

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 maps¹⁰. 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 issues¹¹. 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

Capabilities on project:
Transportation

4.9 West Midlands

List of Key Facts:

1. There were 2,172 lorry parking spaces spread across 42 on site lorry parking locations throughout the region. This was the second highest amount of spaces in a region
2. The overnight parking charge within 50% of the sites was £20 or more, this was relatively high. The average price of parking in the West Midlands was £17 on sites with facilities; this was high compared to the national average of £12.50
3. Overall lorry parking sites were highly utilised, operating at 71%. Nationally this was the second busiest on site utilisation for a region
4. Solihull and Newcastle under Lyme were considerably busier than the rest of the region. The utilisation was recorded as 100% (or over) in both of these local authorities
5. Telford and Wrekin, Bromsgrove, North Warwickshire, Rugby, Stratford on Avon authorities were all between 75-100% utilised
6. Vehicles parking in lay bys and industrial estates was greatest towards the west of the region in Shropshire, Herefordshire and Stafford
7. There was significant off site parking in Rugby, Shropshire, Stafford and Herefordshire with between 50 and 75 vehicles parking off site in each of these local authorities. This created one of the most concentrated hotspot zones for off site parking in England, stretching into the East Midlands
8. Off site parking hotspots covered the majority of the SRN in the region, and had a high concentration around the M5 / M6 junction, on the M6 south of Stoke on Trent and around the M6 and M45 junctions with the M1 close to Rugby
9. There were a total of 121 Excess vehicles in the region
10. There were 252 recorded crimes in the West Midlands in 2010 costing the industry an estimated £6.3 million

4.9.1 Overview

The base information contained in the following Tables 4.22, 4.23 and 4.24 will be analysed in detail throughout the West Midlands 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 4.22 Overview of facility types and capacity in the West Midlands region

Name	Type	Overnight Cost (£s)	Capacity
Birmingham Truck Stop	Independent	£5 or less	40
Brewery Street Birmingham	Local Authority	Opening Spring 2011	0
Broad Street	Local Authority	£25 or less but more than £20	4
Corley Services Eastbound	MSA	£25 or less but more than £20	46
Corley Services Westbound	MSA	£25 or less but more than £20	72
Dinkys Dinahs	Transport Cafe in large segregated Layby	£5 or less	14

Capabilities on project:
Transportation

Doxey Lorry Park	Local Authority	£5 or less	30
Drome Cafe And Fish Bar	Independent	£5 or less	12
Frankley Services North	MSA	£10 or less but more than £5	38
Frankley Services South	MSA	£10 or less but more than £5	32
Hawkins Transport Village	Independent	£20 or less but more than £15	50
Hilton Park Services North	MSA	£25 or less but more than £20	32
Hilton Park Services South	MSA	£25 or less but more than £20	32
Hopwood Park Services	MSA	£20 or less but more than £15	56
Keele Services Northbound	MSA	£20 or less but more than £15	24
Keele Services Southbound	MSA	£15 or less but more than £10	24
Lincoln Cafe And Hotel	Independent	£10 or less but more than £5	80
Lynns Raven Cafe	Independent	£5 or less	40
Market Drayton Market	Independent	£5 or less	200
Merton Meadow	Local Authority	£5 or less	5
Midway Truckstop	Independent	£20 or less but more than £15	30
Norton Canes Services (M6 Toll)	MSA	£25 or less but more than £20	50
NT Truckstop	Independent	£15 or less but more than £10	280
Oakamoor Cafe	Independent	£15 or less but more than £10	30
Pjs Transport Cafe	Independent	£15 or less but more than £10	28
Shrewsbury Services Station	TRSA	£20 or less but more than £15	10
Stafford Services Northbound	MSA	£20 or less but more than £15	60
Stafford Services Southbound	MSA	£15 or less but more than £10	60
Standeford Farm Cafe	Independent	£25 or less but more than £20	56
Strensham Services Northbound	MSA	£25 or less but more than £20	120
Strensham Services Southbound	MSA	£25 or less but more than £20	100
Swan Service Station and Lorry Park	Independent	£20 or less but more than £15	55
Symonds Yat	Independent	£20 or less but more than £15	40
Tamworth Services	MSA	£15 or less but more than £10	50
Telford Services	MSA	£10 or less but more than £5	18
The Lazy Kettle	Independent	£10 or less but more than £5	40
The New Hollies	Independent	£15 or less but more than £10	70
The Vale	Independent	£15 or less but more than £10	40
Truckers Rest	Independent	Free	110
Warwick North A46	TRSA	£25 or less but more than £20	4
Warwick Services Northbound	MSA	£25 or less but more than £20	52
Warwick Services Southbound	MSA	£25 or less but more than £20	38
Total			2,172

Capabilities on project:
Transportation

Table 4.23: Overview of on-site utilisation, off-site parking and excess demand in the West Midlands region

Utilisation						
Vehicle Type	UK Artic	non-UK Artic	UK Rigid	non-UK Rigid	Total	% Utilisation
On-site parking	1,012	191	211	8	1,547	71%
Off-site Parking	Lay-bys	356	109	17	1	483
	Industrial Estates	197	47	19	0	263
Excess Demand				121		

Table 4.24: Overview of 2010 reported freight crime in the West Midlands region

Reported Freight Crime ²⁶					
Number of recorded crimes in 2010	252				
Severity Index ²⁷	1	2	3	4	5
Number of crimes recorded	14	194	41	2	1
Value of freight crimes recorded	£1,489,956*				
Estimated total value of freight crimes recorded	£6,300,333**				

*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.

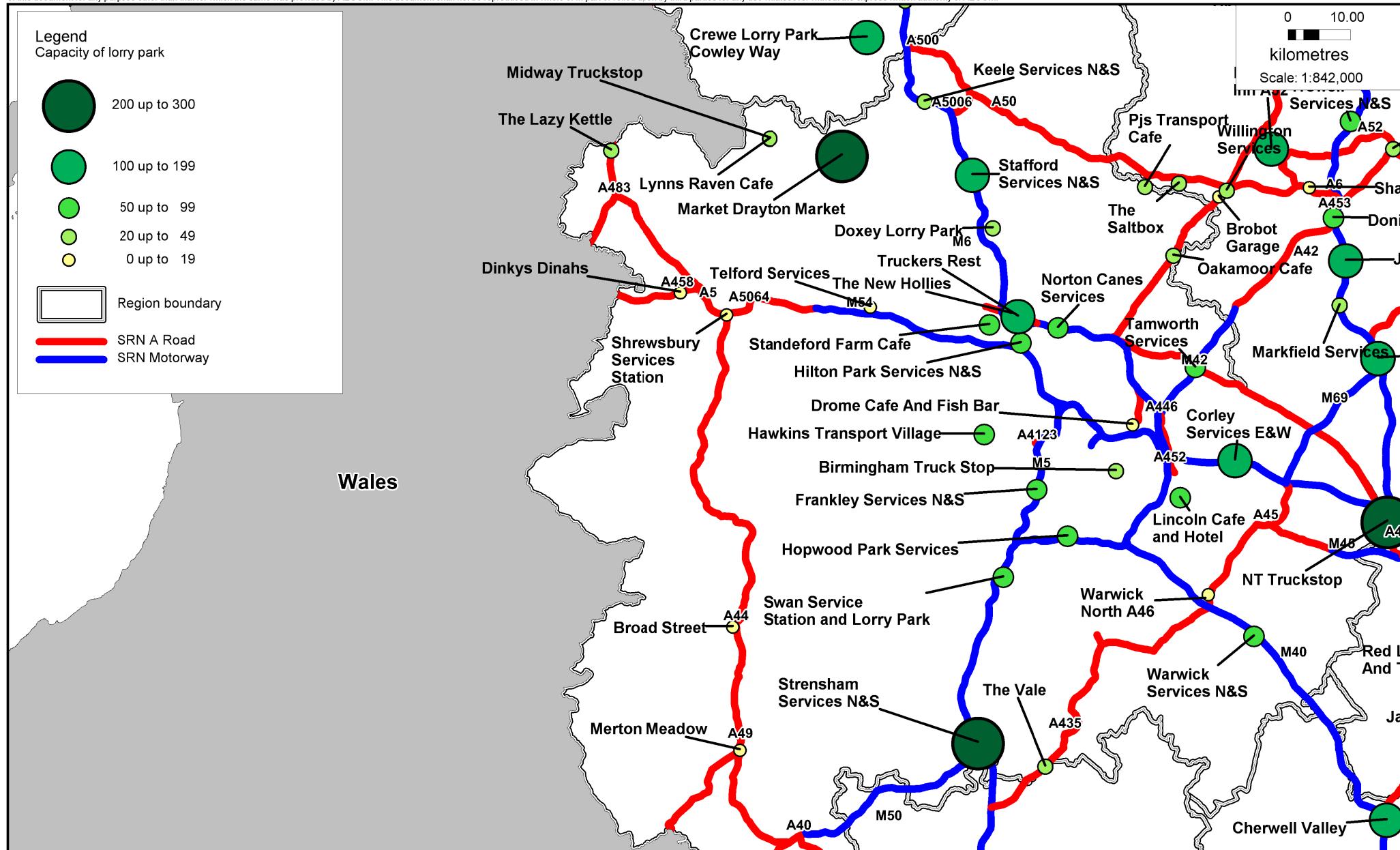
4.9.2 Facilities and Capacity

The West Midlands had 2,172 lorry parking spaces spread across 42 on-site lorry parking locations throughout the region. This was the second highest amount of spaces in a region, just behind the North West. Overall 25 of the sites had fewer than 50 spaces and five had more than 100 spaces. This indicates that smaller and medium sites were relatively prevalent in the region. The overnight parking charge within 50% of the sites was £20 or more, this was relatively high. The average price of parking in the West Midlands was £17 on sites with facilities; this is high compared to the national average of £12.50.

Map 4.9.1 shows that the parking provision was generally focused around Birmingham and the four major routes heading outwards; the M6 to the North, the M5 to the South, M54/A5 to the West and M6/M40 to the East. As shown in map 4.9.2 Shropshire, South Staffordshire and Rugby provided the largest number of spaces. Malvern Hills, Wychavon, Stratford-on-Avon, Bromsgrove, Warwick, Solihull, Dudley, Telford and Wrekin, Stafford, Newcastle-under-Lyne, East Staffordshire, Cannock Chase, Birmingham, Tamworth and North Warwickshire districts also had some capacity. Urban areas that had no capacity included Worcester, Redditch, Nuneaton and Bedworth, Coventry, Lichfield, Walsall Sandwell and City of Wolverhampton districts.

²⁶ Truckpol 2010

²⁷ See Appendix 5 for explanation of crime severity index



Client: Department for Transport

Title:

West Midlands:
Capacity of lorry parking sites

Project: Lorry Parking Study

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Design: T.F

Mapinfo: T.F

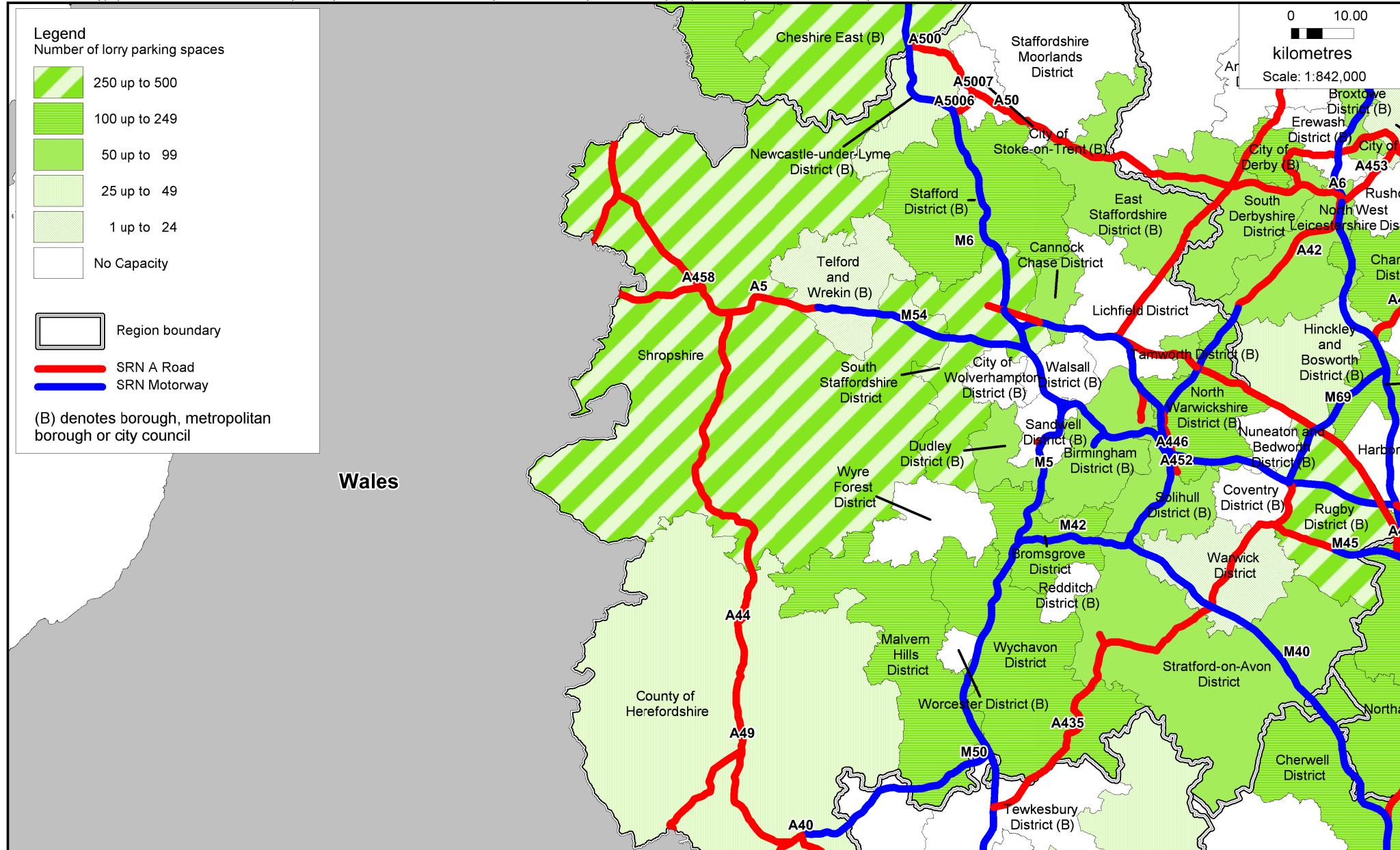
Chk'd: J.M

App'd: S.H

Date: 21.06.11

Scale: 1: 842,000

No: Map 4.9.1



Client: Department for Transport

Title:

West Midlands:
Onsite lorry parking capacity

Project: Lorry Parking Study

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Design: T.F

Mapinfo: T.F

Chk'd: J.M

App'd: S.H

Date: 21.06.11

Scale: 1: 842,000

No:

Map 4.9.2

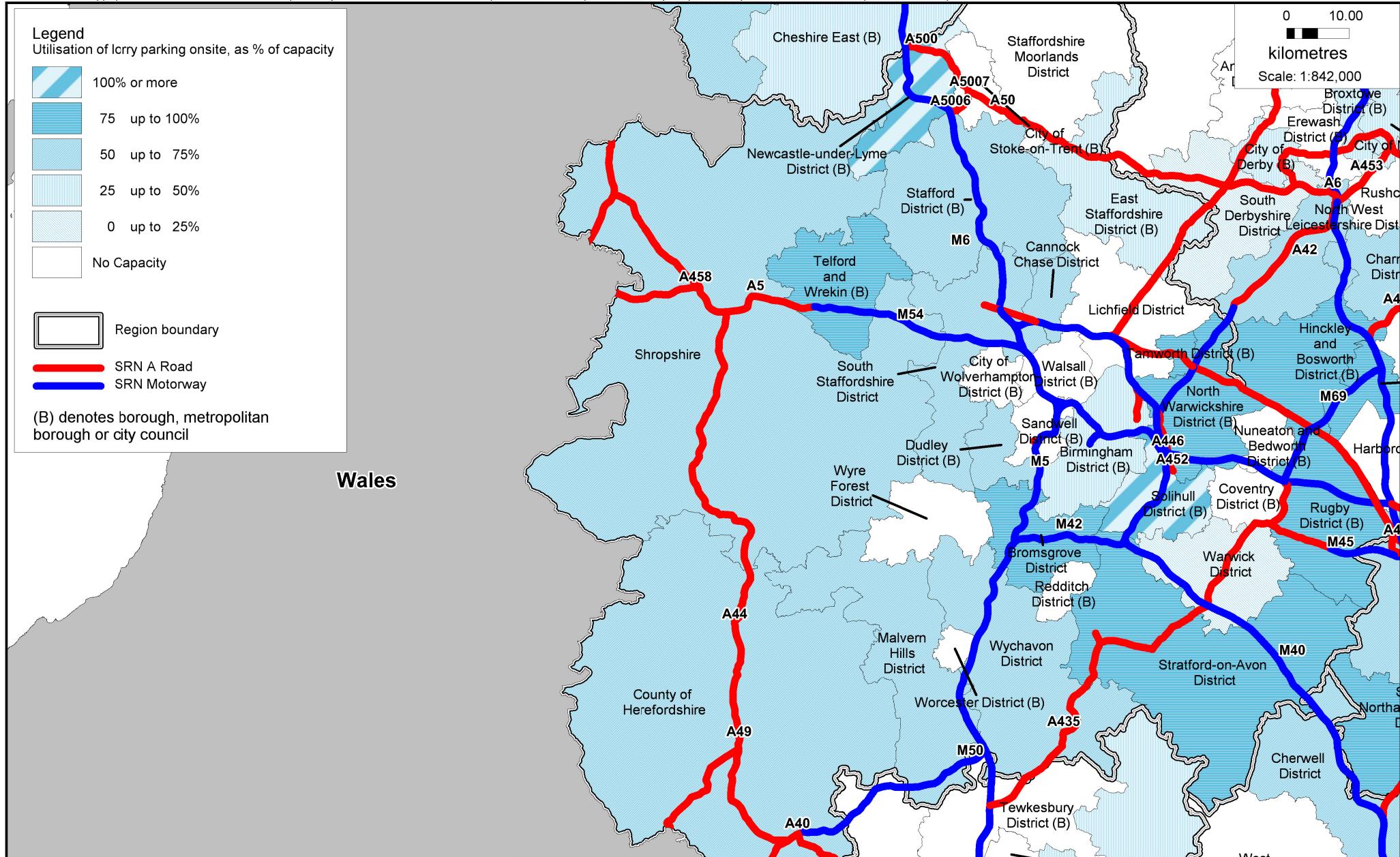
Capabilities on project:
Transportation

4.9.3 On-site Parking

When assessing the level of on-site utilisation in the West Midlands, Table 4.23 (see section 4.9.1) shows that overall lorry parking sites were highly utilised, operating at 71%. Nationally this was the second busiest on-site utilisation. Over two thirds of vehicles counted on-site were UK registered articulated vehicles. This type of vehicle was used for long distance journeys and thus would be more likely to be parking overnight than in a local yard. At the local authority level (see map 4.10.3) it was clear that Solihull and Newcastle-under-Lyne were considerably busier than the rest of the region. The utilisation was recorded as 100% or over in both of these local authorities. This high level of utilisation will lead to increased off-site parking.

With regards to other local authorities in the region, Telford and Wrekin, Bromsgrove, North Warwickshire, Rugby, Stratford-on-Avon was 75-100% utilised. This shows that there was significant demand for parking in these authorities and on certain days demand could outstrip supply of spaces; particularly at peak times of year.

The hotspot map (4.9.9) shows that 14 of the 42 lorry park sites in the region were more than 75% utilised. This shows that although there were local authorities with high usage, and a shortage of supply, there was also some surplus provision. 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 have spaces to accommodate them.



Capabilities on project:
Transportation

4.9.4 Off-site Parking

The off-site parking maps (see maps 4.9.4, 4.9.5, 4.9.6, 4.9.7, 4.9.8 and 4.9.9 - all immediately after this page) shows that the number of vehicles parking in lay-bys and industrial estates was greatest towards the west of the region in Shropshire, Herefordshire and Stafford. Towards the east of the region Rugby also had high off-site parking.

Table 4.23 (see section 4.9.1) shows that one third of vehicles parking in the West Midlands were parking off-site. 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. It may also indicate that some sites had to turn drivers away due to being at full capacity.

Map 4.9.4 showed the significant off-site parking surveyed in Rugby, Shropshire, Stafford and Herefordshire with between 50 and 75 vehicles recorded as parking off-site in each of these local authorities. There was also between 25 and 50 vehicles parking off-site in each of local authorities of Stratford-on-Avon, Warwick, Coventry, North Warwickshire, Birmingham, Dudley, Walsall, Tamworth, Lichfield and Newcastle-under-Lyne. There was more minor off-site parking in Wychavon, Bromsgrove, South Staffordshire, Telford and Wrekin, Stoke-on-Trent and Nuneaton and Bedworth with between 10 and 25 parking off-site in each local authority.

Given the size of some authorities within region it is important to understand exactly where the hotspots of off-site parking were. Hotspot map 4.6.9 shows six locations where there were more than 25 vehicles parked off-site within in a 5km radius of each other. These hotspots stretched along the A45, between M1 and M42; A45 / M40 interchange; north Birmingham; Stafford and Stoke; Telford, and Ross on Wye.

The detailed off-site parking map (see maps 4.9.5, 4.9.6, 4.9.7 and 4.9.8) shows the exact locations of the lay-bys and industrial estates that were being used for parking, which can be related back to the hotspot analysis. The A45 hotspot was caused by vehicles parking in lay-bys on the A5 between the M1 and M42 and the A46 near Coventry. There were also vehicles parked in industrial estates near Coventry and Nuneaton. The epicentre of this hotspot was near NT Truckstop in Rugby, and extended well into the East Midlands. There were over 100 vehicles parking at the centre of this hotspot. This was one of the most concentrated hotspot zones for off-site parking in England.

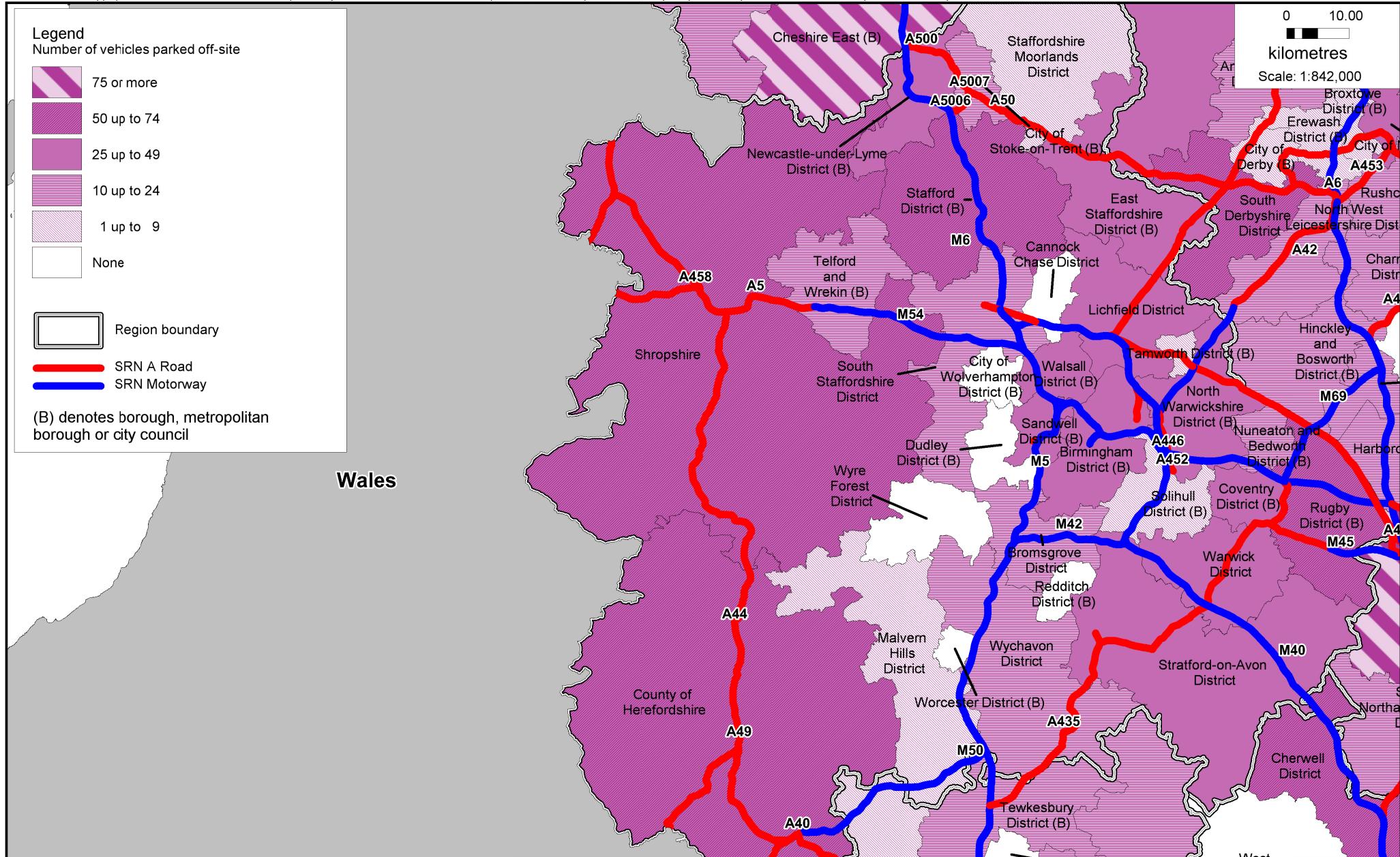
The hotspot near the A45 M40 interchange was caused by a combination of vehicles parking on the A45 north of the M40 and in industrial estates between Leamington Spa and Warwick; Tachbrook Park and Heathcote Industrial Estate.

The north Birmingham hotspot was caused mainly by vehicles parking in industrial estates near Drome Cafe, Lichfield, Walsall and Smethwick. There was also some parking on the A5 and the A460.

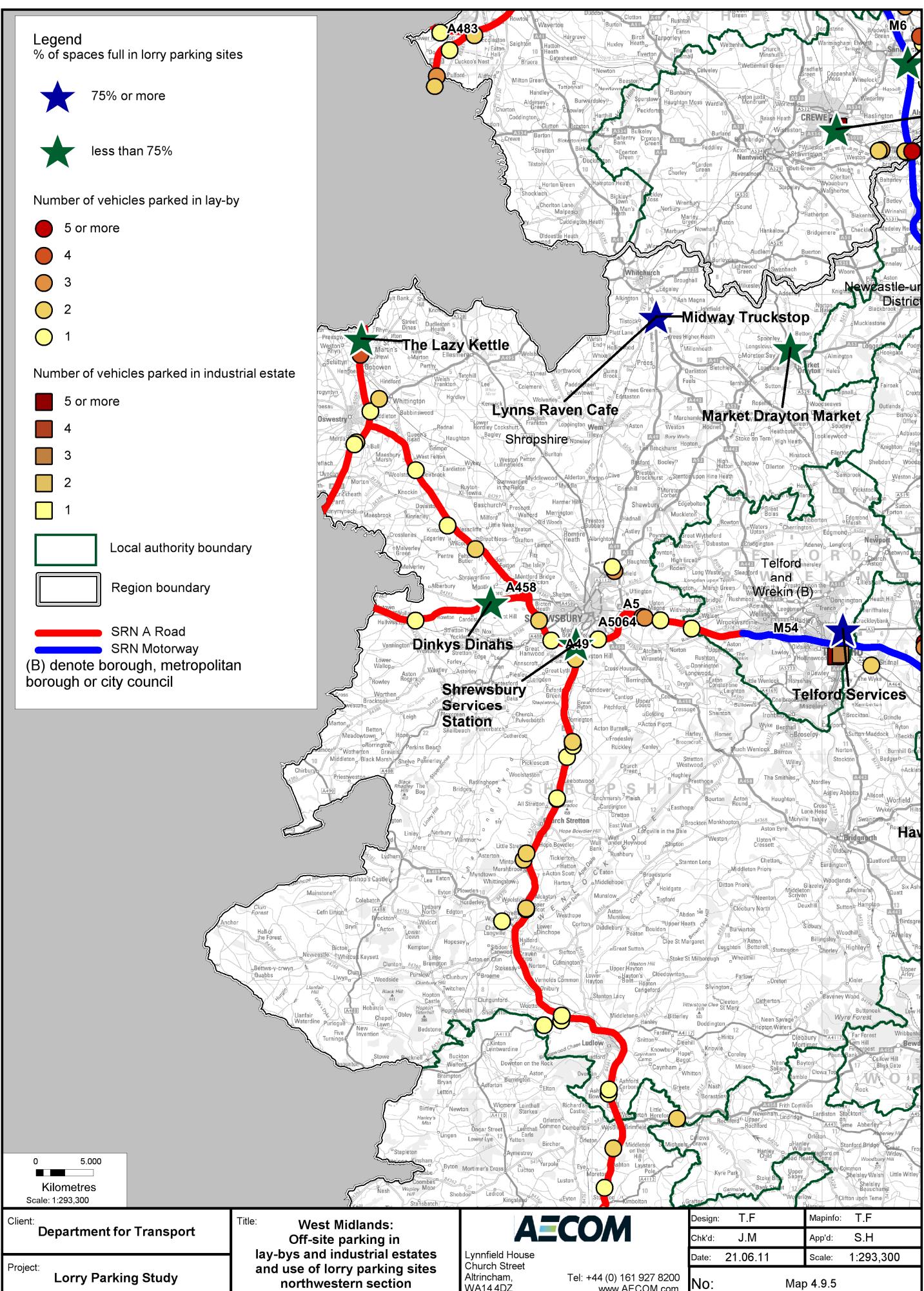
The hotspot between Stafford and Stoke was caused by the vehicles parking in lay-bys on the A500 north of Stoke and the A34 north of Stafford. More vehicles were also parking in industrial estates in and around Stafford, Greyfriars, M6 Junction 14, and Tollgate industrial estate. Recently signage had been put in place to stop vehicles parking on certain roads near to the Britannia football stadium, evidence showed that these signs had helped to stop vehicles parking here, but it is unclear whether they had moved to on-site locations.

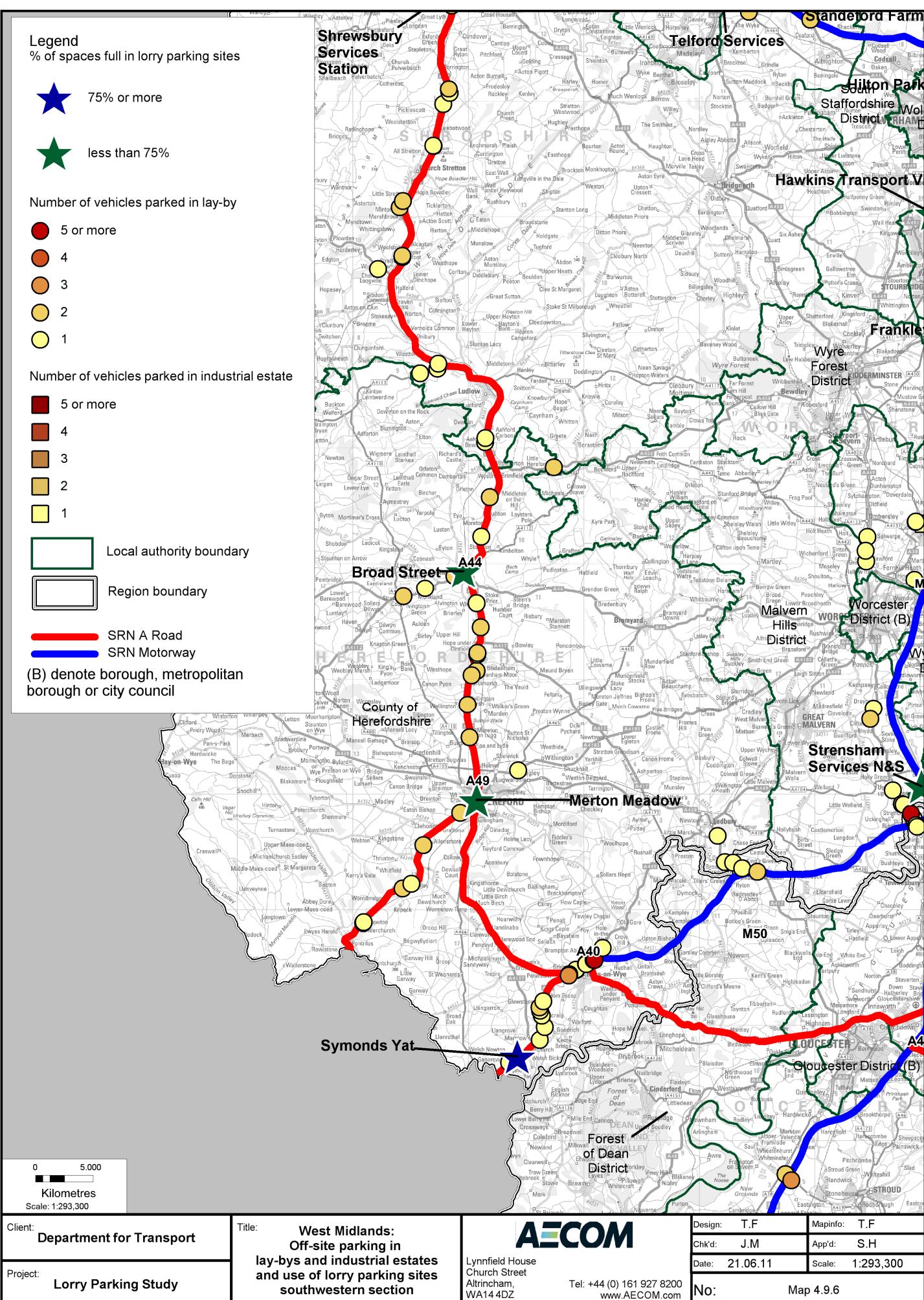
The hotspot near Telford was caused by vehicles parking in the Stafford Park Telford and Denso industrial estates.

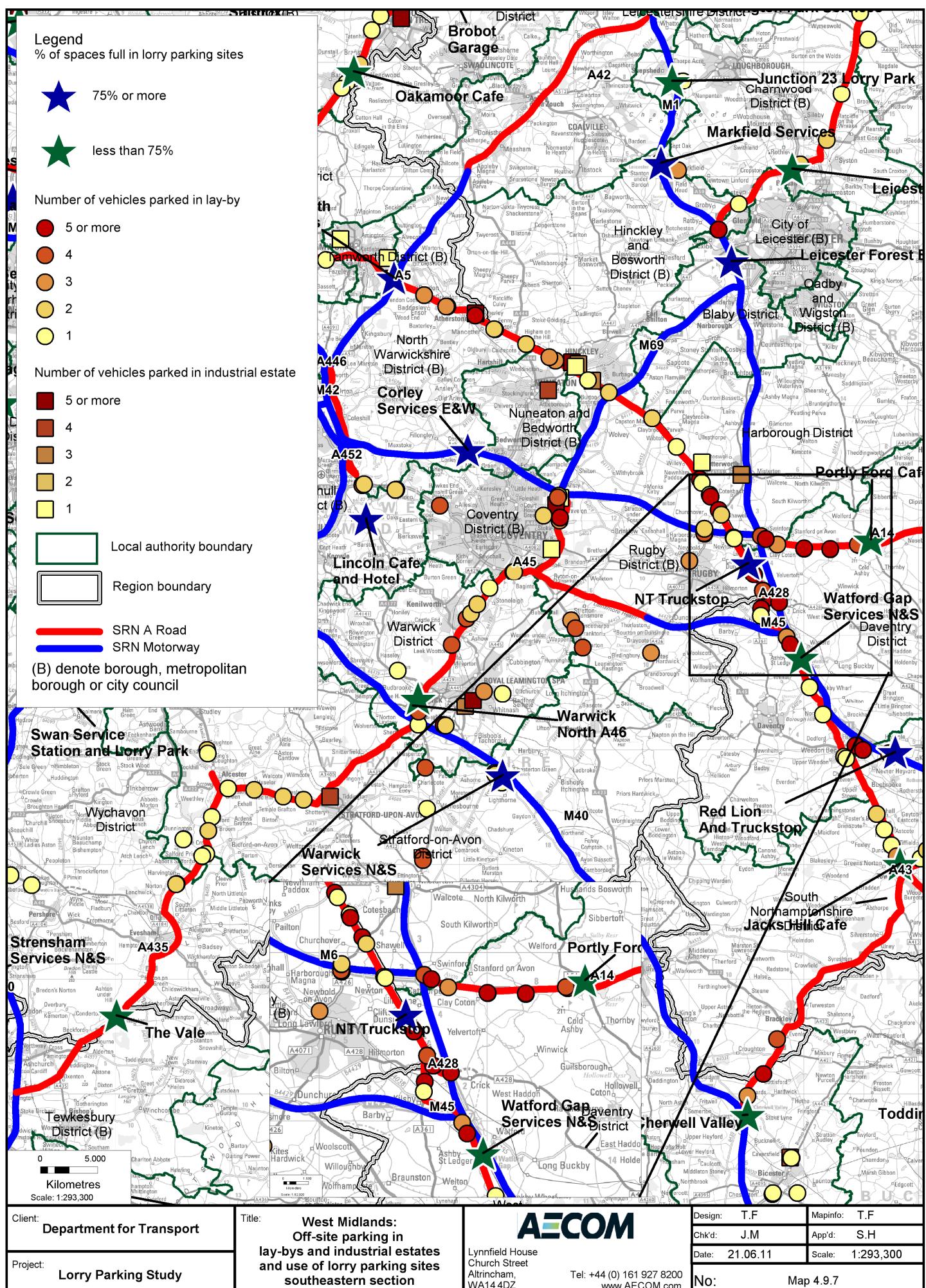
The final hotspot, near Ross on Wye was caused by vehicles parking in lay-bys on the A40. This stretch of road was at the end of the M50 motorway. It is possible drivers were using the opportunity to stop here before joining, or just after leaving the motorway, as there were lay-bys available.

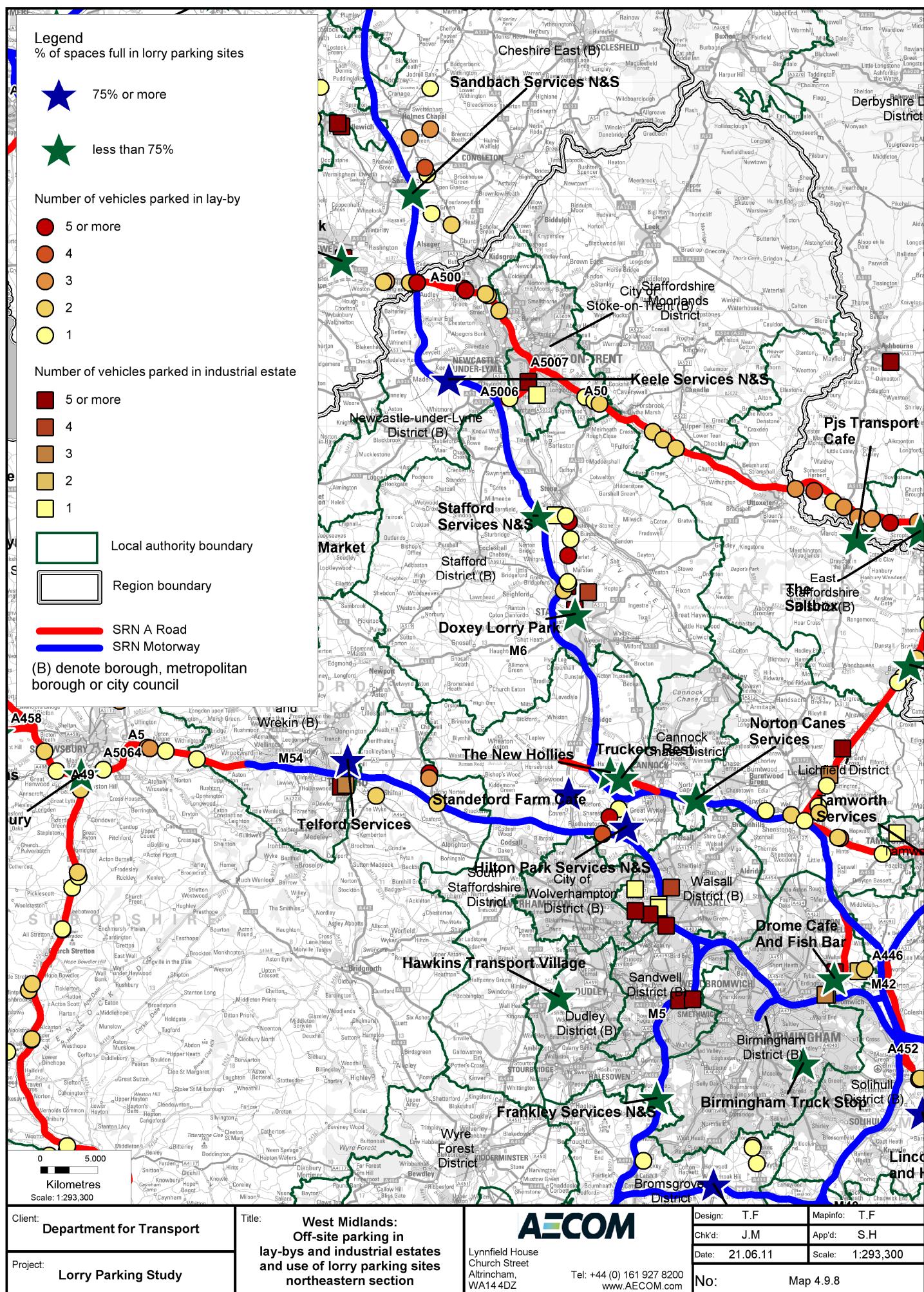


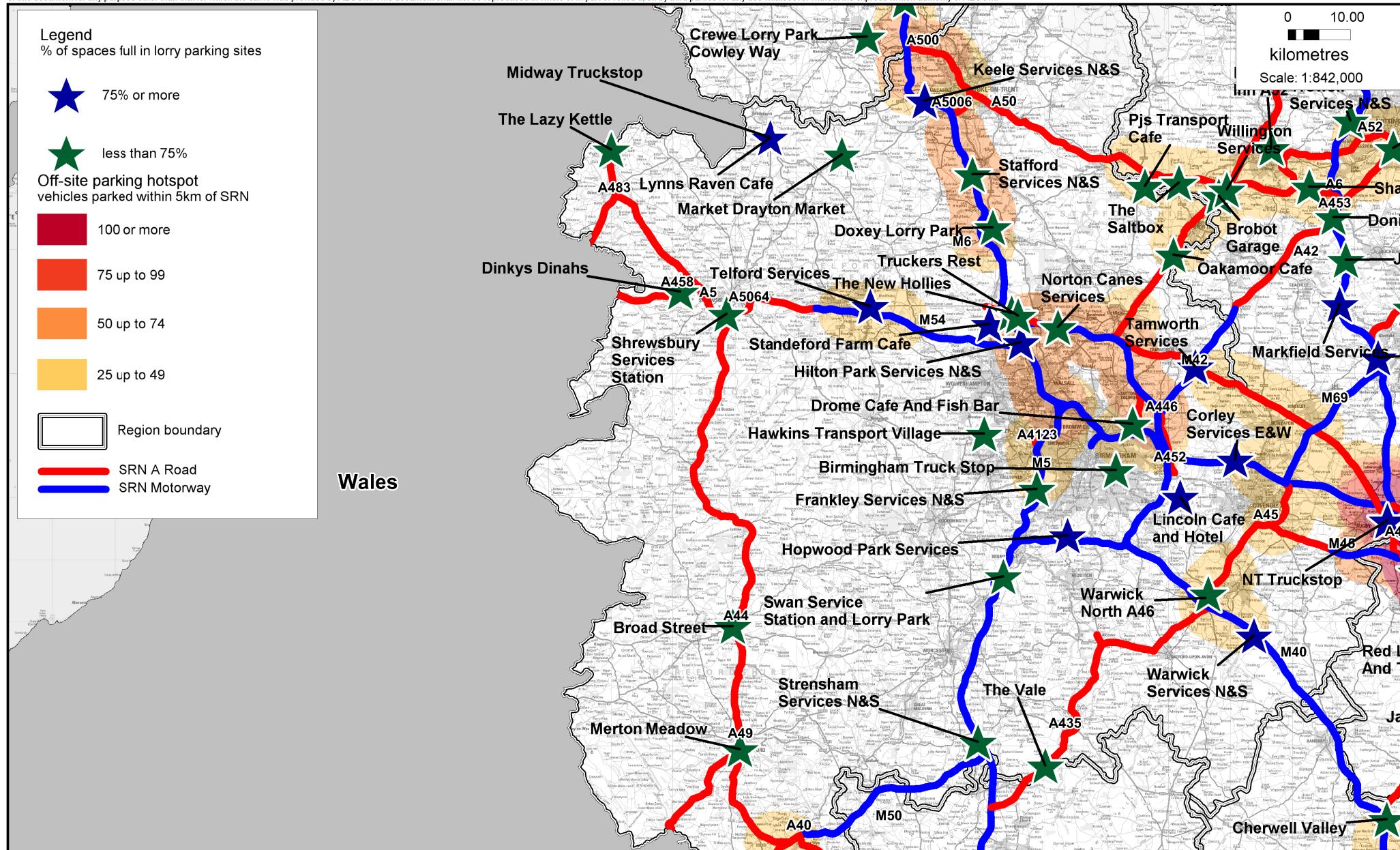
Client:	Department for Transport	Title:	West Midlands: Number of vehicles parked off-site (lay-bys and industrial estates)		Design: T.F Chk'd: J.M Date: 21.06.11	Mapinfo: T.F App'd: S.H Scale: 1: 842,000
Project:	Lorry Parking Study		Lynnfield House Church Street Altrincham, WA14 4DZ	Tel: +44 (0) 161 927 8200 www.AECOM.com	No:	Map 4.9.4











Client: Department for Transport

Title:

West Midlands:
Capacity of lorry parking sites

Project: Lorry Parking Study

AECOM

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Design: T.F

Mapinfo: T.F

Chk'd: J.M

App'd: S.H

Date: 21.06.11

Scale: 1: 842,000

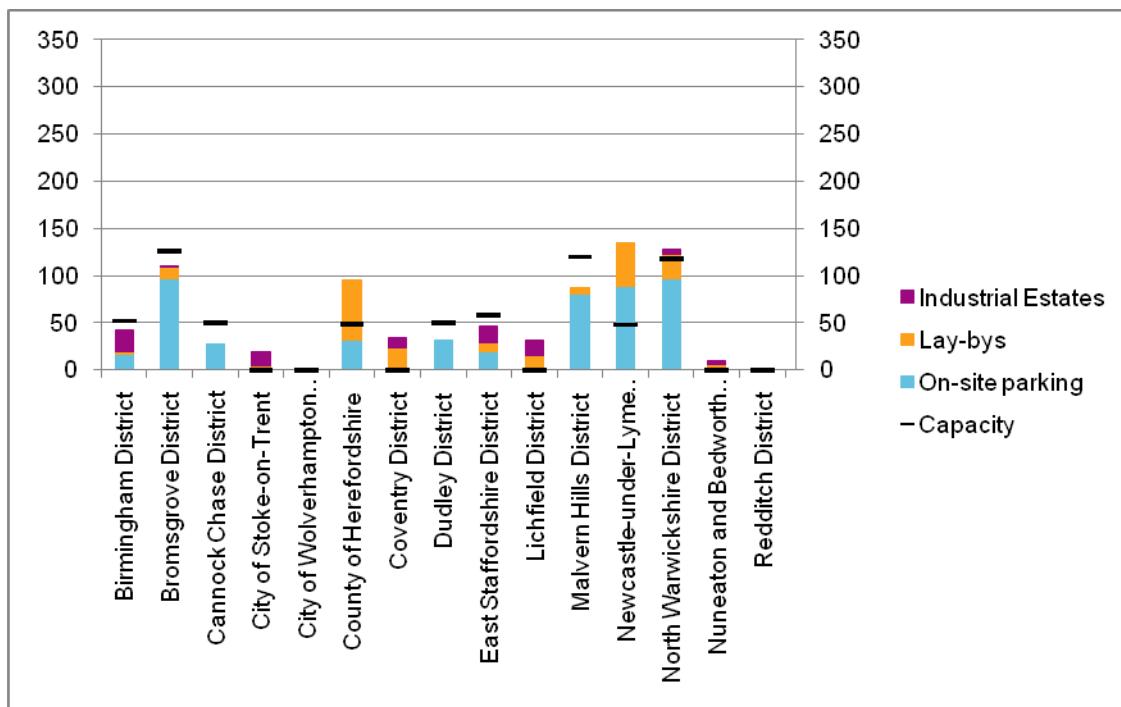
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Capabilities on project:
Transportation

4.9.5 Excess Demand

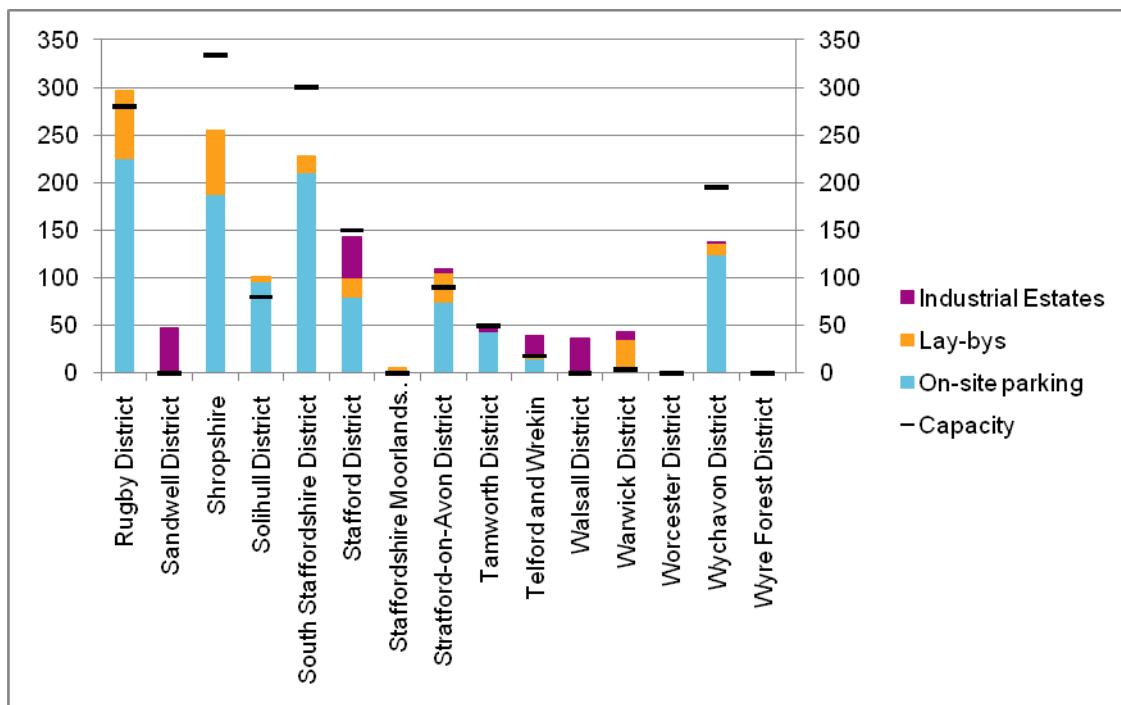
The chart below (figure 4.22 and 4.23) shows the amount of on and off-site parking by local authority. Each column in the chart represents the total vehicles parked in the local area broken down into on-site, lay-by and industrial estate. The black line denotes the amount of capacity in each authority, and where the column goes above the black line it shows there was an excess of vehicles parked. This chart aims to show whether there was spare capacity in lorry parks to accommodate all the vehicles in the region, and where vehicles were parking. For example, Rugby 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 South Staffordshire column is below the black line meaning all vehicles could have been accommodated on-site.

Figure 4.22: Graph of parking trends across local authorities in West Midlands (A-Re)



Capabilities on project:
Transportation

Figure 4.23: Graph of parking trends across local authorities in West Midlands (RU-W)



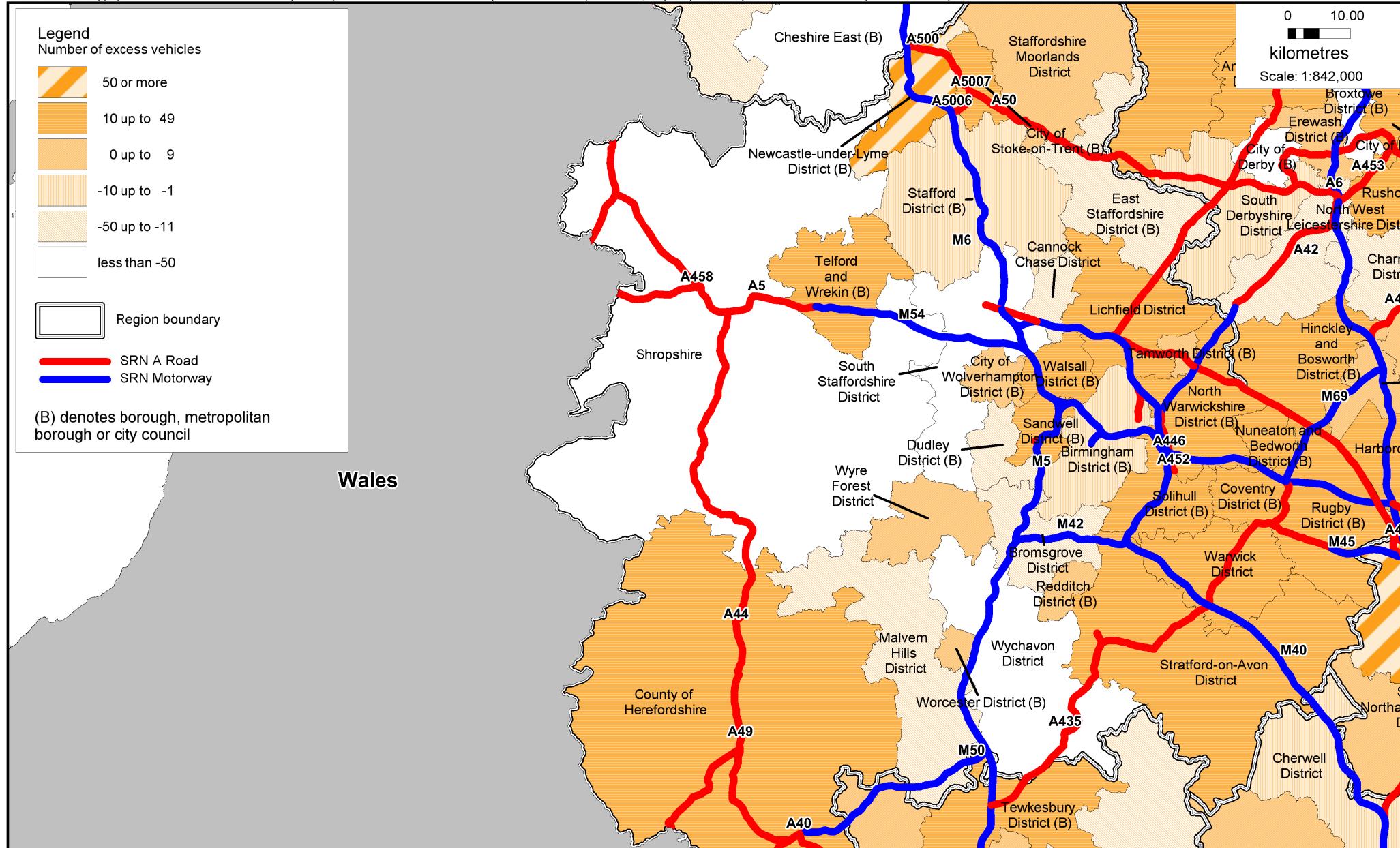
Map 4.9.10, Figure 4.22 and 4.23 above highlight that parts of the West Midlands had more vehicles parked than spaces. Herefordshire, Newcastle-under-Lyme, Warwick and Rugby districts do not have enough capacity if all vehicles were to park on-site. A number of local authorities did have limited spare spaces, including Bromsgrove, Shropshire Wychavon and Malvern Hills. This indicates that many local authorities within the region were close to, or did not have enough capacity. The shortages that do exist were also in key areas in terms of strategic freight routes.

These charts combined with map 4.9.10 highlighted clear problems; in County of Herefordshire, Newcastle-under-Lyme and Rugby where the demand for spaces outstripped the supply leading to high levels of off-site parking.

Referring back to the hotspots identified earlier in section 4.6.3 (map 4.6.9) the hotspot on the A5 was near to three lorry parking sites; NT Truckstop, Tamworth Services and Corley Services. These services were all more than 75% full. This indicated a severe lack of adequate capacity in these areas.

The hotspot around Warwick and Leamington Spa contained between 25 and 50 vehicles. The lorry parking site nearby at Warwick North Services only had space for four vehicles to park on-site, and the site at Warwick Services was more than 75% full. This indicates that locally there was also a shortage of capacity within these local authorities.

The north Birmingham hotspot can be treated as three individual hotspots. There was parking near to the Drome Cafe which was less than 75% utilised. The parking on the A5, which could be caused by the business to the east near Rugby, however there were sites to the west which had available spaces. The parking in industrial estates around Walsall was more likely to be traffic parking near to their destination rather than through traffic, and so were less likely to use on-site facilities.



Client: Department for Transport

Project: Lorry Parking Study

Title: West Midlands:
Difference between number of vehicles
parked (on and off-site)
and capacity of lorry parking

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Design: T.F

Mapinfo: T.F

Chk'd: J.M

App'd: S.H

Date: 21.06.11

Scale: 1: 842,000

No: Map 4.9.10

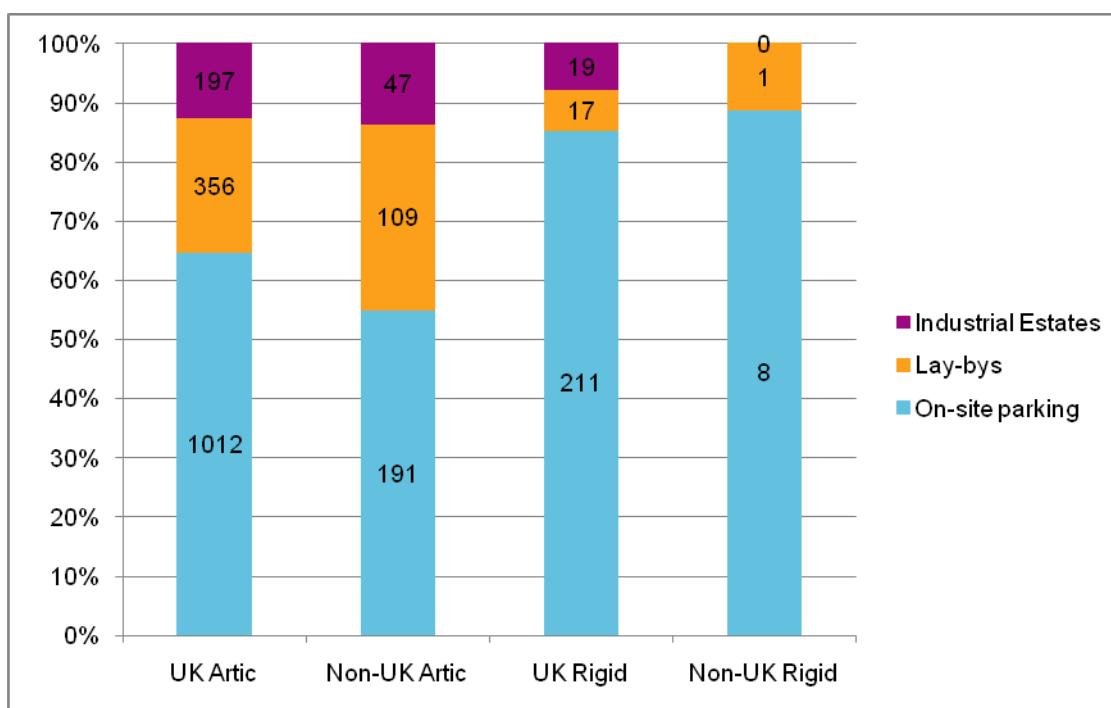
Capabilities on project:
Transportation

Telford services was more than 75% full and was surrounded by an off-site parking hotspot indicating a shortage of supply in that location.

There was no lorry parking on the A500 or A5007 to cater for vehicles parking off-site around Stoke. The nearby Keele Services on the M6 was also more than 75% full, additionally the nearest independent facility was Crewe Lorry Park. Further south Stafford Services had some available capacity as did Doxey Road Lorry Park, however there were still vehicles parking on the A34 parallel to the M6 rather than in these facilities.

Figure 4.24 below shows the split of how different vehicle types park on-site, in lay-bys or industrial estates. This showed that UK articulated vehicles account for the majority of on-site parking, however over 30% of UK registered articulated vehicles were also parking in lay-bys or industrial estates. In the West Midlands UK registered vehicles were slightly more likely to park on-site than non-UK registered vehicles. Encouraging non-UK vehicles to park on-site rather than in lay-bys and industrial estates may require different sets of strategies.

Figure 4.24: Split of different parking areas across UK and non-UK vehicle types in the West Midlands



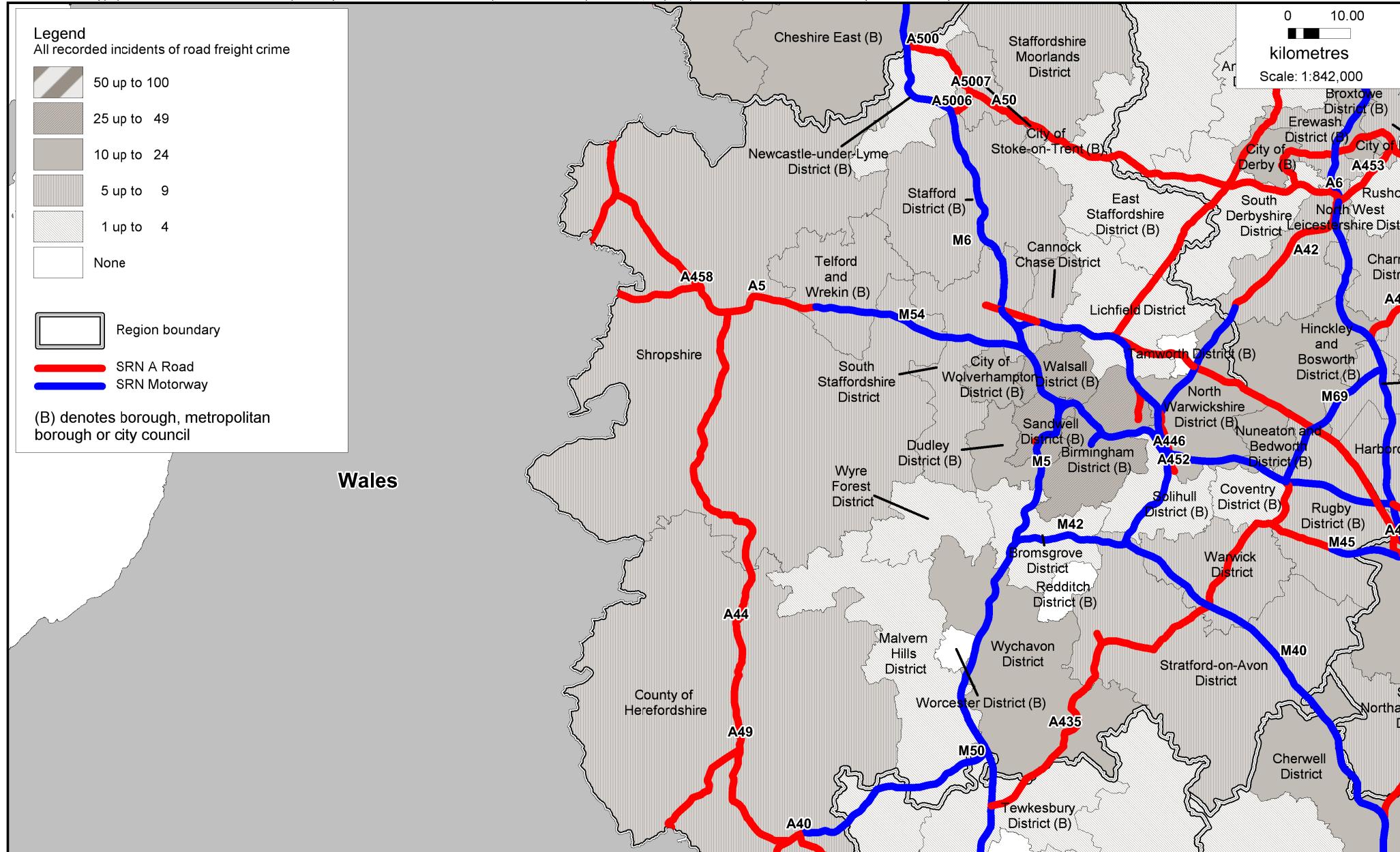
Capabilities on project:
Transportation

4.9.6 Crime Analysis

There were 252 recorded crimes in the West Midlands in 2010 costing the industry and estimated £6.3 million. The crimes were concentrated more towards the urban areas around Birmingham; Sandwell, Walsall and Birmingham districts all had between 25 and 50 recorded crimes each. Furthermore the City of Wolverhampton, Dudley and North Warwickshire had between 10 and 25 recorded crimes each. Wychavon District also had between 10 and 25 recorded crimes in 2010, this district contains two major SRN roads the M5 and A435 and borders several medium sized towns; Kidderminster, Worcester and Redditch. This means that some local authorities in the region attract more parking and traffic than other similarly sized local authorities.

4.9.7 Summary

The West Midlands was a home to key industrial hubs and could be seen to have several major strategic roads travelling through it, this means that the region was extremely busy in terms of lorry parking. The average lorry park utilisation was 71% and there were around 750 vehicles parking off-site meaning that overall there was not enough capacity in the region. Alongside a general shortage of capacity there were also several hotspots of severe off-site parking activity, particularly around Rugby and around Birmingham. It should be noted that a new lorry park in Brewery Street, Birmingham was being opened in 2011 which could cater for some of this demand.



Client: Department for Transport

Project: Lorry Parking Study

Title: West Midlands:
All recorded incidents of road
freight crime
Truckpol 2010

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AECOM

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Design: T.F

Mapinfo: T.F

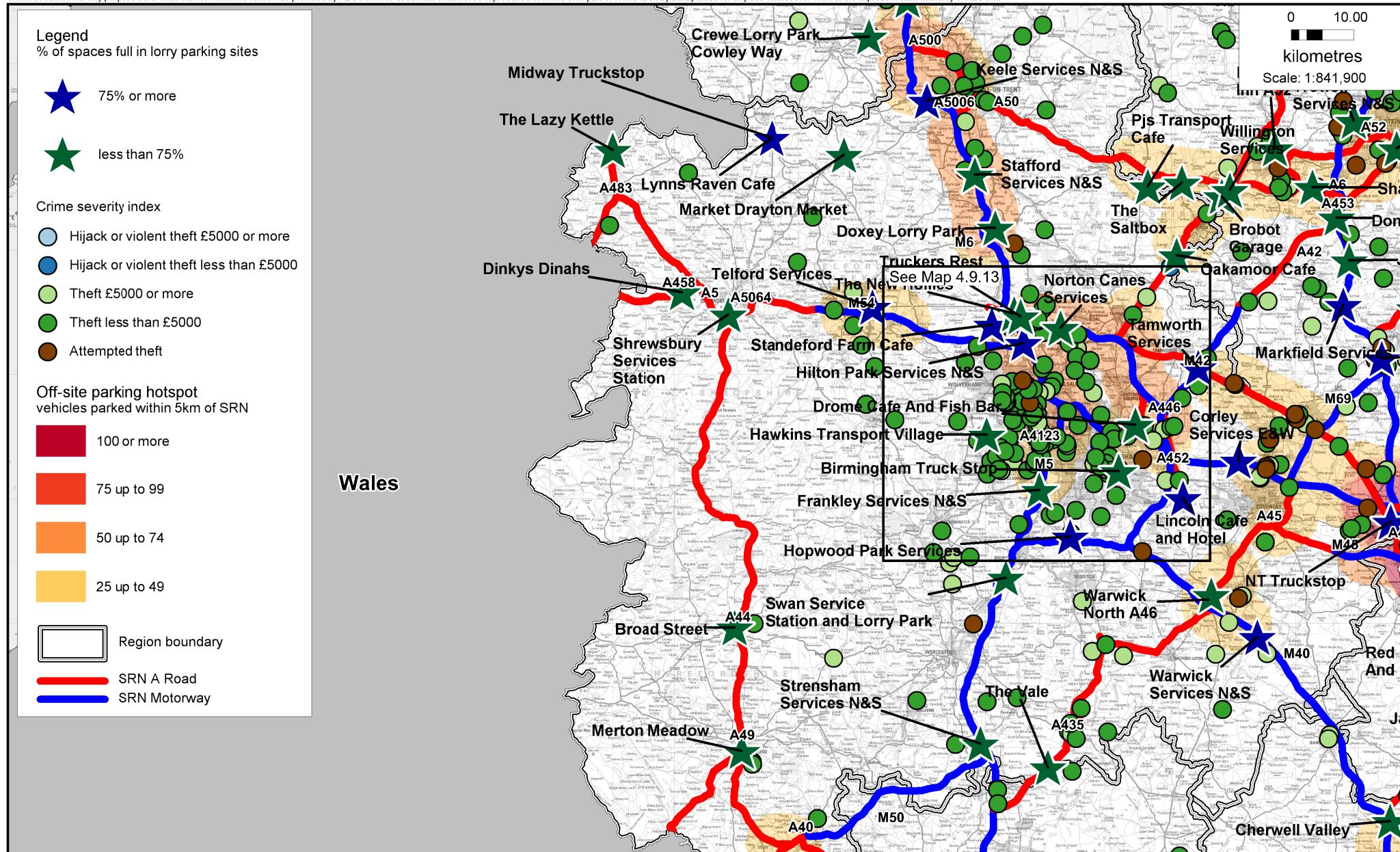
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Date: 21.06.11

Scale: 1: 842,000

No: Map 4.9.11



Legend
% of spaces full in lorry parking sites

★ 75% or more

★ less than 75%

Crime severity index

- Hijack or violent theft £5000 or more
- Hijack or violent theft less than £5000
- Theft £5000 or more
- Theft less than £5000
- Attempted theft

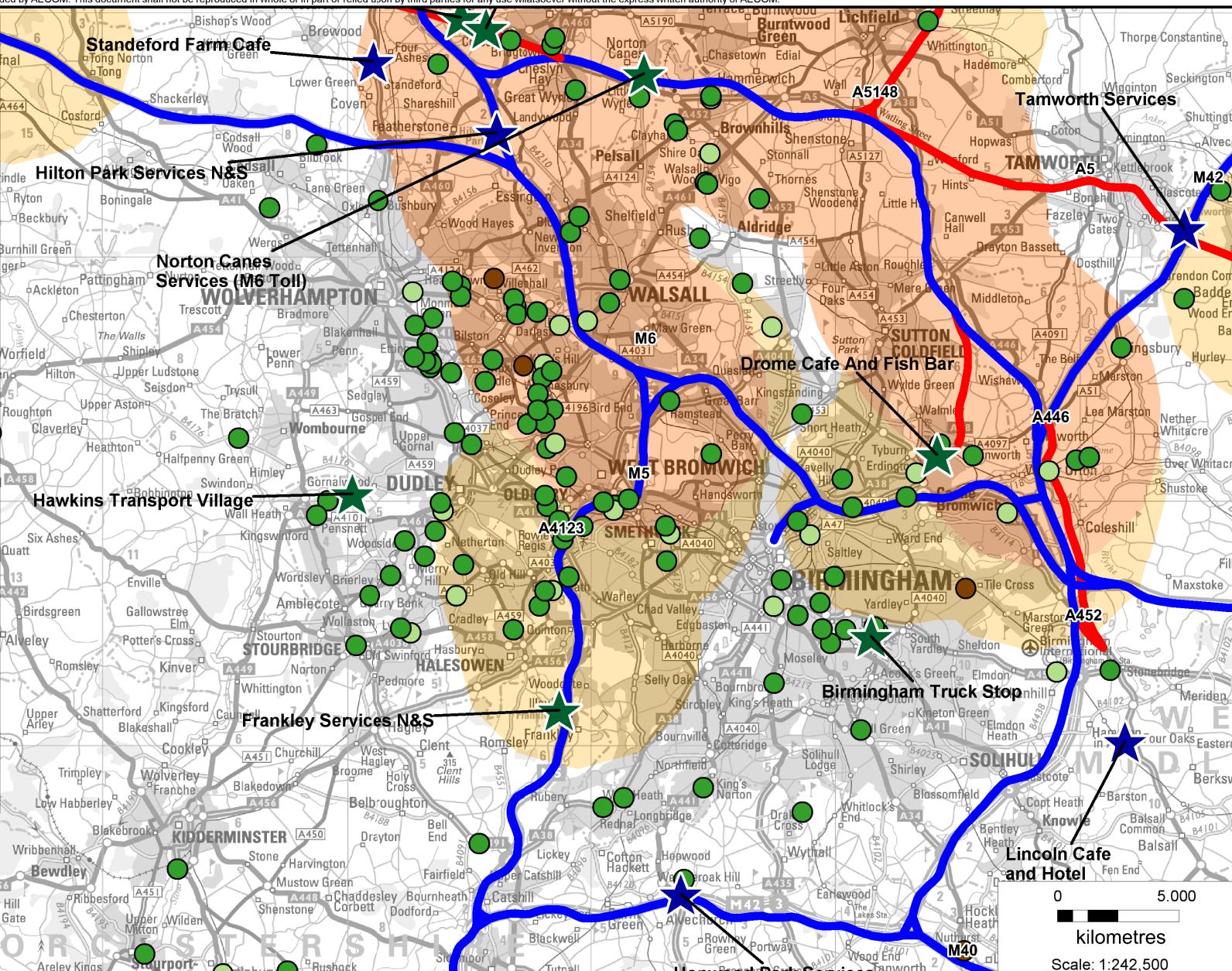
Off-site parking hotspot

vehicles parked within 5km of SRN



Region boundary

SRN A Road
SRN Motorway



Client: Department for Transport

Project: Lorry Parking Study

Title: West Midlands:
Severity of all recorded
road freight crime in relation
to off-site parking hotspots
and onsite utilisation

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AECOM

Design: T.F	Mapinfo: T.F
Chk'd: J.M	App'd: S.H
Date: 21.06.11	Scale: 1: 242,500
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