Highways Agency: Spatial Planning Framework Review of Strategic Road Network Service Areas

National Report

Date: January 2010 Version: 2

## Document Control

| Document Title | Review of Strategic Road Network Service Areas |
| :--- | :--- |
| Author | JA/NB (JMP) |
| Owner | lain Reidy |
| Distribution |  |
| Document Status | FINAL |

## Revision History

| Version | Date | Description | Author |
| :--- | :--- | :--- | :--- |
| DRAFT | $02 / 11 / 2009$ | First Draft |  |
| DRAFT | $27 / 11 / 2009$ | Final Draft |  |
| FINAL | $15 / 01 / 2010$ | Final |  |

## Reviewer List

| Name | Role |
| :--- | :--- |
| Neal Byers | Senior Transport Planner |
|  |  |

## Approvals

| Name | Signature | Title | Date of <br> Issue | Version |
| :--- | :--- | :--- | :--- | :--- |
| Neville McKenzie |  | Associate | $02 / 12 / 09$ | 1 |
|  |  |  |  |  |

The original format of this document is copyright to the Highways Agency.

## Table of Contents

1 Introduction ..... 4
2 Gap Analysis Methodology ..... 5
3 Identification of the Motorway Network and MSAs ..... 7
4 Results - Motorway Service Areas ..... 10
5 Conclusions and Recommendations ..... 29
Figures ..... 31
Appendix A ..... 34

## 1 Introduction

1.1 The Highways Agency (HA) has commissioned the undertaking of a study into the provision of service areas on the Strategic Road Network in England. The Motorway Network is one element of the Strategic Road Network, the Trunk Road Network being the other, which is the road network under control of the HA.
1.2 Circular $1 / 2008$ (the Circular) sets out the policy for the provision of service areas on the Strategic Road Network and the HA's role in relation to these facilities. The Circular supersedes previous guidance provided in Circular 1/94, Circular 4/94 and the Motorway Service Areas [MSA] Policy Statement 1998.
1.3 As part of this study, the HA have undertaken two investigations - one into Trunk Road service area provision, one into MSA provision - that have been combined into eight reports based on Government Office region. The regional reports have been produced to understand the requirements for new facilities within each Government Office boundary. The purpose of this report is to encapsulate the results of the MSA study which provides a gap study of those MSAs located in each region. This study therefore comprises the following:

- Identification of the location of MSAs along the Motorway Network
- Determination of the separation of MSAs
- Identification of any gaps in provision
- Recommendations to address provision issues along the Motorway Network.
1.4 The information presented in this report provides the evidence base from which to identify the existing gaps in MSA provision. Therefore, where necessary, the HA can provide input into the appropriate Local Development Frameworks to recommend action to address gaps in provision.


## Structure of the Report

1.5 The study is split into five sections including this introduction as follows:

- Section 2 contains the methodology for the Motorway study
- Section 3 identifies the Motorway Network and MSAs
- Section 4 presents the results of the MSA gap study
- Section 5 presents conclusions and recommendations


## HIGHWAYS <br> AGENCY

## 2 Gap Analysis Methodology

2.1 Circular 1/2008 (the Circular) sets out the policy for the provision of service areas on Trunk Roads and the HA's role in relation to these facilities. The Circular supersedes previous guidance provided in Circular 1/94, Circular 4/94 and the MSA policy statement 1998.
2.2 MSAs perform an important road safety function by providing opportunities for travellers to stop and take a break in the course of their journey. The Circular states that:
"motorists should stop and take a break of at least twenty minutes every two hours. Drivers of heavy goods vehicles (HGVs) are subject to a regime of statutory breaks, and such facilities offer the opportunity for this." [paragraph 6]
2.3 Historically the spacing of MSAs has been every 30 miles based on drivers being offered the opportunity to stop roughly every 30 minutes. However, on congested parts of the network the travel time between MSAs can exceed 30 minutes. Furthermore, HGVs fitted with 56 mph speed limiters have a maximum range over 30 minutes of 28 miles. Therefore any new applications for MSAs should be based upon a spacing of 28 miles or 30 minutes drive from the previous MSA, whichever is the lesser.
2.4 The Circular also specifies the HA's obligations in relation to the provision of service areas and states that:
"The Highways Agency will provide input into Local Development Frameworks, assisting Local Authorities to consider whether there is sufficient provision of roadside facilities on the Strategic Road Network" [paragraph 28]
2.5 In order to identify priority locations a distance of 40 miles or greater has been defined to represent a gap between MSAs at which the HA would consider informing a local authority of the potential need for a new MSA to be included in the Local Development Framework. Where a distance is above the 28 mile threshold contained in the Circular, this has also been noted.
2.6 In order to be signed from the Motorway Network the service area must provide the following facilities:

- Free parking for up to two hours for all vehicles
- Free toilets and hand washing facilities for all users with no obligation to make a purchase
- Parent/carer and child facilities containing baby-changing amenities
- Access to a signed, free, private breast-feeding area
- A free picnic area
- Cash operated telephone
- Fuel
- Snacks and hot drinks
- Free children's play area
2.7 There are additional requirements in relation to factors such as opening hours, access from the surrounding highway network equality legislation and competition between providers that have not been specifically considered within this study. MSAs should be intended to be for the sole use of those using the SRN and should not become a destination in their own right.
2.8 There is no official database of MSAs available therefore it was necessary to perform a desktop study in order to identify the locations of such sites on the Motorway Network.
2.9 The desktop study used online aerial mapping sources to identify the locations of service areas on the Motorway Network. The information was then cross-referenced with conventional mapping to establish the names of the MSAs. Thus a comprehensive list of MSAs in England has been produced. As an additional check, information was cross-referenced with unofficial internet based guides to MSAs - motorwayservices.info and motorwayservicesonline.co.uk.
2.10 Each MSA was selected with the distance to the nearest MSAs in all directions measured using GIS software. Where there is no other MSA between the selected site and the terminus of the Motorway Network, the distance to the terminus of the Motorway Network has been recorded.
2.11 When the Motorway Network leaves England, the distance to the next MSA along the route has also been recorded.
2.12 Distances between MSAs were recorded in the form of a matrix with separation of over 40 miles being highlighted as an issue for further consideration.
2.13 A map displaying the location of MSAs and the Motorway Network was produced using Manifold to accompany the results matrices and display the information visually. The map displays the Motorway Network and the name and location of MSAs and can be found in the appendix.


## Assumptions

2.14 No information has been collected regarding the facilities present at each MSA as this study is primarily concerned with the distances between service areas. The assumption has been made that the services are signed from the Motorway and are of sufficient standard to be in compliance with the Circular.
2.15 In general, distances have been measured from the Motorway mainline at a point deemed to be the 'centre' of the MSA. If service stations are not directly opposite each other a point half way between them is utilised instead. Where services are standalone or located at a junction the distance taken is to the entrance to the car parking area.
2.16 For simplicity it has been assumed that the distance between two MSAs is the same regardless of direction of travel.
2.17 All distances have been rounded to the nearest mile.

## 3 Identification of the Motorway Network and MSAs

3.1 The HA is responsible for the construction and effective operation of the majority of Motorways in England. According to Transport Statistics: Great Britain 2009, England contains 3,011 km of Motorway classified carriageway served by 72 MSAs.
3.2 Tables 3.1 to 3.8 show the Motorways studied in this report region by region, with Figure 3.1; appended at the end of this report illustrating the Motorway Network and MSAs on a map.

## North East Region

Table 3.1: Summary of Motorways in the North East

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| A1 (M) | Yorkshire \& Humber Border | Washington |
| A194(M) | A1 (M) | Tyne Tunnel |
| A66(M) | A1 $(\mathrm{M})$ | Darlington |

## North West Region

Table 3.2: Summary of Motorways in the North West

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M6 | West Midlands Border | Scottish Border |
| M62 | Liverpool | Yorkshire \& Humber Border |
| M60 | Manchester Outer Ring Road | Manchester Outer Ring Road |
| M56 | M60 | Welsh Border |
| M61 | M60 | M6 |
| M66 | M60 | Edenfield |
| M67 | M60 | Hyde |
| M65 | M6 | Colne |
| M55 | M6 | Blackpool |
| M57 | M62 | Switch Island |
| M58 | M6 | Switch Island |
| M602 | M60 | Manchester City Centre |
| A627(M) | Oldham | Rochdale |
| M53 | Wallasey | Chester |
|  |  |  |
|  |  |  |
|  |  |  |

## Yorkshire and Humber Region

Table 3.3: Summary of Motorways in the Yorkshire \& Humber Region

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M1 | East Midlands Border | A1(M) |
| M62 | A63 | North West Border |
| M18 | M1 | M62 |
| M180 | M18 | A180 |
| M181 | M180 | Scunthorpe |
| A1(M) | Doncaster | Wetherby |
| M621 | M1 | M62 |
| M606 | M62 | Bradford City Centre |

## West Midlands region

Table 3.4: Summary of Motorways in the West Midlands

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M5 | M6 | South West Border |
| M50 | M5 | Ross-on-Wye |
| M6 | M1 | North West Border |
| M6 Toll | M6 | M6 |
| M40 | South East Border | M42 |
| M54 | M6 | Telford |
| M42 | M5 | East Midlands Border |
| M69 | M1 | M6 |
| M45 | M1 | Coventry |

## East Midlands Region

Table 3.5: Summary of Motorways in the East Midlands

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M1 | South East Border | Yorks \& Humber Border |
| M69 | M6 | M1 |
| M45 | West Midlands Border | M1 |
| M6 | West Midlands Border | M1 |

## East of England Region

Table 3.6: Summary of Motorways in the East of England

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M 25 | South East Border | South East Border |
| M 11 | South East Border | Cambridge |
| A1(M) | South East Border | East Midlands Border |

## South East Region

Table 3.7: Summary of Motorways in the South East

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M1 | London | East Midlands Border |
| M2 (inc some of A2) | M25 | Faversham |
| M3 | London | Southampton |
| M4 | London | South West Border |
| M11 | London | East of England Border |
| M20 | M25 | Folkestone |
| M25 | London Orbital | London Orbital |
| M23 | London | Crawley |
| M27 | New Forest | Portsmouth |
| M26 | M20 | M25 |
| A1(M) | London | East Midlands Border |

## South West Region

Table 3.8: Summary of Motorways in the South West

| Trunk Road | Start Point | Finish Point |
| :---: | :---: | :---: |
| M4 | South East Border | Welsh Border |
| M5 | West Midlands Border | Exeter |
| M32 | M4 | Bristol City Centre |
| M48 | M4 | Welsh Border |
| M49 | M5 | M4 |

## 4 Results - Motorway Service Areas

4.1 The results from this analysis have been presented in the form of a matrix displaying the distance from an MSA to the next along all possible routes. This is appended in Appendix A. For the main body of the report the matrix has been split by region to breakdown the data into digestible tables.
4.2 The following tables display matrices showing the distance between MSAs broken down by Government Office regions of England. Where MSAs are subject to access restriction or other factors, these have been recorded in the notes column on the far right of the table.
4.3 The matrix is read by selecting an MSA in the far left column. The distance to the nearest MSAs (listed along the top) are recorded in the matrix itself.
4.4 Distances less than 40 miles are coloured green with distances greater than 40 miles coloured red. Those distances coloured green are deemed to be acceptable separations for MSAs. It is the distances highlighted in red which will be subject to some further analysis.
4.5 Figure 4.1; appended at the end of this document, displays this information visually by displaying the Motorway Network and MSAs with distances which are coloured red in the matrices highlighted on the map.

## HIGHWAYS <br> AGENCY

Table 4.1: Matrix Displaying MSA Separation in the North East

| Motorway Service Area | Government Office Region |  |  |  |  | त <br> ¢ <br> ¢ <br> 0 <br> 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Durham | North East | \# |  |  | 13 | 63 |
| Terminus of A194(M) (Tyne Tunnel) | North East |  | \# |  | 5 |  |
| Terminus of A66(M) (Darlington) | North East |  |  | \# |  | 41 |
| Washington | North East | 13 | 5 |  | \# |  |
| Wetherby | North East | 63 |  | 41 |  | \# |

4.1 Table 4.1 shows that distances between Wetherby Services to the South on the $A 1(M)$ and Durham Services or the terminus off the A66 (M) are further than 40 miles apart. The matrix shows that these distances are 63 and 41 miles respectively which are above the threshold of 40 miles.
4.2 Whilst the distances mentioned above are greater than the threshold of 40 miles, much of the A1 separating them is not designated as Motorway and therefore lies outside the scope of this study. On this basis these distances are not representative of actual separations and therefore no further consideration need be given at this stage.
4.3 Despite being Non-Motorway at the present time, the A1 between Dishforth and Scotch Corner is to be upgraded to Motorway standard. Upon completion, there will be a separation of 63 miles between MSAs.
4.4 Elsewhere in the North East MSA provision is good with MSA separations of under 28 miles and therefore fully compliant with Highways Agency policy.

Table 4.2: Matrix Displaying MSA Separation in the North West

| Motorway Service Area | Government Office Region | ¢ |  | $\begin{aligned} & \text { } \\ & \vdots \\ & \vdots \\ & \overline{0} \\ & \overline{0} \\ & 0 \end{aligned}$ |  | $\begin{aligned} & 0 \\ & \hline 0 \\ & 0 \\ & 3 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  | $\underset{\underset{\lambda}{E}}{E}$ |  | 0 0 0 3 3 3 0 0 | $\begin{gathered} \text { ৯} \\ \stackrel{\oplus}{0} \\ \stackrel{1}{-} \end{gathered}$ |  |  |  |  |  |  |  |  |  |  | Truckhaven (Carnforth) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Birch | North West | \# |  | 17 |  | 22 | 35 | 39 |  | 24 |  |  |  | 25 |  |  |  | 6 |  |  |  |  | 39 | 13 | 28 | 17 |  |  |
| Blackburn with Darwen | North West |  | \# | 16 |  |  | 15 |  |  |  |  |  | 25 |  |  |  |  |  |  |  | 26 |  |  | 32 | 18 | 35 |  |  |
| Bolton West | North West | 17 | 16 | \# |  |  | 16 |  |  |  |  |  | 28 |  |  |  |  |  |  |  | 28 |  |  | 18 |  | 30 |  |  |
| Burton-in-Kendal (Northbound O | North West |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  | 22 |  |  |  |  |  |  |  |  |  |  |  |
| Burtonwood | North West | 22 |  |  |  | \# | 20 |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 18 | 16 |  | 34 |  |  |
| Charnock Richard | North West | 35 | 15 | 16 |  | 20 | \# |  |  |  |  |  | 25 | 23 |  |  |  |  |  |  | 26 |  | 19 | 30 |  | 48 |  |  |
| Chester | North West | 39 |  |  |  |  |  | \# |  |  |  | 20 |  | 14 |  |  |  |  | 6 | 20 |  | 6 |  |  |  |  |  |  |
| Gretna (A74(M) Scotland) | Scotland |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  |
| Hartshead Moor | Yorkshire and North East | 24 |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  | 22 |  |  |  |  |  |  |  |  |  |  |
| Killington Lake (Southbound On | North West |  |  |  |  |  |  |  |  |  | \# |  | 26 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 15 |
| Knutsford | North West |  |  |  |  |  |  | 20 |  |  |  | \# |  | 7 | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lancaster (Forton) | North West |  | 25 | 28 |  |  | 25 |  |  |  | 26 |  | \# |  |  |  |  |  |  |  | 28 |  |  |  |  |  |  | 13 |
| Lymm | North West | 25 |  |  |  | 10 | 23 | 14 |  |  |  | 7 |  | \# |  |  |  |  |  |  |  |  |  |  |  | 26 |  |  |
| Sandbach | North West |  |  |  |  |  |  |  |  |  |  | 14 |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Southwaite | North West |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# | 27 |  |  |  |  |  |  |  |  |  | 12 |  |
| Tebay | North West |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 27 | \# |  |  |  |  |  |  |  |  |  |  |  |
| Terminus of A627(M) (Oldham) | North West | 6 |  |  |  |  |  |  |  | 22 |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |
| Terminus of M53 (Chester) | North West |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  | \# | 22 |  |  |  |  |  |  |  |  |
| Terminus of M53 (Wallasey) | North West |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  | 22 | \# |  |  |  |  |  |  |  |  |
| Terminus of M55 (Blackpool) | North West |  | 26 | 28 |  |  | 26 |  |  |  |  |  | 28 |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |
| Terminus of M56 (Chester) | North West |  |  |  |  |  |  | 8 |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |
| Terminus of M57/M58 (Switch Island) | North West | 39 |  |  |  | 18 | 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# | 35 |  | 52 |  |  |
| Terminus of M602 (M'cr City Centre) | North West | 13 | 32 | 18 |  | 16 | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 35 | \# | 38 | 26 |  |  |
| Terminus of M65 (Colne) | North West | 28 | 18 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 38 | \# |  |  |  |
| Terminus of M67 (Mottram \& Hyde) | North West | 17 | 35 | 30 |  | 34 | 48 |  |  |  |  |  |  | 26 |  |  |  |  |  |  |  |  | 52 | 26 |  | \# |  |  |
| Todhills | North West |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  | 12 |  |  |  |  |  |  |  |  |  |  | \# |  |
| Truckhaven (Carnforth) | North West |  |  |  | 5 |  |  |  |  |  | 15 |  | 12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |

4.5 Table 4.2 and Figure 4.1 show that in general coverage of MSAs in the North West is in accordance with the circular with only two routes; Charnock Richard and the Terminus of the M58 to the terminus of the M67 being further than 40 miles long.
4.6 A further nine routes have MSAs separated by less than 40 miles but more than 28 miles. It is recommended that these routes are noted but are not a priority for improvement. This still leaves the majority of the routes in the region fully compliant with policy set out in the Circular.
4.1 It has been identified that two routes in the region produce distances above 40 miles. Both of these routes converge at the M62 with the option of travelling in a clockwise or anticlockwise direction on the M60.

Table 4.3: Matrix Displaying MSA Separation in the Yorkshire \& Humber

| Motorway Service Area | Government Office Region |  | ¢ N 言 O |  |  |  |  |  |  |  | $\overline{\overline{0}}$ <br> 0 <br> 0 <br> 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Doncaster North | Yorkshire and Humber | \# |  | 20 |  | 25 | 14 |  | 21 |  | 26 | 42 |
| Durham | North East |  | \# |  |  |  |  |  |  | 63 |  |  |
| Ferrybridge | Yorkshire and Humber | 20 |  | \# | 23 |  |  | 24 | 26 | 18 | 31 | 20 |
| Hartshead Moor | Yorkshire and Humber |  |  | 23 | \# |  |  | 5 |  | 31 |  | 21 |
| Terminus of M180 (A15 Humber Br) | Yorkshire and Humber | 25 |  |  |  | \# | 16 |  |  |  |  |  |
| Terminus of M181 <br> (Scunthorpe) | Yorkshire and Humber | 14 |  | 26 |  | 16 | \# |  |  |  |  |  |
| Terminus of M606 (Bradford City Centre) | Yorkshire and Humber |  |  |  | 5 |  |  | \# |  | 32 |  | 22 |
| $\begin{aligned} & \text { Terminus of M62 (A63- } \\ & \text { Hull) } \\ & \hline \end{aligned}$ | Yorkshire and Humber | 21 |  | 24 |  |  |  |  | \# |  |  |  |
| Wetherby | Yorkshire and Humber |  | 63 | 18 | 31 |  |  | 32 |  | \# |  | 28 |
| Woodall | Yorkshire and Humber | 26 |  | 31 |  |  |  |  |  |  | \# | 27 |
| Woolley Edge | Yorkshire and Humber | 42 |  | 20 | 21 |  |  | 22 |  | 28 | 27 | \# |

## HIGHWAYS <br> AGENCY

4.2 Table 4.3 containing the data collected for MSAs in the Yorkshire \& Humber region show that generally coverage is under 40 miles between MSAs, with only two routes having MSAs spaced more than 40 miles apart.
4.3 The distance via the M1/M18 junction between Woolley Edge Services on the M1 and Doncaster North Services on the M18/180 junction is 42 miles and therefore above the 40 miles threshold.
4.4 The distance between Wetherby Services on the A1 (M) and Durham Services or the terminus off the A66 (M) are further than 40 miles apart. The matrix shows that these distances are 63 and 41 miles respectively which are above the threshold of 40 miles.
4.5 Whilst the distances mentioned above are greater than the threshold of 40 miles, much of the A1 separating them is not designated as Motorway and therefore is outside of the scope of this document. Therefore these distances are not representative of actual separations and therefore no further consideration need be given at this stage.
4.6 Despite being Non-Motorway at the present time, the A1 between Dishforth and Scotch Corner is to be upgraded to Motorway standard. Upon completion, there will be a separation of 63 miles between MSAs.
4.7 Overall, the Yorkshire and Humber is well-served by MSAs with a total of two routes having MSAs separated by more than 28 miles, of which only one is over 40.

Table 4.4: Matrix Displaying MSA Separation in the West Midlands


## HIGHWAYS <br> AGENCY

4.8 Table 4.4 shows that distances between Warwick Services on the M40 and Hilton Park or Norton Canes on the M6 and M6 Toll respectively are further than 40 miles when the route along the M42 to the east of Birmingham is taken. The matrix shows that these distances are 49 and 47 miles respectively which are above the threshold of 40 miles.
4.9 Table 4.4 also shows that the distance from the terminus of the M50 at Ross-on-Wye to Michaelwood services on the M5 is 56 miles.
4.10 Table 4.5 below shows 12 hour, 18 hour and 24 hour flows along the M42 on a weekday in June 2009. The level of traffic on this route provides evidence to support the need for a MSA in this location.

Table 4.5: Flows on the M42

| Flow Count | Northbound | Southbound |
| :---: | :---: | :---: |
| 12 Hour | 51779 | 31727 |
| 18 Hour | 49682 | 29737 |
| 24 Hour | 41772 | 24381 |

Table 4.6: Matrix Displaying MSA Separation in the East Midlands

| Motorway Service Area | Government Office Region | $\stackrel{\text { ® }}{\text { ¢ }}$ |  |  |  |  |  | $\overline{\overline{0}}$ <br> 3 <br> iol |  | $\overline{\bar{T}}$ <br> 0 <br> 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Corley | West Midlands | \# |  | 23 |  |  |  |  | 25 |  |
| Donington Park | East Midlands |  | \# | 17 |  |  |  | 11 |  |  |
| Leicester Forest East | East Midlands | 23 | 17 | \# |  |  |  |  | 23 |  |
| Newport Pagnell | South East |  |  |  | \# | 18 |  |  |  |  |
| Rothersthorpe | East Midlands |  |  |  | 18 | \# |  |  | 11 |  |
| Tibshelf | East Midlands |  |  |  |  |  | \# | 15 |  | 15 |
| Trowell | East Midlands |  | 11 |  |  |  | 15 | \# |  |  |
| Watford Gap | East Midlands | 25 |  | 23 |  | 11 |  |  | \# |  |
| Woodall | Yorkshire and North East |  |  |  |  |  | 15 |  |  | \# |

4.11 The Motorway Network in the East Midlands primarily consists of the M1 with sections of the M6, M69 and M45. Of these roads, only the M1 has MSAs along its length, of which there are six.
4.12 The data collected for MSAs in the East Midlands is displayed in Table 4.6 and shows that all service stations are separated by less than 40 miles.
4.13 The largest separation is 25 miles between Watford Gap and Corley Services, located in the West Midlands. The largest separation of MSAs that are both located within the East Midlands is between Leicester Forest East and Watford Gap at 23 miles.
4.14 As illustrated in Figure 4.1, all distances separating MSAs in the East Midlands are less than 40 miles and less than the 28 miles recommended by the Circular and it can be concluded that MSA provision in the region is fully compliant with the Circular.

Table 4.7: Matrix Displaying MSA Separation in the East of England

| Motorway Service Area | Government Office Region | $\begin{aligned} & \text { 믐 } \\ & \frac{\text { O}}{\tilde{\aleph}} \end{aligned}$ |  | $\begin{aligned} & \stackrel{0}{\tilde{\omega}} \\ & \stackrel{\rightharpoonup}{ \pm} \\ & \stackrel{\rightharpoonup}{0} \\ & \stackrel{\rightharpoonup}{0} \end{aligned}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\mathbb{D}} \\ & \frac{\ddot{U}}{1} \end{aligned}$ | $\begin{aligned} & \text { 을 } \\ & \text { 이 } \end{aligned}$ |  |  |  |  |  |  |  | 등 L ¢ F |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baldock | East of England | \# |  |  |  |  |  |  |  | 39 |  | 25 |  |  |  |
| Birchanger Green | East of England |  | \# |  |  |  |  |  |  | 56 |  | 31 |  | 31 |  |
| Clacket Lane | South East |  |  | \# |  |  | 64 |  |  |  |  |  | 51 | 22 | 80 |
| Fleet | South East |  |  |  | \# |  | 47 |  |  |  |  | 51 |  |  | 60 |
| Heston | South East |  |  |  |  | \# | 30 |  |  |  |  | 33 |  |  | 42 |
| London Gateway | South East |  |  | 64 | 47 | 30 | \# |  | 71 |  | 54 | 17 | 37 |  | 27 |
| Newport Pagnell | East Midlands |  |  |  |  |  |  | \# |  |  |  |  |  |  | 15 |
| Pease Pottage | South East |  |  |  |  |  | 71 |  | \# |  |  | 73 |  |  | 82 |
| Peterborough | East of England | 39 | 56 |  |  |  |  |  |  | \# |  |  |  |  |  |
| Reading | South East |  |  |  |  |  | 54 |  |  |  | \# | 54 |  |  | 63 |
| South Mimms | East of England | 25 | 31 |  | 51 | 33 | 17 |  | 73 |  | 54 | \# | 41 | 33 | 27 |
| Terminus of A404(M) (Maidenhead) | South East |  |  |  |  |  | 37 |  |  |  |  | 41 | \# |  | 50 |
| Thurrock | East of England |  | 31 | 22 |  |  |  |  |  |  |  | 33 |  | \# |  |
| Toddington | East of England |  |  | 80 | 60 | 42 | 27 | 15 | 82 |  | 63 | 27 | 50 |  | \# |

4.15 Table 4.7 shows that within the East of England region all the distances separating MSAs are less than the 40 mile threshold. The majority of these distances are also less than the 28 miles specified in the Circular and are therefore compliant with HA policy.
4.16 The routes which are above 28 miles but less than 40 are: Thurrock to South Mimms, South Mimms to Birchanger Green and Thurrock to Birchanger Green.
4.17 Significant cross-boundary issues have been identified at MSAs between the East of England and the South East regions. This is discussed in more detail in the South East results section.

Table 4.8: Matrix Displaying MSA Separation in the South East

| Motorway Service Area | Government Office Region | $\begin{aligned} & \text { 등 } \\ & \frac{\text { O}}{\tilde{N}} \\ & \hline \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{\mathbf{D}} \\ & \frac{\text { U }}{L} \\ & \hline \end{aligned}$ |  |  |  | त <br> $\sum_{0}^{0}$ <br> 2 <br> $\sum$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Terminus of M27 (Portsmouth) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baldock | East of England | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 39 |  |  | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beaconsfield | South East |  | \# |  |  |  | 48 | 33 | 15 | 24 |  |  |  |  | 25 | 55 |  | 37 |  | 27 |  | 24 |  |  |  |  |  | 49 |  |  |  |  | 22 | 13 |  | 7 |  | 36 |  |
| Birchanger Green | East of England |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  | 56 |  |  | 31 |  |  |  |  | 22 |  |  |  |  |  |  |  |  |  |  |  | 31 |  |  |
| Cherwell Valley | South East |  |  |  | \# |  |  |  |  |  |  |  |  |  | 18 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chievely | South East |  |  |  |  | \# |  |  |  |  |  |  | 12 |  |  |  |  | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Clacket Lane | South East |  | 48 |  |  |  | \# | 48 | 43 | 64 | 27 | 35 |  |  |  | 22 |  | 65 |  |  |  | 51 |  |  |  |  |  | 16 |  |  |  |  | 37 | 41 |  | 45 | 22 | 80 |  |
| Fleet | South East |  | 33 |  |  |  | 48 | \# | 28 | 47 |  |  |  |  |  | 54 |  | 27 |  | 51 |  |  |  |  |  |  |  | 48 |  |  |  |  | 21 | 26 |  | 30 |  | 60 | 23 |
| Heston | South East |  | 15 |  |  |  | 43 | 28 | \# | 30 |  |  |  |  |  | 50 |  | 30 |  | 33 |  | 17 |  |  |  |  |  | 55 |  |  |  |  | 18 | 4 | 5 | 12 |  | 42 |  |
| London Gateway | South East |  | 24 |  |  |  | 64 | 47 | 30 | \# |  |  |  |  |  | 71 |  | 54 |  | 17 |  | 37 | 6 |  |  |  |  | 63 |  |  |  |  | 38 | 27 |  | 21 |  | 27 |  |
| Maidstone | South East |  |  |  |  |  | 27 |  |  |  | \# | 45 |  |  |  |  |  |  |  |  | 23 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 31 |  |  |
| Medway | South East |  |  |  |  |  | 35 |  |  |  | 45 | \# |  |  |  |  |  |  |  |  |  |  |  |  |  | 17 |  |  |  |  |  |  |  |  |  |  | 26 |  |  |
| Membury | South East |  |  |  |  | 12 |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Newport Pagnell | South East |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 15 |  |
| Oxford | South East |  | 25 |  | 18 |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pease Pottage | South East |  | 55 |  |  |  | 22 | 54 | 50 | 71 |  |  |  |  |  | \# |  | 71 |  | 73 |  | 58 |  |  |  |  |  | 8 |  |  |  |  | 44 | 48 |  | 52 |  | 82 |  |
| Peterborough | South East | 39 |  | 56 |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reading | South East |  | 37 |  |  | 14 | 65 | 27 | 30 | 54 |  |  |  |  |  | 71 |  | \# |  | 54 |  | 18 |  |  |  |  |  | 65 |  |  |  |  | 31 | 30 |  | 34 |  | 63 |  |
| Rownhams | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  | 7 | 21 | 3 | 22 |  |  |  |  |  |  | 16 |
| South Mimms | East of England | 25 | 27 | 31 |  |  |  | 51 | 33 | 17 |  |  |  |  |  | 73 |  | 54 |  | \# |  | 41 |  |  | 23 |  |  | 70 |  |  |  |  | 40 | 30 |  | 25 | 33 | 27 |  |
| Stop24 (Folkestone) | South East |  |  |  |  |  |  |  |  |  | 23 |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |
| Terminus of A404(M) (Maidenhead) | South East |  | 24 |  |  |  | 51 |  | 17 | 37 |  |  |  |  |  | 58 |  | 18 |  | 41 |  | \# |  |  |  |  |  |  |  |  |  |  | 16 |  |  | 19 |  | 50 |  |


| Motorway Service Area | Government Office Region | 辰 |  |  |  | $\begin{array}{\|c} \frac{\lambda}{0} \\ \stackrel{0}{0} \\ \frac{\ddot{U}}{} \\ \hline \end{array}$ |  | $\begin{array}{\|l\|} \hline \stackrel{\rightharpoonup}{\mathbf{Q}} \\ \hline \mathbf{\omega} \\ \hline \end{array}$ |  |  |  |  |  |  | $\begin{aligned} & \frac{0}{0} \\ & \frac{0}{1} \\ & \hline \mathbf{~} \end{aligned}$ | 0 0 O 0 0 0 0 0 0 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { ᄃ } \\ & \text { O} \\ & \text { I } \\ & \overline{0} \\ & 0 . \\ & 1 \end{aligned}$ | $\begin{aligned} & \bar{\Phi} \\ & \stackrel{\omega}{\omega} \\ & \frac{0}{0} \\ & \vdots \\ & \vdots \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Terminus of M1 } \\ & \text { (London) } \\ & \hline \end{aligned}$ | South East |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Terminus of M10 (St. Albans) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  | 18 |  |
| Terminus of M11 (London) | South East |  |  | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 23 |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  | 24 |  |  |
| Terminus of M2 (Faversham) | South East |  |  |  |  |  |  |  |  |  |  | 17 |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Terminus of M20 (Folkestone) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  |  |  |  | \# |  |  |  |  |  |  |  |  |  |  |  |  |
| Terminus of M23 <br> (Gatwick Airport) | South East |  | 49 |  |  |  | 16 | 48 | 55 | 63 |  |  |  |  |  | 8 |  | 65 |  | 70 |  |  |  |  |  |  |  | \# |  |  |  |  | 37 | 41 |  | 45 |  | 75 |  |
| Terminus of M27 <br> (New Forest) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 |  |  |  |  |  |  |  |  |  | \# |  | 7 |  |  |  |  |  |  |  |  |
| Terminus of M27 (Portsmouth) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 21 |  |  |  |  |  |  |  |  |  |  | \# |  | 3 |  |  |  |  |  |  | 33 |
| Terminus of M271 <br> (Soton Docks) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  | 7 |  | \# |  |  |  |  |  |  |  |  |
| Terminus of M275 <br> (Portsmouth Docks) | South East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 22 |  |  |  |  |  |  |  |  |  |  | 3 |  | \# |  |  |  |  |  |  | 34 |
| Terminus of M3 (London) | South East |  | 22 |  |  |  | 37 | 21 | 18 | 38 |  |  |  |  |  | 44 |  | 31 |  | 40 |  | 16 |  |  |  |  |  | 37 |  |  |  |  | \# | 16 |  | 19 |  | 50 |  |
| Terminus of M4 (Heathrow Airport) | South East |  | 13 |  |  |  | 41 | 26 | 4 | 27 |  |  |  |  |  | 48 |  | 30 |  | 30 |  |  |  |  |  |  |  |  |  |  |  |  | 16 | \# |  | 9 |  | 40 |  |
| $\begin{aligned} & \text { Terminus of M4 } \\ & \text { (London) } \end{aligned}$ | South East |  |  |  |  |  |  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \# |  |  |  |  |


4.18 Table 4.8 shows that long separation between MSAs in the South East is an issue with around a third of separations being higher than the 40 mile threshold.
4.19 The majority of issues are located around the west side of the M25 with another large gap between Medway and Maidstone services.
4.20 It is understood that there are proposals for a new MSA on the M25 at Cobham.
4.21 Table 4.9 below shows the average 12 hour, 18 hour and 24 hour flows along the anti-clockwise M25 between the M3 and M23 at Cobham in 2007. The level of traffic on this route provides evidence to support the need for a MSA in this location.

Table 4.9: Flows on the anti-clockwise M25 at Cobham

| Flow Count | Northbound |
| :---: | :---: |
| 12 Hour | 59043 |
| 18 Hour | 73996 |
| 24 Hour | 78235 |

4.22 Table 4.10 displays the separations which will be remedied by the construction of Cobham services.

Table 4.10: Separations reduced to below 40 miles by Cobham Services

| From | To |
| :---: | :---: |
| Pease Pottage | Beaconsfield |
| Pease Pottage | Toddington |
| Pease Pottage | South Mimms |
| Pease Pottage | London Gateway |
| Pease Pottage | Fleet |
| Pease Pottage | M4 Heathrow Spur |
| Pease Pottage | Reading |
| Pease Pottage | A404(M) |
| M23 Gatwick Spur | Beaconsfield |
| M23 Gatwick Spur | Toddington |
| M23 Gatwick Spur | South Mimms |
| M23 Gatwick Spur | London Gateway |
| M23 Gatwick Spur | Fleet |
| M23 Gatwick Spur | M4 Heathrow Spur |
| M23 Gatwick Spur | Reading |
| M23 Gatwick Spur | A404(M) |
| Clacket Lane | Beaconsfield |
| Clacket Lane | Toddington |
| Clacket Lane | South Mimms |
| Clacket Lane | London Gateway |
| Clacket Lane | Fleet |
| Clacket Lane | M4 Heathrow Spur |
| Clacket Lane | Reading |
| Clacket Lane | A404(M) |
|  |  |
|  |  |
|  |  |

4.23 A new MSA at Cobham would not solve the separation issues for all the problem routes identified.

Table 4.11 displays the routes which would still have MSAs separated by more than 40 miles.
Table 4.11: Separations reduced to below 40 miles by Cobham Services

| From | To |
| :---: | :---: |
| Toddington | Fleet |
| Toddington | Heston |
| Toddington | Reading |
| Toddington | A404(M) |
| South Mimms | Fleet |
| South Mimms | Reading |
| South Mimms | A404(M) |
| London Gateway | Fleet |
| London Gateway | Reading |

Table 4.12: Matrix Displaying MSA Separation in the South West

| Motorway Service Area | Government Office Region | $\begin{aligned} & \overline{\mathbf{y}} \\ & \sum_{0}^{0} \\ & . \overline{0} \\ & \hline \mathbf{0} \\ & \hline \end{aligned}$ | 흠 틍 $\overline{\overline{3}}$ 0 | $\begin{array}{r} \stackrel{\rightharpoonup}{\mathbf{\omega}} \\ \stackrel{\rightharpoonup}{\underset{\omega}{w}} \\ \hline \end{array}$ | $\begin{aligned} & \circ \\ & \stackrel{0}{7} \\ & \text { 흉 } \\ & \hline \end{aligned}$ |  |  | $\begin{aligned} & \text { D } \\ & \frac{3}{3} \\ & \frac{0}{0} \\ & \stackrel{C}{0} \\ & \dot{N} \end{aligned}$ | 흥 $\stackrel{6}{0}$ O © © | 3 <br>  <br>  <br> 0 <br> 0 <br> 0 <br> 0 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bridgwater | South West | \# |  |  |  |  |  |  | 13 |  | 12 |  |  |
| Cullompton | South West |  | \# | 12 |  |  |  |  |  |  | 15 |  |  |
| Exeter | South West |  | 12 | \# |  |  |  |  |  |  |  |  | 4 |
| Gordano | South West |  |  |  | \# | 28 | 16 | 19 | 19 | 14 |  | 16 |  |
| Leigh Delamere | South West |  |  |  | 28 | \# | 35 | 28 |  | 24 |  | 24 |  |
| Magor (Wales) | Wales |  |  |  | 16 | 35 | \# | 24 |  | 11 |  | 20 |  |
| Michaelwood | South West |  |  |  | 19 | 28 | 24 | \# |  | 14 |  | 18 |  |
| Sedgemoor | South West | 13 |  |  | 19 |  |  |  | \# |  |  |  |  |
| Severn View | South West |  |  |  | 14 | 24 | 11 | 14 |  | \# |  | 12 |  |
| Taunton Deane | South West | 12 | 15 |  |  |  |  |  |  |  | \# |  |  |
| Terminus of M32 (Bristol City Centre) | South West |  |  |  | 16 | 24 | 20 | 18 |  | 12 |  | \# |  |
| Terminus of M5 (Exeter) | South West |  |  | 4 |  |  |  |  |  |  |  |  | \# |

4.24 Table 4.12 shows that within the South West region all the distances separating MSAs are under the 40 mile threshold.
4.25 The majority of separations between MSAs in the South West are fully compliant with HA policy by being less than 28 miles with the exception of one. Leigh Delamere on the M4 and Magor Services on the M4 in Wales are separated by 35 miles.
4.26 The M4 and M5 are important constituents of the Motorway Network and are served by MSAs separated by less than 28 miles. Therefore it can be concluded that provision of MSAs in the South West region is adequate.
4.27 However, when considering cross regional border issues reference needs to be made to the West Midlands report and the Gap Identified between the terminus of the M50 at Ross-on-Wye and Michaelwood services on the M5.

## 5 Conclusions and Recommendations

## Conclusions

5.1 This report has brought together the results of eight regional report produced to understand the provision of Strategic Road Network Service Areas. The focus of this report is the gaps in the provision of MSAs on the HA's network, with a view to making recommendations for new MSAs.
5.2 In general, the Motorway Network is well served by MSAs located less than 40 miles apart. There are however a number of stretches of Motorway which exceed the 40 mile separation and therefore are considered to be a priority. The following provides the conclusions of this report region by region.

## North East

5.3 No requirements at this time but there may be some need for cross boundary coordination with the Yorkshire and Humber region.

## North West

5.4 In the North West, Charnock Richard and the terminus of the M58 to the terminus of the M67 are both routes further than 40 miles long with no MSA provision. There are a further nine routes above the 28 mile threshold
Yorkshire and Humber
5.5 Despite being non-motorway at the present time, the A1 between Dishforth and Scotch Corner in the Yorkshire \& Humber region is to be upgraded to Motorway standard. Upon completion, there will be a separation of 63 miles between MSAs.

## West Midlands

5.6 In the West Midlands region, the routes between Warwick services and Norton Canes on the M6 Toll and Warwick services and Hilton Park on the M6 are also routes with MSAs spaced more than 40 miles apart.

## East Midlands

5.7 No requirements at this time.

## East of England

5.8 The results show that Motorway Network within the East of England region provides an adequate coverage of MSAs. However, the results highlight a need to coordinate future plan with the South East region in order to achieve an outcome that resolves the issues that have been identified South East
5.9 The western stretch of M25 is poorly served by MSAs which will only be partially rectified by a new MSA at Cobham.

## South West

5.10 With sections in both the West Midlands and South West regions, the route from the terminus of the M50 at Ross-on-Wye to Michaelwood services on the M5 lies above the 40 mile threshold

## Recommendations

5.11 The HA will need to facilitate cross-boundary working so that a co-ordinated approach can be taken. Regions such as the Yorkshire and Humber and North East will need to work together as the $A 1(M)$ is completed to ensure appropriate provision of MSAs. Similarly, the East of England and South East regions should work closely together to ensure the needs of both are incorporated into future plans.
5.12 This study has only been concerned with the geographical location of MSAs and has not sought to validate the provision of services and facilities.
5.13 As part of taking forward recommendations consideration should be given to the location of new MSAs in relation to the local authority boundaries and the need for inclusion in the respective Local Development Frameworks. Further work will be required for identifying appropriate sites for providing MSAs. This should involve the respective local authorities early in the process to identify sustainable, available and viable sites.

## Figures



Motorway Service Station Gap Analysis National Overview - Distance between MSA's


| Key |  |
| :---: | :---: |
|  | GO Regions |
| $\square$ | Areas |
|  | A-Roads |
|  | National MSA's |
|  | MSA Gaps |
|  | Number of Routes > 40 miles separation |
|  | 0 |
| - | 1-10 |
| $\underline{\square}$ | 10-20 |
| --..-. | 20+ |

## Appendix A



Highways Agency Publications Code PR272/09

## © Crown Copyright 2010

## Email: roadside_facilities@highways.gsi.gov.uk

