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Lorry Parking Demand Assessment

Highways England

20 June 2019

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	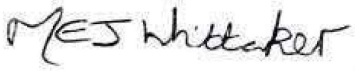	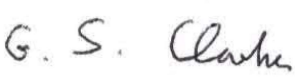
Harrison Byrnes **Freight & Logistics Consultant** **Yihang Xue** Freight & Logistics Consultant	**Michael Whittaker** Associate Director – Freight & Logistics	**Geoff Clarke** Regional Director – Freight & Logistics

Revision History

Revision	Revision date	Details	Authorized	Name	Position

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Prepared for:

Highways England

Prepared by:

Harrison Byrnes
Freight & Logistics Consultant
T: +44 (0)775 447 0501
E: harrison.byrnes@aecom.com

AECOM Limited
AECOM House
179 Moss Lane
Cheshire, Altrincham WA15 8FH
United Kingdom

T: +44(0)1619 278200
aecom.com

Table of Contents

Figures

Tables

Executive Summary

Throughout the course of this study, identifying which areas of England are in the greatest need of additional lorry parking provision has been assessed using three different methods. Firstly, the 2017 DfT 'snap shot' survey was analysed at a more granular level than any previous work, which included data relating to existing lorry park utilisation (for those lorry parks located on the SRN) as well as off-site parking in laybys and industrial estates. A more practical assessment of lorry parking issues was then undertaken through a survey of Highways England Traffic Officers which highlighted recurring issues on parts of the road network. This section was also complemented with information gathered through consultation with various stakeholders including hauliers, lorry park facility providers, trade bodies and fuel providers. The third method to assess lorry parking demand was to analyse port related freight movements and conduct a high level theoretical analysis into the demand for lorry parking that port related freight movements generate. The full methodology for this assessment is outlined in Chapter 4.

Each of the three methodologies highlighted a number of the same geographical areas to have significant demand for additional supply of rest areas including:

- South East England, specifically the county of Kent
- the Midlands, in the regions of Leicester, Coventry, Milton Keynes and everywhere in between
- the M5 between Bristol and Birmingham
- Liverpool and Manchester regions
- logistics precincts in Sheffield/Rotherham and Leeds
- the A1(M) through Durham to Newcastle
- Central London.

The regions are highlighted in the figure below which has the combined findings from all three methodologies at a local authority level. The lighter shade of orange represents local authorities that were identified as requiring additional lorry parking in one of the methodologies while the brightest shade of orange represents those local authorities that were identified by all three of the methodologies to require additional lorry parking supply. A list of which local authorities were raised in each methodology can be found in Appendix B.

As part of the study, some additional issues relating to the supply of lorry parking were identified and discussed. The key issues that need to be addressed in order to increase the supply of lorry parking and reduce off-site parking include:

1. **Recognising the segmentation of lorry parking demand –** demand for lorry parking may vary between types of lorry parking provision including:
   - 'High Quality' – any lorry park with the presence of toilets, showers, a café, accommodation and security
   - Middle of the range – usually some combination of amenities and costs more than £5
   - 'Cheap & Cheerful' – any lorry park costing less than £5 for an overnight stay.
2. **Ensuring key lorry parking success factors are met –** the factors that should remain consistent across all lorry parks include being in close proximity to the SRN and provision of some level of security.
3. **Removing barriers to lorry parking development from the private sector –** to promote private sector investment and reduce the time and difficulty associated with providing lorry parking.
4. **Promoting technology** as a means to provide real time information such as location and availability of lorry parking facilities and promote collaboration between lorry parks and major freight generators and attractors (i.e. ports and industrial estates).

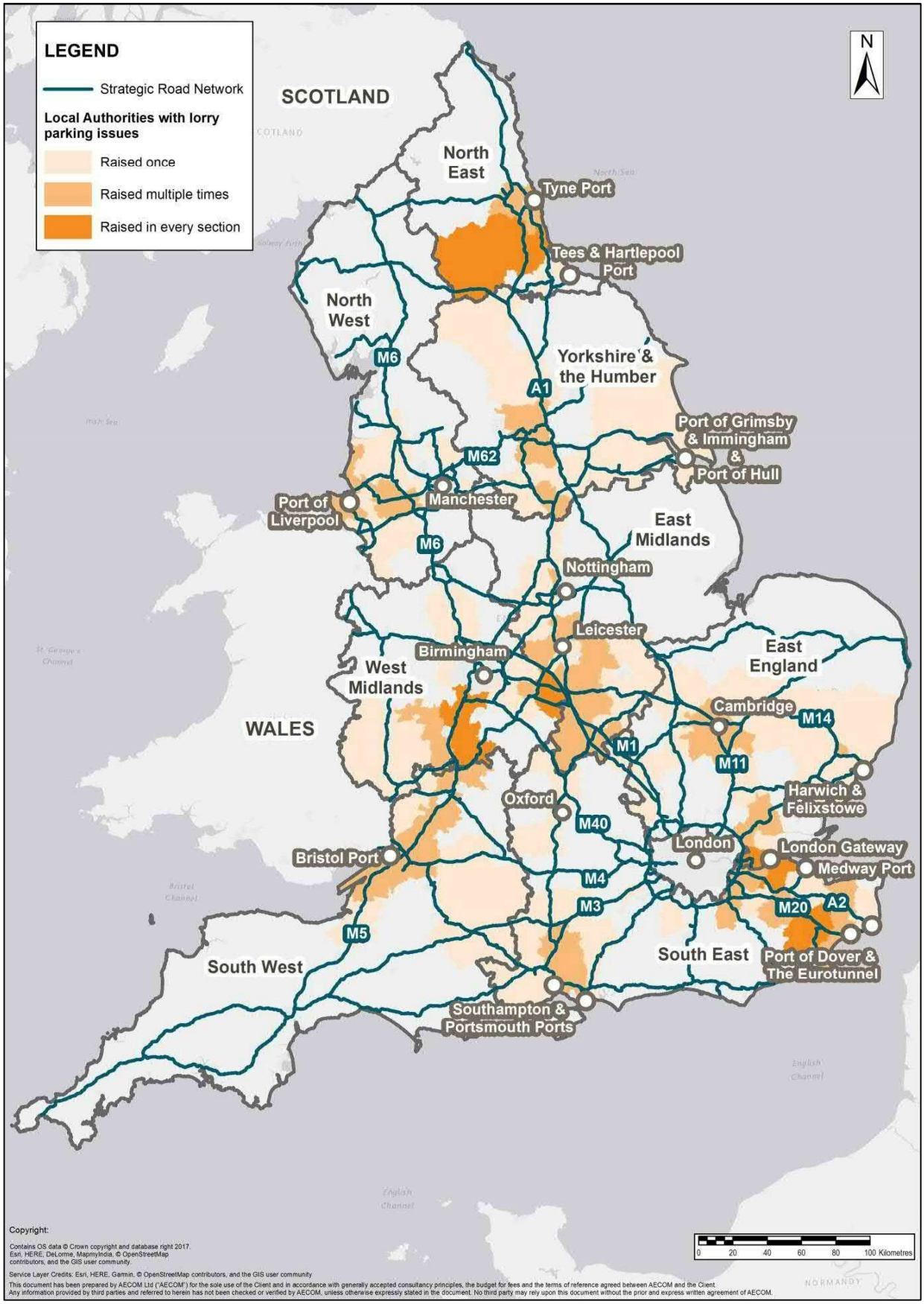


Figure 1 Summary of local authorities in need of additional lorry parking supply

1. Introduction

Background

Highways England were asked by the Department for Transport (DfT) to consider lorry parking and assess where there are areas of high demand and lack of provision. It is recognised that having sufficient lorry parking and rest areas within close proximity to the Strategic Road Network (assumed to be 5kms) helps Highways England meet three imperatives: Safety / Customer Service / Delivery.

The DfT in March 2017 used AECOM's Freight Team to do a full audit of utilisation of over 4,000 parking areas including official lorry parks, Motorway Service Areas and industrial estates and laybys. This found that there is an increasing need for overnight lorry parking and that there is a shortfall in provision in six regions of England. Although some heat maps based on utilisation were produced as part of the research, there is a need to be more specific such as identifying locations with high demand but no existing supply (which cannot be identified from utilisation heat maps alone).

Purpose of this study

The focus for this work is to do a qualitative and quantitative analysis of driver patterns of behaviour on key freight corridors to narrow down the most likely areas of demand for lorry parking. It considers strategic spatial geography to focus on parts of the country where demand for parking spaces is greatest and supply of these spaces is weakest; this provides a honed view as to locations most likely to support viable new or potentially enlarged lorry parks. This in turn will allow Highways England to focus its input to the Local Authority Development Plan process and help to achieve its requirement to provide facilities for freight users.

In addition to providing guidance on the most likely areas of demand for lorry parking based on all the available evidence, consideration has been given to locations most likely to make successful lorry parks. The approach of the work has been broken down using a 3-stage approach, and features in the following chapters;

2. **Existing supply and demand** – this draws directly from the 2017 DfT national survey
3. **Stakeholder-led demand analysis** – this included consultation with hauliers, trade bodies, lorry parking facility providers and governmental organisations to identify problematic areas and confirm drivers of lorry parking demand. Highways England Traffic Officers were also surveyed which is discussed in this section.
4. **Port driven demand and theoretical analysis** – this was informed by port statistics for inbound and outbound freight as well as driving time regulations which were confirmed during the stakeholder consultation.

A short summary of the recent publication by the European Commission titled a 'Study on Safe and Secure Parking for Trucks' has also be completed and is detailed in Section 5 before a summary of the entire report and discussion around next steps and recommendations in Section 6.

2. Existing supply and demand

Methodology

This assessment is mainly comprised of reviewing and analysing the DfT's 2017 National Survey data of overnight lorry parking in England and to provide information on local areas with high demand and low supply for lorry parking. This will require analysis of the existing database which includes usage of lorry parks, Motorway Service Areas, laybys and retail/industrial sites. During the survey, there were 311 lorry parks (on site), 801 Industrial / Retail Estates (off-site) and 3,397 laybys (off-site) visited as shown in Figure 2-1. The locations where vehicles were parked are colour coded by type.

The utilisation surveys were undertaken during the evenings between the hours of 6pm and 2am on Tuesdays, Wednesday and Thursdays throughout the month of March 2017. There was a team assigned to each of the nine regions and each team consisted of two team members. All of the truck stops, industrial estates and laybys were visited in England within 5km of the SRN.

Data on the lorry parking sites was collected using a mobile application 'Collector for ArcGIS'. This is a cloud based mapping platform designed by Esri. This 'App' allowed audit teams to digitally record site visit observations using a mobile phone, tablet or iPad. The information collected included data on whether vehicles were UK or foreign registered in order to gain an understanding of international transit movements.

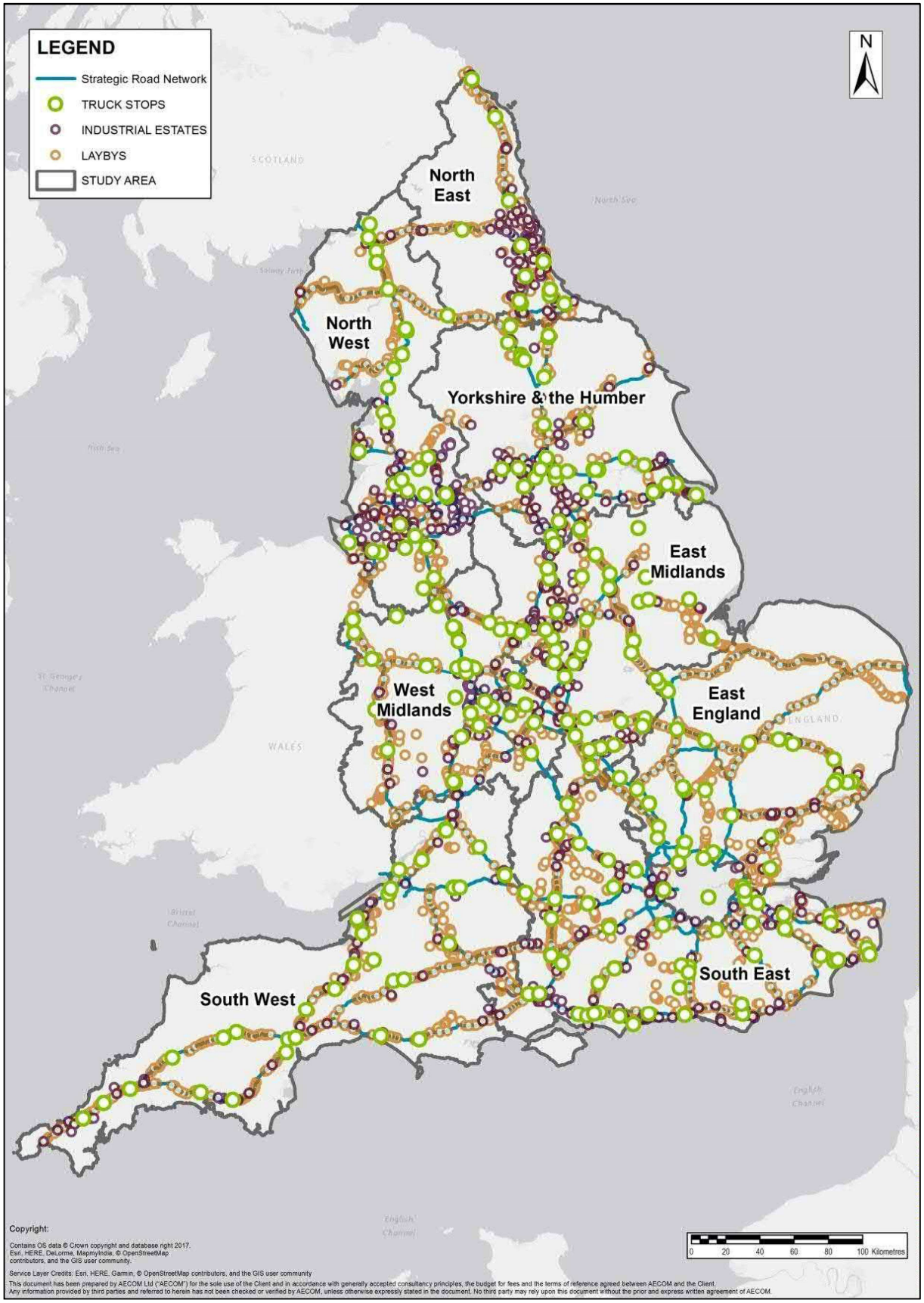


Figure 2-1 All locations visited

Lorry parking supply and demand

The utilisation of on-site lorry parking facilities compares the number of vehicles parked against current capacity which is a useful indicator for areas where additional provision of lorry parking is likely to be utilised.

A categorisation system has been created in the previous DfT demand study as shown in Table 2-1 to identify when high utilisation becomes problematic. It is recognised that at 85 percent utilisation or more it is difficult for drivers to find parking spaces due to the size of vehicles and the way they are positioned, hence at this point the Lorry Park is considered to be full in a practical sense.

Table 2-1 Lorry Park Categorisation

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

This section aims to identify areas with highly utilised lorry parks (i.e. lorry parks with above 85% utilisation). As can be seen in Figure 2-2, 112 out of 311 lorry parks (on-site) surveyed are identified as critically utilised lorry parks with utilisation above 85 percent. The critical lorry parks tend to be on major freight arteries such as the M1, M3, M4, M5, M6, M11, M18, M20, M25, M27, M40, M56, M62 and M180. Additionally, the following A-roads also contain a number of critically utilised lorry parks; A1, A3, A5, A12, A14, A20, A23, A27, A30, A34, A38, A46, A50 and A417. It is also worth noting that an acceptable utilised (green dot on the map) does not represent an underutilised or unsuccessful lorry park but merely suggests that at the time of the survey a lorry driver looking to park at this facility would not be turned away. For example, a lorry park in Ashford (South-East England in close proximity to Dover) was recorded at under 70 percent uilised at the time of the survey however during discussions with the owner of the lorry parking facility it was suggested that upto 150 lorries were turned away per night of a regular basis.

To be more specific, as shown in Table 2-2, East of England and South East reigions have the highest number of critical lorry parks (24 and 23 followed by East Midlands with 18 critical lorry parks). Further analysis on lorry park utilisation is carried out on a more detailed level to identify counties and metropolitan areas with high demand for existing lorry parks. Table 2-2 shows counties and metropolitan areas within which all existing lorry parks are critically utilised. Only areas with at least two existing lorry parking facilities have been included. Generally, regions that have the greatest number of critically utilised lorry parks also include the most counties and metropolitan areas within which all lorry parks are critically utilised. Four areas in the East of England have all lorry parks critically utilised while Leicestershire has the highest number of critical lorry parks in the East Midlands.

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. Additionally, the existence of one lorry park surveyed at below critical utilisation (below 85%) would have excluded the area from Table 2-2 however demand for lorry parking in this area may still be very high (i.e. for a different location or different set of facilities such as increased security). For example, the county of Kent contains four critically utilised lorry parks as well as a further five seriously utilised (above 70%), however it also contains five lorry parks at an acceptable utilisation on the day of the survey (below 70%), thus is not including in Table 2-2. There are a number of similarly located lorry parks which incur varying levels of utilisation which demonstrate driver's preferences for security, showering facilities and areas for socialising. These factors are discussed in the next section.

Table 2-2 Critically utilised lorry parks

Region	Total lorry parks	Critically utilised lorry parks	Percentage
East of England	**31**	**24**	**77%**
- Cambridgeshire	5	5	
- Essex	4	4	
- Central Bedfordshire	3	3	
- Thurrock	2	2	
South East	**58**	**23**	**40%**
- Surrey	3	3	
- Milton Keynes	2	2	
East Midlands	**49**	**18**	**37%**
- Leicestershire	9	9	
West Midlands	**38**	**16**	**42%**
Yorkshire and Humber	**37**	**9**	**24%**
- Rotherham	4	4	
South West	**37**	**8**	**22%**
North West	**39**	**8**	**21%**
North East	**17**	**6**	**35%**
London	**5**	**0**	**0%**
Total	**311**	**112**	**36%**

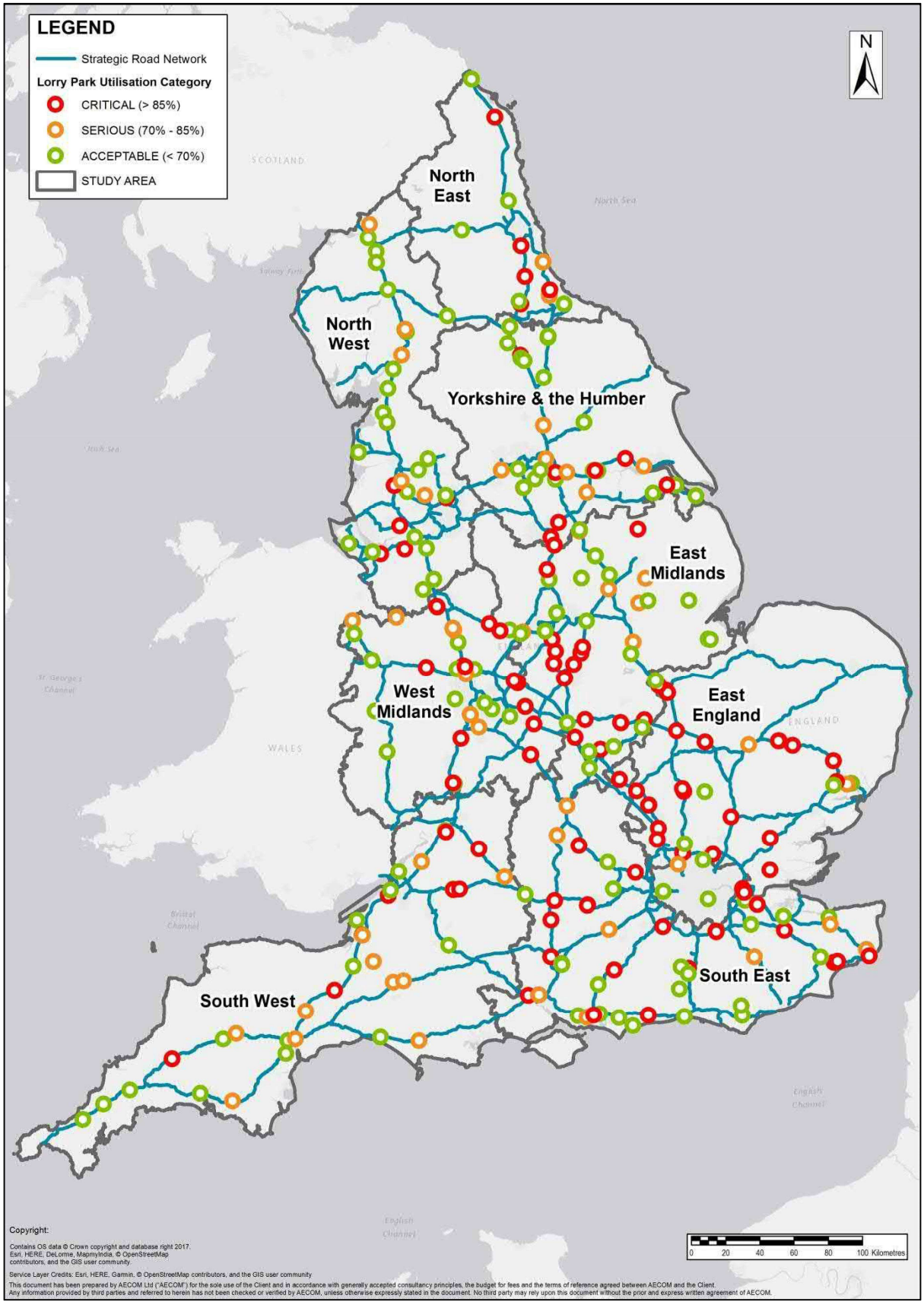


Figure 2-2 Lorry parks

Inappropriate (off-site) parking

In total, 18,670 lorries were parked overnight across England, with 39 percent of them observed to be parked off-site. A total of 15,012 appropriate spaces were recorded, which means that even if all of these spaces were filled, a theoretical excess of 3,658 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 and other inappropriate places every day.

Lay-bys

A layby has been considered as being used for overnight lorry parking if one or more lorry was recorded. Table 2-3 and Figure 2-3 below show the layby-usage and positioning across nine regions in England respectively. It is shown that across England around 51 percent of all laybys have been used by at least one lorry during the survey. South East has the most used laybys (326) at 59 percent of all laybys being used while East Midlands has the highest percentage of used layby in its own region (65%) with 470 laybys used. Although London has the highest percentage of used laybys in its region, it may not accurately indicate the demand due to the small sample size (only nine laybys in total), however it is known from consultation that a parking problem exists in London.

Layby usage rate analysis has also been carried out on the county and metropolitan area level to identify the local demand. Counties with highest layby usage rate are shown in Table 2-3 below. Please note that counties and metropolitan areas with less than 40 laybys are not individually listed due to the small sample size. Similarly to the lorry park analysis, regions with high layby usage rate tend to have more counties with a high layby usage rate. It can be seen that the counties with highest percentage of utilised laybys are Leicestershire, Derbyshire and Kent with 78, 72 and 71 percent utilised respectively. It is worth noting that Leicestershire also has the most critical lorry parks (nine out of nine) as shown in Table 2-2. In addition to Kent, Essex and Cambridgeshire are shown to have the most used laybys (84, 81 and 69 respectively). Part of the reason for this is that many foreign drivers do not want to pay for overnight parking and hence look for somewhere that is free of charge.

Table 2-3 Regional Layby Utilisation

Region	Total Laybys	Used Laybys	Percentage
South East	**554**	**326**	**59%**
- Kent	118	84	71%
- Hampshire	107	66	62%
- Oxfordshire	84	51	61%
East Midlands	**470**	**304**	**65%**
- Northamptonshire	95	62	65%
- Leicestershire	69	54	78%
- Derbyshire	61	44	72%
East of England	**559**	**297**	**53%**
- Essex	132	81	61%
- Cambridgeshire	111	69	62%
West Midlands	**362**	**188**	**52%**
North West	**357**	**183**	**51%**
South West	**523**	**176**	**34%**
Yorkshire and Humber	**276**	**128**	**46%**
North East	**287**	**105**	**37%**
London	**9**	**8**	**89%**
Total	**3,397**	**1,715**	**51%**

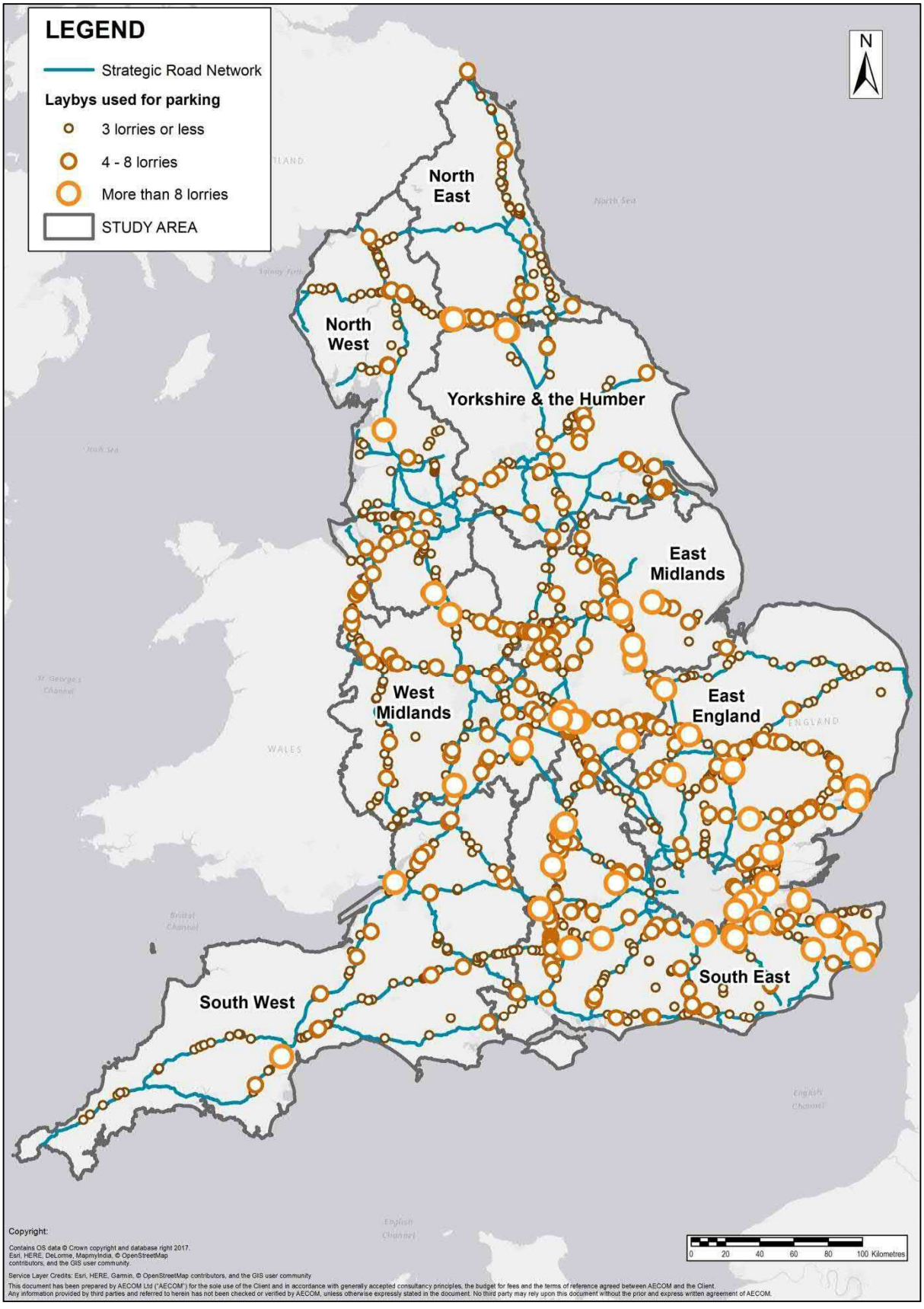


Figure 2-3 Layby usage

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 2-4 below to help indicate areas with high demand for lorry parks.

Table 2-4 Industrial Usage Categorisation

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

Table 2-5 and Figure 2-4 below show the utilisation and positioning of industrial areas across the England respectively. It can be seen that East Midlands and West Midlands have the most highly used industrial estates (17 and 14 sites respectively). They also have the highest percentage of highly used laybys in their regions with around 16 percent of all industrial estates having more than 10 lorries parked in them. The heat map shown in Figure 2-4 demonstrates that the areas of intensive use for lorry parking include the M1, M6, M25 and A34 corridors.

Counties with highest lorry occupancy rate of industrial estates are listed in Table 2-5 below. Similarly, counties with less than three industrial estates with a high usage rate are not listed due to the small sample size. It can be seen that Northamptonshire has the most highly used industrial estates with six. It is followed by Leicestershire and Warwickshire which have five highly used industrial estates. Warwickshire has the highest percentage of highly used industrial estates (42%). It is worth mentioning that Northamptonshire, Derbyshire and Leicestershire are also counties with high layby usage rates shown in Table 2-3 and Leicestershire also has the highest number of critical lorry parks shown in Table 2-2. The variance between industrial estates could be explained by a number of factors such as size, tenants and land holders within the sites and differences in local authority/planning policies in the area.

Table 2-5 Regional Industrial Estates Usage

Region	Total Estates	High Usage	High Usage % in the region
East Midlands	**115**	**17**	**15%**
- Northamptonshire	24	6	25%
- Leicestershire	31	5	16%
- Derbyshire	18	4	22%
West Midlands	**86**	**14**	**16%**
- Warwickshire	12	5	42%
North West	**150**	**10**	**7%**
North East	**108**	**9**	**8%**
South East	**128**	**6**	**5%**
Yorkshire and Humber	**95**	**5**	**5%**
South West	**67**	**4**	**6%**
East of England	**26**	**3**	**12%**
London	**26**	**0**	**0%**
Total	**886**	**68**	**8%**

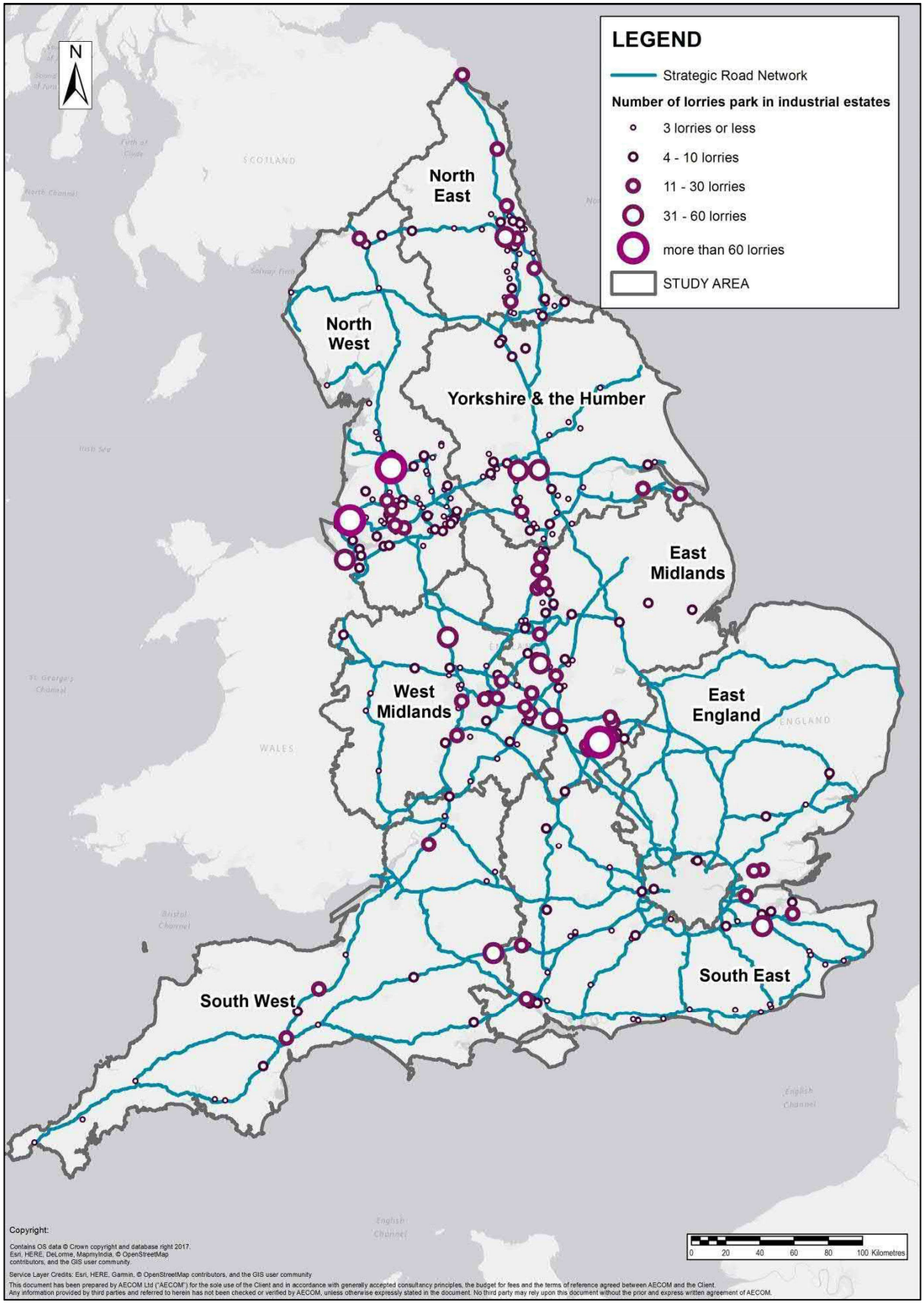


Figure 2-4 Industrial Estates Utilisation

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 Figure 2-5. This map illustrates the areas of England with the greatest off-site parking issues and will be used to represent off-site parking throughout the rest of the chapter.

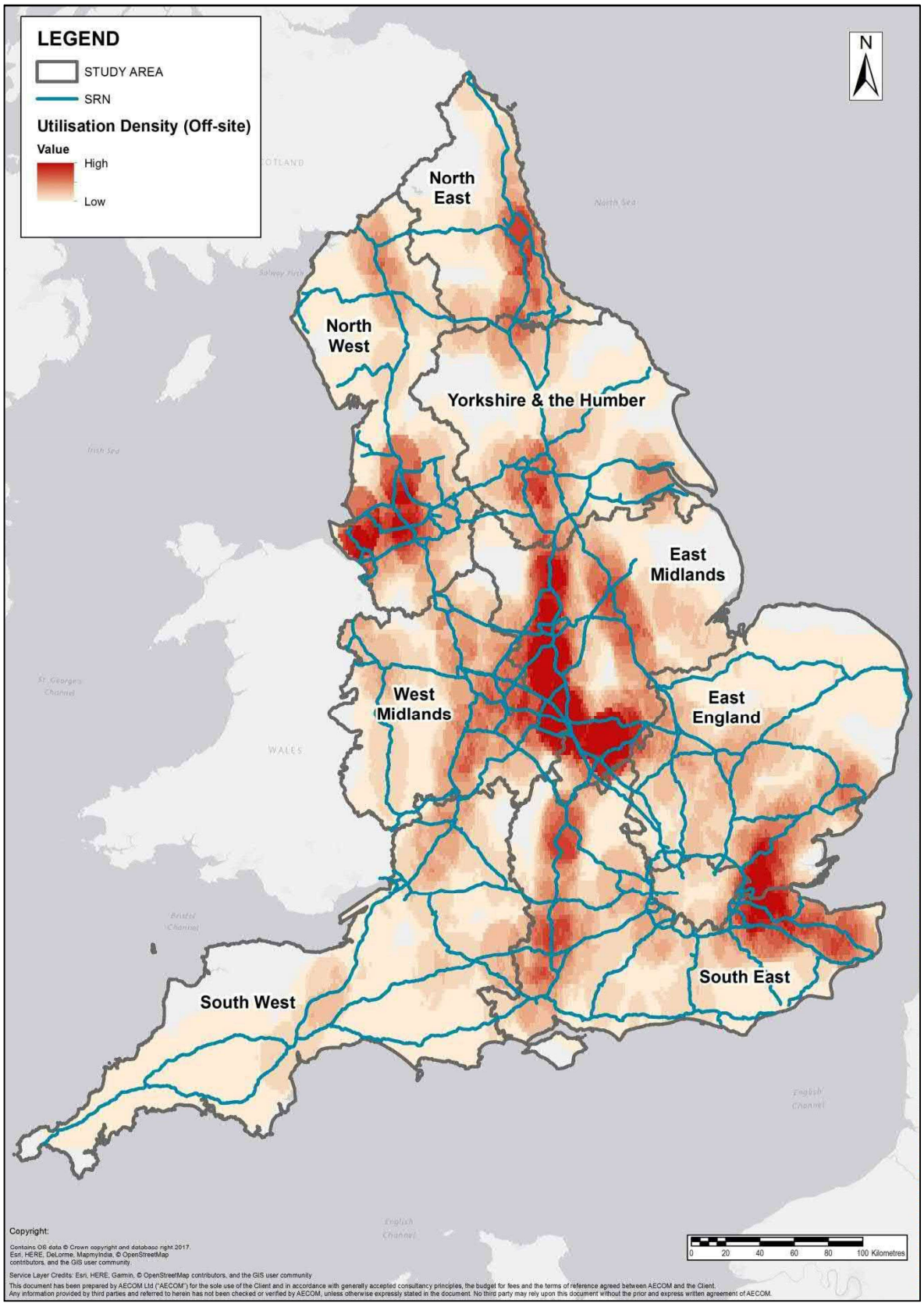


Figure 2-5 Combined off-site parking

Identified areas of high demand

Using the off-site parking data as well as lorry park utilisations, this section details an analysis undertaken into local 'hot spots'. In each 'hot spot' discussed, a map is shown which combines the previously shown lorry park utilisation map and the off-site heat map in Figure 2-2 and Figure 2-5. Areas discussed include:

- The Midlands logistics hub
- The South-East of England
- The Port of Liverpool
- The Port of Southampton
- The North-East of England including Teesport and the Port of Tyne.

East Midlands and West Midlands – Logistics Hub

The East Midlands was found to have the greatest number of vehicles parking off site with 65 percent of laybys used and 25 percent of industrial estates with more than 10 lorries parked in them.The high density of off-site parking and critical lorry parks can be found along the M1 corridor in the East Midlands region. That is also where the 'golden triangle' is located which is the area where logistics activity is most concentrated and is considered a prime location for National Distribution hubs. Traditionally, the "golden triangle" in the Midlands is bounded by the M1, M6 and M42 and has been a key hub for logistics activity for the last 40 years. The main reason for this is that drivers can reach most areas of the UK from here within a HGV driver's working day. The term 'logistics hub' was coined by property developers keen to attract business to the Midlands based on a national hub and 'spoke' distribution pattern. Unsurprisingly, it can be seen that a high density of used laybys and critical lorry parks are concentrated around this area. A high percentage of industrial estates with more than 10 lorries are also observed around the logistics hub. The demand for lorry parks near the logistics hub can be further illustrated by looking at the counties which are associated with the "golden triangle". This explains why Leicestershire has most critically parked lorry parks and is the county with highest off-site usage rate as analysed in the previous section.

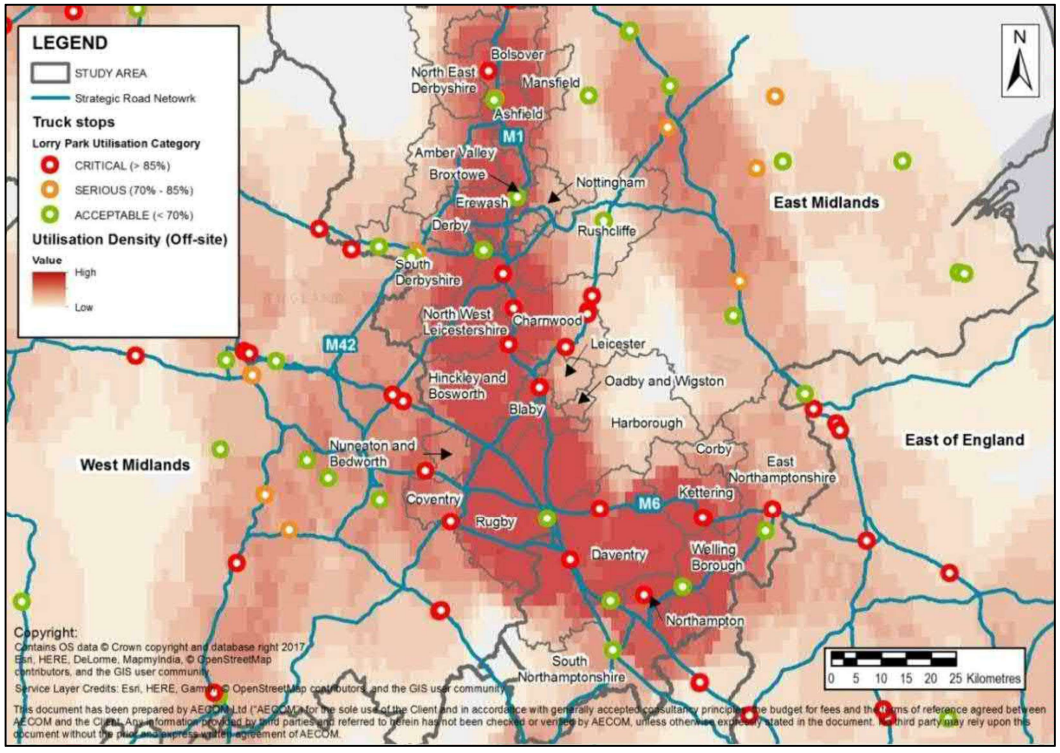


Figure 2-6 Hotspot with Layby Usage and Critical Lorry Parks

South East and East of England

The Strategic Road Network surrounding the five major ports (Felixstowe, Harwich, Dover, Medway and London Gateway), as well as the Channel Tunnel entrance/exit in Dover, in the South East and East of England is under a lot of pressure for additional lorry parking as can be seen in Figure 2-7. In particular, the SRN around the port of London Gateway shows the high density of used laybys and criticial lorry parks. It can also be seen that there are a relatively high percentage of industrial eastates with inappropriate lorry parking around London Gateway.

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) while the entire county of Kent incurs significant off-site lorry parking as illustrated by the heat map.

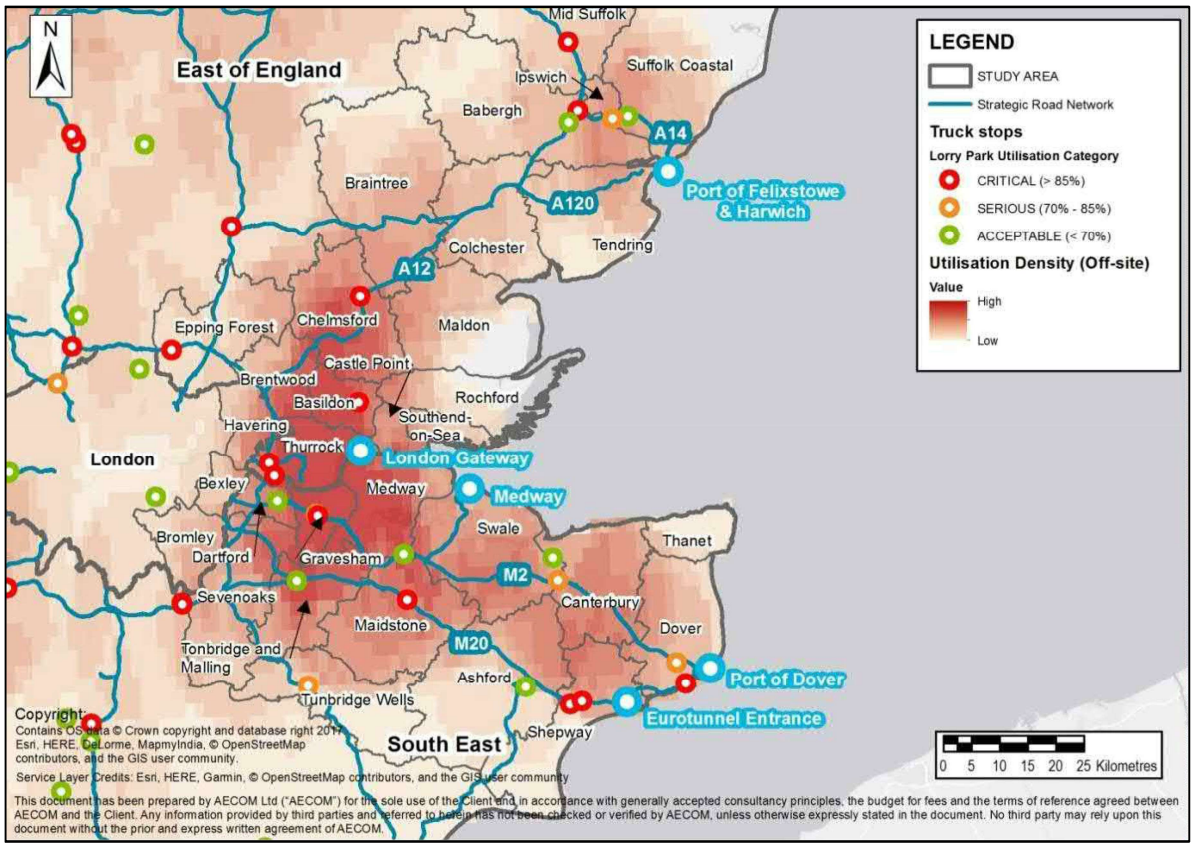


Figure 2-7 Hotspot with Layby Usage and Critical Lorry Parks

Port of Liverpool

Figure 2-8 shows a high off-site parking density around Merseyside with a number of industrial estates in high usage around the Port of Liverpool. It has been suggested in a previous study that there are a limited number lorry parks close to the Port of Liverpool and a number of those are at critical utilisation. It is recognised that if a lorry park is to be considered in the North West, providing one in the immediate vicinity of the Port of Liverpool and on the M6 and M62 corridors should be a high priority. It is understood that a new MSA on the M62 near Warrington is currently an advanced state of planning.

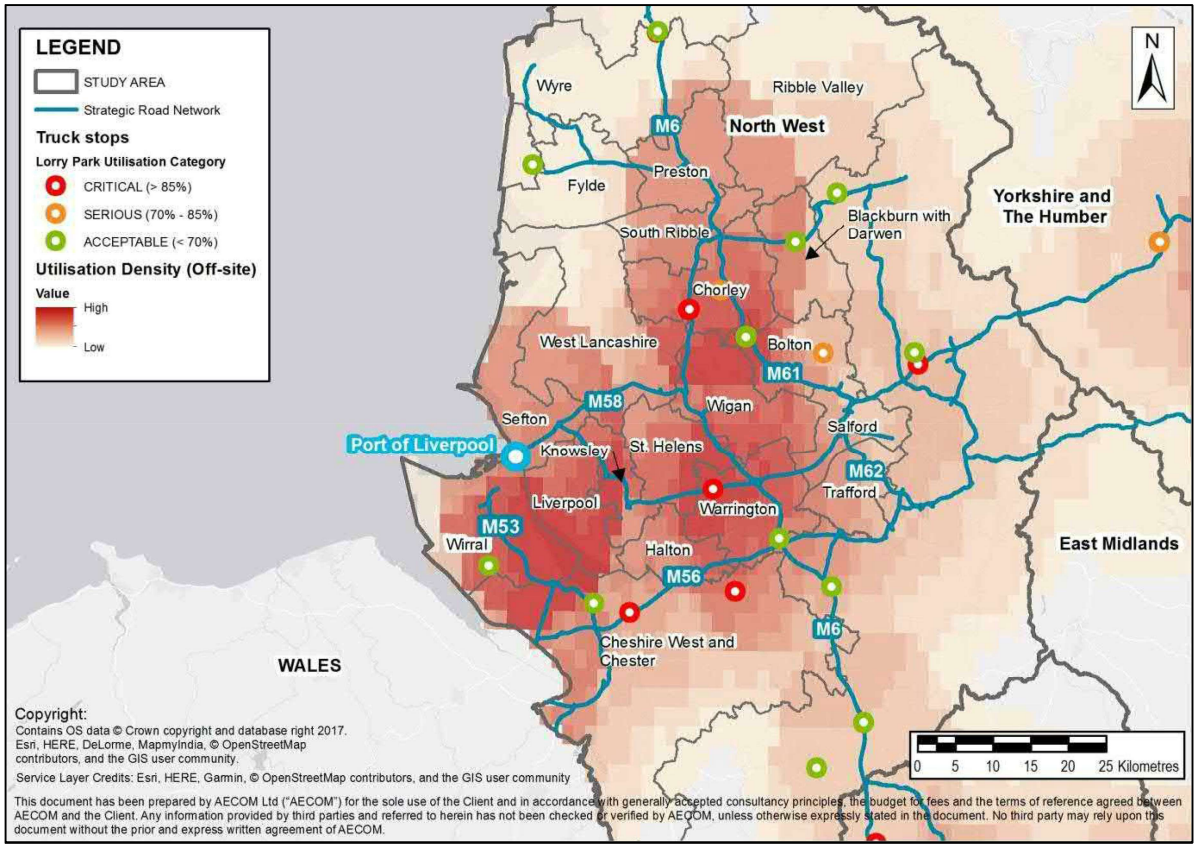


Figure 2-8 Hotspot with Layby Usage and Critical Lorry Parks

Southampton Port

The A34 in the South leads north from the ports of Southampton and Portsmouth and 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 2-9. A high number of serious and critically utilised lorry parks are observed along the A34, which explains a high layby usage rate in Hampshire and Oxfordshire in Table 2-3. Also worth noting are the A34 and the eastern end of the A303 which also incur a reletively high level of demand for HGV parking.

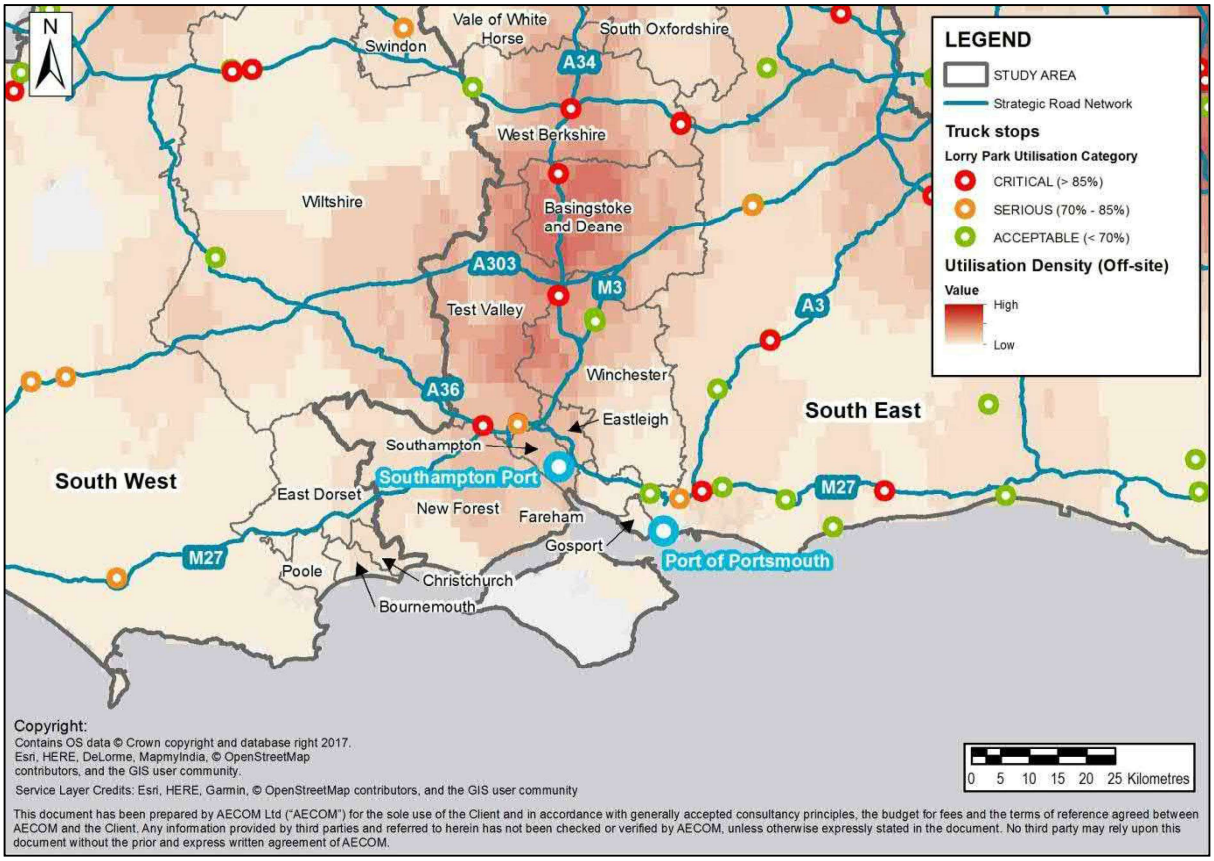


Figure 2-9 Hotspot with Layby Usage and Critical Lorry Parks

North East - Teesport

The North East as a region as a whole has relatively low percentage (37%) of laybys being used during the survey. However, the area indicated in Figure 2-10 incurs high off-site parking surrounding Teesport and Tyneside along with several lorry parks with critical utilisation on the A1 and A19 corridors. Additionally, a number of industrial estates within the immediate area of the port are shown to have medium or high usage indicating they are intensively used by lorries. This suggests a lorry park could be very beneficial if located near the port or on the A1 and A19 corridors.

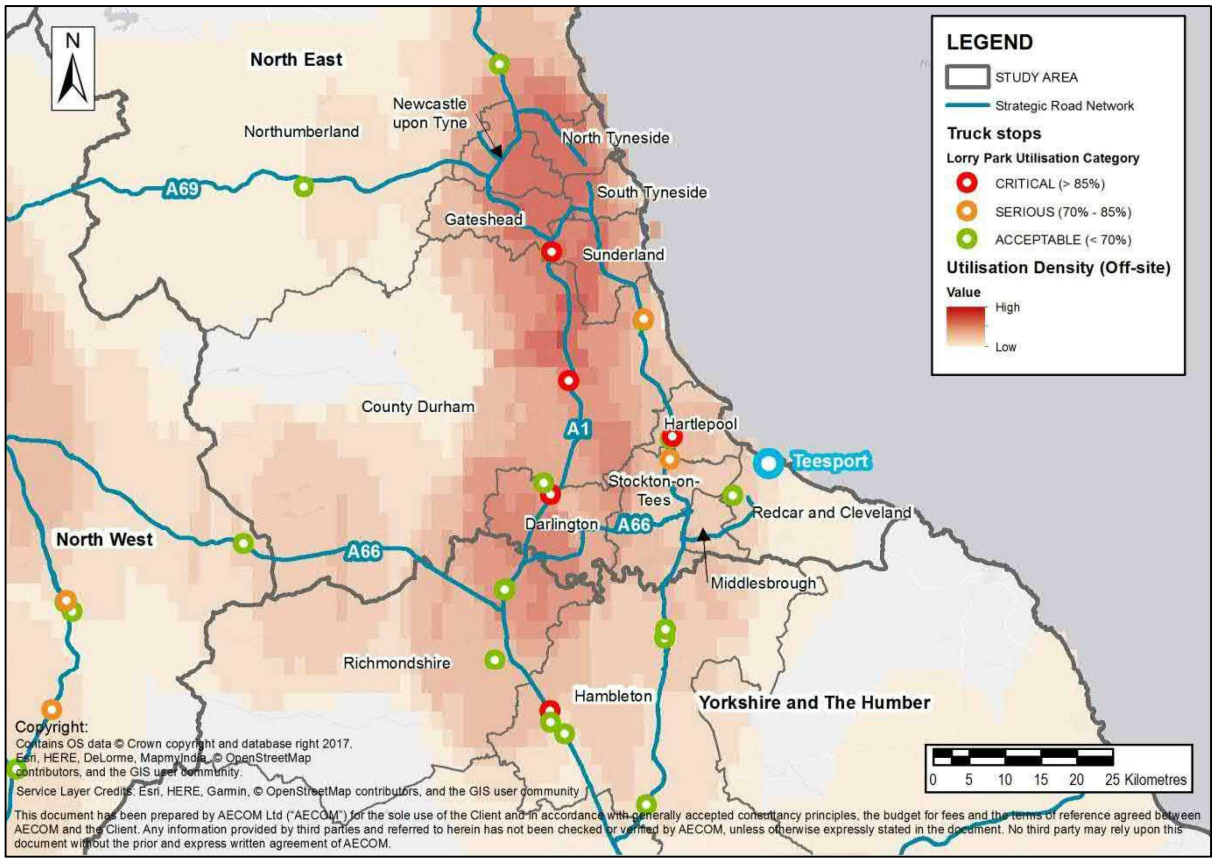


Figure 2-10 Hotspot with Layby Usage and Critical Lorry Parks

Lorry park success factors

Statistical analysis

A high level statistical analysis has been carried out using the DfT data in order to determine the factors affecting lorry park utilisation. This involved consideration of whether the facility included toilets, showers, a café, CCTV, lighting, a security fence and accommodation. The quality of these facilities was not considered (the presence of one shower was equal to the provision of numerous high quality showers and changing facilities). The analysis resulted in the conclusion that a security fence was the characteristic most likely to result in increased utilisation of a lorry park while lighting and accommodation were also strongly correlated.

Interestingly, the parking charge is observed to be positively related to the lorry park utilisation which indicates that lorry parks with higher parking changes more often had a higher utilisation. This demonstrates that some drivers are less concerned with the cost of a facility when compared to the provision of facilities (i.e. drivers are happy to pay a premium for access to these facilities). It is known that a proportion of customers insist that their goods in transit are kept to a secure lorry park at night to minimise the risk of theft. This usually relates to the movement of high-value goods.

Case studies

Three case studies have been investigated which involved comparing lorry parks located in close proximity to each other and that incur significant differences in utilisation. These case studies are discussed below and are at the following locations:

1. Goole (Yorkshire and the Humber, M62)
2. Crawley (South East, M23)
3. Ipswich (East of England, A14)

Goole

Table 2-6 and Figure 2-11 below outline the first case study which compares three lorry parks, one of which is critically utilised while the other two are below 50 percent. The difference in utilisation between Lorry Parks A and B may be explained by provision of accommodation while comparing Lorry Parks B and C illustrates that the provision of CCTV and a security fence is likely to increase the lorry park's utilisation. Additionally, as Figure 2-11 shows, Lorry Park B is located in closer proximity to the M62 which will positively influence the utilisation.

Table 2-6 Lorry park comparison - Case Study 1

Facility	Lorry park A	Lorry park B	Lorry park C
Toilets & Showers	✓	✓	✓
Café	✓	✓	✓
Security fence & CCTV	✓	✓	×
Lighting	✓	✓	✓
Accommodation	×	✓	✓
Parked lorries / Capacity	16 / 40	52 / 60	19 / 40
Charge (per night)	Unknown	£16.50	£22.00
Utilisation	**40%**	**87%**	**48%**

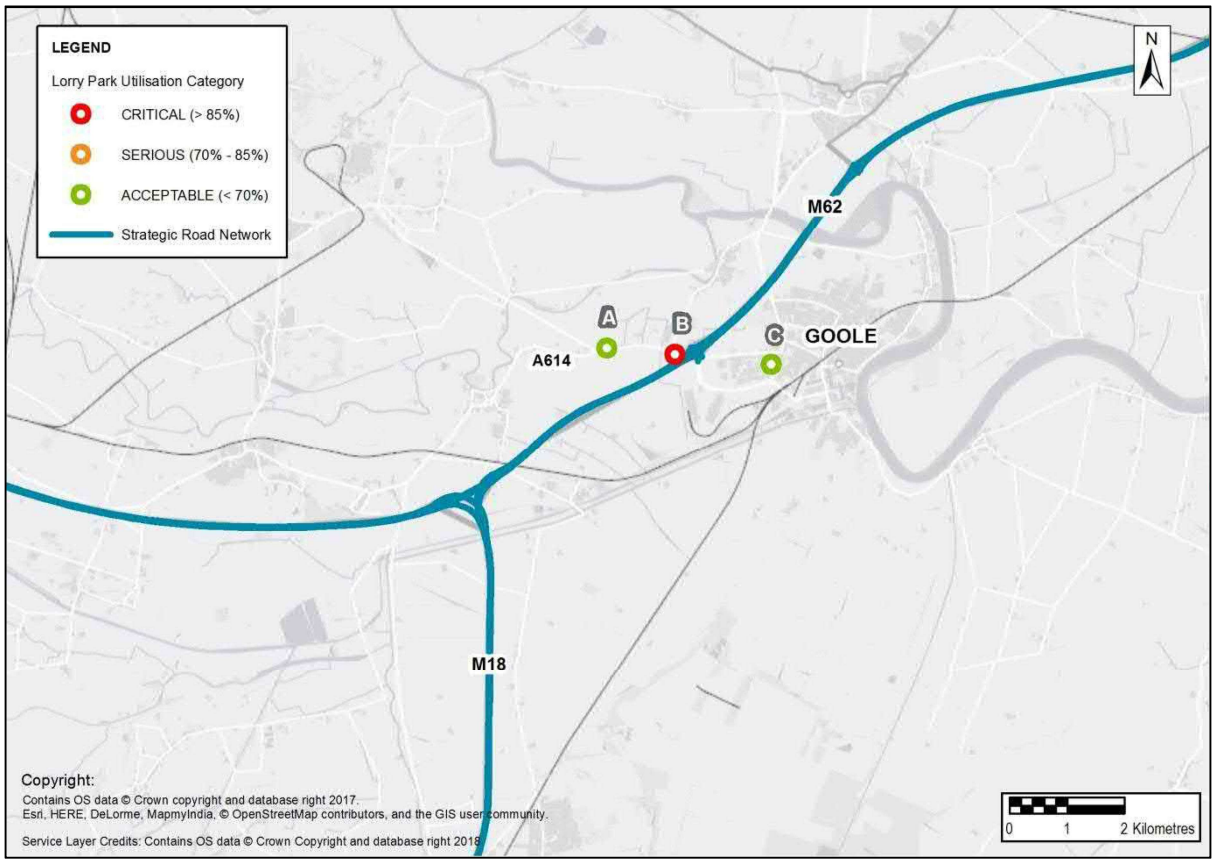


Figure 2-11 Case Study 1

Crawley

In this example, although Lorry Park B does not include security, it still incurs a far greater utilisation than Lorry Park A or C. The difference in utilisation between Lorry Park A and Lorry Park B can be explained by the presence of a café and accommodation as well as its location directly on the SRN. Lorry Park C is also located directly on the SRN however does not incur the same utilisation of Lorry Park B which can be explained by the lack of showering facilities, accommodation and also due to the reduced capacity which may mean drivers are more concerned about the lack of security and social interaction.

Table 2-7 Lorry park comparison - Case Study 2

Facility	Lorry park A	Lorry park B	Lorry park C
Toilets & Showers	✓	✓	×
Café	×	✓	✓
Security fence & CCTV	×	×	×
Lighting	×	✓	✓
Accommodation	×	✓	×
Parked lorries / Capacity	5 / 15	27 / 25	1 / 6
Charge (per night)	Unknown	£28.00	Unknown
Utilisation	**33%**	**108%**	**17%**

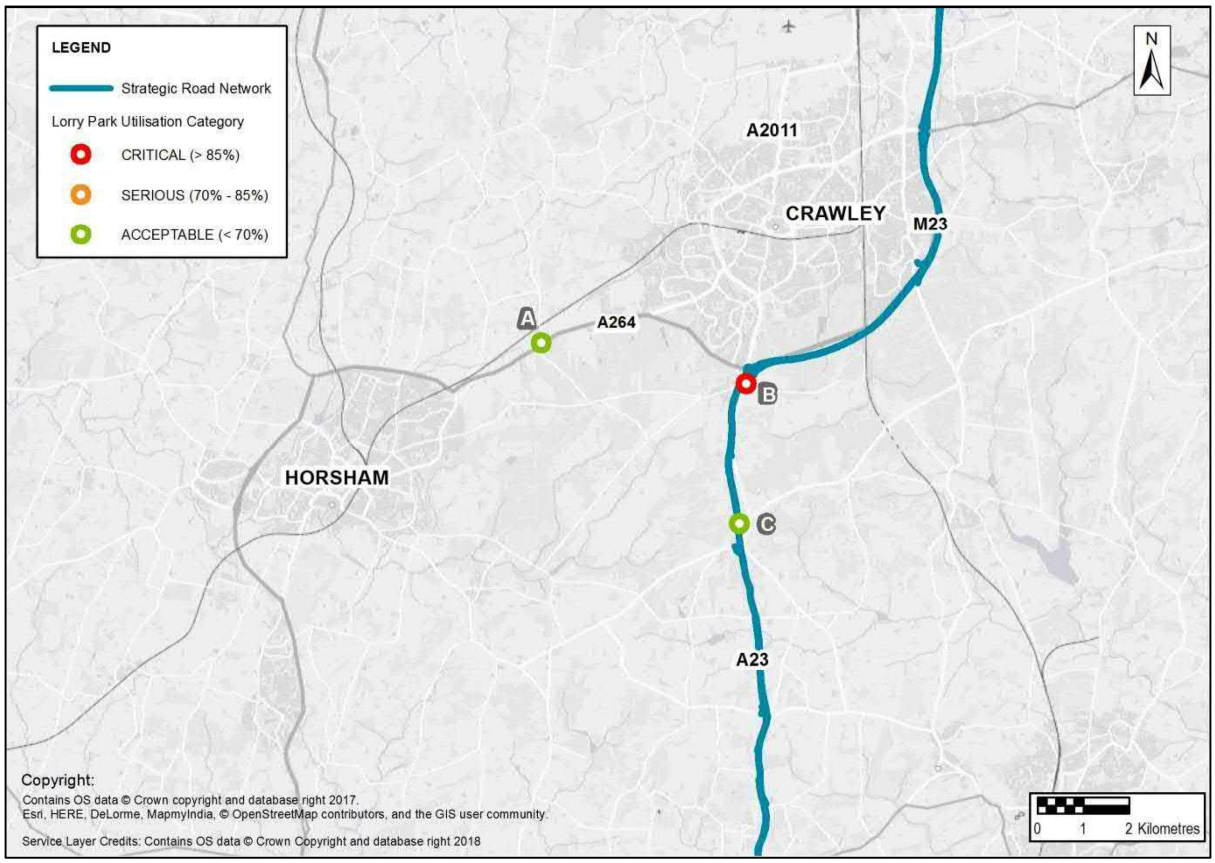


Figure 2-12 Case Study 2

Ipswich

This case study includes four lorry parks located in close proximity to the SRN near Ipswich on the A12 and A14 which link the Port of Felixstowe to the rest of England. At the time of the survey, the utilisation across the four facilities ranged from 56 percent to 88 percent. Each facility includes different features however none of them include the option for accommodation. The lower utilisation at Lorry Park A relative to the other three lorry parks can be explained by their locations on the higher freight volume route of the A14 compare to the A12. Lorry Park B may incur a greater utilisation than Lorry Park C due to the presence of a café while Lorry Park D may have its lower utilisation explained by the fact that it contains such a large capacity. The number of lorries parked in Lorry Park D is 94 which is greater than the other three lorry parks combined. Lorry Park D also provides resilience to the local area as it is known that the additional supply at this location is used for temporary vehicle storage when the operations of the nearby ports are halted due to bad weather. The features and locations of these lorry parks are displayed in Table 2-8 and Figure 2-13.

Table 2-8 Lorry park comparison - Case Study 3

Facility	Lorry park A	Lorry park B	Lorry park C	Lorry Park D
Toilets & Showers	×	×	×	✓
Café	✓	✓	×	✓
Security fence & CCTV	×	×	×	✓
Lighting	×	×	✓	✓
Accommodation	×	×	×	×
Parked lorries /	14 / 25	22 / 25	18 / 25	94 / 150
Charge (per night)	Unknown	Unknown	Unknown	£18.00
Utilisation	**56%**	**88%**	**72%**	**63%**

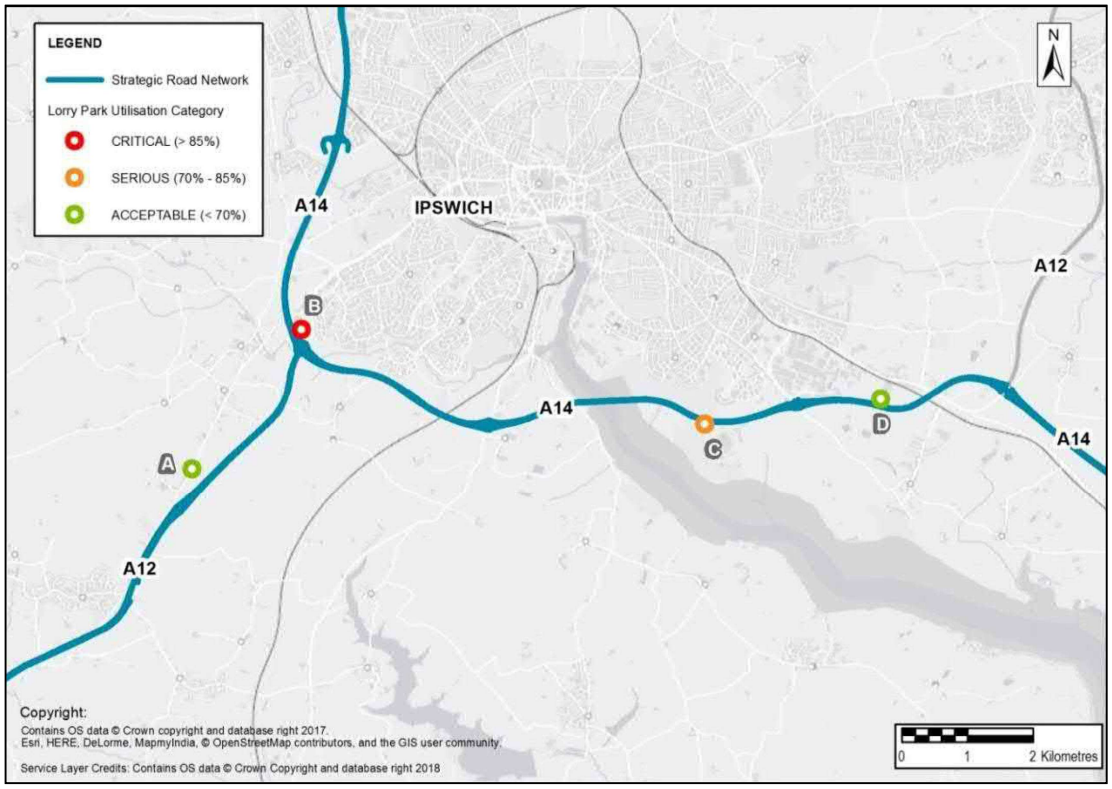


Figure 2-13 Case Study 3

Lorry park segmentation and 'high quality' lorry parks

It is known that demand can exist for different types of lorry parking depending on the needs of the driver. This creates segmentation in the supply of lorry parking facilities from the 'high quality' lorry parks with all the drivers needs catered for to the 'cheap and cheerful' lorry parks which provide a low cost option. Figure 2-14 outlines the segmentation of lorry parking across England using the following criteria:

- 'High Quality' – any lorry park with the presence of toilets, showers, a café, accommodation and security
- 'Cheap & Cheerful' – any lorry park costing less than £5 for an overnight stay
- Middle of the range – any lorry park that did not fit into either of the other two categories (or where the price was not known, thus a number of these may actually be 'Cheap & Cheerful').

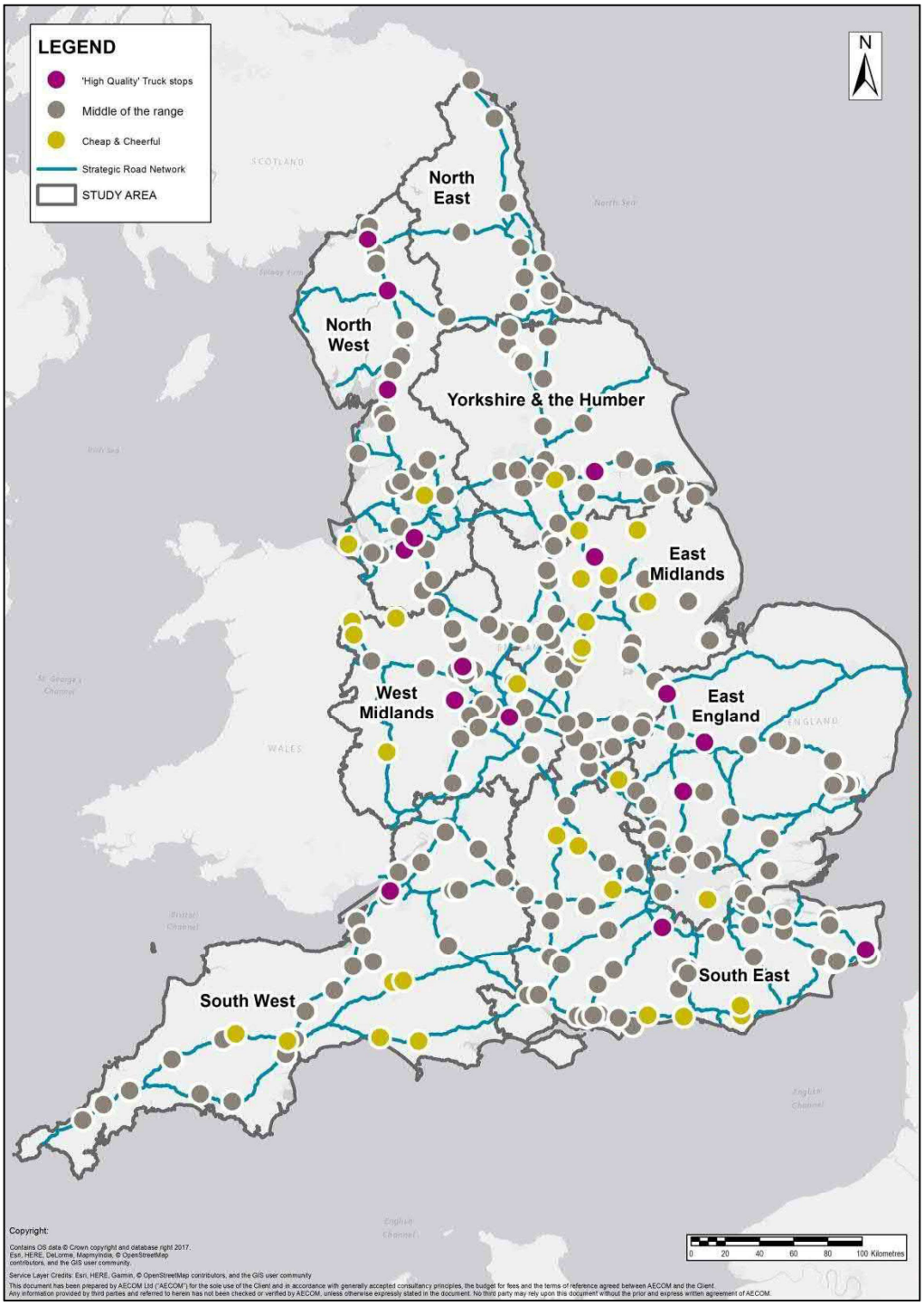


Figure 2-14 Lorry park segmentation

'High quality' lorry parks

In total, there are 16 lorry parking facilities which are classified as 'high quality' due to the presence of showers, toilets, accommodation and security. Of these, seven are critically utilised, one is seriously utilised and eight are acceptable. Four of the acceptably utilised lorry parks that are situated in areas with high off-site parking have been investigated to determine why this might be the case. Table 2-9 outlines the capacity and number of lorries parked at each facility based on the DfT survey as well as an observed capacity based on google aerial imagery and a theoretical utilisation based on this observed capacity. Both stated capacity and observed capacity are estimates and they vary since each uses a different method. Stated capacity is from the DfT survey in 2017 where data collectors estimated the capacity from ground level while on-site compared to observed capacity which was estimated by counting the number of spaces using Google imagery of the lorry park.

Table 2-9 Underutilised high quality lorry parks in areas of high demand

Ref	Truck Stop	Parked lorries (DfT survey)	Stated capacity (DfT survey)	Observed capacity (Google imagery)	Utilisation (from observed capacity)
1	Moto Service (Lymm)	236	400	281	**84%**
2	Markham Moor Truckstop	60	100	75	**80%**
3	Lincoln Farm Truckstop	0	8	8	**0%**
4	Hawkins Transport Village	38	60	< 50	**>76%**

When the observed capacity from aerial imagery is used to calculate lorry park utilisation, it is likely that three of these lorry parks would be considered critically utilised rather than acceptably utilised. When considering the Lincoln Farm Truckstop, which did not have a lorry parked in it at the time of the survey, the lack of demand can be explained by the very small capacity and the requirements of the facility for drivers to call and book in advance. Additionally, the Lincoln Farm Truckstop is located on the A452 which is not part of the Strategic Road Network (SRN). This facility is likely to be used by returning lorry drivers familiar with the route. Considering this investigation, it can be reasonably concluded that any high quality lorry park operating in an area of high demand is likely to be successful. Figure 2-15 outlines each of these facilities.

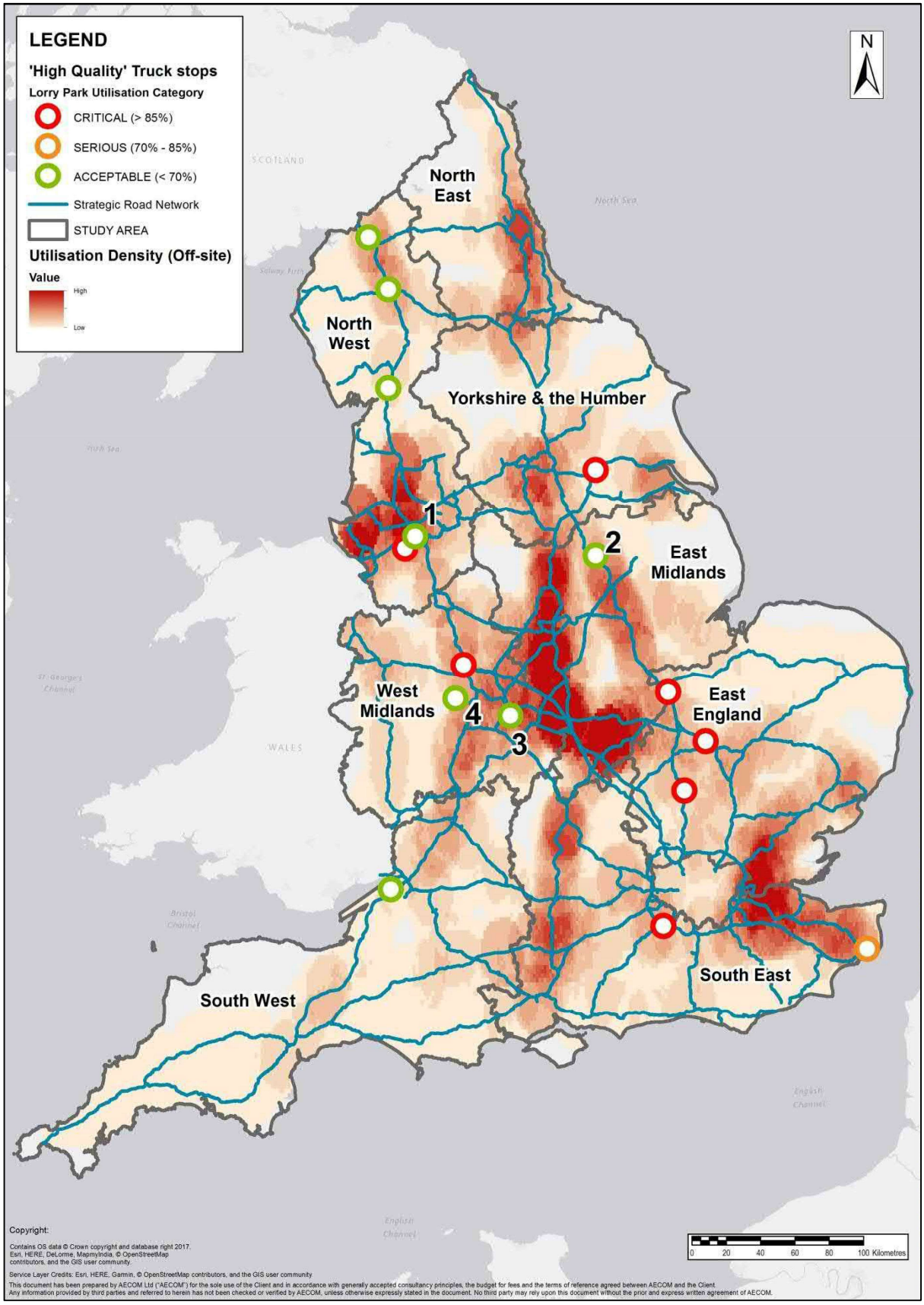


Figure 2-15 High quality lorry park

'Cheap & Cheerful' lorry parking

There are 33 lorry parks classified as 'Cheap & Cheerful' across England as shown in Figure 2-16. This type of lorry park is considered to provide an alternative to off-site parking for those drivers unwilling to pay very much for a park, either because it comes out of their own pocket or they get to keep whatever is left over from an allowance, Without a good coverage of acceptably utilised 'Cheap & Cheerful' lorry parks, drivers cannot be reasonably expected to stop parking in laybys or industrial estates. The majority of these lorry parks located in areas of high off-site parking are critically utilised, meaning that they are likely to be turning away drivers.

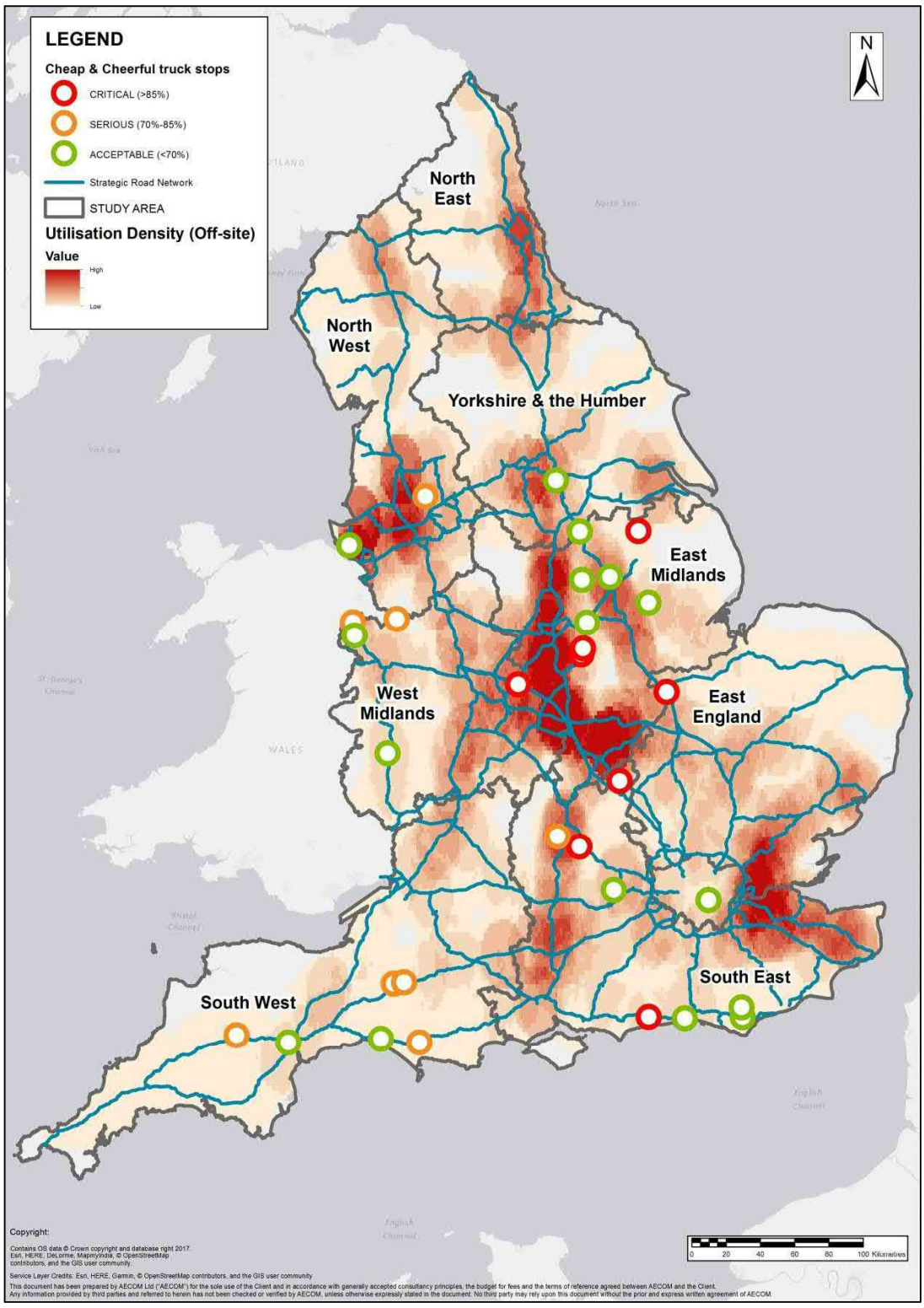


Figure 2-16 Cheap & Cheerful lorry parking

Critical lorry park success factors

Using the information outlined throughout this section, a number of success factors can be identified however provision of these characteristics does not necessary guarantee success as the demand market is highly segmented. The following characteristics have been identified to impact on the success of a lorry park:

- **Security** – the provision of security fences, CCTV and security guards improves the utilisation of a lorry park and provides the justification for some drivers to pay for parking rather than using laybys or industrial estates.
- **Facilities** – The provision of good quality toilets and washing facilities along with the option to purchase a meal and accommodation are all linked to improved utilisation.
- **Location** – The location of a lorry park greatly impacts its utilisation. Determining whether a site is a good location for a lorry park depends on:
  - If there is high demand in the area for lorry parking in the form of high off-site parking or highly utilised existing lorry parks
  - The network of lorry parks in the surrounding area (ie. provision of lorry parks at a consistent distance along a stretch of road is likely to increase the utilisation of all of them due to increased predictability)
  - The proximity of the site to major freight generators and attractors (ie. ports, industrial estates, etc.)
- **Distance from the SRN** – The further a lorry park is away from the SRN the less likely it is to be highly utilised. New lorry park developments should aim to be as close as possible to the SRN with clear signage to direct lorries of the SRN where possible.
- **Price** – There is no specific price which leads to increased utilisation of a lorry park however carefully considering the needs of the drivers at that particular site and developing and pricing the lorry park appropriately can result in improved utilisation. This could be in the form of a high value lorry park with all of the facilities or alternatively a relatively cheap facility with access to basic amenities.
- **Visibility and availability** – To provide a lorry park with the best chance of being highly utilised, drivers must be able to find the lorry park easily both online and while they are driving. This comes in the form of road signage and registering the lorry park with various lorry parking apps (eg. inTruck).

Summary and Actions

Existing supply and demand

Figure 2-17 shows lorry parks by utilisation as well as high density off-site parking which summarises the existing supply and demand for lorry parking based on the DfT 2017 survey.

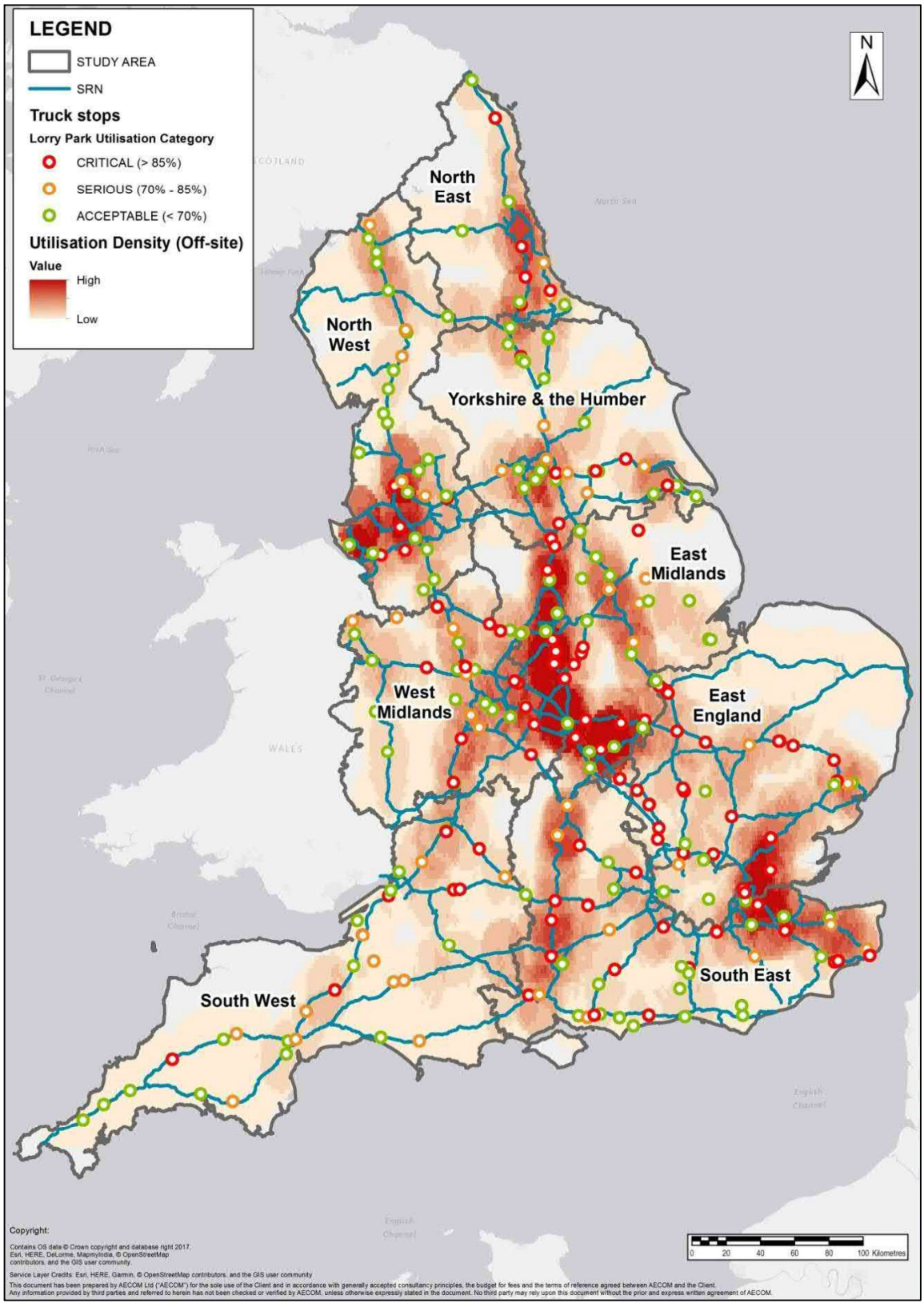


Figure 2-17 Summary of existing supply and demand

Areas in need of additional lorry parking supply

Using the analysis conducted on the DfT data throughout this chapter, the following areas (shown in Table 2-10) have been identified to be in the highest need for additional lorry parking capacity. A full list of local authorities which have been identified to have lorry parking issues is provided in Appendix B.

Table 2-10 Key areas in need of additional lorry parking capacity - Existing supply and demand

Region	County	Road corridor	Specific local authorities
EAST MIDLANDS	DERBYSHIRE	A38, A50	Amber Valley, Derby, Erewash, South Derbyshire
	LEICESTERSHIRE	M1, M69	Blaby, Charnwood, Harborough , Hinckley and Bosworth, Leicester, North West Leicestershire
	NORTHAMPTONSHIRE	M1, A14	Daventry, East Northamptonshire, Kettering, Northampton , South Northamptonshire, Wellingborough
	NOTTINGHAMSHIRE	M1	Ashfield, Bolsover, Broxtowe
EAST OF ENGLAND	SUFFOLK	A14	Forest Heath, Ipswich, Mid Suffolk, St Edmundsbury
	CAMBRIDGESHIRE	A14	Cambridge, East Cambridgeshire, South Cambridgeshire
NORTH EAST	COUNTY DURHAM	A1	County Durham
	MIDDLESBOROUGH	A19	Hartlepool, Stockton-on-tees
	TYNE AND WEAR	A1	Gateshead, Newcastle Upon Tyne, North Tyneside, Sunderland
NORTH WEST	LANCASHIRE	M6, M62	Chorley, Preston, South Ribble, St Helens, Warrington, Wigan
	MERSEYSIDE	A5036	Halton, Knowsley, Liverpool, Sefton, St Helens, Wirral
SOUTH EAST	ESSEX	M25, A12	Basildon, Brentwood, Chelmsford, Thurrock
	KENT	M20, M25	Ashford, Canterbury, Dartford, Maidstone, Medway, Sevenoaks, Shepway, Tonbridge and Malling
	OXFORDSHIRE	A34	Cherwell, Oxford , Vale of White Horse
	SUSSEX	M27	Eastleigh, Fareham, Portsmouth, Southampton
WEST MIDLANDS	WARICKSHIRE	M6, A14	Coventry, Rugby
	WORCESTERSHIRE	M5, M42	Bromsgrove, Wychavon
YORKSHIRE AND THE HUMBER	SOUTH YORKSHIRE	M1, M18	Barnsley, Rotherham, Sheffield
	WEST YORKSHIRE	M1	Leeds, Wakefield

Actions and Next Steps

Some proposed actions and next steps that have been identified from the assessment undertaken in this chapter include:

- Increasing the provision and geographical coverage of ‘high quality’ lorry parks to improve the conditions for drivers required to spend nights out and ensure adequate security is available for those drivers who need it.
- Increase the provision of ‘Cheap & Cheerful’ lorry parking, particularly in areas of high off-site parking, to provide an alternative to those drivers unwilling to pay much for an overnight park.

3. Stakeholder-led demand analysis

Methodology

The objective of the stakeholder engagement is to identify areas of high demand for lorry parking from an industry perspective while also gaining insight to the reasons why some lorry parks are highly utilised and others aren't. The key barriers to developing lorry parks are also discussed. To capture a broad range of perspectives and insight the following types of stakeholders were engaged (a full list can be viewed in Appendix C):

- Hauliers
- Trade bodies
- Facility providers
- Fuel providers
- Governmental organisations
- Highways England Traffic Officers.

Identified areas of high demand

As part of the stakeholder consultation process, the Highways England Traffic Officers that have expressed an interest in freight were survey to identify lorry parking issues at a local level. This survey covered all regions of England with the majority of issues raised relating to inappropriate lorry parking in laybys or on hard shoulders. These issues are more likely to be identified from the Traffic Officers survey rather than the DfT 2017 survey which was targeted at overnight parking rather than lorries parking for their shorter day time break. The following are some quotes from Traffic Officer responses.

"Drivers seem to be unaware that the emergency refuge areas on the M4 and M5 should be used in emergencies only and are using them for short breaks"

"Laybys adjacent to the M6 near junction's 15 and 16 are always full of lorries parking overnight – these drivers have no access to facilities and thus there is always a large amount of litter and other waste in the area"

"HGV drivers using the incorrect areas that I have spoken to have stated that their companies will not pay for overnight parking and that the drivers are expected to pay for any facilities they use out of their own pocket"

"There are no real facilities along the M50. As an old motorway, the hard shoulders are not continuous, narrow and often do not have the sub soil structure to support the static weight of a parked lorry. This means that parked HGV's can easily overhang into a live lane"

Figure 3-1 displays the issues raised by the Traffic Officers while additional issues raised through the stakeholder consultation included:

- The A66 and A1 – where adverse weather conditions and a lack of alternatives lead to poor resilience in the road network
- Trafford Park in Manchester – a large industrial precinct with a lack of lorry parking supply
- Lincolnshire – the fresh food region of England which relies on refrigerated transport and storage
- The South East of England.

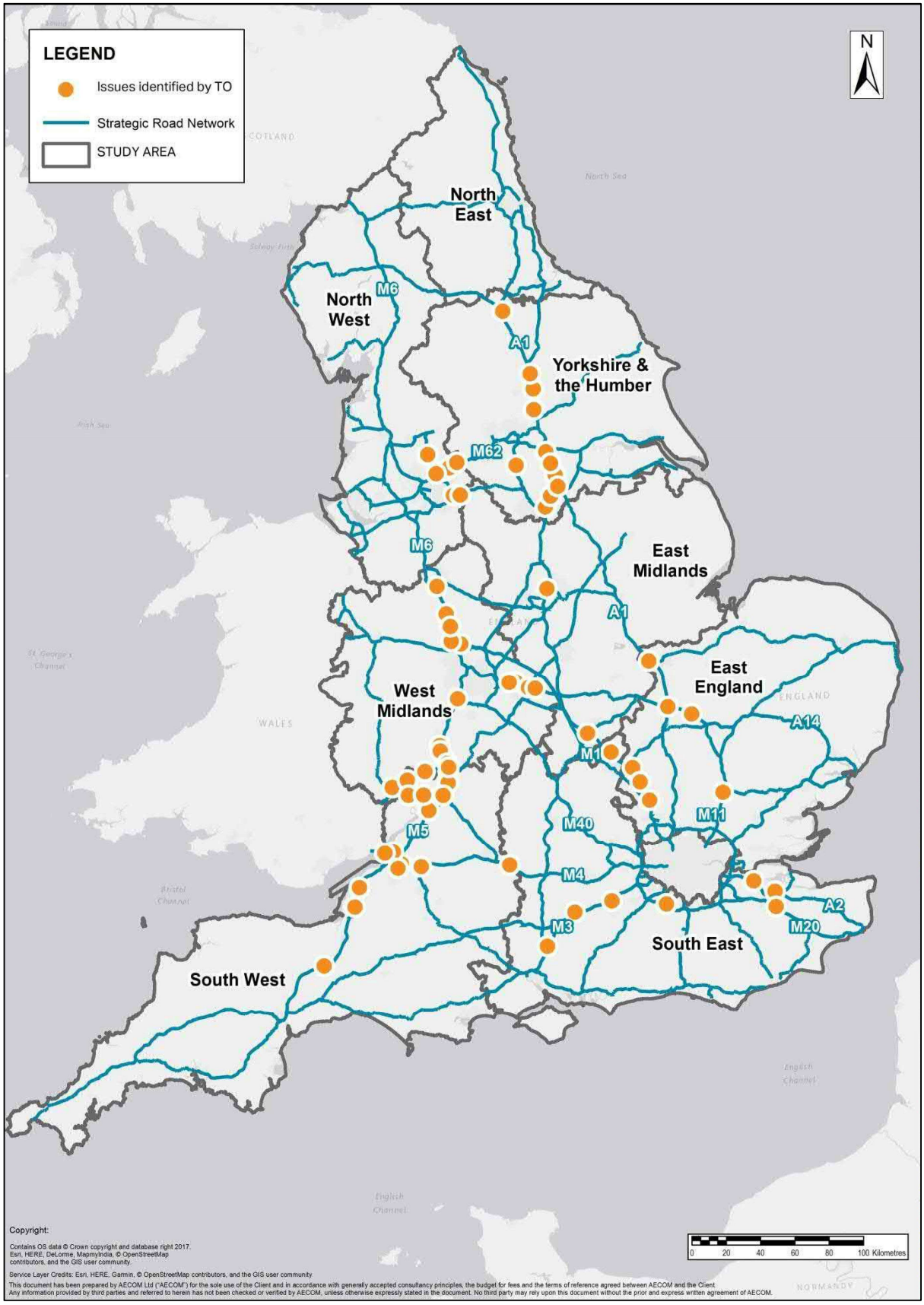


Figure 3-1 Lorry parking issues identified by Highways England Traffic Officers

Additional considerations

Lorry parking provision guidelines

The current guidance from Highways England regarding the provision of lorry parking on the SRN is that a facility should be provided every 28 miles. The interpretation of this guidance has varied between stakeholders with some assuming that this means in any 28 mile stretch of road there should be at least one lorry parking facility while others assume as long as drivers are always within 28 miles of a lorry park then the guidelines are satisfied. The latter effectively assumes that there only needs to be one lorry parking facility provided in any 56 mile stretch of road.

In addition to clarifying this set of guidelines to ensure that provision of a lorry parking facility is considered for every 28 mile stretch of road, there is an argument for amending these guidelines to encourage provision of a lorry parking facility in any 14 mile stretch of road on freight heavy road corridors. Typically, heavy goods vehicles make up approximately 12-13 percent of traffic volume (by number of vehicles) on average on strategic routes. One option for implementing this guideline would be if the heavy goods vehicle percentage of traffic exceeds 20 percent of traffic volume and thus could be considered a freight heavy road corridor. Regular and predictable provision of lorry parking is likely to reduce off-site parking as many drivers are unable to plan when and where they may need to park for the night until it's too late because they have run out of driving time or they only recently found out where their next destination is and have not had time to book ahead.

"Drivers often don't know where they are going next until they drop off their most recent consignment"[1]

One example of where this type of approach of extra provision of rest areas has been implemented is on the M6 in the north west of England. A lorry parking facility has been provided at approximately 15 mile intervals from Lancaster to Carlisle which is an important road corridor for freight moving between Scotland or the north of England and the South. This provision of lorry parking has resulted in a significantly reduced problem of off-site parking in laybys and industrial estates along this stretch of road when compared to the rest of the country and other high volume and freight heavy corridors. Apart from good and regular provision of MSAs on the M6, these are a number of specific off-line lorry parks which are well signed from the Motorway. The signing of close-by rest areas is good practice.

Barriers to lorry park development

There are a number of lorry parks currently in planning process including a site at Rothwell, Ashford and Brenley Corner; however more needs to be done to attract investment in the sector. A couple of obstacles to increasing the supply of lorry parks have been flagged up by stakeholders including:

- **Planning permission**

One of the main barriers is the difficulty in obtaining planning permission from local authorities. It is often more attractive to allocate land for residential development rather than lorry parks, even if sites are identified as suitable to develop into lorry parks from a national strategic perspective. One stakeholder suggested that it can take two years or more for a park provider to obtain the planning permission. It was also mentioned that 'mini' lorry parks (parks with 12 or less capacity) are more easily built with less planning constraints.

"Some sites are identified to be suitable for lorry parking from a national perspective but are being overruled on a planning basis by local councils"[2]

- **Time**

Obtaining planning permission is a time-consuming process with many parties involved. More consistent and clearer framework for liaising with DfT, Highways England and local planning authorities is needed. It was suggested that the planning and decision-making process should be reviewed to streamline planning with less parties involved.

[1] A quote from a haulier during stakeholder consultation
[2] A quote from stakeholder consultation with the Road Haulage Association

- **Cost**

The cost of increasing the size and number of lorry parking facilities is identified as the biggest burden by lorry park providers, with high investment but a long period of payback. It is estimated that more than one million pounds are needed to develop a lorry park with a capacity for 100 vehicles. A large cost is attached to obtaining planning, ecology surveys, noise and pollution surveys which are all necessary.[3]

- **Limited Guidance**

Policy guidance on providing truck stops as part of road projects is very limited. It is recognised that national strategy or policy guidelines on the lorry park provision topic are needed.

"New parameters are needed to streamline planning with fewer parties involved"[4]

Lorry driver safety considerations

A survey has showed that one in six drivers was the victim of attack through organised crime in every five year period, and seven in 10 of these attacks happen at night while three in five of these attacks target the vehicle and its load. As recently as March 2019 a driver was attacked by a group of robbers while in his lorry which resulted in a serious injury.[5] The MotorTransport magazine recently (April 2019) stated that West Yorkshire experienced the most cargo thefts in 2018 with Northamptonshire, Kent, Leicestershire and Nottinghamshire rounding out the top five. Technology is helping as motion sensor cameras at some MSA's have been reasonably successful at capturing potential criminals with footage handed over to Police.

"Comprehensive security which runs from 6pm to 6am is a big driver of demand for the facility"[6]

Technology in lorry parking

Alternative fuels

The use of alternative fuels to reduce the impact of the transport industries on the environment should also be considered when designing new lorry parks to encourage the take up of alternative fuels. Co-located lorry parking with fuelling facilities are effective ways to increase the utilisation of lorry parking facilities, thus lorry parking facilities under planning should consider the provision of power for electric lorries as well as fossil fuelled lorries. Although the use of alternative fuels for road haulage has not become mainstream as of yet, initiatives such as one identified by a stakeholder where electric vehicles are leased under 3-8 year terms with a 'buy back' guarantee from the manufacturer to de-risk the purchase for hauliers. It is likely that once a suitable 'green' lorry has been developed, the majority of the industry will switch. It is important that a lack of infrastructure does not present a barrier to the uptake of a 'greener' transport industry. Current thinking is that electric traction is likely to be the preferred power source for light to medium HGVs and gas for the heaviest tractor units.

Applications

Using apps to find suitable and safe lorry parks is already happening but it can be further developed. There are many emerging lorry park finding apps available currently on the market to help drivers to find secured and comfortable parking areas with facilities such as security guards, CCTV, fences, flood lights, toilets, showers and cafés etc. There is also potential to use lorry parking apps in conjunction with queuing systems for ports and industrial areas to more effectively regulate pick up/drop off times to reduce congestion.

"Technology is helping to alleviate lorry parking issues but drivers do not have access to live information regarding lorry park availability"[7]

Table 3-1 below shows three popular apps in the UK with a number lorry parking sites available in England and their key features and strengths. Given that security is estimated to be the biggest factor for parks' utilisation and now more of a welfare and safeguarding issue as much as load security, it is

[3] i.e £10,000 construction cost per space at £15 revenue per night (100 percent utilised) means a payback period of 667 days
[4] A quote from stakeholder consultation with the Freight Transport Association
[5] https://www.miltonkeynes.co.uk/news/crime/lorry-driver-brutally-assaulted-by-group-of-men-during-robbery-in-newport-pagnell-1-8845321 (12 March 2019)
[6] A quote from a lorry parking facility provider during stakeholder consultation
[7] A quote from stakeholder consultation

believed that more and more truck drivers and companies will use the technology to find reliable parking areas with these characteristics. Stakeholders agree that technology is helping alleviate inappropriate parking, but further development can be achieved, such as live information, i.e. spaces available in the parking areas. Individual lorry parks do not have to be exclusively registered to any one app, thus any specific lorry park may be listed on each of the apps below at the same time. It's also worth noting that TRANSPark has 354 lorry parks listed which is greater than the 311 included in the DfT survey as TRANSPark covers the whole of England rather than just the SRN.

Table 3-1 Truck Parks Finding Apps

Apps	No. of sites	Types	Strength
SNAP	130	Truck stops and highly secured depots	• All accredited truck stops with reliable service and security. • Pay through Vehicle Plate number • Pre-booking service
TRANSPark	354	Truck Stops	• Wide coverage of areas including UK and Europe • Comprehensive information about security facilities
Truck Parking Europe	~3,000	Truck Stops, Laybys and Industrial Areas	• Comprehensive parking areas and spots including Truck stops, Laybys and Industrial Sites • Wide coverage area including UK, Europe and other countries • Comprehensive information about facilities

Port queuing and lorry park collaboration

Technology also creates the opportunity for lorry parks and ports to collaborate for mutual benefit through the use of high quality queuing/waiting and marshalling areas. The following case study outlines the benefits available to both parties. In this case, the Port and the lorry parking facility are owned by the same entity. Establishing a similar relationship between two separate entities presents additional challenges and thus the benefits will have to be assessed on a case by case basis to determine if they are significant enough to overcome these challenges.

CASE STUDY – VEHICLE BOOKING SYSTEM AT THE PORT OF FELIXSTOWE

The Port of Felixstowe, in Suffolk, is the United Kingdom's busiest container port, dealing with 48% of Britain's containerised trade with 9.74 million twenty-foot equivalent units (TEU) of traffic handled in 2018.

A Vehicle Booking System (VBS) was introduced in the Port of Felixstowe in 2006/7 which is a real-time, web-based booking system used by all hauliers to book a timed appointment for their container deliveries /collections. The system is free to use although some charges are in place during peak hours to guarantee the bookings and prevent misuse of the system.

The Port sets the number of VBS booking slots up to seven days in advance which will be released to the haulage operators between 3-6 days in advance. Hauliers must register with a VBS account (which is free) to book VBS slots (normally 1 hour) to deliver and collect containers at the Port. They also have to add their collection/delivery containers information to the booking details which will be checked at the gate on arrival.

The Port can limit VBS availability at specific times to manage the flow of haulage to/from the port. The system enables the Port to adjust resources to accommodate the demand by looking at the VBS bookings. A customer services team is provided to answer haulage customers' questions via telephone helpline.

Before the introduction of VBS, the majority of hauliers came to the Port during peak hours in the afternoon causing congestion on the site and adjacent roads, while there were many other hours of the day underutilised. More than 25 percent of hauliers arrived at the Port with the wrong information, e.g., containers are not booked on, which led to wasted journeys, traffic congestion and environmental costs.

The booking system has been proven to be beneficial for both the Port of Felixstowe and haulage operators. It significantly improves the efficiency of the Port by enabling better management and spread the arrivals, which reduces the congestion in the port area and on roadways around the complex. For hauliers, container details are pre-checked via VBS which significantly reduces the waste and number of empty trips. The system has also led to haulage operators maximising the utilisation of their trailer capacity during busy periods for each booking slot. In the event of bad weather or emergency, the port can remove all slots and inform hauliers immediately to avoid congestion and wasted time.

Vehicle Booking Systems are beneficial for both ports and the haulage operators and helps to smooth demand across the whole day. It is suggested that it would be advantageous to locate a large lorry park near any large volume port, which can provide a parking area and essential facilities for hauliers that arrive before their booked slots as drivers tend to arrive early to avoid missing their booking slot. This allows the drivers to turn the engine off and have a break while waiting for their slot, instead of waiting on the roads without any facilities while the engine is on. This can effectively reduce the road traffic congestion and improve the air quality. The lorry park can also acts as a marshalling area for trucks in the event of emergency such as bad weather, strike action or IT system failure issues which would have a knock-on effect on other traffic.

Emergency Parking

Eventuality Planning

There are a range of other issues that merit consideration in terms of contingency planning. Some are best done at the Major Project Planning stage when a road is first designed, others need to be factored in around "business as usual" to reduce the impact of infrequent but potentially disruptive occurrences. They are as follows;

1. Closures due to strong/side winds particularly affected are high-sided vehicles such as double-deck trailers

2. Closures due to snow or icy conditions, this is particularly an issue across exposed routes e.g. Trans-Pennine corridors

3. Rough Seas can cause delays or cancellations to sailings all around the UK and not just at Dover. This tends to affect high volume “driver accompanied” routes more

4. Event planning for shows, major sporting events and music concerts can cause disruptions

5. Emergency Lane 1, which is where on All Lane Running there is no hard shoulder but there is a need to facilitate prompt movement of emergency services

6. Project “U Turn”, which could be designed to have periodic central lifting barriers and lane control run using RED X signalling

7. Project Fire where traffic is alerted to a severe vehicle fire that needs attention and probably 2 or 3 lanes of road closure to safely deal with the incident

8. Cobra style emergency staffing where additional staff are alerted of an emergency situation and extra resources report to work to help manage the scenario.

The need for well thought through contingency planning is important in minimising disruption to all users of the road network. Many road freight users are on urgent deliveries which have designated ETAs (expected time of arrival) and if vehicles are late there can be quite punitive financial penalties and further additional delays possible. Depending on the customer if a lorry misses its booked slot it may have to wait several hours until a suitable gap in the unloading/handling programme becomes available. This delay may cause further knock-on effects to other drops/loads that the driver was planned to do.

One of the main provisions to help address resilience issues is to have a lorry parking area that can facilitate off-road vehicle stacking in readiness for a managed return to normal operations once the cause of the problem is solved. Making sure the needs of the drivers are catered for during this period of disruption is important as it is both a welfare and safety issue. The delay can be of more than 24 hours and hence it is essential that toilet, food and rest facilities are made available.

In many cases there is a need to consider procedures for lorries as a specific response to the problem. There are already in existence specific schemes such as “Operation Stack” and “Operation Brock” related mainly to disruption to Cross-Channel freight traffic caused by a number of different problems e.g. rough seas, strike action, IT system failure and issues with illegal immigrants. The queues of HGVs can cause a tailback out of a freight terminal on to main roads and this in turn has a knock-on effect on other traffic.

Additional or Emergency Parking

Additional or emergency parking areas may be required to help mitigate some of the problems above. It is recommended that these emergency parking areas are built as annexes to existing or new Rest Areas so that they can operate normally as an ongoing viable business but can be called on to cater for specific circumstances. So the provision of additional parking areas and additional toilet/washroom and catering can be activated at almost immediate notice should an incident happen. It is expected that the “overspill” parking is a further fenced off area built to be as unobtrusive as possible with grasscrete or equivalent paved areas that can accommodate HGVs but do not look like barren concrete yards. Additional toilet blocks can be brought into use once site occupancy reaches a standard accepted level. Also additional catering staff and vending machines can be activated to cater for extra demand. The facility should have a potential briefing area and an area for accumulating vehicles to join a convoy in certain situations. So for example a platoon of 4 wheel drive or double drive HGVs could be assembled ready for a piloted platoon to perhaps negotiate a section of road under controlled and managed circumstances.

The following are two case studies which illustrate these issues;

Operation Snow Gate – for consideration as part of the design for the upgrade of the A66

The A66 is a strategically important road – one quarter of its 19,000 vehicles a day are lorries – and it provides Trans-Pennine connections between the M6 in Penrith (west) and the A1 in the east which is a primary route connecting Yorkshire and the East Midlands to Scotland. However, vehicles on the stretch of the Trans-Pennine corridor are affected by severe weather conditions every year, especially 2-wheel drive articulated HGVs which can more easily lose traction of worse be jack-knifed on icy roads.

Snow gates were installed on the Trans-Pennine road to improve safety during severe weather. The eastbound gates are on the carriageway near Augill Beck which at 1,400ft (426m) is one of the highest points along any trunk road in England. The westbound gates are near Bowes in County Durham closing the A66 off to westbound traffic as shown in Figure 3-2. During bad weather conditions including snow, the gates will be closed and the drivers asked to choose alternative routes and not risk getting stuck beyond the gates. According to Cumbria Police, the snow gates on A66 had been closed for 3 times in 2018 (January, March and November) due to severe weather conditions.

Highways England is now developing plans to fully dual the remaining six single carriageway sections, which total 18 miles of the complete 50-mile route. This will provide improved benefits to journey time reliability, safety, network resilience and connectivity for nearby villages and towns and ultimately increase the volume of traffic using the route. Thus, it emphasises the need for additional emergency lorry parking to be placed at the snow gates on the A66 to accommodate lorries during severe weather conditions when the gates are closed while the route is being cleared. Specifically, one park is recommended to be placed on the northern side of A66 near Brough to accommodate eastbound vehicles, and the other one is suggested to be placed on the southern side of A66 before the snow gate near Bowes as shown in Figure 3-2. The parks should be accessible for traffic from both sides, therefore facilities can be provided every 25 miles between Penrith and Scotch Corner as per the general guidance for lorry park provision. Additionally, advanced warning signs of gate closure should be displayed along the various routes leading to A66 such as M6, A685 and A1(M), so that alternative routes can be found at an early stage to avoid delay.

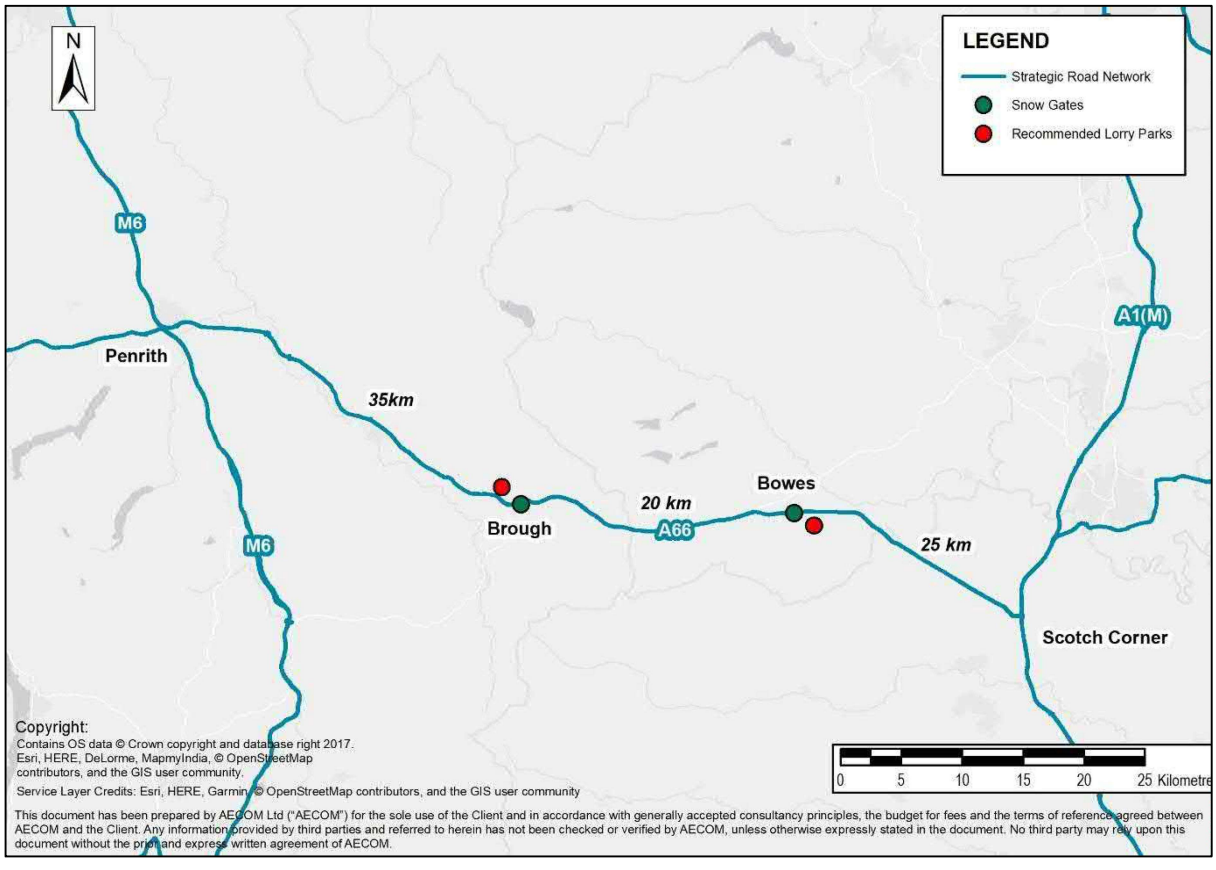


Figure 3-2 Emergency Snow Gate Lorry Parks

Operation Highsiders – example of closure of Severn Bridge crossings to high sided HGVs

Between 1992 and 1996, 13 vehicles were blown over on the Severn Bridge during high winds, resulting in more than 47 hours of closure. As a result, a high winds protocol was introduced.[8] The High Winds Traffic Filtering System ensures the M48 Severn Bridge remains open and operationally safe for Category 1 (cars) and Category 2 (light commercial) vehicles for as long as possible. However, when the wind speed reaches 40 knots, high sided vehicles (lorry or double-decker bus) are not permitted and an alternative route must be found. It is advisable to consider placing two additional lorry parking areas on both sides of the Severn Bridge to accommodate the extra demand of lorries in the event of bridge closure due to strong wind. Even though there is already an existing truck stop on the east side of Severn Bridge, the size of the park is considered too small to accommodate the demand in case of long delay. Thus, the extra lorry parking area and facilities are suggested to be attached to the existing park to cater for the high demand.

Advanced warning signs of bridge closure status should be put out along the various routes, such as M5, M4, M32 and A38, so that lorries can find alternative routes, for example using M4 Prince of Wales Bridge or A48, to travel to/from Wales to avoid delay.

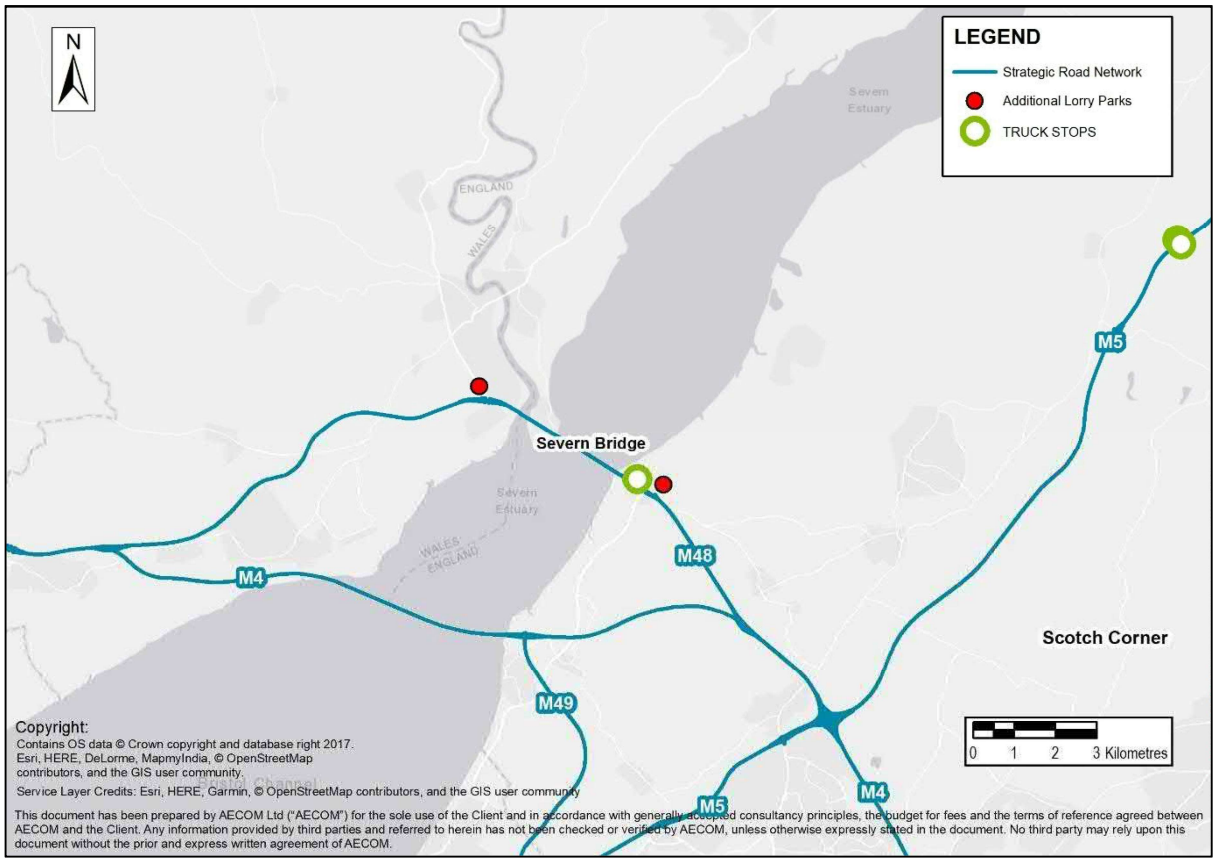


Figure 3-3 Emergency parking for high winds

The issue of high sided trailers blowing over on other exposed parts of the SRN is an issue for further consideration. This is especially the case as the number of double deck 16 feet high trailers has grown considerable over the last decade.

[8] https://www.severnbridge.co.uk/Home.aspx?.Parent=&FileName=current-bridge-status7

Summary

Issues identified by stakeholders

The practical issues identified by Traffic Officers have been combined with the more general issues raised throughout the stakeholder consultation to summaries the issues raised throughout this chapter and create the map shown in Figure 3-4.

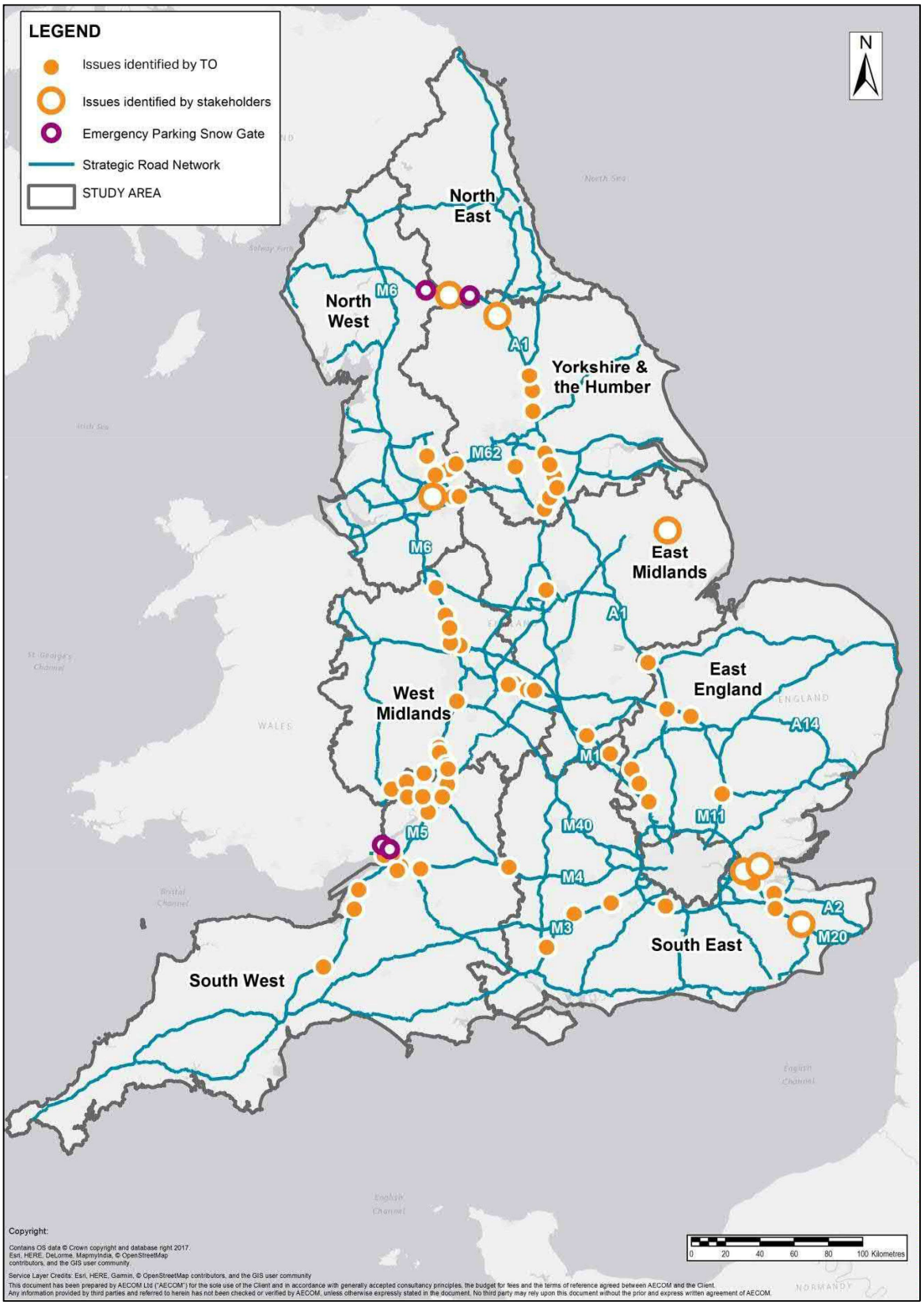


Figure 3-4 Summary of stakeholder identified issues

Areas in need of additional lorry parking supply

Using the stakeholder consultation and responses from Traffic Officers the following areas (shown in Table 3-2) have been identified to be in the highest need for additional lorry parking capacity.

Table 3-2 Key areas in need of additional lorry parking capacity - Existing supply and demand

Region	County	Road corridor	Local Authorities
EAST MIDLANDS	LINCOLNSHIRE	-	Local Authorities in Lincolnshire
	NORTHAMPTONSHIRE	M1, A43	South Northamptonshire
	NOTTINGHAMSHIRE	M1	Broxtowe
EAST OF ENGLAND	BEDFORDSHIRE	M1	Central Bedfordshire
	CAMBRIDGESHIRE	A1, A14	Huntingdonshire, South Cambridgeshire
	ESSEX	M1, M25, A13	Uttlesford, Thurrock
	HERTFORDSHIRE	M1	Dacorum
NORTH EAST	COUNTY DURHAM	A66	County Durham
NORTH WEST	LANCASHIRE	A56	Rossendale
	GREATER MANCHESTER	M62, M67	Rochdale, Tameside, Trafford
SOUTH EAST	HAMPSHIRE	M3, A34	Basingstoke and Deane, Winchester
	KENT	M20	Ashford, Gravesham, Maidstone, Medway
	BUCKINGHAMSHIRE	M1	Milton Keynes
	SURREY	M25	Mole Valley, Surrey Heath
SOUTH WEST	BRISTOL	M32	Bristol
	GLOUCESTERSHIRE	M4, M5, A40	Forest of Dean, Stroud, Tewkesbury, South Gloucestershire
	SOMERSET	M5	North Somerset, Sedgemoor, Taunton Deane
	WILTSHIRE	M4	Wiltshire
WEST MIDLANDS	HEREFORDSHIRE	A40, A49	Herefordshire
	STAFFORDSHIRE	M6, A5, A500	Cannock Chase, South Staffordshire, Stafford
	WARWICKSHIRE	M6	North Warwickshire, Rugby
	WORCESTERSHIRE	M5	Bromsgrove, Malvern Hills, Wychavon
YORKSHIRE AND THE HUMBER	SOUTH YORKSHIRE	M1, M18, A1	Doncaster, Rotherham
	NORTH YORKSHIRE	A1	Harrogate, Richmondshire
	WEST YORKSHIRE	M1, A1	Leeds, Wakefield

Actions and Next Steps

Some proposed actions and next steps that have been identified from the assessment undertaken in this chapter include:

- Re-visit the lorry parking provision guidelines regarding distance between facilities on the strategic road network and freight heavy road corridors
- Assess the process required for private investors to develop a lorry park and identify where barriers can be removed to reduce the time and difficulty facing developers
- Review the options available for lorry drivers to park in secure facilities to reduce the occurrences of robbery and violent attacks
- Assess the business case for providing lorry parks for emergency planning purposes for when adverse weather results in route closures
- Consider installing charging points for electric and gas refuelling at new and existing lorry parks.

4. Theoretical analysis – demand from ports

Methodology

This chapter explores the theory that import and export freight originating and destined for one of the UK's major ports is a significant driver of lorry parking demand. The theory regarding inbound freight relates to roll-on roll-off (Ro-Ro) freight where drivers in Europe use half of their allotted day's driver hours getting to a European port (eg. Calais) and have their break while on the vehicle ferry before using the second half of their hours (4.5 hours) in the UK before they are required to find a park for the night.

By identifying which ports the majority of inbound Ro-Ro freight comes through, demand for lorry parking from these vehicles can be identified by estimating where these vehicles will be with an additional four and a half hours of driving once on the UK Strategic Road Network. An assessment can also be conducted on outbound freight as it is known that vehicles often arrive at their port of departure early, sometimes the night before, to ensure that they do not miss their slot. Therefore, areas within 30 minutes to one hour from major outbound ports for Ro-Ro as well as lift-on lift-off (Lo-Lo) freight are likely to incur associated demand for lorry parking.

Key freight origins and destinations

Inbound freight

Port statistics from the Department for Transport Statistics have been analysed to determine the volume of freight inbound through British ports via accompanied Ro-Ro in 2017. The Channel Tunnel has also been included in the assessment. Port statistics for the top ten ports by number of units are shown in Table 4-1. Holyhead has been included in this table given in proximity to the Strategic Road Network in England.

Table 4-1 Top ten English ports by number of inbound units (2017)

Rank	Port	Units (2017)	Percentage of UK
1	Dover	1,356,561	23.4%
2	Grimsby & Immingham	884,046	15.3%
3	Channel Tunnel	818,500	14.1%
4	London	484,151	8.4%
5	Bristol	442,040	7.6%
6	Southampton	341,817	5.9%
7	Medway	322,092	5.6%
8	Tyne	204,619	3.5%
9	Holyhead	147,777	2.6%
10	Harwich	100,035	1.7%

Outbound freight

The same set of statistics from the Department for Transport Statistics have been analysed to identify the English ports with the greatest number of outbound units. The top ten English ports (including Holyhead) are shown in Table 4-2.

Table 4-2 Top ten English ports by number of outbound units (2017)

Rank	Port	Units (2017)	Percentage of UK
1	Dover	1,516,023	15.9%
2	Felixstowe	1,333,225	13.9%
3	Southampton	1,107,908	11.6%
4	Channel Tunnel	818,500	8.6%
5	London	818,369	8.6%
6	Grimsby & Immingham	757,778	7.9%
7	Liverpool	545,028	5.7%
8	Tyne	436,421	4.6%
9	Bristol	237,588	2.5%
10	Holyhead	234,889	2.5%

Identified areas of high demand

When analysing inbound freight, it was determined that only accompanied Ro-Ro freight would be considered given this is the type most likely to be impacted by the driver hour's restrictions which this analysis has been based on. This is because unaccompanied Ro-Ro and Lo-Lo freight can be collected at the port by vehicles from the UK which are less likely to have used half a day's allowance to get to the port. This theory is primarily targeted at Ro-Ro freight from the south-eastern ports destined for the north of England as this is the main segment which is likely to be significant and require an overnight stop prior to reaching the final destination. This results in the following ports being considered which account for 3.5 million units (lorries) or over 61 percent of all UK inbound traffic:

- Dover Port
- Channel Tunnel
- London Gateway
- Southampton Port
- Medway Port
- Harwich Port
- Port of Portsmouth.

Figure 4-1 outlines the results of the analysis which shows that inbound freight from these ports leads to elevated demand in the midlands despite the majority of this freight being destined for parts of England further north. This is because the midlands area sits within the range of four to four and a half hours drive time from the main Ro-Ro traffic ports in the south and south-east of England. This creates increased demand for lorry parking in a region which generates a lot of demand through the high number of industrial estates that are located there and the large population resident in the Midlands. Figure 4-1 classifies demand into the following categories; limited demand (within 4-4.5 hours from a low volume ports), some demand (within 4-4.5 hours from some low demand ports), medium demand (within 4-4.5 hours from a high volume port) and high demand (within 4-4.5 hours from most ports).

Figure 4-2 outlines the demand generated from outbound freight. This analysis includes unaccompanied Ro-Ro as well as accompanied Ro-Ro and also Lo-Lo freight. These ports are considered to start generating demand for lorry parking within one hour's drive from the ports while the region within 30 minutes' drive is considered to be in high demand for parking. As shown, the combination of ports in the south-east and their close proximity to each other compounds the demand for lorry parking on the road network in the region. Figure 4-2 classifies demand into two categories; some demand (within one hour on major freight routes) and high demand (within 30 minutes).

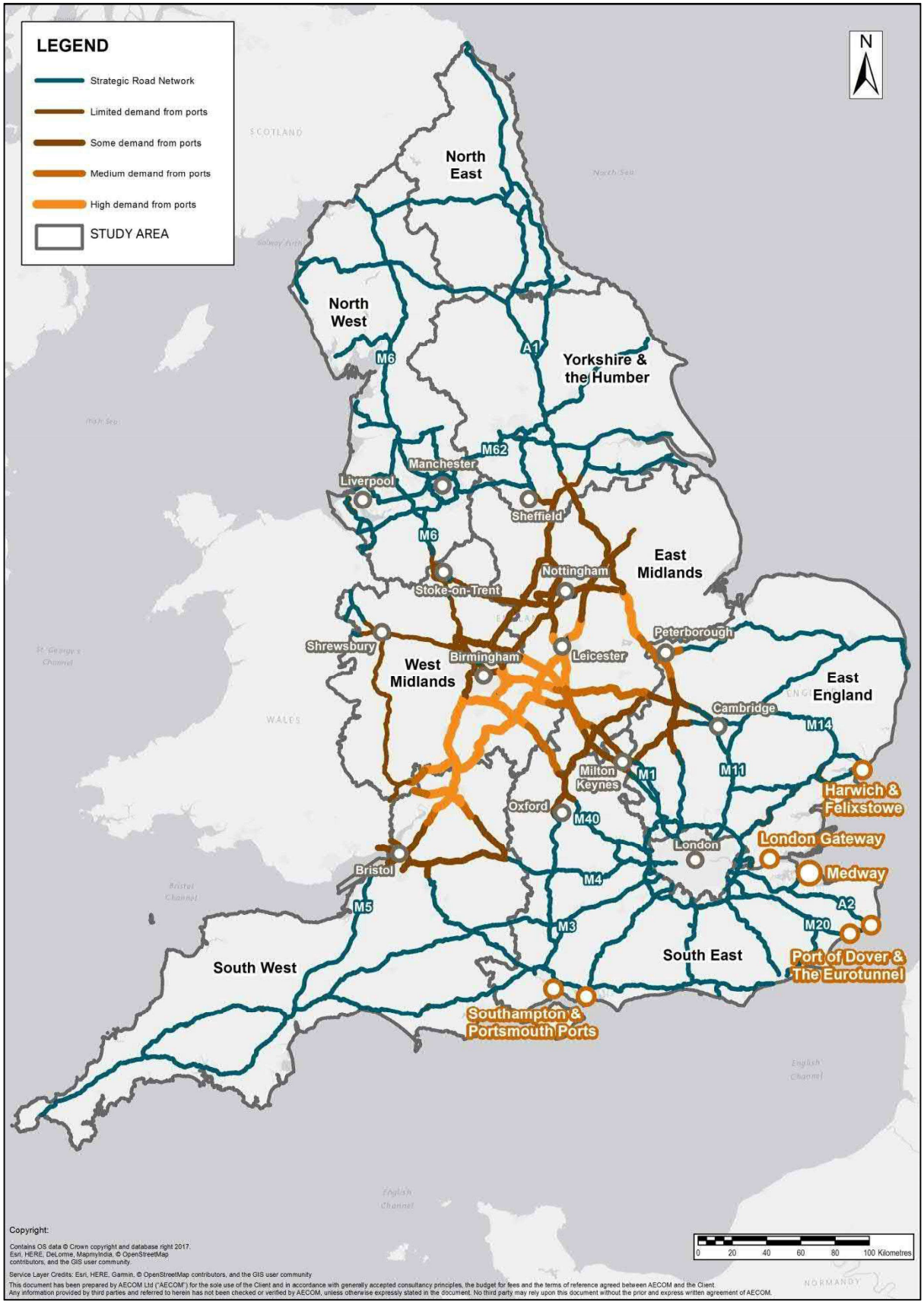


Figure 4-1 Lorry parking demand from inbound freight

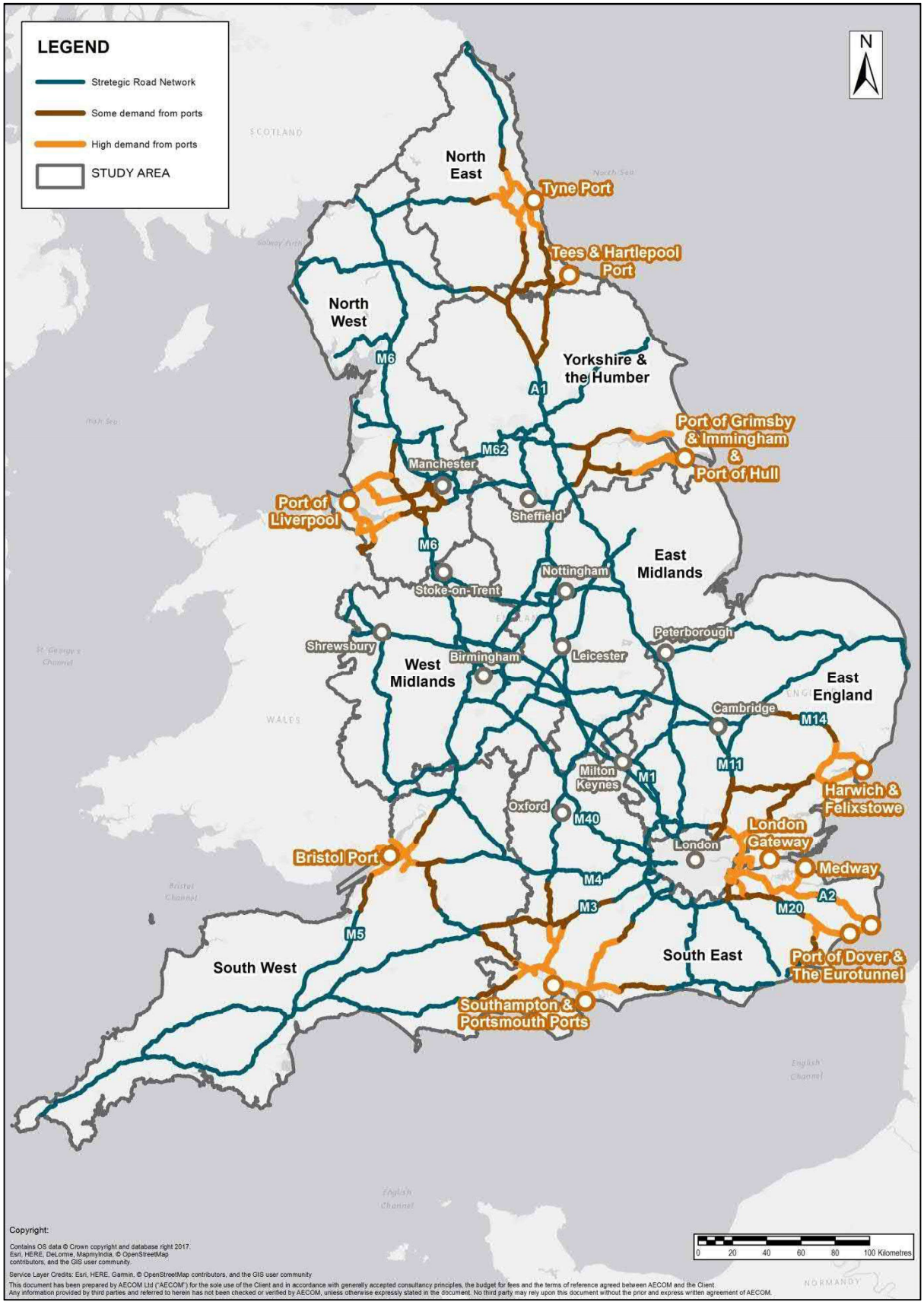


Figure 4-2 Lorry parking demand from outbound freight

Summary

Port driven demand for lorry parking

The inbound and outbound freight from ports driving demand for lorry parking has been estimated at a high level and combined as shown in Figure 4-3.

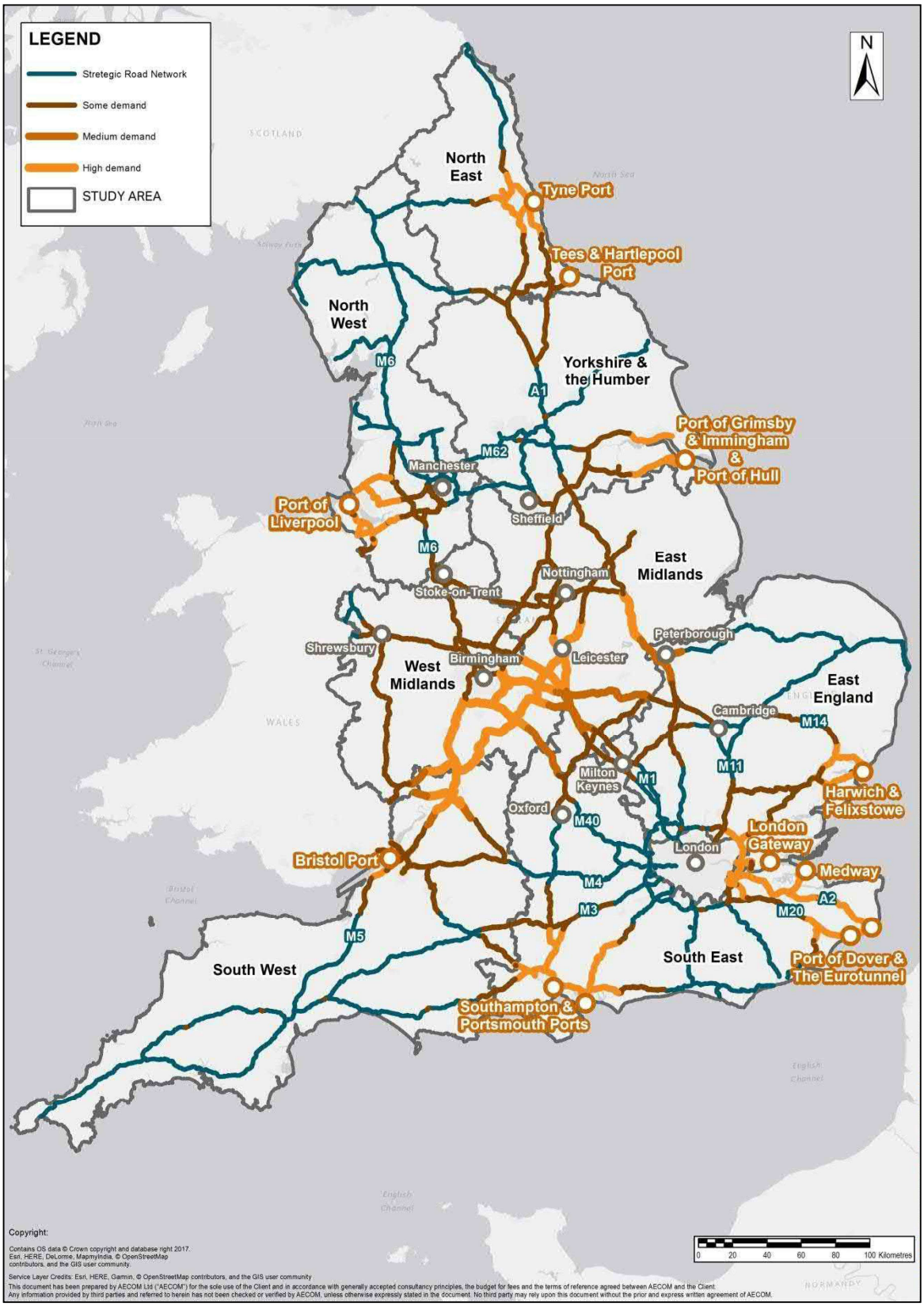


Figure 4-3 Summary of lorry parking demand driven by ports

Areas in need of additional lorry parking supply

Using the analysis conducted inbound and outbound freight the following areas (shown in Table 4-3) have been identified to be in the highest need for additional lorry parking capacity.

Table 4-3 Key areas in need of additional lorry parking capacity - Existing supply and demand

Region	County	Road corridor	Local Authorities
EAST MIDLANDS	LEICESTERSHIRE	M1, M69, A46	Charnwood, Harborough, Hinckley and Bosworth
	LINCOLNSHIRE	M180, A1, A160, A180, A46	North East Lincolnshire, North Lincolnshire, South Kesteven
	NORTHAMPTONSHIRE	M1, A14, A43, A45, A5	Daventry
	RUTLAND	A1	Rutland
EAST OF ENGLAND	ESSEX	M11, A12, A1120, A13, M25	Brentwood, Chelmsford, Tendring, Thurrock
	SUFFOLK	A14, A12	Babergh, Ipswich, Suffolk Coastal
NORTH EAST	COUNTY DURHAM	A1, A19	County Durham
	TYNE AND WEAR	A1, A19, A194, A69 , A696	Gateshead, Newcastle upon Tyne, North Tyneside, Sunderland
NORTH WEST	CHESHIRE	M52, M56, M6, M62, A483, A55, A550	Cheshire West and Chester, Halton, Warrington
	LANCASHIRE	M55, M6, M61	West Lancashire
	MERSEYSIDE	M5036, M53, M57, M58, M6, M62, A59	Knowsley, Sefton, St. Helens, Wirral
SOUTH EAST	HAMPSHIRE	M27, M3, A3, A303, A31, A34, A36	East Hampshire, Eastleigh, Fareham, Havant, New Forest, Test Valley, Winchester, Portsmouth
	KENT	M2, M20, M25, M26, A2, A2010, A21	Ashford, Canterbury, Dartford, Dover, Gravesham, Sevenoaks, Swale, Medway
	WEST SUSSEX	A23, A27	Colchester
SOUTH WEST	BRISTOL	M5	Bristol
	GLOUCESTERSHIRE	M32, M4, M48, M49, M5, A40, A417, A46	Stroud, Tewkesbury, South Gloucestershire
	SOMERSET	M5	North Somerset
WEST MIDLANDS	WEST MIDLANDS	M42, M6	Solihull
	WARWICKSHIRE	M40, M6, M69, A45, A46	Coventry, Nuneaton and Bedworth, Rugby, Stratford-on-Avon, Warwick
	WORCESTERSHIRE	M42, M5, A46	Bromsgrove, Malvern Hills, Wychavon
YORKSHIRE AND THE HUMBER	EAST RIDING OF YORKSHIRE	M62, A63	East Riding of Yorkshire, City of Kingston upon Hull

Actions and Next Steps

Some proposed actions and next steps that have been identified from the assessment undertaken in this chapter include:

- Increase the provision of lorry parking in the midlands beyond the demand that is from freight originating/destined for the area given a significant demand for lorry parking in the area is derived from through traffic between the south and the north.
- Assess the demand for lorry parking generated by ports and study the behaviour of these type of trips to determine the type of lorry parking demand and how best to address it (i.e. technology and apps).

5. Study on Safe and Secure Parking for Trucks (European Commission)

This chapter summarises the European Commission study which was published in February 2019. The study was undertaken for the purposes of determining:

- What the characteristics in terms of security and service are needed to make a parking facility sufficiently safe and secure and how users can be sure that the facility meets the requirements
- Where safe and secure lorry parking capacity is needed in Europe
- How companies investing in new parking facilities can be guided and supported to develop more safe and secure parking capacity whilst taking into account the need for adequate service levels.

Creating a common standard for the required levels of security and service

An EU-wide standard for lorry parking areas has the potential to create greater transparency and build trust amongst users, including the UK given a large portion of the demand for lorry parking in England comes from foreign drivers. In order to achieve the standard, parking areas will need to be independently and regularly checked to obtain certification. Four classifications were defined in regards to security ranging from Bronze through to Platinum where the following characteristics are assessed:

- Staff procedures (removal of unauthorised vehicles, alarm response, pre-booking availability, etc.)
- Entry / exit (presence of barriers, lighting, license plate recognition, gatehouse, etc.)
- Parking area (visibility, lighting, surveillance, line markings, manned 24/7, etc.)
- Perimeter (visual deterrents, physical deterrents, barriers, clear zones, etc.)

The required services at the facility for it to achieve certification include:

- Working and available toilets (male and female)
- Working and available showers (male and female)
- Clean toilets checked at regular intervals
- Clean washing facilities checked at regular intervals
- Available and working water taps
- Available waste bins on site
- Clear signs promoting safe traffic movement and parking within the facility
- Emergency contacts displayed
- Snacks and drinks available for purchase at all times
- Internet connection available
- Electricity connection available for personal use.

Survey response

In total, 159 valid responses were received from the survey of drivers which was designed to determine parking habits as well as future needs or expectations. The results are outlined in Table 5-1, Table 5-2 and Table 5-3.

Table 5-1 Willingness to pay for safe and secure parking

Type of break	Never	Only when loaded	Always
Long night rests	19%	36%	45%
Short breaks	46%	28%	26%
Long weekly rests	27%	22%	51%
While waiting for the next assignment	61%	16%	23%

Table 5-2 Reasons to stay in a safe and secure parking area

Type of reason and break	No	Yes
Are you required to spend rest times in a safe and secure area for legal reasons?	17%	83%
Are you required to spend short stops in safe and secure area for legal reasons?	46%	54%
Are you instructed to use safe and secure area by your employers?	36%	66%
Do you need safe and secure area while waiting for your next assignment?	61%	39%

Table 5-3 Driver opinions

Question	No	Neutral	Yes
Is there enough information regarding availability of parking spaces and accommodation?	58%	27%	15%
Is the information available accurate?	58%	32%	11%
Is it the company's/employers responsibility to pay for parking?	36%	14%	76%

Existing supply and demand

Figure 5-1 outlines the existing demand for lorry parking in the UK based on vehicle movements as well as the supply of safe and secure facilities. There are no certified parking locations in the UK however there are a number of facilities which are assumed to be eligible for certification with only minor upgrades required based on advertised security and services.

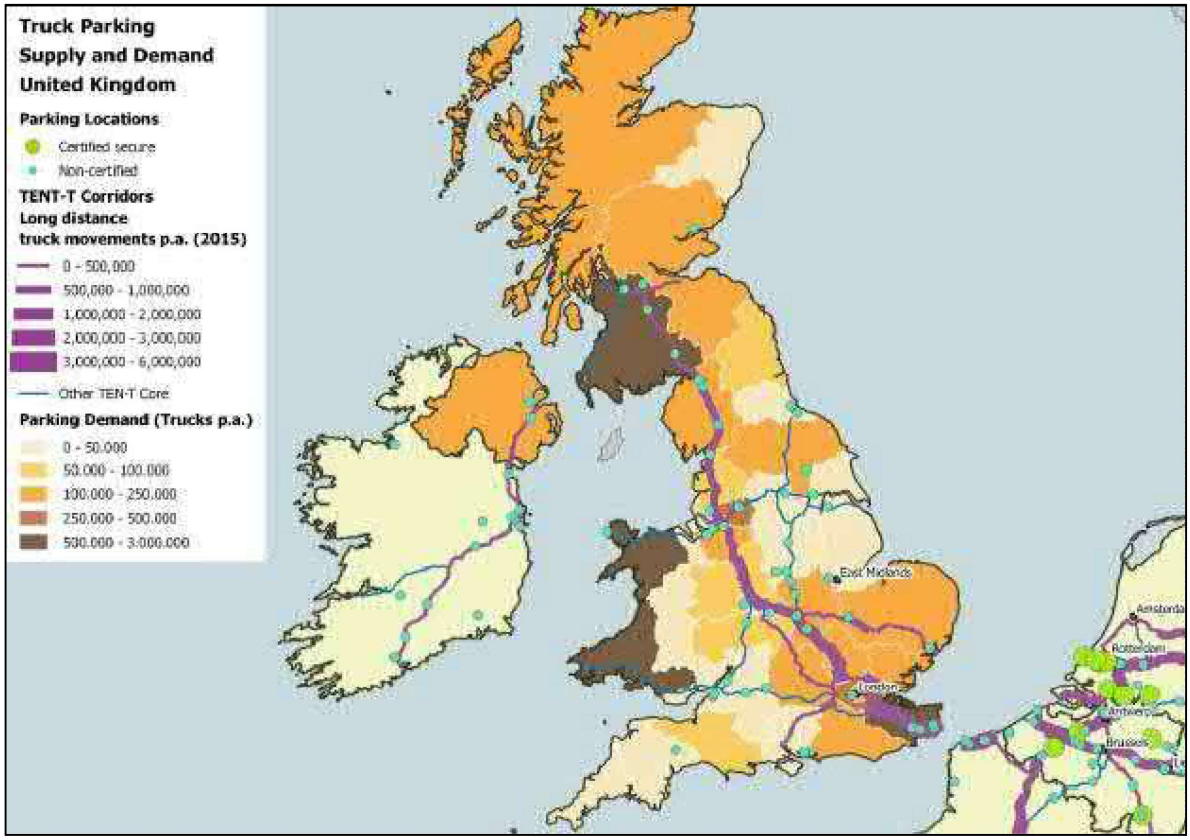


Figure 5-1 Truck parking supply and demand in the UK

Conclusions and next steps

There is no consistent definition of safe and secure lorry parking across Europe and there is a lack of provision of these facilities for drivers. This study also identified that guidance is lacking on how to set up and operate these types of facilities. Broad implementation of the proposed accreditation process and further guidance on developing new facilities is likely to result in reduced crime and incident rates and improved driver conditions.

6. Conclusion and Recommendations

It is widely known amongst stakeholders that there is a lack of lorry parking supply in many areas across England which is leading to inappropriate lorry parking which creates hazards on the Strategic Road Network as well as unsafe conditions for drivers. There is a large problem with inappropriate parking in laybys and how to address this problem. Simply closing down problematic laybys does not solve the problem, it displaces it. This study has found that the 2017 DfT Lorry Parking audit outlining an urgent need for additional rest areas in six out of nine English regions is even more urgent now. The market for lorry parking is differentiated into 3 categories;

1. those that are willing to pay for high quality and secure parking
2. drivers who will pay for 'good value' parking
3. those who are unwilling to pay anything for parking, thus park in either lay-bys or industrial/retail estates.

There is a limited supply of 'high quality' lorry parks throughout England and the ones that are 'high quality' tend to be critically utilised, the provision of adequate security is a large factor in this, however there remains a place in the supply market for 'cheap and cheerful' lorry parking facilities.

Highways England Traffic Officers (those interested in freight), have been helpful in pointing out problem areas on the SRN and some geographical gaps on the network. This information has been used to validate the findings from the DfT survey in identifying lorry parking issues commonly seen during day time shorter breaks as well as overnight lorry parking, which was the primary focus of the DfT survey.

The process required to develop a lorry park (including land allocation) is very difficult and takes a long time. Despite this, it is largely considered a national issue rather than a local issue meaning that proposed lorry parks often do not progress past local authority approval. Until lorry parking is seen as a local issue it will be difficult to change this behaviour. Kent is one example where off-site lorry parking is now widely seen as a major issue and where lorry park development is encouraged at a local authority level.

New major "freight generators" such as new distribution parks and industrial estates should be required to consider the provision for lorry parking as it's unlikely that the new tenants of the industrial units will want to accommodate HGVs overnight. Thus, there is a responsibility on the developer to work with the relevant highways authorities to assess where this provision should be. Additionally, the design of new expressways needs not only to adhere to the same requirements for "rest areas" (every 28 miles) but also the "spirit of the requirement". In other words just because a new expressway might only be 22 miles long it doesn't mean that rest provision can be ignored. The new expressway is likely to be replacing an existing A Road which typically might have had several lay-bys and/or service stations along its length. There is also a need to consider alternative fuels and refuelling points in the provision of future MSAs and Lorry Parks and retro-fitting existing facilities for gas and electric freight vehicles. Further research on the location of high sided vehicle incidents is needed for contingency and emergency parking including snow gates and bad weather planning.

Very high demand for lorry parking in the East and West Midlands is supported by the theory that a significant proportion of inbound RoRo freight entering the country via Dover (and other south eastern ports) will require an overnight stop in this area due to driver's hours' time restrictions. This adds to the strong demand for overnight parking for drivers delivering into the Golden Triangle, which is driven by the high logistics and industrial land use in the Midlands. Demand identified from the 2017 DfT survey validates the theory that major outbound RoRo ports drive lorry parking demand in their local region. Assuming that drivers are not allowed to park inside port land overnight which is mostly the case, a proportion of drivers use their available driving hours to get as near as possible to the port or Eurotunnel check-in to ensure they can catch their pre-booked sailing/scheduled service.

Now that the areas of England in which additional lorry parking supply is needed most have been identified, as well as what types of lorry parks are in demand and where gaps in the currently supply exist, the next steps are to remove the barriers to investment (private or public) and development in the sector. The key points from the European Commission's *Safe and Secure Parking for Trucks* should also be considered as part of any future work.

Appendix A Regional Assessments

East Midlands

Strategic road corridors

The key road corridors in the North West include:

- The **M1** – this is the major north-south route from the south-east of England to the midlands and the north. It also extends through the 'Golden Triangle' and cities including Leicester, Derby and Nottingham.
- The **A1** – an alternative north-south route to the east of the M1 which is a more direct route for freight from the South East to the North East.
- The **M69** – a route extending from the South West through Leicester to the A52.
- The **A52** – the major east-west route in the East Midlands which starts in the West Midlands and runs through Derby and Nottingham before connecting into the A1.
- The **A14** – an east-west route in the south of the region which extends east into the East of England and connects to the Port of Felixstowe.

Major freight generators and attractors

A large portion of the 'Golden Triangle' sits in the East Midlands which is considered the largest industrial precinct in the United Kingdom. Cities such as Northampton, Leicester, Derby and Nottingham are major freight generators in the East Midlands. Although it is not well serviced by the Strategic Road Network, and thus not under Highways England authority, the Lincolnshire region was also identified by stakeholders to be in need of additional lorry parking supply driven by the fresh food sector which is time sensitive and often requires lorries with the capacity to keep cargo chilled which should be considered as part of any lorry parking solutions developed for the area.

Provision of lorry parking

A total of 49 lorry parks were surveyed in the East Midlands as part of the DfT survey of which 26 were either critically or seriously utilised (over 70%). Majority of these lorry parks are situated in the M1 and M69/A46 around Leicester where each road corridor has a stretch of approximately 40 miles without a lorry park with an acceptable utilisation.

The East Midlands has only one known 'high quality' (containing all facilities/amenities) lorry park located on the A1 in the north of the region suggesting there is a gap in supply for this market segment. There are at least nine 'cheap & cheerful' (under £5 per night) lorry parks identified in the region however these are also concentrated in the north east of the region and are severely lacking along the M1 and M69/A46 where significant off-site demand is incurred.

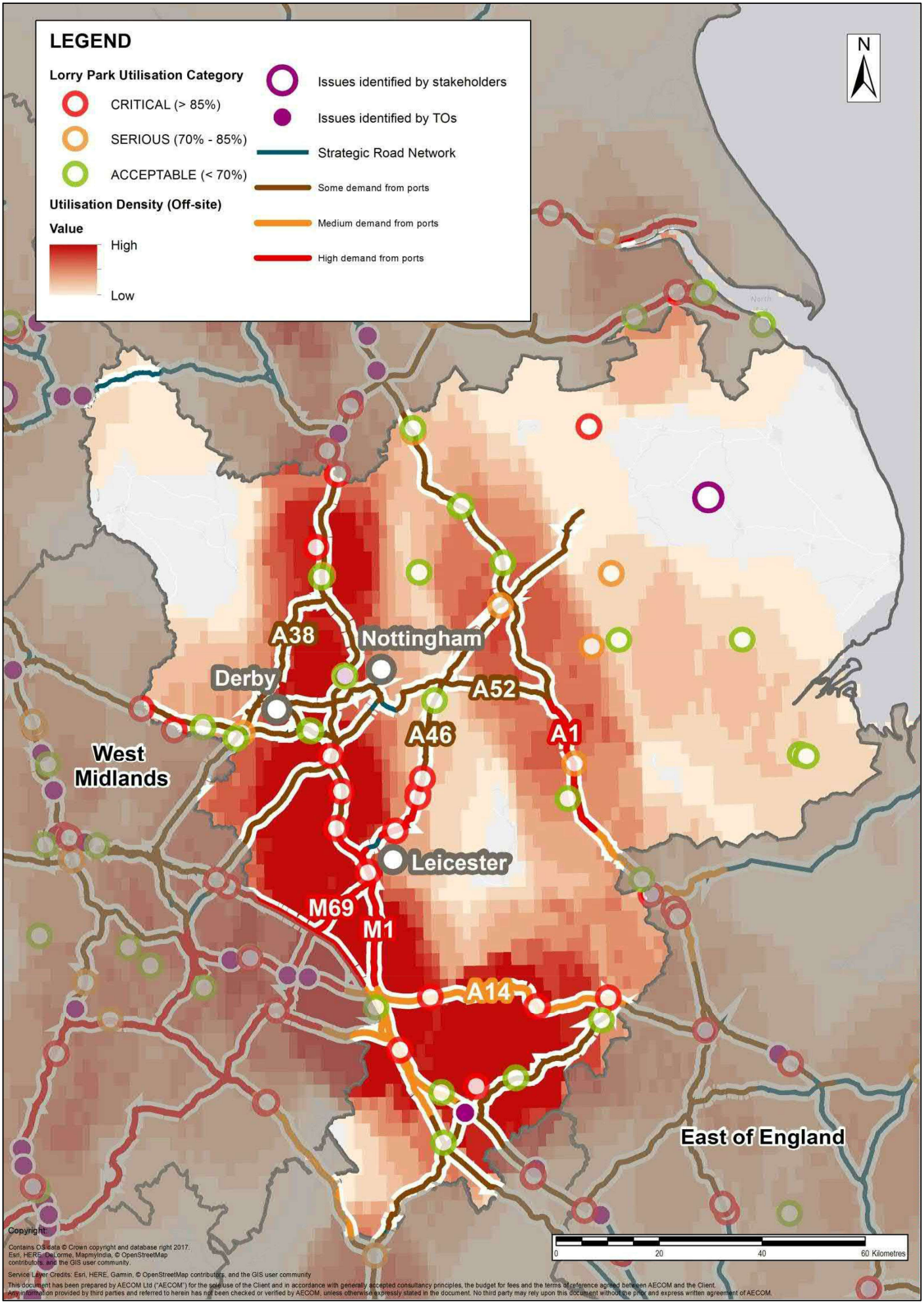
Off-site lorry parking incurred

A significant amount of off-site lorry parking was captured in the DfT lorry parking survey (2017) along the entire length of the M1 through the region as well as the A1 and A14. Majority of the off-site parking surrounding the A1 was recorded in laybys where industrial estates in Northampton and the south-west of the region were found to have large numbers of off-site demand for parking.

Summary

This study has identified the region surrounding Northampton as well as the entire length of the M6 road corridor to be in significant need of additional lorry parking supply across all segment types. Additionally, the road corridors of the A14 and A1 incur significant off-site lorry parking while all three lorry parks on the A14 in the region are critically utilised.

Demand in this region is driven by the industrial activity associated with the 'Golden Triangle' however it has also been identified that the section of the M1 in the East Midlands is situated approximately 4.5 hours' drive from a number of major ports in the South East of England which means this area also incurs demand for lorry parking from freight destined for the north of England and Scotland but requiring an overnight stay in the Midlands on the way.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Utilisation Density (Off-site)
Value
High
Low
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
N
A38
Nottingham
Derby
A52
A46
A1
West Midlands
Leicester
M69
M1
A14
East of England
0
20
40
60 Kilometres
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East of England

Strategic road corridors

The key road corridors in the East of England include:

- The **M1** – this is the major north-south route from the south-east of England to the Midlands and the North. Within this region it extends from the M25 northbound into the East Midlands.
- The **A1** – an alternative north-south route to the east of the M1 which is a more direct route for freight from the South East to the North East.
- The **M11** – a route beginning at the M25 to the east of the A1 extending north meeting the A14.
- The **A14** – an east-west route beginning on the east coast at the Port of Felixstowe and extending across the region, intersecting with the A1 before passing into the East Midlands.
- The **A12** – links the Port of Felixstowe and Port of Harwich with London and the South East of England.

Major freight generators and attractors

The Port of Felixstowe and Port of Harwich are major freight generators in the East of England which drive demand for lorry parking. Additionally, the south of the region where the East meets the South East is a natural location for a regional distribution centre for the south-east catchment of England which generates a significant amount of freight.

The industrial areas including the 'Golden Triangle' are located immediately to the west of the region which is also a major freight generator along the road corridors in the region. Any freight travelling between the Midlands and the major Ports of Felixstowe or Harwich or the South East of England is likely to be using road corridors in the East of England.

Provision of lorry parking

A total of 31 lorry parks were surveyed in the East of England as part of the DfT survey of which 26 were either critically or seriously utilised (over 70%). The majority of these lorry parks are situated in the M1, A1 and A14. The stretch of the M1 in this region contains four lorry parks, all of which are critically utilised, while a 50 mile stretch of the A1 through the region was recorded to have no lorry parks with availability. Similarly, there were no lorry parks with availability recorded on the A14 west of Ipswich which is an 80 mile stretch of road.

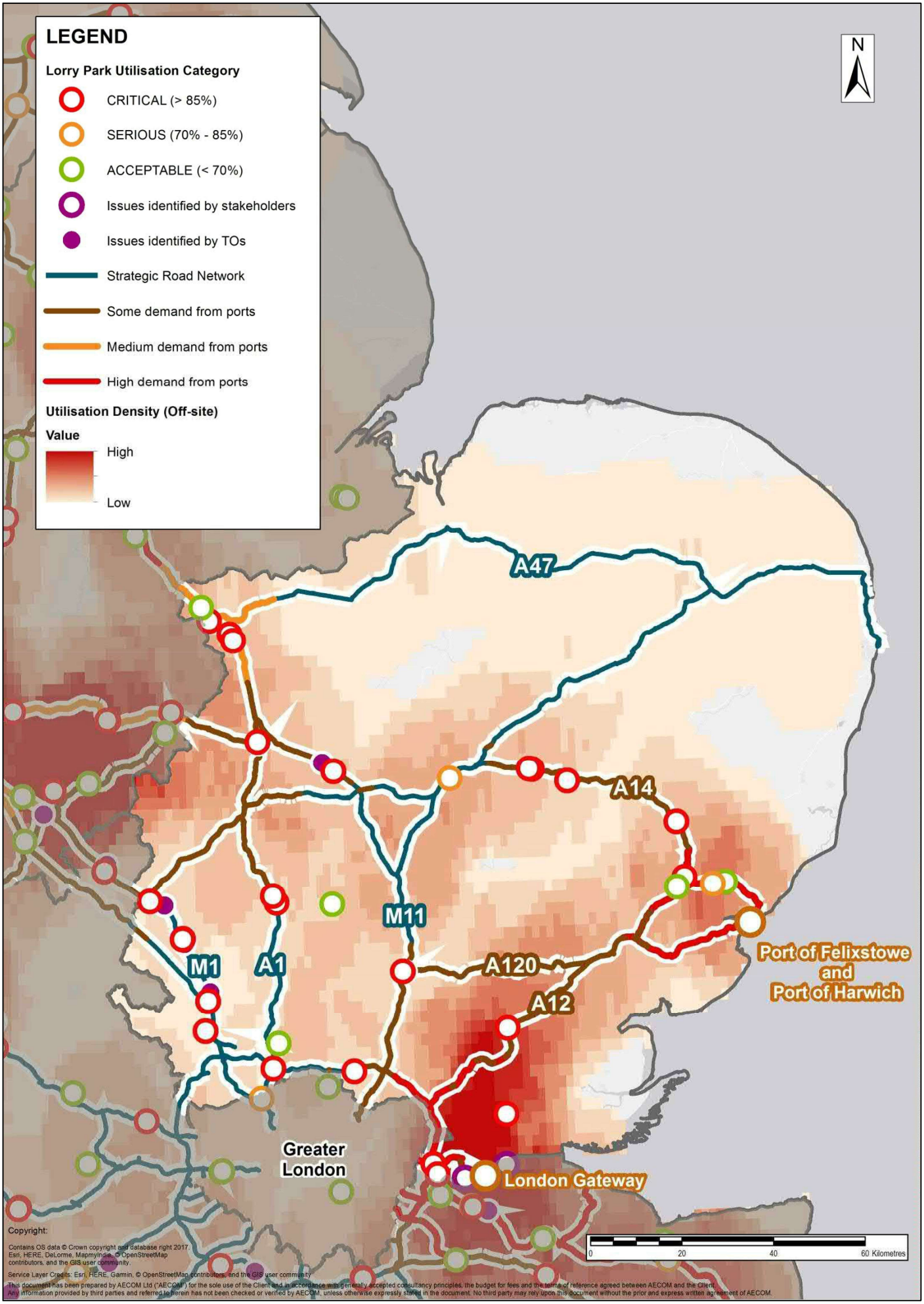
The East of England has three known 'high quality' (containing all facilities/amenities) lorry parks, two of which were on the A1 with the other on the A14, all of which were critically utilised. There was only one known 'cheap & cheerful' (under £5 per night) lorry park identified in the region. It is recommended that further provision of both of these types of lorry parking is increased in the region.

Off-site lorry parking incurred

A significant amount of off-site lorry parking was captured in the DfT lorry parking survey (2017) in the south of the region surrounding the A12 and the M25 on the north side of the river Thames. There is also a significant amount of off-site lorry parking recorded in the region of the Port of Felixstowe and Port of Harwich.

Summary

This study has identified the region on the north side of the river Thames and the Ports of Felixstowe and Harwich to be in need of further lorry parking provision to address the high off-site parking. Additionally, the road corridors of the M1, A1 and A14 have very limited availability of parking with majority of lorry parks on these corridors being critically utilised. Each of these road corridors contain long sections without any lorry parks with availability which effectively pushes the issue to other parts of the region and adds to the lorry parking issues in the Midlands. The figure below outlines these issues and demonstrates the lack of lorry parks with availability in the region.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
Utilisation Density (Off-site)
Value
High
Low
N
A47
A14
M11
M1
A1
A120
A12
Port of Felixstowe
and
Port of Harwich
Greater
London
London Gateway
0
20
40
60 Kilometres
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North East

Strategic road corridors

The key road corridors in the North East include:

- The **A1** – this road corridor provides the primary north-south route through the region and connects the East of England region to Newcastle and the east of Scotland.
- The **M19** – an alternative north-south route in the region which runs along the east coast and is a more direct connection between Newcastle and Teesport.
- The **A69** – an east-west route connecting Newcastle to the North West.
- The **A66** – a route that is only briefly in the North East but one that provides an important east-west connection for vehicles travelling between the North West and Teesport.

Major freight generators and attractors

Teesport and Tyne Port are the major freight generators in the North East along with their associated industrial precincts. The area surrounding Newcastle is the natural location for a regional distribution centre serving the North East and parts of Scotland.

Provision of lorry parking

A total of 17 lorry parks were surveyed in the North East as part of the DfT survey of which seven were either critically or seriously utilised (over 70%). All of the critically utilised parks are situated on the A1 or the M19. Lorry parks on the sections of the A1 and M19 immediately south of Newcastle in particular.

There is not known to be any 'high quality' or 'cheap & cheerful' lorry parks in the North East, thus provision of these types of parks to satisfy the varying types of demand should be considered.

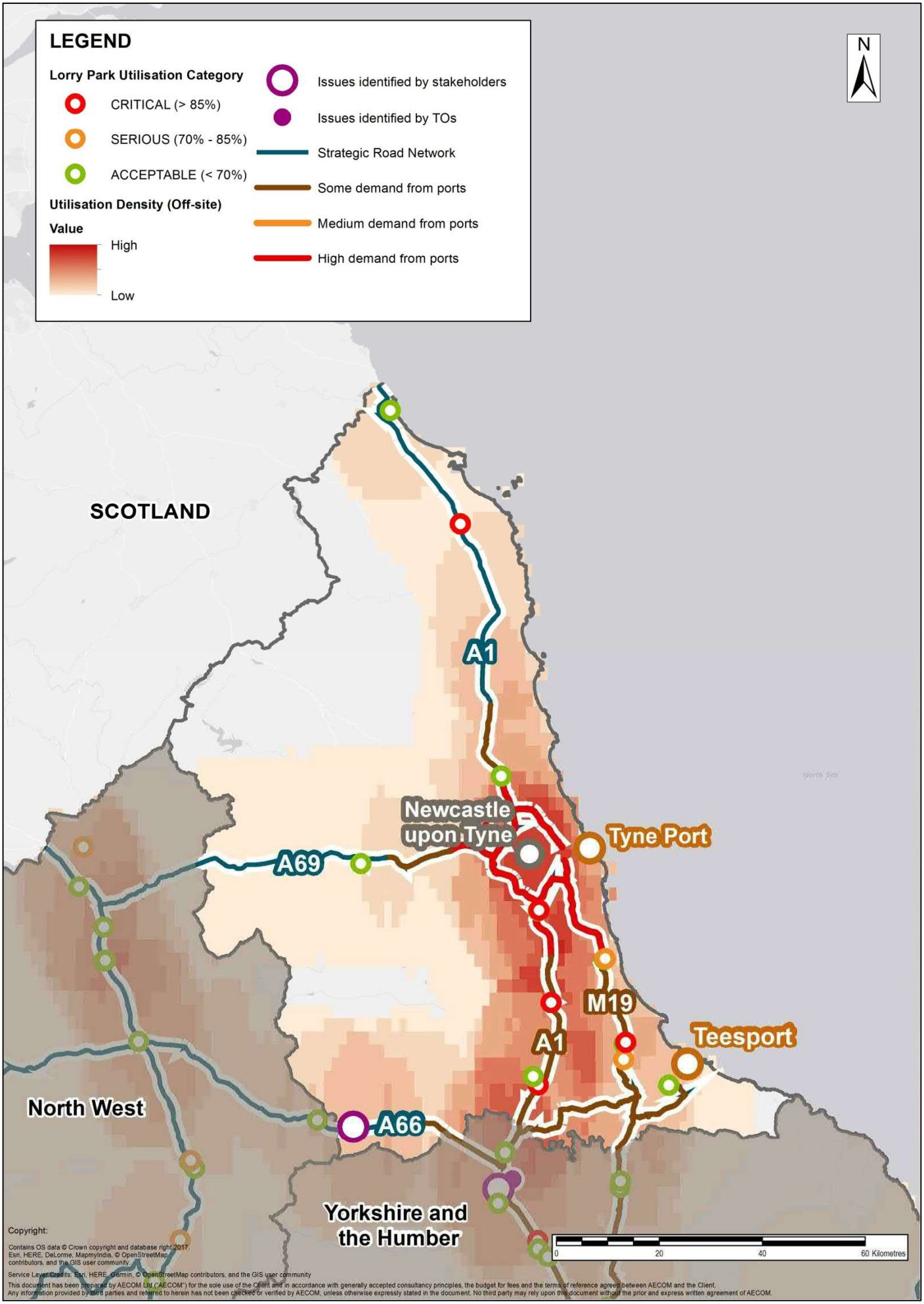
Off-site lorry parking incurred

A significant amount of off-site parking was recorded in the area surrounding Newcastle in various industrial estates as well as laybys along the A1 to the south of Newcastle. A lack of provision on the A66 was also identified which can create off-site parking issues along this route particularly during adverse weather when it is closed for periods of time. This forces vehicles to park in laybys and on hard shoulders which in turn makes it harder to clear the road of snow and re-open the route.

Summary

This study has identified a need for additional parking in the Newcastle region targeted towards reducing the off-site parking. The most effective approach to reduced off-site parking is likely to be provision of 'cheap & cheerful' lorry parking in areas nearby industrial estates and in close proximity to the SRN. It is also recommended to promote the development of at least one 'high quality' lorry park in the region for those drivers willing to pay a premium.

Strategic provision of lorry parking on the A66 should also be considered to aid the operations of the route and provide an area for lorries to park while waiting for the route to re-open if it is closed during adverse weather. This would also make it easier for snowploughs and other vehicles to work on getting the route operational as quick as possible after closure.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Utilisation Density (Off-site)
Value
High
Low
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
N
SCOTLAND
A1
Newcastle upon Tyne
Tyne Port
A69
M19
A1
Teesport
North West
A66
Yorkshire and the Humber
0
20
40
60 Kilometres
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North West

Strategic road corridors

The key road corridors in the North West include:

- The **M6** – major north-south route which extends from the southern border of the region near Stoke right up to the Scotland border. This road is nationally significant and is a key artery from vehicles travelling between the south of England and the North/Scotland.
- The **M62** – this road corridor extends from Liverpool on the west coast of England east through Manchester to Leeds in Yorkshire and beyond. It provides a key east-west route in the north of England and is strategically very important due to the lack of alternatives in adverse weather conditions.
- The **M56** – this road corridor extends south from the Port of Liverpool before heading east and providing access to the M6 and Manchester. This route is strategically important from connecting the Port of Liverpool with the Midlands and south of England.
- The **M60** – provides a route around the congested area of Manchester.
- The **A66** – this route provides an east-west connection in the far north of England between Penrith (North West) and Bowes (North East). It is important due to the lack of alternatives.

Major freight generators and attractors

The major freight generator in the North West is the Port of Liverpool which is the primary port on the west coast of the United Kingdom. The associated industrial precincts in Warrington and Trafford are also major freight generators and drivers of lorry parking demand.

Provision of lorry parking

A total of 39 lorry parks were surveyed in the North West as part of the DfT survey of which 15 were either critically or seriously utilised (over 70%). The majority of these lorry parks are situated in the Liverpool/Warrington and Manchester area which demonstrates the need for additional lorry parking supply. A number of the acceptably utilised lorry parks are located on the M6 in the northern part of the region which can be attributed to the even and regular spacing (approximately every 15 miles) which has reduced the volume of off-site parking in the area as shown by the figure below.

The North West has five known ‘high quality’ (containing all facilities/amenities) lorry parks which is the most of any region in England however the facilities located along the M6 in the south of the region are heavily utilised suggesting there is demand additional supply of this type of lorry park in this area. There are only two known ‘cheap & cheerful’ (under £5 per night) lorry parks identified in the region thus additional provision of these, particularly in areas of high off-site parking, is recommended.

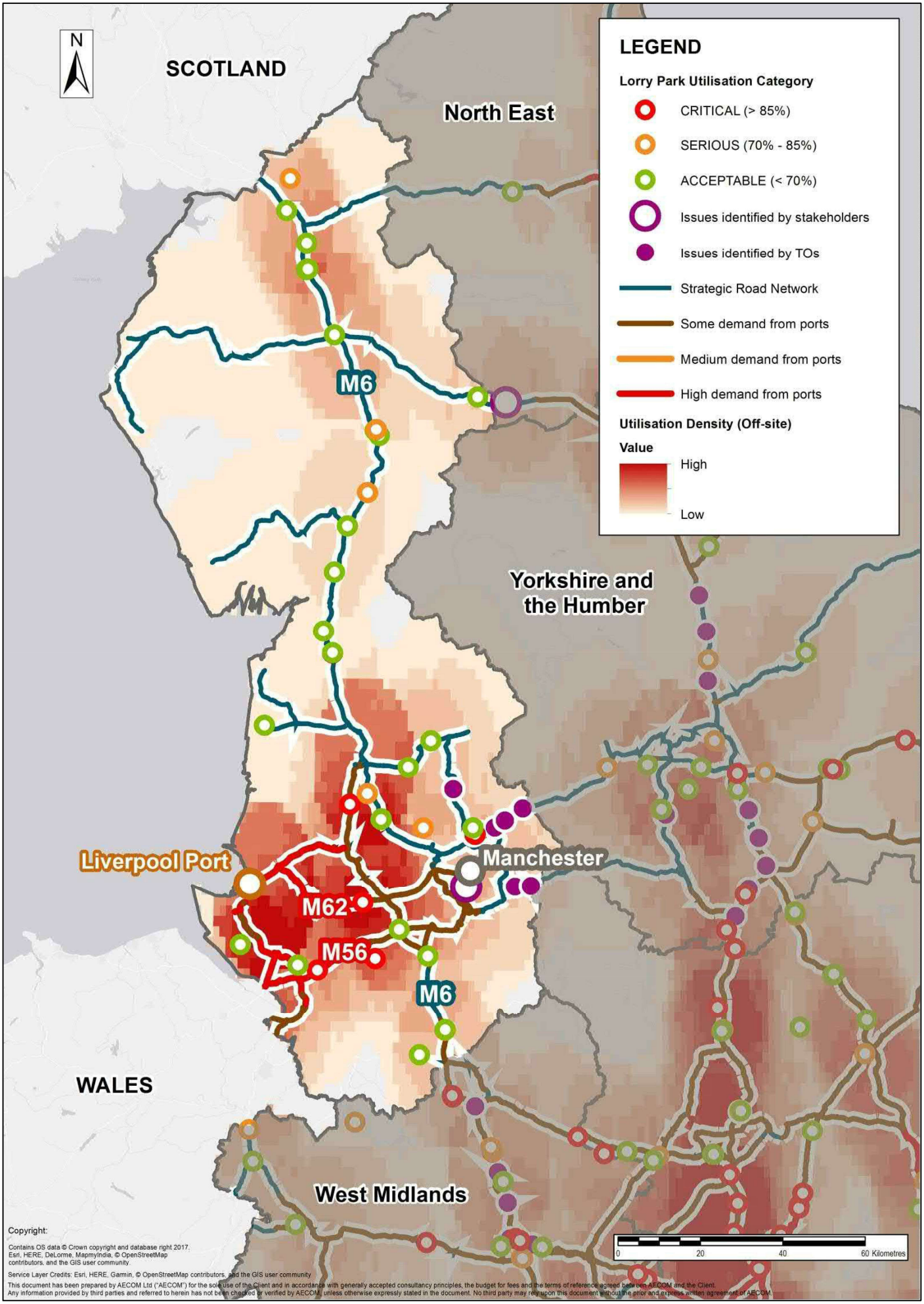
Off-site lorry parking incurred

A significant amount of off-site lorry parking was captured in the DfT lorry parking survey (2017) in industrial estates around Liverpool and west Manchester as well as in laybys along the M6 as shown in the figure below. A number of lorry parking related issues were also identified by Highways England Traffic Officers on the M62 to the north east of Manchester.

Summary

This study has identified the region surrounding the Port of Liverpool, industrial precincts in Warrington and Trafford as well as the M6 road corridor is being in high demand for lorry parking and requiring additional lorry parking supply. Additionally, there is demand for lorry parking supply on the M62 to the north east of Manchester as identified by Highways England Traffic Officers. Supply of ‘cheap & cheerful’ lorry parking has been identified to be lacking in particular.

Although the North West incurs significant off-site demand, it also demonstrates how to effectively provide lorry parking along the northern section of the M6 where facilities are provided at regular intervals which has reduced the issue of off-site lorry parking demand in the area.


N
SCOTLAND
North East
Yorkshire and the Humber
Liverpool Port
Manchester
M62
M56
M6
M6
WALES
West Midlands
LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
Utilisation Density (Off-site)
Value
High
Low
0
20
40
60 Kilometres
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South East

Strategic road corridors

The key road corridors in the South East include:

- The **M2/A2** – this route provides a connection from London and east London to the south east of the region and Dover. It is also used by vehicles accessing Medway Port.
- The **M20** – this route provides an alternative connection between Dover and London and is situated west of the M2. This corridor provides a more direct route to Dover from west London and the South England.
- The **A3** – this road corridor extends south west from London and provides the most direct connection to Portsmouth and Southampton Ports.
- The **A34** – this route is located to the west of the region and provides a north-south connection between Southampton and the Midlands.
- The **M25** – this route acts as a ring road for London however also forms the primary north-south route to the east of London.

Major freight generators and attractors

There are six major ports located in the South East (including the channel tunnel) which can all be considered to be large freight generators and attractors. Additionally, four of them are located south of the river Thames but east of the M20 which creates a significant amount of freight to the east of London and along the M2. Southampton and Portsmouth ports also generate and attract significant volumes of freight due to their more direct connection with the Midlands logistics area, a route which avoids the need to transverse across congested London motorways.

Provision of lorry parking

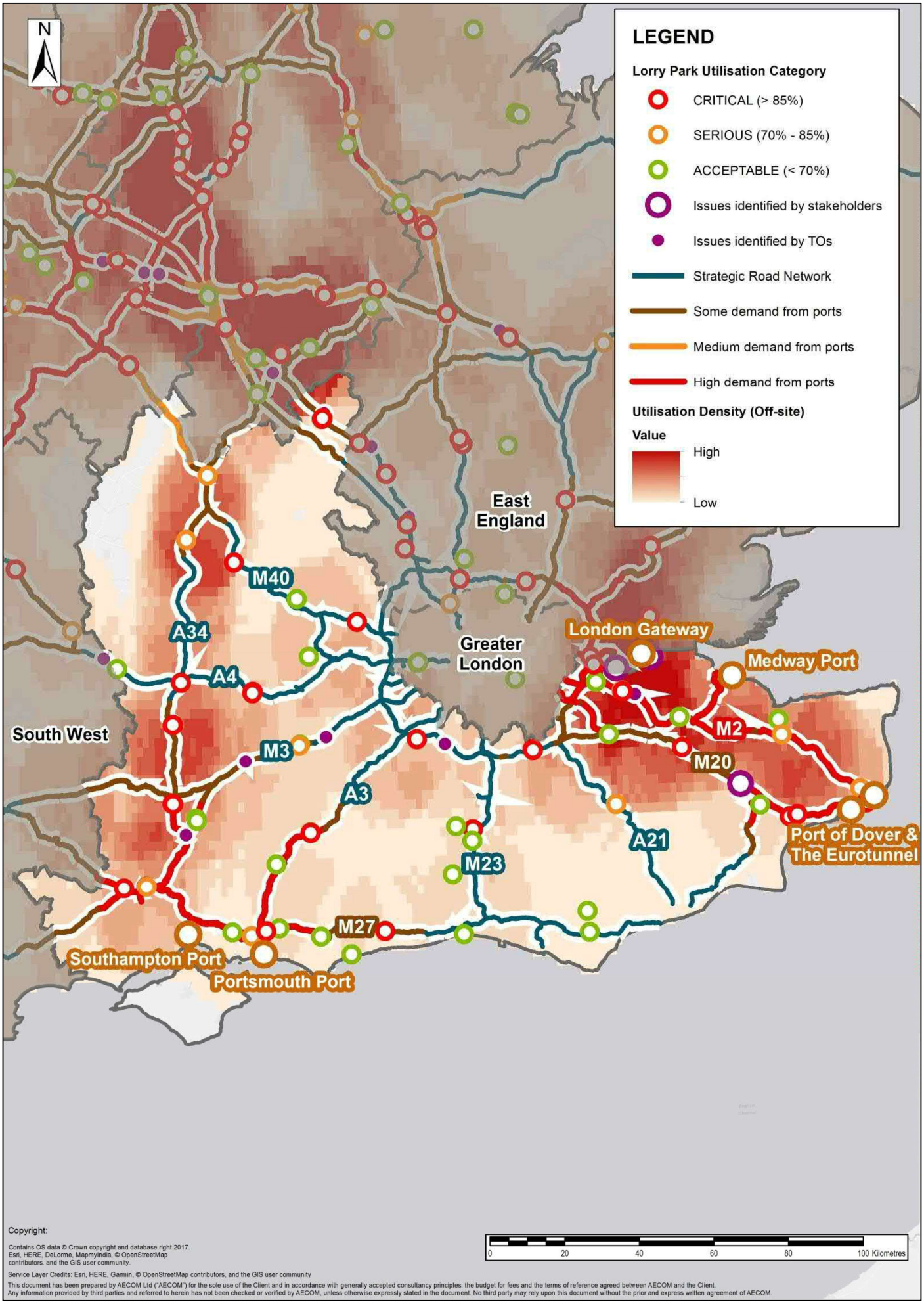
A total of 58 lorry parks were surveyed in the South East as part of the DfT survey of which 34 were either critically or seriously utilised (over 70%). These parks are located right across the SRN in the region with the M2, M20, M25 and A34 incurring the most number of critically utilised parks. The longest stretch of road in the South East that does not have a lorry park at an acceptable level of utilisation is on the A34 from Southampton to Oxford in which a driver not willing to divert off the A34 could potentially drive over 60 miles without seeing a lorry park with availability. The South East has two known ‘high quality’ lorry parks (both of which were recorded at over 70% utilisation) and seven known ‘cheap & cheerful’ (under £5 per night) lorry parks. Of the ‘cheap & cheerful’ lorry parks, none are located in the south-east area along the M2 and M20 while the only two located on the A34 were recorded at over 70 percent utilised. Thus, although there are four acceptable utilised ‘cheap & cheerful’ lorry parks in the region, it is recommended that provision is increased in areas which are incurring significant off-site demand.

Off-site lorry parking incurred

The areas of significant off-site demand in the South East echo the areas of high demand identified through analysing lorry park utilisations. The M2 and M20 road corridors incur a significant amount of off-site parking, particularly near the M25 in both industrial estates and laybys. Laybys along the A34 are also heavily used for off-site parking.

Summary

This study has identified the area in the south-east of the region around the M2, M20 and M25 to be in significant need of additional lorry parking provision in order to reduce the existing off-site lorry parking issues. When considering the provision of additional lorry parking in this area, encouragement should be given to both ‘high quality’ and ‘cheap & cheerful’ lorry parks among others given the lack of existing lorry parks with these characteristics. The road corridor of the A34 is also in need of additional lorry parking supply to reduce the issue of off-site parking and also because all existing capacity is being utilised. Similarly to the south-east of the region, a range of lorry parking types is recommended to satisfy a range of demand segments.


N
LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
Utilisation Density (Off-site)
Value
High
Low
East England
Greater London
South West
M40
A34
A4
M3
A3
M23
M27
M2
M20
A21
London Gateway
Medway Port
Port of Dover & The Eurotunnel
Southampton Port
Portsmouth Port
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0
20
40
60
80
100 Kilometres

South West

Strategic road corridors

The key road corridors in the South West include:

- The **M5** – this route stretches from Exeter north through Bristol and Gloucester on the way into the Midlands towards Birmingham. This road corridor is the most direct and strategically important route between the South West and the Midlands/North England.
- The **M4** – this route provides an east-west connection across South England, extending east from Bristol toward London and the South East.
- The **A303** – this route provides a more direct connection between London and Exeter and the far south west of the region.
- The **A419** – this short road corridor is strategically important in the South West as it links Gloucester with the M4 and would be part of the most direct route to Southampton and the South East.
- The **A40** – there is only a short section of this route in the South West however it is located in an important area of the region and is a key connection route between the South West and Wales, the West Midlands and the North West.

Major freight generators and attractors

Bristol Port is the major freight generator and attractor in the region with the industrial areas of Gloucester also creating a lot of freight movements. The Welsh capital city of Cardiff is also located approximately 30 miles to the west of Bristol which is likely to generate freight movements through the South West.

Provision of lorry parking

A total of 37 lorry parks were surveyed in the South West as part of the DfT survey of which 21 were either critically or seriously utilised (over 70%). Majority of these highly utilised lorry parks are located in the vicinity of Bristol and Gloucester on the M5, M4 and A419 road corridors. There are also two seriously utilised lorry parks on the A303 which are the only lorry parks on this stretch of road east of Exeter for over 70 miles.

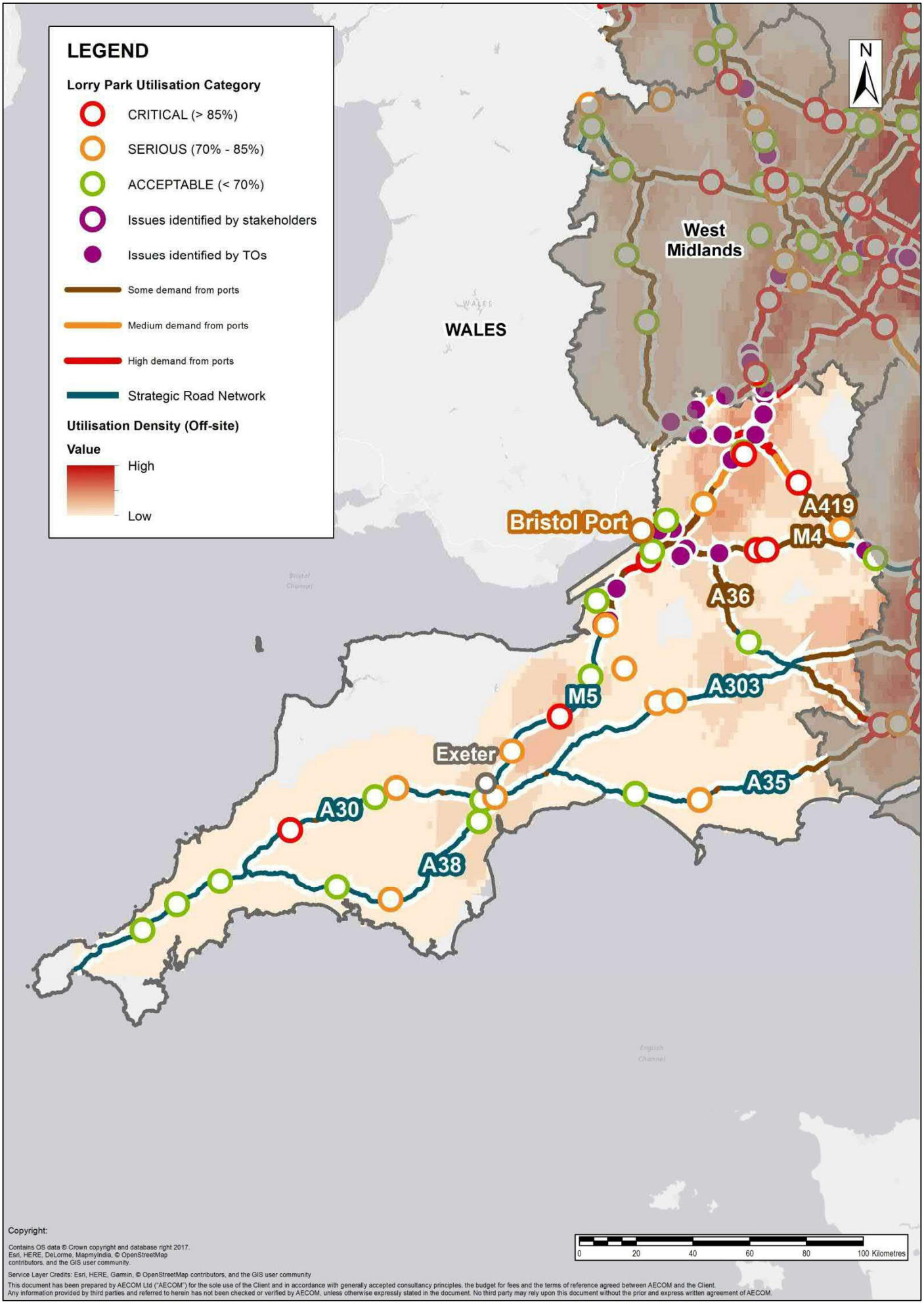
The South West has only one known 'high quality' lorry park however it is located in Bristol and survey to be at an acceptable utilisation level which could be considered an appropriate level of provision in this region. There are six known 'cheap & cheerful' (under £5 per night) lorry parks however none are located in the Bristol and Gloucester region along the M5, M4 or A419.

Off-site lorry parking incurred

Majority of the off-site parked lorries observed in the South West as part of the DfT survey were in laybys along the M5, M4 and A419 near Bristol and Gloucester. Additionally, a number of lorry parking issues were identified in these regions by Highways England Traffic Officers which highlights the need to be strategic about how to provide additional lorry parking supply to ensure the demands of these drivers are met.

Summary

This study has identified the area surrounding Bristol and Gloucester to be in significant need of additional lorry parking supply including the road corridors of the M5, M4 and A419. The number of issues identified by Traffic Officers suggests a more thorough investigation into these specific areas to identify the particular demands of the lorry drivers that are parking off-site. Given the lack of 'cheap & cheerful' provision in the area, additional supply of this type of lorry parking capacity is likely to reduce the magnitude of the issue.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Issues identified by stakeholders
Issues identified by TOs
Some demand from ports
Medium demand from ports
High demand from ports
Strategic Road Network
Utilisation Density (Off-site)
Value
High
Low
N
West Midlands
WALES
Bristol Port
A419
M4
A36
M5
A303
Exeter
A35
A30
A38
0
20
40
60
80
100 Kilometres
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West Midlands

Nationally strategic road corridors

The key road corridors in the West Midlands include:

- The **M5** – this route stretches from Bristol in the South West in the West Midlands to Birmingham and is the most direct route for majority of West Midlands (and North West) freight movements to the south.
- The **A46** – this road corridor provides a route through the south-east of the region between Gloucester in the South West and the East Midlands.
- The **M6** – this road corridor extends east from Birmingham into the East Midlands and also north of Birmingham to the North West. It is a very strategic and important route for the connectivity of the West Midlands to the rest of England.
- The **A5** – this route provides connectivity through the logistics hub of the midlands between areas north of Birmingham to Northampton in the East Midlands.
- The **M40** – this route extends south-east of Birmingham and is one of the most direct routes to London.

Major freight generators and attractors

There are no ports in the West Midlands however the large industrial and logistics precinct known as the 'Golden Triangle' that spans across the Midlands generators a significant volume of freight in the region east of Birmingham. Additionally, Birmingham is the second most populous city in England which also creates a significant volume of freight for the West Midlands.

Provision of lorry parking

A total of 38 lorry parks were surveyed in the West Midlands as part of the DfT survey of which 25 were either critically or seriously utilised (over 70%). Majority of these highly utilised lorry parks are located west of Birmingham on the M40, A45, M6 or A5 however there are also a number on the M5 south of Birmingham and the M6 north of Birmingham.

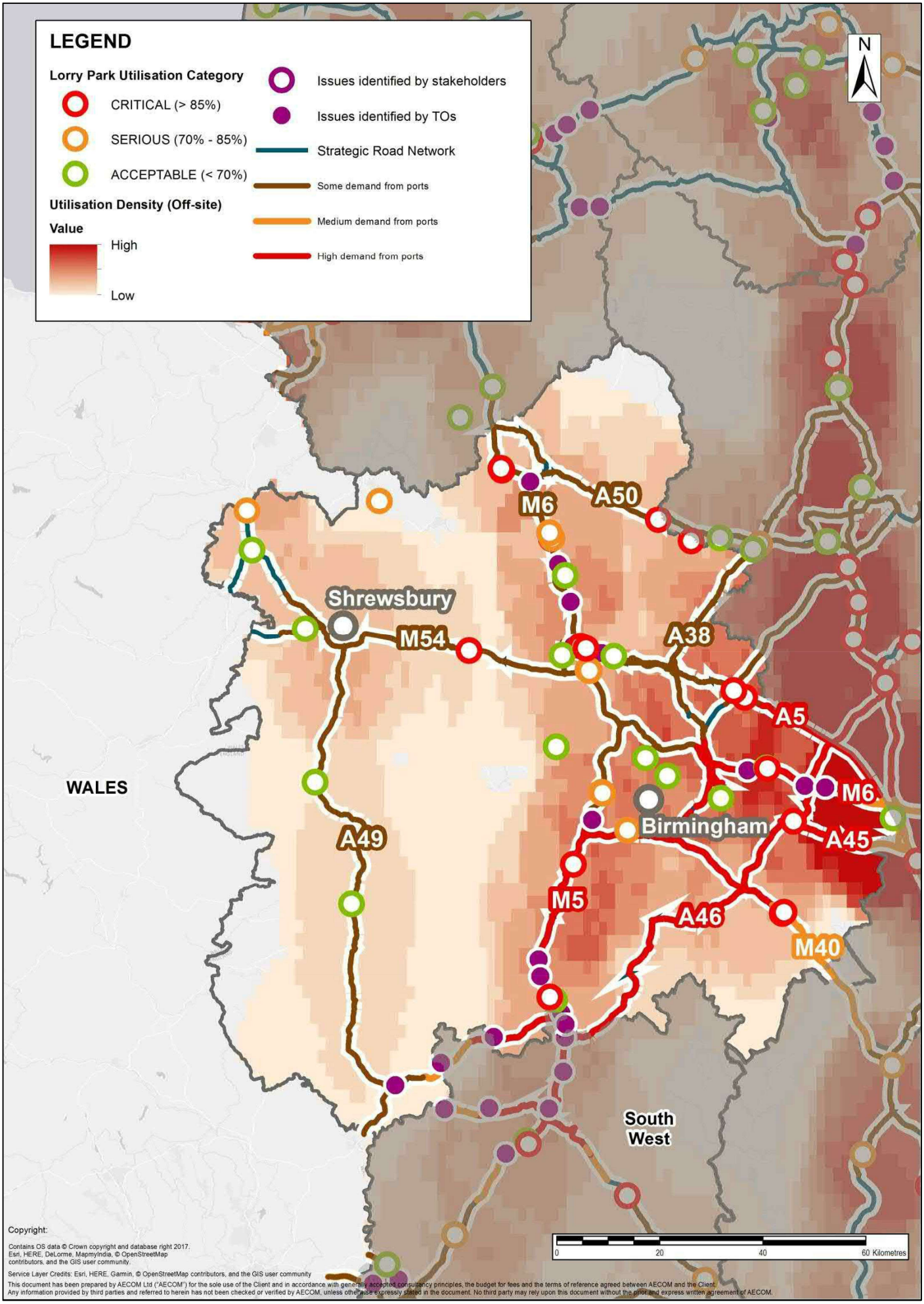
There are three known 'high quality' lorry parks in the West Midlands which is considered to be a reasonable level of provision however only one of the lorry parks is located to the east of Birmingham where the greatest demand for lorry parking is incurred. There are five known 'cheap & cheerful' (under £5 per night) lorry parks located in the region however only one is located east of Birmingham which is critically utilised.

Off-site lorry parking incurred

Significant off-site parking has been observed in the West Midlands along all major routes outlined above. Majority of the off-site parking along these road corridors was observed in laybys however a number of industrial estates to the east of Birmingham were also being used for off-site parking. Additionally, a number of issues were reported by Highways England Traffic Officers along the M5 to the south of Birmingham and M6 both to the east and north of Birmingham.

Summary

This study has identified the area to the east of Birmingham to be in significant need of additional lorry parking across all demand segment types including 'high quality' and 'cheap & cheerful' lorry parks. The stretch of the M5 to the south of Birmingham which eventually joins with the M6 to the north of Birmingham is also in need of additional lorry parking supply given it contains a 30 mile stretch of road without a lorry park at an acceptable rate of utilisation. Although the A46 may incur less traffic volume than the M5, it is also likely that the 40 mile stretch of road along this route between Gloucester and Coventry without a lorry park at an acceptable utilisation is a driver of off-site parking which should be reconciled when possible through additional capacity.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Utilisation Density (Off-site)
Value
High
Low
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
N
M6
A50
Shrewsbury
M54
A38
A5
WALES
M6
Birmingham
A45
A49
M5
A46
M40
South West
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0
20
40
60 Kilometres

Yorkshire and the Humber

Nationally strategic road corridors

The key road corridors in the region of Yorkshire and the Humber include:

- The **A1** – major north-south route which extends from the southern border of the region near Doncaster right up to the northern border of the region before continuing on to Newcastle.
- The **M1** – this route is strategically important for the cities of Leeds and Sheffield and their connection to the East Midlands and the south of England.
- The **M62** – This road corridor provides the primary east-west route for the region which links the Port of Hull in the east to Leeds before continuing on to Manchester in the North West.
- The **M180** – this route also provides an east-west route in the region and links the Port of Grimsby and Immingham to the rest of the region.

Major freight generators and attractors

The two ports located in the east of the region, the Port of Hull as well as the Port of Grimsby and Immingham, are two major freight generators for the region however there are also large industrial precincts located in Leeds, Sheffield and Rotherham which are considered to be major freight generators for the region as well.

Provision of lorry parking

A total of 37 lorry parks were surveyed in region of Yorkshire and the Humber as part of the DfT survey of which 17 were either critically or seriously utilised (over 70%). A number of these highly utilised lorry parks are located on the M62 between the Port of Hull and Leeds with the M1, A1 and M180 also containing critically utilised lorry parks.

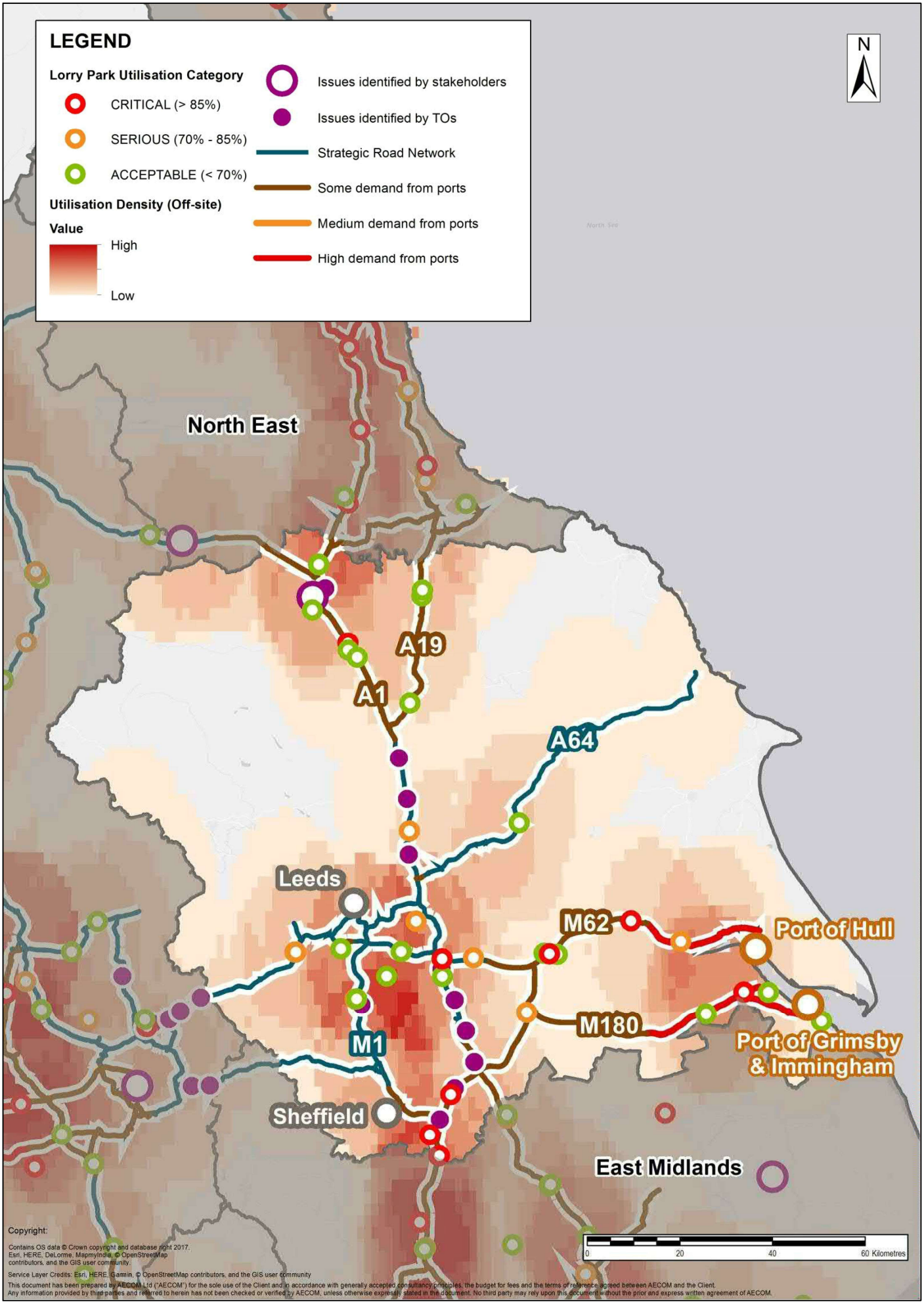
The region of Yorkshire and the Humber has one known 'high quality' (containing all facilities/amenities) lorry park which is located on the M62 to the east of Leeds which is critically utilised. There is also only one known 'cheap & cheerful' (under £5 per night) lorry park identified in the region which is located on the A1 to the south-east of Leeds.

Off-site lorry parking incurred

The main areas within the region of Yorkshire and the Humber which incur off-site parking are in the areas surrounding Leeds and Sheffield as well as the Port of Hull. Two industrial estates were identified to the south of Leeds which had over 30 lorries parked off-site in them each. To the north of the region, a number of lorries were also recorded in laybys around Scotch Corner which could be a result of resilience issues on the A66. Highways England Traffic Officers also reported a number of lorry parking issues on the A1 at regular intervals which indicates the more consistent and regular provision of lorry parks along this route should be encouraged.

Summary

This study has identified the areas to the south of Leeds as well as around Sheffield, Rotherham and the Port of Hull to be in need of additional lorry parking supply to reduce the level of off-site parking. There is a number of lorry parks to the south of Leeds which are currently at an acceptable level of utilisation, thus provision of any further capacity should be carried out strategically and aim to target specific segments of demand. The section of the M62 leading up to the Port of Hull does not have any lorry parks at an acceptable level of utilisation for approximately 30 miles which may also drive off-site parking near the Port. Additionally, it is also recommended that more regular and consistent provision of lorry parking facilities is provided on the A1 to aid the off-site parking issue identified by Highways England Traffic Officers.


LEGEND
Lorry Park Utilisation Category
CRITICAL (> 85%)
SERIOUS (70% - 85%)
ACCEPTABLE (< 70%)
Utilisation Density (Off-site)
Value
High
Low
Issues identified by stakeholders
Issues identified by TOs
Strategic Road Network
Some demand from ports
Medium demand from ports
High demand from ports
N
North East
A19
A1
A64
Leeds
M62
Port of Hull
M180
Port of Grimsby & Immingham
M1
Sheffield
East Midlands
0
20
40
60 Kilometres
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Appendix B Local Authorities

Local Authority	Issue			No. Utilised LP's (Fully utilised/Total)
	Off-site parking (DfT 2017 Survey)	Off-site parking (TO's/Stakeholders)	High demand from ports	
Amber Valley	✓			1/2
Ashfield	✓			1/2
Ashford	✓	✓	✓	1/2
Babergh			✓	0/0
Barnsley	✓			1/2
Basildon	✓			0/0
Basingstoke and Deane		✓		2/2
Blaby	✓			0/0
Bolsover	✓			0/2
Brentwood	✓		✓	0/0
Bristol, City of		✓	✓	1/2
Bromsgrove	✓	✓	✓	2/4
Broxtowe	✓	✓		1/1
Cambridge	✓			0/0
Cannock Chase		✓		0/0
Canterbury	✓		✓	1/2
Central Bedfordshire		✓		0/2
Charnwood	✓		✓	0/1
Chelmsford	✓		✓	0/0
Cherwell	✓			0/0
Cheshire West and Chester			✓	0/0
Chorley	✓			0/0
Colchester			✓	0/0
County Durham	✓	✓	✓	0/0
Coventry	✓		✓	0/0
Dacorum		✓		1/2
Dartford	✓		✓	0/0
Daventry	✓		✓	1/1
Derby	✓			1/1
Doncaster		✓		0/0
Dover			✓	1/2
East Cambridgeshire	✓			0/2
East Hampshire			✓	0/0
East Northamptonshire	✓			0/0
East Riding of Yorkshire			✓	1/1
Eastleigh	✓		✓	0/0
Erewash	✓			1/1
Fareham	✓		✓	3/4
Forest Heath	✓			0/0
Forest of Dean		✓		1/1
Gateshead	✓		✓	3/5
Gravesham		✓	✓	0/0
Halton	✓		✓	0/1
Harborough	✓		✓	1/1
Harrogate		✓		0/0
Hartlepool	✓			0/1

Havant			✓	0/0
Herefordshire, County of		✓		0/0
Hinckley and Bosworth	✓		✓	0/0
Huntingdonshire		✓		0/2
Ipswich	✓		✓	1/1
Kettering	✓			1/1
Kingston upon Hull, City of			✓	4/5
Knowsley	✓		✓	0/0
Leeds	✓	✓		1/1
Leicester	✓			0/2
Liverpool	✓			0/0
Maidstone	✓	✓		3/5
Malvern Hills		✓	✓	0/0
Medway	✓	✓	✓	1/3
Mid Suffolk	✓			0/0
Milton Keynes		✓		3/3
Mole Valley		✓		1/1
New Forest			✓	0/0
Newcastle Upon Tyne	✓		✓	3/4
North East Lincolnshire			✓	1/2
North Lincolnshire			✓	0/0
North Somerset		✓	✓	0/0
North Tyneside	✓		✓	1/1
North Warwickshire		✓		0/0
North West Leicestershire	✓			0/0
Northampton	✓			0/0
Nuneaton and Bedworth			✓	1/7
Oxford	✓			0/0
Portsmouth	✓		✓	1/1
Preston	✓			2/3
Richmondshire		✓		0/0
Rochdale		✓		0/0
Rossendale		✓		0/0
Rotherham	✓	✓		0/0
Rugby	✓	✓	✓	0/1
Rutland			✓	1/1
Sedgemoor		✓		0/2
Sefton	✓		✓	1/1
Sevenoaks	✓		✓	0/0
Sheffield	✓			0/0
Shepway	✓		✓	0/1
Solihull			✓	0/0
South Cambridgeshire	✓	✓		0/0
South Derbyshire	✓			0/1
South Gloucestershire		✓	✓	0/1
South Kesteven				0/1
South Northamptonshire	✓	✓		0/0
South Ribble	✓			2/3
South Staffordshire		✓		0/2

Southampton	✓			1/1
St Edmundsbury	✓			0/0
St. Helens	✓		✓	0/0
Stafford		✓		0/0
Stockton-on-tees	✓			0/0
Stroud		✓	✓	1/2
Suffolk Coastal			✓	5/5
Sunderland	✓		✓	0/0
Surrey Heath		✓		3/3
Swale			✓	1/2
Tameside		✓		0/0
Tendring			✓	0/0
Test Valley			✓	1/3
Tewkesbury		✓	✓	0/0
Thurrock	✓	✓	✓	3/4
Tonbridge and Malling	✓			0/1
Trafford		✓		0/0
Uttlesford		✓		1/2
Vale of White Horse	✓			4/4
Wakefield	✓	✓		0/0
Warrington	✓		✓	1/2
Warwick			✓	0/0
Wellingborough	✓			0/0
West Lancashire			✓	0/0
Wigan	✓			0/1
Wiltshire		✓		0/0
Winchester		✓	✓	2/2
Wirral	✓		✓	0/1
Wychavon	✓	✓	✓	2/2

Appendix C Stakeholders consulted

Stakeholders Consulted

Organisation	Name	Type
Ashford Truck Stop	Darren Smith	Lorry Park Provider
C4T	Stuart Madden	Lorry Park Provider
Certas Energy	Andrew Goodwin	Fuel Provider
Certas Energy	Alex Wolfe	Fuel Provider
Eddie Stobart	Nick Graham	Haulier
FlowGas	James Goodson	Fuel Provider
Freight Transport Association	Malcolm Bingham	Trade Body
Highways England	John Henderson	Governmental Organisation
Highways England	Kevin Bown	Governmental Organisation
Highways England	Brian Williams	Governmental Organisation
Highways England	Dave Lakin	Governmental Organisation
Road Haulage Association	Chrys Rampley	Trade Body
Welcome Break	Nick Jackson	Lorry Park Provider

Appendix D Traffic Officer Responses

Locations	Comment
SOUTH EAST	
Cobham Services, M25, J9-10 / J10-9	Services full every night. HGVS park up on HS before and after services and on entrance slips into services.
M3, A34, J9	Layby at 3/5 north. HGV parking on the mud or getting stuck just before the layby or blocking the layby as it's too small. 89371 is a Airsweb number due to us closing the A34 due to recovery need more room to pull a HGV out of the mud. Closed for 40 minutes in total just before rush hour.
M3	Fleet Services Both sides of Fleet services J, K slip and L,M slip. Park up on the hard shoulder so they don't have to pay for parking in the Service.
M3, J6-J7	Wide part of the hard shoulder between the bridge. Due to it being away from the main carriageway they park with lights off and stay for 9 hours. 82/0 on both sides.
Cobham, A2	Services on B always full and HS on A slide full with HGVs each night
Medway Services, M2, J4-5	Services full every night. HGVS park up on HS before and after services and on ramps
Maidstone Services, M20, J8	Services full every night. HGVs park on J8 slip roads every night
SOUTH WEST	
Leigh Delemare & Membury	M slip Entry from at Leigh Delemare services East bound and the K slip exit Westbound at Membury
Sedgemoor, M5	M5 Sedgemoor services North and South on the On slip road.
Taunton Deane North, M5	M5 Taunton Deane North on Slip
M5, J21	M5 J21 K slip onslip southbound occasionally and also there has been some on K and M slip on slip South and Onslip north at Junction 28.
General	Services slips when motorway services when either the truck stop is full or the driver doesn't want to pay to use the truck stop but wants the facilities.
Pucklechurch, M4, J18 to J19,	Pucklechurch proposed slips both directions on the M4 J18 to J19 and vice versa
M4, J 19	Hard standing areas (locally known as the bat cave) under Junction 19 M4 both east and west sides of the roundabout.
M4 / M5	ERA bays on the M4 / M5. Drivers (especially non UK nationals) are unaware that these are for emergency use only, not for taking breaks.
M4, Js 21+22	Extra wide areas of the hard shoulder between junctions 21+22 M4 in both directions.
M4, J 22	M4 Junction 22 abload bay and roundabout. Drivers use the abload bay and hardstanding areas from rest breaks even though there are motorway regulation signs on the entrance to the roundabout off the J and L slips.
M32, Js 2-1	Extra wide hard shoulder junctions 2-1 M32, drivers park on the hatch markings as one driver told me "well this isn't the hard shoulder".
Old Gloucester, M5, Js 12 – 13	Old Gloucester services proposed junctions 12 – 13 M5 in both directions
M5, J 10 and 11	Proposed junction slip road between 10 and 11 M5 in both directions.

M5, J 8	M5 Junction 8 abload bay.
M48 both directions, J 1 and the M4	in wider hardshoulder which is a parking area for the power towers that run over the motorway. They look like laybys to people often stop there, also Exit slip southbound from Michael wood services
General	All of the ERA bays in motorways with SMART running lanes normally for short tacho breaks
M5 K Slip onslip southbound, J20	
EAST OF ENGLAND	
Birchanger Green, MSA, M11, J8	During the week, the overnight truck parking is full to overflowing, with HGV's parking wherever they can within the service area.
Swavesey, MSA, A14, J28	During the week, the overnight truck parking is full to overflowing, with HGV's parking wherever they can within the service area, including all coach parking and into the car park.
Brampton Hut, MSA, A14, J21	During the week, the very limited overnight truck parking area, is full to overflowing.
Peterborough, MSA, A1M, J17	During the week, the overnight truck parking is full to overflowing.
M11	laybys near, are always filled with HGV's overnight.
A14 and A11	being APTR's, have numerous laybys, these are usually filled with HGV's overnight.
J 12-11, J12 /Toddington svs	Foreign Registered HGV Tacho break in ERA Bay
J 10-11, J 10/J 9 Truck Stop	Foreign Regestered HGV Tacho in ERA Bay
J 12- 13 , J 12/Toddington svs/J 13 Truck Stop	English Registered HGV Tacho in ERA Bay
J 13-14, J 13	Foreign Registered HGV Tacho Live Lane on slip road
Newport Pagnell SVS , J 15 Newport Pagnell svs J 14	English Registered HGV Tacho on Hatch Marking on slip road
J 13-12, J 13 Truck Stop	English Registered HGV Tacho in ERA Bay
EAST MIDLANDS	
Trowell Services, M1	Quite often there are LGV's parked on the hard shoulder on the entry slip as there isn't enough room for them to park in the services. This is the same for both the north and south bound service areas. This happens mostly during the day when the drivers stop for their 45 minute break rather than their overnight stop.
WEST MIDLANDS	
Frankley Services, M5A, M5B, J3	Exit slip roads on both carriageways are regularly used by HGVs for tacho breaks and overnight parking.
Stafford, A34, M6, J14	All lay-bys and industrial areas are full most weekday nights with HGV's
Cannock, A5, M6, J12	All lay-bys are full every night and both truck stops are full.

Stafford, A449, M6, J13	HGV parking under motorway bridge on roundabout an issue, local lay-bys fill quickly on night time.
Stoke, A500, M6, J15	To due to lack of parking the only lay-by gets full very early.
Cannock, A460, M6, J11	Due to volume of hgv traffic the one lay-by is always full causing HGV's to park on verges.
Keele Services, M6, M6, J15-16-15	Due to volume of HGV's parking both side get full very quick leading to them parking in car park and coach park.
Hilton park, M6, M6, J10a-11	Due to lack of space on the northbound HGV park always get problems with HGV's taking breaks on the K slip out of Hilton Park, has been hard coned to prevent but just moved the problem further down hard shoulder towards J11.
Rugby, A426, M6, J1	Lay-bys and near by industrial areas full of HGVs at nights and weekends
Coventry, A4600, M6, J2	Lay-bys and near by industrial areas full of HGVs at nights and weekends
Coventry, A444, M6, J3	Lay-bys and near by industrial areas full of HGVs at nights and weekends
M5, J 6 Southbound Slip road	HGVs are parking up on the bottom of the slip road, just after the roadworks and cones leading onto the motorway southbound
M5, J 8 Southbound Slip road	HGVs are resorting to parking up on the hard shoulder, just after the services (after the recently installed traffic management cones) on the slip road southbound
M5, J 8 Wide load bay	At the bottom of Junction 8 there is a wide load bay in the middle of the roundabout leading onto the M50 motorway, HGVs are using this area to stopover.
M5, J 7 North / South Overbridge	HGVs are exiting the motorway at Junction 7, and are parking up on the overbridge on the wide section of pavement either for Tacho breaks or overnight
M42, J 2 Southbound Slip road	HGVs are parking up on the slip road, which is not suitable due to the very narrow hard shoulder, parking the wheels on the verge, carving it up and making it unsuitable
M6, J1/2 & J2/1	LGV's use a wide section of hard shoulder as overnight parking.
Corley Services (both directions), M6	LGV's regularly use the slip roads to avoid paying parking charges.
M6, J9	LGV's park on side streets and in an adjacent retail park.
M6, A500	lay bye's adjacent to J15 & J16,M6 are always full with overnight parking – no facilities leads to large amounts of litter and other waste etc.
Frankley services, M5	slip roads often used for overnight parking
M5, J6	LGV's park on top of the junction.
M5, J8	hard shoulder between Strensham services and J8,M5 often full of LGV's parked overnight.
M42, J6	LGV's park on the roadside in the adjacent distribution park (Starley Way). Aggressive clamping operation in place.
M42, J9	LGV's park on the roadside when visiting the Hams Hall industrial area.

STRENSHAM SERVICES, SOUTHBOUND, M5, J8	During the last two years, Strensham services southbound have being carrying out three phases of reconstruction and reorganisation of their building facilities, car & caravan parking areas and finally the HGV parking. The latter has not yet been completed but the existing area has been relined. Relining has made some of the spaces too tight to park in. I understand that part of the field at the rear of the HGV area has been leased/purchased to increase the HGV parking, but at present this has not come to fruition other than an access point has been opened in the hedge. This has meant insufficient parking area for those wishing to use it for overnight parking and the over-spill has led top HGVs parking on the hardshoulder exiting the services to J8, M5 (interchange with the M50 and subject to motorway regulations) and the abnormal load (AL) area on J8 roundabout. Consequently abnormal loads requiring to use their allocated area have regularly not been able to a) access the AL area; b) get fully into the AL area and therefore utilised the roundabout hardshoulder, sometimes forcing part of their vehicles to remain in live lane; and c) to get into the AL area but remain on the yellow markings of the safety zone at the start of the AL area. Regularly used by companies travelling south from the north as this is usually the extent of their 4.5 hour driving time. Some HGV drivers stopping for 45 mins breaks also do not use the services as the parking is too tight and there is not sufficient space – hence they will (and do) drive through the services to use the hardshoulder on the exit slip from the services. Also HGV drivers using the incorrect areas that I have spoken to have stated that their companies will not pay for overnight parking and the drivers are expected to use these facilities but pay for it out of their own pocket. Hence they will try and park where they do not have to pay. High overnight parking costs.
STRENSHAM SERVICES, NORTHBOUND, M5, J8	Large enough open space which has been white lined in the past but most HGV drivers using this know where to park their vehicles and generally do so comfortably. Regularly used by companies travelling north from the south as this is usually the extent of their 4.5 hour driving time and gives a good starting point for their onward journey. HGV drivers that I have spoken to have stated that their companies will not pay for overnight parking and the drivers are expected to use these facilities but pay for it out of their own pocket. Hence they will try and park where they do not have to pay. High overnight parking costs (£32 overnight with meal).
STRENSHAM, A38, M50, J1	Five lay-bys within two miles of M50 J1. Generally well used although turning a HGV is only available by using the largest layby (northbound) or the roundabouts at J1. No toilet facilities unless the Old Hutte Café is open (06:30 – 15:00 Mon - Sat). Laybys need attention and enlarging with better facilities, but is in an area that would be well utilised once drivers are aware this area is available. There is also a weight restriction if travelling south from J1 M50 into Tewkesbury, which does not really allow one layby to be properly used by a HGV as there is no place to turn a large vehicle to return to the M50.
WORCESTER SOUTH, A44/ A4440, M5, J7	Overbridges at J7 and hardshoulders on the slips are regularly used for all breaks and comfort stops. HGV drivers have stated that coming from the Welsh borders/west on the A44 (Worcester Southern Link Road), there are insufficient places to stop for breaks or for comfort breaks with large vehicles, hence they are either “desperate” or have run out of driving time and require a tachograph break.
WORCESTER NORTH, A449/A44, M5, J6	Overbridges at J6 often used by HGVs (and cars attending rugby matches at Sixways (Worcester Warriors)). Very few parking areas in the vicinity for large vehicles, and only two laybys on A449 towards Kidderminster and retail parks on the north side of Worcester. Currently (Feb 2019), there are major restructuring works ongoing for J6 and further industrial parks being built on the east side (towards Evesham) of J6. Both the A449 and A44 are diversion routes suitable and used by HGVs, but with nowhere for them to take breaks.
DROITWICH SPA / WYCHBOLD, A38 NORTH, M5, J5	Privately owned truck stop on A38 northbound which is often used as a diversion route between M5 J5, M40 J1 and M5 J4. Very well used and full most nights. Good general service facilities for overnight breaks, but it does need expanding. Well known by HGVs drivers and only 1 mile from M5 J5. Knock-on effect is that HGVs are now using the Emergency Areas (EA) on the M5 ALR section between J4a and J6.
DROITWICH SPA, A38 SOUTH, M5, J5	Very few laybys for large vehicle parking. Access road for Berry Hill Industrial Estate where roadside parking available but limited. Drivers around this area are often looking for parking before running out of driving time, but cannot reach Strensham Services (M5 south) nor Frankley Services (M5 north) or Hopwood Services (M42 J2). Also route for access to Kidderminster and north side of Worcester. Knock-on effect is that HGVs are now using the Emergency Areas (EA) on the M5 ALR section between J4a and J6.
TEWKESBURY, A46, M5, J9	No HGV parking other than roadside in industrial estates either side of the J9 (Ashchurch Ind. Est. and Tewkesbury Ind. Est.). This is not ideal as insufficient space due to parking restrictions and the roads are in constant use day and night. Often used as alternative parking from Strensham Services southbound - timing is about 4.5 hour driving hours mark for a lot of HGV companies and no charge, but there are no welfare facilities other than a snack van (no toilet facilities).
TEWKESBURY/STRAFORD-UPON-AVON, A46, M5/M40, J9/J15	A diversion route for large vehicles. Although there are laybys along this route, they are not lit and often have kerbing which is not clearly seen. HGVs however are more likely to be pushing to M5 J9 or M40 J15 as timings for tachograph breaks often do not coincide with this part of their journey.
TEWKESBURY (TEDDINGTON HANDS), A46, A435, (M5 J9)	At the Teddington Hands roundabout, there is a secure/gated truck stop which café and gate security. This appears to be a recent addition to the A46 route (in the last couple of years) but also is not as well advertised as it could be. I have yet to see this being used other than by the company that I believe has set this up (Gordon Gilder Logistics). There are few residences in the vicinity and it has easy access to the A46 for onward journey (suitable for HGVs) to M5 or M40.

ROSS-ON-WYE, A40, M50, J4	Ross Spur services are located at the end of the M50. There are no services on the M50. Ross Spur services are really a small vehicle service area, but do have about 12 parking spaces for HGVs. This is insufficient sometimes, but the only opportunity for some miles for large vehicles to stop. Large vehicles are regularly found using the narrow hardshoulders on the M50 for tachograph breaks when travelling eastbound. Westbound, large vehicles either go onto A40 for Gloucester, A40 for Monmouth/Wales, A49 for Hereford/Shrewsbury – all of which have little or no areas for large vehicles to stop. The A40 Gloucester is also a diversion route for when there are closures on the M50.
TEWSKESBURY to ROSS-ON-WYE, M50, All Js	The M50 has no facilities for HGV parking. It is 26 miles long but has Strensham Services at the M5 end and Ross Spur Services at the A40 end (towards Wales) – see comments above. At M50 J2, there is one layby which is well utilised by HGVS and has a daytime snack van. However this is on A417 towards Ledbury and there are few opportunities for HGVS to turn safely after using this layby unless they travel some distance towards Ledbury, so not ideal. In the past, M50 has been an alternative route to/from South Wales for those not wishing to pay bridge tolls and for an old motorway, it has considerable usage by large vehicles. This may be eased a little now by the removal of the bridge tolls on the Severn Bridges (M4/M48) Bristol area at the end of 2018, although it continues to be used as a diversion route for closures on the M4 at the bridges and by those travelling north from South Wales or when the bridges are shut. No real facilities along this route, and HGVs are found using the hardshoulder for tachograph breaks. HGV drivers I have stopped with have basically indicated that the M50 isn't a motorway, nor is it subject to motorway regulations, is not patrolled by Police or ourselves regularly and that they can stop on it. (Obviously I have disillusioned some of these drivers now!) As an old motorway, the hardshoulders are not continuous, narrow and do not necessarily have the soil sub-structure for constant static weight – something we have to bear in mind for any breakdown. HGVS can easily overhang into live lane along the M50.
NORTH EAST	
Woodall and Woolle	Woodall and Woolley regularly overflow with trucks using the hard shoulder on slip roads
M18, J1	The stock yard at hellaby is often full to capacity overnight with around 200 trucks farm land is adjacent to this which may be worth seeking out assistance or to put in a slip to truck services to ease traffic
M1	All the slips at Woodhall services M1
Sprotbrough	Sprotbrough depot slips
Ferrybridge/Darrington	Wide load bays Ferrybridge/Darrington
A1M, J 36	K slips Jct 36 A1M
A1M, J 34	K slip Jct 34 A1M
M1, J 37	The long slip roads at Jct 37 M1
A1M, J 37	K slip Jct 37 A1M
Woodhall, M1	"M1, Woodhall Services lorry Parking isn't big enough. Many HGV's then opt to park on the slips."
M1, J31	"There are Lorry parks located nearby such as J31 but they are not very well sign posted"
A1(M), J37	"Lay-bys usually full J37 A1(M)"
A1(M), J34	"Blyth Services J34 A1(M) are not big enough for HGV's"
RAF Kirton Lindsey, M180	My initial thought for our area is towards my home area – the M180. RAF Kirton Lindsey – this is a now-unused RAF Base. Although abandoned it has recently been used by a private company to run a Zombie-paintball event using the old abandoned buildings there. Whether it is suitable for LGV standing/storage I wouldn't like to guess but it is an unused grass airfield.
Wetherby, A1M, J 46	Wetherby junction 46 A1M 'K' slip.
Ripon, A1M, J 50	Ripon junction 50 A1M 'M' slip.

Borobridge, A1M, J 48	Borobridge junction 48 'M' slip and 'K' slip. (The 'K' slip is particularly concerning as the hard shoulder is so narrow they are in effect in live lane).
Leeming Bar, A1M	Leeming Bar 'M' and 'K' slips.
Barton, A1M, J 56	Barton junction 56 'K' slip.
Wetherby, A1M, J 46	Wetherby junction 46 A1M 'K' slip.
Ripon, A1M, J 50	Ripon junction 50 A1M 'M' slip.
Borobridge, A1M, J 48	Borobridge junction 48 'M' slip and 'K' slip. (The 'K' slip is particularly concerning as the hard shoulder is so narrow they are in effect in live lane).
Leeming Bar, A1M	Leeming Bar 'M' and 'K' slips.
Barton, A1M, J 56	Barton junction 56 'K' slip.
	Four of the above are junctions with service areas which cater for large goods vehicles so no excuse. Further to this these areas are plagued with litter.
NORTH WEST (incl. YORSHIRE AND THE HUMBER	
Hyde, M67, M67	At the end of the M67there is a very wide hard shoulder LGV can be found parked up here at night and they tend to be foreign registered.
Ramsbottom, A56, M66 J1	Lorry's parking up in the rest bays all night and taking all the room up.
Middleton, M62	When Birch is full lorry's park overnight on the exit slip of the services once again these tend to be foreign registered.
Manchester/ Milnrow, A627, M62, J.22	Too few lay-bys spaces
Manchester/ Milnrow, M62 / Mp72.9, J.22/21,	Wide area at the side of motorway, with no signs
Hattersely / Manchester, M67 A/B, A560/ A6018, J.4	No lay-bys, so HGV park at wide area at side of motorway
Birch / Manchester, M62 A/B, J.18/19	Not enough spaces within the services
Slattocks / Manchester, A627M/K slip, A664, J.2	Not enough lay-bys within industrial est

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