

Controlled Motorway M20 Junctions 4 to 7

Response to Consultation - Report March 2010



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EXECUTIVE SUMMARY

This document details the Highways Agency's response to comments raised during the 12-week consultation period on the proposal to introduce Variable Mandatory Speed Limits (VMSL) on the M20 motorway between junctions 4 and 7.

The consultation period started on 5 May 2009 and closed on 28 July 2009 and provided an opportunity for interested parties and members of the public to comment on the proposal (the "M20 Controlled Motorway Scheme").

Controlled Motorway Objectives

The proposed "Controlled Motorway Scheme" is a pro-active traffic management system, which when operational will help deliver the following objectives:

- Reduced congestion and improved journey time reliability;
- Reduced flow breakdown;
- Reduced incidents and improved safety.

Controlled Motorway schemes also reduce noise levels and carbon dioxide emissions. The potential reduction in these emissions has been recognised as a positive from many members of the public who responded to the consultation process.

Consultation Process

The consultation document "Controlled Motorways M20 Junctions 4 to 7 - Consultation Paper (May 2009)" together with appendices was issued as follows:

- By post direct to 50 stakeholders;
- Made open to public consultation on the Highways Agency's website.

The consultation encouraged representative organisations, businesses and members of the public to make contact with the Highways Agency and communicate their views. The results of this process can be summarised as follows:

- 73 responses were received within the 12-week consultation period;
- 41 responses were in favour of the scheme with 32 not in favour.

Those not in favour have raised a number of issues which are addressed in this report.

Given the largely positive response and due consideration of the issues raised, this report recommends that Variable Mandatory Speed Limits (VMSL) be implemented on the M20 between Junctions 4 and 7.

1 INTRODUCTION

1.1 Purpose of Document

The purpose of this document is to provide a summary of the responses received during the M20 Controlled Motorways Scheme consultation and to address the various issues raised. The consultation took place between 5 May 2009 and 28 July 2009 and provided an opportunity for stakeholders, such as road user groups, local government organisations, other interested parties and members of the public to comment on the proposal to implement Controlled Motorway operation on the M20 between Junctions 4 and 7.

1.2 Background

Full details of the background to the scheme were published in the consultation document, "Controlled Motorways M20 Junctions 4 to 7 - Consultation Paper (May 2009)". For reference, please refer to the Evidence Base at Annex.

1.3 Government's Code of Practice on Consultation

The consultation was conducted in accordance with the Government's Code of Practice on consultation (see below).

- 1) When to consult** - Formal consultation should take place at a stage when there is scope to influence the policy outcome.
- 2) Duration of consultation exercises** - Consultations should normally last for at least 12 weeks with consideration given to longer timescales where feasible and sensible.
- 3) Clarity of scope and impact** - Consultation documents should be clear about the consultation process, what is being proposed, the scope to influence and the expected costs and benefits of the proposals.
- 4) Accessibility of consultation exercises** - Consultation exercises should be designed to be accessible to, and clearly targeted at, those people the exercise is intended to reach.
- 5) The burden of consultation** - Keeping the burden of consultation to a minimum is essential if consultations are to be effective and if consultees' buy-in to the process is to be obtained.
- 6) Responsiveness of consultation exercises** - Consultation responses should be analysed carefully and clear feedback should be provided to participants following the consultation.
- 7) Capacity to consult** - Officials running consultations should seek guidance in how to run an effective consultation exercise and share what they have learned from the experience.

Further information about the Code of Practice can be located on the Department for Business Innovation and Skills website:

<http://www.berr.gov.uk/whatwedo/bre/consultation-guidance/page44420.html>

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2 SUMMARY OF RESPONSES

2.1 Analysis of Responses

In total 73 responses were received with 41 in favour of the scheme and 32 not in favour. In percentage terms, this represents 56% in support and 44% against. Those in favour include local government organisations:

- Maidstone Borough Council;
- Tonbridge and Malling Borough Council;
- Kent County Council (Kent Highways Services).

Figure 1 gives a breakdown of the responses received.

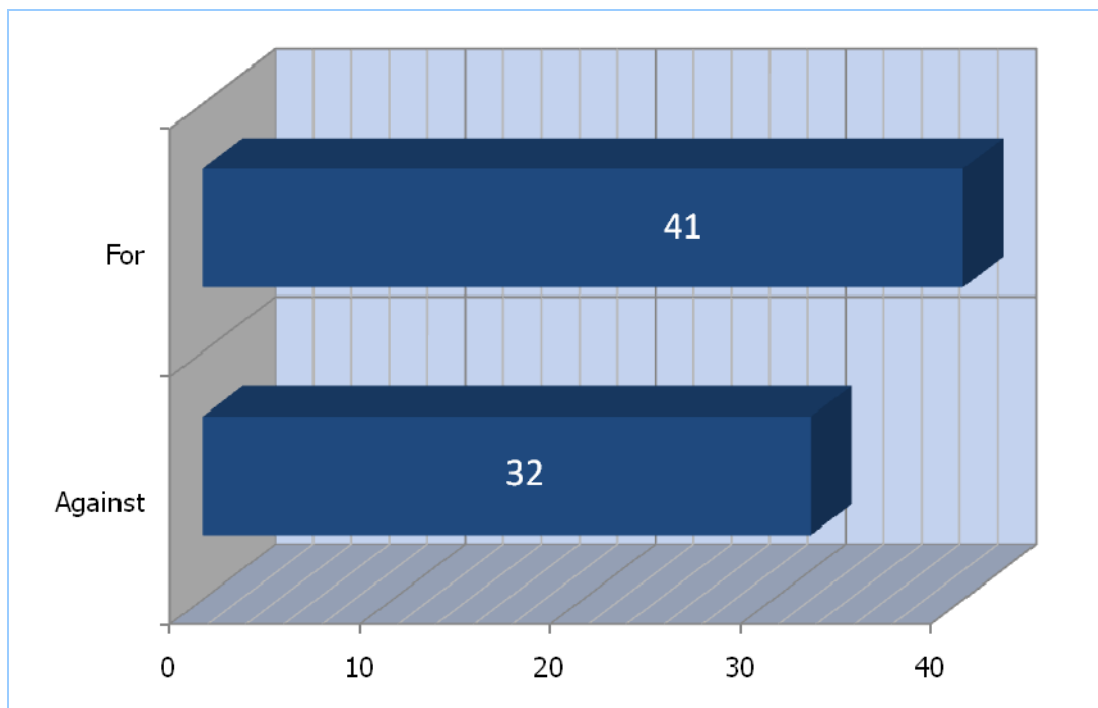


Figure 1: Number of Respondents to Consultation

2.2 Support for the Proposed Scheme

During the consultation period, there was general support for the M20 Controlled Motorways from the local government organisations affected by the proposal. From the benefits outlined in the Impact Assessment, the 41 respondents who were in favour of the proposals highlighted reduced carbon emissions and noise pollution as the most desirable benefits of the scheme. This is shown in Figure 2.

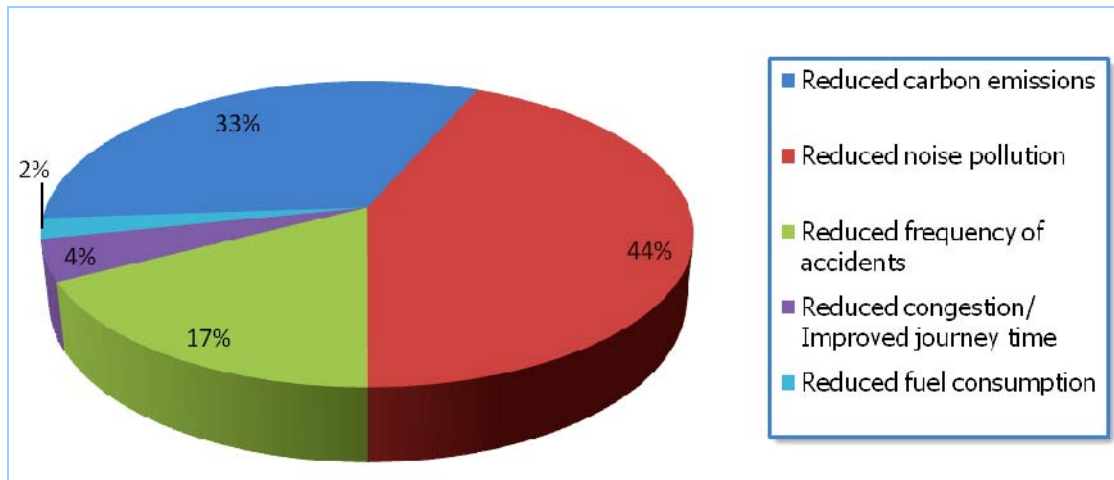


Figure 2: Breakdown of Perceived Benefits

2.3 Objections to the Proposed Scheme

A number of issues were raised during the consultation. Figure 3 provides a breakdown of the respondents' main objections.

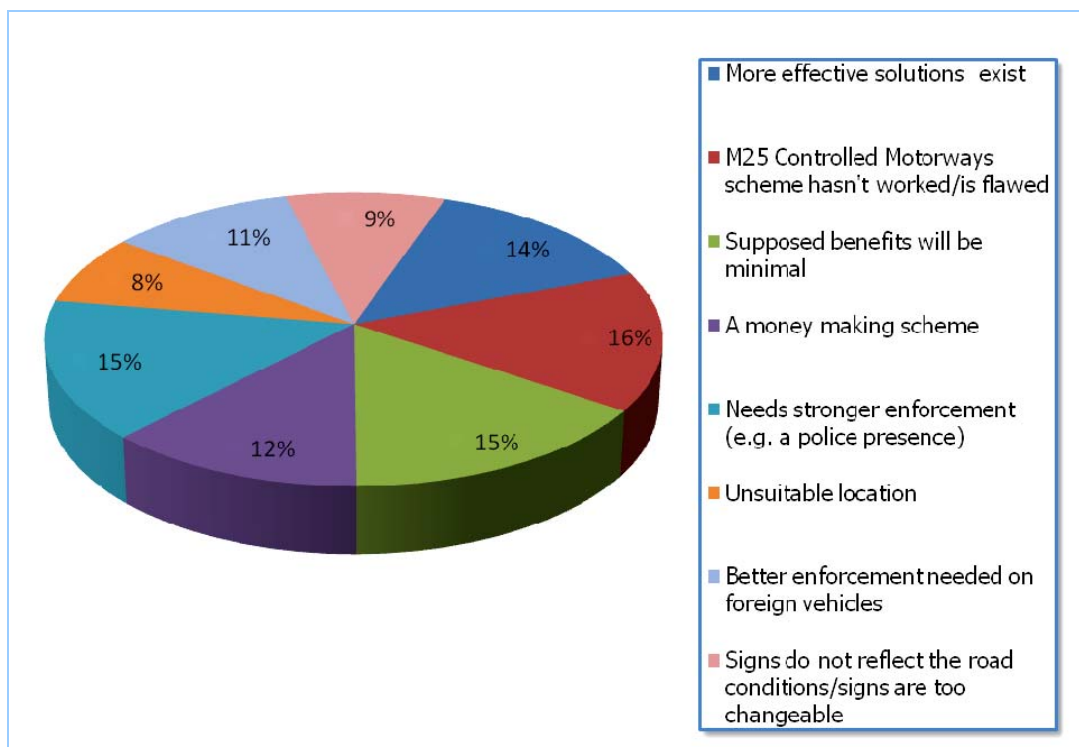


Figure 3: Breakdown of Main Objections

3 OBJECTIONS RAISED AND THE HIGHWAYS AGENCY'S RESPONSE

Of the 73 respondents to the consultation, 32 made objections to the proposal and these have been analysed and grouped according to subject area.

Table 3.1 overleaf sets out the results of this analysis together with the corresponding Highways Agency's response.

TABLE 3.1: RESPONDENTS' COMMENTS AND THE HIGHWAYS AGENCY'S RESPONSE

Ref	Respondents' Comment	Highways Agency's Response
1	<i>The system has been operational for a year and does not work. The consultation process is a foregone conclusion. The Highways Agency has no legal right to pre-empt the consultation.</i>	The equipment already installed and working has been an upgrade to the latest technology and was required whether Controlled Motorway operation is implemented or not. The Controlled Motorway system is not yet operational and the Advance Motorway Indicators (AMIs) are not showing the mandatory red ring. The consultation has been carried out in full compliance with Government guidelines.
2	<i>Noise and pollution will increase because of the density of the traffic.</i>	A Controlled Motorway scheme was first piloted on the M25 between Junctions 10 and 12 in 1995. Studies and investigations of its operation have been carried out since that time and all the studies confirm the findings that Controlled Motorway schemes reduce congestion, increase journey time reliability and reduce the risk of serious accidents. The scheme also encourages better lane discipline. Additional secondary benefits such as reduced noise and carbon dioxide emissions are realised by the smoother traffic flow and the reduction in stop start motoring.
3	<i>Comparison with the M25 is not relevant because of the greater distances between gantries on the M25. Distances between junctions on the Maidstone bypass are too constrained to allow smooth traffic flow.</i>	The original business case for the M20 Junctions 4 to 7 Controlled Motorways undertaken by the Transport Research Laboratory (TRL) took all factors associated with road layout and distances between junctions into account and concluded that this section of road would benefit from Controlled Motorway operation in the same way as the M25 scheme.
4	<i>In conditions of poor light and bad weather, there is no manual setting provision of speed limits.</i>	Signals will be able to be set manually by the South East Regional Control Centre (SERCC) at Godstone, should adverse road and weather conditions dictate such action.

TABLE 3.1: RESPONDENTS' COMMENTS AND THE HIGHWAYS AGENCY'S RESPONSE

Ref	Respondents' Comment	Highways Agency's Response
5	<i>Excessive acceleration and deceleration will occur between signals resulting in an increase in accidents.</i>	The results obtained from the M25 studies indicate there will be a reduction in accidents.
6	<i>Why has the Maidstone area been targeted for such a scheme?</i>	The M20 around Maidstone has suffered from peak-time congestion problems for some considerable time between junctions 4 and 7.
7	<i>Congestion cannot be cured by enforcing speed limits.</i>	Congestion can be reduced by Controlled Motorway operation as the M25 studies have shown.
8	<i>Air quality studies should be undertaken to confirm reduction in emissions takes place.</i>	Air quality stations have already been installed to measure the before and after pollution levels at various locations between junctions 4 and 7.
9	<i>Speed cameras cause erratic driver behaviour.</i>	The studies undertaken on the M25 scheme have shown that Controlled Motorways do not cause erratic driver behaviour.
10	<i>Speed control is not a substitute for road capacity and capacity could be increased by enforcing lane discipline.</i>	Where possible it is Government policy to make better use of the existing infrastructure rather than build new roads. Lane discipline is improved by the introduction of Controlled Motorway operation.
11	<i>Many thousands of pounds will be generated from this scheme which will go into Government funds.</i>	VMSL on the M20 between junctions 4 and 7 will provide tangible traffic management benefits as set out in the Evidence Base (Annex A). It is not the purpose of the scheme to raise revenue through speeding fines.
12	<i>Modern vehicles already have low emissions.</i>	Modern cars and lorries do produce less emissions than older vehicles, but increases in vehicle volumes have tended to negate the technology advances in engine development.

TABLE 3.1: RESPONDENTS' COMMENTS AND THE HIGHWAYS AGENCY'S RESPONSE

Ref	Respondents' Comment	Highways Agency's Response
13	<i>Controlled Motorway operation does not reduce driver stress and carbon dioxide emissions will also increase.</i>	There is no evidence that driver stress is increased as a result of Controlled Motorways. Studies to date conducted on the M25 confirm the environmental benefits given in the Consultation Report and Impact Assessment.
14	<i>Speed is only a factor in a small number of accidents. Speed cameras cause heavy braking and panic on the road.</i>	There is no evidence that enforcement cameras used with Controlled Motorways cause panic and heavy braking.
15	<i>Advisory limits are more effective. Cameras cause accidents and effective signal setting is required.</i>	The studies on the M25 have shown that without variable mandatory speed limits compliance is poor. The cameras are to encourage drivers to comply with the VMSL. Signal settings are derived automatically from sensors in the road.
16	<i>The signs and signals are a distraction to drivers.</i>	Whilst drivers always need to be observant of traffic signs and signals there is no evidence that Controlled Motorway signals are a distraction.
17	<i>Where does the fine money go?</i>	All monies collected from speed offences goes to HM Treasury.
18	<i>The scheme will result in lower speed limits than necessary being set. Speed limits should relate to road conditions.</i>	The scheme when operational derives traffic data from sensors within the road surface. This data provides information on traffic numbers, speed and vehicle headway (distance between vehicles). When predetermined parameters are reached an appropriate speed limit is set automatically. This removes the human interface resulting in more consistent speed settings and will ensure speed limits set relate directly to road conditions.
19	<i>Equipment life / decommissioning costs.</i>	The costs given in the Consultation Report include the initial installation and for maintenance replacements after 15 years. The decommissioning costs after the 30-year period are not included since these costs are considered to be negligible.

TABLE 3.1: RESPONDENTS' COMMENTS AND THE HIGHWAYS AGENCY'S RESPONSE

Ref	Respondents' Comment	Highways Agency's Response
20	<i>The cameras should not enforce the national speed limit (70 mph) and less punitive measures (less penalty points on licence) should be applied when caught exceeding one of the limits than would apply on ordinary "A" roads.</i>	The system allows the Police to enforce the 70mph (National Speed Limit) limit should they wish. All enforcement decisions and parameters related to excess speed are the responsibility of the Police.
21	<i>Average speed cameras would be a better solution over the whole length of the M20 between junction 4 and 7.</i>	Average speed cameras have not been considered for this section of the M20 because outside of peak hour traffic flow the motorway functions safely and satisfactorily without the need to slow traffic down to a fixed speed limit over a 24-hour period. Average speed limit cameras do not provide the flexibility of a Controlled Motorway scheme.
22	<i>Traffic will divert on to other roads within the vicinity of Maidstone.</i>	Previous studies on the M25 indicate that this will not be the case.
23	<i>Incorrect message signs and signals.</i>	The Controlled Motorway system sets message signs and mandatory signals automatically. The information to perform this task is obtained from sensors buried within the road surface. These sensors have proven highly reliable and can operate for significant periods without failure.

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4 ISSUES CONSIDERED TO BE OUTSIDE OF THE CONSULTATION REMIT

Members of the public have taken the opportunity during the M20 Controlled Motorway consultation process to convey a number of their concerns with other aspects of the M20 and surrounding roads.

Table 4.1 overleaf sets out a summary of these concerns together with the corresponding Highways Agency's response.

TABLE 4.1: RESPONDENTS' COMMENTS OUTSIDE THE CONSULTATION REMIT AND THE HIGHWAYS AGENCY'S RESPONSE

Ref	Respondents' Comment	Highways Agency's Response
1	<i>Spending more money on rural local roads.</i>	Rural roads are the responsibility of the local highway authority and not the Highways Agency. It is not possible to divert funds from the Controlled Motorway scheme into the maintenance of rural roads.
2	<i>Resurfacing the carriageway with a lower noise surface.</i>	Motorways and trunk roads are re-surfaced to maintain the safety and serviceability of the carriageway and not for noise mitigation reasons. The surface of the M20 Maidstone Bypass is currently in a satisfactory condition and resurfacing is currently not needed. When resurfacing is needed, a lower noise surface will be used. Noise reduction associated with Controlled Motorways is an additional benefit of the scheme.
3	<i>Extending the current scheme.</i>	Reports and business cases are currently being prepared to review the possibility of extending the scheme to junction 3 to the west and junction 8 to the east.
4	<i>Vehicle cloning and unregistered vehicles.</i>	Vehicle cloning and unregistered vehicles are matters for the Police.
5	<i>Poor driving.</i>	Driver behaviour issues are a matter for the Police.
6	<i>Operation Stack.</i>	Operation Stack is a Police led procedure. It is not envisaged that Operation Stack when in place will adversely impact on the proposed Controlled Motorway scheme.
7	<i>Foreign drivers escaping prosecution.</i>	Negotiations with our European partners are under way to resolve this issue.
8	<i>More Police presence required.</i>	The Police already operate an unmarked Police car regime on this stretch of the M20.

TABLE 4.1: RESPONDENTS' COMMENTS OUTSIDE THE CONSULTATION REMIT AND THE HIGHWAYS AGENCY'S RESPONSE

9	<i>Further improvements to M20 junction 4.</i>	Significant improvements to junction 4 have already been made by Kent County Council. The issue of further improvements is not within the scope of this consultation.
10	<i>Installation of noise barriers.</i>	The Highways Agency has installed noise barriers in a number of locations on the M20 between junctions 4 and 5 as part of the Government's noise mitigation programme. Whilst accepting that traffic noise is a problem for many people, the section of the M20 from junction 5 to 7 is not part of the noise mitigation programme. There are no plans therefore to install noise barriers on this section of the M20.
11	<i>Highways Agency Traffic Officers not effective.</i>	A recent customer survey found that over 99% of people rated the Highways Agency Traffic Officer service as excellent or very good.
12	<i>Different speed limits should apply for different vehicles, e.g. Heavy Goods Vehicles (HGVs). HGVs should be confined to one lane or travel off peak.</i>	Current motorway regulations apply.
13	<p><i>Consideration should be given to:</i></p> <ul style="list-style-type: none"> • <i>Widening of the A2 at Lydden;</i> • <i>Improving the M2 at Brenley Corner;</i> • <i>M2 Widening between Gillingham and Sittingbourne;</i> • <i>Improving the A249/M2 junction.</i> 	Future developments of the Kent Corridor routes and access to the Kent Ports is part of the DfT's Delivering a Sustainable Transport Strategy (DaSTS) agenda.

5 SUMMARY AND RECOMMENDATIONS

5.1 Summary

As the response analysis shows, there has been much support for the introduction of Variable Mandatory Speed Limits on the M20 between junctions 4 and 7 from both the public and local government organisations.

Whilst a number of respondents have objected to the proposal, it is considered that the issues raised have been addressed in the analysis. The analysis also notes that many of the comments received were outside of the consultation remit, but it is accepted that an open consultation of this nature also provides a platform for other views to be put forward.

5.2 Recommendations

In support of the proposal to introduce Variable Mandatory Speed Limits on the M20 between junctions 4 and 7, various studies commissioned since the introduction of the trial scheme on the M25 have established conclusively that Controlled Motorway technology does provide the benefits set out in the Impact Assessment, which formed part of the public consultation document.

In addition, having addressed the various objections and issues raised in the consultation process and noting that the consultation responses have not provided any new information to warrant amending the Impact Assessment, it is recommended that Variable Mandatory Speed Limits are implemented on the M20 between junctions 4 and 7.

ANNEX

EVIDENCE BASE

Evidence Base

Note: *This proposal has been assessed against the guidance that DfT uses to assess proposals based on the same principles as other Impact Assessments but some presentation aspects may differ.*

BACKGROUND

The Highways Agency is proposing to implement regulations to introduce Variable Mandatory Speed Limits on the M20 between junctions 4 and 7 (“the Controlled Motorway Scheme”). The Controlled Motorway Scheme together with the ability to enforce the variable mandatory speed limits will deliver a number of positive benefits with regard to safer roads and a reduction in journey times without the need for more road construction. These are:

- Making best use of the existing infrastructure;
- Reducing congestion;
- More reliable journey times;
- Reduced traffic flow breakdown;
- Reduced frequency of accidents/incidents;
- Reduced carbon dioxide emissions; and
- Reduced driver stress.

Since 1995, a Controlled Motorway scheme has been operational on the western quadrant of the M25 between Junction 10 (A3) and Junction 15 (M4). In 2002, the scheme was extended to cover Junctions 15 (M4) to 16 (M40).

Controlled Motorways have the following key features:

- Mandatory speed control, using variable speed limits displayed on special Advanced Motorway Indicators (AMIs) equipped with ‘Red Rings’, mounted above each lane on standard gantries;
- Automatic signal setting in response to traffic conditions, driven from by the Motorway Incident Detection and Automatic Signalling (MIDAS) system, with additional driver information displayed on Enhanced Message Signs (EMS); and
- Provision of speed enforcement using the Highways Agency Digital Enforcement Camera System 2 (HADECS 2) which will be mounted on the gantries.

The variable mandatory speed limit signals will be displayed on gantries. The signals mounted on overhead gantries are capable of automatically displaying one of three mandatory settings, 40 mph, 50 mph or 60 mph. All the lanes above the main carriageway will automatically display the mandatory speed limit as appropriate to the road conditions. In addition, 40 mph signals are set to protect backs of queuing traffic. Lower speed limits such as 20 mph or 30 mph can be manually set by

operators when considered necessary for the safety of the travelling public or those working within the carriageway.

A detailed “before and after” study was carried out when the Controlled Motorway was implemented on the M25 between Junctions 15 and 16. The study team included recognised experts in traffic behaviour, air quality, noise pollution, accident analysis, statistics and economic appraisal. The project team was accountable to a specially created Steering Group, comprising suitably qualified representatives from the Department for Transport and the Highways Agency. Methodology and results were reviewed on at least a quarterly basis, with interim meetings focusing on more technical detail as required.

BUSINESS CASE

In determining the methodology for guiding the business casework, the Project Steering Group recommended that the New Approach to Traffic Appraisal be adopted. The Business Case itself was established using a “before and after” comparison of key variables such as journey time, safety and capacity. The “before” scenario was the conventional gantry-mounted lane-signalling and cantilever mounted carriageway signals, with manually set signals and automatic queue protection using advisory speed limits. The “after” scenario (after implementation, i.e. with Controlled Motorway operational) was Controlled Motorways with variable mandatory speed limits, speed enforcement and congestion algorithms.

The project team conducted a comprehensive data analysis as part of developing the business case methodology. There were several sources used to collect this data:

- Carriageway loop detectors provided minute-by-minute data on flows, speeds, vehicle type and vehicle spacing;
- Specific journey data from instrumented vehicles provided information about stop-start behaviour and verified journey time measurements;
- Automatic Number Plate Recognition data provided a larger volume of information on actual journey times between Junctions 15 and 16;
- Noise surveys assessed the impact of the scheme on noise levels close to the road;
- Typical driving profiles (from the instrumented vehicles) and a large database for vehicle emission values were used to measure and model exhaust emissions; and
- STATS19 injury accident records provided extensive accident data.

The studies showed that there were impacts from introducing Controlled Motorways on the M25. The effects are described in the M25 Controlled Motorways Summary Report (HA159/04). Table A1 summarises the key outcomes.

TABLE A1: IMPACTS OF CONTROLLED MOTORWAYS ON M25		
Impact Area	Indicators of Impacts	Overall Improvement (Y/N)
Safety	Safety benefits arose as a result of a culmination of impacts on the driving environment and on driver behaviour. Injury accidents were reduced by 10%, and there was a 20% drop in the ratio of injury to damage only accidents.	Y
Journey times	There was an increase in peak-time journey times on the clockwise carriageway and a decrease on the anticlockwise carriageway. Combining the two carriageways made the peak-time effect of Controlled Motorways neutral. Off-peak, there were small increases in journey times on both carriageways.	N
Journey time reliability	There was a small improvement in overall journey time reliability, indicating a smoother journey.	Y
Emissions	Emissions decreased overall by between 2% and 8%. The smoothing effect of the system reduced fuel consumption, with a commensurate impact on emissions.	Y
Noise	Weekday traffic noise adjacent to the scheme was reduced by 0.7 decibels.	Y
Throughput	There was no increase in the peak 1-hour throughput.	N
Speed limit compliance	There was a reduction of 5% in the proportion of drivers exceeding the 40mph speed limit, which is now displayed as a mandatory limit.	Y
User reaction	The controlled motorway scheme was well accepted and there was a perception of key benefits.	Y

Subsequent to these studies, additional research has been carried out to determine the effect of Controlled Motorways on safety, using additional data (up to the end of 2006). This analysis¹ has shown that the best estimate of the effect of Controlled Motorways on injury accidents is a reduction of 15%.

¹ Crinson L, Notley S & Lawton (2007). *Safety Benefits of the M25 Controlled Motorway 1990 to 2006 Data UPR/SSI/165/07, Wokingham*

M20 CONTROLLED MOTORWAY SCHEME JUNCTIONS 4 TO 7

As part of the work to tackle congestion on the motorway and trunk road network, the Highways Agency is planning to introduce mandatory variable speed limits on the M20 between Junctions 4 and 7 (“the Controlled Motorway Scheme”). Traffic congestion and pollution has been a problem for a considerable time and improvements to Junction 4 and the adjoining roads have been implemented to help alleviate these problems. The proposed Controlled Motorways Scheme will enhance these new civil engineering works.

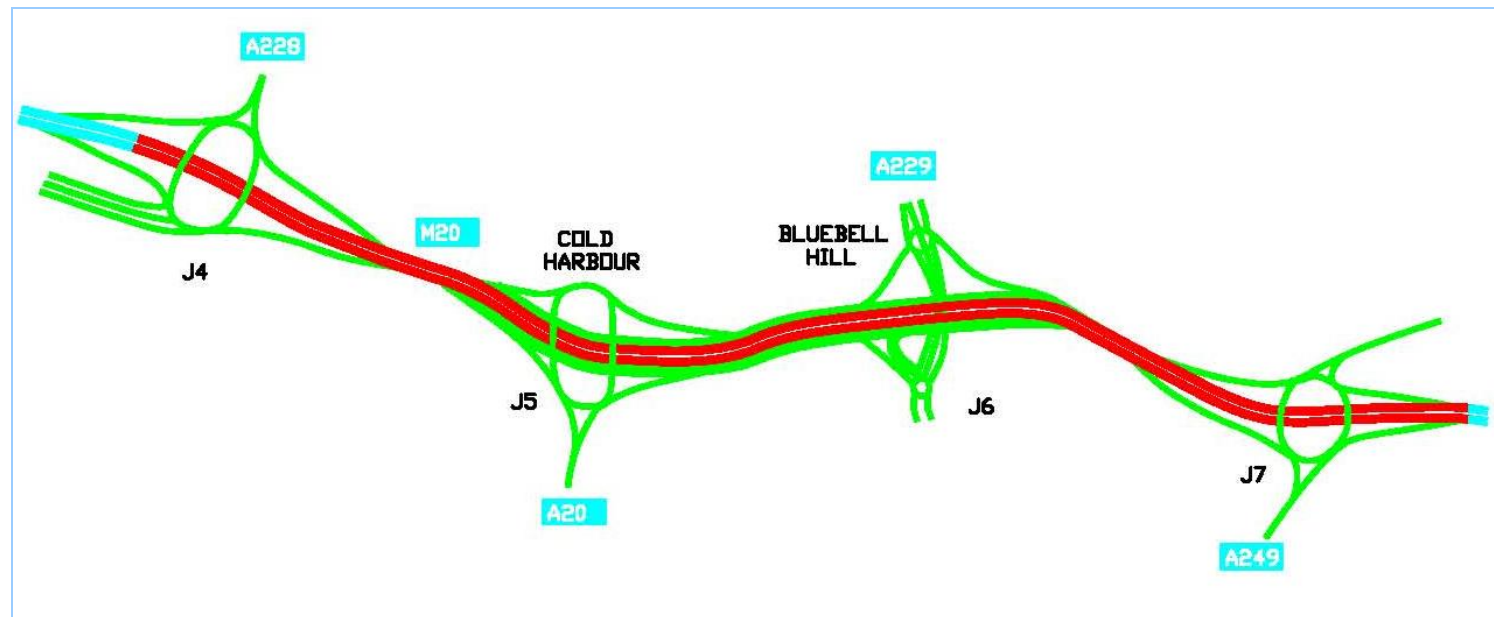
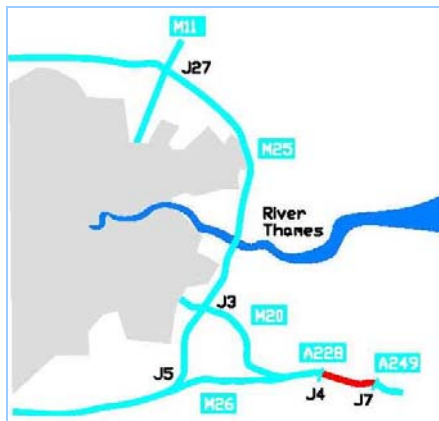


Figure A1: Scheme Map