Chapter 4:
Regional Analysis

4 Regional Analysis

4.1 Introduction

This chapter provides a regional analysis of the study results. By breaking England into the nine regions it aims to inform stakeholders at a more detailed level. A number of the outputs in this chapter also present data at the local authority level within each region. This further segmentation of the results enables the analysis to be more targeted in its approach and identify the specific locations of greatest demand for lorry parking in each region.

4.1.1 Structure of Regional Analysis

All of the nine regions have a consistent format. The analysis is structured to guide the reader through a logical narrative. The sequence of outputs therefore aim to build up the overall picture of lorry parking demand, from the base information through to more complex presentations of multiple layers of data. As an outline, the analysis of each region has the following structure:

- ***Regional Overview:*** Three tables are used to depict base information such as the facilities, utilisation and crime totals. These are important to provide the context for each region before it is discussed in detail.
- ***Facilities and Capacity:*** There are two maps that illustrate capacity by specific location and within each local authority. This helps the reader to understand the options that were available to drivers and the locations in relation to the SRN.
- ***On-Site Parking:*** This is used to start the process of understanding demand. It therefore maps the on-site utilisation of each local authority within the region (as a percentage of total capacity). This will start to highlight areas that do not have enough capacity to accommodate on-site parking demand.
- ***Off-Site Parking:*** The analysis is separated into three sections with corresponding maps, including:
  i. A map that shows the total number of vehicles that were parking off-site in each local authority of the region. This shows the overall extent of off-site parking.
  ii. A more detailed analysis showing the specific location and type of off-site parking. This includes a differentiation between lay-bys, industrial estates and types of vehicle. Due to the level of detail means the region must be broken down into a number of maps[10]. The maps also include the individual on-site parking locations and depict how full they were. This helps to identify patterns of off-site parking compared to on-site availability.
  iii. A hotspots map is used to identify locations where there was high off-site parking (25 vehicles or more, within a 5km radius of each other). This is a focussed analysis used to uncover specific locations of high off-site parking within the large area of a region.
- ***Excess Demand:*** This analysis presents an overall situation of demand for each local authority in the region, in terms of the total vehicle numbers that needed to park (on and off-site combined) compared to total capacity. Excess demand is important to identify local authorities, where even if off-site parking could be moved to on-site locations, there would not be enough capacity. Excess demand is therefore an indicator for potential required development, and at a minimum it is an indicator that there is an issue within the region.
- ***Crime:*** This is used to add a further level of comparison to demand issues[11]. The total number of crimes is highlighted in each local authority of the region. A further map is then used to show specific locations of where crime was happening in relation to the hotspots of off-site parking and utilisation of on-site parking. This helps to understand any relationship between location of crime and demand.

[10] The number of maps depends on the size of the region
[11] All crime data sourced from Truckpol 2010

4.5 North East

List of Key Facts:

1. **Overall there was a low level of capacity with only 310 spaces being provided in the region. This was compared to a regional average in England of 1,500**
2. **Although there was low capacity, the lorry parks were also relatively underutilised at being only 50% full. However, there were more vehicles parking on and off site in total than there were spaces available**
3. **The region had an excess demand of 77 vehicles**
4. **Over 60% of vehicles were parking off site**
5. **Problem areas of off site parking which have been classed as hotspots include; Berwick, Washington & Gateshead and the A66 in County Durham**
6. **The north east had the lowest level of crime in England. However, there were still 38 recorded road freight crimes in 2010 costing the industry an estimated £1 million**

4.5.1 Overview

The base information contained in the following Tables 4.10, 4.11 and 4.12 will be analysed in detail throughout the North East regional analysis. This will include the use of maps, graphs and written commentary as described in section 4.1.1 Structure of Regional Analysis.

Table 4.10: Overview of facility types and capacity in the North East

Name	Type	Overnight Cost (£s)	Capacity
Purdy Lodge	Independent	£15 or less but more than £10	20
Washington Services Northbound	MSA	£25 or less but more than £20	32
Washington Services Southbound	MSA	£25 or less but more than £20	38
Durham Services	MSA	£25 or less but more than £20	30
Newton Park Services	TRSA	£15 or less but more than £10	30
A19 Northbound Services (Ron Perry and Sons)	Independent	£10 or less but more than £5	40
Truck Pound	Independent	£15 or less but more than £10	120
Total			310

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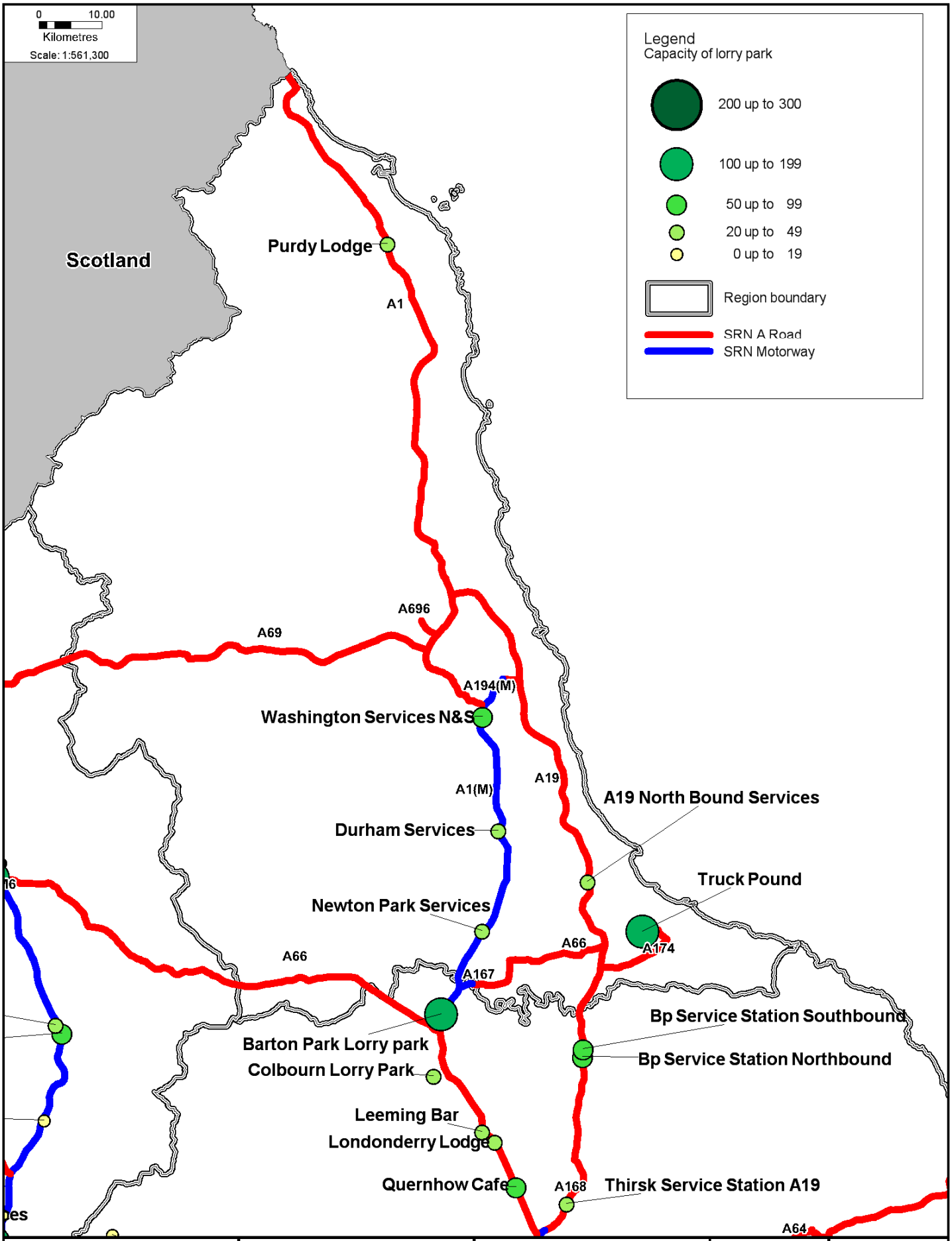

Client: Department for Transport	Title: North East : Capacity of lorry parking sites	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F	Mapinfo: T.F
Project: Lorry Parking Study			Chk'd: J.M	App'd: S.H
			Date: 21.06.11	Scale: 1:561,300
			No: Map 4.5.1	

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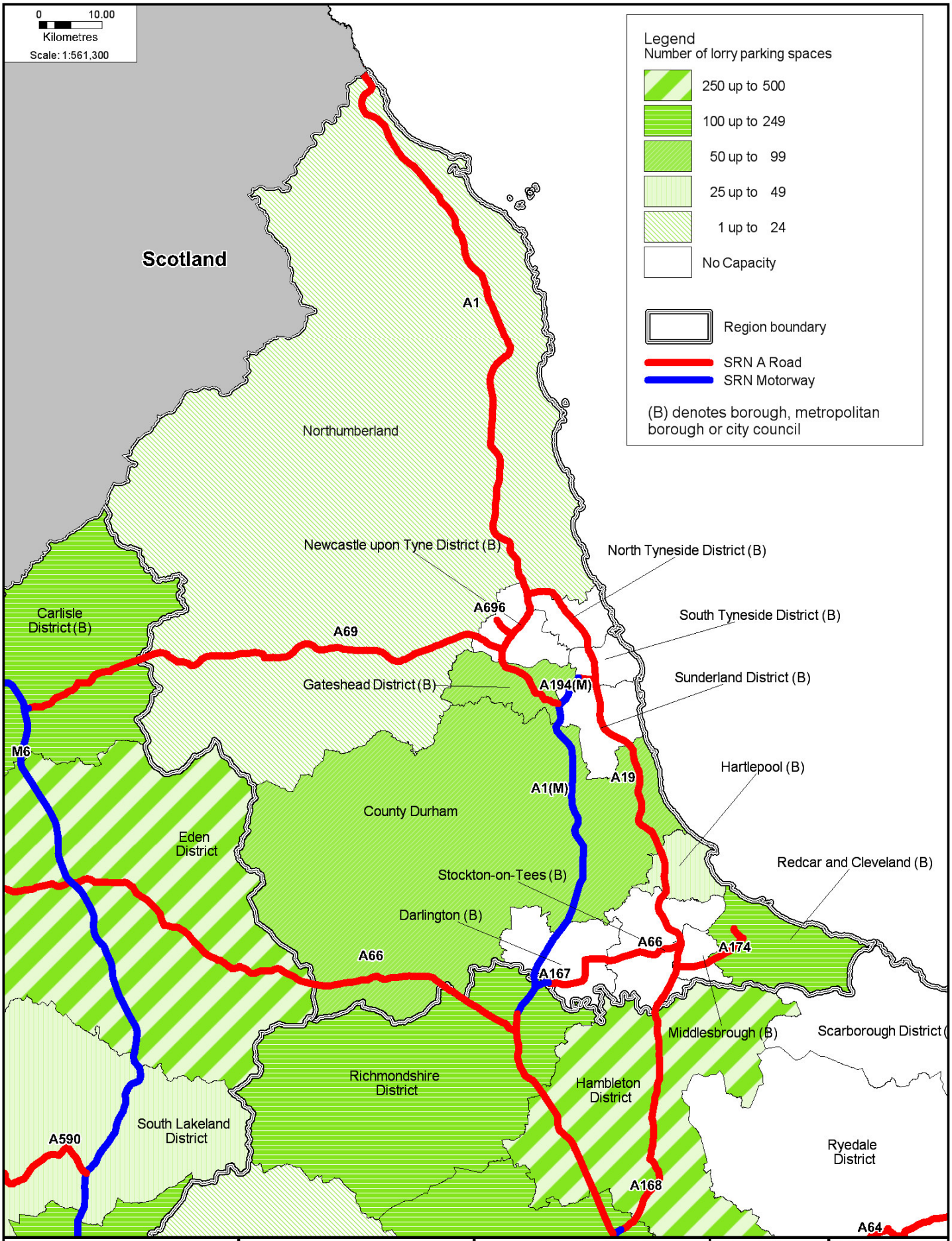

Client: Department for Transport	Title: North East : Onsite lorry parking capacity	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F	Mapinfo: T.F
Project: Lorry Parking Study			Chk'd: J.M	App'd: S.H
			Date: 21.06.11	Scale: 1:561,300
			No: Map 4.5.2	

Table 4.11: Overview of on-site utilisation, off-site parking and excess demand in the North East

Utilisation							
Vehicle Type		UK Artic	non-UK Artic	UK Rigid	non-UK Rigid	**Total**	% Utilisation
On-site parking		102	18	32	4	156	50%
Off-site Parking	Lay-bys	93	12	14	0	119	
	Industrial Estates	103	13	11	0	127	
Excess Demand		92					

Table 4.12: Overview of 2010 reported freight crime in the North East

Reported Freight Crime[18]					
Number of recorded crimes in 2010	38				
Severity Index[19]	1	2	3	4	5
Number of crimes recorded	0	35	3	0	0
Value of freight crimes recorded	£159,950*				
Estimated total value of freight crimes recorded	£950,000**				

**Note that only reported costs are included in this data. Not all crimes were given an associated cost due to information not being available.*

***In 2008 Truckpol estimated an average incident to cost £25,000. This base figure is used to estimate the total cost of freight crime in the region. This accounts for where cost information was not available.*

4.5.2 Facilities and Capacity

The North East had 310 lorry parking spaces located across seven on-site lorry parking locations spread throughout the region. Six of the sites had fewer than 50 spaces. Map 4.5.1 shows that the parking provision was generally focused towards the south of the region with only one of the seven sites situated north of Newcastle upon Tyne. The A1(M) corridor had a good level of provision south of Newcastle, however all of these sites were mixed user MSAs or TRSAs rather than dedicated lorry parks.

Map 4.5.2 shows that Redcar and Cleveland, County Durham and Gateshead provided the largest number of spaces; Hartlepool and Northumberland also having some capacity. Many urban areas had no provision at all which could potentially lead to high levels of off-site parking if, for example there was a freight hub located nearby. This is the case in the Teeside and Tyne & Wear areas. There was also no capacity on the A66 or A69.

[18] Truckpol 2010
[19] See Appendix 5 for explanation of crime severity index

4.5.3 On-site Parking

When assessing the level of on-site utilisation in the North East, Table 4.11 (see section 4.5.1) shows that overall lorry parking sites were underutilised. Being 50% full, around two thirds of vehicles counted on-site were UK registered articulated vehicles. These are generally used for long distance journeys and would be more likely to be parking overnight than in a local yard. At the local authority level (see map 4.5.3) it was clear that County Durham and Northumberland were considerably busier than the rest of the region. Given that utilisation was recorded as 75 – 100% in both authorities and the surveys were taken on what were deemed to be average days, it is conceivable that the lorry parks in these areas are sometimes over-subscribed, which would contribute to vehicles parking off-site.

With regards to other local authorities in the region, Gateshead District was 50 – 75% utilised, showing a demand for parking, but also some further 'spare' capacity. This was particularly important as Gateshead has one of the higher capacities in the region indicating that the spare 25% could cater for significant further demand. Redcar & Cleveland and Hartlepool were in the 25 – 50% and 0 – 25% utilisation bands showing that there was a high level of spare capacity when surveyed.

The hotspot and on-site utilisation map (4.5.9) shows that only two of the seven lorry park sites, Purdy Lodge and Newton Park, in the region were more than 75% utilised. This shows that although there were local areas with high usage, and a shortage of supply, there was also a surplus of provision elsewhere in the region. This indicates that in some cases where there was off-site parking there may have been scope to encourage drivers to use lorry parking sites nearby that had space to accommodate them.

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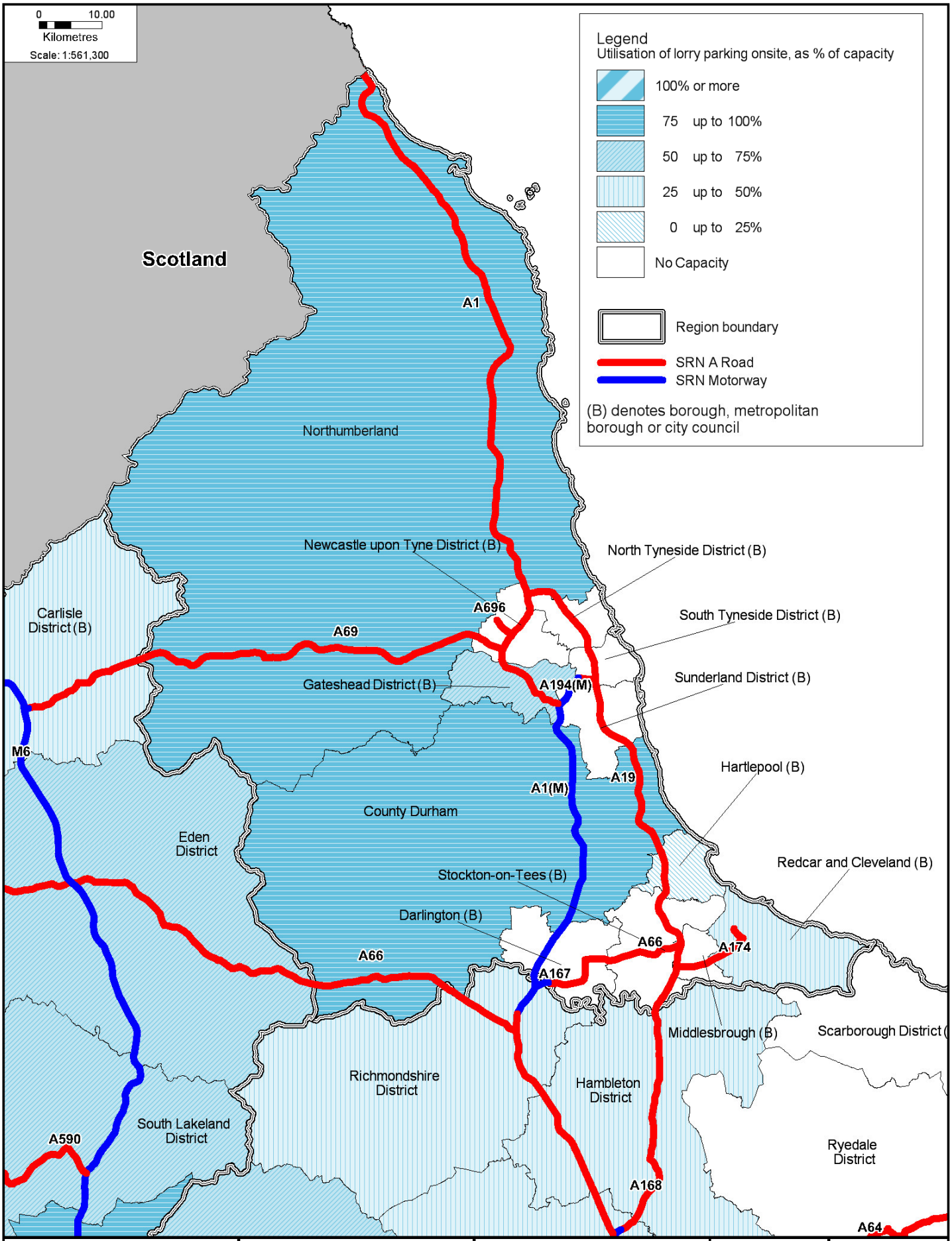

Client: Department for Transport	Title: North East : Onsite lorry parking utilisation	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F Chk'd: J.M / App'd: S.H Date: 21.06.11 / Scale: 1:561,300 No: Map 4.5.3
Project: Lorry Parking Study			

4.5.4 Off-site Parking

The maps that analyse off-site parking (see maps 4.5.4, 4.5.5, 4.5.6, 4.5.7, 4.5.8 and 4.5.9 - all immediately after this page) show that the number of vehicles parked in lay-bys and industrial estates was greatest in County Durham, Northumberland and Gateshead. Significant off-site parking was also in Stockton-on-Tees and Darlington and lesser off-site parking in Newcastle upon Tyne, North Tyneside, Sunderland, Hartlepool and Redcar and Cleveland.

Table 4.11 (see section 4.5.1) shows that over 60% of vehicles parking in the North East were parking off-site despite lorry parking sites being only 50% full. This could indicate that drivers were not using sites, in order to save money, and that the facilities and security may not have been sufficient enough to attract them.

Map 4.5.4 shows which local authorities had high levels of off-site parking. More than 75 vehicles were parked either in lay-bys or industrial estates in Northumberland, and more than 50 vehicles were parked off-site in County Durham. Both of these areas were relatively large in size compared to other authorities in the region and have major roads running through them, the A1 and A69 in Northumberland and the A1(M) and A19 in County Durham. As these local authorities are so large, with a drive time of approximately 2 hours to cover the length of the two local authorities, it means there was a higher chance that vehicles travelling through the region would be likely to have to stop. The origin/destinations of vehicles travelling through the region needing to stop could therefore be linked to a range of locations such as Scotland, Cumbria and Southern England.

Map 4.5.4 also shows that Gateshead had between 25 and 50 vehicles parking off-site and Darlington and Stockton-on-Tees had between 10 and 25 vehicles parked off-site. These local authorities were considerably smaller than Northumberland and County Durham.

Given the size of some areas within regions it is important to understand exactly where the hotspots of off-site parking were. The North East hotspot map (see map 4.5.9) shows three locations where there were between 25 and 50 vehicles parked off-site within in a 5km radius of the SRN. These were near Berwick in Northumberland, on the A66 in County Durham and the A1/A1 (M) from Chester-le-Street to the A69 interchange.

The detailed off-site parking map (see maps 4.5.5, 4.5.6, 4.5.7 and 4.5.8) shows the exact locations of the lay-bys and industrial estates being used for parking which can be related back to the hotspot analysis. The majority of off-site parking in Northumberland was in lay-bys on the A1 and A69. Elsewhere, in Gateshead the majority of off-site parking was in industrial estates to the west of the A1. Durham had off-site parking in industrial estates around Chester-le-Street and Durham City and in lay-bys on the A66. There was also off-site parking in industrial estates in Darlington, Stockton-on-Tees and the Tyne & Wear Districts.

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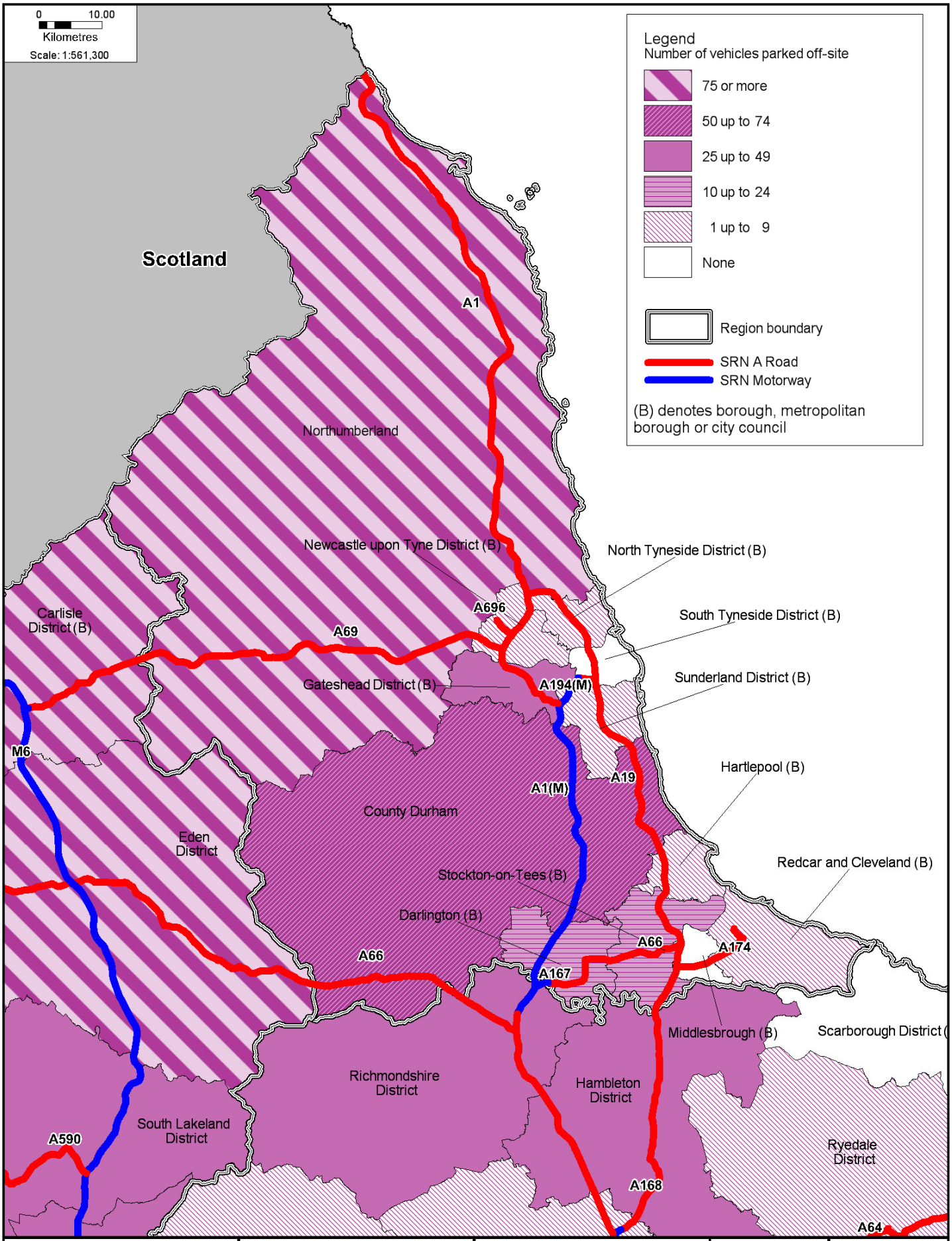

Client: Department for Transport	Title: North East : Number of vehicles parked off-site (lay-bys and industrial estates)	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F	Mapinfo: T.F
Project: Lorry Parking Study			Chk'd: J.M	App'd: S.H
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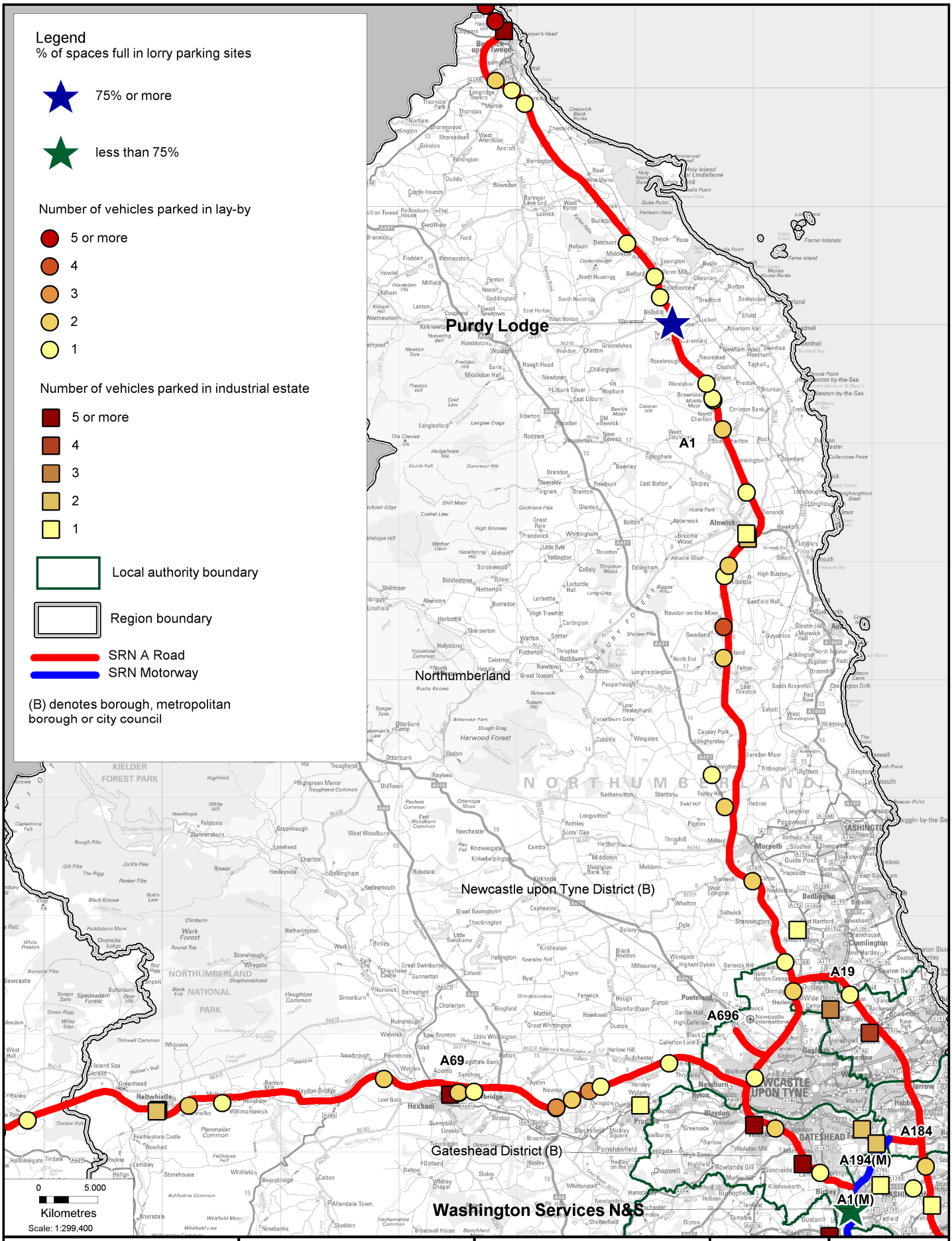

Client: Department for Transport	Title: North East : Off-site parking in lay-bys and industrial estates and use of lorry parking sites Northern Section	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F Chk'd: J.M / App'd: S.H Date: 21.06.11 / Scale: 1:299,400 No: Map 4.5.5
Project: Lorry Parking Study			

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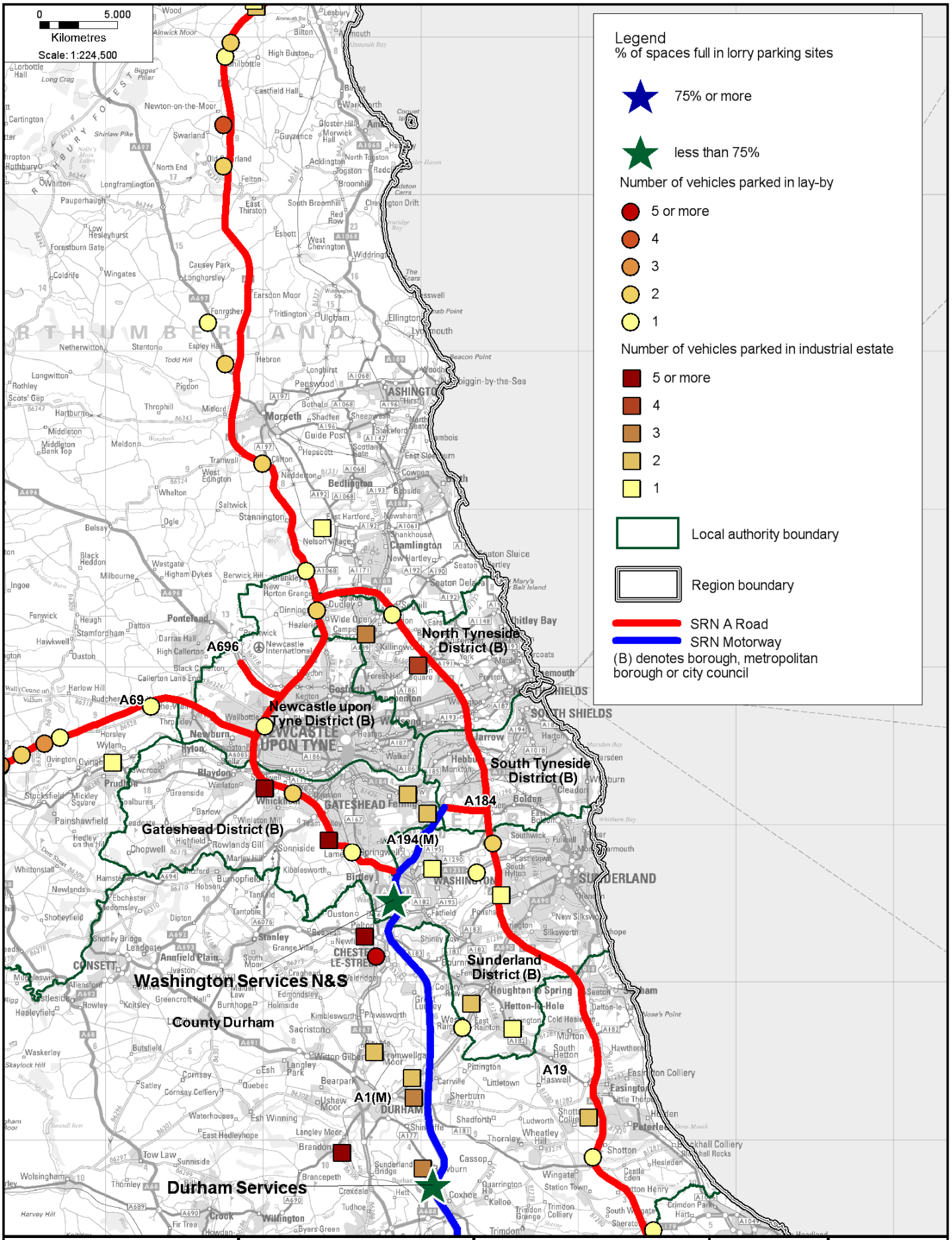

Client: Department for Transport	Title: North East : Off-site parking in lay-bys and industrial estates and use of lorry parking sites Central Section	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F; Mapinfo: T.F; Chk'd: J.M; App'd: S.H; Date: 21.06.11; Scale: 1:224,500; No: Map 4.5.6
Project: Lorry Parking Study			

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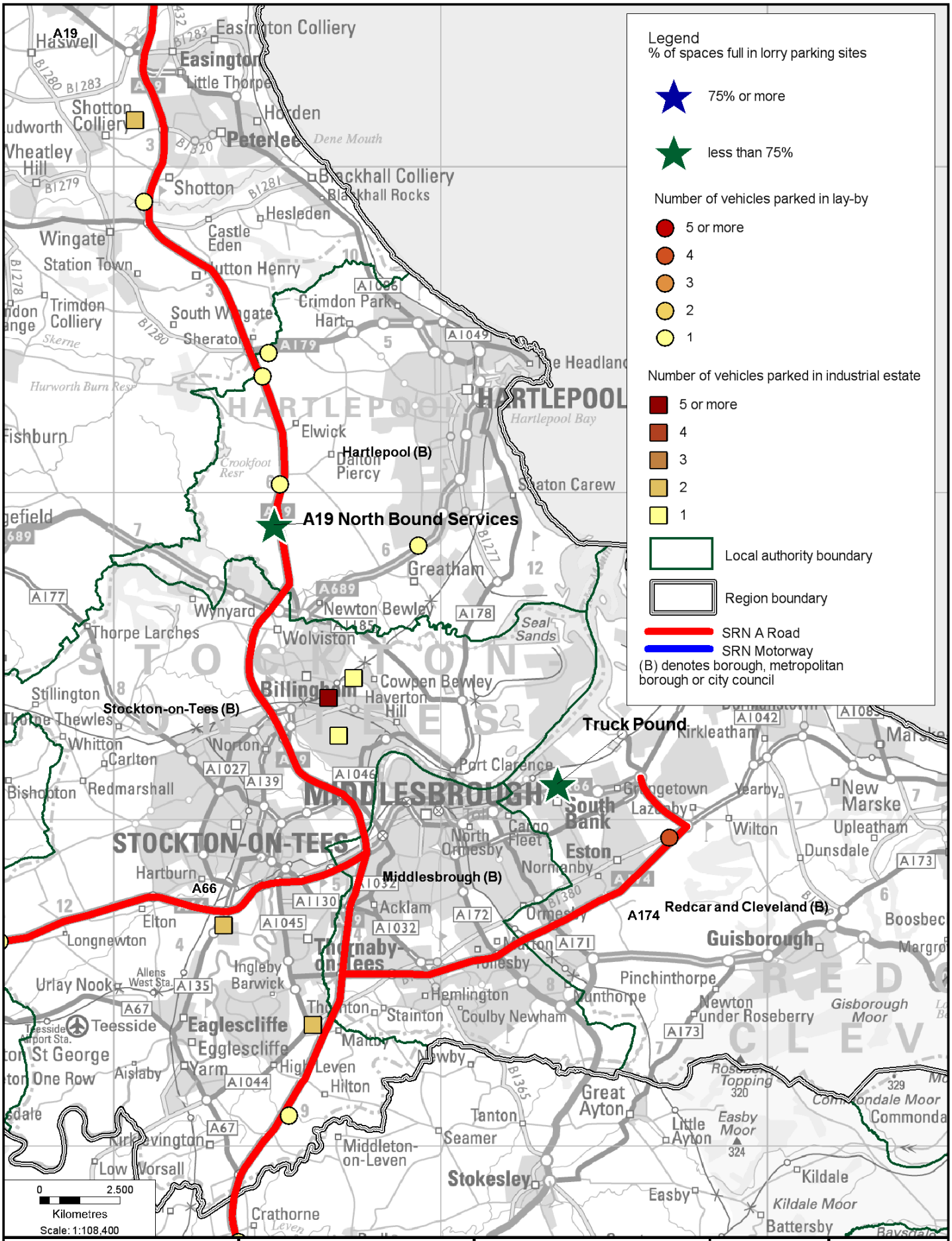

Client: Department for Transport	Title: North East : Off-site parking in lay-bys and industrial estates and use of lorry parking sites Southeast Section	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F
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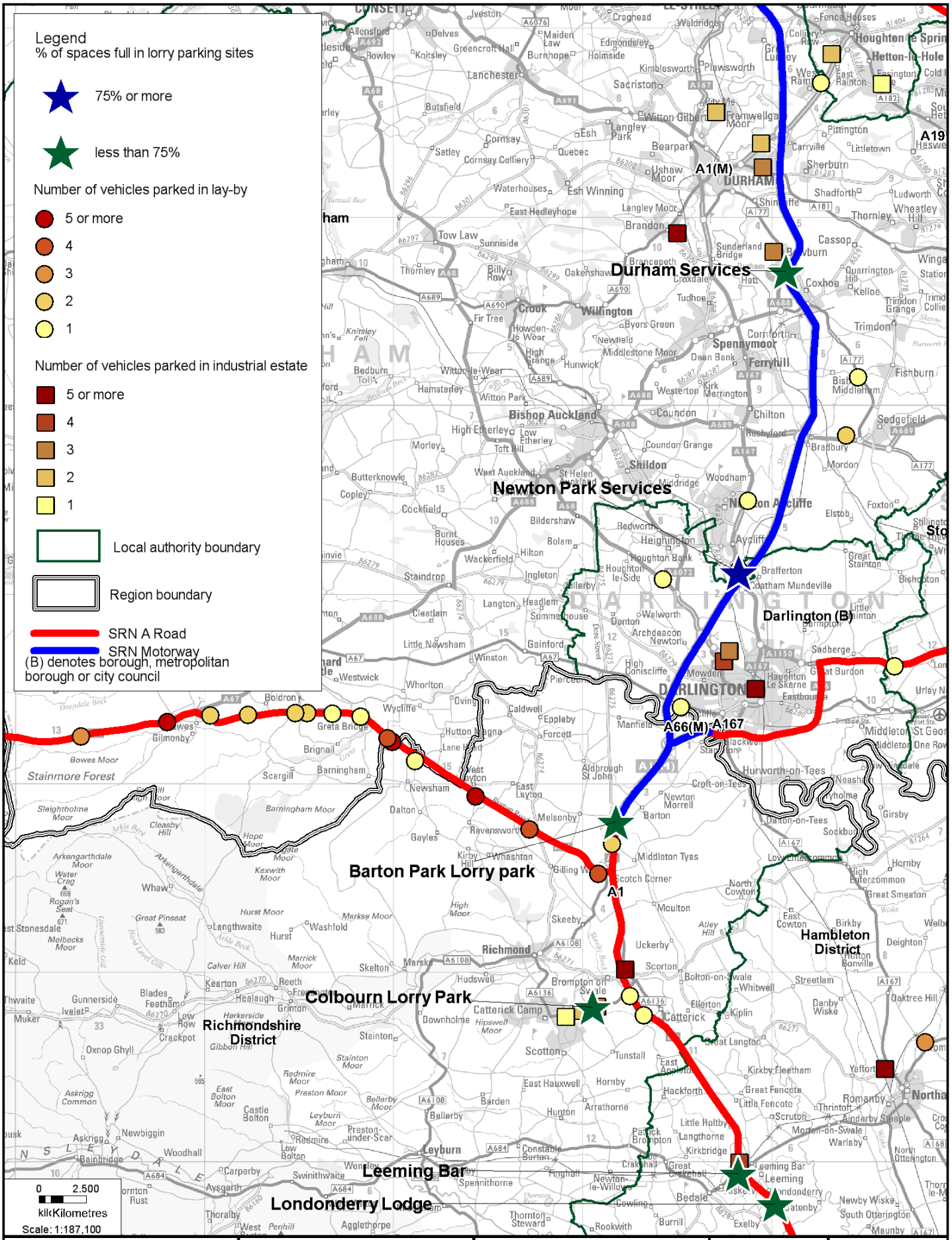

Client: Department for Transport	Title: North East : Off-site parking in lay-bys and industrial estates and use of lorry parking sites Southwest Section	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F
Project: Lorry Parking Study			Chk'd: J.M / App'd: S.H
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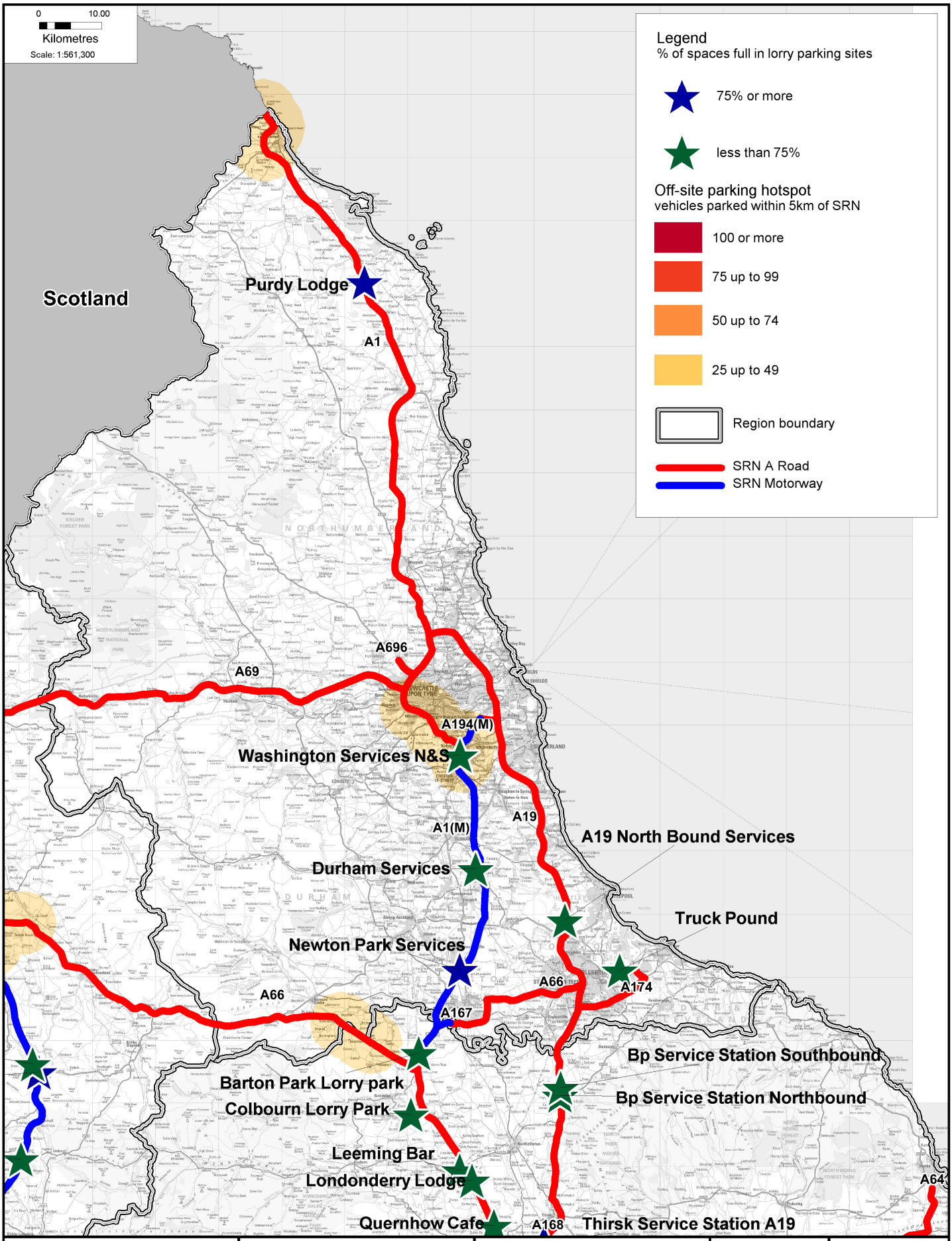

Client: Department for Transport	Title: North East : Off-site parking hotspots and use of lorry parking sites	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F / Chk'd: J.M / App'd: S.H / Date: 21.06.11 / Scale: 1:561,300 / No: Map 4.5.9
Project: Lorry Parking Study			

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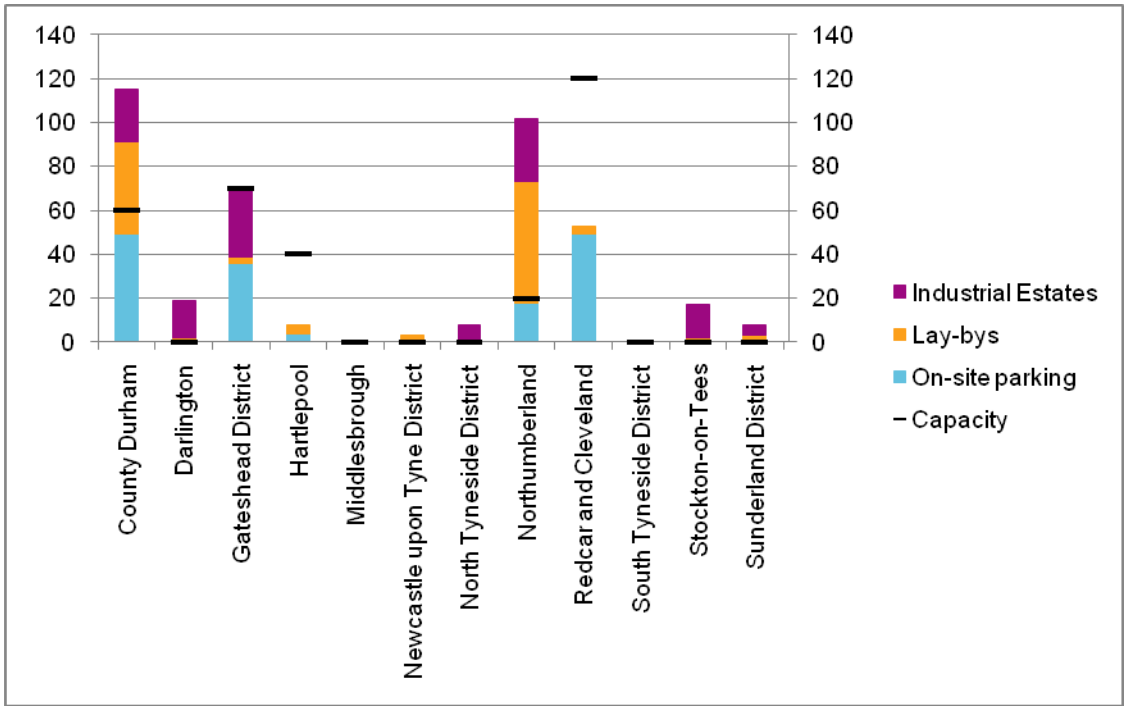
4.5.5 Excess Demand

The chart below (figure 4.10) shows the amount of on and off-site parking by local authority. Each column in the chart represents the total vehicles parked in the local area broken down into on-site, lay-by and industrial estate. The black line denotes the amount of capacity surveyed in each authority, and where the column goes above the black line it shows there was an excess of vehicles. This chart aims to show whether there was spare capacity in lorry parks to accomodate all the vehicles in the region and where vehicles were parking. For example, County Durham had some available space on-site but even if the lorry parks were fully utilised there would still be significant off-site parking. Whereas, the Gateshead column is below the black line meaning all vehicles could have been accomodated on-site.

Figure 4.10: Graph of parking trends across local authorities in North East



Map 4.5.10 and Figure 4.10 above highlight that the majority of the North East had more vehicles parking than spaces. Northumberland and County Durham, both had more vehicles parked than spaces. The exceptions to this being Redcar and Cleveland, and Hartlepool which had 67 and 32 spare spaces respectively.

The chart combined with map 4.5.10 highlight clear problems; in Northumberland and County Durham there was not enough supply of spaces to accomodate the demand for spaces. In Gateshead there was not a shortage of supply, although on some days there may be an excess during busy periods. In Darlington, Newcastle upon Tyne, North Tyneside, Stockton-on-Tees and Sunderland there was no lorry parking capacity and small, levels of off-site parking.

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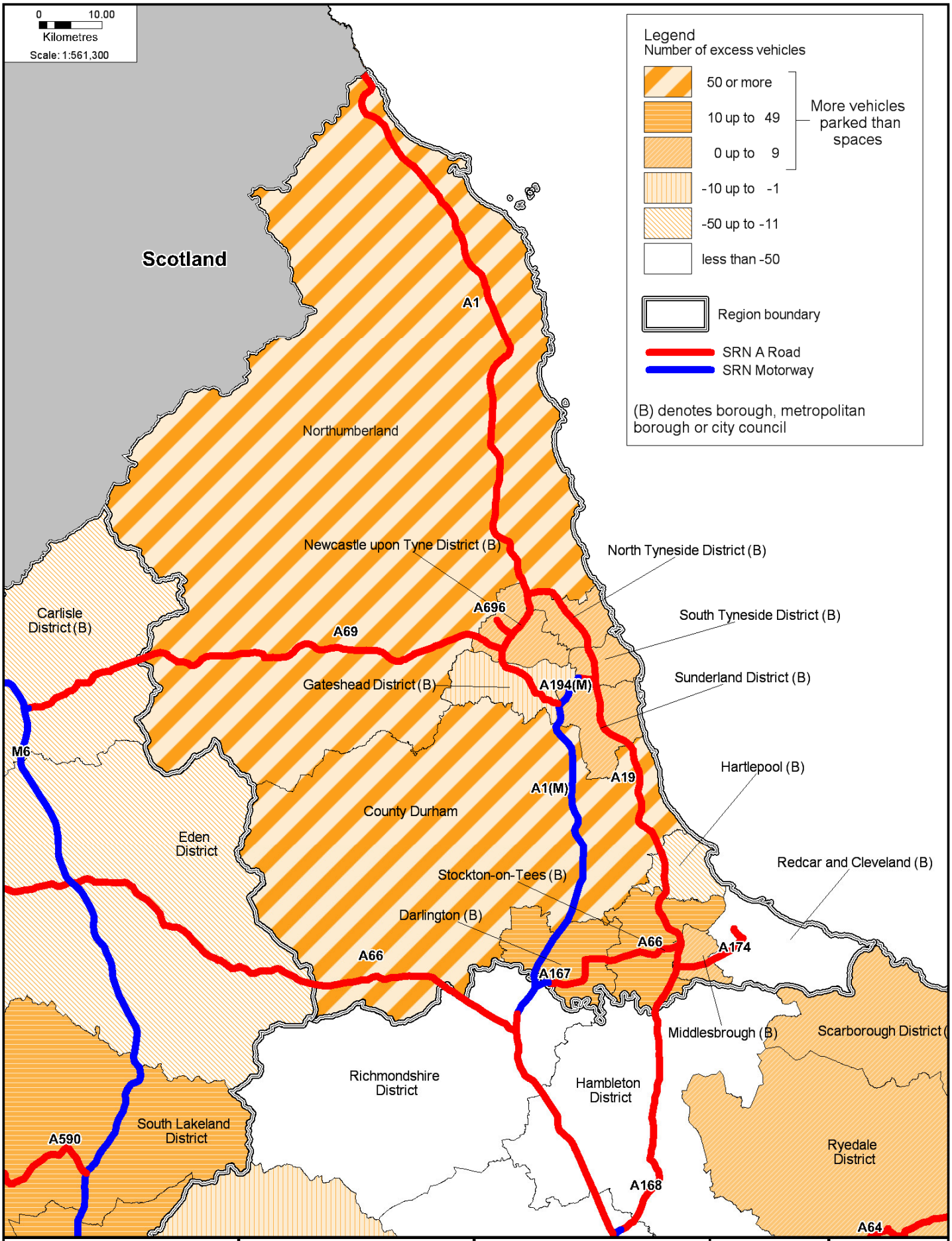


Client: Department for Transport	Title: North East : Difference between number of vehicles parked (on and off-site) and capacity of lorry parking	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F Chk'd: J.M Date: 21.06.11 Mapinfo: T.F App'd: S.H Scale: 1:561,300
Project: Lorry Parking Study			No: Map 4.5.10

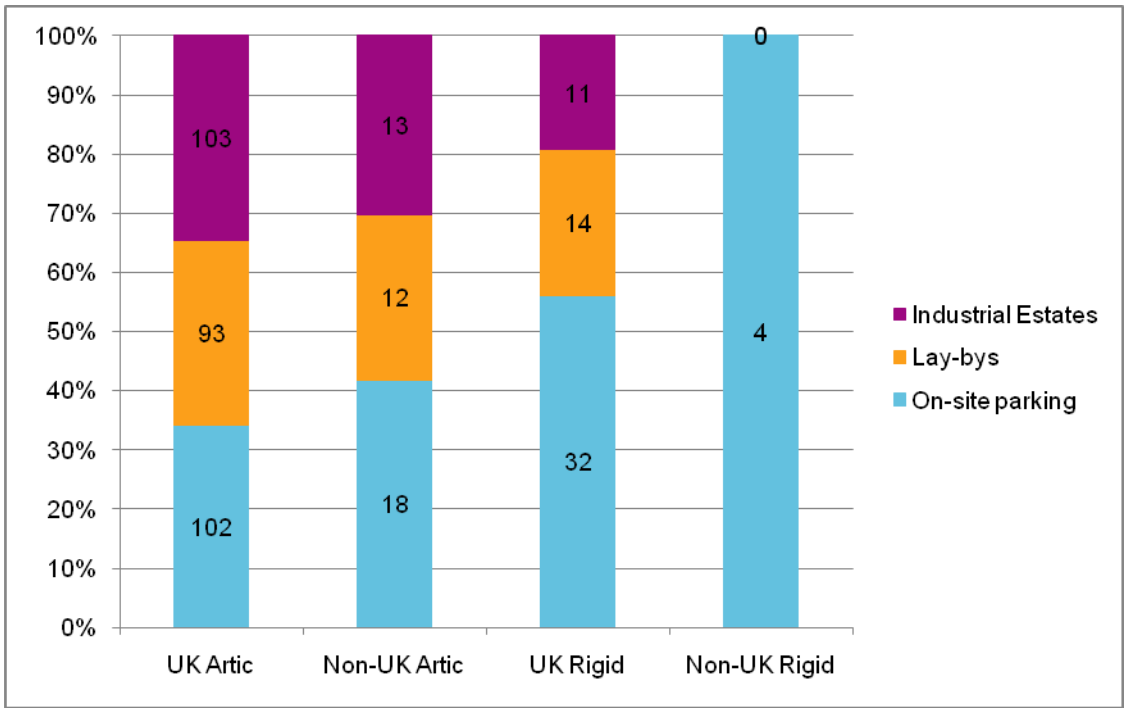
Referring back to the hotspots identified earlier in section 4.5.3 (map 4.59) there was no lorry parking available near Berwick, the nearest being the small and busy site at Purdy Lodge, 20 miles away. This may indicate the need for new capacity alongside complementary measures. The hotspot surveyed on the A66 in County Durham was near to Barton Park Lorry Park and Colbourn Lorry Park, which lie in Richmondshire District, both of which had space for more vehicles.

The hotspot on the A1/A1 (M) was around Washington Services and Gateshead, and when studying the more detailed off-site parking map (see map 4.5.6) it is clear that there were a number of industrial estates from Durham Services to the A69 Interchange which were being used as off-site parking areas. This area was expected to be busy due to its proximity to the Tyne and Wear urban areas and the A1/A1 (M) being the only major North-South route in the area.

Figure 4.11 below shows the split of how different vehicle types park on-site, in lay-bys or industrial estates. This shows that UK articulated vehicles account for the majority of on-site parking and off-site parking in termsd of numbers. UK articulated vehicles split roughly into 3rds across on-site, lay-bys and industrial estates.

Approximately 53% of non-UK vehicles were parking off-site. In the North East the number of non-UK registered vehicles WAS relatively low compared to national figures.

Figure 4.11: Split of different parking areas across UK and non-UK vehicle types in the North East



4.5.6 Crime Analysis

The level of recorded crimes related to road freight WAS relatively low in the North East when compared to other regions, with there being 38 recorded crimes at an estimated cost to industry of £1 million. All authorities had fewer than ten recorded incidents in 2010. However, it still shows that road freight crime is taking place in the region (see maps 4.5.11 and 4.5.12). Where crime does occur it is generally where there were vehicles parked off-site. This is shown clearly on map 4.5.12 where there were a high number of crimes clustered within the Washington – Gateshead off-site parking hotspot. There was also further crime occurring in and around the urban areas in Tyne & Wear and Teeside.

4.5.7 Summary

The North East had relatively less demand for lorry parking than other regions and was shown to have some spare provision, particularly on the A1(M) south of Newcastle. The overall level of provision was largely adequate, however, given there was an excess of 92 vehicles on an average day there is potentially scope, in specific areas for increased capacity. However, five out of the seven lorry parks in the region were less than 75% full during the survey meaning that there is also possible scope to encourage vehicles parking off-site to use these sites.

Particular attention could be paid to the several hotspot areas of off-site parking which may require further attention (see map 4.5.9 and 4.5.12;

- Berwick – considerable distance away from nearest lorry parking site, Purdy Lodge, which was busy
- Washington-Gateshead – close to Washington Services which was under-utilised, also high level of crime
- A66 in County Durham – nearest parking was on the A1, likelihood that drivers were using full drivers' hours rather than stopping early at one of these sites
- Teeside industrial estates – there was some parking provision nearby at Redcar & Cleveland, also high level of crime

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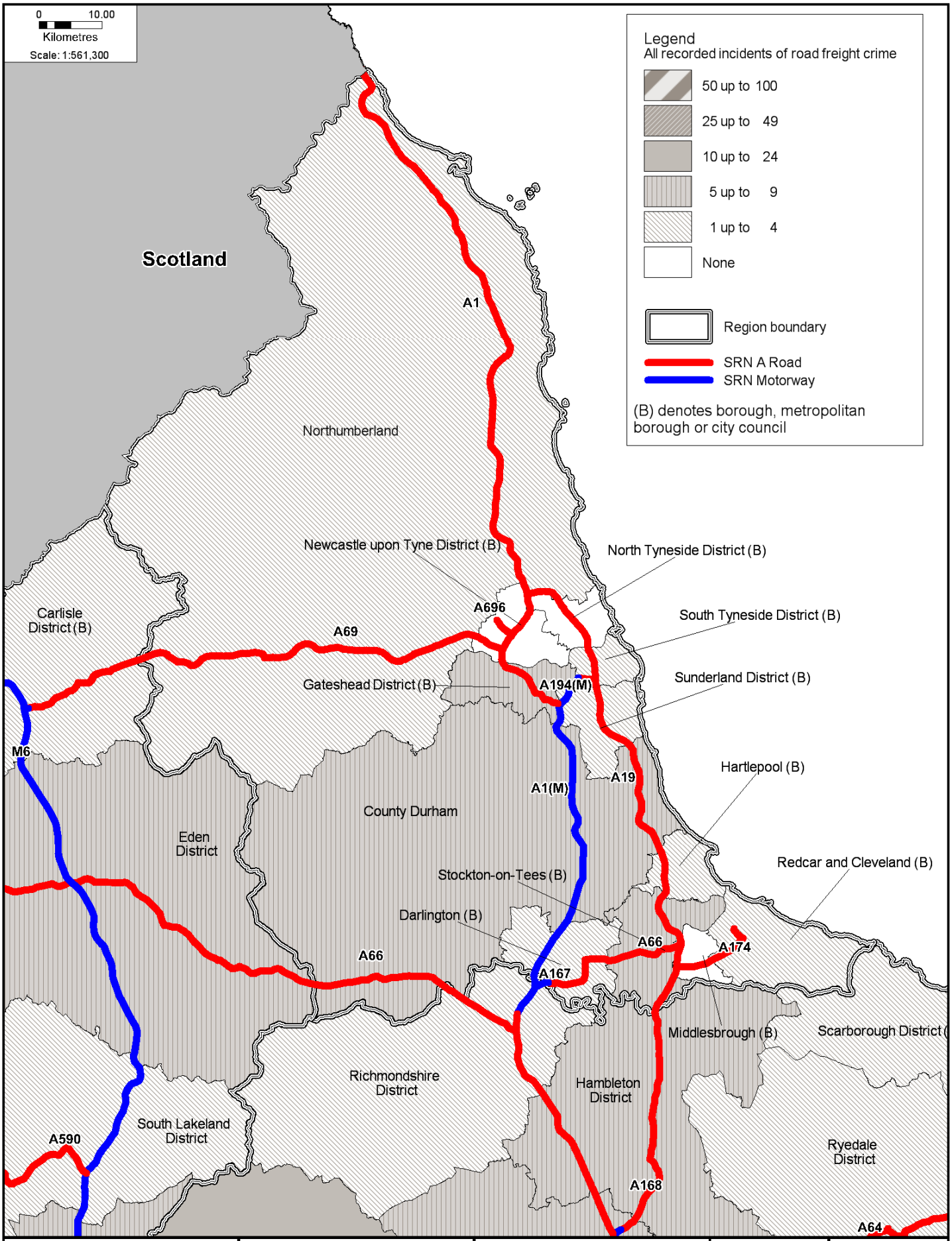

Client: Department for Transport	Title: North East : All recorded incidents of road freight crime Truckpol 2010	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F / Mapinfo: T.F
Project: Lorry Parking Study			Chk'd: J.M / App'd: S.H
			Date: 21.06.11 / Scale: 1:561,300
			No: Map 4.5.11

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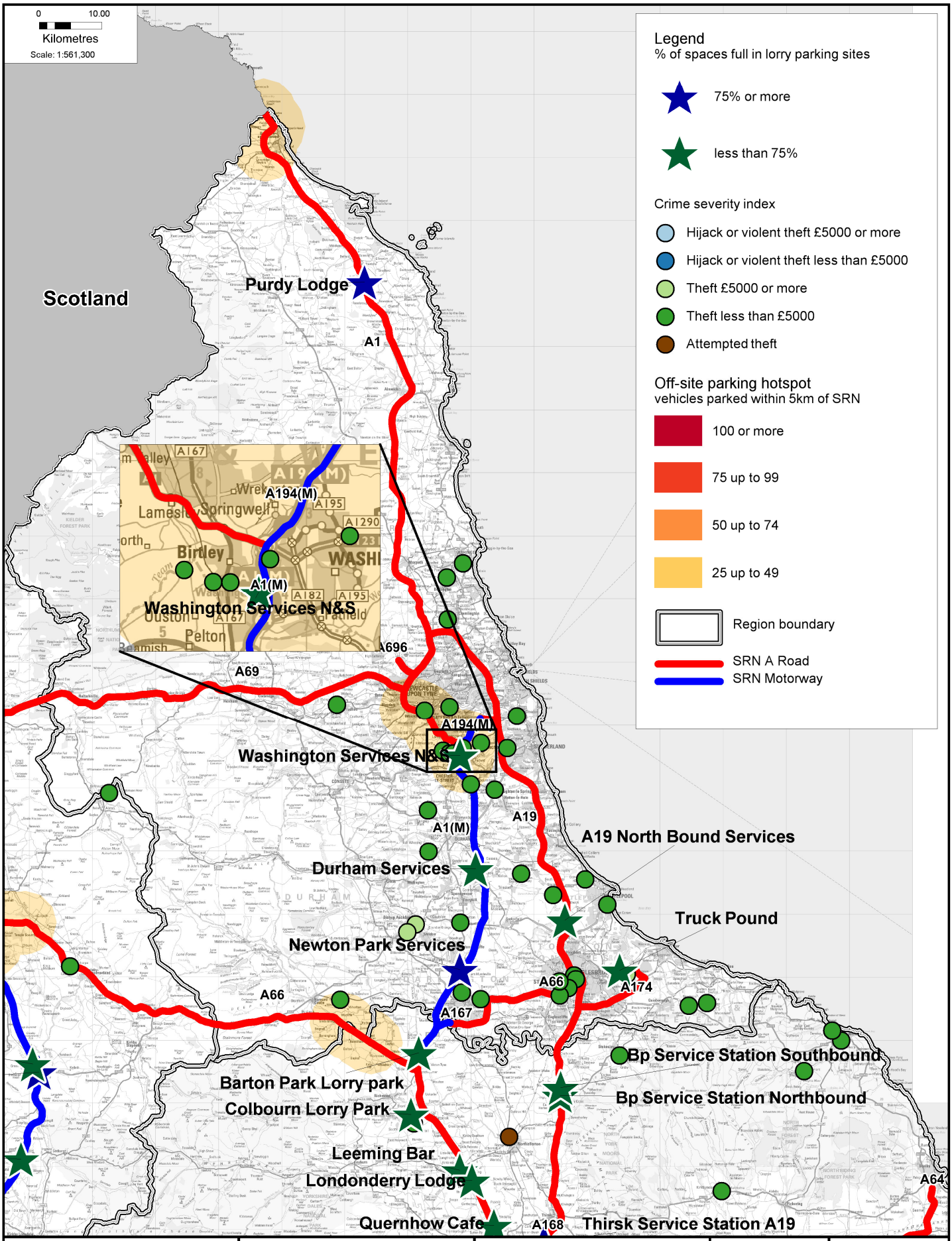

Client: Department for Transport	Title: North East : Severity of all recorded road freight crime in relation to off-site parking hotspots and on-site utilisation	AECOM Lynnfield House Church Street Altrincham, WA14 4DZ Tel: +44 (0) 161 927 8200 www.AECOM.com	Design: T.F; Mapinfo: T.F; Chk'd: J.M; App'd: S.H; Date: 21.06.11; Scale: 1:561,300
Project: Lorry Parking Study			No: Map 4.5.12

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