service Areas (MSAs), 41% at independent truckstops, 13% at Trunk Road Service Areas and 2% at local authority lorry parks. All independent lorry parks across England were observed to have a utilisation rate of 85%, MSAs a utilisation rate of 84%, Trunk Road Service Areas a utilisation rate of 81%, and local authority lorry parks a utilisation rate of 52% (AECOM, 2022).

Given that HGVs arrive and leave lorry parks at various times of day with some staying less than an hour and others parking for long periods, the utilisation rate of lorry parks fluctuates over the course of a day and night. In addition, HGVs of various size and type visit lorry parks, so parks often do not mark out bays for this reason. Therefore even if some space still exists at a lorry park it will not always be suitable for the arriving vehicle, and drivers may not have parked in such a way to accommodate as many vehicles as possible. Also, drivers arriving in the dark or in poor weather at a poorly lit lorry park may struggle to locate a suitable space. Therefore, for the purposes of the HGV parking audit, the surveyor (AECOM) agreed with the Department for Transport that once the HGVs at a lorry park reach 85% of its maximum vehicle limit, the park may in fact be full.

The surveyor therefore ascribed lorry park utilisation when audited to one of the following three categories depending on the vehicles present at a park and its maximum limit: i) acceptable level of utilisation (less than or equal to 69% full of HGVs), ii) serious level of utilisation (70-84% full of HGVs), and iii) critical level of utilisation (equal to or greater than 85% full of HGVs). In the 2022 audit, across England as a whole, 44% of lorry parks (143 lorry parks) were at a critical utilisation rate (i.e. deemed full at the time of the survey), with 14% having a serious utilisation rate and 42% an acceptable utilisation rate. The regions with the highest proportion of parks with a critical status (i.e. full) were Eastern (55%), East Midlands (54%), North West (50%), West Midlands (47%) and South East (42%) (see **Table 8.4**).

Table 8.4: Utilisation status of lorry parks by region, 2022

Region	Acceptable (less than or equal to 69% full)	Serious (70-84% full)	Critical (equal to or greater than 85% full)	Total
Eastern	23%	23%	55%	100%
West Midlands	36%	17%	47%	100%
South East	41%	17%	42%	100%
York & Humber	54%	14%	32%	100%
East Midlands	31%	15%	54%	100%
South West	61%	5%	34%	100%
North East	75%	0%	25%	100%
North West	42%	8%	50%	100%
London	60%	20%	20%	100%
England	42%	14%	44%	100%

Source: calculated from data in AECOM, 2022.

In the 2022 audit, 100 of the 143 lorry parks across England that had a critical utilisation level (i.e. 70% of them) had a utilisation of 100% or greater (meaning that they had reached or exceeded the absolute maximum number of HGVs they could accommodate). The overall capacity of these 143 lorry parks with a critical utilisation rate accounted for 58% of total lorry park capacity in England as a whole. They are not therefore small sites, having an average capacity of 68 HGV parking spaces. Only 13 of these 143 lorry parks had less than ten parking spaces. In terms of type of lorry park for these 143 sites with a critical rate of utilisation, 35% were independent lorry parks, 41% were Motorway Service Areas, 22% were Trunk Road Service Areas, and 2% were local authority lorry parks.

Overall, 51% of all Motorway Service Areas had a critical rate of utilisation, compared with 49% of all independent lorry parks, 34% of all Trunk Road Service Areas, and 19% of all local authority lorry parks in 2022.

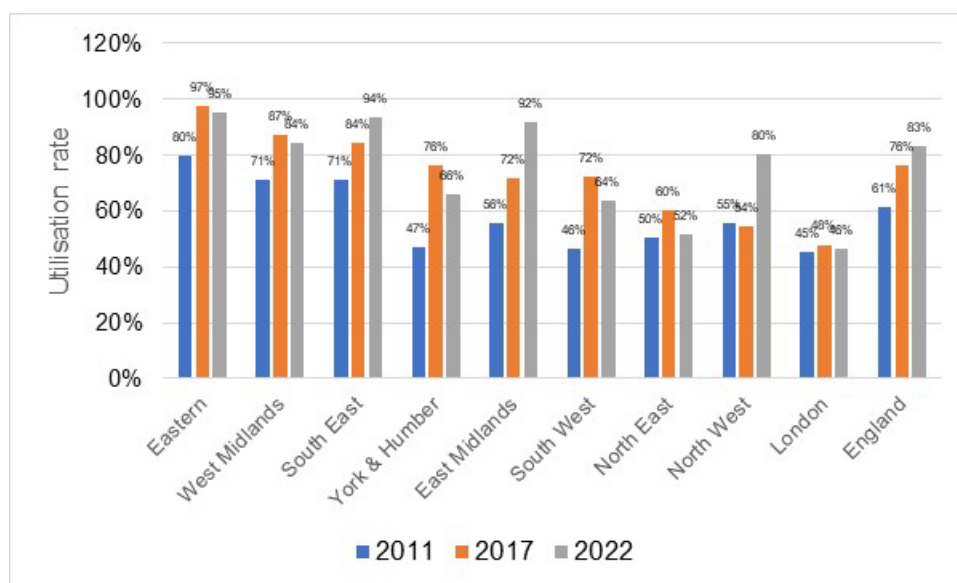
The number of lorry parks in England in these audits increased from 279 in 2011, to 311 in 2017 to 328 in 2022. The HGV total parking capacity of these lorry parks also increased from 13,143 HGVs in 2011 to 15,021 HGVs in 2017 to 16,761 in 2022. This represents an increase in HGV parking capacity at lorry parks of 14% between 2011 and 2017 and of 12% between 2017 and 2022). The number of vehicles observed parked overnight at lorry parks during the audits was 8,026 HGVs in 2011, 11,469 HGVs in 2017, and 13,916 HGVs in 2022. This represents an increase in HGV overnight parking at lorry parks of 43% between 2011 and 2017 and of 21% between 2017 and 2022).

This data indicates that the total demand for HGV overnight parking has been growing far more strongly than lorry park capacity since 2011. This is reflected in the overall average lorry park overnight utilisation at lorry parks in England. This has risen from 57% in 2006, to 61% in 2011, to 76% in 2017, to 83% in 2022. The overall average lorry park utilisation for all lorry parks in England stood only just below the 85% threshold that is deemed to be 'critical' by the surveyors and the Department for Transport and which is used as the rate at which lorry parks are deemed to be full.

This lorry park utilisation rate varies by region. It was higher in all nine regions in 2022 compared to 2011. It was higher in three out of the nine English regions in 2022 compared to

2017 (see **Figure 8.1**). In 2022, it exceeded the 85% utilisation rate at which lorry parks are deemed full in four regions: Eastern, Southern, East Midlands and West Midlands.

Figure 8.1: Overnight lorry park utilisation rates in 2011, 2017 and 2022 by region



Notes:

Average utilisation per region masks individual lorry parks where demand exceeds supply.

The surveys were undertaken at 'average' times of year, utilisation figures would be higher in peak periods.

Source: calculated from data in AECOM, 2011, 2017, 2022.

8.3 HGV overnight parking in all locations

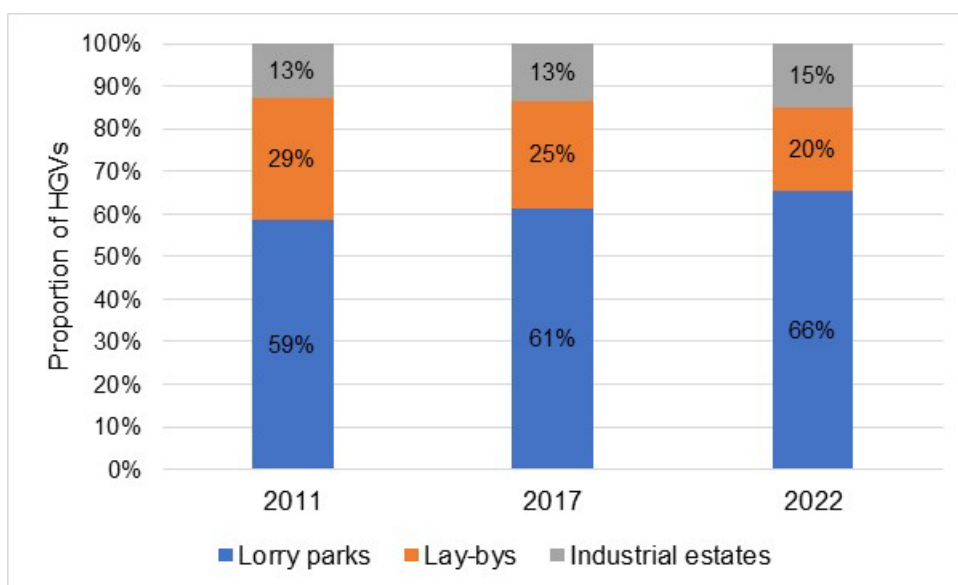
Table 8.5 shows the locations at which HGVs parked overnight in England in 2011, 2017 and 2022. It reflects the growing number of HGVs requiring overnight parking over time. **Table 8.5** and **Figure 8.2** also reflect the proportion of HGVs parking overnight in each of these locations. Lorry parks and kerbsides in industrial estates accounted for a greater proportion of HGV overnight parking in 2022 than in 2017, while lay-bys accounted for a smaller proportion.

Table 8.5: HGV overnight parking in England by type of parking location, 2011, 2017 and 2022 (numbers and proportion of total HGVs)

	Number of HGVs				Proportion of HGVs			
	Lorry parks	Lay-bys	Industrial estates	Total	Lorry parks	Lay-bys	Industrial estates	Total
2011	8,026	3,940	1,736	13,702	59%	29%	13%	100%
2017	11,469	4,709	2,492	18,670	61%	25%	13%	100%
2022	13,916	4,157	3,161	21,234	66%	20%	15%	100%

Source: calculated from data in AECOM, 2011, 2017, 2022.

Figure 8.2: Overnight parking by HGVs in England by parking location type, 2011, 2017 and 2022 (proportion of total HGVs using each location type)



Note: Totals do not sum to 100% due to rounding errors. HGVs parked in lay-bys and on-street in industrial estates accounted for 41% of all HGVs parked overnight in 2011, 39% in 2017 and 34% in 2022.

Source: calculated from data in AECOM, 2011, 2017, 2022.

Table 8.6 shows that while the number of HGVs parked overnight in lay-bys in England has fallen by 20% over the period 2011 to 2022, the number parking on-street in industrial estates has increased by 139%. As a result, the combined lay-by and industrial estate overnight HGV parking increased by 29% between 2011 and 2022. The growth in the rate of combined lay-by and industrial estate overnight HGV parking was far slower (2%) between 2017 and 2022, than between 2011 and 2022. Due to the rate of increase in HGV overnight parking in lorry parks compared to non-lorry park locations, the proportion of vehicles not parked in lorry parks has fallen over the period (from 41% in 2011 to 39% in 2017, to 34% in 2022).

Table 8.6: HGVs parked overnight by parking location type in England, 2011, 2017 and 2022

Parking location	2011	2017	2022	% change 2011-2017	% change 2017-2022	% change 2011-2022
Lorry parks	8,026	11,469	13,916	43%	21%	73%
Lay-bys	3,940	4,709	3,161	20%	-33%	-20%
Industrial estates	1,736	2,492	4,157	44%	67%	139%
Lay-bys and industrial estates	5,676	7,201	7,318	27%	2%	29%
All locations	13,702	18,670	21,234	36%	14%	55%
Percentage not in lorry parks	41%	39%	34%	-7%	-11%	-17%

Source: calculated from data in AECOM, 2011, 2017, 2022.

Table 8.7 shows where HGVs were parked overnight by type of parking location by region in the 2022 audit. The proportions parked on-street in industrial estates and lay-bys varied by region, with the proportion of parking in industrial estates greatest in the North East, London and the North West, and lay-by parking greatest in the South West, North East and Eastern). In all but one region between 28-44% of HGVs were parked in industrial estates and lay-bys rather than in lorry parks. However, in the North East this accounted for 73% of all HGV parking.

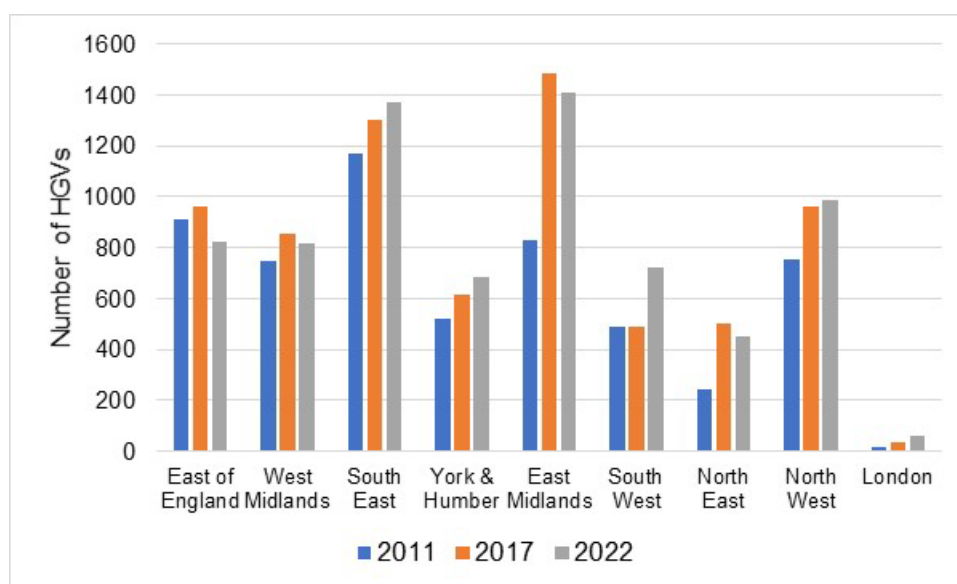
Table 8.7: HGV overnight parking by parking location type and region in England, 2022

Region	HGVs parked in lorry parks (%)	HGVs parked on industrial estates (%)	HGVs parked in lay-bys (%)	All HGVs parked (%)	Lay-bys & industrial estates combined (%)
Eastern	70%	7%	23%	100%	30%
West Midlands	70%	16%	14%	100%	30%
South East	72%	8%	20%	100%	28%
York & Humber	65%	17%	18%	100%	35%
East Midlands	63%	14%	22%	100%	37%
South West	56%	15%	29%	100%	44%
North East	27%	49%	25%	100%	73%
North West	63%	25%	12%	100%	37%
London	69%	26%	5%	100%	31%
England	66%	15%	20%	100%	34%

Source: calculated from data in AECOM, 2022.

Figure 8.3 shows the total number of HGVs parking overnight in lay-bys and at kerbsides in industrial estates (combined) in 2011, 2017 and 2022 by region.

Figure 8.3: Total HGVs parked overnight in lay-bys and industrial estates by region, 2011, 2017 and 2022



Source: calculated from data in AECOM, 2011, 2017, 2022.

Table 8.8 shows the percentage change in the total number of HGVs parked overnight in lay-bys and at kerbsides in industrial estates combined. The change in HGV overnight parking in these locations between 2017 and 2022 was greatest in London (by 62%), South West (47%), Yorkshire and Humberside (11%), South East (6%), and North West (3%). It fell in four regions between 2017 and 2022: Eastern (-14%), North East (-10%), West Midlands (-5%), and East Midlands (-5%).

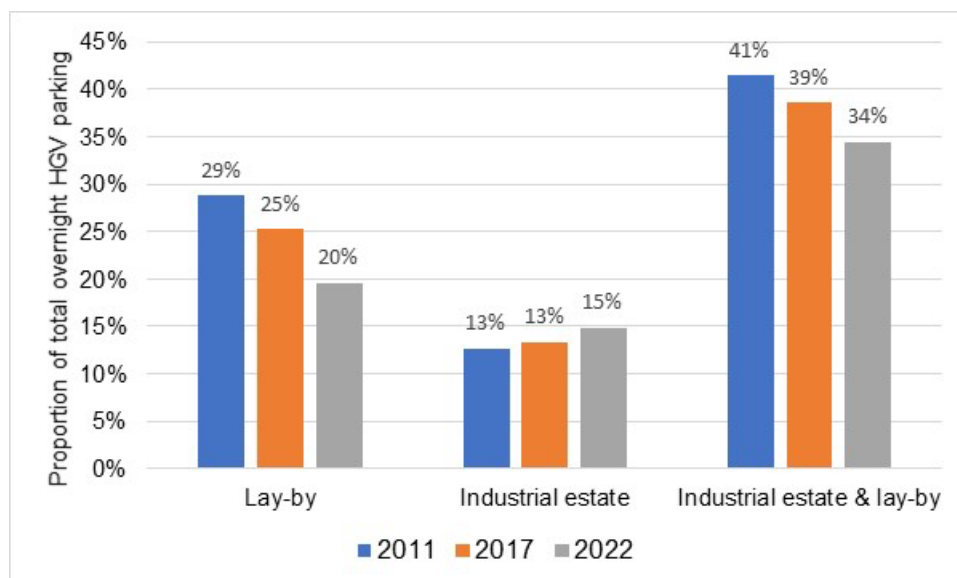
Table 8.8: Change in total HGVs parked overnight in lay-bys and industrial estates by region, 2011, 2017 and 2022

Region	2011-2017 (% change)	2017-2022 (% change)	2011-2022 (% change)
Eastern	6%	-14%	-10%
West Midlands	15%	-5%	9%
South East	11%	6%	18%
York & Humber	18%	11%	31%
East Midlands	79%	-5%	70%
South West	0%	47%	48%
North East	104%	-10%	83%
North West	27%	3%	30%
London	131%	62%	275%
England	27%	2%	29%

Source: calculated from data in AECOM, 2011, 2017, 2022.

Figure 8.4 shows the proportion of HGV overnight parking in lay-bys and at kerbsides in industrial estates as a proportion of total HGV overnight parking (i.e. including lorry parks) in England in 2011, 2017 and 2022. This shows that while HGV overnight parking in lay-bys fell between 2011 and 2022, overnight parking in industrial estates has increased. When added together, the proportion of overnight parking in both lay-bys and at kerbsides in industrial estates fell over the period, reflecting the growing proportion of HGVs parking overnight in lorry parks (with the proportion of all HGVs overnight parking that use lorry parks increasing from 59% in 2011, to 61% in 2017, to 66% in 2022).

Figure 8.4: HGV overnight parking in lay-bys and industrial estates as a proportion of total HGV overnight parking in England, 2011, 2017 and 2022



Note: Individual lay-by and industrial estate parking data do not sum to combined total due to rounding errors. HGVs parked in lay-bys and on-street in industrial estates accounted for 41% of all HGVs parked overnight in 2011, 39% in 2017 and 34% in 2022.

Source: calculated from data in AECOM, 2011, 2017, 2022.

Table 8.9 provides a breakdown of HGV overnight parking in lay-bys and on-street in industrial estates in 2011, 2017 and 2022 by region. This indicates the same trend regionally as has been taking place nationally across England, with a reduction in overnight parking in lay-bys as a proportion of total HGV parking together with an increase in overnight parking in industrial estates. Overnight parking in lay-bys fell substantially in 2022 compared to 2017 in the South East, Eastern, West Midlands, East Midlands and North West. This could be due to greater use of regulations and issuing of fines by local highway authorities such as has been implemented by Kent County Council in the South East (see **section 6.3**). The North East has experienced the greatest combined proportion of all HGV overnight parking in lay-bys and on-street in industrial estates in each of these audits, with this continuing to increase over time (from 61% of all HGV overnight parking in 2011 to 73% in 2022).

Table 8.9: HGVs parked overnight in lay-bys and industrial estates as a proportion of total HGV parked overnight (including in lorry parks) by region, 2011, 2017 and 2022

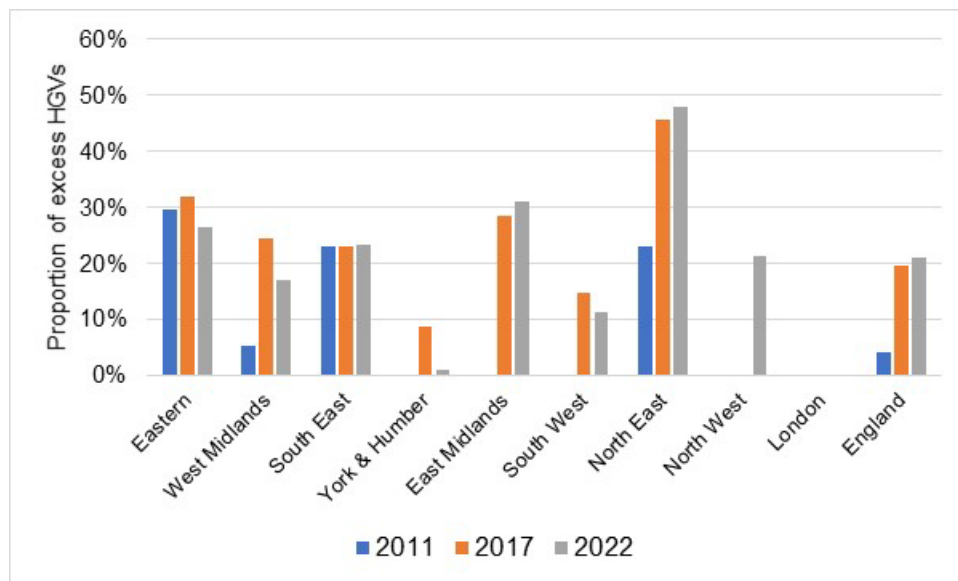
Region	Lay-bys			Industrial estates			Lay-bys & industrial estates		
	2011	2017	2022	2011	2017	2022	2011	2017	2022
Eastern	37%	30%	23%	7%	4%	7%	44%	34%	30%
West Midlands	21%	20%	14%	11%	14%	16%	33%	34%	30%
South East	36%	29%	20%	9%	6%	8%	45%	35%	28%
York & Humber	30%	18%	18%	12%	13%	17%	42%	30%	35%
East Midlands	34%	30%	22%	9%	19%	14%	42%	49%	37%
South West	31%	28%	29%	18%	10%	15%	49%	38%	44%
North East	30%	27%	25%	32%	40%	49%	61%	67%	73%
North West	14%	18%	12%	24%	23%	25%	38%	41%	37%
London	11%	16%	5%	0%	11%	26%	11%	27%	31%
England	29%	25%	20%	13%	13%	15%	41%	39%	34%

Source: calculated from data in AECOM, 2011, 2017, 2022.

8.4 The additional HGV parking space required in lorry parks

Given the increase in total HGVs parking overnight in England (in lorry parks, lay-bys and on-street in industrial estates) and the failure of the capacity of lorry parks to increase at the same rate there has been an increase in the proportion of total excess HGVs parked overnight in many regions (i.e. the difference between total HGVs parked overnight regardless of location and the total parking capacity available in lorry parks). There was a 4% excess of HGV overnight parking in England in 2011 (i.e. the proportion by which total HGVs parked overnight exceeded lorry park spaces). This rose to 20% in 2017 and then to 21% in 2022. **Figure 8.5** shows this excess overnight HGV parking for England as a whole and the regions. The North East region had the greatest excess parking rate in 2017 and 2022 due to its small provision of lorry park capacity (320 spaces on 12 parks) and the proportion of vehicles parking in lay-bys and on-street in industrial estates (with the latter non-lorry park locations accounting for 73% of all overnight parking in 2022).

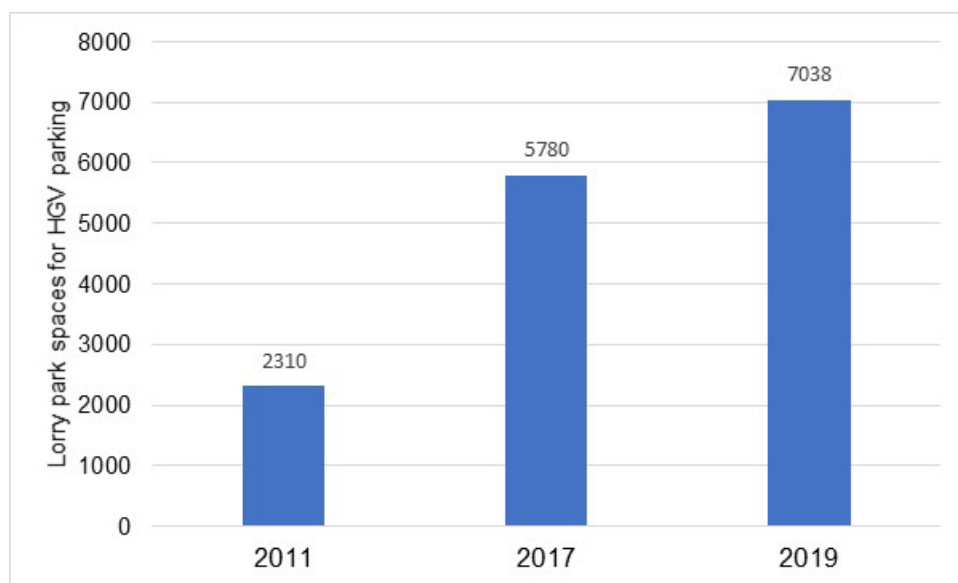
Figure 8.5: Total excess overnight HGV parking by region, 2011, 2017 and 2022



Source: calculated from data in AECOM, 2011, 2017, 2022.

Given that it is assumed in the audits that lorry parks are full when they reach 85% utilisation, there has been a need for additional lorry park capacity if all HGVs were to be parked overnight in lorry parks in England since the 2011 audit (see **Figure 8.6**). This shortfall of HGV parking spaces in lorry parks across England increased by 3,470 spaces (150%) between 2011 and 2017. It then increased by a further 1,258 spaces (22%) between 2017 and 2022. The additional lorry park space required in 2022 was approximately 200% greater than in 2011. There was a shortfall of approximately 7,000 HGV parking spaces in lorry parks in 2022 (which was equivalent to 34% of all HGVs parked overnight in England).

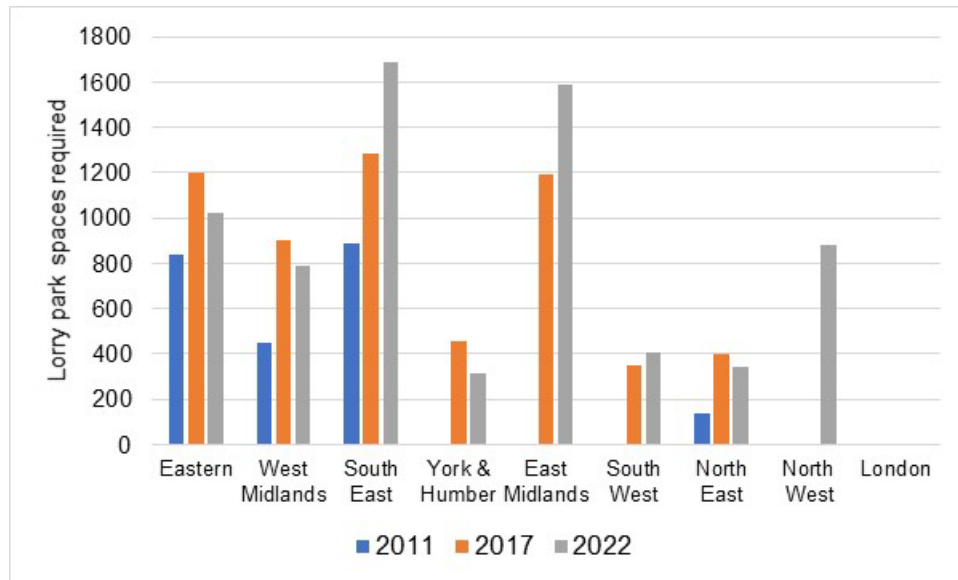
Figure 8.6: Additional HGV parking spaces required in lorry parks in England as a whole, 2011, 2017 and 2022



Source: calculated from data in AECOM, 2011, 2017, 2022.

In 2011, four out of nine regions of England required additional space in lorry parks in order to accommodate all HGVs in them. In 2017, this rose to seven out of nine regions, and in 2022 this rose again to eight out of nine regions requiring additional space in lorry parks. The lack of lorry park spaces is greatest in the South East, East Midlands and Eastern regions (see **Figure 8.7**).

Figure 8.7: Additional HGV parking spaces required in lorry parks by region, 2011, 2017 and 2022

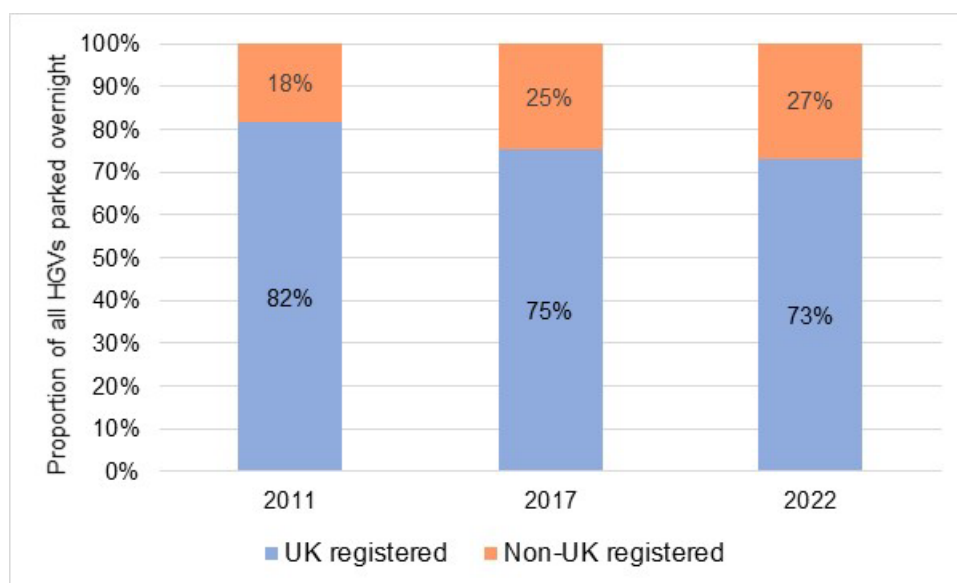


Source: calculated from data in AECOM, 2011, 2017, 2022.

8.5 Overnight parking by UK and non-UK registered HGVs

Figure 8.8 provides details of the proportion of UK-registered and non-UK registered HGVs parking overnight in England in 2011, 2017 and 2022. The proportion of non-UK registered HGVs as a proportion of the total HGVs parked overnight in any location type in England has increased in each of the three surveys, from 18% in 2011, to 25% in 2017, to 27% in 2022.

Figure 8.8: Proportion of UK and non-UK registered HGVs parked overnight in England, 2011, 2017 and 2022



Source: calculated from data in AECOM, 2011, 2017, 2022.

Table 8.10 shows the overnight parking location used by UK and non-UK registered HGVs in England in 2011, 2017 and 2022. A greater proportion of non-UK registered HGVs use lorry parks than UK registered HGVs. This difference was especially marked in the 2022 audit, with 80% of non-UK registered HGVs found to use lorry parks compared with 60% of UK-registered HGVs. Consequently, a smaller proportion of non-UK HGVs park overnight in lay-bys and on-street in industrial estates than UK registered HGVs.

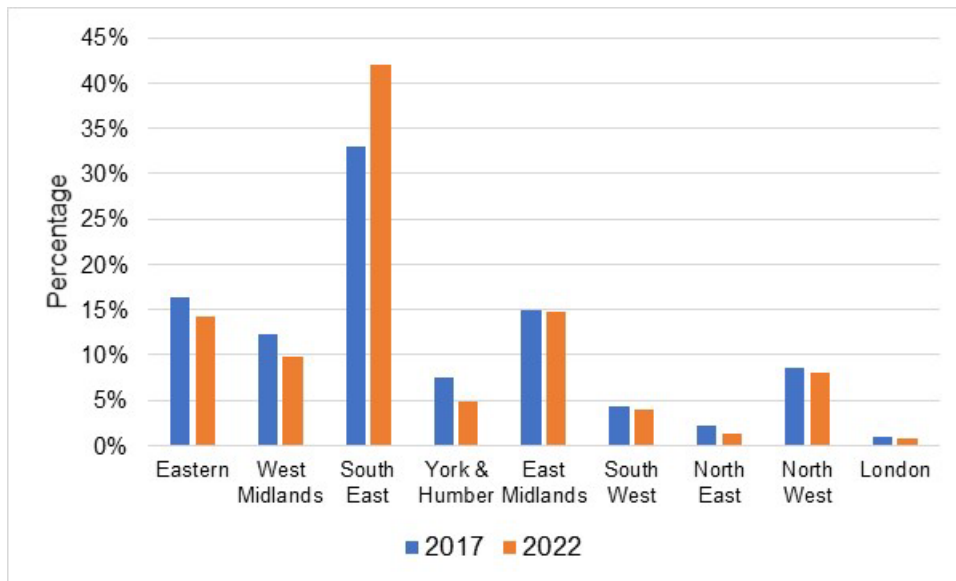
Table 8.10: Overnight parking locations used by UK and non-UK registered HGVs in England, 2011, 2017 and 2022

Year	Registration	Lorry parks	Lay-bys	Industrial estates	Total
2011	UK registered	58%	29%	13%	100%
	Non-UK registered	62%	27%	11%	100%
2017	UK registered	61%	25%	14%	100%
	Non-UK registered	63%	26%	11%	100%
2022	UK registered	60%	22%	18%	100%
	Non-UK registered	80%	13%	7%	100%

Source: calculated from data in AECOM, 2011, 2017, 2022.

Figure 8.9 shows the proportion of non-UK registered HGVs parked overnight in the 2017 and 2022 audits by English region. This shows that the regions most used by non-UK HGV drivers for overnight parking were (in order of importance) the South East, the East Midlands and Eastern regions.

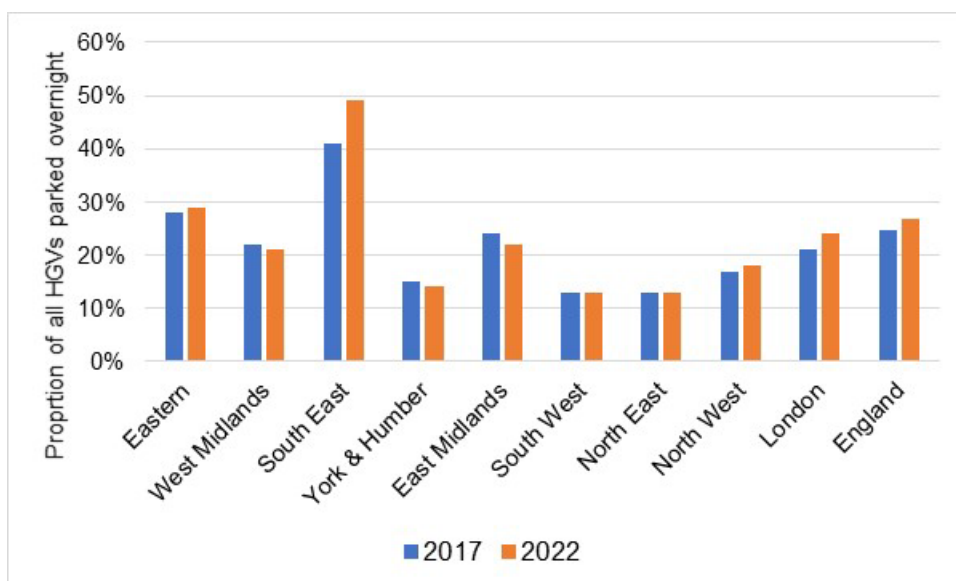
Figure 8.9: Proportion of all non-UK registered HGVs parking overnight in England by region, 2017 and 2022



Source: calculated from data in AECOM, 2017, 2022.

Figure 8.10 shows the proportion of all overnight HGV parking accounted for by non-UK registered HGVs in the various English regions in 2017 and 2022. This shows that in 2022 non-UK HGVs comprised approximately half of all HGV overnight parking in the South East. The vast majority of these non-UK HGV drivers select the South East as their overnight stopping location, given that their journeys to and from mainland Europe often take place via the Port of Dover and Channel Tunnel.

Figure 8.10: Non-UK registered HGVs as a proportion of all HGVs parking overnight in England by region, 2017 and 2022



Source: calculated from data in AECOM, 2017, 2022.

Non-UK registered vehicles accounted for 38% of all HGVs parked at independent lorry parks, 32% of all HGVs parked at Motorway Service Areas, 19% of all HGVs parked at Trunk Road Service Areas and 12% of all vehicles parked at local authority lorry parks across England in the 2022 audit.

9. User opinion surveys of overnight lorry park facilities

An HGV driver opinion survey was also carried out by AECOM on behalf of the Highways Agency in July 2008, to investigate drivers' opinions on overnight HGV parking facilities (AECOM, 2008b). The surveys were mainly conducted in Motorway Service Areas (MSAs) and independent lorry parks), with some also conducted in lay-bys. Results of this survey work are shown in **Table 9.1** broken down into views about different types of parking facility and by nationality of respondents. The survey results indicated that 25% of all drivers surveyed usually parked in a lorry park overnight, 24% in an MSA and 20% in lay-bys. The remainder (31%) parked wherever they could find space and wherever was convenient (regardless of parking facility type).

Overall, participants in this survey stated that cost was the key reason for drivers using lay-bys, but with a far higher proportion of British drivers ranking this most highly than European drivers (with the latter ranking having no choice and not having to detour as more important factors in their decision to use lay-bys). Twenty four percent of HGV drivers who were interviewed said they refused to ever pay for parking. The average amount that lay-by users were willing to pay was also less than for drivers interviewed at independent lorry parks and MSAs. Seventy six percent of HGV drivers surveyed had overnight stays at MSA or independent lorry parks paid for them by their companies in some form. The 24% who had to pay to use these facilities themselves were most likely to use lay-bys overnight. To summarise, the two main factors identified in the survey that deterred HGV drivers from using MSAs and independent lorry parks rather than lay-bys, kerbsides in industrial estates and other inappropriate parking arrangements was their price and location.

Table 9.1: Reasons Why Drivers Choose MSAs, Other Lorry Parks or Lay-bys, 2008
(% of respondents mentioning each factor)

	Motorway Service Areas		Other lorry parks		Lay-bys	
	British (%)	European (%)	British (%)	European (%)	British (%)	European (%)
Secure parking	63%	65%	63%	43%	9%	0%
Facilities (e.g. showers)	39%	49%	46%	57%	1%	0%
Cost	6%	0%	20%	21%	62%	30%
Company policy	44%	37%	23%	14%	5%	20%
No choice, run out of driver time	15%	21%	13%	14%	24%	60%
Do not have to detour	16%	16%	9%	21%	14%	40%
Quiet	3%	26%	14%	21%	14%	30%
24 hour opening	18%	30%	21%	36%	9%	10%
Know there will be space	10%	7%	15%	36%	6%	10%
Quality of food	6%	12%	23%	7%	5%	0%
Beds	2%	0%	1%	0%	0%	0%
No. of respondents	62	43	94	14	78	10

Source: AECOM, 2008b, reported in AECOM, 2009.

The three most important reasons given by HGV drivers for using MSAs were: the secure parking provided, the facilities available and that it was company policy. In the case of

independent lorry parks, the top two reasons given for using them were also the secure parking and the facilities they provide. This was followed by several other factors including cost, 24-hour opening, the food services, company policy, knowing space will be available, the quiet they offer and having no choice. When asked about the quality of facilities, drivers rated clean toilets and showers most highly (cleanliness was mentioned by nearly every driver indicating this may be a problem at some lorry parks), followed by security, and reasonably priced good food (there were several complaints about meal vouchers (see **Table 8.1**).

Drivers' opinions of independent lorry parks varied, with some holding very negative views while others felt they were better than MSAs. European drivers were considerably more positive about them than British ones. In terms of their general quality, their value for money and their availability, 51%, 71% and 69%, respectively, of British drivers were either dissatisfied or very dissatisfied with independent lorry parks. The quality of UK HGV parking facilities was generally viewed as inferior to those in France and other European countries, especially among British drivers (see **Table 8.1**).

Survey work carried out in 2016 on behalf of Transport Focus (the executive non-departmental public body, sponsored by the Department for Transport) among HGV drivers using MSAs for rest breaks and overnight stops found that drivers felt that these suffered from a variety of problems including inadequate parking space, being too expensive, offering insufficient vehicle security, too noisy, and offering too much 'fast food'. Respondents reported that independent lorry parks varied considerably in facilities offered and quality but were often better than MSAs. However, these drivers felt that there were insufficient lorry parks and too little parking available at them. As a result of these shortcomings and the prices charged, some drivers instead used lay-bys and industrial / retail parks (Transport Focus, 2016).

Further survey work in 2018, February-March 2020, April 2020-March 2021, and April 2021-March 2022 by Transport Focus showed similar views regarding the provision of roadside stopping places on the SRN in England among managers of HGVs and coaches (see **Table 9.2**). A high proportion of HGV and coach managers rated all five factors of roadside facilities on strategic roads as poor (either 'fairly' or 'very' poor), with value for money rating worst of all factors. The proportion of respondents rating factors as fairly or very poor has increased since the 2018 survey.

Table 9.2: Proportion of HGV and coach managers rating features of stopping facilities on the SRN as fairly poor or very poor, 2018-2022

Factor	2018	Feb-March 2020	Apr 2020-Mar 2021	Apr 2021-Mar 2022
How many there are	33%	55%	50%	57%
Availability of spaces for your vehicles	42%	61%	56%	62%
Quality of facilities	27%	57%	57%	66%
Security of your vehicles when parked	33%	62%	59%	63%
Their value for money	54%	65%	65%	66%

Source: Transport Focus, 2018, 2020a, 2021, 2022a.

Survey work among HGV drivers only about the facilities provided at MSAs is shown in **Table 9.3**. It should be noted that these results show the proportion of HGV drivers that rate each factor as 'fairly' or 'very' good (rather than poor). Value for money, shower availability and shower cleanliness were less well rated in 2020 than in 2017, while parking availability was rated more highly in 2020 than other years, potentially due to Covid-19 related effects on traffic levels. In terms of value for money, in 2020 HGV drivers rated Road Chef (57% of respondents

rated as fairly or very good) above Moto (38%) and Welcome Break (26%) (Transport Focus, 2020b).

Table 9.3: Proportion of HGV drivers rating features of stopping facilities at MSAs as fairly good or very good, 2017-2020

Factors	2017	2018	2019	2020	2022
Parking availability	64%	63%	60%	75%	66%
Value for money	47%	50%	39%	38%	40%
Ease to sleep or rest	72%	70%	72%	71%	64%
Shower availability	65%	57%	46%	42%	51%
Shower cleanliness	83%	66%	57%	57%	58%
Relaxation & social facilities	67%	68%	58%	66%	61%

Note: Samples sizes were approximately a third lower in 2020 than in previous years due to interviewing being cut short by the outbreak of Covid-19.

Source: Transport Focus, 2020b, 2022b.

An online survey of HGV drivers was carried out in 2022, promoted via posters at MSAs, and gaining 364 respondents. Ninety five percent of respondents were from the UK and 92% were male. It investigated the barriers to drivers using lorry parks of all types that have a charge for overnight parking. The factors that respondents noted as 'very important' were (in order of importance): 'security not being good enough' (81% of respondents) 'wash/shower/toilets not being good enough' (78% of respondents), 'not enough spaces available' (74% of respondents), 'tend not to be worth the money' (62% of respondents), 'food not good enough' (58% of respondents) and 'company won't cover the cost/full cost' (44% of respondents) (AECOM, 2022).

When asked which facilities were most important when parking overnight at a lorry park with a charge, those that deemed to be 'very important' were (in order of importance): 'well maintained toilets and showers' (91% of respondents), CCTV (80% of respondents), 'security staff' (73% of respondents), 'security fence' (68% of respondents), 'good value food' (67% of respondents), 'security lighting' (66% of respondents), 'convenient location to route' (57% of respondents), 'controlled gate entry' (46% of respondents), 'fuel' (41% of respondents), and segregated male and female facilities (40% of respondents). Facilities that fewer respondents felt to be 'very important' were: 'Wi-Fi' (27% of respondents), 'online booking' (23% of respondents), 'availability of plug-in power for freezer unit' (22% of respondents), 'drivers' lounge / communal space' (20% of respondents), 'vehicle washing facilities' (15% of respondents), 'laundrette' (14% of respondents), 'gym' (13% of respondents), and 'prayer room' (4% of respondents) (AECOM, 2022).

When asked about the availability of good quality overnight HGV parking in the last five years (free or with a charge), 79% of respondents believed that it had decreased, 11% thought while it has stayed about the same, 7% thought it had increased, and 3% did not know. When asked about HGV crime in the last five years, 92% of respondents believed it had increased, 4% felt it had stayed about the same, 1% felt it had decreased, and 3% did not know (AECOM, 2022).

For daytime parking areas, factors deemed to be 'very important' were (in order of importance): 'toilets' (87% of respondents), 'no parking fee' (78% of respondents), 'litter bins that are emptied regularly' (69% of respondents), 'convenient location' (62% of respondents), 'secure parking' (47% of respondents), 'hot food' (44% of respondents), 'shop' (34% of respondents), and 'seating area' (24% of respondents) (AECOM, 2022).

In a focus group with ten HGV drivers held at a lorry park in May 2022, those with experience of driving in Mainland Europe strongly expressed the better facilities provided at these sites

(even basic ones) when compared to lorry parks in the UK. Factors mentioned as superior in mainland European lorry parks included consistency, price, size of site (with them being far larger), available of parking space, and cleanliness of facilities. An online stakeholder meeting was held in June 2022 with representatives mostly from lorry park operators, as well as from professional bodies, transport authorities, property consultancies and energy companies. When asked to anonymously state the barriers to improving and increasing lorry parks, the most commonly selected terms were related to planning (including 'planning', 'planning approval', 'planning regs' and 'local planning authority'). Other terms related to land/site availability, and investment costs and commercial viability. When asked to anonymously state they felt the key aspects of a HGV parking standard should be, the most common responses related to safety and security, and cleanliness. Other responses included driver welfare, food provision, site location and accessibility, and pricing. When asked for anonymous solutions to the provision of lorry parks the most common terms were associated with planning (such as 'easier planning', 'planning policy', and 'clear policy') as well as funding arrangements (AECOM, 2022).

Some businesses pay upfront for lorry parks used by their HGV drivers or reimburse drivers for using them but some others do not. Even those businesses that do provide such allowances may not provide drivers with sufficient funding to cover the cost of more expensive facilities. This can lead to drivers travelling further to lorry parks that their company-provided funding will cover. Some drivers that receive financial support from businesses for overnight stops may choose to keep this, treating it as income, and instead park in free locations. Self-employed drivers also have to make decisions about whether or not they want to pay for lorry parks.

When HGV drivers have to spend the night away from their home and their permanent workplace (if they have one), businesses employing them can pay these drivers a tax-free overnight subsistence allowance of up to £34.90 to cover personal expenses, which has been unchanged since 2013. This tax-free allowance is intended to cover overnight accommodation and the cost of meals. For drivers using a sleeper cab in their vehicle, up to 75% of the allowance can be paid. The employer can apply for an approval notice from the HMRC to make these tax-free allowance payments for a period of five years as long as they ensure that employees using lorry parks check that the employees "are in fact incurring and paying amounts in respect of expenses" and that the employer neither "knows or suspects, or could reasonably be expected to know or suspect, that the employee had not incurred an amount in respect of the expense". For employees using sleeper cabs, employers making tax-free payments must ensure that they these employees "are undertaking qualifying travel on occasions in respect of which a payment is made or reimbursed" and that the employer neither "knows or suspects or could reasonably be expected to know or suspect, that travel was not undertaken" (HMRC, 2023a, 2023b). This tax-free allowance is not available to self-employed HGV drivers.

An employer paying more than the maximum £34.90 tax-free allowance has to pay tax on amount paid above the limit unless they apply to HMRC for a bespoke allowance. However, for such a bespoke allowance payment rate, HMRC requires evidence from employers from a random sample of employees' expenses of 10% of drivers for a period of one month, ideally containing receipts for all expenses incurred during the sampling period, as well as notes of the expenses explaining whether the amounts are reasonable and representative, as well as a checking system for ensuring that payments are only made when the employee is entitled to it and that the employee has incurred and paid an amount in respect of expenses, and has retained evidence of their expenditure (HMRC, 2023c).

10. Lorry park actions and research in other countries

10.1 Situation and actions in the European Union

The European Commission has financed the development and upgrade of safe and secure lorry parks along the Trans-European Transport Network parking areas through the Connecting Europe Facility (CEF) for Transport. Between 2014 and 2019, 65 parking areas were selected for financial support (European Commission, 2022a).

In 2018, a European Commission study identified 5,000 HGV parking sites across the EU28 that were estimated to provide approximately 300,000 HGV spaces per night, 47,000 of which HGV spaces provided some security and 7,000 of which HGV spaces offered a level of security that had been certified were located in a small number of countries. Based on cargo flows and applying current driving and rest time, it was estimated that on an average weekday there were approximately 400,000 HGV drivers engaged in long-distance transport across Europe, requiring overnight parking. This indicates a net shortfall of around 100,000 designated overnight HGV parking spaces in total in the EU28. The study also estimated (on a conservative basis) that cargo crime from HGVs cost European businesses losses in the region of €3.2 billion per annum in 2018, indicating the potential importance of secure oversight parking sites from a financial and supply chain perspective (Panteia, 2018; de Leeuw van Weenen et al., 2019).

The 2021 CEF Transport call for proposals has made an additional €250 million available to support further lorry park upgrades and new developments across the EU (European Commission, 2022a). In April 2022, the European Commission adopted new EU standards and procedures to support the development of a network of safe and secure HGV parking areas throughout the EU that are intended to improve rest facilities for drivers, and to protect them from violence and vehicle/cargo crime. This goes alongside the new requirement that such facilities are required to be available at least every 100 km along the Trans-European Transport Network (European Commission, 2021). In this new EU standard, lorry parks are categorised according to four security levels: bronze, silver, gold and platinum. Rivers and freight transport businesses can select the level of safety and security that they require. Factors that are used to determine a site's security rating include the security of its: (i) perimeter, (ii) parking area, (iii) entry/exit points, and (iv) staff procedures. In addition to its level of security, all sites must provide drivers with access to facilities including showers, toilets, food and drink services, and internet connection (European Commission, 2022b). A manual explaining these security and safety features has been produced (de Leeuw van Weenen et al., 2018).

Surveys of various stakeholders in lorry parks in the EU28 were carried out in 2018 as part of the European Commission funded study mentioned above (IRU, ESPORG and Panteia, 2018). Respondent groups included drivers, freight transport businesses, lorry park operators, shippers, and insurance companies. The main purpose of the survey was to investigate the views and needs in terms of safe and secure HGV overnight parking. In total, 314 valid responses were achieved in the survey comprising the following stakeholders:

- 209 driver questionnaires (159 male drivers and 50 female drivers recruited via a separate survey),
- 41 freight transport company questionnaires,
- 35 lorry park operator questionnaires,
- 18 shipper questionnaires (i.e. those whose goods are being transported),
- 11 insurance company questionnaires.

Key findings from the survey from the different stakeholder groups are summarised below (IRU, ESPORG and Panteia, 2018).

Male driver survey results: Male drivers who carried out long-distance haulage surveyed came from the following countries: Germany, UK, Ireland, Nordic countries, Italy, Greece, Portugal and Spain, France, the Netherlands, Belgium Switzerland, Poland, Lithuania, Bulgaria, Slovakia, Romania, Austria, Slovenia and Hungary. 50% of male drivers find information on parking locations via the internet, 25% from other colleagues and 25% from other sources (apps, experience, dispatcher, GPS). 46% of drivers would like to have access to a new (dedicated) app that provides details of safe and secure lorry parks, while 35% would like a better information app than they currently use.

45% of male drivers surveyed were always willing to pay for overnight/long vehicle stops in a lorry park, 36% were willing to pay only when carrying a load, with 19% unwilling to pay in either situation.

For short rest break stops, 54% of the male drivers were willing to pay for parking, while 46% were not. 61% of male drivers were not prepared to pay for lorry parks while waiting for their next load/job, while 39% were. For weekly rests, approximately half of male drivers were prepared to pay for a lorry park (whether carrying a load or not), while 22% were willing to pay only when loaded and 27% were not willing to pay whether loaded or empty.

43% of male drivers said that they made up to 20 stops for rest breaks and overnight stops per month, 45% stop twenty-one to fifty times per month, and 12% make more than 50 stops per month. Two-thirds of male drivers said they stopped in lorry parks to comply with the instructions of their employer.

In terms of the availability of lorry park space in safe and secure sites, 50% of male drivers said it was insufficient on weekdays with them unable to find spaces, and 25% said it was also insufficient at weekends. Only one in six male drivers thought that the availability of spaces in safe and secure lorry parks was always sufficient. In terms of non-secure (normal) HGV parking sites and places, 67% of male drivers felt the space available was insufficient during weekdays and only 14% thought that availability of space was sufficient close or close to sufficient.

78% of male drivers felt that a HGV parking information system essential, while 41% felt that a pre-booking system was essential. 58% of male drivers felt that there was insufficient information and provision available to find and book accommodation at lorry parks, while 51% felt that information available on lorry parks is inaccurate or out of date.

When asked about the facilities that were of importance to them at a lorry park, all male drivers saw toilets and showers as a necessity, 90% wanted a Wi-Fi connection, 83% wanted washing/laundry facilities, and 73% wanted food and drink services.

When asked about what they felt constituted a secure lorry park, 96% of male drivers agreed that this required external financing, cameras and barriers, and 90% agreed that it required site surveillance through security checks.

When asked if the EU was to ban weekly rest periods being spent in sleeper cabs (i.e. the driver remaining in the vehicle) and a hotel or other accommodation away from the vehicle having to be used, whether there would be sufficient lorry park space available, 87% of male drivers disagreed (with 70% saying it was very difficult to find accommodation during a regular weekly rest outside of their vehicle in EU Member States). Only 5% of male drivers agreed with the proposition that they should pay for a lorry park (rather than a company of some other body).

Female driver survey results: In the initial driver survey, only 5 women took part. So additional efforts were made to recruit a total of 50 female respondents. Of these, 62% had jobs that involved staying away overnight, while 21% did so in the past but not now (due to reasons including now having family commitments, now only working part-time, having experienced difficulties in finding lorry parks, and experiences of violence and feeling unsafe while doing so), and 17% had never done work that involved staying away overnight. When asked if safety is an important reason for no longer doing driving work that involves overnight stops, 10 out of 13 respondents said that it was, while 7 out of 13 said that insufficient services to meet their needs on lorry parks were an important factor.

Of the 22 female respondents who make overnight stops, the most popular stopping place was a petrol station facility. They said they preferred these as they have suitable sanitary facilities and there are always people around which helps with feeling safe.

All female respondents were asked about their experiences of feeling safe when using any daytime stopping locations (not just overnight ones). While 4 of the 13 female drivers said they never felt unsafe at such stopping locations, and 4 said they felt unsafe approximately once a year, approximately 40% (5 out of 13) felt unsafe more frequently (2 on a monthly basis, 12 on a weekly basis and 1 on a daily basis).

Among those female drivers with experience of overnight stops, bad experiences (recounted as taking place once a year or more frequently by 60% of them) include theft, people trying to break into their HGV while they are asleep in it, and intrusive, sexual and threatening behaviour by male drivers. Some recounted having men trying to look under cubicle doors while they used toilets or took showers, especially in shared sanitary facilities.

Specific ideas to make lorry parks feel safer for women included locating restaurant in a central, well-lit location where everyone can be, and providing parking spaces to women that are close to the facilities so they do not need to walk across the entire site to access the facilities.

In terms of facilities, suggestions included that there should be separate toileting and shower facilities for men and women, and that are well equipped and that offer privacy, with security features such as CCTV or key codes to prevent male access. The need for clean toilets and washing facilities was highlighted, as was the need for site shops to sell products including tampons and shampoo. Two-thirds of female drivers had experiences of insufficient facilities and services at lorry parks whether using them in the day or for overnight stops.

The survey of freight transport operators showed that the majority reimburse drivers for overnight stops and weekly breaks. Some pre-paid drivers for these stops using credit cards, fuel cards, cash or subscription schemes. Operators felt that the most important services provided by a lorry park include sanitary facilities, site surveillance by guards or CCTV in place and external fencing covering the whole perimeter of the site. The least important services were felt to be internet connection and electricity connection (unlike drivers).

74% of transport operators felt that information sources to find available HGV parking spaces slots and booking of accommodation were unsatisfactory, and 53% felt that the accuracy of the information about sites was also unsatisfactory. 54% of transport operators thought that finding parking space while drivers are waiting for new jobs was a major problem and 87% of them reported experiencing problems finding satisfactory accommodation (outside of sleeper cabs) for drivers when taking their weekly rest.

76% of transport operator felt that the best HGV parking area offers a combination of free parking slots with basic facilities and a separate, dedicated section with more facilities that has

to be paid for. This would allow the operator to select the suitable service, especially given that transport operators are unwilling to reimburse drivers for short stays.

Survey of lorry park operators: 78% of the lorry park operators surveyed had a certification from a third party. Parking space occupation rates varied by period and site. On an average day, 41% of the respondents said their parking spaces over 80% occupied, while 45% of them reported being approximately half-full (41-60%). Over a typical week, most of the parking areas were reported to approximately 41-80% occupied. The occupation rate of parking spaces exceeded 60% for the majority of respondents during peak hours, with 45% of them reporting 80% or more occupancy at these times. A lorry stayed, on average, 8-12 hours in the HGV parking space. Only 40% of parking operators in the survey were operating a slot booking service.

Survey of shippers: Amongst the shippers surveyed, 13 out of 18 felt that there were not sufficient secure parking sites or sufficient information sources to find (and book) available parking slots.

Responses from insurers found that they wanted HGV parking areas to have external fencing or alternative barriers, CCTV, and site surveillance through regular security checks. They would also like better information about parking availability and opening hours for sites so that improvements in route planning were possible.

10.2 Situation in the United States of America

A 1996 study identified a shortfall of overnight and rest area parking spaces for goods vehicles existed throughout the United States. This reported that 80% of public rest areas and 53% of private truckstops were full overnight and estimated that there was a 28,000 shortfall in overnight truck parking spaces. Given the forecast increase in road freight, it was estimated that this shortfall could increase to 38,000 by 2000, and that the cost of building additional parking to meet future truck parking demands was \$489-629 million (US Department of Transportation, 1996).

A study carried out in 2000 involving public hearings also identified the insufficient number of overnight parking spaces for HGV drivers in the United States who need or want to use them. This study also expected the shortfall in parking space to increase due to increases in HGV traffic, which was being reported even during the period over which the study took place (National Transportation Safety Board, 2000).

Reports have continued to find an ever-worsening HGV parking problem. A 2015 report found that 75% of HGV drivers and 66% of logistics personnel reported regularly experiencing problems finding safe parking, with 90% reporting struggling to find safe and available parking during night hours (US Department of Transportation, 2015). By 2019, this had increased to 98% of drivers. This 2019 study found that although HGV parking spaces nationwide increased 6% in public areas and 11% in private areas between 2014-2019, the growth in demand for parking space had outstripped this, resulting in a growing shortfall. It also found that 79% of truck park operators did not plan to increase parking space (reported in Lockridge, 2022).

A 2021 study of the top ten road freight industry concerns found that HGV parking shortages came fifth. The lack of available truck parking has made the top ten list of industry concerns every year for the last decade in this report. Among commercial drivers it has consistently ranked in their top three concerns (ATRI, 2021).

In February 2022, the American Trucking Associations and Owner-Operator Independent Drivers Association wrote to the US Department of Transportation stating that, on average,

drivers spend 56 minutes trying to find safe parking space for rest breaks, which was estimated to be equivalent to a 12% pay cut for its self-employed members. These associations urged the Secretary of State for Transportation to increase truck parking capacity which would help make significant progress toward safer and healthier truck drivers, more productive fleets, a more resilient trucking workforce and a reduction in truck fuel consumption and harmful emissions (American Trucking Associations and Owner-Operator Independent Drivers Association, 2022).

In September 2022, the US Department of Transportation announced \$38.5 million in grants for truck parking projects. This included \$15 million for constructing a new truckstop on Interstate 4 in Florida with 120 spaces, electric charging stations, and pedestrian infrastructure to access nearby commercial amenities. There was also funding for adding 125 truck parking spaces to existing facilities on Interstate 40 in Tennessee (US Department of Transportation, 2022a). The US Department of Transportation also announced a meeting of the National Coalition of Truck Parking with state, industry, and federal leaders to share information about the finance resources made available in the US President's Bipartisan Infrastructure Law (BIL) which was enacted in 2021 (US Department of Transportation, 2022b). This US Department of Transport announcement built on the commitments of the Biden-Harris Administration's Trucking Action Plan (The White House, 2021).

The BIL amended existing legislation "to require States to include an assessment of the adequacy of commercial motor vehicle parking in their State Freight Plans". This requires these Plans to provide details of (i) the capability of the State, together with the private sector, to provide adequate parking and rest facilities for HGVs on interstate journeys; (ii) the total volume of HGV traffic in the State; and (iii) any areas within the State with a shortage of adequate HGV parking facilities including an analysis of the underlying causes of the shortage. It also altered law to require these State Freight Plans to be updated every four rather than five years (US Department of Transportation, 2022c).

The US Department of Transportation has also produced a new handbook for US States that provides details of strategies for developing truck parking facilities and best practice on its construction and design (US Department of Transportation, 2022d).

Some US States use technologies to monitor parking availability in lorry parks. These can be broadly categorised into two types: (i) sensing technologies (systems that sense the presence of HGVs in parking spaces or facilities), and (ii) dissemination technologies (systems that distribute the gathered parking data to interested parties) (Murray and Shirk, 2021).

Sensing technologies can be further categorised into direct and indirect methods: (i) indirect parking methods are used for "detecting and classifying vehicles at all ingress and egress points of the parking facility and summing the difference over accumulated counts at specified time intervals" (Morris et al., 2017), and (ii) direct parking methods that detect the number of parking spaces available at any given time. Direct and indirect sensing technologies include: (i) magnetometers to monitor HGVs at the entrance and exit points of the truckstop (direct / indirect method), (ii) entrance/exit cameras (indirect method), (iii) in-pavement detection (direct), and (iv) parking space cameras (direct method) (Murray and Shirk, 2021).

Dissemination technologies include: (i) in-cab systems (telematics or other systems), (ii) mobile technologies (smartphone applications or services using Interactive Voice Response), (iii) websites (run by private or State organisations), and (iv) Variable Message Signage on roads (Murray and Shirk, 2021).

Survey work was carried out with 1,103 HGV drivers to investigate how drivers are currently receiving HGV parking availability information and their preferences for receiving such information (Murray and Shirk, 2021). Drivers were asked about their use of truck parking apps

over the last 12 months. 57% of respondents had made use of a HGV parking app in the previous 12 months. Such apps were found to be more widely used by younger HGV drivers and drivers with five or fewer years of experience than by drivers with 11 or more years of experience. These truck parking apps was used more by drivers working for larger fleet operators (65% of drivers working in fleets of 1000 or more HGVs), compared with 51% of drivers in fleets with 20 or fewer trucks. It was found that 71% of respondents were continuing to use the same app to locate available truck parking space. Among the reasons that drivers listed for continued use of the same truck parking app were: 'up-to-date, accurate information', 'ability to reserve parking spaces in advance' and 'convenience', whereas reasons for not continuing to use a particular parking app were 'lack of accuracy', 'need for multiple applications', and 'difficult-to-navigate technology'. A complication with this mobile phone app technology is transport law that prevents using a mobile phone while driving, so this has to be done with the HGV stationary.

Approximately 75% of HGV drivers had seen variable message signs (VMS) at the edge of the roadside or overhead displaying lorry park information, with the likelihood of drivers having seen them closely related to whether they did long distance or local driving work. 70% of drivers felt that HGV parking VMS were useful. As with mobile phone apps, newer drivers reported finding VMS parking information more useful than those with 11 or more years of HGV driving experience. Overall, 47% of drivers had taken action based on VMS parking information, while 53% had not taken action. The most frequently mentioned concern with VMS parking information was the accuracy of VMS information (Murray and Shirk, 2021).

In addition, drivers whose average journey length was over 1,000 miles reported finding VMS least useful (67%). This may indicate that these very long distance drivers plan their truck parking space earlier in their journey than where VMS displaying local truck parking information are located and/or they have familiarity with the route and know in advance where they intend to park (Murray and Shirk, 2021).

About 25% of respondents used truck parking apps only to find parking space, 14% used only variable message signs, while 33% used both truck parking apps and variable message signs. Overall, when asked how they would address the current HGV parking shortage in a free response question, 72% of drivers mentioned increasing HGV parking capacity, 16% mentioned improving the placement of VMS signs and the presentation of their information (such as displaying the actual number of spaces available rather than simply stating 'high' or 'low' availability or colour codes to reflect availability), 12% mentioned improve the accuracy of parking information, and 6% mentioned improving the relevance of parking information (such as updated information provided more frequently) (Murray and Shirk, 2021).

As in England, despite the high demand for truck parking, at any given time some truckstops are full while others are not. Drivers who cannot find a parking space in a truckstop often park illegally in unsafe places including on the interstate mainline, on ramp shoulders (i.e. hard shoulders intended for use by emergency vehicles) or in parking areas of vacant buildings. The Florida Department of Transportation is currently developing a Truck Parking Availability System (TPAS) to address the need for parking information management. "The TPAS program will be delivered in three stages: (i) implementation of technology at state owned facilities to accurately assess and disseminate the availability of truck parking; (ii) development of predictive analysis for future parking availability; and (iii) incorporation of private parking locations for systemwide resource utilization. The information that will be provided by TPAS will assist truck drivers in identifying available parking locations where the technology is deployed" (Florida Department of Transportation, 2023).

11. Views on lorry park of those in the UK freight industry in 2020/21

In October 2021, the House of Commons Transport Select Committee launched an inquiry into challenges to the effective operation of road freight transport and the supply chain and the UK Government's relevant policies. This was prompted by the impacts of Brexit and the Covid-19 pandemic on the road freight industry and the HGV driver shortage these resulted in. The remit also included consideration of the extent to which the Transport Committee's previous recommendations on road freight in its 2016 inquiry were pertinent and unheeded (House of Commons Transport Select Committee, 2021a). The inquiry included consideration of the potential effects of the UK Government's policies on road safety and infrastructure, which included consideration of the provision of overnight HGV parking and its adequacy. The sections below provide details about the points made by witnesses providing oral and written evidence to the Committee (House of Commons Transport Select Committee, 2021b).

11.1 Engagement and progress on HGV parking by UK Government and others

Lack of engagement by the UK Government about the shortage of HGV parking spaces

Trade associations and unions have seen little in the way of tangible outcomes from meetings held with national government, elected mayors and local authorities about lorry parks and other driver facilities.

Link between HGV driver shortage and the poor image of the industry and the lack of overnight parking provision

One witness stated that having to park in a lay-by or kerbside in an industrial estate overnight with no washing, toilet or catering facilities was not an attractive proposition and which affects HGV driver retention and recruitment.

Difficulty in getting engagement and discussion with central and local government

One witness explained that it is difficult to engage all tiers of government (i.e. UK Government, devolved government and local authorities) in discussing the lack of HGV parking capacity and what to do about it.

Comparisons with lorry parks in other European countries

UK facilities are much inferior to those in some mainland European countries. It was noted by one witness that in Rotterdam, the port authority provides the bathroom and catering facilities together with secure parking.

11.2 Planning issues

National planning approach

A witness suggested that the proposed update to the National Planning Policy Framework (NPPF) should include greater detail about the importance of the provision of regular stopping locations and facilities for drivers to stop and rest during their journeys as part of road safety management, and also inform local authorities of the need to plan for the development of suitable vehicle stopping locations in their areas, especially in terms of short and long-stay parking for HGVs that provide facilities for these drivers. This witness also suggested that the Department for Transport and the Department for Levelling Up, Housing and Communities should consider producing a joint policy statement that brings together all relevant UK Government planning and highways policy in a single document, to assist local authorities in their planning considerations and decisions.

Another witness suggested that the revised Department for Transport circular on roadside facilities, should include more prescriptive requirements for the facilities that should be provided including security features. They added that coach parking bays at Motorway Service Areas (MSAs) could be designated for use by HGVs at night, when they are not used by coaches, to help increase HGV parking capacity in the short-term.

Several witnesses felt that the UK Government needs to provide better guidance to local authorities to increase the speed and number of planning approvals for lorry parks.

One lorry park operator provided an example of spending hundreds of thousands of pounds trying to get planning consent for a new park in Kent, but it received objections from the local community. The witness was of the opinion that the local authority did not have enough guidance, or a mandate from national government on what they need to do in this situation.

The Under-Secretary of State for Transport explained that planning applications for lorry parks meet “very substantial local resistance”. When asked if she would like to see the planning system change to make it easier for companies to provide overnight HGV parking, the Under-Secretary of State told the Transport Select Committee that she would but that “one of the issues may not be the planning system, but the implementation of the current planning system. That is our conversation with the local authority. Are they putting in place the current planning guidance?”

Obtaining planning permission

A witness explained that there are difficulties in obtaining planning permission for lorry parks (either for building new ones or extending space at existing MSAs). Many locations in which new or expanded lorry parks are required are in the green belt or sites of outstanding natural beauty, which makes gaining planning permission extremely challenging.

Time taken by the planning system to deal with lorry park applications and its effects

A witness noted that planning applications for lorry parks are often refused and then have to be appealed. Some are won on appeal, others not, but this takes considerable time. Applications and appeals are costly. If a developer does not have a reasonable degree of confidence it is likely to get planning approval for a site, it has to make decisions commercially to invest that money elsewhere. They suggested that it should be made more difficult for local authorities to reject lorry park planning applications through the issuing of updated planning guidance to local authorities informing them that overnight HGV parking space is a strategic need and that they should grant permissions.

11.3 Financial viability of lorry parks and future funding options

Financial viability of lorry parks

The finance required to set up a lorry park together with the financial returns of running one, is likely to have affected private investing in these facilities.

In relation to the business model for lorry parks, the Under-Secretary of State for Transport said, “Laying hardstanding is expensive. You have to compare that with how much revenue you will get from it and the opportunity cost for HGV parking rather than people in cars who are likely potentially to spend more and turn over more quickly. The economic model is quite challenging”.

Lack of contractual relationships between large HGV operators and lorry parks

One witness explained that the decision to use a lorry park is usually made by the driver rather than the company they are driving for. Large businesses operating goods vehicle do not have contracts with lorry parks to provide space and facilities, it is left to the drivers to decide.

Whether the current funding model for lorry parks should change

One witness felt that direct UK Government funding/provision of lorry parks is required. Another felt that both commercial businesses and Government should provide lorry parks.

Another witness did not think that public funds should be provided to existing private lorry park operators to improve their facilities, given that they had failed to provide appropriate facilities in the first place.

One witness felt that road tax or road user charging should be used to invest in the provision of secure and decent HGV parking facilities with amenities. An example was provided of France, in which toll roads are required to have 'aires de repos' at regular distances (approximately every 10 km) from each other, that provide toilets, hand washing facilities and picnic facilities for all road users including HGVs. In addition, less frequent service areas are also provided with parking, fuel supplies, shops, restaurants and/or vending machines toilets and picnic facilities.

When asked if the Government would consider imposing a tax levy on the road freight transport industry to fund HGV parking provision that the Government would then implement, the Under-Secretary of State for Transport replied, "It is definitely something that has crossed my mind, but it is not something that one would want to do as a first step."

One trade association stated that "despite the urgent need to resolve the shortfall of overnight HGV parking, it is not the responsibility of the logistics sector to build and run lorry parks, nor should they be funded via a levy on the industry. However, that does not mean we are asking for Government to provide the entire solution either. It has been demonstrated through the work the Government has undertaken to date that there is commercial appetite to build and run these sites, but it is lack of land and planning approval that has led to a market failure in this area. Once these barriers are overcome, we expect this to lead to commercially viable private sector provision of parking where Government intervention should no longer be needed." They went on to conclude that industry should pay for lorry parks at the point of use rather than through a tax levy, as the latter "would be disproportionate and would lead to further costs on an industry which already works on tight margins and is predominately made up of SMEs. It would also result in the Government having to distribute long-term funding and potentially running lorry parking."

11.4 Facilities and standards required at lorry parks

Key lorry parks facility requirements requested by HGV drivers at MSAs

An operators of MSAs stated that the key requirements were for site security, more and always functioning showers, and better, more healthy food options.

A trade association stated that the facilities currently provided at MSAs often do not meet the needs of HGV drivers, going on to note that some MSAs have little security which increases the risk of theft, citing research from Transport Focus (see **section 10**).

Need for mandatory lorry park standards

One witness felt that there is a need for lorry parks to meet and adhere to standards laid down by national Government, as happens in some EU countries. They also felt that inspectors should be appointed to check that facilities are being maintained to these standards.

Lorry park standards, online space availability checking and booking being considered by the UK Government

The Under-Secretary of State for Transport said that the Government was investigating a standards system for lorry parks with them being awarded a star rating by an independent body so that drivers know what to expect on arrival, as well as the potential provided by apps for online availability checking and booking.

11.5 Future HGV refuelling at lorry parks

Cost of providing vehicle recharging facilities at lorry parks

A major provider of MSAs expected the cost of grid upgrades to provide EV charge points for the anticipated demand from vehicles using its sites to be approximately £500 million. In addition to the investment required, obtaining planning consent and getting power providers to carry out grid upgrades has taken far longer than expected.

Lack of Government decision making and discussion with lorry parks about future refuelling for HGVs

At MSA sites that one operator leases from the UK Government, the lack of certainty about whether leases due to expire in the next few years for these sites will be renewed has acted as a further impediment to the planning for and installation of EV charging facilities. A major provider of MSAs also noted that the Government has not put in place targets for refuelling infrastructure for HGVs on motorways or provided any such targets for this to site operators (which it did do for car/LGV EV charging points).

11.6 Government views on overnight parking in lay-bys and on-street in industrial estates

The Under-Secretary of State for Transport explained that in relation to HGV overnight parking in lay-bys and kerbside in industrial estates, "I do not want any informal HGV parking". When asked how this would be achieved, she replied, "We need the private sector to step up. We need to reform the planning system. We need to ensure that people can actually pay for it. There are lots of issues to fix..... One of the things that I really have to get a grip on is the responsibility and accountability of local authorities. As you pointed out, they often are the people who manage roads. They are the ones who will grant planning permission, and sometimes do not. We need to reach a new agreement with local authorities, particularly those in areas where there is a real deficit in parking, which our review will find, and see how we are going to address it. Each area will probably have its own solution because all areas are definitely not the same."

When asked how local authorities would be funded to provide all the additional lorry park spaces so that there was no need for any overnight lay-by or on-street in industrial estates parking, the Under Secretary said that if the three-year settlement for roads maintenance received by local authorities was not sufficient to meet these costs and requested more money to be able to do so that, "There is no mechanism to do that. The settlements are fixed by the Treasury." She went on to say that the Government expected local authorities "to manage with the budget that has been set. There should be no expectation that there will be any further funding. The spending review was relatively recent."

12. Actions announced by UK Government concerning lorry parks in 2021 and 2022

In the 2021 Autumn Budget, the Chancellor of the Exchequer announced £32.5 million of investment in roadside facilities for HGV drivers (HM Treasury, 2021). However, this funding is mostly for improving the safety and attractiveness of existing lorry parks rather than to provide new ones. Some may be used to increase spaces for lorry drivers in England through part-funding of local proposals (Department for Transport, 2021e). However, this scale of money will do little to address the problem. The lorry parks that Moto opened at Rugby in 2021 (its first new Motorway Service Area in 13 years) cost £40 million and provided 100 HGV parking spaces (it has had almost 100% occupancy since opening) (Moto Hospitality, 2021b).

A week later (in November 2021), the Transport Secretary made a statement to the House of Commons about HGV parking facilities. He explained the joint initiative between the Department for Transport and Department for Levelling Up, Housing and Communities on planning reforms for HGV parking. This included (Department for Transport, 2021f):

- the Government and its partners working to identify and provide a number of temporary sites where short-term modular facilities can be installed to provide some immediate additional capacity.
- asking National Highways to consider how its land holdings can be used to provide additional parking spaces nationwide, “to give priority to the provision of HGV parking across the Strategic Road Network and assist local authorities in identifying areas of HGV parking need”.
- the Transport Secretary stated that the Government has, “also published planning practice guidance setting out how local planning authorities can assess the need for and allocate land to logistics site uses and are accelerating work recommended by the National Infrastructure Commission to consider the appropriateness of current planning practice guidance. This includes taking forward a review of how the freight sector is currently represented in guidance”.
- the Department for Transport is updating Highways Circular 02/2013 ‘The Strategic Road Network and the Delivery of Sustainable Development’ (Department for Transport, 2013) to reflect the importance of providing logistics and freight (see below for further details of this update),
- the national HGV parking survey is being updated to ensure up-to-date evidence is available on the current national situation.

The Transport Secretary also emphasised, “the critical importance of the freight and logistics sector to shops, households, assembly lines, hospitals and other public services across the country. The infrastructure that supports our hauliers is essential to the effective and resilient supply chains we need. This government is committed to addressing the strategic national need for more lorry parking and better services in lorry parks in England and we must act now.... The need for a reliable and efficient supply chain has recently come into sharp focus. It is therefore essential that we put in place mechanisms that deliver a supply chain network that is secure, reliable, efficient, and resilient, with no link in the chain overlooked” (Department for Transport, 2021f).

Despite this comment by the Transport Secretary that “it is essential that we put in place mechanisms....with no link in the chain overlooked”, the approach that he outlined only discusses lorry parks and does not mention the provision of driver and rider facilities at other locations in the supply chain.

In March 2022, the Road Haulage Association (RHA) launched a petition for goods vehicle drivers to have “secure areas to park, access to toilets and showers, and food out on the road”. In the letter to the UK Prime Minister to accompany the petition, the RHA called on the UK Government to “introduce a cross Government task force to review all existing driver facilities and work with industry on a long-term solution; ii) increase the funding provided to improve and increase the provision of safe and secure driver facilities and parking spaces; and iii) amend the National Planning Policy Framework to mandate local authorities to approve appropriate and low impact plans for new parking and facilities” (Road Haulage Association 2022b).

13. Recommendations made by the Transport Select Committee concerning lorry parks and the UK Government response

In its report published in June 2022 into the difficulties experienced in the road freight transport industry since the onset of Brexit and Covid-19, the Transport Select Committee made the following recommendations in relation to the provision of HGV overnight and rest break stopping locations that the UK Government should (House of Commons Transport Select Committee, 2022):

- set a minimum standard for HGV stopping facilities (that should cover: security to protect drivers and their vehicles; availability and cleanliness of toilet and shower facilities; food options, including healthy choices; and sufficient provision for female drivers),
- use the findings of its current HGV parking survey to set regional targets for building additional parking capacity, setting up a joint Government-industry taskforce to ensure these targets are met,
- inject more urgency and immediately escalate and prioritise negotiations to agree new leases with motorway service operators operating on Government-owned land,
- reform the existing planning framework and ensure that decisions for new driver facilities are not left to individual planning authorities. The Government must reform national planning policy to ensure that more driver facilities, which are fit for purpose and industry leading, are delivered. The Government must make an assessment as to whether the demand for new facilities can be delivered with only light reform. If it cannot, the Government should seek to take this dilemma from local authorities and local plans and place the responsibility at a central level. This would rightly recognise these facilities as key national infrastructure assets,
- in consultation with the sector, should devise a binding code of conduct setting minimum standards for employers' and other businesses' treatment of HGV drivers, and
- give the logistics industry two years to deliver sufficient drivers and high-quality parking facilities, and that if the industry does not deliver, it should implement a 'Supply Chain Levy' on large businesses that use and facilitate road freight transport (including physical and online-only retailers and oil companies) to enforce them to pay sufficient sums for the Government to build these facilities and pay to train new drivers.

In September 2022, in its response to this Transport Select Committee report and recommendations, the UK Government noted the £32.5 million that it had already announced it was investing in driver welfare facilities and HGV parking, as well as a further £20 million that National Highways will be investing £20 million in improving roadside facilities for goods vehicle drivers on the SRN (UK Government, 2022).

In referring to the HGV parking survey of England that it had commissioned, the Government stated that "this evidence will assist industry in improving the quantity and quality of HGV parking and be used in the matched-funding grant we are launching later this year. The £32.5 million scheme will invite applications from operators to fund improvements to HGV driver facilities such as improved shower and washroom facilities, catering areas, security lighting, barriers and perimeter fencing, or capacity improvements". It went on to note that the Government "believes that the private sector is best placed to deliver new capacity and high-quality facilities for drivers". The UK Government also stated that it "does not at this stage intend to set up a Government-Industry taskforce. But we are working closely with Logistics UK, National Highways, the Chartered Institute of Logistics & Transport, Transport Focus (the

transport users' independent watchdog) and other industry stakeholders on improvements to the HGV parking and driver welfare facilities" (UK Government, 2022). Further details of the matched funding scheme for lorry parks are provided below.

The Government stated that it would "reform the existing planning framework and ensure that decisions for new driver facilities are not left to individual planning authorities. The Government must reform national planning policy to ensure that more driver facilities, which are fit for purpose and industry leading, are delivered." It said that this will involve the Government assessing whether this can be achieved with 'light reform' or whether "the Government should seek to take this dilemma from local authorities and local plans and place the responsibility at a central level. This would rightly recognise these facilities as key national infrastructure assets." In order to make this assessment the Government will carry out a call for evidence to "build a comprehensive picture of where the planning system can appropriately support the freight and logistics sector" (UK Government, 2022).

The Government also stated it "should set a minimum standard for driver facilities. This should cover: a) Security to protect drivers and their vehicles; b) Availability and cleanliness of toilet and shower/changing facilities; c) Food options, including healthy choices; and d) Sufficient provision for female drivers." It is "gathering evidence on the appropriate level for standards and working with industry on proposals for the most appropriate mechanisms that will help drive adoption and adherence by industry" (UK Government, 2022).

In response to the Select Committee's call to prioritise negotiations to agree new leases with motorway service operators operating on Government-owned land, the Government said that the Department for Transport and National Highways were "assessing future ownership options for sites where the Government holds the Motorway Service Areas (MSA) freehold. This work is looking at how to maximise value for the taxpayer and ensure that privately operated MSAs will be responsive to the needs of future road users" (UK Government, 2022).

The Committee had called that if the freight transport industry did not provide sufficient high-quality parking facilities (and HGV drivers) within two years that the Government should implement a levy to make the industry pay sufficient sums for the Government to build these facilities (and pay to train new drivers). The UK Government did not directly answer this question, instead reiterating the measures it had taken to improve the HGV driver shortage, its announced investment in HGV parking facilities, and the need for a modernised planning system (UK Government, 2022).

In November 2022, the UK Government launched a scheme in which lorry park operators can bid for a share of the £52.5 million Government funding through match-funding. This scheme (referred to as the 'HGV parking and driver welfare grant scheme') provides match funding to "support industry operators to improve HGV facilities in any of the following areas: i) driver welfare facilities - including toilets, shower facilities, rest areas, ii) security for drivers - including lighting systems, CCTV and monitoring equipment, and secure fencing, iii) HGV parking capacity - including spaces and layout." The scheme allows independent truckstops, Motorway service areas, Trunk road service areas, and local authority truckstops that operate HGV driver facilities with a minimum of three years trading history and which are located on, or near to, the SRN in England to apply. The facility must be either on freehold land or on land where the operator holds leasehold tenure for a minimum of eight years. Grants must not be used to purchase land on behalf of the applicant or a third party. These lorry park operators can apply for up to £315,000 per site with Government providing up to 50% of the capital cost of an improvement project for small operators and up to 25% of the capital cost for larger operators. These grants are available for investment in capital improvement projects only, not to fund resource expenditure (i.e. operating costs such as business overheads and labour costs) (Department for Transport, 2022b).

In December 2022, the Department for Transport published a revised policy paper on the Strategic Road Network (SRN) in England (DfT Circular 01/2022 which replaced Circular 02/2013 (see **section 7**) – Department for Transport, 2022a). This revised circular “recognised that on certain parts of the SRN and at certain times a shortage of parking facilities for HGVs can make it difficult for drivers to find safe space to stop and adhere to requirements for mandatory breaks and rests”. It went on to recognise that “to alleviate the shortage, the expansion of existing facilities on the SRN is likely to be needed alongside the creation of new parking sites. As a result, existing truckstops (including closed facilities) on or near to the SRN must be retained for their continued and future use unless it can be clearly demonstrated that a need no longer exists” (Department for Transport, 2022a).

This circular requires that, in locations where there is an identified need for HGV parking facilities, National Highways “will work with relevant local planning authorities to ensure that local plan allocations and planning application decisions address the shortage of HGV parking on or near to the SRN”. Determining this identified need will “be informed by regular updates to the Department for Transport’s National Lorry Parking Survey and demand assessments undertaken by the company (i.e National Highways) to ensure that appropriate evidence is available on the national picture”. The circular also reminded these local planning authorities to have regard to the need for the maximum distance between such facilities on the motorway network to be no more than 14 miles apart, and no more than 20 minutes driving time on all-purpose trunk roads. It also notes that “where the general spacing distances above are met but a need for HGV parking still arises, the company (i.e. National Highways) will support the case to address unmet demand, subject to an assessment of the safety of the proposed access or egress arrangements”.

In terms of charging facilities for zero emissions vehicles this circular notes that “operators of motorway and APTR (all-purpose trunk road) service areas must support the uptake of zero emission and hybrid vehicles through the installation of EV chargepoints at their sites” and that “plans submitted with applications for roadside facilities must show how they can support the conversion of spaces initially allocated for petrol or diesel vehicles (including HGVs, vans and coaches) to spaces with an EV chargepoint in the future without detriment to the overall parking numbers on site” (Department for Transport, 2022a).

This 2022 Circular provides an updated version of the minimum requirements for motorway services (see **Table 13.1**). This can be compared with **Table 7.1** in the 2013 circular that was discussed previously (see **section 7**).

Several new requirements and changes to existing requirements are included in Circular 01/2022 compared with Circular 02/2013. These are:

- A new requirement has been added for all lorry parks (which is permitted rather than mandatory) that segregated parking is provided for refrigerated vehicles with access to appropriate mains electrical supply and noise abatement.
- A new requirement has been added for provision of security monitoring equipment including appropriate lighting and CCTV systems has (mandatory for all lorry parks except motorway rest areas for which it is permitted).
- The existing mandatory free to use toilets and handwashing facilities requirement has been extended to include and at least one changing places toilet and one toilet for people with disabilities.

- The existing shower and washing facilities requirement has been revised to include separate male and female facilities (mandatory for all lorry parks but not for motorway rest areas and all-purpose trunk road service areas).
- The fuel provision requirement has been extended to include EV chargepoints (mandatory for all lorry parks but not for motorway rest areas and all-purpose trunk road service areas).
- ‘Cooked hot food’ rather than ‘hot food’ is now a mandatory requirement at motorway services areas and motorway lorry parks.
- ‘Access to a cash operated telephone’ has been revised to ‘Access to a free-of-charge telephone for emergency use, Wi-Fi and power points available for device charging’ (and remains mandatory at all sites).

Table 13.1: Minimum requirements for roadside facilities to be eligible for signing from the SRN in Circular 01/2022

	Motorway		All-purpose trunk road (APTR) service area*	Motorways truck-stops	APTR truck-stops	Truck-stops signed from the SRN
	Service area	Rest area				
Available 24 hours a day throughout the year.	M	M	N/A	M	N/A	N/A
Available at least between 8am and 8pm on every day except Christmas Day, Boxing Day and New Year's Day.	N/A	N/A	M	N/A	M	M
Free parking for a minimum of 2 hours for all vehicles permitted to use the facility.	M	M	M	M	M	M
Segregated parking for refrigerated vehicles with access to appropriate mains electrical supply and noise abatement.	P	P	P	P	P	P
Provision of security monitoring equipment including appropriate lighting and CCTV systems.	M	P	M	M	M	M
Free-to-use toilets with hand washing facilities, and at least 1 changing places toilet and 1 for people with disabilities, and no need to make a purchase during opening hours.	M	M	M	M	M	M
Shower and washing facilities for HGV drivers	M	P	P	M	M	M

(separate provision for men and women), including secure lockers in the shower/washing area.						
Provision of fuel for petrol and diesel vehicles and EV chargepoints.	M	P	M	M	P	P
Hot drinks and cooked hot food available for purchase during all opening hours for consumption on the premises.	M	P	P	M	P	P
Hot drinks and hot food available at least between 8am to 8pm for consumption on the premises.	N/A	P	M	N/A	M	M
Access to a free-of-charge telephone for emergency use, Wi-Fi and power points available for device charging.	M	M	M	M	M	M
Use as an operating centre for the purposes of the Goods Vehicles (Licensing of Operators) Act 1995 or the Public Passenger Vehicles Act 1981.	Prohibited	Prohibited	Prohibited	Prohibited	P	P

Notes:

M = Mandatory

P = Permitted

N/A – not applicable

*Limited to a single or exceptionally 2 interconnected premises, accessed directly from the trunk road or a junction on the trunk road.

'Truck-stop' is an alternative term for 'lorry park'.

Source: Department for Transport, 2022a.

The Circular also revised the method for calculating HGV parking spaces required at Motorway Service Areas so that it can be 1% of the average daily flow of goods vehicles for the peak month in locations where there is an identified need for parking updated (rather than the standard 0.5% where such identified need does not exist). The parking space requirements at all-purpose trunk road service areas remains unchanged (at a minimum of two HGV parking spaces) (Department for Transport, 2023a).

The Department for Transport has also committed to consult on updates to local transport plan guidance, as well as to publishing an updated manual for streets (Department for Transport, 2023b).

14. The provision of other driver welfare facilities in the course of work

14.1 Driver welfare needs and facilities for HGV drivers at warehouses, distribution centres and other sites they visit

Among the sites at which HGV drivers make collections and deliveries are warehouses, distribution centres, shops and offices. Sometimes, these facilities are run by the company for which the driver works but often they are operated by the shipper or receiver of the goods being transported. In these cases, the HGV driver is a visitor to the site when making the collection or delivery. The driver may need to use the toilet/handwashing facilities or take a legally required rest break when making these collections and deliveries. However, staff at some sites are reluctant to make toilet and washing facilities available (despite it being a legal requirement) and to provide parking space for rest breaks, or even if such space exists, refuse to make it available to visiting HGV drivers.

Oral witnesses from the CILT and Unite the Union explained to the Transport Select Committee's inquiry into road haulage in 2015/16 that inadequate provision was being developed for visiting HGV drivers at new warehouses, distribution centres and retail parks. Another witness told the Committee that, "Quite a number of [drivers] said that they are treated like scum - that having facilities is a basic human need and it is as if they are not human." It was suggested to the Committee that secure parking should be a planning requirement for such developments over a certain size and that section 106 agreements could be made use of to help fund lorry park facilities (House of Commons Transport Select Committee, 2016b). However, this idea was not taken up by the Government. In its response to the Transport Select Committee's report, the UK Government stated that it would "work with the industry bodies to consider whether and if so how to establish a good practice standard or code of conduct for businesses when receiving visiting drivers. We believe that the provision of access to facilities for visiting drivers at depots and customer facilities should not require specific Government regulation. It is in the interests of companies to treat visitors in the manner they would wish for their employees while offsite. A good practice standard combined with an identifiable "charter mark", promoted by industry bodies could provide a visible commitment to drivers which could then be promoted to customers outside the logistics sector" (House of Commons Transport Select Committee, 2016c). Nothing has subsequently emerged about this work that the UK Government pledged to carry out with industry.

In 2017, Logistics UK published a 'Commercial Vehicle Driver's Rest Facilities Charter'. This document sets out the notion that "proper provision and use of facilities is a shared responsibility – between the service area providers, public and highway authorities, and industry. Drivers and operators also have a part to play in ensuring facilities are used correctly and respectfully. The conditions in this Charter show what is expected from all sides to ensure that the needs of those who keep Britain supplied with goods everyday are met." It explains that "the provision of adequate stopping places provides benefits for drivers, operators, the community and the economy as a whole", and is important in ensuring that HGV driving is an attractive and respectable profession. In relation to the warehouses and distribution centres that HGV driver visit, it states that the provision of parking space for rest breaks at the off-street sites of shippers and receivers who HGV drivers make deliveries to also helps to improve vehicle utilisation (as drivers do not have to waste time finding another location in which to take a rest break). The Charter urges that shippers and receivers of goods at all sites that HGV drivers visit "must play their part in the overall provision of basic facilities" (i.e. as a minimum access to sufficient toilet and washing facilities without unreasonable delay) (Logistics UK, 2017).

The size and layout of the warehouse site should be sufficient to accommodate goods vehicle movements and parking in a manner that does not lead to the public highway being used for loading/unloading, queuing or parking. Underestimates of goods vehicle trips for new

developments can lead to the under-specification of site parking space, resulting in vehicle queuing to use the space or parking on-street instead and the related impacts of these outcomes. The method usually used by developers for predicting goods vehicle movements to and from new warehouse developments and submitted as part of the planning application (which is called TRICS) often leads to underestimates in goods vehicle trip generation (see Allen and Piecyk, 2023 for further discussion of this issue).

This led the Chartered Institute of Logistics and Management (CILT) to issue guidance in 2017 about the problem of HGV parking in residential areas due to lack of parking availability for them to take mandatory rest breaks at warehouses, distribution centres and other facilities they had visited to make collection or deliveries. It noted that, “there is insufficient secure HGV overlay parking provided within or adjacent to logistics ‘hot spots’, a situation made more urgent with pressures for growth in stockholding and order processing as a result of redesigning the supply chain. This situation results from outmoded planning guidelines for HGV access and parking for the B8 use class provided by county and local authorities to support and assess the Transport Statement in planning applications by developers and designers” (Drury, 2017). The CILT guidance stated that goods vehicle trip estimates in Transport Assessments for warehouses and distribution centres should be based on forecast stock throughput including seasonal variations by supply chain and proposed an alternative methodology and a worked example for producing these goods vehicle trip generation estimates. It states that local planning authorities should use this alternative methodology to check and query the estimated goods vehicle movement derived using TRICS provided in Transport Assessments submitted as part of applications for new developments to ensure that the application has provided sufficient on-site (i.e. off-street) space for visiting goods vehicle drivers to use while waiting to make collections and deliveries to be able to take rest breaks to conform with drivers' hours regulation (Drury, 2017). This CILT guidance also told local planning authorities to ensure that the planning application includes provision of driver welfare access to toilets and washing facilities and to accommodation on the site for rest areas and refreshment. It advised that in the case of “major multi-warehouse unit developments where there may be pressure to increase site cover for economic viability, either recommend a planning condition for on-site secure goods vehicle parking or under a Section 106 agreement provision for off-site secure goods vehicle parking with driver welfare accommodation provided adjacent to the development with provision for sanitation, trailer exchange and refrigerated vehicle chill-down. An off-site secure truckstop is an employment site requiring the same screening and protection provisions as apply for any employment site close to urban or rural residential areas” (Drury, 2017).

In its report on freight transport to the UK Government, the National Infrastructure Commission has noted that, “Providing sufficient loading bay capacity at new developments means delivery drivers spend less time looking for space to park and load, and vans or lorries are not parked in a way which restricts traffic flow on the road (National Infrastructure Commission, 2019).

Oral and written evidence provided to the Transport Select Committee’s 2021 inquiry into road freight transport that addressed the issue of HGV drivers visiting sites to make collections and deliveries mentioned that even when warehouses and distribution centres visited have sufficient parking space for a visiting driver to take a rest break, it is often not made available to them. It was suggested that existing planning rules need to be reconsidered, so that it is compulsory that new developments have facilities for HGVs to be able to park while drivers take rest breaks. One witness stated that in some mainland European countries, developments of major distribution and retail parks were required to provide sufficient space for visiting HGVs to park (for rest breaks and longer stays) and provided on-site facilities and security. Additionally, it requires that a requirement needs to be put in place to ensure that warehouses and distribution centres with sufficient space for visiting HGV drivers to take a rest break are compelled to do so (House of Commons Transport Select Committee, 2021b).

The current National Planning Policy Framework only states, “Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use” (Ministry of Housing, Communities and Local Government, 2021). It makes no reference to ensuring adequate space is developed to facilitate visiting HGV drivers to park and take their rest breaks at these sites.

One witness to the Transport Select Committee’s 2021 inquiry commented on the poor standard of many toilet facilities that have to be used by HGV drivers at lorry parks and workplaces. They suggested the need for the requirement of suitable standards for these facilities that can then be reported on and enforcement action taken when they are sub-standard (House of Commons Transport Select Committee, 2021b).

HGV drivers visiting sites to make collections and deliveries should legally be provided with access to toilets and washing facilities at readily accessible places. This has been in place since 1992 (HSE, 2013) but this does not always mean that such access is always readily forthcoming. The regulations state that suitable toilet and washing facilities should be sufficient in number to allow everyone at work to use them without unreasonable delay (with minimum numbers provided based on size of workforce), should be located so they are convenient and available at all times when workers are in the workplace, that toilets should provide privacy for the user (in a separate room or cubicle, with a door that can be secured from the inside, and that separate toilet facilities should be provided for men and women (except where they are inside a room with a door that can be secured from the inside and are only used by only one person at a time) (HSE, 2013). HGV drivers, like all workers, must also be provided with drinking water and access to worker rest areas if required (but not parking spaces in order to park their vehicles while making use of these rest facilities).

Access to toilet facilities (but not necessarily their standards) have improved to some extent for drivers visiting sites in recent years. This followed a long-running campaign by Gill Kemp at Truckers Toilets (UK) and Unite the Union, which in 2017 led the HSE to state that its guidance would in future state that, “Drivers must have access to welfare facilities in the premises they visit as part of their work” (it had said ‘should’ rather than ‘must’). However, this is not reflected in the legal requirements published in 2013 still provided by the HSE on its website (HSE, 2013).

During the Covid-19 pandemic in March 2020, some sites visited by HGV drivers refused to let them use toilet and handwashing facilities. On receiving complaints about this, HSE had to make businesses aware of their legal responsibilities and that failure to do so was against the law and conflicted with advice from Public Health England that regular handwashing was a control measure against the spread of the virus. The RHA told its members that any driver being denied the use of toilet facilities, when delivering and collecting goods, should report this to them and that they would follow it up, in the first instance, by contacting the site and asking that appropriate signage was displayed, which clearly states that toilet facilities can be accessed by drivers. This also led to the Under-Secretary of State for Transport and the CEO of HSE providing a letter in 2020 that they had signed that could be presented to sites visited by HGV drivers telling the site operator that preventing such access was illegal. However, in April 2021, Logistics UK reported that it was receiving reports from some members and other sources “that many commercial drivers are still being refused access to basic facilities at customer sites. One fleet professional reported that drivers from his company were being denied access to their customers’ facilities, even after presenting official notification from the HSE stating that it is against the law to prevent drivers from using basic toilet facilities” (Logistics UK, 2021).

Unite the Union carried out a survey of 1,700 HGV drivers in 2022 in which 76% of respondents reported that in the last year they had experienced a situation when they needed to urgently use a toilet but none were available. Only 22% of respondents reported that they were always

given access to customer toilets, with 32% of them reporting that access to customers' toilets had worsened during and since the Covid-19 pandemic. In terms of toilet facilities at service stations and lorry parks, 44% of respondents reported that the greatest problem was cleanliness, while 22% reported it was restricted opening times. Some respondents noted that despite the Health and Safety Executive (HSE) putting in place rules that businesses must allow HGV drivers visiting them to use their toilets, many are failing to observe the law (Unite, 2022). In response to these survey results, the Road Haulage Association (RHA) advised goods vehicle operators and drivers to remind businesses that it is a legal requirement to offer access to facilities and that if a business still refuses they should report the incident to the Health & Safety Executive (Road Haulage Association, 2022a).

Goods vehicle drivers who are members of Unite the Union produced a driver manifesto in 2021 in response to the HGV driver shortage. One of its seven points focused on parking, stating that in order to comply with driver rest break rules, all industrial sites should provide off-street parking areas for drivers making deliveries and collections to and from and make facilities available, and that local authorities should ensure that new park and ride facilities can be used by and have space for HGV parking when not used for passenger car parking. A second point referred to toilets, and stated that in addition to the strengthening of the regulations for driver (and other worker) access to toilets at sites that they visit. However, this is not always provided, so the Health and Safety Executive (HSE) or authorities should enforce these regulations and sanction businesses that refuse drivers access to toilets (Unite the Union, 2021).

The Government updated that National Planning Policy Framework (NPPF) in 2021 so that it includes the sentence "Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use" (Ministry of Housing, Communities and Local Government (2021)). However, in a recent document the Department for Transport suggests that this update to NPPF requires "that development proposals for new or expanded goods distribution centres should make sufficient provision for HGV drivers, which should include overnight parking and an adequate level of welfare facilities" (Department for Transport, 2023a). This statement seems to go beyond what the NPPF update actually contains.

14.2 Driver/rider welfare needs and facilities for other workers making deliveries/collection and providing services

Despite the consideration given to parking and welfare needs of HGV drivers in recent work by the Transport Select Committee, trade associations and unions, far less consideration has been given to the needs of those drivers and riders using other vehicles to make deliveries/collection and provide services, many of whom work in urban areas.

Various other goods delivery/collection workers and service providers who have to visit customer sites would benefit from access to toilet and handwashing facilities and rest areas. These include those delivering and collecting goods using LGVs (i.e. vans), cargo bikes, bicycles, mopeds, motorbikes and on-foot parcel and document couriers. Many of these goods delivery and collection workers are providing last-mile delivery services linked to the growth in online shopping, with many of them not having employed status and in roles with high rates of worker turnover. This results in their voices and needs being even more invisible than that of HGV drivers. In addition, service personnel, such as engineers, plumbers, and builders, whose main reason for making the journey is to provide their service rather than to move goods (although the journey may also include the conveyance of goods and tools) also require access to these facilities at the customer sites they visit.

The toilet and handwashing facility welfare needs of all of these workers are often less readily available than for HGV drivers given that many of these workers mostly visit offices, shops, and residential homes rather than distribution centres and warehouses. The reduction in the

provision of public toilets in towns and cities adds to this problem facing these drivers and riders.

Some delivery personnel, including same-day parcel and document couriers and those delivering meals from restaurants, takeaways and 'dark kitchens' and instant grocery orders from dark stores using bicycles, mopeds, motorbikes, cars and LGVs, have to wait between deliveries for the next job allocation. There is often little provision of waiting areas, with them typically have to wait in public places due to lack of alternatives, with those without enclosed vehicles suffering worst in terms of exposure to weather (e.g. rain, wind and sun) as well as risk of crime and theft to them and their vehicles. In the case of those delivering meals this often takes place in the dark adding to the risk.

In taking breaks and rest periods and accessing food and drink, these workers typically make use of cafes and supermarkets. However, whilst purchasing these items and if consuming them indoors, those with vehicles that are vulnerable to theft and vandalism including bicycles and cargo bikes, need safe public storage and parking locations for them. Theft of and damage to these vehicles negatively affects these workers' ability to carry out their work and to earn a living.

The public and private sectors need to work together to discuss the provision of these basic facilities for workers who require them in the course of their goods and servicing work. However, to date little consideration has been given to the welfare needs of these goods delivery and collection and service workers.

15. People living in LGVs

A recent development in the UK and other countries has been the upsurge in the number of people living in LGVs (often referred to as vans). These people do not use the LGV as part of their work but have decided to live one due to the high cost of housing and/or as a means of providing them with an alternative lifestyle in which they can easily relocate their place of residence. Although there has always been a small number of people who have lived nomadic lifestyles in LGVs and other vehicles (including caravans, camper vans, mobile homes and HGVs) especially from Romany traveller and so-called 'New-Age' communities, the number of people adopting this lifestyle has increased markedly in the last couple of years, most often due to the unaffordability of housing.

In addition to people who permanently live in LGVs, there has also been an increase in the number who choose to live in LGVs for short periods while taking holidays, thereby allowing themselves to avoid the need to rent expensive holiday accommodation or pay expensive campsite fees. This has led to car parks and lay-bys close to beauty spots becoming heavily congested with such vehicles in the summer period and was especially noticeable in the UK during Covid-19 lockdowns when many hospitality venues were forced to close. The growing interest in 'wild camping' seems to be further fuelling this trend.

Many of these LGVs have been converted by their inhabitants to provide various facilities which can include cooking equipment, beds, chemical toilets, water sources and showers, heating, insulation and ventilation systems. The equipment installed depends on the owner's ingenuity, skills and budget. Living in a LGV provides advantages over other vehicles such as caravans and motor homes as they are not readily identifiable as homes, so far less subject to being disturbed by local residents, police or others when parked at the roadside, in a lay-by or overnight in a car park, regardless of the rules in force concerning camping.

However, living in a LGV is a difficult, uncomfortable and sometimes dangerous lifestyle, regardless of the creature comforts installed in the vehicle. There is little space in which to manoeuvre and in which to cook and wash, with basic tasks taking substantial time to perform. LGVs are not purpose-built for living in and are therefore inferior to motorhomes and caravans designed for this purpose with insulation, heating and protection from water ingress. When it rains, entering a LGV that is poorly ventilated with wet clothing leads to much moisture and damp.

It is legal to park an LGV at the kerbside on a public road in the UK, as long as existing parking regulations are observed and no local byelaws are in force preventing it (in the same way as HGVs using the kerbside and lay-bys). LGVs that are parked on road in one location and used as permanent homes can cause concern and impacts for other local residents depending on the behaviour of vehicle dwellers (including litter, toileting, noise and anti-social behaviour). An example of this situation is provided by those living in LGVs in various locations in Bristol over recent years.

Living in vehicles has a longer and larger history in America than it does in the UK, dating back to the Great Depression of the 1920s and '30s, which left millions of people unemployed, poverty-stricken and homeless. Many took to life on the road, living in cars and campervans (Recreational Vehicles – 'RVs'). This allowed them to vastly reduce the cost of living while also facilitating their travel across states seeking work. Ford launched its Model A House Car in 1928 for this purpose, and was followed by other companies including Airstream, Curtiss Aero Car and Masterbilt. Many individuals couldn't afford these purpose-built, if basic, vehicles so took to carrying out their own conversions of standard cars and LGVs. This legacy of dwelling in vehicles continued in America with a sizeable community doing so to the present day and being reflected in many films including the Oscar-winning 'Nomadland' in 2020, in which a widow who loses her job begins life in a LGV travelling between seasonal work at

campsites and Amazon fulfilment centres, meeting many others living a similar existence. 'Vanlife' has become a popular hashtag on Twitter and Instagram with users sharing photos and experiences.

There are no official statistics showing how many people in the UK live in LGVs, given that until recently it was a very small community or is hard to detect and count. In 2018, the charity Crisis estimated that 12,000 people lived in cars, tents or on public transport in the UK – which they reported as being double those doing so in 2012 (Crisis, 2018). The most recently available UK Government data for those living in traveller caravans in England, showed approximately 24,400 such vehicles in January 2022 (with approximately 2,900 of them on unauthorised sites). This represented an 8% increase in total vehicles compared with 2018. The number of vehicles on authorised sites with planning permission increased by approximately 1,900 vehicles between 2018 and 2022 despite the likely faster growth of those living in vehicles (Department for Levelling Up, Housing & Communities, 2022). This data only covers those vehicles on traveller caravan sites (whether authorised or not) rather than those living on the public road network.

In October 2019, the DVLA reported that in the previous 12 months it had granted conversion and re-registration applications from LGV to 'motor caravan' for 21,215 vehicles which was a two-thirds increase on the figures in 2016-17 (reported in Paton, 2019). This re-registration requires that the vehicle has a bed with a minimum length of six-foot (1800 mm) which can be converted from daytime seating but must be permanently fixed, a door that provides access to the living accommodation, a water storage tank or container on or in the vehicle, a permanent seating and dining area (the table can be detachable but must have permanent means of attachment to the vehicle), a permanently fixed means of storage (a cupboard, locker or wardrobe), a permanently fixed cooking facility within the vehicle powered by gas or electricity, two or more windows on the side of the accommodation (in addition to driver and passenger door windows), An awning bar for a canopy attached to either side of the vehicle and motor caravan-style graphics on each side of the vehicle. Re-registration is required to access motorhome insurance, which is often less expensive than that for LGVs, as well as having better contents insurance as they are lived in. Insurance would be unlikely to pay out for internal fittings for a converted LGV that has not been re-registered. There are also speed limit differences between LGVs and motor caravans (with the latter allowed to travel at 70 mph on a dual carriageway whereas LGVs have a limit of 60 mph). Motor caravans sometimes have lower ferry and parking charges than LGVs given their no-commercial use. In addition to DVLA re-registrations there are likely to be many LGV conversions for living purposes that are not re-registered with the DVLA, as well as cases in which no conversion work takes place, with the owner simply choosing to live in it.

16. Conclusions about HGV parking and driver welfare issues

As this report has illustrated there is a serious shortage of safe, secure overnight and daytime parking space for HGVs. There are also on-going issues about the provision of driver welfare and amenities to those visiting warehouses, distribution centres and other sites when making collection and deliveries in the course of their daily work.

16.1 HGV overnight parking – current situation

The supply of and demand for overnight lorry park spaces has not been well matched across England for the last fifteen years for which data has been available and probably for far longer. Lorry parks have been at full capacity for a considerable time in some English regions, and the situation is worsening across England as a whole, with national lorry park utilisation at very close to critical levels in the 2022 audit. In 2022, 34% of all overnight HGV parking took place in lay-bys and kerbsides in industrial estates rather than in lorry parks, with this figure increasing over this fifteen year period (calculated from data in AECOM, 2022). As a result, facilities provided to and the welfare of long-distance HGV drivers has worsened over time.

While the total number of lorry parks and their HGV parking space in England has increased since 2011, this has been outstripped by the growth in HGV parking overnight in them. HGV parking capacity at lorry parks increased by 14% between 2011 and 2017 and 12% between 2017 and 2022). Meanwhile, the number of HGVs observed parked overnight at lorry parks during audits increased by 43% between 2011 and 2017 and 21% between 2017 and 2022 (calculated from data in AECOM, 2022).

This strong demand for HGV overnight parking in lorry parks has not been met by additional provision of parking space. This is reflected in the overall average lorry park overnight utilisation at lorry parks in England which has risen from 57% in 2006, to 61% in 2011, to 76% in 2017, to 83% in 2022 (which is just below the 85% threshold that is deemed to be 'critical' by the surveyors and the Department for Transport and which is used as the rate at which lorry parks are deemed to be full) (AECOM, 2009, 2011, 2017, 2022).

Lorry park utilisation rates were higher in all nine regions in 2022 compared to 2011, and in 2022 exceeded the 85% utilisation rate in the Eastern, Southern, East Midlands and West Midlands regions. Across England as a whole, 44% of lorry parks (143 lorry parks) were at a critical utilisation rate (i.e. deemed full at the time of the survey), with 14% having a serious utilisation rate and 42% an acceptable utilisation rate (AECOM, 2022).

In the 2022 audit, 100 of the 143 lorry parks across England that had a critical utilisation level (i.e. 70% of them) had a utilisation of 100% or greater (meaning that they had reached or exceeded the absolute maximum number of HGVs they could accommodate). The overall capacity of these 143 lorry parks with a critical utilisation rate accounted for 58% of total lorry park capacity in England as a whole (AECOM, 2022).

The facilities provided at a considerable proportion of lorry parks in England were rated as low in 2022, with 5% found to provide no facilities with only parking space available, 15% providing only toilets, 22% providing toilets and catering, 35% providing toilets, showers and catering, 16% providing toilets, showers, catering, lighting and a security fence, and 7% provided toilets, showers, catering, lighting a security fence and CCTV (AECOM, 2022). This is a rating of the facilities at lorry parks rather than the quality of those facilities.

The overnight parking charge tends to vary with facilities provided, type of lorry park and location. The average price for overnight parking in 2022 ranged from £11.67 in local authority lorry parks which tend to have few if any facilities, to £21.36 in independent lorry parks to £28.16 in Motorway Service Areas (AECOM, 2022). However, 39% of independent lorry parks

had a facility rating of 4 or 5 compared with only 25% of Motorway Service Areas, indicating that the latter may benefit in its pricing from its proximity to the motorway network used by the vast majority of HGVs.

Audits indicate that HGV overnight parking in lay-bys and kerbsides in industrial estates as a proportion of total HGV overnight parking (i.e. including lorry parks) in England fell between 2011 and 2022 (from 41% to 34% of all HGVs parking overnight). However, while lay-by parking has fallen (presumably due to the introduction of more overnight stopping restrictions and enforcement), overnight parking in industrial estates has increased (calculated from data in AECOM, 2022).

Given the increase in total HGVs parking overnight in England (in lorry parks, lay-bys and on-street in industrial estates) and the failure of the capacity of lorry parks to increase at the same rate there has been an increase in the proportion of total excess HGVs parked overnight in many regions (i.e. the difference between total HGVs parked overnight regardless of location and the total parking capacity available in lorry parks). There was a 4% excess of HGV overnight parking in England in 2011 (i.e. the proportion by which total HGVs parked overnight exceeded lorry park spaces). This rose to 20% in 2017 and then to 21% in 2022 (calculated from data in AECOM, 2022).

Given that it is assumed in the audits that lorry parks are full when they reach 85% utilisation, there has been a need for additional lorry park capacity if all HGVs were to be parked overnight in lorry parks in England since the 2011 audit. This shortfall of HGV parking spaces in lorry parks across England increased by 3,470 spaces (150%) between 2011 and 2017. It then increased by a further 1,258 spaces (22%) between 2017 and 2022. The additional lorry park space required in 2022 was approximately 200% greater than in 2011. There was a shortfall of approximately 7,000 overnight HGV parking spaces in lorry parks in England in 2022 (which was equivalent to 34% of all HGVs parked overnight) (calculated from data in AECOM, 2022).

In 2011, four out of nine regions of England required additional space in lorry parks in order to accommodate all HGVs in them. In 2017, this rose to seven out of nine regions, and in 2022 this rose again to eight out of nine regions requiring additional space in lorry parks. The lack of lorry park spaces is greatest in the South East, East Midlands and Eastern regions (AECOM, 2022).

The proportion of non-UK registered HGVs as a proportion of the total HGVs parked overnight in England has increased in each of the three surveys, from 18% in 2011, to 25% in 2017, to 27% in 2022 (AECOM, 2011, 2017, 2022).

A greater proportion of non-UK registered HGVs use lorry parks than UK registered HGVs. This difference was especially marked in the 2022 audit, with 80% of non-UK registered HGVs found to use lorry parks compared with 60% of UK-registered HGVs. Consequently, a smaller proportion of non-UK HGVs park overnight in lay-bys and at kerbsides in industrial estates than UK registered HGVs. The regions most used by non-UK HGV drivers for overnight parking were (in order of importance) the South East, the East Midlands and Eastern regions (calculated from data in AECOM, 2022).

Non-UK registered vehicles accounted for 38% of all HGVs parked at independent lorry parks, 32% of all HGVs parked at Motorway Service Areas, 19% of all HGVs parked at Trunk Road Service Areas and 12% of all vehicles parked at local authority lorry parks across England in the 2022 audit (calculated from data in AECOM, 2022).

Survey work with HGV drivers and road freight transport businesses also shows that satisfaction rates with Motorways Service Areas (MSAs) and other lorry park facilities in the UK (in terms of their value for money, cleanliness of facilities and availability) have been falling

in recent years, with satisfaction rates for non-MSA lorry parks lower than those for MSAs (Transport Focus, 2018, 2020a, 2020b, 2021, 2022a, 2022b).

Shortage of overnight HGV parking spaces is by no means unique to England / the UK. In the EU it has been estimated that the shortage in HGV parking spaces increased from 16,000 in 2007 to 100,000 in 2018 (Panteia, 2018; de Leeuw van Weenen et al., 2019). In the USA, the shortage of overnight parking spaces has been noted and studied since 1996. The proportion of HGV drivers reporting regularly experiencing difficulties finding parking spaces rose from 75% in 2015 to 98% in 2019 (reported in Lockridge, 2022).

16.2 Research needs and considerations for overnight HGV parking

Overnight HGV parking audits in England in 2011, 2017 and 2022 have not reported on (and possibly did not study):

- The extent to which prices charged, location in relation to the SRN, and the range and quality of facilities provided at a lorry park are linked to its occupancy rate.
- The importance of various factors in HGV driver decision-making about the choice of lorry park they use (such as (lack of) available space, price, location from the SRN, security features, and the range and quality of facilities provided).
- The decision-making factors that result in HGV drivers decided not to use lorry parks and to instead park overnight in lay-bys or at kerbsides in industrial estates (including consideration of the extent to which such drivers do so by choice or due to lack of space in lorry parks). These include the financial support towards the cost of using lorry parks from their employers and/or customers, the form that this financial support takes and the method by which it is made).

The 2011 and 2017 audits did not report on the extent to which occupancy rates varied between lorry parks within each region (an occupancy rate at a regional level may hide significant differences between lorry parks within that region that could be due to price, location in relation to the SRN, security features, and the range and quality of facilities provided). However, the 2022 audit did so.

Ever-improving sleeper cabs and in-vehicle facilities may have fundamentally changed some drivers' views about the whether they want to use lorry parks at all and, if they do, the services that they require at them. Survey work with drivers using lay-bys and kerbsides in industrial estates could help gain insight into this.

Little, if any, recent research has studied the safety (in terms of driver safety from passing traffic and safety for other road users), security (in terms of crime committed against HGV drivers, their vehicles and loads), and traffic congestion impacts of HGV overnight parking in lay-bys and at kerbsides in industrial estates. Such work is necessary to understand the dangers posed by these practices and measures that can be taken by drivers and enforcement agencies to ensure that unsafe practices do not occur and that drivers and other road users are not placed at undue risk.

Research from 2005 indicated that three-quarters of HGV drivers were reimbursed by the company they were working for overnight parking expenses or had some kind of allowance. However, this work also identified that some drivers were encouraged not to park in lorry parks if the vehicle was empty of goods. The quarter who had to meet their own parking costs were most likely to use lay-bys and at kerbsides in industrial estates for overnight parking. However, those who receive such expenses at a fixed rate regardless of whether or not they used a lorry

park may choose to treat this as income and not use a lorry park. Therefore, the method of this payment can also influence overnight parking choices (AECOM, 2005). Further up-to-date understanding of who pays for the use of a lorry park, the method of payment, and the effect of this on driver parking location choice is required.

Planning objections from local residents are often an important factor in the rejection of planning applications for new and extended lorry parks. Research is needed to understand whether these objections by local residents are based on objective traffic safety risks or disturbance impacts of having vehicles travelling in their locality.

No research has been carried out into whether HGV drivers are having to drive additional mileage to find overnight parking spaces (due to the shortage of them) and thereby adding to HGV mileage and its traffic, social and environmental impacts. Similarly, efforts to find overnight parking space or decisions by drivers to drive for less time than driver's hours permit due to their concern about finding somewhere to park may be having impacts of the productivity and operating costs of long-distance road freight transport. This could be resulting in the need for more HGVs to be operating on the roads and for more HGV mileage to be travelled than would be necessary if overnight parking space was more readily available.

The business model for lorry parks does not appear to have been working well for several decades. This is due to a number of factors including land acquisition costs, the redevelopment value of lorry park sites for other more valuable uses (such as residential development), major difficulties in obtaining planning permission for lorry parks and the cost of doing so, and the price that HGV drivers and the road freight industry is willing or able to pay for lorry park services (especially given the industry's low profit margins). These issues need to be addressed in joint efforts between the UK Government, local government, lorry park developers and operators, the users of lorry parks (road freight transport businesses and other businesses employing drivers and paying for drivers to use lorry parks), and insurers and shippers of goods.

Despite the statements made by the UK Government in 2021 in 2022 about its short term actions and longer term plans to address the capacity shortfall at lorry parks (Department for Transport, 2021e, 2021f; UK Government, 2022) it remains to be seen if it is truly committed to solving this problem given the history of similar statements made by previous UK Governments that have not been delivered on (see for example Department for Transport, 2009, 2016a, 2016b).

Action taken by the UK Government and local authorities to impose Traffic Regulation Orders (TROs) on HGV overnight parking in lay-bys and kerbsides in industrial estates, whilst not at the same time increasing the provision of alternative facilities, is penalising drivers and road freight businesses with fines and operating disruption without resolving the overnight parking shortage. Such action in Kent and other regions under particular pressure with parking availability is likely to add to the HGV driver shortage, making driver retention and recruitment increasingly difficult.

The provision of more overnight HGV parking spaces in lorry parks will clearly require substantial funding and questions remain about how these costs are to be met. Based on the existing business model for lorry parks, it is unlikely that lorry park providers will want or be able to supply all the additional provision that audit surveys commissioned by Government have indicated is necessary. It is therefore important the national and local government and businesses discuss how this is to be afforded, and risks and benefits shared.

16.3 Daytime rest and welfare needs of all freight transport drivers and service providers

In addition to the overnight HGV parking problem, little consideration has been given by Government or industry to the wider welfare needs of those delivering and collecting goods and providing services who require daytime rest and refreshment facilities and access to toilets and washing facilities, many of whom work in urban areas. This includes improved access for HGV drivers to welfare amenities (toilets, washing facilities, catering and parking space for mandatory rest breaks when visiting distribution centres and warehouses to make collections and deliveries). Despite the UK Government and the HSE reminding businesses of their legal requirement to make toilet, handwashing and rest facilities available to drivers visiting their buildings to make deliveries and collections, this is still not always happening. In addition, the quality of these facilities varies considerably between businesses. The lack of parking space for mandatory rest breaks for HGV driver visiting the site to make collections and deliveries is often due to insufficient HGV parking space at the site. This is a flaw of the current planning approval system for new buildings in which HGV trip generation and HGV parking space requirements are underestimated. This flaw is compounded by developers wanting to include little non-value added HGV parking space into new developments.

Consideration of the welfare needs of drivers and riders working in urban areas providing goods and services has received very little attention from government or industry. These workers who provide collections and deliveries as well as services using LGVs, cars, bicycles, mopeds, motorbikes, cargo bikes and walking (i.e. on-foot porters) often work in urban areas. Those making collections and deliveries are often working in online shopping and parcel sectors. Service personnel include plumbers, electricians, utility engineers and maintenance workers. These drivers and riders often experience difficulty meeting various welfare needs including access to toilets and washing facilities, suitable safe and indoor/covered protected rest areas while waiting for job allocations and for mandatory breaks, secure vehicle parking and storage locations while obtaining/consuming food and drink. Operators of commercial buildings and those in residential homes they visit to perform their activities (i.e. goods delivery/collection and servicing tasks) often do not provide them with toilets and handwashing facilities in the course of their daily work. In addition, many of these workers often have to wait between job allocations or take mandatory breaks without the provision of indoor waiting areas and rest areas provided, so instead are exposed to the prevailing weather (if they do not have an enclosed vehicle) and are at greater risk of crime to themselves and their vehicles. They also often have nowhere to safely and secure leave their vehicle while obtaining and consuming food and drink.

17. Recommendations for HGV parking capacity and other driver/rider welfare issues

Lack of action on overnight HGV parking capacity and better provision of driver welfare facilities for all those delivering and collecting goods and providing services is likely to add to the existing UK shortages of freight workers driving HGVs and other vehicles. This will result in the recruitment and retention of freight transport workers becoming ever more challenging. This has impacts on all sectors of the economy both public and private, resulting in delays in obtaining goods and services and disruption to supply chains. There is therefore an urgent need for better joint working between national/local government and industry, improved planning strategy, and enhanced planning guidance by the UK Government and devolved administrations for local authorities to address these freight worker driver welfare issues. This would assist in the provision of toilet and handwashing access, safe rest break parking locations, secure vehicle parking provision in the course of daily work, and changes to how decisions on lorry park planning applications are made to help ensure that fewer delays and rejections to such applications take place. It requires industry to help meet the costs associated with these welfare needs.

HGV drivers and the road freight transport industry have been subject to problems associated with HGV parking regulations and the provision of sufficient lorry park capacity ever since the growth of long-distance road freight in the 1950s (see **section 3**). No Government has satisfactorily addressed these problems over the intervening decades, instead simply requesting surveys of the situation, reviews of the problems and minor amendments to existing planning law, while at same time continuing to pursue on-street parking policies since the early 1970s that have led to local authorities continually reducing the quantity of on-street overnight parking space for HGVs through the use of TROs and enforcement approaches.

The lack of capacity in lorry parks reached an all-time high in 2022 and, together with the cost of this parking and the quality of provision, is contributing to the HGV driver shortage that has impacted on businesses and households throughout the country in terms of their ability to acquire the goods they need when they need them.

In addition to the consideration and research that needs to be given to HGV parking problems that has been discussed in **section 16**, various ways in which HGV parking space for overnight and daytime rest and driver welfare issues could be addressed are provided below.

17.1 Reforms to the planning system

The UK Government should proceed with reforms to the existing planning framework as it has promised. However, these must go beyond minor word changes and vague sentences added to the National Planning Policy Framework (NPPF), the circular on the SRN and HGV parking provision and other guidance for local planning authorities in England to consider when dealing with planning applications for lorry parks as has happened in the past (and recently in 2021 and 2022).

In 2022, the UK Government stated that it will “reform the existing planning framework and ensure that decisions for new driver facilities are not left to individual planning authorities. The Government must reform national planning policy to ensure that more driver facilities, which are fit for purpose and industry leading, are delivered.”

It also said that this will involve assessing whether this can be achieved with “light reform” or whether “the Government should seek to take this dilemma from local authorities and local plans and place the responsibility at a central level. This would rightly recognise these facilities as key national infrastructure assets.”

It went on to say that in order to make this assessment the Government will carry out a call for evidence to “build a comprehensive picture of where the planning system can appropriately support the freight and logistics sector” (UK Government, 2022).

There is no need for yet another assessment, survey or consultation. The difficulties and problems are clear. The Government should proceed now with recognising lorry parks as key national infrastructure assets and putting in place the measures and resources to support them and increase their capacity.

In order to “ensure that decisions for new driver facilities are not left to individual planning authorities” as stated by the Government, it should carry out wide ranging changes to NPPF, the circular on SRNs and lorry parks and guidance to local authorities informing them that lorry parks are key national infrastructure assets and that therefore planning applications for them must be treated as essential and necessary, with timely outcomes. NPPF and this guidance should set out the HGV parking capacity and facilities that should be made available. Alternatively, the Government could take direct responsibility for such planning applications given their national importance, making timely decisions that reflect this.

The updated Department for Transport circular on the Strategic Road Network has noted the need for more HGV parking space at lorry parks at certain times, and has stated that lorry parks cannot be closed unless it has been “clearly demonstrated that a need no longer exists” and that National Highways “will work with relevant local planning authorities to ensure that local plan allocations and planning application decisions address the shortage of HGV parking on or near to the SRN” (Department for Transport, 2022a). However, the means by which this will be achieved have not been explained in sufficient detail.

The UK Government should ensure that all its relevant departments with an input to lorry park provision (including the Department for Transport, and the Department for Levelling Up, Housing and Communities) are working closely together on necessary planning reform and it should put in place targets for the next 5 and 10 years for the provision of additional lorry park capacity that will be delivered, for overnight lorry park utilisation and for the proportion of all HGVs that park in lorry parks overnight (i.e. taking account of those vehicles parked in lay-bys and at kerbsides in industrial estates), and then compare these targets with the results of the lorry park audits it commissions. These lorry park audits should be commissioned more frequently than in the past (2011, 2017 and 2022) to check on progress.

The UK Government should also require regional transport bodies and local authorities to pay proper regard and attention to the need for lorry parks, including the identification of suitable sites for new lorry park provision close to industrial estates and away from residential areas. These should be identified in Local Plans.

New warehouse and distribution centres and logistics parks should have daytime and overnight HGV parking capacity and facilities included as a planning condition, with off-street space made available to vehicles making deliveries and collections that can arrive well in advance of their planned arrival times so that they do not miss these slots and incur commercial penalties. This requires the implementation of a new methodology for calculating HGV trip generation in planning applications for logistics developments (as it is usually underestimated leading to too little HGV parking/waiting space being designed in to development). Enforcement of such regulations with appropriate penalties for failure to do so would be required in order to ensure compliance.

In 2022, the UK Government announced that it “does not at this stage intend to set up a Government-Industry taskforce” to address these HGV parking problems and wider driver welfare issues despite being urged to do so by the Transport Select Committee. It referred instead to ‘working closely’ with Logistics UK, National Highways, the Chartered Institute of

Logistics & Transport, Transport Focus and other industry stakeholders (House of Commons Transport Select Committee, 2022; UK Government, 2022). The Government should reverse this decision and put in place such a public-private sector partnership to ensure that the changes made to the planning system for lorry parks and HGV parking will have their intended consequences.

The UK Government put in place a minimum standard requirement for security, toilets/showers, cooked hot food facilities, wifi and device charging availability, and provision for showers and washing facilities for female drivers at lorry parks in December 2022 (Department for Transport, 2022b). These relatively minor changes made to the minimum requirements for lorry park facilities do not go far enough as they do not specify the quality of facilities required, only that certain facilities exist. Also, some drivers choose to use lorry parks with few facilities due to them being cheaper than those with more facilities. Therefore, the government needs to give more thought to requiring differing quality of facilities at various lorry parks, rather than simply requiring a basic minimum standard of facilities at all lorry parks. More thought needs to be given by Government as how to encourage the 34% of HGV drivers who were observed to park overnight in lay-bys and on-street in industrial estates to use lorry parks, and for some of these drivers the price of overnight lorry parks is the main reason they choose not to do so.

The UK Government should implement an overall rating system for lorry parks based on the facilities they offer, such as that used in mainland Europe (known as LABEL – the European Truck Park Area Certification system) or the point system used in the HGV parking audits carried out for the Department for Transport. A rating system such as this together with an online directory of lorry parks would inform HGV drivers about the facilities available when deciding where to stop overnight.

The recommendations made above also apply to devolved administrations in the UK.

17.2 Methods of funding greater lorry park capacity

As previously discussed (see **section 5**), commercial issues concerning lorry park provision and operation (including high land purchase prices, investment and operating cost requirements, and lack of sufficient expenditure by HGV drivers using them) as well as the costs and delays developers face in trying to obtain planning permissions for a new lorry park need to be addressed. The short-term matched funding that the UK Government and National Highways have put in place for lorry park development will fall well short of the existing scale of the problem.

The Transport Select Committee recommended that if the road freight transport industry has not resolved HGV parking issues within two years, the Government “should implement the levy charging mechanism and cause the industry to pay sufficient sums for the Government to build these facilities (and pay to train new drivers)...The Supply Chain Levy should be applied to those at the production and sales end of the supply chain, such as large retailers, oil companies and online service giants. These organisations currently make large profits which do not trickle further down the supply chain to the companies which transport the goods” (House of Commons Transport Select Committee, 2022). In its response, the UK Government did not directly answer this recommendation, instead reiterating its announced investment in HGV parking facilities, and the need for a modernised planning system (UK Government, 2022). The UK Government should seriously consider this mechanism as a means by which to fund the additional capacity in lorry parks that is required. The Government has constantly stated over the last decade that it sees industry as being responsible for funding and providing lorry parks, therefore if industry continues to fail to provide these it was seen to be a sensible way in which to proceed with obtaining the funding needed, placing the costs on the retailers, manufacturers, fuel providers and other parties in the supply chain most able to afford it.

Local authority lorry parks are few in number and capacity (with there being only 16 such lorry parks in England with a total parking capacity of 609 spaces in 2022 – AECOM, 2022). These local authority lorry parks tend to be among the most basic in terms of the facilities they provide, with 8 of the 16 providing only parking, 4 providing only parking and toilets, 1 providing parking, toilets and café, and three providing toilets, shower, café, lighting, and security fence). Far more local authority lorry parks have closed than opened over time, with local authorities stating that they do not see providing lorry parks themselves as a priority and sometimes selling sites for redevelopment by private developers for other uses.

With the proceeds of a Supply Chain Levy the UK Government could oversee the provision of more motorway and A-road HGV lorry park capacity (either operating them themselves or by making Levy funding available to private lorry park operators).

It could also make funding available to local authorities or private operators to provide more lorry park provision with only basic facilities which could be made available to HGV drivers either freely or cheaply. This type of lorry park would be most likely to prove successful in reducing overnight HGV parking in lay-bys and kerbsides in industrial estates, given that price is a key factor in parking location choice for many of these drivers. Research could be carried out to investigate the proportion of HGV drivers making overnight stops who do and do not intend to use lorry parks and the reasons for their intentions. If a sizeable proportion of long-distance HGV drivers never intend to pay for lorry parks then, providing free or inexpensive lorry parks would be the best way to reduce central and local Government's objective of reducing HGV parking in lay-bys or on-street in industrial estates. Consideration would need to be given to whether drivers using these facilities were asked to pay a relatively low price for the use of such a lorry park or whether their provision should be publicly funded on safety grounds.

If the UK Government is of the opinion that the use of lay-bys and on-street in industrial estates for overnight parking is unsafe and must be reduced, then there is a need for it to put in place a system to ensure that businesses that reimburse drivers for overnight HGV parking they pay for or, even better, book this themselves directly on behalf of drivers to ensure that these drivers make use of lorry parks rather than park in lay-bys and on-street in industrial estates. This would potentially involve the removal of tax benefits for reimbursement of drivers doing so and instead require businesses to take responsibility for booking and paying for these lorry park facilities directly.

It should also be noted that HMRC has not increased the tax-free overnight allowance of £34.90 that employers can pay to employees for overnight expenses since 2013, so it has fallen in value considerably due to this lack of inflation-linked increases. This potentially makes it ever-more difficult for employed HGV drivers receiving these tax-free allowances to meet their overnight expenses from them (unless their employer makes bespoke payments to them that are above this limit but which require onerous checking systems for HMRC to receive tax-free status).

This approach could also involve making businesses that employ and use HGV drivers to transport their goods over long distances without currently providing payment for the overnight parking services having to do so and becoming responsible for booking lorry parks and paying directly for them on behalf of these drivers. The Government could make this a legal requirement. Socially responsible companies could also make this a condition of their logistics contracts and Corporate Social Responsibility statements.

In relation to the provision of new and extended lorry parks in locations in which they are required, Government needs to work with industry to determine the locations in which such facilities are required, as well as to ensure large scale planning reform to ensure that planning

applications for this nationally important infrastructure are dealt with positively and promptly and determine appropriate ways which objections from the local community are addressed (as discussed in **section 17.1**).

17.3 Lorry park supply and demand data and research requirements

The UK Government has commissioned overnight HGV parking audits in England in 2011, 2017 and 2022. The frequency of these audits needs to be increased so that a current understanding of the shortfall in lorry park capacity and the locations in which this shortfall exists is available to inform Government policy. Devolved administrations in the UK need to also carry out such data capture and analysis so that national provision is understood.

As discussed in **section 16.2** there are important questions about overnight HGV parking that need to be addressed and which the UK government should investigate. These include (i) issues concerning the relationship between lorry park prices, location, facilities and occupancy rates; (ii) the factors that influence HGV drivers decision-making about whether or not to use lorry parks for overnight parking; (iii) understanding of who pays for the use of a lorry park, the method of payment, and the effect of this on driver parking location choice; (iv) understanding of objections made by local residents to new lorry park developments are based on objective traffic safety risks or disturbance impacts; (v) whether HGV drivers are either travelling further than necessary to find overnight parking spaces and thereby adding to HGV mileage and its traffic, social and environmental impacts or stopping driving earlier than necessary due to concerns about parking availability and thereby affecting their productivity; and (vi) the safety, security, traffic impacts of overnight HGV parking in lay-bys and on-street in industrial estates.

National Government could make local planning authorities responsible for carrying out regular analysis of lorry park demand and supply within these areas of governance and the reasons for any undersupply identified. Local authorities could be made to make use of this information in their preparation of their Local Plans.

17.4 Provision of HGV parking availability information

There is substantial scope to improve the capture and dissemination of HGV parking availability data. This should take the form of both the gathering of parking space data in lorry parks using cameras or sensor pads in parking bays, as well as the systematic provision of this data via mobile phone apps and variable message signs (VMS) at the roadside provided drivers with information about local parking space availability on the roads they are using. Useful work into these topics is being carried out in the USA (Murray and Shirk, 2021). There are HGV parking apps that are available in the UK, such as 'Transparking', 'HGVparking', 'Truck Parking Europe', 'Motorway Buddy', and 'SNAP' - however coverage of HGV parking availability in the UK is not currently very comprehensive in these apps, not all provide real-time data, and some also include lay-bys as well as lorry parks.

VMS information is already widely used for providing car drivers with car park space availability and could readily be used for HGV parking information provision. Online real-time availability data which can be accessed by mobile phone apps could be used to provide drivers with real-time information about the availability of lorry park space as well as the ability to book available parking spaces. However, given laws preventing mobile phones while driving, HGV drivers would have to access such apps while stationary.

Such parking data gathering and dissemination would assist HGV drivers to find such space and prevent them from having to park in lay-bys and at kerbsides in industrial estates. It would also reduce the additional mileage involved in drivers searching for a lorry park space, or the inefficiency (and associated vehicle fleet and vehicle kilometre impacts) of stopping driving sooner than necessary.

There is an important role for national Government to work with private lorry park operators and local authorities in the acquisition and provision of this parking information to HGV drivers and their employers.

17.5 Greater use of collaborative overnight HGV parking facilities

Open networks in which freight transport operators and other businesses with suitable provision make their off-street parking space and facilities available. 'SNAP' provides online booking services for access to approximately 250 HGV parking locations in the UK and EU, comprising existing lorry parks as well as freight operators' depot facilities. Approximately 80 of these 250 sites are freight operators' depot facilities. Founded in 2012, SNAP has signed up secure HGV parking sites at depots where spare parking capacity can be used to provide safe parking facilities and at the same time generate an additional source of revenue for the businesses making their depots available. The quantity of space made available by parking providers can be altered online according to the movements and needs of the business' own fleet. For example, APP Wholesale, a plumbing and heating supplier based in Dagenham, London joined SNAP in July 2019, investing in some groundworks, amenities and security measures and then opening the underused parking space as a lorry park to other users. After several months, APP began receiving repeat fleet users and earning a good return. Between opening in July 2019 and October 2020 the site received 9,000 parking transactions from approximately 3,000 unique HGVs and typically accommodates 25 to 30 HGVs per night. Offering the service has had no negative effects of AAP Wholesale day-to-day plumbing and heating business (SNAP, 2020).

The Transport Association is a national network of approximately 60 freight transport businesses (mostly family-owned businesses), operating a total of approximately 4,000 vehicles and 150 operating depots. It was established in 1946. These businesses share each other's depot facilities for the purposes of HGV parking (Transport Association, 2022). Membership is required so this can be referred to as a closed collaborative network.

Government and trade associations could work together to identify further opportunities for and promote open and closed collaborative networks in which off-street HGV parking are made available to other HGV operators and drivers to increase the capacity of HGV parking facilities both quickly and relatively inexpensively.

17.6 Using two-person crews for long distance HGV journeys

Two-person crews for long distance HGV journeys can help significantly reduce the need for HGV overnight and daytime parking to comply with drivers' hours rules. In these operations, which are common in the USA, one driver sleeps while the other drives. Such operations could be considered for the UK in order to reduce the demand for HGV drivers and overnight HGV parking space.

EU driver's hours rules, to which drivers in HGV drivers operating in the UK are currently subject, currently specify that 45 minute rest break periods can be taken in a moving vehicle. However, while daily rest periods (i.e. sleeping time after a day's driving work) may be taken in a vehicle it is expected that suitable sleeping facilities exist for each driver and that the vehicle is stationary ("suitable sleeping facilities in a vehicle are considered to be a bunk or other type of bed which is primarily designed for sleeping on. If a vehicle has no suitable sleeping facilities then other arrangements should be made, for example, a hotel, hostel, guest or boarding house, chalet, static caravan or rental accommodation") (Driver and Vehicle Standards Agency, 2020). These same results currently apply to weekly rest periods: "It is not permitted to take regular weekly rest periods and any weekly rest of more than 45 hours which include compensation for previous reduced weekly rest in a vehicle. Such rest periods must

be taken in suitable gender-friendly accommodation with adequate sleeping and sanitary facilities such as a hotel, hostel, guest or boarding house, chalet, static caravan or rental accommodation” (Driver and Vehicle Standards Agency, 2020).

Therefore, changes to drivers’ hours rules in the UK would be necessary for two person crews to operate in this way and reduce the demand for overnight HGV parking. This would need to be accompanied by an assessment of the safety of such a change in regulations.

17.7 Drop trailer operations

Drop trailer operations have existed for many years. Rather than an articulated HGV driver having to transport a trailer over a long-distance and then return home (and spend a night away from home), instead they leave the trailer at an inter intermediate location (or rendezvous with another driver with a tractor unit) with the second driver transporting the trailer to its destination and the first driver returning to base or going to another local job. This reduces the distance over which drivers have to transport goods, how frequently they need to stay away overnight, and can help to better utilise vehicle fleets and driver resources, resulting in lower operating costs and fewer vehicles. Therefore, drop trailer operations can reduce the demand for overnight HGV parking space and may prove popular in attracting drivers into the industry who do not like the prospect of being away from home overnight. These drop trailer operations are gaining increasing attention in concepts being developed about the ‘Physical Internet’ in which future freight transport and logistics networks are made open and the equipment used is standardised in order to enable seamless asset sharing and goods flow consolidation, to improve operational efficiency and environmental sustainability (ALICE-EPT, 2020; Landschutzer, 2015; Treiblmaier et al., 2020). However, to carry out these drop trailer operations there is a need for suitable, safe spaces where trailers can be deposited or transferred between tractor units.

17.8 Unaccompanied Roll-on Roll-off trailer operations

Unaccompanied Roll-on Roll-off (RoRo) sea freight (i.e. HGV trailers without drivers and the vehicle drive unit making the crossing and containers) has greater handling costs than accompanied roll-on, roll-off HGV crossings. However, delays caused by Brexit-related checks and other traffic-related factors cause less HGV driver and vehicle costs in the case of unaccompanied movements than the accompanied roll-on, roll-off HGV movements that take place through the Port of Dover and the Eurotunnel in Folkstone. It is therefore possible that, if these delays persist, businesses may reorganise their logistics operations so that greater use is made of unaccompanied movements to other ports in preference to accompanied movements through Kent. The unaccompanied RoRo movements generate less demand for overnight HGV parking than accompanied ones given shorter journey leg distances and journey times.

These other UK ports are better positioned in relation to many of the large 100,000 sq ft plus warehouses in central regions of the UK. Unaccompanied roll-on, roll-off goods movements may provide advantages over accompanied movements from Dover and the Eurotunnel in terms of the cost of driver and vehicle delay, unreliable goods deliveries and poor driver working and welfare conditions associated with delays. It also means that goods can be temporarily stored at the port if warehouse space is limited. However, road freight transport businesses wanting to switch to this approach may need to relocate vehicle depots to avoid longer, more expensive road journeys, may require setting up businesses in mainland Europe to recruit and manage drivers and fleets to deliver and collect these unaccompanied trailers, and for retailers, wholesalers and manufacturers importing and exporting goods in the UK to hold the additional buffer stock to compensate for the greater times typically spent at ports by trailers and containers.

Such a development would have important implications for the total demand for overnight HGV parking and the locations in which this demand arises, with demand in Kent most likely to fall.

17.9 Wider driver and rider welfare issues

The UK Government needs to better ensure that the driver welfare facilities provided at buildings receiving collections and deliveries and services are made clear to the operators of such buildings, and that a robust enforcement system is put in place to deal with any contraventions. Although making toilet and handwashing facilities available to visiting drivers is already a legal requirement, there is evidence that many businesses receiving deliveries and collections are not observing it.

Local authorities have a role to play in reviewing the driver welfare facilities provided within their localities (both at the buildings where these activities take place as well as in public places). This should especially focus on facilities for urban delivery workers providing services associated with online shopping who use vehicles that are not enclosed (such as bicycles, cargo bikes, mopeds and motorbikes) or who work on-foot and are therefore most subject to the weather and at risk of crime to themselves and their vehicles and loads when taking rest breaks or waiting for their next job allocation. In some cases this may involve requiring businesses that make use of such workers (such as restaurants, takeaways, 'dark kitchens, and 'dark stores') to make these toilet, covered rest and secure vehicle parking facilities available as part of their planning permission or licensing. This is especially important in situations in which the lack of such provision also results in negative impacts for local residents.

Depending on the review findings, it will require also potentially require an assessment of the adequacy of the public provision of toilets, covered rest areas and secure vehicle parking locations, as well as the scope for increasing such public provision where it is deemed inadequate.

As the Transport Select Committee recommended "the Government, in consultation with the sector, should devise a binding code of conduct setting minimum standards for employers' and other businesses' treatment of HGV drivers" (House of Commons Transport Select Committee, 2022). Consideration of such a code of conduct should be extended to other workers providing goods and service to businesses in addition to those who drive HGVs, including LGV drivers and those who use cargo bikes, bicycles, mopeds, motorbikes, cars and those who work on-foot.

17.10 Connected autonomous vehicles (CAVs)

It should be noted that Connected Autonomous Vehicles (CAVs) are under development for HGV use. "Connected vehicles can communicate information with other vehicles, road infrastructure and devices, while autonomous vehicles can perform certain driving tasks without human input, such as braking and steering, with more advanced and future models having the potential to become 'self-driving'. Collectively, CAVs have the potential to deliver significant societal benefits to the UK, including reducing the number of collisions on our roads, improving access to travel for those who currently find it difficult, and increasing the efficiency of transport networks to make them safer, smoother, and more efficient" (Britain Thinks, 2021, p.13).

Six levels of autonomous driving have been defined from 0 to 5. At level 0 there is no automation, with a human driver totally in control of the vehicle. Level 3 is referred to as 'conditional driving automation', and level 4 as 'high driving automation'. While at level 5 ('full driving automation'), the vehicle is capable of driving itself everywhere in all conditions (SAE International, 2021).

CAVs are expected to have various social and environmental benefits including helping to reduce traffic congestion, improving fuel consumption and thereby reducing GHG emissions and local air pollutants, improving road safety, and enhancing vehicle utilisation, thereby reducing the total vehicles required to be produced (Paddeu et al., 2019). Fuel savings are the most commonly mentioned benefit of goods vehicle platooning on longer distance journeys using CAVs due to more efficient driving. However, the extent of these fuel savings depends on factors including vehicle technology, distance between vehicles, congestion levels, vehicle speed and weather conditions. Different trials provided fuel savings of 3–11% (Paddeu and Denby, 2021). The world's first approved level 3 car became available on a lease basis in Japan in 2021 (Honda, 2021). The National Infrastructure Commission has noted this future development in its report on freight transport saying that, "CAVs could help improve driver safety, address the issue of HGV driver shortages, and potentially make journeys more efficient with vehicles able to run long distances without stopping (National Infrastructure Commission, 2019).

Research and trials are proceeding into applying the connected autonomous vehicle (CAV) concept to goods vehicles. These include platooning trials, in which HGVs travel together over long distances on a motorway (Paddeu and Denby, 2021), Ocado trials of an autonomous grocery delivery LGV in an urban environment in London accompanied by a human (Burgess, 2017; Oxbotica, 2017) to Nuro's regulatory exemption from the US Department of Transportation and the National Highway Traffic Safety Administration (NHTSA) to trial a small, battery electric, fully autonomous last-mile delivery vehicle (known as the R2 – a level 4 CAV) on public roads in a neighbourhood in Houston, Texas with a permitted speed of up to 25 miles per hour (Bhattacharya 2021; Ferguson, 2020). Trials of the Nuro R2 are now also taking place in California and Arizona (Nuro, 2020). At present, human supervisors are required to follow, travel in or remotely observe such CAVs to monitor their performance and ensure safety on public roads and public places during trials (Nuro, 2019). Some companies have also developed small CAVs that operate on pavements (such as Starship) but these raise regulatory and safety concerns. Flytrex has also started meal delivery trials to suburban homes in North Carolina, USA using aerial drones (Flytrex, 2022). Stakeholder workshops with freight transport operators have identified their concerns about using CAVs that share pavement or road space with the public in busy, urban locations (Paddeu and Parkhurst, 2020). Autonomous vehicles and robots are already widely used in warehouses, distribution centres, factories and on private premises such as mines and quarries (Flämig, 2016).

CAVs have higher capital costs than standard goods vehicles due to the equipment they require. Fully autonomous vehicles require GPS systems for vehicle positioning, LIDARs and video cameras for monitoring the vehicles' surroundings, ultrasonic sensors for monitoring close objects, odometry sensors for distance measurement, connectivity features to exchange information with the outside environment (including other cars or infrastructure) and on-board computing systems. However, the costs of this technology are expected to fall rapidly as development progresses and mass production takes place. On the other side of the equation, CAVS are predicted to result in improved vehicle utilisation and to substantially reduce vehicle operating costs when human drivers are no longer required, given that driver-related costs can represent 30-60% of goods vehicle operating costs (see **section 7.1**). One study has estimated that fully autonomous goods vehicles will lead to falls in the total cost of vehicle ownership of 15-30% (Wadud, 2017).

The timescale for level 5 implementation and the circumstances and operating environments in which such goods vehicles would be used remains unclear. A research report commissioned by Nuro that has considered only LGV-type CAVs for deliveries of online shopping to residential addresses in urban areas has developed three scenarios for uptake based on expert interviews and existing studies to identify trends in vehicle regulation, the cost of CAVs, online shopping penetration, customer behaviour and willingness to pay. The

scenarios were: (i) conservative – very limited use of CAVs for delivery of online shopping by 2035, (ii) gradual – more rapid uptake of CAVs for delivery of online shopping by 2035, and (iii) disruptive - high uptake for CAVs for delivery of online shopping by 2035 (Steer, 2020). There are a range of safety, security, technological, operational, attitudinal, infrastructural and financial challenges that need to be addressed before AVs (be they road-based, footway-based, or air-based) become commonly used for last-mile deliveries.

There is even less certainty about the likely uptake of fully autonomous LGVs and HGVs across all subsectors of road freight transport. Whenever such fully autonomous goods vehicles (level 5) are introduced they will have important implications for the demand for overnight HGV parking and rest areas, as these would not be required by such vehicles (as there would be no human driver who needs to comply with driver hour regulations). However, human personnel are still likely to be required to carry out goods movement and delivery from these vehicles to the receiver and various depot tasks that robots are either incapable of or cannot provide economically. Therefore, toilet/handwashing and other welfare needs of these workers will remain.

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