

Traffic Signs Policy Paper

October 2011



Signing the Way



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Foreword



Great Britain has one of the safest road networks in the world and the quality and clarity of our traffic signs (including traffic signals and road markings) make a significant contribution to this. This report sets out the recommendations of the national traffic signs policy review, the most significant undertaken by this Department in over forty years, which builds on the strengths of the current system and sets out new policies that will help meet the challenges of tackling congestion and improving the environment on our roads.

To maximise road user understanding, the current traffic sign system is built on strong prescription and regulation to ensure nationally consistent sign design and application. The review provides a framework for a new system which retains national consistency, but provides significantly more discretion and freedom for local authorities to design and deliver traffic signs that meet local needs. In doing so, the review will reduce the need for central government approval of non-standard signing, reducing costs and allowing local authorities the flexibility to deliver timely traffic management solutions.

The review recognises that our travel behaviour is changing over time as we make more informed and sustainable transport choices. The traffic sign system needs to reflect these changes and this review provides a range of proposals for improved signs and traffic signals that will promote safer cycling and help pedestrians.

On the other hand, poorly designed and placed traffic signs and their over-provision detract from the environment, and affect road safety by distracting the road user. The review sets out a clear framework for the removal of unnecessary signing, traffic signals and road markings to make our roads safer, more attractive, and easier to use.

“Signing the Way” provides a vision of a simpler and more flexible regulatory framework for traffic signs, and sets out a forward programme of work to deliver that vision. I look forward to continuing to engage with road users, local authorities and other interested parties to make a reality of this vision.

A handwritten signature in blue ink that reads "Norman Baker". The signature is written in a cursive, flowing style.

Norman Baker MP

Parliamentary Under Secretary of State for Transport

1. Executive Summary

- 1.1 This document sets out a policy framework for ensuring that the traffic sign system in Great Britain meets the future needs of all road users, while building upon the existing and established traffic sign system. It sets out recommendations for improving the information that traffic signs communicate to road users by providing more freedom for decisions about signing at the local level.
- 1.2 The review process has been informed and managed by the large numbers of key stakeholders involved in this project, and many of these have directly contributed to the large amount of research that has been undertaken. This data collection and research programme has been a major undertaking and has provided a substantive evidence base for the review, ranging from the consideration of the effectiveness of area-wide parking controls to the consideration of the potential for traffic signs to be delivered within the planning framework.
- 1.3 This research shaped a series of wide-ranging recommendations set out below.

Provide more flexibility for local authorities

- 1.4 While it is essential that there is national consistency in traffic sign design, to ensure motorists and other road users understand the messages that signs provide, the current level of prescription that the Traffic Signs Regulations and General Directions (TSRGD) require can be a barrier to local authorities working effectively. The review sets out recommendations to reduce this level of prescription by:
 - providing more flexible regulation to enable more choice
 - reducing the requirements for Secretary of State approvals of non-prescribed signing
 - further deregulating lighting requirements for signing to help reduce energy costs and environmental impact
 - making TSRGD more user friendly
 - retaining national consistency to help ensure essential road user understanding

Reduce signing on the road network

1.5 Traffic signs can clutter the highway network if used to excess. Traffic sign clutter is unattractive and is a potential distraction to road users. The review provides a range of measures to improve this negative effect of signing by:

- setting a clear policy context for only placing traffic signs where they are required;
- recommending that local authorities take a wider policy approach to designing and delivering traffic signs which positively impact on the local environment;
- providing guidance on the different techniques for auditing of traffic signs and the removal of unnecessary signs;
- reducing the regulatory requirement for placing combinations of traffic signs and road markings;
- providing thresholds below which it will be unnecessary to provide some repeater signs;
- permitting more flexibility in the use of repeater signs on red routes; and
- providing smaller signs for cyclists where appropriate.

Deliver effective enforcement

1.6 Regulatory traffic signs give effect to Traffic Regulation Orders (TROs). To ensure that traffic signs contribute to effective enforcement, the review delivers recommendations that:

- enable local authorities to design parking signs that meet local needs;
- simplify the TRO process;
- reduce regulation to allow local authorities to target the publicity of their TROs more effectively and to reduce costs;
- relax the regulatory requirements for parking bays, and other parking related road markings, that lead to confusion and challenge to the enforcement process;
- give greater consideration to the design and placing of some regulatory traffic signs;
- provide new parking sign guidance that will emphasise the benefit of providing simple restrictions and simple signing;
- allow more flexibility for the provision of 20mph schemes; and
- improve the public understanding of the signing of traffic restrictions.

Traffic signs for all road users

1.7 The review recognises that travel behaviour is changing as people make more sustainable choices. The review provides a range of proposals for improved signs and traffic signals that will promote more sustainable travel, safer cycling and help pedestrians by:

- designating dedicated parking places for electric vehicles and car clubs;
- providing safer cycling at signalised junctions;
- introducing new signing to encourage greater use of contra-flow cycling;
- giving better cycle route information on signs and road markings;
- promoting cycling by indicating cycle journey times on destination signing;
- trialing new cycling schemes, including cycle safety mirrors; and
- providing new facilities for pedestrians at road crossings and junctions.

Provide road users with better information

1.8 Traffic signs provide road users with the essential information that they require to use the road network. The review will help ensure better information is provided including new traffic signs to inform road users that:

- there is disruption on other travel networks;
- travel conditions may be adversely affected by bad weather;
- the road ahead is unsuitable for HGVs;
- the road user is entering a shared space traffic management scheme;
- there is an advisory part-time 20mph speed limit in the vicinity of a school;
- there is risk of skidding and maximum speed of 20 mph is advised on a road with loose chippings;
- the road ahead is blocked by a temporary obstruction.

Develop local solutions built on local knowledge

1.9 The Government believes that interventions at the local level can provide significant improvements to the transport network. The review makes a

number of recommendations that will increase the involvement of the local community in the level and design of signing by:

- encouraging better consultation for local residents for some traffic and parking restrictions;
- setting out in guidance that the design and placing of traffic signs should form part of this consultation;
- ensuring that the publicity relating to TROs is more targeted;
- encouraging local community audits of traffic signs;
- providing new guidance on mapping traffic restrictions, so that the description of new traffic restrictions is more accessible.

Implementation

1.10 The Department will implement these recommendations in stages. Amendments to TSRGD will come into force in November 2011 and will reduce the administrative burden on local authorities by prescribing many of the non-prescribed traffic signs that are frequently authorised by the Department. The Department will undertake a full revision of TSRGD, to implement the more substantive regulatory changes, as a priority. This is a major undertaking and it is unlikely that the new TSRGD will be completed before 2014. However, the Secretary of State will use his powers of authorisation to make many changes in the interim.

2. Introduction

The traffic sign system

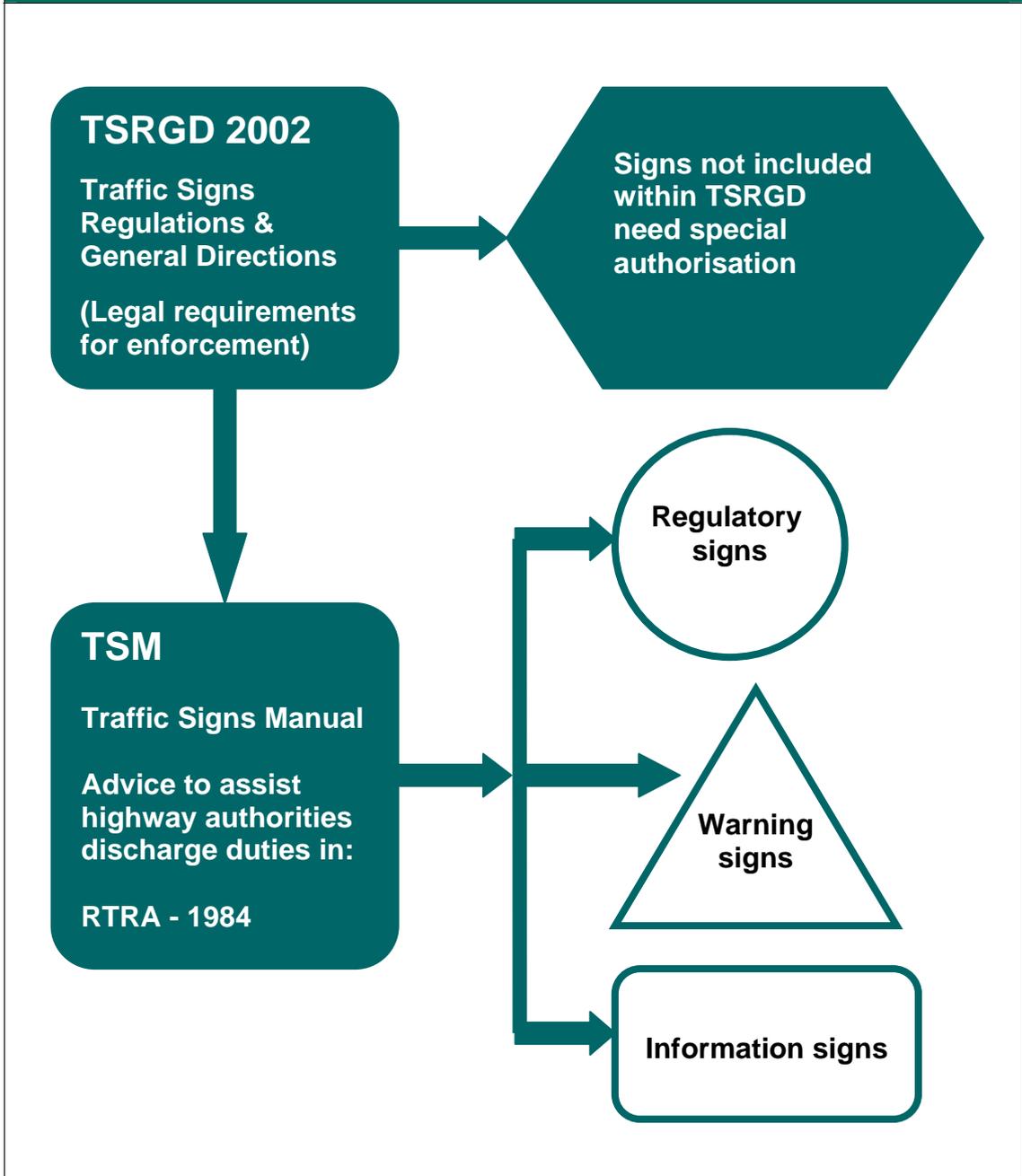
- 2.1** Traffic signs are important. An effective traffic signing system is vital for road safety and for the efficient use of the road network. Road users rely on traffic signs to navigate the road network, to provide them with warnings of hazards and to clearly inform them of traffic and parking restrictions and prohibitions.
- 2.2** It is widely acknowledged that Great Britain has one of the best and safest road networks and the quality and clarity of our signs, signals and road markings play a key role. A nationally consistent traffic sign system has helped deliver signs that are instantly recognisable and many have become a familiar part of our everyday lives. This consistency has been delivered through legislation and guidance which ensure that traffic signs can be seen and readily understood under all common road conditions.

Legislation

Road Traffic Regulation Act (RTRA) 1984

- 2.3** The RTRA provides the legislative framework for traffic signs. Section 64 of the Act defines a traffic sign as "an object or device for conveying, to traffic on roads or any specified class of traffic, warnings, information, requirements, restrictions or prohibitions of any description."
- 2.4** The RTRA also provides that for a traffic sign to be lawfully placed on the highway in Great Britain, it must be either:
- a. specified by Regulations. The Department prescribes the traffic signs that may be erected on any road by means of TSRGD (which are made under sections 64, 65 and 85(2) of the RTRA), the latest version of which was published in 2002, or;
 - b. authorised by the Secretary of State, Scottish Ministers and the Welsh Government. Special sign authorisations for non-prescribed signs are provided on a case by case basis to local authorities on application.

Figure 2.1 – the traffic sign system



Advice

- 2.5** The Traffic Signs Manual gives advice to local authorities and their agents on the correct design and use of signs and road markings. In total, it consists of eight chapters in separate documents, dealing with individual topics. Currently, six chapters, comprising seven documents, are available:

| Chapter | Traffic Signs Manual |
|------------|--|
| Chapter 1: | "Introduction" 1982 (Reprinted May 2004) |
| Chapter 2: | "Directional and Informatory Signs" (in preparation) |
| Chapter 3: | "Regulatory Signs" 2011 |
| Chapter 4: | "Warning Signs" 2004 |
| Chapter 5: | "Road Markings" 2003 |
| Chapter 7: | "The Design of Traffic Signs" 2003 |
| Chapter 8: | "Traffic Safety Measures and Signs for Road Works and Temporary Situations" 2006 Part 1: Design Part 2: Operations |

- 2.6** Chapter 1 of the Manual is undergoing final revision following a peer review. This revision will particularly focus on providing good sign mounting practice to reduce sign clutter and to help traffic signs positively contribute to the streetscape. Chapter 5 is being revised to reflect the Amendment Regulations 2011, as set out in paragraph 4.8, and other changes. Further changes to the Manual will be provided to take on board the regulatory and policy changes arising from this paper.

Purpose of signs and responsibilities

- 2.7** The only specific statutory requirement for local authorities to place traffic signs is that they must provide signs that are adequate to indicate the provisions of TROs. TROs are made under the requirements of the RTRA and decisions on what restrictions should be applied and signed are a matter for local discretion.

- 2.8** All local authorities are required to ensure that traffic signs are maintained so that they can be seen by road users. This stems from their general "duty of care" as set out in Section 122 of the RTRA, together with their statutory responsibility for maintaining the highway.

Issues with the current system

- 2.9** The legal framework for traffic signing is comprehensive and has served highway authorities well since the first modern edition of TSRGD in 1964. Road users have benefitted from the resulting consistency across the country of both the appearance of signs and their use. However the latest edition of TSRGD, produced nearly ten years ago, does not reflect the significant innovation in traffic engineering or the policy changes that local authorities have made to manage their roads more effectively.
- 2.10** TSRGD has also reached its practical limits. It currently prescribes over 860 traffic signs and provides hundreds of permitted variations. This high level of regulation can be a barrier to the delivery of local transport schemes that reflect local needs. Issues have been identified in the review include:
- TSRGD places an unnecessary burden on local and central Government – it does not provide sufficient flexibility for local authorities to deliver certain traffic management schemes that are introduced on a regular basis. This results in over 500 requests for special signs authorisations to the Secretary of State each year;
 - it is essentially reactive and does not promote innovation and creative solutions. There have been several recent initiatives that local authorities have wanted to trial to promote sustainable transport, such as permitting cycling across zebra crossings in order to provide continuous cycle facilities, that are not permitted under the current pedestrian crossing regulations (the "Zebra, Pelican and Puffin Pedestrian Crossings Regulations and General Directions 1997");
 - it reduces the role and responsibility of local authorities in delivering traffic signs and schemes that meet local needs; and
 - the complexity of TSRGD is a practical barrier to implementation of the appropriate design of traffic signs on the highway.

3. The Traffic Signs Policy Review

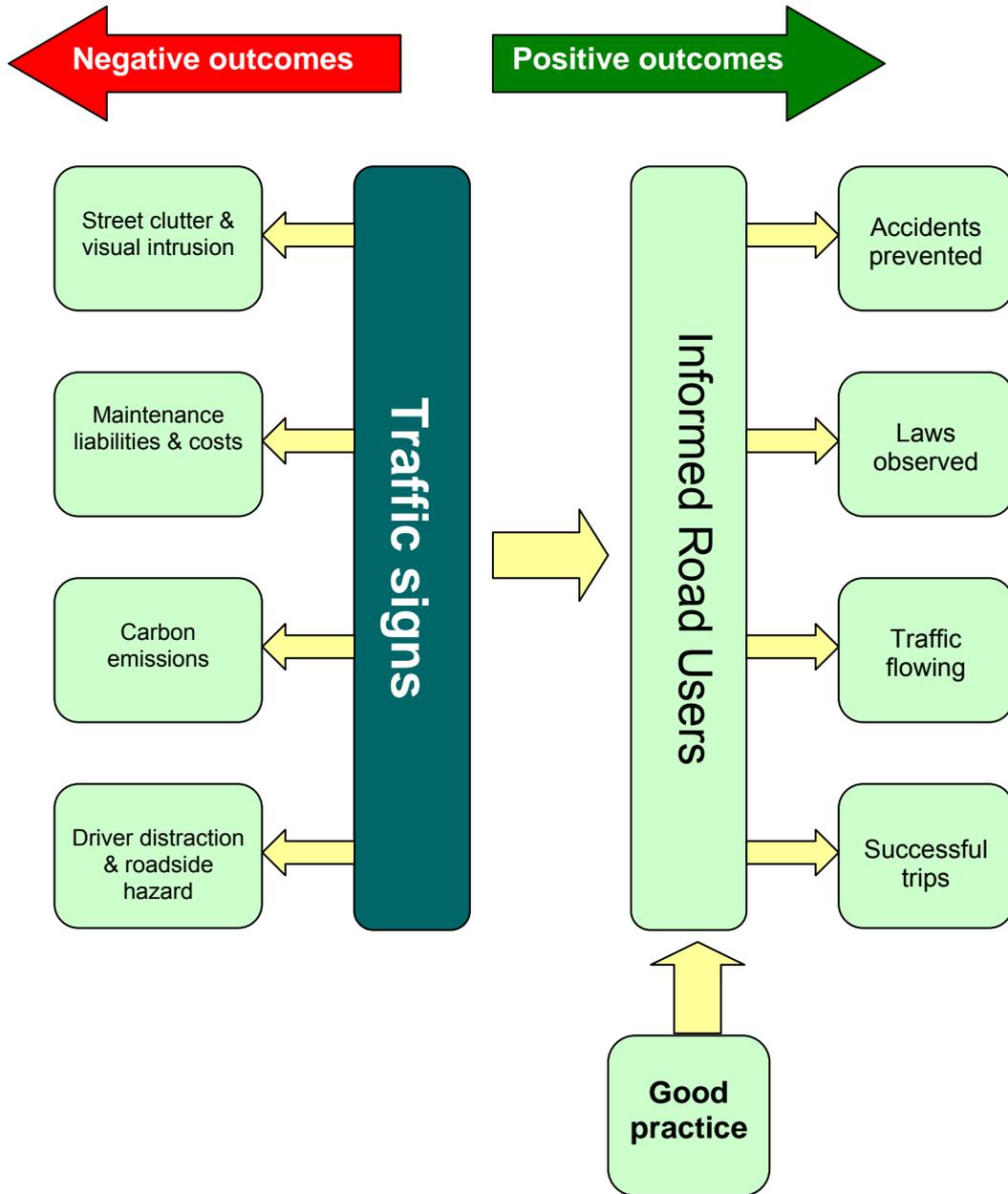
Introduction

- 3.1** A wide ranging traffic signs policy review was launched in September 2008. This was a radical departure from the usual and reactive practice of simply updating TSRGD when required. The principal objective was to consider whether TSRGD was fit for purpose and, if it was not, in what form it should be provided to deliver a 21st century traffic sign system.
- 3.2** The process was led and managed by a steering group comprising representatives from the key interested partners. The group included members from the road user organisations, local authorities, the devolved administrations, design and environment agencies, enforcement agencies and the police and relevant professional bodies. They helped develop an action plan (see Annex A) which was reviewed and agreed by Ministers in May 2010. This plan provides the basis for the review recommendations.

Objectives

- 3.3** Traffic signs, signals, and road markings are the key method for communicating with the road user when it matters most and need to be simple and concise so as to be easily understood. Information not only alerts road users to the conditions on the roads, but should also stimulate an appropriate response. For example, road markings contribute to safety by clearly defining the path to be followed through hazards, by separating conflicting movements and by delineating the road edge on unlit roads at night.
- 3.4** The way that traffic signs are designed and placed is also critical to the way that roads look, how they are used and how restrictions and prohibitions are enforced. Figure 3.1 illustrates the contribution that traffic signs can make, both positively and negatively, to the delivery of transport policy. Poorly designed and placed traffic signs and their over-provision detract from the environment and could affect road safety by distracting the road user.

Figure 3.1 The wider transport impact of traffic signs



- 3.5** The over-arching objective for the review reflects this policy context and places an emphasis on meeting the needs of road users, as shown below.

"To develop a traffic sign system that will both meet the changing needs of road users and provide effective tools for the better management of the road network, incorporating new technologies and minimising the impact on the environment."

The review approach to better signing

- 3.6** Published in January 2011, the White Paper "Creating Growth, Cutting Carbon" ("the White Paper") sets out the Government's vision for a transport system that devolves responsibility for local transport to the local level. The traffic signs policy review aims to support this by providing a framework for reducing regulation and to enable more choices to be made by local authorities.
- 3.7** Working groups were established to support the steering group by delivering the Action Plan relating to the three core policy areas:
- Road user information - traffic conditions have changed significantly over the last ten years and traffic signs need to keep pace with that change to provide the best information possible to all road users.
 - Enforcement - clear signing helps people stay out of trouble by helping them comply with traffic regulations and it enables effective enforcement when people do break the rules. Signing of parking rules, particularly since the widespread introduction of civil enforcement powers, has been particularly contentious and provided a clear reference point for the review.
 - Environment – was a key issue for the review because of the double dividend of energy and environmental savings that could arise from reduced signing and regulatory requirements for lighting.
- 3.8** In support of the action plan, the Department has undertaken a wide variety of research and fact gathering through the working groups. This research has been a major undertaking and has determined the length of the review programme timetable. The research includes:
- consideration of possible links between traffic signs and the planning system;
 - auditing techniques and the removal of unnecessary traffic signs;

- consideration of traffic sign design processes;
- a review of the structure and content of TSRGD;
- lighting requirements for traffic signs;
- mapping systems to indicate traffic controls;
- the economic assessment of changes to the TRO process;
- the public understanding of traffic signs;
- the effectiveness of area-wide parking controls; and
- cycling through signalised junctions.

3.9 We are grateful for the contribution from all the partners who have assisted the process, including the British Parking Association (BPA), English Heritage, the Institute of Highway Engineers, the road user organisations and those cycling groups who helped develop recommendations and outcomes that meet the needs of the users. A full list of the organisations that participated in the steering and working groups is provided at Annex B.

3.10 A sounding board of interested parties and individuals was also established and they provided invaluable support to the working groups in developing the scope and defining the problems that the review addressed.

4. Reducing Regulation

Introduction

- 4.1** Devolving responsibility for local transport to the local level is a key part of the Government's transport agenda. The White Paper set out the Government's strategy to allow local authorities to determine their own solutions, tailored for the specific needs and behaviour patterns of their own communities, to a much greater degree than hitherto.
- 4.2** The review aims to deliver an overall shift in approach and development of traffic sign delivery. The current model is based on a system that depends upon traffic sign designers being primarily directed by regulation and guidance. The review seeks to shift this balance to increase the inter-relationship between engineering and local knowledge with regulation and guidance becoming less imposing and prescriptive.

TSRGD and national consistency

- 4.3** The fundamental question for the review was the role and scope of TSRGD. The partners in the review were asked to consider whether the current highly regulated signing system provided the basis of a 21st century signing system. The BPA conducted a survey of their members and 94% of the 120 respondents, including many local authorities, stated that TSRGD was essential for promoting national consistency in the provision of traffic signs and road markings. These views were strongly supported by all stakeholders within the review process.
- 4.4** While the support for the role of TSRGD was strong, there was also a strong call for change in the level of prescription. Over 55% of the BPA respondents considered that some of the regulatory requirements should be relaxed and substituted by guidance and advice on good practice. The challenge for the review has been to maintain national consistency while providing for more innovation and local variations where consistency is not essential.

Less regulation, more flexibility

4.5 We have undertaken a thorough review of the regulatory framework for the traffic sign system. Some of the leading practitioners in the traffic signs industry were commissioned to review TSRGD to highlight where there are barriers to local performance and to consider ways to rationalise the structure and content. Other workstreams from the review have also helped develop proposals which will reduce regulation and provide more flexibility by:

- reducing the regulatory requirement for signing – by relaxing a variety of directions which currently prescribe the conditions for placing signs (see paragraphs 6.12 to 6.17);
- reducing the regulations for parking signs – parking signs are currently amongst the most highly regulated of traffic signs. Paragraphs 7.14 to 7.15 sets out our proposals to significantly improve local authorities' ability to deliver parking schemes that are tailored to local needs;
- improving effective enforcement – the removal of unnecessary regulation for parking bays and other road markings will provide local authorities with greater design freedom and reduce technical appeals against penalty charge notices (see paragraphs 7.16 to 7.18);
- further deregulating the requirement to light traffic signs (see paragraphs 6.21 to 6.25);
- supporting vulnerable road users – the new TSRGD will incorporate measures to help motorcycles and pedestrian safety (see paragraphs 5.45 to 5.47);
- reducing regulation to provide more choice - the new TSRGD will provide a menu approach for directional and other sign categories, which will reduce the number of prescribed signs and provide more flexibility (see paragraphs 4.11 to 4.12);
- promoting innovation - for example, there will be powers to ensure that the Secretary of State can approve trials of new technologies and sign designs (see paragraphs 5.39 to 5.40, for example);
- removing regulatory barriers - for example, the cycling chapter (see paragraphs 5.34) sets out our proposals for making revisions to allow more flexibility at traffic signal stop-lines;
- reducing administrative burdens - by providing sufficient flexibility, it will further reduce the requirement for central government approvals for non-prescribed traffic signs (see paragraphs 4.7 to 4.10);
- provide more and better information to road users – by better design of road work signs and by increasing freedom to provide wider

transport network information on variable message signs (see paragraphs 5.16 to 5.18), including messages to promote public transport alternatives in carefully selected locations;

- remove type approval requirements for certain traffic signal equipment – to allow local authorities more discretion to purchase equipment that meets their needs (see paragraphs 4.14 to 4.16); and
- making TSRGD as accessible as possible - by structuring it in a format that is as user-friendly as possible (see paragraph 4.12 to 4.13).

4.6 These recommendations are discussed in more detail throughout this document. These are significant changes and will take time to deliver. Annex C sets out the delivery programme for the review.

Reducing the need for special signs authorisations

4.7 Figure 4.1 illustrates how the number of special signs authorisations provided by the Department has increased steadily since TSRGD was introduced in 2002.

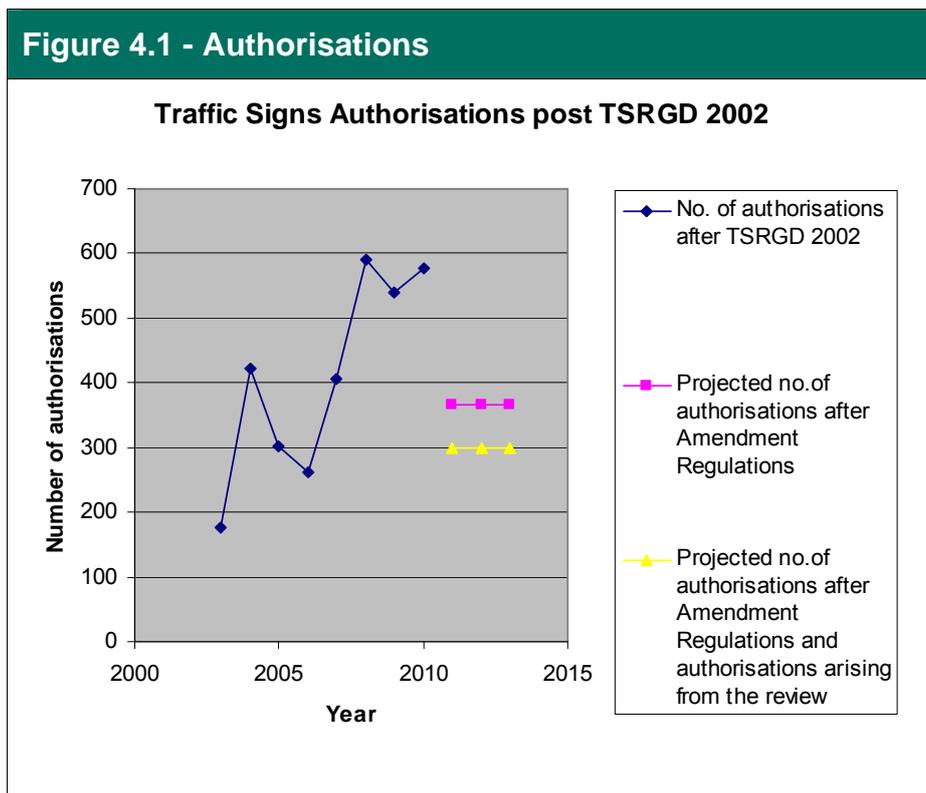
4.8 As an early win for the review, the Department is providing Amendment Regulations to TSRGD which will come in to force in November 2011 to reduce the burden on local authorities before the main review recommendations are taken forward. These amendments will prescribe many of the traffic signs that are regularly requested by local authorities through the authorisation process. We estimate that this will reduce the number of signs requiring authorisation by 40% per year.

4.9 To reduce casework further, we have provided local authorities with authorisations which will further reduce the number of authorisation requests per annum as part of the traffic signs policy review announcement. The combination of this, together with the Amendment Regulations, should reduce the expenditure for all local authorities by about £100,000 per annum on preparing signs authorisations and possibly save the equivalent of two DfT full-time staff.

4.10 We have been working with the London Borough of Sutton, the transport vanguard authority for the Big Society, to improve the transparency of the traffic signs authorisation process. As a result, traffic signs authorisations will be placed on the DfT's web-site from January 2012. This will provide a reference for the authorisations that the DfT has issued to facilitate wider awareness and promote good practice.

The Revised TSRGD

4.11 As a result of the review, the next TSRGD will be significantly different in both context and form. As part of our commitment to reduce regulatory and administrative burdens, we will reduce the requirement for signs authorisations by making TSRGD sufficiently flexible to meet most of the current signing requests. It will, for instance, prescribe the conditions for placing traffic mirrors and 'Stop' signs which can currently only be provided with the consent of the Secretary of State. Local authorities will also be able to introduce traffic management measures, such as high occupancy vehicle lanes, off-side bus lanes, and low emission zones, which have been developed since TSRGD 2002 without requiring special signs authorisation. Such decisions should be made in context of the local transport network and with consideration of the impacts that these measures may have on other road users.



4.12 The revised TSRGD will be structured to provide a more user-friendly and accessible document. The layout will be changed and there will be a reduction in the number of the traffic signs prescribed to make it easier to use. There will be more variants provided, in menu-style formats, to allow more flexibility for the sign designer where appropriate. For example, there are a significant number of map type directional signs presented within the current TSRGD. This number could be substantially reduced and simplified by the provision of a toolkit approach which prescribes the

common elements but leaves the design and construction of the sign to the designer. Annex D provides an illustration of how some revisions to TSRGD could be presented, so as to provide a more concise and flexible approach.

- 4.13** The "Zebra, Pelican and Puffin Pedestrian Crossings Regulations and General Directions 1997" will be updated and consolidated into TSRGD, to provide a single concise set of regulations.

Type approval

- 4.14** Type approval for traffic control equipment is a statutory duty under Direction 56 of TSRGD 2002. This duty is carried out by the Highways Agency (HA) on behalf of the Secretary of State. Type approval helps to ensure that traffic control equipment such as traffic lights and variable message signs operate in a consistent and safe manner, by setting out minimum performance requirements in specifications. A manufacturer must self-certify that his equipment meets this specification, and the HA must grant approval, before it can be used on the highway.
- 4.15** The review has considered whether the type approval process for traffic signal equipment remains fit for purpose and considered the potential for deregulation. The process requires a significant resource and is highly centralised in nature; it can be restrictive in practice. For example, although the process allows for trials of new equipment, some deregulation (such as removing the requirement for approval for some types of equipment) would help promote innovation and a more competitive market.
- 4.16** This work is progressing and is considering a range of options, from retaining the existing system to deregulating it completely. Any proposals to deregulate type approval completely would have to be balanced against the need to maintain consistency and safety. There are many issues to consider in this, and no decisions have yet been made.

5. Improving traffic signs for road users

Introduction

- 5.1** Many of our traffic signs are widely used throughout Great Britain and conform to international standards of design. The review was undertaken to ensure our traffic sign system continues to meet the needs of all road users and to provide nationally consistent traffic sign designs that are well understood.
- 5.2** The widespread take up of civil enforcement powers has focussed attention on the public understanding of traffic signs. One of the key pieces of research undertaken for the review looked at the level of public understanding of some of the important regulatory signs, including complex parking signs.

Public understanding of traffic signs

- 5.3** In-depth research was undertaken to test the comprehension of the current signing system by road users. Thirty eight traffic signs were tested and were shown to respondents in the context in which they would usually be seen on the road network. Seven signs were shown dynamically, whereby a simulation of a driving experience was created which included the sign under consideration.
- 5.4** A sample of eight hundred interviewees was selected across the country with different road user experience. The research tested the respondent's understanding of the sign and did not rely on the respondent saying they understood it. The following sections demonstrate some of the key findings from the research.

Research findings

Regulatory signing

5.5 Some of the most fundamental regulatory signs (circular signs with red borders) were included in the testing. These signs provide the most important messages for road users. It is imperative that these signs are well understood if road users are to navigate the road network safely and reliably. Table 5.1 demonstrates that there is a high level of understanding.

Table 5.1: Summary of public understanding of prohibitory traffic signs

| Traffic Sign |  No motor vehicles |  No vehicles |  No pedestrians |  Height restrictions |  Weight restrictions |
|--|---|---|---|---|---|
| % of respondents demonstrating correct comprehension | 88% | 84% | 83% | 94% | 96% |

5.6 These high levels of comprehension are reassuring and support the importance of having nationally consistent traffic signs where road users are expected to obey regulatory signs.

Improving the design of regulatory signs

- 5.7** The research did consider possible ways to improve road user understanding of regulatory signs. It tested the introduction of cancellation bars on prohibitory signs to further emphasise the sign message that a certain class of road user is not permitted, as shown in Figure 5.1. The research tested the understanding of two signs (“no pedestrians” and “no motor vehicles”). The bar did increase the level of comprehension (to 96% and 98% respectively) but the understanding without the bar is already high (83% and 88% respectively).
- 5.8** It would be difficult and potentially costly to introduce these cancellation bars as it is not possible to have two different signs with the same meaning (that is, with and without the bar) in use on the road network at the same time. If this was not the case, there could be a considerable safety issue as people might reasonably assume that the sign without the bar meant the opposite to the one with. To implement this change, local authorities would have to replace all of these signs which are widely used. This would impose significant costs.

Figure 5.1 Testing red cancellation bars for public understanding



- 5.9** As a result of this research, the Department will not be introducing red cancellation bars to existing prohibitory traffic signs. However, to improve levels of understanding, the review will require local authorities to provide an accompanying plate for the pedestrian and cycling prohibition signs displaying the text "No pedestrians" and "No cyclists" respectively, to reinforce the key message for these safety critical signs.

Public understanding of parking signs

- 5.10** The research demonstrated that the key messages of the parking signs tested were reasonably well understood, but not as well understood as the more straightforward regulatory signs. For example, 88% of respondents understood the concept of "no return" when provided within a simple restriction.
- 5.11** However, the respondents' comprehension of parking signs corresponded to the complexity of the parking sign tested. The respondents had more difficulty in comprehending the messages where signs showed several pieces of information such as restrictions for no waiting and no loading. Respondents also found it difficult to take in all the information from these signs and were unsure as to the appropriate behaviour. They were also confused by the unwritten information arising from these signs. For example, on parking signs which show times of restrictions, there tends to be uncertainty about what is permitted outside those hours.
- 5.12** These design issues, and our proposals to assist local authorities in the design of parking signs, are set out in paragraphs 7.20 to 7.23 of this document.

Summary of the research findings

- 5.13** The results demonstrate that overall the meanings of the signs under consideration were generally well understood. It also showed a good basic level of understanding as to what different types of traffic sign mean but there are some areas where comprehension and design could be improved. The simple message from the parking sign research is that signs carrying less information are more readily understood.

Improving traffic signs

- 5.14** The review did identify a number of areas for improvement, set out in the following sections:

Better information for road users

New designs for temporary roadwork signs

- 5.15** Highways Agency (HA) research has demonstrated that a significant number of drivers do not understand some roadwork related traffic signs, indicating lane closures or contra-flow working on dual carriageways,

particularly ones carrying a more complicated or infrequently seen message. The HA intend to undertake a review of the current level and provision of roadwork related signs, including re-designing a number of signs that were not readily understood to make them simpler.

Variable Message Signs (VMS)

- 5.16** Highway authorities are increasingly using VMS to provide road users with more dynamic information. They help manage the road network by providing advanced warning to drivers of emergencies and incidents. The review has considered the range of messages that are currently prescribed and to the wider information that could better inform road users about their journey.
- 5.17** In order to provide better management of our transport networks, the Department will provide new traffic signs to inform road users of the potential benefits of travelling by rail at carefully selected locations. The research on the public understanding of traffic signs demonstrated that nearly half the respondents said that signs displaying information on other modes would make them more inclined to use public transport the next time they made a similar journey.
- 5.18** The HA will also extend the range of information it provides to inform road users of :
- nationwide airport closures - where incidents such as volcanic ash clouds cause unexpected closures of UK airspace;
 - train station closures - information to be provided about major train station closures or widespread disruption to the rail network; and
 - area-wide weather warnings - to inform road users before bad weather arrives.
- 5.19** The Department will provide advice on nationally consistent VMS messages, operational requirements and equipment to meet the requirements of TSRGD. This will be the first national advice on VMS and will emphasise the ban on paging and scrolling on VMS. The Amendment Regulations will strengthen this restriction on scrolling text on VMS by requiring the whole of the traffic sign message to be displayed at the same time.

New sign designs to provide more information

- 5.20** There will be a number of new traffic signs as a result of the review. These include signs to inform road users that:

- the road ahead is inappropriate for heavy goods vehicles. This is particularly important where drivers may be following information from satellite-navigation systems;
- there is a risk of skidding and a maximum speed of 20mph is advised on a road with loose chippings;
- there is a shared space scheme ahead and that motorists should give due attention to the needs of other road users. The Department's new Local Transport Note 1/11, Shared Space, provides advice to practitioners on the design and provision of shared space.
- that they should switch off their engines when parked, waiting or loading (being trialed by TfL, where enforcement is taking place, to help reduce emissions); and
- the road ahead may be temporarily closed while essential maintenance is undertaken.

Figure 5.2 Examples of new sign designs to provide more information



New signing to help reduce bridge strikes

5.21 A bridge strike by an over-height vehicle can result in injury or loss of life to road users and may cause a serious incident on the railway, such as a train derailment. Bridge strikes also cause significant costs, disruption, damage and delay to the freight industry, other road users, and maintainers and users of the railway.

5.22 In common with the existing dual-unit height prohibition roundel, a new warning sign will be prescribed in the Amendment Regulations containing both imperial and metric units. This sign will be easier and less costly for local authorities to provide additional warning to over-height vehicles.

Figure 5.3 Dual unit maximum headroom sign



New signing for motorway service areas

- 5.23** The Department estimates that around 300 people a year are killed and many more seriously injured where a driver has fallen asleep at the wheel. It is important that drivers take a break, especially on longer journeys. A new traffic sign has been designed that will provide information on up to six companies operating at a motorway service area to help road users decide where to stop. This sign can be varied to illustrate a combination of prescribed symbols and corporate identities (as shown in figure 5.4).

Figure 5.4 Motorway service area traffic sign



Revised tourism signing

- 5.24** Following the publication of the Government's Tourism Policy in March 2011, a working group consisting of the Department for Culture, Media and Sport, the DfT, HA and VisitEngland has been developing proposals to simplify and streamline the decision-making process for delivering brown tourist signs to ensure that the strategic needs of the tourism industry are considered.
- 5.25** The working group considers that a two-tier approach to tourism signs needs to be retained to reflect the different needs between the strategic and local provision of brown signs. The higher level tier will look at strategic policy and major destinations/attractions to be signed from the HA network and will involve the national partners represented on the working group; the lower level tier will be reviewed to consider how best practice can be made available to encourage local authorities, working with tourism Destination Management Organisations, to ensure local tourist signing is coordinated and consistent with those placed on the HA network.
- 5.26** The working group began its programme in May 2011 and a schedule of work is being taken forward through the autumn. This programme will help reduce unnecessary sign clutter by providing a clear definition of what constitutes a tourist attraction to guide local decision-making on the need for signing.

Extending the permitted use of the "no entry" sign

- 5.27** "No entry" signs are safety critical signs used to protect exits from one-way streets and to prevent collisions between opposing streams of vehicles. The Department has been concerned that road users are only likely to respect no-entry signs where they can see that the signs have been provided for road safety reasons rather than to restrict access or afford priority to particular classes of vehicle.
- 5.28** However, following the successful trials of the "no entry except cycles" combined sign (see paragraph 5.37), Transport for London (TfL) approached the Department about a temporary restriction on their network which had attracted press interest because of the significant numbers of road users who were contravening a "motor vehicles prohibited" sign. The Department agreed to permit a trial of a new combined traffic sign with the message "no entry except buses, taxis and cycles".
- 5.29** This trial is still in progress but TfL has confirmed that contraventions had dropped by about 75% as a result of the sign change and the wider provision of information relating to the restriction. As a result, the

Department will consider permitting the wider use of the "no entry" sign within TSRGD, where entry by several classes of vehicles is permitted, and the Department will give consideration to further trials where a dedicated need is identified.

Revised guidance for temporary event signing

- 5.30** As part of the review announcement, the Department has updated its Traffic Advisory Leaflet on temporary signing for special events to ensure that these signs are designed to a high standard and that correct protocols are followed to manage their placement and removal.

More signing to promote safer cycling

- 5.31** The recent White Paper, "Creating Growth, Cutting Carbon", set out the positive role that cycling can provide towards meeting a more sustainable future. As well as the health benefits, it can provide a more viable alternative to motorised vehicle trips for short journeys to reduce carbon emissions, improve air quality and reduce congestion.
- 5.32** To encourage cycling, junctions and crossings need to facilitate safe passage while avoiding undue delay and interruptions to progress such as having to dismount. A disproportionate number of cycling collisions occur at or near junctions.
- 5.33** The Department commissioned a desk-based research project to explore the range of traffic management techniques for cyclists at signalised junctions. The research found that advanced cycle stop lines (ASLs) provided the best overall technique while having little effect on other road users. ASLs are widely used at signal controlled junctions and provide the cyclist with both priority and protection. The Amendment Regulations will prescribe a 'gated' alternative to a lead-in cycle lane, as currently required by TSRGD. This is particularly useful where the road is too narrow to allow the provision of a cycle lane.
- 5.34** TSRGD currently only permits cyclist access to the ASL through either the gate or cycle lead in lane. This requires cyclists to use the cycle lane where conflicts can occur with turning traffic. The review provides further flexibility in the design of ASLs recommending the removal of the requirement for a lead-in lane or gate, allowing cyclists to access the ASL as they require. There will also be flexibility to provide part-width ASLs which can provide protection where there is no right-turn movement. Figure 5.5 illustrates the part-width and no cycle lead-in ASL.

Figure 5.5 - Part-width ASL and ASL with no cycle lane lead-in lane



Cycle safety mirrors

5.35 A large proportion of cyclist fatalities occur because of conflicting movements with heavy goods vehicles. The cycle safety mirrors, known as "trixi" mirrors after Beatrix Willburger who was seriously injured by a turning lorry, are placed on the traffic signal post and help heavy goods vehicle drivers to see cyclists on their nearside at signalised junctions. The Department has provided approval to TfL to extend the use of these mirrors across the London Cycle Super Highway network, to assess their effectiveness, as part of the review.

New road markings for cyclists through junctions

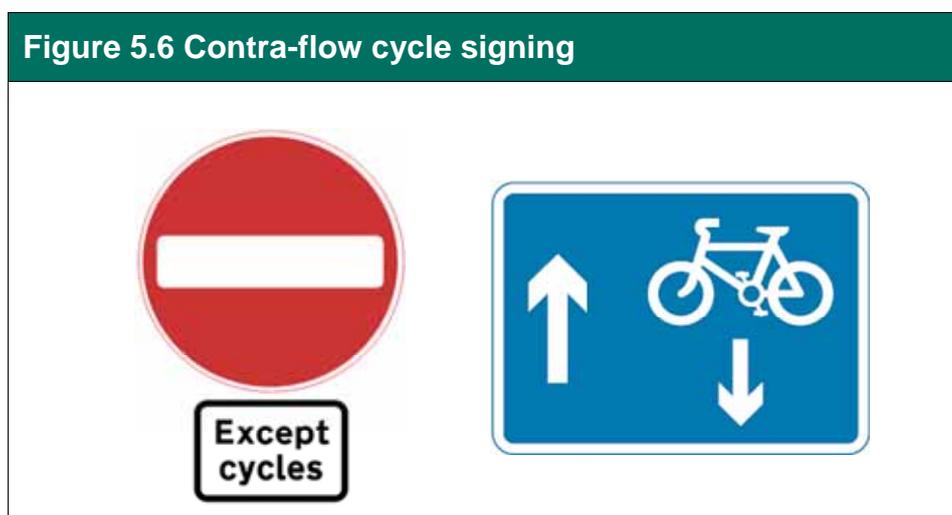
5.36 To encourage cycling as the mode of choice for short journeys, cycle route continuity is important. Research for the review has indicated that there is significant support amongst cyclists for cycle lanes across junctions. To emphasise the cycle lane, a new road marking will be allowed to indicate the route more clearly.

Contraflow cycling

5.37 As part of the announcement for this review, English local authorities will be able to place the combined sign "no entry except cycles" where they consider appropriate. Trials undertaken for the review in the Royal Borough of Kensington and Chelsea, and further trials undertaken for research for TfL, have indicated that the number of motor vehicles which contravened the restrictions was halved and there was an increase in the

number of cyclists using the contraflow schemes compared to the prescribed solution of using the "no motor vehicles" traffic sign.

- 5.38** The Amendment Regulations will prescribe a sign to indicate to road users that un-segregated contraflow cycling is permitted on a one-way road. This is a frequently requested sign through the authorisation process. Figure 5.6 illustrates this sign and the "no entry except cycles" sign combination. The Department will update its Traffic Advisory Leaflet 6/98, Contraflow Cycling Lanes, to reflect these changes.



The flexibility to trial innovative cycle schemes

- 5.39** The research project exploring traffic management techniques for cyclists at signalised junctions highlighted some potentially beneficial measures for cyclists which are currently not possible within the existing regulatory framework. We will provide sufficient flexibility within the revised TSRGD to allow local authorities to trial innovative design, for example, low level repeater traffic signals, pre-signals for cyclists and cycle bypasses to signalised junctions within the carriageway. These will be on a time limited basis to assess their effectiveness and, where relevant, in promoting safe cycling while minimising delays to other road users.
- 5.40** We will also permit trials for cyclists to use zebra crossings where they could form part of continuous cycle routes and facilities only, which the current pedestrian crossings Regulations do not allow. Zebra crossings are common in low speed urban areas where cycling is likely to be more prevalent. Currently a toucan crossing must be provided for cyclists to cross.

Cycle route branding

- 5.41** The Department worked closely with TfL to develop signing for the introduction of the Cycle Super Highway and authorised the directional signs and route road marking as shown in figure 5.7. TSRGD currently permits the name and number of a cycle route only to be provided in transport alphabet. The revised TSRGD will allow for the branding of routes to be provided in conjunction with route numbers, subject to the prescribed design standard. Local authorities should carefully manage such signing so as not to significantly contribute to sign clutter.
- 5.42** The Amendment Regulations will permit estimated journey times to be placed on directional signs, instead of distance, to encourage people to take short, local journeys by bicycle.

Temporary diversion signing

- 5.43** The revised TSRGD will provide for diversion signing for cyclists. Diversion signs may be used for general traffic, but in certain circumstances cycle specific diversion signs are needed at road works or other situations where a cycle route is obstructed.

Figure 5.7 Authorised branded signs and road markings on the TfL Cycle Super Highway



Measures to reduce the environmental impact of cycle signs

- 5.44** The review will provide measures to reduce the environmental impact of cycle signs including:
- the provision of smaller signs where they are provided for cyclists only (on cycle tracks, for example);
 - smaller cycle route, directional and route signing;
 - removing the requirement to illuminate cycle signs.

Signs to help motorcyclists

- 5.45** Following successful trials in London, the Amendment Regulations will prescribe signs to allow motorcycles to enter bus lanes. Several local authorities have already introduced these measures across all their bus lanes.

New facilities to help pedestrians

- 5.46** Walking is a healthy and sustainable mode of transport. One of the major barriers to encouraging more people to walk is the impact that traffic has on walking routes and the perception that crossing busy roads is unsafe.
- 5.47** New measures to improve pedestrian safety at road crossings and signalised junctions include:
- the introduction of portable pedestrian crossing facilities to be used either at sites where a crossing is needed at road works or for temporary events;
 - pedestrian countdown units at traffic signal junctions which have been trialed by TfL. As part of the announcement for this review, English local authorities will be able to introduce these countdown units where appropriate;
 - provide sufficient flexibility within TSRGD to enable the use of diagonal pedestrian crossings at signal junctions. Westminster City Council and TfL introduced such a crossing, at Oxford Circus in 2009; and
 - supplementary near-side signals may be mounted on the same post above the existing prescribed one at crowded puffin, equestrian and toucan crossings where the lower signal might otherwise be blocked by others waiting to cross.

Summary

5.48 The provision of information to road users is the primary purpose of traffic signs. Our detailed research has established that TSRGD has provided a framework of nationally consistent regulatory signs that are very well understood. The comprehension of some complex parking signs was not as good. Proposals to allow local authorities more discretion in signing parking restrictions, and to ensure that there is more emphasis on communicating the restriction to the road user, are set out in more detail later in the document.

5.49 This section also sets out a variety of measures to improve signing for all road users. The Amendment Regulations will deliver new sign designs that will improve lorry routing and inform road users of the skid risk arising from new road surfaces. The HA will provide more information regarding motorway services areas and operating conditions on other transport networks to help inform road users.

5.50 This section also describes a wide range of measures to provide new signing and road markings that will help more vulnerable road users including:

- a series of measures designed to help cyclists through signalised junctions;
- facilitating the use of contra-flow cycling, to enable more direct cycling through quieter and traffic calmed areas;
- trialing innovative measures to help cyclists at signal controlled junctions and pedestrian crossings;
- more flexibility to provide cycle route branding on signs;
- reducing the environmental impact of cycle signing;
- providing measures to assist motorcyclists; and
- promoting pedestrian safety at road crossings.

6. Reducing the Environmental Impact of Traffic Signing

Introduction

- 6.1** One of the key objectives for the review was to reduce the number of unnecessary traffic signs that are placed on the highway. Traffic sign clutter can lead to driver uncertainty and confusion. New signing is often simply added to the existing signing in piecemeal fashion with no overarching plan for delivering signing and minimising the impact on the streetscape.
- 6.2** Reducing unnecessary signing will benefit the appearance and function of the road and benefit road users who find it hard to distinguish those signs which provide crucial information from those which do not.

De-cluttering traffic signs - policy context

- 6.3** The Government's White Paper recognised that better design and management of local roads, including removing street clutter caused by unnecessary signs, can improve traffic flow as well as improving the attractiveness of the local environment.
- 6.4** In August 2010, the Secretaries of State for Transport and Communities and Local Government wrote to council leaders highlighting the Government's commitment to reducing street clutter, asking them, as local leaders, to make the same commitment. De-cluttering involves removing unnecessary signing, traffic signals, road markings and other street furniture to make streets tidier and easier to use. Over-provision of these measures often arises from a mistaken belief that they are required for safety reasons or they are a legal necessity.
- 6.5** The removal of unnecessary traffic signs is a measure which can help deliver high quality public spaces at relatively low cost and reduces maintenance liabilities. Many local authorities place a high priority on the design of signs for this reason. For example, the Royal Borough of Kensington and Chelsea has adopted transport and streetscape policies

which restrict the number of signs and road markings and provide for sensitive sign location and mounting arrangements. These principles were developed during the design and implementation of the successful Kensington High Street improvements, which reduced both sign and street clutter as shown in figure 6.1. Within this policy framework, the use of traffic signing needs to be considered in a wider context and not just as a traffic management tool to be applied independently of other streetscape and design considerations. To achieve this, local authorities should consider establishing multi-disciplinary teams to deliver a high quality of design for both rural and urban roads.

Figure 6.1 - Kensington High Street, with reduced sign and street clutter.



Auditing and removing traffic signs

- 6.6** The Department commissioned research to identify the tools that would help local authorities collect data on all their existing signing. There is no current single advice document combining all of the relevant guidance that would enable the collection of baseline traffic sign information in the local authority and, from this, create and maintain an inventory of signs.
- 6.7** There are a number of different ways of collecting information on the number of traffic signs that are placed on the highway. Some web-based street level imagery tools may be sufficient to allow this process to be undertaken at limited cost to the authority. Some local authorities have encouraged community involvement in street audits with a particular

focus on collecting information on poorly maintained and badly designed traffic signs.

6.8 The Department will provide advice to encourage local authorities to collect information on their signing assets and create and maintain an inventory of signs to:

- improve their streetscape by identifying and removing unnecessary traffic signing;
- rationalise their remaining signs to provide signing only where it is required;
- minimise environmental impact through the careful selection of signing, including the design, siting, size and colour; and
- improve the scheduling of cyclic maintenance to maintain standards and help reduce costs.

6.9 The Department will also provide advice on the steps to be followed to determine which signs can be removed. The advice will focus on many of the over-used signs, and their supporting infrastructure, that local authorities place without sufficient consideration as to the needs of the road users. It will recommend local authorities check whether:

- traffic signs are prescribed in TSRGD, or if not, have special authorisation from the Secretary of State. Otherwise the sign should be removed as it is an unlawful obstruction in the highway;
- regulatory signs and relevant road markings accurately reflect an existing TRO;
- warning signs are required. Warning signs are all too often placed where the hazard to road users does not warrant it or where the hazard is self-evident. This is the most obvious area of over-use of signing which local authorities should consider;
- tourist signs provide directional guidance to major tourist destinations and local facilities, but not to general amenities that are well known locally. Local authorities should develop a strategy for tourist signing that achieves a balance between assisting tourists, minimising environmental intrusion and maintaining safety by preventing an overload of information (see figure 6.2); and
- temporary signs warning of changes to road layouts, such as new roundabouts, should still be removed as they are permitted to be installed for a maximum of three months.

Figure 6.2 - example of sign clutter



Mounting traffic signs

- 6.10** The advice on reducing unnecessary traffic signs will also provide strong guidelines for the provision of the traffic sign infrastructure. For example, yellow backing boards are visually intrusive and the advice will emphasise that they should not be used as a matter of course.
- 6.11** The indiscriminate placing of poles and other structures to support signing can also damage the appearance of the road and provide a real obstacle to pedestrians. The London Local Authorities and Transport for London (No.2) Bill is currently proceeding through the legislative process and will provide powers for local authorities in London to place traffic signs on property without the consent of the property holder, subject to proper controls and checks, to reduce the requirement for poles to support signs. The Government will give consideration to introducing these powers nationally subject to the outcome of this London legislation.

Removing the requirement for signing

6.12 Reducing regulation can have a direct impact on the local streetscape and the number of traffic signs. TSRGD (2002) removed the requirement for highway authorities to provide an “at any time” plate to accompany double yellow lines. This provided the impetus for a programme of sign clutter removal that many authorities have now started to undertake.

6.13 As a result of the review, there will be a significant relaxation in the number of traffic signs that TSRGD will require. By providing more flexibility, it is the intention of the review that local authorities will take the responsibility for determining the level of signing that they provide. For example, the Amendment Regulations to TSRGD will:

- provide thresholds below which certain repeater signs might not be necessary. These thresholds are determined by carriageway length and the applicable speed limit. This will include signing for clearways, some parking restrictions, and speed limits;
- prescribe the use of new types of area-wide parking controls (see paragraph 7.25) which might reduce signing and lining by up to 80% over conventional controlled parking zones; and
- provide one warning sign for both metric and imperial warnings at both approaches to bridges, rather than the two signs currently prescribed (see paragraph 5.21 to 5.22)

6.14 The parking, speed signing and cycling sections of this report also set out proposals that will:

- remove the requirement for regulatory signs to be placed on both sides of the road indicating the beginning of the restriction, requirement or prohibition. Local authorities will need to undertake risk-based analysis and individual site assessments when considering placing only one of the safety critical signs, such as "no entry" and "no motor vehicles";
- allow smaller signs for some parking plates and cycle direction signs;
- remove the requirement for upright parking signs to be placed where there are dedicated, full-time restrictions;
- remove the requirement for dedicated road markings to accompany upright signs for parking bays;
- remove the requirement for speed roundels and cycle lane road markings to be accompanied by upright signs;
- remove the requirement for speed limit terminal signs to be placed on both sides of the road for part-time 20 mph restrictions; and

- remove the requirement to place road markings to indicate waiting and loading restrictions in pedestrian zones, where repeater signs are placed.
- 6.15** These measures will be incorporated within the revised TSRGD and will allow local authorities to determine when and where it is appropriate to place many of the most commonly used traffic signs.
- 6.16** The requirement for red route repeater signs, informing road users of the ‘no stopping’ restriction on double red lines, was tested in the research into public understanding of signs described in the Chapter 5. In London, TfL have placed 8,000 such signs and their removal would greatly enhance the environment and reduce costs by approximately £190,000 per annum. The research demonstrated that almost all respondents (85%), including those from outside London, knew they were not allowed to stop on double red lines (for “red routes”).
- 6.17** In light of this evidence, the Department will relax the requirement to place the repeater signs to enable local authorities with red routes to place repeater signs only as they consider appropriate.

Community involvement

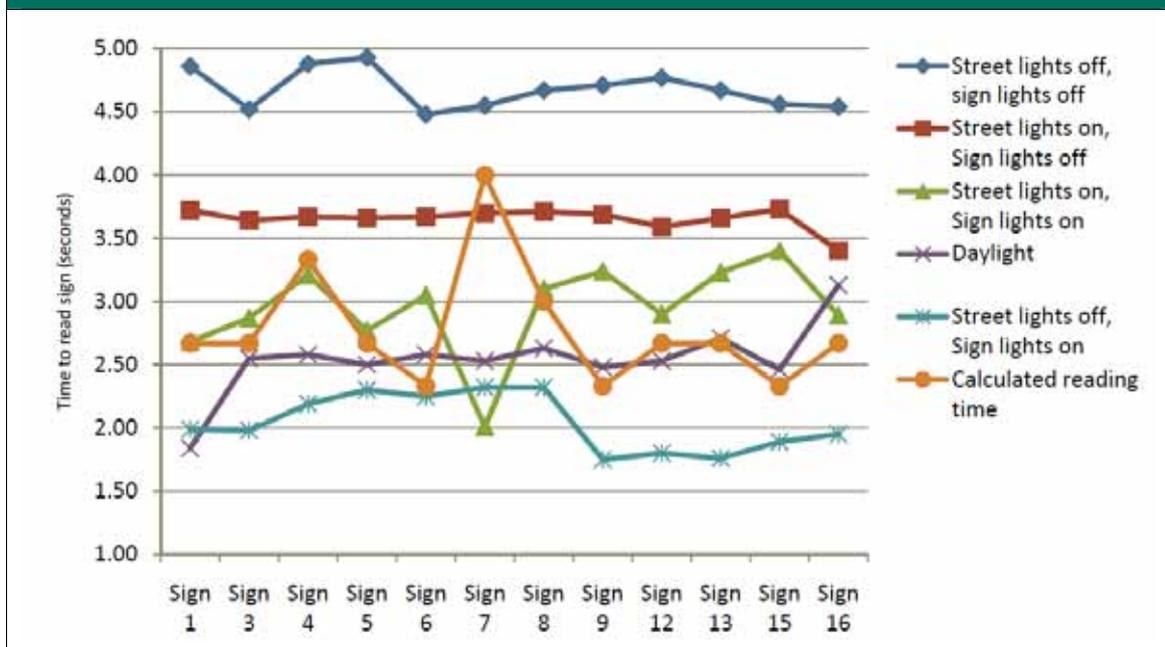
- 6.18** The Government believes that it is at the local level where most can be done to improve the street environment. The promotion of community involvement within the decision-making process lies at the heart of the localism agenda.
- 6.19** In order to involve local communities in the design and implementation of traffic management and parking schemes, local authorities should ensure that they are consulted on the TROs for traffic and parking restrictions which will directly affect them. The Department strongly recommends that the location and design of the signs should be included within this consultation to enable detailed comment before the traffic signs are placed. This should ensure that local authorities give greater consideration to the design and placing of signs at the scheme feasibility stage.
- 6.20** The Department’s guidance on auditing and removing traffic signs will also emphasise the benefits of involving local people in both processes. There are already numerous examples of local communities being involved with street clutter audits; local authorities should build upon these principles to encourage participation in sign audits and suggestions for sign removal.

Sign lighting

6.21 Direct lighting for traffic signs impacts on the carbon footprint and energy costs for local authorities. TSRGD (2002) significantly reduced the requirement for direct lighting for signs where there are street lights. Excluding road works and motorway signs, there are over five hundred different signs that are currently not required to be directly lit and only sixty signs which normally have to be lit if sited within fifty metres of a street lamp. Those signs which must be lit in these circumstances are safety-critical warning or regulatory signs.

6.22 The review has considered the scope for further reductions in the requirement for local authorities to directly light signs. Research was undertaken to test whether modern microprismatic retroreflective materials can provide sufficient reflectorisation to make signs visible without lighting. Figure 6.3 shows the results of a series of off-road trials undertaken to test the ability of drivers to read different signs under different lighting conditions. Sign 1, for example, was a traditional glass bead lane indicator sign and sign 3 a microprismatic warning sign.

Figure 6.3 - the results of driver reading times of signs under different lighting conditions (source: Use of New Materials to Reduce Sign Lighting Report - research for Highways Agency (May 2011))



- 6.23** The results demonstrate that even the best modern materials are unable to provide the required level of luminance for all drivers of vehicles in all situations. The driver reading times for the "street lights on, sign lights off" test, shows times significantly higher than the desired (or calculated) reading times in all but one case. The comparatively flat line for this test in figure 6.3 indicates that the different materials tested made little difference to the time taken reading the signs. However, the "street lights on, sign lights on" test show that average reading times are much closer to meeting the desired reading time for most of the signs tested.
- 6.24** However, to help local authorities deliver lower carbon emissions, the review is recommending the following significant further relaxations in the lighting of signs:
- for all warning signs, except those indicating restricted headroom. Warning signs are only placed at the discretion of a local authority. They should consider whether lighting is necessary at the same time as deciding if a warning sign is needed at all;
 - for signs within 20mph zones and/or areas subject to 20mph limits. The lower speed reduces the required clear visibility distance for all vehicles; and
 - for regulatory cycle signs.
- 6.25** These recommendations would reduce the current requirement by a further ten signs outside of a 20mph speed limit/zone, and by up to forty signs in a 20mph zone/limit. In addition, the number of signs that will actually need direct lighting will be significantly reduced by the relaxation of the requirement to provide two regulatory signs on the road, in certain situations, to indicate the beginning of restrictions and prohibitions (see paragraph 6.14).

Lighting of signs mounted on traffic bollards

- 6.26** Local authorities often place the prescribed signs for "keep left" or "keep right" at the ends of central islands and refuges and kerb build-outs to warn road users of the obstacle in their path. They are often mounted on bollards and TSRGD requires that the signs must be directly lit where there is a system of street lighting.
- 6.27** There is no regulatory requirement to provide bollards or traffic signs and local authorities should consider whether they are required. The Department is also prescribing retroreflective bollards in the amendments to TSRGD which can be used to indicate traffic islands to road users without the requirement for a mounted traffic sign. Where traffic signing is required, there is a wide range of lighting arrangements that can be

used. The Department will provide a new traffic advisory leaflet to help advise local authorities on the use of traffic bollards.

- 6.28** The review is not recommending changes at this stage to the requirement to light traffic signs mounted on bollards. However, retroreflective bollards are placed low down and immediately adjacent to the road to receive the highest possible level of illumination from vehicle headlamps and can perform well. The Department propose to work with the UK Lighting Board and other interested parties to trial the use of retroreflective signs mounted on bollards in street lit areas, without direct lighting, to inform possible changes to TSRGD.

Existing sign lighting and low energy technology

- 6.29** The advice on auditing and removing unnecessary traffic signs will also recommend that local authorities should check current lighting requirements as they may no longer require a separate lighting source and power supply, following changes to TSRGD 2002. For example, as a result of their traffic sign audit, the London Borough of Havering established that over 660 of its 2300 lit signs are not required to be lit. Removing the power supply or reducing the energy for these signs would save the Borough approximately £8,000 per annum in energy supply costs. The borough is also considering LED lighting for 20% of its remaining sign lighting (330 signs) which would save up to £5,000 per annum in energy costs and provide a ten year payback on their capital cost. For the remaining lit signs, the Borough is considering fitting photocells and removing one lamp would reduce costs by £17,000 per annum and would pay back the capital cost in four years.
- 6.30** With many local authorities looking to reduce their costs, utilising products which require less energy to provide the same level of illumination can provide medium to long term benefits. Table 6.1 provides a comparison of annual maintenance costs and energy costs between new technologies and the more traditional external light units (referred to a "Type A" light unit in table 6.1) in 2008/9. While table 6.1 does not include the removal costs of lighting units, it does demonstrate that savings can be realised by the new technologies over a period of time due to energy and maintenance savings.

Table 6.1 - Comparison in annual maintenance and energy costs (£) with a "Type A" light unit (source: Use of New Materials to Reduce Sign Lighting Report - research for Highways Agency (May 2011))

| | Type A light unit | Electro - luminiscent | LED externally lit | Fluorescent internally lit | LED internally lit |
|-----------------------------------|-------------------|-----------------------|--------------------|----------------------------|--------------------|
| Product cost | 190 | 440 | 250 | 160 | 330 |
| Annual maintenance & energy costs | 110 | 45 | 50 | 110 | 50 |
| 12 month saving | N/A | -185 | 0 | 30 | -80 |
| 24 month saving | N/A | -120 | 60 | 30 | -20 |
| 36 month saving | N/A | -55 | 120 | 30 | 40 |
| 48 month saving | N/A | 10 | 180 | 30 | 100 |

Summary

- 6.31** The reduction of unnecessary signing and sign lighting is a major challenge and opportunity for local authorities. Local authorities should move away from considering traffic signing as only an engineering function which can become remote from the needs of road users and environmental interests. To achieve better outcomes, local traffic sign policy should be embedded in wider Council policies and objectives and expressed in terms of the outcomes to be achieved. Evidence of senior-level leadership and championing of high standards would reinforce this policy and encourage effective implementation.
- 6.32** The lighting recommendations provide a balance between giving more discretion to local authorities and ensuring that safety critical signs remain visible for all road users where required. Local authorities should remove sign lighting where it is not required and consider the use of low energy technology where illumination is required to reduce energy consumption, while still providing the necessary levels of sign luminance. Whole life costs should be used as one of the criteria to help consider what form of lighting should be employed where required.

7. Better Enforcement

Introduction

- 7.1** The management of traffic is a high priority for local authorities as they seek to control the competing demands upon their road network. Traffic Regulation Orders (TROs) are the foundations of the traffic management system and set out the rules that road users must follow to help ensure their safety, the free flow of traffic and the protection of the environment.
- 7.2** Regulatory traffic signs are the means by which the provisions of the TRO are given force and communicated to road users. There is therefore an important link between arrangements for signing and for enforcement, and issues about the adequacy of signing arise as a consequence of the enforcement process.

The TRO process

- 7.3** The TRO process is time-consuming, labour intensive and costly to publicise. Even simple and non-controversial proposals can take several months to process. Controversial schemes have been known to take two to three years.
- 7.4** The Department intends to streamline the current Procedure Regulations which currently prescribe the TRO process. For example, local authorities and the Highways Agency are currently required to publicise their temporary and permanent TROs through advertisements in local newspapers. This is not always the most appropriate means of communicating restrictions and prohibitions to a specific target audience. This process also places a financial burden on highway authorities which the UK Roads Liaison Group's Network Management Board estimate costs £20 million per annum. These costs are passed on to utility companies and developers, resulting in a burden on business as well as the public sector, where appropriate.
- 7.5** The Department will relax this regulation so that local authorities can publicise their TROs in a manner that is appropriate for the target audience and to reduce the costs. We expect to consult on these proposals in November 2011. The requirements in the regulations on

who local authorities should consult are also very specific, and the Department proposes to simplify this. We will also be publishing guidance to help local authorities carry out tests of reasonableness when deciding what publication and consultation measures are appropriate.

- 7.6** TSRGD (2002) permitted local authorities to introduce bus stop clearways and yellow box junction road markings without a formal TRO. This has significantly reduced costs and bureaucracy for local authorities. The BPA has worked with the Department to consider whether there are other regulatory traffic and parking restrictions which could be delivered in a similar manner. Any recommendations to provide further regulatory signs without TROs will need to safeguard the public's right to object and to ensure that full account of their views is taken before decisions are made.
- 7.7** This work is on-going and, if appropriate, will be taken forward as part of the Department's commitment to further streamline the TRO process. In the interim, the Department will also continue to work with the PATROL Adjudication Joint Committee working group who are drafting standard clauses for TROs that will enable local authorities to provide simpler and more consistent orders.

Mapping guidance

- 7.8** The Department will also provide advice on the use of mapping to indicate traffic controls. This guidance will set out how mapping can be used to inform all stages of the TRO process, including the consultation stage. This will enable local authorities to simplify the presentation of often complex restrictions into a form that is more readily accessible and understood by a wider segment of the community.
- 7.9** The advice will also set out the benefits of providing a map based system of traffic orders to simplify procedures and provide a consistent form of illustrating restrictions.

Parking signs

- 7.10** Parking signs have been a significant issue for the review and for the consideration of effective enforcement. Local authorities are responsible for the accuracy and condition of the traffic signs and road markings that identify parking restrictions in their area. To be enforceable, local authorities must ensure that their parking policies are not only underpinned by an up-to-date TRO but that their parking signs are prescribed or authorised and are adequate to indicate the effect of the TRO.

TSRGD and parking signs

- 7.11** TSRGD is very prescriptive in both the design and application of parking signs. National consistency of parking signing is essential if road users are to be able to comprehend the wide-ranging, and often complex, parking restrictions. However, this prescription is very tight and restricts the introduction of simple measures such as the provision of some shared use parking bays where an appropriate combined sign is not prescribed by TSRGD.
- 7.12** Seeking DfT authorisation for this simple measure places an administrative burden on local authorities. As part of the announcement for this review, English local authorities will now be able to introduce the following measures where they consider appropriate:
- combined bus stop clearway signing displaying loading only or no stopping except taxis restrictions outside the operational times of bus stop clearways;
 - combined signs displaying loading only restrictions together with disabled badge only, or limited waiting only, restrictions at other times; and
 - pay by phone parking signs - an increasingly popular means of enabling drivers to pay for parking without the need to use coins and bank notes.

Parking signs and the traffic signs policy review

- 7.13** Local authorities should use parking policies alongside other planning and transport measures to promote sustainable transport choices. To support this objective, the Amendment Regulations will provide for dedicated parking bays and upright signs to promote parking places for both electric vehicles and car club vehicles as shown in figure 7.1.



Increasing flexibility

- 7.14** In order to simplify TSRGD, and to provide more flexibility for its application, the Department will remove most parking signs from the Regulations. In their place, we will provide a more flexible structure for designing parking signs that permits prescribed wording to be used in any sensible combination. This proposed menu approach will make a significant change to the way that parking signs are designed. Local authorities will have the freedom to provide parking solutions that are required locally without the need for special sign authorisation from the Department. This should lead to more innovative solutions to parking management and will significantly reduce the number of traffic signs that need to be prescribed in TSRGD.
- 7.15** Parking signs will still look the same across the country but local authorities will be free to introduce different local restrictions to meet local needs without reference to central Government. National consistency will be maintained by ensuring that the text, size, character and colour of the current parking signs are prescribed. This will specify the common elements for most parking signs and the Traffic Signs Manual will be updated to reflect these changes and to provide detailed guidance on their application. Layouts should be designed consistently and these will be set out in the Department's working drawings. Road users will still be able to challenge the validity and lawful placing of parking signs as part of the appeal process against penalty charge notices.

Parking bays

- 7.16** The review recommends that the prescribed road marking requirements for parking bays will be significantly relaxed. TSRGD provides for a number of different parking bays for which there are prescribed bay markings and dimensions. The current distinction between the TSRGD diagrams for bay markings is not well understood and has evolved over time. This complexity also provides an opportunity for technical appeals against parking contraventions where the parking bay does not meet the requirements of TSRGD. This is clearly inappropriate – a bay marking should only be required to indicate the location and extent of a parking place.
- 7.17** The only safeguard that TSRGD will retain is that a parking bay should be clearly demarcated to the road user - the choice of materials and bay markings should be sufficient to indicate the area of carriageway where it is permitted to park or load. As part of the announcement for this review, English local authorities will be now be able to use distinctive carriageway surfacing materials, or different colour of block pavements, to indicate parking bays where they consider appropriate. This will enable

local authorities to provide high quality surfacing materials together with parking bays that are delineated with paving in a contrasting colour with the surrounding carriageway. This can deliver a better design solution than the use of white paint for indicating a parking place.

- 7.18** The revised TSRGD will relax other technical requirements for parking signs and road markings that cause both operational and enforcement problems. For instance, the requirement for a terminal bar to be placed on yellow lines (indicating waiting restrictions) between parking bays will be removed.

Road markings and their inter-relation with vertical signs

- 7.19** As part of the Department's commitment to reduce signing, the revised TSRGD will remove the requirement for an upright sign to be placed where there is a dedicated and full-time parking bay as indicated by a suitably worded road marking. The research into public understanding of traffic signs demonstrated that almost all respondents (95%) recognised that a parking bay was for permit holders only by the road marking without an accompanying traffic sign as shown in figure 7.2. Conversely, the revised TSRGD will also permit an upright sign to indicate such a restriction without an accompanying parking bay legend at the discretion of the local authority.

Figure 7.2 - provision of parking place by road marking only



Public understanding of parking signs

- 7.20** The research has demonstrated that the respondents understood most of the signs tested but the more difficult signs to understand were the parking signs that provided different time segments and/or conditions of use. Moreover, the research did highlight some common areas of misunderstanding. For example, the respondents were unsure as to what they can do outside the conditions shown on parking signs. Where a sign shows different conditions and time periods there tends to be uncertainty about what is permitted outside these hours.
- 7.21** For sign A in figure 7.3, 36% of respondents thought non disabled badge holders could park outside the hours shown. In fact, only disabled badge holders are allowed to park at any time. The Department has recently provided a revised design which includes "at all times" to clarify the time restrictions as shown by sign B in figure 7.3. The Department will provide design advice on these issues.



Improving design – to reduce sign size and improve information

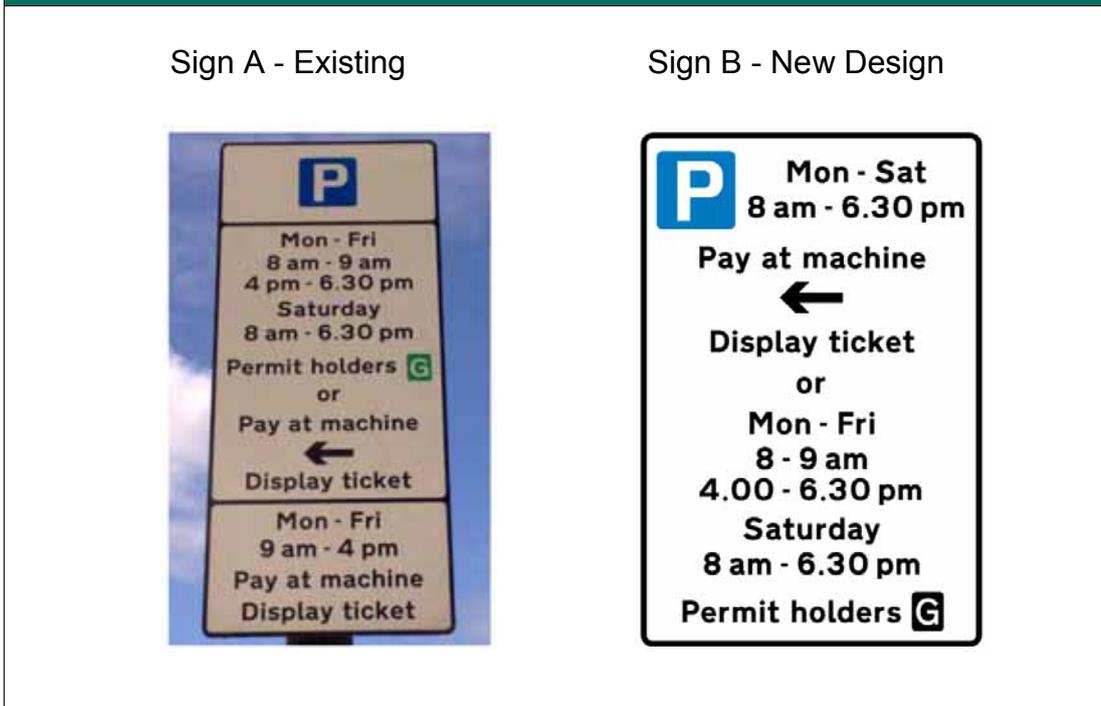
- 7.22** The Department has been working with local authorities to improve the design of parking signs. Our experience has enabled us to provide practical design solutions which rationalise the parking restrictions and reduce the sign size. Figure 7.4 shows an example where the conditions were made simpler to understand by condensing the sign into a single

panel and the time limited parking was removed by combining all applicable times. The times were also presented in a standard format.

Complexity of sign design

7.23 The public understanding research clearly demonstrated that where signs are complex, and cover a number of different restrictions, the respondent's comprehension reduced. Respondents had difficulty where signs showed several pieces of information such as parking signs which show restrictions for no waiting, no loading and parking. Respondents also found it difficult to take in all the information and therefore were unsure as to the appropriate behaviour. One of the key messages from the review is the requirement to keep the restriction and sign design simple so that road users can clearly comprehend the sign message.

Figure 7.4 Improving sign design – to reduce sign size and improve information



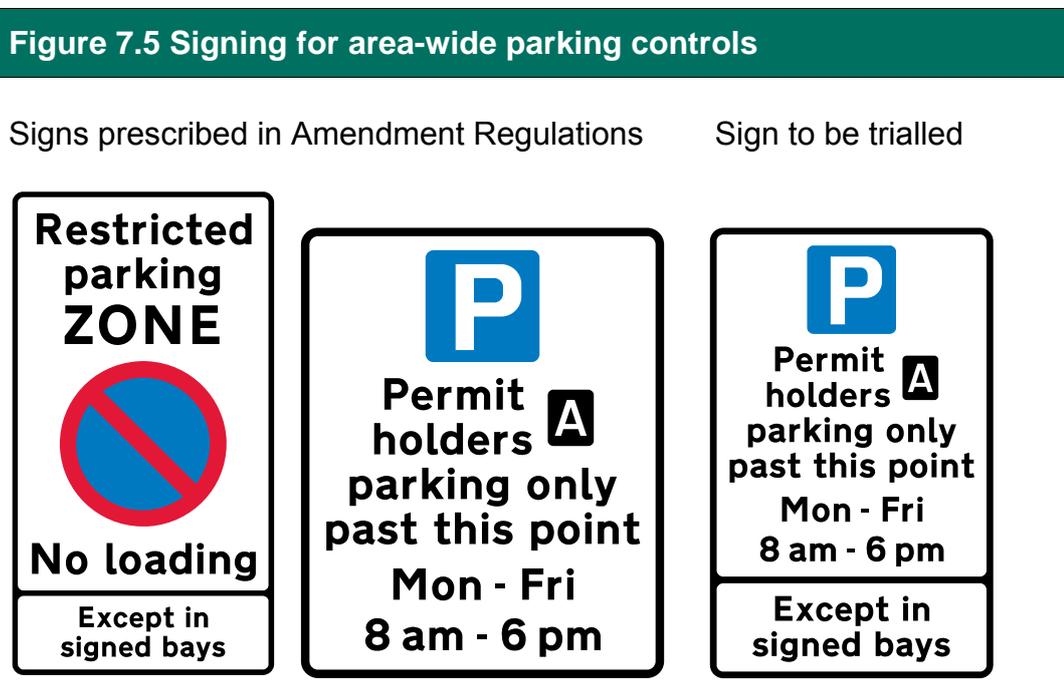
Area-wide parking controls

7.24 The review commissioned detailed research to consider the effectiveness of area-wide parking controls. The signing of these controls is an integral part of their operation as a Controlled Parking Zone (CPZ). They depend upon the use of entry signs and yellow lines to clearly inform road users what and where the restrictions are. This

may be difficult if the yellow line restrictions operate on different days, or if the zone is so large that drivers cannot remember what was on the entry sign by the time they reach their destination.

7.25 The Amendment Regulations will prescribe two new zonal parking signs that are frequently requested through the Department’s sign authorisation process which significantly reduce the amount of signing that would be required.

- Restricted Parking Zones (see figure 7.5) - are indicated by zone entry signs and time plates giving uniform waiting and loading restrictions within the zone, but without yellow lines to reduce the visual intrusion. This is a change from the sign which has frequently been authorised ("Restricted Zone") as a result of the public understanding research. The authorisations for the previous design remain in force and, where practical, authorities should consider replacing signs with the prescribed version when these signs become either life expired or are otherwise replaced.
- Permit holders only past this point (see figure 7.5) – a simple signing solution which provides area-wide controls for permit holders only and where there are no other parking or loading activities are permitted.



7.26 The Department will provide detailed advice on the provision and design of area-wide parking control which will set out a toolkit approach to the consideration of parking controls that meet the needs of users, provide

effective management of parking supply and reduce the need for traffic signs and road markings. This advice will be based on the research undertaken for the review which recommends that local authorities:

- provide a simple assessment framework to identify the type of parking treatment to be adopted that will minimise the impact on the local area;
- consider kerbside controls in situations where parking pressure does not currently justify measures being implemented or where there are significant variations in parking controls;
- evaluate area wide and kerbside parking measures on the basis of environmental impact, particularly with regard to the number of signs required;
- justify the design and use of signs based on public understanding as part of implementation and review;
- consider zone size in terms of streetscape impact with zones only being implemented if it can be demonstrated that there is a benefit in doing so;
- be responsive to local needs and provide for more innovative solutions. The research demonstrated that local authorities are introducing parking measures which do not, for example, implement measures on every available section of carriageway ; and
- take a progressive area-wide approach by converting CPZs into Restricted Parking Zones or permit holder parking areas which can reduce signs and road markings by up to 80%.

7.27 The Department is currently working on proposals to extend the permit holders only zonal techniques to include other types of permitted parking, and allow exceptions (such as disabled parking bays) to be placed within the areas that are otherwise free of road markings. The sign to be trialled is shown at figure 7.5. If it is successful, it will offer local authorities a much simpler restriction for road users to understand and will require significantly less signing and road marking with consequent reduction in the costs of installation and maintenance.

Signing of speed restrictions

7.28 Local authorities can introduce 20mph speed restrictions through 20 mph zones, which need to have specified types of traffic calming features at specific maximum frequencies, or 20 mph speed limits. The Government's Strategic Road Safety Framework recognises that these speed restrictions can be useful in the right locations but that these are local decisions which should be made in consultation with local

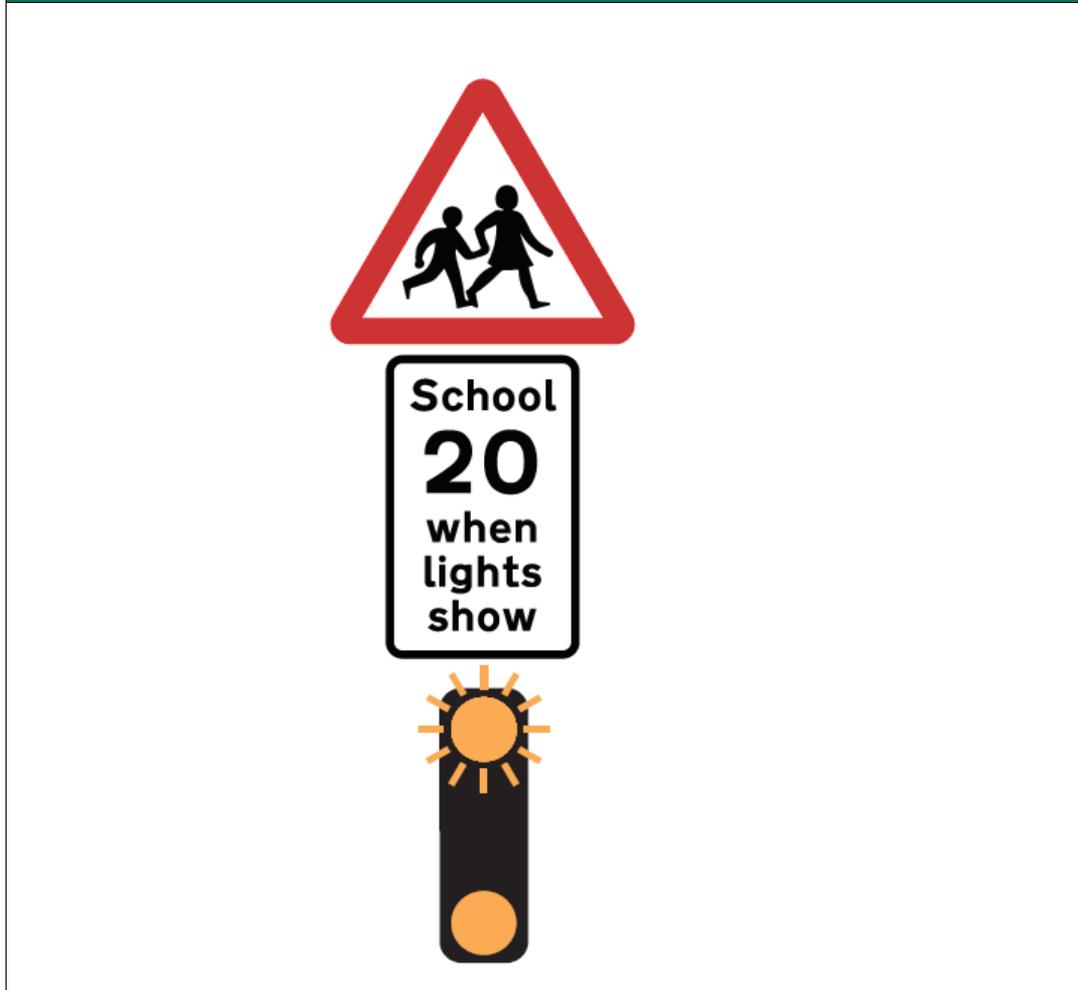
communities. The Department is developing a new economic tool to help assess the full costs and benefits of any proposed schemes.

7.29 The Framework also announced that the Department would revise and reissue advice on speed limits with the aim of increasing flexibility. As part of the announcement for this review, English local authorities will be able to introduce the following measures where they consider appropriate:

- repeater speed signing to be used in addition to the self-enforcing features within 20 mph zones where traffic speeds are already low. This should enable local authorities to reduce the number of traffic calming features where speeds are restricted because of the nature of the road.
- speed roundels on the carriageway as an alternative to upright repeater signs in 20 mph zones and limits. Currently, painted speed roundel road markings are only permitted to be placed on the highway with an accompanying upright sign. This will reduce the number of signs that local authorities are required to place.
- an advisory part-time 20mph speed limit sign, with flashing school warning lights, for use in the proximity of schools (see figure 7.6).

7.30 The Department is also working with Coventry City Council to trial a significantly different 20mph zone, within their city centre, as part of the Coventry Olympic Legacy Project. This scheme aims to provide a 20mph zone without physical traffic management features but by designing out speed using many of the principles set out in the Manual for Streets, to provide safer and more attractive streets. The 20mph zone requires a special sign authorisation from the Secretary of State and a new gateway sign has been designed for this purpose. The scheme will be monitored to determine the effectiveness of the measures provided.

Figure 7.6 Part-time advisory 20mph speed limit signing



7.31 As a result of these changes, the Department will update its Traffic Advisory Leaflet 9/99, 20mph Speed Limits and Zones. The Department is also proposing to trial 40 mph zones with reduced signing requirements. We intend to issue site specific authorisations in response to requests from local authorities on this matter.

Summary

7.32 The review of the enforcement process is one of the most significant parts of the review. As a result of the recommendations, it will both streamline the TRO procedure and reduce the costs for local authorities.

7.33 Parking signs are the most complex and difficult signs for road users to comprehend. The review is promoting improvements that will:

- allow local authorities to introduce widely used types of area-wide controls without recourse to central Government;
- increase local authority responsibility for parking signs and ensure that there is flexibility to meet local needs;
- change TSRGD to allow simpler and less frequent signing;
- reduce the opportunity for technical appeals through the parking enforcement system;
- provide more information where required to increase road user understanding;
- provide revised guidance aimed at reducing the number and complexity of parking signs; and
- develop communication strategies to improve awareness of parking controls.

7.34 The review will also simplify and reduce speed limit signing, by creating more flexibility and relaxing the requirements for upright traffic signs.

8. The role of the traffic sign designer

Introduction

- 8.1** The traffic signs policy review seeks to change the parameters for the practitioners responsible for the design and use of traffic signs. Sign design has traditionally been carried out by traffic engineers as part of their responsibilities for traffic management and road safety. Sign design is often carried out at a late stage in a project's programme, almost as an after-thought rather than a fundamental design consideration from the outset. The review seeks to provide a framework whereby local authorities will have more responsibility and discretion for the design and placing of signs to improve the road user understanding of signs and the enforcement of restrictions and prohibitions.
- 8.2** Some authorities have provided significant resource to ensure that their signing system is well designed and maintained. This is not always the case and the training and expertise of staff to undertake the delivery of signing may not always have been given the priority it required.

The sign designer and the traffic signs policy review

- 8.3** The design and use of traffic signs requires a high level of knowledge and experience, particularly for more complex restrictions. The traffic signs policy review places greater responsibility on practitioners in a number of key areas:
- placing traffic signs in a broader policy context with strong links to other functions, including the impact of signs on the wider environment;
 - providing flexibility so local authorities deliver signing that is tailored to meet local needs;
 - recommending the auditing of traffic signs and including traffic signs in asset management planning;

- reducing unnecessary sign clutter to reduce environmental impact and to ensure that the road user is provided with only the messages that they need;
- challenging the requirement to place traffic signs; traffic signs should only be sufficient to enforce restrictions and provide essential information, for example where there is a real hazard to road users;
- providing the framework for local authorities to improve parking signs;
- placing the design of regulatory signs at the start of the process. The changes to the TRO process will require far more consideration to be given as to what restriction the sign provides and where it is placed;
- involving the local community in the placing of signs that meet the needs of road users;
- customer orientation/communication – introduce processes which ensure that traffic signs are directed at communications with the road user, rather than simple compliance with regulatory requirements; and
- listening to feedback from the field for enforcement purposes, particularly for parking signs– setting in place procedures for obtaining intelligence from the field (civil enforcement officers, police, public complaints, local amenity groups) to identify traffic signing issues that potentially need resolving.

8.4 Sign practitioners need to take more responsibility with respect to the messages that their traffic signs convey to the road user and the frequency with which these messages are provided. The research into public understanding of traffic signs has demonstrated that the main regulatory signs are well understood but parking signs are less well understood because of the complex restrictions that they often attempt to convey. Traffic signs should provide simple and concise messages that are directed at communications with the road user, rather than simple compliance with regulatory requirements.

8.5 One of the biggest impacts on the sign practitioner will be to create better awareness and understanding of the sign through the consultation process. Whereas the design process currently takes account of local preferences, for example the times of operation for parking restrictions, this will now need to be balanced against how this is understood when viewed as a sign. Designers should ensure that the design process is amended to account for better public understanding and to be able to satisfy differences where public understanding requires.

The competence of the sign designer

- 8.6** It is more important than ever to ensure professional staff maintain their knowledge and expertise through the appropriate development and training activities. The possible steps that a local authority could take to address these skill issues include:
- recognising that traffic signing is a specialism requiring particular skills;
 - giving greater attention to training and mentoring staff new to traffic signing;
 - encouraging sign specialists to obtain formal recognition of their skills, such as through the Institute of Highway Engineers' Certificate in Traffic Sign Design;
 - smaller local authorities could consider forming joint teams with adjacent authorities or to employ consultants for this work.
- 8.7** The status of the signing professional needs to be enhanced so that they become the champion for signing, to be consulted by others and to co-ordinate what gets erected on the road. In particular, the signing champion needs to be consulted by those designing innovative parking schemes and other regulatory measures to avoid having signs which are not readily understandable or are over intrusive.

Annex A -Traffic Signs Policy Review Action Plan and Recommendations

1. Summary of road user information action plan

| Action/status | Recommendations | Delivery mechanism | Guidance required |
|---|--|---|--|
| 1. Develop proposals to review the regulatory framework for traffic signs | 1) changes to TSRGD, to remove barriers to flexibility 2) relaxation of need to require traffic signs 3) changes to individual signs, and TSRGD presentation of signs, to reduce the level of prescription 4) change TSRGD format to increase flexibility and improve accessibility and understanding. 5) update TSRGD to remove the requirement for traffic signs authorisations. | These recommendations to be delivered through a revised TSRGD – by 2014, at the earliest. | The DfT to issue a Circular to accompany new TSRGD and will update the Traffic Signs Manual as required. |
| 2. Explore the potential for the provision of wider information to be displayed on traffic signs. | 1) provide wider network information; and 2) to include campaign information, where appropriate | 1) and 2) – by Secretary of State traffic sign authorisations (“authorisations”) and revised TSRGD. | The DfT is to provide advice to set out the current requirements for Variable Message Signs (2012). |

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| <p>3. Undertake research to determine road users' interpretation of a range of traffic signs.</p> | <p>1) provide revised parking sign guidance/design</p> <p>2) remove the need for many red route repeater signs</p> <p>3) simplify certain traffic sign designs</p> <p>4) develop communication strategies to improve understanding of certain traffic signs.</p> | <p>Revised TSRGD, authorisations, guidance and communication strategies.</p> | <p>The Traffic Signs Manual to be updated to reflect sign design changes.</p> |
| <p>4. Consolidate the Zebra, Pelican and Puffin Pedestrian Crossings Regulations and General Directions within TSRGD.</p> | <p>To consolidate the Crossings Regulations within TSRGD.</p> | <p>The revised TSRGD</p> | <p>Advice to be provided dependent on level of change.</p> |
| <p>5. Consider new traffic sign proposals for cyclists.</p> | <p>1) improve directional signing, cycle contra-flow and advanced stop lines (ASLs)</p> <p>2) provide for more flexible ASL operation</p> <p>3) approve the "No entry except cycles" combined signs for contra-flow cycling</p> <p>4) provide the flexibility within TSRGD for future trials of on-highway bypasses at signal junctions, pre-signals for cyclists and to allow cyclists to use pedestrian crossings.</p> <p>5) permit the extension of trial of "trixi" mirrors across the TfL Cycle Super-Highway network;</p> | <p>Through a combination of traffic signs authorisations, Amendment Regulations and revised TSRGD.</p> | <p>The DfT is to provide revised advice on the changes to Advance Stop Lanes; and cycle contra-flow lanes.</p> |

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| | <p>6) to allow smaller cycle signs where appropriate</p> <p>7) to reduce the lighting requirements for regulatory cycle signs</p> <p>8) to provide more information for cycle route information and destinations</p> | | |
| 6. Review the “type approval” process for traffic signal equipment. | <p>1) consider whether the process for providing traffic signal equipment can be streamlined, with less Government oversight.</p> <p>2) consider the inclusion of minimum standards to be included within TSRGD.</p> | Revised TSRGD | Advice to be provided, depending on level of changes. |
| 7. The provision of new traffic signal control | <p>1) the permitting of high level repeater signals for near sided pedestrian facilities</p> <p>2) remove the need for Government approval for tall signal poles</p> <p>3) new powers for highways agency traffic officers to cross stop lines at a red signal</p> <p>4) allow the provision of portable pedestrian crossings to be provided</p> <p>5) authorise the wider use of the Pedestrian Countdown pedestrian signals system as trialled by TfL.</p> <p>6) facilitate the use of diagonal pedestrian crossings</p> | Through a combination of authorisations, Amendment Regulations and the revised TSRGD. | The DfT has already published the Traffic Advisory Leaflet for portable pedestrian crossings (May 2011). |

2. Summary of enforcement action plan

| Action | Recommendations | Delivery mechanism | Guidance required |
|--|---|---|---|
| 8. Develop alternative models to the Traffic Regulation Order (TRO) process for the purpose of regulatory traffic signs. | 1) The TRO Procedure Regulations will be updated and relaxed to streamline procedures and reduce local authority costs. | Amendments to the TRO Procedure Regulations. | The DfT will consult later this year on draft Amendments. |
| 9. Develop models for community involvement in the design and siting of regulatory traffic signs. | <p>1) local authorities should consult frontagers on traffic and parking restrictions.</p> <p>2) mapping software should be used throughout TRO and consultation process, to improve and simplify information.</p> <p>3) the design of the relevant sign(s) and a map indicating the placing of traffic signs should be included in the consultation on regulatory traffic signs.</p> | To be provided through guidance. | The DfT to provide advice on the use of mapping to indicate restrictions as part of the TRO process. |
| 10. Develop a nationally consistent parking sign system with more flexibility. | <p>1) relax the regulations relating to parking signs while maintaining national consistency of design.</p> <p>2) reduce administrative burdens on local authorities by including the most requested authorised parking signs through the Amendment Regulations to TSRGD.</p> <p>3) relax the regulations on road markings to remove the opportunities for technical challenges to parking enforcement.</p> | Through a combination of guidance, Amendment Regulations and revised TSRGD. | The DfT will update the Traffic Signs Manual to set out the new design principles and the requirement for national consistency of design. |

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| | <p>4) reduce the requirement for parking signs and road markings where possible.</p> <p>5) provide simpler and clearer traffic signs design.</p> | | |
| <p>11. Undertake an assessment of the effectiveness of area-wide parking controls.</p> | <p>1) to permit local authorities to place “Restricted Parking Zones” and “Permit Holders Only Past This Point” parking restrictions without the need for authorisation.</p> <p>2) to develop advice on a tool-kit for local authorities in the provision and design of area-wide parking controls.</p> <p>3) to provide advice on the zoning size in the light of the impact on streetscape and public understanding.</p> <p>4) to promote the use of kerbside traffic signs where there are high levels of variations in parking restrictions.</p> <p>5) promote traffic management zoning techniques that are less environmentally intrusive.</p> | <p>Through a combination of guidance, Amendment Regulations and revised TSRGD.</p> | <p>The DfT will provide detailed guidance on the provision of area-wide parking controls.</p> |
| <p>12. Communication strategies to inform road users of restrictions and prohibitions.</p> | <p>1) The DfT should design some simple and effective communication tools to increase the public understanding of traffic signs.</p> <p>2) Local authorities to be encouraged to undertake publicity to promote understanding of local restrictions.</p> | <p>Various methods of informing the public of traffic restrictions and signs.</p> | <p>No</p> |

3. Summary of the environment action plan

| Action Plan | Recommendations | Delivery mechanism | Guidance required |
|--|--|---|-----------------------------------|
| 13. To provide a review of the lighting requirements for traffic signs. | <p>1) to retain the requirement for direct lighting for traffic signs which are safety-critical and enforceable, where there is a system of street lighting.</p> <p>2) lighting of warning signs to be at the discretion of local authorities, except for those involving height restrictions.</p> <p>2) lighting requirements relaxed for traffic signs within 20 mph zones/limits.</p> <p>3) remove the requirements for lighting regulatory cycling signs.</p> <p>4) the DfT to work with local authorities to trial the use of signs mounted on bollards without the requirement for lighting.</p> | Revised TSRGD | No. |
| 14. To scope possible powers to affix traffic signs to buildings. This would reduce the need for some obstructive and unsightly traffic sign infrastructure. | <p>1) the DfT is supporting the clause in the London Local Authorities and Transport for London (No 2) Bill, which will introduce these powers for London authorities, subject to checks and balances</p> <p>2) the DfT will consider the provision of these powers nationally subject to the outcome of the London legislation.</p> | To introduce these powers nationally would require primary legislation changes (to the Road Traffic Regulation Act 1984). | No |
| 15. Develop proposals for a | 1) Promote reducing street clutter campaigns and improve traffic | The DfT to highlight the issue | Yes - the Traffic Signs Manual to |

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|---|--|--|--|
| <p>communications strategy designed to promote good practice and better design.</p> | <p>signs designer's awareness.</p> | <p>through press notices, as appropriate, and advice.</p> <p>In August 2010, the Secretaries of State for Transport and Communities wrote to council leaders highlighting the Government's commitment to reducing street clutter, asking them, as local leaders, to make the same commitment.</p> <p>See also action plan item 17.</p> | <p>be updated to reflect key messages.</p> |
| <p>16. Consider the feasibility of working across legislation to provide a development control approach to the traffic sign design.</p> | <p>1) planning legislation is not appropriate to control the design and placing of traffic signs.</p> <p>2) local authorities should develop links between traffic sign design and wider policy areas.</p> | <p>This document highlights the importance of placing traffic signs within a wider policy context. This will also be reflected through wider advice.</p> | <p>No</p> |
| <p>17. Provide guidance on signs review/auditing for local authorities to follow.</p> | | <p>The DfT is to provide auditing and removal of unnecessary traffic signing.</p> | <p>Yes</p> |

Annex B - List of organisations involved in the process

Steering Group

Association of Directors of Environment, Economy, Planning & Transport (ADEPT)
Association of Chief Police Officers (ACPO)
Commission for Architecture and the Built Environment (CABE)
Department for Regional Development Northern Ireland (DRDNI)
Design Council
English Heritage
Highways Agency
Institute of Highway Engineers (IHE)
London Councils
RAC Foundation
The Scottish Government
Sustrans
Transport for London (TfL)
The Automobile Association (AA)
The Chartered Institution of Highways and Transportation (CIHT)
Traffic Penalty Tribunal
The Welsh Government

Working Group 1 – signs and road user information

ADEPT
AA
Confederation of Passenger Transport
DRDNI
Highways Agency
IHE
Intelligent Transport Systems (ITS UK)
Sustrans
Technical Advisor Group (TAG)
TfL
Transport Research Laboratory
The Welsh Government

Working Group 2 – signs and law enforcement

ADEPT
ACPO
AA
British Parking Association
Campaign to Protect Rural England
Disabled Persons Transport Advisory Committee (DPTAC)
IHE
London Councils
DRDNI
Parking and Traffic Appeals Service
The Scottish Government
TAG
The Magistrates Association
Traffic Penalty Tribunal
TfL
The Welsh Government

Working Group 3 – signs and the environment

ADEPT
AA
CABE
Communities and Local Government
Cycling England
English Heritage
English National Parks Authorities Association
National Association for Areas of Outstanding Natural Beauty
Highways Agency
IHE
Living Streets
Royal Town Planning Institute
The Scottish Government
TAG
CIHT
UK Lighting Board
The Welsh Government

Annex C - Programme of implementation for specific measures highlighted in report

| Measure | Reference | Delivery mechanism | Timetable |
|---|--------------|---|--------------------|
| 1. DfT to make completed traffic signs authorisations widely available. | 4.10 | DfT web-site | January 2012 |
| 2. To update and improve the TSRGD structure. | 4.11 | Revised TSRGD | 2014 |
| 3. To review the type approval process. | 4.14 | DfT/HA to review and discuss with interested parties. | 2012 |
| 4. Providing sub-plate to the "no pedestrians" sign, to increase public understanding. | 5.9 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 5. New designs for some temporary roadwork signs | 5.15 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2012 2. 2014 |
| 6. More messages on Variable Message Signs (VMS) | 5.17 to 5:18 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 7. National guidance on VMS | 5.19 | DfT Traffic Advisory Leaflet | 2012 |
| 8. New traffic signs to indicate: i) the road ahead is inappropriate for heavy goods vehicles ii) there is a risk of skidding and a maximum advisory speed of 20mph iii) to road users that they should share space with | 5.20 | 1. Secretary of State authorisation 2. Amendments to TSRGD, 2011 | 1. 2011 2. 2011 |

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|--|------|--|--------------------|
| others lv) that drivers should switch off their engines when parked, waiting or loading iv) the road ahead may be temporarily closed while essential maintenance is undertaken | | | |
| 9. New sign to help reduce bridge strikes | 5.21 | Amendments to TSRGD | 2011 |
| 10. Improved signing for motorway service areas | 5.23 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 11. Undertake a review of tourist signing | 5.24 | Cross - Government working party to develop, in discussions with interested parties. | 2011 -2012 |
| 12. Trials of "except" plate with "no entry" traffic sign. | 5.27 | Trials on-going. | |
| 13. Revised advice on temporary event signing | 5.30 | Traffic Advisory Leaflet | 2011 |
| 14. A "gated" approach for cyclists to enter advanced cycle stop-lines (ASLs) | 5.33 | Amendments to TSRGD | 2011 |
| 15. Relaxation of regulation regarding cyclists entering an ASL | 5.34 | Revised TSRGD | 2014 |
| 16. Provision of part-width ASLs | 5.34 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 17. The provision of cycle safety mirrors ("trixi" mirrors) at signalised junctions | 5.35 | Extension of trial for TfL as part of traffic signs policy review announcement | 1. 2011 |
| 18. New road markings for cyclists through junctions | 5.36 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 19. "No entry except cycles" combined traffic sign for contra-flow cycling schemes. | 5.37 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 20. Traffic sign to indicate contra-flow cycling | 5.38 | Amendment Regulations to | 2011 |

| | | | |
|--|------|--|-----------------------------|
| permitted on a one-way road. | | TSRGD | |
| 21. DfT to update advice on contraflow cycling. | 5.38 | Traffic Advisory Leaflet, "Contraflow Cycling" | 2012 |
| 22. Permitting the trialling of innovative schemes, including permitting cyclists to use zebra crossings | 5.39 | Trials arising from revised pedestrian crossings regulations. | 2014 |
| 23. Provide more information regarding cycle route branding on destination signs. | 5.41 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 24. Provision of journey times on cycle destination signs. | 5.42 | Amendment Regulations to TSRGD | 2011 |
| 25. Temporary diversion signing for cyclists | 5.43 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 26. Measures to reduce the environmental impact of cycle signs | 5.45 | 1. Secretary of State authorisation (except the lighting requirements, which can only be delivered through a revised TSRGD). | 1. 2011 |
| 27. Signs to indicate that motorcycles permitted within bus lanes | 5.45 | Amendment Regulations to TSRGD | 2011 |
| 28. The introduction of temporary portable pedestrian crossing facilities. | 5.47 | Amendment Regulations to TSRGD | Came into force in May 2011 |
| 29. To provide pedestrian countdown units at traffic signals | 5.47 | Secretary of State authorisation | 2011 |
| 30. To permit supplementary near-side signals at puffin, equestrian and toucan crossings. | 5.47 | Amendments to TSRGD | 2011 |
| 31. Provide sufficient flexibility within TSRGD to enable diagonal pedestrian crossings | 5.47 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 32. The Department to provide advice on auditing | 6.8 | Traffic Advisory Leaflet | 2012 |

| | | | |
|--|------|--|--------------------|
| traffic signs | | | |
| 33. The Department to provide advice on removing unnecessary traffic signing | 6.9 | Traffic Advisory Leaflet | 2012 |
| 34. Provide thresholds below which certain repeater traffic signs may not be necessary | 6.13 | Amendment Regulations to TSRGD | 2011 |
| 35. Provide new area-wide parking controls signs | 6.13 | Amendment Regulations to TSRGD | 2011 |
| 36. Provide new warning sign for dual measurement height warning signs | 6.13 | Amendment Regulations to TSRGD | 2011 |
| 37. Remove the requirement for some regulatory signs to be placed on both sides of the road | 6.14 | Revised TSRGD | 2014 |
| 38. Allow smaller cycle signs for off-highway use | 6.14 | Revised TSRGD | 2014 |
| 39. Remove the requirement for upright parking signs to be placed where there are dedicated, full-time restrictions | 6.14 | Revised TSRGD | 2014 |
| 40. Remove the requirement for dedicated road markings to accompany upright signs for parking bays | 6.14 | Revised TSRGD | 2014 |
| 41. remove the requirement for speed roundels and cycle lane roundels to be accompanied by an upright traffic sign | 6.14 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 42. remove the requirement for speed terminal signs to be placed on both sides of the road for part-time 20 mph restrictions | 6.14 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 43. Removing the requirement for red route repeater signs | 6.17 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 44. Recommend that local authorities consult | 6.19 | Advice on mapping TRO procedures | 2012 |

| | | | |
|--|------|---|-------------------------------|
| frontagers on traffic and parking restrictions. | | | |
| 45. Reduce lighting requirements for traffic signs | 6.24 | Revised TSRGD | 2014 |
| 46. DfT to work with local authorities to test the requirement to light mounted traffic signs on bollards. | 6.26 | | 2011 |
| 47. DfT to provide new advice on bollards. | 6.26 | Traffic Advisory Leaflet. | 2012/13 |
| 48. Streamlining the TRO process | 7.4 | Amendment Regulations to the TRO Procedural Regulations. | DfT plan to consult in 2011. |
| 49. Mapping guidance for consultation and TROs. | 7.8 | DfT guidance | 2012 |
| 50. Cashless parking bays and shared use parking bays. | 7.12 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 51. Providing dedicated parking spaces for electric vehicles and car clubs | 7.13 | Amendment Regulations to TSRGD | 2011 |
| 52. Increasing the flexibility of the parking sign system | 7.14 | Revised TSRGD | 2014 |
| 53. Relax regulations in respect of parking bays | 7.18 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 54. Relaxing the relationship between parking signs and parking road markings. | 7.19 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 55. Removing the requirement to place a terminal bar marking on yellow line waiting restrictions. | 7.20 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 56. Revised parking signs as a result of public comprehension research | 7.22 | 1. Secretary of State authorisation. 2. Revised TSRGD 3. Revised guidance | 1. 2011 2. 2014 3. 2014 |
| 57. New signs for restricted parking zones and permit | 7.25 | Amendment Regulations to | 2011 |

| | | | |
|---|------|--|--------------------|
| holders parking only past this point | | TSRGD | |
| 58. Revised design of permit holders only past this point signs (subject to trial). | 7.27 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 59. Revise 20 mph zones to allow 20mph repeaters and mini-roundabouts as traffic calming features; speed roundels to be used without upright signs in 20mph zones; and new advisory signing for part-time 20mph speed limits. | 7.29 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |
| 60. Trialling 20mph zone, without physical features. | 7.30 | Secretary of State authorisation. | 2011 |
| 61. DfT to update its advice on 20mph speed limits and zones. | 7.31 | Revised Traffic Advisory Leaflet | 2012 |
| 62. Trial 40mph zones with reduced signing | 7.31 | 1. Secretary of State authorisation. 2. Revised TSRGD | 1. 2011 2. 2014 |

Annex D - Example of layouts being considered for simplifying TSRGD

(Example Schedule 1 Warning Signs with signs combined and deleted)



501

Junction ahead controlled by diagram 601.1 ("STOP") or diagram 602 ("GIVE WAY") sign

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 20(1), 21(1) |
| 3 | Diagrams: 502, 503, 608 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



503

Distance to a junction ahead

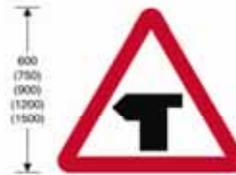
| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 20(1), 21(1) |
| 3 | Diagrams: 501 |
| 4 | "GIVE WAY" is used at a junction controlled by a diagram 602 ("GIVE WAY") sign. Permitted variant: "STOP" is used at a junction controlled by a diagram 601.1 ("STOP") sign. |
| 5 | Illumination requirements: Schedule 17, item 8 |



504.1

Crossroads ahead

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 20(1), 21(1) |
| 3 | Diagrams: 502, 503, 608 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



505.1

T-junction ahead

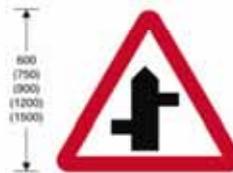
| Item | |
|------|--|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 572, 7301, 7302 |
| 4 | Permitted variants: Schedule 16 item 17, 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |



506.1

Side road ahead

| Item | |
|------|--|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 572 |
| 4 | Permitted variants: Schedule 16 item 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |



507.1

Staggered junction ahead

| Item | |
|------|--|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 572 |
| 4 | Permitted variants: Schedule 16 item 17, 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |

(Example Schedule 1 Warning Signs with signs combined and deleted)



508.1 Traffic merges ahead – From the left (508.1) and onto main carriageway (509.1)

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 17, 21(1) |
| 3 | Diagrams: 572, 1010 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



510 Roundabout ahead

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 17, 21(1) |
| 3 | Diagrams: 572, 1010 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



511 Reduction in speed necessary for a change in road layout ahead

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 504.1, 505.1, 506.1, 507.1, 510, 512, 512.1, 512.2, 513, 516, 517, 520, 523.1, 524.1, 528, 556 |
| 4 | Permitted variants: "REDUCE SPEED NOW" may be varied to "HEAVY PLANT CROSSING" when used in combination with any of the signs in diagrams 504.1, 505.1, 506.1, 507.1, 512.1, 512.2 |
| 5 | Illumination requirements: Schedule 17, item 8 |



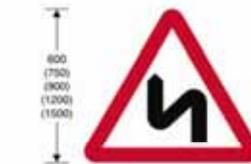
512 Bend ahead

| Item | |
|------|--|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 513.1, 513.3, 526, 575 |
| 4 | Permitted variants: Schedule 16 item 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |



512.3 Junction on bend ahead – Outside junction (512.1), Inside junction (512.2) and both (512.3)

| Item | |
|------|---|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 513.1, 513.2, 526, 570, 575 |
| 4 | Permitted variants: Schedule 16 item 28 Symbol may be varied to show just inside or outside junction |
| 5 | Illumination requirements: Schedule 17, item 1 |



513 Double bend or series of bends ahead, first to the left

| Item | |
|------|--|
| 1 | Regulations: 58(7) |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 511, 513.1, 513.2, 526, 570, 575 |
| 4 | Permitted variants: Schedule 16 item 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |

(Example Schedule 2 Regulatory Signs with signs combined and deleted)



601.1

Vehicular traffic must comply with the requirements prescribed in regulation 16

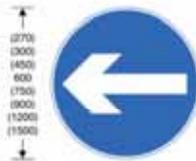
| Item | |
|------|--|
| 1 | Regulations: 4, 10(1), 10(2), 16 |
| 2 | Directions: 6, 17, 18(3), 20(1), 21(1), 30 |
| 3 | Diagrams: 608, 783, 1002.1, 1022 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



602

Vehicular traffic must comply with the requirements prescribed in regulation 16

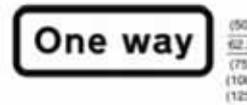
| Item | |
|------|---|
| 1 | Regulations: 4, 10(1), 16, 25 |
| 2 | Directions: 17, 18(3), 20(1), 21(1), 34(1) |
| 3 | Diagrams: 608, 611.1, 774, 778, 778.1, 1003, 1003.4, 1023 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



606

Vehicular traffic must proceed in the direction indicated by the arrow

| Item | |
|------|---|
| 1 | Regulations: 10(1), 12(7), 47(3), 48(3), 49(3), 54 |
| 2 | Directions: 7, 20(3), 21(1) |
| 3 | Diagrams: 515, 515.1A, 515.2, 607, 608, 954, 954.2, 954.3, 954.4, 954.5, 954.6, 954.7 |
| 4 | Permitted variants: Schedule 16, item 13 |
| 5 | Illumination requirements: Schedule 17, item 1, 6, 7 |



607

One-way traffic

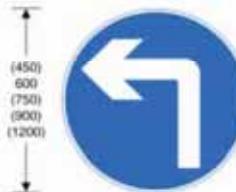
| Item | |
|------|--|
| 1 | Regulations: 12(7) |
| 2 | Directions: 7, 21(1) |
| 3 | Diagrams: 606, 609 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 8 |



601.1

Dual carriageway

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 7(3), 21(1) |
| 3 | Diagrams: 501, 601.1, 602, 606, 609, 610 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 8 |

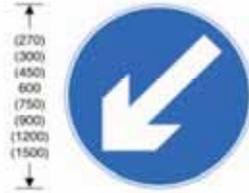


609

Vehicular traffic must turn ahead in the direction indicated by the arrow

| Item | |
|------|--|
| 1 | Regulations: 10(1), 12(7), 54 |
| 2 | Directions: 7, 21(1) |
| 3 | Diagrams: 607, 608, 954, 954.2, 954.3, 954.4 |
| 4 | Permitted variants: Schedule 16 item 28 |
| 5 | Illumination requirements: Schedule 17, item 1 |

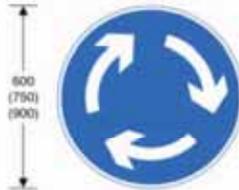
(Example Schedule 2 Regulatory Signs with signs combined and deleted)



610

Vehicular traffic must comply with the requirements prescribed in regulation 15

| Item | |
|------|--|
| 1 | Regulations: 10(1), 12(7), 14(1), 15, 26(6), 27(1), 54 |
| 2 | Directions: 21(1) |
| 3 | Diagrams: 608 |
| 4 | Permitted variants: Arrow may point downwards to the right |
| 5 | Illumination requirements: Schedule 17, item 1, 7 |



611.1

Vehicles entering the junction must comply with the requirements prescribed in regulation 16

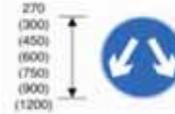
| Item | |
|------|--|
| 1 | Regulations: 10(1), 12(7), 16, 25 |
| 2 | Directions: 17, 18(1), 18(3) |
| 3 | Diagrams: 602, 1003, 1003.3, 1003.4, 1023 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



614

No U-turns for vehicular traffic

| Item | |
|------|---|
| 1 | Regulations: 12(7) |
| 2 | Directions: 7, 11, 21(1) |
| 3 | Diagrams: 570, 645 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1, 6 |



611

Vehicular traffic may reach the same destination by proceeding either side of the sign

| Item | |
|------|---|
| 1 | Regulations: 12(7), 27(1) |
| 2 | Directions: None |
| 3 | Diagrams: None |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1, 7 |

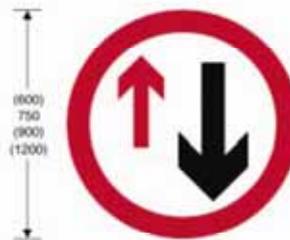


612

613

No right turn for vehicular traffic (612) and no left turn for vehicular traffic (613)

| Item | |
|------|---|
| 1 | Regulations: 12(7), 27(1), 47(3), 48(3), 49(3) |
| 2 | Directions: 7, 21(1) |
| 3 | Diagrams: 954, 954.2, 954.3, 954.4, 954.5, 954.6, 954.7 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1, 6 |

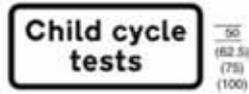


615

Priority must be given to vehicles from the opposite direction

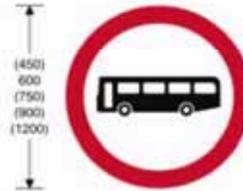
| Item | |
|------|---|
| 1 | Regulations: 10(1) |
| 2 | Directions: 19, 20(1), 21(1) |
| 3 | Diagrams: 615.1, 645, 811, 1003, 1023, 1043, 1044 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |

(Example Schedule 5 Signs for bus, tram and pedal cycle facilities with signs combined and deleted)



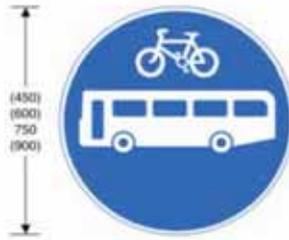
951
Training or testing of child cyclists ahead

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 21(1), 39(7) |
| 3 | Diagrams: 950 |
| 4 | Permitted variants: Schedule 16, items 3, 6, 11 "tests" may be varied to "training". "Child cycle tests" may be varied to "Cycles crossing" or "Cycle event" |
| 5 | Illumination requirements: Schedule 17, item 8 |



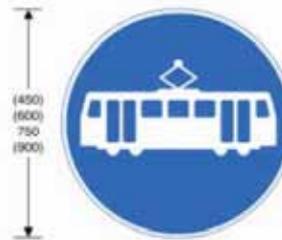
951
Training or testing of child cyclists ahead

| Item | |
|------|--|
| 1 | Regulations: 24 |
| 2 | Directions: 7, 8, 21(1) |
| 3 | Diagrams: 620, 954.2 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 1 |



953
Route for use by buses and pedal cycles only

| Item | |
|------|--|
| 1 | Regulations: 10(1), 24 |
| 2 | Directions: 7, 8, 18(1), 18(4), 20(1), 21(1) |
| 3 | Diagrams: 953.2, 1048.3, 1048.4 |
| 4 | Permitted variants: The bus symbol may be varied to the local bus symbol shown in diagram 958. The cycle symbol may be omitted. The word "taxi" in white letters may be added below the bus symbol |
| 5 | Illumination requirements: Schedule 17, item 1 |



953.1
Route for use by tramcars only

| Item | |
|------|--|
| 1 | Regulations: 10(1), 24 |
| 2 | Directions: 7, 8, 18(1), 20(1), 21(1) |
| 3 | Diagrams: 953.2, 1048.2 |
| 4 | Permitted variants: The bus symbol shown in diagram 953 or the local bus symbol shown in diagram 958 may be added below the tramcar symbol |
| 5 | Illumination requirements: Schedule 17, item 1 |



953.2
Explanatory plate for the signs shown in diagrams 953 and 953.1

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 7, 20(1), 21(1) |
| 3 | Diagrams: 953, 953.1 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 8 |



953.3
Entrance to bus station, depot or garage

| Item | |
|------|--|
| 1 | Regulations: 22 |
| 2 | Directions: None |
| 3 | Diagrams: None |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 9 |

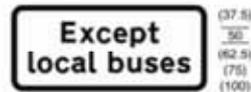
(Example Schedule 5 Signs for bus, tram and pedal cycle facilities with signs combined and deleted)



954

Buses excluded from restriction or prohibition conveyed by associated sign

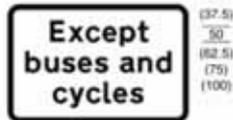
| Item | |
|------|---|
| 1 | Regulations: 22 |
| 2 | Directions: 7, 18(4), 21(1) |
| 3 | Diagrams: 606, 609, 612, 613, 616, 629, 629A, 629.1 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 8 |



954.2

Same as diagram 954 applying to local buses

| Item | |
|------|--|
| 1 | Regulations: 22 |
| 2 | Directions: 7, 18(4), 21(1) |
| 3 | Diagrams: 606, 609, 612, 613, 616, 629, 629A, 629.1, 952 |
| 4 | Permitted variants: The legend may be on three lines |
| 5 | Illumination requirements: Schedule 17, item 8 |



954.3

Same as diagram 954 applying to buses and pedal cycles

| Item | |
|------|---|
| 1 | Regulations: 22 |
| 2 | Directions: 7, 21(1), 21(2) |
| 3 | Diagrams: 606, 609, 612, 613 |
| 4 | Permitted variants: The word "local" may be added before "buses". "buses and cycles" may be varied to "buses, taxis and cycles", "buses, taxis & cycles" or "buses and taxis" |
| 5 | Illumination requirements: Schedule 17, item 8 |



954.4

Same as diagram 954 applying to pedal cycles

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Directions: 7, 21(1), 21(2) |
| 3 | Diagrams: 606, 609, 612, 613, 816 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 8 |



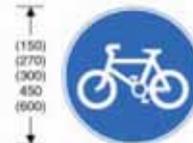
954.5

954.6

954.7

Same as diagram 954 applying to buses (954.5), applying to buses and pedal cycles (954.6) and applying to buses, taxis and pedal cycles (954.7) where the signs are mounted in combination with light signals prescribed by regulation 33

| Item | |
|------|---|
| 1 | Regulations: 22 |
| 2 | Directions: 7, 21(1), 21(2) |
| 3 | Diagrams: 606, 612, 613 |
| 4 | Permitted variants: "buses" may be varied to "cycles" (954.5). "buses & cycles" may be varied to "local buses" or "buses & taxis" (954.6). "buses, taxis & cycles" may be varied to "local buses & cycles" or "local buses & taxis" (954.7) |
| 5 | Illumination requirements: Schedule 17, item 6 |



955

Route for use by pedal cycles only

| Item | |
|------|---|
| 1 | Regulations: None |
| 2 | Directions: 7, 8, 18(1) 18(5), 21(1) |
| 3 | Diagrams: 1003, 1023, 1049, 1057, 2602.3 |
| 4 | Permitted variants: None |
| 5 | Illumination requirements: Schedule 17, item 3, 7 |

(Example Schedule 7 Directional Signs)



| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | Map Type Advance Direction Signs placed on or near a: Primary Route must have a Green background colour. Direction 12(1) applies. Non-Primary Route must have a White background colour. Direction 13(1) applies. |
| 3 | Diagrams: None |
| 4 | Permitted variants: Junction name and top panel may be added or omitted; Recommended route avoiding a restriction such as a low bridge may be added; A blue panel showing an alternative numbered route of pedal cycles forming part of a cycle route network may be added; Symbols and distance plates may be added; Coloured panels showing recommended route for lorries, to a Ministry of Defence establishment, a Tourist Destination or Ring road may be added; Symbol may be varied to show a route through a village or town being by-passed; and Distances may be added to Non-Primary Route signs. Primary Route Sign, Schedule 16, items 3, 5, 12, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. Non - Primary Route Sign, Schedule 16, items 3, 5, 9, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. |
| 5 | Illumination requirements: Schedule 17, item 4 |

(Example Schedule 7 Directional Signs)



2003
Stack Type Advanced Direction Sign

| Item | |
|------|--|
| 1 | Regulations: None |
| 2 | <p>Map Type Advance Direction Signs placed only on or near a:</p> <ul style="list-style-type: none"> Primary Route must have a Green background colour. Direction 12(1) applies. Non-Primary Route must have a White background colour. Direction 13(1) applies. Motorway must have a Blue background colour. Direction 14(1) applies. Tourist destinations have a brown background colour. Direction 13(3) applies. Lorry destinations have a black background colour. Direction 13(3) applies. |
| 3 | <p>Diagrams: None</p> <p>Permitted variants:</p> <ul style="list-style-type: none"> Recommended route avoiding a restriction such as a low or lifting bridge may be added; A blue panel showing an alternative numbered route of pedal cycles forming part of a cycle route network may be added; Symbols and distance plates may be added; Coloured panels showing recommended route for primary and local routes, motorway, lorry routes, to a Ministry of Defence establishment, a Tourist Destination or Ring road may be added; Coloured patches for primary route and motorway may be added; Symbol may be varied to show a route through a village or town being by-passed; Distances may be added to Non-Primary Route signs; U-turn symbol may be added; |
| 4 | <ul style="list-style-type: none"> Legends such as 'Alternative route, Services and Works unit may be added; Cycle panel may be added to primary and non-primary signs. Where a route leads directly to a Motorway, another route should include the legend 'Non-motorway traffic'; Symbols such as vehicle ferry and station may be added; and Legends with symbols such as Shopmobility, Recycling centre and Goods vehicle testing centre may be added. <p>Primary Route Sign, Schedule 16, items 3, 5, 12, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37.</p> <p>Non - Primary Route Sign, Schedule 16, items 3, 5, 9, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37.</p> <p>Motorway Sign, Schedule 16, items 12, 16, 19, 20, 21, 22, 23, 24, 25, 26, 30, 31, 34.</p> <p>Tourist Sign, Schedule 16, items 5, 12, 16, 19, 29, 31, 32, 33.</p> |
| 5 | Illumination requirements: Schedule 17, item 4 |

(Example Schedule 7 Directional Signs)



2012
Grade Separated Junction Sign

| Item | |
|------|---|
| 1 | Regulations: None |
| 2 | Map Type Advance Direction Signs placed only on or near a: Primary Route must have a Green background colour. Direction 12(2) applies. Non-Primary Route must have a White background colour. Direction 13(2) applies. |
| 3 | Diagrams: None |
| 4 | Permitted variants: Junction name and top panel may be omitted; Recommended route avoiding a restriction such as a low bridge may be added; A blue panel showing an alternative numbered route of pedal cycles forming part of a cycle route network may be added; Symbols and distance plates may be added; Coloured panels showing recommended route for lorries, to a Ministry of Defence establishment, a Tourist Destination or Ring road may be added; Symbol may be varied to show a route through a village or town being by-passed; and Distances may be added to Non-Primary Route signs. Primary Route Sign, Schedule 16, items 3, 5, 12, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. Non - Primary Route Sign, Schedule 16, items 3, 5, 9, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. |
| 5 | Illumination requirements: Schedule 17, item 4 |

(Example Schedule 7 Directional Signs)



| | |
|---|---|
| 1 | Regulations: None |
| 2 | Map Type Advance Direction Signs placed only on or near a: Primary Route must have a Green background colour. Direction 12(1) applies. Non-Primary Route must have a White background colour. Direction 13(1) applies. Motorway must have a Blue background colour. Direction 14(1) applies. Tourist destinations have a brown background colour. Direction 13(3) applies. Lorry destinations have a black background colour. Direction 13(3) applies. |
| 3 | Diagrams: None |
| 4 | Permitted variants: Recommended route avoiding a restriction such as a low or lifting bridge may be added; A blue panel showing an alternative numbered route of pedal cycles forming part of a cycle route network may be added; Symbols and distance plates may be added; Coloured patches for primary route and motorway may be added; Symbol may be varied to show a route through a village or town being by-passed; Distances may be added to Non-Primary Route signs; Legends such as 'Alternative route, Services and Works unit may be added; Where a route leads directly to a Motorway, another route should include the legend 'Non-motorway traffic'; Symbols such as vehicle ferry and station may be added; and Legends with symbols such as Shopmobility, Recycling centre and Goods vehicle testing centre may be added. Primary Route Sign, Schedule 16, items 3, 5, 12, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. Non - Primary Route Sign, Schedule 16, items 3, 5, 9, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37. Motorway Sign, Schedule 16, items 12,16,19,20,21,22,23,24,25,26,30,31,34. Tourist Sign, Schedule 16, items 5,12,16,19,29,31,32,33. |
| 5 | Illumination requirements: Schedule 17, item 4 |

(Example Section 16 Permitted Variants)

PERMITTED VARIANTS

| (1) | (2) | (3) |
|------|--|--|
| Item | Diagram numbers | Permitted variants |
| 1. | 513.2, 523.1, 524.1, 530, 531.1, 532.2, 532.3, 629, 629A, 629.1, 629.2, 629.2A, 670, 672, 673, 675 (in respect of the upper panel of the sign), 780A, 780.1A (in respect of height), 780.2A, 818.3 (other than in respect of distance), 6001, 7275, 7283, 7283.1, 7284, 7284.1, 7290 (in respect of speed limit), 7292, 7294 | Numerals may be varied but (with the exception of one decimal place of a metre indicating a height, width or length) no fractions or decimal places shall be used. |
| 2. | 629.1 | Metric units to one decimal place of a metre may be substituted for imperial units when the sign is placed in combination with another sign shown in diagram 629.1 which has not been so varied. |
| 3. | 518, 519, 530.1, 543.1, 546, 547.1, 547.2, 547.4, 547.7, 547.8, 563, 563.1, 773, 883, 950.1, 2001, 2002, 2003, 2004, 2005, 2005.1, 2006, 2007, 2008, 2009, 2022, 2023, 2024, 2025, 2026, 2027, 2027.1, 2028, 2029, 2033, 2035, 2101, 2102, 2102.1, 2104, 2105.1, 2108, 2109, 2110, 2111, 2112, 2113, 2113.1, 2118, 2119, 2120, 2121, 2122, 2126.1, 2127, 2131, 2132, 2133, 2134, 2135, 2136, 2139, 2140, 2141, 2205, 2213, 2214, 2215, 2216, 2218, 2308.1, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2504, 2505, 2505.1, 2506, 2507, 2509.1, 2510, 2511, 2512, 2513, 2601.1, 2601.2, 2603, 2605, 2606, 2607, 2608, 2609, 2610, 2610.2, 2701, 2701.1, 2705, 2706, 2707, 2801, 2802, 2803, 2804, 2805, 2806, 2925, 2929+, 7001.1 +When used on a motorway exit slip road. | An indication of distance may be shown in accordance with item 5 or 6. |

(Example Section 16 Permitted Variants)

| | |
|----|--|
| 4. | 2911, 2912, 2917, 2918 |
| 5. | <p>527, 583.1, 584.1, 2001, 2002, 2003, 2004, 2005, 2005.1, 2006, 2007, 2008, 2009, 2022, 2023, 2024, 2025, 2026, 2027, 2027.1, 2028, 2029, 2030, 2030.1, 2033, 2035, 2101, 2102, 2102.1, 2103, 2104, 2105.1, 2106.1, 2107, 2108, 2109, 2110, 2111, 2111.1, 2112, 2113, 2113.1, 2118, 2119, 2120, 2121, 2122, 2125, 2126, 2126.1, 2127, 2128, 2131, 2132, 2141, 2209, 2213, 2214, 2215, 2218, 2308.1, 2309.1, 2328, 2329, 2601.1, 2601.2, 2602.1, 2705, 2706, 2707, 2803, 2804, 2805, 2806, 2925, 2926, 2929+</p> <p>+When used on a motorway exit slip road.</p> |
| 6. | <p>502, 503, 518, 519, 530.1, 543.1, 546, 547.1, 547.2, 547.3, 547.4, 547.7, 547.8, 548.1, 553.2, 554.3, 556.2, 557.2, 557.3, 557.4, 558.2, 563, 563.1, 570, 572, 573, 615.1, 773, 780.1A (in respect of distance), 811.1, 817.2, 818.1 (in respect of distances not exceeding 2 miles), 818.2 and 818.3 (in respect of distance), 820.1, 821, 876, 883, 950.1, 2010.1, 2123, 2133, 2134, 2135, 2136, 2139, 2140, 2201, 2202, 2203, 2204, 2205, 2216, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2322, 2323, 2324, 2325, 2326, 2327, 2501, 2502, 2503, 2504, 2505, 2505.1, 2506, 2507, 2508, 2509.1, 2510, 2511, 2512, 2513, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2610.1, 2610.2*, 2701, 2701.1, 2713.1, 2801, 2802, 5014, 7001.1, 7004, 7012**, 7015**, 7030, 7201.1, 7208, 7209, 7256, 7306, 7307</p> <p>*Distances may be expressed as "yards", "yds", "mile", "miles", "m", "YARDS", "YDS", "MILE", "MILES", or "M".</p> <p>**Distances shall be expressed as "YARDS", "MILE" or "MILES"</p> |
| 7. | 832.6, 832.7, 2011, 2012, 2013, 2014, 2015, 2017, 2020, 2021, 2101.1, 2101.2, 2115, 2116, 2117, 2903, 2904, 2905, 2906, 2908, 2908.1, 2909, 2914, 2914.1 |
| 8. | <p>2310.1, 2313.1, 2313.3, 2313.5, 2919.1*</p> <p>**1m" permitted variant does not apply to this sign.</p> |
| 9. | 557.4, 573, 780.1A, 2020, 2021, 2103, 2106.1, 2107, 2111.1, 2112, 2116, 2117, 2125, 2126, 2202, 2203, 2204, 2302, 2304, 2306, 2309.1, 2508, 2602.1, 2604, 2610.1, 2713.1, 2908, 2908.1, 2909, 7030 |