Solent Transport Evidence Base **03/12/2019**

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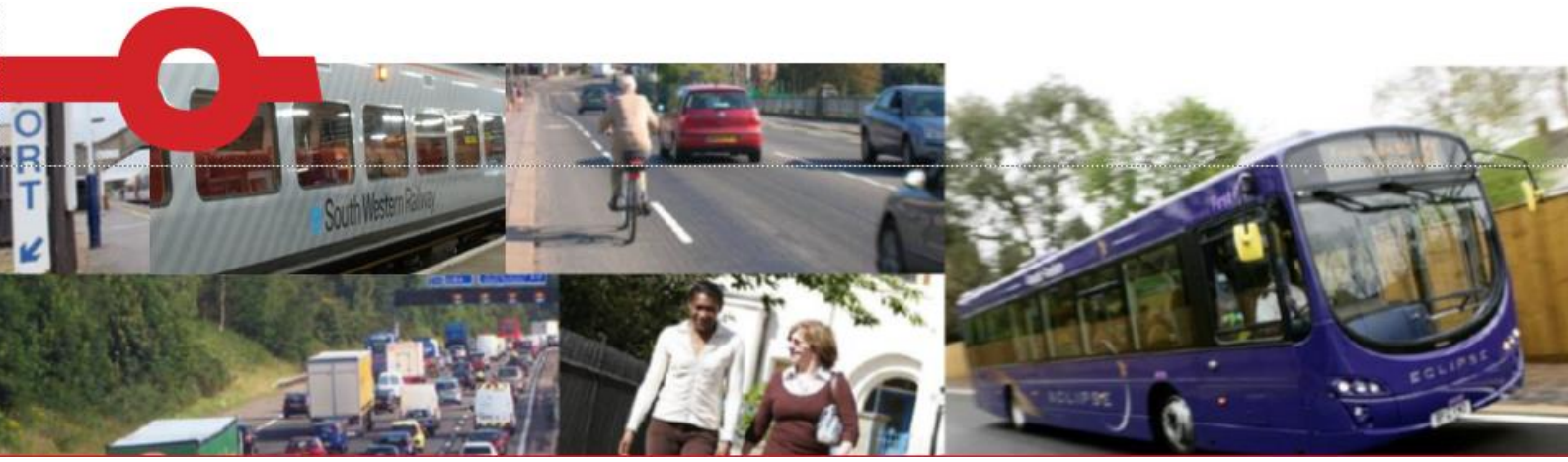
SRTM MODEL REFERENCE CASE UPDATE



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SOLENT TRANSPORT EVIDENCE BASE

SRTM MODEL REFERENCE CASE UPDATE

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3					

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1. INTRODUCTION

1.1 Background

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

1.1.2 The SRTM is used to support a wide-ranging set of interventions across the South Hampshire sub-region, and is specifically required to be capable of:

- forecasting changes in travel demand, road traffic, public transport patronage and active mode (walking and cycling) 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 within practical (but probably longer) run times.

1.1.3 The model has a base year of 2015, and can forecast the following years: 2019, 2026, 2031, 2036 and 2041. An initial Reference Case for each year was modelled when the model was built. SYSTRA has subsequently been commissioned to update the Reference Case with 2019 land use and transport assumptions.

1.2 This report

1.2.1 This report details the Reference Case assumptions, both in terms of assumed land use and change to transport schemes and the impact of the changes on forecast year results.

2. REFERENCE CASE DEFINITIONS

2.1 Introduction

2.1.1 Reference Case definitions have been developed for five forecast year scenarios for use with SRTM, and form the basis of the 2019, 2026, 2031, 2036 and 2041 reference cases.

2.1.2 The key assumptions included in these reference case models are described in this chapter along with the differences. These cover economic, demographic, land-use and transport supply changes in forecast years. The gateway model inputs for the corresponding years are also described.

2.2 Supply Changes

Public Transport Supply

2.2.1 The public transport schemes included in the reference case networks for the modelled years (2019, 2026, 2031, 2036 and 2041) are shown in Table 1.

Table 1. Public Transport Network Changes

Scheme	2019	2026	2031	2036	2041
Eclipse Bus Rapid Transit Line Extension (Rowner Rd, Gosport)	✓	✓	✓	✓	✓
North Whiteley Bus network (associated to the new development at that location)		✓	✓	✓	✓

Highway Network Changes

2.2.2 The highway schemes included in the reference case networks are shown in Table 2.

2.2.3 Schemes newly included in the latest (2019) version of the Reference Case are highlighted in grey.

Table 2. Road Network Changes Summary

District	Scheme	Description	2019	2026	2031	2036	2041
East Hampshire	Green Lane, Clanfield	Traffic calming	✓	✓	✓	✓	✓
Eastleigh	A3024 Bursledon Road access to west of Hamble Lane housing developments	New signalised junction		✓	✓	✓	✓
Eastleigh	A335 Leigh Road / Passfield Avenue	Junction capacity changes	✓	✓	✓	✓	✓
Eastleigh	Allington Lane / B3037 Fair Oak Road	Signalisation		✓	✓	✓	✓
Eastleigh	B3037 Eastleigh Road / B3354 Botley Road / Stubbington Way Junction	Signalised junction improvements		✓	✓	✓	✓
Eastleigh	B3037 Mortimers Lane / B3354 Winchester Road Junction	Junction capacity changes		✓	✓	✓	✓
Eastleigh	Boorley Gardens development access	New roundabout		✓	✓	✓	✓
Eastleigh	Boorley Green development access	New roundabout	✓	✓	✓	✓	✓
Eastleigh	Botley Bypass	New road		✓	✓	✓	✓
Eastleigh	Botley Road / Burnett's Lane	Signalisation		✓	✓	✓	✓
Eastleigh	Burnett's Lane / B3037 Fair Oak Road / Sandy Lane	Road realignment		✓	✓	✓	✓
Eastleigh	Chestnut Avenue / Passfield Avenue	Roundabout improvements		✓	✓	✓	✓
Eastleigh	Chestnut Avenue / Stoneham Lane Roundabout	Roundabout improvements	✓	✓	✓	✓	✓
Eastleigh	M27 J7 improvements	MOVA control		✓	✓	✓	✓
Eastleigh	Maypole Roundabout Hedge End	Enlargement of roundabout	✓	✓	✓	✓	✓
Eastleigh	North Stoneham Park Development Access	New road		✓	✓	✓	✓
Eastleigh	St John's Link Road	New road		✓	✓	✓	✓
Eastleigh	Sundays Hill Bypass	Road realignment	✓	✓	✓	✓	✓
Eastleigh	Winchester Road / Eastleigh Road / Stubbington Way junction, Fair Oak	MOVA control	✓	✓	✓	✓	✓
Eastleigh	Woodside Avenue/Judd Close	New junction arm	✓	✓	✓	✓	✓
Fareham	A27 Downend Road, Porchester	Road widening		✓	✓	✓	✓
Fareham	A27 East St/Castle Trading Estate, Portchester	MOVA control	✓	✓	✓	✓	✓
Fareham	A27 Southampton Road, Fareham	Road widening	✓	✓	✓	✓	✓
Fareham	Gudge Heath Lane	Road realignment	✓	✓	✓	✓	✓
Fareham	Newgate Lane South, Fareham	Link Road	✓	✓	✓	✓	✓
Fareham	Peel Common Rbt.	Improvement scheme	✓	✓	✓	✓	✓
Fareham	Peel Common Rbt. (Stubbington Bypass)	New roundabout		✓	✓	✓	✓
Fareham	St Margaret's Rbt.	Improvement scheme	✓	✓	✓	✓	✓
Fareham	Station Roundabout (Avenue approach)	Road widening	✓	✓	✓	✓	✓
Fareham	Stubbington Bypass	New bypass		✓	✓	✓	✓
Fareham	Stubbington Bypass mitigation measures	Mitigation measures		✓	✓	✓	✓
Gosport	B3333 South Street / Dock Road	Signalisation	✓	✓	✓	✓	✓
Gosport	Heritage Way/Retail Park	New signalised junction	✓	✓	✓	✓	✓
Gosport	Privett Road / Bury Road junction	MOVA control	✓	✓	✓	✓	✓
Gosport	Rowner Road / Carisbrooke Road junction	MOVA control	✓	✓	✓	✓	✓

Gosport	Stubbington Lane/Daedalus Spine Road 'Ross House', Lee-on-the-Solent	New signalised junction	✓	✓	✓	✓	✓
Havant	A259 Havant Road est of A27 Warblington Junction	New signalised junction		✓	✓	✓	✓
Havant	A27 / A259 Warblington Junction	Improvement scheme		✓	✓	✓	✓
Havant	A3(M) J3	Signalisation		✓	✓	✓	✓
Havant	Barncroft Way New Road	Right-turn ban	✓	✓	✓	✓	✓
Havant	Bartons Road / Horndean Road Junction	New lane	✓	✓	✓	✓	✓
Havant	Bartons Road right turn	Road realignment	✓	✓	✓	✓	✓
Havant	Dunsbury Hill Farm Business Park	Link Road	✓	✓	✓	✓	✓
Havant	Eagle Avenue Wecock Farm mini roundabout	New roundabout		✓	✓	✓	✓
Havant	Hambledon Road / Aston Road junction, Waterlooville	Road realignment	✓	✓	✓	✓	✓
Havant	Harts Farm Way / Southmoor Lane	Road realignment	✓	✓	✓	✓	✓
Havant	Hulbert Rd / Frendstaple Rd / Tempest Ave	Roundabout improvements		✓	✓	✓	✓
Havant	Hulbert Rd/Purbook Way Jn (Dunsbury Hill)	Roundabout improvements	✓	✓	✓	✓	✓
Havant	Interbridges	Signalisation		✓	✓	✓	✓
Havant	Ladybridge Roundabout	New roundabout access		✓	✓	✓	✓
Havant	Park Road South / Elm Road / Parkway junction	MOVA control	✓	✓	✓	✓	✓
Havant	Park Road South / Solent Road junction	MOVA control	✓	✓	✓	✓	✓
Havant	Purbook Way / College Road	Signalisation		✓	✓	✓	✓
Havant	Purbrook Way / Stakes Hill Road	Signalisation		✓	✓	✓	✓
Havant	Purbrook Way f. Stakes Hill Rd to College Rd	Dual to single carriageway		✓	✓	✓	✓
Havant/P'mouth	Hayling Island ferry service	Pedestrian ferry service	✓	✓	✓	✓	✓
Isle of Wight	Coppins Bridge - St Georges Approach	Road widening		✓	✓	✓	✓
Isle of Wight	Forest Road / Parkhurst Rd, Newport	Signalisation		✓	✓	✓	✓
Isle of Wight	Mill Street, Newport	New road	✓	✓	✓	✓	✓
Isle of Wight	Pennyfeathers development network changes	Road realignment			✓	✓	✓
Isle of Wight	St. Georges Way, Newport	New roundabout	✓	✓	✓	✓	✓
New Forest	Ringwood Road / Calmore Road junction	MOVA control	✓	✓	✓	✓	✓
New Forest	Rollestone cross roads, Blackfield	MOVA control	✓	✓	✓	✓	✓
Portsmouth	A27 Southampton Road Compass Road Paulsgrove	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	A27 Southampton Road Port Way	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Aldi Store Access, Southampton Road Paulsgrove	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Anglesea Road / Park Road	Left-turn ban	✓	✓	✓	✓	✓
Portsmouth	Anglesea Road, Queens Street, Alfred Road, Bishop Crispian Way	MOVA control	✓	✓	✓	✓	✓
Portsmouth	Copnor Road / Burrfields Road / Stubbington Avenue junction	MOVA control		✓	✓	✓	✓
Portsmouth	Copnor Road / Norway Road junction	MOVA control	✓	✓	✓	✓	✓
Portsmouth	Eastern Road / Havant Road / Farlington Avenue junction	Signal timing update		✓	✓	✓	✓

Portsmouth	Eastney Road, Bransbury Road, Devonshire Avenue	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Fratton Park Lake Road	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Fratton Road / Arundel Street junction	MOVA control	✓	✓	✓	✓	✓
Portsmouth	Fratton Road / Lake Road / St Mary's Road junction	MOVA control		✓	✓	✓	✓
Portsmouth	Fratton Way	New roundabout	✓	✓	✓	✓	✓
Portsmouth	Goldsmith Avenue Milton Road Eastney Road	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Goldsmith Avenue Priory Crescent Winter Road	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Havant Road/Eastern Road	BRT improvements	✓	✓	✓	✓	✓
Portsmouth	Isambard Brunel Road	New footway/cycleway	✓	✓	✓	✓	✓
Portsmouth	Kingston Road Kingston Crescent - North End	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	London Road / Southwick Hill Road junction	MOVA control	✓	✓	✓	✓	✓
Portsmouth	M275 A3 A27, Marriott Junction	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Market Way Alfred Road Unicorn Road	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Mile End Road Trafalgar Link Road	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	Milton Rd/ Priory Crescent	Road realignment		✓	✓	✓	✓
Portsmouth	Milton Road Velder Avenue	Signal timing update	✓	✓	✓	✓	✓
Portsmouth	The Hard, Queen St, Wickham St, Clock St	Improvements to traffic management	✓	✓	✓	✓	✓
Smart Motorways	Smart Motorways - M3	Smart motorway		✓	✓	✓	✓
Southampton	A3024 Improvements	Signalisation and cyle/bus measures		✓	✓	✓	✓
Southampton	A3057 Shirley High Street / Park Street	Signal timing update	✓	✓	✓	✓	✓
Southampton	A33 Millbrook Road West / Regents Park Road	Signal timing update	✓	✓	✓	✓	✓
Southampton	A33 Millbrook Roundabout	MOVA control	✓	✓	✓	✓	✓
Southampton	A33 W Approach/Redbridge Rd/Millbrook Rd W	Speed limit reductions	✓	✓	✓	✓	✓
Southampton	A33 West Quay Road corridor	Signal timing update	✓	✓	✓	✓	✓
Southampton	Brownhill Way / Frogmore Lane	Signal timing update	✓	✓	✓	✓	✓
Southampton	Commercial Rd/Morris Rd/Wyndham Place	Signal timing update	✓	✓	✓	✓	✓
Southampton	Inner Avenue Southbound	New cycle lanes	✓	✓	✓	✓	✓
Southampton	M27 J8	Capacity enhancement scheme		✓	✓	✓	✓
Southampton	M271 Redbridge Rbt. (RIS)	Roundabout upgrade	✓	✓	✓	✓	✓
Southampton	Northam Road /Union Street / Princes Street	Signal timing update	✓	✓	✓	✓	✓
Southampton	Saltmarsh Lane / Central Bridge / Albert Road North / Itchen Bridge	Signal timing update	✓	✓	✓	✓	✓
Southampton	Stoneham Way/ Wide Lane junction	Signal and cycle improvements		✓	✓	✓	✓
Southampton	Swaythling A335 Junctions scheme	Signal timing update	✓	✓	✓	✓	✓
Southampton	The Avenue cycleway Alma Road-Avenue Road	Road realignment		✓	✓	✓	✓
Southampton	Third Avenue	New cycle lanes	✓	✓	✓	✓	✓
Southampton	Wide Lane	New signalised junction	✓	✓	✓	✓	✓

Southampton	Windhover Roundabout	Capacity enhancement scheme		✓	✓	✓	✓
Southampton	Woolston - Victoria Rd / Woodley Rd	Road realignment	✓	✓	✓	✓	✓
Southampton	Woolston Itchen Riverside development	Road realignment	✓	✓	✓	✓	✓
Test Valley	Abbotswood network changes	New road	✓	✓	✓	✓	✓
Test Valley	M27 J3	Road realignment	✓	✓	✓	✓	✓
Test Valley	M271 Junction 1 / Brownhill Way	Signalisation	✓	✓	✓	✓	✓
Test Valley	Winchester Road / Braishfield Road junction	Signalisation	✓	✓	✓	✓	✓
Various	Smart Motorways M27	Motorway Improvement	✓	✓	✓	✓	✓
Winchester	Andover Road/Northern Access Road	New signalised junction	✓	✓	✓	✓	✓
Winchester	Andover Road/Southern Access Road (Barton Farm development)	New signalised junction	✓	✓	✓	✓	✓
Winchester	M27 J9 and Parkway South roundabout	Capacity signalised signalisation		✓	✓	✓	✓
Winchester	Romsey Road/Pitt Manor	New signalised junction	✓	✓	✓	✓	✓
Winchester	Whiteley Way Extension and speed limits	Road extension		✓	✓	✓	✓

2.3 Demand Changes

Planning Input Data

2.3.1 The residential dwelling planning inputs are shown in Table 3 (Note: These are approximate as actual inputs are based on residential floorspace). The inputs are shown by district for the Core Modelled Area. The number of dwellings is shown for each of the modelled years.

2.3.2 The inputs are based on Local Authority data (provided centrally via HCC) as at April 2018 in accordance with adopted Local Plans at that time (it is anticipated that periodic updates of the landuse inputs will be undertaken to account for newly adopted Plans and planning permissions etc). In later model years beyond current Local Plan periods, the landuse module of the SRTM can replicate additional development floorspace over and above the allocated sites through a process of intensification of existing sites. This enables continued growth to be represented within existing developed areas. Intensification is limited to those areas where development already exists because it is not considered appropriate for the model to arbitrarily allocate development to undeveloped areas. It follows that there is less certainty in the actual location of this growth. The impact of intensification is not accounted for in the tables below.

Table 3. Reference Case Residential Dwellings LEIM Planning Input (permissible)

	Total Planning Inputs				
District	2015-2019	2015-2026	2015-2031	2015-2036	2015-2041
East Hampshire (Core)	445	1,220	1,425	1,425	1,425
Eastleigh	3,538	8,338	8,564	8,564	8,564
Fareham	1,301	3,957	5,657	7,777	7,777
Gosport	878	1,910	2,014	2,014	2,014
Havant	1,663	3,644	3,930	3,930	3,930
Isle of Wight	1,640	3,019	3,019	3,019	3,019
New Forest (Core)	234	502	909	1,300	1,330
Portsmouth	1,309	3,075	3,958	4,318	4,318
Southampton	3,476	6,973	7,025	7,095	7,095
Test Valley (Core)	916	3,214	3,614	3,664	3,714
Winchester (Core)	2,467	8,501	10,842	11,292	11,292
Core TOTAL	**17,867**	**44,353**	**50,957**	**54,398**	**54,478**

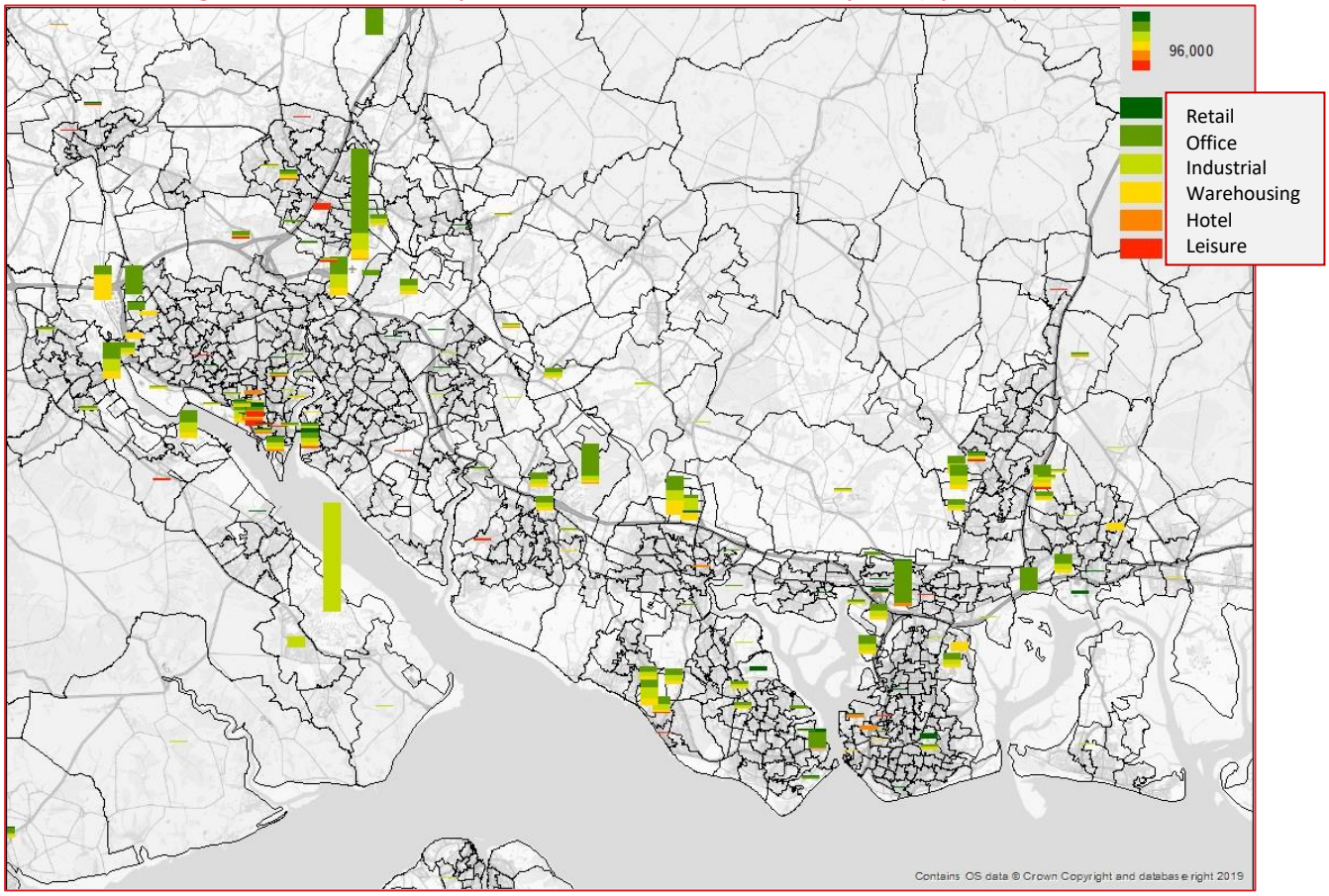
2.3.3 The employment floorspace planning inputs are shown in Table 4. The inputs are shown by district for the Core Modelled Area. The level of floorspace is shown for each of the modelled years. Note that planned increases are not defined beyond 2031 although the model will include allowances to align with Tempro in the form of intensification.

Table 4. Reference Case Employment Floorspace (m^2) LEIM Planning Input (permissible) (Office+Industrial+Warehousing)

	Total Planning Inputs				
District	**2015-2019**	**2015-2026**	**2015-2031**	**2015-2036**	**2015-2041**
East Hampshire (Core)	2,393	7,178	7,178	7,178	7,178
Eastleigh	32,548	176,784	269,947	269,947	269,947
Fareham	26,451	141,645	212,970	212,970	212,970
Gosport	36,185	115,199	135,649	135,649	135,649
Havant	51,629	135,438	158,983	158,983	158,983
Isle of Wight	2,191	6,574	6,574	6,574	6,574
New Forest (Core)	28,972	209,834	318,198	318,198	318,198
Portsmouth	56,497	160,992	192,537	192,537	192,537
Southampton	73,621	200,063	258,903	258,903	258,903
Test Valley (Core)	59,407	123,171	129,898	129,898	129,898
Winchester (Core)	44,322	270,732	397,697	397,697	397,697
Core TOTAL	**414,216**	**1,547,610**	**2,088,534**	**2,088,534**	**2,088,534**

2.3.4 Figure 1 shows the permissible development LEIM input. It is presented by zone and floorspace type.

Figure 1. 2041 LEIM Input Non Residential Permissible Development (sq metre)



3. LEIM FORECASTS

3.1 Summary

3.1.1 This section presents LEIM forecasts including population, households and employment. In forecasting mode, the SRTM responds to the output network conditions and that influences the take-up of permissible floorspace (both residential and non-residential). This can make some locations/ areas more 'attractive' than others and can effectively suppress employment and population growth in certain areas if the provision of new transport services/ infrastructure do not sufficiently mitigate against increased generalised cost of travel.

3.2 Population

3.2.1 Population forecasts for each modelled year are presented in Table 5. Forecasts are presented at district and area level, with the Core Area districts shown in Figure 2. Note that not all of New Forest, Test Valley, Winchester or East Hampshire lay within the Core Model area. The further areas of New Forest, Test Valley and East Hampshire, the remainder of Winchester together with Chichester and Arun constitute the Marginal Area.

Figure 2. Reported Districts and Areas

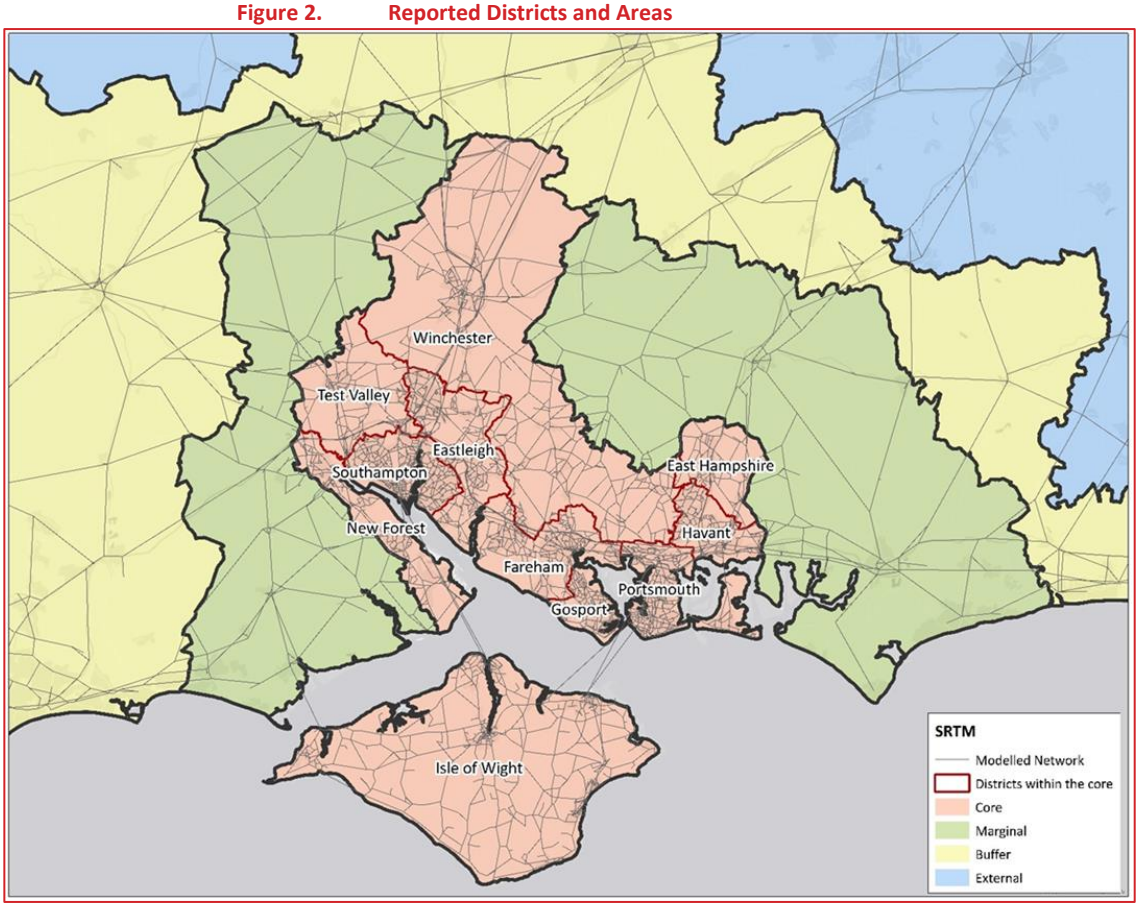


Table 5. Population Forecasts by District and Area

District	Total					Difference				Difference from 2015			
	2015	2019	2026	2031	2036	2019	2026	2031	2036	2019	2026	2031	2036
East Hampshire (Core)	20,983	21,585	22,574	23,057	23,079	601	1,591	2,074	2,095	3%	8%	10%	10%
Eastleigh	129,029	132,845	140,359	143,809	146,301	3,816	11,330	14,780	17,272	3%	9%	11%	13%
Fareham	114,819	116,231	120,958	126,304	133,003	1,412	6,140	11,486	18,184	1%	5%	10%	16%
Gosport	84,627	86,366	92,059	95,152	97,176	1,739	7,432	10,525	12,549	2%	9%	12%	15%
Havant	122,892	123,872	124,600	125,852	127,801	981	1,708	2,961	4,909	1%	1%	2%	4%
New Forest (Core)	71,223	69,546	69,945	72,323	74,414	-1,677	-1,278	1,100	3,191	-2%	-2%	2%	4%
Test Valley (Core)	41,618	42,952	47,608	49,459	51,694	1,334	5,990	7,841	10,076	3%	14%	19%	24%
Winchester (Core)	108,089	111,933	126,018	135,029	140,099	3,844	17,929	26,940	32,010	4%	17%	25%	30%
Portsmouth City	211,697	216,935	226,786	231,055	232,733	5,238	15,090	19,359	21,037	2%	7%	9%	10%
Southampton City	249,559	252,157	266,427	272,400	276,449	2,598	16,868	22,841	26,890	1%	7%	9%	11%
Isle of Wight	139,346	145,287	149,958	154,682	160,945	5,941	10,612	15,336	21,599	4%	8%	11%	16%
Hampshire County	693,280	705,329	744,122	770,987	793,567	12,049	50,842	77,707	100,286	2%	7%	11%	14%
Portsmouth City	211,697	216,935	226,786	231,055	232,733	5,238	15,090	19,359	21,037	2%	7%	9%	10%
Southampton City	249,559	252,157	266,427	272,400	276,449	2,598	16,868	22,841	26,890	1%	7%	9%	11%
Core Modelled Area	**1,293,882**	**1,319,708**	**1,387,293**	**1,429,125**	**1,463,695**	**25,826**	**93,411**	**135,243**	**169,813**	**2%**	**7%**	**10%**	**13%**
East Hampshire (Marginal)	30,089	30,979	32,501	33,375	34,019	890	2,412	3,286	3,931	3%	8%	11%	13%
New Forest (Marginal)	74,831	78,679	83,797	86,964	90,024	3,848	8,966	12,134	15,193	5%	12%	16%	20%
Test Valley (Marginal)	26,229	28,100	30,660	32,031	33,005	1,871	4,430	5,801	6,776	7%	17%	22%	26%
Winchester (Marginal)	12,655	12,775	13,723	14,057	14,314	120	1,069	1,402	1,659	1%	8%	11%	13%
Arun (Marginal)	86,375	85,147	86,097	86,950	88,865	-1,228	-278	575	2,490	-1%	0%	1%	3%
Chichester (Marginal)	94,766	95,328	98,027	100,002	102,106	562	3,261	5,236	7,340	1%	3%	6%	8%
Marginal Modelled Area	**324,945**	**331,007**	**344,806**	**353,378**	**362,334**	**6,062**	**19,861**	**28,433**	**37,389**	**2%**	**6%**	**9%**	**12%**
Arun (Buffer)	69,354	71,354	73,380	74,498	75,539	2,000	4,026	5,144	6,185	3%	6%	7%	9%
Chichester (Buffer)	22,233	23,072	23,801	24,308	24,996	839	1,569	2,075	2,763	4%	7%	9%	12%
East Hampshire (Buffer)	67,032	72,701	76,249	78,622	80,623	5,669	9,216	11,590	13,591	8%	14%	17%	20%
New Forest (Buffer)	32,971	33,389	34,448	34,790	35,098	418	1,477	1,820	2,128	1%	4%	6%	6%
Test Valley (Buffer)	52,879	56,783	59,179	61,749	64,068	3,904	6,300	8,870	11,189	7%	12%	17%	21%
Bournemouth	194,538	203,074	216,654	223,993	230,827	8,536	22,116	29,455	36,289	4%	11%	15%	19%
Poole	150,580	153,915	160,072	162,887	165,541	3,335	9,492	12,307	14,961	2%	6%	8%	10%
Christchurch	49,067	49,566	50,850	51,160	51,466	499	1,783	2,093	2,400	1%	4%	4%	5%
East Dorset	88,714	89,453	91,694	92,178	92,598	739	2,980	3,464	3,884	1%	3%	4%	4%
Basingstoke & Dean	173,856	187,085	200,486	206,833	212,174	13,229	26,630	32,978	38,318	8%	15%	19%	22%
Worthing	107,718	112,265	117,151	120,183	123,204	4,547	9,433	12,465	15,486	4%	9%	12%	14%
Salisbury	122,045	128,941	129,906	133,752	137,410	6,896	7,862	11,708	15,366	6%	6%	10%	13%
Buffer Area	**1,130,986**	**1,181,597**	**1,233,870**	**1,264,953**	**1,293,544**	**50,611**	**102,884**	**133,967**	**162,559**	**4%**	**9%**	**12%**	**14%**
Total	**2,749,812**	**2,832,312**	**2,965,968**	**3,047,456**	**3,119,573**	**82,499**	**216,156**	**297,643**	**369,760**	**3%**	**8%**	**11%**	**13%**

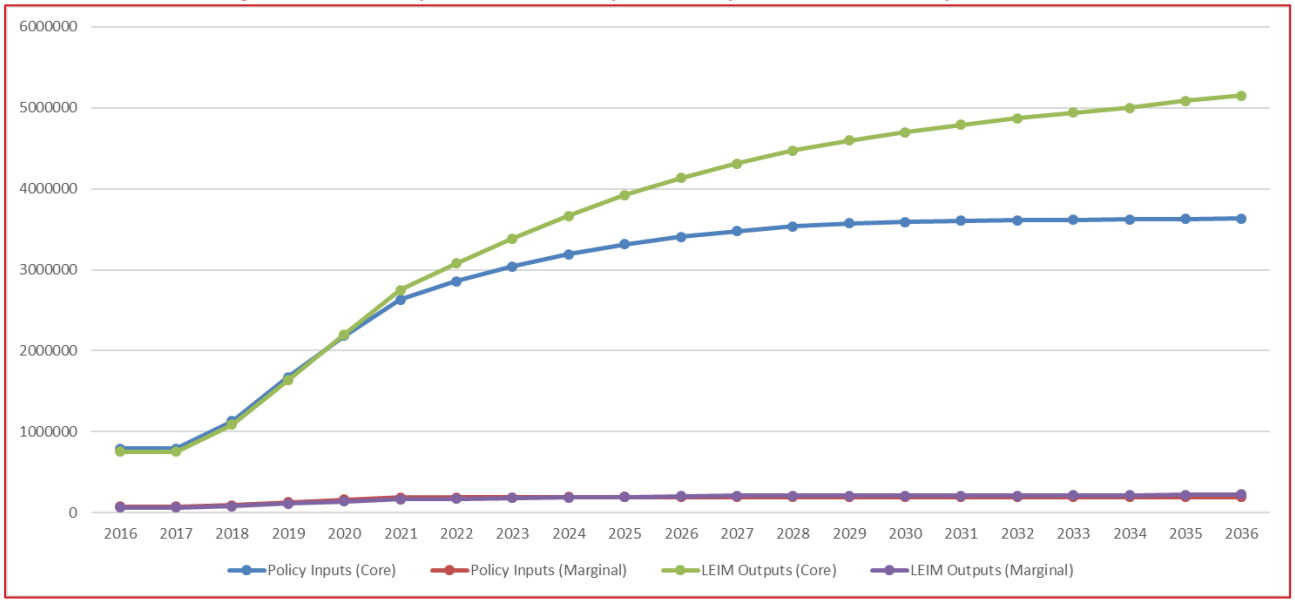
3.3 Households

3.3.1 Table 6 shows the growth in residential floorspace over the forecast years and Figure 3 shows the uptake of residential floorspace compared to LEIM inputs for the core and marginal areas. Household inputs are provided by the Authorities these are converted to floorspace in the LEIM model so it can operate on a consistent basis across the land use types. This demonstrates that not all the residential floorspace required for growth in later years has been identified as LEIM input.

Table 6. Growth of Residential Floorspace by Year

	Total					Difference				Difference from 2015			
District	2015	2019	2026	2031	2036	2019	2026	2031	2036	2019	2026	2031	2036
East Hampshire (Core)	1,030,967	1,084,048	1,172,576	1,195,546	1,195,546	53,081	141,609	164,579	164,579	5%	14%	16%	16%
Eastleigh	5,518,361	5,884,686	6,384,202	6,408,491	6,408,491	366,325	865,842	890,131	890,131	7%	16%	16%	16%
Fareham	5,118,483	5,251,125	5,549,682	5,744,548	5,987,576	132,642	431,199	626,065	869,093	3%	8%	12%	17%
Gosport	3,130,586	3,200,091	3,276,242	3,282,722	3,282,722	69,505	145,656	152,136	152,136	2%	5%	5%	5%
Havant	5,162,293	5,321,358	5,499,290	5,522,400	5,522,400	159,065	336,997	360,107	360,107	3%	7%	7%	7%
New Forest (Core)	3,184,472	3,207,809	3,234,720	3,277,017	3,318,665	23,337	50,248	92,545	134,193	1%	2%	3%	4%
Test Valley (Core)	1,928,355	2,002,200	2,238,183	2,278,933	2,282,742	73,845	309,828	350,578	354,387	4%	16%	18%	18%
Winchester (Core)	4,481,508	4,741,109	5,344,933	5,585,733	5,628,847	259,601	863,425	1,104,225	1,147,339	6%	19%	25%	26%
Portsmouth City	6,487,550	6,574,773	6,695,111	6,752,739	6,776,071	87,224	207,561	265,189	288,521	1%	3%	4%	4%
Southampton City	8,644,959	8,895,426	9,132,109	9,135,453	9,142,343	250,467	487,150	490,494	497,384	3%	6%	6%	6%
Isle of Wight	6,850,824	7,009,912	7,145,571	7,145,571	7,145,571	159,088	294,747	294,747	294,747	2%	4%	4%	4%
Hampshire County	29,555,026	30,692,427	32,699,829	33,295,391	33,626,990	1,137,401	3,144,803	3,740,365	4,071,964	4%	11%	13%	14%
Portsmouth City	6,487,550	6,574,773	6,695,111	6,752,739	6,776,071	87,224	207,561	265,189	288,521	1%	3%	4%	4%
Southampton City	8,644,959	8,895,426	9,132,109	9,135,453	9,142,343	250,467	487,150	490,494	497,384	3%	6%	6%	6%
Core Modelled Area	**51,538,358**	**53,172,538**	**55,672,619**	**56,329,153**	**56,690,974**	**1,634,180**	**4,134,261**	**4,790,795**	**5,152,617**	**3%**	**8%**	**9%**	**10%**
East Hampshire (Marginal)	1,342,386	1,347,408	1,349,168	1,349,168	1,349,168	5,022	6,782	6,782	6,782	0%	1%	1%	1%
New Forest (Marginal)	4,000,948	4,071,172	4,097,764	4,104,057	4,117,757	70,224	96,816	103,109	116,809	2%	2%	3%	3%
Test Valley (Marginal)	1,313,028	1,339,274	1,358,768	1,358,768	1,358,768	26,246	45,740	45,740	45,740	2%	3%	3%	3%
Winchester (Marginal)	626,885	638,022	681,462	682,482	682,482	11,138	54,578	55,598	55,598	2%	9%	9%	9%
Arun (Marginal)	3,922,192	3,922,230	3,922,230	3,922,230	3,922,230	38	38	38	38	0%	0%	0%	0%
Chichester (Marginal)	4,535,369	4,535,372	4,535,372	4,535,372	4,535,372	3	3	3	3	0%	0%	0%	0%
Marginal Modelled Area	**15,740,807**	**15,853,478**	**15,944,764**	**15,952,077**	**15,965,777**	**112,671**	**203,957**	**211,270**	**224,970**	**1%**	**1%**	**1%**	**1%**

Figure 3. Comparison between input and output Residential Floorspace



3.4 Employment

3.4.1 Table 7 shows the growth in LEIM employment forecasts by district and area. Table 8 shows the growth in employment floorspace and Figure 4 shows the uptake of employment floorspace (office, industrial & warehousing floorspace) compared to LEIM inputs for the core and marginal areas. This shows the reverse situation compared to residential land use in that more employment floorspace is input into the LEIM model than is utilised.

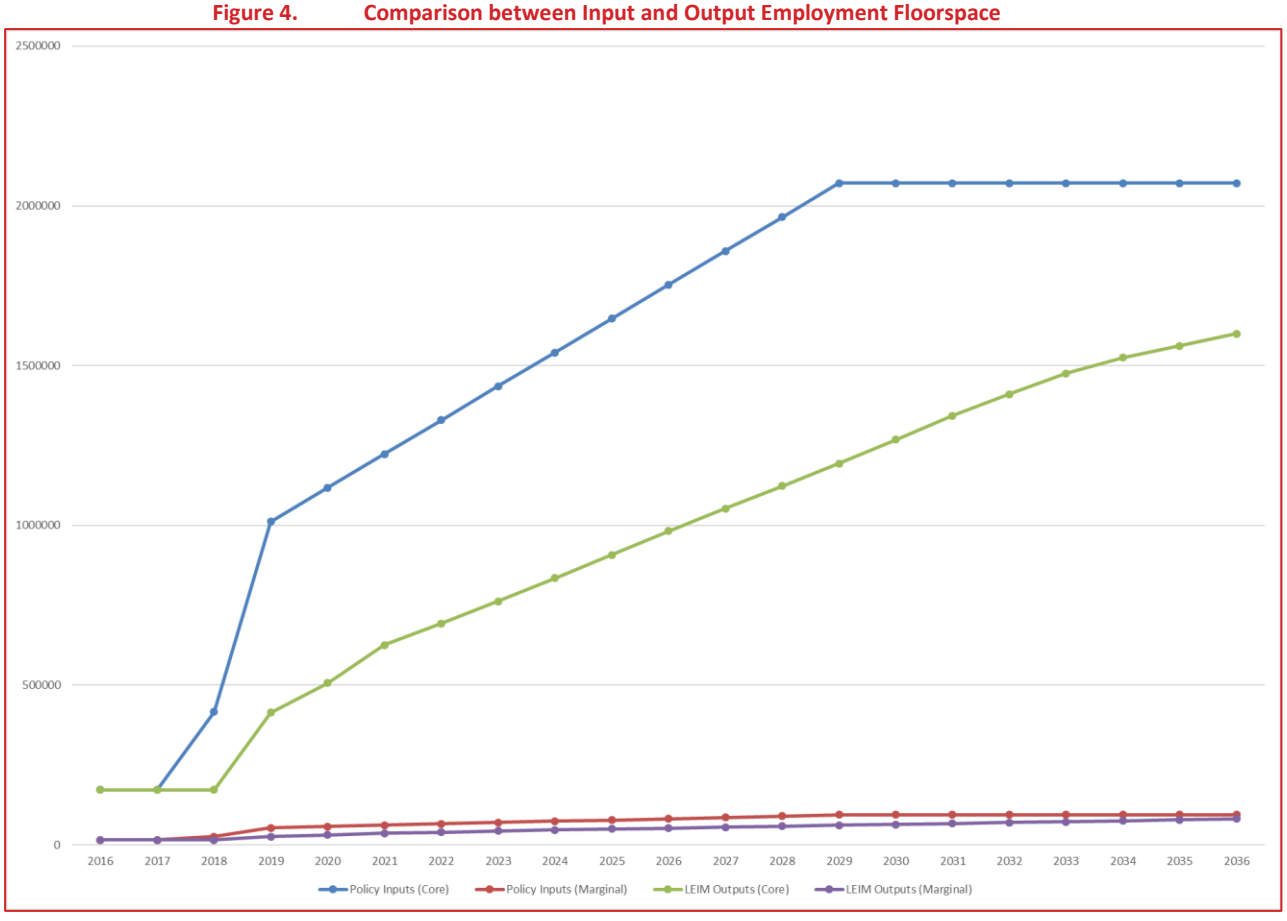
Table 7. Employment Forecasts by District and Area

	Total					Difference				Difference from 2015			
District	2015	2019	2026	2031	2036	2019	2026	2031	2036	2019	2026	2031	2036
East Hampshire (Core)	4,934	5,365	5,713	5,556	5,443	430	778	621	509	9%	16%	13%	10%
Eastleigh	64,035	66,132	67,701	69,796	74,443	2,097	3,667	5,761	10,408	3%	6%	9%	16%
Fareham	52,571	53,783	56,689	59,747	61,867	1,212	4,118	7,176	9,296	2%	8%	14%	18%
Gosport	28,355	30,636	38,505	44,975	50,216	2,281	10,150	16,620	21,861	8%	36%	59%	77%
Havant	51,005	53,297	54,925	52,954	50,945	2,292	3,920	1,949	-60	4%	8%	4%	0%
New Forest (Core)	29,521	30,002	34,935	38,680	38,714	480	5,413	9,159	9,193	2%	18%	31%	31%
Test Valley (Core)	23,032	25,185	29,063	31,842	34,228	2,153	6,031	8,811	11,196	9%	26%	38%	49%
Winchester (Core)	74,610	74,934	75,972	79,772	84,172	325	1,362	5,162	9,562	0%	2%	7%	13%
Portsmouth City	110,117	113,014	109,877	104,728	100,699	2,896	-240	-5,389	-9,418	3%	0%	-5%	-9%
Southampton City	123,833	128,818	132,811	134,300	135,813	4,985	8,978	10,467	11,980	4%	7%	8%	10%
Isle of Wight	56,849	58,380	58,850	59,395	60,673	1,531	2,001	2,546	3,823	3%	4%	4%	7%
Hampshire County	328,063	339,333	363,503	383,322	400,028	11,269	35,440	55,259	71,965	3%	11%	17%	22%
Portsmouth City	110,117	113,014	109,877	104,728	100,699	2,896	-240	-5,389	-9,418	3%	0%	-5%	-9%
Southampton City	123,833	128,818	132,811	134,300	135,813	4,985	8,978	10,467	11,980	4%	7%	8%	10%
Core Modelled Area	**618,863**	**639,545**	**665,041**	**681,745**	**697,214**	**20,682**	**46,179**	**62,882**	**78,351**	**3%**	**7%**	**10%**	**13%**
East Hampshire (Marginal)	12,531	12,835	12,933	12,749	12,684	304	401	217	152	2%	3%	2%	1%
New Forest (Marginal)	33,691	34,760	36,084	36,505	37,409	1,069	2,393	2,814	3,717	3%	7%	8%	11%
Test Valley (Marginal)	11,454	11,796	12,241	11,261	10,720	342	787	-193	-734	3%	7%	-2%	-6%
Winchester (Marginal)	8,419	8,389	6,707	4,601	3,533	-30	-1,712	-3,818	-4,886	0%	-20%	-45%	-58%
Arun (Marginal)	27,380	28,006	27,307	27,474	28,166	626	-73	95	786	2%	0%	0%	3%
Chichester (Marginal)	55,649	56,726	57,464	57,397	57,552	1,077	1,815	1,748	1,903	2%	3%	3%	3%
Marginal Modelled Area	**149,124**	**152,513**	**152,735**	**149,987**	**150,064**	**3,389**	**3,610**	**862**	**940**	**2%**	**2%**	**1%**	**1%**
Arun (Buffer)	23,574	24,284	24,877	25,174	25,545	710	1,303	1,600	1,972	3%	6%	7%	8%
Chichester (Buffer)	8,472	8,719	8,926	9,009	9,127	246	454	537	654	3%	5%	6%	8%
East Hampshire (Buffer)	25,726	26,264	26,784	27,204	27,675	538	1,058	1,478	1,949	2%	4%	6%	8%
New Forest (Buffer)	16,079	17,315	18,452	19,449	20,397	1,237	2,373	3,370	4,319	8%	15%	21%	27%
Test Valley (Buffer)	28,357	29,078	28,893	28,356	28,014	721	536	-1	-343	3%	2%	0%	-1%
Bournemouth	89,365	91,918	94,384	95,595	97,206	2,553	5,019	6,230	7,840	3%	6%	7%	9%
Poole	83,743	85,367	86,760	87,306	88,169	1,624	3,017	3,563	4,426	2%	4%	4%	5%
Christchurch	22,500	22,924	23,311	23,484	23,747	424	811	983	1,246	2%	4%	4%	6%
East Dorset	34,748	35,466	36,073	36,201	36,459	718	1,325	1,453	1,711	2%	4%	4%	5%
Basingstoke & Dean	82,255	84,782	86,854	87,667	88,851	2,528	4,599	5,413	6,596	3%	6%	7%	8%
Worthing	50,481	52,102	53,414	54,063	54,848	1,621	2,934	3,583	4,368	3%	6%	7%	9%
Salisbury	69,863	68,256	68,298	69,912	71,606	-1,608	-1,565	48	1,742	-2%	-2%	0%	2%
Buffer Area	**535,163**	**546,475**	**557,026**	**563,420**	**571,643**	**11,312**	**21,863**	**28,257**	**36,480**	**2%**	**4%**	**5%**	**7%**
Total	**1,303,150**	**1,338,532**	**1,374,802**	**1,395,152**	**1,418,920**	**35,382**	**71,652**	**92,001**	**115,770**	**3%**	**5%**	**7%**	**9%**

Table 8. Growth of Employment Floorspace (Office, Industrial & Warehousing)

	Total					Difference				Difference from 2015			
District	2015	2019	2026	2031	2036	2019	2026	2031	2036	2019	2026	2031	2036
East Hampshire (Core)	88,987	91,380	93,900	94,114	94,231	2,393	4,913	5,126	5,244	3%	6%	6%	6%
Eastleigh	1,859,027	1,891,575	1,973,877	2,034,426	2,102,170	32,548	114,851	175,399	243,143	2%	6%	9%	13%
Fareham	1,029,171	1,055,626	1,098,831	1,127,661	1,147,992	26,455	69,661	98,491	118,821	3%	7%	10%	12%
Gosport	435,302	471,488	512,112	536,411	557,011	36,186	76,811	101,110	121,709	8%	18%	23%	28%
Havant	920,590	972,219	1,003,156	1,011,905	1,018,563	51,628	82,566	91,315	97,973	6%	9%	10%	11%
New Forest (Core)	565,350	594,322	712,196	827,083	876,420	28,973	146,846	261,733	311,071	5%	26%	46%	55%
Test Valley (Core)	631,053	690,460	736,691	753,040	760,015	59,407	105,638	121,987	128,963	9%	17%	19%	20%
Winchester (Core)	1,284,877	1,329,207	1,410,659	1,456,946	1,509,964	44,330	125,782	172,069	225,088	3%	10%	13%	18%
Portsmouth City	1,698,142	1,754,638	1,787,263	1,803,521	1,813,866	56,496	89,121	105,379	115,724	3%	5%	6%	7%
Southampton City	2,328,373	2,402,007	2,487,484	2,532,454	2,553,478	73,634	159,111	204,081	225,105	3%	7%	9%	10%
Isle of Wight	713,753	715,957	720,687	720,687	720,687	2,203	6,933	6,933	6,933	0%	1%	1%	1%
Hampshire County	6,814,356	7,096,275	7,541,423	7,841,586	8,066,367	281,919	727,067	1,027,230	1,252,011	4%	11%	15%	18%
Portsmouth City	1,698,142	1,754,638	1,787,263	1,803,521	1,813,866	56,496	89,121	105,379	115,724	3%	5%	6%	7%
Southampton City	2,328,373	2,402,007	2,487,484	2,532,454	2,553,478	73,634	159,111	204,081	225,105	3%	7%	9%	10%
Core Modelled Area	**11,554,624**	**11,968,877**	**12,536,857**	**12,898,248**	**13,154,398**	**414,252**	**982,233**	**1,343,624**	**1,599,774**	**4%**	**9%**	**12%**	**14%**
East Hampshire (Marginal)	197,728	198,182	198,330	198,330	198,330	455	602	602	602	0%	0%	0%	0%
New Forest (Marginal)	375,242	388,271	406,874	420,421	434,792	13,029	31,632	45,179	59,550	3%	8%	12%	16%
Test Valley (Marginal)	312,100	324,696	331,747	332,634	333,203	12,595	19,646	20,533	21,102	4%	6%	7%	7%
Winchester (Marginal)	154,231	154,590	155,135	155,183	155,200	360	905	953	970	0%	1%	1%	1%
Arun (Marginal)	356,541	356,538	356,538	356,538	356,538	-3	-3	-3	-3	0%	0%	0%	0%
Chichester (Marginal)	661,015	661,018	661,018	661,018	661,018	3	3	3	3	0%	0%	0%	0%
Marginal Modelled Area	**2,056,857**	**2,083,295**	**2,109,642**	**2,124,123**	**2,139,081**	**26,438**	**52,785**	**67,267**	**82,224**	**1%**	**3%**	**3%**	**4%**

Figure 4. Comparison between Input and Output Employment Floorspace



4. MDM & GDM FORECASTS

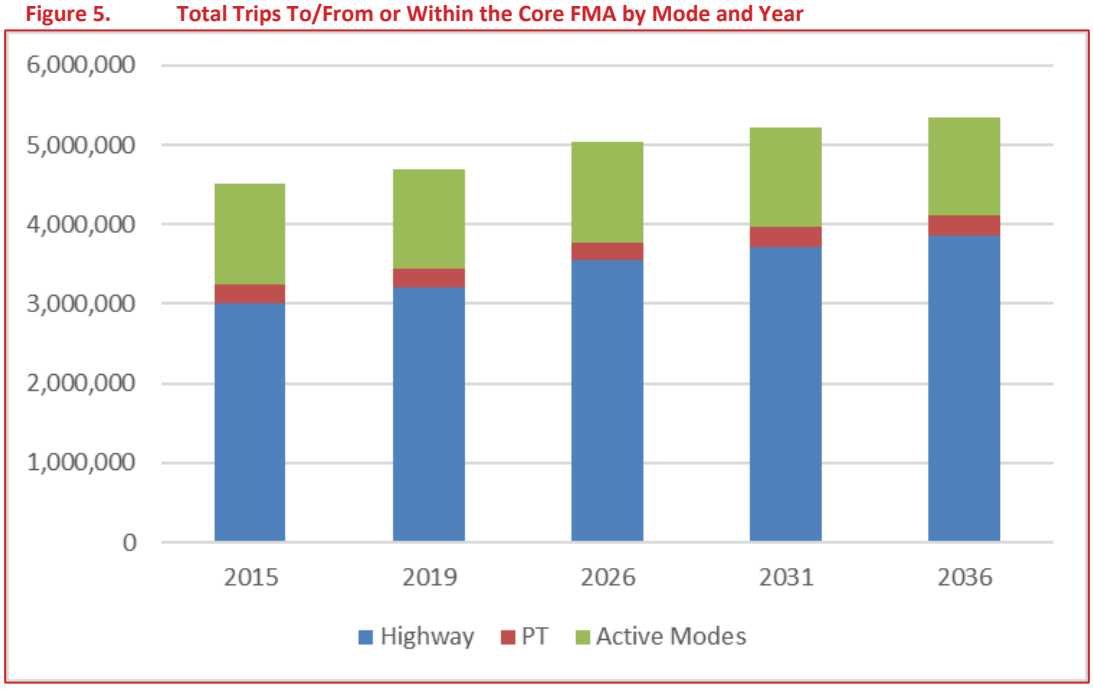
4.1 Summary

4.1.1 This section presents forecasts from the MDM and the GDM. MDM forecasts include origin and destination trip data and total trips by mode. GDM forecasts include trips to each port by mode, and car and PT mode share.

4.2 MDM Forecasts

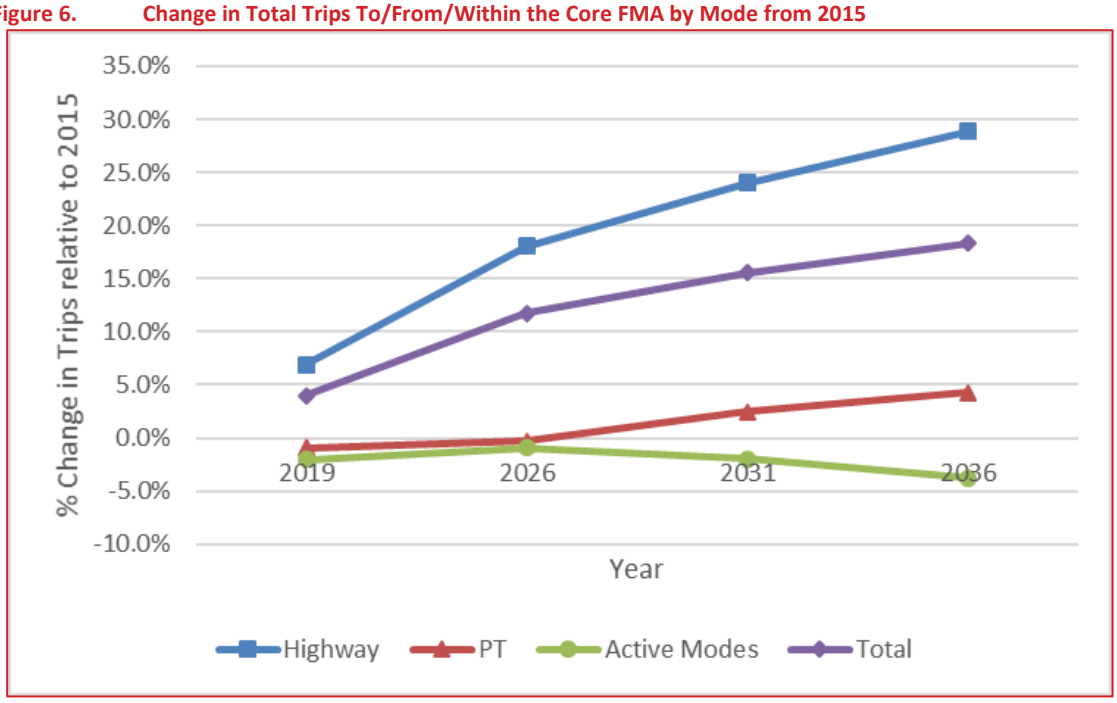
4.2.1 Figure 5[1] shows the total number of trips made to, from or within the Core Fully Modelled Area, broken down by main mode, for each modelled year. Figure 6 shows the percentage change in trips from the base year for each mode.

Figure 5. Total Trips To/From or Within the Core FMA by Mode and Year



[1] This and all further outputs are based on test ERZ & ESS.

Figure 6. Change in Total Trips To/From/Within the Core FMA by Mode from 2015



4.2.2 Table 9 and Table 10 show the demand by mode for 2015 and 2031. This has been presented by local authority within the South Hampshire Core Area and also aggregated to marginal, buffer and external. The tables show demand by mode, mode share (separately including and excluding Active Modes) and also absolute and percentage changes in demand. Over the 12 hour period car journeys increase by 28%, public transport by 5% and active modes drop by 4%.

4.2.3 Table 11 shows the absolute and percentage change in 12 hour demand between the years 2015 and 2031 of the reference case model runs.

Table 10. Mode Share by Core Area Authority (2015 & 2031)

2015 12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	64%	97%	86%	99%	97%	97%	82%	96%	98%	98%	21%	95%	97%	86%	**75%**
Test Valley	97%	53%	89%	93%	96%	97%	95%	90%	95%	100%	49%	92%	96%	77%	**76%**
Southampton	87%	89%	51%	86%	90%	92%	78%	88%	94%	99%	11%	87%	88%	67%	**60%**
Eastleigh	99%	94%	86%	62%	92%	97%	91%	95%	97%	96%	10%	95%	97%	83%	**76%**
Winchester	96%	96%	90%	91%	53%	92%	96%	95%	94%	98%	14%	95%	95%	75%	**73%**
Fareham	97%	97%	92%	97%	92%	65%	87%	89%	96%	98%	8%	96%	95%	83%	**76%**
Gosport	82%	95%	81%	91%	96%	88%	50%	66%	89%	99%	5%	75%	77%	72%	**58%**
Portsmouth	95%	89%	88%	95%	95%	88%	67%	52%	86%	94%	21%	87%	86%	81%	**59%**
Havant	97%	95%	94%	98%	94%	96%	87%	86%	60%	94%	21%	92%	96%	89%	**72%**
East Hampshire	98%	100%	99%	97%	98%	98%	99%	95%	94%	61%	24%	95%	100%	95%	**88%**
Isle of Wight	20%	41%	8%	9%	14%	7%	5%	16%	21%	21%	65%	26%	17%	36%	**64%**
Marginal	95%	92%	86%	95%	95%	96%	77%	87%	92%	95%	38%	16%	96%	89%	**40%**
Buffer	97%	96%	87%	96%	95%	95%	79%	88%	97%	100%	20%	95%	92%	98%	**94%**
External	85%	78%	70%	84%	77%	83%	69%	82%	89%	95%	39%	90%	98%	98%	**88%**
Total	75%	77%	60%	76%	73%	76%	58%	60%	73%	87%	64%	40%	94%	88%	**66%**

2031 12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	69%	98%	87%	98%	97%	98%	86%	96%	98%	98%	26%	96%	98%	90%	**80%**
Test Valley	98%	58%	89%	95%	97%	98%	94%	93%	95%	100%	52%	94%	97%	84%	**80%**
Southampton	88%	89%	57%	88%	92%	93%	60%	92%	95%	99%	10%	90%	91%	77%	**66%**
Eastleigh	98%	95%	88%	65%	90%	96%	93%	96%	98%	97%	11%	94%	97%	87%	**79%**
Winchester	97%	97%	91%	90%	55%	90%	93%	93%	86%	98%	3%	95%	96%	67%	**74%**
Fareham	98%	98%	93%	96%	90%	68%	88%	91%	97%	99%	8%	97%	96%	88%	**79%**
Gosport	84%	95%	62%	93%	94%	87%	58%	76%	90%	99%	6%	82%	81%	76%	**65%**
Portsmouth	95%	93%	92%	96%	94%	91%	77%	56%	90%	96%	27%	92%	92%	90%	**65%**
Havant	97%	95%	95%	98%	87%	97%	88%	89%	65%	95%	17%	94%	97%	90%	**77%**
East Hampshire	99%	100%	99%	97%	98%	99%	99%	96%	96%	64%	18%	96%	100%	96%	**90%**
Isle of Wight	25%	43%	7%	11%	8%	7%	5%	23%	17%	16%	70%	27%	17%	33%	**69%**
Marginal	96%	94%	89%	94%	96%	97%	82%	92%	94%	96%	41%	20%	96%	92%	**46%**
Buffer	98%	97%	90%	97%	96%	96%	82%	93%	97%	100%	21%	96%	94%	99%	**96%**
External	89%	84%	78%	88%	72%	88%	75%	91%	91%	95%	37%	92%	99%	99%	**90%**
Total	80%	80%	66%	79%	75%	79%	65%	65%	77%	89%	69%	46%	96%	89%	**71%**

2015 12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	2%	1%	10%	1%	3%	3%	18%	4%	2%	2%	79%	2%	3%	14%	**3%**
Test Valley	1%	2%	5%	3%	2%	3%	5%	10%	5%	0%	51%	4%	4%	23%	**3%**
Southampton	10%	5%	7%	7%	9%	7%	22%	12%	6%	1%	89%	12%	12%	33%	**7%**
Eastleigh	1%	2%	7%	3%	5%	2%	9%	5%	3%	4%	90%	5%	3%	17%	**4%**
Winchester	4%	2%	9%	6%	1%	3%	3%	4%	1%	1%	86%	3%	5%	25%	**4%**
Fareham	3%	3%	7%	2%	3%	2%	5%	8%	4%	2%	92%	4%	5%	17%	**3%**
Gosport	18%	5%	19%	9%	3%	5%	2%	34%	11%	1%	95%	25%	23%	28%	**4%**
Portsmouth	5%	11%	12%	5%	4%	8%	33%	4%	10%	6%	79%	13%	14%	19%	**6%**
Havant	3%	5%	6%	2%	1%	4%	13%	11%	5%	2%	79%	4%	4%	11%	**6%**
East Hampshire	2%	0%	1%	3%	1%	2%	1%	5%	2%	2%	76%	4%	0%	5%	**3%**
Isle of Wight	80%	59%	92%	91%	86%	93%	95%	84%	79%	79%	6%	74%	83%	64%	**7%**
Marginal	2%	3%	14%	5%	3%	4%	23%	12%	5%	4%	62%	1%	4%	11%	**3%**
Buffer	3%	4%	13%	4%	5%	5%	21%	12%	3%	0%	80%	5%	8%	2%	**6%**
External	15%	22%	30%	16%	23%	17%	31%	18%	11%	5%	61%	10%	2%	2%	**12%**
Total	**3%**	**3%**	**7%**	**4%**	**4%**	**3%**	**4%**	**6%**	**6%**	**3%**	**7%**	**3%**	**6%**	**12%**	**6%**

2031 12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	2%	1%	9%	2%	3%	2%	14%	4%	2%	2%	74%	2%	2%	10%	**3%**
Test Valley	1%	2%	5%	2%	2%	2%	6%	7%	5%	0%	48%	3%	3%	16%	**3%**
Southampton	9%	5%	5%	6%	8%	7%	40%	8%	5%	1%	90%	9%	9%	23%	**6%**
Eastleigh	2%	2%	6%	3%	7%	2%	7%	4%	2%	3%	89%	6%	3%	13%	**4%**
Winchester	3%	2%	9%	7%	3%	3%	6%	5%	2%	1%	97%	3%	4%	33%	**6%**
Fareham	2%	2%	7%	2%	3%	2%	6%	6%	3%	1%	92%	3%	4%	12%	**3%**
Gosport	16%	5%	38%	7%	5%	6%	2%	23%	10%	1%	94%	18%	19%	24%	**5%**
Portsmouth	5%	7%	8%	4%	4%	6%	23%	3%	7%	4%	73%	8%	8%	10%	**5%**
Havant	3%	5%	5%	2%	2%	3%	12%	8%	5%	2%	83%	3%	3%	10%	**5%**
East Hampshire	1%	0%	1%	3%	1%	1%	1%	3%	2%	1%	82%	3%	0%	4%	**2%**
Isle of Wight	75%	57%	93%	89%	92%	93%	95%	77%	83%	84%	5%	73%	83%	67%	**6%**
Marginal	2%	3%	11%	6%	3%	3%	18%	8%	3%	3%	59%	1%	4%	8%	**2%**
Buffer	2%	3%	10%	3%	4%	4%	18%	7%	3%	0%	79%	4%	6%	1%	**4%**
External	11%	16%	22%	12%	28%	12%	25%	9%	9%	5%	63%	8%	1%	1%	**10%**
Total	**3%**	**3%**	**6%**	**4%**	**6%**	**3%**	**5%**	**5%**	**5%**	**2%**	**6%**	**2%**	**4%**	**11%**	**5%**

2015 12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	34%	2%	4%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	**22%**
Test Valley	1%	45%	6%	4%	1%	0%	0%	0%	0%	0%	0%	4%	0%	0%	**20%**
Southampton	4%	6%	43%	7%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	**32%**
Eastleigh	0%	4%	7%	35%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	**20%**
Winchester	0%	1%	0%	3%	46%	5%	1%	1%	5%	1%	0%	2%	0%	0%	**23%**
Fareham	0%	0%	1%	2%	6%	33%	8%	3%	0%	0%	0%	0%	0%	0%	**21%**
Gosport	0%	0%	0%	0%	1%	8%	48%	0%	0%	0%	0%	0%	0%	0%	**38%**
Portsmouth	0%	0%	0%	0%	1%	3%	0%	44%	3%	0%	0%	0%	0%	0%	**34%**
Havant	0%	0%	0%	0%	4%	0%	0%	4%	34%	4%	0%	4%	0%	0%	**22%**
East Hampshire	0%	0%	0%	0%	1%	0%	0%	0%	3%	38%	0%	2%	0%	0%	**10%**
Isle of Wight	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	**29%**
Marginal	3%	4%	1%	0%	2%	0%	0%	0%	4%	2%	0%	83%	0%	0%	**57%**
Buffer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
External	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
Total	**22%**	**20%**	**32%**	**20%**	**22%**	**21%**	**38%**	**34%**	**22%**	**10%**	**29%**	**57%**	**0%**	**0%**	**28%**

2031 12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	29%	1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	**17%**
Test Valley	1%	40%	6%	3%	1%	0%	0%	0%	0%	0%	0%	3%	0%	0%	**17%**
Southampton	3%	6%	38%	6%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	**28%**
Eastleigh	0%	3%	6%	32%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	**17%**
Winchester	0%	1%	0%	3%	42%	6%	1%	1%	12%	1%	0%	1%	0%	0%	**19%**
Fareham	0%	0%	1%	1%	7%	30%	6%	3%	0%	0%	0%	0%	0%	0%	**17%**
Gosport	0%	0%	0%	0%	1%	6%	39%	0%	0%	0%	0%	0%	0%	0%	**31%**
Portsmouth	0%	0%	0%	0%	1%	3%	0%	40%	3%	0%	0%	0%	0%	0%	**31%**
Havant	0%	0%	0%	0%	11%	0%	0%	3%	30%	3%	0%	3%	0%	0%	**18%**
East Hampshire	0%	0%	0%	0%	1%	0%	0%	0%	3%	35%	0%	1%	0%	0%	**8%**
Isle of Wight	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	**25%**
Marginal	2%	3%	1%	0%	1%	0%	0%	0%	3%	1%	0%	79%	0%	0%	**51%**
Buffer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
External	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
Total	**17%**	**17%**	**28%**	**17%**	**19%**	**17%**	**30%**	**31%**	**18%**	**9%**	**24%**	**51%**	**0%**	**0%**	**24%**

Table 11. Change in Demand by Core Area Authority by Mode (2015 & 2031)

12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	6543	1970	5066	1645	914	427	94	532	173	25	3	2555	1445	511	21904
Test Valley	2184	6060	7591	3544	1984	546	110	372	155	20	7	1040	1745	399	25757
Southampton	6823	8555	54444	10063	4162	2732	927	1696	666	134	0	1741	3535	3255	98731
Eastleigh	1766	3942	8452	9045	7520	3244	1096	1735	685	93	7	918	1907	1576	41987
Winchester	807	2113	3291	6576	9764	3446	1400	2926	2172	509	2	1849	4528	1892	41277
Fareham	425	575	2549	3163	3868	9131	7314	4264	1785	279	1	456	614	698	35123
Gosport	107	132	935	1055	1461	5936	30664	2793	1030	112	4	257	146	217	44848
Portsmouth	477	370	1755	1761	3658	5075	3443	42912	6730	1724	238	3241	1683	7422	80488
Havant	132	146	657	607	2336	1714	1085	5761	10762	3377	-7	5356	997	854	33777
East Hampshire	27	24	147	104	499	278	149	1569	4094	991	-4	583	188	114	8763
Isle of Wight	3	6	-3	10	2	1	4	223	-7	-4	61352	6	-2	-157	61434
Marginal	2341	1014	1194	732	1864	482	245	2910	5015	558	22	6326	3310	2256	28269
Buffer	1263	1963	2765	1630	4226	685	168	1669	1140	198	1	3025	2001	5608	26341
External	338	413	2317	1252	1642	624	196	6411	637	84	-196	1673	3986	4347	23727
Total	23236	27282	91160	41187	43901	34321	46897	75772	35038	8098	61429	29028	26083	28993	572424

12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	11%	44%	30%	29%	24%	32%	77%	45%	28%	29%	22%	20%	24%	21%	19%
Test Valley	47%	30%	38%	30%	44%	64%	166%	90%	62%	49%	32%	37%	35%	32%	36%
Southampton	40%	44%	24%	21%	36%	23%	190%	36%	29%	35%	0%	23%	34%	56%	27%
Eastleigh	31%	32%	18%	10%	30%	26%	171%	34%	32%	32%	33%	22%	26%	27%	19%
Winchester	21%	45%	27%	27%	16%	23%	76%	38%	29%	56%	5%	23%	23%	17%	24%
Fareham	33%	66%	21%	26%	26%	9%	35%	18%	19%	36%	7%	19%	27%	19%	17%
Gosport	86%	189%	172%	164%	72%	28%	47%	73%	79%	109%	50%	65%	55%	31%	46%
Portsmouth	46%	97%	37%	38%	50%	22%	90%	19%	19%	29%	64%	37%	48%	86%	24%
Havant	24%	61%	26%	29%	31%	19%	91%	17%	10%	20%	-14%	27%	25%	12%	16%
East Hampshire	27%	49%	32%	31%	55%	34%	136%	22%	22%	16%	-26%	18%	16%	6%	21%
Isle of Wight	25%	29%	-6%	48%	5%	7%	50%	87%	-13%	-27%	25%	5%	-3%	-20%	25%
Marginal	18%	34%	17%	18%	23%	18%	58%	31%	25%	17%	11%	16%	18%	18%	20%
Buffer	22%	35%	26%	21%	22%	27%	54%	41%	25%	16%	1%	17%	34%	24%	24%
External	15%	30%	36%	20%	14%	17%	27%	69%	8%	4%	-21%	13%	19%	13%	20%
Total	20%	38%	25%	19%	25%	17%	49%	22%	16%	21%	25%	21%	25%	24%	23%

12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	-255	10	306	82	-5	2	8	18	3	0	-5	3	13	-65	116
Test Valley	13	-21	396	13	18	1	7	9	7	0	4	16	-4	-52	406
Southampton	449	426	-1715	75	112	124	807	-101	1	1	104	-127	-48	-133	-27
Eastleigh	87	13	29	249	1200	169	60	9	4	-1	48	108	31	-102	1906
Winchester	-11	18	196	994	2620	292	145	329	132	8	1082	77	-164	2456	8175
Fareham	1	0	138	169	296	578	851	-314	-19	-1	7	-19	-12	-149	1526
Gosport	16	7	790	60	137	841	1388	97	108	2	46	13	18	11	3533
Portsmouth	23	11	-79	13	231	-257	214	-2976	-807	-73	273	-295	-99	-283	-4105
Havant	5	8	0	3	126	-9	129	-897	-1176	-32	37	-127	-10	-37	-1980
East Hampshire	0	0	2	0	7	-1	2	-73	-29	8	2	1	0	-5	-85
Isle of Wight	-3	5	115	49	290	23	63	194	33	4	-2474	6	-10	-111	-1815
Marginal	2	12	-117	99	13	-18	18	-317	-143	1	-4	52	4	-223	-622
Buffer	13	-2	-105	2	-165	-12	22	-106	-15	0	-21	-8	-68	-91	-556
External	-74	-63	-336	-153	1737	-171	-15	-404	-81	-8	-193	-266	-99	-98	-224
Total	265	424	-381	1654	6618	1562	3700	-4532	-1981	-90	-1094	-564	-449	1117	6248

12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	-13%	19%	15%	111%	-4%	5%	31%	39%	22%	8%	-8%	1%	8%	-17%	2%
Test Valley	24%	-3%	40%	4%	16%	3%	182%	20%	54%	#DIV/0!	19%	15%	-2%	-14%	13%
Southampton	23%	42%	-6%	2%	9%	13%	580%	-16%	1%	24%	16%	-12%	-3%	-5%	0%
Eastleigh	126%	4%	1%	7%	81%	83%	95%	4%	6%	-5%	24%	46%	12%	-9%	16%
Winchester	-8%	16%	16%	67%	199%	70%	240%	114%	127%	70%	360%	28%	-15%	67%	78%
Fareham	4%	1%	15%	80%	73%	24%	71%	-15%	-5%	-5%	5%	-18%	-10%	-20%	17%
Gosport	59%	184%	607%	97%	232%	71%	52%	5%	66%	187%	28%	10%	24%	4%	51%
Portsmouth	46%	23%	-12%	5%	79%	-12%	11%	-15%	-19%	-18%	20%	-22%	-17%	-14%	-12%
Havant	30%	60%	0%	7%	117%	-2%	75%	-21%	-12%	-8%	18%	-13%	-7%	-4%	-11%
East Hampshire	5%	0%	26%	-3%	62%	-4%	215%	-19%	-7%	5%	4%	1%	6%	-5%	-7%
Isle of Wight	-7%	19%	17%	23%	92%	14%	38%	14%	16%	7%	-11%	2%	-3%	-8%	-6%
Marginal	1%	11%	-10%	46%	5%	-17%	14%	-24%	-14%	1%	-1%	2%	0%	-15%	-6%
Buffer	8%	-1%	-7%	1%	-15%	-9%	27%	-19%	-9%	6%	-7%	-1%	-12%	-22%	-9%
External	-19%	-16%	-12%	-13%	49%	-22%	-5%	-20%	-8%	-7%	-13%	-18%	-26%	-17%	-1%
Total	5%	14%	-1%	14%	64%	17%	53%	-13%	-11%	-7%	-4%	-6%	-7%	7%	3%

12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	-4476	21	132	0	0	0	0	0	0	0	0	-60	0	0	-4384
Test Valley	19	1290	530	-31	-11	0	0	0	0	0	0	1	0	0	1799
Southampton	122	570	-546	5	32	2	0	0	0	0	0	-9	0	0	176
Eastleigh	0	-28	8	-2193	52	26	0	0	0	0	0	0	0	0	-2135
Winchester	0	-10	34	51	905	462	15	37	979	3	0	-13	0	0	2462
Fareham	0	0	2	18	492	-3594	146	-51	-1	0	0	0	0	0	-2989
Gosport	0	0	0	0	16	120	3273	5	0	0	0	0	0	0	3413
Portsmouth	0	0	0	0	35	-42	4	1444	-163	0	0	1	0	0	1279
Havant	0	0	0	0	927	-1	0	-167	-6729	-50	0	-89	0	0	-6109
East Hampshire	0	0	0	0	2	0	0	0	-61	71	0	-3	0	0	9
Isle of Wight	0	0	0	0	0	0	0	0	0	0	-1036	0	0	0	
Marginal	-57	-1	-10	0	-15	0	0	1	-104	-4	0	-12671	0	0	-12861
Buffer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
External	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	-4391	1842	149	-2150	2436	-3029	3439	1268	-6078	20		-12845	0	0	-20375

12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	-14%	30%	18%	67%	0%	0%	0%	0%	0%	0%	0%	-16%	0%	0%	-13%
Test Valley	27%	8%	37%	-6%	-17%	0%	0%	0%	0%	0%	0%	1%	0%	0%	9%
Southampton	17%	43%	0%	0%	96%	3%	0%	0%	0%	0%	0%	-15%	0%	0%	0%
Eastleigh	56%	-6%	0%	-4%	6%	13%	0%	0%	0%	0%	0%	-17%	0%	0%	-4%
Winchester	0%	-16%	94%	6%	2%	54%	73%	32%	268%	26%	0%	-9%	0%	0%	5%
Fareham	0%	0%	2%	9%	55%	-7%	8%	-6%	-11%	0%	0%	-32%	0%	0%	-5%
Gosport	0%	0%	0%	0%	78%	6%	5%	40%	3%	0%	0%	0%	0%	0%	5%
Portsmouth	0%	0%	0%	0%	32%	-5%	38%	1%	-11%	14%	0%	3%	0%	0%	1%
Havant	0%	0%	0%	0%	265%	-11%	3%	-11%	-11%	-8%	0%	-11%	0%	0%	-9%
East Hampshire	0%	0%	0%	0%	23%	0%	0%	13%	-9%	2%	0%	-7%	0%	0%	0%
Isle of Wight	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-1%	0%	0%	0%	0%
Marginal	-14%	-1%	-15%	-18%	-10%	-33%	0%	3%	-12%	-7%	0%	-6%	0%	0%	-6%
Buffer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
External	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	-13%	10%	0%	-4%	5%	-5%	5%	1%	-9%	0%	0%	-6%	0%	0%	-2%

Table 9. Demand by Core Area Authority by Mode (2015 & 2031)

2015 12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	61436	4494	17068	5616	3763	1315	123	1178	619	85	16	12700	5946	2447	116806
Test Valley	4663	20112	19759	11873	4508	851	67	413	248	40	21	2803	5011	1241	71608
Southampton	17062	19235	226795	46972	11435	11664	488	4647	2321	378	80	7451	10346	5839	364712
Eastleigh	5693	12376	47169	94730	25213	12327	642	5041	2116	286	22	4264	7418	5767	223064
Winchester	3797	4741	11987	24312	59444	14837	1840	7729	7528	908	48	8038	19441	10838	175486
Fareham	1297	875	11879	11970	14688	102111	21089	23542	9505	776	12	2359	2275	3638	206018
Gosport	124	70	543	642	2039	21237	65277	3840	1301	103	9	397	266	702	96550
Portsmouth	1033	381	4776	4685	7363	22560	3836	229132	35946	6015	373	8804	3522	8597	337024
Havant	550	239	2522	2117	7619	9142	1190	34410	111534	16865	55	20049	4010	7278	217579
East Hampshire	103	48	456	338	911	828	110	7295	18636	6121	16	3278	1178	2064	41380
Isle of Wight	13	20	59	21	49	12	9	256	55	16	240651	114	65	789	242130
Marginal	12824	2950	7089	4082	7940	2640	420	9517	20315	3274	208	39816	18126	12855	142055
Buffer	5863	5581	10622	7628	19570	2520	311	4055	4645	1206	78	17740	5899	23088	108806
External	2213	1363	6402	6346	11605	3758	716	9333	7952	2129	926	12608	20929	33623	119901
Total	116668	72485	367126	221332	176149	205803	96116	340388	222720	38202	242513	140421	104429	118766	2463119

2031 12hr - Car	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
New Forest	67978	6464	22133	7261	4677	1742	218	1711	792	110	19	15254	7391	2958	138709
Test Valley	6847	26172	27350	15416	6491	1398	177	785	403	59	27	3842	6756	1641	97365
Southampton	23886	27791	281239	57035	15597	14396	1415	6342	2986	512	80	9193	13880	9093	463443
Eastleigh	7459	16318	55621	103775	32733	15572	1738	6776	2802	378	29	5182	9325	7343	265051
Winchester	4604	6854	15278	30888	69209	18284	3240	10655	9700	1417	50	9888	23969	12730	216763
Fareham	1722	1451	14428	15132	18556	111243	28403	27807	11290	1055	13	2816	2890	4336	241140
Gosport	230	201	1478	1697	3500	27173	95941	6633	2331	215	13	654	412	919	141398
Portsmouth	1510	751	6532	6446	11021	27635	7279	272044	42676	7739	611	12046	5205	16018	417512
Havant	682	384	3179	2724	9955	10855	2276	40171	122296	20242	47	25405	5007	8132	251355
East Hampshire	130	71	603	442	1410	1106	259	8864	22730	7112	12	3860	1366	2178	50143
Isle of Wight	16	26	56	32	51	13	13	479	48	11	302003	120	62	633	303564
Marginal	15165	3965	8283	4814	9804	3122	665	12427	25331	3832	230	46142	21436	15111	170324
Buffer	7126	7544	13387	9258	23797	3205	478	5723	5785	1404	79	20765	7900	28696	135147
External	2551	1776	8719	7598	13248	4381	912	15744	8590	2213	730	14281	24915	37970	143628
Total	139903	99767	458287	262519	220050	240124	143013	416160	257758	46300	303942	169449	130512	147759	3035543

2015 12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	1912	54	1988	74	132	37	26	46	15	2	58	299	169	386	5200
Test Valley	53	769	1000	331	115	25	4	46	13	0	21	112	183	376	3048
Southampton	1931	1006	28958	3856	1187	945	139	638	145	6	651	1061	1477	2893	44893
Eastleigh	69	309	3702	3807	1490	204	64	244	60	12	199	235	254	1152	11799
Winchester	139	112	1241	1476	1317	416	60	288	104	12	300	273	1093	3691	10523
Fareham	36	25	918	210	407	2452	1197	2075	381	15	140	101	126	762	8846
Gosport	27	4	130	61	59	1177	2660	1941	164	1	164	132	78	276	6873
Portsmouth	49	46	646	240	293	2130	1909	19842	4279	404	1395	1345	574	2008	35158
Havant	18	13	157	47	107	388	173	4333	9709	427	200	954	148	904	17578
East Hampshire	2	0	6	12	12	15	1	393	415	154	52	125	1	108	1296
Isle of Wight	50	29	656	211	314	162	169	1396	209	58	22701	323	311	1411	27999
Marginal	281	111	1136	216	274	103	127	1341	1015	123	341	2215	852	1517	9654
Buffer	165	208	1544	292	1088	135	80	556	165	1	312	859	545	422	6374
External	388	393	2746	1194	3543	778	315	1980	961	115	1443	1439	381	580	16257
Total	5122	3078	44827	12026	10338	8968	6923	35119	17635	1331	27976	9474	6192	16486	205496

2031 12hr - PT	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	1657	65	2294	156	126	39	34	64	19	2	54	303	182	321	5315
Test Valley	66	748	1396	343	134	26	11	55	20	0	25	128	179	324	3454
Southampton	2380	1432	27243	3930	1299	1069	946	536	146	7	755	934	1429	2760	44866
Eastleigh	155	322	3731	4056	2690	373	124	253	64	11	246	344	285	1050	13705
Winchester	129	129	1437	2470	3937	709	205	618	236	20	1382	351	929	6147	18698
Fareham	38	25	1056	379	703	3030	2047	1762	362	14	147	82	113	613	10372
Gosport	42	11	920	121	196	2018	4048	2038	271	3	210	145	96	287	10407
Portsmouth	71	56	567	252	525	1873	2123	16866	3471	331	1668	1050	475	1725	31053
Havant	24	20	157	50	233	379	302	3436	8533	395	237	827	138	866	15598
East Hampshire	2	0	7	12	20	15	3	320	386	162	54	126	1	102	1211
Isle of Wight	47	35	770	261	603	185	232	1590	242	62	20227	329	301	1300	26184
Marginal	283	123	1018	315	287	86	145	1024	872	124	337	2268	856	1294	9031
Buffer	179	206	1439	294	923	123	102	450	151	1	291	851	477	331	5817
External	314	330	2410	1041	5279	607	299	1576	881	107	1250	1173	283	482	16033
Total	5386	3502	44446	13680	16955	10530	10622	30587	15655	1242	26882	8910	5743	17603	211743

2015 12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	33100	70	743	0	0	0	0	0	0	0	0	381	0	0	34294
Test Valley	71	16788	1431	496	62	0	0	0	0	0	0	118	0	0	18966
Southampton	727	1329	189137	3692	34	77	0	0	0	0	0	59	0	0	195055
Eastleigh	0	483	3709	53149	845	200	0	0	0	0	0	0	0	0	58387
Winchester	0	65	36	892	51581	854	21	115	366	10	0	144	0	0	54084
Fareham	0	0	81	207	891	51746	1828	876	10	0	0	1	0	0	55639
Gosport	0	0	0	0	20	1843	61881	12	0	0	0	0	0	0	63757
Portsmouth	0	0	0	0	111	856	12	193367	1439	3	0	18	0	0	195806
Havant	0	0	0	0	350	10	0	1487	63194	642	0	819	0	0	66503
East Hampshire	0	0	0	0	10	0	0	3	672	3801	0	52	0	0	4538
Isle of Wight	0	0	0	0	0	0	0	0	0	0	108280	0	0	0	108280
Marginal	400	131	63	0	149	1	0	19	837	53	0	200381	0	0	202035
Buffer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
External	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	34298	18866	195199	58437	54054	55588	63742	195878	66519	4509	108280	201974	0	0	1057344

2031 12hr - Active	New Forest	Test Valley	Southampton	Eastleigh	Winchester	Fareham	Gosport	Portsmouth	Havant	East Hampshire	Isle of Wight	Marginal	Buffer	External	Total
	6	7	10	2	8	3	4	9	5	1	14	11	12	13	
New Forest	28623	91	874	1	0	0	0	0	0	0	0	321	0	0	29910
Test Valley	90	18078	1961	466	52	0	0	0	0	0	0	119	0	0	20765
Southampton	849	1899	188591	3697	66	79	0	0	0	0	0	50	0	0	195231
Eastleigh	1	456	3717	50955	897	225	0	0	0	0	0	0	0	0	56252
Winchester	0	55	70	942	52486	1316	36	152	1345	12	0	131	0	0	56546
Fareham	0	0	82	225	1383	48152	1974	824	9	0	0	1	0	0	52650
Gosport	0	0	0	0	36	1963	65155	17	0	0	0	0	0	0	67170
Portsmouth	0	0	0	0	147	814	16	194810	1276	3	0	19	0	0	197085
Havant	0	0	0	0	1277	9	0	1320	56466	592	0	730	0	0	60394
East Hampshire	0	0	0	0	12	0	0	3	611	3872	0	49	0	0	4547
Isle of Wight	0	0	0	0	0	0	0	0	0	0	107245	0	0	0	107245
Marginal	343	131	53	0	135	1	0	19	733	50	0	187710	0	0	189174
Buffer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
External	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	29906	20709	195348	56286	56490	52559	67181	197146	60440	4530	107245	189129	0	0	1036969

4.1 GDM Forecasts

4.1.1 Summaries of the Port and Airport related demand matrices derived in the GDM for the highway and PT assignment models are shown in Table 12 below. The assignment matrices trips are aggregated by purpose, mode and period, and are presented below by port, mode and forecast year. They represent vehicle trips both to and from the ports, between 07:00 and 19:00.

Table 12. Reference Case GDM Assignment Matrices Summary

	Trips				% Increase from 2015			
	Car	PT	LGV	OGV	Car	PT	LGV	OGV
Southampton Port – Gate 4								
2015	917	185	161	169				
2019	1,197	232	210	218	31%	26%	30%	29%
2026	1,467	276	257	267	60%	49%	59%	58%
2031	1,639	303	286	298	79%	64%	77%	76%
2036	1,824	335	318	333	99%	81%	97%	97%
Southampton Port – Gate 10								
2015	714	32	126	163				
2019	931	41	163	210	30%	27%	30%	29%
2026	1,139	46	200	257	59%	44%	59%	58%
2031	1,270	50	223	288	78%	56%	77%	76%
2036	1,412	55	248	321	98%	74%	97%	97%
Southampton Port – Gate 20								
2015	767	7	112	592				
2019	990	10	145	763	29%	38%	29%	29%
2026	1,210	12	178	934	58%	68%	58%	58%
2031	1,352	14	198	1,044	76%	89%	76%	76%
2036	1,506	15	221	1,163	96%	115%	97%	97%
Southampton Airport								
2015	641	37	65	100				
2019	663	38	67	102	4%	3%	2%	2%
2026	758	44	76	115	18%	19%	16%	16%
2031	845	51	83	127	32%	37%	28%	28%
2036	955	60	94	143	49%	62%	43%	43%
Portsmouth Port								
2015	1,475	70	125	58				
2019	2,143	101	181	85	45%	45%	45%	45%
2026	2,858	135	242	113	94%	94%	94%	94%
2031	3,278	155	277	129	122%	122%	122%	122%
2036	3,699	174	313	146	151%	151%	151%	151%

5. RTM REFERENCE FORECASTS

5.1 Summary

5.1.1 This section presents the results from the RTM reference forecasts. Results include flows, and delays.

5.2 Summary RTM Statistics

5.2.1 Figure 7 to Figure 12 give a graphical representation of the following statistics by period and year:

- Demand by userclass;
- Delays and Cruise times;
- PCU Kms;
- Average Speeds;
- Average Trip Length; and
- Average Trip Time.

5.2.2 The modelled time periods are as follows (Note, AM and PM periods represent 3 hours and IP period represents 6 hours):

- AM, 07:00-10:00
- IP, 10:00-16:00
- PM, 16:00-19:00

Figure 7. Demand by Period and Modelled Year

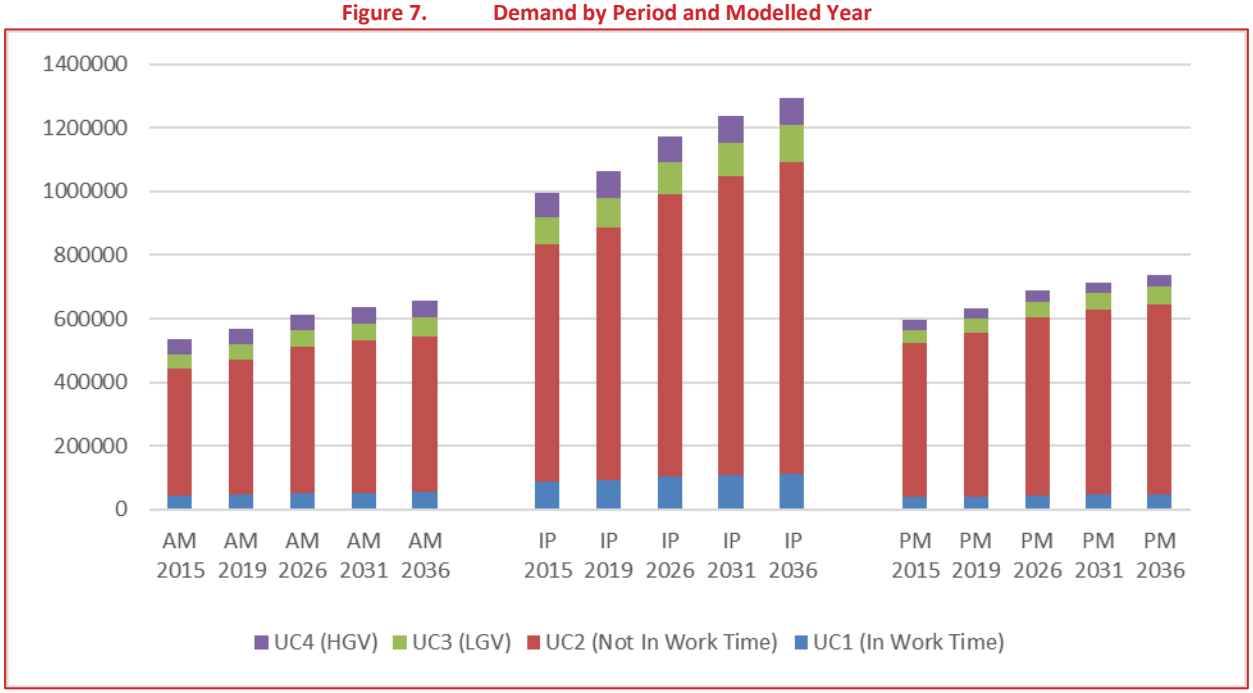


Figure 8. Delays and Cruise Times by Period and Modelled Year (PCU Hours)

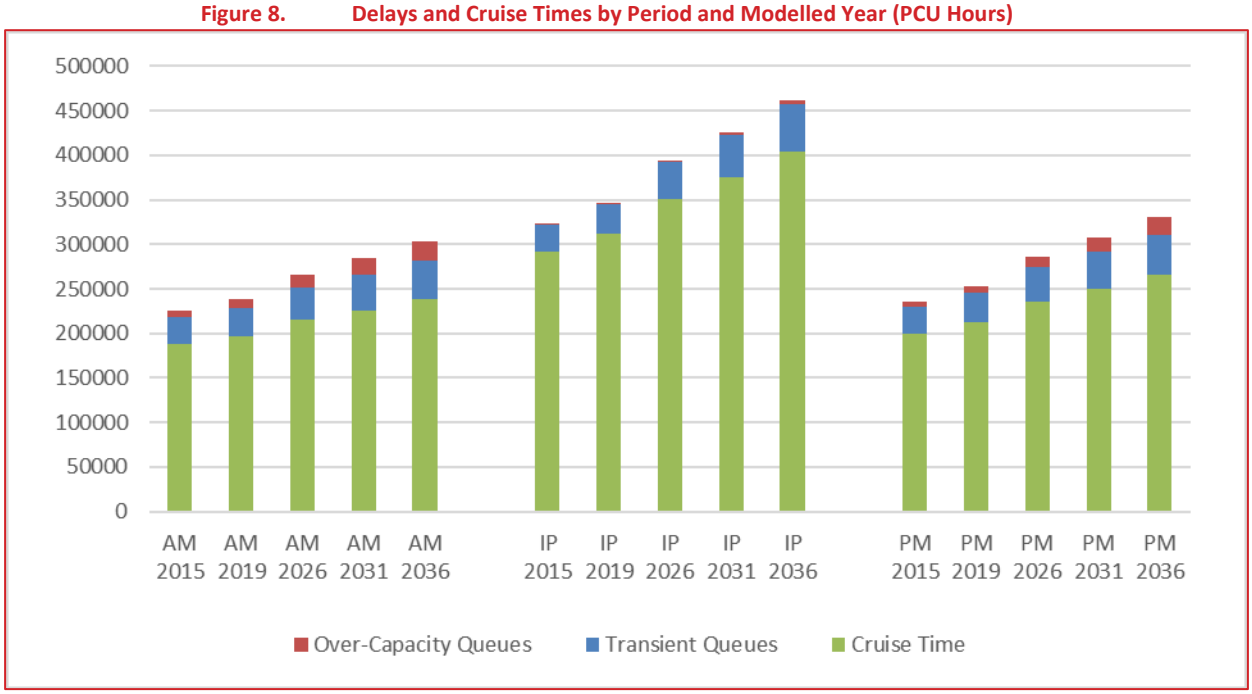


Figure 9. PCU Kms by Period and Modelled Year

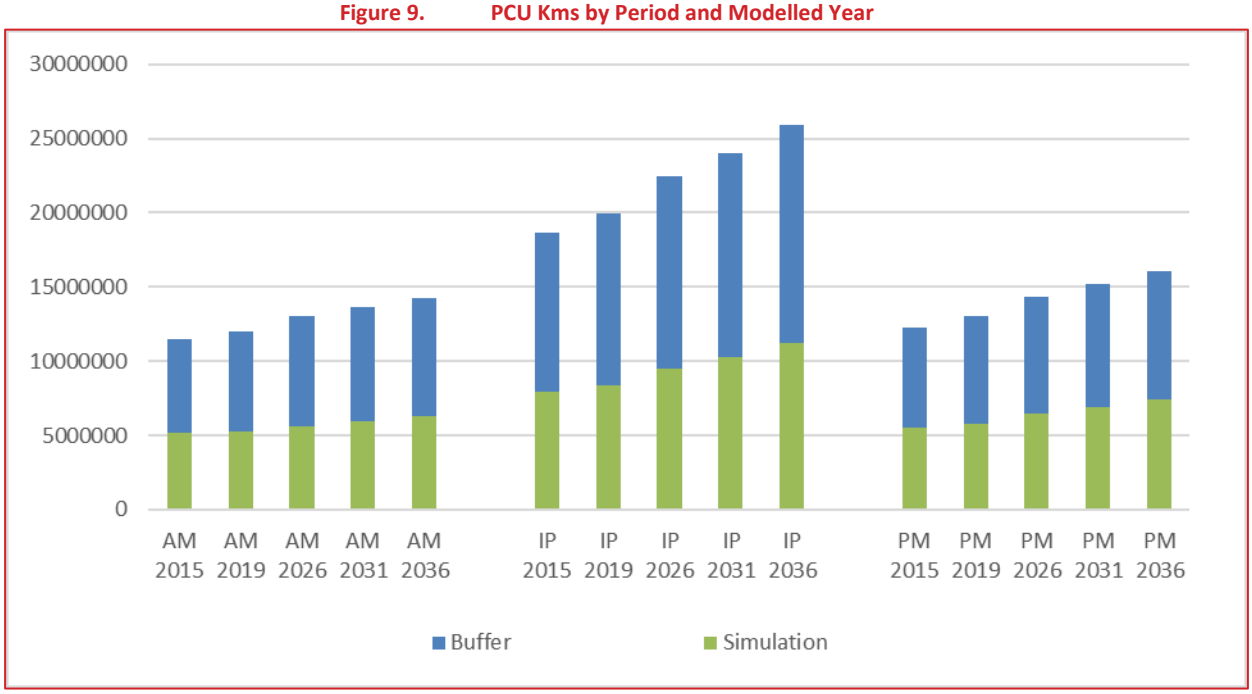


Figure 10. Average Speeds (kph) in the Core Area by Period and Modelled Year

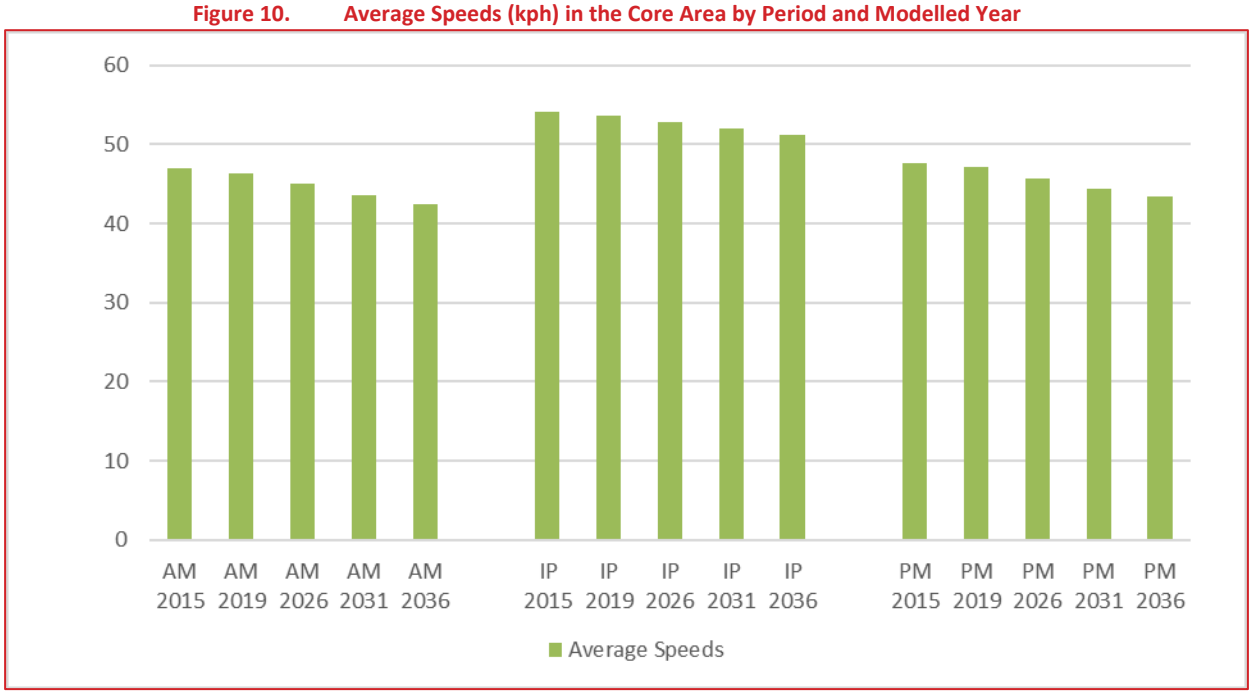


Figure 11. Average Trip Length (km) by Period and Modelled Year

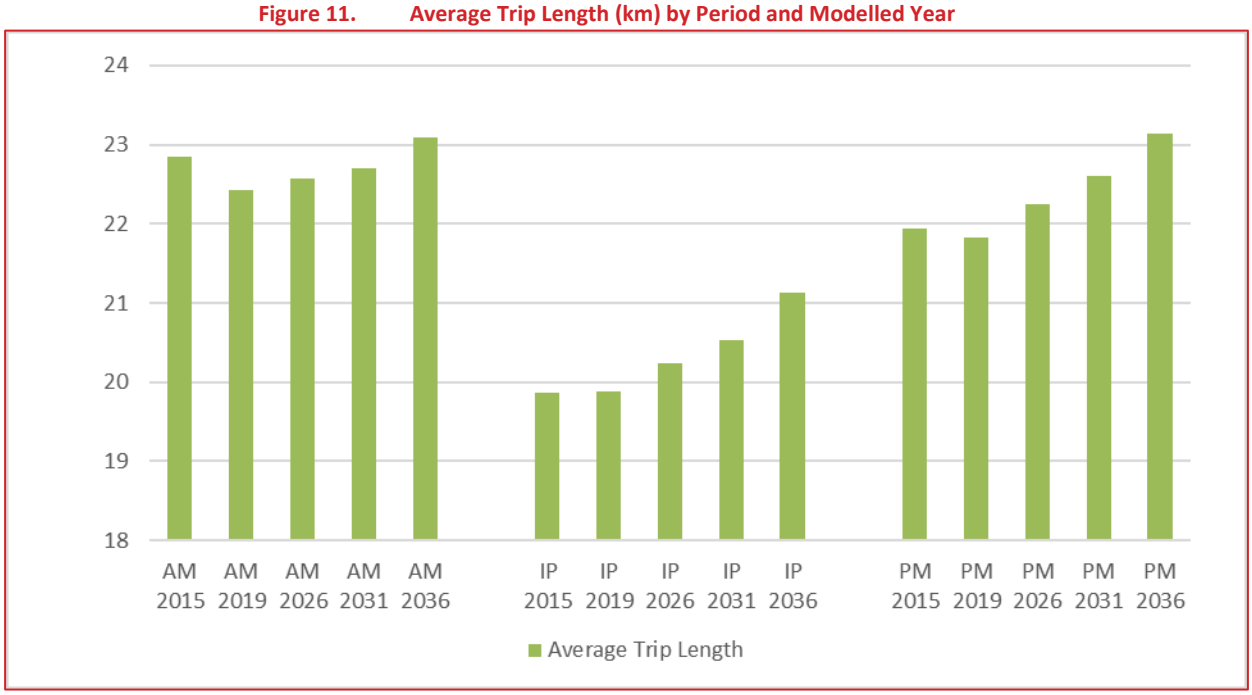
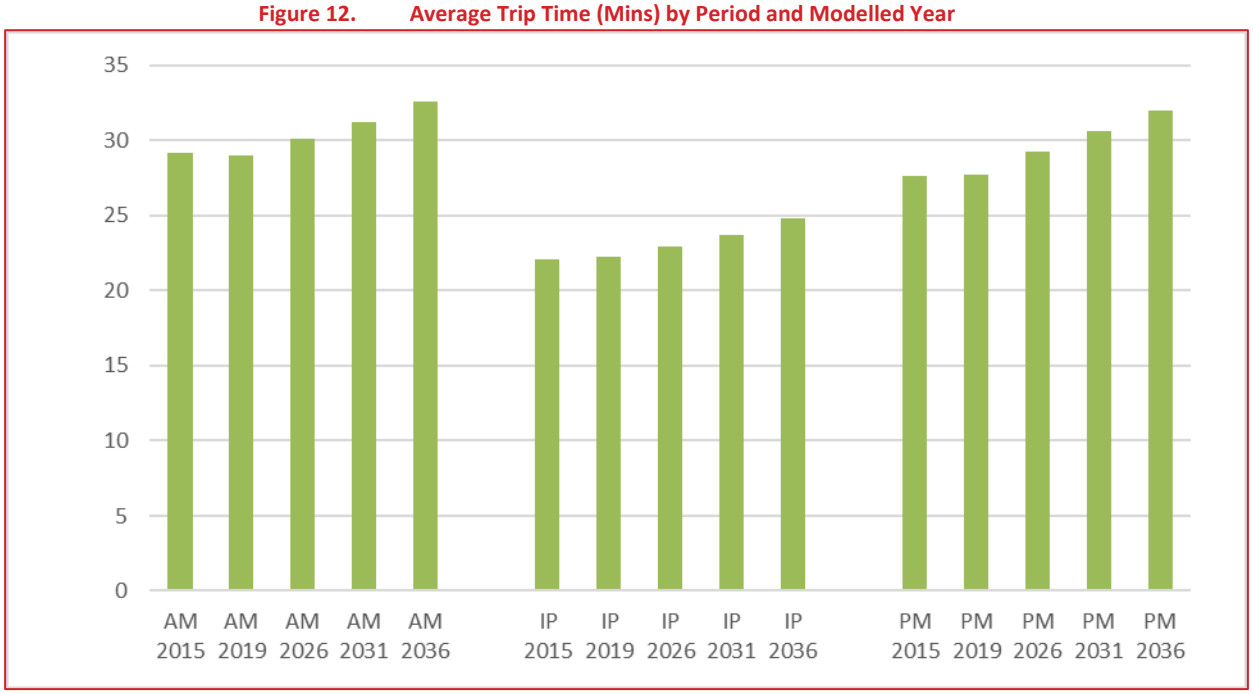


Figure 12. Average Trip Time (Mins) by Period and Modelled Year



5.3 Highway Delays

5.3.1 Figure 13 to Figure 18 show the highway delays for the base case and the reference case for all years to 2036. Delays are shown for Southampton, Portsmouth and Winchester for the AM and PM. The delay is presented in terms of the average delay per pcu.

Figure 13. Average Delay per PCU AM Peak - Southampton

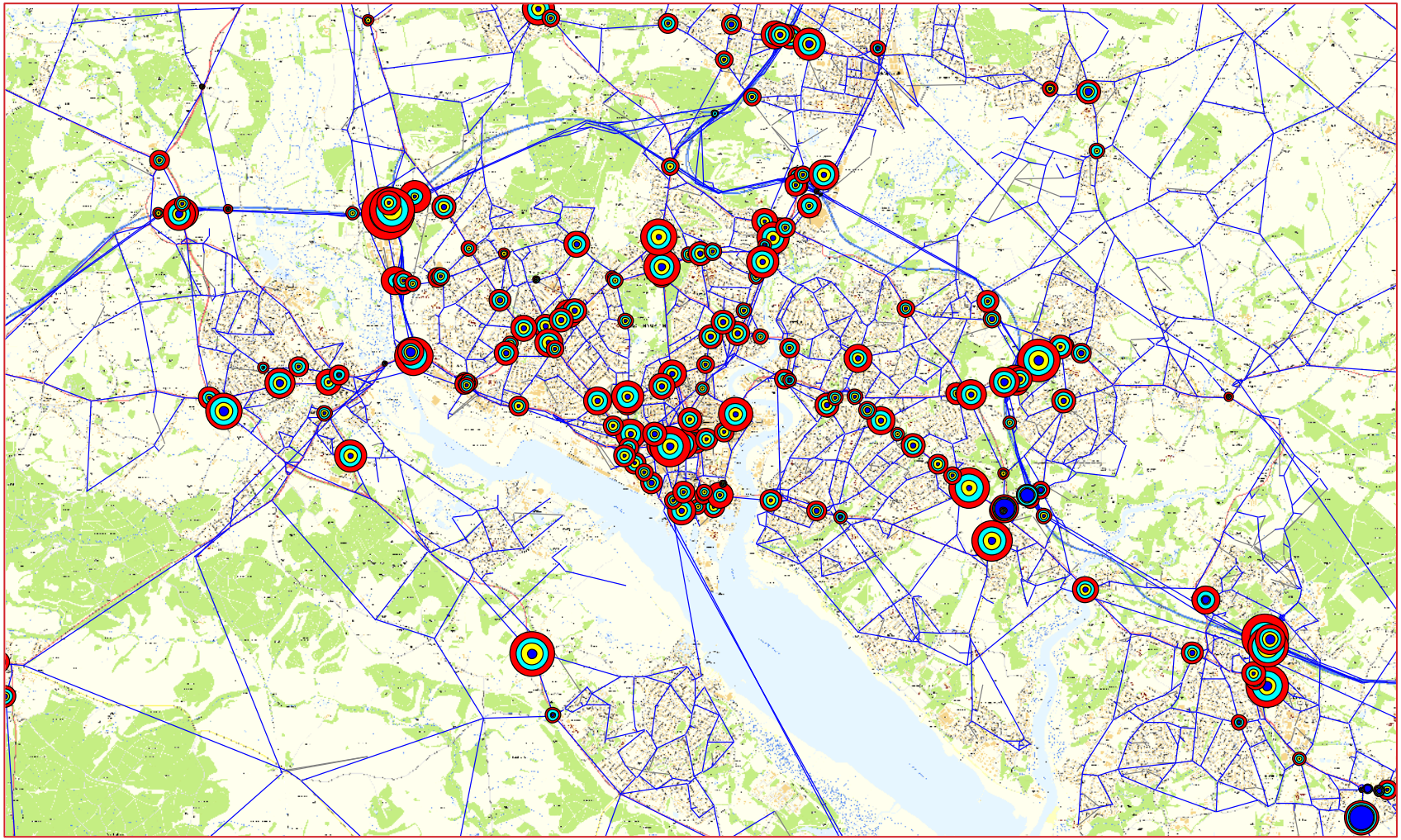


Figure 14. Average Delay per PCU AM Peak – Portsmouth

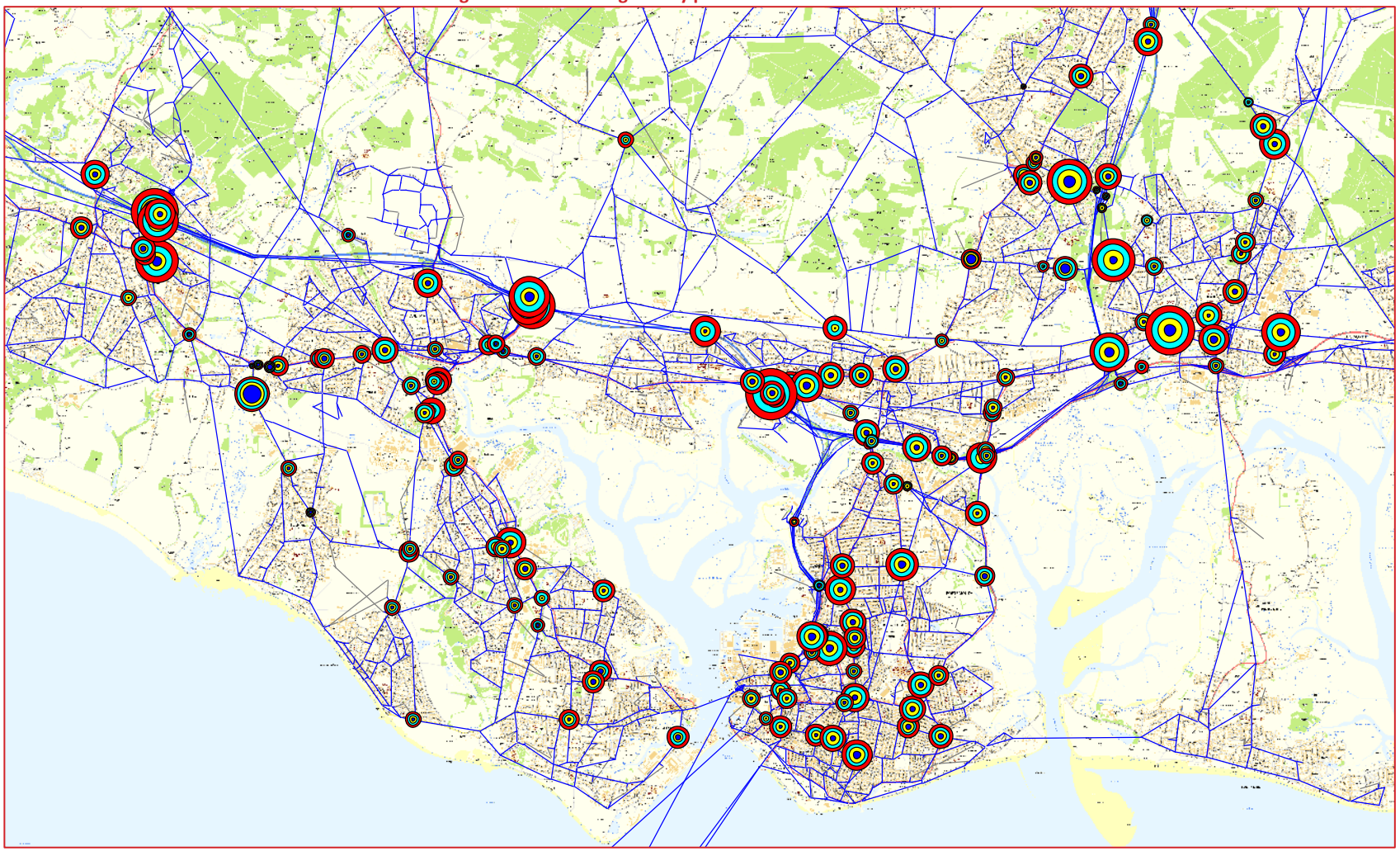


Figure 15. Average Delay per PCU AM Peak – Winchester

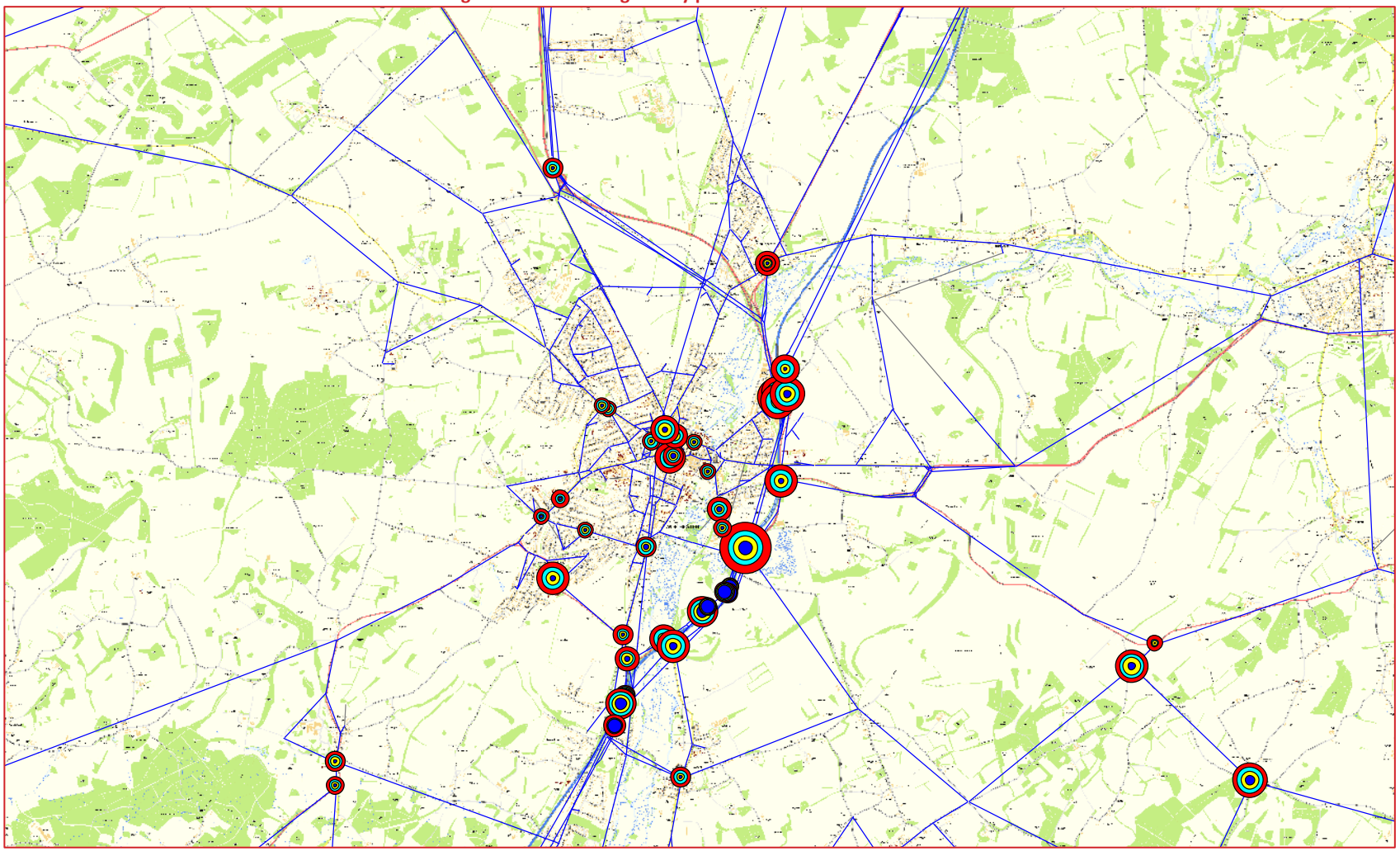


Figure 16. Average Delay per PCU PM Peak – Southampton

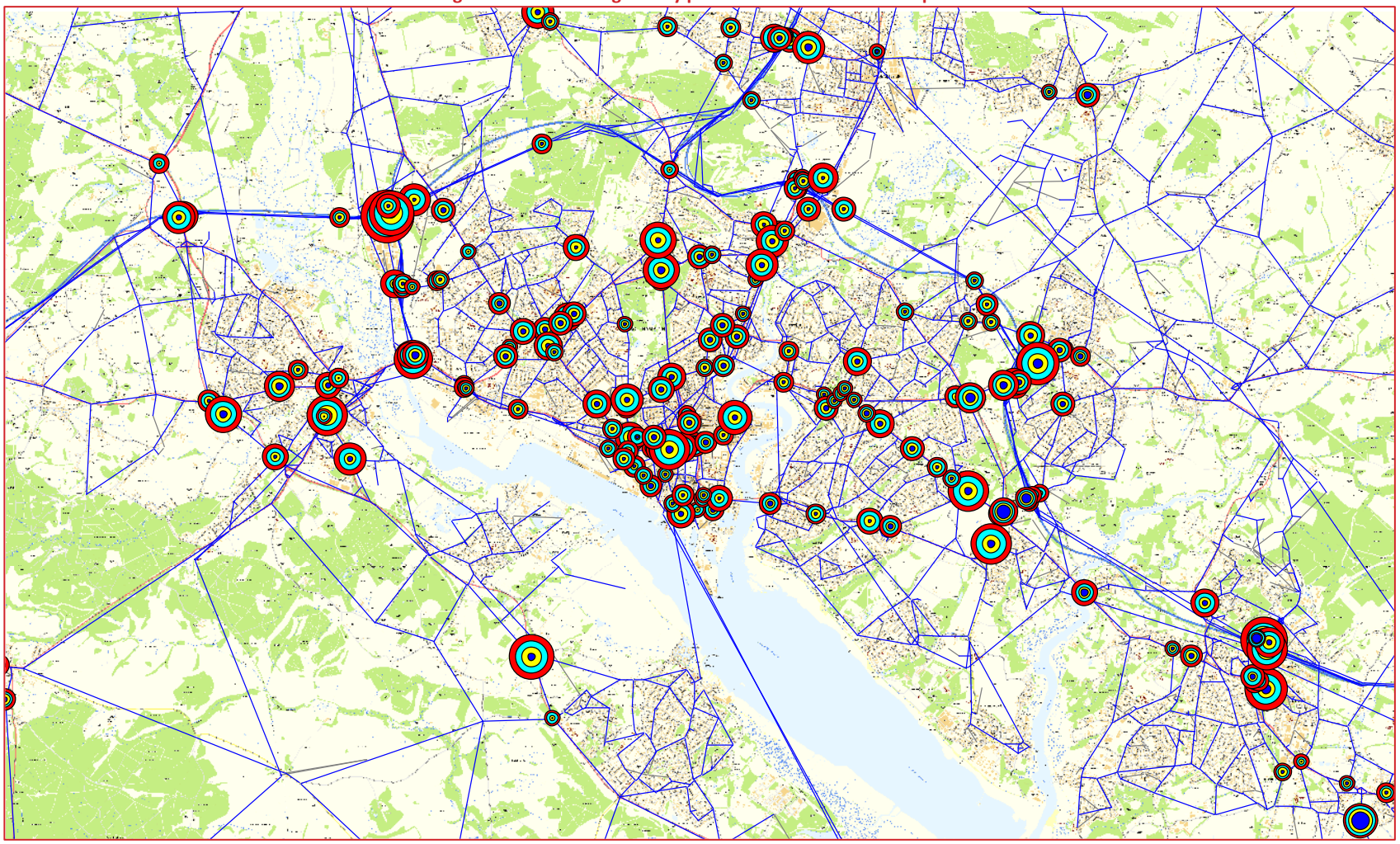


Figure 17. Average Delay per PCU PM Peak – Portsmouth

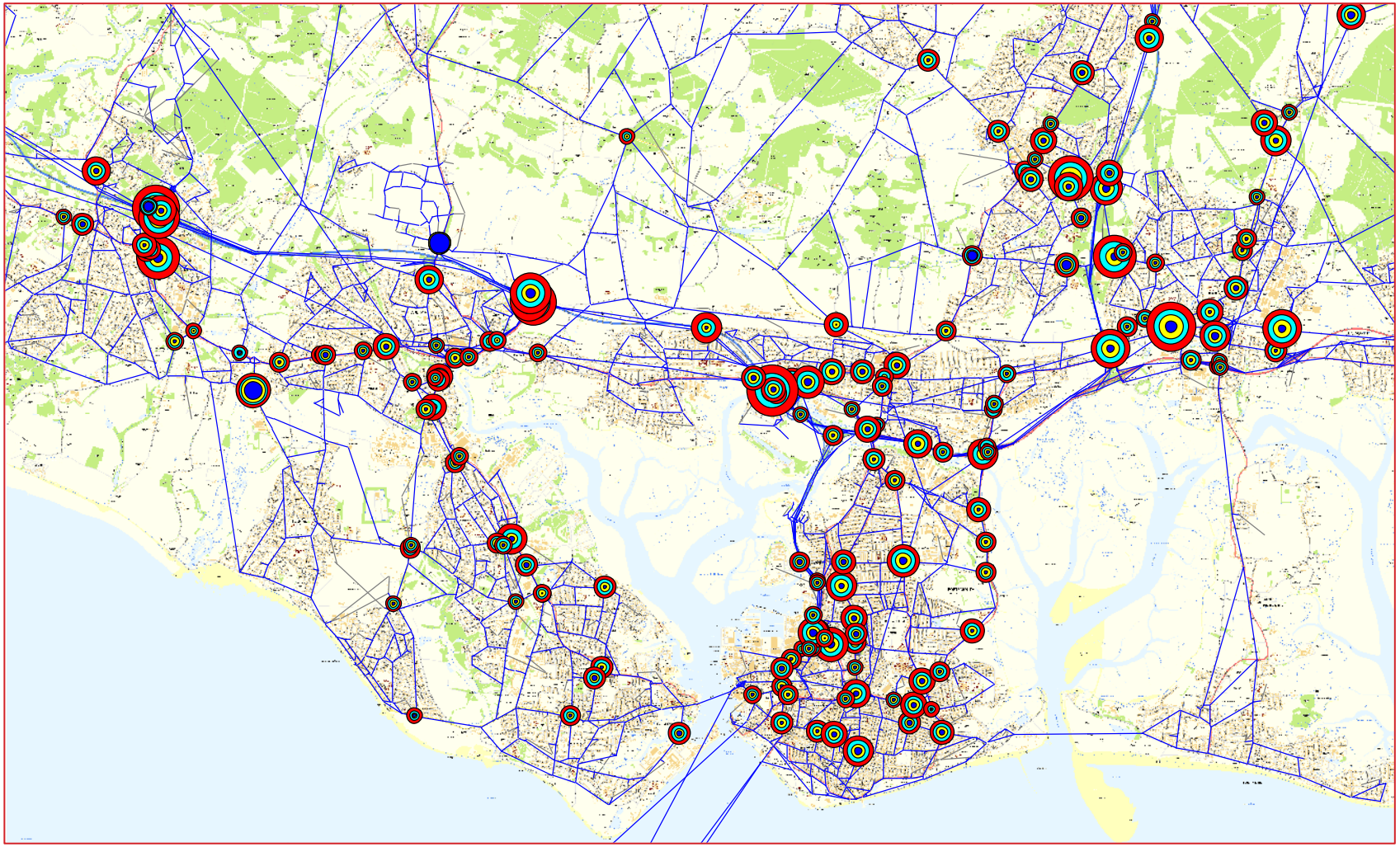
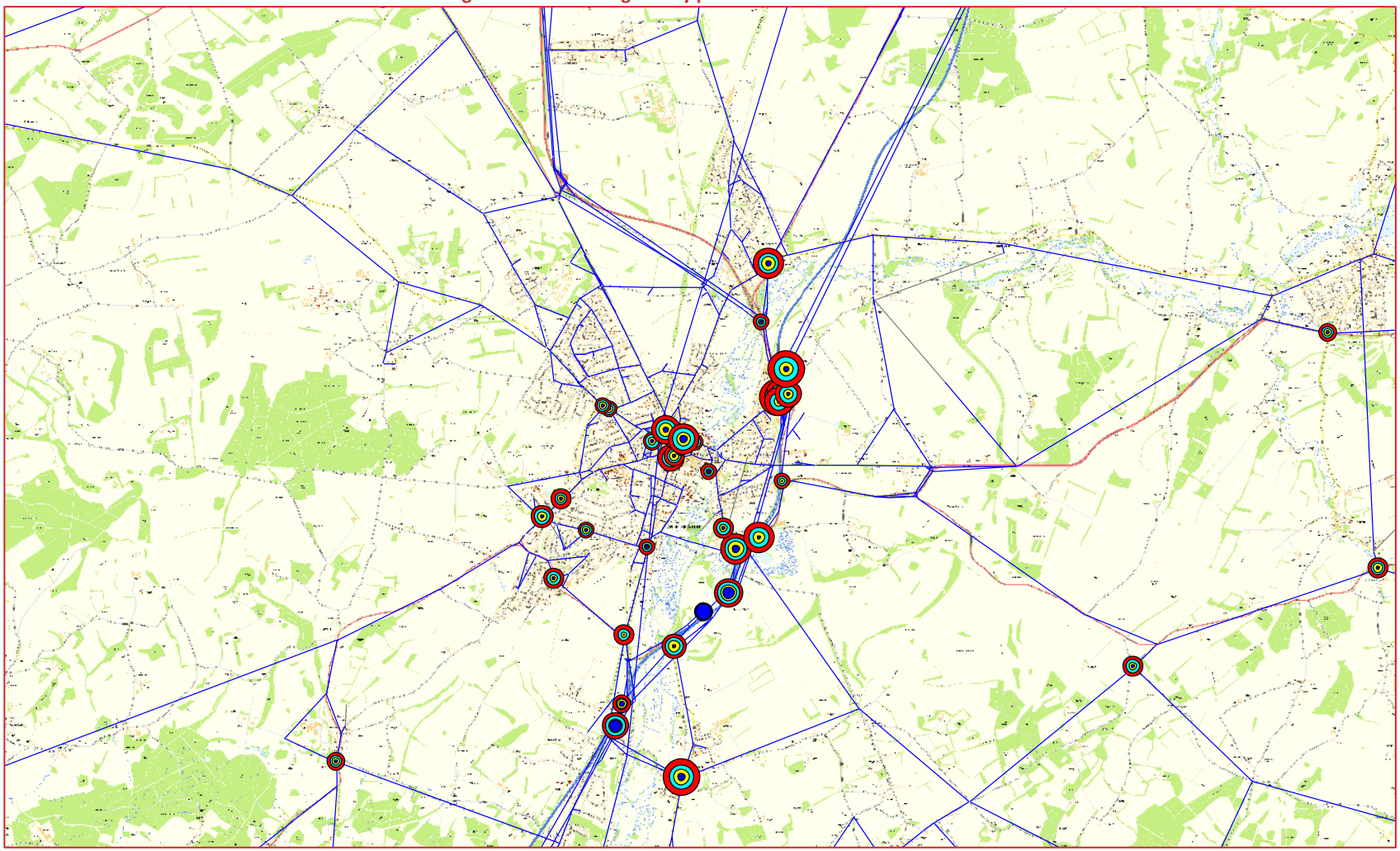


Figure 18. Average Delay per PCU PM Peak – Winchester



5.4 Journey Time

5.4.1 Journey times for 25 routes, in both directions (listed in Table 13), were compared for the base and Reference Case forecast years.

Table 13. List of Journey Time Routes

NO.	SET	MAP ID	DESCRIPTION	DISTANCE (KM)
1	Part 1 – 2010 routes	1	A336 Ringwood Road - A35 Burgess Road	10.85
2	Part 1 – 2010 routes	2	A35 Millbrook Road West - A3025 Hamble Lane	11.44
3	Part 1 – 2010 routes	3	A33 Dorset Street - A335 Twyford Road	9.98
4	Part 1 – 2010 routes	4	A33 Dorset Street - A33	4.84
5	Part 1 – 2010 routes	5	A3024 Bursledon Road - A33 The Avenue	8.21
6	Part 1 – 2010 routes	6	A27 West End Road - A27 Bassett Green Road	9.47
7	Part 1 – 2010 routes	7	A3024 Brunswick Place - A3057 Romsey Road	7.91
8	Part 1 – 2010 routes	8	A27 Western Way - A27 Bridge Road	12.49
9	Part 1 – 2010 routes	9	A32 Mumby Road - B3334 Titchfield Road	10.71
10	Part 1 – 2010 routes	10	A32 Fareham Road - A27 Western Road	12.57
11	Part 1 – 2010 routes	11	A397 Northern Road - A3 London Road	10.93
12	Part 1 – 2010 routes	12	B2177 Portsdown Hill Road - B2149 Havant Road	11.74
13	Part 1 - Portsmouth	1	A2030 Velder Avenue - A2030 Eastern Road	6.29
14	Part 1 - Portsmouth	2	A288 Milton Road - A288 Copnor Road	3.86
15	Part 1 - Portsmouth	3	M275 - A27	5.90
16	Part 1 - Portsmouth	4	A2047 Kingston Crescent - A3 Southampton Road	6.05
17	Part 1 - Portsmouth	5	A3 Marketway - A27 Western Road	6.02
18	Part 2 – 2015 new	1	M3 Junction 11 - A32	10.08
19	Part 2 – 2015 new	2	M27 Junction 2 - A303	33.87
20	Part 2 – 2015 new	3	M27 Junction 2 - A34	27.46
21	Part 2 – 2015 new	Sec 1	Six Dials Junction to Windhover Roundabout	5.72
22	Part 2 – 2015 new	Sec 2	M27 Junction 7 to M3 Junction 11	14.67
23	Part 2 – 2015 new	Sec 3	M27 Junction 10 - M3 Junction 11	23.99
24	Motorway		M27 Junction 3 – Junction 11	28.45
25	Motorway		M3 Junction 8 – Junction 14	32.23

5.4.2 Figure 19 to Figure 23 show the locations of the routes. The change in journey times are shown in Table 14. There are a few instances where journey time drops in the future years, particularly on M27 as a result of the Smart Motorway improvements, but generally, journey times increase over the future years.

Figure 19. Map of Journey Time Assessment Routes: Part 1

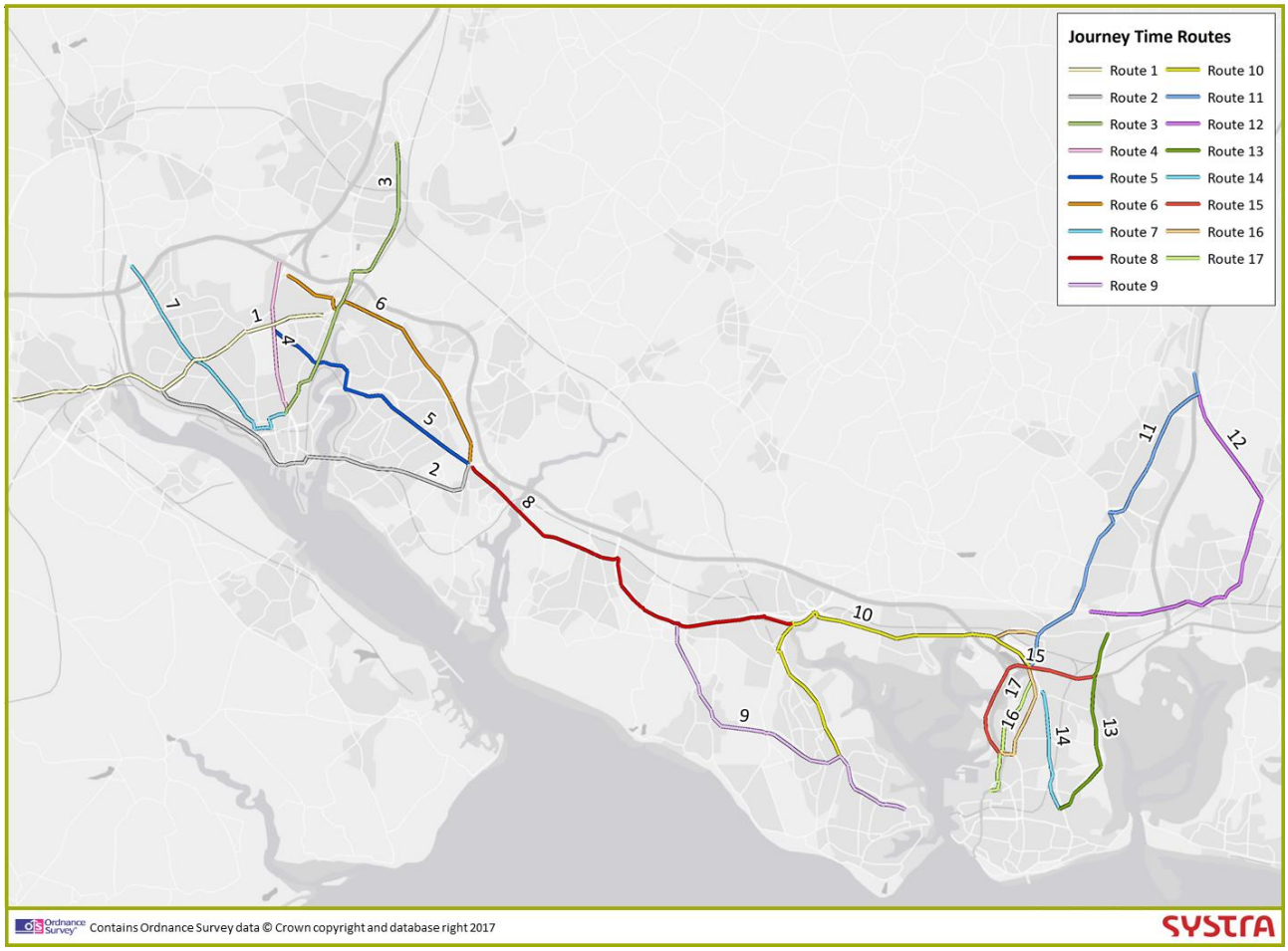


Figure 20. Map of Journey Time Assessment Routes: Part 2 – Route 18 to 20

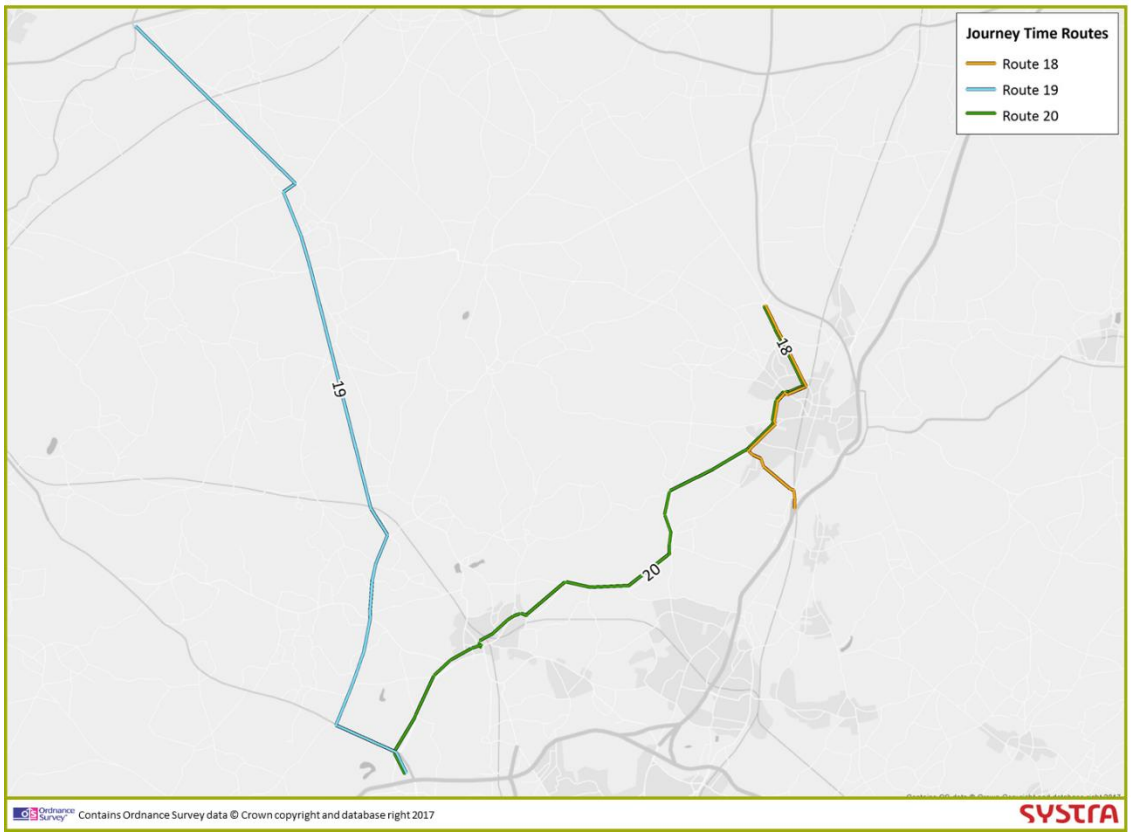


Figure 21. Map of Journey Time Assessment Routes: Part 2 – Route 21 to 23

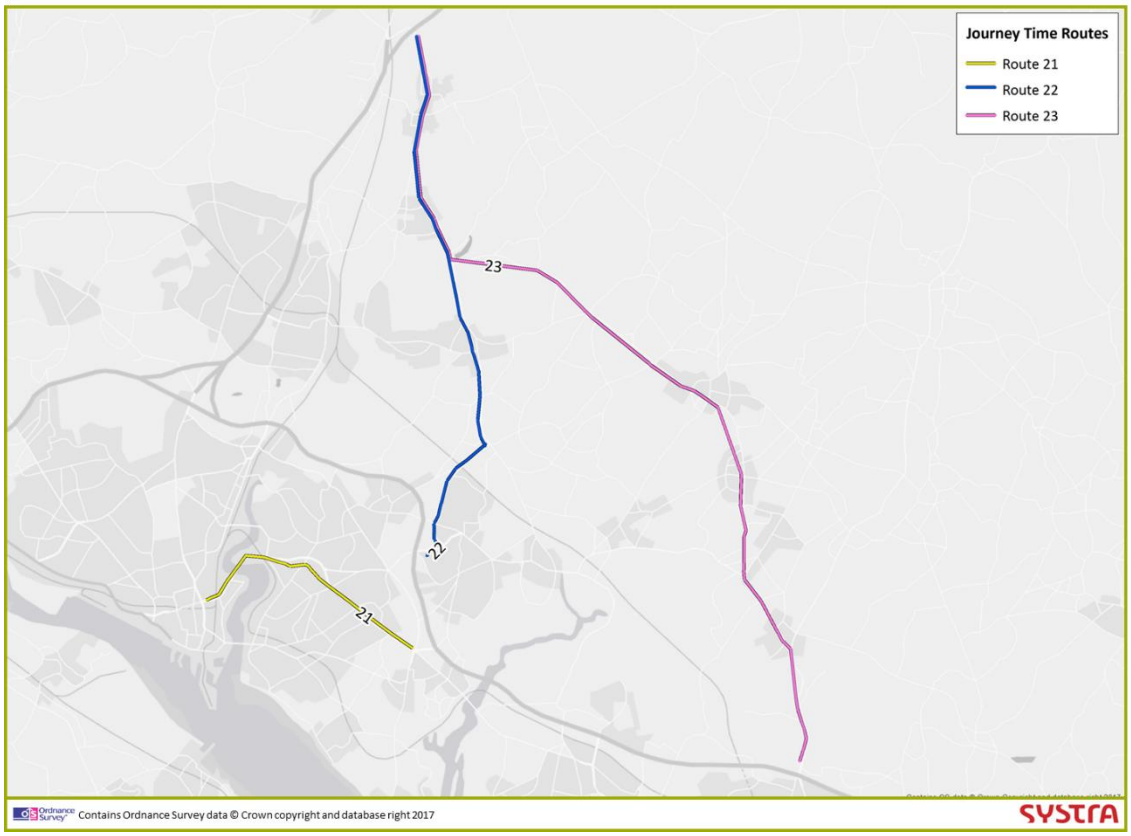


Figure 22. Map of Journey Time Assessment Routes: Motorways – Route 24

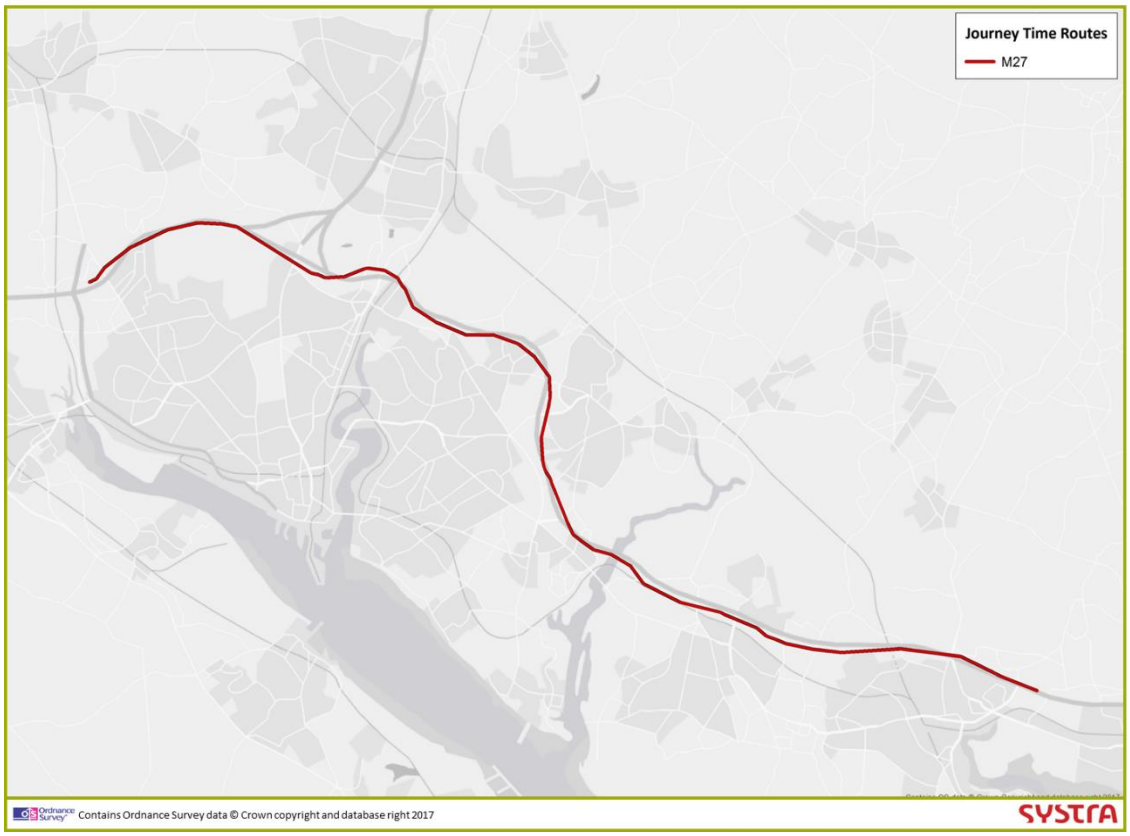


Figure 23. Map of Journey Time Assessment Routes: Motorways – Route 25

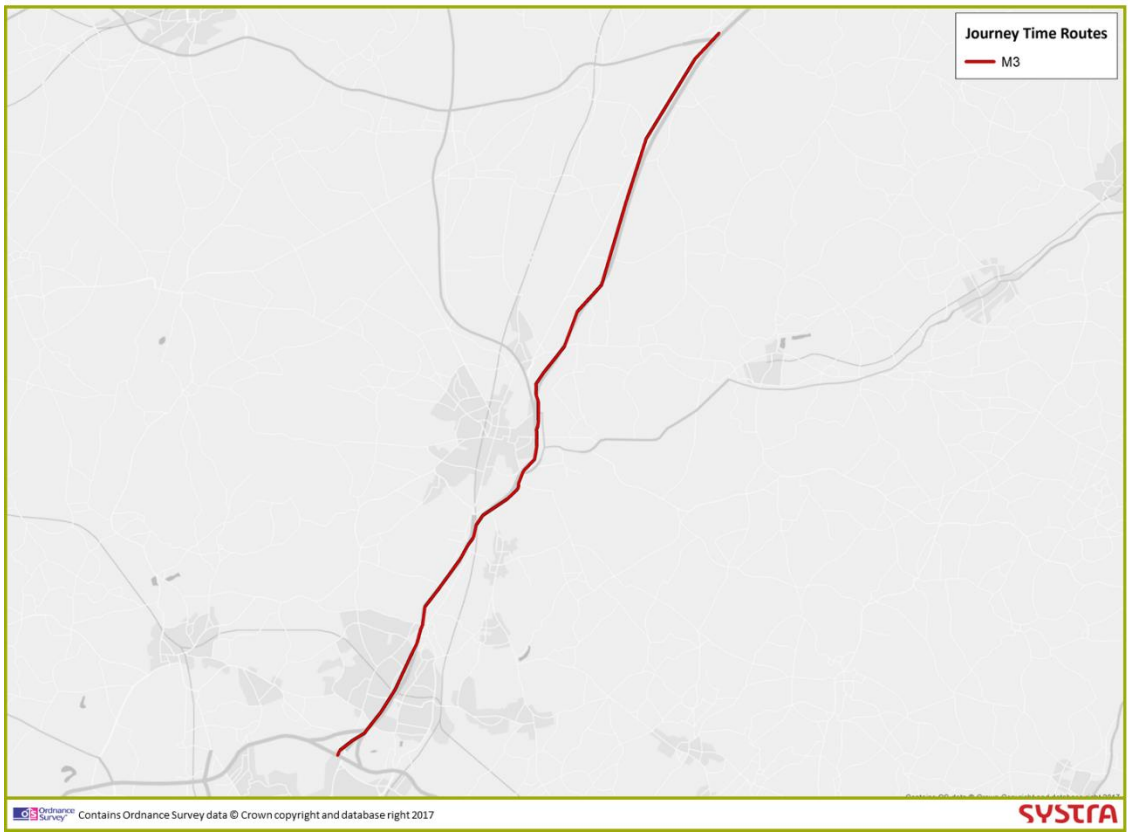


Table 14. Change in JT Routes (Minutes)

		AM Peak					PM Peak					AM Peak Change vs Base				PM Peak Change vs Base			
ID	Route	Base	2019	2026	2031	2036	Base	2019	2026	2031	2036	2019	2026	2031	2036	2019	2026	2031	2036
1	A336 Ringwood Road - A35 Burgess Road	25	25	28	31	34	22	23	24	26	27	2%	12%	24%	35%	5%	12%	20%	26%
1	A35 Burgess Road - A35 Winchester Road	26	26	28	29	30	26	26	28	29	29	2%	7%	13%	18%	2%	7%	12%	14%
2	A35 Millbrook Road West - A3025 Hamble Lane	21	22	25	26	26	22	23	26	27	29	6%	18%	22%	26%	4%	16%	22%	27%
2	A3025 Hamble Lane - A35 Millbrook Road West	22	23	26	27	28	22	23	25	26	27	3%	16%	23%	27%	3%	14%	18%	20%
3	A33 Dorset Street - A335 Twyford Road	18	19	20	21	22	18	19	20	20	21	7%	13%	18%	23%	7%	12%	15%	20%
3	A335 Twyford Road - A33 Dorset Street	21	22	22	24	24	19	20	21	21	23	5%	8%	14%	16%	4%	8%	11%	18%
4	A33 Dorset Street - A33	9	9	10	10	11	8	8	9	9	10	2%	16%	21%	31%	7%	16%	22%	31%
4	A33 - A33 Dorset Street	11	11	12	13	13	10	10	12	12	12	4%	15%	19%	20%	3%	16%	21%	25%
5	A3024 Bursledon Road - A33 The Avenue	23	24	28	28	30	24	24	24	25	25	1%	20%	18%	26%	2%	3%	5%	7%
5	A33 The Avenue - A3024 Bursledon Road	20	20	21	22	23	20	21	22	22	23	0%	6%	10%	12%	2%	8%	11%	14%
6	A27 West End Road - A27 Bassett Green Road	18	17	19	19	20	16	16	17	18	18	-2%	4%	9%	12%	2%	9%	11%	13%
6	A27 Bassett Green Road - A27 West End Road	15	15	16	16	17	15	15	16	17	17	2%	4%	5%	9%	1%	6%	11%	13%
7	A3024 Brunswick Place - A3057 Romsey Road	18	19	19	20	21	18	19	20	21	21	3%	6%	9%	12%	6%	10%	14%	16%
7	A3057 Romsey Road - A3024 Brunswick Place	18	19	20	21	21	17	18	19	20	21	3%	10%	14%	17%	5%	10%	14%	19%
8	A27 Western Way - A27 Bridge Road	22	23	23	24	26	22	23	22	22	23	4%	4%	9%	15%	1%	-3%	1%	4%
8	A27 Bridge Road - A27 Western Way	22	20	21	21	21	19	18	19	19	20	-5%	-4%	-2%	-2%	-3%	1%	3%	6%
9	A32 Mumby Road - B3334 Titchfield Road	20	23	27	29	31	18	19	20	22	24	13%	34%	43%	54%	4%	11%	23%	33%
9	B3334 Titchfield Road - A32 Mumby Road	18	19	20	20	21	19	20	21	21	22	4%	7%	10%	16%	4%	11%	13%	15%
10	A32 Fareham Road - A27 Western Road	25	26	28	28	29	25	27	29	32	35	3%	9%	11%	15%	6%	17%	27%	38%
10	A27 Western Road - A27 Western Road	27	27	29	30	32	24	24	26	26	27	0%	5%	11%	18%	3%	8%	10%	15%
11	A397 Northern Road - A3 London Road	21	22	22	22	22	23	24	25	25	25	4%	5%	5%	4%	5%	9%	10%	10%
11	A3 London Road - A397 Northern Road	26	27	27	27	27	23	24	26	26	26	2%	3%	3%	1%	5%	9%	10%	12%
12	B2177 Portsdown Hill Road - B2149 Havant Road	22	23	23	23	23	20	20	21	21	21	2%	4%	4%	3%	2%	5%	4%	3%
12	B2149 Havant Road - B2177 Portsdown Hill Road	23	22	23	23	23	22	22	22	23	23	-2%	0%	1%	0%	-3%	0%	1%	2%
13	A2030 Velder Avenue - A2030 Eastern Road	11	12	15	16	17	10	11	12	12	12	11%	32%	44%	52%	5%	15%	17%	17%
13	A2030 Eastern Road - A2030 Velder Avenue	8	8	8	8	8	9	10	10	11	11	-3%	-3%	-4%	-4%	7%	17%	21%	23%
14	A288 Milton Road - A288 Copnor Road	7	7	7	7	7	8	8	7	7	7	0%	-1%	-1%	-1%	-1%	-4%	-4%	-4%
14	A288 Copnor Road - A288 Milton Road	9	9	10	10	10	9	10	10	10	10	9%	13%	13%	12%	9%	10%	12%	12%
15	M275 - A27	5	6	8	8	9	5	6	7	8	8	16%	50%	68%	86%	15%	37%	48%	54%
15	A27 - M275	4	5	5	5	5	4	4	5	5	5	4%	7%	9%	11%	8%	19%	26%	32%
16	A2047 Kingston Crescent - A3 Southampton Road	15	16	18	19	20	15	16	18	19	20	9%	24%	31%	37%	13%	25%	31%	34%
16	A3 Southampton Road - A2047 Kingston Crescent	12	13	13	12	12	12	13	14	15	15	2%	2%	1%	1%	7%	16%	20%	20%
17	A3 Marketway - A27 Western Road	13	15	18	20	21	12	12	13	13	13	16%	38%	50%	59%	1%	5%	6%	6%
17	A27 Western Road - A3 Marketway	11	11	12	12	12	11	12	13	14	14	2%	5%	6%	6%	7%	16%	19%	23%
18	M3j11 - A32	15	15	15	15	16	13	13	13	14	14	2%	6%	6%	12%	1%	3%	5%	10%
18	A32 - M3j11	14	14	14	15	15	14	14	15	15	16	3%	4%	7%	12%	3%	7%	7%	13%
19	M27j2 - A303	33	33	34	35	36	33	33	33	34	35	0%	3%	6%	7%	1%	2%	4%	7%
19	A303 - M27j2	37	38	38	39	39	34	35	36	36	36	2%	2%	3%	4%	2%	6%	7%	7%
20	M27j2 - A34	18	19	20	21	22	18	19	20	20	21	7%	13%	18%	23%	7%	12%	15%	20%
20	A34 - M27j2	21	22	22	24	24	19	20	21	21	23	5%	8%	14%	16%	4%	8%	11%	18%
21	Six Dials Jun To Windhover Rbt	15	15	16	17	18	16	16	17	18	19	-1%	8%	15%	19%	0%	9%	15%	18%
21	Windhover Rbt To Six Dials Jun	17	18	20	20	21	16	17	19	19	19	3%	16%	19%	22%	3%	14%	16%	16%
22	M27J7 To M3J11	23	22	22	23	23	23	24	25	25	26	-3%	-2%	0%	3%	3%	7%	9%	11%
22	M3j11 - M27j7	21	22	22	22	23	23	23	24	24	25	4%	6%	7%	7%	-2%	2%	3%	8%
23	M27j10 - M3j11	29	28	29	29	30	28	28	30	30	30	-2%	0%	1%	5%	0%	5%	6%	8%
23	M3j11 - M27j10	26	26	28	28	28	28	28	30	30	31	0%	5%	5%	5%	-1%	5%	5%	8%
24	M27 Eastbound	20	18	19	20	20	22	18	20	21	22	-13%	-6%	-4%	-4%	-16%	-8%	-4%	0%
24	M27 Westbound	26	22	23	24	25	22	20	21	22	23	-15%	-10%	-7%	-3%	-11%	-5%	-2%	2%
25	M3 Southbound	20	21	20	21	21	22	23	22	22	23	4%	-2%	1%	5%	3%	-3%	-1%	4%
25	M3 Northbound	27	28	25	26	26	21	21	20	21	22	5%	-4%	-3%	0%	4%	-1%	2%	5%

6. PTM REFERENCE FORECASTS

6.1 Summary

6.1.1 This chapter presents the key results from the PTM reference forecasts.

6.1.2 Figure 24 gives a graphical representation of the total public transport demand by period and year. Figure 25 gives PT boardings by mode, period and year.

Figure 24. PT Demand by Period and Modelled Year

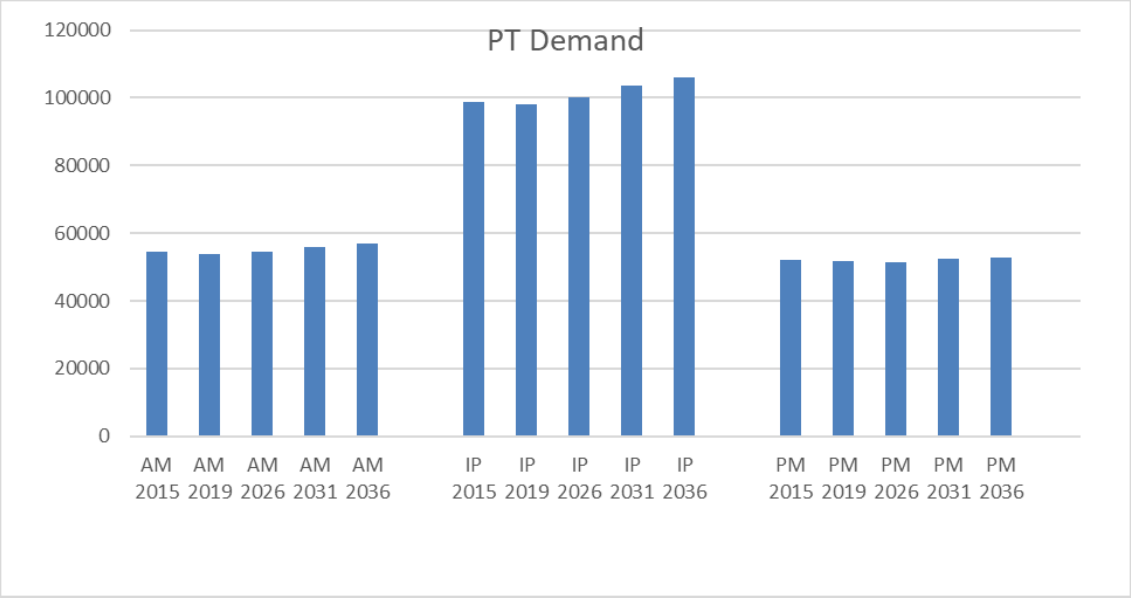


Figure 25. PT Boardings by Mode, Period and Modelled Year

7. CONCLUSIONS

7.1 Summary

7.1.1 The approach and results presented in this note demonstrate that the SRTM components interact as designed and the results produced match the responses that might be expected. Given that these responses are themselves calibrated on both base data and WebTAG sensitivity criteria the model projects for future years represent a compliant projection that reacts to changing inputs assumptions.

7.1.2 Clearly clarity and consensus of these assumptions are required to make use of the model but the reference cases produced thus far provide a working set of future scenarios based on the best available data and assumptions available at the time.

7.1.3 As a result of ongoing changes to the built environment, including new planning permissions and development constructions; highway infrastructure improvements; and changes to public transport services, key elements of the transport system in reality are in a gradual, continuous state of evolution. Whilst the model's reference year scenarios seek to model these changes as accurately as possible, new decisions and changes not accounted for in the reference cases occur periodically – this means that there is a need to periodically update planning and highway inputs in order to try to maintain the accurate representation provided by the model.

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