

LEGOLAND SIGNAGE STRATEGY

Report on the outcomes of the 2014 trial routes and signage changes

This paper provides a commentary and analysis of the LEGOLAND alternative route trials implemented in Spring 2014.

The report supplements a review of the Spring signage trials, written by transportation consultants, Motion ('Technical Note 03: LEGOLAND Alternative Signage Strategy'), appointed by LEGOLAND but working in close consultation with RBWM. The intention is to provide additional commentary and data to review and, if appropriate, verify the conclusions from Motion's paper and to investigate and provide responses to issues raised by third parties, questioning or seeking clarity on the validity and findings from the Spring trials. The Motion report, is referred to as the 'original report' throughout this paper, and is included as Appendix A to this document.

It is emphasised that this report does not cover other strategic transport issues associated with LEGOLAND. Further details of which can be found on the Borough website under 'Transparency'. This paper focuses only on the alternative route strategy.

Royal Borough of Windsor & Maidenhead, Strategic Assets, Operations Directorate

October 10, 2014

LEGOLAND signage strategy

Report on the outcomes of the 2014 trial routes and signage changes

1 INTRODUCTION

1.1 WORKING GROUP

A multi-agency working group was established in September 2013 with a focus on investigating whether alternative routes to LEGOLAND could be implemented that would help to ease pressure on particular parts of the local and strategic highway network. The working group includes representatives from Royal Borough, the LEGOLAND Windsor Resort, Bracknell Forest Council, Surrey County Council and the Highways Agency.

1.2 OBJECTIVES

The working group held regular meetings to develop a signing strategy to introduce alternative routes to LEGOLAND to be implemented on a trial basis on the first two Spring bank holiday weekends of 2014 and on a third occasion during Spring half term of 2014.

In order to provide objective data from the signage trials it was agreed to capture as much traffic flow data as possible to enable comparisons to be made between traffic movements under the existing signage arrangements and with the trial route signage in place.

Rather than identify a single agreed measure for success, which was not considered to be adequate, the intention instead would be to gather both data and 'soft' feedback from stakeholders that would help inform a rounded judgement about the impacts of the trials in order that decisions on any permanent changes could be made.

Broadly, there were three key areas identified on the existing signed route from Windsor where there have been ongoing concerns expressed by residents and other third parties about the need for congestion reduction. This congestion can not be attributed solely to LEGOLAND traffic, as queuing does still occur at times when LEGOLAND is closed. It is however evident that at peak arrival times during the peak visitor season that the network has been unable to cope with the traffic volumes. The key locations where it was intended that the trial signage would look to reduce pressure were as follows:

- A. Junctions of Imperial Road / St Leonards Road & Winkfield Road / Clewer Hill Road
- B. Clarence Road roundabout junction with Imperial Road
- C. A332 Royal Windsor Way and M4 junction 6

By reducing the amount of traffic travelling through Imperial Road / St Leonards Road and St Leonards Road / Clewer Hill Road, it was intended that those junctions could operate more efficiently and reduce the incidence of blocking back of traffic to the Clarence Road roundabout. The blocking of traffic onto the Clarence Road roundabout can lead to stacking of traffic on all routes leading to that roundabout, as well

as the Maidenhead Road roundabout. At the busiest times traffic can also extend along Royal Windsor Way and onto the M4 at junction 6.

Whilst this report focuses on data and impacts of the routes for traffic travelling to LEGOLAND, there were also a series of signage, and other improvements within LEGOLAND and on the highway network to assist exiting traffic. The focus was to direct traffic back along the same routes, which it was intended would also lessen the pressure on the Winkfield Road / Clewer Hill Road and St Leonards Road / Imperial Road junctions.

The trial signage routes were intended to help establish whether the congestion at the above mentioned areas of concern could be reduced and what the implications on other routes would be.

The primary factors driving the decision to proceed with the trials are summarised below:

- i. **Motorway network** – where traffic queues back along a slip road and onto the M4 at junction 6 (as has previously happened) this introduces a significant safety risk due to the high speed of traffic on the motorway. It also has financial implications on a local, regional and national basis if traffic queues and delays develop on the motorway. This is an unacceptable safety risk to the Highways Agency, who are responsible for the motorway network, and has previously led to the junction being closed.
- ii. **Duties under the Traffic Management Act 2004** – the Royal Borough has a statutory duty of “*securing the expeditious movement of traffic on the authority’s road network; and, facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority*”.
- iii. **Easier access to Windsor Town Centre** – less blocking of the key gateway of the Clarence Road roundabout encourages visitors to the town and helps contribute to the vitality of the town centre.
- iv. **‘Residents First’ RBWM Strategic Objective** - by taking action to address long standing resident concerns about pressure on the Imperial Road corridor
- v. **Air Quality Action Plan** – The signage changes support the Cabinet Resolution of 27 February 2014, where the junction of St Leonards Road / Imperial Road was identified as an area for the preparation of an ‘Air Quality Action Plan’ (AQAP). The intention of reducing traffic flows through this junction would be complimentary to improving air quality.
- vi. **Appropriate use of road hierarchy** - The alternative routes look to make use of higher status roads than the existing route for traffic arriving via M4 junction 6. The alternative trial routes direct traffic onto A-roads, which serve as primary distributor roads, whereas Imperial Road and St Leonards Road are B roads with significant residential development.

Based on the multiple driving factors for carrying out the trials it is not considered viable to agree specific measureable objectives for determining the success or otherwise of the trials. Inevitably with any reduction in traffic flows on one route, there will be increases on others, and it is a subjective matter to determine what would be an acceptable change in flow on any particular road. However, the analysis does take into account the effect on the capacity of the respective routes.

1.3 ENGAGEMENT

The intention to carry out alternative route trials was communicated on 6th February at the Windsor & Eton Town Forum and the plan has been communicated at various stages and through various channels since that date.

On 6th March 2014 Ward Councillors were consulted (Appendix B) on the proposal to implement the trial signage routes on the pre-mentioned dates, and on a proposal for permanent signage changes from the Clarence Road roundabout for traffic to use the Goslar Way route, rather than Imperial Road, to be implemented alongside the other trial routes. Bray and Old Windsor Parish Councils have also responded with comments on the alternative routes, both prior to, and following the trials.

Following initial feedback from Councillors a subsequent email to Councillors was issued on 19th March (Appendix C), confirming that the decision had been taken to proceed with the trials. The decision was taken under the delegated powers of the Service Lead for Strategic Assets, in his capacity as the Borough's Traffic Manager, in consultation with Cllr Hill in his capacity as Lead Member for Highways and Transport. The only change from the previously circulated plans being to the M4 junction 8/9 route; the trials would use A308, Oakley Green Road and Fifield Lane rather than A308, A330 Ascot Road, due to major gas main works on the A330.

Ongoing communication has taken place through press releases, meetings, emails and phone calls with Councillors, Parish Councils, residents and the business community.

2 TRAFFIC FLOW DATA - SPRING 2014 TRIALS

2.1 1ST TRIAL (Fri 18 – Mon 21 April 2014)

2.1.1 Original report

For the purposes of comparing with a baseline scenario, the original report focused the analysis on the traffic flows from Saturday 19th April 2014 (trial date) with a baseline date of Sunday 18th August 2013. The comparison date was chosen on the basis of the two dates having almost identical visitor numbers to LEGOLAND. Whilst this does not guarantee that general traffic flows not associated with LEGOLAND would be the same, there will always be a number of variable factors that will influence traffic volumes on any given road at any time

The general changes in traffic flow on each of the routes between the baseline date and the trial are detailed in the original report. Section 3 of this report responds to comments on issues that may have had a bearing on the changes in traffic flow between the baseline and the trial.

2.1.2 Commentary & additional analysis

It has been asserted that to compare traffic flows from Saturday 19th April 2014 (Easter Saturday) with Sunday 18th August 2013 does not make for a reasonable and fair comparison. The date from 2013 was selected as a baseline date on the basis of similar visitor numbers to LEGOLAND.

In view of the concerns expressed, further analysis of data has been carried out to compare the flows from Saturday 19th April 2014 with a number of other Saturdays from 2013. Appendix D shows the full range of dates compared for all three trials, and a selection of key findings are shown in Table 1 (below).

Table 1 – Comparison of 1st trial with various dates from 2013

Comparison date from original report is highlighted in orange.

Location	data	TRIAL Sat 19 April '14	Easter Sat 30 March 2013	Sat 6 April 2013	Sat 13 April 2013	Sat 20 April 2013	Sat 27 April 2013	Sat 4 May 2013	Sat 11 May 2013	Sat 18 May 2013	Sat 25 May 2013	Sat 17 Aug 2013	Sun 18 Aug 2013
Imperial Road (south)	3 hr flow (9am to 12pm)	1879	2084	2051	1969	1776	1971	1795	2029	2078	2250	2057	2222
	% change for trial	-	-10%	-9%	-5%	+6%	-5%	+5%	-8%	-10%	-16%	-9%	-15%
Winkfield Road (south from north of LLWR)	3 hr flow (9am to 12pm)	2837	2733	2693	2596	2644	2616	2803	2578	2752	3008	2981	3113
	% change for trial	-	+4%	+5%	+9%	+7%	+8%	0%	+10%	+3%	-6%	-5%	-9%
Goslar Way (east)	3 hr flow (9am to 12pm)	2624	1713	1792	1815	2383	2051	2457	2085	2004	n/a	2144	1791
	% change for trial	-	+53%	+46%	+54%	+10%	+28%	+7%	+26%	+30%	n/a	+22%	+47%
Straight Road (north)	3 hr flow (9am to 12pm)	2150	1816	1692	1757	1892	1864	1925	2147	1921	2158	1833	1681
	% change for trial	-	+18%	+27%	+22%	+14%	+15%	+12%	0%	+12%	0%	+17%	+28%

It is important to clarify that the figures in Table 1 for the selection of dates should not be assumed to provide a more useful baseline scenario than the single date used as a comparison in the original report.

Whilst Table 1 draws on a greater number of dates to provide an 'average' situation from a larger sample, the visitor numbers to LEGOLAND are considered to be the most important control factor. In essence if the visitor numbers to LEGOLAND on any date used as a comparison are lower than for the trial date, then this will skew the figures for all routes, as the total number of vehicles travelling to LEGOLAND will be less.

In addition if visitor numbers are lower on a particular date, there is often a correlation with the weather on that date, which in turn can lead to fewer journeys on the network as a whole, which again can skew the results. It is for these reasons that the comparison date was selected for the original report, as this was considered to offer the most robust 'control' data.

Although it cannot be claimed that the data from 18th August 2013 will reflect exactly the same set of circumstances on the highways as for the trial date, there is nothing to suggest that using a different date would have been a more reasonable basis for comparison.

In terms of 'control' data to further verify the general traffic levels on the Borough's roads on the selected trial date of 19th April 2014 compared with the date of 18th August 2013, a list of roads in Table 2 has been selected to test the difference in traffic flows between the two dates. The roads included in Table 2 have been selected on the basis that they are not considered to be directly impacted by the signed routes to LEGOLAND:

Table 2 – Trial 1: Control data of traffic flows on trial date and comparison date for a selection of roads not directly linked to, or forming part of signed routes to LEGOLAND

Location	data	TRIAL DATE Sat 19 April '14	SUN 18 Aug 2013 Comparison date from original report
A329, Ascot West of Heatherwood (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1907 (6% increase)	1802
A4 Castle Hill, Maidenhead eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	2225 (28% increase)	1737
Southlea Road, Datchet	3 hr flow - 9am to 12pm (% change for 2014 trial)	988 (48% increase)	668
Kings Road, Windsor (northbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1167 (25% increase)	930
Clarence Road, Windsor (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1369 (86% increase)	737
Dedworth Road, Windsor	3 hr flow - 9am to 12pm (% change for 2014 trial)	1014 (49% increase)	682

It can be seen from Table 2 that all six of the roads selected to provide a general overview of the difference between traffic flows on the Borough's roads between the trial date and the comparison date, carried more traffic. From this data it can be seen that the Saturday 19 August was a busier day on the local road network than Sunday 18 August. Accordingly, for the records of the traffic on Imperial Road and Winkfield Road to show a reduction gives confidence that it can, quite reasonably be asserted that the reductions in flows on Imperial Road and Winkfield Road (southbound) towards LEGOLAND do reflect the fact that the signage was successful in reducing volumes on the Imperial Road corridor.

Finally it is worth noting that the journey time surveys that were carried out on Friday 18th April (Good Friday) revealed that the signed routes coped well and no major delays were experienced. The journey time surveys referred to in the original report are included in APPENDIX E to this document.

2.2 2nd TRIAL (Sat 03 – Mon 05 May 2014)

2.2.1 Original report

The same comments referred to in section 2.1.1 apply to the second trial. The original report should be referred to for information on traffic flow changes on the various routes between the baseline and trial data.

2.2.2 Commentary & additional analysis

The same issues regarding the selection of the comparison date apply as for the first trial (See 2.1.2)

The below tables reinforce the validity of the selection of the baseline date for Trial 2, as it can be seen that the general traffic flows on the network unrelated the trials saw broad increases, or minor reductions, in traffic level on the date of the trial as compared with the baseline scenario. Ideally it would be possible to use a date when traffic flows on all roads were exactly the same from one date to another, but this is simply not possible, as there are so many factors that influence traffic flows on any given date.

Table 3 – Comparison of 2nd trial with various dates from 2013

Comparison date from original report is highlighted in orange. (note: Goslar Way excluded due to counter fault in June 2013)

Location	data	TRIAL Sat 03 May 2014	Easter Sat 30 March 2013	Sat 6 April 2013	Sat 13 April 2013	Sat 20 April 2013	Sat 27 April 2013	Sat 4 May 2013	Sat 11 May 2013	Sat 18 May 2013	Sat 25 May 2013	Sat 17 Aug 2013	Sat 15 June 2013
Imperial Road (south)	3 hr flow (9am to 12pm)	1791	2084	2051	1969	1776	1971	1795	2029	2078	2250	2057	2150
	% change for trial	-	-14%	-13%	-10%	1%	-10%	0%	-12%	-14%	-20%	-13%	-17%
Winkfield Road (south from north of LLWR)	3 hr flow (9am to 12pm)	2597	2733	2693	2596	2644	2616	2803	2578	2752	3008	2981	3068
	% change for trial	-	-5%	-4%	0%	-2%	-1%	-7%	1%	-6%	-14%	-13%	-15%
Straight Road (north)	3 hr flow (9am to 12pm)	2177	1816	1692	1757	1892	1864	1925	2147	1921	2158	1833	2077
	% change for trial	-	+20%	+29%	+24%	+15%	+17%	+13%	0%	+13%	0%	+19%	+5%

Table 4 – Trial 2: Control data of traffic flows on trial date and comparison date for a selection of roads not directly linked to, or forming part of signed routes to LEGOLAND

Location	data	TRIAL DATE Sat 03 May '14	SAT 15 June 2013 Comparison date from original report
A329, Ascot West of Heatherwood (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	2494 (19% increase)	2104
A4 Castle Hill, Maidenhead eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	2469 (1% increase)	2451
Southlea Road, Datchet	3 hr flow - 9am to 12pm (% change for 2014 trial)	907 (9% reduction)	995
Kings Road, Windsor (northbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1116 (3% reduction)	1153
Clarence Road, Windsor (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1415 (17% increase)	1213
Dedworth Road, Windsor	3 hr flow - 9am to 12pm (% change for 2014 trial)	1002 (3% increase)	969

Tables 3 and 4 demonstrate that the reductions in flow for Imperial Road and Winkfield Road from the north of the park reported in the original report would appear to be robust findings.

The selection of roads in Table 4 show that general traffic flows on those roads not linked to the trials either saw increases in flow or only minor reductions, between the comparison date and the trial date. In addition as none of those roads included in Table 4 saw substantial reductions in flow, this would appear to address any assertion that the baseline (comparison) date had unusually high traffic flows.

Table 3 looked at in isolation may give the impression that the Straight Road flows were rather high on the baseline date. However, Appendix H provides additional traffic flow data for Straight Road for Saturdays throughout Spring and Summer 2013, which further clarifies that the flows on the comparison date were not unusually high. It should be noted that the journey time surveys referred to in the original report (attached herein as Appendix F), revealed that the Imperial Road corridor and the Royal Windsor Way were operating well and coping with the traffic. The surveys did reveal queuing on the route via Goslar Way, with the majority of the queuing experienced towards the southern end of the Great Park. The reduced queuing in the Imperial Road corridor clearly has benefits to local traffic in the immediate vicinity of Imperial Road and to the strategic highway network by reducing the risk of blocking back towards the M4, as well as general benefits in terms of ease of access to Windsor, with less blocking of Clarence Road roundabout.

It would appear that the high volumes of traffic using the Goslar Way route, combined with traffic using the Straight Road route led to a degree of congestion at the busiest point in the LEGOLAND peak. These delays were concentrated around 10.45 to 11.30am, with minimal impacts either side of that time period.

Section 3 of this paper (Comment 11 therein) discusses why these delays may have been experienced and how they might be addressed going forward. A key reason may well be that a small percentage of traffic used the route from junction 8/9 of the M4, as is reflected in the figures from the original report, and as expected due to the intermittent display of the LEGOLAND message on the Variable Messages Signs for junction 8/9. It may be that if the signage at junction 8/9 of the M4 had attracted only moderately increased levels of traffic onto the route via Drift Road, the two routes that pass through the Great Park

would have experienced only very minor congestion, even during the busiest part of the peak arrival period.

2.3 3rd TRIAL (Mon 26 – Sat 31 May 2014)

2.3.1 Original report

The same comments referred to in section 2.1.1 also apply to the third trial. The original report should be referred to for information on traffic flow changes on the various routes between the baseline and trial data.

2.3.2 Commentary & additional analysis

See tables over page.

Table 5 – Comparison of 3rd trial with various dates from 2013

Comparison date from original report is highlighted in orange.

Location	data	TRIAL Sat 31 May 2014	Easter Sat 30 March 2013	Sat 6 April 2013	Sat 13 April 2013	Sat 20 April 2013	Sat 27 April 2013	Sat 4 May 2013	Sat 11 May 2013	Sat 18 May 2013	Sat 25 May 2013	Sat 17 Aug 2013	Sun 26 May 2013
Imperial Road (south)	3 hr flow (9am to 12pm)	1875	2084	2051	1969	1776	1971	1795	2029	2078	2250	2057	2138
	% change for trial	-	-10%	-9%	-5%	+5%	-5%	+5%	-8%	-10%	-17%	-9%	-12%
Winkfield Road (south from north of LLWR)	3 hr flow (9am to 12pm)	2611	2733	2693	2596	2644	2616	2803	2578	2752	3008	2981	3169
	% change for trial	-	-4%	-3%	+1%	-1%	0%	-7%	1%	-5%	-13%	-13%	-18%
Goslar Way (east)	3 hr flow (9am to 12pm)	2582	1713	1792	1815	2383	2051	2457	2085	2004	n/a	2144	1764
	% change for trial	-	+51%	+44%	+42%	+8%	+26%	+5%	+24%	+29%	n/a	+20%	+46%
Straight Road (north)	3 hr flow (9am to 12pm)	2262	1816	1692	1757	1892	1864	1925	2147	1921	2158	1833	2282
	% change for trial	-	+25%	+34%	+29%	+20%	+21%	+18%	+5%	+18%	+5%	+23%	-1%

Table 6 – Trial 3: Control data of traffic flows on trial date and comparison date for a selection of roads not directly linked to, or forming part of signed routes to LEGOLAND

Location	data	TRIAL DATE Sat 31 May 2014	SUN 26 May 2013 Comparison date from original report
A329, Ascot West of Heatherwood (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1944 (10% reduction)	2157
A4 Castle Hill, Maidenhead eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	2224 (29% increase)	1724
Southlea Road, Datchet	3 hr flow - 9am to 12pm (% change for 2014 trial)	913 (30% increase)	702
Kings Road, Windsor (northbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1123 (43% increase)	784
Clarence Road, Windsor (eastbound)	3 hr flow - 9am to 12pm (% change for 2014 trial)	1292 (82% increase)	709
Dedworth Road, Windsor	3 hr flow - 9am to 12pm (% change for 2014 trial)	893 (6% reduction)	946

Tables 5 and 6 show broadly similar patterns to the tables in sections 2.1 and 2.2 of this report (ie. The first and second trials). The most apparent trend is that the traffic volumes on the Imperial Road route were reduced during the third trial, with traffic being displaced primarily to the Goslar Way and Straight Road routes.

No figures are given for the junction 8/9 route as there were no permanent counter sites in place in 2013 which can be used to produce the same analysis. The analysis in the original report does cover analysis of that route. The junction 8/9 route across all of the trial periods is further discussed in section 3 of this report.

It should be noted that Table 5 compares the trial date of Saturday 31 May primarily with Saturday's earlier in the year, where flows are lower than for early Summer. Appendix H includes further traffic flow information for Straight Road, to provide a greater breadth of information on typical traffic flows throughout the Summer of 2013 on Straight Road. Appendix H confirms that the flows experienced during the trials were not significantly higher than would normally be experienced.

2.4 AUGUST 2014 (implement changes for peak season)

2.4.1 Decision

A decision was taken under the delegated powers of the Service Lead for Strategic Assets, in his capacity as the Borough's Traffic Manager, in consultation with Cllr Hill in his capacity as Lead Member for Highways and Transport to implement the trial routes again during August. The only change to the routes was for the route from junction 8/9 of the M4 to be via A330 Ascot Road and Drift Road rather than via the A308, Oakley Green Road, Fifield Lane and Drift Road. This was the original preferred route, which was not used for the trials due to major gas main works taking place at the time.

2.4.2 Commentary & additional analysis

Feedback on the traffic conditions during August in Windsor has been positive and there has been very limited feedback to suggest any problems caused by extra traffic on any of the alternative routes. Some queuing has been reported by one individual on the Albert Road approach to the Kings Road roundabout, though this is only a single response and amendments to the roundabout 'keep clear' markings have been arranged to help address any blocking that may occur on occasion. It is acknowledged that the VMS for junction 8/9 have not permanently displayed the LEGOLAND message, and that this will have impacted on the actual shift in traffic flows onto the route via A330 Ascot Road.

Table 7 in section 3 of this report addresses the concerns expressed that A330 Ascot Road will not be able to cope with the additional traffic that would arise if the route from junction 8/9 of the M4 is signed permanently. This is further discussed in Comment 2 in Section 3 of this paper.

Appendix I provides data from late August and into early September on traffic flows on the key routes in Windsor. Each date is compared with a corresponding date from 2013. When examining the data it should be noted that the dates in September 2014 are dates when only the Goslar Way route via the Great Park was signed to LEGOLAND. There was no signage beyond what was in place in 2013 for the Straight Road route. The contents of Appendix I support the findings of the original report and the trials generally.

3. EVALUATION

A variety of comments have been received on the signage trials since the initial consultation with Members in early March 2014. The comments have been received prior to implementing the trials, during the trial periods and following conclusion of the trials. The comments are summarised below along with an accompanying response in each case:

Comment	Response
<p>1) VMS for junction 8/9 of the M4 not displaying the information to direct LEGOLAND traffic to exit</p>	<p>The Highways Agency have supported the scheme and allowed use of their Variable Message Signs (VMS) for the purposes of the trial. Messages relating to incidents or important safety information are afforded a higher degree of priority and displaced the LEGOLAND messages at times throughout the trials and through August.</p> <p>The Highways Agency has a limited number of VMS on the approach to junction 8/9. As such the messages were not displayed to the same frequency as at the M25 junction 13 route, where there were infrequent occasions when the LEGOLAND message was not displayed.</p> <p>If there were signs permanently displaying information for LEGOLAND traffic to exit at junction 8/9 of the M4, then it is reasonable to assume that less traffic would have exited at junction 6, and in turn the routes via Imperial Road and Goslar Way would have seen lower traffic volumes.</p>

	<p>The junction 8/9 route passes along the A330 Ascot Road and Drift Road, and that route passes fewer junctions and residential frontages than the Imperial Road route. It has merit as an alternative route to ease traffic in central Windsor and to disperse the traffic more effectively than was the case during the trials.</p> <p>The messages on the VMS were overwritten more frequently than would have been ideal. This was always a risk with the Highways Agency needing to prioritise other messages according to circumstances. The Highways Agency has advised that there have been some technical issues with the 'LEGOLAND' information not returning immediately to the signs once other message displays had been removed. The Highways Agency has supplied extensive raw data of the messages displayed on the various VMS units during the trials and in August.</p> <p>The response to Comment 2 is also relevant to this Comment.</p>
<p>2) "LEGOLAND informed Windsor residents in March that 15% of traffic passed through J8/9. Using data from the Motion report....this means we have a potential additional 708 vehicles (15% of 4719) passing along the A330 Ascot Road through Holyport in a three hour period"</p>	<p>The percentage figure of traffic passing through junction 8/9 is estimated to be 14% (rather than 15%) of traffic that uses a motorway in travelling to LEGOLAND and <u>not</u> 14% of all traffic that arrives at LEGOLAND.</p> <p>The quoted potential 3 hourly figure of 708 vehicles is based on all arrivals at LEGOLAND averaged across the three trial weekends. A certain percentage of vehicles will be using local roads and therefore it does not follow that 14% (or 15%) of the 4719 vehicles would use junction 8/9, as this would presume that 100% of those vehicles have used a motorway, and ignores traffic with a local origin point.</p> <p>Furthermore, whilst 14% of motorway arrivals travel via junction 8/9 of the M4, it can not be assumed that all of those vehicles would choose to follow signs to exit at that point, as this would ignore the influence of sat nav systems, which presently direct such traffic to continue to junction 6 of the M4.</p> <p>It is accepted that the VMS for junction 8/9 did not operate at all times throughout the signage trials, and this will have led to less traffic exiting at junction 8/9 than if permanent static signs were in place.</p> <p>Importantly it should be noted that despite the VMS issues, even if the signs had been permanently in use, and all eastbound LEGOLAND traffic on the M4 had exited at junction 8/9 and used the A330 Ascot Road, the total 3 hourly southbound flows (9am to 12pm) would still be below the levels experienced during the PM peak period (4pm to 7pm) on weekdays.</p> <p>Table 7 below provides some figures to illustrate this point. Even with the 708 extra vehicles referred to in the comment, the flows between 9am and 12pm for weekdays in August would be between 1757 and 1851 vehicles. These potential increases would mean that total southbound flows would still be on average 15% less than the flows currently using the route between 4pm and 7pm (between 1986 and 2264 vehicles).</p> <p>It is therefore apparent that a permanently signed route on junction 8/9 would not create unprecedented traffic levels for this A road.</p>
<p>3) "I am advised that the signs for traffic</p>	<p>Signs have been changed within LEGOLAND to encourage more motorists to turn right into Winkfield Road. LEGOLAND staff also issued leaflets to visitors</p>

<p>exiting LEGOLAND have not been changed so exiting visitors are generally left to their own devices”</p>	<p>providing travel information to encourage use of the alternative routes. In addition, temporary signs were in use throughout the trials to direct drivers back along the relevant routes to the motorway network. Should the routes be made permanent, the signs would be more visible and could be located on new posts where this would ensure that they would be sited in optimum positions. For the purposes of the trials it is considered that signs for exiting traffic were fit for purpose.</p>
<p>4) “The flimsy nature of signs for LEGOLAND contrasts with better signs for the Red Bull Air show”</p>	<p>There were seven temporary signs manufactured for directing traffic away from LEGOLAND to the appropriate routes. There were some problems with two of these signs coming loose from the frames. The problems were rectified as soon as possible in each case. This did not materially impact on the outcomes of the trials. If decisions are taken to make the routes permanent then permanent signs of appropriate size and construction would be installed.</p>
<p>5) “I hear that LEGOLAND have not changed their website so are still directing traffic travelling via the M4 to exit at J6”</p>	<p>During the trials the LEGOLAND website advised of the various alternative routes to be used. For a short period during the first trial the website for the hotel had not been updated with details of the alternative routes. This was changed once the issue was raised. It is not considered that this had a major impact on the findings of the trial.</p>
<p>6) “I consider that Ward Councillors cannot accept that permanent route changes be made unless they are certain that the traffic trials actually diverted traffic onto the new routes, and that the increased traffic was acceptable”</p>	<p>Refer to Comment 2 response, and Table 7, for information that the traffic levels for A330 Ascot Road during the busiest time for LEGOLAND traffic would be below the existing evening peak flows experienced on weekdays on the A330 Ascot Road.</p> <p>The Highways Agency has advised that the VMS for the route from junction 13 of the M25 were in operation throughout the majority of the trial. In addition the vast majority of that route was already signed with permanent brown tourist signs and is also a route referred to on the LEGOLAND website. The moderate change in traffic flow during the trials on Straight Road (6.4% averaged across the trials)referred to in the original report is considered to be as expected in view of the fact that the route from the Runnymede roundabout has been signed since LEGOLAND was first opened.</p> <p>The Borough has a duty under the Traffic Management Act (TMA) to secure the expeditious movement of traffic on its road network. This legal duty requires a broad view of the highway network and the intention to address the variable and sometimes severe congestion in Windsor (due to a range of factors, not just LEGOLAND), by utilising a variety of routes is considered an appropriate way to manage the issues. Again, as the increases in flow experienced during the trials on the various alternative routes to the Imperial Road route did not lead to traffic levels that exceed peak am or pm flows on those roads, the routes are considered appropriate and complimentary to fulfilling the TMA duty.</p>
<p>7) “It is essential that RBWM demonstrate transparency and publish the Highways Agency data so we can be clear what signs</p>	<p>Refer to responses to Comments 1, 2 and 6 for information on why the findings of the original report are considered to be provide useful information, when supplemented by the additional commentary and analysis contained in these comments.</p> <p>In terms of publishing the data relating to the Highways Agency (HA) VMS, this has now been received from the Highways Agency just prior to completion of this report. The data is extensive and full analysis is not possible at present. The raw</p>

<p>were switched on, when they were switched on and what each of them displayed during the three trial periods”</p>	<p>data is available to be emailed if requested.</p> <p>As mentioned elsewhere in this report, even if the VMS had not been operation at all, the routes from junction 8/9 of the M4 and from junction 13 of the M25 are well suited to carrying additional traffic during the LEGOLAND peak periods. The Imperial Road signed route, is only in place as it was the route many years ago as the shortest route from the motorway network at a time when the Safari Park was in operation and general traffic flows nationally were substantially lower.</p>
<p>8) Despite careful scrutiny of the original report there is no mention that the alternative routes that formed the basis of the trial routes would include the A330 through Holyport during August.</p>	<p>The A330 would have been the signed route from junction 8/9 of the M4 during the trials had it not been for the fact that major gas main works were taking place on the A330 at the time of the trials.</p> <p>The original report was concerned with commenting on the actual routes used during the trials.</p> <p>The A330 with its higher classification is more suitable for use as a permanent signed route to LEGOLAND than using Oakley Green Road and Fifield Lane. Signing an A road and Drift Road, which is a high standard route with minimal frontage residential development, is considered to represent good practice in terms of appropriate use of the hierarchy of the Borough’s roads. It also supports the Borough’s ‘Residents First’ Strategic Objective and air quality issues around the highly residential Imperial Road and Clewer Hill Road junctions.</p>
<p>9) The original report is “flimsy, inconclusive and not robust”</p>	<p>Refer to above responses to Comments.</p> <p>In addition, feedback from various Windsor Councillors, including Cllr Bathurst, Cllr Mrs Quick and Cllr Mrs Evans, has indicated that the traffic in the town seemed to flow well during the trials.</p> <p>Positive feedback has been received from the Windsor Town Forum, the Chamber of Commerce, the Windsor Public Realm Project Board and various residents of Windsor.</p> <p>Negative responses to the route signage have also been received, although these have been from a small group of individuals. Cllr Hill has made it clear that the key aim was to relieve congestion on Imperial Road and Winkfield Road and to stop traffic backing onto the M4. Irrespective of any assertions on the robustness of data (which are separately addressed in this report), the trials did lead to reduced congestion on those roads.</p>
<p>10) The trials were not effective and were a waste of time and money</p>	<p>LEGOLAND funded the trials. Which was a commercial decision and did not utilise public funding.</p> <p>The trials clearly showed that revised signage arrangements help to reduce overall congestion on the highway network. Officers have reported that fewer complaints have been received about traffic in Windsor than in previous years</p> <p>Analysis of existing flows on the alternative routes demonstrate that there is scope for these roads to cope with traffic levels in excess of those experienced during the LEGOLAND peak periods when the trial signage was in place. As such even taking into account the issues with the VMS, it can be stated that the A330 Ascot Road can carry higher volumes during the hours of 9am to 12pm,</p>

	<p>than is presently the case.</p> <p>If the VMS had displayed the LEGOLAND message more frequently it does follow that the junction 8/9 route would have carried more traffic than it did, and in turn the congestion reduction in Windsor would have been greater than it was.</p>
<p>11) Delays were experienced during the second trial in the Great Park and at A332 / B383 roundabout</p>	<p>There were delays experienced on the Saturday of the second trial during the hours of approximately 10:35 to 11:10am at the southern end of Sheet Street Road. This was the busiest point in the peak and the trial signage was effective in directing substantial amounts of traffic onto the alternative routes. If the VMS for junction 8/9 of the M4 had been displaying the LEGOLAND message at the same time, this would have assisted in easing the pressure on the routes through the Great Park. Signing the junction 8/9 route permanently would help to spread the LEGOLAND traffic more effectively and evenly across the network.</p>
<p>12) Residents have not received answers to their questions</p>	<p>Borough officers and Councillors have investigated complaints and comments from residents before, during and after the trials. Actions have been taken as required to address issues raised.</p>

Table 7: A330 Ascot Road, Holyport. Southbound flows from permanent traffic counter with projected traffic flows during LEGOLAND peak if the route from junction 8/9 was permanently signed.

			ACTUAL EXISTING FLOWS			Projected flow if 600 extra vehicles added	Projected flow if 708 extra vehicles added
			am peak	LEGO PEAK	pm peak	LEGO PEAK	LEGO PEAK
			7am-10am	9am-12pm	4pm-7pm	9am-12pm	9am-12pm
Sat	07-Jun	2013	652	963	1275	1563	1671
Mon	09-Jun	2013	1578	1069	1765	1669	1777
Tue	10-Jun	2013	1608	848	2022	1448	1556
Wed	11-Jun	2013	1473	1011	2264	1611	1719
Mon	12-Aug	2013	1416	1124	1986	1724	1832
Tue	13-Aug	2013	1508	1121	2092	1721	1829
Wed	14-Aug	2013	1454	1115	2167	1715	1823
Thur	15-Aug	2013	1484	1143	2094	1743	1851
Fri	16-Aug	2013	1339	1049	2264	1649	1757
Sat	17-Aug	2013	590	980	963	1580	1688
Sun	18-Aug	2013	430	815	948	1415	1523

APPENDICES