Transport for South Hampshire Evidence Base

Havant Local Plan Development Allocations

Report for Havant Borough Council

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1 Introduction

1.1 SRTM Background

1.1.1 MVA Consultancy was commissioned, as part of a wider team, to support Transport for South Hampshire (TfSH) with the development and application of a Sub-Regional Transport Model Suite (SRTM) for this nationally important area.

1.1.2 The SRTM has been developed to support a wide-ranging set of interventions across the TfSH sub-region, and is specifically required to be capable of:

- forecasting changes in travel demand, road traffic, public transport patronage and active mode use over time as a result of changing economic conditions, land-use policies and development, and transport improvement and interventions;
- testing the impacts of land-use and transport policies and strategies within a relatively short model run time; and
- testing the impacts of individual transport interventions in the increased detail necessary for preparing submissions for inclusion in funding programmes.

1.1.3 A glossary of the common terms used in relation to SRTM and this study is provided as Appendix A.

1.2 Study Background and Havant Borough Council Development Scenarios

1.2.1 Havant Borough Council (HBC) is preparing its Local Plan (Allocations) for adoption in late 2013. To help inform and evidence the Plan, TfSH's SRTM has been identified as a tool to assess the transport implications of the proposed land allocations.

1.2.2 Use of the SRTM in a fully forecasting mode (whereby the amount of development taken up is projected) was not required. Instead the draft allocation sites have been tested fully developed and the impacts identified.

1.2.3 This study builds on the work previously undertaken by PUSH (Partnership for Urban South Hampshire) and the PBA (Peter Brett Associates) study as part of the Core Strategy. The study has been undertaken in consultation with representatives of both Hampshire County Council (HCC) and the Highways Agency (HA) to ensure the study approach is consistent with their requirements for assessing the impacts of the allocation sites.

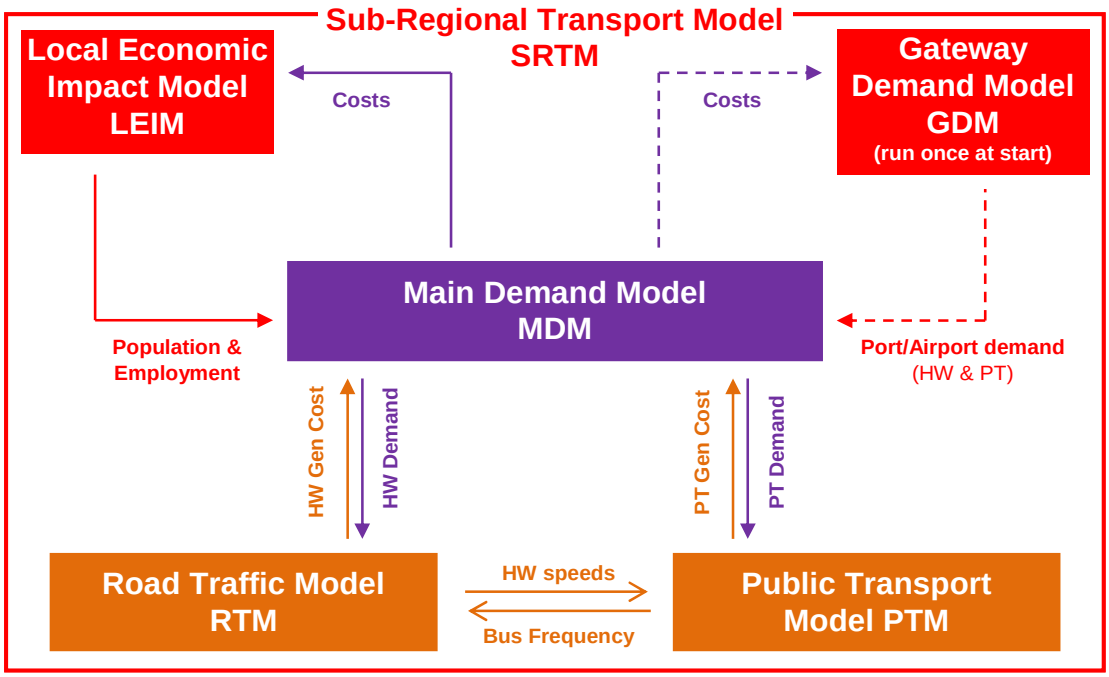
1.3 Sub Regional Transport Model Context and Scope

1.3.1 The SRTM is a suite of linked models comprising the following components as shown in Figure 1.1:

- the Main Demand Model (MDM) which predicts when (time of day), where (destination choice) and how (choice of mode) journeys are made;
- the Gateway Demand Model (GDM) which predicts demand for travel from ports and airports;

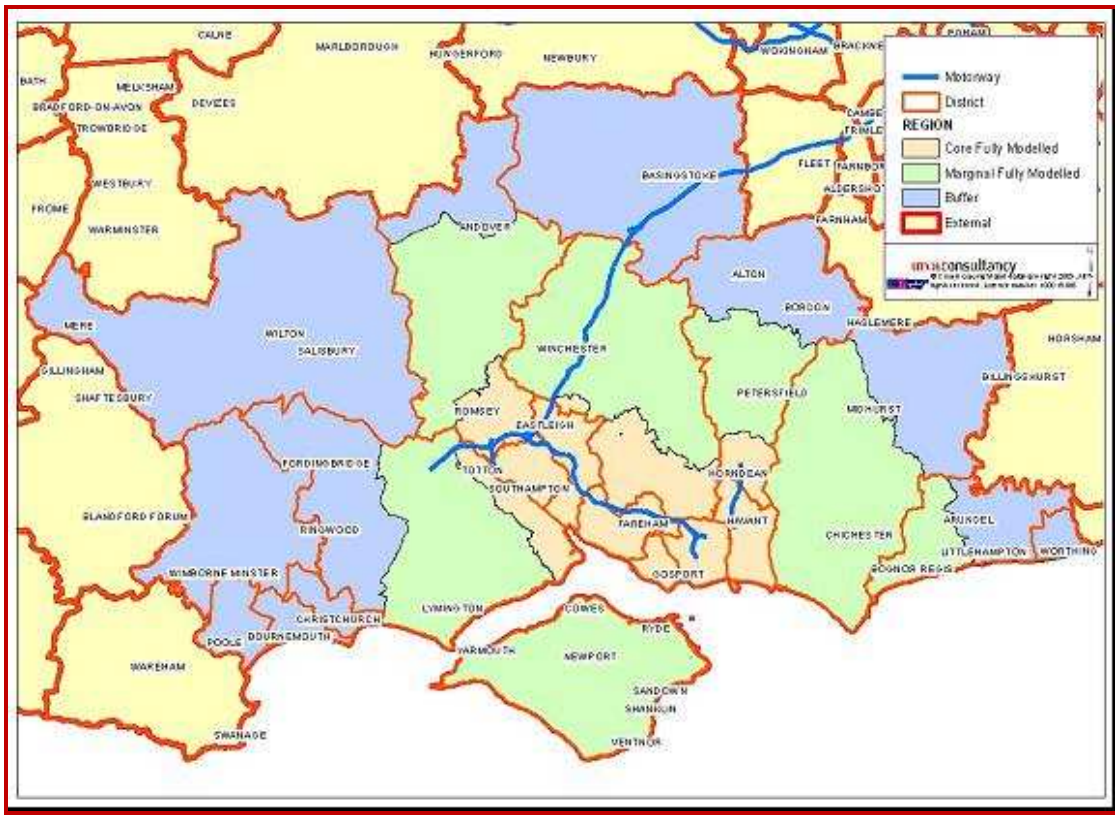
- the Road Traffic Model (RTM) which determines the routes taken by vehicles through the road network and journey times, accounting for congestion;
- the Public Transport Model (PTM) which determines routes and services chosen by public transport passengers; and
- a Local Economic Impact Model (LEIM) which uses inputs including transport costs to forecast the quantum and location of households, populations and jobs.

Figure 1.1 TfSH Sub-Regional Transport Model



1.3.2 The modelled area of the SRTM is divided into four regions, shown in Figure 1.2, which differ by zone aggregation and modelling detail. Havant Borough is within the Core Fully Modelled Area. An extract of the SRTM Validation tables that covers Havant Borough is included as Appendix B.

Figure 1.2 Study Area of the SRTM



1.3.3 Travel in the model is aggregated into zones which therefore determine the spatial detail available. The definition of zones takes account of barriers (rivers, railways, motorways) as well as administrative and planning data boundaries (TfSH zones are aggregations of Census Output Areas in the fully modelled area and wards elsewhere). In addition zones account for land use types, access points onto the road network as well as respecting screenlines for trip matrix validation. For public transport catchment areas for rail stations and bus stops fare boundaries were also considered and additional zones are included for the ports and airports.

1.3.4 In accordance with guidance three weekday periods are modelled in the SRTM:

- AM peak: busiest hour between 0700 and 1000, (defined as 38.2% of the three hours for Highway and 40% for Public Transport);
- Inter peak: average of 1000 to 1600 (i.e. 16.7% of the six hours for both modes); and
- PM peak: busiest hour between 1600 and 1900, (defined as 35.8% of the three hours for Highway and 40% for Public Transport).

1.3.5 The SRTM model represents conditions up to the year 2036. Known developments and committed highway schemes are included within the models' reference case scenarios (2014, 2019, 2026 and 2036) to provide the most accurate representation of future year conditions. A list of the known larger developments and committed (funded) highway schemes included in the Reference Cases is provided as Appendix C.

1.3.6 In addition to committed sites, "permissible" sites are included within the Reference Cases. These refer to those locations identified as suitable for future development but have not yet been subject to planning approval. The location and maximum land use quantum of the

permissible sites are tied to the inputs originally provided by each Local Planning Authority during model development (2010). The take up of permissible developments is determined by LEIM based on the local conditions (the relative 'attractiveness' of the development).

1.3.7 LEIM controls the level of overall development take-up within the model in accordance with TEMPRO employment and population targets for the sub-region which conforms with WEBTAG. This is equivalent to allowing for background traffic growth within the modelling process.

1.3.8 The version of SRTM utilised in this study includes the updated methodology for determining projected residential trip rates. The revised methodology was prepared in response to comments by both HCC and HA that the residential trips rates from the original methodology appeared low. The development of the revised trip rate methodology took into account comparable residential site data, extracted from TRICS, both in terms of actual trips rates and the profile of trips rates within the three hour AM and PM peak periods.

2 Modelling Havant Allocation Sites in the SRTM

2.1 Introduction

2.1.1 This chapter identifies the overall planning assumptions for the draft site allocations and describes how the SRTM was adapted to replicate future forecast conditions.

2.1.2 The study and application of the SRTM lends itself to a three stage process:

- Stage 1 – 'Without Development' Scenario
- Stage 2 – 'With Development' Scenario
- Stage 3 – Development of Highway mitigation measures

2.1.3 The following sections provide a breakdown down of the key processes, inputs and outputs for the three stages.

2.2 Stage 1 – Without HBC Allocations Scenario (2026)

2.2.1 Stage 1 provides the baseline against which the draft allocations are assessed. The 'without development' scenario requires an adapted SRTM Reference Case to include for recently Committed Highway Schemes, Significant Completions (2010-12) and Strategic Sites but without development at the draft allocation sites.

Recently Committed Highway Schemes

2.2.2 At the meeting of 16/08/12 (attended by HBC, HCC and MVA) it was identified that a number of highway infrastructure schemes both within and on the boundary to HBC were now committed (funded) and should therefore be included within the SRTM Reference Case scenarios. The schemes are associated with the three developments listed below and the elements of the schemes that can be modelled in SRTM are summarised in Table 2.1 based on the information provided by HCC on 17/08/12.

- West of Waterlooville MDA
- Purbook Park
- Hampshire Farm, Emsworth
- Sainsburys, Hambledon Road, Waterlooville

Table 2.1 Reference Case SRTM Updates

Development	Committed Highway Scheme(s)
West of Waterlooville MDA (includes Purbrook Park schemes)	1. London Road/ Milk Lane - Realigned priority junction 2. Southern Site Access – New roundabout 3. Purbrook Way/ College Rd – priority junction converted to signal control 4. Purbrook Way (Stakes Hill Rd to College Rd) – widened to dual carriageway 5. Purbrook Way/ Stakes Hill Rd – roundabout converted to signal junction 6. A3 Maurepas Way – new Toucan crossing adjacent to ASDA car park 7. Pedestrian and Cycle route improvements between Stakes Hill Rd and London Rd 8. Hulbert Rd/ Tempest Ave – Flare from 2 to 3 lanes on Hulbert Rd approaches to roundabout. 9. A3(M) J3 – signalise NB off-slip
Hampshire Farm	1. New Brighton Rd/ Westbourne Rd – mini roundabout converted to larger standard roundabout to incorporate site access arrangements. 2. (Traffic signal scheme at New Brighton Rd/ Horndean Rd not committed – therefore not included in Ref Case model).
Sainsburys (Hambledon Rd)	1. Hambledon Rd/ Aston Rd – widen Aston Road approach to signal junction from 2 to 3 lanes.

Significant Completions and Committed Non-strategic Sites

2.2.3 The SRTM base year is 2010. In order to account for development site planning approvals and completions for the intervening period to 2012, HBC provided information on significant completions and committed non-strategic sites (e.g. Hampshire Farm). 'Significant' for this study is defined as fulfilling any of the following:

- >50 dwellings
- >5000m^2 employment floorspace
- >2500m^2 retail floorspace
- >1000m^2 leisure floorspace

Table 2.2 Significant Completions and Committed Non-Strategic Sites within Havant (2010-12)

Development	Dwellings (units)	Employment Floorspace (m^2)	Retail Floorspace (m^2)
Sainsburys (Hambledon Road)	0	0	6000
Hampshire Farm	280	0	0
Purbrook Park	76	0	0
Total	**356**	**0**	**6000**

Strategic Sites

2.2.4 In addition to the above there are five strategic sites within Havant that need to be included within the revised reference case. The five sites are listed below and the development quanta are identified in Table 2.3:

- West of Waterlooville MDA;
- Dunsbury Hill Farm
- Public Service Village (PSV), Havant
- Woodcroft Farm, Waterlooville
- Havant Thicket Reservoir

Table 2.3 Strategic Sites (2012-26)

Development	Dwellings (units)	Employment Floorspace (m^2)	Hotel Floorspace (m^2)	Retail Floorspace (m^2)
West of Waterlooville MDA (Includes quantum within Winchester District)	3000	153000 Assumed split: B1 50100 B2 50100 B8 50100	0	0
Dunsbury Hill Farm	0	61780 Split: B1 24712 B2 24712 B8 12356	5574	0
Public Service Village (PSV)	40	476 All B1	0	0
Woodcroft Farm	300	0	0	0
Havant Thicket Reservoir	0	0	0	0
Total	**3340**	**220830**	**5574**	**0**

Removal of Allocation Site Equivalent Floorspace

2.2.5 The SRTM Reference Case models include for assumed permissible (Section 1.4.6) levels of future development within model zone in accordance with information provided by Local Authorities when the model was originally developed (2010). To avoid any double counting it was necessary to remove the volume of floorspace equivalent to the draft allocations from the existing Havant SRTM zones. The floorspace permissions in all other model zones have been left unchanged.

2.2.6 Because LEIM controls the overall land use take-up in accordance with TEMPRO targets, the take up of permissible floorspace in other model zones may increase (this could include other zones within Havant) in the 'without development' scenario.

2.3 Stage 2 – With HBC Allocations Scenario (2026)

2.3.1 Stage 2 provides the 'with development' SRTM model run and includes all draft allocation sites as a combined single run.

2.3.2 The 'without development' model has been adapted for the 'with development' scenario to include the full housing, employment and retail allocations identified in Table 2.4. The existing SRTM zone structure (boundaries) within Havant has been utilised and the allocation

sites are modelled as committed which forces the full land use to be taken up within the model. The full breakdown by site is included as Appendix D.

2.3.3 The allocation numbers in Table 2.4 are consistent with HBC's estimates provided in early September 2012 at the time the study was commissioned. We understand that these numbers have since been refined and could be subject to further future refinements. The current Borough total is between 5-10% lower than in Table 2.4 and are expected to reduce further as the Local Plan progresses. Therefore, the SRTM tests undertaken should be considered 'worst case' and provide a robust assessment of the expected development impacts.

Table 2.4 Local Plan Allocations (2012-26)

Local Plan Area	Dwellings (units)	Employment (m^2)	Retail (m^2)
Emsworth	185	2217	0
Waterlooville	684	5990	4000
Leigh Park	424	1260	0
Hayling Island	377	1014	0
Havant & Bedhampton	1323	69210	9000
Total	**2993**	**79691**	**13000**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

2.3.1 The HBC Annual Monitoring Report (www.havant.gov.uk/pdf/Final%20AMR%202011.pdf) identifies the projected housing completions through to 2026. Table 2.5 interpolates this data for the period 2012-26 and summarises both yearly and cumulative percentage completions.

2.3.2 The SRTM model years (2014, '19, '26) have been highlighted in the Table. In broad terms 25% of allocations are assumed to be completed by the end of 2014, 50% by the end of 2019 and 100% by end of 2026. The phasing of the draft allocations within SRTM is consistent with this profile (we understand that there is no equivalent data for employment and retail floorspace, and so these land uses we have assumed a similar profile to that projected for residential completions).

Table 2.5 Projected Residential Completions

	% Completions														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Yearly (%)	5	6	11	9	7	2	5	8	13	6	5	5	5	6	8
Cumulative (%)	5	11	22	31	38	40	45	53	66	72	77	82	87	93	100

2.3.3 It is understood that there are no identified highway or PT schemes within the Borough to be included as part of the development tests, other than those already included in the original SRTM Reference Case scenarios or identified in Table 2.1. Potential mitigation measures to address congestion hotspots resulting from the Local Plan allocations are to be identified as part of Stage 3 of the study where appropriate.

2.4 Stage 3 – Highway Mitigation

2.4.1 Stage 3 involves the development and assessment of a package of local and potentially strategic highway schemes aimed at mitigating the highway impacts of the development within the Borough. It has not been progressed at this time but is expected to follow in early 2013.

3 Results – Main Demand Model and LEIM

3.1 Introduction

3.1.1 This section identifies the forecasts produced by the MDM and the LEIM for the Local Plan draft allocation sites scenarios including forecast jobs, trips, mode share and emissions.

3.2 Population, Dwellings, Jobs

3.2.1 Tables 3.1 to 3.3 show the LEIM forecasts for the population, number of dwellings and number of jobs within the Borough as a whole and for the surrounding Districts.

3.2.2 LEIM controls the level of overall development take-up within the model in accordance with TEMPRO employment and population targets for the sub-region which conforms with WebTAG. Therefore, if there is an increase in one district within the model there may be decreases within other districts.

Table 3-1 Forecast Change in Population

District	Without HBC Allocations	With HBC Allocations	Difference
East Hampshire (Core)	21888	21841	-48
Eastleigh	132908	132732	-176
Fareham	124483	123771	-712
Gosport	84417	83940	-477
Havant	122186	129572	7386
New Forest (Core)	68668	68575	-93
Test Valley (Core)	47064	47022	-42
Winchester (Core)	62022	61749	-273
Portsmouth	240722	239489	-1233
Southampton	261558	261246	-312
Total	**1165917**	**1169936**	**4019**

Table 3-2 Forecast Change in Dwellings

District	Without HBC Allocations	With HBC Allocations	Difference
East Hampshire (Core)	9331	9299	-32
Eastleigh	57379	57308	-71
Fareham	54008	53737	-271
Gosport	36940	36758	-182
Havant	53593	56582	2989
New Forest (Core)	29567	29533	-34
Test Valley (Core)	20623	20602	-21
Winchester (Core)	27263	27138	-125
Portsmouth	103443	102915	-528
Southampton	110562	110446	-116
Total	**502709**	**504318**	**1609**

Table 3-3 Forecast Change in Jobs

District	Without HBC Allocations	With HBC Allocations	Difference
East Hampshire (Core)	4085	4145	60
Eastleigh	61458	61451	-7
Fareham	52269	51770	-499
Gosport	27093	26779	-314
Havant	41796	44604	2808
New Forest (Core)	19677	19611	-66
Test Valley (Core)	20322	20310	-12
Winchester (Core)	24632	24403	-229
Portsmouth	107639	107542	-97
Southampton	118660	118537	-123
Total	**477631**	**479152**	**1521**

3.3 Emissions

3.3.1 Tables 3.4 to 3.8 show the forecast emissions (NOx, PM10, HC, CO, Carbon) from the two modelled scenarios. Emission outputs are provided for the modelled region as a whole and for Havant Borough.

Table 3-4 NOx Forecast Emissions (Kg/12hr)

	Without HBC Allocations	With HBC Allocations	Difference	
			Abs	%
Whole Model	16076	16093	17	0.1%
Havant District	726	741	15	2.1%

Table 3-5 PM10 Forecast Emissions (Kg/12hr)

	Without HBC Allocations	With HBC Allocations	Difference	
			Abs	%
Whole Model	296	297	1	0.0%
Havant District	12	12	0	0.0%

Table 3-6 HC Forecast Emissions (Kg/12hr)

	Without HBC Allocations	With HBC Allocations	Difference	
			Abs	%
Whole Model	7618	7630	12	0.2%
Havant District	414	427	13	3.1%

Table 3-7 CO Forecast Emissions (Kg/12hr)

	Without HBC Allocations	With HBC Allocations	Difference	
			Abs	%
Whole Model	91373	91474	101	0.1%
Havant District	3462	3554	92	2.7%

Table 3-8 Carbon Forecast Emissions (Kg/12hr)

	Without HBC Allocations	With HBC Allocations	Difference	
			Abs	%
Whole Model	6089547	6096564	7017	0.1%
Havant District	283029	289769	6740	2.4%

4 Results - Havant Borough Overview

4.1 Introduction

4.1.1 This chapter summarises the Highway outputs for the Draft Local Plan (Allocations) SRTM tests across the Borough as a whole. Chapters 5 to 9 provide a more detailed summary on the five local plan areas. All outputs relate to the 2026 forecast year.

4.1.2 Each output provides a comparison of the forecast highway performance in 2026 with and without the draft development allocations:

- Run 1 – 2026 Without Draft Local Plan Allocations
- Run 2 – 2026 With Draft Local Plan Allocations

4.2 Highway Network Performance

4.2.1 Tables 4.1 and 4.2 summarise key network statistics for the full SRTM study area for both peak periods.

Table 4-1 AM Period (07:00-10:00) Study Area Network Statistics

Parameter	Run 1	Run 2	2 v 1
Vehicle Hr	101304	101529	225 (0.2%)
Vehicle Km	5054206	5060541	6335 (0.1%)
Average Speed	50	50	0 (0.0%)

Table 4-2 PM Period (16:00-19:00) Study Area Network Statistics

Parameter	Run 1	Run 2	2 v. 1
Vehicle Hr	98127	98292	165 0.6%
Vehicle Km	4802780	4808248	5468 (0.1%)
Average Speed	49	49	0 (0.0%)

4.3 Highway Link Flows, Delays and Capacity Hotspots

4.3.1 The following paragraphs introduce the type and format of the output plots presented in the remainder of this Chapter and the following Chapters that focus on the five sub areas of the Borough. Due to the high number of development sites, and resulting broad spread of development, traffic and associated impacts, the specific numbers on the output plots are only highlighted in the individual sub area chapters.

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4.3.2 The output plots included as Figures 4.1 to 4.10 include the whole Borough with Hayling Island as an inset. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

Development Only Flows

4.3.3 Figures 4.1 and 4.6 identify the development only traffic (in PCUs) for the AM and PM peak hours respectively. These plots isolate the distribution of development trips on the highway network. For clarity only development flows in excess of 10 PCUs are displayed on the plots.

Change in Traffic Flow

4.3.4 Figures 4.2 and 4.7 identify the change in traffic flow in the AM and PM peak hours respectively peak between the 'with' (Run 2) and 'without' (Run 1) development scenarios. In addition to new traffic directly associated with the developments these plots highlight any re-routing of traffic that may result from localised congestion or redistribution of existing trips to the new facilities (e.g. homes, shops, schools etc.). These plots identify where the net change to traffic flow is most pronounced.

4.3.5 For the flow difference plots, the absolute difference in PCUs is identified adjacent to the appropriate link. Blue lines identify a reduction compared to the non-development scenario and pink/red lines an increase. In addition, the scale of the change is represented graphically with the coloured lines of varying bandwidth. Only flow differences of 10 PCUs or greater and are displayed in the plots.

Highway Delays

4.3.6 Figures 4.3 and 4.8 identify the change in link delay AM and PM peak hours respectively between the 'with' (Run 2) and 'without' (Run 1) development scenarios. The absolute difference in delay in seconds is identified adjacent to the appropriate link. Blue lines identify a reduction compared to the non-development scenario and pink/red lines an increase. In addition, the scale of the change is represented graphically with the coloured lines of varying bandwidth. All delay differences in excess of 1s are displayed in the plots.

Capacity Hotspots

4.3.7 Figures 4.4 and 4.5 identify the capacity hotspots for the AM and peak hour for the 'with' and 'without' development scenarios (Figures 4.9 and 4.10 identify the equivalent PM peak hour hotspots). The hotspots are defined in terms of the link Volume to Capacity ratio (V/C). For the V/C plots the performance of the link is identified through the colour of the link as follows:

- > 90% - Pink
- > 100% - Red

4.3.8 If the V/C is near, or in excess of 90%, then the junction will be subject to queuing and delays; a value of 90% is taken as the practical value for design purposes. A value of >100% means that the junction is over capacity and signification queues and delay could occur.

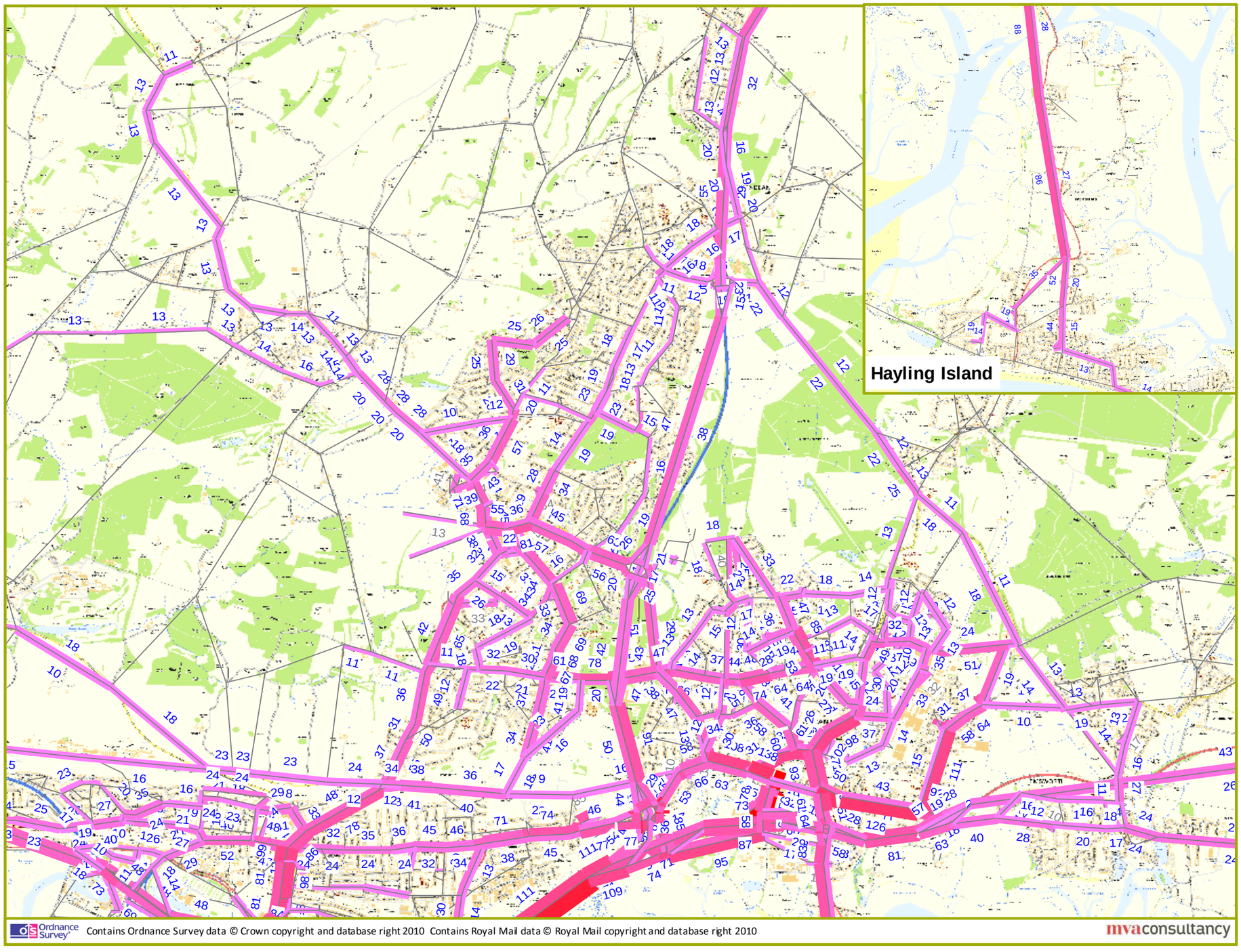

Figure 4.1 - AM Peak Development only Flows (Run 2)

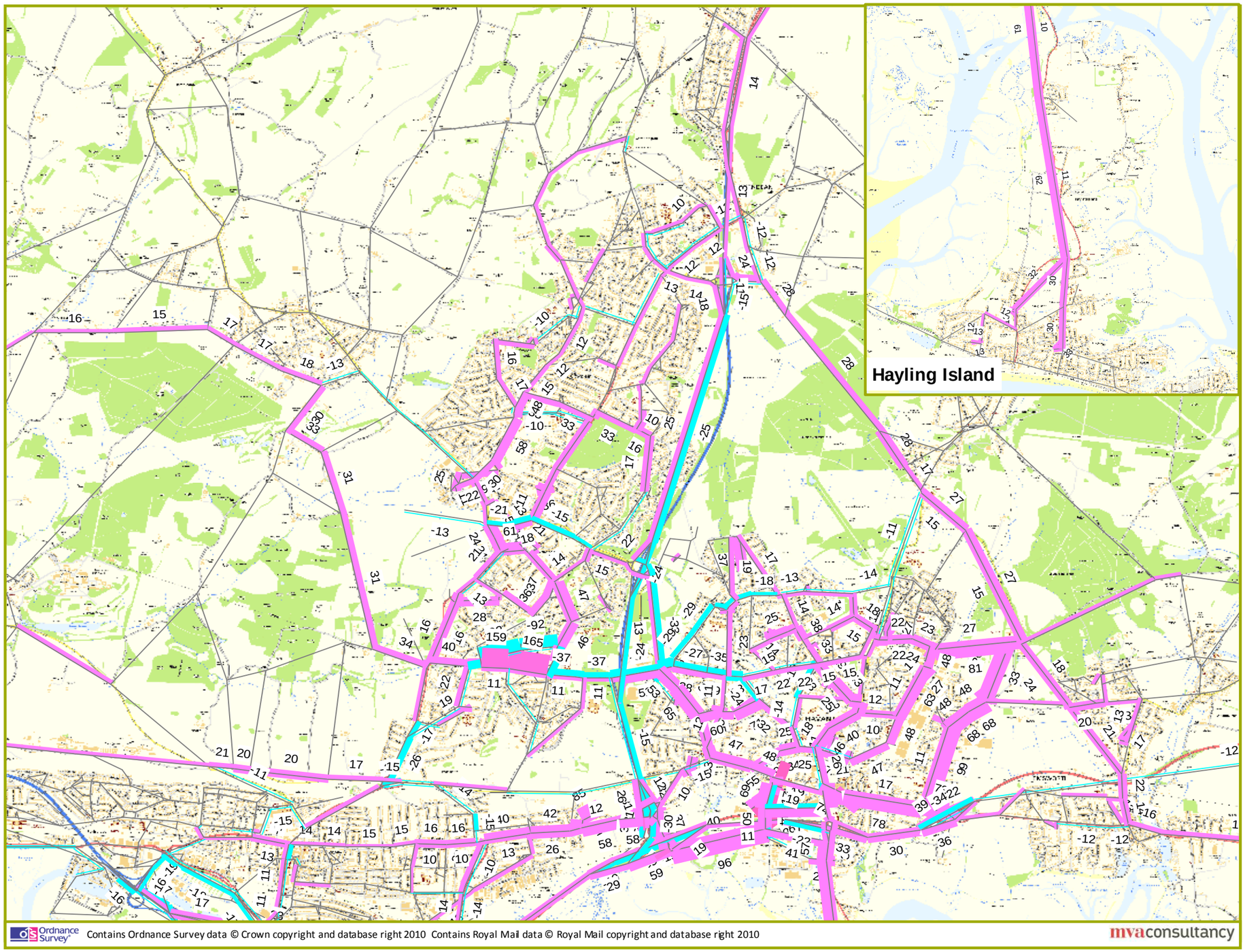

Figure 4.2 - AM Peak Flow Difference (Run 2 v Run 1)

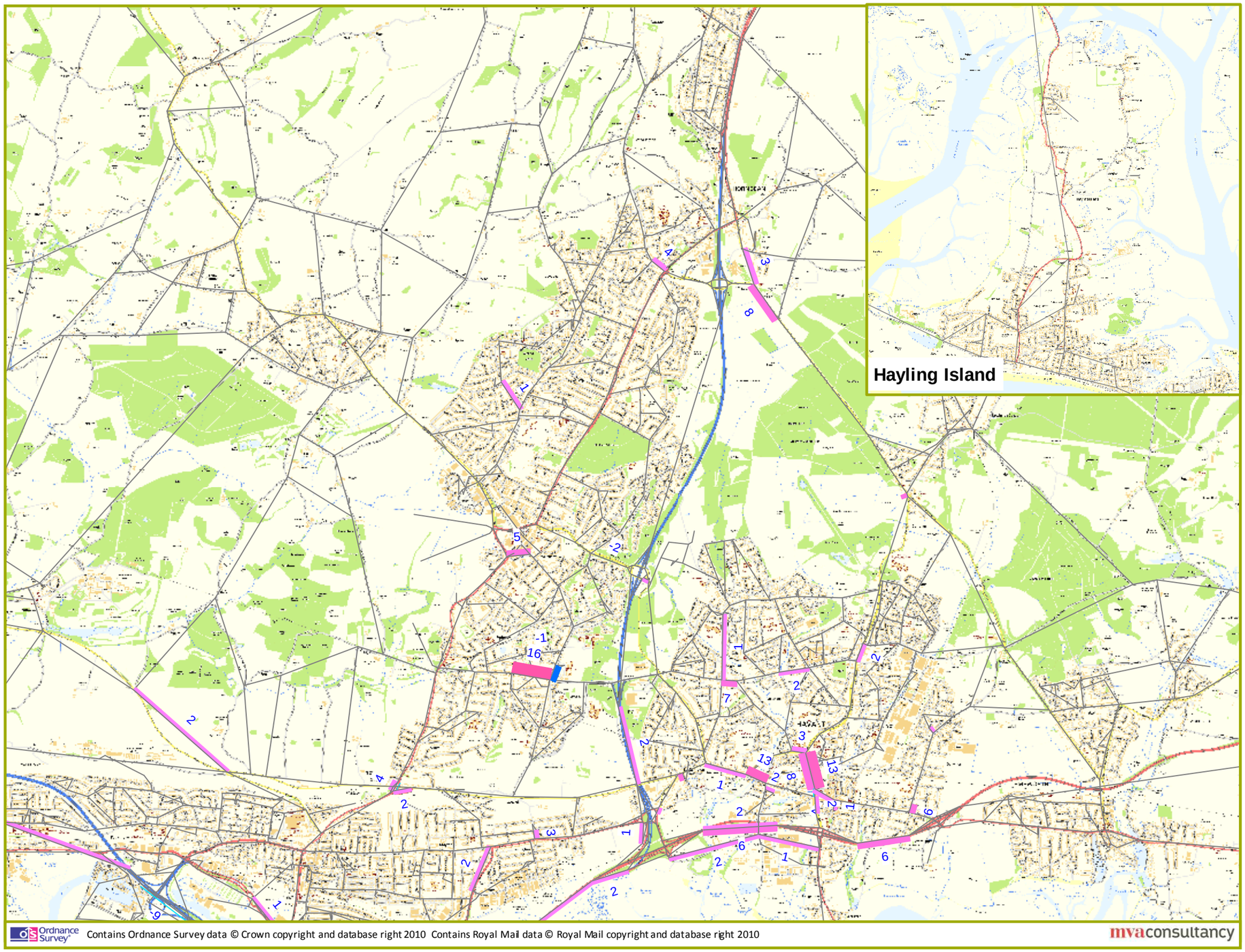

Figure 4.3 - AM Peak Delay Difference (Run 2 v Run 1)

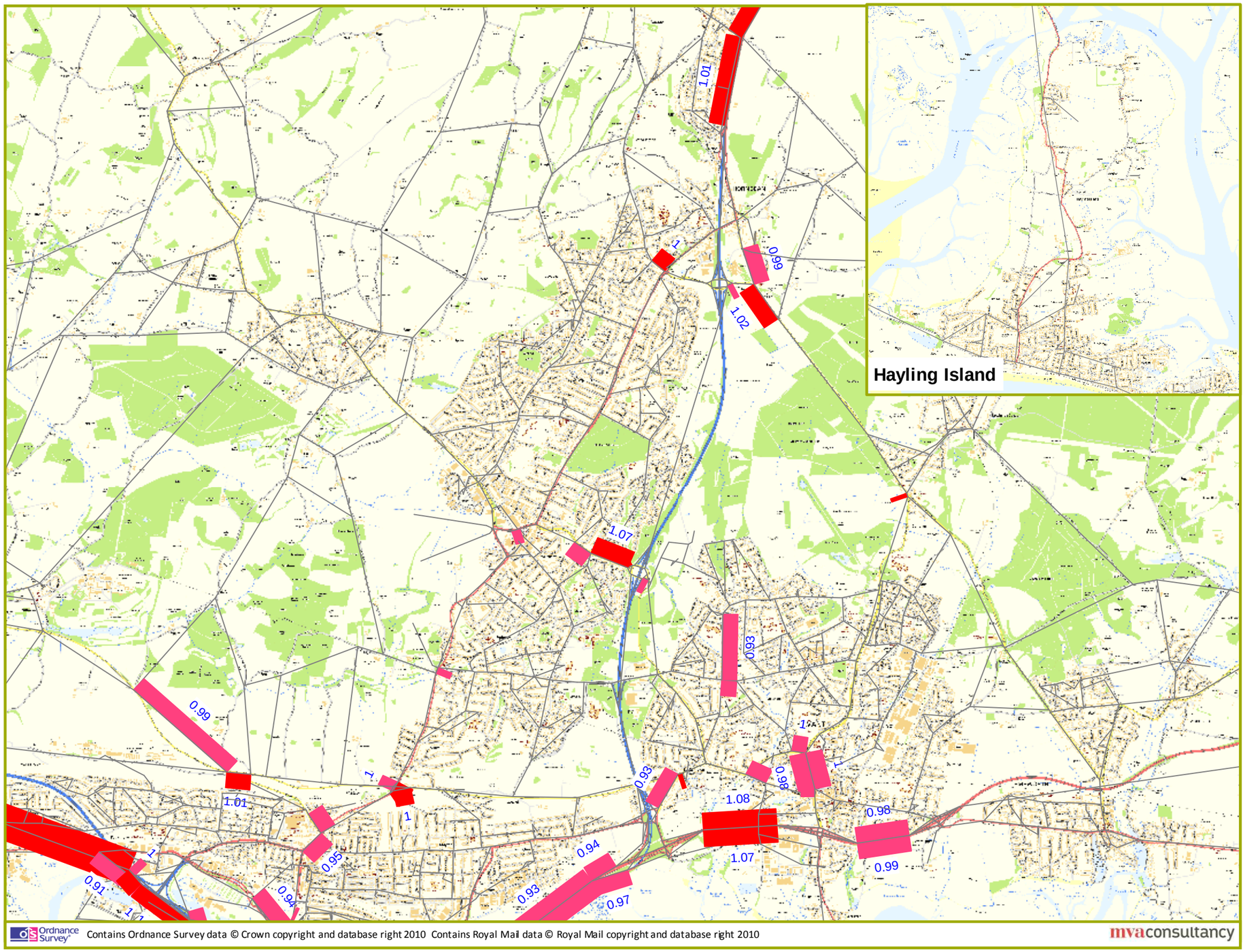

Figure 4.4 - AM Peak Volume over Capacity (Run 1)

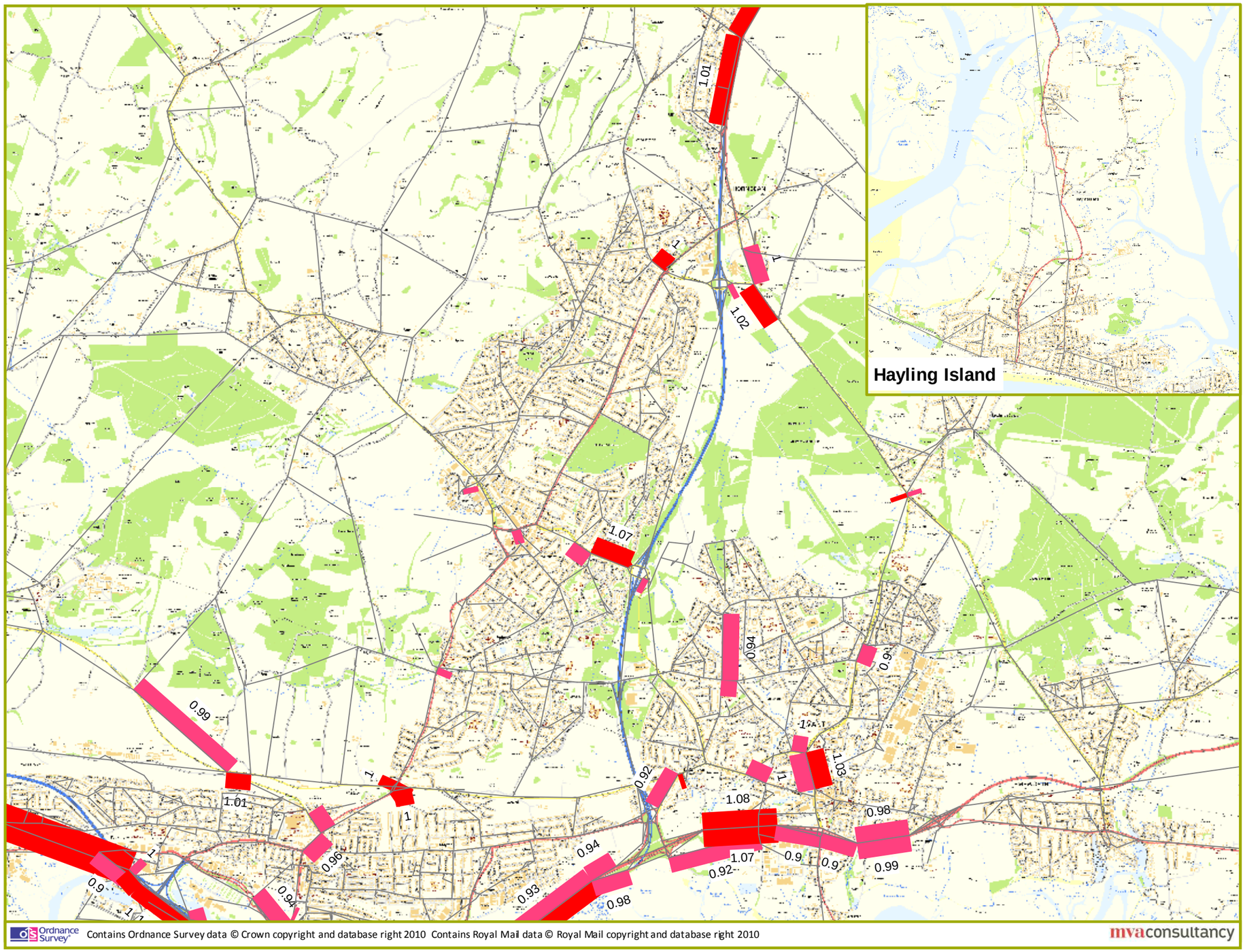

Figure 4.5 - AM Peak Volume over Capacity (Run 2)

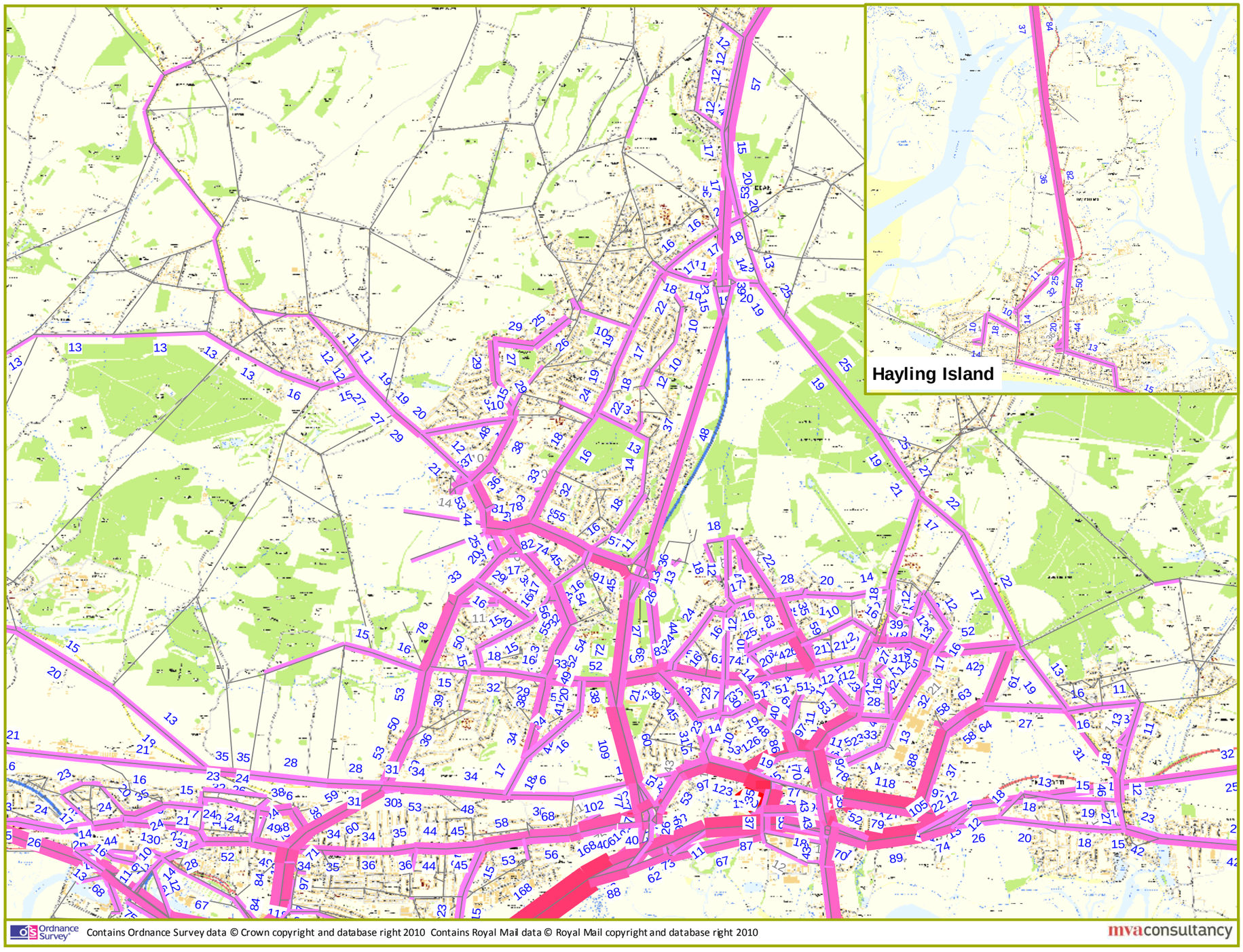

Figure 4.6 - PM Peak Development only Flows (Run 2)

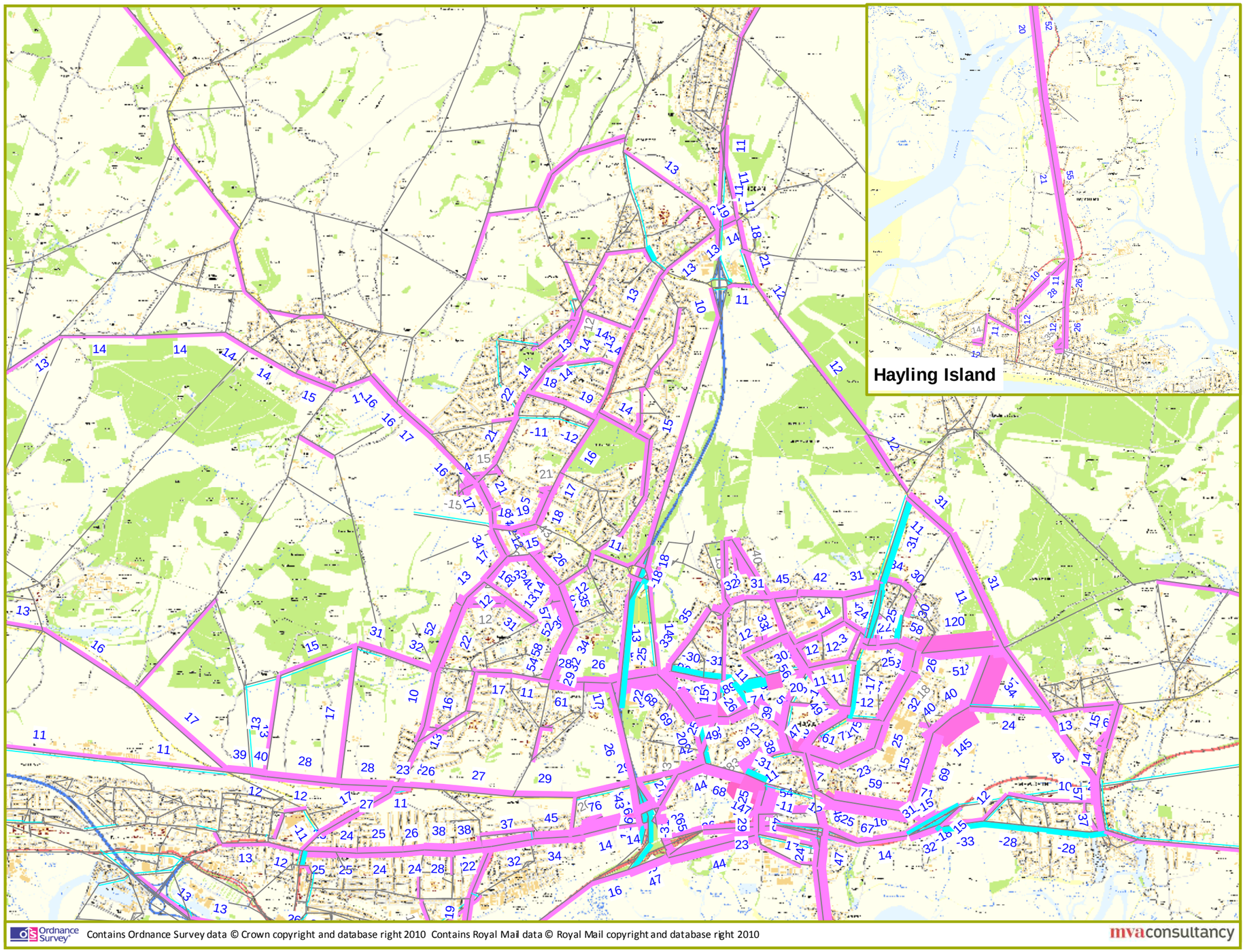

Figure 4.7 - PM Peak Flow Difference (Run 2 v Run 1)

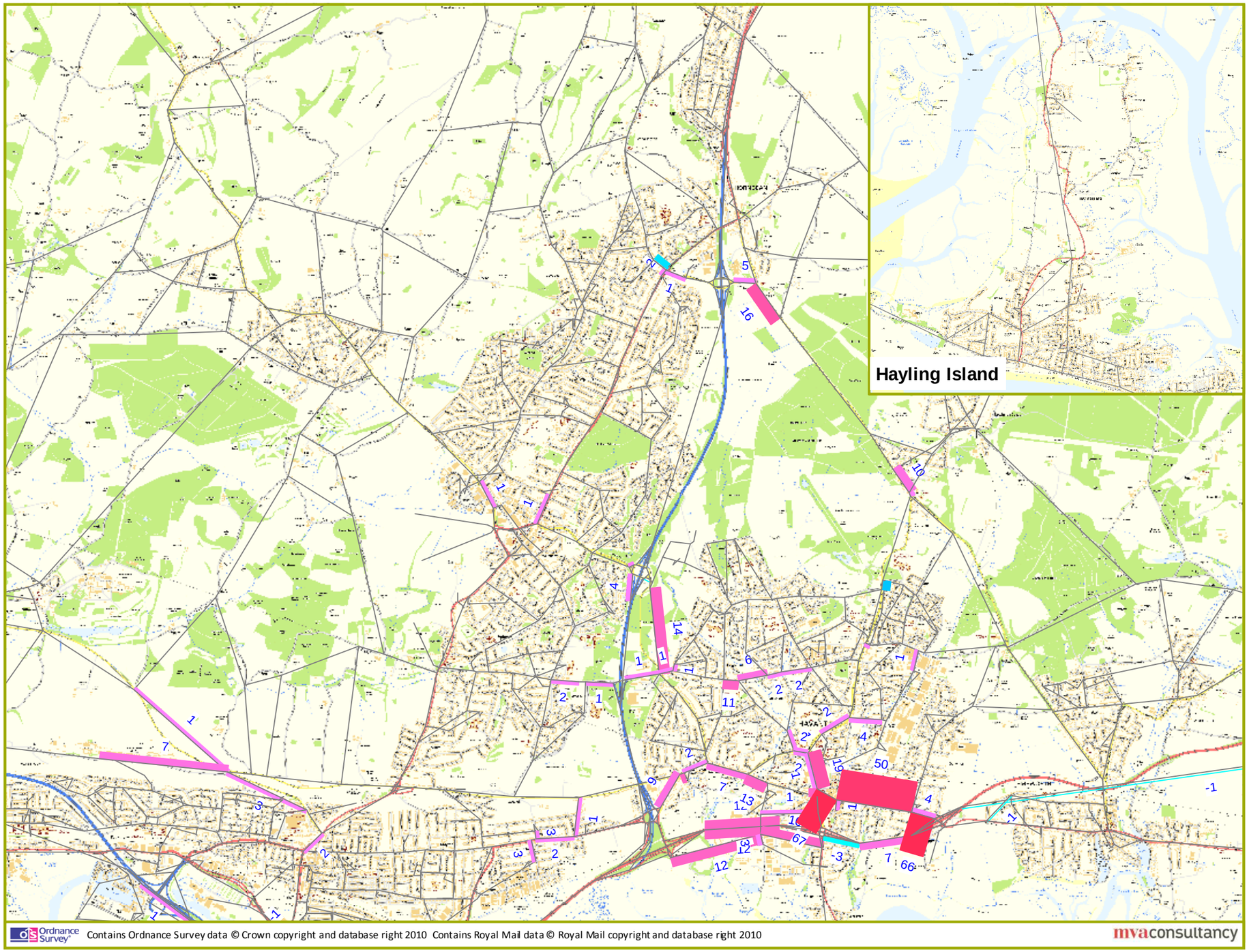

Figure 4.8 - PM Peak Delay Difference (Run 2 v Run 1)

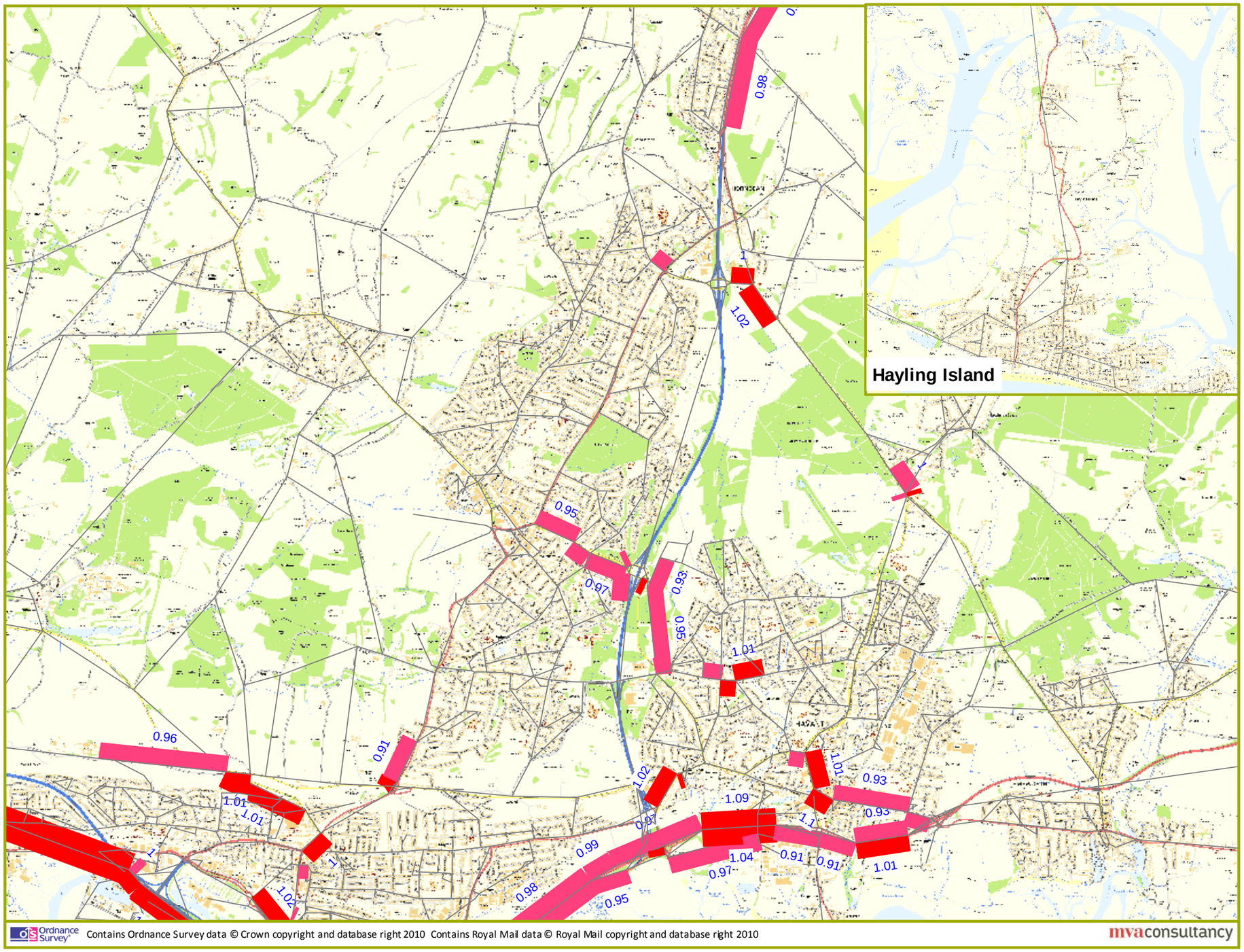

Figure 4.9 - PM Peak Volume over Capacity (Run 1)

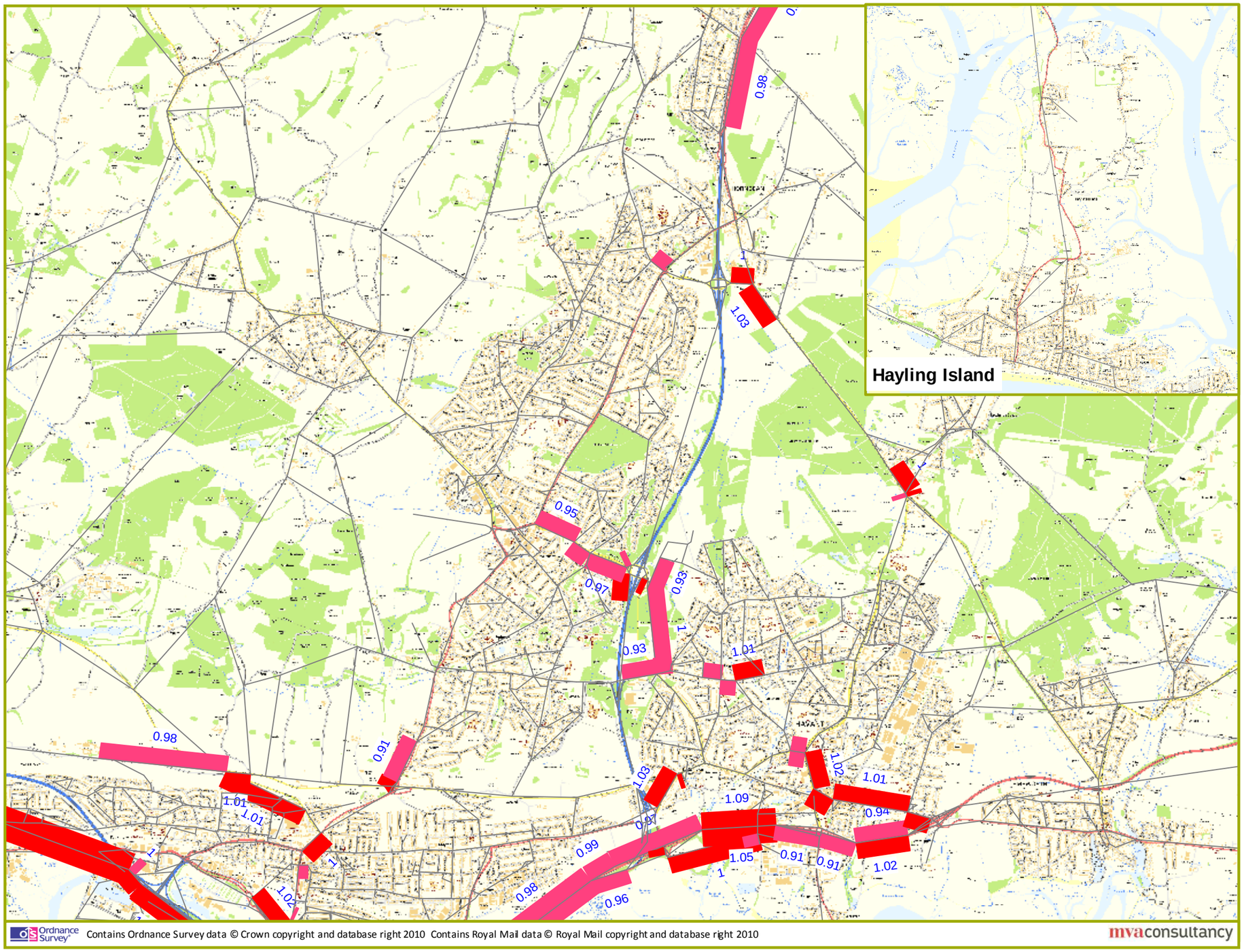

Figure 4.10 - PM Peak Volume over Capacity (Run 2)

5 Results – Emsworth Area

5.1 Introduction and Emsworth Development Quantum

5.1.1 This chapter summarises the Highway outputs focussing on the Emsworth sub area. The breakdown of development sites and land use quantum is provided in Table 5.1. A map summarising the location of the individual development sites is provided in Appendix D.

Table 5.1 Emsworth Draft Development Allocations

Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
UE11	Land west of Emsworth	50	0	0	0	0
UE13	Land west of Horndean Rd	60	0	0	0	0
UE32	Land east of Horndean Rd	60	0	0	0	0
UE37	West of Coldharbour Farm	15	0	0	0	0
BD39	Interbridges East	0	0	1108	1109	0
	Total	**185**	**0**	**1108**	**1108**	**0**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

5.2 Highway Link Flows, Delays and Capacity Hotspots

5.2.1 The following paragraphs highlight the main changes to link flows, delay and congestion hotspots for Emsworth in the 2026 forecast year. The definitions for the different plot types are provided in Section 4.3. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

Development Only Flows (Figures 5.1 & 5.3)

5.2.2 The volume of development related trips is relatively modest which is consistent with the lower proposed development quantum in Emsworth compared to the other areas in the District. As would be expected the greater volumes of development only trips are most apparent on the larger roads (A259, B2148, B2147) carrying vehicles to other areas within the district and model as a whole.

Change in Traffic Flow (Figures 5.2 & 5.4)

5.2.3 Taking account of reassigned trips the actual net changes in traffic flow in the immediate Emsworth area are again very modest. The highest change in flow is approximately 20-25 vehicle increase in both directions on B2148 Horndean Road in the AM peak and up to 50 vehicle increase northbound in the PM peak. The PM peak increase is in part fed by a reassignment of westbound trips from A259 Havant Road to Horndean Road, probably as a result of downstream congestion/delay on the A27.

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Highway Delays

5.2.4 Within the core Emsworth area there are no highlighted changes in delay and the blank delay plots have not been included. However, as noted in section 5.2.3, route choices do appear to be influenced by wider congestion on the A27.

Capacity Hotspots

5.2.5 There are no congestion issues (where the V/C on any link exceeds 90%) forecast for the Emsworth area. Therefore, the blank capacity hotspot plots have not been included.

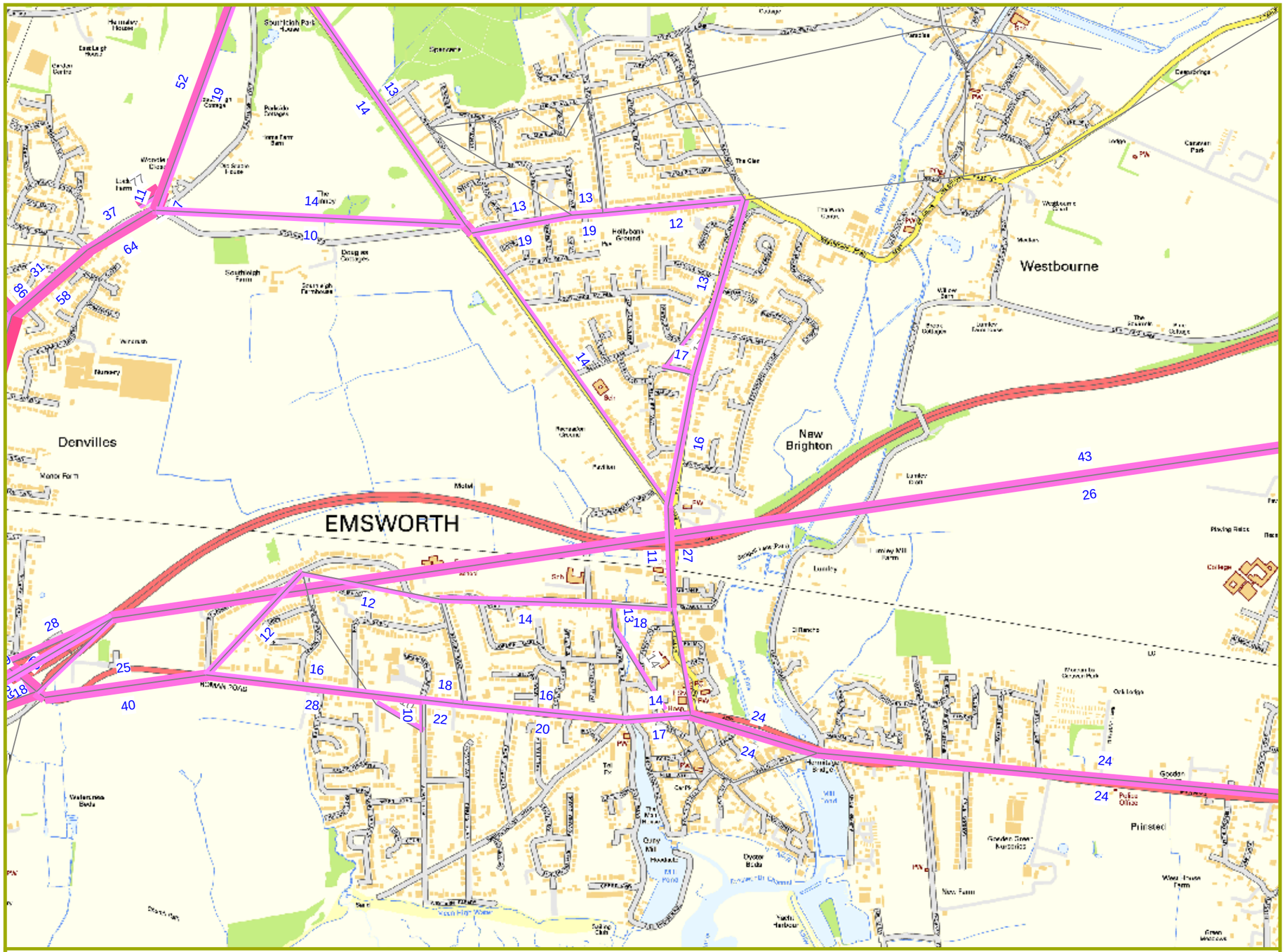

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Figure 5.1 - AM Peak Development only Flows (Run 2)

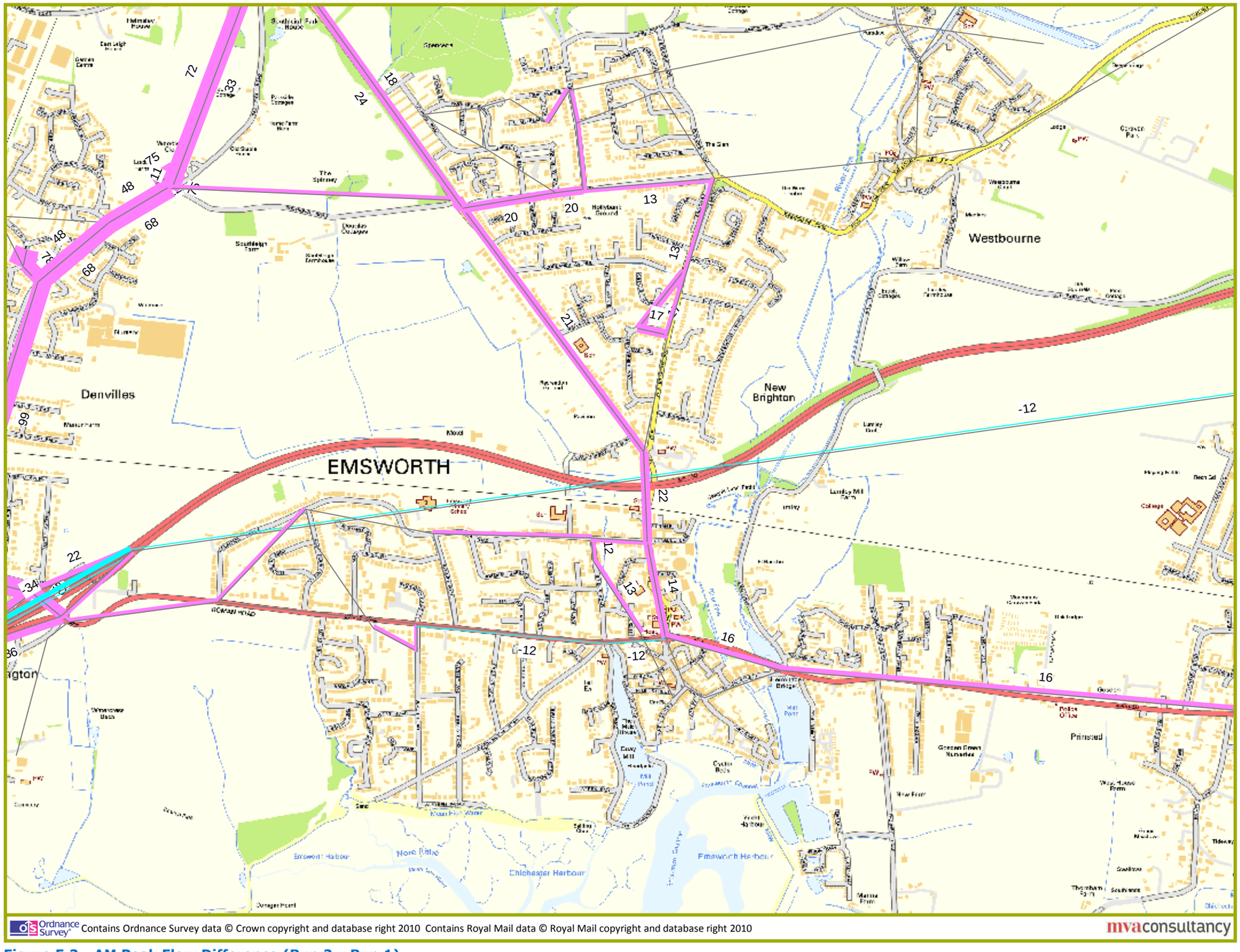

Figure 5.2 - AM Peak Flow Difference (Run 2 v Run 1)

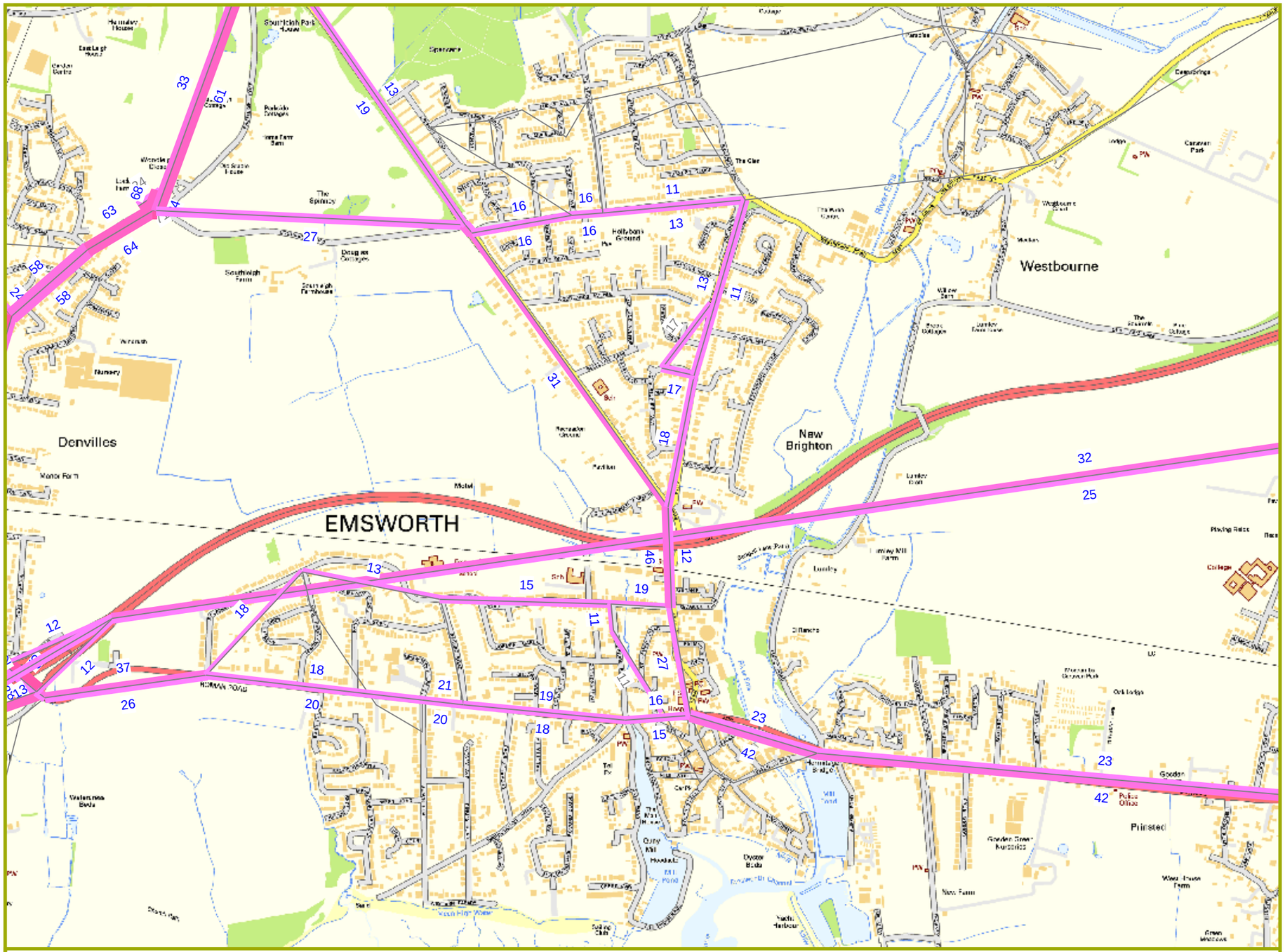

Figure 5.3 - PM Peak Development only Flows (Run 2)

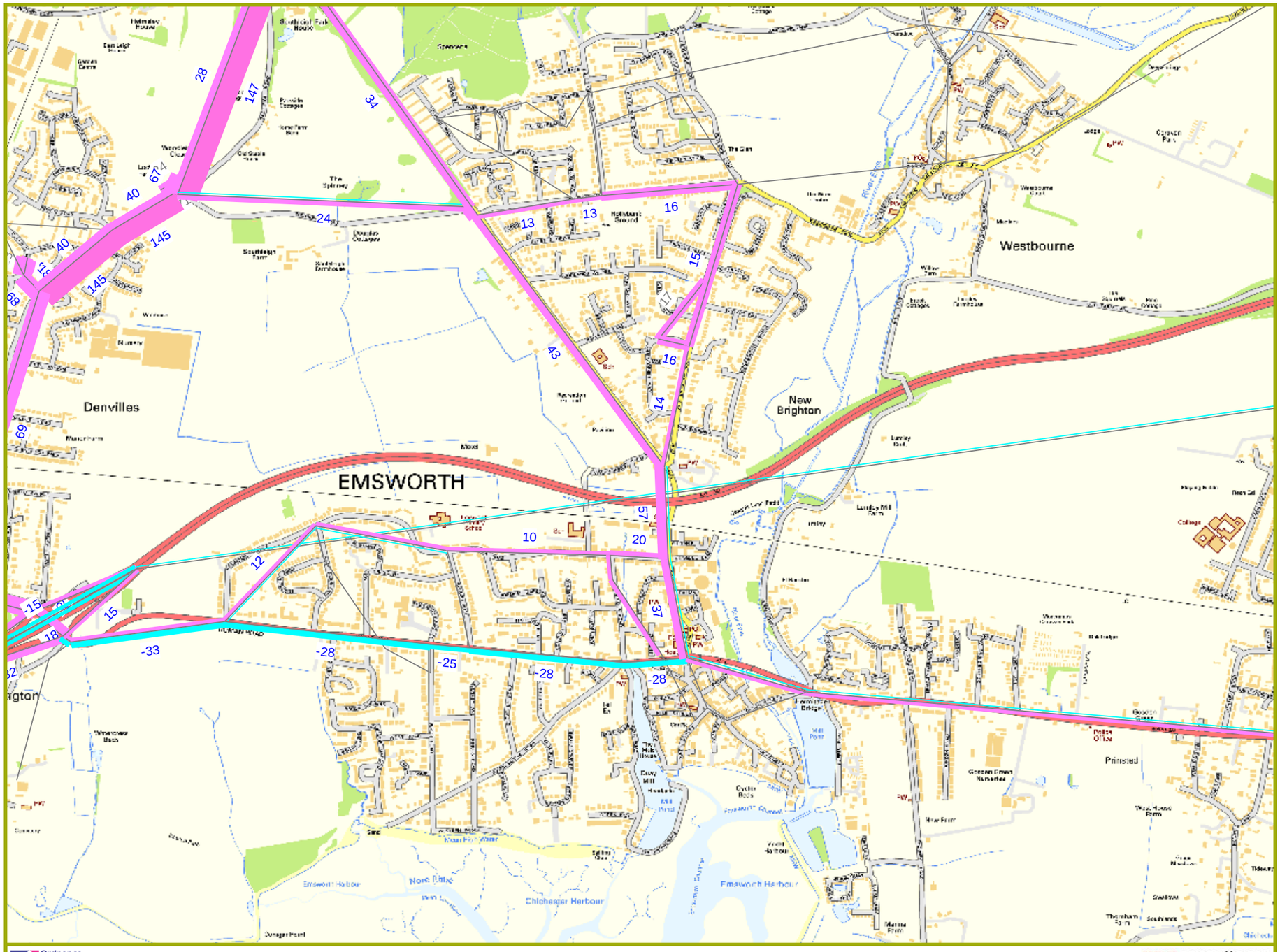

Figure 5.4 - PM Peak Flow Difference (Run 2 v Run 1)

6 Results - Havant & Bedhampton Area

6.1 Introduction and Havant & Bedhampton Development Quantum

6.1.1 This chapter summarises the Highway outputs focussing on the Havant & Bedhampton sub area. The breakdown of development sites and land use quantum is provided in Table 6.1. A map summarising the location of the individual development sites is provided in Appendix D.

Table 6.1 Havant & Bedhampton Draft Development Allocations

Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
H6	Warblington School Field (off New Lane)	79	0	0	0	0
H7	Wessex & Network Rail, New Lane (Mixed Use)	30	0	0	0	0
H10	Market Parade (Mixed Use)	176	0	0	0	0
H14	Portsmouth Water HQ	48	0	0	0	0
H18	Portsmouth Water land	67	0	0	0	0
H19	Land at Palk Road	21	0	0	0	0
H22	Car Park behind Bear Hotel and East Street (Mixed Use)	76	0	0	0	0
H69	Former Oak Park School	65	0	0	0	0
H72	Town End House	19	0	0	0	0
H76	North east of Havant College, New Road	41	0	0	0	0
H79	Job Centre Plus Site	35	0	0	0	0
H80	Havant Retail Park, Bedhampton (Mixed Use)	30	0	0	0	0
H144	Barncroft School	34	0	0	0	0
UE3a	Land north of Bartons Road	30	0	0	0	0
UE3b	Land south of Bartons Road	250	0	0	0	0
UE4	Strides (Manor) Farm & Copsey's Nursery	175	0	0	0	0
UE5	Land at Portsdown Hill	40	0	0	0	0
UE7	Scratchface Lane, Bedhampton	92	0	0	0	0

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Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
UE30	Land South of Lower Road	10	0	0	0	0
UE33	Eastleigh House, Bartons Rd	5	0	0	0	0
BD8	Bosmere Field	0	2600	2600	0	0
BD9	SiteFour, Harts Farm Way	0	0	8137	8138	0
BD10	Land north of Regional Business Centre	0	0	1728	1728	0
BD11	Brockhampton West	0	0	11700	11700	0
BD14	Land adjacent to Bosmere Medical Centre	0	6579	0	0	0
BD15 (pt)	Langstone Gate Car Park	0	500	0	0	0
BD16	Solent Road South	0	1834	1833	1833	0
BD19	Kingscroft Farm	0	0	3400	3400	0
BD30	Market Parade	0	1500	0	0	0
	Havant Town Centre	0	0	0	0	9000
	Total	**1323**	**13013**	**29398**	**26799**	**9000**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

6.2 Highway Link Flows, Delays and Capacity Hotspots

6.2.1 The following paragraphs highlight the main changes to link flows, delay and congestion hotspots for Havant & Bedhampton in the 2026 forecast year. The definitions for the different plot types are provided in Section 4.3. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

Development Only Flows (Figures 6.1 & 6.6)

6.2.2 Similarly to most of the sub areas the broad spread of allocation sites in Havant & Bedhampton spreads the resulting development traffic across the highway network and so reduces the focus on any individual or small number of highway links. The most pronounced volumes of development trips are on the approaches to, from or over the strategic routes of A3(M) and A27.

Change in Traffic Flow (Figures 6.2 & 6.7)

6.2.3 The net change in traffic volumes is most pronounced on Harts Farm Way, Hulbert Road, New Lane, Emsworth Road and Southleigh Road in the AM peak. In the PM peak

Brockhampton Road and New Road have noticeable increases in addition to those links identified for the AM Peak.

Highway Delays (Figures 6.3 & 6.8)

6.2.4 The most pronounced increase in delays (greater than 10s) in the AM peak occurs at the following locations:

- Park Road North - southbound approach to the junction with West Street
- West Street - eastbound approach to the junction with Brockhampton Road.

6.2.5 The increase in delays are noticeably higher in the PM peak and are located as follows:

- Both east and westbound approaches of Emsworth Road at the junction with Southleigh Road
- The north, east and south approaches at the junction of Park Road North/ West Street
- West Street westbound approach to the junction with Bedhampton Road
- Hulbert Road southbound at the junction with Purbrook Way
- Pulbrook Way westbound at the junction with Middle Park Way
- Harts Farm Way on the approach to A3(M) J5
- A27 both directions between A3(M) J5 and Langston Road junction

Capacity Hotspots (Figures 6.4, 6.5 & 6.9, 6.10)

6.2.6 As would be expected, the capacity hotspots within the area are largely consistent with the more significant increases to vehicle delay summarised in Sections 6.2.4 and 6.2.5. Table 6.2 below summarises the junctions experiencing capacity problems in the scenarios with and without the preferred allocations.

Table 6.2 Havant & Bedhampton Capacity Hotspots

Junction	Capacity Hotspots	
	Without Allocation Sites	With Allocation Sites
B2177 Bedhampton Hill/ Portsdown Hill Rd	✓	✓
West Street/ Brockhampton Road	✓	✓
B2149 New Road/ Park Road North	✓	✓
Park Road North/ West Street	✓	✓
Harts Farm Way/ A27 J5	✗	✓
A27/ A3(M)	✓	✓
A27/ Langstone Road	✓	✓
A27/ Havant Road	✓	✓

6.2.7 Despite a general worsening in performance in those junctions/links already experiencing capacity problems (most notably A27 junctions) its is only the junction of Harts Farm Way/ A27 J5 that is pushed in to the capacity hotspot threshold as a result of the allocation sites.

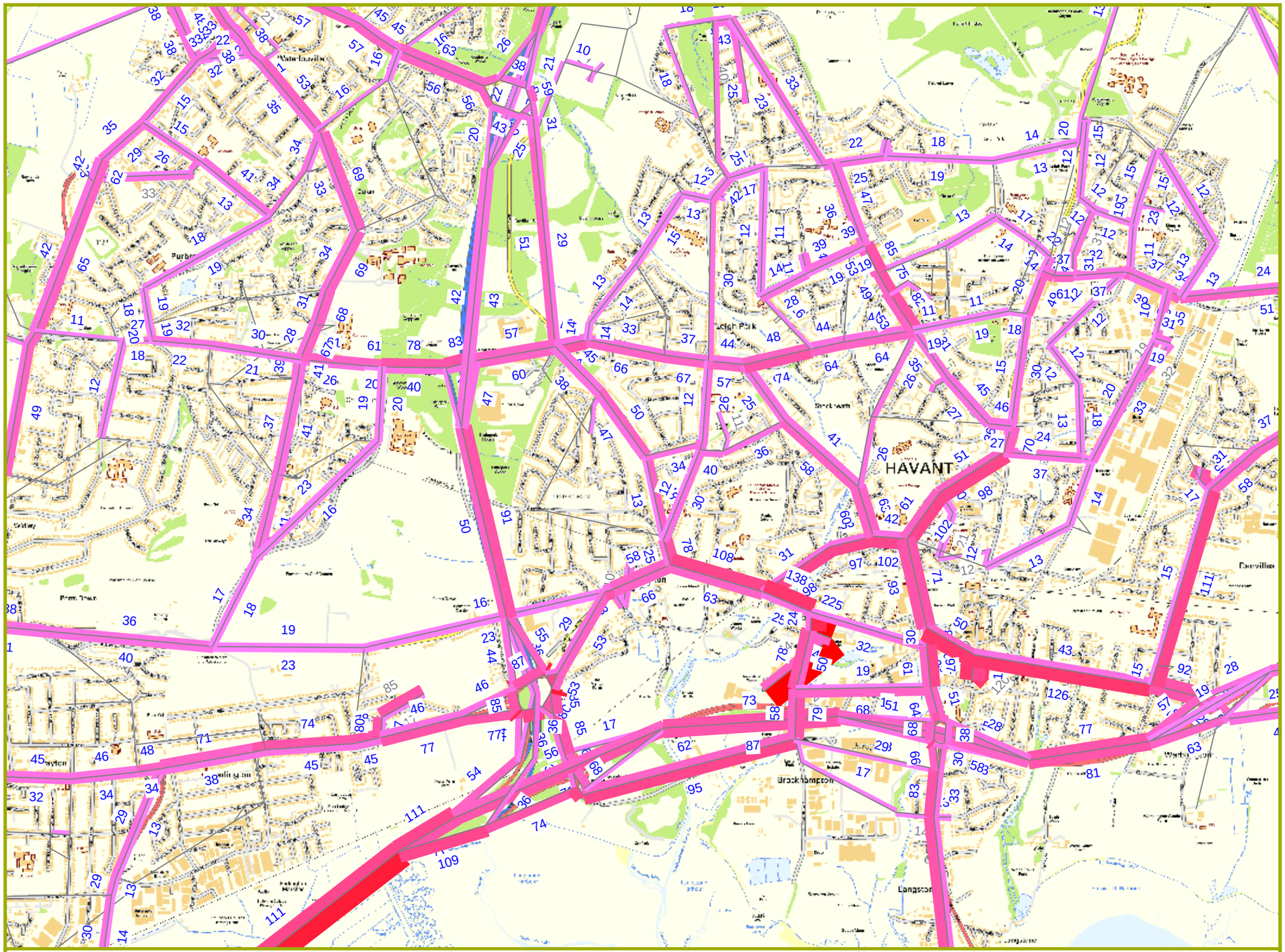

Figure 6.1 - AM Peak Development only Flows (Run 2)

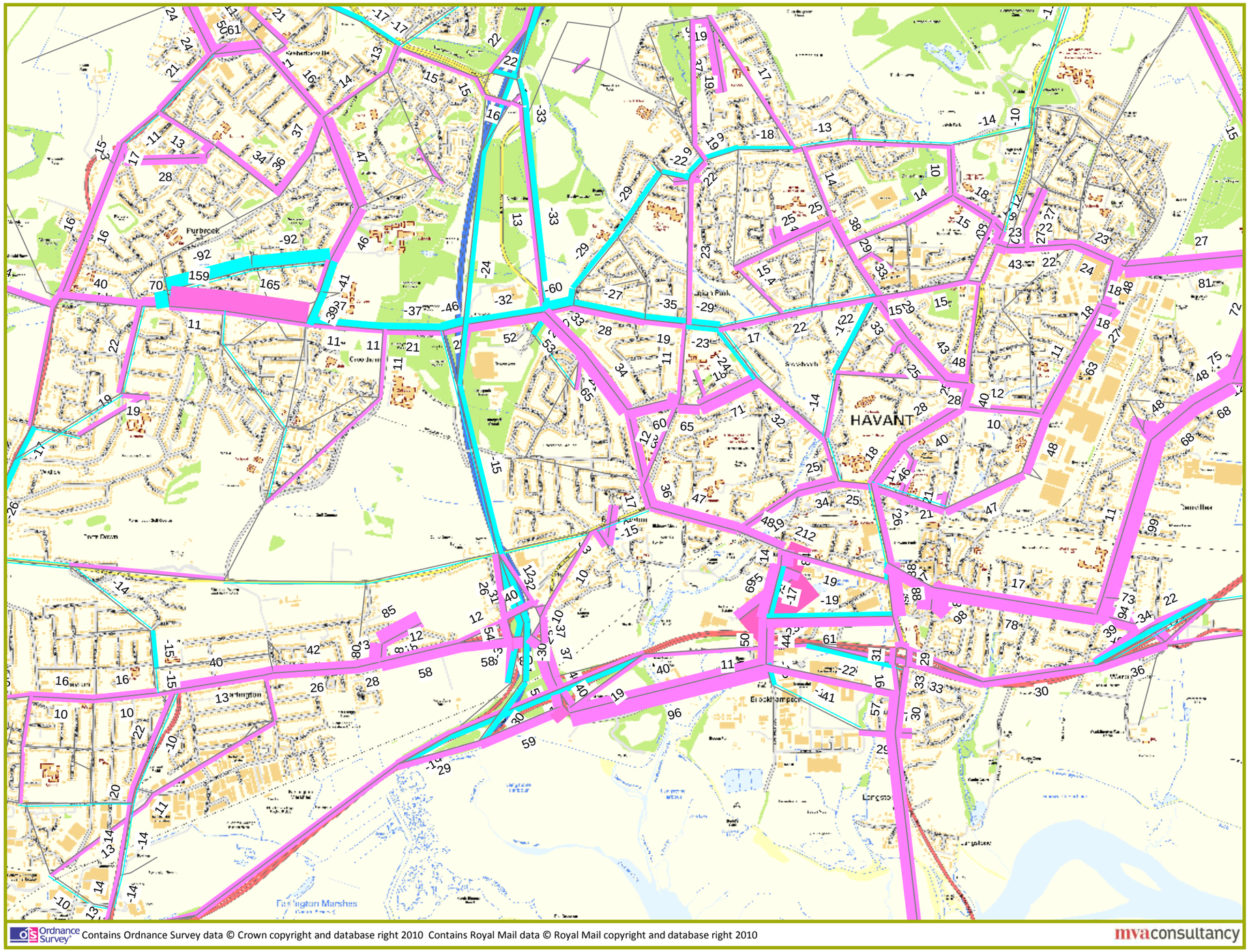

Figure 6.2 - AM Peak Flow Difference (Run 2 v Run 1)

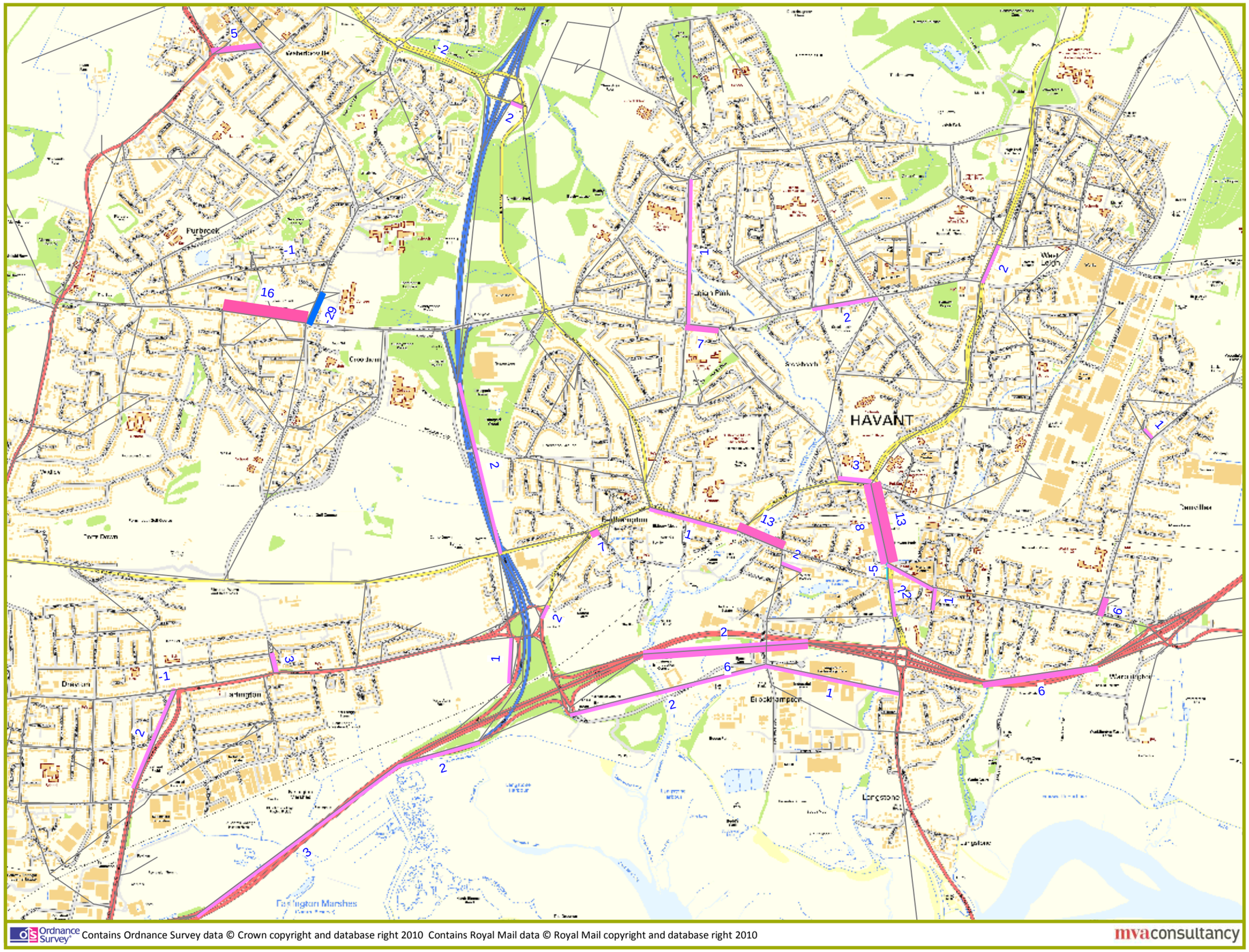

Figure 6.3 - AM Peak Delay Difference (Run 2 v Run 1)

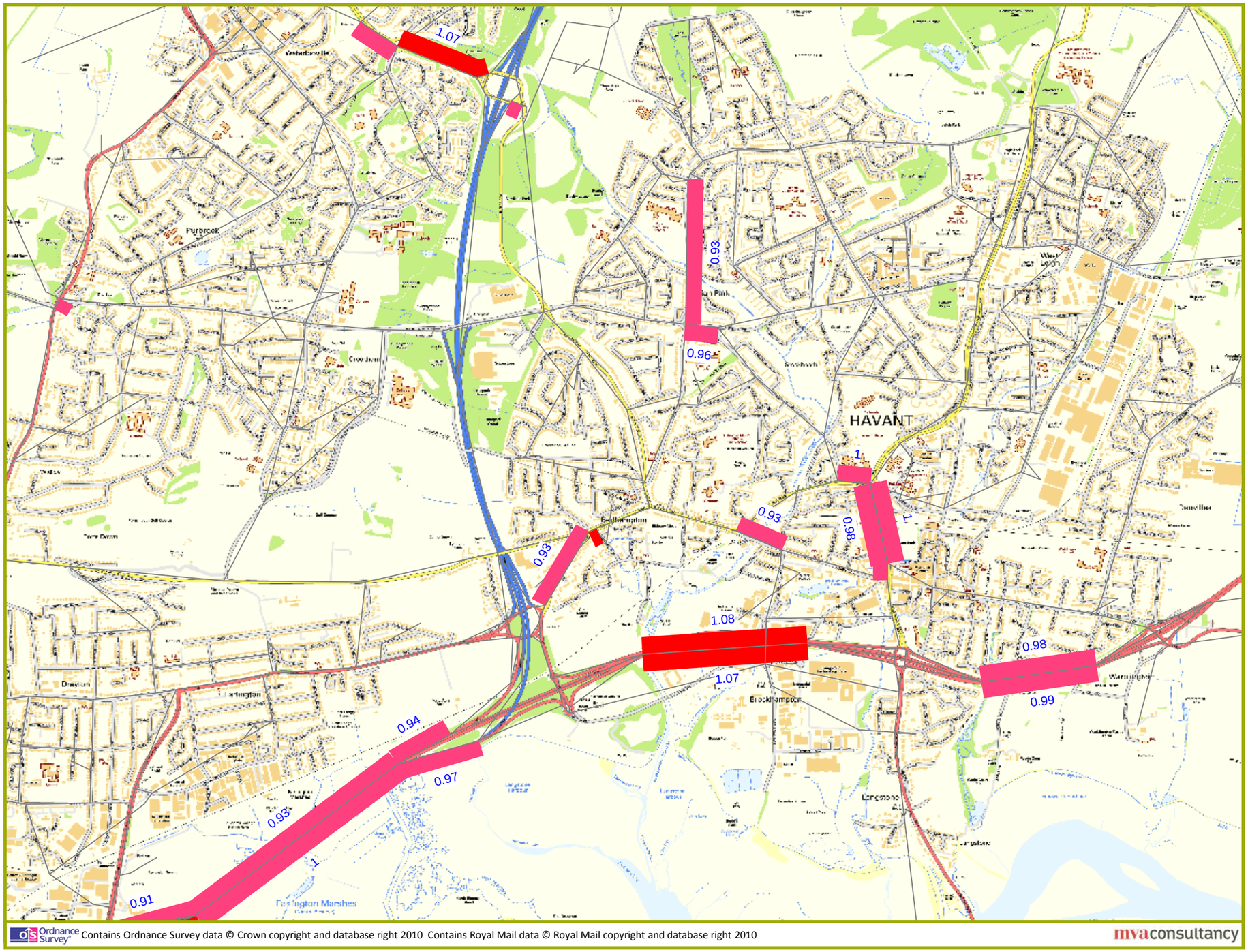

Figure 6.4 - AM Peak Volume over Capacity (Run 1)

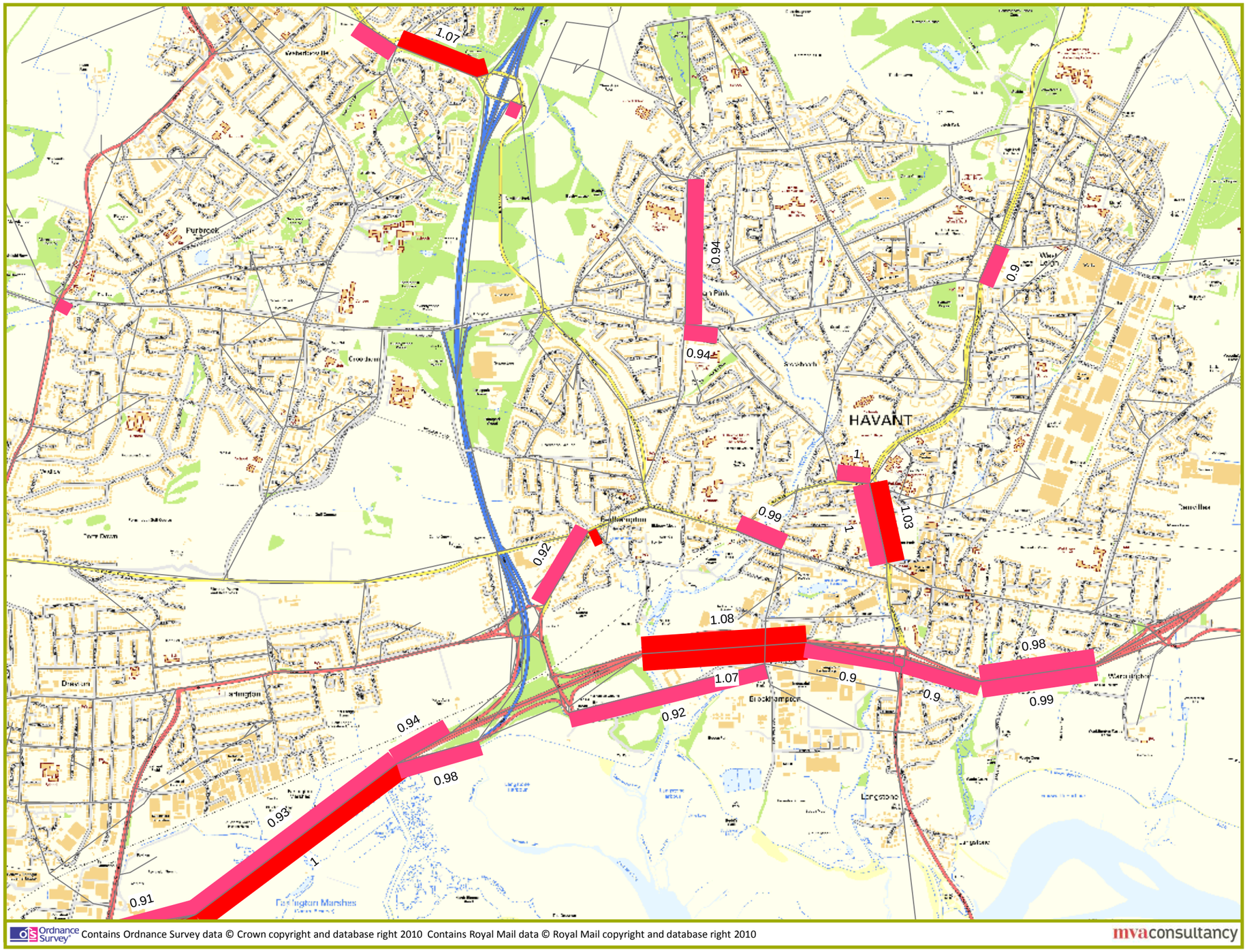

Figure 6.5 - AM Peak Volume over Capacity (Run 2)

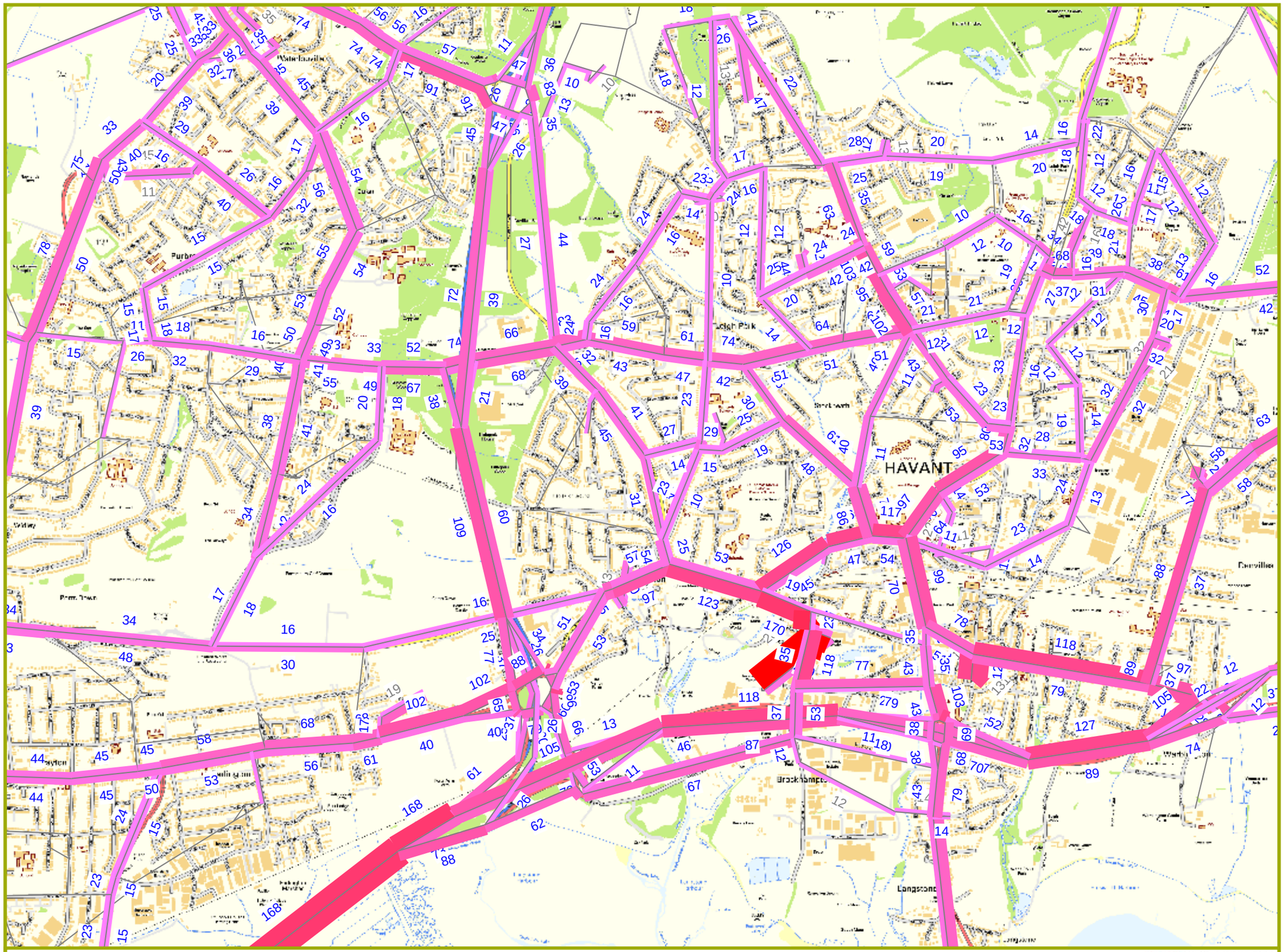

Figure 6.6 - PM Peak Development only Flows (Run 2)

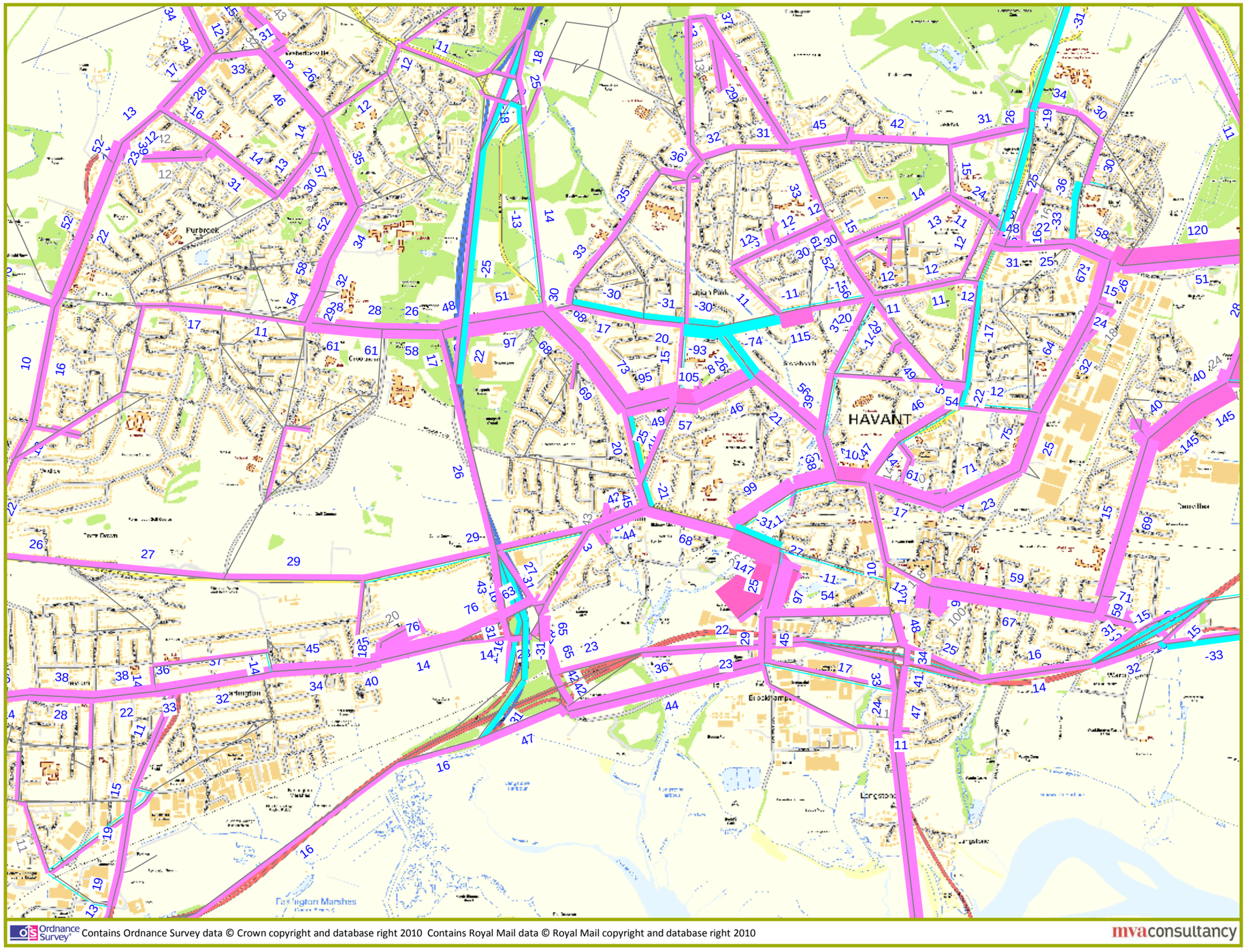

Figure 6.7 - PM Peak Flow Difference (Run 2 v Run 1)

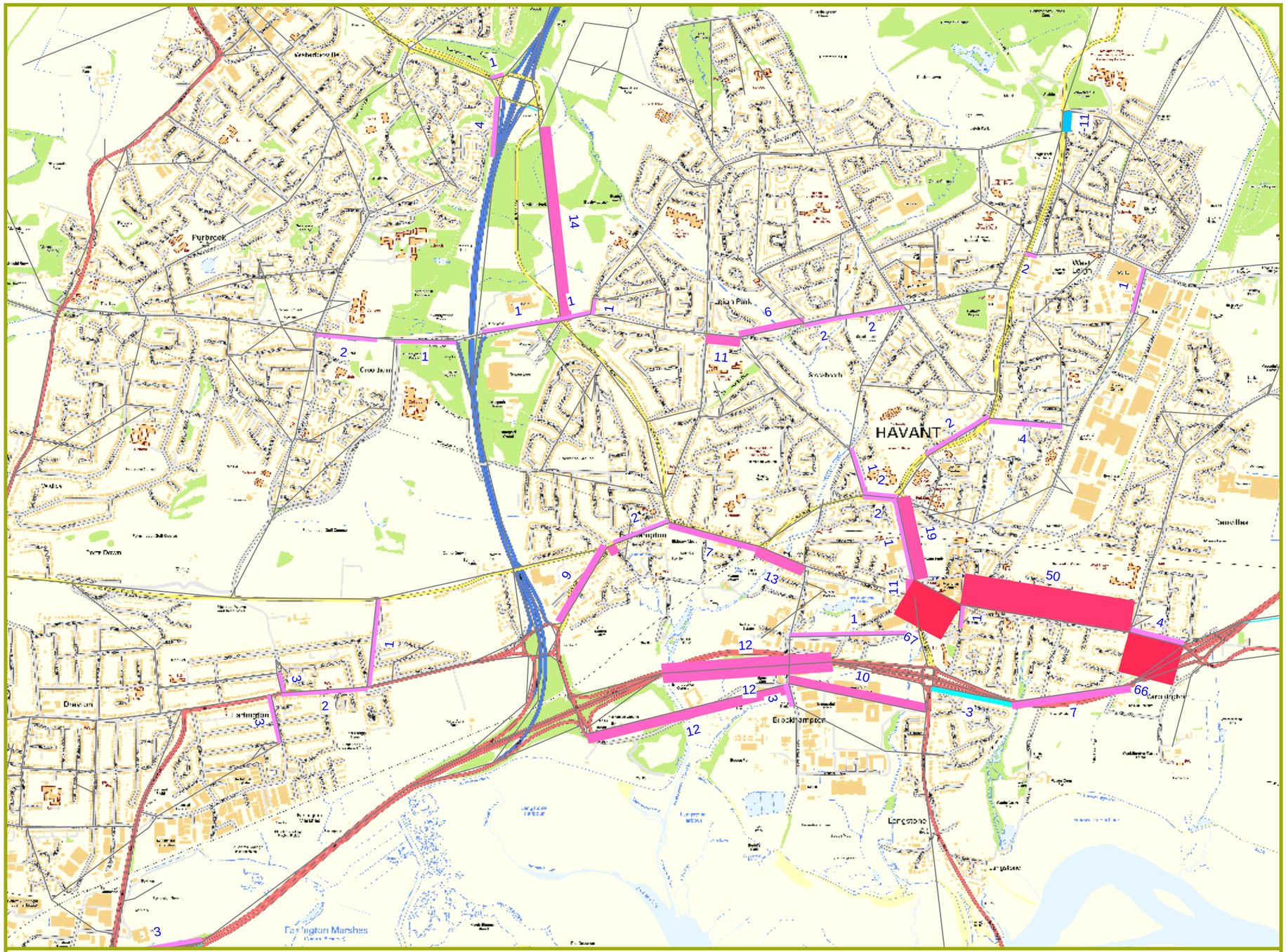

Figure 6.8 - PM Peak Delay Difference (Run 2 v Run 1)

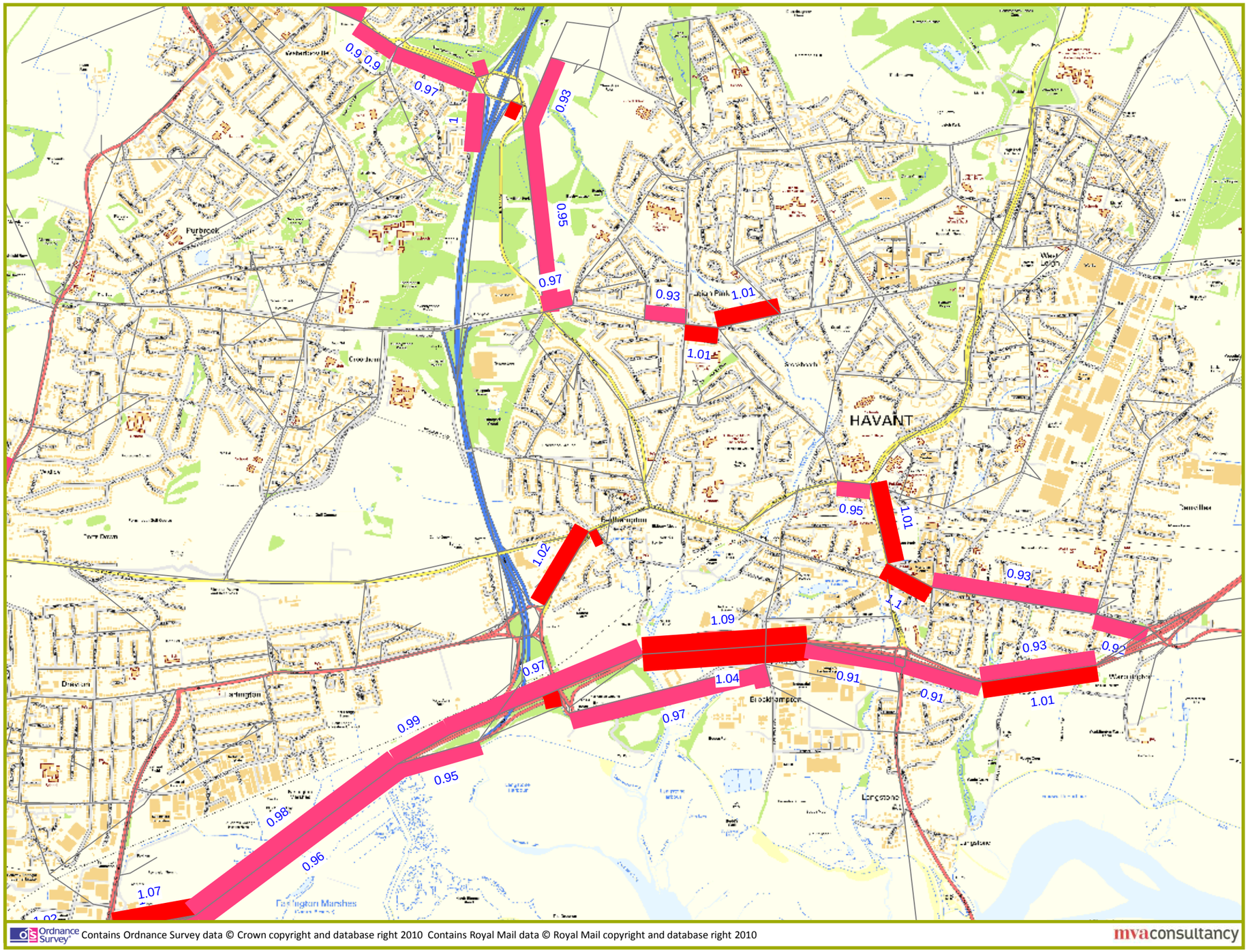

Figure 6.9 - PM Peak Volume over Capacity (Run 1)

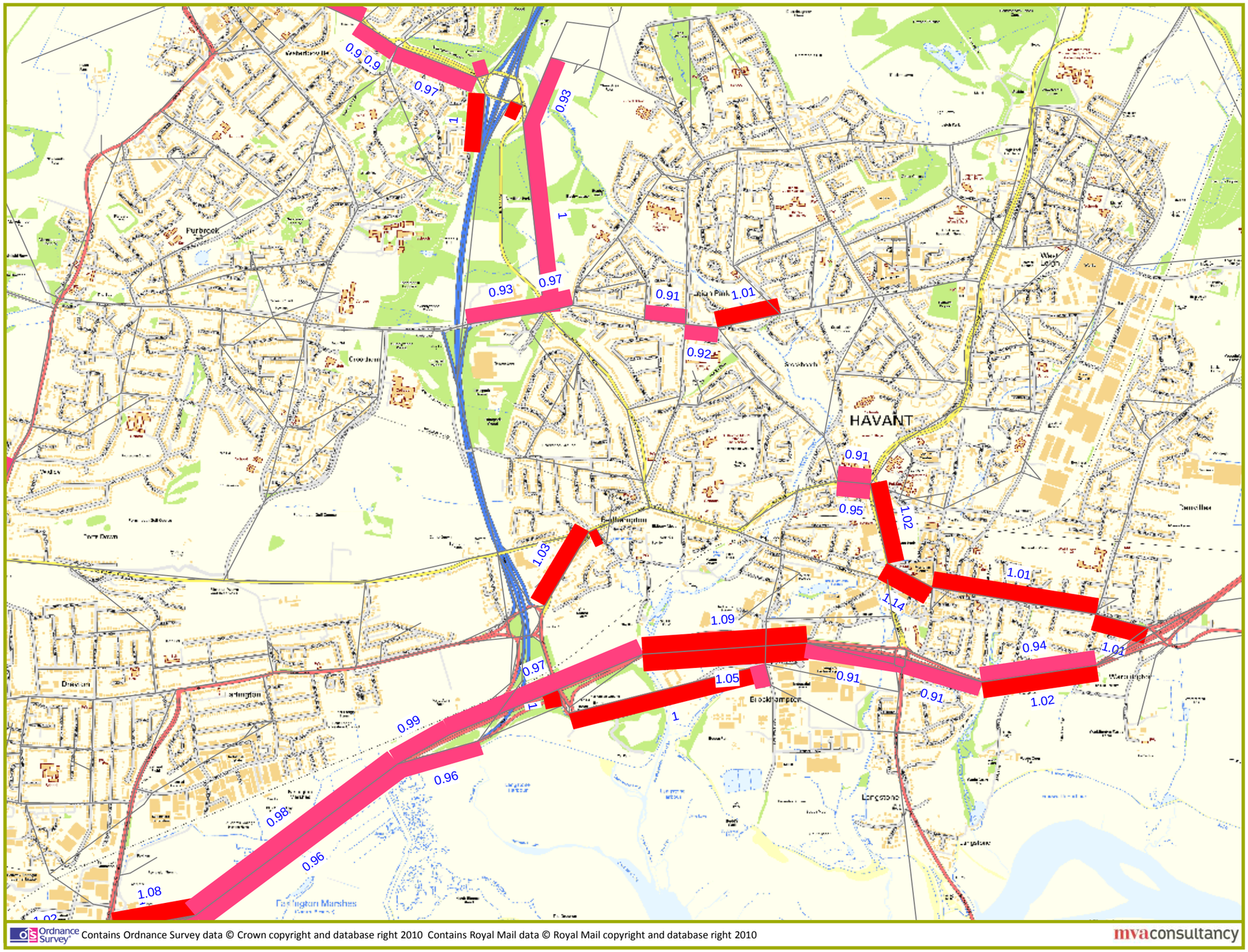

Figure 6.10 - PM Peak Volume over Capacity (Run 2)

7 Results - Hayling Island Area

7.1 Introduction and Hayling Island Development Quantum

7.1.1 This chapter summarises the Highway outputs focussing on the Hayling Island sub area. The breakdown of development sites and land use quantum is provided in Table 7.1. A map summarising the location of the individual development sites is provided in Appendix D.

Table 7.1 Hayling Island Draft Development Allocations

Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
HY08	103 – 105 Station Road	12	0	0	0	0
HY13	Rear of 108-110 Elm Grove	7	0	0	0	0
HY45	Beachlands (mixed use)	75	0	0	0	0
UE15	Manor Nurseries	13	0	0	0	0
UE17	Rook Farm	53	0	0	0	0
UE21	Station Road (east of Furniss Way) (mixed use)	98	0	0	0	0
UE35	North of Rook Farm	119	0	0	0	0
BD73	Station Road North (mixed use)	0	0	507	507	0
	Total	**377**	**0**	**507**	**507**	**0**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

7.2 Highway Link Flows, Delays and Capacity Hotspots

7.2.1 The following paragraphs highlight the main changes to link flows, delay and congestion hotspots for Hayling Island in the 2026 forecast year. The definitions for the different plot types are provided in Section 4.3. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

Development Only Flows (Figures 7.1 & 7.4)

7.2.2 The A3023 provides the only highway link between Hayling Island and the mainland. This provides the focal point for the development only trips in this area with approximately 85 development related trips in the peak hour away from the Island and the reverse in the PM peak hour.

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Change in Traffic Flow (Figures 7.2 & 7.5)

7.2.3 As would be expected, the A3023 is also the focus of the net change in traffic volume in the Hayling Island area. Where change in flow is lower than development trips it should be noted that not all development related trips are necessarily new to the highway network. For example, existing trips may switch to newly provided retail or employment facilities and would be classed as development trips but would have existed previously between different origin-destination pairs.

Highway Delays (Figures 7.3 & 7.6)

7.2.4 The changes in delay within the Hayling Island area are only minimal. Any changes in delay on A27 are reported within the Havant & Bedhampton Chapter (Chapter 6).

Capacity Hotspots

7.2.5 There are no congestion issues (where the V/C on any link exceeds 90%) forecast for the Hayling Island area. Therefore, the blank capacity hotspot plots have not been included. The length of A27 within the Borough that will impact on Hayling Island amongst other areas is included in Chapter 6

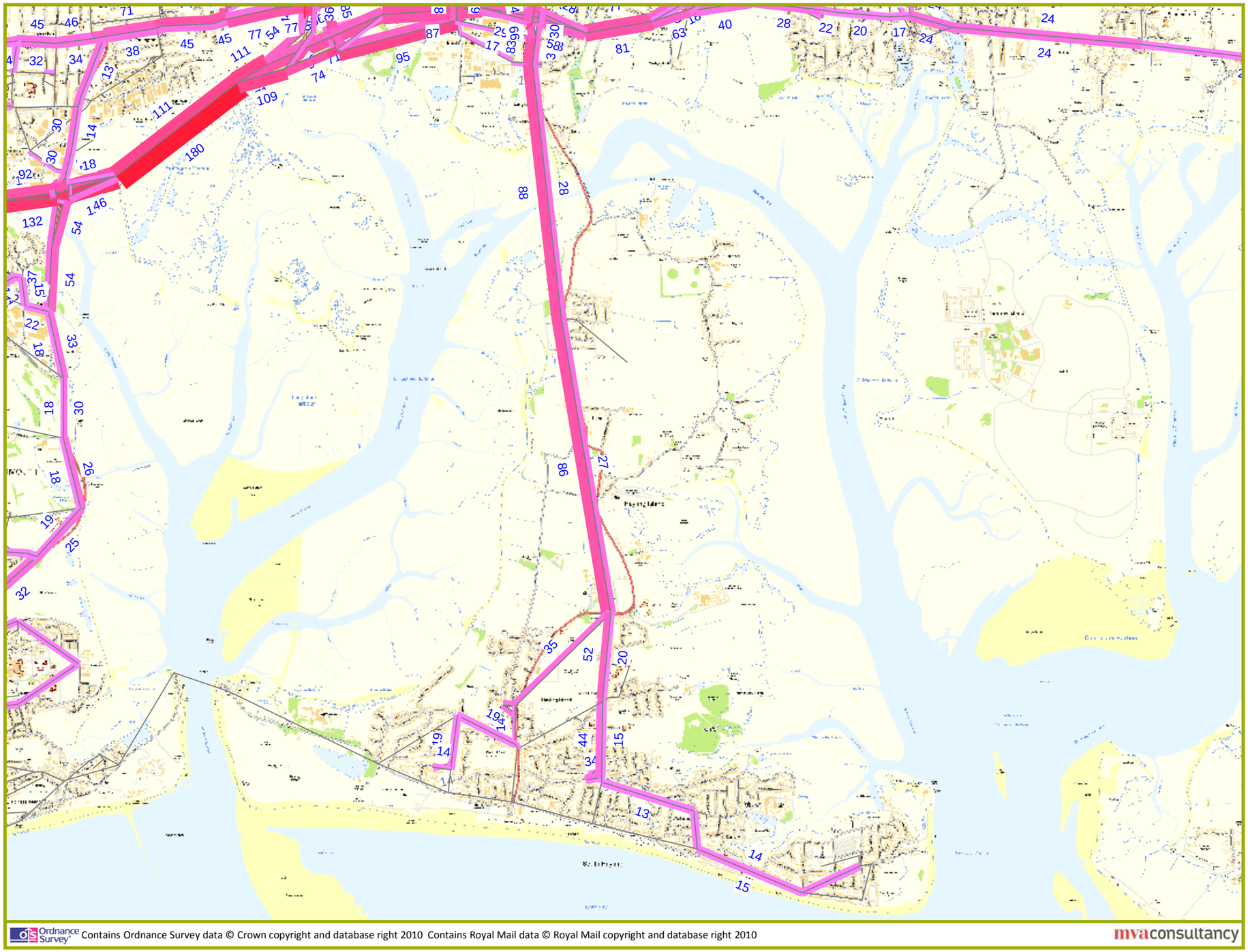

Figure 7.1 - AM Peak Development only Flows (Run 2)

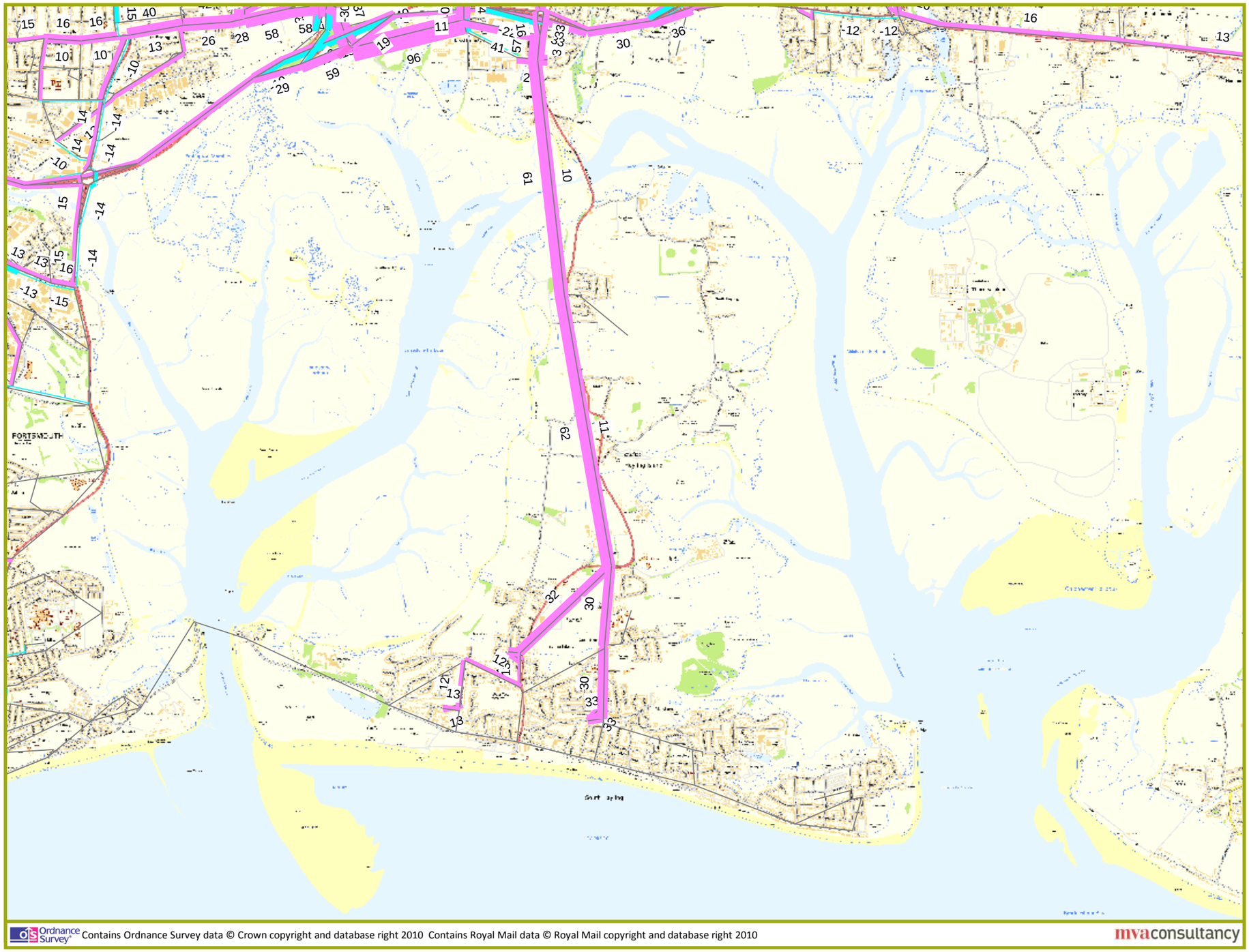

Figure 7.2 - AM Peak Flow Difference (Run 2 v Run 1)

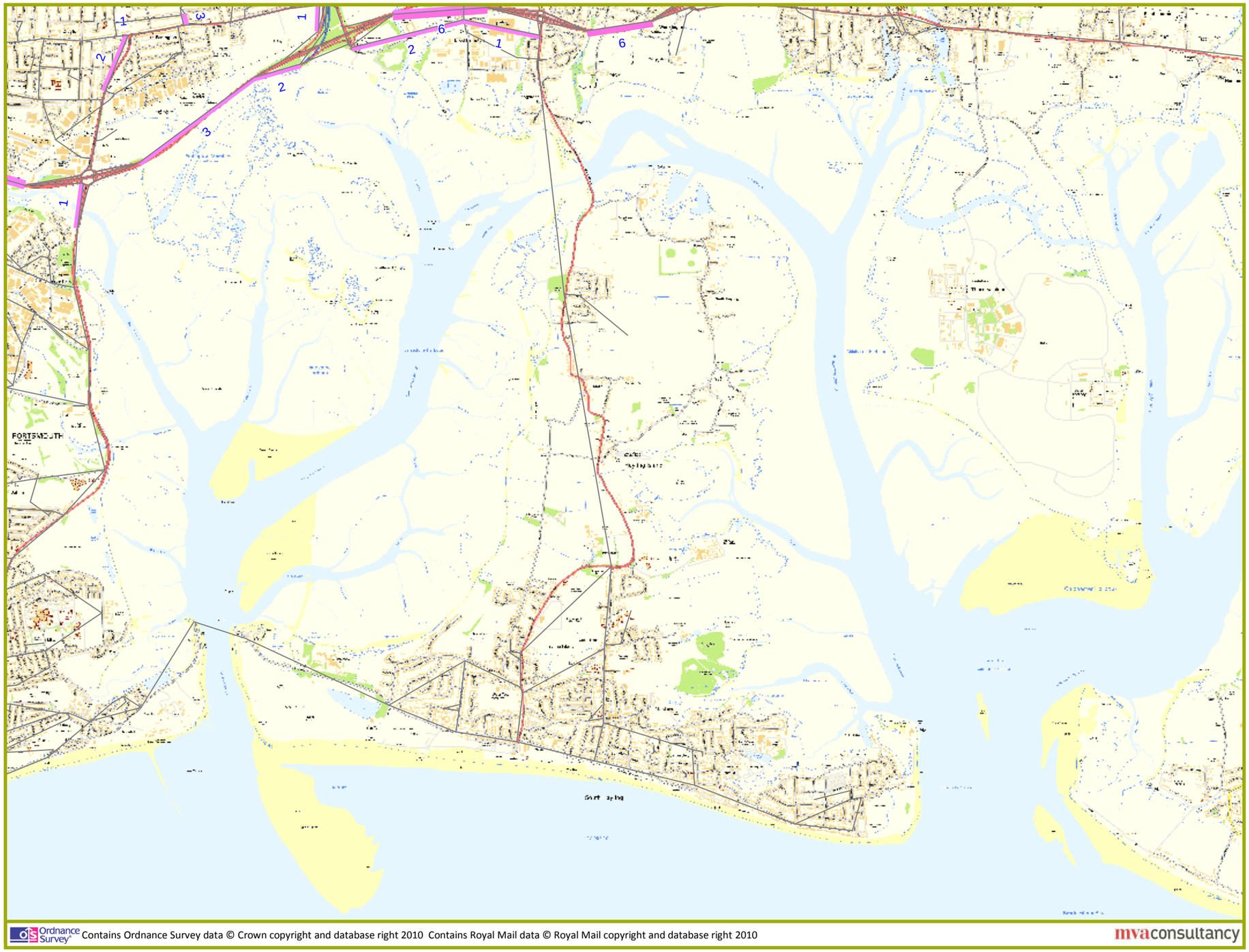

Figure 7.3 - AM Peak Delay Difference (Run 2 v Run 1)

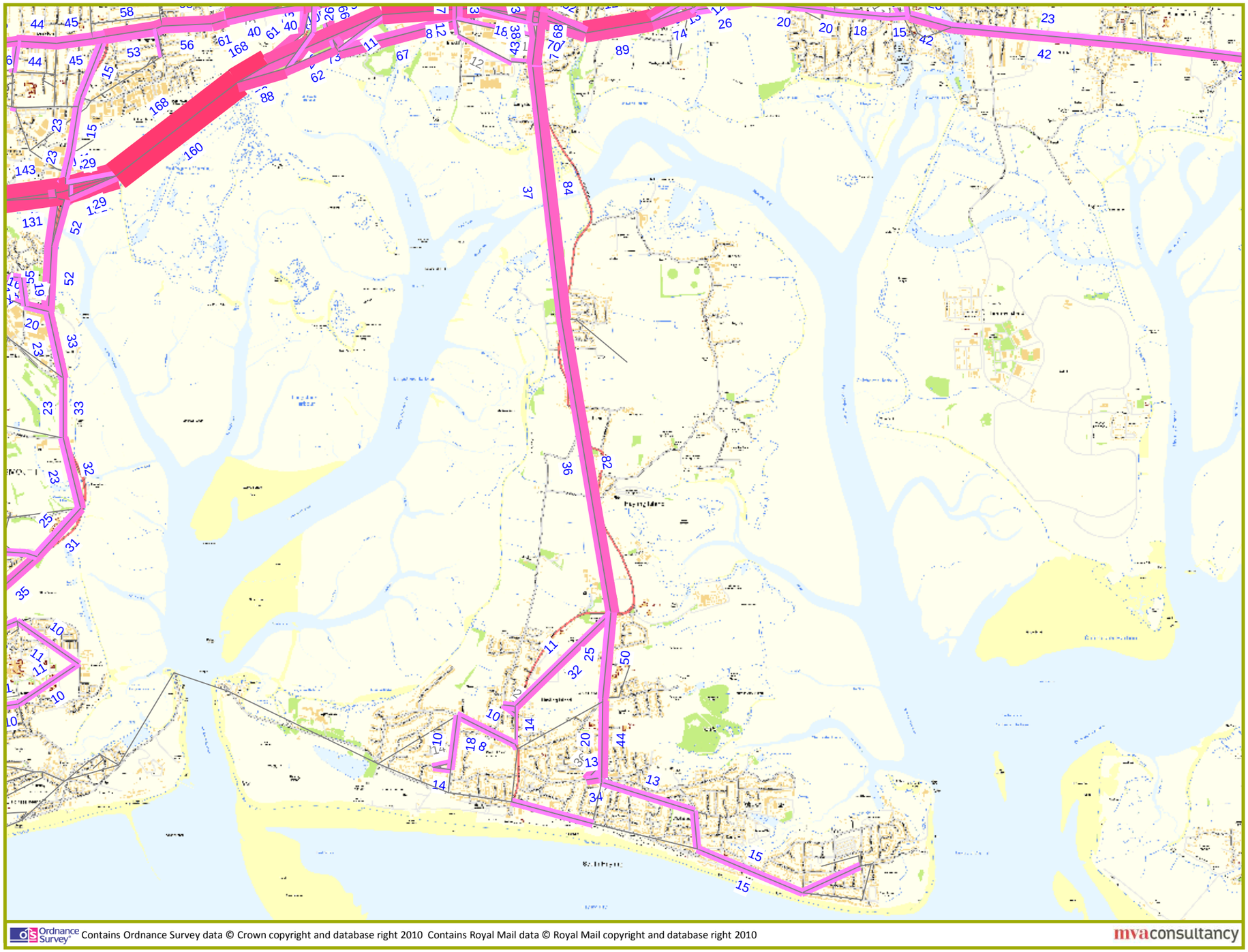

Figure 7.4 - PM Peak Development only Flows (Run 2)

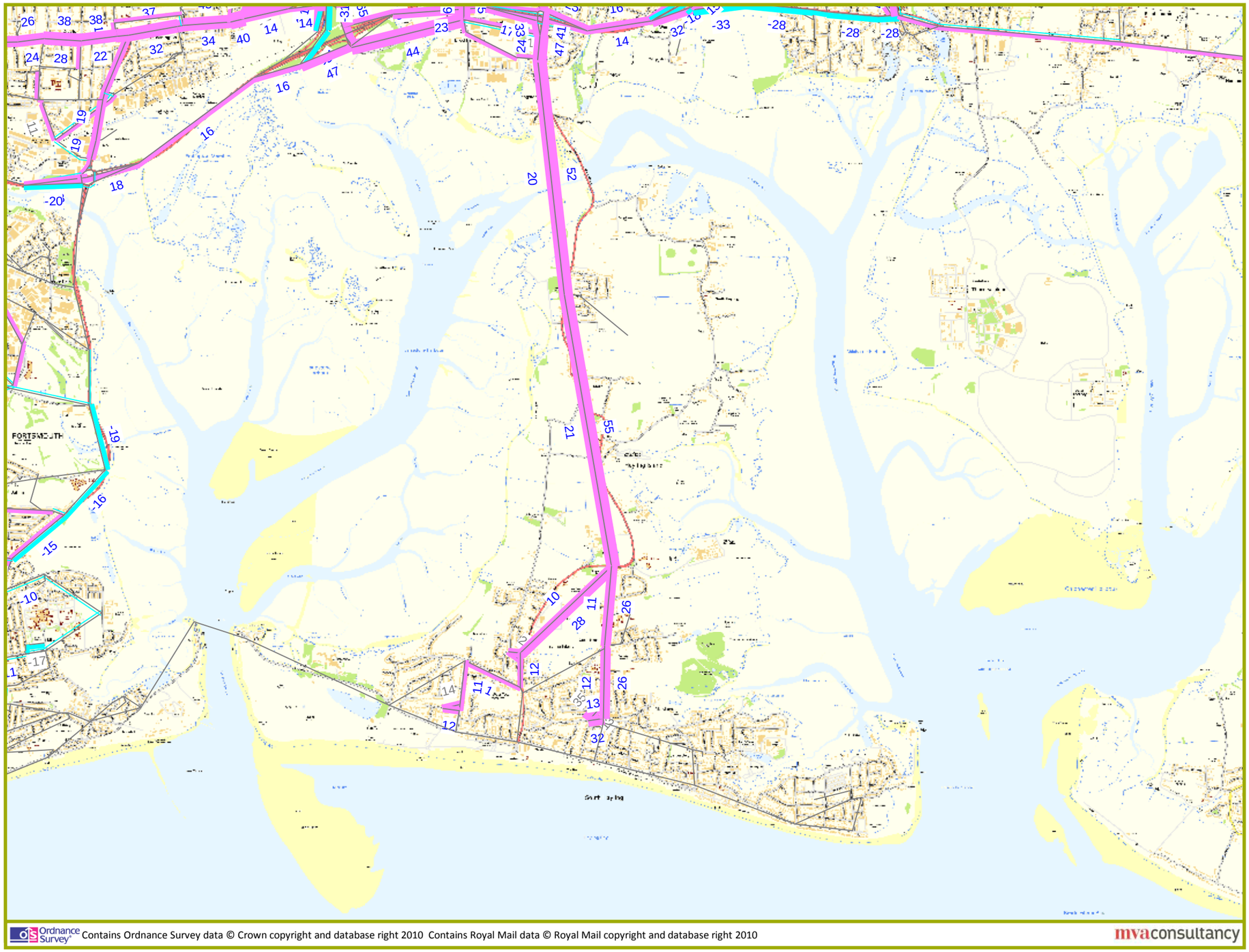

Figure 7.5 - PM Peak Flow Difference (Run 2 v Run 1)

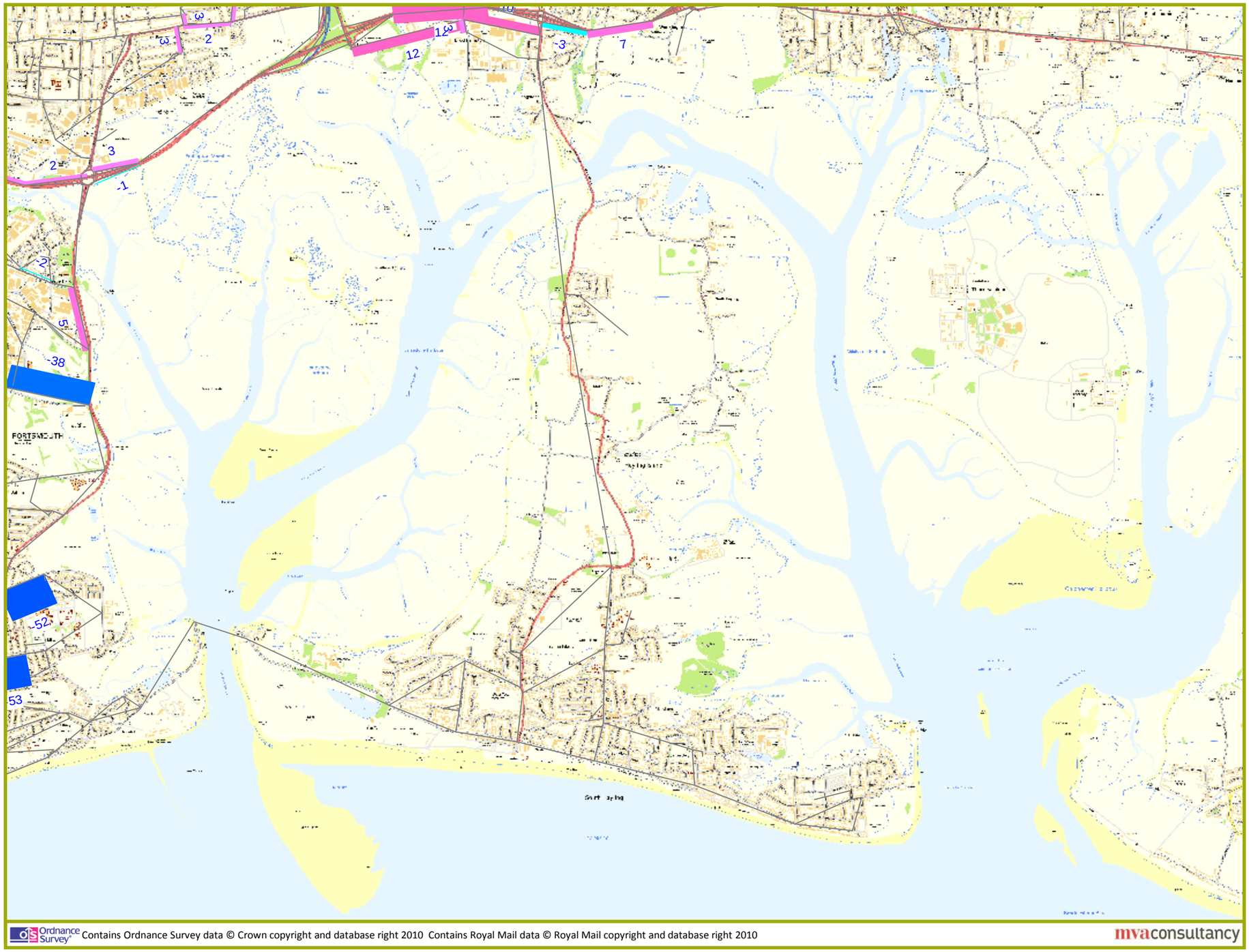

Figure 7.6 - PM Peak Delay Difference (Run 2 v Run 1)

8 Results - Leigh Park Area

8.1 Introduction and Leigh Park Development Quantum

8.1.1 This chapter summarises the Highway outputs focussing on the Leigh Park sub area. The breakdown of development sites and land use quantum is provided in Table 8.1. A map summarising the location of the individual development sites is provided in Appendix D.

Table 8.1 Leigh Park Draft Development Allocations

Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
L21	Kingsclere Avenue open space (part)	25	0	0	0	0
L25	Strouden Court	25	0	0	0	0
L46	Oakshott Drive	8	0	0	0	0
L83	Riders Lane allotments	65	0	0	0	0
L86	Blendworth Crescent open space	40	0	0	0	0
L89	Adjacent 27 Holybourne Road	8	0	0	0	0
L108	Fox PH off Prospect Lane	7	0	0	0	0
L119	Land at Dunsbury Way (mixed use)	72	0	0	0	0
L138	Leigh Park Centre (mixed Use)	38	0	0	0	0
L145	SSE, Bartons Road	90	0	0	0	0
UE6a	Cabbagefield Row	46	0	0	0	0
BD65 (pt)	Dunsbury Way	0	0	630	630	0
	Total	**424**	**0**	**630**	**630**	**0**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

8.2 Highway Link Flows, Delays and Capacity Hotspots

8.2.1 The following paragraphs highlight the main changes to link flows, delay and congestion hotspots for Leigh Park in the 2026 forecast year. The definitions for the different plot types are provided in Section 4.3. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

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Development Only Flows (Figures 8.1 & 8.6)

8.2.2 The broad spread of development sites again reduces the impact of development trips on any single location, and it is only Purbrook Way and Dunsbury Way where the volume of development trips is relatively more pronounced.

Change in Traffic Flow (Figures 8.2 & 8.7)

8.2.3 The most noticeable change in net traffic flow occurs on the section of Purbrook Way in the vicinity of the junction with Middle Park Way where there are reported drops in traffic flow for a number of movements. This would appear to be due to the junction experiencing capacity problems and delay and so vehicles seeking to divert to find a shorter journey time. Park Lane and Hulbert Road appear to be accommodating the majority of the diverted traffic.

Highway Delays (Figures 8.3 & 8.8)

8.2.4 Following from the change in traffic flow referred to above, the delay at the junction of Purbrook Way and Middle Park Way has increased particularly westbound. There is also an increase in delay on the southbound approach of Hulbert Road in the PM peak which is most likely the result of the junction performance being impacted by the re-routed traffic diverting to use the northbound approach of Hulbert Road (Section 8.2.3).

Capacity Hotspots (Figures 8.4, 8.5 & 8.9, 8.10)

8.2.1 Table 8.2 below summarises the junctions experiencing capacity problems in the scenarios with and without the Local Plan allocations.

Table 8.2 Leigh Park Capacity Hotspots

Junction	Capacity Hotspots	
	Without Allocation Sites	With Allocation Sites
Middle Park Way/ Purbrook Way	✓	✓
Petersfield Road/ Stockheath Road	✗	✓
A3(M) Junction 3	✓	✓
Hulbert Road/ Purbrook Way	✓	✓

8.2.2 Based on the flow and delay changes discussed above it is expected that the junctions of Middle Park Way/Purbrook Way and Hulbert Road/Purbrook Way would be experiencing capacity problems. It should, however, be noted that these are predicted to experience capacity problems without the draft allocation sites, but the capacity problems are increased with their introduction. It is only the junction of Petersfield Road/ Stockheath Road that is pushed in to the capacity hotspot threshold as a result of the draft allocation sites.

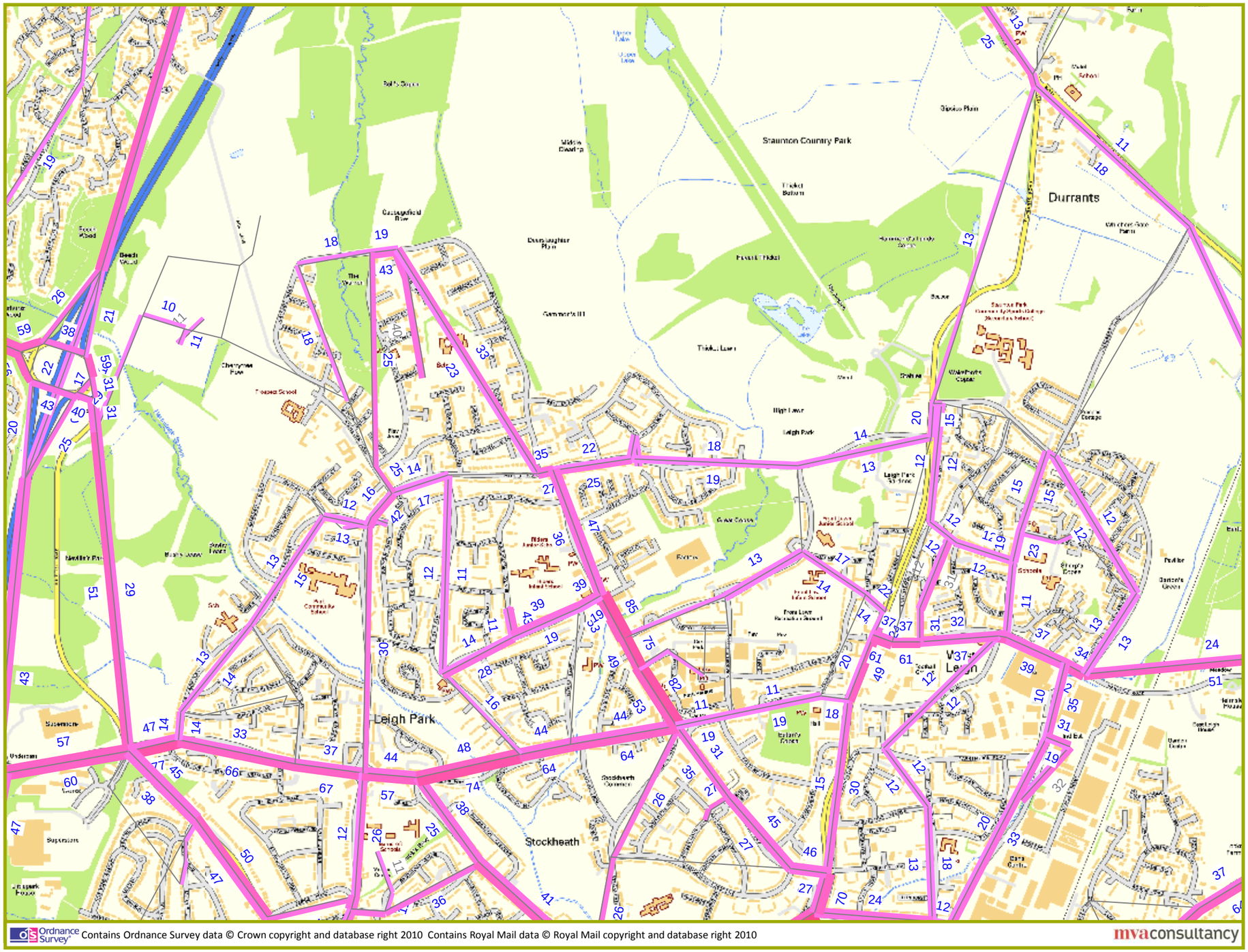


Figure 8.1 - AM Peak Development only Flows (Run 2)

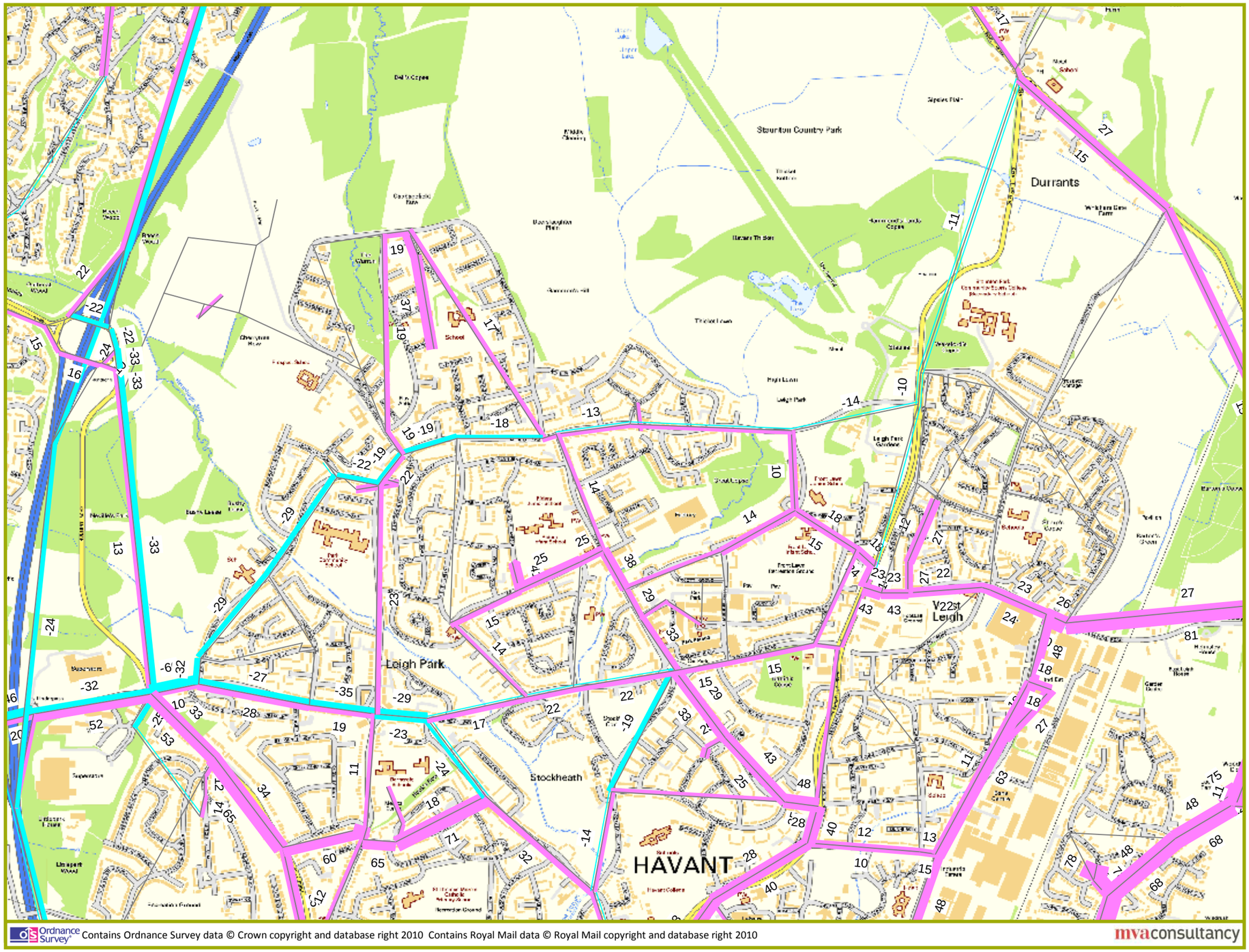


Figure 8.2 - AM Peak Flow Difference (Run 2 v Run 1)

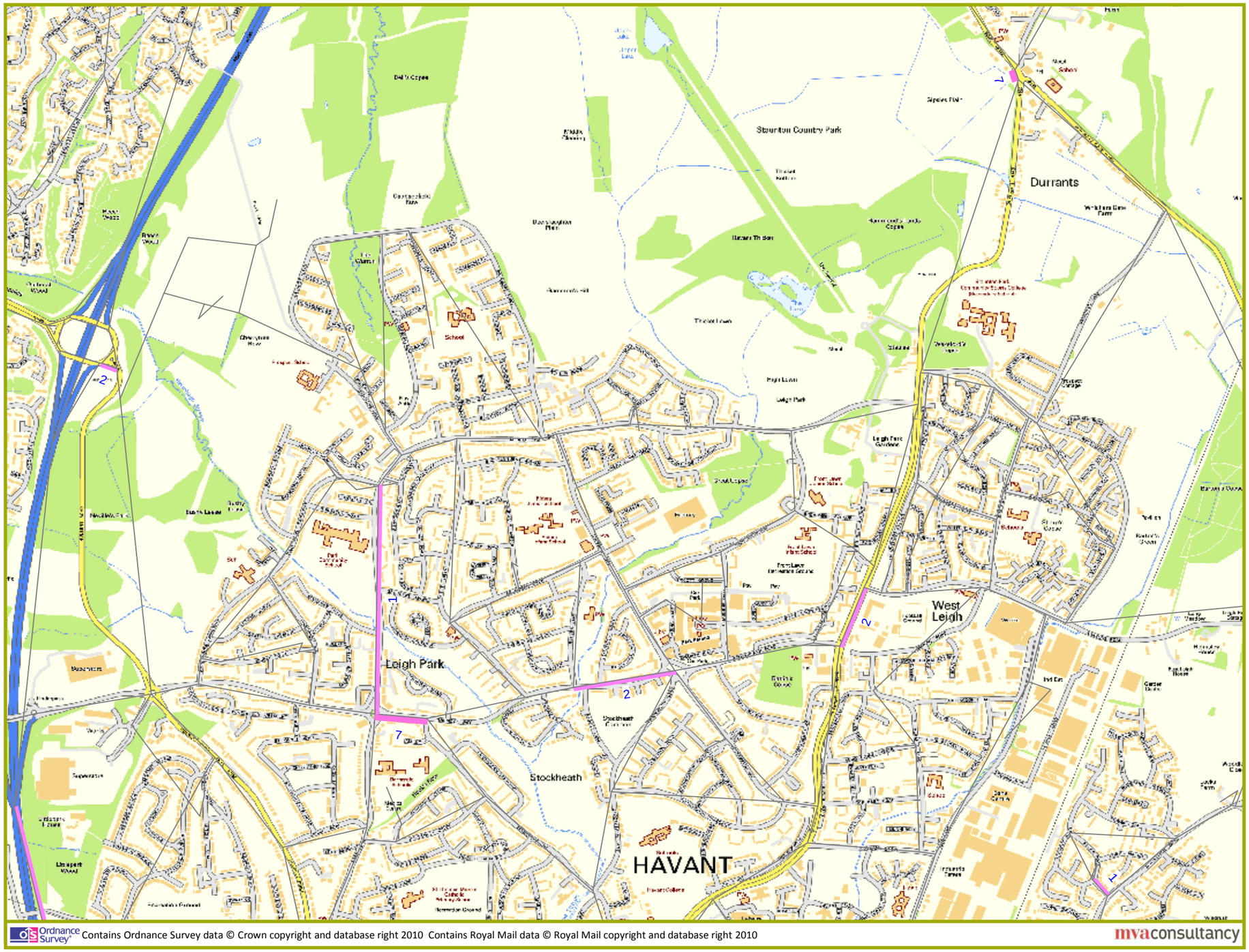


Figure 8.3 - AM Peak Delay Difference (Run 2 v Run 1)

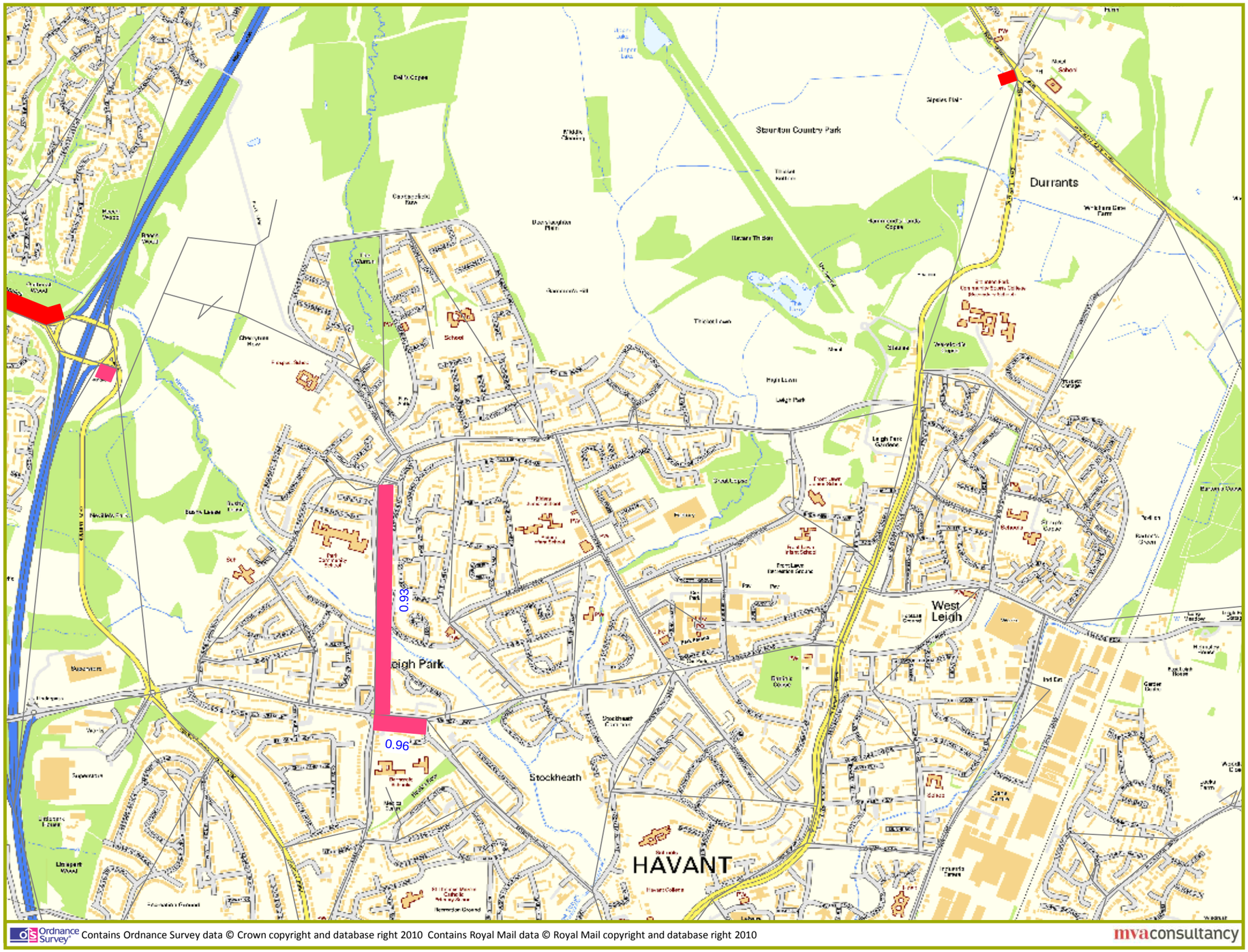


Figure 8.4 - AM Peak Volume over Capacity (Run 1)

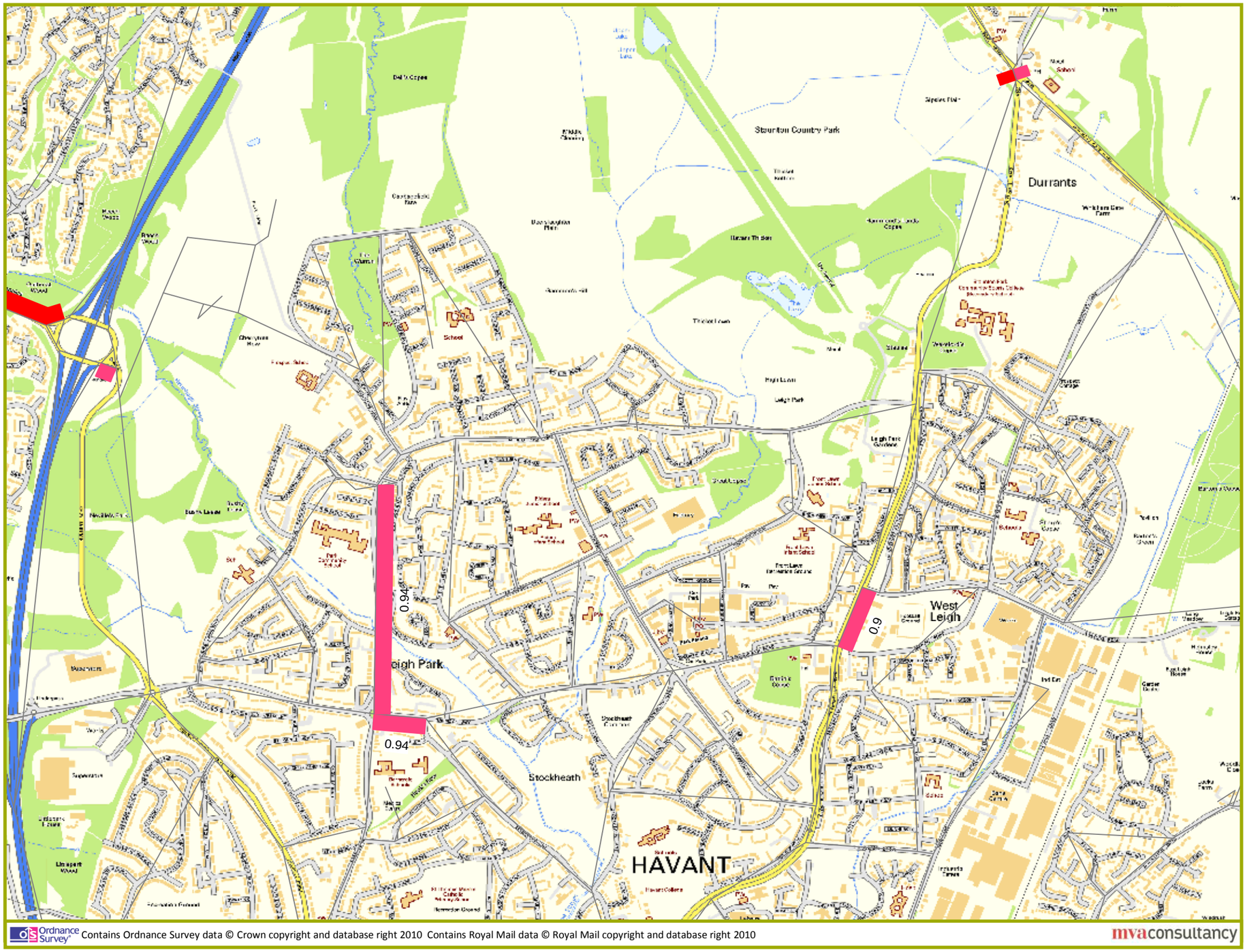


Figure 8.5 - AM Peak Volume over Capacity (Run 2)

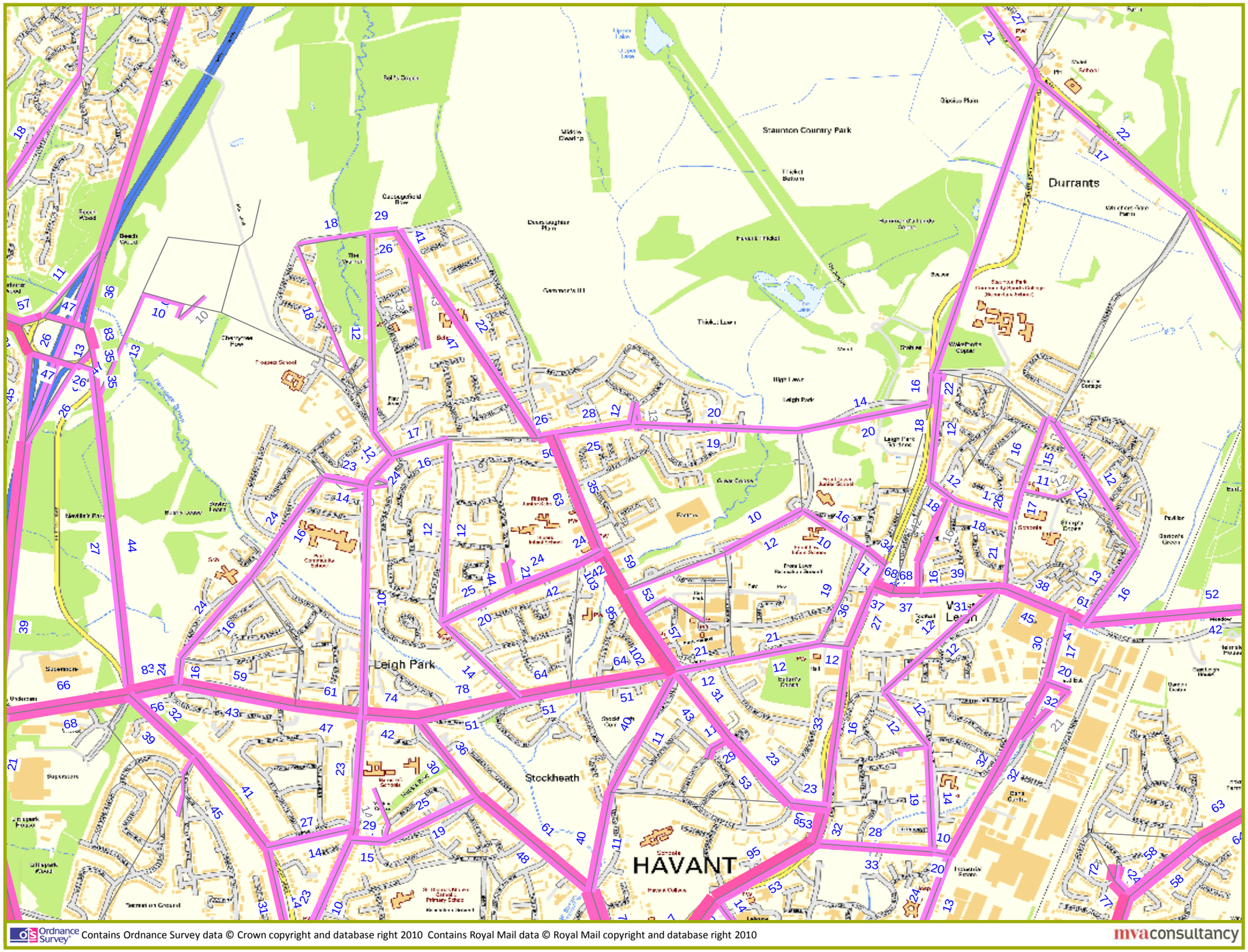


Figure 8.6 - PM Peak Development only Flows (Run 2)

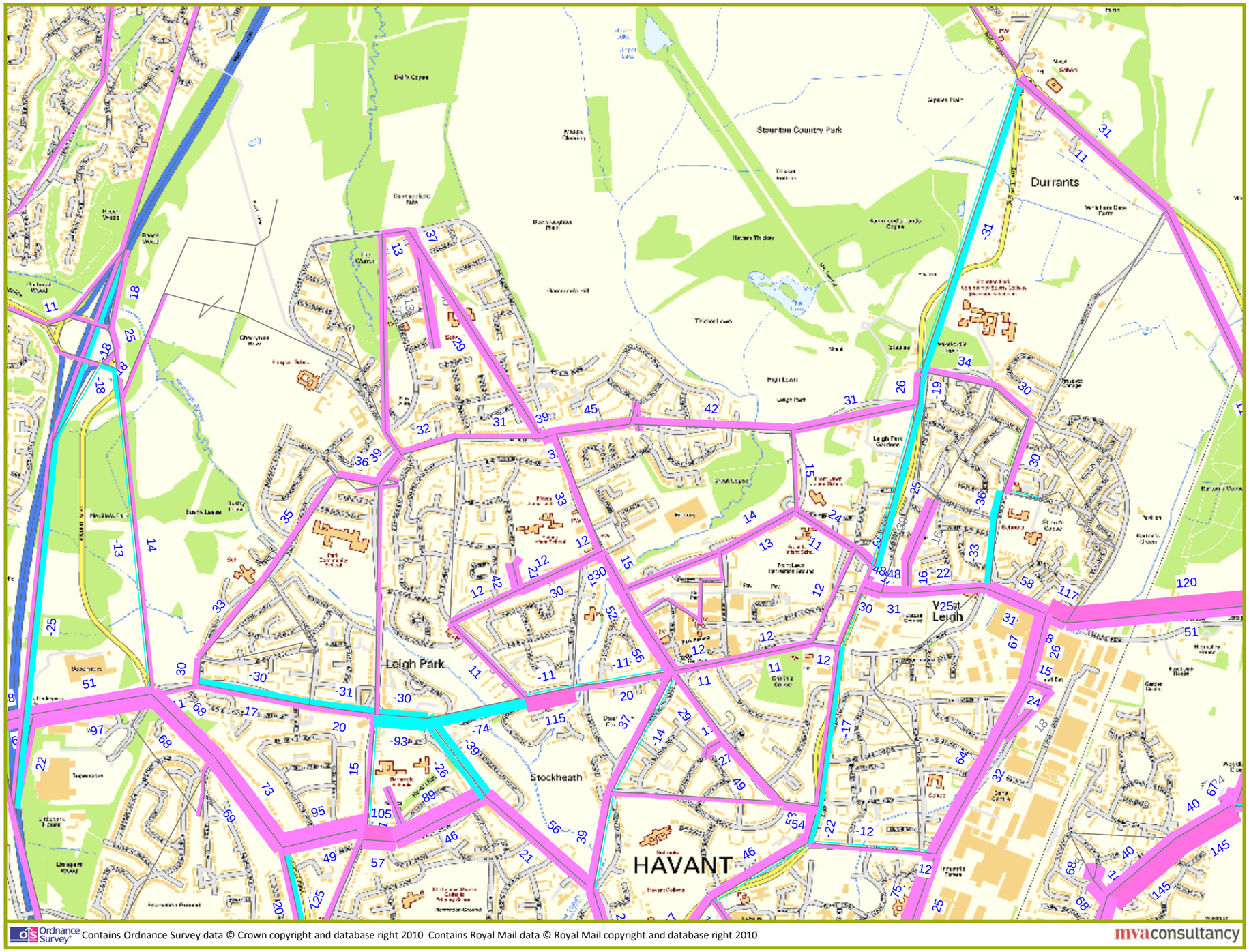


Figure 8.7 - PM Peak Flow Difference (Run 2 v Run 1)

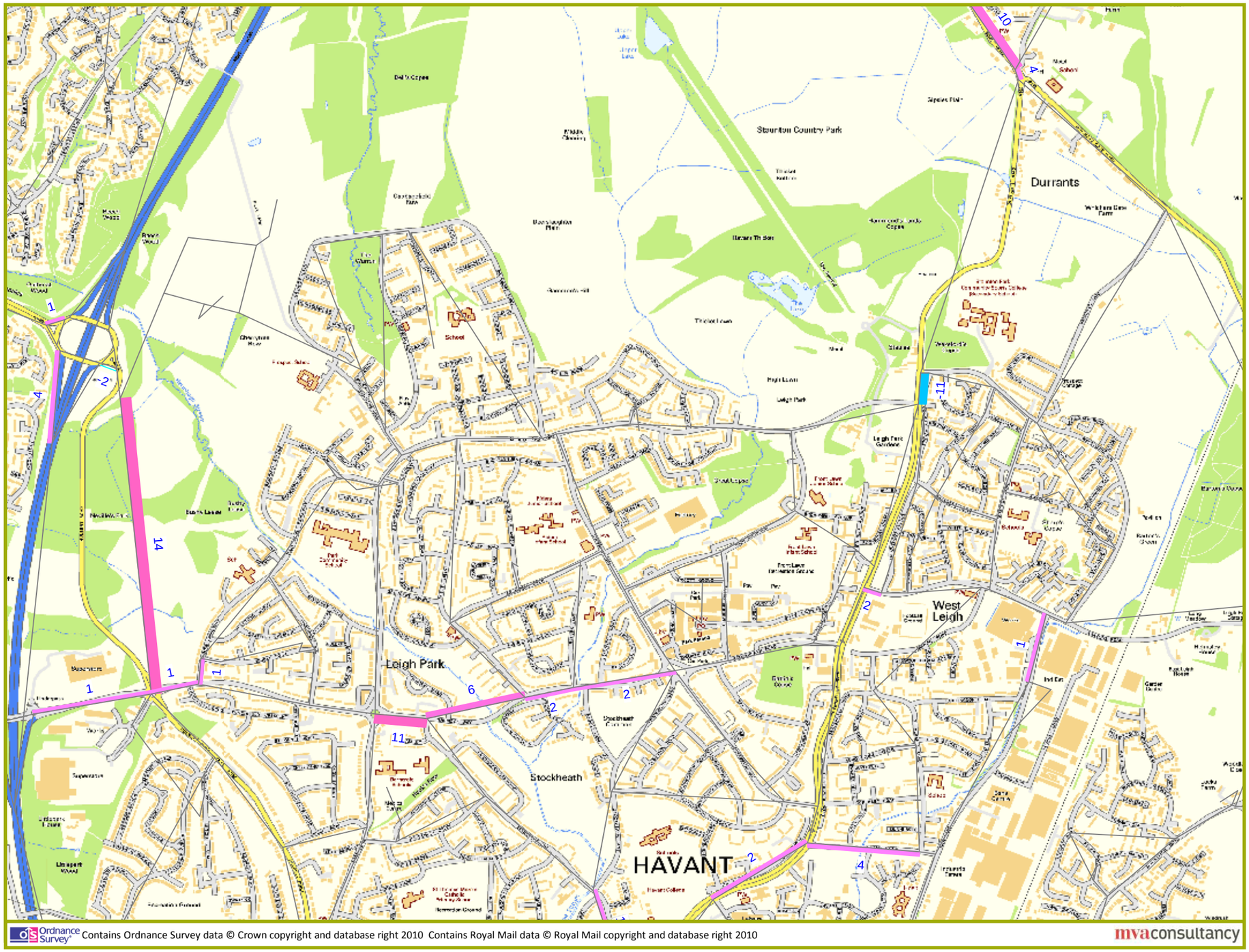


Figure 8.8 - PM Peak Delay Difference (Run 2 v Run 1)

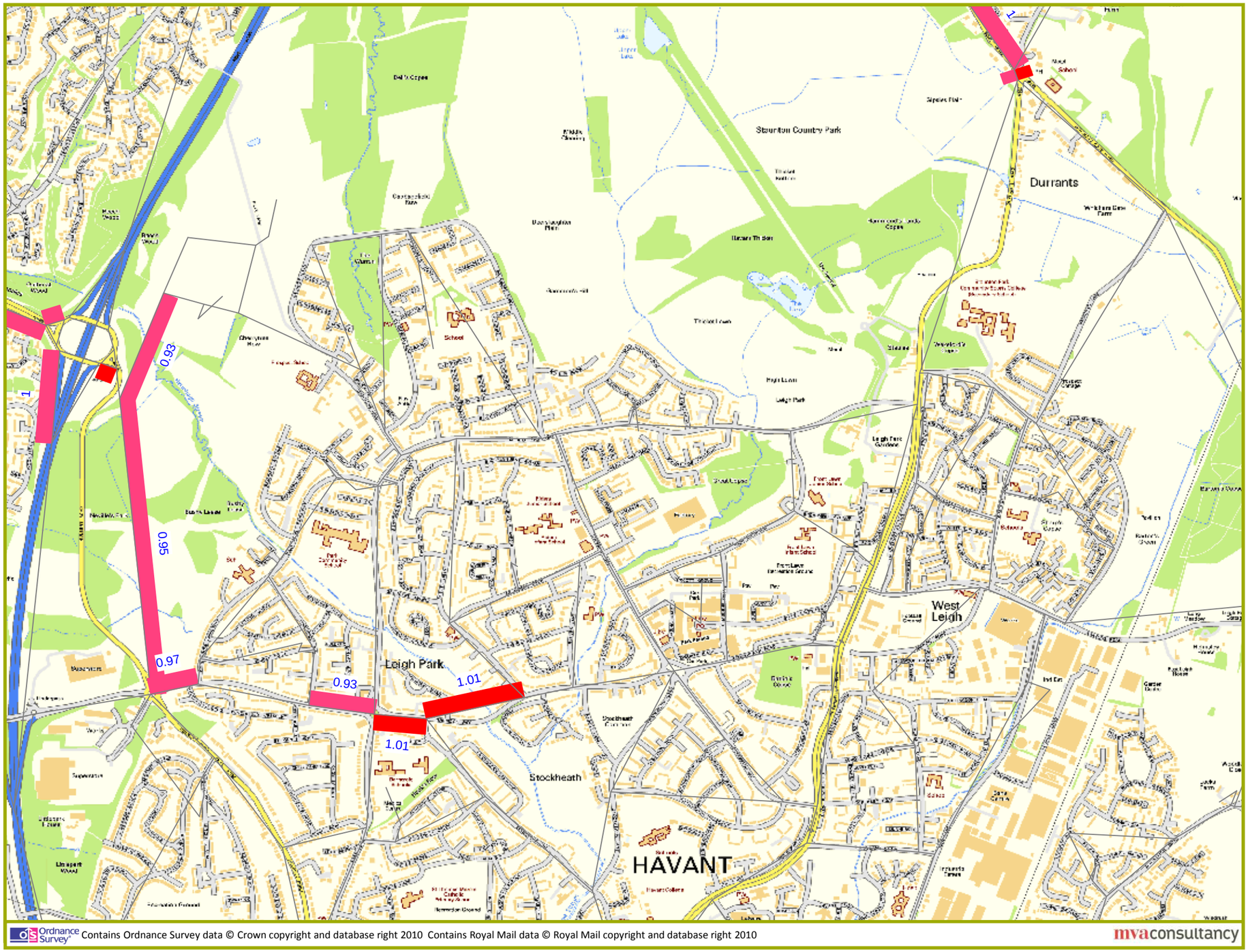


Figure 8.9 - PM Peak Volume over Capacity (Run 1)

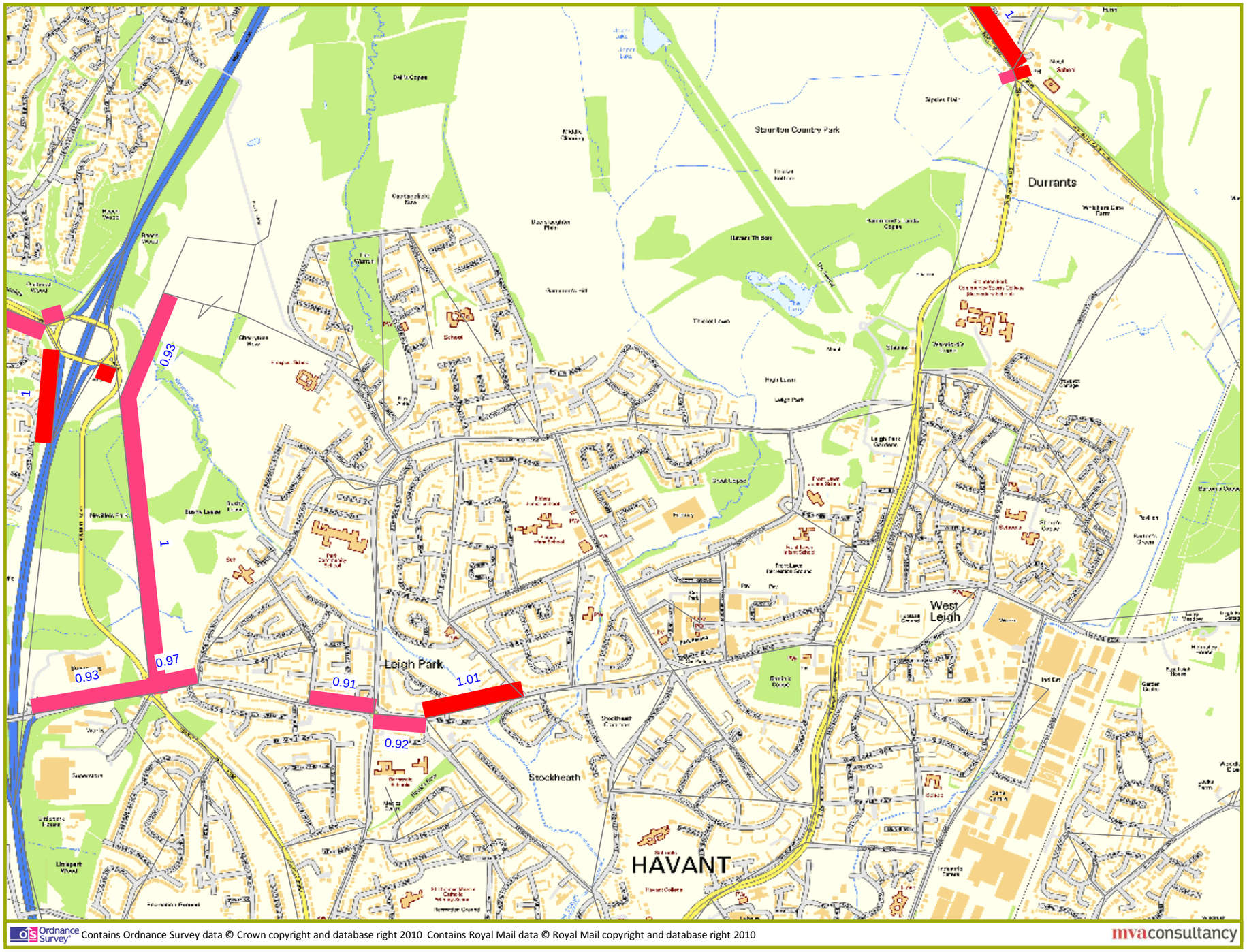


Figure 8.10 - PM Peak Volume over Capacity (Run 2)

9 Results – Waterlooville Area

9.1 Introduction and Waterlooville Development Quantum

9.1.1 This chapter summarises the Highway outputs focussing on the Waterlooville sub area. The breakdown of development sites and land use quantum is provided in Table 9.1. A map summarising the location of the individual development sites is provided in Appendix D.

Table 9.1 Waterlooville Draft Development Allocations

Site		Dwellings (units)	Employment (m^2)			Retail (m^2)
			B1	B2	B8	
W53a/ 53b	St Michael's Convent / Sacred Heart Church	66	0	0	0	0
W58	Forest End Garages	5	0	0	0	0
W63	Goodwillies Timber Yard	96	0	0	0	0
W109	Asda/Clock Tower (mixed use)	111	0	0	0	0
W110	Wellington Way (mixed use)	55	0	0	0	0
W125	Former Purbrook Park School playing field	95	0	0	0	0
W126	Padnell Grange	84	0	0	0	0
W130	Meadowlands School	52	0	0	0	0
W135	Land West of Asda (mixed use)	100	0	0	0	0
UE31	Land north of Highbank Avenue, Widley	20	0	0	0	0
BD54 (pt)	BAE Systems Technology Park car park	0	1997	1997	1996	0
	Within Town Centre Boundary	0	0	0	0	4000
	Total	**684**	**1997**	**1997**	**1996**	**4000**

Note: The allocations in the Table above are based on HBC's estimates from early September 2012. The development sites and development quantum are subject to ongoing refinement and the final numbers may differ from those above.

9.2 Highway Link Flows, Delays and Capacity Hotspots

9.2.1 The following paragraphs highlight the main changes to link flows, delay and congestion hotspots for Waterlooville in the 2026 forecast year. The definitions for the different plot types are provided in Section 4.3. Only data that exceeds the thresholds identified in Sections 4.3.3 to 4.3.8 below is included in the figures.

DRAFT

Development Only Flows (Figures 9.1 & 9.6)

9.2.2 Again, the broad spread of the draft allocation sites result in the most pronounced volumes of development trips being consolidated to the approaches to, from or over the strategic routes, in this instance the A3(M).

Change in Traffic Flow (Figures 9.2 & 9.7)

9.2.3 The most striking net change in flows occur in the vicinity to the Stakes Hill Road/Purbrook Way junction. In the AM peak there appears to be an element of re-routing from Shaftesbury Avenue to Stake Road at the junction whilst Stake Hill Road has a notable increase in vehicles in both AM and PM peaks beyond the junction with Shaftesbury Avenue.

Highway Delays (Figures 9.3 & 9.8)

9.2.4 The only noticeable change in delay in either peak is at the Stakes Hill Road/ Purbrook Way junction which ties with the change in flows identified above. The AM peak re-routed trips have increased the eastbound delay on Stakes Road and reduced the southbound delay on Stakes Hill Road.

Capacity Hotspots (Figures 9.4, 9.5 & 9.9, 9.10)

9.2.5 Table 9.2 below summarises the junctions experiencing capacity problems in the scenarios with and without the draft allocations.

Table 9.2 Waterloovilee Capacity Hotspots

Junction	Capacity Hotspots	
	Without Allocation Sites	With Allocation Sites
A3/ B2149 Dell Piece Way	✓	✓
A3 (M) J3	✓	✓
A3/ Hambledon Road	✓	✓
A3/ Portsdown Hill Road	✓	✓
A3/ Ladybridge Road	✓	✓

9.2.1 Despite a general worsening in performance in those junctions already experiencing capacity problems there are no further junctions that are pushed in to the capacity hotspot threshold as a result of the Waterlooville allocation sites.

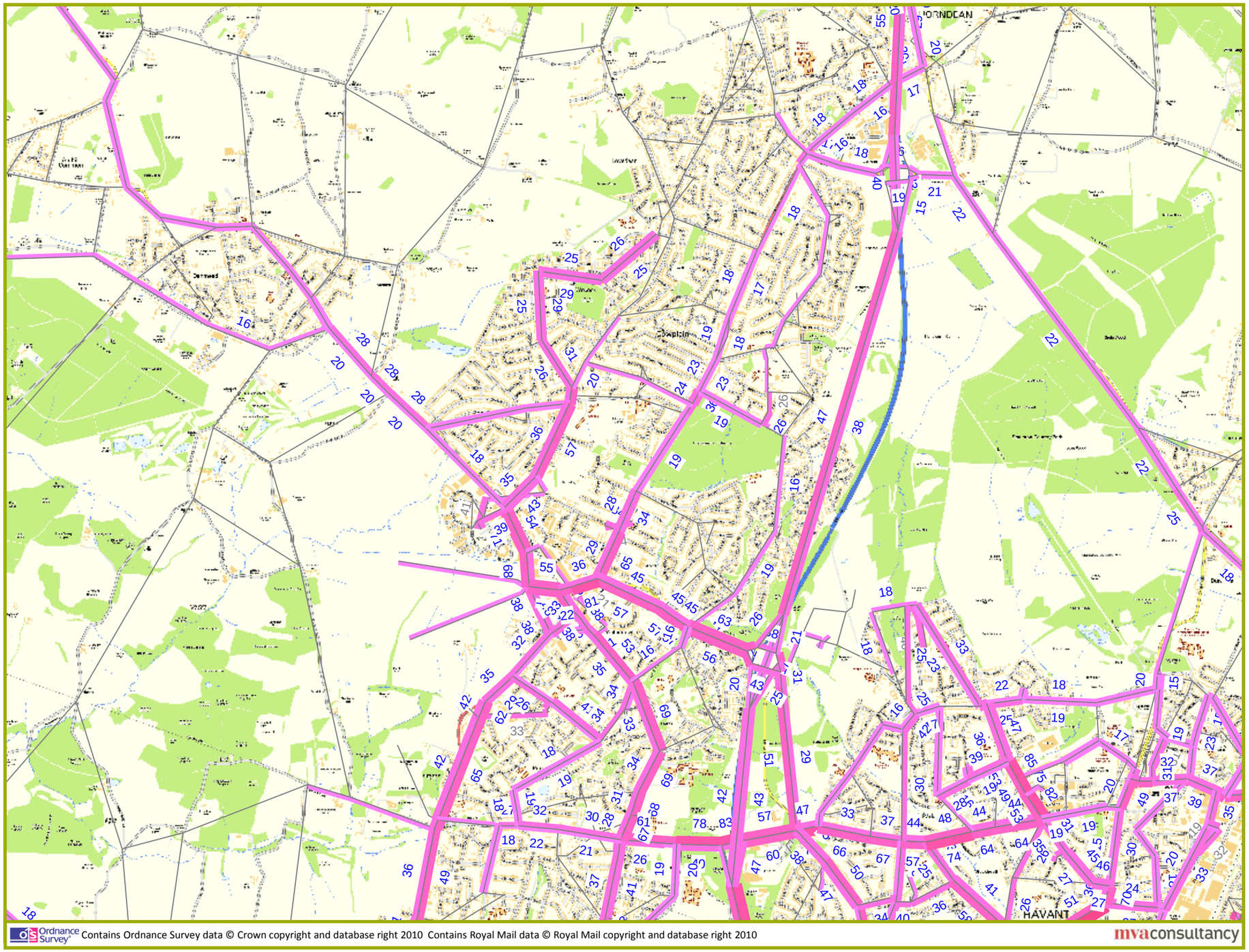


Figure 9.1 - AM Peak Development only Flows (Run 2)

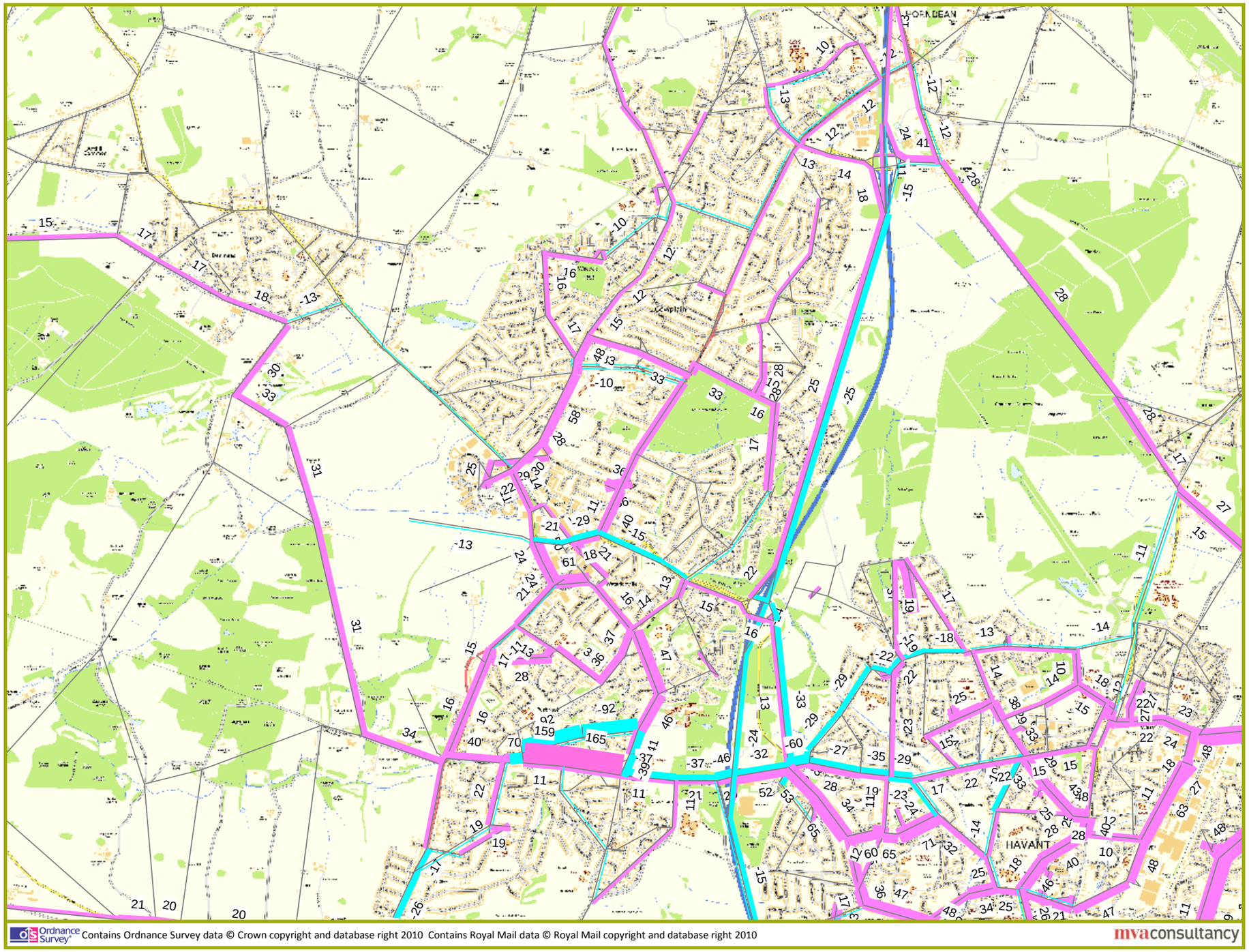


Figure 9.2 - AM Peak Flow Difference (Run 2 v Run 1)

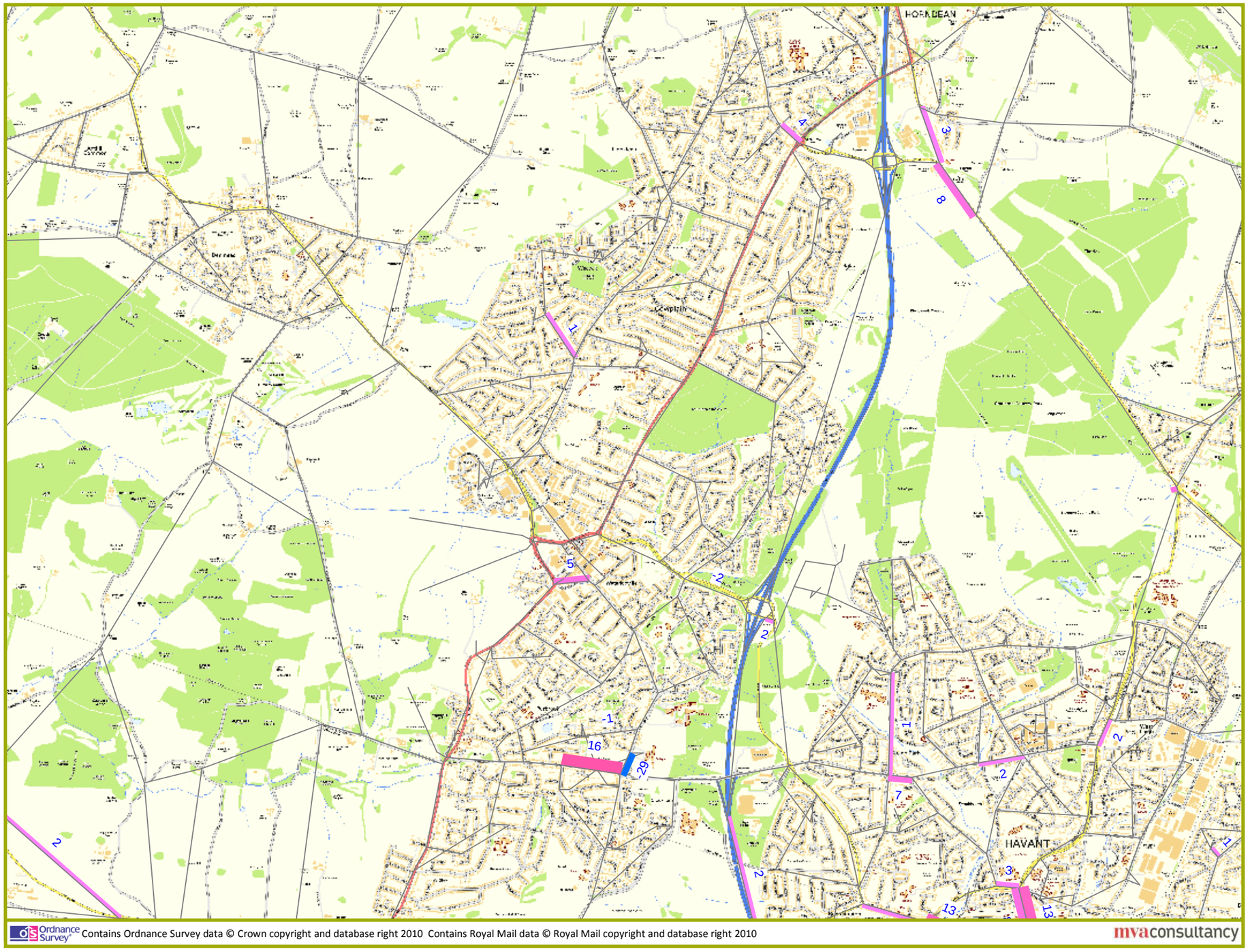


Figure 9.3 - AM Peak Delay Difference (Run 2 v Run 1)

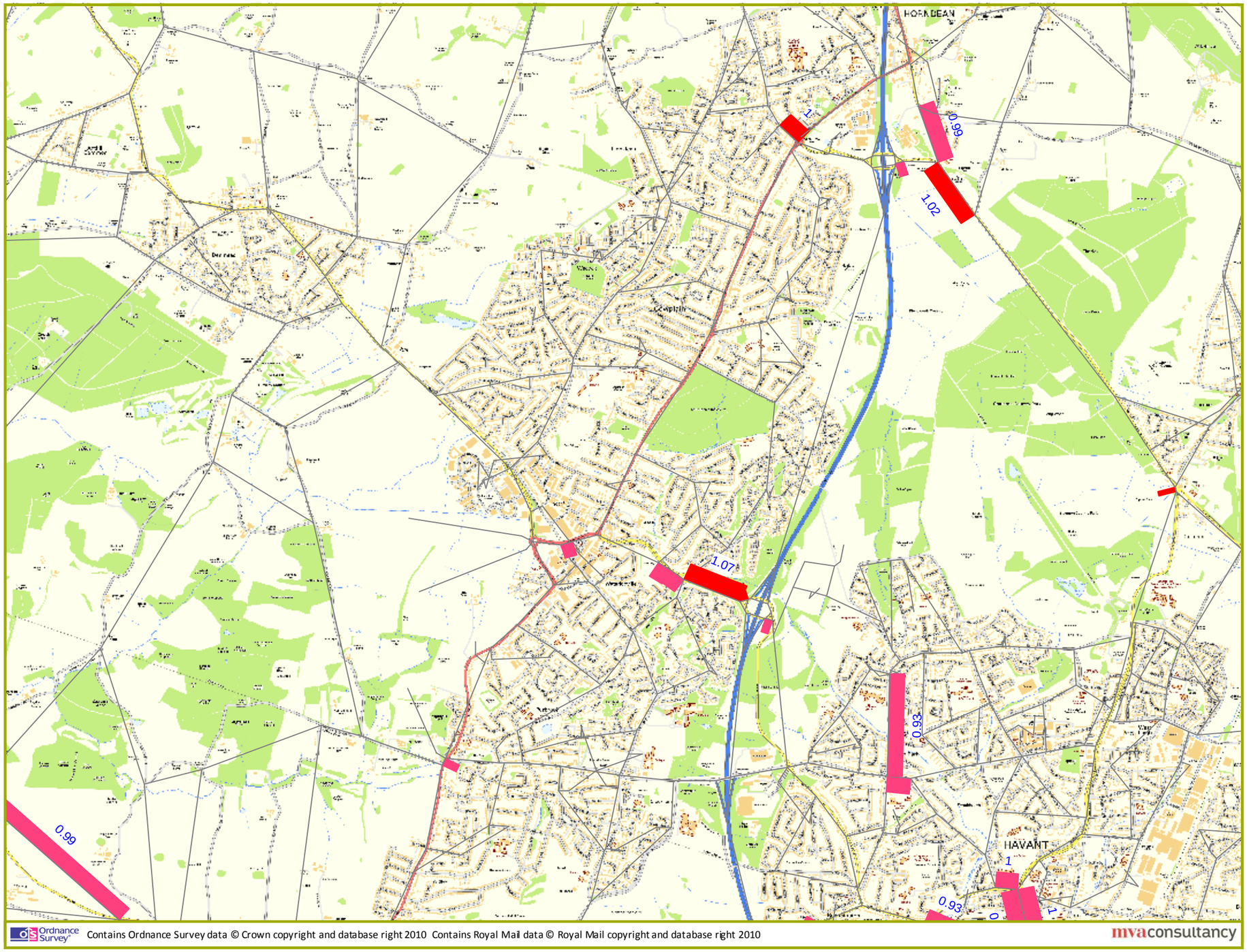


Figure 9.4 - AM Peak Volume over Capacity (Run 1)

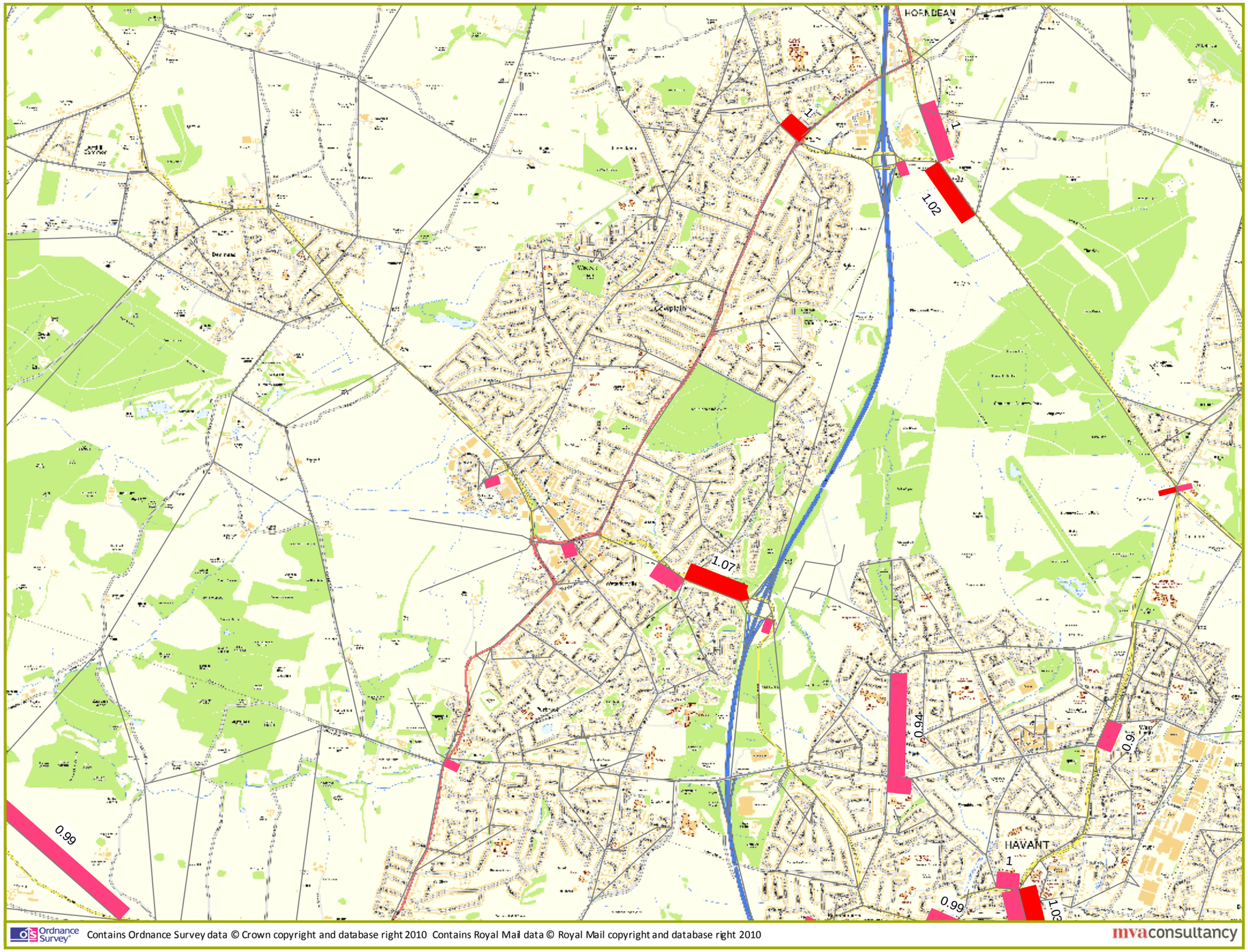


Figure 9.5 - AM Peak Volume over Capacity (Run 2)

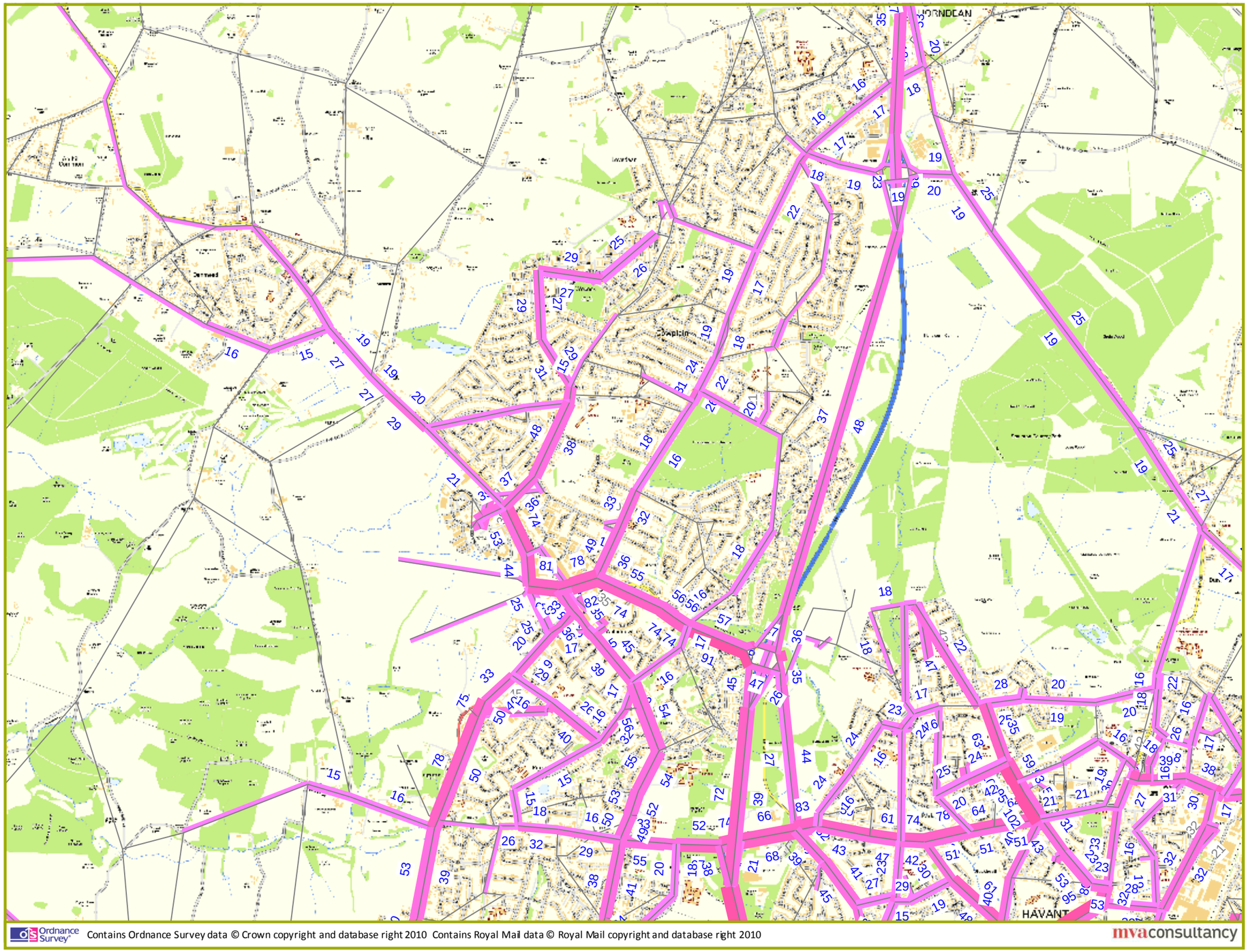


Figure 9.6 - PM Peak Development only Flows (Run 2)

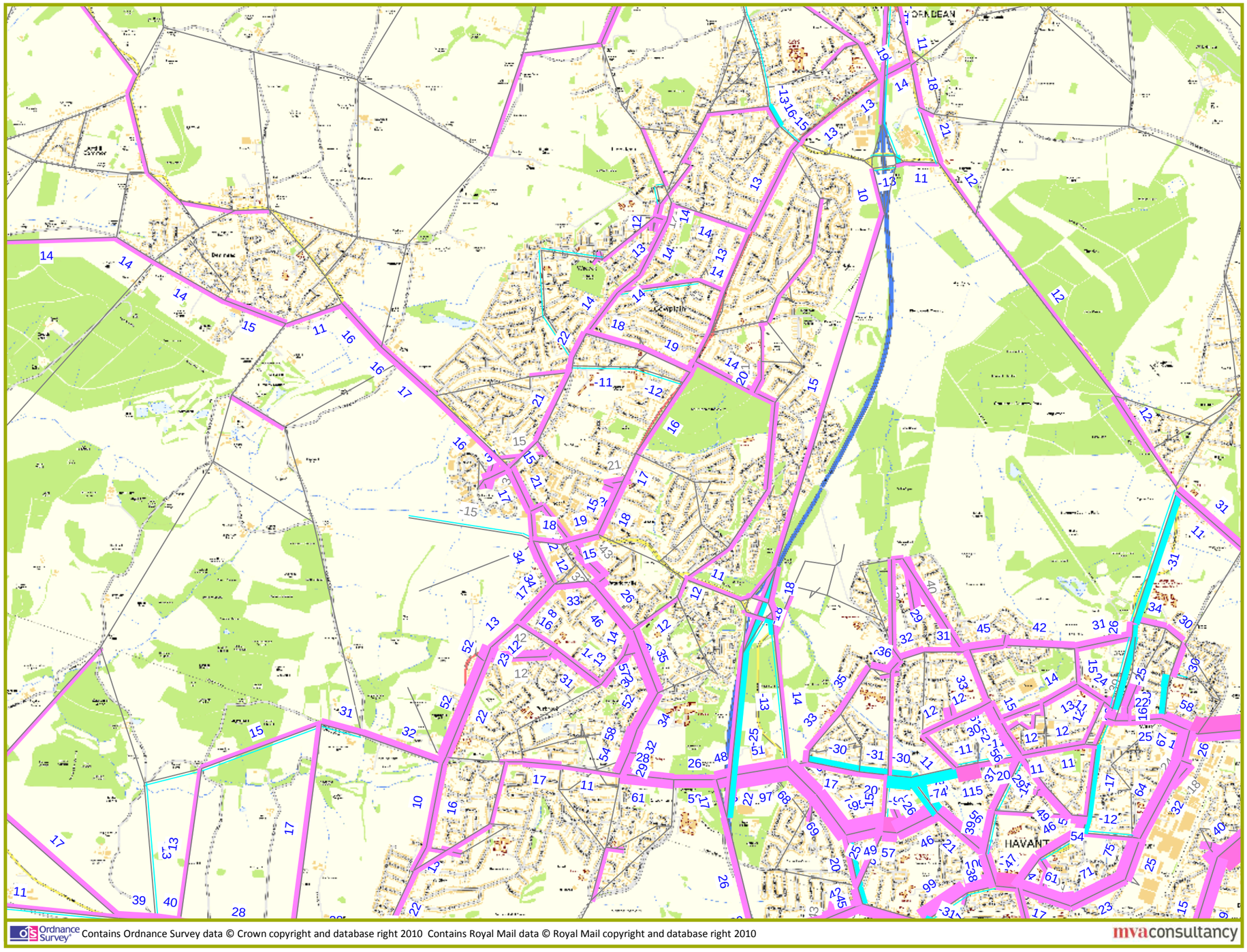


Figure 9.7 - PM Peak Flow Difference (Run 2 v Run 1)

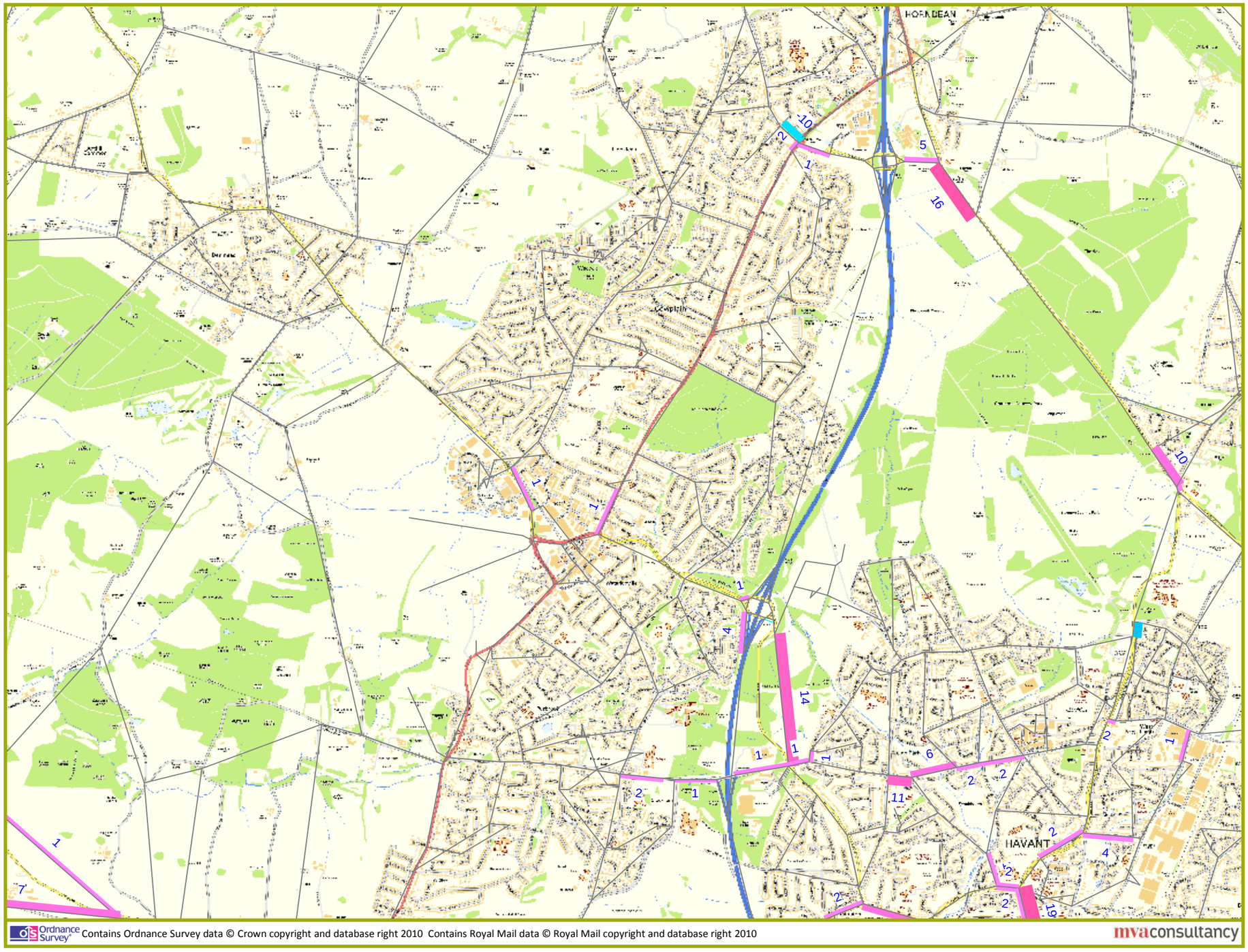


Figure 9.8 - PM Peak Delay Difference (Run 2 v Run 1)

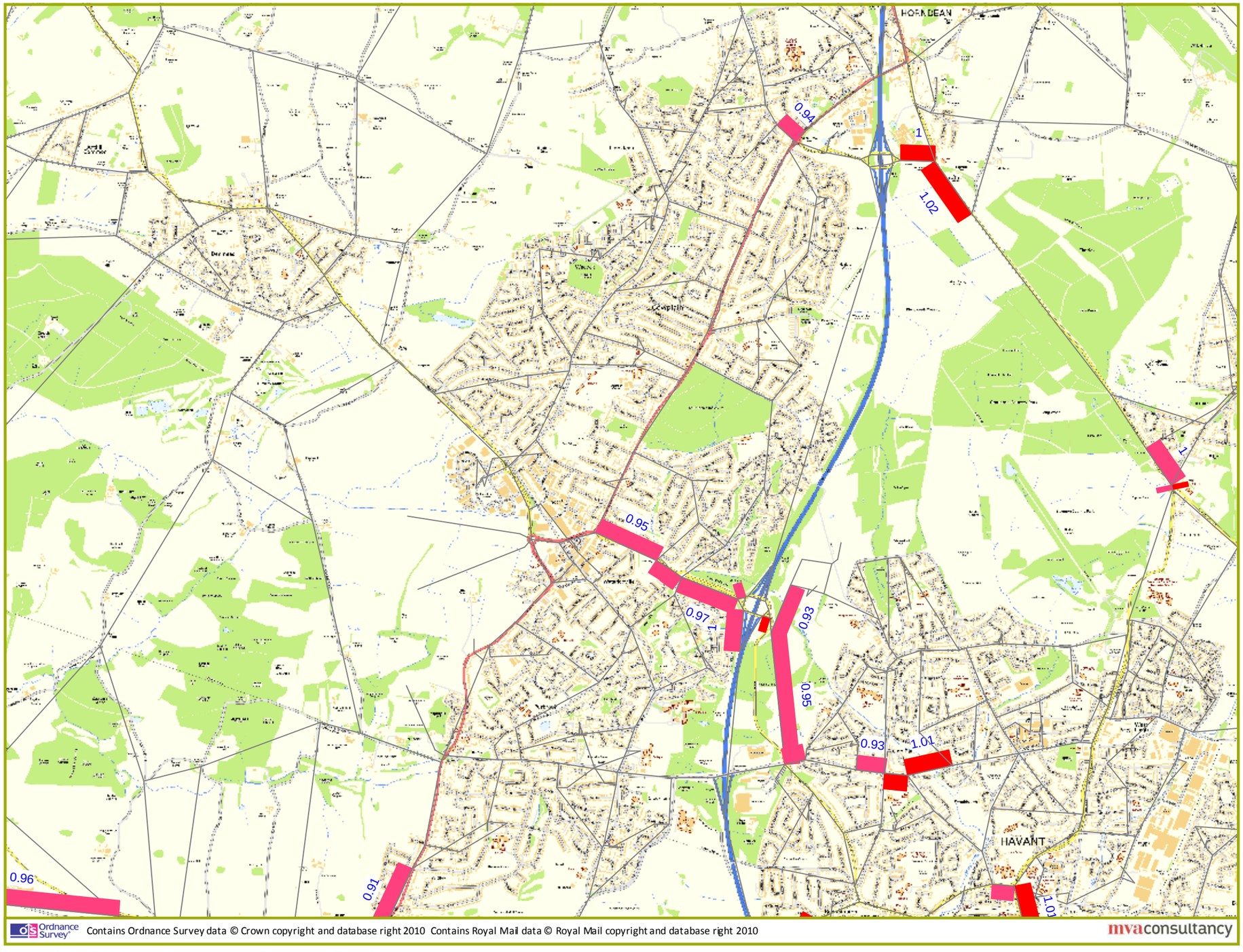


Figure 9.9 - PM Peak Volume over Capacity (Run 1)

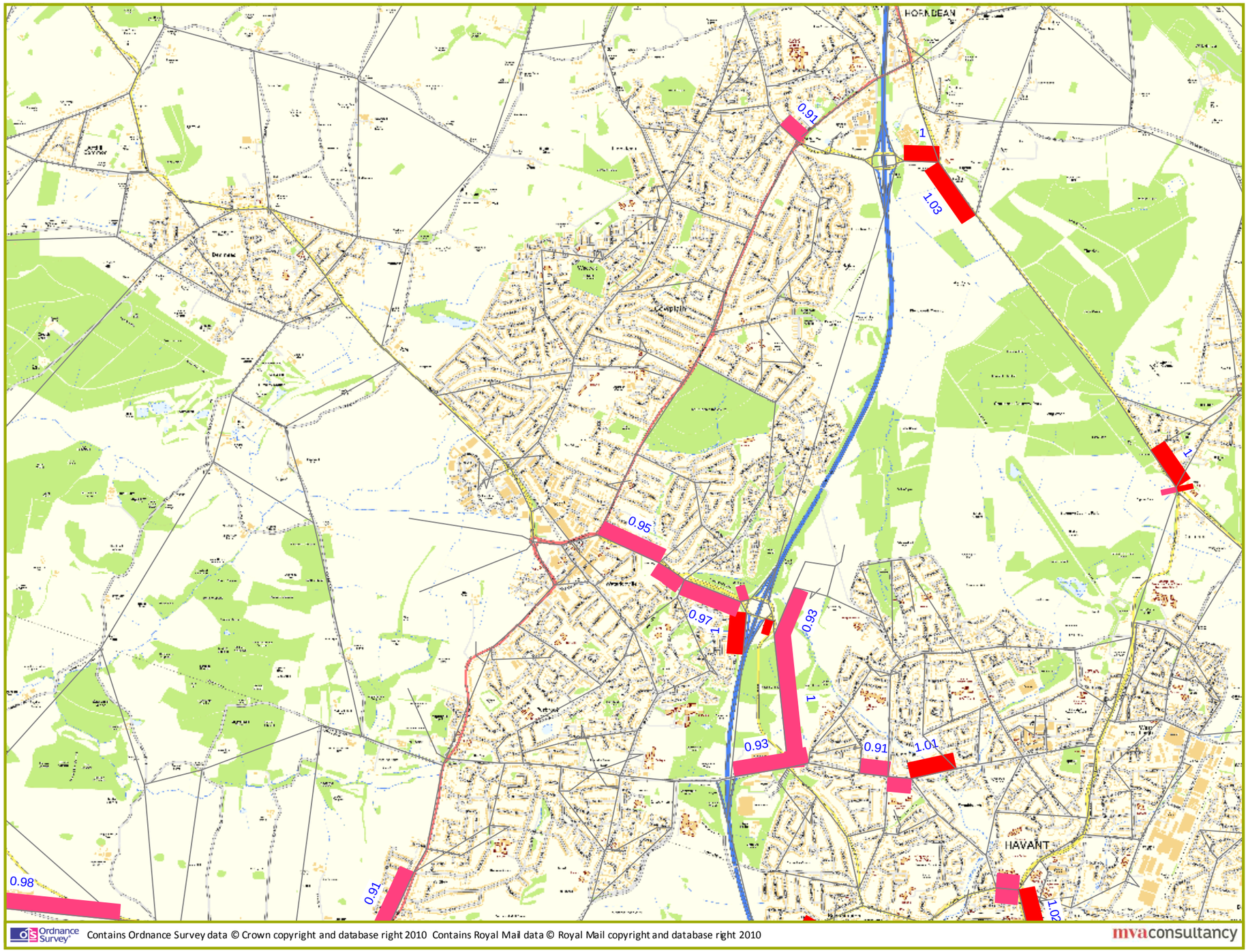


Figure 9.10 - PM Peak Volume over Capacity (Run 2)

10 Summary and Next Steps

10.1 Summary

10.1.1 Havant Borough Council is preparing its Local Plan (Allocations) for adoption in late 2013. To help inform and evidence the Plan, TfSH's SRTM has been used to assess the transport implications of the proposed land allocations for the period up to 2026.

10.1.2 Two scenarios have been modelled within SRTM: 'with' and 'without' the inclusion of the draft allocation sites. In this way the impact of the potential development sites can be isolated and assessed.

10.1.3 Both the West of Waterlooville MDA and Dunsbury Hill Farm developments are committed schemes and have therefore been subject to previous studies to identify and mitigate scheme impacts. The SRTM includes for the activity and mitigation measures at these committed developments within the 'without' development scenario.

10.1.4 When considering the impact of the draft allocation sites, it should be noted that the activity at the previously assessed strategic sites is very focussed on the immediate vicinity of the developments. By comparison, the high number of individual sites, each with a relatively small quantum of development, dampens the impact of the additional traffic across the district as a whole.

10.1.5 The overall impact of the draft allocation sites can be summarised as a general worsening in highway network performance across the Borough but without the creation of major new congestion issues. By 2026 the local Havant highway network is predicted to feature a number of congestion hotspots near the A3(M) and A27 strategic routes. However, the SRTM tests indicate that the majority of the congestion hotspots would be present even without the allocation sites.

10.2 Recommendations and Next Steps

10.2.1 The Local Plan (Allocations) is going out to consultation in mid November 2012 and the final document is due for submission in July 2013.

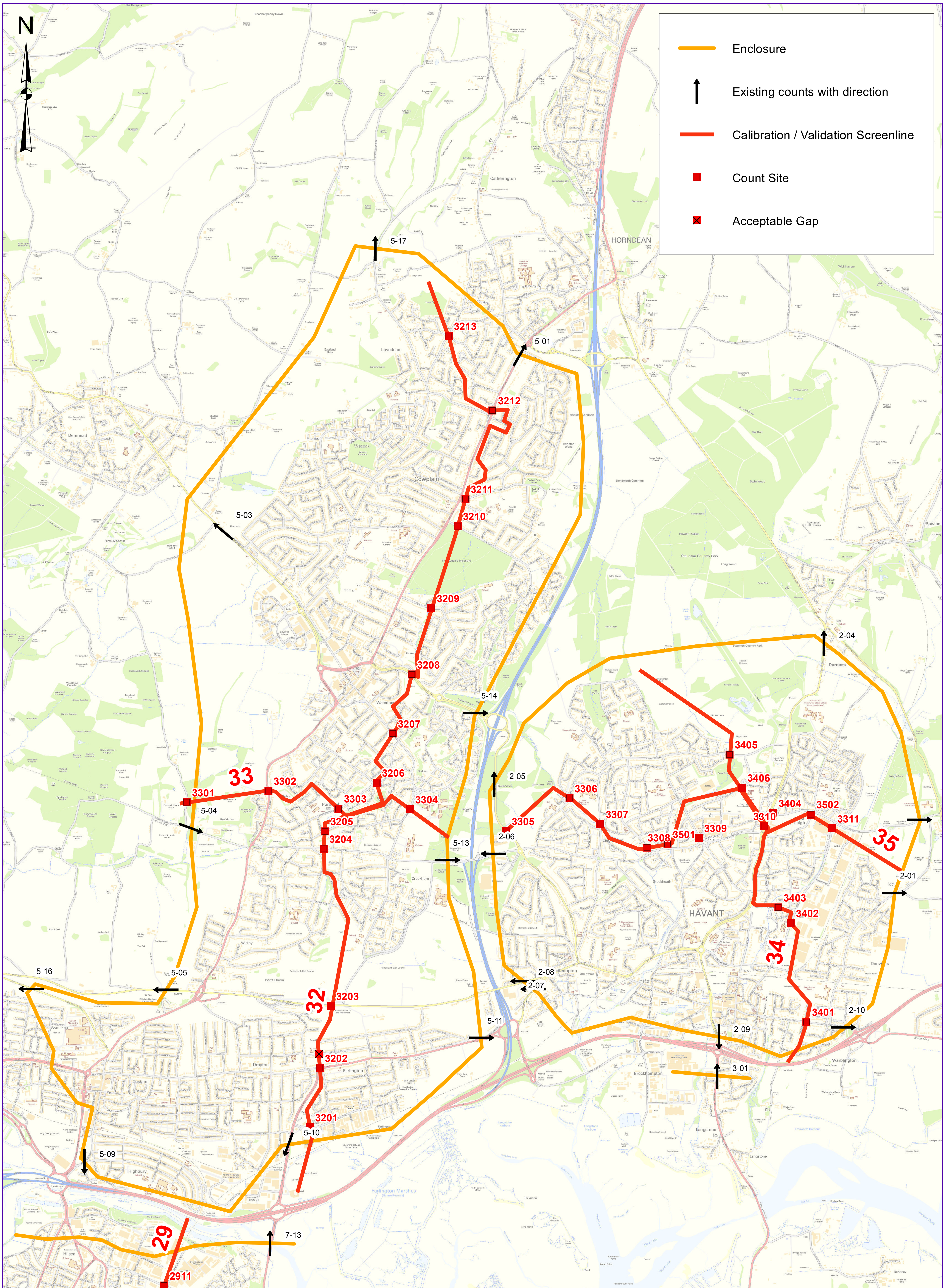
10.2.2 Post consultation the final allocation numbers should be compared to those assessed in this study. In discussion with the Highway Authorities of HCC and HA, agreement should be sought on any requirement to re-run the SRTM with the final allocations or if the current test provides a suitable assessment base. As noted in Section 2.3.3 it is understood that the total allocation numbers are expected to be lower than those reported in this study and that the current tests should be considered as 'worst case' for the Borough as a whole.

10.2.3 Subsequent to any further model runs a list of junctions to be reviewed in greater detail to address any capacity concerns should also be agreed with HCC and HA. The more detailed junction assessments will enable suitable mitigation measures to be identified at these locations.

Appendix A – Glossary

Acronym	Description
LEIM	**L**ocal **E**conomic **I**mpact **M**odel (part of the SRTM model suite) Uses inputs including transport costs to forecast the quantum and location of households, populations and jobs.
MDM	**M**ain **D**emand **M**odel (part of the SRTM model suite) Predicts when (time of day), where (destination choice) and how (choice of mode) journeys are made.
RTM	**R**oad **T**raffic **M**odel (part of the SRTM model suite) Determines the routes taken by vehicles through the road network and journey times, accounting for congestion.
GDM	**G**ateway **D**emand **M**odel (part of the SRTM model suite) Predicts demand for travel from ports and airports.
PTM	**P**ublic **T**ransport **M**odel (part of the SRTM model suite) Determines routes and services chosen by public transport passengers.
WebTAG	**Web T**ransport **A**nalysis **G**uidance Is the Department for Transport's website for guidance on the conduct of transport studies. The guidance is a requirement for all projects/studies that require government approval. For projects/studies that do not require government approval TAG serves as a best practice guide.
TEMPRO	**T**rip **E**nd **M**odel Presentation **Pro**gram Provides pre-processed trip-end, journey mileage, car ownership and population/workforce planning data from the National Trip End Model (NTEM). The pre-processed data is itself the output from a series of models developed and run by the TASM division of DfT. TEMPRO can also be used to provide summaries of traffic growth using data from the National Transport Model (NTM).

Appendix B – SRTM Validation Extract (Havant Borough)



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Transport for South Hampshire

5 - Waterlooville Enclosure

Out

		AM						IP	Average Hour Factor:						PM	Peak Hour Factor:					
		Source	Observed	Model	Diff	% Diff	GEH	Source	Observed	Model	Diff	% Diff	GEH		Source	Observed	Model	Diff	% Diff	GEH
501	A3 south of B2149 Dell Piece West	ATC	703	617	-86	-12%	3.3	ATC	585	480	-106	-18%	4.6		ATC	650	522	-128	-20%	5.3
514	B2150 Hulbert Road west of A3 (M)	ATC	1,772	1,758	-14	-1%	0.3	ATC	1,036	1,215	179	17%	5.3		ATC	1,200	1,481	281	23%	7.7
513	Purbrook Way west of A3(M)	ATC	1,003	1,187	183	18%	5.5	ATC	699	815	116	17%	4.2		ATC	831	757	-74	-9%	2.6
207	Portsdown Hill Road at A3 (M)	ATC	545	319	-226	-42%	10.9	ATC	406	153	-253	-62%	15.1		ATC	683	197	-486	-71%	23.2
511	A2030 Havant Road near A3 (M)	ATC	757	719	-39	-5%	1.4	ATC	575	574	-1	0%	0.0		ATC	771	1,047	276	36%	9.1
509	Portsmouth Road near A397 Northern Road	ATC	538	568	29	5%	1.2	ATC	407	420	13	3%	0.7		ATC	511	715	204	40%	8.2
1602	A397 Northern Road	ATC	819	926	107	13%	3.6	ATC	670	961	291	43%	10.2		ATC	887	968	80	9%	2.6
1603	A3 Southampton Road	ATC	950	968	17	2%	0.6	ATC	655	716	61	9%	2.3		ATC	921	871	-50	-5%	1.7
601	Allaway Avenue near M27	ATC	309	431	122	39%	6.3	ATC	219	333	113	52%	6.8		ATC	289	389	100	35%	5.4
516	B2177 Southwick Hill Road between Portsdown Hill Road and London	ATC	270	287	17	6%	1.0	ATC	209	272	63	30%	4.0		ATC	291	454	163	56%	8.4
505	Portsdown Hill west of A3	ATC	590	467	-123	-21%	5.4	ATC	404	245	-159	-39%	8.8		ATC	578	636	58	10%	2.4
504	Purbrook Heath Road West of A3	ATC	102	110	8	7%	0.7	ATC	86	90	4	4%	0.4		ATC	110	80	-30	-27%	3.1
503	B2150 Hambledon Road south of Closewood Road	ATC	470	542	73	15%	3.2	ATC	537	581	43	8%	1.8		ATC	807	883	76	9%	2.6
9999	Day Lane	ATC	165	149	-16	-10%	1.3	ATC	108	143	34	31%	3.0		ATC	116	205	89	77%	7.0
517	Lovedean Lane between Day Lane and Manor Lane	ATC	172	111	-60	-35%	5.1	ATC	119	150	30	25%	2.6		ATC	153	208	55	36%	4.1
3213	Frogmore Lane	ATC	210	318	108	52%	6.7	ATC	138	197	59	43%	4.6		ATC	218	200	-18	-8%	1.3
		Total	**9,376**	**9,477**	**100**	**1%**	**1.0**	**Total**	**6,855**	**7,343**	**488**	**7%**	**5.8**		**Total**	**9,018**	**9,612**	**594**	**7%**	**6.2**
					Number of Sites		**16**				**Number of Sites**		**16**					**Number of Sites**		**16**

In

501	A3 south of B2149 Dell Piece West	ATC	437	303	-133	-31%	6.9	ATC	584	512	-72	-12%	3.1		ATC	810	716	-94	-12%	3.4
514	B2150 Hulbert Road west of A3 (M)	ATC	1,138	1,277	139	12%	4.0	ATC	1,152	1,239	87	8%	2.5		ATC	1,752	1,971	219	13%	5.1
513	Purbrook Way west of A3(M)	ATC	851	849	-2	0%	0.1	ATC	757	978	221	29%	7.5		ATC	1,113	1,149	36	3%	1.1
207	Portsdown Hill Road at A3 (M)	ATC	674	556	-118	-18%	4.8	ATC	483	372	-111	-23%	5.4		ATC	663	532	-131	-20%	5.4
511	A2030 Havant Road near A3 (M)	ATC	545	603	58	11%	2.4	ATC	536	489	-47	-9%	2.1		ATC	699	726	27	4%	1.0
509	Portsmouth Road near A397 Northern Road	ATC	515	557	42	8%	1.8	ATC	441	470	28	6%	1.3		ATC	629	637	8	1%	0.3
1602	A397 Northern Road	ATC	824	709	-115	-14%	4.1	ATC	675	973	298	44%	10.4		ATC	1,009	946	-63	-6%	2.0
1603	Southampton Road	ATC	689	560	-128	-19%	5.1	ATC	642	663	21	3%	0.8		ATC	650	866	217	33%	7.9
601	Allaway Avenue near M27	ATC	270	383	112	42%	6.2	ATC	208	259	52	25%	3.4		ATC	266	295	29	11%	1.7
516	B2177 Southwick Hill Road between Portsdown Hill Road and London	ATC	274	361	87	32%	4.9	ATC	209	170	-39	-19%	2.8		ATC	276	197	-79	-28%	5.1
505	Portsdown Hill west of A3	ATC	476	573	97	20%	4.2	ATC	393	348	-44	-11%	2.3		ATC	701	781	79	11%	2.9
504	Purbrook Heath Road West of A3	ATC	77	107	29	38%	3.1	ATC	80	73	-7	-9%	0.8		ATC	117	53	-64	-55%	6.9
503	B2150 Hambledon Road south of Closewood Road	ATC	764	790	26	3%	0.9	ATC	533	495	-38	-7%	1.7		ATC	568	590	22	4%	0.9
9999	Day Lane	ATC	124	152	28	23%	2.4	ATC	108	154	46	42%	4.0		ATC	155	229	74	48%	5.4
517	Lovedean Lane between Day Lane and Manor Lane	ATC	112	157	44	40%	3.8	ATC	116	148	32	28%	2.8		ATC	177	234	57	32%	4.0
3213	Frogmore Lane	ATC	203	221	17	9%	1.2	ATC	143	175	32	22%	2.5		ATC	218	210	-8	-4%	0.5
		Total	**7,974**	**8,159**	**185**	**2%**	**2.1**	**Total**	**7,060**	**7,519**	**459**	**6%**	**5.4**		**Total**	**9,803**	**10,132**	**329**	**3%**	**3.3**
					Number of Sites		**16**				**Number of Sites**		**16**					**Number of Sites**		**16**

32 Waterlooville North to South

Westbound

	A0027_A0003_A2030	TRADS	6,445	6,596	151	2%	1.9	TRADS	4,074	4,313	238	6%	3.7		TRADS	5,489	5,704	214	4%	2.9
3201	Fitzherbert Road	ATC	298	192	-105	-35%	6.7	ATC	244	115	-129	-53%	9.7		ATC	277	128	-149	-54%	10.5
3202	A2030 Havant Road	ATC	478	521	43	9%	1.9	ATC	412	400	-12	-3%	0.6		ATC	537	491	-45	-8%	2.0
3203	B2177 Portsdown Hill Road	ATC	690	753	63	9%	2.3	ATC	525	576	51	10%	2.2		ATC	702	993	292	42%	10.0
3204	Stakes Road	ATC	432	334	-98	-23%	5.0	ATC	393	402	10	2%	0.5		ATC	615	548	-68	-11%	2.8
3205	Shaftsbury Avenue	ATC	47	90	42	90%	5.1	ATC	29	89	60	211%	7.9		ATC	39	69	30	76%	4.1
3206	Elizabeth Road	ATC	141	193	51	36%	4.0	ATC	143	209	65	46%	4.9		ATC	227	267	40	18%	2.5
3207	Stakes Hill Road	ATC	274	244	-29	-11%	1.8	ATC	292	177	-115	-39%	7.5		ATC	356	192	-164	-46%	9.9
3208	B2150 Hulbert Road	ATC	1,155	1,280	124	11%	3.6	ATC	964	1,059	95	10%	3.0		ATC	1,238	1,485	247	20%	6.7
3209	Highfield Avenue	ATC	101	108	7	7%	0.7	ATC	67	63	-4	-6%	0.5		ATC	89	67	-21	-24%	2.4
3210	Park Lane	ATC	231	197	-34	-15%	2.3	ATC	162	126	-35	-22%	3.0		ATC	215	146	-69	-32%	5.1
3211	Padnell Road	ATC	226	204	-21	-9%	1.5	ATC	150	148	-1	-1%	0.1		ATC	188	179	-9	-5%	0.7
3212	A3 Portsmouth Road	ATC	415	242	-173	-42%	9.5	ATC	458	356	-102	-22%	5.0		ATC	671	480	-191	-29%	8.0
3213	Frogmore Lane	ATC	203	221	17	9%	1.2	ATC	143	175	32	22%	2.5		ATC	218	210	-8	-4%	0.5
		Exc M'Way	**4,692**	**4,579**	**-113**	**-2%**	**1.7**	**Exc M'Way**	**3,980**	**3,894**	**-86**	**-2%**	**1.4**		**Exc M'Way**	**5,372**	**5,256**	**-116**	**-2%**	**1.6**
		Inc M'Way	**11,136**	**11,175**	**38**	**0%**	**0.4**	**Inc M'Way**	**8,054**	**8,207**	**153**	**2%**	**1.7**		**Inc M'Way**	**10,861**	**10,960**	**99**	**1%**	**0.9**
					Number of Sites		**13**				**Number of Sites**		**13**					**Number of Sites**		**13**
					Number of Sites		**14**				**Number of Sites**		**14**					**Number of Sites**		**14**

Eastbound

	A0027_A2030_A0003	TRADS	5,542	5,723	181	3%	2.4	TRADS	4,178	4,542	364	9%	5.5		TRADS	6,198	6,622	425	7%	5.3
3201	Fitzherbert Road	ATC	231	160	-71	-31%	5.1	ATC	195	131	-64	-33%	5.0		ATC	184	163	-22	-12%	1.7
3202	A2030 Havant Road	ATC	525	499	-26	-5%	1.2	ATC	489	489	1	0%	0.0		ATC	624	793	169	27%	6.3
3203	B2177 Portsdown Hill Road	ATC	570	532	-38	-7%	1.6	ATC	461	335	-126	-27%	6.3		ATC	694	549	-146	-21%	5.8
3204	Stakes Road	ATC	561	422	-139	-25%	6.3	ATC	401	402	2	0%	0.1		ATC	505	477	-28	-5%	1.3
3205	Shaftsbury Avenue	ATC	62	61	-1	-1%	0.1	ATC	37	98	61	165%	7.4		ATC	51	113	62	120%	6.8
3206	Elizabeth Road	ATC	228	198	-30	-13%	2.1	ATC	155	230	74	48%	5.4		ATC	204	113	-90	-44%	7.2
3207	Stakes Hill Road	ATC	321	456	135	42%	6.8	ATC	323	177	-146	-45%	9.2		ATC	390	322	-68	-18%	3.6
3208	B2150 Hulbert Road	ATC	1,174	1,048	-126	-11%	3.8	ATC	808	1,033	224	28%	7.4		ATC	1,018	1,338	321	32%	9.3
3209	Highfield Avenue	ATC	95	31	-64	-67%	8.0	ATC	74	32	-42	-56%	5.7		ATC	109	45	-64	-59%	7.3
3210	Park Lane	ATC	199	128	-71	-36%	5.6	ATC	212	106	-107	-50%	8.5		ATC	329	160	-169	-51%	10.8
3211	Padnell Road	ATC	116	166	50	43%	4.2	ATC	135	144	9	7%	0.8		ATC	194	186	-8	-4%	0.6
3212	A3 Portsmouth Road	ATC	588	446	-143	-24%	6.3	ATC	482	297	-185	-38%	9.3		ATC	582	402	-181	-31%	8.2
3213	Frogmore Lane	ATC	210	318	108	52%	6.7	ATC	138	197	59	43%	4.6		ATC	218	200	-18	-8%	1.3
		Exc M'Way	**4,882**	**4,465**	**-417**	**-9%**	**6.1**	**Exc M'Way**	**3,910**	**3,672**	**-238**	**-6%**	**3.9**		**Exc M'Way**	**5,104**	**4,861**	**-243**	**-5%**	**3.4**
		Inc M'Way	**10,424**	**10,188**	**-236**	**-2%**	**2.3**	**Inc M'Way**	**8,088**	**8,214**	**126**	**2%**	**1.4**		**Inc M'Way**	**11,301**	**11,483**	**182**	**2%**	**1.7**
					Number of Sites		**13**				**Number of Sites**		**13**					**Number of Sites**		**13**
					Number of Sites		**14**				**Number of Sites**		**14**					**Number of Sites**		**14**

33 Waterlooville West to East

Northbound

3301	Newlands Lane	ATC	57	26	-31	-54%	4.8	ATC	50	36	-14	-28%	2.2		ATC	89	42	-47	-53%	5.8
3302	A3 London Road	ATC	649	569	-80	-12%	3.2	ATC	522	460	-62	-12%	2.8		ATC	560	525	-35	-6%	1.5
3303	Woodlands Grove	ATC	134	41	-92	-69%	9.9	ATC	91	52	-39	-43%	4.6		ATC	126	40	-86	-68%	9.4
3304	Stakeshill Road	ATC	415	526	111	27%	5.1	ATC	481	585	104	22%	4.5		ATC	727	706	-21	-3%	0.8
	A003M_J0004_J0003	TRADS	2,397	2,604	207	9%	4.1	TRADS	1,843	2,038	195	11%	4.4		TRADS	2,986	3,069	83	3%	1.5
		Exc M'Way	**1,255**	**1,162**	**-92**	**-7%**	**2.7**	**Exc M'Way**	**1,144**	**1,132**	**-11**	**-1%**	**0.3**		**Exc M'Way**	**1,502**	**1,313**	**-189**	**-13%**	**5.0**
		Inc M'Way	**3,652**	**3,767**	**114**	**3%**	**1.9**	**Inc M'Way**	**2,986**	**3,171**	**184**	**6%**	**3.3**		**Inc M'Way**	**4,488**	**4,382**	**-106**	**-2%**	**1.6**
					Number of Sites		**4**				**Number of Sites**		**4**					**Number of Sites**		**4**
					Number of Sites		**5**				**Number of Sites**		**5**					**Number of Sites**		**5**

Southbound

3301	Newlands Lane	ATC	60	106	46	76%	5.0	ATC	42	72	31	74%	4.1		ATC	70	53	-17	-24%	2.2
3302	A3 London Road	ATC	516	487	-29	-6%	1.3	ATC	451	452	1	0%	0.0		ATC	564	562	-2	0%	0.1
3303	Woodlands Grove	ATC	125	57	-68	-54%	7.1	ATC	92	46	-46	-50%	5.6		ATC	144	176	32	22%	2.5
3304	Stakeshill Road	ATC	695	730	35	5%	1.3	ATC	498	495	-4	-1%	0.2		ATC	627	490	-138	-22%	5.8
	A003M_J0003_J0004	TRADS	3,042	3,199	157	5%	2.8	TRADS	1,858	2,101	243	13%	5.5		TRADS	2,442	2,701	259	11%	5.1
		Exc M'Way	**1,397**	**1,381**	**-16**	**-1%**	**0.4**	**Exc M'Way**	**1,083**	**1,064**	**-18**	**-2%**	**0.6**		**Exc M'Way**	**1,405**	**1,280**	**-125**	**-9%**	**3.4**
		Inc M'Way	**4,439**	**4,579**	**141**	**3%**	**2.1**	**Inc M'Way**	**2,940**	**3,165**	**225**	**8%**	**4.1**		**Inc M'Way**	**3,847**	**3,981**	**134**	**3%**	**2.1**
					Number of Sites		**4**				**Number of Sites**		**4**					**Number of Sites**		**4**
					Number of Sites		**5**				**Number of Sites**		**5**					**Number of Sites**		**5**

3 - Hayling Island Enclosure

Out

301	A3023 Langstone Bridge	ATC	1,353	1,364	10	1%	0.3	ATC	835	913	78	9%	2.6		ATC	722	827	105	15%	3.8
		Total	**1,353**	**1,364**	**10**	**1%**	**0.3**	**Total**	**835**	**913**	**78**	**9%**	**2.6**		**Total**	**722**	**827**	**105**	**15%**	**3.8**
					Number of Sites		**1**				**Number of Sites**		**1**					**Number of Sites**		**1**

In

301	A3023 Langstone Bridge	ATC	681	727	46	7%	1.7	ATC	853	828	-25	-3%	0.9		ATC	1,335	1,361	26	2%	0.7
		Total	**681**	**727**	**46**	**7%**	**1.7**	**Total**	**853**	**828**	**-25**	**-3%**	**0.9**		**Total**	**1,335**	**1,361**	**26**	**2%**	**0.7**
					Number of Sites		**1**				**Number of Sites**		**1**					**Number of Sites**		**1**

Transport for South Hampshire

2 - Havant Enclosure

Out

		AM						IP	Average Hour Factor:						PM	Peak Hour Factor:					
		Source	Observed	Model	Diff	% Diff	GEH	Source	Observed	Model	Diff	% Diff	GEH		Source	Observed	Model	Diff	% Diff	GEH
204	Durrants Road south of B148	ATC	341	546	204	60%	9.7	ATC	329	439	110	33%	5.6		ATC	447	400	-47	-11%	2.3
202	Bartons Road west of Eastleigh Road	ATC	419	335	-84	-20%	4.3	ATC	361	268	-93	-26%	5.3		ATC	511	363	-148	-29%	7.1
201	Southleigh Road west of Eastleigh Road	ATC	281	166	-116	-41%	7.7	ATC	190	173	-17	-9%	1.2		ATC	221	277	56	25%	3.5
210	Emsworth Road near M27	ATC	468	390	-79	-17%	3.8	ATC	364	365	1	0%	0.1		ATC	488	617	130	27%	5.5
209	Park Road South approach to A27	ATC	596	550	-45	-8%	1.9	ATC	580	584	3	1%	0.1		ATC	766	803	37	5%	1.3
9999	Brockhampton Road (over A27)	ATC	268	480	212	79%	11.0	ATC	152	201	49	32%	3.7		ATC	129	412	283	220%	17.2
208	B2149 Bedhampton Hill Road near M3	ATC	602	439	-163	-27%	7.1	ATC	499	455	-44	-9%	2.0		ATC	586	391	-194	-33%	8.8
207	Portsdown Hill Road at A3 (M)	ATC	674	556	-118	-18%	4.8	ATC	483	372	-111	-23%	5.4		ATC	663	532	-131	-20%	5.4
206	Purbrook Way east of A3 (M)	ATC	978	971	-7	-1%	0.2	ATC	849	891	42	5%	1.4		ATC	927	1,006	79	9%	2.5
205	B2150 Hulbert Road east of A3 (M)	ATC	521	741	220	42%	8.8	ATC	525	626	100	19%	4.2		ATC	668	730	63	9%	2.4
		Total	**5,149**	**5,174**	**25**	**0%**	**0.3**	**Total**	**4,334**	**4,374**	**40**	**1%**	**0.6**		**Total**	**5,405**	**5,533**	**127**	**2%**	**1.7**
					Number of Sites		**10**				**Number of Sites**		**10**					**Number of Sites**		**10**

In

204	Durrants Road south of B148	ATC	422	389	-33	-8%	1.6	ATC	312	371	59	19%	3.2		ATC	400	467	67	17%	3.2
202	Bartons Road west of Eastleigh Road	ATC	459	294	-164	-36%	8.5	ATC	359	326	-33	-9%	1.8		ATC	481	511	30	6%	1.4
201	Southleigh Road west of Eastleigh Road	ATC	154	175	22	14%	1.7	ATC	196	129	-67	-34%	5.2		ATC	314	250	-64	-20%	3.8
210	Emsworth Road near M27	ATC	431	644	213	49%	9.2	ATC	363	481	118	32%	5.7		ATC	479	552	73	15%	3.2
209	Park Road South approach to A27	ATC	1,155	967	-188	-16%	5.8	ATC	790	851	61	8%	2.1		ATC	717	548	-169	-24%	6.7
9999	Brockhampton Road (over A27)	ATC	138	170	32	23%	2.6	ATC	152	112	-40	-27%	3.5		ATC	251	171	-80	-32%	5.5
208	B2149 Bedhampton Hill Road near M3	ATC	541	805	264	49%	10.2	ATC	561	609	48	9%	2.0		ATC	795	822	27	3%	1.0
207	Portsdown Hill Road at A3 (M)	ATC	545	319	-226	-42%	10.9	ATC	406	153	-253	-62%	15.1		ATC	683	197	-486	-71%	23.2
206	Purbrook Way east of A3 (M)	ATC	894	1,068	175	20%	5.6	ATC	855	832	-23	-3%	0.8		ATC	1,033	1,230	196	19%	5.8
205	B2150 Hulbert Road east of A3 (M)	ATC	755	595	-160	-21%	6.2	ATC	526	653	127	24%	5.2		ATC	698	932	234	33%	8.2
		Total	**5,493**	**5,427**	**-66**	**-1%**	**0.9**	**Total**	**4,520**	**4,518**	**-3**	**0%**	**0.0**		**Total**	**5,852**	**5,681**	**-171**	**-3%**	**2.2**
					Number of Sites		**10**				**Number of Sites**		**10**					**Number of Sites**		**10**

34 Havant North South

Westbound

	A0027_A0259_A3023	TRADS	3,063	3,010	-53	-2%	1.0	TRADS	2,225	2,229	4	0%	0.1		TRADS	2,748	3,143	395	14%	7.3
3401	Green Pound Corner	ATC	431	726	295	69%	12.3	ATC	319	317	-2	-1%	0.1		ATC	346	247	-99	-29%	5.8
3402	New Lane	ATC	223	67	-156	-70%	13.0	ATC	149	71	-78	-53%	7.5		ATC	180	111	-69	-38%	5.7
3403	Crossland Drive	ATC	324	396	72	22%	3.8	ATC	276	407	130	47%	7.1		ATC	415	616	202	49%	8.9
3310	B2149 Petersfield Road	ATC	758	665	-93	-12%	3.5	ATC	609	566	-43	-7%	1.8		ATC	755	658	-97	-13%	3.6
3406	High Lawn Way btwn Broadmere Ave and Somborne Drive	ATC	56	100	44	79%	5.0	ATC	54	130	75	138%	7.8		ATC	57	229	172	304%	14.4
3405	Middle Park Way	ATC	163	98	-65	-40%	5.7	ATC	177	163	-13	-7%	1.0		ATC	266	286	20	7%	1.2
		Exc M'Way	**1,954**	**2,051**	**97**	**5%**	**2.2**	**Exc M'Way**	**1,585**	**1,654**	**69**	**4%**	**1.7**		**Exc M'Way**	**2,019**	**2,147**	**128**	**6%**	**2.8**
		Inc M'Way	**5,017**	**5,061**	**44**	**1%**	**0.6**	**Total**	**3,810**	**3,883**	**73**	**2%**	**1.2**		**Total**	**4,767**	**5,290**	**523**	**11%**	**7.4**
					Number of Sites		**6**				**Number of Sites**		**6**					**Number of Sites**		**6**
					Number of Sites		**7**				**Number of Sites**		**7**					**Number of Sites**		**7**

Eastbound

	A0027_A3023_A0259	TRADS	2,795	2,867	72	3%	1.4	TRADS	2,164	2,227	63	3%	1.3		TRADS	2,943	2,999	55	2%	1.0
3401	Green Pound Corner	ATC	310	61	-249	-80%	18.3	ATC	303	208	-94	-31%	5.9		ATC	409	648	238	58%	10.4
3402	New Lane	ATC	218	363	145	66%	8.5	ATC	170	124	-46	-27%	3.8		ATC	219	196	-23	-10%	1.6
3403	Crossland Drive	ATC	371	541	170	46%	8.0	ATC	245	454	210	86%	11.2		ATC	298	488	190	64%	9.6
3310	B2149 Petersfield Road	ATC	616	418	-199	-32%	8.7	ATC	637	496	-142	-22%	6.0		ATC	820	420	-399	-49%	16.0
3406	High Lawn Way btwn Broadmere Ave and Somborne Drive	ATC	51	202	151	297%	13.5	ATC	49	110	61	123%	6.8		ATC	54	147	93	173%	9.3
3405	Middle Park Way	ATC	255	237	-18	-7%	1.1	ATC	179	161	-18	-10%	1.4		ATC	229	221	-9	-4%	0.6
		Exc M'Way	**1,821**	**1,822**	**1**	**0%**	**0.0**	**Exc M'Way**	**1,583**	**1,553**	**-30**	**-2%**	**0.8**		**Exc M'Way**	**2,029**	**2,120**	**90**	**4%**	**2.0**
		Inc M'Way	**4,616**	**4,689**	**73**	**2%**	**1.1**	**Total**	**3,748**	**3,780**	**33**	**1%**	**0.5**		**Total**	**4,973**	**5,119**	**146**	**3%**	**2.1**
					Number of Sites		**6**				**Number of Sites**		**6**					**Number of Sites**		**6**
					Number of Sites		**7**				**Number of Sites**		**7**					**Number of Sites**		**7**

35 Havant East West

Northbound

	A003M_J0004_J0003	TRADS	2,397	2,604	207	9%	4.1	TRADS	1,843	2,038	195	11%	4.4		TRADS	2,986	3,069	83	3%	1.5
3305	B2150 Hulbert Road	ATC	521	741	221	42%	8.8	ATC	540	626	86	16%	3.5		ATC	680	730	51	7%	1.9
3306	Park House Farm Way	ATC	168	167	-1	0%	0.1	ATC	158	180	22	14%	1.7		ATC	248	426	178	72%	9.7
3307	Middle park Way	ATC	238	24	-214	-90%	18.7	ATC	238	68	-169	-71%	13.7		ATC	358	106	-251	-70%	16.5
3308	Botley Drive	ATC	66	35	-30	-46%	4.3	ATC	79	89	10	12%	1.1		ATC	113	179	66	59%	5.5
3501	Riders Lane south of Eversley Crescent	ATC	37	0	-37	-100%	8.6	ATC	42	0	-42	-100%	9.1		ATC	65	0	-65	-100%	11.4
9999	Dunsbury Way	ATC	227	164	-63	-28%	4.5	ATC	176	138	-37	-21%	3.0		ATC	226	523	297	132%	15.4
3406	High Lawn Way btwn Broadmere Ave and Somborne Drive	ATC	51	202	151	297%	13.5	ATC	49	110	61	123%	6.8		ATC	54	147	93	173%	9.3
3310	B2149 Petersfield Road	ATC	616	418	-199	-32%	8.7	ATC	637	496	-142	-22%	6.0		ATC	820	420	-399	-49%	16.0
3502	Martin Road Just south of Bartons Road	ATC	100	95	-5	-5%	0.5	ATC	73	30	-43	-59%	6.0		ATC	106	36	-70	-66%	8.3
3311	New Ln	ATC	205	193	-12	-6%	0.9	ATC	210	239	29	14%	1.9		ATC	342	502	160	47%	7.8
		Exc M'Way	**2,228**	**2,039**	**-189**	**-8%**	**4.1**	**Exc M'Way**	**2,202**	**1,975**	**-226**	**-10%**	**5.0**		**Exc M'Way**	**3,009**	**3,069**	**60**	**2%**	**1.1**
		Inc M'Way	**4,625**	**4,643**	**18**	**0%**	**0.3**	**Total**	**4,045**	**4,013**	**-31**	**-1%**	**0.5**		**Total**	**5,996**	**6,138**	**143**	**2%**	**1.8**
					Number of Sites		**10**				**Number of Sites**		**10**					**Number of Sites**		**10**
					Number of Sites		**11**				**Number of Sites**		**11**					**Number of Sites**		**11**

Southbound

	A003M_J0003_J0004	TRADS	3,042	3,199	157	5%	2.8	TRADS	1,858	2,101	243	13%	5.5		TRADS	2,442	2,701	259	11%	5.1
3305	B2150 Hulbert Road	ATC	757	595	-162	-21%	6.2	ATC	529	653	125	24%	5.1		ATC	688	932	245	36%	8.6
3306	Park House Farm Way	ATC	114	139	24	21%	2.2	ATC	86	152	66	76%	6.0		ATC	101	190	90	89%	7.4
3307	Middle park Way	ATC	404	451	47	12%	2.3	ATC	296	71	-225	-76%	16.6		ATC	369	108	-262	-71%	17.0
3308	Botley Drive	ATC	121	205	83	69%	6.5	ATC	90	77	-13	-14%	1.4		ATC	115	91	-23	-20%	2.3
3501	Riders Lane south of Eversley Crescent	ATC	45	0	-45	-100%	9.5	ATC	32	0	-32	-100%	8.0		ATC	38	0	-38	-100%	8.7
9999	Dunsbury Way	ATC	241	282	41	17%	2.5	ATC	176	151	-25	-14%	1.9		ATC	213	226	14	6%	0.9
3406	High Lawn Way btwn Broadmere Ave and Somborne Drive	ATC	56	100	44	79%	5.0	ATC	54	130	75	138%	7.8		ATC	57	229	172	304%	14.4
3310	B2149 Petersfield Road	ATC	758	665	-93	-12%	3.5	ATC	609	566	-43	-7%	1.8		ATC	755	658	-97	-13%	3.6
3502	Martin Road Just south of Bartons Road	ATC	96	17	-79	-82%	10.4	ATC	70	35	-35	-49%	4.8		ATC	100	88	-12	-12%	1.3
3311	New Ln	ATC	392	322	-70	-18%	3.7	ATC	196	158	-38	-19%	2.9		ATC	214	214	0	0%	0.0
		Exc M'Way	**2,983**	**2,775**	**-208**	**-7%**	**3.9**	**Exc M'Way**	**2,138**	**1,994**	**-145**	**-7%**	**3.2**		**Exc M'Way**	**2,649**	**2,736**	**87**	**3%**	**1.7**
		Inc M'Way	**6,025**	**5,974**	**-51**	**-1%**	**0.7**	**Total**	**3,996**	**4,094**	**98**	**2%**	**1.5**		**Total**	**5,091**	**5,438**	**347**	**7%**	**4.8**
					Number of Sites		**10**				**Number of Sites**		**10**					**Number of Sites**		**10**
					Number of Sites		**11**				**Number of Sites**		**11**					**Number of Sites**		**11**

Appendix C – SRTM Committed Schemes

Current Reference Cases as at June 2012:

Note: Only committed (funded) Highway/ PT schemes are included in the Reference Cases

Model	Major Developments	Major Highway Schemes	Major PT Schemes
2010 Base	Existing 2010	Existing 2010	Existing 2010
2014 Ref	As 2010 Base plus: 1. Initial Whitehill / Bordon Eco-Town 2. Initial Bushfield Camp, Winchester 3. Initial Daedalus 4. Initial North Whiteley 5. Initial Tipner 6. Initial Fareham SDA 7. Initial Eastleigh Riverside	As 2010 Base plus: 1. Quay Street Roundabout (Fareham) – Full signalisation of roundabout and 'through lane' from A32 to A27. 2. Newgate Lane (Fareham) - Widening (to 7.3m) from Speedfield Retail Park access roundabout southwards to Peel Common roundabout. 3. Totton Western Bypass / A326 – Existing roundabout at junction of A326/A336 converted to traffic signal control. 4. A3M J5 Bedhampton Road Junction (Rusty Cutter) – Junction improvement including additional lanes on A3M S/B Off Slip; Bedhampton Hill W/B; Havant Rd E/B; A27 E/B link; North, East and South circulating arms on the roundabout. 5. Trafalgar Gate Link Road – New highway link between A3 Mile End Road to Trafalgar Gate (naval base). 6. M27 J3 – 10% increase to junction circulating lane capacity. 7. M3 J12 – Additional lane on S/B off-slip. 8. Eastern Rd/ Fitzherbert Rd/ Grove Rd junctions – Revised signal timings to improve capacity. 9. New Road/ Tangier Road area improvement scheme – Speeds on Tangier Rd and New Rd reduced to 20mph. 10. Copnor Road area improvement scheme (Portsmouth) –	As 2010 Base plus: 1. Fareham – Gosport BRT Phase 1A 2. Isambard Brunel Rd Bus Priority – S/B bus lane between Station Rd and Winston Churchill Ave.

Model	Major Developments	Major Highway Schemes	Major PT Schemes
		Pedestrian facilities at Copnor Road/ Stubbington Ave junction. Reduce speed to 20mph on section of Copnor Road. 11. Elm Grove/ Albert Road junction - Pedestrian facilities provided at junction. 12. Eastern Road (Portsmouth) congestion improvement scheme – Additional S/B lane between Hayling Ave and Kirpal Rd, amendments to signal junction with Milton Rd. 13. Portswood Rd/ St Denys Rd/ Highfield Ln junction modifications – Improved pedestrian crossing facilities and signal timing changes associated to Sainsburys development. 14. Maybush Corner (Junction of Romsey Rd/ Wimpson Ln/ Rownhams Ln) – Additional approach lane added to Wimpson Lane and traffic signal timing adjustments. 15. Civic Centre Place – Access to Civic Centre Rd between Portland Terr and Above Bar St restricted to bus only. Increased pedestrian provision at Havelock Rd/ Western Esplanade and Portland Terr/ Civic Centre Rd signal junctions. 16. M271 Redbridge Roundabout – Pedestrian crossing facility incorporated into existing signal junction where A33 E/B off slip joins roundabout. Assumed small reduction in highway capacity at roundabout due to provision of cycle facilities.	
2019 Ref	As Central 2014 Reference plus: 1. Additional Whitehill / Bordon Eco-Town 2. Additional Bushfield Camp, Winchester	As Central 2014 Reference plus: 1. Platform Road (Southampton) – Platform Rd, Orchard Place and Queens Terrace converted to two-way operation; Queens Terrace closed at eastern end. New signal junction at Platform Rd/ Dock Gate 4.	As Central 2014 Reference

Model	Major Developments	Major Highway Schemes	Major PT Schemes
	3. Additional Daedalus 4. Additional North Whiteley 5. Additional Tipner 6. Additional Fareham SDA 7. Additional Eastleigh Riverside 8. Initial other Eastleigh strategic sites		
2026 Ref	As Central 2019 Reference plus: 1. Additional Whitehill / Bordon Eco-Town 2. Additional Bushfield Camp, Winchester 3. Additional Daedalus 4. Additional North Whiteley 5. Additional Tipner 6. Additional Fareham SDA 7. Additional Eastleigh Riverside 8. Additional other Eastleigh strategic sites	As Central 2019 Reference	As Central 2014 Reference
2036 Ref	As Central 2026 Reference	As Central 2026 Reference	As Central 2014 Reference

Appendix D – HBC Allocation Details and Maps

OVERALL TOTALS

Local Plan Area	Requirement 2006-2026	Net comps. 2006-2012	Deliverable permissions 1.4.12	Other	Windfalls	Remaining to be allocated
EMSWORTH	745 – 826	129	343	-	167	108 – 189
HAVANT & BEDHAMPTON	1755 – 1944	233	51	-	180	1291 – 1480
HAYLING ISLAND	660 – 727	172	51	-	154	299 – 366
LEIGH PARK	1223 – 1357	545	8	61 *	118	491 – 625
WATERLOOVILLE	1917 – 2126	343	744	300 **	193	337 – 546
BOROUGH TOTALS	6300 – 6980	1422	1181	361	810	2526 – 3206

(* 61 dwellings have been taken off the total Leigh Park requirement to allow for the development of PCC garage sites to come forward within the plan period)
(300 dwellings from Woodcroft Farm strategic site)**
(Anticipated phasing of housing delivery up to 2026 can be found in the Annual Monitoring Report http://www.havant.gov.uk/pdf/Final%20AMR%202011.pdf)

Local Plan area	Requirement 2012 - 2026	Draft Allocations (Preferred Options)
EMSWORTH	108 – 189	185
HAVANT & BEDHAMPTON	1291 – 1480	1323
HAYLING ISLAND	299 – 366	377
LEIGH PARK*	491 – 625	424
WATERLOOVILLE	337 – 546	684
TOTALS	2526 – 3206	2979

AREA BREAKDOWN

Waterlooville

HOUSING		Nos. of Dwellings
W53a/53b	St Michael's Convent / Sacred Heart Church	66
W58	Forest End Garages	5
W63	Goodwillies Timber Yard	96
W109	Asda/Clock Tower (mixed use)	111
W110	Wellington Way (mixed use)	55
W135	Land West of Asda (mixed use)	100
W125	Former Purbrook Park School playing field	95
W126	Padnell Grange	84
W130	Meadowlands School	52
UE31	Land north of Highbank Avenue, Widley	20
	TOTAL	684 dwgs.
EMPLOYMENT		Floorspace (sq m)

BD54 (pt)	**BAE Systems Technology Park car park**	**5990**
	TOTAL	**5990 sq m**
RETAIL		**Floorspace (sq m)**
Within Town Centre Boundary		**4000 sq m**

Waterlooville note:

- Woodcroft Farm - strategic site allocated in the Core Strategy anticipates and additional 300 housing
- Retail – 4,000 sqm within town centre boundary
- Town Centre boundary – needs to be amended to include W135 Land west of Asda

Leigh Park

HOUSING		**Nos. of Dwellings**
L21	**Kingsclere Avenue open space (part)**	**25**
L25	**Strouden Court**	**25**
L46	**Oakshott Drive**	**8**
L83	**Riders Lane allotments**	**65**
L86	**Blendworth Crescent open space**	**40**
L89	**Adjacent 27 Holybourne Road**	**8**
L108	**Fox PH off Prospect Lane**	**7**
L119	**Land at Dunsbury Way (mixed use)**	**72**
L138	**Leigh Park Centre (mixed Use)**	**38**
L145	**SSE, Bartons Road**	**90**
UE6a	**Cabbagefield Row**	**46**
	TOTAL	**424 dwgs.**
EMPLOYMENT		**Floorspace (sq m)**
BD65 (pt)	**Dunsbury Way**	**1260**
	TOTAL	**1260 sq m**

Leigh Park notes:

- Special allocation of 60 new homes on 23 garage sites around Leigh Park. Please see Proposals Map
- Dunsbury Hill Farm – strategic site allocated in the Core Strategy anticipates approximately 60, 000 sqm of employment floorspace
- For clarity sites L32, L48, L62 and L131 on the proposals map are actually discounted sites and should be removed from the map.

Emsworth

HOUSING		**Nos. of Dwellings**
UE11	**Land west of Emsworth**	**50**
UE13	**Land west of Horndean Road**	**60**

UE32	Land east of Horndean Road	60
UE37	West of Coldharbour Farm	15
	TOTAL	185 dwgs.
EMPLOYMENT		Floorspace (sq m)
BD39	Interbridges East	2217
	TOTAL	2217 sq m

Hayling Island

HOUSING		Nos. of Dwellings
HY08	103 – 105 Station Road	12
HY13	Rear of 108-110 Elm Grove	7
HY45	Beachlands (mixed use)	75
UE15	Manor Nurseries	13
UE17	Rook Farm	53
UE21	Station Road (east of Furniss Way) (mixed use)	98
UE35	North of Rook Farm	119
	TOTAL	377 dwgs.
EMPLOYMENT		Floorspace (sq m)
BD73	Station Road North (mixed use)	1014
	TOTAL	1014 sq m

Havant and Bedhampton

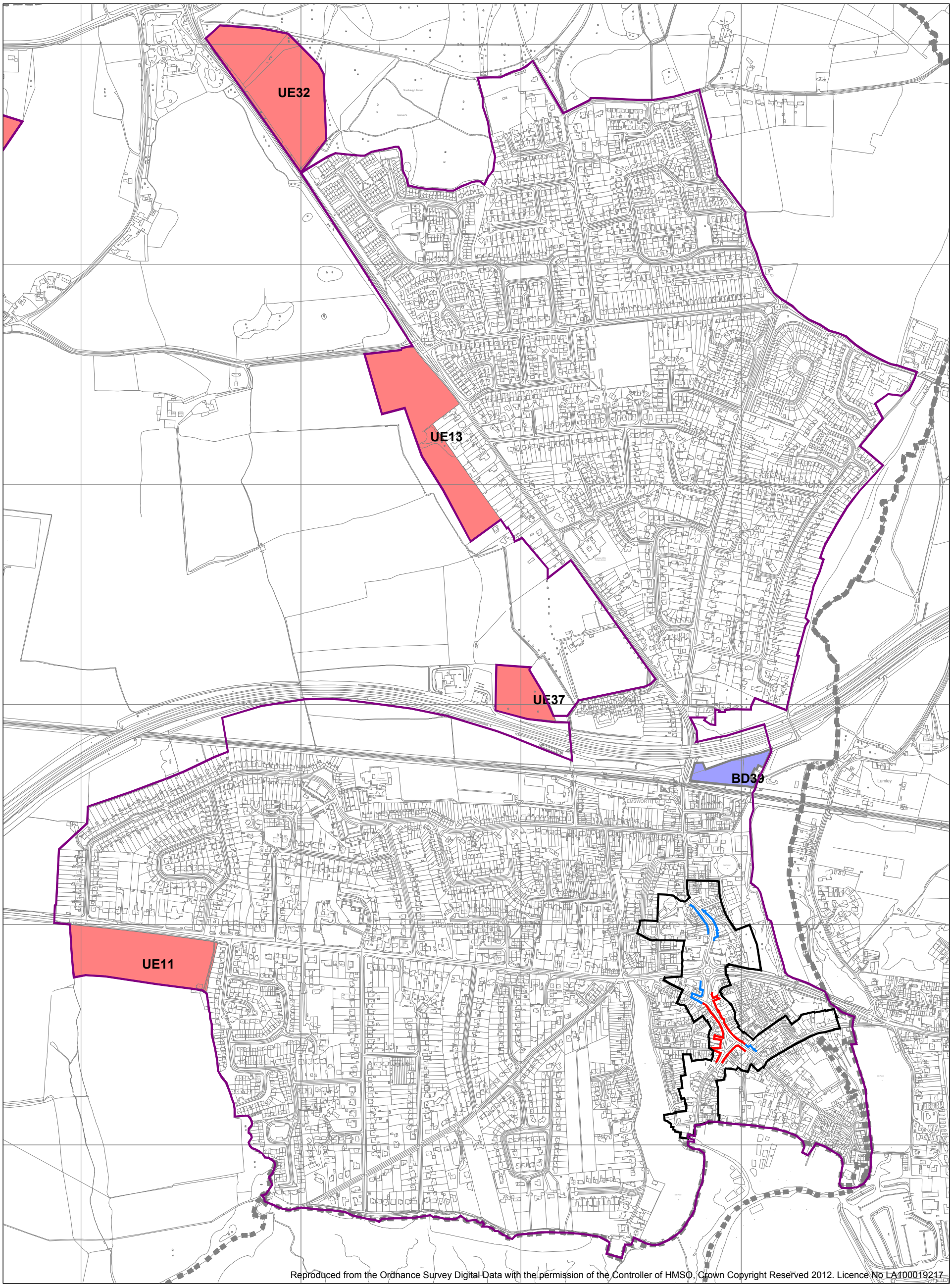
HOUSING		Nos. of Dwellings
H6	Warblington School Field (off New Lane)	79
H7	Wessex & Network Rail, New Lane (Mixed Use)	30
H14	Portsmouth Water HQ	48
H18	Portsmouth Water land	67
H19	Land at Palk Road	21
H69	Former Oak Park School	65
H76	North east of Havant College, New Road	41
H144	Barncroft School	34
UE3a	Land north of Bartons Road	30
UE3b	Land south of Bartons Road	250
UE4	Strides (Manor) Farm & Copsey's Nursery	175
UE5	Land at Portsdown Hill	40
UE7	Scratchface Lane, Bedhampton	92
UE30	Land South of Lower Road	10
UE33	Eastleigh House, Bartons Road	5
H10	Market Parade (Mixed Use)	176

H79	**Job Centre Plus Site**	**35**
H72	**Town End House**	**19**
H22	**Car Park behind Bear Hotel and East Street (Mixed Use)**	**76**
H80	**Havant Retail Park, Bedhampton (Mixed Use)**	**30**
	TOTAL	**1323 dwgs.**
EMPLOYMENT		**Floorspace (sq m)**
BD8	**Bosmere Field**	**5,200**
BD9	**SiteFour, Harts Farm Way**	**16,275**
BD10	**Land north of Regional Business Centre**	**3,456**
BD11	**Brockhampton West**	**23,400**
BD14	**Land adjacent to Bosmere Medical Centre**	**6,579**
BD15 (pt)	**Langstone Gate Car Park**	**500**
BD16	**Solent Road South**	**5,500**
BD19	**Kingscroft Farm**	**6,800**
BD30	**Market Parade**	**1,500**
	TOTAL	**69,210 sq m**
RETAIL		**Floorspace (sq m)**
Within Town Centre Boundary		**9000 sq m**

Havant and Bedhampton notes:

- 9, 000 sqm retail to be allocated within the town centre boundary

Emsworth



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Housing Allocation

Employment Allocation

Urban Area Boundary

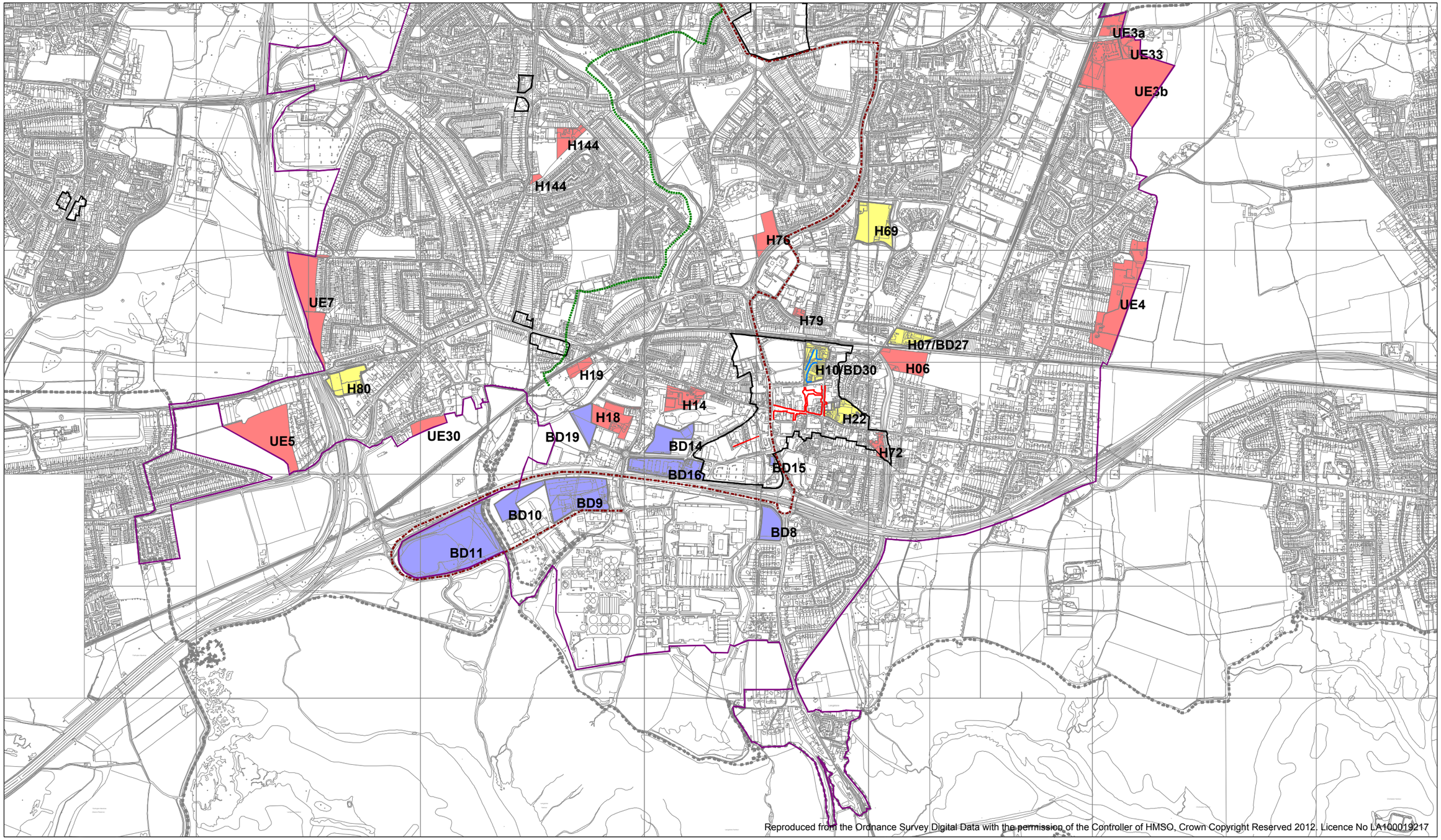
Borough Boundary

Town/District/Local Centre Boundary

Primary Frontage

Secondary Frontage

Havant and Bedhampton



Housing Allocation

Employment Allocation

Mixed Use Allocation

Urban Area Boundary

Borough Boundary

Town/District/Local Centre Boundary

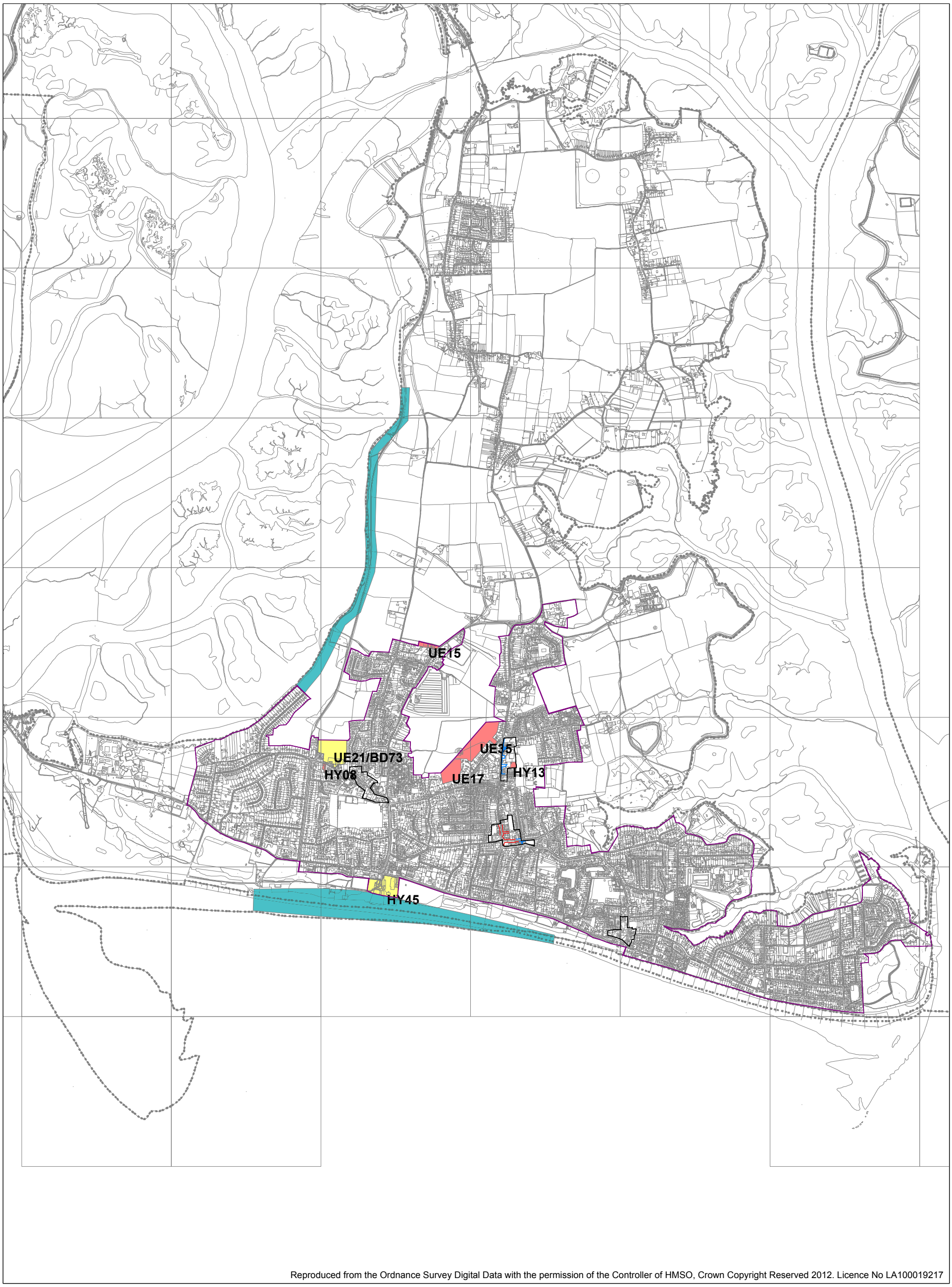
Primary Frontage

Secondary Frontage

Proposed BRT Route

Proposed Havant Thicket Pipeline Route

Hayling Island



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Housing Allocation

Employment Allocation

Coastal Change Management Area

Mixed Use Allocation

Urban Area Boundary

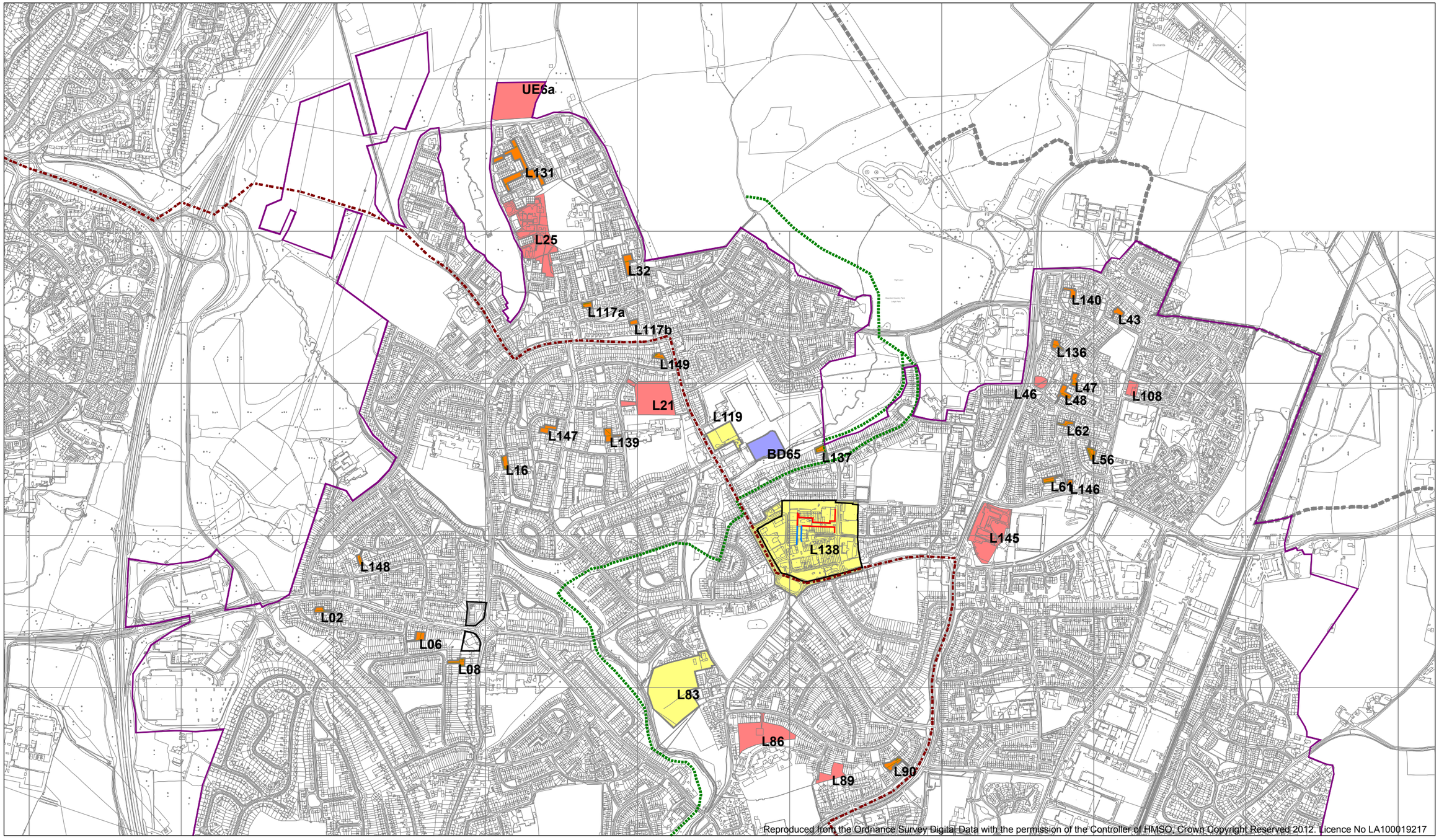
Borough Boundary

Town/District/Local Centre Boundary

Primary Frontage

Secondary Frontage

Leigh Park



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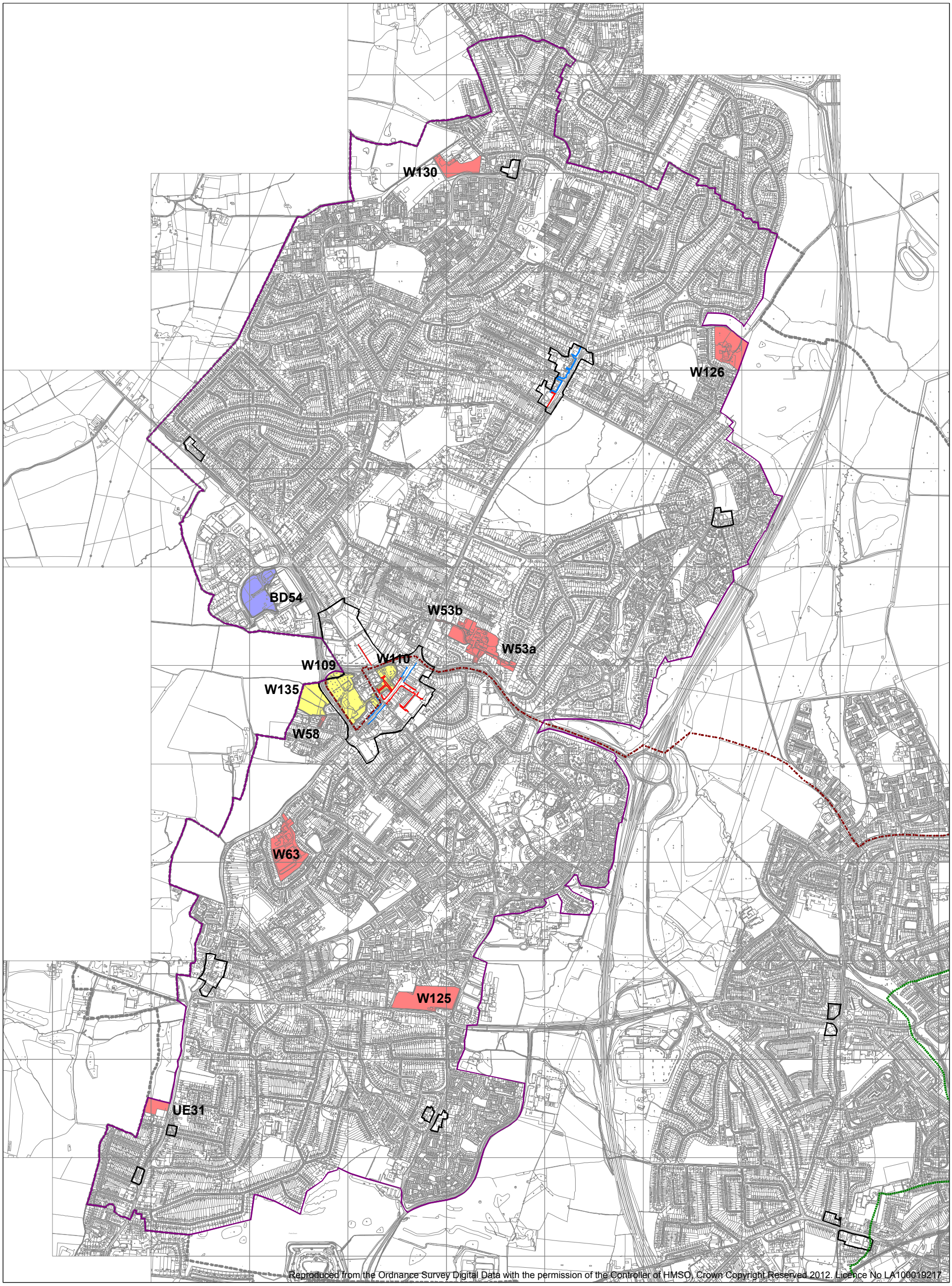
- Housing Allocation
- Employment Allocation
- Mixed Use Allocation
- Leigh Park Garage Sites
- Urban Area Boundary
- Borough Boundary
- Town/District/Local Centre Boundary
- Primary Frontage
- Secondary Frontage
- Proposed BRT Route
- Proposed Havant Thicket Pipeline Route

Waterlooville



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Housing Allocation

Employment Allocation

Mixed Use Allocation

Urban Area Boundary

Borough Boundary

Town/District/Local Centre Boundary

Primary Frontage

Secondary Frontage

Proposed BRT Route

Proposed Havant Thicket Pipeline Route

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