



Lorry Parking Demand Assessment

National Highways

September 2023


Quality information

Prepared by



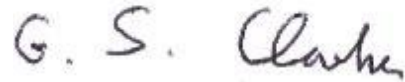
Jack Chawner
Graduate Consultant – Freight and Logistics

Checked by



Paul Davison
Associate Director –
Freight & Logistics

Approved by



Geoff Clarke
Regional Director – Freight & Logistics

Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

# Hard Copies	PDF Required	Association / Company Name

Prepared for:

National Highways

Prepared by:

Jack Chawner
Graduate Freight & Logistics Consultant
T: +44-7467-701980
E: jack.chawner@aecom.com

AECOM Limited

4th Floor
100 Embankment
Cathedral Approach
Manchester
M3 7FB
United Kingdom

aecom.com

© 2023 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Contents

Executive Summary	5
1. Introduction	8
2. Data Collection Methodology	11
3. Lorry Parking Demand -National/Regional Overview	15
4. Identified Areas of High Demand	22
5. Spatial Approach to Assessment	27
6. Lorry Parking Demand by Local Planning Authority Area.....	31
7. Lorry Park Success Factors	48
8. Summary and Conclusions	53
Appendix A Regional Assessments	A
Appendix B: Local Authorities Scoring Above 12 in the Analysis.....	B

Figures

Figure 0-1: Lorry Park utilisation in England	6
Figure 0-2: Lorry parking issues by local authority	7
Figure 2-1 All locations visited.....	12
Figure 2-2 Map from the Government Offices for the English Regions showing the nine regions.....	12
Figure 3-1. Lorry Park utilisation in England	17
Figure 3-2 Layby usage	18
Figure 3-3 Industrial Estates Utilisation.....	20
Figure 3-4 Combined off-site parking	21
Figure 4-1: Midland's hotspot of high off-site parking and number of critically utilised lorry parks	23
Figure 4-2 Hotspot with Layby Usage and Critical Lorry Parks – South East and East of England	24
Figure 4-3 Hotspot with Layby Usage and Critical Lorry Parks – Port of Liverpool and North West	25
Figure 4-4 Hotspot with Layby Usage and Critical Lorry Parks – Solent to Midlands.....	26
Figure 6-1: Lorry parking issues by local authority	32
Figure 6-2: Proposed Birchwood Services in Warrington, M62 J11.....	36
Figure 6-3: Importance of the MRN in BCP.....	40
Figure 6-4: The primary route choices between Southampton and Exeter	40
Figure 6-5: The consideration of wider freight geographies across local authority boundaries	41
Figure 6-7: LPAs by number of Lorry Parks critically utilised.....	44
Figure 6-8. Unmet Lorry Parking Demand against SRN	45
Figure 6-9: Map of HGV flows against unmet lorry parking demand (utilisation and off site parking).....	46
Figure 6-10: M6 West Midlands to Scottish Borders Route Strategy Corridor.....	47
Figure 7-2: Lorry parking success factors in Cumbria	49
Figure 7-1: HGV parking demand in Cumbria	49
Figure 7-3: LTC route map	50
Figure 7-4: Shortlisted sites for new potential lorry parking (with considered success factors) under the LTC implementation.....	52

Tables

Table 2-1: Overview of all data collected at different site types	13
Table 3-1 Lorry Park Categorisation.....	15
Table 3-2 Critically and severely utilised lorry parks.....	16
Table 3-3 Regional Layby Utilisation	18
Table 3-4 Industrial Usage Categorisation	19
Table 3-5: Regional Industrial Estates Usage	19
Table 6-1: Local authorities with the worst lorry parking issues.....	33
Table 6-2: The acknowledgement of lorry parking provision in LTPs and LIPs.....	38
Table 6-3: Additional Demand Indicator: Top 8 LPAs for no. of over utilised lorry parks.....	43

Executive Summary

This report has been developed to provide National Highways with an assessment of lorry parking demand on or close to the Strategic Road Network (SRN). The Department for Transport (DfT) tasked National Highways with the evaluation of lorry parking facilities and identification of areas experiencing high demand and insufficient provision. Having enough lorry parking and rest areas near the SRN (within approximately 5 kilometres) is important for National Highways to meet three main goals: Safety, Customer Service, and Delivery.

The 2022 lorry parking research study provides an accurate assessment of lorry parking provision and demand near the SRN in England. Through physical audits and a comparison with the previous study in 2017, the findings inform public bodies and help support the industry in meeting the parking and welfare needs of drivers while supporting the country's economic requirements.

Quality of Data Assurance

AECOM and DfT established a reporting and assurance mechanism that ensured that data was checked not just by the on-site teams but also by those overseeing the surveys and those responsible for data analysis. Capacity and utilisation of lorry parks, lay-bys and industrial estates were assessed against previous years and for several key routes monthly (to assess seasonal changes and corroborate findings). DfT and partners are therefore confident that this is a dataset that can be trusted, reported on and used for a variety of applications.

Lorry Parking Demand in England

Figure 0-1: Lorry Park utilisation in England demonstrates that there are significant areas of unmet demand across England, consistent with previous surveys undertaken in 2010 and 2017. In the left hand diagram, lorry parks marked with a red or black dot were nearly or completely full at the time of the audit and this has been translated into a heat map on the right.

The analysis showed that there were 4 key areas of demand:

- East and West Midlands
- South East/ East of England
- Port of Liverpool/Wider North West
- Solent to Midlands Corridor

Success factors for lorry parks include being competitively priced, whilst offering facilities that enable HGV drivers to properly rest in a safe and secure environment. Where lorry parks do not meet these requirements, they are often underutilised, even in areas of otherwise high and unmet demand.

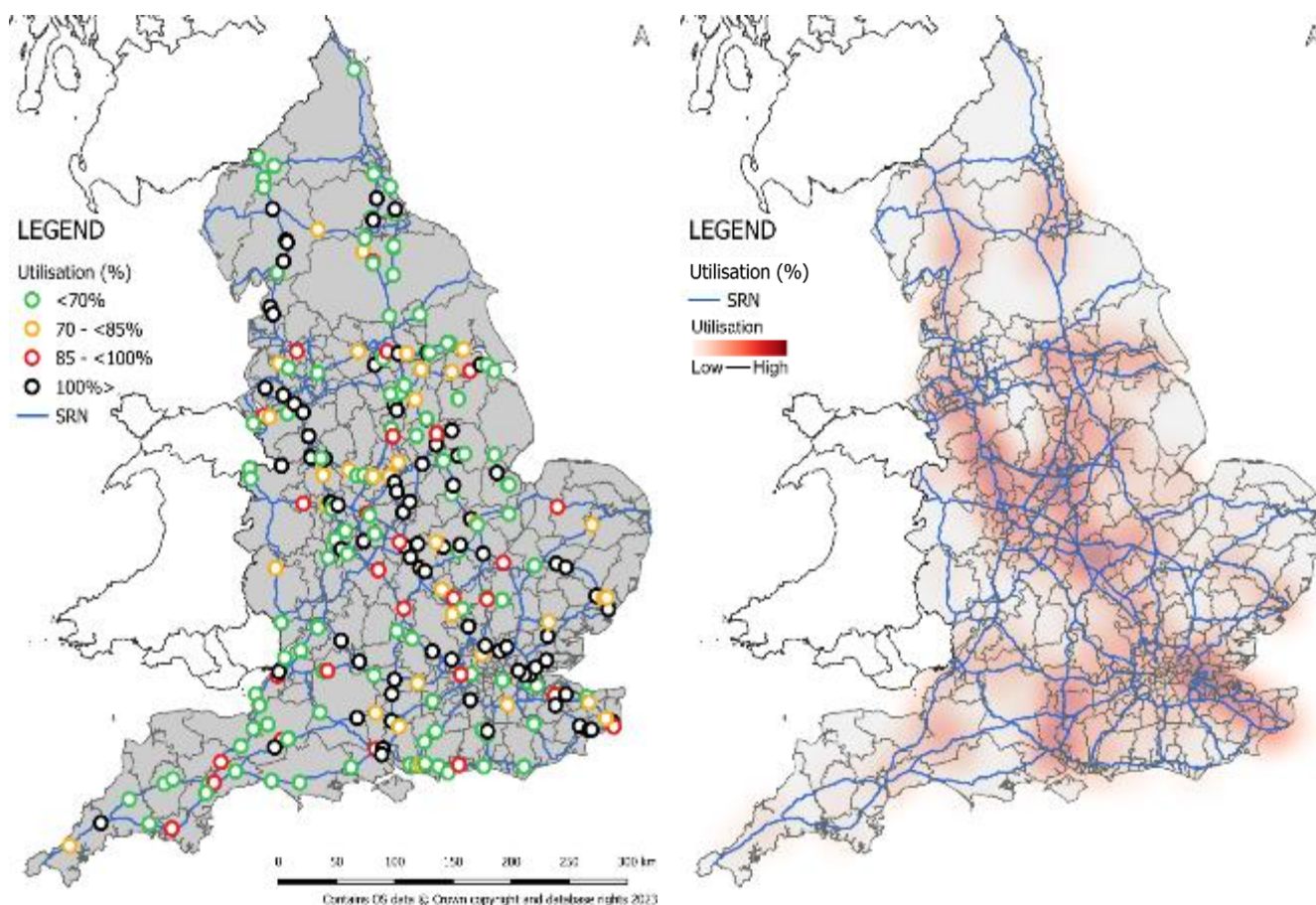


Figure 0-1: Lorry Park utilisation in England

Spatial Context

Local authorities need support to help ensure that lorry parking demand is met by safe, secure and comfortable facilities. Local Planning Authorities (LPAs) are tasked with the responsibility of aligning land-use planning with economic needs and are directly responsible for approving applications for new lorry parks. Therefore, it is essential for them to have a straightforward means of evaluating lorry parking demand in their respective areas.

National Highways can help by providing this information in a format that allows easy interrogation and clearly shows demand by LPA, comparison to other areas and where demand is present across several local authorities. Fundamentally, the LPDA can be used to influence local plans. Therefore, it is most suitable to develop the LPDA at the LPA level. The data derived from DfT Lorry Parking Survey, supplemented by the analysis conducted in this report, facilitates this process. This is therefore our recommended way of applying the data spatially.

Demand by LPA area

In conducting a comprehensive assessment, a ranking system was developed that evaluated local authorities by comparing the severity of their lorry parking issues in relation to each other. This system allows for a better understanding of which areas warrant closer inspection and attention, as demonstrated below in Figure 0-2.

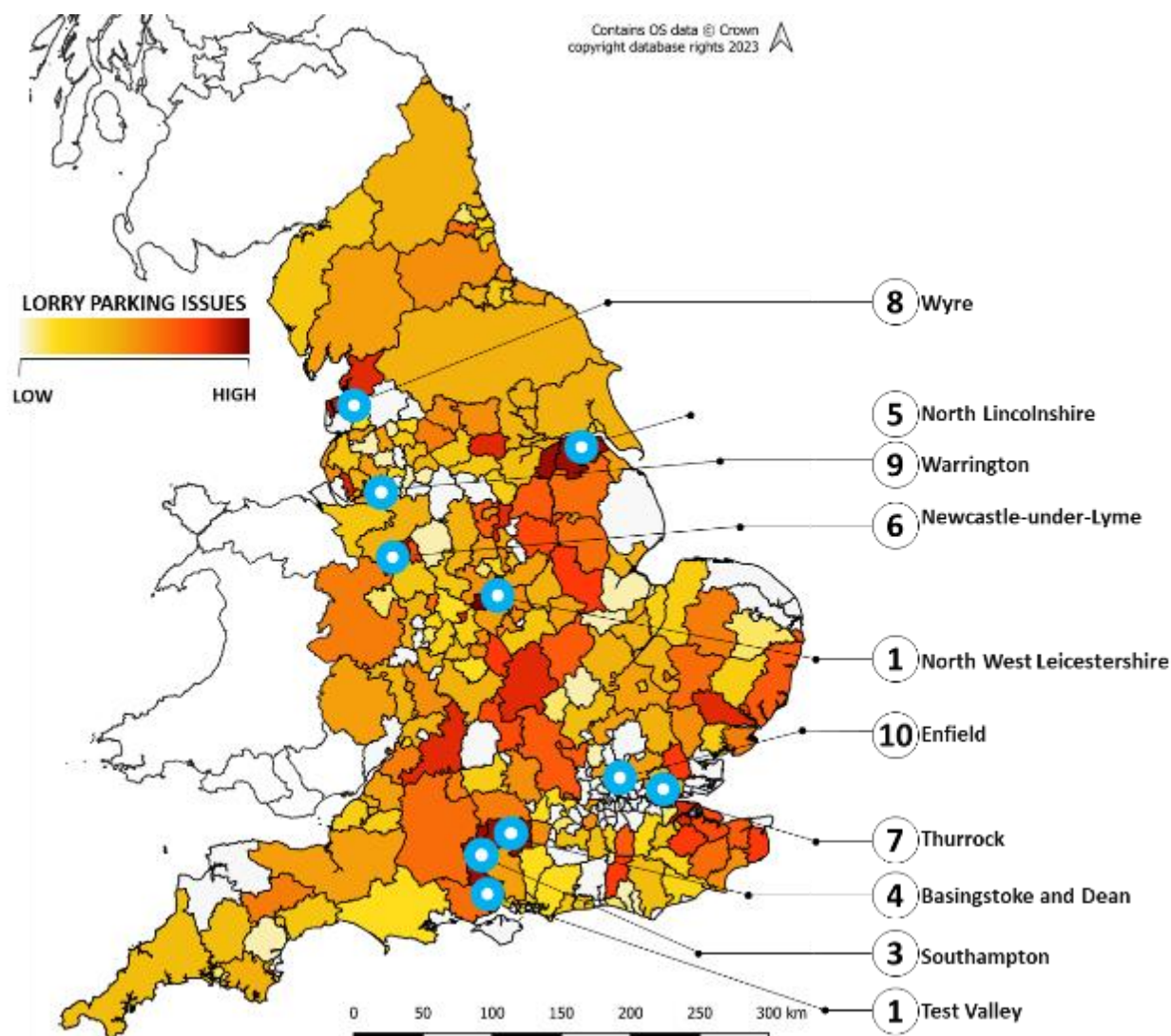


Figure 0-2: Lorry parking issues by local authority

The assessment shows that there is a requirement for National Highways to support LPAs in accommodating new or improved lorry parks. The tool that has been developed can help partners assess the extent to which the need for new lorry parking provision is prevalent in their area. This can be an important resource in the goal of delivering new and better lorry parking, that will benefit the freight sector and all those who live and work in areas affected by informal lorry parking.

1. Introduction

Background

This report has been developed to provide National Highways with an assessment of lorry parking demand on or close to the SRN.

The DfT tasked National Highways with the evaluation of lorry parking facilities and identification of areas experiencing high demand and insufficient provision. Having enough lorry parking and rest areas near the Strategic Road Network (within approximately 5 kilometres) is important for National Highways to meet three main goals: Safety, Customer Service, and Delivery.

This Lorry Park Demand Assessment is being produced in direct response to consultation responses on DfT Circular 01/2022 which replaced the previous guidance Circular 02/2013.

Paragraph 81 of Circular 01/2022¹ establishes that in areas where there is an identified need for greater HGV parking, National Highways will work with relevant local planning authorities to ensure that local plan allocations and planning application decisions address the shortage. Table 2 of the Circular also establishes that twice as many HGV spaces shall be provided at motorway service areas in these locations than the current minimum provision (0.5% of the average daily HGV traffic flow). Following the publication of Part 2 of the National Survey for Lorry Parking, National Highways will update its 2019 Lorry LPDA study to formally identify those areas of high demand. Where these findings are agreed by the Department for Transport, the higher threshold for HGV parking at motorway service areas will apply for applications submitted after the date of the LPDA's publication. Timeframes for subsequent updates to the LPDA will be agreed with the Department for Transport.

In March 2022, the DfT asked AECOM's Freight Team to conduct a detailed audit of over 4,000 parking areas, including official lorry parks, Motorway Service Areas, industrial estates, and laybys. This research followed on from the same audit conducted in 2017. Both the 2017 and 2022 audits revealed that there is a growing need for overnight lorry parking, identifying a shortage of facilities in six regions across England. Supply of new parking spaces is continuing to fall behind the demand for additional spaces and hence worsening the shortfall.

Outputs from the recently completed DfT Lorry Parking Audit (March 2022 survey data) provide an opportunity to review the 2019 LPDA (2017 audit data) and other studies/information that have since emerged.

It is recognised that there is a need for National Highways to work with LPAs to ensure that local plan allocations and planning application decisions address the shortage of lorry parking spaces. This work will help local authorities plan for and support Lorry Parks in their Land Use Planning Policy and Local Transport Plans (LTPs), as well as any other relevant policy and strategy positions. Therefore, there is a need to update this data and collaborate with local authorities to implement measures that address lorry parking challenges.

¹ <https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development/strategic-road-network-and-the-delivery-of-sustainable-development>

Purpose of this study

The main objective of this study is to analyse driver behaviour patterns on key freight routes, both qualitatively and quantitatively in terms of parking. The aim is to identify the areas with the highest demand for lorry parking and the least available supply. By focusing on the strategic spatial geography, we can pinpoint locations that are most likely to need new or expanded lorry parks. This information will be valuable for National Highways to provide input to the Local Authority Development Plan process and meet its obligation to provide suitable facilities for freight users.

This report also explores how data relating to the 2023 LPDA should be applied in a spatial context. The aim is to ensure that it is in a format that is useful for National Highways and partners and that the approach and associated methodology is robust and provides an accurate interpretation of lorry parking demand in an affected area.

Moreover, this study not only provides insights into the areas of highest demand for lorry parking based on all available data, but also considers factors that contribute to successful lorry park locations. The approach used in this work is structured into two stages, which will be discussed in detail in the following chapters.

- **Existing supply and demand** – this draws directly from the 2022 DfT National Survey
- **Local authority-led demand analysis** – Conducting an analysis by local authority is essential to gain a comprehensive understanding of the specific needs and requirements within different regions. This approach enables targeted and tailored solutions to be developed whereby resources and efforts are effectively allocated.

Document Structure

This document is split into 8 sections to highlight the key findings of the 2022 National Lorry Parking Audits.

Section 2 of the document details the data collection approach for the 2022 survey. This method involves national audits, comparisons with prior surveys, and underscores the crucial role of reliable data in shaping DfT policies. Additionally, it clarifies the routing and scheduling of audits, providing reasons for collecting data in specific locations, such as laybys, industrial estates, and lorry parks. Assurance is also given to imply the methodology is tried and tested.

Section 3 of the report summarises the results of the 2022 survey. It covers off-site and on-site trends, explores how lorry parking spaces are used, and identifies regions in the country where there is a high level of unmet demand.

In Section 4, the document details broader regions with significant unmet demand. This includes the East Midlands and West Midlands Logistics Hub, South East and East of England, Port of Liverpool and North West England, and the Solent to Midlands Corridor. The purpose of this section is to give a broad overview of areas facing notable challenges.

Section 5 reviews the different spatial analysis options for the study. An approach at the local authority level is justified with a list of pros and cons. Analysis at the local authority level is best suited to

precisely identify regions with a significant unmet demand for lorry parking, further informing National Highways for future work.

Section 6 is a longer section that goes deeper into the data analysis performed at the local authority level, building upon the approach outlined in section 5. It provides a more detailed explanation of the spatial methodology, which includes the use of a scoring system to comparatively assess local authorities and determine which are dealing with the most pressing unmet demand challenges.

The ten local authorities with the highest unmet demand are interrogated to understand localised unmet demand. This considers factors like the role of wider logistics hubs or proximity to the SRN and ports. The section subsequently acknowledges the responsibilities and actions required by these ten local authorities to address lorry parking issues by incorporating solutions into their Local Transport and Implementation Plans.

Limitations to the approach are also addressed in this section. These limitations involve the possibility of overarching factors like route choice or local freight geographies. As a result, alternative demand indicators are discussed to support any conclusions drawn from the spatial analysis.

Section 6 further explores an alternative spatial approach, which examines unmet demand in relation to the SRN and National Highways' 20 Route Strategies. The objective is to identify any "cross-border" issues where unmet demand remains consistent along an entire route or corridor, spanning multiple local authorities.

Section 7 addresses lorry park success factors. This section identifies two examples where there is inconsistent trends in demand and seeks to understand why. The M6 in Cumbria is used as an example where utilisation rates vary due to the availability of specific facilities and pricing. Another case study is the Lower Thames Crossing, which serves as an example to help understand the elements that make a lorry park successful and provides insights that can inform future plans for the development of new lorry parks.

Section 8 provides a summary and draws conclusions from the analysis.

2. Data Collection Methodology

This section details the methodology used to collect the data that informed this study, aiming to establish its credibility and suitability for assessing Lorry Parking Demand in England.

The national audits took place in March 2022 (with subsequent monthly surveys in some areas of North West England, the East of England, South East England, and the West Midlands). Outputs from the 2022 survey provided an opportunity to review the 2019 LPDA within the framework of newly emerged studies and information. Further to this there is an opportunity to provide a direct comparison of overnight on-site and off-site utilisation with the previous 2010 and 2017 surveys (this shows both trends in lorry parking demand and acts as quality assurance, meaning any unexpected data can be cross checked), and to assess utilisation of any newly identified sites. The 2022 night audits were undertaken on Mondays, Tuesdays, Wednesdays, and Thursdays between the hours of 6.00pm and 2.00am.

DfT recognise the importance of robust data collection to inform policy development regarding lorry parking and the well-being requirements of drivers. The 2022 lorry parking research study was aligned with the DfT's objective of creating an evaluation of lorry parking availability and demand. These surveys, as with those undertaken in 2010 and 2017, provide invaluable evidence to support the DfT in their efforts to address these issues effectively.

Teams of two auditors travelling in one car on pre-arranged routes conducted each nightly audit. Over 4,000 sites were visited, as illustrated in Figure 2-1, including 326 on-site parking facilities, 827 industrial estates and 3,241 laybys within five kilometres of the SRN. For this study, 'off-site' locations refer to industrial estates and laybys and 'on-site' parking facilities refer to independent truckstops, local authority truckstops, Motorway Service Areas (MSAs) and Trunk Road Service Areas (TRSAs).

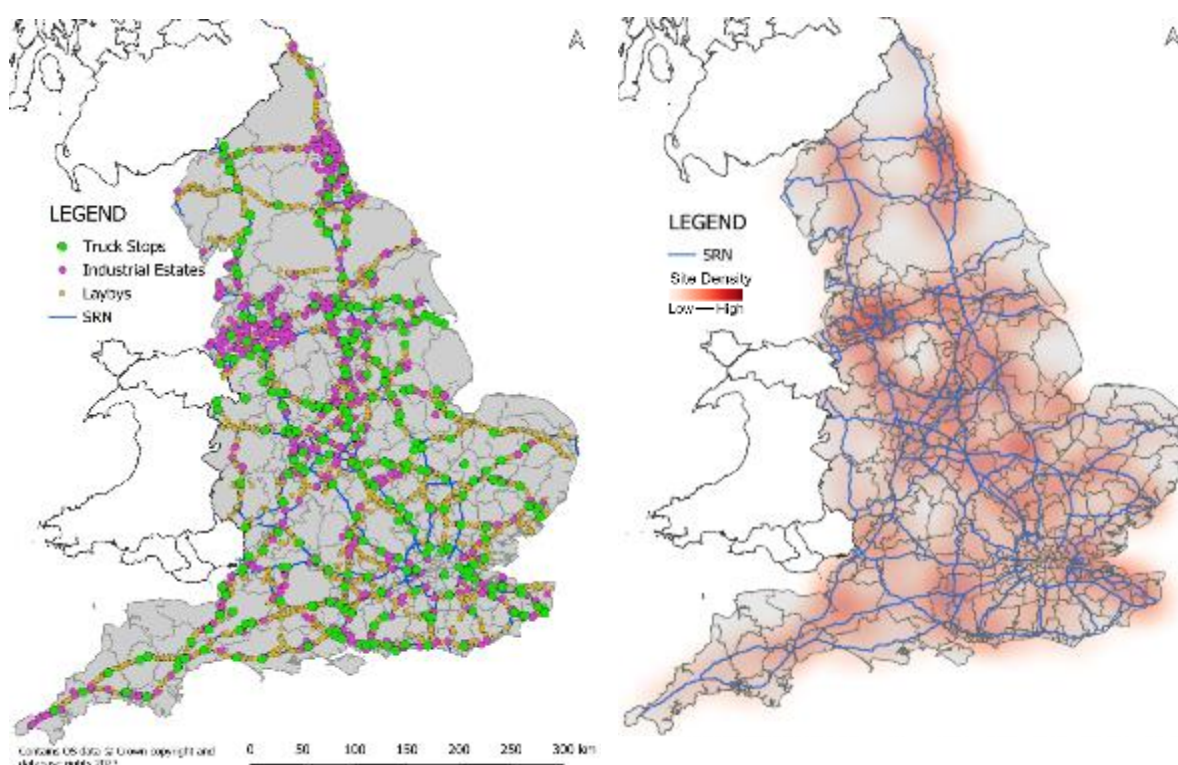


Figure 2-1 All locations visited

Routing and scheduling of audits

As in 2010 and 2017, the country was split into nine separate regions. The regions were originally based on the nine administrative regions from The Government Offices for the English Region, and the same regions and boundaries have been used for the 2022 study, as listed below, and shown in Figure 2-2.

1. East Midlands
2. East of England
3. London
4. North East
5. North West
6. South East
7. South West
8. West Midlands
9. Yorkshire and the Humber



Figure 2-2 Map from the Government Offices for the English Regions showing the nine regions

A team of two auditors was allocated to a region for several nights, or weeks, depending on their availability. Each area manager was responsible for planning the nightly routes of the audit team(s) working in their region. This was done by using a combination of the Esri ArcGIS Field Maps application and route optimisation software to produce route maps containing multiple destinations for each team to visit during each audit night. This approach meant that the amount of time, distance, environmental impact, and financial cost of undertaking the lorry parking audits could be minimised as much as possible.

Data Collected

The purpose of the study was to determine the number, type, and capacity of on-site parking facilities, calculate and map the utilisation at on-site facilities, and record and map the extent of other indicators of demand so that the national parking capacity for lorries for 2022 could be established. Parking capacity at industrial estates and laybys (off-site) is difficult to quantify due to there being no clearly defined parking spaces and was therefore not included in the scope of the study.

However, AECOM did manage to estimate the capacity for about 28 per cent of laybys (894 sites with a total capacity of 2,250) – this is not included in the on-site capacity. Auditors also collected data around driver welfare and vehicle support. The data collected was slightly different for on-site and off-site locations, recording the facilities each type of site can offer. This is shown in

Table 2-1.

Independent Truckstops, Local Authority Truckstops, MSAs and TRSAs	Laybys	Industrial Estates
Capacity and Demand	Demand	Demand
Number of Spaces	Number of UK registered vehicles	Number of UK registered vehicles
Number of UK registered vehicles	Number of foreign registered vehicles	Number of foreign registered vehicles
Number of foreign registered vehicles		
Driver Welfare	Driver Welfare	Driver Welfare
Parking charge	Oxbow	Café
Toilets	Toilets	Lighting
Showers	Café	
Café	Lighting	
CCTV		
Lighting		
Security fencing		
Accommodation		
WiFi		
Shop		
Bar		
Gym		
Laundry		
Driver Lounge		
	+Capacity recorded where possible	
Vehicle Support		
Filling station		
Charge points		
Truck wash		
Accept refrigerated trailers		
Provisions for vans		

Table 2-1: Overview of all data collected at different site types

Assurance

This approach is a ‘tried and tested’ methodology which has been agreed, applied and finessed over three different surveys in 2010, 2017 and 2022. The results have been used to inform responses to Lorry Parking by the DfT for over 10 years and are considered by the freight sector to accurately reflect demand on or around the SRN.

AECOM and DfT established a reporting and assurance mechanism that ensured that data was checked not just by the on-site teams, but also by those overseeing the surveys and those

responsible for data analysis. Capacity and utilisation of lorry parks, lay-bys and industrial estates were assessed against previous years and for several key routes monthly (to assess seasonal changes and corroborate findings).

DfT and partners are therefore confident that this is a dataset that can be trusted, reported on and used for a variety of applications.

Summary

The 2022 lorry parking research study provides an accurate assessment of lorry parking provision and demand on or around the SRN in England.

Through physical audits and a comparison with the previous study in 2017, the findings inform public bodies and help support the industry in meeting the parking and welfare needs of drivers while supporting the country's economic requirements.

The study reveals a shortfall in on-site parking facilities, with 21,234 vehicles observed within five kilometres of the SRN against an on-site capacity of 16,761. This results in an excess of 4,473 vehicles compared to capacity. Several factors have contributed to the demand for lorry parking, including economic activity, population growth, trading patterns, journey distances, driver shortages, cost differentials, security and welfare needs, and safety concerns. While the precise impact of each factor remains uncertain, the study highlights that the demand for lorry parking spaces has outpaced the supply of additional spaces over the past five years.

Furthermore, the study identifies 127 on-site facilities that are at a critical level, with 85 percent capacity or more. For instance, Ashford International Truckstop is highlighted as an example, which regularly turns away over 100 vehicles on average.

The assurance statement acknowledges the importance of the 2022 lorry parking research study in providing valuable insights to address the growing demand for lorry parking spaces, prioritise improvements in infrastructure and services, and ensure the well-being of drivers while supporting the economic interests of the country. The DfT and relevant public bodies are committed to taking necessary actions to address the challenges and bridge the gap between demand and supply in lorry parking provision.

3. Lorry Parking Demand - National/Regional Overview

This section outlines the headline findings from the 2022 Lorry Parking Survey on a national and regional basis, which helps identify the overall picture and any immediate 'hotspots' where there is an undersupply of formal lorry parking facilities. Further analysis on these hotspots has been undertaken to explore these areas further.

On-site parking

The assessment of on-site truck parking facilities involves comparing the number of parked vehicles to the existing capacity, providing valuable insights into areas where additional truck parking provision is needed. In the previous demand study conducted by the DfT, a categorisation system was established (Table 3-1) to determine when high utilisation becomes problematic.

It is acknowledged that when utilisation reaches 85 percent or higher, drivers face challenges in finding parking spaces due to the size and positioning of the vehicles. Consequently, at this threshold, the Lorry Park is deemed practically full. A further utilisation rate of over 100% was added to the categorisation system. This differentiated the lorry parks which were nearly at capacity and those which were completely full.

Description	Utilisation (%)
Severe	≥100.00
Critical	≥85.00 – <100.00
Serious	≥70.00 - <85.00
Acceptable	<70.00

Table 3-1 Lorry Park Categorisation

This section aims to identify areas with highly utilised lorry parks (i.e. lorry parks with above 85% utilisation falling under the 'severe' or 'critical' categories). As can be seen in Figure 3-1, 127 out of 326 lorry parks (on-site) are identified as critically or severely utilised, with utilisation above 85 percent. This is significantly higher than the 112 lorry parks recorded under the same categories in 2017.

Major freight arteries, such as the M1, M3, M4, M5, M6, M11, M18, M20, M25, M27, M40, M56, M62, and M180, are typically home to critically or severely full services. Moreover, several A-roads, including A1, A3, A5, A12, A14, A20, A23, A27, A30, A34, A38, A46, A50, and A417, also feature lorry parks that experience significant utilisation. It is important to note that an acceptable level of utilisation (indicated by a green dot in Figure 3-1) does not always imply an underutilised or unsuccessful lorry park. Rather, it can suggest that, at the time of the survey, the lorry park was relatively quiet.

As shown in Table 3-2, the South East and East Midlands have the highest number of critical and severe lorry parks (25 each), with the East Midlands having 20 lorry parks over 100% utilised. The average utilisation in these two regions is roughly the same, with the East Midlands at 82% and the South East 83%. Later in the report, further analysis on lorry park utilisation is carried out to identify local authorities have high demand for existing lorry parks.

Table 3-2 also identifies local authorities where there are several critically and severely utilised parks. Only areas with at least three existing critical/severe lorry parking facilities have been included. Generally, regions that have the greatest number of critically/severely utilised lorry parks also include the most local authorities where all lorry parks are critically/severely utilised. It is worth noting that the data presented in the table below does not necessarily indicate the areas in which demand for lorry parking is the greatest, but rather where there is the greatest potential for unmet demand.

There are several similarly located lorry parks which incur varying levels of utilisation, which demonstrate drivers' preferences for security, showering facilities and areas for socialising. These factors are discussed in the next section.

Region Local Authority	Total lorry parks	No. Critical utilisation (≥85.00 – <100.00)	No. Severe Utilisation ≥100.00	Total ≥85.00	Average Utilisation
South East	64	11	14	25	83%
East Midlands	49	5	20	25	82%
North Northamptonshire	6	1	2	3	70%
West Northamptonshire	7	0	5	5	101%
East of England	44	4	16	20	92%
Thurrock	4	0	4	4	121%
South West	44	11	4	15	62%
Somerset	11	3	1	4	65%
Wiltshire	6	2	1	3	71%
North West	36	5	9	14	77%
Cheshire East	5	0	3	3	80%
Westmorland and Furness	9	0	4	4	81%
West Midlands	36	9	5	14	76%
Yorkshire and Humber	37	6	4	10	66%
Wakefield	5	2	2	4	95%
North East	11	0	3	3	56%
London	5	0	1	1	49%
Total	326	51	76	127	71%

Table 3-2 Critically and severely utilised lorry parks

In the left hand diagram in Figure 3.1, lorry parks marked with a red or black dot were nearly or completely full at the time of the audit and this has been translated into a heat map on the right.

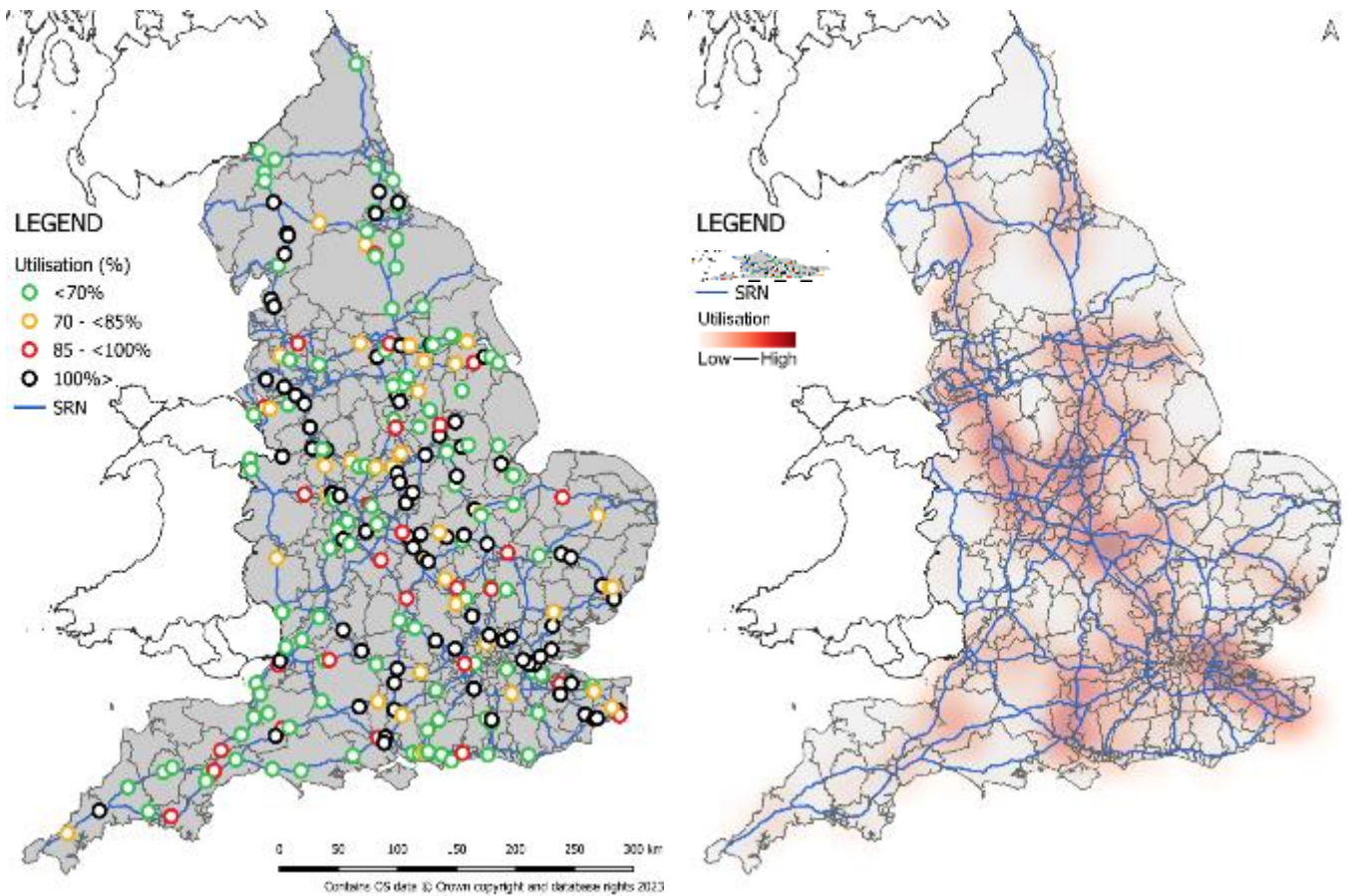


Figure 3-1. Lorry Park utilisation in England

Off-site parking

In total, 21,234 lorries were parked overnight across England, with 35 percent of them observed to be parked off-site. A total of 16,761 on-site spaces were recorded, which means that even if all of these spaces were filled, a theoretical excess of 4,473 lorries remain which cannot park in designated lorry parking areas. In practice, some of the available parking capacity is left unused on a daily basis and a significant number of HGVs park in laybys, industrial estates and other inappropriate places overnight.

Lay-bys

A layby has been considered as being used for overnight lorry parking if one or more lorries were recorded. Table 3-3 and Figure 3-2 below show layby-usage across the nine English regions. Around 50% of all laybys (1,605) have been used by at least one lorry during the survey. 1,636 laybys were recorded with no parked lorries. Outside London, the South East had the most used laybys (308) as well as the highest percentage of used laybys (60%). Although London has the highest percentage of used laybys, it may not accurately indicate the demand, due to the small sample size (only eleven laybys in total). However, it is known from consultation that lorry parking problems do exist in London.

The use of laybys has marginally changed between the 2017 and 2022 survey. Some of the biggest changes can be seen in the West Midlands, where utilisation fell from 65% to 52%, and in North West England, where utilisation fell from 51% to 39%.

Region	Total Laybys	Used Laybys	Percentage
--------	--------------	-------------	------------

London	11	8	73%
South East	515	308	60%
East of England	480	261	54%
East Midlands	518	269	52%
West Midlands	287	148	52%
Yorkshire and Humber	305	134	44%
South West	548	217	40%
North West	327	129	39%
North East	250	86	34%
Total	3,241	1,605	50%

Table 3-3 Regional Layby Utilisation

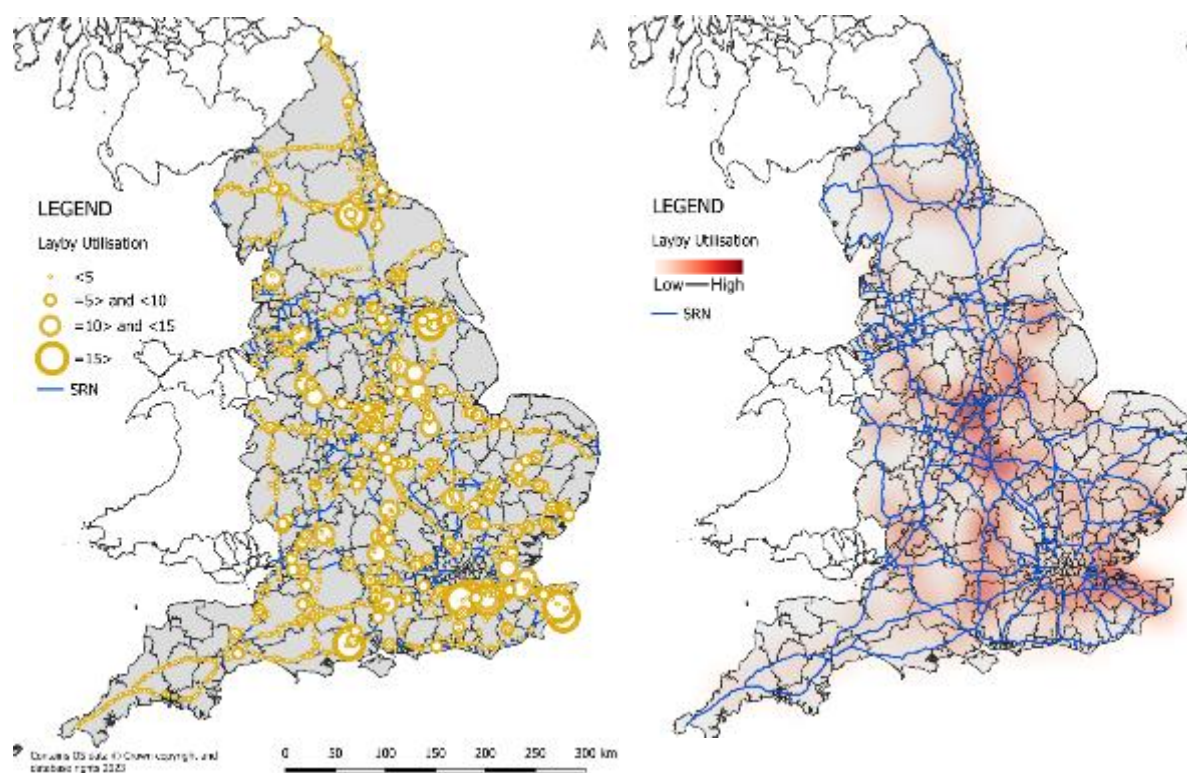


Figure 3-2 Layby usage

Industrial areas

Industrial areas with off-site lorries are categorised into three groups (i.e., low usage, medium usage and high usage) as shown in Table 3-4 below. This helps to differentiate areas with high demand for lorry parks.

Categorisation	Number of Lorries Parked
Low usage	5 or less
Medium Usage	5 to 10
High Usage	More than 10

Table 3-4 Industrial Usage Categorisation

Error! Reference source not found. and Figure 3-3 show industrial estate usage across the nine English regions. The North West had the most industrial estates surveyed (183), with London (expectedly) having the lowest (19). The East Midlands and North West had the most highly utilised industrial estates (at 21 and 16 sites respectively). The East Midlands also had the highest percentage of highly used sites; 21% of all industrial estates had more than 10 lorries parked in them. Despite having fewer highly utilised sites, the East of England had 18% of sites with over 10 lorries.

The heat map in Figure 3-3 demonstrates areas with high industrial estate utilisation include the A34 near Southampton, the SRN near the Port of Liverpool (M6, M57, M58 and M62), large swathes of the Midlands (M1, M6, M69 and A5), the region around London Gateway (M20, A2, and A13) and some activity in North East England (A1, A69, A194[M]). The 2022 audit revealed marginal changes from the 2017 audit. For instance, London had no highly utilised sites in 2019, but had 2 in 2022, and the East of England and East Midlands both reported an increase of 6%. The North East was the only region that saw utilisation of industrial estates decrease between the surveys, with high usage sites falling from 8% to 4%.

Region	Total Estates	High Usage	High Usage % in the region
East Midlands	102	21	21%
East of England	33	6	18%
West Midlands	68	10	15%
London	19	2	11%
North West	183	16	9%
Yorkshire and Humber	107	10	9%
South West	78	6	8%
South East	124	7	6%
North East	113	5	4%
Total	827	83	8%

Table 3-5: Regional Industrial Estates Usage

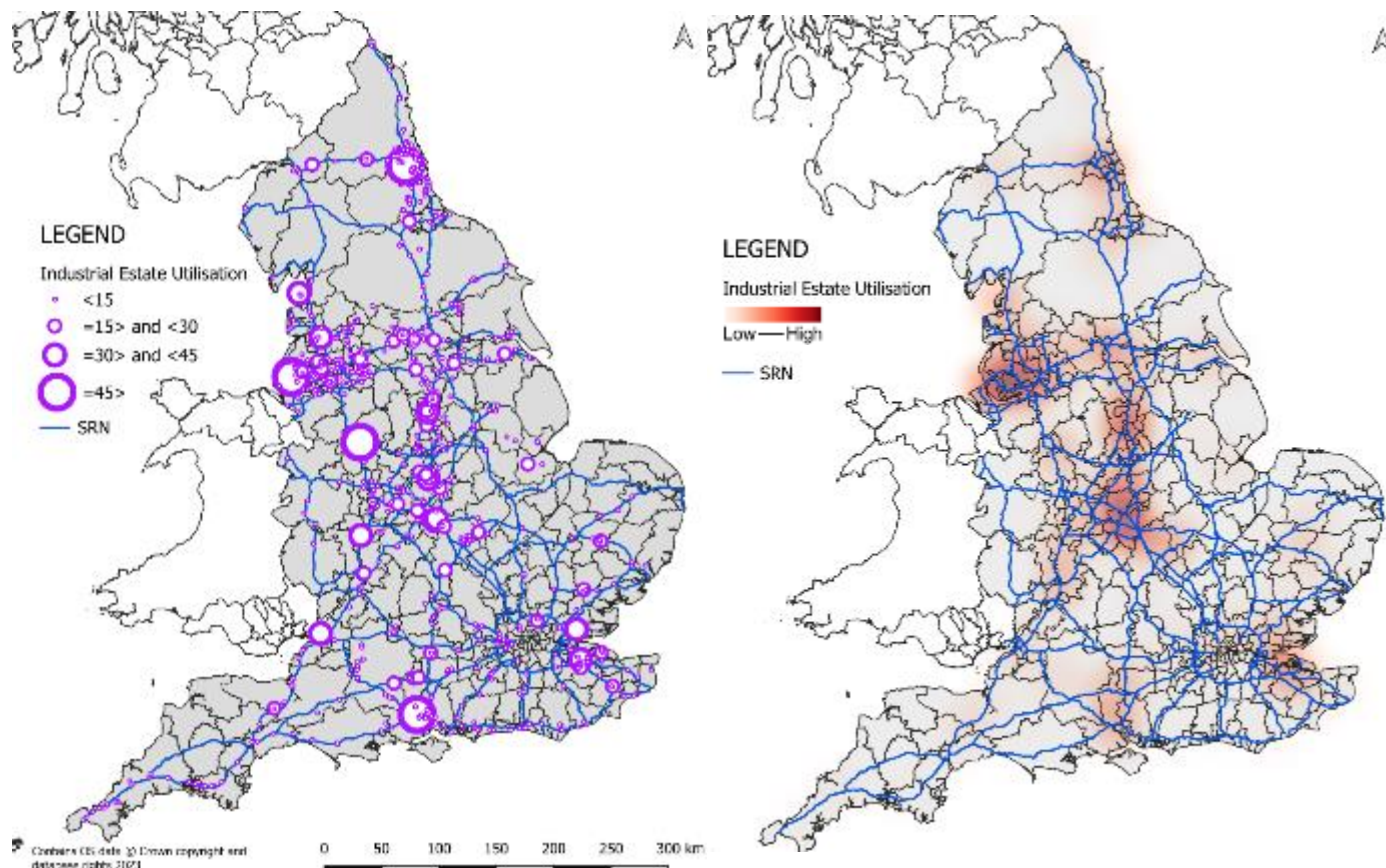


Figure 3-3 Industrial Estates Utilisation

Combined off-site parking

The off-site parking recorded for laybys and industrial estates has been combined into a utilisation density 'heat map' shown in **Error! Reference source not found.** This map illustrates the areas of England with the greatest off-site parking issues and will be used to represent off-site parking in the subsequent sections.

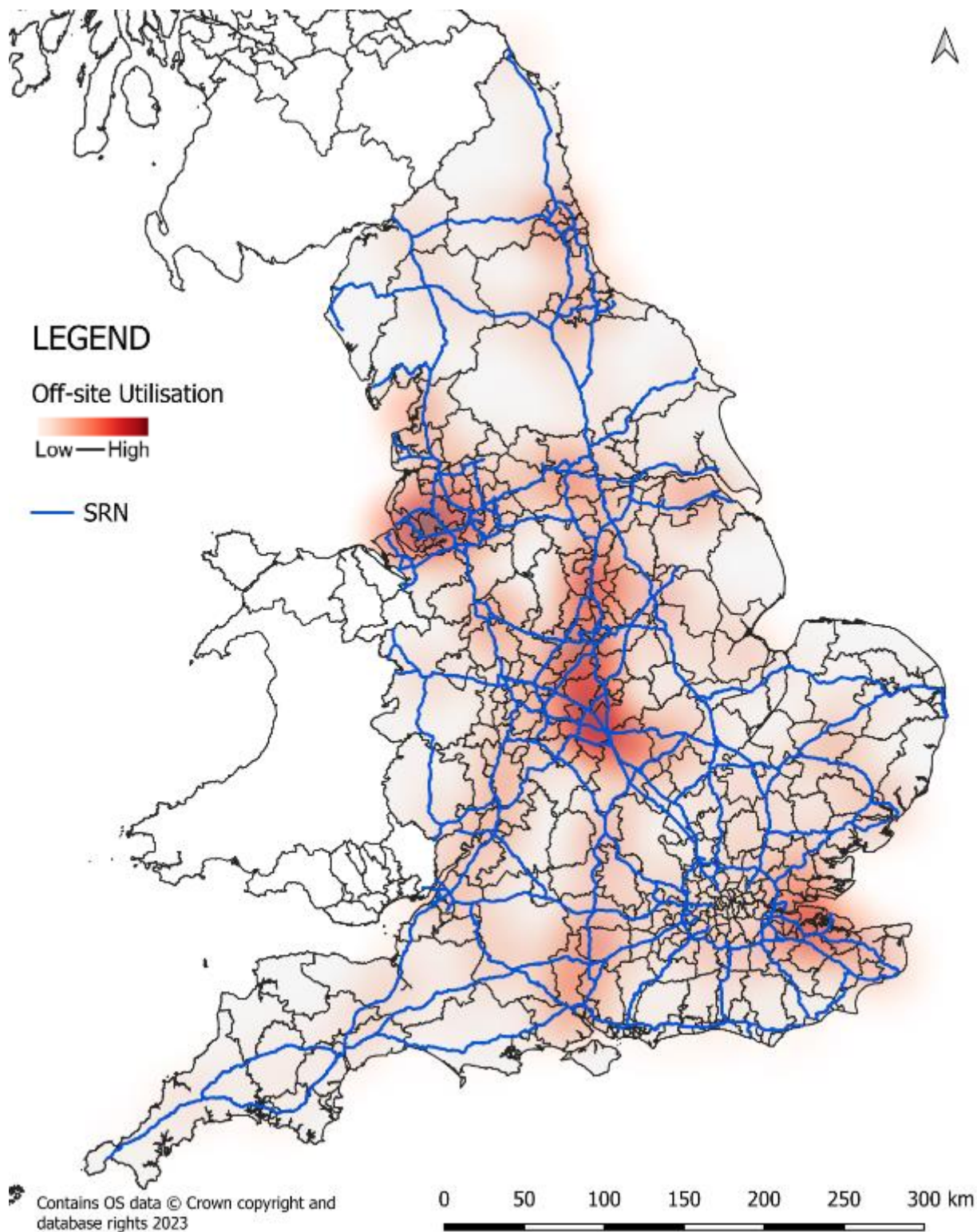


Figure 3-4 Combined off-site parking

4. Identified Areas of High Demand

Overview

Using the off-site parking data as well as lorry park utilisation, this section details an analysis of parking demand 'hot spots' with high unmet demand. In each 'hot spot' discussed, a map is shown which combines the previously shown lorry park utilisation map (Figure 3-1) and the off-site heat map (Figure 3-4). This section provides an overview of these hot spots; detailed spatial analysis of local authorities is discussed in Sections 5 and 6. Geographical areas discussed in this overview include:

- The Midlands logistics hub
- South East England and East of England
- The Port of Liverpool and North West England
- Solent to Midlands

East Midlands and West Midlands – Logistics Hub

The Midlands is a key generator of freight and has several key routes connecting the north to the south. The East Midlands has some of the highest off-site parking figures in England, with over 50 percent of laybys used and the highest proportion of industrial estates with 10 or more parked lorries (21%). The high density of off-site parking and critically utilised lorry parks can be found along the M1 corridor in the East Midlands, where the A5 and M6 meet the M1 near Rugby, and on the M6/A14 between Birmingham and Cambridge.

This is also part of the wider 'golden triangle', which is the part of the UK where logistics activity is most concentrated and is considered a prime location for National Distribution hubs. As a further way of putting this into context we have reviewed the national list of freight vehicle operating centres run by the Traffic Commissioners. All operators of heavy duty vehicles whether HGVs or PCVs (Passenger Carrying Vehicles) have to apply for a licence and specify various details including the number and location of where they propose to base their vehicles. Companies tend to base their vehicles near to centres of transport activity and hence it is useful to see which towns and cities have the most operating centres. Within this golden triangle area, but extending slightly into the East of England to Peterborough, 7 of the top 20 operating centre towns/cities in England can be found, with roughly 4,074 centres located at Birmingham (823), Nottingham (745), Leicester (598), Northampton (546), Peterborough (477), Dudley (462) and Coventry (423).

Traditionally, the golden triangle is bounded by the M1, M6 and M42 and has been a key hub for logistics for the last 40 years. The term 'golden triangle' was coined by property developers keen to attract businesses to the Midlands based on a national hub and 'spoke' distribution pattern. Although numerous warehouses were built there was insufficient attention given to providing space for the HGVs involved in this activity. The high density of unmet demand in the Central Midlands also spills into adjacent areas and SRN, like the A1(M) passing through Peterborough and the A46 heading towards Lincoln. The main reason for this is that HGV drivers can reach most areas of the UK from here within their maximum daily drivers hours rules, thus it is a convenient and timely place to rest.

Unsurprisingly, there is a high density of used laybys, critical lorry parks and industrial estates with more than 10 lorries in this area. This is illustrated in Figure 4-1.

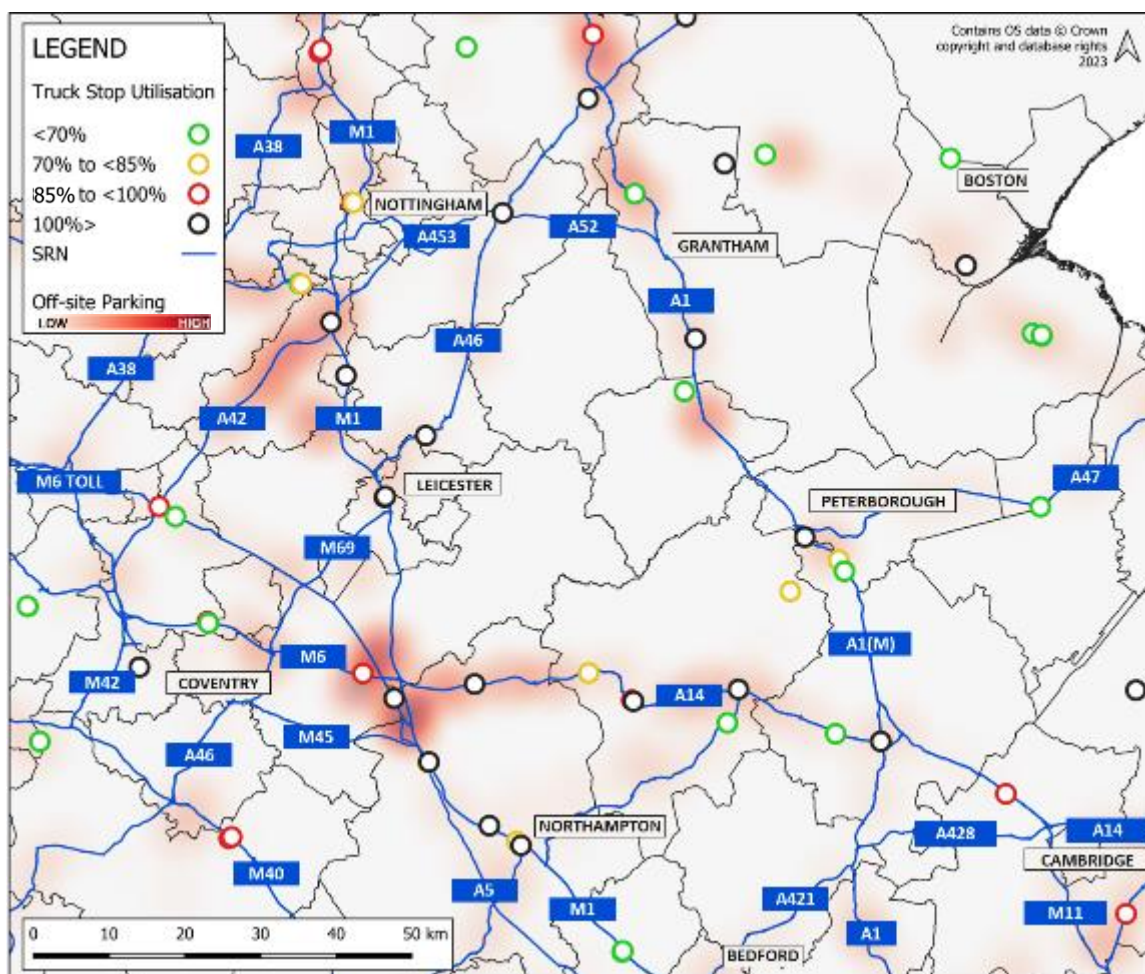


Figure 4-1: Midlands’s hotspot of high off-site parking and number of critically utilised lorry parks

South East and East of England

With the major ports and Channel Tunnel generating a large number of long distance international trips, the South East and East of England are facing significant pressure for additional lorry parking, as indicated in Figure 4-2. London Gateway experiences a high density of critical lorry parks and has a notable presence of off-site lorry parking in laybys and industrial estates. The convergence of freight from London Gateway and the Port of Dover creates a significant hotspot for lorry parking demand around Thurrock. Evidently, there is high lorry park utilisation on the east side of the M25, continuing northward toward the M11, M1, and M40, among other routes.

The heat map below shows high off-site parking on the M20, A2, A14 and A120 surrounding the ports of Felixstowe, Harwich, London Gateway and Dover. It is worth noting that almost all laybys are used for parking by lorries on the A12 in Essex (which has four critical utilised lorry parks), and the entire county of Kent incurs significant off-site lorry parking. Medway experiences high off-site parking demand, which flows into Maidstone and across the M26 towards the southern section of the M25. In Swale alone (on the A249 and M2), there were 82 lorries parked in laybys and 54 in industrial estates. Only one layby and one industrial estate had no lorries parked in them, stressing the high demand for lorry parking in this part of the country.

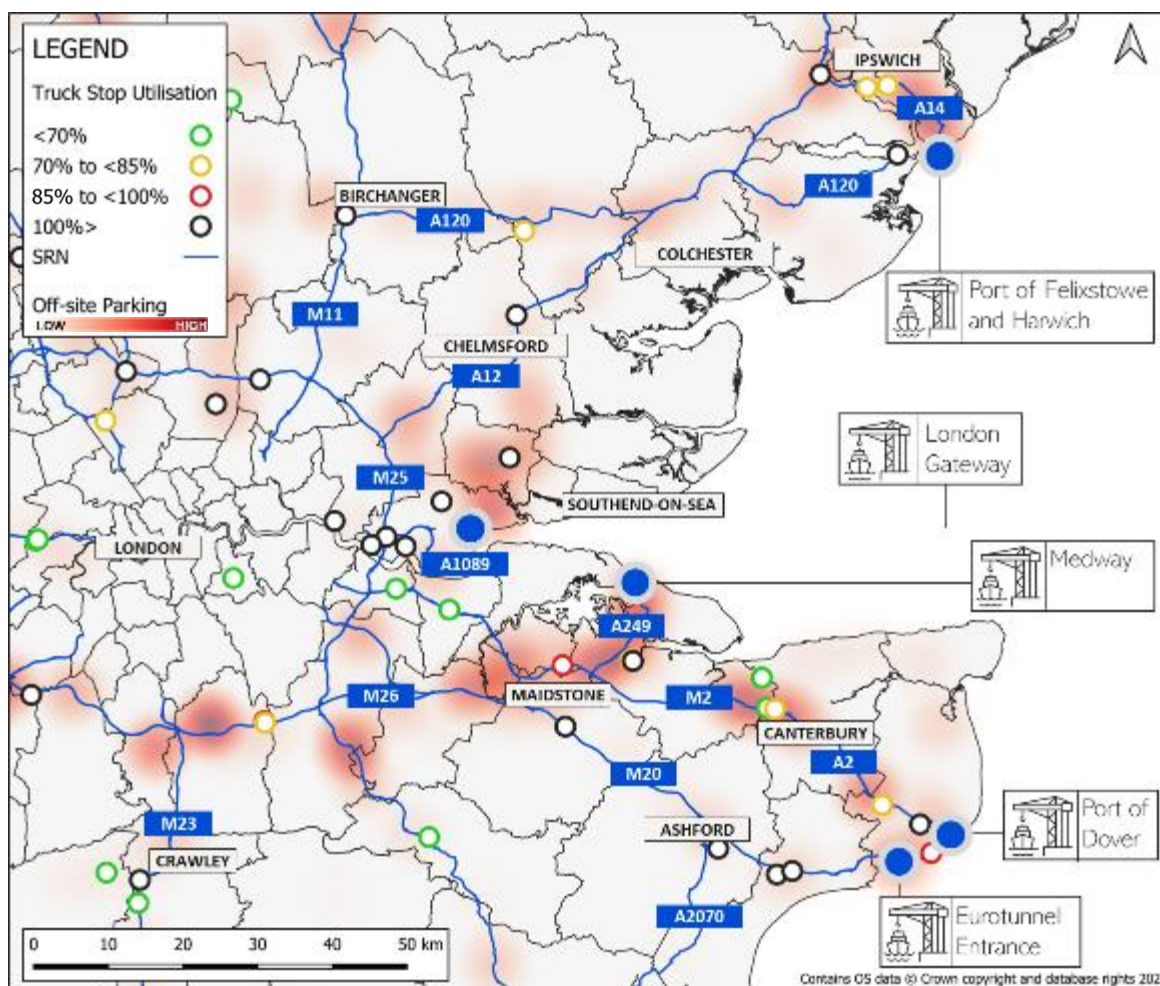


Figure 4-2 Hotspot with Layby Usage and Critical Lorry Parks – South East and East of England

Port of Liverpool and the North West

Figure 4-3 illustrates unmet demand along the M6 and in parts of Cheshire/Merseyside, notably on the M62 and M57. There are areas of high off-site parking demand between Liverpool and Manchester, as well as the M6 (through Lancaster further north and Stoke-on-Trent to the south). Stoke-on-Trent, despite not being regionally part of the North West, is particularly important as it serves a key industrial conurbation on the M6 transit corridor, facilitating freight movement to the region.

Recognising the need to address the challenges evident in Figure 4-3, it would be useful to consider a new lorry park on the M6 or M62 near Warrington. To this end, there are plans to develop a new MSA on the M62 J11 near Warrington, with approval already granted. The Extra MSA group is currently engaged in preparatory work, aiming to begin construction in 2024. The site will be known as Birchwood. Warrington and surrounding areas are operating at critical levels of utilisation, as evident from the issues with HGVs parking in laybys and industrial estates around M62 J11 and the adjacent Birchwood Business Park. Therefore, the construction of the planned MSA on the M62 holds great significance in addressing the pressing need for adequate lorry parking facilities in the region. This is despite Warrington already having the large Lymm Truckstop (MOTO) at the intersection of the M6 and M56.

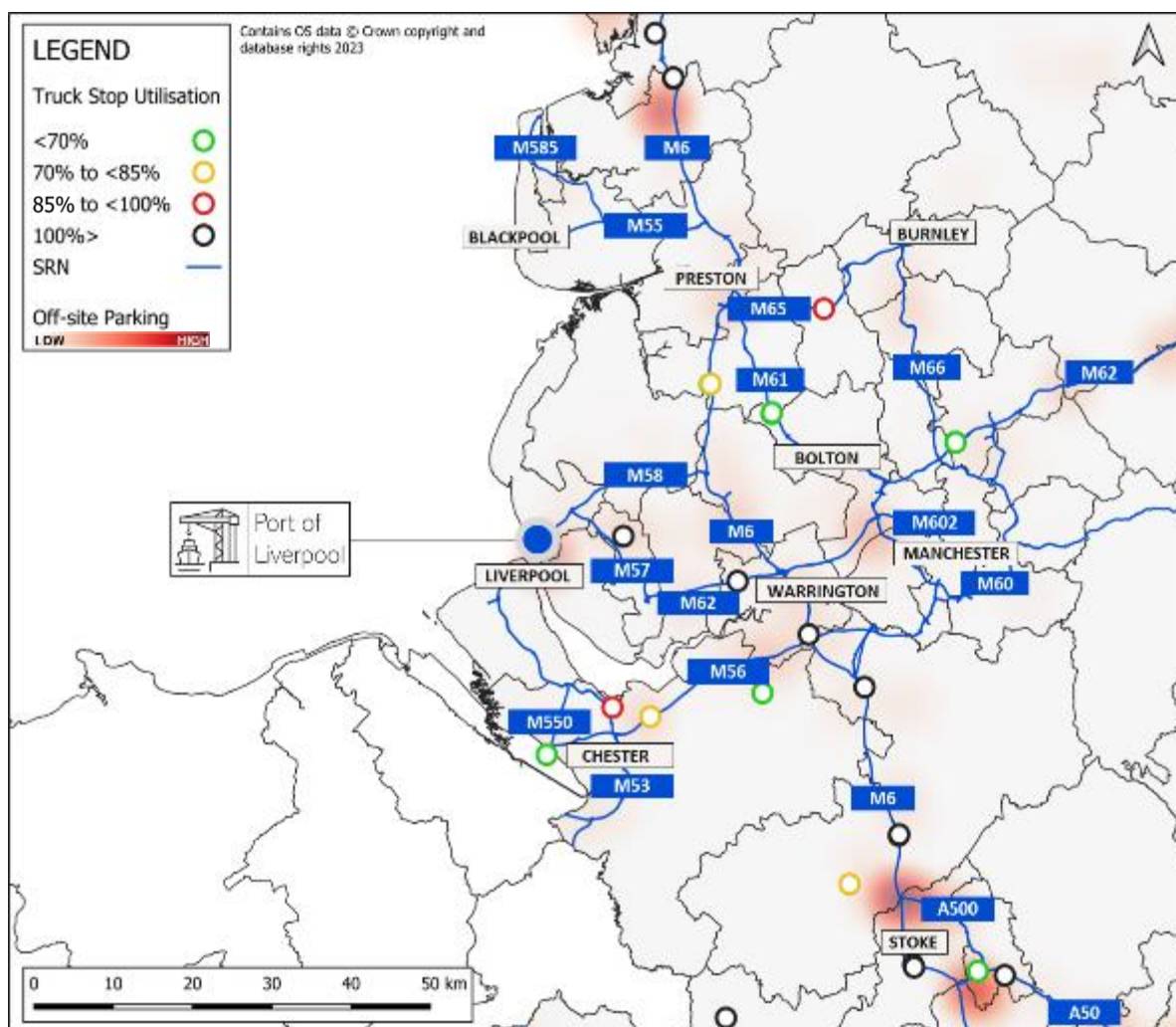


Figure 4-3 Hotspot with Layby Usage and Critical Lorry Parks – Port of Liverpool and North West

Solent to Midlands Corridor

The A34 (from Solent to the Midlands) has high levels of off-site parking. It is worth noting that almost all laybys had HGVs parked in them during the survey and there were several heavily utilised industrial estates with 10 or more parked lorries, as shown in Figure 4-4. A high number of over utilised lorry parks are observed along the A34, which explains a high layby usage rate in Hampshire and Oxfordshire. There is a considerable demand for lorry parking at the intersection of the A303 and A34, where flows heading north to the midlands and east to London converge.

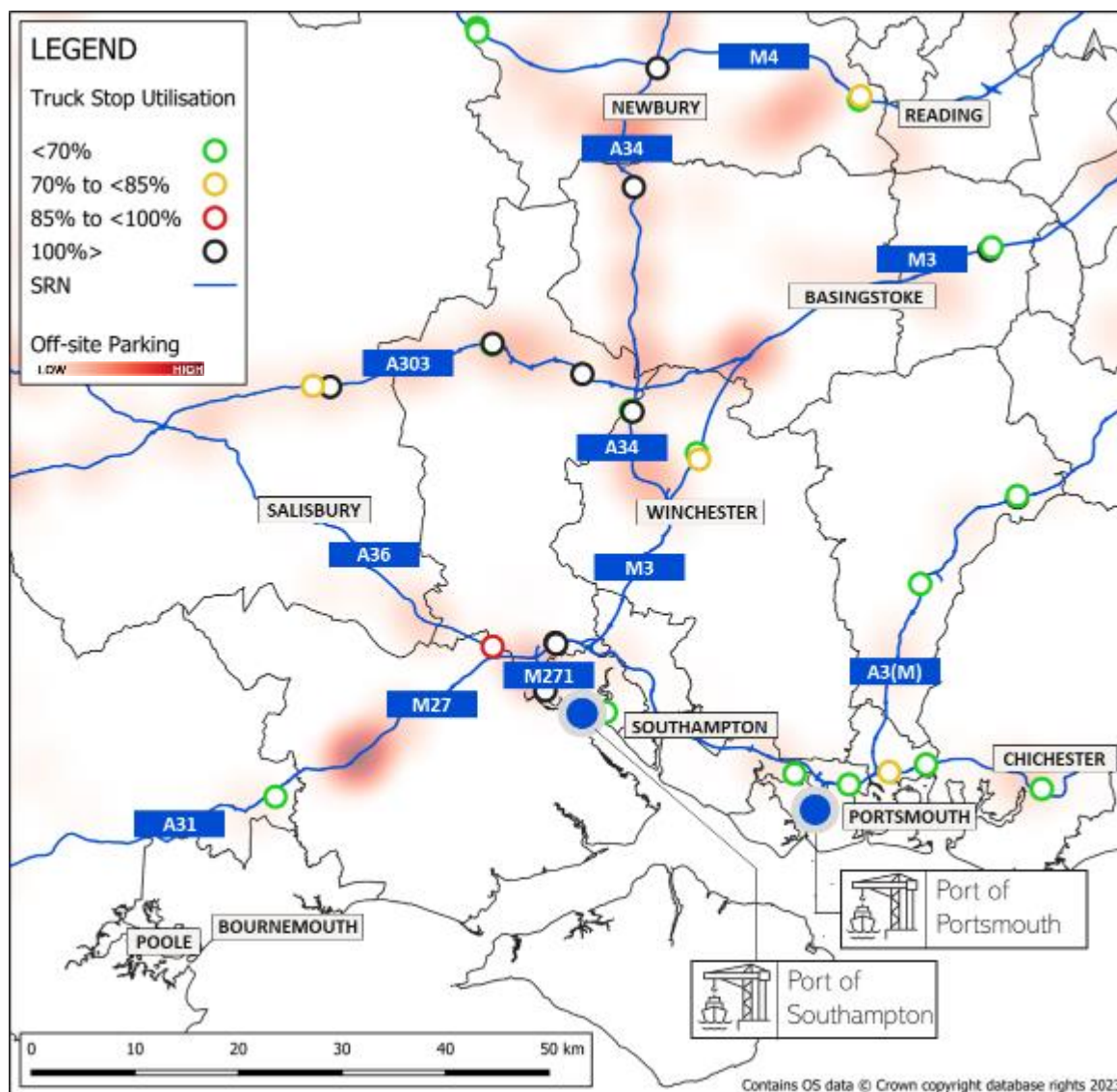


Figure 4-4 Hotspot with Layby Usage and Critical Lorry Parks – Solent to Midlands

Summary

There is widespread unmet demand for lorry parking spaces in England, with specific hotspots in the Midlands, around major ports, and along key SRN routes. Addressing this issue is critical for the efficiency and safety of the freight industry and driver welfare. From the four regions discussed, it is evident that:

- The Midlands, as the country’s key freight hub, lacks sufficient lorry parking. This creates localised issues and a ‘spill-over’ of high unmet demand into regions like the North West and East of England
- Major ports in the East of England and South East need more lorry parking provision
- There is high demand for lorry parking on the A34 between Solent and the Midlands, notably with off-site parking which increases at major road intersections with the M4 and A303
- Unmet demand is high on the M6 in the North West; a new lorry park planned in Warrington ought to relieve some demand

5. Spatial Approach to Assessment

As discussed, the aim of this LPDA is to provide National Highways and partners with clear and easily interrogatable information that can help inform interventions and quickly address any knowledge barriers. How data is displayed spatially will impact on how it can be used. Therefore, consideration was given to the spatial context of the analysis. Several spatial contexts were considered as part of this study. They include:

By Strategic Road Network Corridor (SRN) Approach – Looking at lorry parking demand across the 20 key corridors on the SRN developed as part of previous route study work

By Sub National Transport Bodies – looking at lorry parking demand for the eight sub-national (or regional) transport bodies in England including TfL. Outside of London, their membership is formed from a mix of local highways authorities, Local Enterprise Partnerships (LEPs), airports, National Highways, Network Rail, the DfT, trade associations and private business.

By Local Highway Authority – the organisation responsible for the public roads of a particular area that are not classified as being the SRN. These often align with local authority boundaries but often a County Council will perform this function for its constituent District Councils.

By Local Planning Authority (LPA) - the local government body that is empowered by law to exercise urban planning functions for a particular area. A local planning authority of an area is usually the local authority (or Council) such as a borough or district council.

Options

This section outlines the options for each of the spatial profiles, arranged from a larger macro level to a more focused 'micro' approach. The pros and cons of each approach are explained in this section.

National Highways Route Strategies (SRN)

Pros

Reflects typical end-to-end freight movements: The SRN is the most heavily used part of the national road network, carrying a third of all traffic and two-thirds of all freight. Analysis by key SRN corridors would work directly with National Highways and help maintain balance in the nation's economy. Freight Movements are rarely undertaken within a local authority boundary and often pass through many different areas. Taking a corridor approach to lorry parking means that demand across a whole route can be assessed. Drivers are generally unconcerned as to which local authority they park in and assessing data on a corridor basis means a holistic approach can be taken on key freight routes. Examples of these include connections between cities and ports or National Distribution Centres and depots/stores.

Could facilitate collaborative working; Working on a corridor basis provides an opportunity for collaboration. Often areas of demand intersect local authority boundaries, which can make it challenging to identify a co-ordinated approach. An area of unmet demand in one authority could be addressed by enhanced provision in a neighbouring authority. Taking a whole route approach can help overcome these challenges. Issues that transcend local authorities can also be identified.

Helps address lack of resources at authority level: Physical infrastructure or even officer time to consider the issue of lorry parking can be resource and cost intensive. There are many competing demands for time and funding for local authorities, even within the transportation remit and as such an approach potentially utilising National Highways and a combination of several authorities' resources can mean the issue of addressing demand is adequately met.

Can better align with the aspirations of Road Investment Strategies (RIS2/3): RIS 2 and the forthcoming RIS 3 set out how National Highways will enhance the SRN over a 5-year period. They often outline how routes can be improved from a strategic perspective, rather than a more localised approach. The route strategy work has informed the development of RIS3 and there are potential synergies to explore here.

Cons

May not reflect demand for lorry parking away from the SRN: Assessing demand using SRN corridors may fail to address issues away from the network as there may be high demand on the local highway network that were not in the remit of the DfT survey.

Inappropriate spatial level for influencing Local Plans: Local Plans are generally aligned with local authority boundaries and represent the most powerful way that land use can be influenced, setting out planning policy across the authority and providing clarity to developers as to authorities' aspirations for individual sites. Providing partners with an assessment based on routes may be challenging for them to integrate into their respective Local Plans. As a result, this is not a preferred spatial approach.

Sub-National Transport Bodies (STBs)

Pros

Can provide support to partner local authorities: STBs combine an approach to review the SRN but also group affected councils / local authorities together, closing the gap between national and local issues and perhaps providing good insight into how lorry parking issues could be dealt with. This means that they can sometimes work better with DfT to obtain larger funding amounts for improvements and for other affected statutory bodies facing parking issues. STBs have been asked by DfT to consider how they can support the provision of new and improved lorry parking and as such are currently exploring the issues in their area.

Cons

Lack of resource: Some STBs are unlikely to have the resources to adequately identify priorities with several having only a few dedicated staff and a wide remit covering all areas of transport.

Inappropriate spatial level for influencing Local Plans: STBs are not necessarily aligned with LPA or Local Highway Authority (LHA's) boundaries, and therefore analysis on a regional basis will not provide the granularity needed for Local Plans. As previously mentioned, STBs do not have a remit over land use planning or the wider highway network and therefore are less able to directly influence local plans than their partner LPAs. As a result, this is not a preferred spatial approach.

Local Highway Authorities (LHAs)

Pros

Highway remit: Local Highway Authorities have a remit to ensure the effectiveness and safety of the non-strategic highway network and have responsibility for delivering LTPs. County councils, unitary authorities, passenger transport authorities and London Borough councils typically produce LTPs, which should include reference to new and improved lorry parking provision where appropriate (new guidance awaited). Like LPAs, LHA officers will receive complaints about lorry parking and other issues that off-site parking causes meaning they will have insight into related issues. This remit means they will likely have a greater level of transport expertise, especially in 2-tier authorities.

Cons

Lack of alignment with LPA boundaries: LHAs are not always completely aligned with LPA boundaries in the case of County and District authorities, which may result in disconnect between land use planning and transport. As a result, this is not a preferred spatial approach.

Local Planning Authorities (LPAs)

Pros

Can directly influence Local Plans and Planning Decisions: LPAs lead the development of Local Plans. Taking this spatial approach can help influence Local Plans, which outline land use planning policy for a particular area. The LPDA outputs can and should inform Local Plans. National Highways is a statutory consultee in the planning system and therefore this approach reflects the vital role it needs to play in guiding and supporting partners in relation to land use planning. LPAs also consider applications for new lorry parks (and the removal of existing provision). Data provided at this level can help ensure that demand is fed into these decisions. As a result, this is the preferred spatial approach.

Ensures Ownership at local level: This approach ensures ownership at a relevant spatial level and is not transferred by implication to a neighbour. Similarly, there is an opportunity still to collaborate with neighbouring authorities where there is opportunity and agreement to do so.

Aligns with officer knowledge of issues: Local authority officers often receive complaints about situations relating to issues caused by inappropriate off-site parking of vehicles. Planning Officers can liaise with Highway Officer colleagues and combine LPDA outputs and feedback from those who live and work in an area to develop land use planning solutions.

Can co-ordinate with other interventions and objectives within the remit of Local Authorities: Local authorities often have a remit to facilitate the introduction of charging/alternative fuel options. These could be dovetailed with lorry parking provision, and demand derived from the LPDA may influence the number of charge/refuelling points installed. Local authorities also have targets to facilitate sustainable and efficient delivery of goods, with carbon reduction targets. Reducing unnecessary vehicle miles spent looking for parking (where facilities are full or there is no provision) will help achieve these aims.

Cons

Lack of resource and freight knowledge in some local authorities: A lack of freight knowledge/specialism and capacity at officer level and that of members may mean outputs from the LPDA are not fully utilised. Any outputs from the LPDA should be developed so that data is easily interrogatable and understood.

Summary

Local authorities need support to help ensure that lorry parking demand is met by safe, secure and comfortable facilities. As LPAs have a remit to ensure that land-use planning supports the economy and direct responsibility for approving applications for new lorry parks, there is a need for them to be able to easily assess and understand lorry parking demand in their area.

National Highways can help by providing this information in a format that allows easy interrogation and clearly shows demand by LPA, comparison to other areas and where demand is present across several local authorities.

Fundamentally, the LPDA is for use in influencing Local Plans. Therefore, it seems most appropriate to develop the LPDA at the LPA level and the data derived from the DfT Lorry Parking Survey supplemented by the analysis here allows this to be achieved. This is therefore our recommended way of applying the data spatially.

6. Lorry Parking Demand by Local Planning Authority Area

The overview provides good insight on a regional basis as to where there are lorry parking demand and utilisation issues. However, as outlined in Section 5, Local Planning Authorities need a more focused understanding of their networks to deliver effective LTPs and Local Plans, which support local lorry parking facilities.

A comparative spatial framework has been developed for each LPA in England, utilising survey data from both off-site and on-site lorry parking. The purpose of this framework is to produce an analysis which highlights local authorities with the most severe lorry parking issues, thereby guiding future funding and support allocation.

The analysis ought to identify areas that require focused attention to address their lorry parking challenges effectively, producing a low-level review which details freight attractors, generators, transitory routes, and ports (amongst other factors) in the worst affected local authorities.

This information is now being integrated into National Highways data repositories for use across a number of workstreams.

Approach

To facilitate a thorough assessment, a ranking system was devised, evaluating local authorities based on the severity of their lorry parking issues in relation to one another. This system allows for a better understanding of which areas warrant closer inspection and attention.

Off-site parking issues:

To address off-site parking issues, we employed a quantitative approach by calculating the number of lorries parked in laybys and industrial estates per km of SRN within each local authority. For instance, if a local authority had 10 off-site parked lorries and 10 km of SRN, the average would be one lorry parked per km. The local authority with the highest number of lorries parked per km scored 10, while the one with the least scored 0.1. A minimum score of 0.1 was assigned to local authorities with even very few off-site parked lorries, as this still indicates potential issues with adequate on-site parking provision. Local authorities with no SRN or no lorries parked off-site (likely due to the area not being surveyed) automatically scored 0.

On-site parking issues (lorry parks):

Like the off-site analysis, a comparable quantitative method was used to assess local authorities based on the severity of their parking issues at lorry parks. The average utilisation of all lorry parks within each authority was calculated and scored accordingly. Local authorities where the highest average utilisation rates were found were given a score closer to 10, while those with lower utilisation rates were assigned scores closer to 0. Local authorities without surveyed lorry parks and thus could not be scored were assigned a score of 0.

The final score was on a scale of 0 to 20, with up to 10 points allotted for off-site parking issues and up to 10 points for on-site lorry park utilisation issues. A local authority scoring 20 indicates critical

lorry parking issues, necessitating immediate support and attention. On the other hand, a score nearer 0 implies negligible issues. Figure 6-1 displays a map of England, colour coded and divided by local authority, highlighting hotspots and critical issues. From Figure 6-1, Table 6-1 shows the ten local authorities with the highest scores. Local authorities which scored at least 12 are presented in a longer table in Appendix B. It can be said that the top 10 local authorities have severe issues with both on-site and off-site parking. Local authorities that have not been surveyed mainly because they do not lie within 5kms of the SRN are shown on the map in white. This means that there is insufficient data to assess lorry parking in that area.

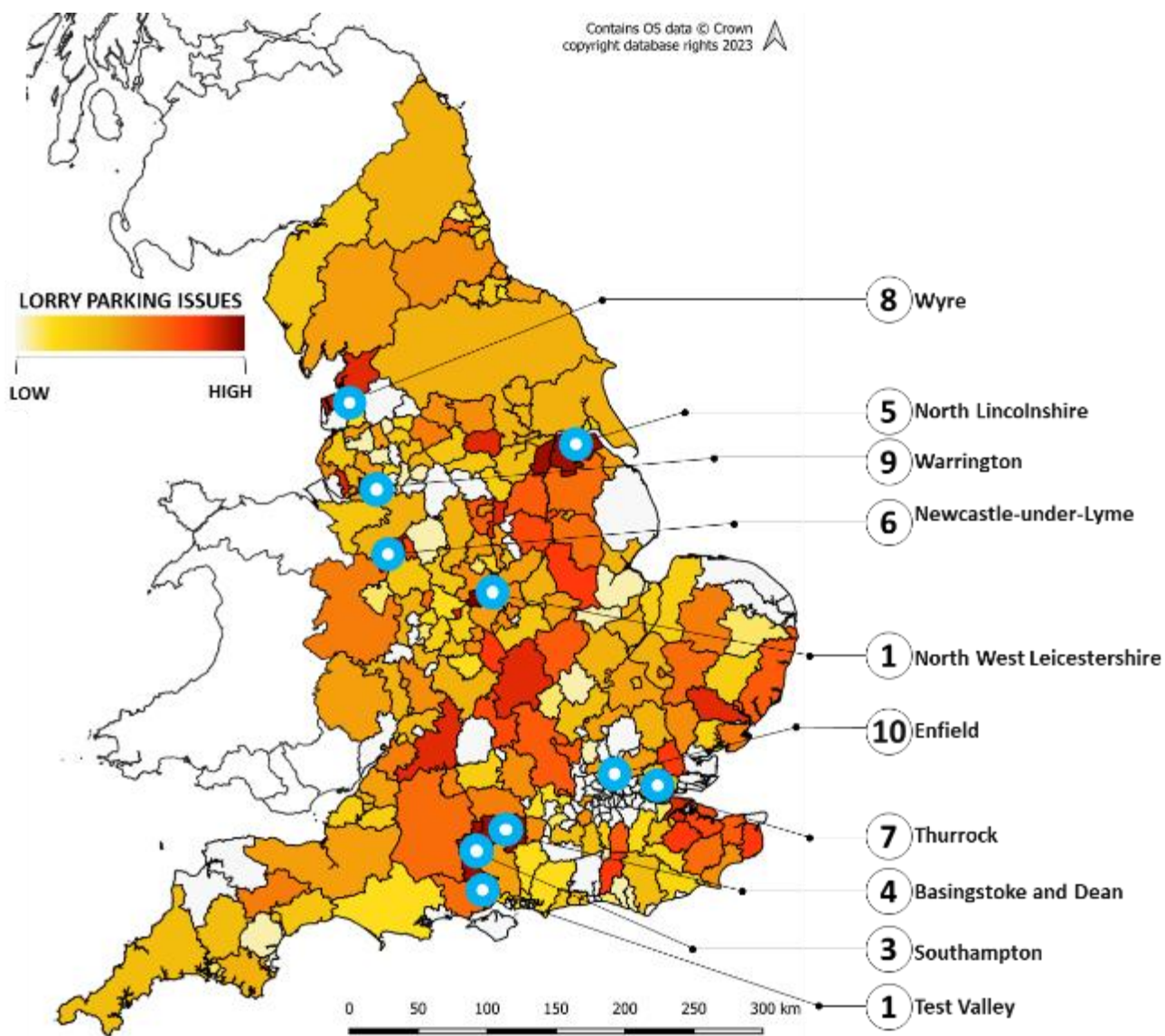


Figure 6-1: Lorry parking issues by local authority

Top 10 Local Planning Authority Areas by unmet demand

The top 10 local authorities with lorry parking issues are affected by various factors contributing to their challenges, although the specific issues vary between them. It is essential to identify the precise factors causing these problems to devise tailored solutions for improved lorry parking. Understanding the specific issues will also help predict how the demand for lorry parking might change in the future, enabling more effective planning and resource allocation.

Local Authority	Off-site Score /10	On-site Score /10	Total Score /20
1) North West Leicestershire	9.4	9.7	19.1
2) Southampton	9.2	8.8	18.0
3) Test Valley	8.5	9.2	17.7
4) Basingstoke and Dean	7.5	9.9	17.4
5) North Lincolnshire	8.7	8.6	17.3
6) Newcastle-under-Lyme	7.1	9.7	16.8
7) Thurrock	7.6	9.2	16.8
8) Wyre	8.3	8.4	16.7
9) Warrington	7.8	8.5	16.3
10) Enfield	8.7	7.3	16.0

Table 6-1: Local authorities with the worst lorry parking issues

- North West Leicestershire:** North West Leicestershire achieved the highest score of 19.1 in the analysis. North West Leicestershire is in the golden triangle and has a well-connected SRN, including the M1, which converges with the A42, A453, and A50, linking Birmingham, Nottingham, and Derby, leading to substantial freight movement and activity. During the survey, Moto Donington Park was 155% utilised, resulting in extensive off-site parking on the A42 and local major road network (MRN), notably along the A511 near Bardon Hill and Coalville.

Summary: reason for lorry parking issues:

- Transitory SRN routes (responsibility of National Highways)
 - Operating Centres (responsibility of the LPA)
- Southampton, Test Valley and Basingstoke and Dean:** The ports of Southampton and Portsmouth are gateways for Britain's deep sea and cross-channel freight. Southampton is the UK's top export port and has the nation's second-largest container terminal. Between Q1 2022 to Q1 2023, Southampton, along with Medway and the Rivers Hull and Humber, experienced the largest increase in freight tonnage. Its strategic location and links via road and rail make it a pivotal hub for international trade.

The Port of Southampton handles between 750,000 and 1,000,000 lorries annually. This places significant pressure on the SRN and lorry parking facilities. The M3, linking the region to London, and the A34, connecting the region to the Midlands, are heavily used by lorries arriving from (or going to) various parts of the UK. Consequently, parking issues also arise in Test Valley and Basingstoke and Dean, as the SRN serves a vital transitory role in this area.

Summary: reason for lorry parking issues:

- Major ports (responsibility of the British Ports Association [BPA])
 - Transitory SRN routes (responsibility of National Highways)
- **Thurrock and Enfield:** Thurrock faces severe lorry parking issues partly due to London Gateway expansion. Before the pandemic, London Gateway was one of the fastest-growing ports globally. In 2022, it led the UK's volume growth in overseas movement, experiencing a 14% increase in the same year, demonstrating its resilience and strong recovery post-pandemic.

The growth of London Gateway has led to mounting challenges in lorry parking in Thurrock. All local lorry parks are operating at over 100% capacity, and several lorry parks in adjacent local authorities are also experiencing similar high utilisation rates. Therefore, a significant number of lorries are forced to park in laybys and industrial estates on the A13. The M25 (passing through Thurrock after the Dartford Crossing [A282]) is part of the transit corridor with large volumes of freight traffic heading north. Much of this traffic comes from the M2 and M20, flowing from ports like Dover and the Medway.

Enfield, located along the north section of the M25, has critical lorry parking challenges. The lorry parks in Enfield, as well as Hertsmere to the west and Epping Forest to the east, are all operating at over 100% capacity, indicating severe strain on available parking facilities. This section of the M25 carries large volumes of HGVs due to its connections with the M1, A1(M), M40, and M4. Additionally, lorries traveling from southwest England may travel through Enfield to reach Felixstowe and Ipswich. Enfield also has a very high number of operating centres (196), which is roughly the same as Wakefield (199) and Poole (185). The convergence of traffic from various major routes, ports and operating centres significantly contributes to the high unmet demand in Thurrock and Enfield.

Summary: reason for lorry parking issues:

- Major ports (responsibility of the British Ports Association [BPA])
 - Transitory SRN routes (responsibility of National Highways)
 - Operating Centres (responsibility of the LPA)
- **North Lincolnshire:** The M180 links the Humber ports (such as Grimsby and Immingham) to the East Midlands and facilitates freight movement between Doncaster and Hull (as an alternative to the M62). Immingham (120), Scunthorpe (198), Grimsby (166), and smaller centres like Brigg (48) have a notable density of operating centres, while Doncaster (561) and Hull (477) exhibit even higher concentrations.

These latter two centres, though not in North Lincolnshire, significantly contribute to the local demand for lorry parking facilities. The existing lorry parking facilities in North Lincolnshire are often near or over capacity, leading to substantial off-site parking, particularly in industrial estates around Scunthorpe and Immingham.

Summary: reason for lorry parking issues:

- Major ports (responsibility of the British Ports Association [BPA])
- Transitory SRN routes (responsibility of National Highways)
- Operating Centres (responsibility of the LPA)

- **Newcastle-under-Lyme, Warrington, and Wyre:** These three areas are on the M6 between the West Midlands and North West England. The M6's strategic location and extensive coverage make it a primary route for the movement of goods and commercial traffic between the West Midlands and Scotland. The road's importance for freight is further amplified by its connections to major ports, such as Liverpool.

Newcastle-under-Lyme and neighbouring Stoke-on-Trent are a critical convergence point where major roads, the A50, A52, and M6, intersect. This area serves as a 'gateway to the north' for freight from significant conurbations like Birmingham, Derby, Leicester, and Nottingham (collectively part of the golden triangle). Stoke-on-Trent is a significant freight generator with 566 operating centres, surpassing cities like Hull (277) and Newcastle upon Tyne (292), and on par with Southampton (574). Goods traffic heading to the North West will often converge on the M6 around Newcastle-under-Lyme, creating a bottleneck of freight movements. The resulting high demand for lorry parking exacerbates off-site parking issues, particularly on the A500.

Warrington has significant lorry parking demand due to its position as a vital transit point along major corridors like the M6, M62, and the M56. Warrington handles substantial freight flows from Manchester, Leeds, and other above-mentioned towns and cities to the south, like Birmingham. A lot of freight in this area is coming from or going to the Port of Liverpool (one of the UK's largest ports), catering for various types of freight (such as general cargo, containers, Ro-Ro, and vehicles). Other freight movements could include those heading north to Lancashire or south west to Wales. Warrington, like other conurbations between Manchester and Liverpool, is an attractive location for distribution centres and hence high demand for off-site and on-site parking.

In Wyre, the M6 forms part of the route connecting the North West England to Scotland. Freight from places with a significant number of operating centres like such as Preston, Liverpool, and Manchester, along with freight traffic from the M65 (including Burnley and Blackburn) and M55 (including Blackpool), converge onto the M6 before going through the Wyre area. This concentration of freight traffic forms a bottleneck, intensifying the pressure on lorry parking facilities and exacerbating the demand for off-site parking solutions.

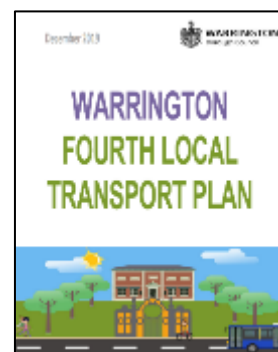
Summary: reason for lorry parking issues:

- Major ports (responsibility of the British Ports Association [BPA])
- Transitory SRN routes (responsibility of National Highways)
- Operating Centres (responsibility of the LPA)

Actions and Responsibilities: Local Transport Plans (LTPs)

In England, LTPs are vital to understand how an area will address transport issues and what actions are needed to improve the movement of people and goods. Such plans come in two types: the LTP and Local Implementation Plans (LIPs). These plans are created by strategic transport authorities, like county councils and local authorities. They look ahead over several years, usually around five, and are submitted to the DfT. Each of the ten LPAs mentioned above have LTPs, albeit their focus on lorry parking improvements varies greatly.

Warrington's LTP is a good example where lorry parking has been considered in policy and planning. In the LTP4 (2019), Warrington outlines an ambition to provide additional lorry parking facilities and ensure existing sites (namely Lymm Truck Stop, Bruntwood Services and Let's Eat Café) are adequate for drivers with an acceptable level of utilisation. In Policy FM15 and FM16, it is explicitly stated (respectively) that *"We will review local lorry parking facilities and, if required, identify potential locations for additional facilities"* and *"We will use an enforcement regime to control inappropriate freight parking."*



Since Warrington's release of LTP4, the issue of insufficient lorry parking remains significant, with a high level of unmet demand. Nevertheless, Extra Services is in the process of establishing a new MSA called Birchwood. The legal decision favoured Extra in May 2022, and adjustments to Birchwood MSA's layout were given the green light in June 2023.

Situated at Junction 11 of the M62, the Birchwood MSA will comprise a facilities building, potentially a 100-bedroom hotel, a service yard, fuel and electric charging stations, parking spaces, lorry parking as well as landscaped and amenity areas. This MSA aims to ease the strain on overcrowded nearby lorry parks and enhance the facilities available to drivers on the M6, M62 and M56. Figure 6-2 visualises plans for the newly approved Birchwood MSA site.



Figure 6-2: Proposed Birchwood Services in Warrington, M62 J11

The remaining nine leading local authorities in England with the most substantial unmet lorry parking demand adopt (or do not adopt) various plans to address the issue of lorry parking. Each local authority is summarised below and in Table 6-2.

Like Warrington, North Lincolnshire and Thurrock adopt LTPs which address lorry parking issues:

- **North Lincolnshire:** The 2011-2026 LTP does identify a need for better lorry parking provision. The earlier LTP3 identifies a short-term option to extend existing laybys or create new ones. In the longer term, establishing a dedicated lorry park is considered. However, this depends on having enough suitable land available. Furthermore, the feasibility of a dedicated lorry park hinges on the participation of an interested operator willing to manage it. In April 2023, a renewed application was made to turn agricultural land in North Killingholme (close to the Port of Immingham) into a 30 space lorry park².
- **Thurrock:** Thurrock's transport plan for 2013-2026 is built upon LTP3 and focuses on shifting towards demand-responsive transport for improved accessibility. The plan emphasises the requirement for 24-hour lorry parking. Thurrock Council is actively collaborating with National Highways and other relevant bodies to minimise the impact of lorry parking on local roads, including residential areas. To achieve this, the Council intends to explore the feasibility and implementation of secure 24-hour lorry parking facilities and suitable amenities for drivers at West Thurrock, Tilbury, and London Gateway. These efforts are likely to be complemented by implementing lorry parking restrictions in other areas³. In March 2021, planning approval was granted for a new truck stop with 207 spaces in the west of Grays⁴.

The other local authorities' LTP's either lack clarity regarding enhancements to lorry parking or do not address the issue:

- **North West Leicestershire:** In the Leicestershire LTP (2011-2026), there is a focus on the lorry route network (LRN), aiming to sustain a network that facilitates efficient freight movement while respecting local communities. However, there is no indication of any policy or strategies aimed at enhancing lorry parking facilities. The plan only suggests enhancing information provision for lorry drivers about available facilities.
- **Southampton:** Southampton City Council currently run the 'Connected Southampton' programme which seeks to improve all areas of local transport by 2040. However, the ongoing LTP4 implementation plan (2022-2025) does not include any provision for improved lorry parking facilities. The Southampton City Vision indicates that forthcoming plans will address freight, heavy goods vehicle (HGV) movements, and an 'access plan', though it is unclear what exactly this will entail for lorry parking.
- **Test Valley:** Test Valley is governed by Hampshire County Council's (HCC's) LTP4 (2022), which sets a vision for the upcoming three decades. However, LTP4 does not lay out any vision or plans for enhancing lorry parking facilities.
- **Basingstoke and Deane:** Like Test Valley, Basingstoke and Deane falls under HCC, thus there is no mention of lorry parking provision in the LTP4. HCC have produced a Basingstoke Transport Strategy (2019), albeit this also lacks any mention of improvements for lorry parking provision.

² <https://www.grimsbytelegraph.co.uk/news/local-news/lorry-park-planned-north-lincolnshire-8351798>

³ https://www.thurrock.gov.uk/sites/default/files/assets/documents/strategy_transport_2013.pdf

⁴ <https://thurrock.nub.news/news/local-news/green-light-for-new-lorry-park>

- **Newcastle-under-Lyme:** The 2011 Newcastle-under-Lyme Local Plan mentions lorry parking, but its adoption from 2003 renders it outdated. The plan highlights that no replacement site was initially suggested for the closed Friars Road lorry park (closed at the end of the 1990s), unless a clear necessity arose in the future, which it subsequently has. The broader Staffordshire County Council LTP (2011-2026) similarly neglects the need for improved lorry parking provisions, despite acknowledging that there is significant aggregate production in the region.
- **Enfield:** Though Enfield falls under the Mayor of London’s Transport Strategy, Enfield Council have also produced an LIP (LIP3 2019-2041)⁵. However, the council’s LIP does not mention the provision of lorry parking or plans/requirements to make improvements over the next two decades.
- **Wyre:** The Wyre Local Plan (2011-2032) was last adopted in 2019 and does not cover the provision of lorry parking facilities or any required improvements. Appendix 17, Highway Implications of the Proposed Wyre Local Plan⁶ (from report - *Statement of Consultation, Highway comment on consultation responses to the Draft Wyre Local Plan*) also fails to document existing lorry parking issues in Wyre.

Local Authority (in order of most severe analysis score)	Covers Lorry Parking Improvements?
1) North West Leicestershire	No
2) Southampton	No
3) Test Valley	No
4) Basingstoke and Dean	No
5) North Lincolnshire	Yes
6) Newcastle-under-Lyme	No
7) Thurrock	Yes
8) Wyre	No
9) Warrington	Yes
10) Enfield	No

Table 6-2: The acknowledgement of lorry parking provision in LTPs and LIPs

All ten local authorities must recognise and outline strategies for addressing lorry parking concerns in their future LTPs and LIPs. This recognition is vital to support proper infrastructure planning, transport integration, driver well-being, and to foster a well-rounded and efficient system that supports the UK's freight industry.

The seven local authorities that are yet to address lorry parking issues could learn from examples like Warrington, Thurrock, and North Lincolnshire. They should incorporate policies and options in future LTPs/LIPs to future-proof driver facilities in their respective regions.

Although the above section has highlighted the 10 areas with the highest score there are several more Local Authorities that should address the need for additional lorry parking facilities.

⁵ https://www.enfield.gov.uk/__data/assets/pdf_file/0019/4825/enfield-transport-plan-2019-2041-roads.pdf

⁶ <https://www.wyre.gov.uk/downloads/file/657/sd007i-appx-17>

Limitations to the Spatial Approach

Studying lorry parking demand by local authority helps grasp regional dynamics of parking problems. Yet, this approach relies solely on the 2022 audit survey data, which focused on the SRN, and the scope did not extend to significant MRN routes with heavy freight traffic and parking demand. There are potentially three major limitations to the spatial analysis used in this study, and include:

- **Not addressed the MRN:** An example of this can be seen in Dorset and Bournemouth, Christchurch, and Poole (BCP) in South West England. BCP sits south east of Dorset and appears to have no lorry parking issues in Figure 6-3. The new BCP Council was formed on April 1 2019, through a local government reorganisation that merged the former borough councils of Bournemouth, Christchurch, and Poole into a single unitary authority.

The A31 running through New Forest and Dorset doesn't pass through BCP. Hence, BCP wasn't surveyed in the 2022 audits. Despite this, the combined population of these conurbations is about 400,000, comparable to Bristol and, due to being a tourist destination, can attract over 1 million visitors and the commensurate freight traffic during peak weeks in the summer. BCP has a higher population than the whole of the rest of Dorset which has a much bigger geographical area.

Therefore, there is likely to be significant freight movement via the MRN, for example down the A338 to Bournemouth and Christchurch and A3049/A350 to Poole. The survey and subsequent analysis fail to recognise this and so areas in white on the map need to be considered carefully and potentially may need future investigation.

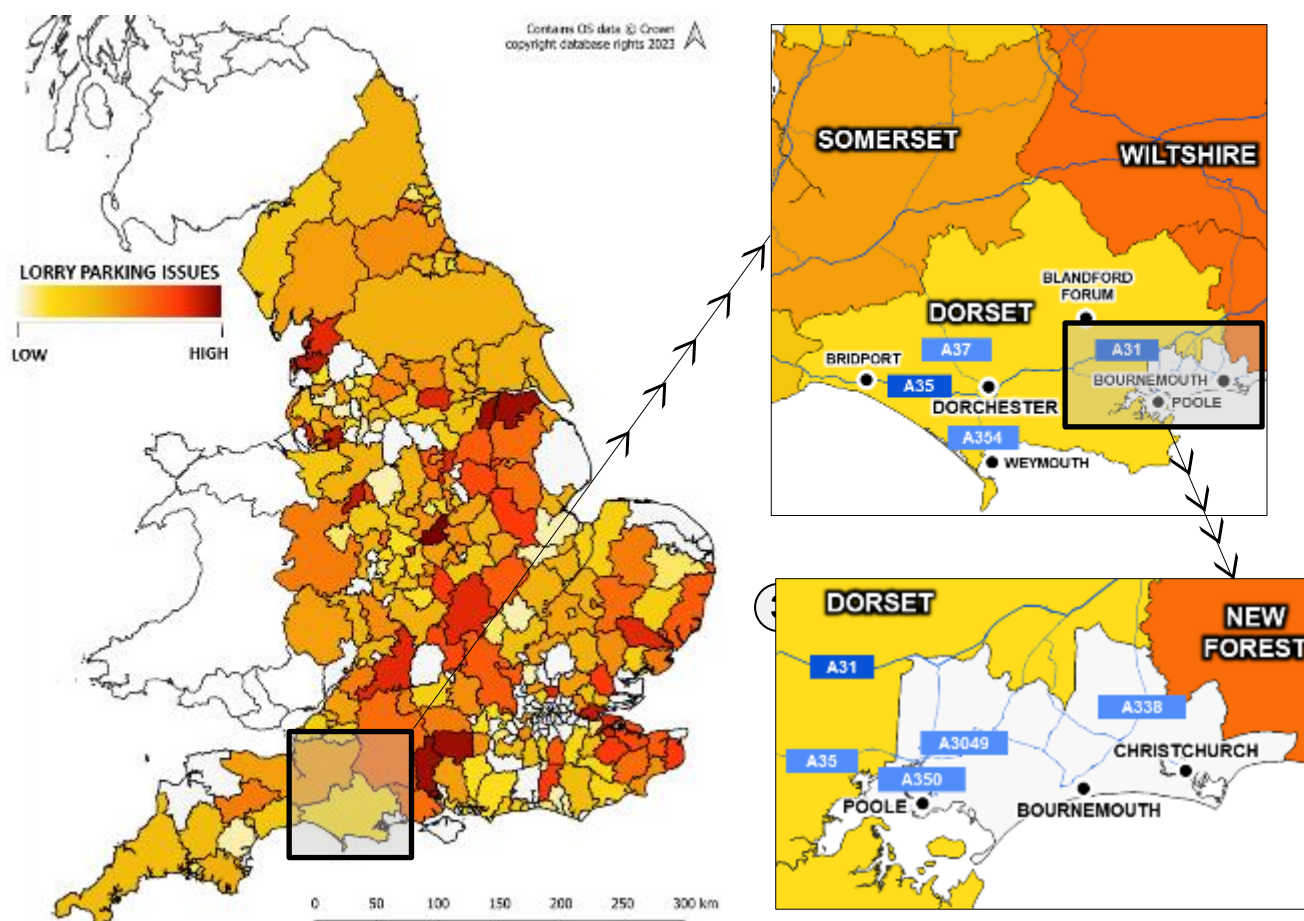


Figure 6-3: Importance of the MRN in BCP

- **Understanding Route Choice:** route choice plays a significant role in affecting freight movement across the country. The selection of a specific route can have various impacts on the efficiency, cost, and overall success of transporting goods. For example, opting for shorter and more direct routes can reduce travel time, leading to faster deliveries and potentially lower costs, or choosing routes with well-maintained roads can reduce the risk of breakdowns and delays. There are multiple other factors that affect route choice, such as regulatory considerations (i.e. weight and height limits) or even the local level of crime.

The reason why more straightforward routes between Southampton and Exeter are underutilised might be due to route choice. For instance, in Figure 6-4, freight movement predominantly follows the red and purple arrows rather than the green ones. This preference for the A303 route across Wiltshire and Somerset, despite a similar travel time, is influenced by factors such as better road infrastructure (e.g. more dual carriageway), better journey time reliability, increased lorry parking options, and practicality, even though the Dorset (green arrow) route may appear 'more logical'.

The purple route may be chosen over the red route as it avoids Salisbury and longer stretches of single carriageway. Though the route to the A303 via the A34 (purple) is a longer distance than the A36 (red), the journey time is roughly the same given less congestion and quicker, wider roads. For example, congestion and uncertainty of traffic in Salisbury can make freight movement less efficient on the A36, for there is more stop-start driving and overtaking, which is difficult or not possible for HGV drivers.

For this reason, it is important that local knowledge from STBs and LPAs is considered to comprehend high and low parking demand across different routes.

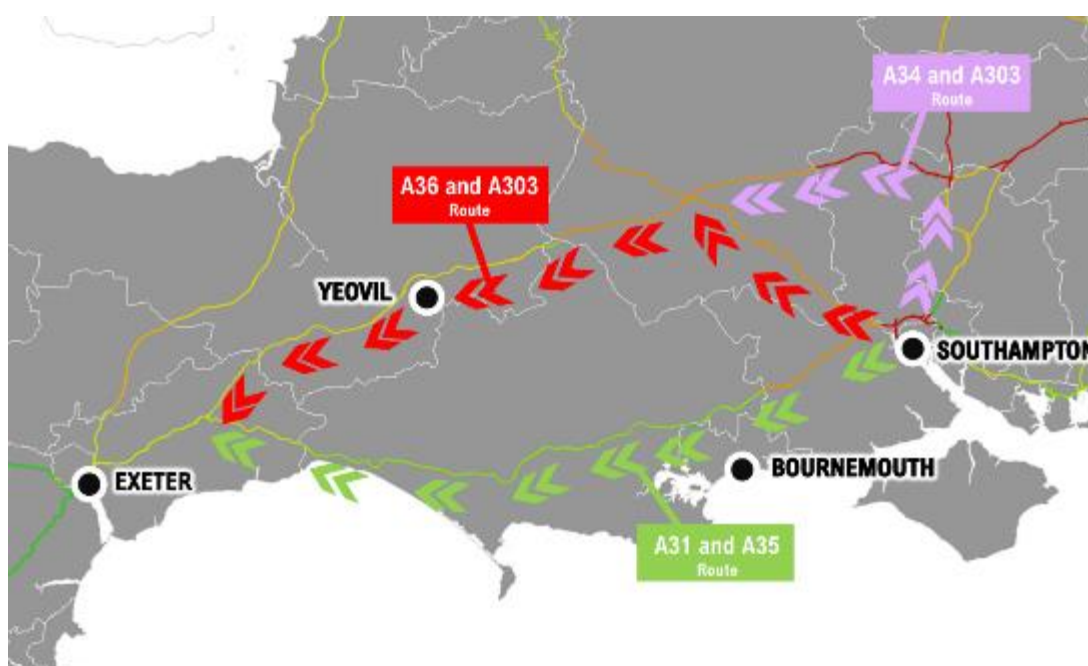


Figure 6-4: The primary route choices between Southampton and Exeter

- Acknowledging Local Geographies:** It's important to consider local geographies when assessing the need for lorry parking facilities. For instance, the A1(M) (to the south of North Yorkshire) does not face as severe lorry parking issues compared to nearby areas like Leeds and Wakefield. However, a closer look reveals that the sections of the A1(M) (west of Selby) experience high lorry parking utilisation and HGV flows, indicating a need for improved lorry parking provisions in this area. The region is shown in Figure 6-5.

This section of the A1(M) in North Yorkshire is at the centre of regional distribution. It connects major areas such as Leeds, Wakefield, Selby, North Lincolnshire, Bradford, Huddersfield, York, and Doncaster, all of which are significant operating centres and freight generators. Despite running through North Yorkshire, sections of the A1(M) are as close to Leeds city centre as they are to Selby. Therefore, it is essential to consider the influence and freight needs of Leeds when planning lorry parking facilities on this part of the SRN; parts of North Yorkshire, Leeds and Wakefield are under the same unofficial freight boundary.

The analysis should also consider local freight routes and National Highways' Route Strategies (discussed later in this report). The evaluation should aim to identify any influences on the A1(M) from neighbouring roads such as the M62, M180, and A64. It's noteworthy that the A1(M) in North Yorkshire is only approximately 2 miles north of the point where the M62 and A1(M) intersect in Wakefield. So it is important to recognise cross-boundary issues. So as an example even though Selby (North Yorkshire) does not have a particularly high lorry parking score, as neighbouring authority Wakefield does experience high lorry parking demand, constructing a lorry park on the A1(M) in North Yorkshire could potentially alleviate some of the issues and consequently reduce Wakefield's unmet demand.

In summary, Leeds, Wakefield, and North Yorkshire received varying scores in the analysis. Nevertheless, it's crucial to recognise that the combined urban areas of Selby, Leeds, and Wakefield fall within the same freight catchment area. This collective perspective should be considered when making decisions about new or improved facilities that extend beyond the local authority level.

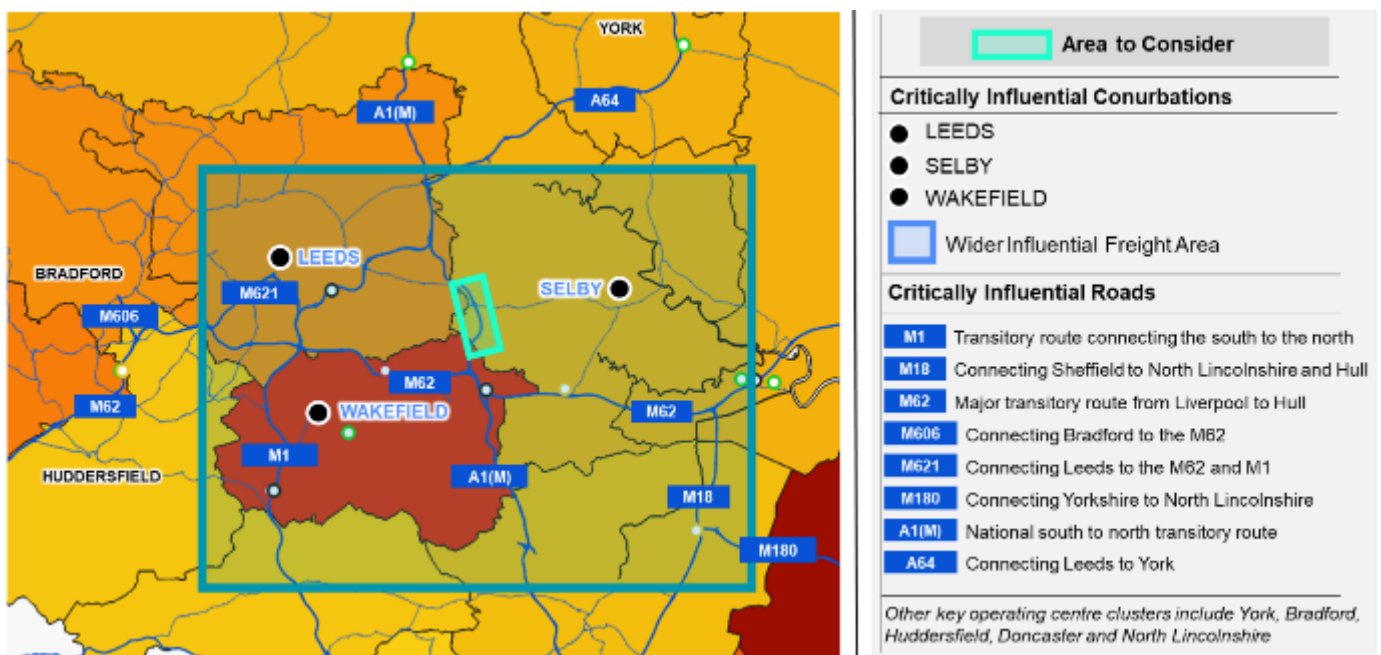


Figure 6-5: The consideration of wider freight geographies across local authority boundaries

Additional demand indicators – number of critically utilised lorry parks

While the evaluation focuses on lorry park utilisation and the proportion of offsite parking within an LPA, it's worth exploring other demand indicators. An additional metric, (not impacting the scores out of 20 discussed earlier), involves the count of LPA truck parks with 'critical' utilisation. The defined threshold for this (in agreement with the DfT) is 85%. This is important as drivers may waste time (and money) travelling to sites which are full, forcing them to seek alternative provision, either formal or informal. Aside from costs, this can be stressful and lead to drivers parking in locations that are not secure or do not provide adequate facilities as they may be going over their legally permitted driving time.

Table 6-3 shows the top 8 local authorities with the most critically utilised lorry parks. West Northamptonshire, in the Golden Triangle, has the most lorry parks critically utilised, followed by Westmorland and Furness in Cumbria, Thurrock, Wakefield and Somerset. North Northamptonshire, Wiltshire and Cheshire East also have 3 lorry parks critically utilised.

Figure 6-6 shows the national context and labels the 8 local authorities mentioned in

Local Authority	No. Lorry Parks at Critical Level	Local SRN	Primary Owner of Issue	Additional Notes
West Northamptonshire	5	M1, A5, A14	National Highways LPA	Part of the golden triangle. Major area for transport storage and warehousing facilities and distribution centres - hot spot for M1 goods movement
Westmorland and Furness	4	M6, A590, A66	National Highways	Primarily an issue with the M6 being the major route between England and Scotland
Thurrock	4	M25, A13, A1089	National Highways LPA BPA	Forms around M25 (major freight route) uses SRN routes linked to London Gateway. Large volumes of traffic also affect the site from Ports such as Dover to the Midlands and North
Wakefield	4	M62, M1	National Highways LPA	West Yorkshire Combined Authority and LTPs recognise a wider issue, given Wakefield is a focus for distribution centres and warehousing for the whole of Yorkshire. The region is also an economic powerhouse for freight given the M1 and M62 intersection
Somerset	4	M5, A303	National Highways	Critical connection to the far south West, Exeter and Plymouth, connecting to Bristol and London
North Northamptonshire	3	A14	National Highways LPA	Part of the golden triangle in Central England. Major area for Transport Storage and Warehousing Facilities and distribution centres. The A14 connects ports such as Felixstowe to central England and associated SRN, namely the M1 and the M6
Wiltshire	3	A303	National Highways	Connecting Plymouth to London
Cheshire East	3	M6	National Highways	Port of Liverpool connected to central England and London. Further, warehousing and distribution in Warrington.

Major route north of Birmingham connecting England to Scotland (Glasgow)

Table 6-3: There is a correlation between the demand indicators used for this study and this additional demand indicator, given it influences the overall lorry park utilisation metric. This is most evident with Thurrock, which scored highly in the local authority analysis and also appears in the additional demand indicator.

Local Authority	No. Lorry Parks at Critical Level	Local SRN	Primary Owner of Issue	Additional Notes
West Northamptonshire	5	M1, A5, A14	National Highways LPA	Part of the golden triangle. Major area for transport storage and warehousing facilities and distribution centres - hot spot for M1 goods movement
Westmorland and Furness	4	M6, A590, A66	National Highways	Primarily an issue with the M6 being the major route between England and Scotland
Thurrock	4	M25, A13, A1089	National Highways LPA BPA	Forms around M25 (major freight route) uses SRN routes linked to London Gateway. Large volumes of traffic also affect the site from Ports such as Dover to the Midlands and North
Wakefield	4	M62, M1	National Highways LPA	West Yorkshire Combined Authority and LTPs recognise a wider issue, given Wakefield is a focus for distribution centres and warehousing for the whole of Yorkshire. The region is also an economic powerhouse for freight given the M1 and M62 intersection
Somerset	4	M5, A303	National Highways	Critical connection to the far south West, Exeter and Plymouth, connecting to Bristol and London
North Northamptonshire	3	A14	National Highways LPA	Part of the golden triangle in Central England. Major area for Transport Storage and Warehousing Facilities and distribution centres. The A14 connects ports such as Felixstowe to central England and associated SRN, namely the M1 and the M6
Wiltshire	3	A303	National Highways	Connecting Plymouth to London
Cheshire East	3	M6	National Highways	Port of Liverpool connected to central England and London. Further, warehousing and distribution in Warrington. Major route north of Birmingham connecting England to Scotland (Glasgow)

Table 6-3: Additional Demand Indicator: Top 8 LPAs for no. of over utilised lorry parks

*BPA: British Ports Association

The local authorities in Table 6-3 are generally larger and accommodate a higher number of lorry parks, which consequently increases the likelihood of overutilisation across multiple lorry parking sites. Somerset and Westmorland and Furness respectively host the M5 and M6 which connect key parts of the country. High freight flows on these roads creates a high demand and utilisation of lorry parking. Wakefield and West Northamptonshire are similar, with the M62 and M1 running through them respectively. Issues in Wakefield and West Northamptonshire are exacerbated however, given they are key operating/distribution centre locations. Thurrock's parking challenges partly stem from its

port, London Gateway, which experiences substantial freight movement in and out of the country, resulting in heightened demand for lorry parking.

The presence of several lorry parks within each local authority indicates an understanding and acknowledgment of high demand. However, it prompts a question as to whether additional facilities are necessary, and the need to establish if lorry drivers are struggling to find adequate parking. This additional demand indicator can be used in conjunction with the previous analysis to give a deeper understanding of issues at the local authority level.

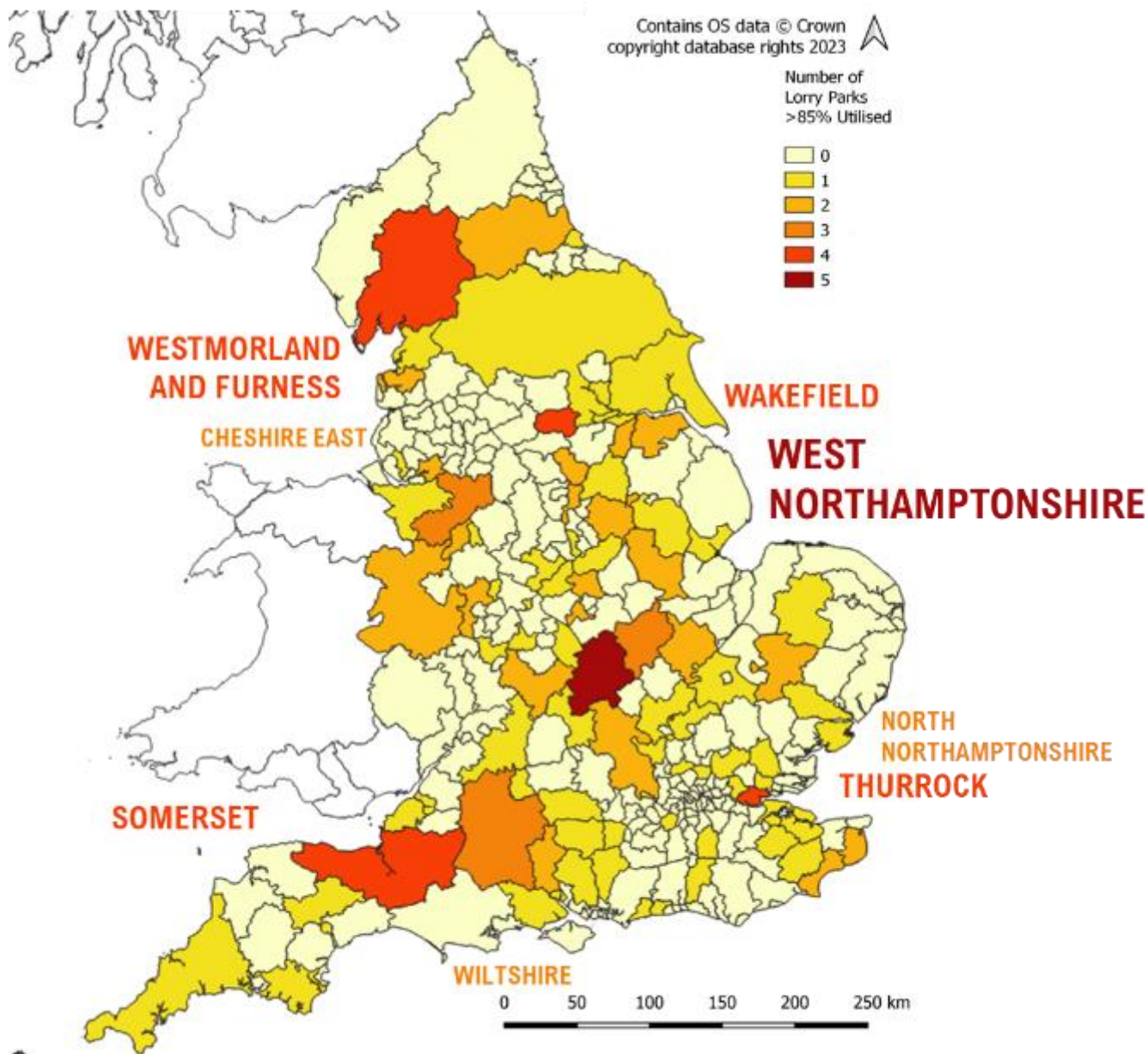


Figure 6-6: LPAs by number of Lorry Parks critically utilised

Lorry Parking Demand against the Strategic Road Network

Though the spatial analysis is local authority focused, it is useful to understand how this translates to the SRN. As a responsibility for National Highways, an understanding at the SRN level captures the dynamics of end-to-end freight movement, bridging local authority boundaries and identifying if a

parking demand issue is more a localised problem or a national corridor issue that one single local authority cannot be held accountable for.

It is essential to know which strategic routes are affected as this can influence the efficiency of freight movement. Lorry parking problems can disrupt the smooth flow of freight on inter-regional corridors, leading to delays, congestion, and inefficiencies in the supply chain. This not only affects the economy but also the comfort of drivers. Additionally, understanding these problems at the SRN level facilitates improved coordination with other policies and plans, such as potentially shifting certain freight from road to rail. Figure 6-7 illustrates the unmet lorry parking demand against the SRN.

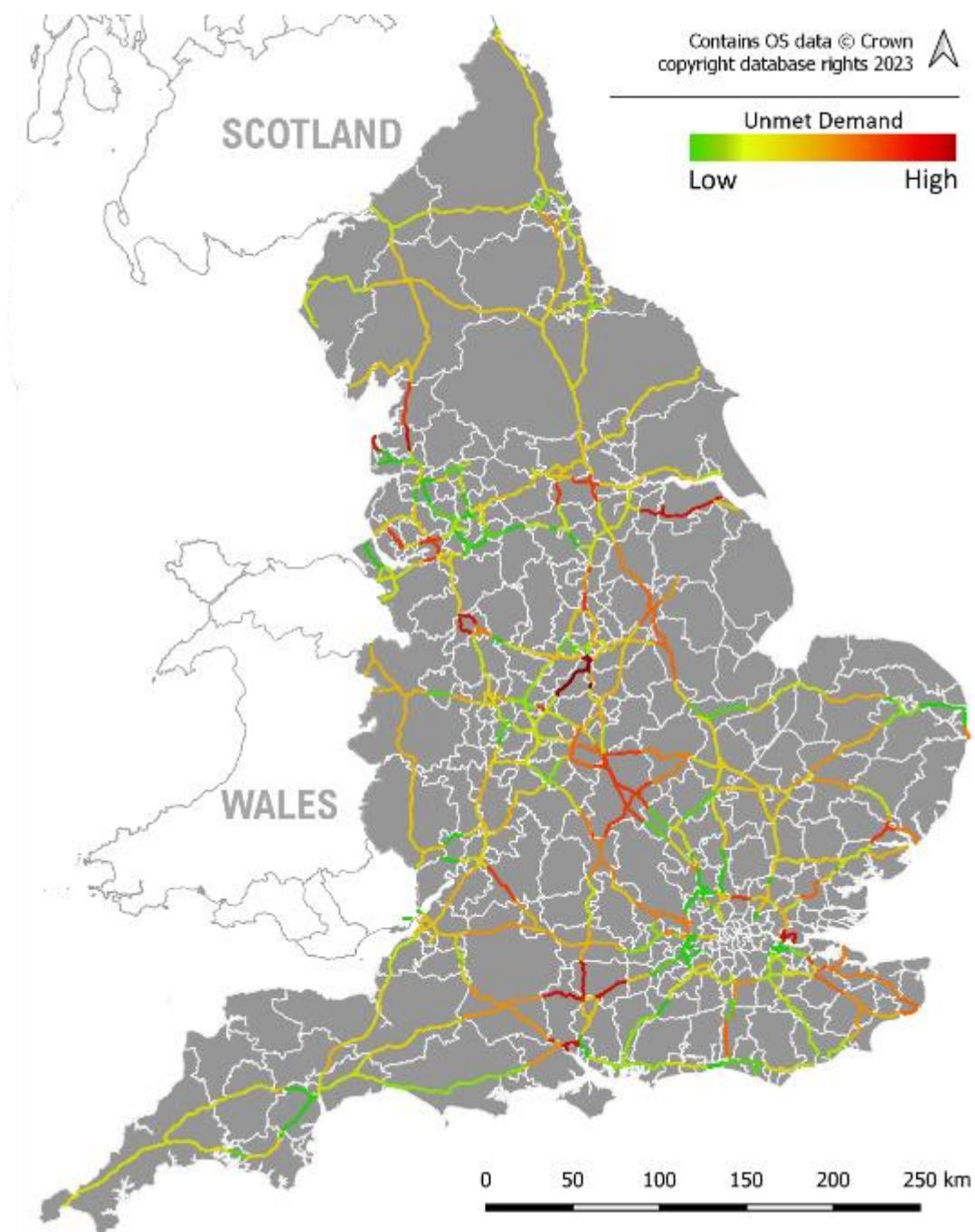


Figure 6-7. Unmet Lorry Parking Demand against SRN

This information will be provided to National Highways in a Power BI format, allowing integration into workstreams, responsibilities and projects which need to consider lorry parking demand.

Relationship between HGV flows and unmet lorry parking demand

Figure 6-8 demonstrates the relationship between unmet lorry parking demand and overall HGV flows on the SRN. It shows that some areas have a clear correlation between HGV flow and unmet lorry parking demand. This is most pronounced across the afore-mentioned 10 local authorities, with Newcastle-under-Lyme, Southampton, Thurrock and North West Leicestershire arguably being the most noticeable in this regard. Though there is some correlation between high flows and unmet demand, there isn't always a direct relationship. This is due to some areas being better served by existing provision or locations being more of a transit route or origin/destination, with HGVs passing through or completing their journeys and not needing to park in formal lorry parking facilities. An example of this can be seen on the M60 and western parts of the M25, where there are high flows but little unmet demand.

Ultimately this demonstrates the need for a nuanced approach to responding to the Local Plan Consultations and planning applications for new or improved provision.

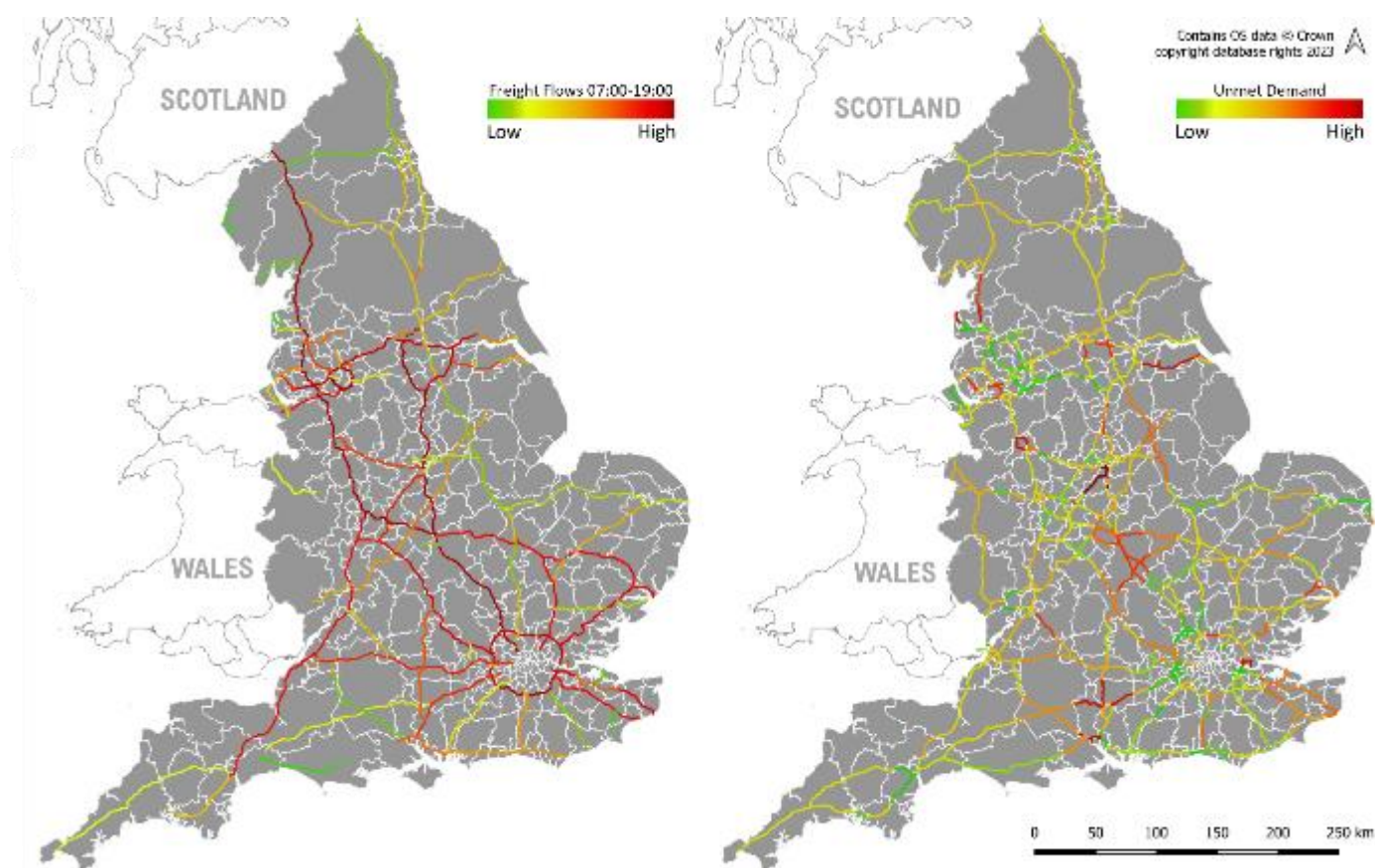


Figure 6-8: Map of HGV flows against unmet lorry parking demand (utilisation and off site parking)

Implications for Route Strategies Work

The National Highways Route Strategies Initial Overview Reports are one of the key steps of initial research in the development of the Road Investment Strategy (RIS). The Initial Overview Reports set out the mid to long term strategies and needs for the network.

It's important to incorporate the findings of the lorry parking demand assessment into actions aligned with the objectives of the 20 route strategies. To do this effectively, it is useful to visually map out where demand for lorry parking is not being met along these routes. This approach can also tackle 'cross-border' issues, where lorry parking solutions in one LPA can ease the burden on neighbouring authorities. Taking this comprehensive approach along the entire route can address demand throughout a corridor.

Figure 6-10 illustrates that unmet demand for lorry parking varies along the northern section of the M6 corridor between Birmingham and the Scottish Borders. Some sections experience high demand, notably around Newcastle-under-Lyme, Warrington and Wyre, while parts of the corridor have lower unmet demand for lorry parking (such as Birmingham and Preston).

The remaining Route Strategies can be found in Appendix A. It should be noted that, while the primary analytical focus of the route strategies analysis is not centred on local authorities, it utilises the established local authority scoring system used in this report. This scoring system serves as a reference to pinpoint areas of high demand along a strategic corridor or network of roads. The use of the local authority scoring system in conjunction with route strategies is a deliberate choice and aims to inform the next steps for addressing unmet demand.

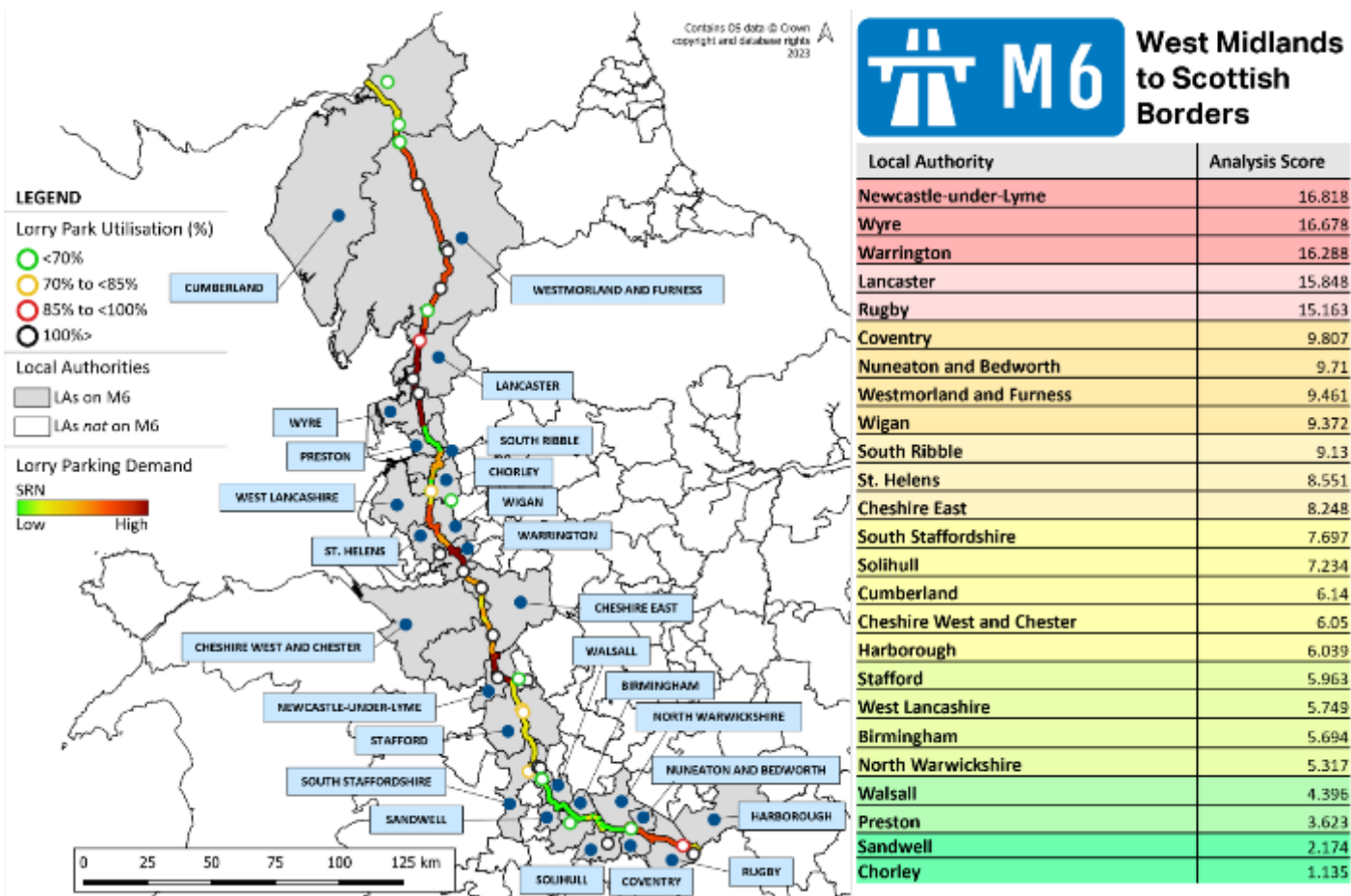


Figure 6-9: M6 West Midlands to Scottish Borders Route Strategy Corridor

7. Lorry Park Success Factors

The data shows that even in areas of high demand, some lorry parks are underutilised, despite a lack of capacity in nearby lorry parking facilities and relatively high levels of off-site lorry parking.

To understand why there are underutilised lorry parking facilities in areas of high demand, it is worth investigating examples where this occurs and identify associated factors. This exercise will help National Highways respond to planning applications and input into Local Plans in a more nuanced way. The survey results were assessed to identify areas where this occurred. Trends in the type of facilities at lorry parks were assessed to understand what makes a successful lorry park. This knowledge can be applied to ensure that future facilities or expansions cater to the specific needs of lorry drivers and the freight industry. This is especially important in regions with significant unmet demand, such as the South East. Two case study examples are explored:

- M6 in Cumbria
- Lower Thames Crossing

M6 Cumbria

The M6 in Cumbria is a largely rural section of the SRN, providing a north-south route between England and Scotland. Associated HGV movements are likely to be strategic in nature, representing long distance trips. There are also likely to be movements associated with centres of population such as Carlisle, however it is anticipated that the key generators of lorry parking demand would be HGV drivers undertaking north-south movements travelling through Cumbria.

Figure 7-1 highlights a section of the M6 corridor where concerns arise regarding the factors influencing the success of lorry parking. In this context, Figure 7-2 serves as a more detailed representation of Figure 7-1 to explain why certain lorry parks within a short segment of the network face either high or low utilisation.

Figure 7-2 demonstrates that a majority of lorry parking facilities in this area are operating at or beyond their capacity. However, 12 miles north of the heavily utilised AW Jenkinson Truckstop is the Moto Southwaite Services. During the 2022 Lorry Parking Survey, Moto Southwaite was only at (roughly) 50% capacity. Such contrast in utilisation rates prompted further investigation, which demonstrated that Moto Southwaite was significantly more expensive than other lorry parks in the area, costing over 40% more than AW Jenkinson Penrith Truckstop. Similarly, further south near M6 Junction 36, there is a small lorry parking area (Canal Garages) that provides 5 spaces. There are few facilities for drivers other than a 24-hour shop and refuelling facilities.

Even though Canal Garages is offered at no cost, it is clear that drivers are willing to find a middle ground and pay for dedicated lorry parking facilities, provided they include essential amenities like showers, security measures, and options for hot meals. If the pricing is too high, it might discourage drivers, but on the flip side, free parking without any security or facilities may be equally unappealing to them. In essence, a successful lorry park strikes the right balance between its pricing and the range of amenities and safety measures it provides to drivers.

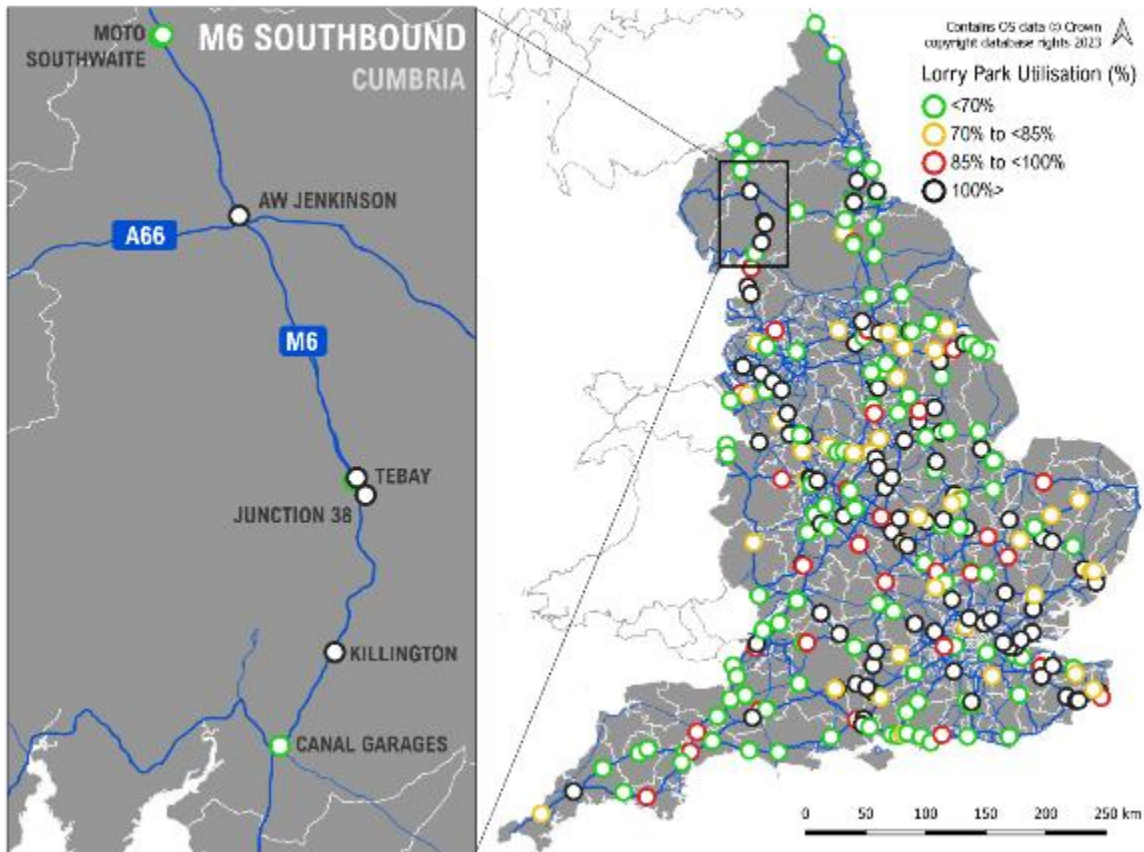


Figure 7-2: HGV parking demand in Cumbria

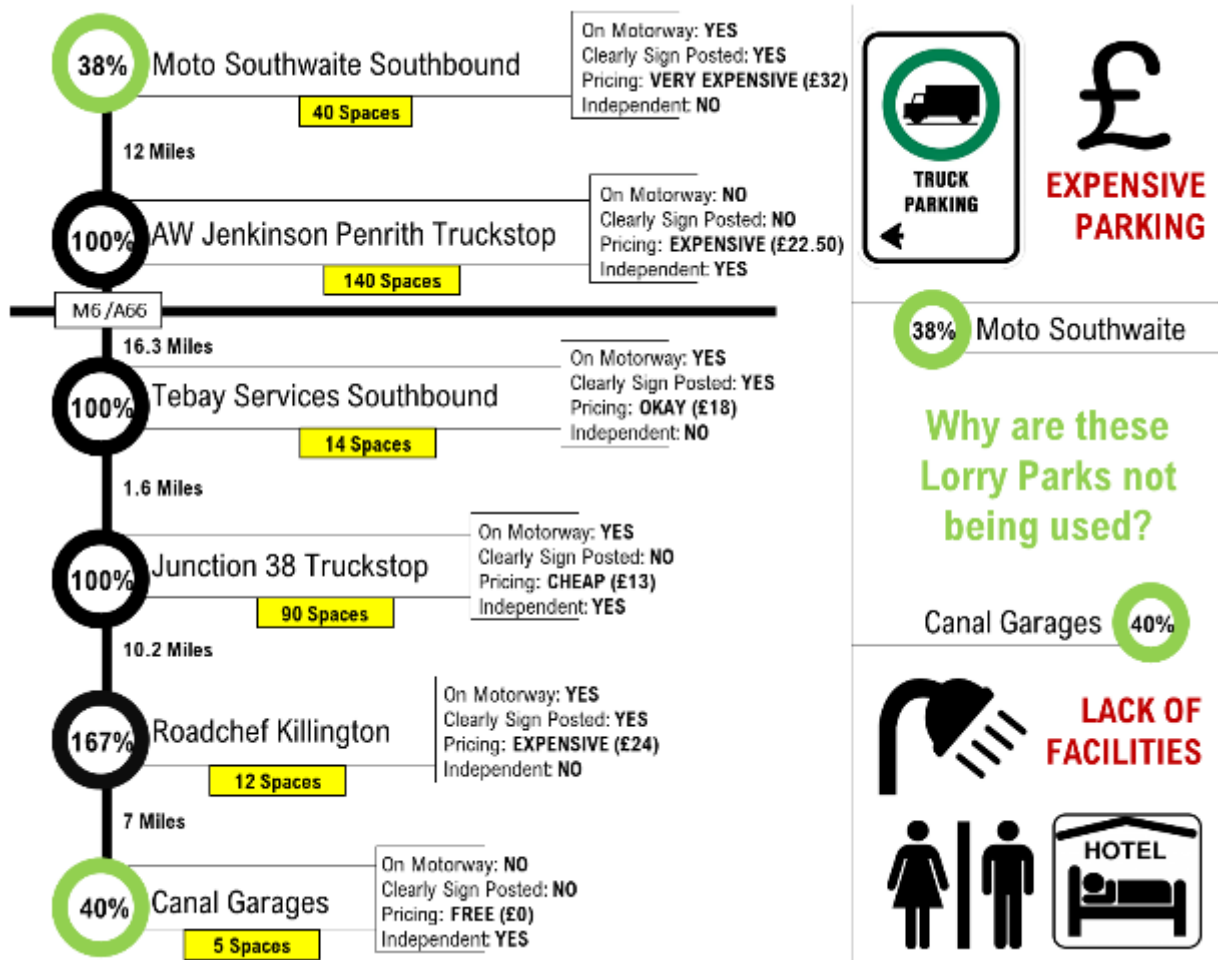


Figure 7-1: Lorry parking success factors in Cumbria

Lower Thames Crossing Study

The Lower Thames Crossing (LTC) is a proposal for a new tunnel and connecting road infrastructure to improve connectivity and freight movement between Kent and Thurrock/Essex and further round the M25. The LTC will provide a new 14.3-mile road, which will link to the A13 in Thurrock and the M25 in Havering on the north side and to the A2 and M2 in Kent on the south side (Figure 7-3).

Currently, there is a lack of sufficient lorry parking in Kent and Thurrock with a high level of unmet demand. The 2022 audits revealed that the South East had the highest demand for overnight parking spaces. Inadequate lorry parking facilities result in improper and sometimes unsafe parking practices. These consequences include lorry-related crime, road safety hazards, damage to infrastructure like roads, kerbs, and verges, environmental health concerns, litter, and noise pollution, particularly when in proximity to residential areas.

The development of the LTC has the potential to exacerbate these issues given more freight traffic will use the crossing. Ultimately, this will lead to higher demand for lorry parking facilities as drivers take breaks in local lorry parks. To accommodate the anticipated increase in traffic and freight movement, there may be plans to develop new lorry parking facilities in proximity to the LTC. These facilities could help alleviate potential parking shortages and ensure that drivers have convenient and safe places to park.



Figure 7-3: LTC route map

Several factors influence the success of lorry parks in this region, including physical site characteristics such as accessibility and proximity to other lorry parks or the SRN. In a previous study by AECOM (2021), an analysis was conducted on the potential for new lorry parking provision in this area. This analysis involved a market assessment to identify the provision of new lorry parking against various factors, including distance to the LTC, route to the LTC, proximity to the SRN, the presence of large distribution centres and/or freight generators within a roughly 20-mile radius, actual capacity of lorry parks, and nearby industrial estates and laybys.

The study revealed several challenges in finding appropriate land for Lorry Parks/MSAs. However, it also shed light on the factors contributing to a successful lorry park and how competition can emerge among clusters of lorry parks/MSAs within close proximity to each other.

The study advised three sites which could be taken forward for future lorry parking with a list of success factors for their potential development. Figure 7-4 shows the location of these sites and their proximity to existing over utilised facilities in the 2022 audit.

MSA on the M25, Dennis Road, South Ockenden

- Space for 873 lorries with 24.9ha site
- Near J30 on the M25
- In-line with MSA opportunity
- Large area
- Within 10 miles of the LTC North Entrance
- Noise issues are unlikely
- Warehousing and distribution in close proximity

Lorry Park by the A2, Watling Street, Gravesend

- Small 3.2 site with 150 lorry parking spaces
- Good proximity to SRN and Junction A227 on the A2 (Gravesend Central)
- Good land shape to support the building of facilities and amenities
- Very close to LTC (2 miles to South Entrance)

Expansion of Lorry Park by the M25, Honey Lane

- 26ha site is relatively large, with potential for 1214 spaces
- The site is already an existing independent site (Junction 26 Diner)
- Relatively low-cost intervention to improve the site from National Highways, particularly in terms of tarmacing the site and adding motorway signage
- Good proximity to the SRN (and good location overall)
- Existing fuelling facilities (albeit need upgrading)
- Flat rectangular land

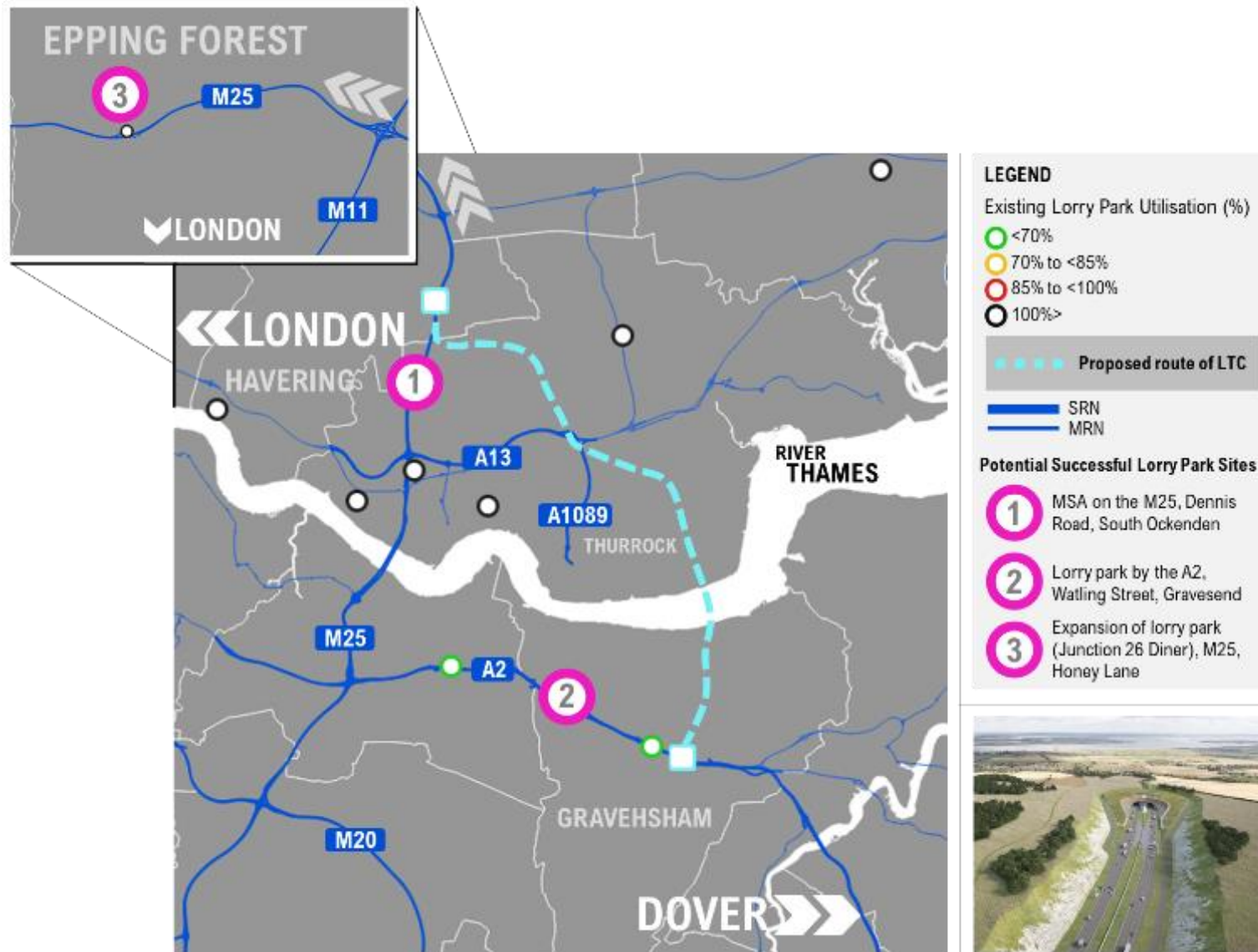


Figure 7-4: Shortlisted sites for new potential lorry parking (with considered success factors) under the LTC implementation

8. Summary and Conclusions

The 2022 DfT Lorry Parking Survey provides the ability to undertake in-depth analysis of the nature of lorry parking across England, showing where HGVs are parking within 5km of the Strategic Road Network.

The robust approach to the survey, first developed in 2010 and repeated in 2017 and 2022, has ensured that there is consistency in how data has been collected and analysed. This has already informed DfT policy in relation to support via additional match funding for better facilities and security measures.

We can therefore be confident that the data used for this assessment is robust and has been subject to the necessary assurance processes. Subsequent analysis has thus been based on a strong evidence base.

This LPDA has shown that many areas of England experience unmet demand for formal lorry parking facilities. This often leads to a prevalence of off-site parking in areas that lack even basic facilities and security measures and existing lorry parks operating above capacity. This in turn puts pressure on those facilities, for example resulting in too few showers for drivers or increasing the extent of wear and tear, thus accelerating the degradation of the lorry park.

The assessment undertaken here enables National Highways' colleagues to easily identify which local authorities are experiencing significant unmet demand. The analysis shows this is influenced by HGV flows, however there is not always a direct link between the extent of road freight traveling along the SRN in a particular area and the need for new facilities.

Creating a high-level (but considered) assessment using robust data means the scoring can be easily understood and applied by those less familiar with lorry parking and/or freight. Focusing on the LPA spatial context means that National Highways regional planning teams can more easily respond to queries such as Local Plan consultations or specific planning applications.

This information has been made available in Power BI, for easy integration into National Highways datasets, enabling quick analysis and easy comparison with other metrics. This has also been provided in table form in this report for quick reference.

This report also helps improve understanding of why some lorry parks are underutilised in areas of demand. This is important as factors such as price and a lack of facilities can lead to drivers not parking in formal facilities.

This assessment shows that there is a requirement for National Highways to support LPAs in accommodating new or improved lorry parks and the tool that has been developed can help partners assess the extent to which the need for new lorry parking provision is prevalent in their area. This can be an important resource in delivering new and better lorry parking, that will benefit the freight sector and all those who live and work in areas affected by informal lorry parking.

Appendix A Regional Assessments

Appendix B: Local Authorities Scoring Above 12 in the Analysis

Local Authority	Off Site Parking Score /10	Utilisation Score /10	Provided Combined Score/20
North West Leicestershire	9.420289855	9.645390071	19.06567993
Southampton	9.22705314	8.794326241	18.02137938
Test Valley	8.502415459	9.14893617	17.65135163
Basingstoke and Deane	7.487922705	9.929078014	17.41700072
North Lincolnshire	8.695652174	8.581560284	17.27721246
Newcastle-under-Lyme	7.101449275	9.716312057	16.81776133
Thurrock	7.536231884	9.219858156	16.75609004
Wyre	8.309178744	8.368794326	16.67797307
Warrington	7.777777778	8.510638298	16.28841608
Enfield	8.743961353	7.304964539	16.04892589
Babergh	6.52173913	9.361702128	15.88344126
Medway	9.758454106	6.09929078	15.85774489
Lancaster	9.323671498	6.524822695	15.84849419
West Northamptonshire	7.68115942	8.156028369	15.83718779
Bolsover	8.84057971	6.879432624	15.72001233
Cotswold	6.280193237	9.290780142	15.57097338
Knowsley	5.700483092	9.787234043	15.48771713
Wakefield	7.342995169	8.085106383	15.42810155
Tamworth	8.45410628	6.808510638	15.26261692
Rugby	8.212560386	6.95035461	15.162915
Maidstone	5.217391304	9.858156028	15.07554733
Chelmsford	5.893719807	8.936170213	14.82989002
Dover	8.405797101	6.312056738	14.71785384
Mid Sussex	5.603864734	9.078014184	14.68187892
South Kesteven	7.29468599	7.021276596	14.31596259
Newark and Sherwood	8.06763285	6.028368794	14.09600164
Cherwell	6.859903382	7.092198582	13.95210196
Swale	8.937198068	4.680851064	13.61804913
Stoke-on-Trent	9.516908213	3.90070922	13.41761743
Dacorum	4.202898551	9.007092199	13.20999075
North Northamptonshire	7.874396135	5.319148936	13.19354507
North East Derbyshire	9.855072464	3.262411348	13.11748381
Canterbury	8.792270531	4.255319149	13.04758968
Buckinghamshire	3.526570048	9.503546099	13.03011615
Bassetlaw	6.231884058	6.737588652	12.96947271
East Suffolk	8.599033816	4.113475177	12.71250899
Tandridge	7.246376812	5.390070922	12.63644773
Ipswich	8.164251208	4.468085106	12.63233631
Ashford	4.541062802	7.730496454	12.27155926
New Forest	6.425120773	5.815602837	12.24072361
West Suffolk	7.198067633	4.893617021	12.09168465

