Fareham Draft Local Plan - Development Site Allocations

Interim Transport Assessment

Fareham Borough Council

24 October 2017

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This document has 82 pages including the cover.

Document history

Job number: 5158692			**Document ref: Fareham TA**			
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0.1	Draft	LH	MB	SK	MB	16/06/17
Rev 0.2	Draft	LH	MB	SK	MB	11/07/17
Rev 0.3	Draft, including summary	LH	MB	SK	MB	14/07/17
Rev 0.4	Draft with revised site allocations	LH	MB	SK	MB	04/09/17
Rev 0.5	Draft addressing client comments	LH	MB	SK	MB	22/09/17
Rev 0.6	Draft addressing final client comments	LH	MB	SK	MB	5/10/17
Rev 1.0	For Issue	LH	MB	SK	MB	24/10/17

Client signoff

Client	Fareham Borough Council
Project	Fareham Local Plan - Development Site Allocation
Document title	Fareham Local Plan Transport Assessment
Job no.	5158692
Copy no.	1
Document reference	Fareham TA

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Introduction

This document has been prepared by Atkins on behalf of Fareham Borough Council (FBC) to inform the proposed development site allocations within the emerging FBC Local Plan.

It describes the availability and operation of the transport infrastructure within the Borough of Fareham and considers the potential transport related impacts of the proposed land allocations in the emerging Local Plan. It also considers what potential interventions may be required to address any identified incremental impacts specifically resulting from the proposed site allocations that would have significant transport related adverse effects.

Local Plans are overarching development plans prepared by local authorities detailing the policies and proposals that will shape developments and land use in the local area over a set period. Local Plans are used to guide decision making at all levels regarding future land use planning and development in the local area, including identifying the interventions necessary to support sustainable development that facilitates economic and population growth.

Fareham Borough Council's currently adopted Local Plan comprises of the following three parts;

- Local Plan Part 1: Core Strategy (August 2011);
- Local Plan Part 2: Development Sites and Policies (June 2015); and
- Local Plan Part 3: The Welborne Plan (June 2015).

Local Plan Part 1 sets out the vision, objectives, and overall development strategy for the Borough up until 2026, whilst Local Plan Part 2 sets out the approach to managing and delivering development through development management policies. Local Plan Part 3, The Welborne Plan, is a specific plan which sets out how Welborne should be developed over the period up to 2036.

Local Plan Parts 1 and 2 will be replaced in due course by the new Fareham Local Plan which will inform development within the Borough until 2036.

Report Structure

The remainder of this report is structured as follows:

- Section 1 summaries the policy and strategic context for the FBC Local Plan and this Transport Assessment;
- Section 2 describes the provision and operation of existing transport infrastructure within the Borough;
- Section 3 provides a commentary on current transport related issues;
- Section 4 discusses the likely transport related impacts arising from forecast future population and economic growth both within FBC and beyond;
- Section 5 describes proposed site allocations in the emerging Local Plan and how they have been selected.
- Section 6 assesses the likely transport related incremental impacts specifically resulting from the proposed site allocations in the emerging Local Plan; and
- Section 7 identifies the potential interventions that may be required to address any identified incremental impacts specifically resulting from the proposed site allocations that would have significant transport related adverse effects.

1. Policy and Strategic Context

This section describes the national, regional and local transport related policies and strategic context for relevant to the FBC Local Plan and this Transport Assessment.

1.1. National Policy

1.1.1. The **National Planning Policy Framework (NPPF)**[1] clearly sets out the national policy expectations relating to transport, its place within the planning process, and its contribution to the achievement of sustainable development.

1.1.2. In addition, the NPPF policies relating to transport are set out below in **Figure 1-1**:

1.1.3. The NPPF also provides guidance on the setting of local parking standards for residential and non-residential development, and recommends local planning authorities should consider:

- The accessibility of the development;
- The type, mix, and use of development;
- The availability of and opportunities for public transport;
- Local car ownership levels; and
- An overall need to reduce the use of high-emission vehicles.

1.1.4. It also states that "Local planning authorities should identify and protect, where there is robust evidence, site and routes which could be critical in developing infrastructure to widen transport choice" and "Local authorities should seek to improve the quality of parking in town centres so that it is convenient, safe and secure, including appropriate provision for motorcycles. They should set appropriate parking charges that do not undermine the vitality of town centres. Parking enforcement should be proportionate."

1.1.5. The **Planning Practice Guidance for Local Plans (PPGs): 'Transport evidence bases in plan making and decision taking'**[2] sets out the requirements of what information should be included within a Local Plan in Transport and Highways terms.

1.1.6. February 2015 saw the introduction of the **Infrastructure Act 2015**[3], outlining the Government's ambitions to build a better transport system. The act targets "transport, energy provision, housing development, and nationally significant infrastructure projects".

1.1.7. The act will also set a **Cycling and Walking Investment Strategy (CWIS)**[4] as a means for funding improvements identified through the strategies. The CWIS will be published by the Department for Transport (DfT) once results of the consultation held in Spring 2016 are analysed.

1.1.8. The DfT has announced that Hampshire will receive £5.1m from **The National Productivity Investment Fund**[5] to improve the local road network and where possible provide upgrades to highway infrastructure. Hampshire County Council has stated that they intend to use the funds in 2017/18 to:

- Add to the structures strengthening programme;
- Replace and upgrade some older traffic signal installations to improve efficiency and reduce congestion; and
- Further carriageway resurfacing with an emphasis on strengthening, making the roads more resilient, and improving links to new development.

[1] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[2] https://www.gov.uk/guidance/transport-evidence-bases-in-plan-making-and-decision-taking
[3] http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted
[4] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/512895/cycling-and-walking-investment-strategy.pdf
[5] https://www.hants.gov.uk/transport/strategies/transportstrategies#step-9

Figure 1-1 NPPF Policies Relating to Transport

NPPF Policies Relating to Transport

- ✓ Pursuing sustainable development involves seeking positive improvements in the quality of the built natural, and historic environment as well as in people's quality of life, including (but not limited to): improving the conditions in which people, live, work, travel and take leisure;
- ✓ Actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant developments in locations which are or can be more sustainable;
- ✓ Local authorities should work with neighbouring authorities and transport providers to develop strategies for viable infrastructure necessary to support sustainable development;
- ✓ Safe and suitable access to the site should be achieved for all people;
- ✓ Plans should protect and exploit opportunities for the use of sustainable transport modes, and where practicable accommodate the efficient delivery of goods and supplies, give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- ✓ Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter;
- ✓ Incorporate facilities for charging plug-in and other ultra-low emission vehicles;
- ✓ Consider the needs of people with disabilities by all modes of transport;
- ✓ Local Plans should seek opportunities to achieve each of the economic, social, and environmental dimensions of sustainable development and net gains across all three;
- ✓ Significant adverse impacts should be avoided and where possible, alternate options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate should be considered;
- ✓ Local Plans should plan positively for the provision of infrastructure for transport and assess the quality and capacity; and
- ✓ Plans should be deliverable and transport and other costs should be considered to ensure viability and that there is a reasonable prospect of planned infrastructure is deliverable in a timely fashion.

1.2. Regional Policy

1.2.1. Hampshire County Council (HCC) is the Highway Authority for the road network in Fareham Borough. HCC has set out its long-term aspirations and strategy for transport and travel in the document **Hampshire Local Transport Plan – Part A: Long-Term Strategy (2011-2031)**[6]. The Local Transport Plan (LTP) builds on previous local transport plans and seeks to make improvements to the transport system to benefit people living and working in Hampshire.

[6] http://documents.hants.gov.uk/transport/HampshireLTPPartALongTermStrategy2011-2031RevisedApril2013.pdf

1.2.2. The Hampshire LTP focuses on the need to maximise the efficiencies of the existing infrastructure network and therefore focuses its policies on five main themes; highway resilience, traffic management, public transport, quality of life, and place and transport growth areas.

1.2.3. Chapter 7 within the Hampshire LTP forms an independent freestanding document to cover the South Hampshire area, in which Fareham is located. **Local Transport Plan 3: Joint Strategy for South Hampshire (LTP3)**[7] was developed jointly by three Local Transport Authorities, namely Hampshire County Council, Portsmouth City Council, and Southampton City Council; working together as Transport for South Hampshire (TfSH), but now renamed as Solent Transport. Solent Transport is covered in more detail in **Section 1.2.13**

1.2.4. LTP3 focuses on seven key transport outcomes for the South Hampshire area, which contribute to the policies set out within LTP3; the desired outcomes are detailed in **Figure 1-2** below:

Figure 1-2 LTP3 Key Transport Outcomes

LTP3 Key Transport Outcomes

1. Reduced dependence on the private car through an increased number of people choosing public transport and the 'active travel' modes of walking and cycling;
2. Improved awareness of the different travel options available to people for their journeys, enabling informed choices about whether people travel, and how;
3. Improved journey time reliability for all modes;
4. Improved road safety within the sub-region;
5. Improved accessibility within and beyond the sub-region;
6. Improved air quality and environment, and reduced greenhouse gas emissions; and
7. Promoting a higher quality of life.

1.2.5. The Solent Transport authorities will seek to address the challenges of achieving the desired outcomes through a policy framework consisting of 14 policies. The Solent Transport philosophy of *Reduce-Manage-Invest*[8] is central for each proposed policy. Solent Transport authorities will work to reduce the need to travel, maximise the use of existing transport infrastructure, and delivery targeted improvements. The policies seek to:

- Support sustainable economic growth;
- Ensure reliable access to and from the three main 'gateways' in this area (the two ports and the airport);
- Maximise the capacity of existing roads;
- Achieve a high quality and well-maintained transport network;
- Delivery improvements in air quality;
- Develop sub-regional approaches to managing parking;
- Improve road safety;
- Promote walking and cycling;
- Encourage private investment in public transport (buses, taxis, etc...) services using high-quality vehicles;
- Improve strategic interchanges and high-quality bus stop infrastructure;
- Develop the role of water-borne transport;
- Work with rail operators to improve stations and facilities for people and freight – Increasing capacity on the rail route between Eastleigh and Fareham;
- Work with local planning authorities to integrate planning and transport;
- Develop and deliver public realm improvement (e.g. environmental improvements to streets); and

[7] http://www3.hants.gov.uk/local-transport-plan-strategy-south-hampshire
[8] http://www3.hants.gov.uk/reduce_strategy.pdf

- Safeguard and enable the delivery of a limited range of transport improvements within the area – those relating to Fareham Borough include proposed strategic routes for western access to Gosport.

1.2.6. The LTP3 document Joint Strategy for South Hampshire is also accompanied by an implementation plan, the **Transport Delivery Plan 2012-2026**[9], finalised in February 2013. This includes a detailed analysis of transport movements by all modes within South Hampshire and the related problems and barriers, concluding that there is a need for transport interventions to support economic growth. It identifies several desired outcomes of such interventions, shown in **Figure 1-3**:

Figure 1-3 Transport Delivery Plan 2012-2026 Outcomes

Transport Delivery Plan 2012-2026 Outcomes

1. Strengthened international gateways, fulfilling their role in supporting the local and national economy;
2. Delivering planned housing and employment growth in existing economic centres first;
3. The transport sector contributing to the area achieving its commitment to reduce greenhouse gas emissions (especially carbon);
4. Reduced social disparities, supporting cohesive and inclusive communities and improving the quality of life for residents; and
5. Delivering continuous economic growth through the implementation of the strategic and major development sites in the region that will ultimately deliver the housing and employment targets.

1.2.7. Four mutually-supporting delivery strands are identified to support these:

- Strengthening existing urban areas by encouraging sustainable patterns of living and working within existing urban areas;
- Raising the quality of public transport and other alternatives to car;
- Increased promotion of travel options, to make sure maximum use is made of public transport and active modes; and
- Targeted improvements to the highway network where these can bring the biggest economic gains.

1.2.8. A **Public Transport Delivery Plan**[10] for 2014-2016 has also been produced to set out the priorities for investment in public transport schemes in South Hampshire and The Isle of Wight. The document details committed, potential, and potential long-term public transport schemes in the area, and comments on their compliance with the Public Transport Strategy Statement.

1.2.9. **Highways England (HE)** was created by the Infrastructure Act 2015. HE is responsible for the Strategic Road Network (SRN), which includes the M27, from Cadnam to Cosham and intersecting the north of the Borough, with access via Junctions 9,10, and 11.

1.2.10. The **Partnership for Urban South Hampshire (PUSH)**[11], of which Fareham is an active member, is a partnership of County, District, Borough, and Unitary Authorities across Hampshire dedicated to delivering sustainable, economic-led growth and regeneration to create a more prosperous, attractive South Hampshire and The Isle of Wight.

[9] http://documents.hants.gov.uk/transport-for-south-hampshire/TransportDeliveryPlan.pdf
[10] http://www.solent-transport.com/images/reports/transport-delivery-plan/public-transport-delivery-plan-140314.pdf
[11] http://www.push.gov.uk/

1.2.11. PUSH is responsible for cross boundary working[12] on strategic planning issues such as housing and employment, as well as producing the PUSH Spatial Position Statement 2016[13], a document which sets out the distribution of development, which has been informed by the NPPF, evidence on housing and employment needs, environmental, transport, and infrastructure issues, and substantial discussions with all Councils, the Solent LEP, Solent Transport, and key statutory agencies and infrastructure providers.

1.2.12. The Position Statement is summarised below in **Figure 1-4**:

Figure 1-4 PUSH Spatial Position Statement 2016

[12] PUSH partners include HCC, Portsmouth and Southampton Unitary Authorities, and the district/borough authorities of Eastleigh, East Hampshire, Fareham, Gosport, Havant, New Forest, Test Valley, and Winchester, as well as The Isle of Wight.
[13] http://www.push.gov.uk/item_12_-_appendix_1_-_position_statement.pdf

1.2.13. **Solent Transport**[14] coordinated strategic transport planning in the PUSH area on behalf of the local transport authorities: HCC, Portsmouth City Council (PCC), Southampton City Council (SCC), and The Isle of Wight Council (IoWC), following the inclusion of The Isle of Wight in PUSH. The vision for Solent Transport is to develop *"A resilient, cost effective, fully integrated sub-regional transport network, enabling economic growth whilst protecting and enhancing health, quality of life, and environment"*.

1.2.14. **Solent Local Enterprise Partnership (LEP)**[15] is a private sector led body tasked with working collaboratively with local partners to stimulate and promote sustainable growth across the Solent region. The LEP's publication **Transforming Solent- Solent Strategic Economic Plan 2014-20**[16] outlines investment priorities in transport infrastructure to improve strategic connectivity to employment sites such as the Solent Enterprise Zone at Daedalus; and enable access to strategic housing sites such as Welborne in Fareham and North Whiteley in Winchester District.

1.3. Local Policy

1.3.1. HCC has produces local transport statements for all districts and boroughs in Hampshire, including Fareham Borough. The Transport Statement is a HCC document and has been developed in consultation with FBC. The Statement covers the period up to 2026, which conforms to the timeframe of the FBC Core Strategy and their other Local Development Framework (LDF) documents.

1.3.2. **Fareham Borough Transport Statement 2012**[17] is intended to provide:

- A comprehensive local transport policy framework for the Borough;
- A framework to assist with the prioritisation of transport investment; and
- A sound basis for land use and development planning.

1.3.3. The **Fareham LDF Core Strategy**[18] is one of three principal documents forming the current Local Plan.

1.3.4. The vision for Fareham as outlined in the core strategy touches on several transport-related points aspiring to achieve a high percentage of the population using public transport to and from work; town centre expansion, using redevelopment opportunities to form a focus for retail, commerce, and transport; and the provision of a new public transport interchange at Fareham Station.

1.3.5. Several of the strategic objectives outlined in the Core Strategy also have a transport focus, namely Strategic Objectives 5, 7, and 9. Policy CS5 details the measures associated with transport strategy, accessibility, tackling congestion, and infrastructure, although the above Strategy Objectives feature in many of the Core Strategies.

1.3.6. The Core Strategy incorporates aspects of the **Fareham Sustainable Community Strategy**[19] titled *Your Future, Your Fareham*, adopted in 2010 covering the period of 2010-2020. The FSCS identifies the following environmental, economic, and transport related priorities:

- Promote alternative means of travel to workplaces;
- Reduction in traffic congestion;
- Improving the overall sustainability of the Borough; and
- Reducing carbon emissions.

[14] http://www3.hants.gov.uk/tfsh.htm
[15] https://solentlep.org.uk/
[16] Solent LEP Transforming Solent publication: http://www.push.gov.uk/transforming_solent_-_final_version.pdf
[17] http://documents.hants.gov.uk/transport/FBCTransportStatementDecember2013.pdf
[18] http://www.fareham.gov.uk/pdf/planning/CoreStrategyAdopted.pdf
[19] http://www.fareham.gov.uk/PDF/planning/local_plan/Examination/DSD14%20your%20future%20your%20fareham.pdf

1.3.7. Fareham Borough Council's **Active Travel Strategy 2017-2027** is an update and follow-on from its predecessor, The Fareham Cycle Strategy 2005-2011. It sets out the Council's approach to active travel (primarily walking and cycling) in the Borough through:

- Promoting cycling as a sustainable and feasible mode of transport and leisure activity to be accessible by all;
- Considering means of enhancing existing routes in terms of both usability and safety;
- Identifying and creating new achievable cycle routes through new development and funding contributions; and
- Increasing the overall connectivity of the cycle network across Fareham providing links into cycling provision within Hampshire and the PUSH sub-region.

1.3.8. The FBC Active Travel Strategy complements the **HCC Cycling Strategy 2015**[20] and the **HCC Walking Strategy**[21] (January 2016).

1.3.9. The cycling strategy sets five clear objectives in line with the vision statement, "In 2025, cycling will be a convenient, safe, healthy, affordable, and popular means of transportation and recreation within Hampshire". The objectives are to make cycling a daily travel choice, reduce cyclist casualties and safety concerns, encourage regular cycling as part of a healthy lifestyle, enable more people to enjoy Hampshire by cycling, and ensure an appropriate balance between the needs of all road users. The objectives for HCC are shown in **Figure 1-5**:

Figure 1-5 HCC Cycling Strategy Objectives

HCC Cycling Strategy Objectives

1. To make cycling a daily travel choice for more people;
2. To reduce cyclist casualties and safety concerns;
3. To encourage regular cycling as part of a healthy lifestyle;
4. To enable more people to enjoy Hampshire by cycling; and
5. To ensure an appropriate balance between the needs of all road users.

1.3.10. The walking strategy states that the county vision is *"By 2025, walking will be the travel mode of choice for short trips and the most popular and accessible means of recreation"*. The strategy details five objectives, which will be complimented by the forthcoming revised Fareham Borough Council Active Travel Strategy. The objectives for HCC are shown in **Figure 1-6**:

Figure 1-6 HCC Walking Strategy Objectives

HCC Walking Strategy Objectives

1. To make walking the most popular mode of travel for short trips;
2. To improve the quality and usability of the main walking routes within our urban and rural settlements (including links to the countryside);
3. To promote walking as a healthy means of travel and recreation;
4. To improve the perceived and actual safety and security of pedestrians; and
5. To improve the quality of rural walking routes of local and strategic importance.

1.3.11. The objectives created for Fareham Borough to achieve this vision are shown in **Figure 1-7**:

[20] http://documents.hants.gov.uk/transport-strategy-documents/HampshireCyclingStrategy.pdf
[21] http://documents.hants.gov.uk/transport-strategy-documents/HampshireWalkingStrategy.pdf

Figure 1-7 Fareham Borough Council Active Travel Objectives

Fareham Borough Council Active Travel Objectives

1. Increase the use of active travel modes as a means of transport;
2. Improve safety for cyclists and walkers;
3. Enhance and expand current cycle and walking routes; and
4. Ensure sustainable transport choices at the forefront of development.

1.3.12. Air Quality: Part IV of the Environmental Act 1995[22] places a statutory duty on local authorities to review and assess local air quality. In keeping with this, Fareham Borough Council have submitted detailed *historical air quality information*[23] reports to DEFRA since 1999. Our latest annual Air Quality Progress Report[24] was submitted and approved by DEFRA in 2014.

1.3.13. The Environment Act 1995 gives us some statutory duties to manage local air quality. This includes carrying out regular reviews and assessments such as monitoring work on busy roads and junctions for emissions of nitrogen dioxide and particulates from vehicle exhausts. Where pollution levels exceed our air quality strategy objective levels, we designate Air Quality Management Areas (AQMAs) to tackle it.

1.3.14. Fareham has two AQMAs. The first was declared in 2006 for part of the Gosport Road[25], Fareham; and the second was declared in 2007 for Portland Street[26], Fareham. Both locations are covered by an Air Quality Action Plan[27]. Further details are provided in **Section 3.3**.

1.3.15. Fareham has several parking standards and strategies covering the town, the **Residential Car and Cycle Parking Standards**[28] and the **Non-Residential Parking Standards**[29] set out parking standards and key requirements for planning purposes. The **Town Centre Parking Strategy**[30] covers the period from 2012-2017 and details the current demand for parking along with parking policies informed by the implications of the demand.

1.3.16. The **Fareham Town Access Plan**[31] sets out FBC and HCC's shared vision of how access to facilities and services in the Borough will be improved. The plan covers existing transport provision as well as detailing any barriers or obstacles to improving accessibility. An action plan for addressing these existing barriers is set out, but these do not include the latest set of development site allocations.

1.4. Other Relevant Strategies

1.4.1. **Network Rail's Wessex Route Study**[32] (August 2015) is the current strategic planning document for the development of the rail network on the Wessex Route, which incorporates most lines/services within Fareham Borough. This document has a planning horizon of 2043 and as such covers the period of the new Local Plan. This study supersedes the 2011 Rail Utilisation Strategy (2011) and sets out the following:

- Existing capability and demand on the rail network;
- Projected changes in future demand and known gaps in connectivity and capability; and

[22] http://www.legislation.gov.uk/ukpga/1995/25/contents
[23] http://www.fareham.gov.uk/licensing_and_inspections/air_quality/historicalairqualityinfo.aspx
[24] http://www.fareham.gov.uk/PDF/licencing_and_inspections/FarehamProgressReport2014.pdf
[25] http://www.fareham.gov.uk/licensing_and_inspections/air_quality/aqmapage.aspx
[26] http://www.fareham.gov.uk/licensing_and_inspections/air_quality/aqma2007.aspx
[27] http://www.fareham.gov.uk/PDF/licencing_and_inspections/aqap-gosportrd-portlandst.pdf
[28] http://www.fareham.gov.uk/pdf/planning/parkstd09.pdf
[29] http://www.fareham.gov.uk/PDF/planning/local_plan/NonResiParkingSPD2015.pdf
[30] http://www.fareham.gov.uk/pdf/parking/towncentrestrategy13.pdf d
[31] https://www.hants.gov.uk/transport/strategies/transportstrategies#step-4
[32] https://www.networkrail.co.uk/wp-content/uploads/2016/11/Wessex-Route-Study-Final-210815-1.pdf

- Options for infrastructure and service changes to meet these capacity challenges/connectivity gaps.

1.4.2. The route study does not commit to any specific enhancements, but instead sets out and, in some cases, recommends options for funders (DfT, and in some areas devolved authorities) and train operators to implement through Network Rail's capital investment programme and through the rail franchising process. The current South West Trains franchise will terminate in 2017 and the duration and content of the next iteration of the franchise has not yet been determined, however bidders for the South-Western franchise will be expected to work with the industry to develop and deliver the projects planned for Control Period 5 (CP5, 2014-2019) and Control Period 6 (CP6, 2019-2025) which are set out in Network Rail's published delivery plans. Therefore, there is considerable uncertainty about which options in the Route Study might be implemented in the short term. Most of the higher expenditure/higher impact items considered in the route study are unlikely to be implemented until CP5, CP6 or beyond.

1.4.3. For the Fareham area, the Wessex Route study contains relatively little in the way of proposals which would significantly improve local rail connectivity and be of relevance to local travel within the Borough and to nearby key destinations (e.g. Winchester, Southampton, Portsmouth). The study is primarily concerned with improving journey times, mainline frequency and AM / PM peak capacity (for commuting) into London Waterloo from Southampton and key destinations on the route such as Winchester and Basingstoke.

1.4.4. Unfortunately, the route study offers very little on options to improve intra-Solent rail connectivity, despite this being identified during consultation by the Solent LEP and by numerous other stakeholders as key strategic priorities for the area to make rail a more viable alternative to the M27 than it currently is. The route study does state that Network Rail "welcomes engagement from South Hampshire stakeholders to further investigate connectivity and journey times between key centres within the area", however the route study as it stands does little to satisfy Fareham's key priorities and improved frequency/journey times on the Portsmouth to Southampton rail line.

1.4.5. **Highways England Solent to Midlands Route Strategy**[33] (March 2017) introduces Highways England's strategic plan for the modernisation of the Strategic Route Network (SRN) connecting the Solent to the Midlands. This includes sections of the M27 in and approximate to Fareham Borough. The strategy evaluates both current and forecast performance of the route to identify specific future challenges and potential opportunities to address the challenges to inform a plan for future investment.

1.4.6. The strategy states that the main problems on the route are traffic congestion and queuing due to high volumes of traffic. This is a similar situation to many other sections of the SRN.

1.4.7. The current constraints and challenges on the route, specifically around Fareham Borough, include road safety with identified clusters of accidents on the M27 and a concentration of congestion on the M27 between Junctions 4 and 11. There are no specific concerns noted on the M27 within Fareham Borough. The Route Strategy did not identify any future challenges and opportunities for the SRN within Fareham Borough.

33 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/600330/Solent_to_Midlands_Final.pdf

2. Transport Infrastructure Provision and Operation

2.1.1. This section of the document outlines the transport infrastructure provision and current operation in FBC. Key transport infrastructure in FBC is shown in **Figure 2-1**.

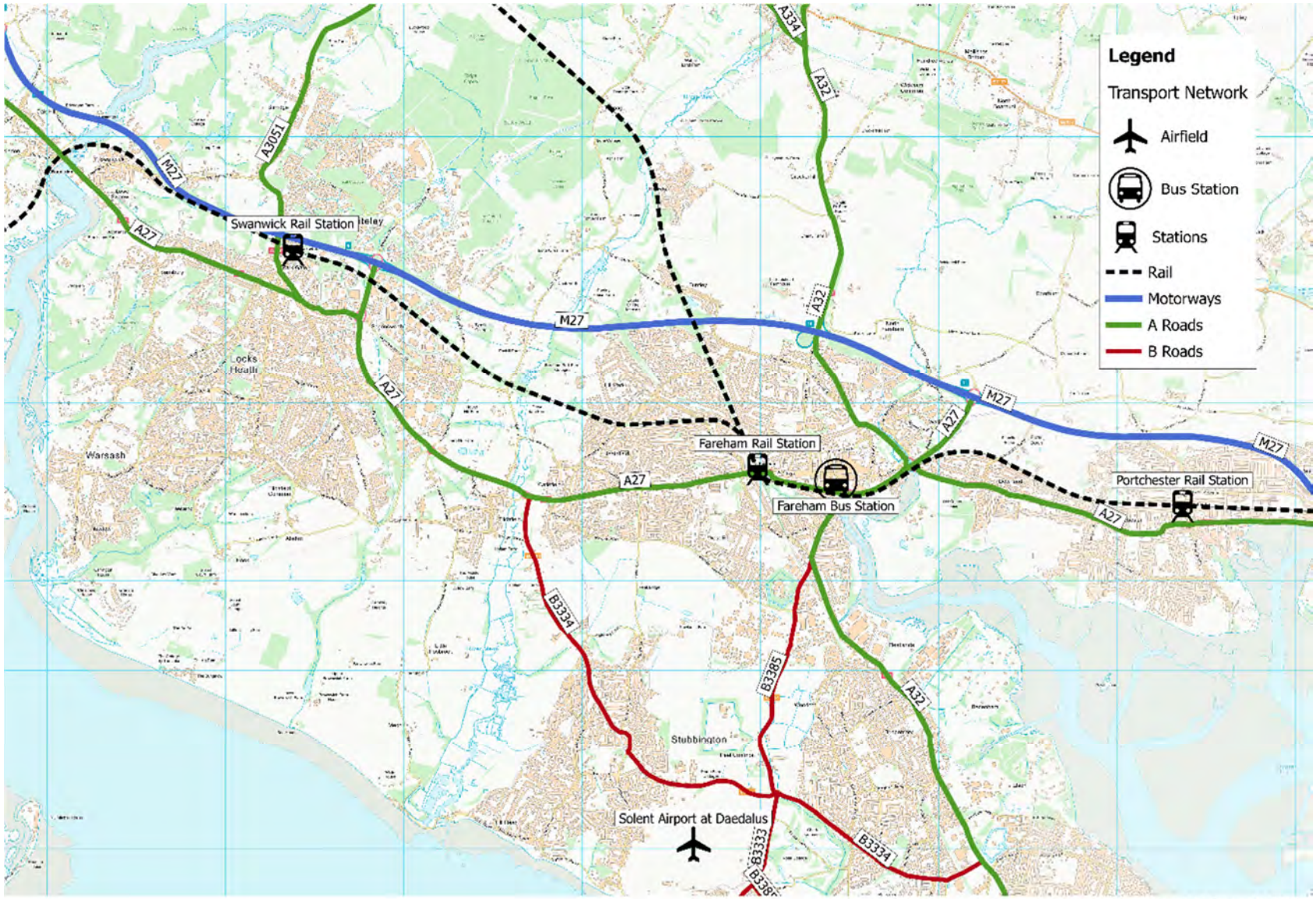
2.2. Road Network

2.2.1. The Borough of Fareham has significant connections to both the National Strategic Route Network (under the control of Highways England), and routes of sub-regional importance. These routes include:

- The M27 connects Portsmouth to Southampton, transecting the Borough. It offers connections to the A27 and Fareham at Junctions 9, 10, and 11. The M27 in the Fareham region caters to approximately 121,000 vehicles per day[34];
- The A27 connects Fareham to Portsmouth and Chichester to the east, and to Southampton and Eastleigh in the west. It also provides direct access to the M27 at Junction 9 and 11. It is also subject to significant infrastructure works to improve traffic flows;
- The A32 Gosport Road links Fareham to Wickham in the north and Gosport in the south;
- The B3385 Newgate Lane is one of three principle routes giving access to and from the Gosport peninsula and the Solent Enterprise Zone at Solent Airport. The northern section of Newgate Lane underwent significant improvements in 2015/16 to address high traffic flows and congestion issues; The southern section is due to be built in 2017/18 and will link the existing road to Peel Common roundabout in the south; and
- The B3334 Gosport Road/Titchfield Road is not a strategic route however it connects Gosport and Stubbington to the Titchfield Gyratory, providing access to the M27. Anecdotally, the route is heavily used by commuters at peak times as an alternative to Newgate Lane.

[34] Figures taken from DfT: https://data.gov.uk/dataset/gb-road-traffic-counts

Figure 2-1 Current Transport Infrastructure in Fareham Borough



2.3. Rail Services

2.3.1. Fareham Borough is served by three rail stations; Swanwick Station to the west, Fareham Station in the centre, and Portchester Station in the east. All three stations are currently operated by South West Trains, although the franchise is due for renewal in 2017.

2.3.2. Rail use within the borough has increased over the last decade, as shown in **Table 2-1**.

2.3.3. Each rail station in Fareham Borough is assessed below, in **Table 2-2**:

Table 2-1 Fareham Station Passenger Numbers

Station	Year	Number of Entries and Exits	Difference on Previous Years
Fareham	2004-05	1,236,000	
	2012-13	1,666,000	
	2013-14	1,725,000	3.5% increase on 2012-13
	2014-15	1,785,000	3.5% increase on 2013-14
	Total Change		44.4% increase on 2004-05
Portchester	2004-05	269,000	
	2012-13	364,000	
	2013-14	390,000	7.1% increase on 2012-13
	2014-15	394,000	1% increase on 2013-14
	Total Change		46.5% increase on 2004-05
Swanwick	2004-05	367,000	
	2012-13	632,000	
	2013-14	678,000	7.3% increase on 2012-13
	2014-15	697,000	2.8% increase on 2013-14
	Total Change		89.9% increase on 2004-05

Table 2-2 Rail Stations in Fareham Borough

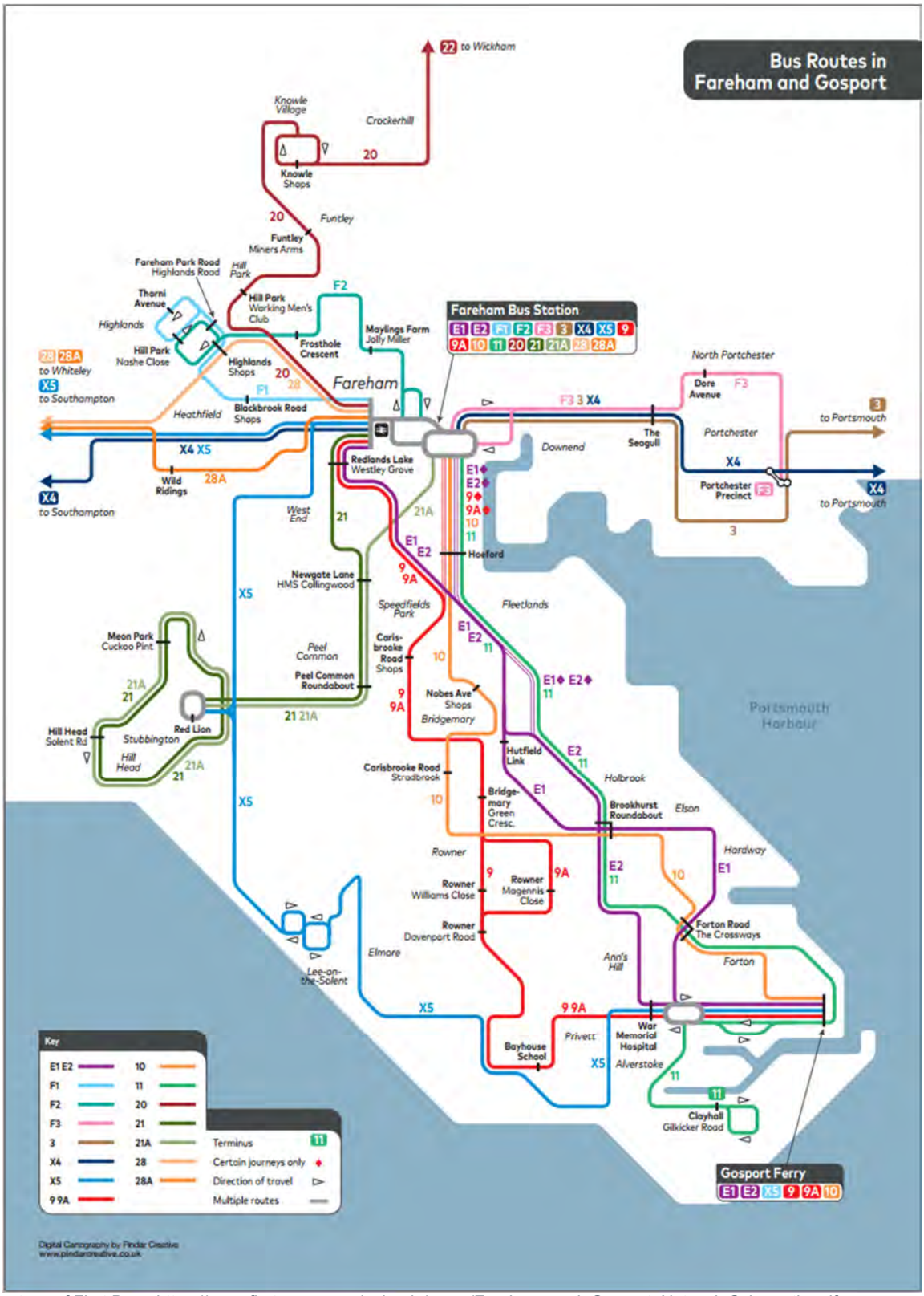
Station	Services to	Information and Accessibility
Fareham	Portsmouth; Southampton; Brighton; Cardiff; and Central London.	• Located approximately 12 minutes' walk west of the Town Centre, and caters for approximately 1.79 million passengers per annum. • Forms a key transport interchange for Fareham Town Centre, offering access to cycle routes and key bus services including the "Eclipse" BRT service. • Vehicular access is via the A27 Station Roundabout to the west of the Town Centre with parking available for 207 vehicles including 5 disabled spaces. • A siding is also provided at Fareham Rail Station; the aggregates rail depot is noted in Policy 19 of the Hampshire Minerals and Waste Plan – October 2013[35].
Portchester	Portsmouth; Southampton; and Facilitates connections to Central London.	• Located to the north of Portchester District Centre, and caters for approximately 394,000 passengers per annum. • The station is accessible from the District Centre on foot by using the pedestrian subway adjacent to Castle Street Roundabout. • Vehicular access is via Station Road; however, no formal parking arrangements exist. Commuter parking occurs in the District Centre long stay car park and residential roads which presents problems for residents in the surrounding area. • Accessibility at the station is a known issue. Wheelchair access to the platforms is impeded, and the station does not provide a ramp for wheelchair users to board or alight a train.
Swanwick	Portsmouth; Southampton; Brighton; and Central London	• The station is located within a small industrial estate between the residential areas of Park Gate and Whitely, to the west of Junction 9 of the M27. Access to the station is via Botley Road and Duncan Road (access road to the industrial estate). The station caters for approximately 697,000 passengers per annum. • Parking is available and accommodates approximately 240 vehicles; however, there is some evidence of underutilisation. • Accessibility at the station is a known issue. Wheelchair users have no way of accessing Platform 2 for eastbound trains.

[35] http://documents.hants.gov.uk/mineralsandwaste/HampshireMineralsWastePlanADOPTED.pdf

2.4. Bus Services

2.4.1. The Borough has a comprehensive bus network, with services connecting all the key urban settlements. Most services are operated by First Bus, as shown in the bus network in **Figure 2-2**.

Figure 2-2 Fareham Bus Services



Courtesy of First Bus - https://www.firstgroup.com/uploads/maps/Fareham_and_Gosport_Network-Schematic.pdf

2.4.2. Existing bus services Fareham provide connections to and from the Town Centre, local centres, and other major destinations including Fareham Railway Station. The major scheduled services are considered in more detail in **Table 2-3**, below:

Table 2-3 Bus and Coach Services in Fareham Borough

Operator	Service	Route
First Bus	**3**	*Fareham* – Portchester – Paulsgrove – QA Hospital – Cosham – Portsmouth City Centre – Gunwharf
	9(A)	*Fareham* – Bridgemary – Rowner – Privett – Gosport
	10	Gosport – Brockhurst – Bridgemary – *Fareham*
	11	*Fareham* – Gosport – Alverstoke
	20	*Fareham* – Knowle – Wickham
	21(A)	*Fareham* – Peel Common – Stubbington – Hill Head
	28(A)	*Fareham* – Park Gate – Whiteley
	Solent Ranger X4	Southampton – *Fareham* – Portsmouth
	Solent Ranger X5	Southampton – Warsash – *Fareham* – Gosport
	Eclipse E1/E2	*Fareham* – Brockhurst – Elson/Anns Hill – Gosport
	F1	*Fareham* – Highlands – Thorni Avenue – *Fareham*
	F2	*Fareham* – Maylings Farm – Frosthole Crescent – Nashe Way – *Fareham*
	F3	*Fareham* – Portchester Precinct
Stagecoach	**69**	Winchester – *Fareham*
National Express	**030**	*Fareham* – Portsmouth – Guildford – London
	203	Portsmouth – *Fareham* – Southampton -Winchester – Basingstoke – London Heathrow Airport
	206	Poole – Bournemouth – Southampton – *Fareham* – Portsmouth – London Gatwick Airport
	300	Portsmouth – *Fareham* – Southampton – Salisbury – Bath – Bristol
	310	Poole – Portsmouth – *Fareham* – Southampton – Oxford – Birmingham – Sheffield – Leeds – Bradford
	341	Portsmouth – *Fareham* – Southampton – Oxford – Birmingham – Manchester – Blackburn

2.4.3. Alongside scheduled bus services there are several privately-contracted services operated by business organisations, educational establishments, and other institutions in the Borough that have been procured to provide a public transport alternative for site access. Due to the dedicated nature of these routes, their potential integration with scheduled bus routes is not considered. Contractual arrangements have meant that only in selected cases has there been agreement to make these private services available to fare paying passengers.

2.4.4. Examples of privately-contracted services currently operating in the Borough including the following:

- ASDA Fareham Newgate Lane: free shopper buses (Fareham Bus Station, Stubbington Village, Lee-on-the-Solent), Mondays to Fridays;
- Whitely Shopping Centre: free bus service operating Monday to Friday lunchtime periods;
- CEMAST Daytime Shuttle: student bus service linking the BRT at Fort Brockhurst, Gosport; and
- CEMAST Morning and Evening Bus Services: student service between the College campus, Fareham Bus and Rail Stations, and Gosport.

2.4.5. Fareham Bus Station is located within Fareham Town Centre and caters for most bus services within the Borough including the BRT and National Express.

2.4.6. To improve journey times for services leaving the bus station a bus gate was implemented in March 2014 which facilitates easier access to the A27 for westbound bus services.

2.4.7. Bus Rapid Transit (BRT) is a broad term given to a variety of transportation systems that, through improvements to infrastructure, vehicles, and scheduling use buses to provide a service that is go a higher quality than an ordinary bus service.

2.4.8. Opened in April 2012, the Eclipse BRT Service links Fareham Rail Station and Fareham Town Centre to Gosport Town Centre and the Gosport Ferry. The BRT utilises both highways and a traffic-free busway along the former rail line between Redlands Lane, Fareham and Titchborne Way, Gosport. The BRT provides services up to every six minutes.

2.5. Airports

2.5.1. **Solent Airport at Daedalus** is located on the Solent shoreline between the villages of Stubbington and Lee-on-the-Solent, Daedalus Airfield remains a functioning airfield. Its primary role is as a key employment site for aviation based employment. In 2011 the site was designated as an Enterprise Zone and was renamed Solent Airport.

2.5.2. HM Maritime and Coastguard Agency also operates its Search and Rescue helicopter service from the site, and completed a new training facility in 2015.

2.5.3. In 2014, £1.5 million of runway improvements were carried out. The airport successfully secured an Aerodrome Licence from the Civil Aviation Authority and obtained Border Force approval for overseas flights to/from the EU, Isle of Man, and Channel Islands.

2.5.4. The Council's vision for the Daedalus as a whole[36] is:

- For Daedalus to become a premier location for aviation, aerospace engineering, and advanced manufacturing businesses, creating many skilled employment opportunities for local people, which is underpinned by a vibrant and sustainable airfield; and
- Building on the existing general aviation uses, the airfield will be an attractive destination for visiting aircraft and will offer hangars, facilities, and services to attract more corporate and commercial aviation activities, allowing it to be self-sustaining in the medium term and contribute positively to the local community.

Figure 2-3 Solent Airport at Daedalus

Courtesy of Solent Airport at Daedalus - http://www.solentairport.co.uk/solent_airport/intro.aspx

[36] http://www.fareham.gov.uk/PDF/business/daedalus/vision.pdf

2.5.5. **Southampton Airport** is not an asset within the Borough of Fareham, as it lies substantially within the Borough of Eastleigh to the north west. It is, however, an important factor in the consideration of journey planning in Fareham.

2.5.6. The airport is easily accessible by road or rail, being accessible by the M27, the A335, or the London-Weymouth main line railway (via Southampton Parkway Station).

2.5.7. The airport is operated by Southampton Airport Ltd, it is a major regional airport currently used by some 1.8 million passengers per year. Southampton Airport Ltd.'s 2006 master plan for the airport indicates that they wish to increase passenger numbers to 6 million per annum by 2030[37].

Figure 2-4 Southampton Airport

Courtesy of Southampton Airport - http://www.southamptonairport.com/media/1051/southampton_masterplan_final.pdf

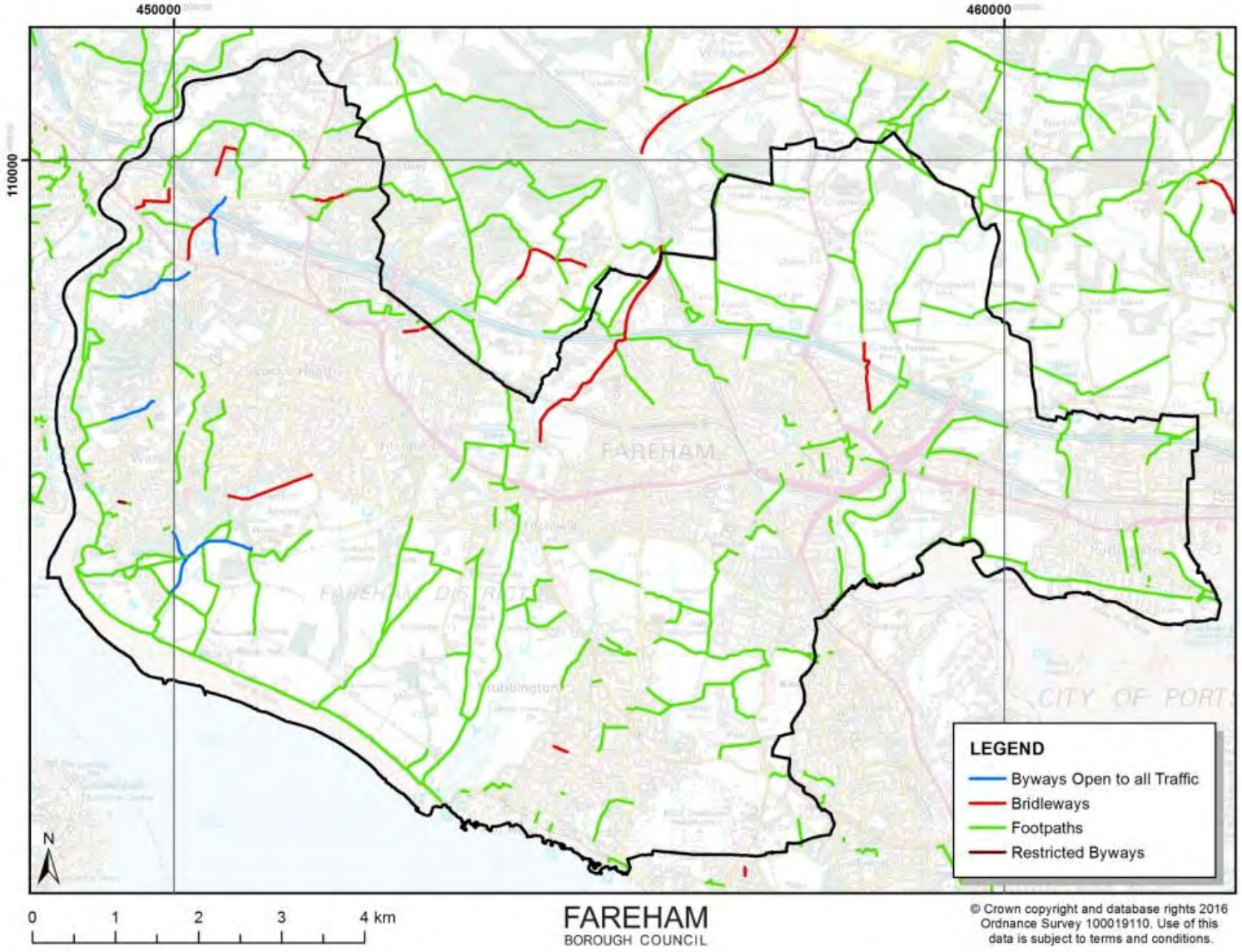
2.6. Public Rights of Way

2.6.1. The Borough's Public Rights of Way are a collection of paths, bridleways, and tracks that can be used to cross private land. These are all maintained and managed by HCC's Countryside Service[38]. As shown in **Figure 2-5**, within the Borough there are:

- 100km of footpaths;
- 7.8km of bridleways;
- 72m of restricted byways; and
- 4.1km of byways open to all traffic.

[37] http://www.southamptonairport.com/about-us/our-vision/
[38] https://www.hants.gov.uk/landplanningandenvironment/rightsofway

Figure 2-5 Public Rights of Way in Fareham Borough



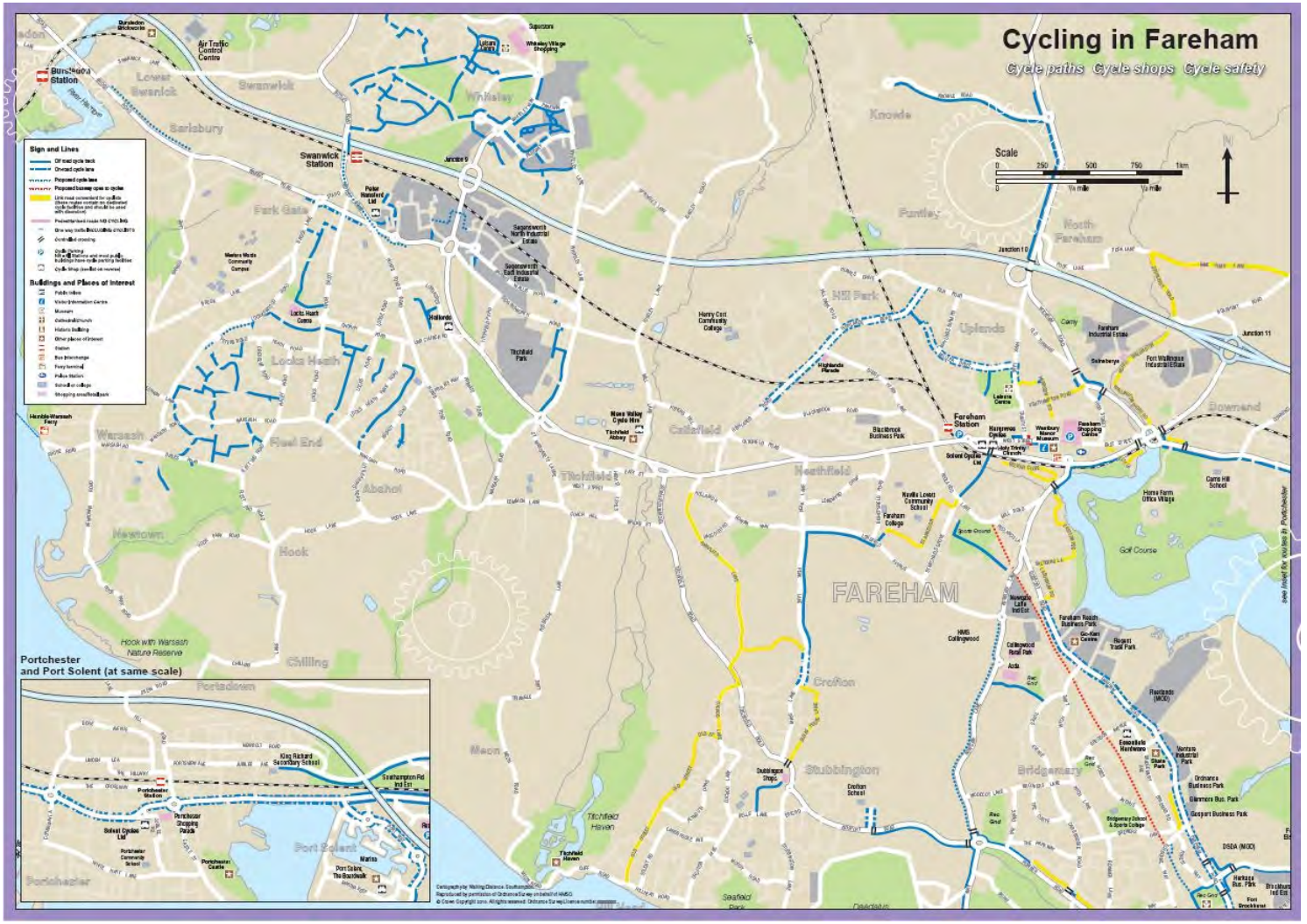
2.7. Cycling

2.7.1. The Borough has connections to the National Cycle Network (NCN) and several local routes. The NCN routes 2, 234, and 236 link east-west across the Borough whilst the local routes can be found providing short links between non-strategic roads and public areas. Details of the routes can be seen on the Sustrans website.

2.7.2. The local routes have been installed either as on-road advisory routes or shared use footways throughout the Borough and many are standalone short distances and therefore do not link to other routes. **Figure 2-6** shows some of the cycling in Fareham, but multiple new cycle routes have been added since the map was produced in 2011.

2.7.3. There is a desire to provide additional links to complete a comprehensive network which will contribute to the ambition to reduce reliance on motor vehicles within the Borough.

Figure 2-6 Cycling in Fareham



**Multiple new cycle routes have been added since the map was produced in 2011*

2.8. Potential for Sustainable Travel

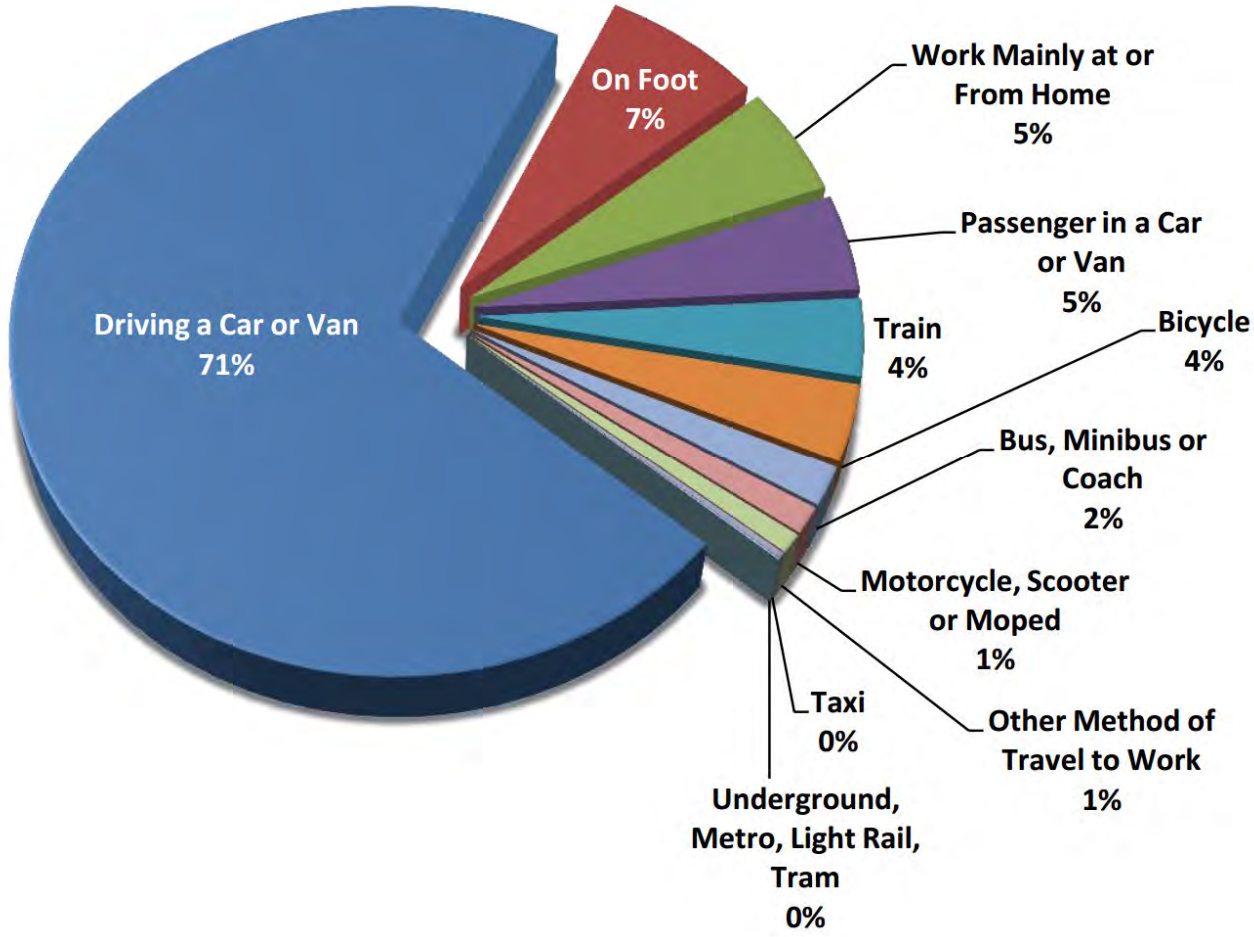
2.8.1. **Figure 2-7** indicated that the most common method of travel to work was by driving a car or van. Of the population of Fareham, 76% use a car or van, or which 5% are passengers. This leaves 71% driving to work in single occupancy vehicles.

2.8.2. Using the information from the 2011 Census it is possible to determine the approximate number of cars/vans that are driven to a place of work, and the approximate number of passengers.

2.8.3. Within the Fareham area the statistics show that in the week prior to the 2011 Census 56,455 workers resided in Fareham. The number of vehicles per head of the working population of Fareham was 1.22 vehicles/head. This equates to 68,863 vehicles being used for commuting purposes.

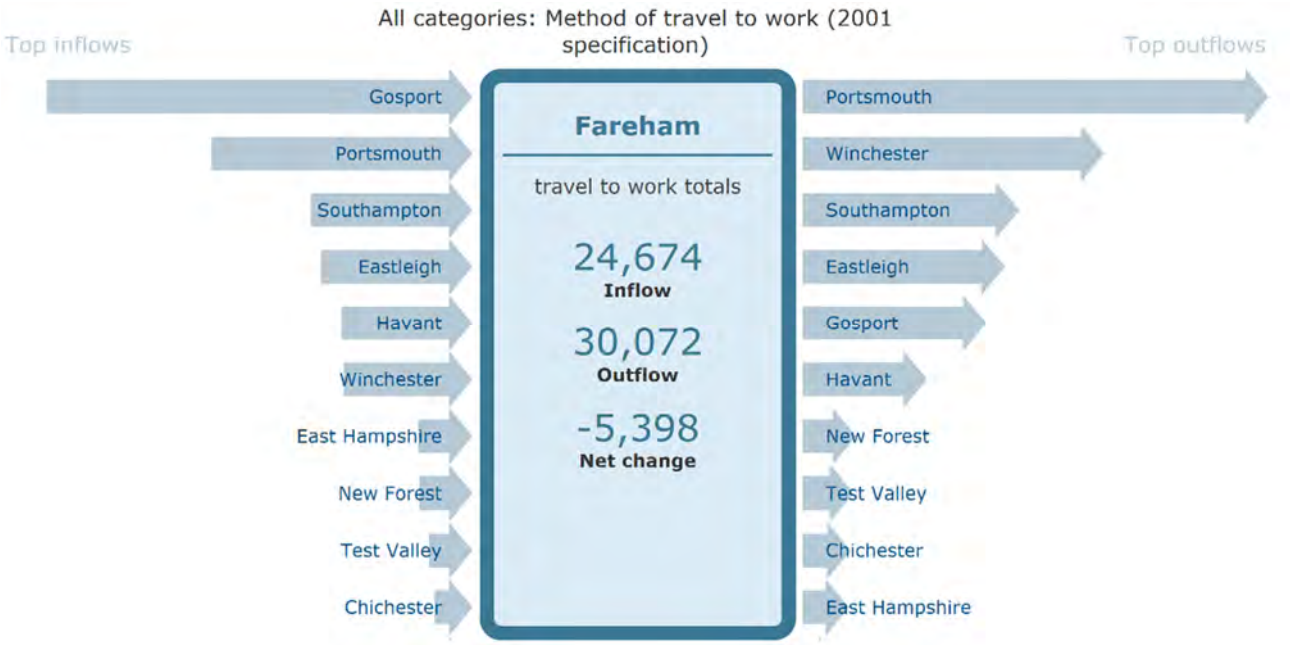
2.8.4. This informs us that 48,824 vehicles were on the roads of Fareham for commuting purposes, and only 3,237 vehicles carry a passenger.

Figure 2-7 Method of Transport for Daily Commute within Fareham Borough



2.8.5. **Figure 2-8** demonstrates the origin and destination for the commuting population of Fareham[39] using 2011 Census data and 2001 specifications.

Figure 2-8 Origin and Destination for Fareham Borough Commuters



Courtesy of ONS - https://www.nomisweb.co.uk/census/2011/WU03UK/chart/1132462199

2.8.6. The use of Smarter Choices initiatives could assist in reducing the number of single-occupancy vehicles on the network.

2.8.7. The Smarter Choices initiative is a Government project based around several simple concepts intended to encourage and incentivise the uptake of either sustainable transport where a journey is essential, or the utilisation of modern technology or working practices.

2.8.8. The use of sustainable transport will only work where infrastructure is currently located or can be made available in order that informed choices can be made by individuals.

2.8.9. The Department for Transport (DfT) undertook research regarding Smarter Choices that indicated that at suitable sites (with a good range of viable alternatives to driving) and adequate promotion, a modal shift away from single occupancy car use of approximately 10% can be achieved.

2.8.10. It is estimated that Smarter Choices initiatives can often achieve the following reduction in single occupancy car use as seen in **Table 2-4**:

[39] https://www.nomisweb.co.uk/census/2011/WU03UK/chart/1132462199

Table 2-4 Smarter Choices Initiative Modal Reduction

Target Initiative	Expected Reduction
Journey to Work	5.40% (Comprised of 2.20% from Teleworking, 2.00% from Car Sharing, and 1.20% from Workplace Travel Plans)
Personalised Travel Planning	1.90%
Teleconferencing	1.90%
Travel Awareness	0.70%
Public Transport Information and Marketing	0.50%
Home Shopping	0.30%
School Travel Plans	0.20%
Local Collection Points	0.06%
Car Clubs	0.02%

2.8.11. Smarter Choices initiatives could potentially reduce the number of single occupancy car trips from 48,824 to 44,820, a reduction of approximately 4,000 vehicle trips (8.2%).

2.8.12. HCC and FBC have worked together on several Travel Planning projects with various partners to try and achieve Smarter Choices objectives. Travel Plans have had a notable impact on reducing single occupancy car trips at some locations in the Borough.

2.8.13. The Innovation Centre at Solent Airport is an example of this. A Travel Plan is being implemented through the national Local Sustainable Transport Fund (LSTF) “My Journey” project, allowing all businesses and operations on the site, whether airside or in the enterprise zone, to access promote and encourage sustainable transport.

2.8.14. Several travel plans are actively implemented within the Borough; however, these are predominantly for schools. This is because HCC, as the Local Education Authority (LEA) requires all schools to subscribe to Travel Plans.

2.8.15. Another example is Fareham College. The College actively promotes their Travel Plan which focuses on seven measures to reduce the dependency on cars across two sites, using various incentives to encourage modal shift.

2.8.16. Fareham College offer bus services to the Bishopfield Road and Centre of Excellence in Engineering, Manufacturing and Advanced Skills Training, (CEMAST) campuses from Whiteley, Locks Heath, Warsash, and surrounding areas. First Buses use a Hail and Ride principle at bus stops along the route, accounting for demand. In addition to current services, Fareham College and CEMAST students can travel on St. Vincent College’s buses from September 2016. The use of the bus services is also incentivised by allowing seven days’ unlimited bus travel on all First Bus services, during term time, with a student travel ticket.

2.8.17. Other significant employers in the Borough implementing to Travel Plans, include:

- Fareham Borough Council;
- The Office for National Statistics; and
- The Enterprise Zone at Daedalus, including a generic, site-wide Travel Plan and individual Travel Plans for larger employers such as the Innovation Centre.

2.9. Accessibility

2.9.1. Walking distances and times from the Town, District, and Local Centres have been identified and mapped. This is shown in Figure 2-9 and Figure 2-10. From this it is seen that most residential areas can access the local centres within a reasonable period (fifteen to thirty minutes’ walk).

2.9.2. **Figure 2-11** depicts the accessibility of the Town, District, and Local Centres when driving. It is noted that most residential areas are within five to ten minutes’ drive to the nearest centre.

Figure 2-9 Walking Distances from Town, District, and Local Centre

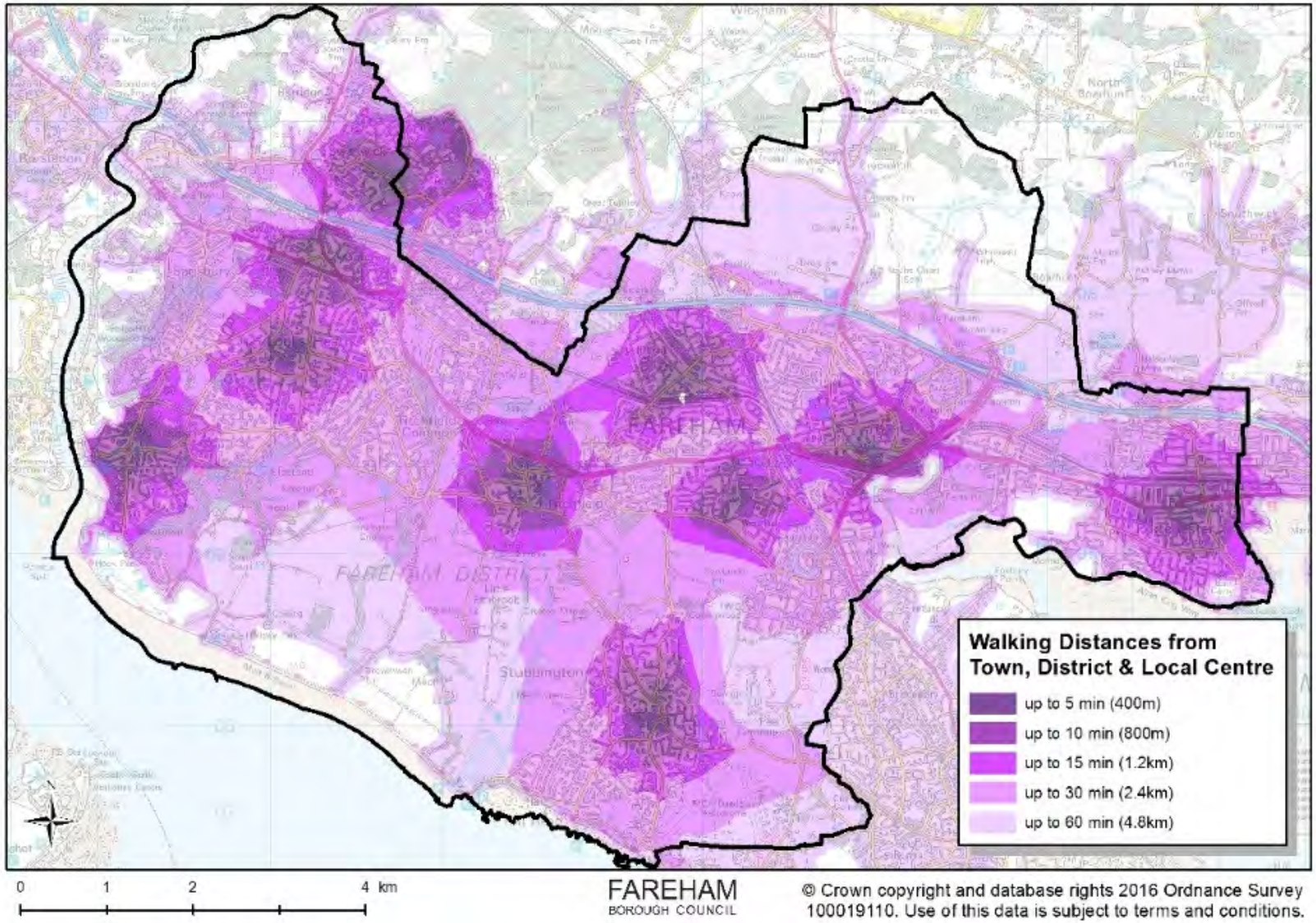


Figure 2-10 Walk from Retail Hubs

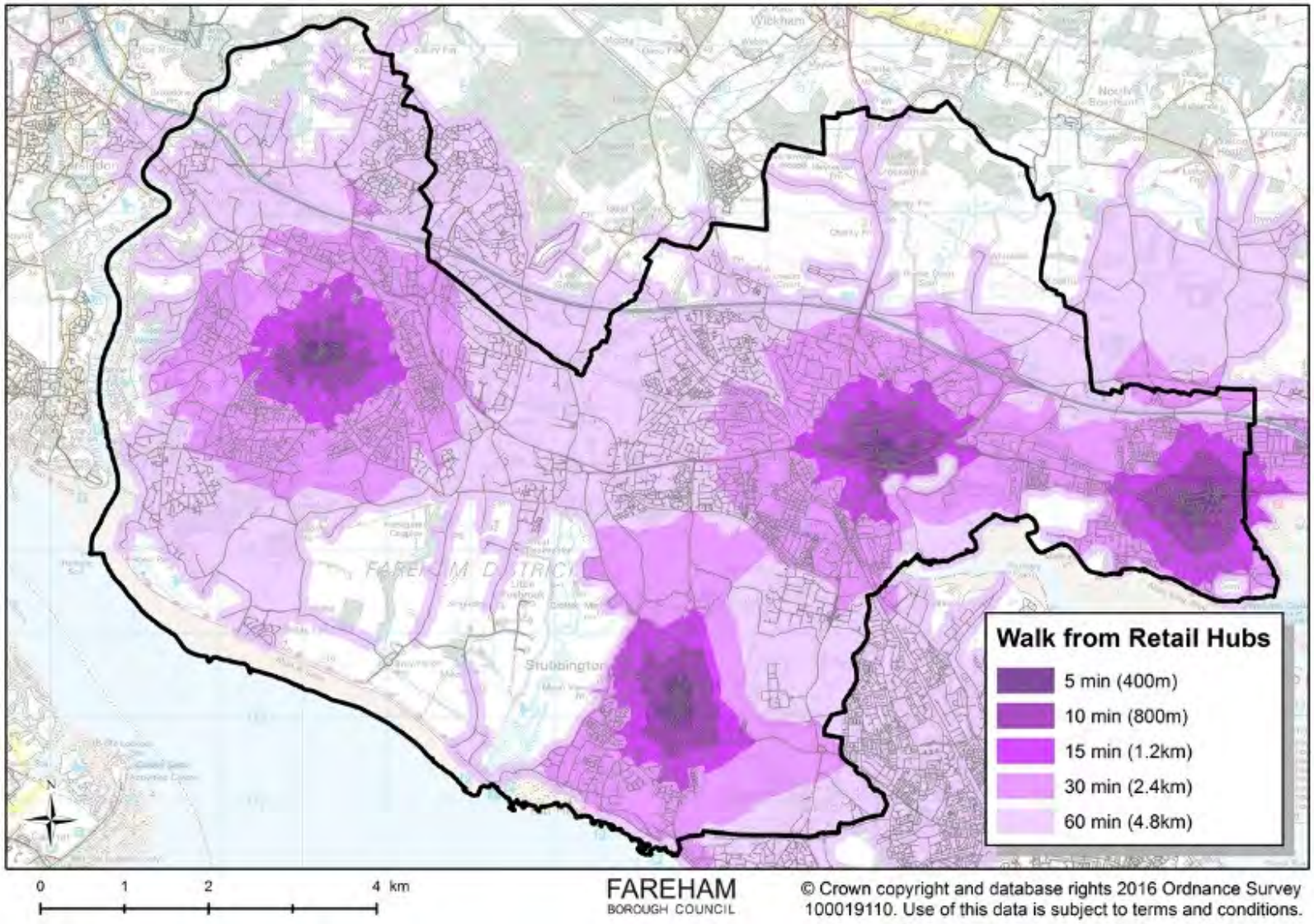
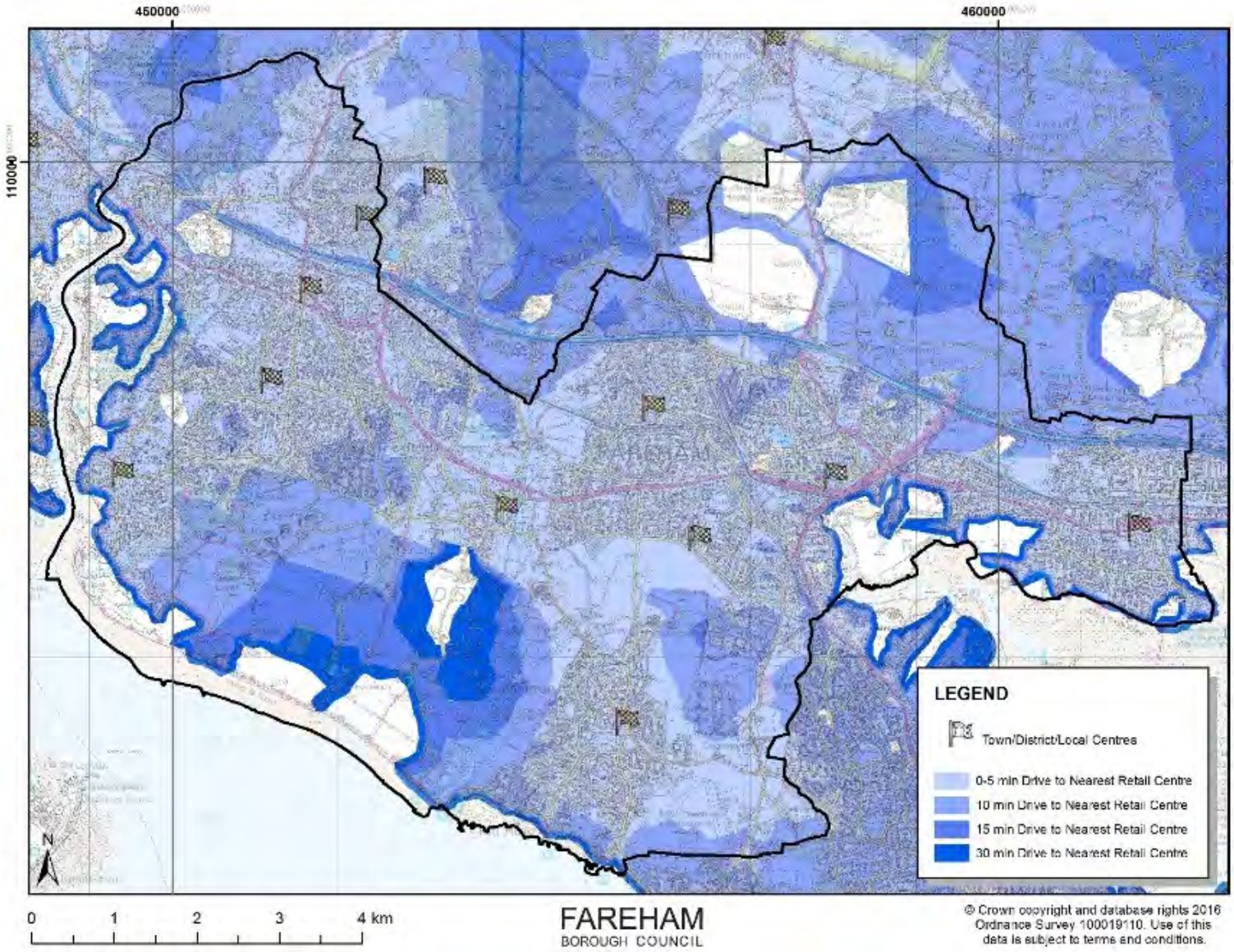


Figure 2-11 Drive times to Town, District, and Local Centres



2.10. Road Safety

2.10.1. Hampshire County Council continuously monitor Fareham Borough's road network for safety though collecting accident data, with engagement from Fareham Borough Council. Accidents are classified by location and severity to inform the Council of locations that may require works to improve road safety.

2.10.2. The intervention level for casualty reduction measures is set at four or more injury accidents over a five-year period.

2.10.3. Where there are accidents of a similar pattern, or serious injury accidents, the intervention level is set at three or more injury accidents over a five-year period.

2.10.4. Road safety in the Borough in considered in more detail in **Section 3.4**

2.11. Current Levels of Congestion

2.11.1. Plots showing traffic volumes compared to available road capacity for 2015 AM and PM peak hours have been taken from the Sub Regional Traffic Model (STRM). These are shown in **Figure 2-12** and **Figure 2-13**.

2.11.2. Volume over Capacity (V/C) is the ratio of traffic demand compared to available capacity presented as a percentage. The plots show the locations where traffic demand exceeds 80% of available capacity, i.e. roads where demand is approaching or exceeding available capacity. V/Cs of 80-90% indicates demand is approaching available practical capacity, possibly resulting in traffic congestion. V/Cs of 90-100% indicates demand exceeds practical capacity, but is below theoretical capacity, resulting in traffic congestion being likely. V/Cs over 100% indicate demand exceeds both practical and theoretical capacity, with traffic congestion being very likely.

2.11.3. In calculating V/C, traffic flows are measured in Passenger Car Units (PCUs). PCUs measure traffic by standardising the size of vehicles based on how much road space they occupy, in terms of the average car size. For example, a lorry is defined as being equivalent to two PCUs, and a pedal cycle as 0.2 PCUs.

2.11.4. Roads where the V/C currently exceeds 100% in either the AM or PM peaks include, Castle Street, Rookery Avenue, Yew Tree Drive, Botley Road, Southampton Road, Bridge Road, Warsash Road, Lower Church Road, Cartwright Drive, Barnes Wallis Road, Highlands Road, Gosport Road, Whiteley Way, The Avenue, and Newgate Lane.

Figure 2-12 AM Peak Period Volume/Capacity

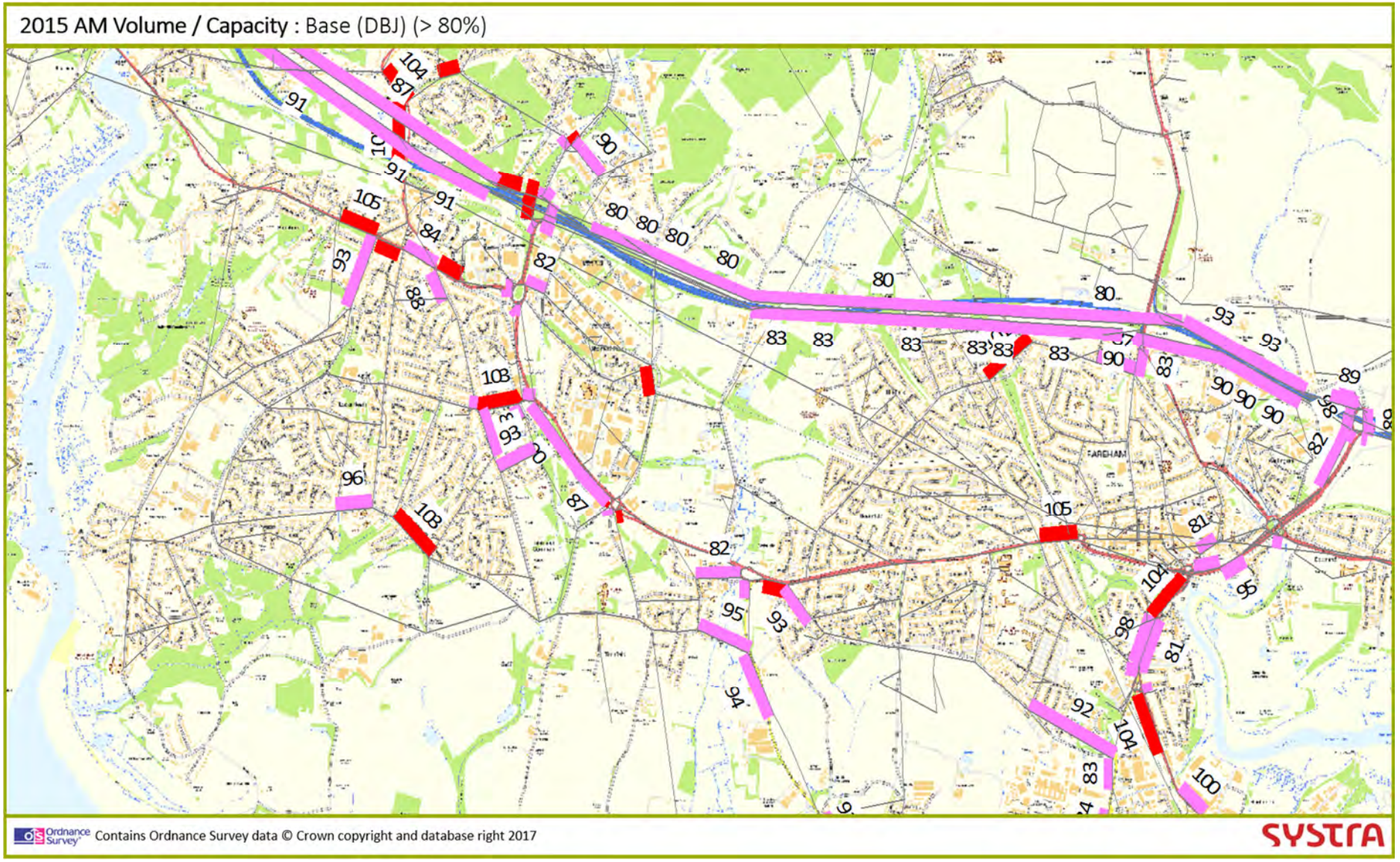
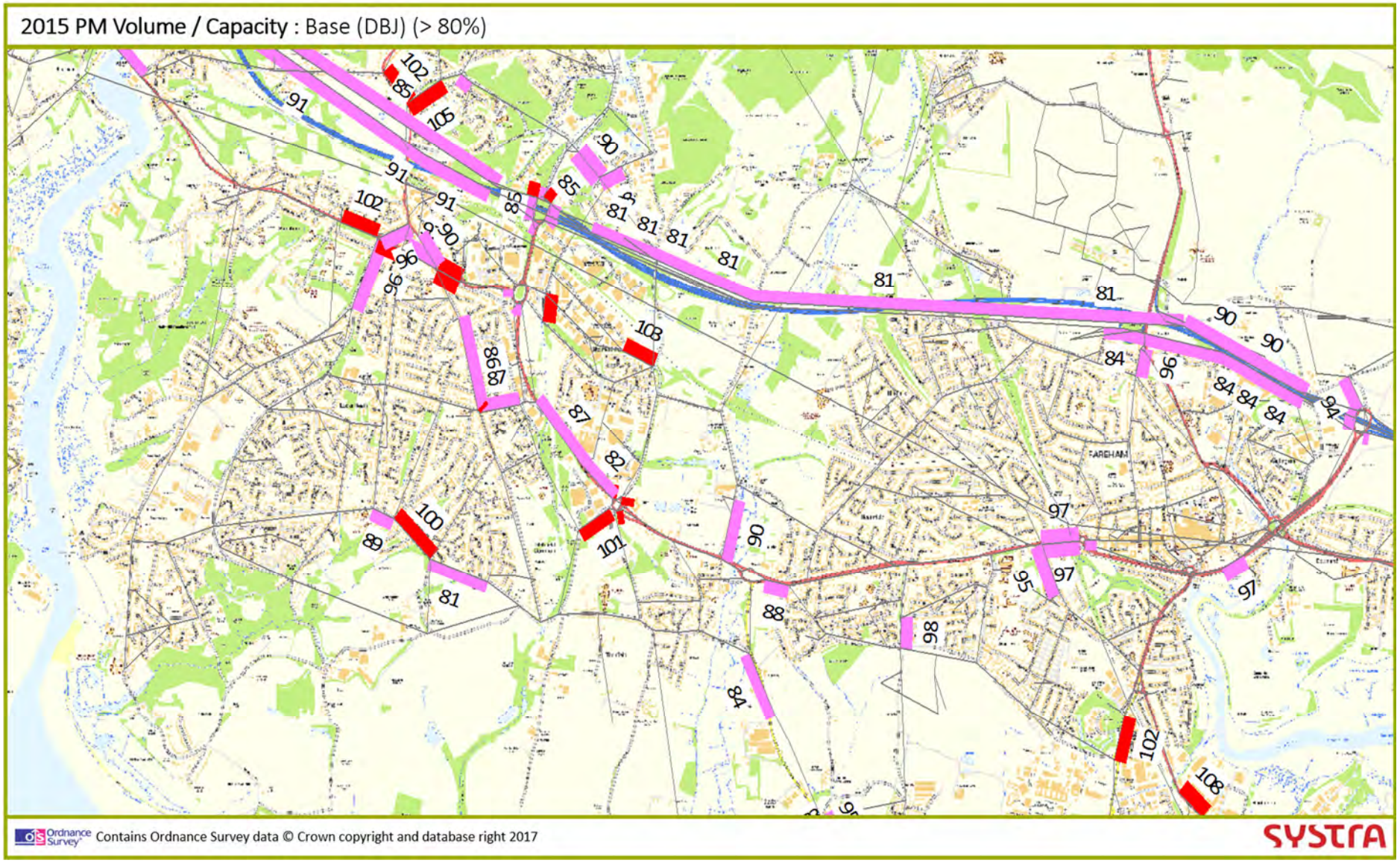


Figure 2-13 PM Peak Period Volume/Capacity



3. Transport Related Issues

This section provides a commentary on current transport related issues in the Borough.

3.1. Traffic Congestion

3.1.1. Many, if not all primary routes (including the M27) are congested and are either at or close to capacity during peak periods, as shown in the V/C plots in **Section 2.11**.

3.1.2. Locations within Fareham Borough where existing traffic demand is reported to be causing significant congestion include the following roads:

- M27 Junctions 9 and 11 off-slips in the AM peak joining the A27;
- M27 between Junction 8 and 9;
- A27 Portchester Road, westbound at Del Quay Roundabout;
- A27 Eastern Way between M27 J11 and Quay Street Roundabout;
- A27 between Fareham and Segensworth on single lane carriageway areas and at roundabout junctions;
- A27 Segensworth areas;
- A32 Gosport Road;
- B3334 Titchfield Road; and
- B3385 Newgate Lane (southern section from HMS Collingwood to Peel Common Roundabout).

3.1.3. Current or planned works to alleviate traffic congestion and to mitigate the effect of new development such as at Welborne and the Enterprise Zone at the former Daedalus Airfield will affect two of the above locations:

- A27 between Fareham and Segensworth on single lane carriageway areas and at roundabout junctions; and
- A27 Segensworth areas.

3.1.4. Committed investment from Highways England will provide increased capacity on the highway network. An example of this is the M27 which is scheduled to be upgraded with SMART Motorway Technology during 2018/19, and treated with quiet running surfaces.

3.2. Connectivity

3.2.1. Connectivity is key to supporting economic growth and maintaining social and community cohesion and quality of life. This includes all types of connectivity, but in a transport context this can include road and rail networks, walking and cycling routes, and public transport scheduling.

3.2.2. Investment in the Borough's transport networks is likely to be restricted in the future due to a lack of funding. This is because of restraints on public spending. FBC will seek to address some of the areas where connectivity is lacking clear routes (both in terms of signage and barriers) from origin to destination, or where connectivity is simply not there. It is envisioned that this will be done through developer funding and grants.

3.3. Air Quality Management

3.3.1. FBC has more than 40 nitrogen dioxide monitoring sites throughout the Borough. Sites include building facades and kerbsides, reflecting the locations where people may be exposed to the maximum concentration of nitrogen dioxide.

3.3.2. The Borough also currently has two Air Quality Management Areas (AQMAs):

3.3.3. The first was declared in 2006 for part of the Gosport Road and the second was declared in 2007 for Portland Street, as shown in **Figure 3-1** and **Figure 3-2**. Air quality testing was undertaken because of complaints, leading to an Air Quality Action Plan (AQAP) being developed to improve air quality in the affected areas.[40]

Figure 3-1 Gosport Road AQMA

Figure 3-2 Portland Street AQMA

[40] http://www.fareham.gov.uk/PDF/licencing_and_inspections/aqap-gosportrd-portlandst.pdf

3.3.4. In June 2008, a continuous nitrogen dioxide monitor was installed in the Gosport Road AQMA. An automatic monitor was funded for three years by contributions from Hampshire County Council and The Department for Environment, Food, and Rural Affairs (DEFRA)[41]. Air quality review and assessment reports combine results from this automatic monitoring station and 'diffusion tube results'. In this case, the monitoring and reporting helps assessment of the BRT route that runs between Gosport and Fareham.

3.3.5. A new automatic monitor was installed in Portland Street, Fareham in April 2012. It was funded through a planning agreement with the developer of the food retail store on Quay Street. The monitor is used along with the diffusion tubes on homes in Portland Street to assess the impact of the new Quay Street roundabout which takes northbound traffic from the A32 onto the A27 Eastern Way and the M27 without passing the homes on Portland Street.

3.3.6. The automatic monitors provide nitrogen dioxide results based on real time data which has not been manually assessed or validated. Further data from these sites can be found on the Air Quality England website[42].

3.3.7. Examples of improvement actions taken in the AQAP include:

- Implementing the Eclipse BRT system between Fareham and Gosport;
- Improving emission standards of our Council fleet;
- Seeking to reduce emissions from the local bus fleet. All 17 buses on the Fareham to Gosport BRT route are fitted with the latest Euro VI engines, producing 95% less nitrogen emissions compared to buses with Euro V engines;
- Pursuing emission testing in the AQMAs;
- Providing "turn off your engine" signs at the bus station/taxi ranks;
- Erecting signs on Gosport Road, Fareham to let vehicle drivers know about areas of poor air quality and encouraging them to share cars etc.;
- Providing bus/rail interchange facility at Fareham rail station;
- Improving the Quay Street roundabout in conjunction with the retail development of the old foundry site;
- Providing real time bus information at bus stops; and
- Promoting walking by introducing Walking for Health43, a scheme which features a series of walks around the Borough which are suitable for all and are graded for different abilities.

3.3.8. The 2015 Air Quality Action Plan Progress Report[44] provides an update on the status of the AQMAs in Fareham and reviews the number of transport initiatives that feed into increasing air quality within the Borough, including schemes associated with StAG.

3.3.9. In January 2017 Fareham and Gosport Environmental Health Partnership issued the Annual Status Report 2016[45], which concluded that both the existing AQMAs need to be extended as locations outside of the AQMAs had exceeded the annual mean NO_2 objective for Fareham. The AQMA extensions were agreed by the Executive in October 2017.

3.4. Road Safety

3.4.1. The road network of Fareham Borough is monitored for safety through collecting data on accidents. The intervention level for casualty reduction measures is set at four or more injury accidents at a single location over a five-year period.

3.4.2. This is reduced when there are accidents with a similar pattern, or where serious injuries are involved. In these cases, the intervention level is set at three or more injury accidents over a five-year period.

[41] https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs
[42] http://www.airqualityengland.co.uk/local-authority/?la_id=131
[43] https://www.walkingforhealth.org.uk/walkfinder/fareham-walking-4-health
[44] http://www.fareham.gov.uk/PDF/licencing_and_inspections/AirQualityReport2015.pdf
[45] http://www.fareham.gov.uk/PDF/licencing_and_inspections/HCU-170130_FarehamAndGosport16.pdf

3.4.3. 'Route Studies' are also considering where injury accident patterns exist over longer lengths of road.

3.4.4. **Table 3-1** below details the locations and years where the intervention level was surpassed (accident hot spots).

Table 3-1 Repeated Road Safety Incidents in Fareham Borough

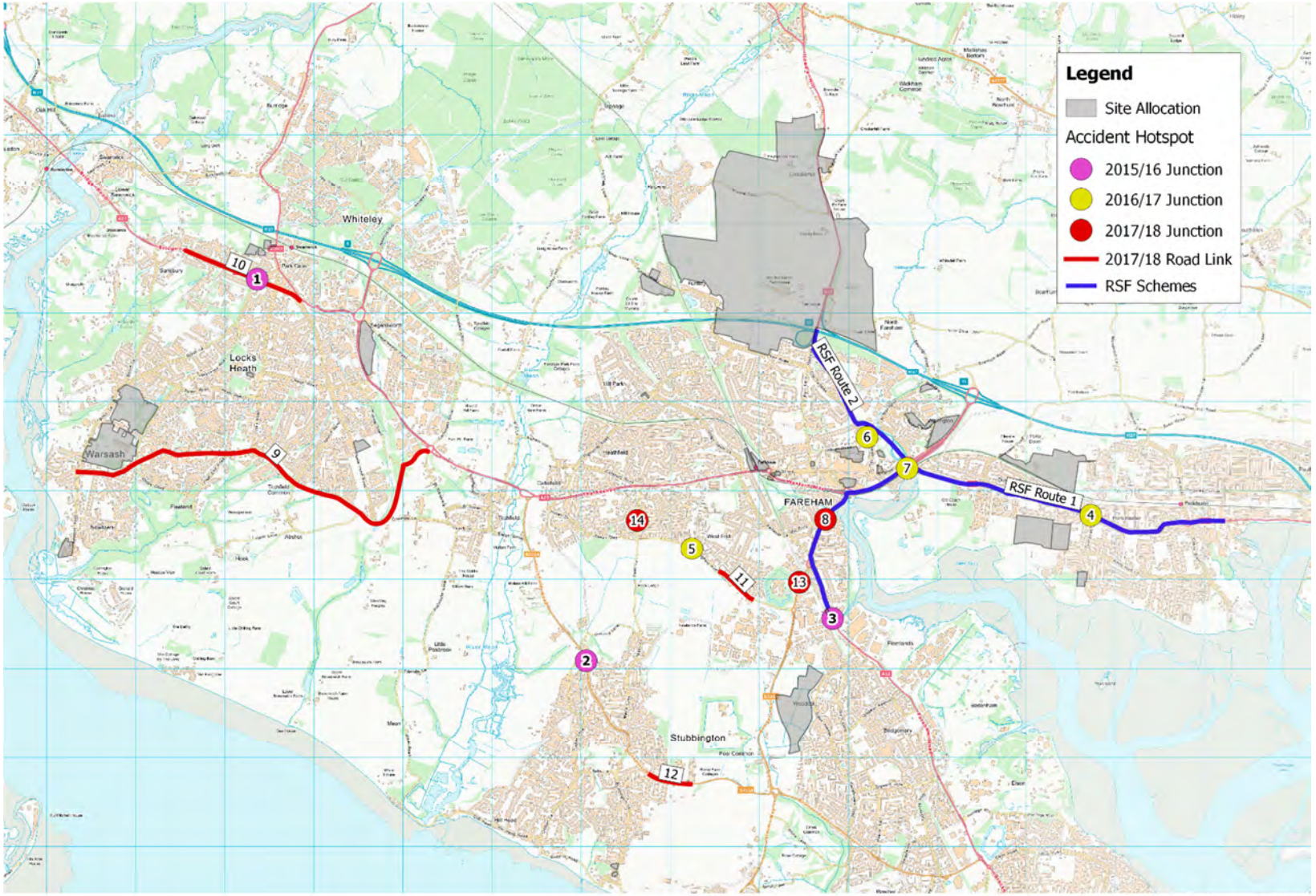
Year	Ref. No.	Location
2015/16	1	A27 Bridge Road/C370 Brook Lane Roundabout Park Gate
	2	B3334 Titchfield Road junction with Cuckoo Lane ATS Stubbington
	3	A32 Gosport Road outside Hoeford Inn
2016/17	4	A27 Portchester Road/Dore Avenue Roundabout
	5	C361 Longfield Avenue junction with Bishopsfield Road
	6	C366 High Street junction with Osborne Road
	7	A27 Delme Roundabout South West exit to Pedestrian Crossing
2017/18	8	A32 Gosport Road, Fareham - A32 Old Gosport Road Roundabout
	9	C363 Warsash Road, Warsash - From Brook Lane Roundabout to A27 Roundabout
	10	A27 Bridge Road, Park Gate - From Fort Fareham Road to 60 metres northwest of Cheviot Walk
	11	C361 Longfield Avenue junction with Bishopsfield Road
	12	B3334 Gosport Road, Stubbington - From Harold Road to Marks Road
	13	B3385 Newgate Lane junction with Palmerston Drive, Fareham
	14	C362 Peak Lane junction with Longmynd Drive, Fareham

3.4.5. Work with the Road Safety Foundation is ongoing to try and secure funding for measures on three routes that have been identified by the EuroRAP risk rating report. Two of these routes are in Fareham:

- A27 Delme Roundabout to Boundary with Portsmouth; and
- A32 from M27 Junction 10 to Gosport boundary.

3.4.6. These locations are shown by reference number in **Figure 3-3**.

Figure 3-3 Road Safety Incidents in Fareham Borough



4. Impact of Growth

This section discusses the likely transport related impacts arising from forecast future population and economic growth both within FBC and beyond;

4.1.1. PUSH has considered the latest Government guidance that identifies the South Hampshire region, including the Isle of Wight, for substantial housing development over the next twenty years. Through this process a Strategic Housing Market Assessment (SHMA) was produced in 2014.

4.1.2. The updated evidence within the Objectively Assessed Housing Need Update for PUSH (June 2016) sets out the need to deliver 121,500 homes across South Hampshire over the period 2011-2034, which includes 10,460 in Fareham Borough.

4.1.3. It is apparent that an increasing volume of vehicles on the current road network is pushing existing road capacity to its limits across not only Fareham Borough but the South Hampshire sub-region too. Restrictions on future spending combined with the levels of development proposed within the area mean it is unlikely that resources will be available to increase the capacity of the network sufficiently to ensure congestion and capacity issues are fully resolved.

4.1.4. The NPPF states that “Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe”. Therefore, alternative methods of transport such as cycling, walking, or public transport and their respective routes will need to be improved and investment found to support and encourage their use.

4.1.5. Proposed housing developments can have an impact on existing traffic volumes and congestion locations if measures are not implemented to mitigate the increase in road use. Measures such as junction improvement schemes, public transport links, rail access improvements, and travel plans (car sharing schemes etc.) can all help reduce the number of vehicles on the highway at peaks times, whilst implementation of pedestrian/cycling routes assist in reducing the dependency on vehicles for short trips and commuting distances under 5km.

4.1.6. PUSH Position Statement T1: Encouraging Modal Split aims to promote and encourage a modal shift to sustainable transport from private car use. Private car use currently accounts for 63% of all trips in the AM peak across the area.

4.2. Strategic Access to Gosport study (StAG)

4.2.1. The Strategic Access to Gosport study (StAG) has been a key component for transport planning in Fareham and the wider region since 2008. The study was undertaken by Solent Transport (formerly Transport for South Hampshire) on behalf of PUSH. Actions and measures for improving strategic access to the Gosport Peninsula are identified, up to 2026.

4.2.2. Solent Transport defined the overall focus for this study as deliverable measures which could contribute to the management of issues related to journey delays and accessibility of all modes, within the context of combatting climate change, supporting the economy, and accommodating the planned growth up to 2026.

4.2.3. The study set the overall aim as to define a set of high level deliverable measures, which would contribute to:

- Managing existing and predicted future access issues, including safety and environment, for the Gosport Peninsula; and
- Supporting the local economy and growth agenda proposed for the Gosport Peninsula.

4.2.4. The study also set out the following objectives (derived through reference to national, regional, sub-regional, and local transport planning policies. The objectives are intended to identify deliverable actions or measures to contribute to:

- The reduction of car trips for short journeys (i.e. at least five miles) at key strategic access links on the highway network, in peak periods for travel to and from the Gosport Peninsula;
- Improving journey time reliability in the peak periods by all modes for trips to and from the Gosport Peninsula;
- Improving access to non-car modes in the peak periods to, from, and within the Gosport Peninsula; and
- Improving access to key existing and proposed development sites by all modes in the peak periods to, from, and within the Gosport Peninsula.

4.2.5. **Table 4-1** sets out nineteen key measures to be implemented, taken from current transport policy for the Gosport Peninsula.

4.2.6. Several of the nineteen schemes have already been completed. Scheme names and StAG reference numbers are listed below. These include:

- Newgate Lane (Northern Section) (1a);
- Quay Street Roundabout (3);
- Brockhurst Roundabout (6);
- BRT Phase 1 (7);
- Stokes Bay Cycle Route (17);
- Tichborne Way to Holbrook Leisure Centre Cycle Route (17);
- Marine Parade East Cycle Route (17);
- Marine Parade West Cycle Route (17); and
- Peel Common Roundabout (2).

4.2.7. Two other schemes have yet to be completed. Both were permitted as of November 2015, these are:

- Newgate Lane (Southern Section) (1b); and
- Stubbington Bypass (9).

Table 4-1 StAG Schemes

Ref. No.	Scheme Name	Scheme Details
1a	Newgate Lane (Northern Section)	Removal of roundabout junctions at Longfield Avenue and Speedfields Retail Park and replacement with signal controlled junctions. **[Completed]**
1b	Newgate Lane (Southern Section)	On line widening from Speedfields Retail Park roundabout southwards to Peel Common roundabout to provide additional capacity and provide improved pedestrian and cyclist provision.
2	Peel Common Roundabout	Provision of additional capacity and introduction of part/full traffic signal control. **[Completed]**
3	Quay Street/Fareham AQMA	Reconfiguration of roundabout by converting to a "semi-hamburger" design plus the introduction of full signalisation of the roundabout to cater for additional traffic generated by the "new" Tesco development. **[Completed]**
4	Access to Daedalus	Access strategy to provide a new access to the previously secure site still under development.
5	ITS Strategy	The strategy is in three parts. Firstly, upgrading the existing traffic signal control on the A32 corridor. The second phase will be the introduction of traffic signal control on the Newgate Lane and B3334 corridor (Titchfield Road, Gosport Road, and Rowner Road). The final phase will be the introduction of driver information about the performance of the peninsula's network to inform driver choices and maximise the efficiency of the network.
6	A32 Brockhurst Roundabout	The introduction of a Toucan crossing and the provision of cycle routes to link with existing cycle routes from Rowner, Heritage Way employment area, and Broom Park Community College. **[Completed]**
7	BRT Phase 1	BRT Phase 1 provides a dedicated busway along the disused railway corridor between Redlands Lane in Fareham to Titchborne Way in Gosport **[Completed]**. Part of an on and off road wider network linking key destinations including Gosport, Fareham, Portsmouth, QAH, Waterlooville, and Havant to proposed development at North Fareham, Tipner, Waterfront, etc. to be developed incrementally as funding is secured.
8	Gosport Waterfront Interchange	PUSH and HCC have funded the Master-Planning of the proposed development which is presently being undertaken by GBC's consultants, Colin Buchanan.
9	Western Access to Gosport	Stubbington Bypass
10	A32 Access to Gosport	Improvements which will help overcome barriers to movement to existing development sites by opening access opportunities for non-car modes and "hot spot" congestion resolution. Scheme for Wych Lane junction improvement identified and previous feasibility work requires "refreshing" to obtain estimated scheme cost and third-party land requirements.
11	Portsmouth to Southampton Ferry	The provision of such a service would need to be subject to further investigation to ascertain whether a robust business case could be made.
12	Delme Roundabout	No current proposals.
13	Stubbington Village Centre	The removal of the Gosport Road/Stubbington Lane and the Titchfield Road/Mays Lane roundabouts and their replacement with traffic signal control.
14	A27 Bus Priority plus Traffic	First phase of this work involves improving accessibility unto and out of Redlands Lane for BRT.
15	Access to North Fareham SDA	Work ongoing to identify impact on local and strategic road network and the mitigation measures required.
16	Fareham Railway Station Interchange	Fareham Station forms a focal part of the wider BRT network. An interim scheme involving a new westbound bus stop and replace eastbound pole on the A27 adjacent to the station is being progressed linked to BRT Phase 1. Longer term proposals to upgrade the interchange will be developed in conjunction with the wider network. **[Under construction at time of writing]**
17	Walking and Cycling Improvements	Cycling schemes to be based on GBC and FBC's Cycle Network Proposals. Walking infrastructure improvements to be focussed on known barriers. **[Some completed, others awaiting funding]**
18	BRT Vision and Future Phases	A BRT network of preferred routes is being developed for 19 sections of on and off-road bus priority provision. The network will link key destinations including Gosport, Fareham, Portsmouth, QAH, Waterlooville, and Havant to proposed development at North Fareham, Tipner, Waterfront, etc. to be developed incrementally as funding is secured.

4.3. Forecast Network Congestion

4.3.1. A run of the sub-regional transport model has been undertaken by PUSH to understand the transport impacts of the latest growth projections in South Hampshire through to 2036, excluding the proposed site allocations in the emerging Local Plan.

4.3.2. The transport model takes account of all committed developments and transport infrastructure interventions in the region, as well as forecast economic and population growth. The outputs of this model also provide the baseline against which the incremental traffic impacts of the proposed site allocations can be compared.

4.3.3. The following transport interventions are included in the model:

- Junction upgrades to M27 Junctions 9 and 10;
- M27 Junctions 4 to 11 Smart Motorway Programme.
- Newgate Lane (Northern Section) - works completed;
- A27 Western Way and Western Road Improvements - works underway;
- Peel Common Roundabout - works completed;
- A27 St Margaret's Roundabout - works completed;
- Newgate Lane (Southern Section);
- A27 Segensworth to Titchfield Improvements - works underway;
- A27 Station Roundabout;
- Stubbington Bypass;
- Welborne M27 all movements Junction 10;
- A32 Fareham to Wickham improvements;
- BRT services;
    - Completion of the Fareham to Gosport links, expanding the current route to the Gosport Ferry transport hub;
    - Fareham to Queen Alexandra Hospital (Cosham);
    - Fareham to Portsmouth;
    - Fareham to Southampton;
    - Fareham to Whiteley;
    - Fareham to Havant;
    - A 'Solent Metro' style rail/tram service which includes a Fareham-Eastleigh-Southampton circular; and
- General railway service improvements between the region and London.

4.3.4. The model has identified the locations where the network is forecast to be under strain in 2036. **Figure 4-1** and **Figure 4-2** show where demand is forecast to exceed capacity for the AM and PM peak periods respectively and therefore significant traffic queuing and delay is anticipated.

4.3.5. The numbers shown are the ratio of flow to capacity (RFC) presented as a percentage. RFCs between 90% and 100% indicate that a junction is operating over practical capacity, but below theoretical capacity. An RFC of 100% or over indicates that a junction is operating over both practical and theoretical capacity.

4.3.6. Junctions forecast to be operating with RFCs of 80% or more are shown in **Figure 4-3.** A list of these junctions is provided in **Appendix A.** The arms operating over capacity in either the AM peak period, PM peak period or both peak periods in the 2036 Baseline scenario are shown in bold.

4.3.7. **Figure 4-4** shows the junctions forecast to be operating at or over 90% RFC against their respective peak hour flow (in PCUs) in the 2036 Baseline scenario. The graph therefore grades the junctions in terms of likely total forecast aggregate delay from the lowest in the bottom left to highest in the upper right. This therefore shows which junctions are most in need of interventions to alleviate forecast traffic congestion. Junction 25 (M27 Jct9) has the highest RFC against flow as is in the top right-hand corner of the graph and is therefore most in need of appropriate intervention.

4.3.8. The junction names corresponding to the reference numbers shown on the figures are listed below:

1. A32 Hoad's Hill / A334 Fareham Rd / A32 School Rd
2. A32 Wickham Rd / Knowle Rd
3. A32 Wickham Rd / Pook La / M27 EB on-slip / Welborne development
4. M27 J10
5. A32 Wickham Rd / North Hill
6. Kiln Rd / North Hill / Old Turnpike Ln
7. A32 / High St / Wallington Way
8. Broadcut Roundabout
9. Osborn Rd / High St / Wickham Rd
10. M27 J11
11. Delme Roundabout
12. Quay St Roundabout
13. Station Roundabout
14. Longfield Av / Newgate Ln
15. Peel Common Roundabout
16. Stubbington Bypass (southern access)
17. Stubbington Bypass (Peak Ln access)
18. Stubbington Bypass (B3334 Titchfield Rd)
19. Longfield Av / Peak Ln / Rowan Way
20. A27 The Avenue / Peak Ln
21. Titchfield Gyratory
22. A27 Southampton Rd / Mill Ln
23. St Margaret's Roundabout
24. Segensworth Roundabout
25. M27 J9
26. West St / High St
27. A32 Gosport Rd / Old Gosport Rd / Mill Rd Roundabout
28. A32 Gosport Rd / Newgate Ln
29. A27 The Avenue / Redlands Ln / Gudge Heath Ln
30. A27 The Avenue / Bishopsfield Rd
31. A27 The Avenue / Highlands Rd
32. B3334 Titchfield Rd / Bridge St
33. Highlands Road / Kiln Road
34. Cartwright Dr / Segensworth Rd
35. Barnes Wallis Rd / Whiteley Ln / Cartwright Dr
36. Barnes Wallis Rd / Brunel Way
37. Barnes Wallis Rd / Brabazon Rd / Witherbed Ln
38. Primate Rd / Prelate Way
39. Hunts Pond Rd / Abshot Rd
40. Lower Church Road / Southampton Road
41. Lower Church Rd / Primate Rd / Longacres
42. Lower Church Rd / Hunts Pond Rd Roundabout (southern mini roundabout)
43. Lower Church Rd / Hunts Pond Rd Roundabout (northern mini roundabout)
44. Warsash Rd / Abshot Rd
45. Warsash Rd / Locks Rd
46. Warsash Rd / Common Ln
47. Peters Road / Lockswood Roundabout
48. A27 Bridge Rd / Coldeast Way
49. A27 Bridge Rd / Station Rd / Brook Ln Roundabout
50. Lockswood Rd / Brook Ln Roundabout
51. Botley Rd / A27 / Hunts Pond Rd / Southampton Rd
52. Southampton Rd / Telford Way Roundabout
53. Botley Rd / Yew Tree Dr
54. Sweethills Crescent / Yew Tree Dr
55. Sweethills Crescent / Yew Tree Dr Roundabout
56. Parkway South Roundabout
57. Parkway / Zone Access
58. Castle Street Roundabout
59. Cornaway Lane Roundabout

Figure 4-1 2036 Baseline AM Peak Period V/C

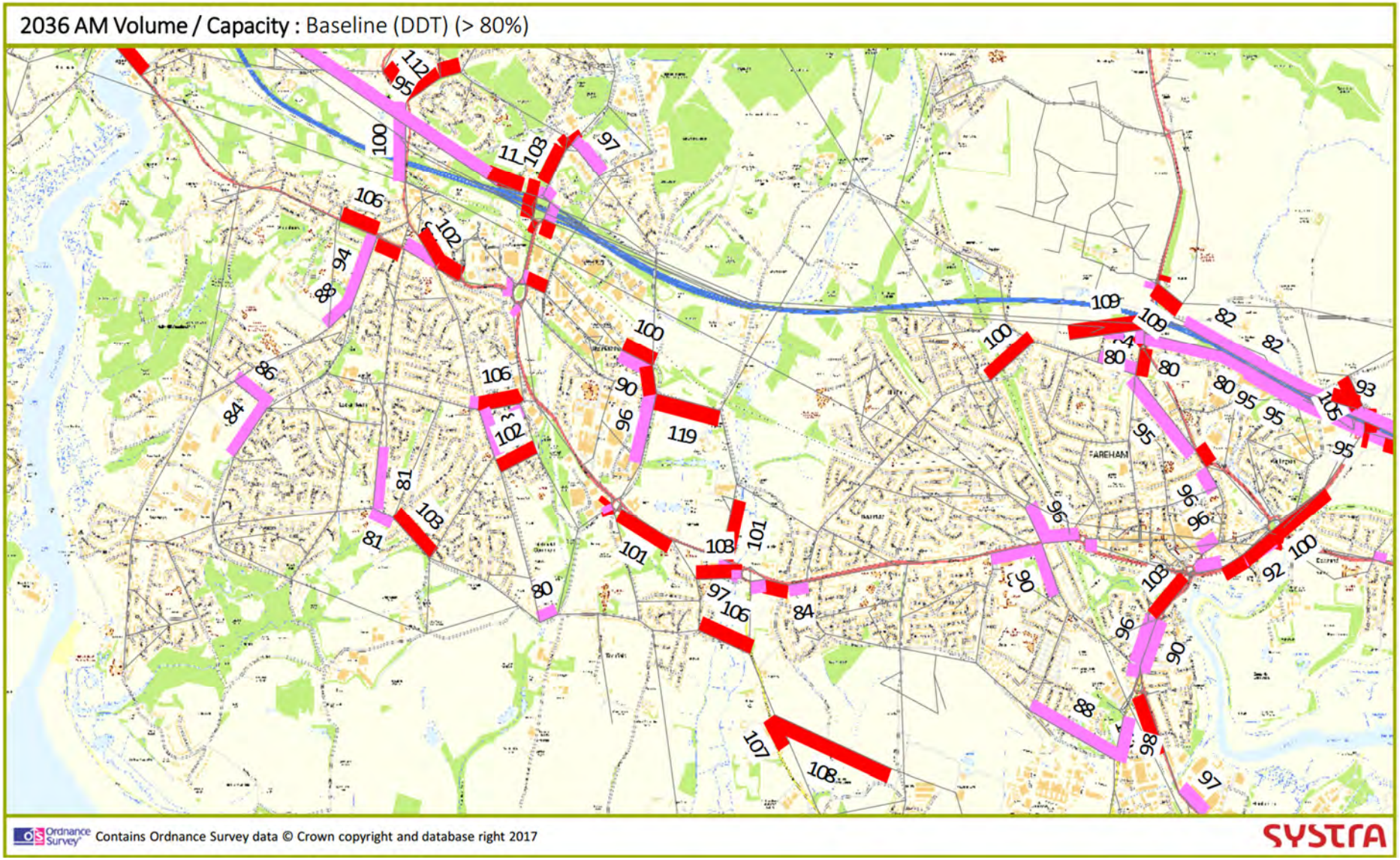


Figure 4-2 2036 Baseline PM Peak Period V/C

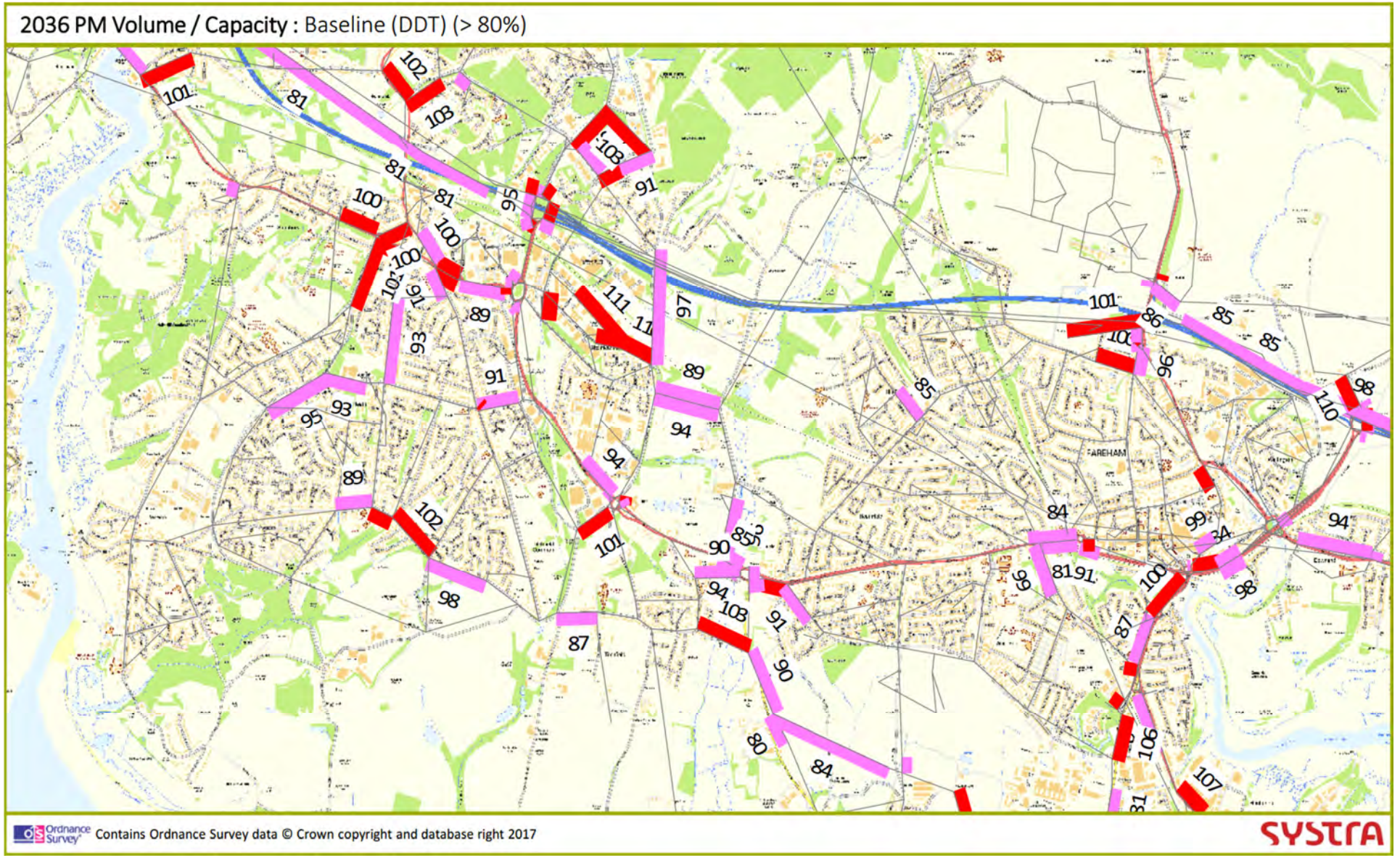


Figure 4-3 Junction Locations

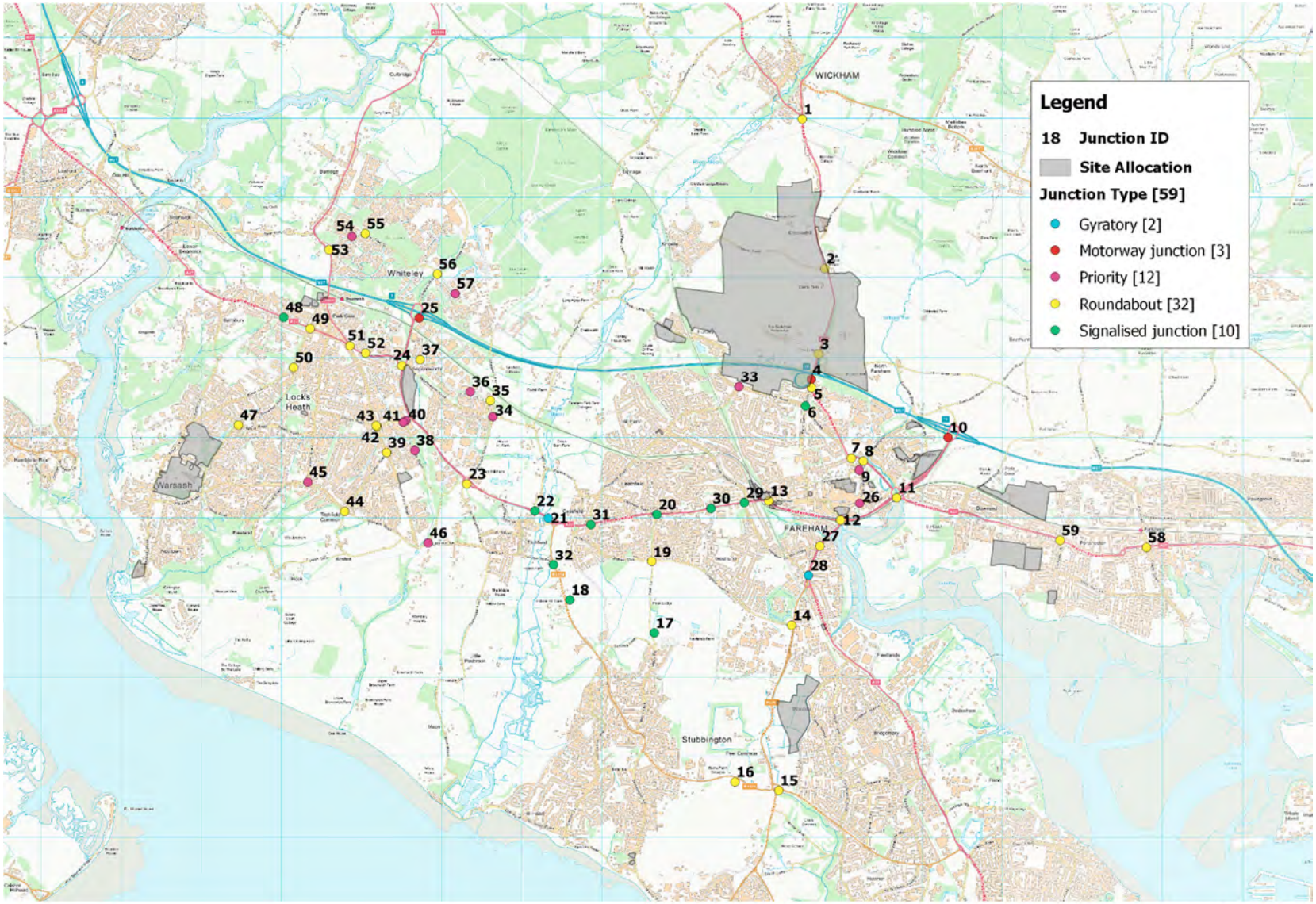
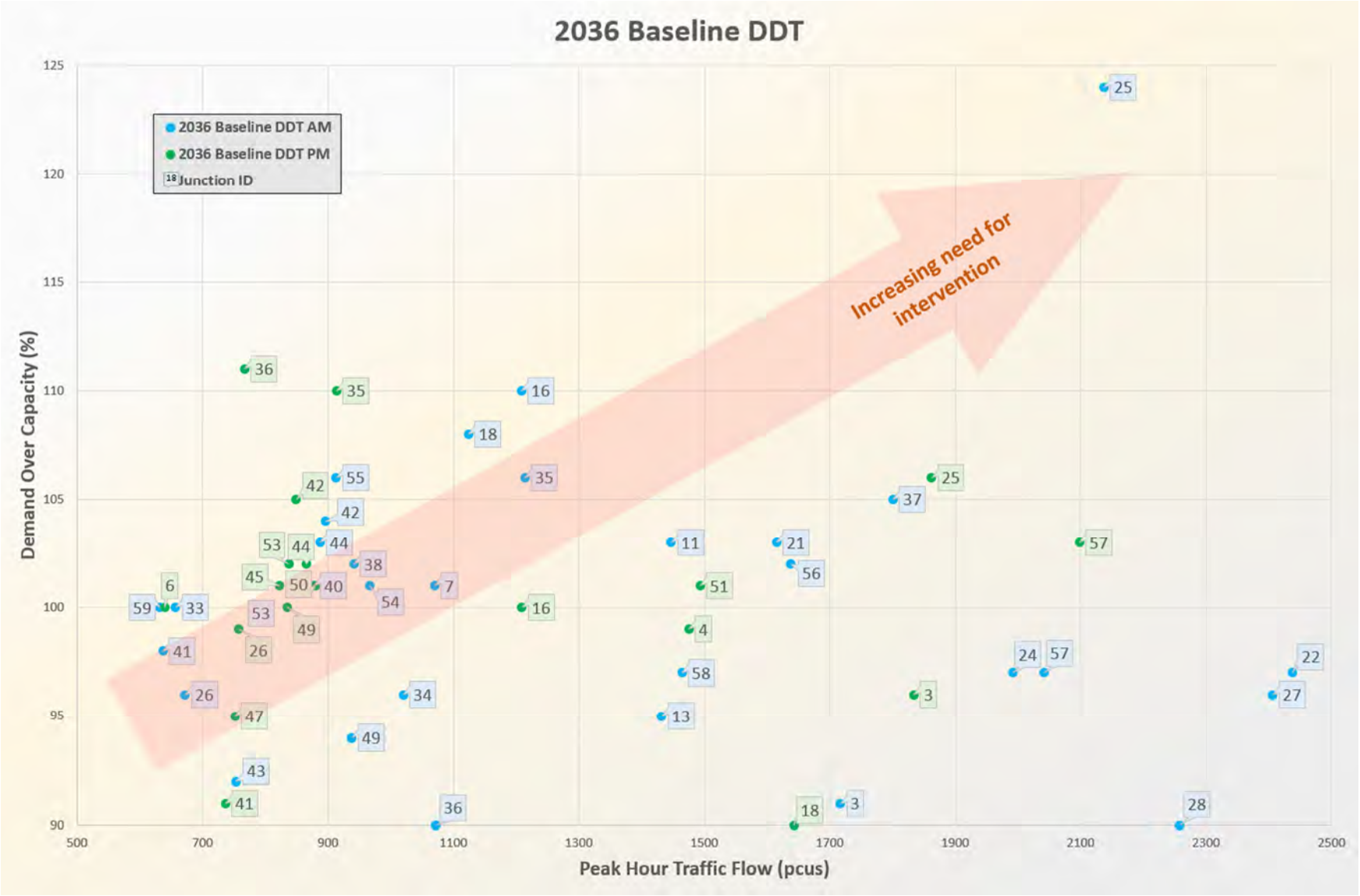


Figure 4-4 Junction Operation - 2036 Baseline



5. Site Allocations

This section describes proposed site allocations in the emerging Local Plan and how they have been selected.

5.1. Site Allocation Locations

5.1.1. There are currently thirteen sites allocated for housing development in Fareham Borough as listed in the Local Plan. Details of the sites are seen in **Table 5-1** below. Their location and area in relation to Fareham Borough is seen in **Figure 5-1**.

Table 5-1 Draft Local Plan Housing Allocations in Fareham Borough

Site	Capacity
Fareham Town Centre	592 dwellings
Funtley	78 dwellings
Hampshire Rose	18 dwellings
Newgate Lane	475 dwellings
Park Gate (Beacon Bottom)	59 dwellings
Portchester Downend East	350 dwellings
Portchester South (Cranleigh Road /Romsey Avenue)	345 dwellings
Segensworth	400 dwellings
Titchfield Common (Hunts Pond Road)	40 dwellings
Wallington	127 dwellings
Warsash	700 dwellings
Warsash Maritime	100 dwellings
Welborne	3,840 dwellings within Local Plan 2036
Total	**7,124 dwellings within Local Plan 2036**

5.1.2. Alongside this, there are also five sites allocated for employment development. These sites are listed in **Table 5-2** below, and their location and area in relation to Fareham Borough is seen in **Figure 5-2**.

Table 5-2 Draft Local Plan Employment Allocations in Fareham Borough

Site	Floorspace Capacity
Faraday Business Park, Daedalus	40,000m^2
Swordfish Business Park, Daedalus	8,000m^2
Solent 2, Whiteley	23,500m^2
Midpoint 27, Segensworth South	4,700m^2
Standard Way, Wallington	2,000m^2
Total	**78,200m^2**

5.2. Development and Transport

5.2.1. There is a need to provide new housing in Fareham Borough due to a growing and aging population. National planning policy sets out that Local Planning Authorities should seek to boost significantly the supply of housing, and should use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing where it is sustainable to do so.

5.2.2. PUSH recently updated the objectively assessed housing need for the area[46], published in June 2016.

5.2.3. Development, particularly largescale development, naturally impacts all transport systems by increasing pressure on roads and public transport services. Therefore, new infrastructure projects and upgrades to existing infrastructure will be essential to ensure the transport networks can accommodate higher usage, and to mitigate existing problems in areas experiencing peak hour congestion and junction delays.

5.2.4. Larger sites, such as Welborne, increase traffic movements across the network and it is imperative that access to sustainable and alternative transport modes is designed as part of any development proposals whether residential or employment related.

5.3. Transport Statements and Assessments

5.3.1. Developments of more than 50 dwellings, or 2,500m^2 floor area for commercial purposes, will require a site-specific transport assessment. This applies regardless of whether the site was allocated as part of the Local Plan or submitted as a planning application.

5.3.2. The TA should address the following issues:

- Reducing the need to travel, particularly minimising the use of cars;
- Ensuring sustainable accessibility for all modes of travel, focusing on public transport and active modes;
- Residual trip management and measure to manage these; and
- Mitigation measures, designed to minimise any physical changes to the highway network.

5.3.3. The TA should also cover:

- Assessment of public transport capacity, walking/cycling capacity, and road network capacity;
- Road trip generation and trip distribution methodologies and/or assumptions about the development proposal;
- Measures to promote sustainable travel including but not limited to walking, cycling, bus, and train links;
- Highway safety implications of the development; and
- Highway and off-line mitigation measures (where applicable) including scope and implementation strategy.

5.3.4. Developments below the thresholds defined above would not require a Transport Assessment, unless significant impacts on the highway network are identified.

[46] http://www.push.gov.uk/2c_objectively_assessed_housing_need_update.pdf

Figure 5-1 Draft Local Plan Housing Allocations in Fareham Borough

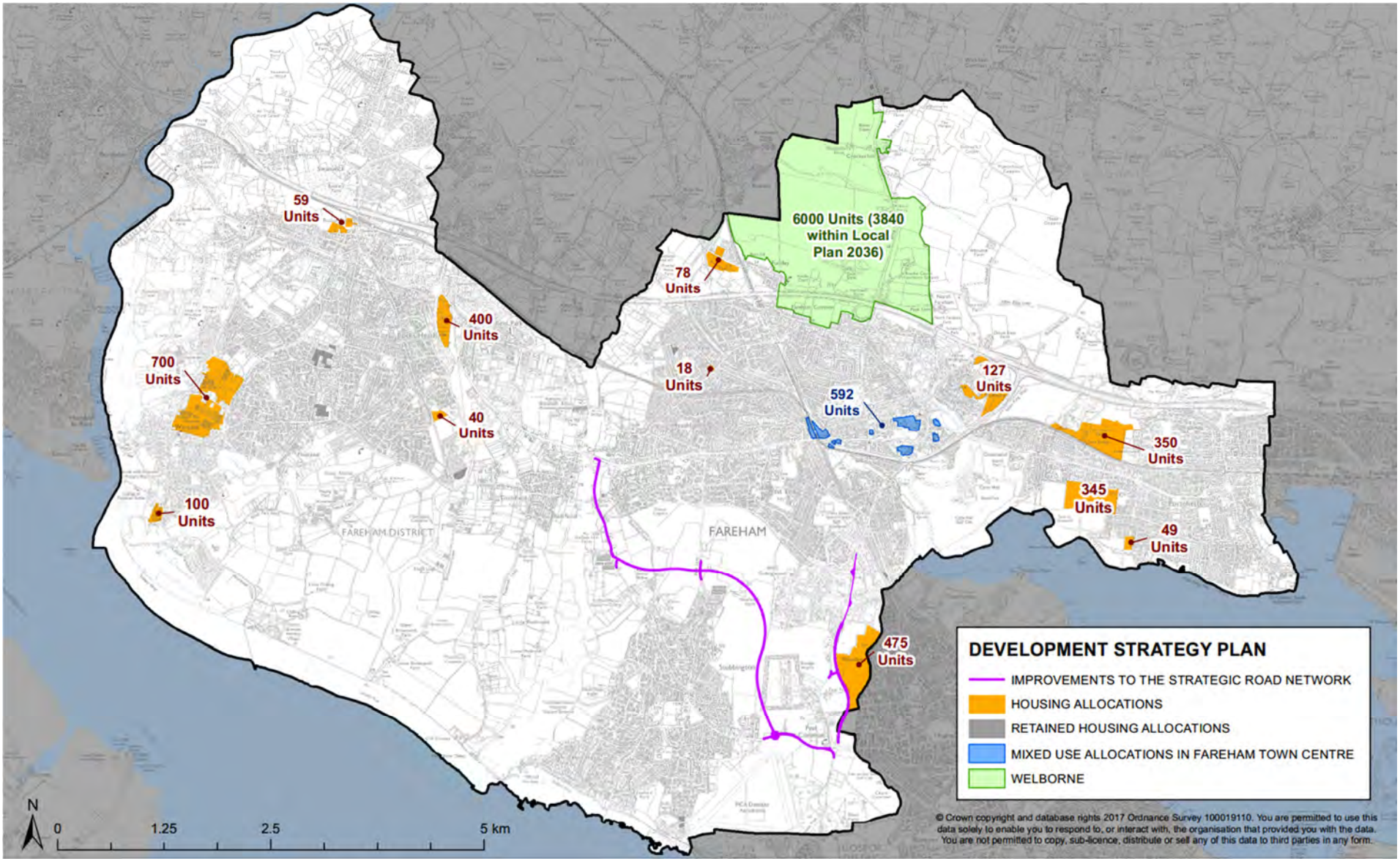
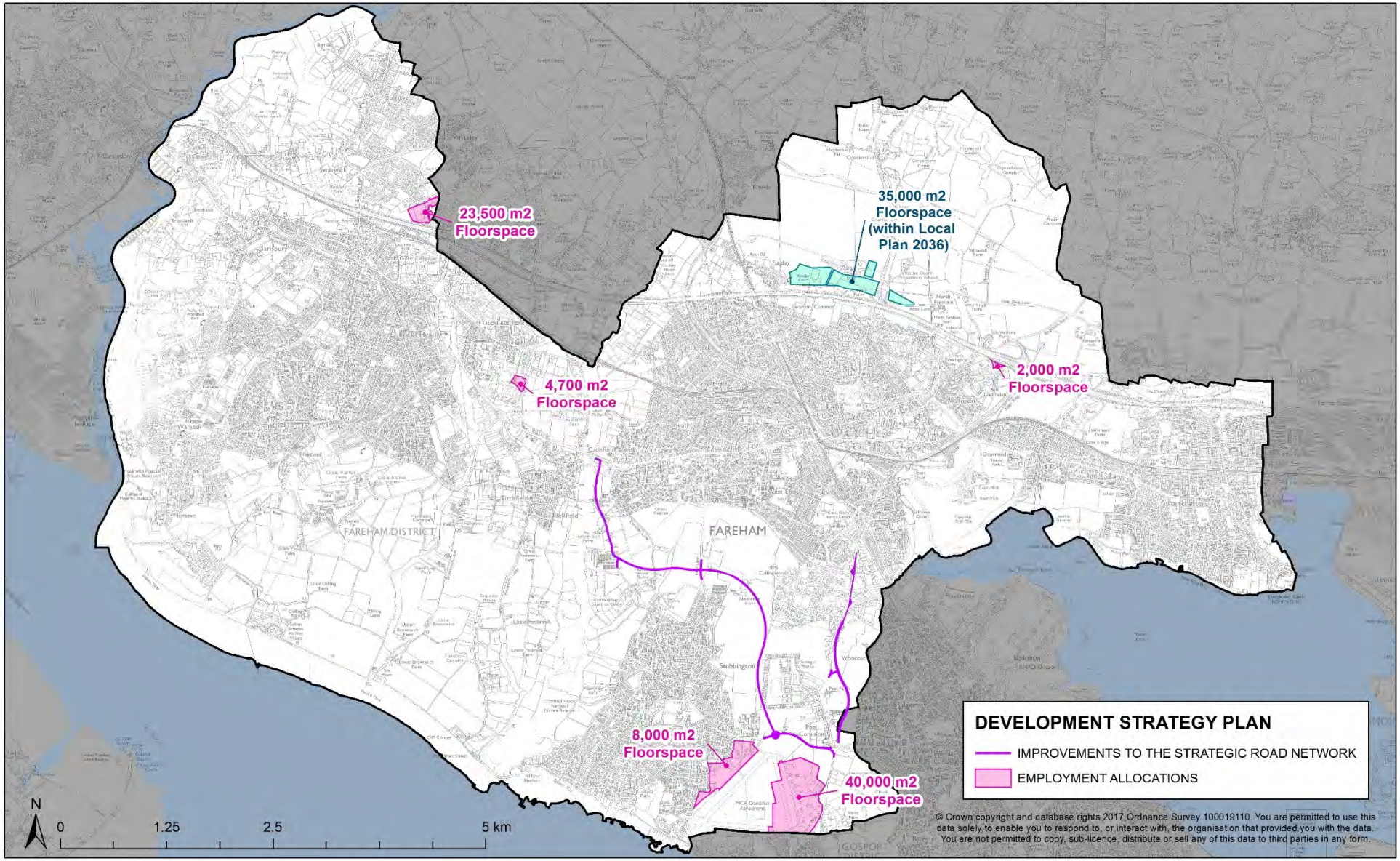


Figure 5-2 Draft Local Plan Employment Allocations in Fareham Borough



5.3.5. Most of the site allocations are located either within or on the edge of existing conurbations and therefore provide good opportunities for trips to be made by modes of transport other than the private car compared to locations remote from existing conurbations that would inevitably be very car dependent. Consequently, the site allocations are in sustainable locations in terms of transport and access. The traffic impacts of the developments are covered in Section 6.

5.4. Housing Allocation Selection Process

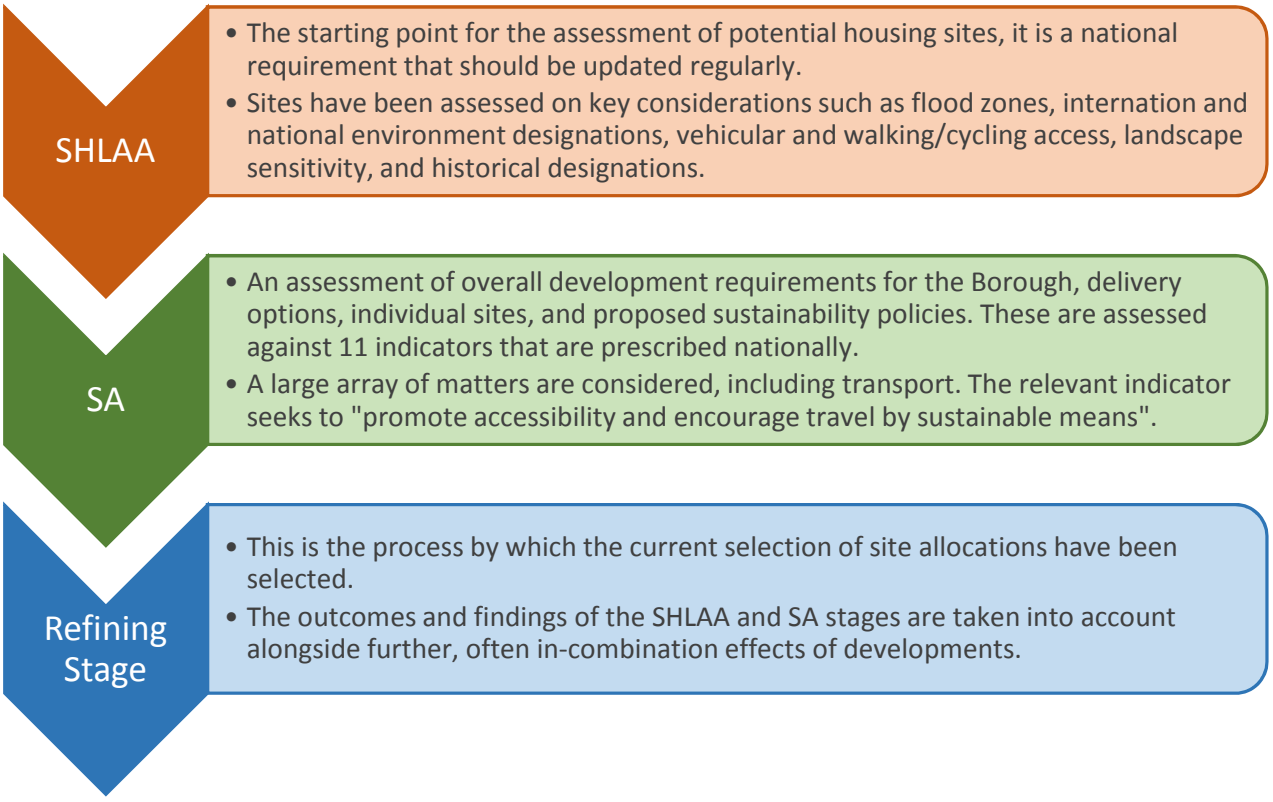
5.4.1. The allocated sites have been selected using the following process to ensure sustainable development that meets the needs of Fareham Borough.

5.4.2. The three main stages that inform the selection of sites are:

- The Strategic Housing Land Availability Assessment (SHLAA)[47];
- The Sustainability Appraisal (SA)[48]; and
- The Refining Stage.

5.4.3. These stages are examined in more detail in **Figure 5-3**. Transport is taken into consideration through ongoing dialogue with the Highway Authority and Highways England, as well as the modelling described in **Section 6**.

Figure 5-3 Fareham Borough Council Site Allocation Selection Process



47 http://www.fareham.gov.uk/PDF/planning/DSP13A%20Strategic%20Housing%20Land%20Availabity%20Assessment%20Volume%202%20-%20Update%20Report%20(FBC%20January%202014).pdf

48 http://www.fareham.gov.uk/PDF/planning/local_plan/SEAFarehamLPRScoping.pdf

6. Impact of Housing Allocation

This section assesses the likely transport related incremental impacts specifically resulting from the proposed housing allocations in the emerging Local Plan.

6.1.1. Outputs from the 2036 Do Minimum scenario of the Sub Regional Traffic Model (STRM) have been used to assess the incremental traffic impact of the proposed site allocations in the emerging Local Plan. The 2036 Do Minimum adds the forecast traffic generation from the site allocations described in Section 5 to the forecast traffic demand in the 2036 baseline model.

6.1.2. It should be noted that the forecast trip generation for the site allocations is based on typical trip rates and does not therefore take account of any reduction in traffic generation that may be achieved through the delivery of Travel Plan measures aimed at reducing sole occupancy car trips for these developments by promoting journeys by public transport, walking and cycling.

6.1.3. **Figure 6-1** and **Figure 6-2** show the forecast traffic flows in PCUs for the 2036 Do Minimum AM and PM peak hours respectively. All roads carrying over 300 PCUs are highlighted in pink with the lines getting thicker and darker as the number of PCU's increases.

6.1.4. Roads forecast to be carrying the highest peak hour traffic flows include the M27, the A27 and A32. High flows of traffic are also evident on the Stubbington Bypass.

6.1.5. **Figure 6-3** shows sections of the highway in the Borough where traffic demand is forecast to be approaching or exceeding capacity during the AM peak hour. Those sections shown in red are where demand is forecast to exceed both practical and theoretical capacity. These include:

- The links/slip roads south and north of the motorway junctions;
- A27 including Bridge Road/Southampton Road/Gosport Road/Western Way;
- The approach arms of the Segensworth roundabout;
- Bridge Street;
- Highlands Road (northern section);
- Gosport Road/Newgate Lane;
- Stubbington Bypass;
- Warsash Road; and
- Lower Church Road and Prelate Way, Park Gate.

6.1.6. **Figure 6-4** shows sections of the highway in the Borough where traffic demand is forecast to be approaching or exceeding capacity during the PM peak hour. These are broadly the same as the AM peak period:

- The links/slip roads south and north of the motorway junctions;
- A27 including Bridge Road/Southampton Road/Gosport Road/Western Way/Portchester Road;
- Barnes Lane;
- The approach arms of the Segensworth roundabout (the modelling shows that the western arms are busier in the PM);
- Bridge Street;
- Kiln Road (western section);
- Gosport Road/Newgate Lane;
- Redlands Lane;
- Stubbington Bypass;
- Warsash Road (albeit at a lower percentage than in the AM); and
- Lower Church Rd, Park Gate.

Figure 6-1 2036 Do Minimum AM Peak Period Flows

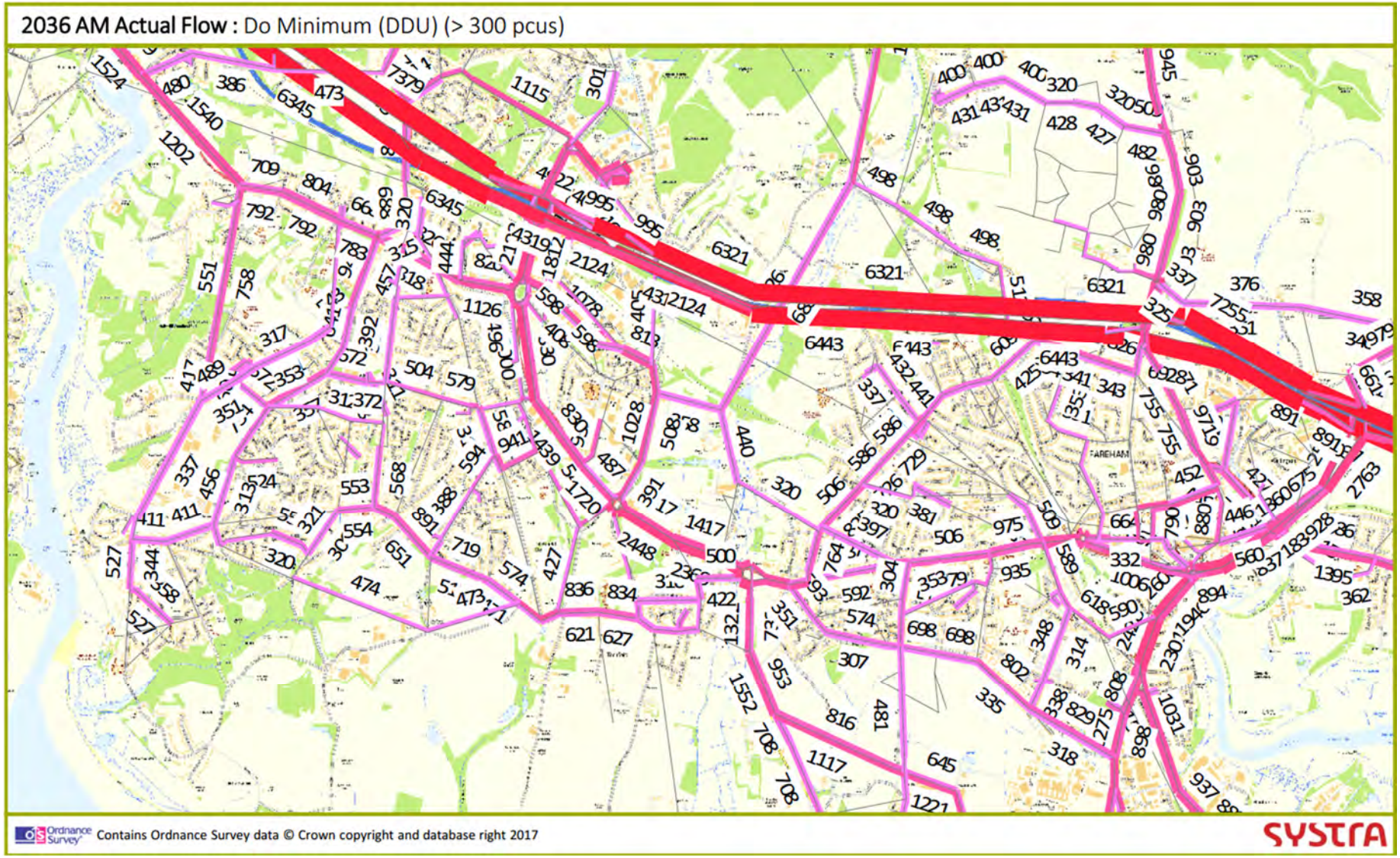


Figure 6-2 2036 Do Minimum PM Peak Period Flows

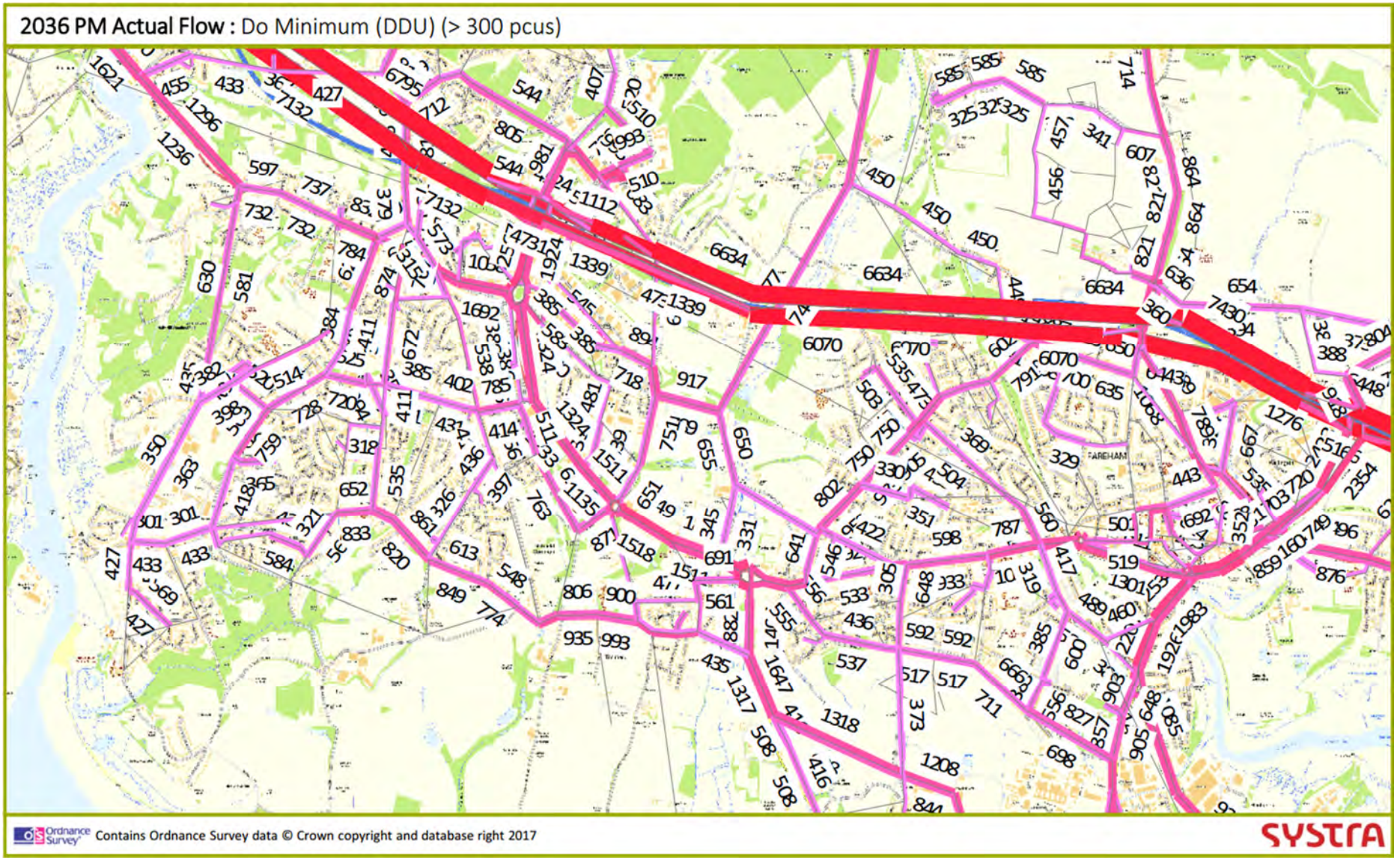


Figure 6-3 2036 Do Minimum AM Peak Period Capacity

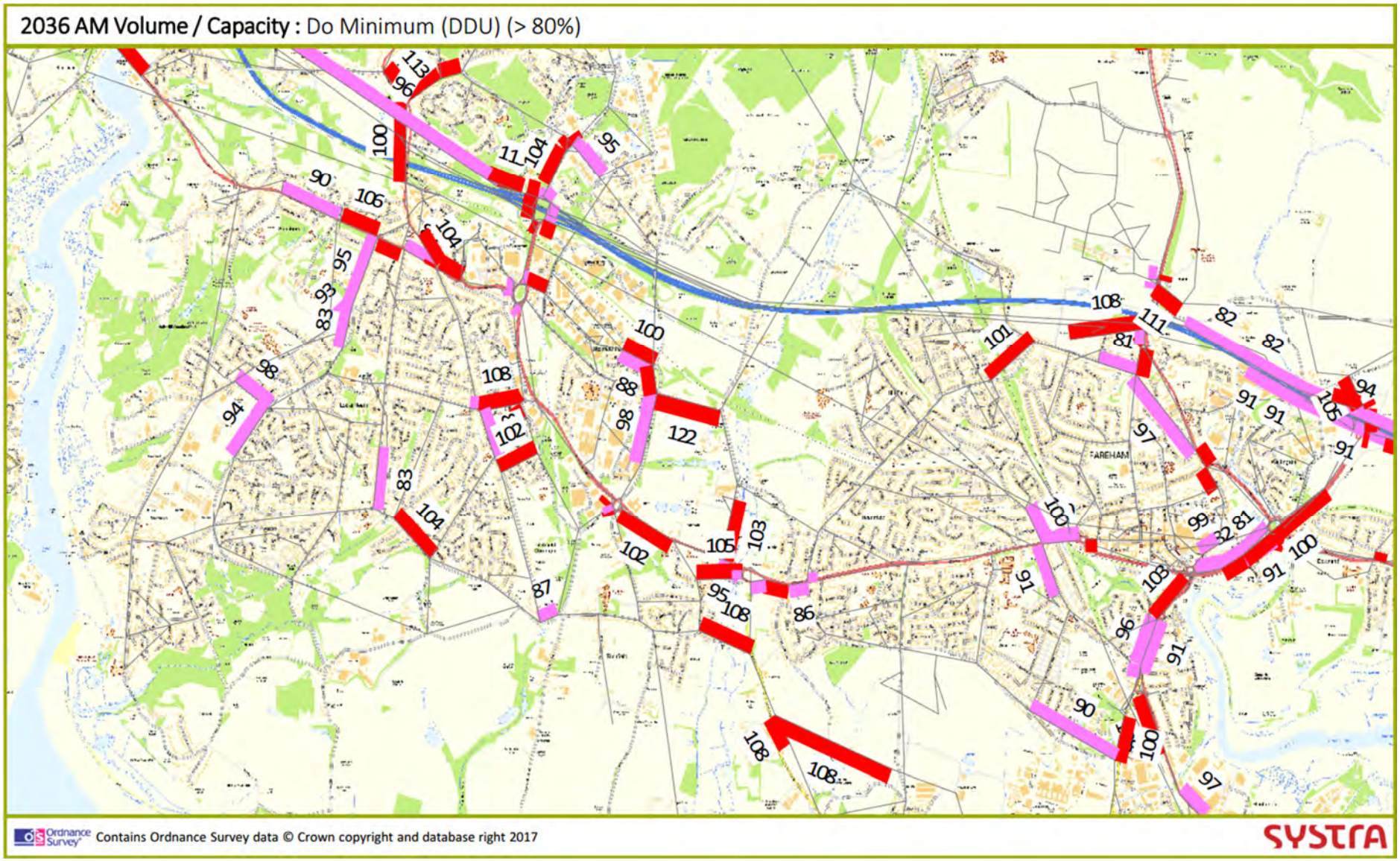
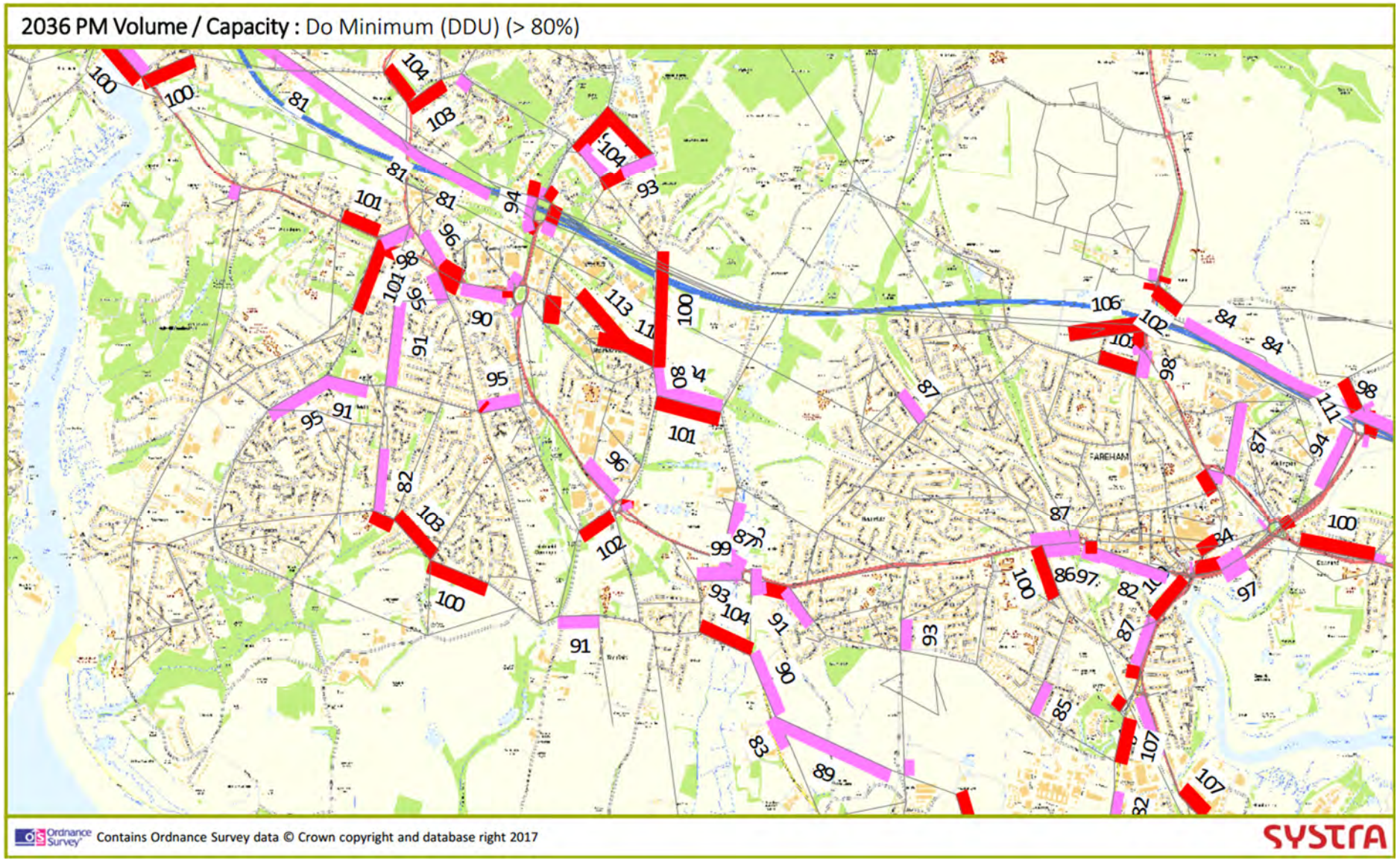


Figure 6-4 2036 Do Minimum PM Peak Period Capacity



6.2. Incremental Traffic Impact

6.2.1. To understand the likely incremental traffic impact of the site allocations, the differences in the forecast flows and capacities on the road network between the 2036 Baseline and 2036 Do Minimum models have been derived. As the site allocations are located throughout the Borough, plots were produced for each relevant part of the Borough and are considered in turn. The plots only show changes in flow of 50 or more PCUs per hour.

6.2.2. **Figure 6-5** and **Figure 6-6** show the forecast change in traffic flow during the AM and PM peak hours respectively near the Fareham Town Centre and Wallington site allocations. Portchester Downend East and Portchester South site allocations are also likely to have an impact on traffic volumes in the area.

6.2.3. These indicate that there is forecast to be a general increase in traffic on most links during both the AM and PM peak hours, especially on the A27 between Fareham and the M27. However, there is a reduction of traffic on the M27 during the AM peak hour. This is likely to be because of additional traffic congestion at junctions with the motorway that restricts access to it and causes traffic to divert on to alternative roads to avoid the traffic congestion.

6.2.4. **Figure 6-7** and **Figure 6-8** show the forecast change in traffic flow during the AM and PM peak hours respectively near the site allocations for Locks Heath, in which there are five site allocations – Park Gate, Titchfield Common, Segensworth, Warsash, and Warsash Maritime.

6.2.5. These indicate that there is forecast to be a general increase in traffic on most key links during both the AM and PM peak hours, especially on the A27. However, there is a reduction of traffic on the M27 during the AM peak hour. This is likely to be because of additional traffic congestion at junctions with the motorway that restricts access to it and causes traffic to divert on to alternative roads. There is a reduction in northbound traffic on Brook Lane, Botley Road and Brook Lane during the AM peak hour.

6.2.6. **Figure 6-9 and Figure 6-10** show the forecast change in traffic flow during the AM and PM peak hours respectively near the Welborne and Funtley site allocations.

6.2.7. These indicate that there is forecast to be a general increase in traffic on most roads, particularly on roads within the Welborne site, but a reduction on Wickham Road during both peak hours.

6.2.8. **Figure 6-11** and **Figure 6-12** shows the forecast change in traffic flow during the AM and PM peak hours respectively near the Newgate Lane site allocations.

6.2.9. These indicate that there is forecast to be an increase in traffic on several roads, including Tichborne Way, Braemar Road, Camp Road and Rowner Road east of Grange Road, but a reduction in traffic on Fareham Road between Wych Lane and Rowner Road in the AM peak hour. During the PM peak hour, there are forecast to be only modest changes in traffic flows, except for Newgate Lane and Lingfield Avenue where more noticeable increases in traffic flow are forecast.

Figure 6-5 2036 Scenarios AM Peak Comparison - Fareham

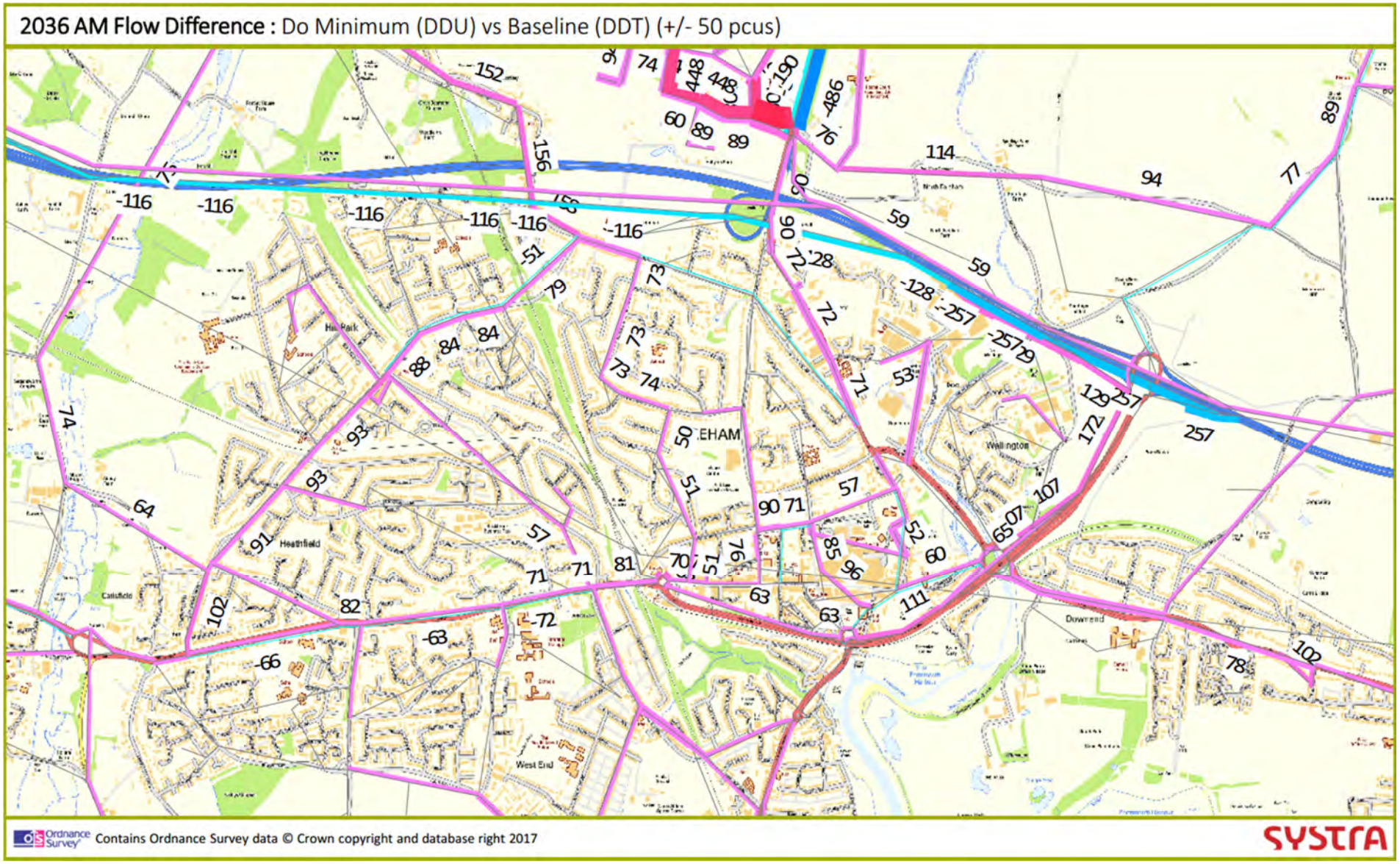


Figure 6-6 2036 Scenarios PM Peak Comparison - Fareham

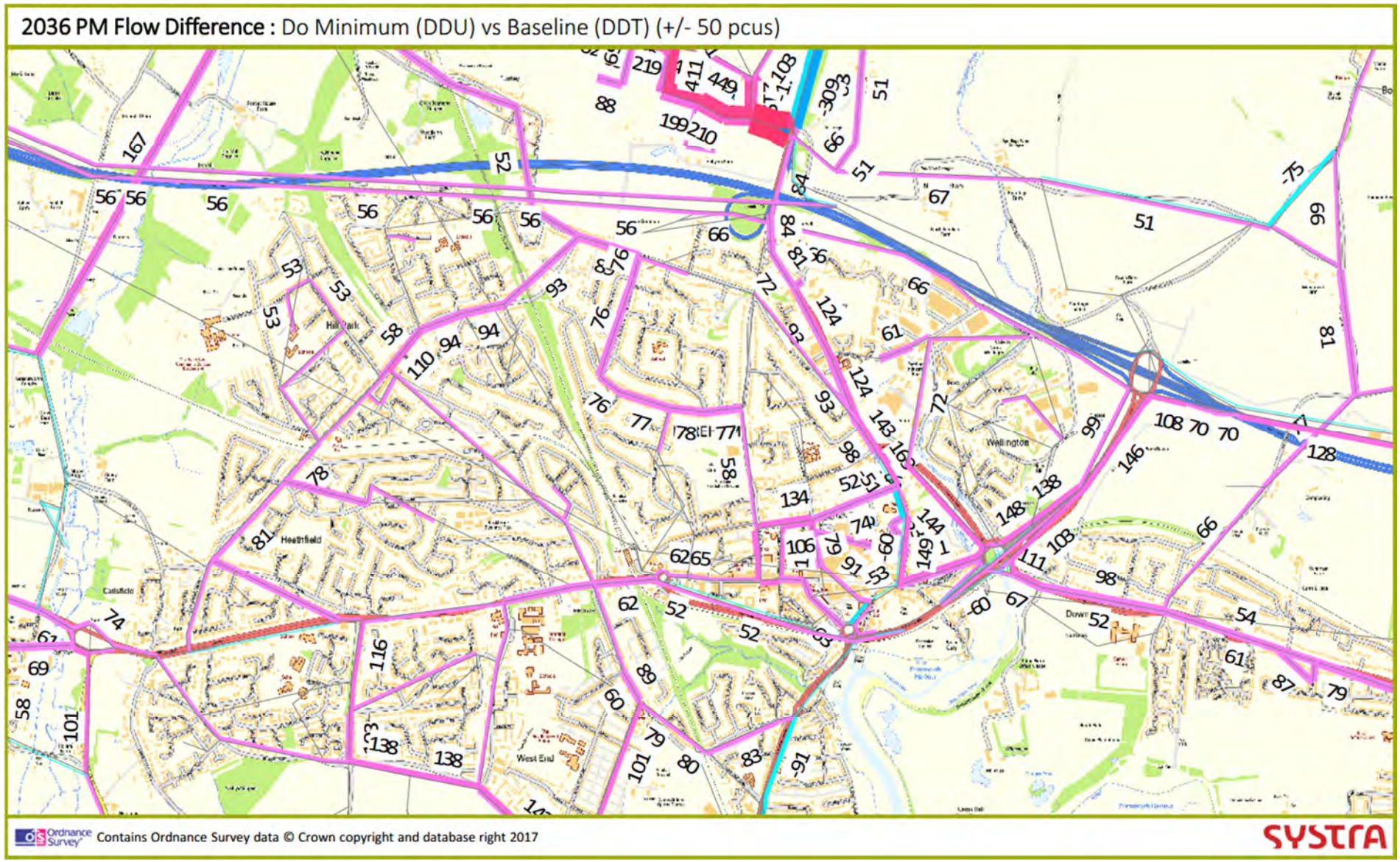


Figure 6-7 2036 Scenarios AM Peak Comparison – Locks Heath

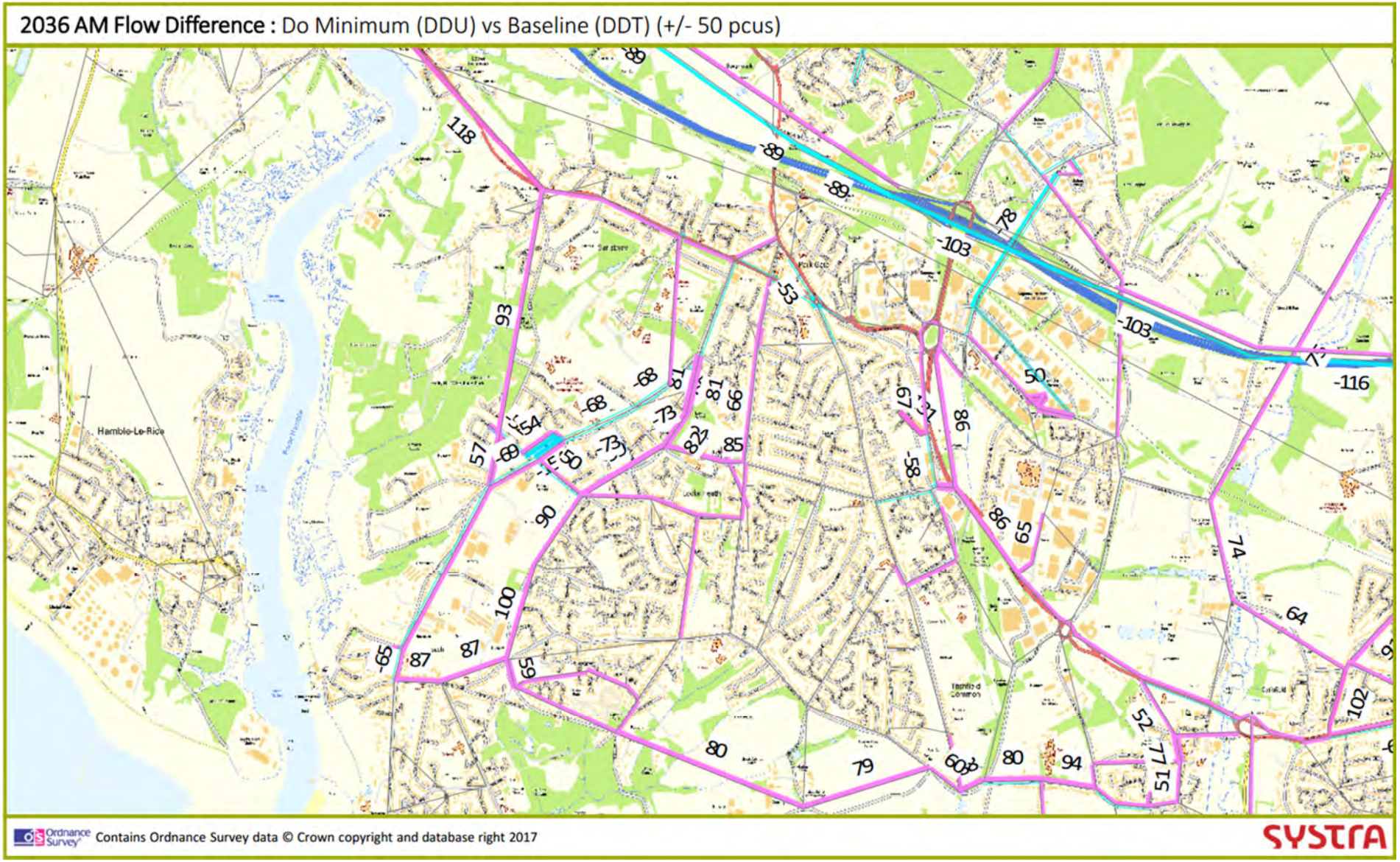


Figure 6-8 2036 Scenarios PM Peak Period Comparison – Locks Heath

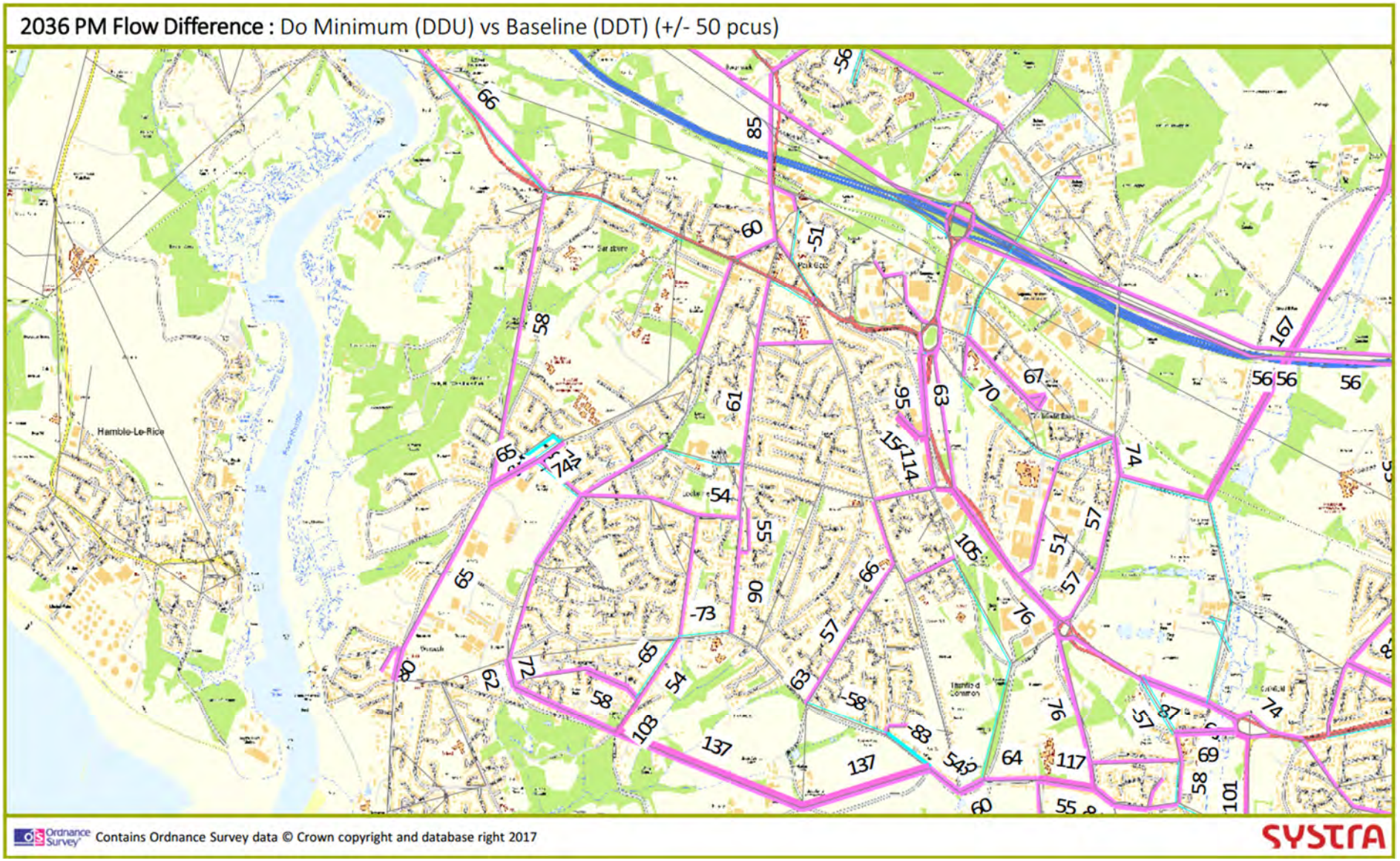


Figure 6-9 2036 Scenarios Comparison AM Peak Period - Welborne

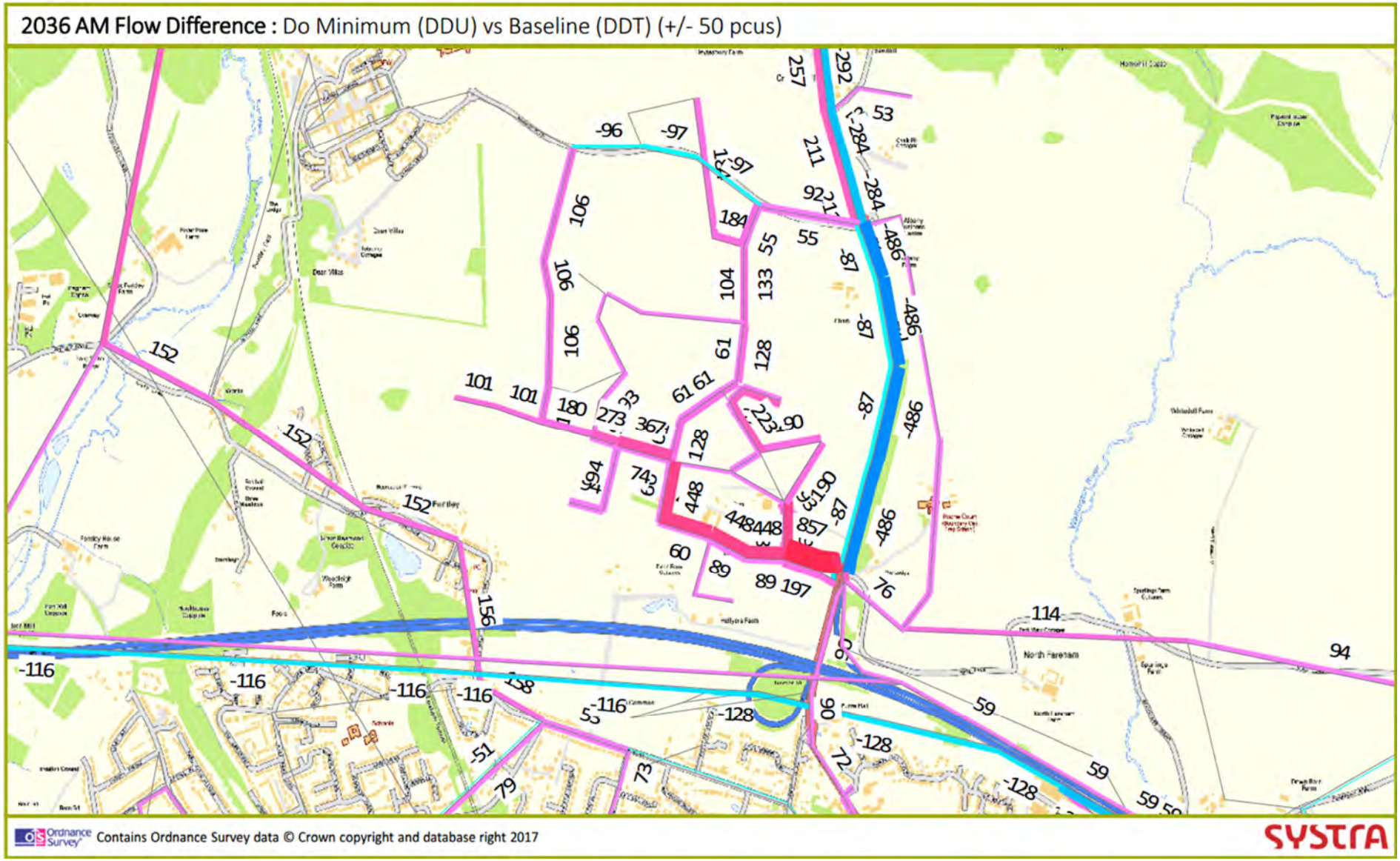


Figure 6-10 2036 Scenarios Comparison PM Peak Period - Welborne

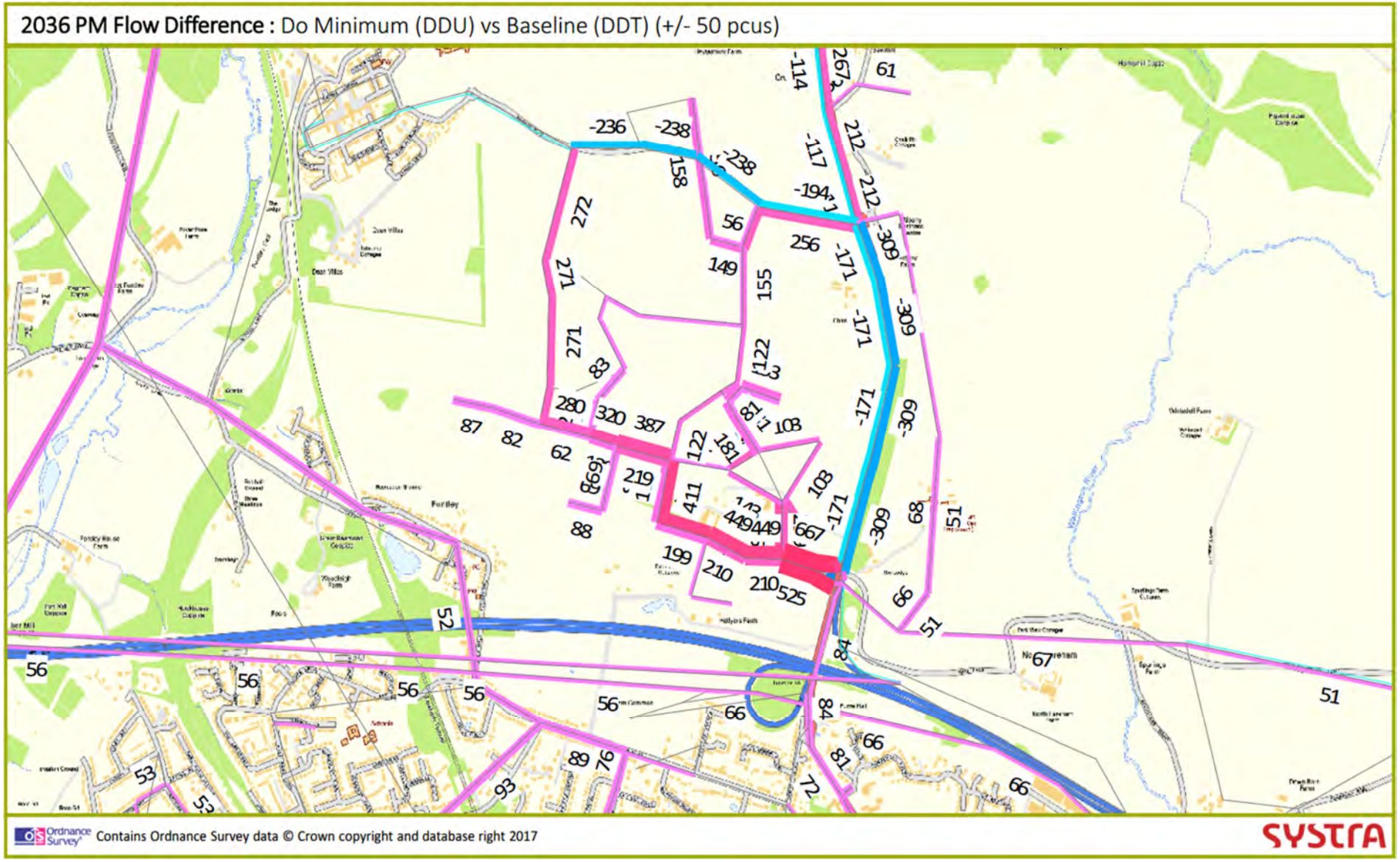


Figure 6-11 2036 Scenarios Comparison AM Peak Period - Gosport

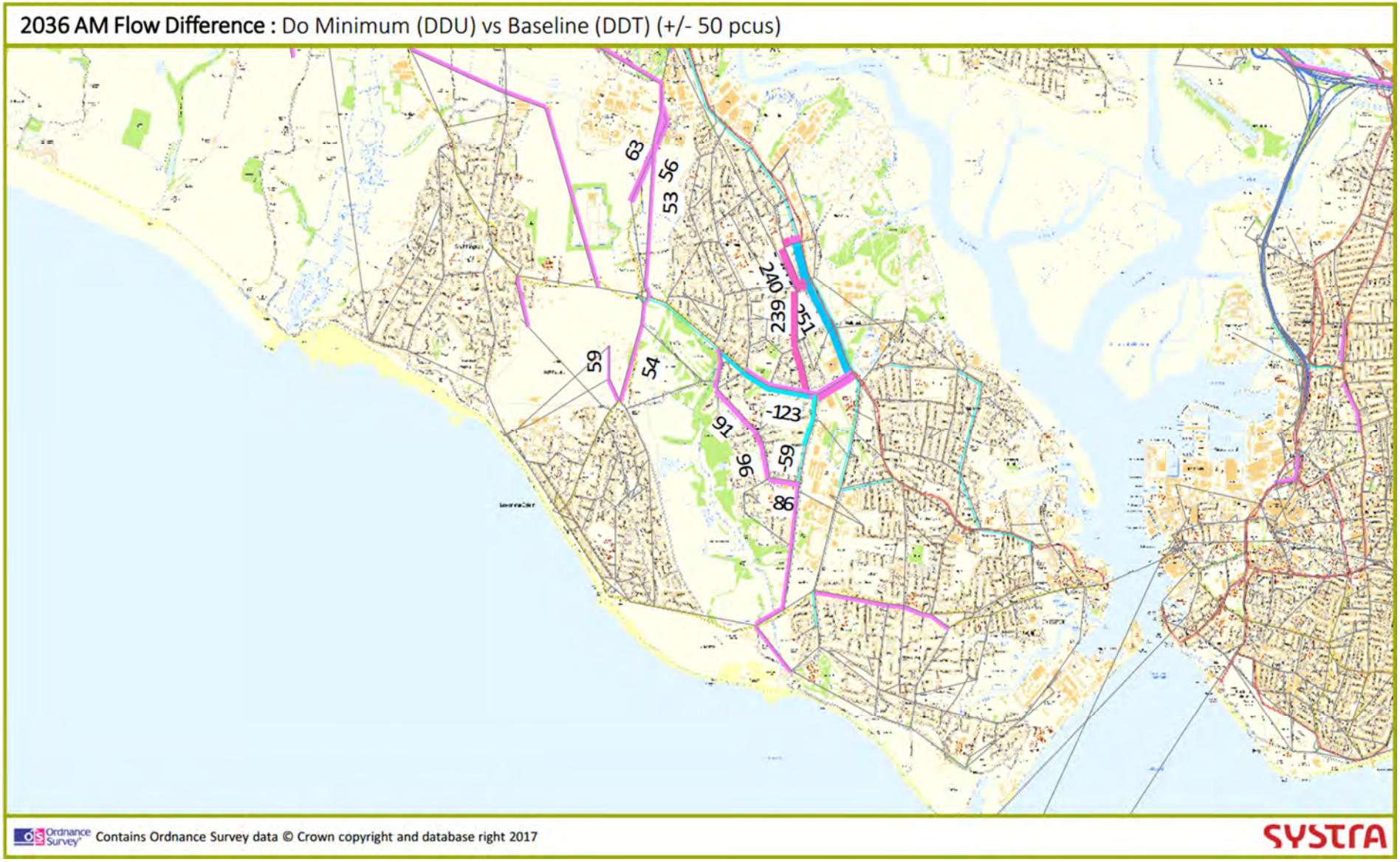
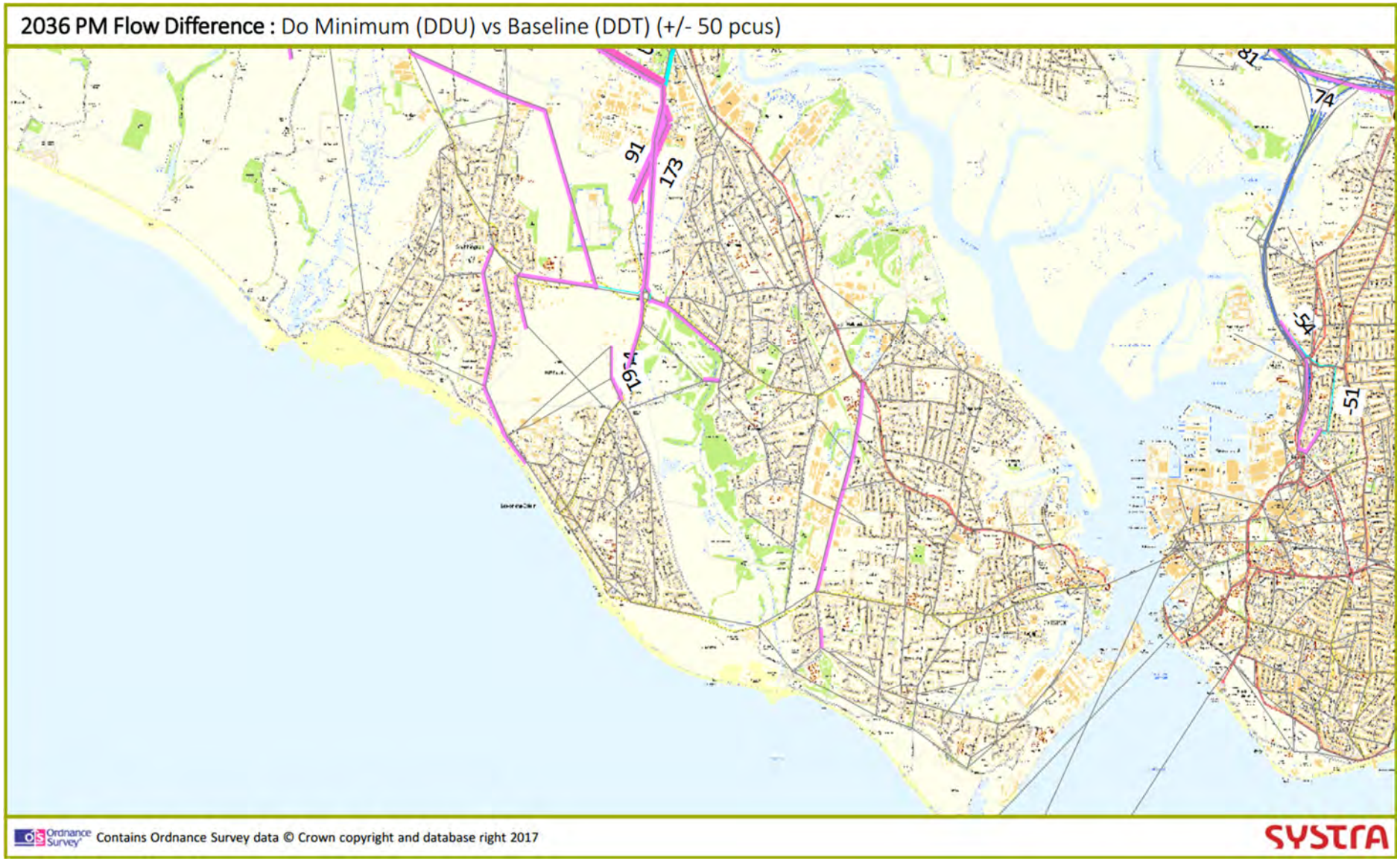


Figure 6-12 2036 Scenarios Comparison PM Peak Period - Gosport



6.2.10. All junctions forecast to be operating close to or over capacity in the Do Minimum scenario are identified in relation to the site allocations in **Figure 6-13**. A list of junctions with at least one arm approaching or exceeding capacity is provided in **Appendix A.**

6.2.11. **Figure 6-14** shows the junctions forecast to be operating at or over 90% RFC against their respective peak hour flow (in PCUs) in the 2036 Do Minimum scenario. The graph therefore grades the junctions in terms of likely total forecast aggregate delay from the lowest in the bottom left to highest in the upper right. This shows which junctions are most in need of interventions to alleviate forecast traffic congestion. Junction 25 (M27 Jct9) has the highest RFC against flow as is in the top righthand corner of the graph and is therefore most in need of appropriate intervention.

6.2.12. **Figure 6-14** can be compared with **Figure 4-4** to determine which junctions are likely to see the greatest change in aggregate delay due to the incremental traffic impact of the site allocations, i.e. the junctions that have moved the most from the bottom left hand corner towards the top righthand corner. This comparison therefore identifies junctions where it is potentially most appropriate to seek developer contributions towards interventions to alleviate forecast traffic congestion. It should be noted that only junctions with RFCs of 90% or over are shown, so some junctions may not be illustrated on both figures.

6.2.13. The junctions that most significantly move from the bottom left towards the top right and are therefore forecast to be most impacted by the incremental traffic generated by the site allocation in terms of aggregate traffic delay are as follows:

- Junction 10: M27 Junction 11
- Junction 1: A32 Hoad's Hill / A334 Fareham Road / A32 School Road – this may be due to being located on Hoad's Hill, which is a key route north from Welborne;
- Junction 19: Longfield Avenue / Peak Lane / Rowan Way – this is not located near any site allocation;
- Junction 13: Station Roundabout – this is located within Fareham Town Centre;
- Junction 47: Peters Road/Lockswood Roundabout – this is located close to the Warsash site allocation
- Junction 3: A32 Wickham Road/Pook Lane/M27 EB On Slip/Welborne development: this is located within the Welborne development boundary;
- Junction 11: Delme Roundabout – this is in Fareham adjacent to both the Fareham Town Centre and Portchester Down site allocations;
- Junction 4: M27 Junction 10; and
- Junction 46: Warsash Road / Common Lane – this is not located near any site allocation.

6.2.14. The junction names corresponding to the reference numbers shown on the figures are listed below:

1. A32 Hoad's Hill / A334 Fareham Rd / A32 School Rd
2. A32 Wickham Rd / Knowle Rd
3. A32 Wickham Rd / Pook Ln / M27 EB on-slip / Welborne development
4. M27 J10
5. A32 Wickham Rd / North Hill
6. Kiln Rd / North Hill / Old Turnpike Ln
7. A32 / High St / Wallington Way
8. Broadcut Roundabout
9. Osborn Rd / High St / Wickham Rd
10. M27 J11
11. Delme Roundabout
12. Quay St Roundabout
13. Station Roundabout
14. Longfield Av / Newgate Ln
15. Peel Common Roundabout
16. Stubbington Bypass (southern access)
17. Stubbington Bypass (Peak Ln access)
18. Stubbington Bypass (B3334 Titchfield Rd)
19. Longfield Av / Peak Ln / Rowan Way
20. A27 The Avenue / Peak Ln
21. Titchfield Gyratory
22. A27 Southampton Rd / Mill Ln
23. St Margaret's Roundabout
24. Segensworth Roundabout
25. M27 J9
26. West St / High St
27. A32 Gosport Rd / Old Gosport Rd / Mill Rd Roundabout
28. A32 Gosport Rd / Newgate Lane
29. A27 The Avenue / Redlands Ln / Gudge Heath Ln
30. A27 The Avenue / Bishopsfield Rd
31. A27 The Avenue / Highlands Rd
32. B3334 Titchfield Rd / Bridge St
33. Highlands Road / Kiln Road
34. Cartwright Dr / Segensworth Rd
35. Barnes Wallis Rd / Whiteley Ln / Cartwright Dr
36. Barnes Wallis Rd / Brunel Way
37. Barnes Wallis Rd / Brabazon Rd / Witherbed Ln
38. Primate Rd / Prelate Way
39. Hunts Pond Rd / Abshot Rd
40. Lower Church Road / Southampton Road
41. Lower Church Rd / Primate Rd / Longacres
42. Lower Church Rd / Hunts Pond Rd Roundabout (southern mini roundabout)
43. Lower Church Rd / Hunts Pond Rd Roundabout (northern mini roundabout)
44. Warsash Rd / Abshot Rd
45. Warsash Rd / Locks Rd
46. Warsash Rd / Common Ln
47. Peters Road / Lockswood Roundabout
48. A27 Bridge Rd / Coldeast Way
49. A27 Bridge Rd / Station Rd / Brook Ln Roundabout
50. Lockswood Rd / Brook Ln Roundabout
51. Botley Rd / A27 / Hunts Pond Rd / Southampton Rd
52. Southampton Rd / Telford Way Roundabout
53. Botley Rd / Yew Tree Dr
54. Sweethills Crescent / Yew Tree Dr
55. Sweethills Crescent / Yew Tree Dr Roundabout
56. Parkway South Roundabout
57. Parkway / Zone Access
58. Castle Street Roundabout
59. Cornaway Lane Roundabout

Figure 6-13 Junctions and Site Allocations

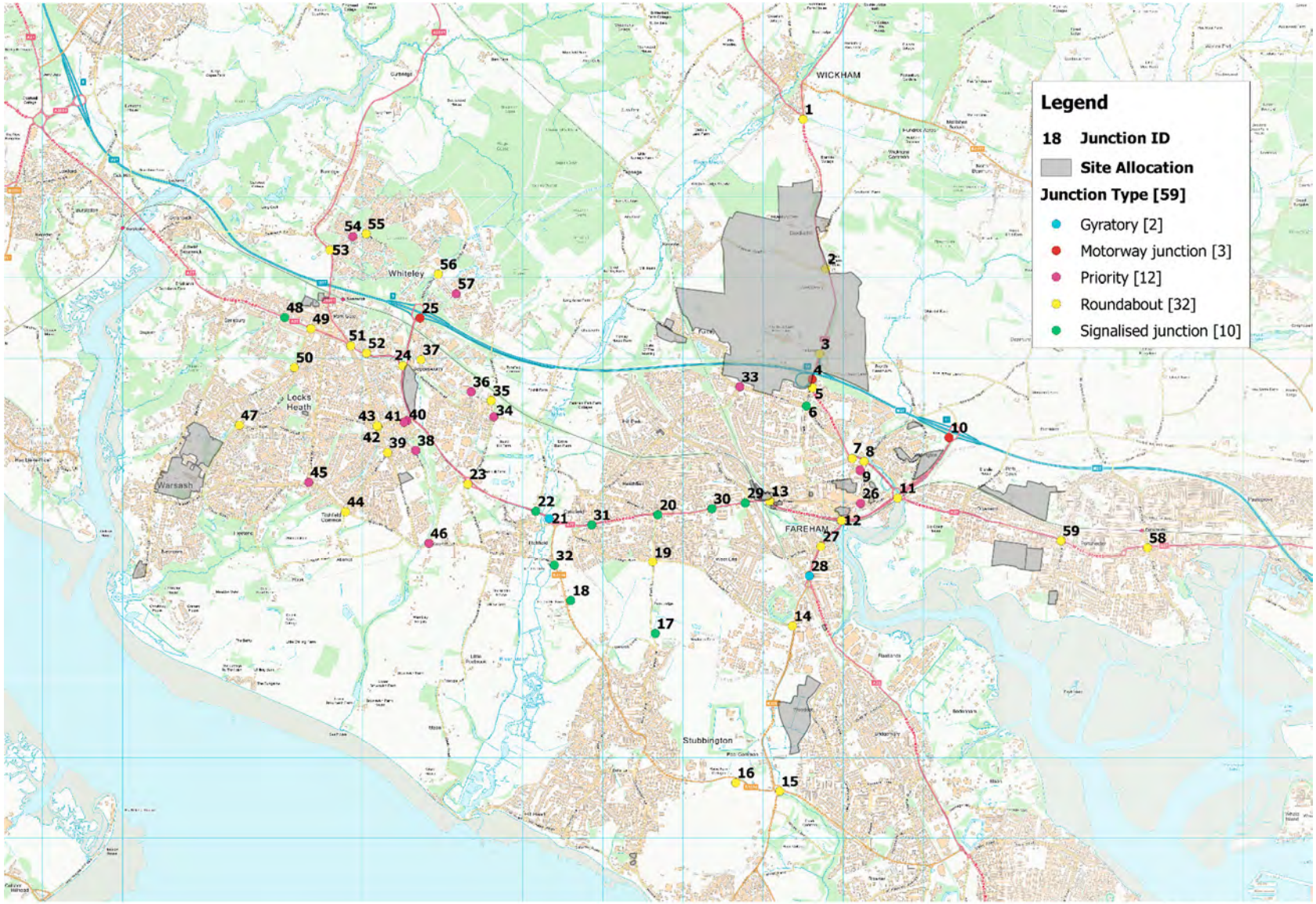
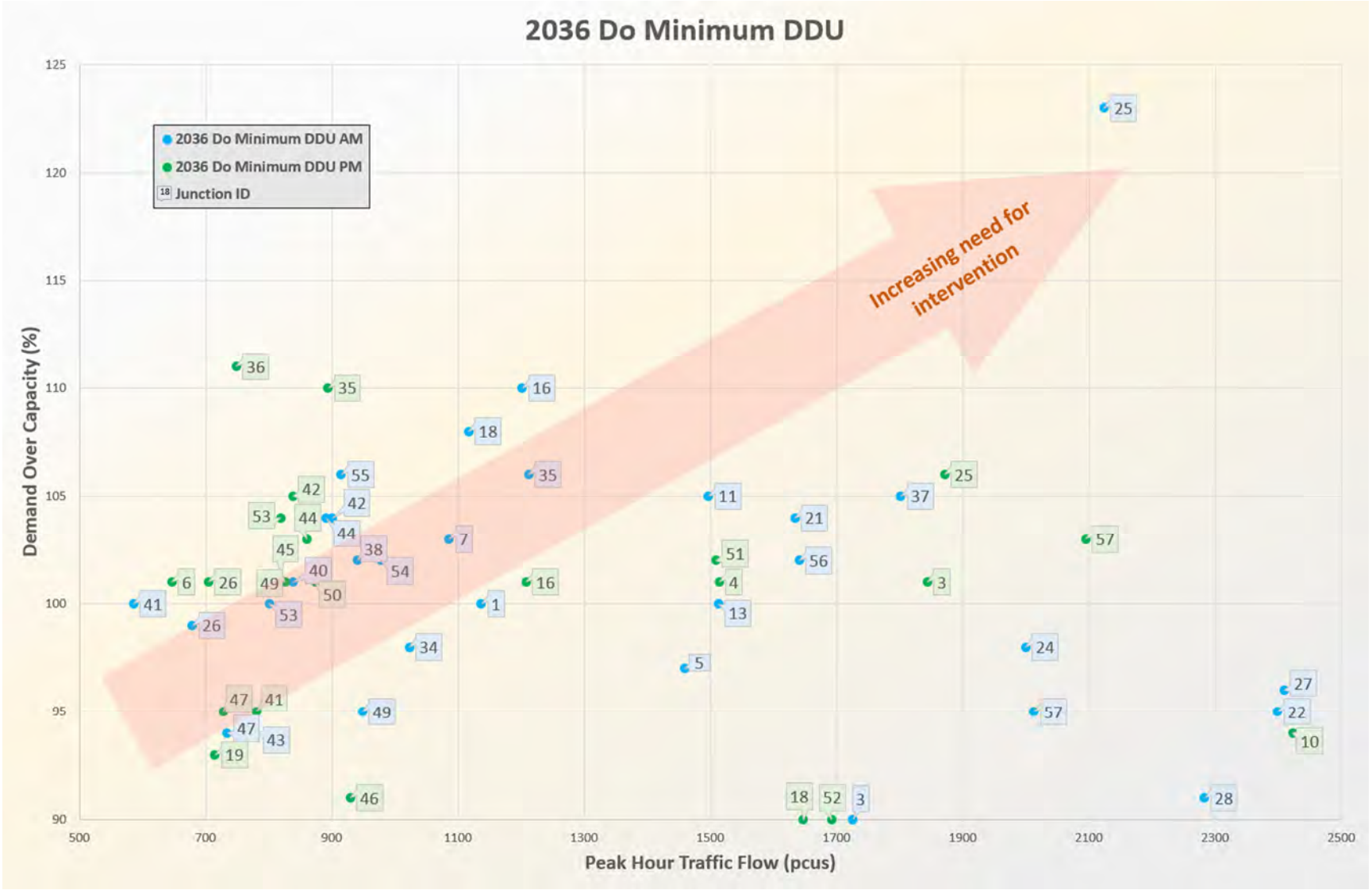


Figure 6-14 Junctions - 2036 Do Minimum



6.3. Incremental Road Safety Impact

6.3.1. **Section 3.4** above details the current road safety hotspots in Fareham Borough.

6.3.2. **Figure 3-3** shows the location of identified accident hotspots in relation to the site allocations and **Table 3-1** gives the exact locations of the hotspots, and their year of interest.

6.3.3. The proposed site allocations are forecast to cumulatively increase traffic flows at locations 4, 6, 7, 8, 9 and 13. Of note are locations 4 and 7 which feature in the list of highly-impacted junctions. Location 4 relates to Junction 59, Cornaway Lane Roundabout and location 11 relates to Junction 7, A32/High Street/Wallington Way Roundabout.

6.3.4. This means that the traffic impact of the proposed site allocations could have a potential adverse impact on road safety at these locations. Although Site 4 on Portchester Road is already being investigated by the Road Safety Foundation for investment into safety.

7. Mitigation and Infrastructure Interventions

7.1.1. This section identifies the potential interventions that may be required to address identified incremental impacts specifically resulting from the proposed site allocations that would have significant transport related adverse effects.

7.1.2. Several junctions in Fareham Borough have been identified as potentially being significantly adversely impacted by the additional traffic forecast to be generated by the site allocations as identified in **Section 6**. However, this is based on typical trip generation rates that do not take account of any reduction in vehicle trip generation due to the implementation of site specific Travel Plans. Consequently, minimising the number of vehicle trips generated by the site allocations through combination of maximising the accessibility of site by modes of transport other than the private car and the implementation of robust, site specific travel plans, that have ambitious targets for maximising trips by alternative sustainable modes of travel, should be considered prior to investment in junction improvements to alleviate forecast incremental traffic congestion caused by the proposed site allocations.

7.1.3. The need for junction capacity enhancements and their scale should be reassessed based on the forecast traffic impacts of the site allocations taking into consideration any reduction in vehicle trip generation predicted to be achieved by the implementation of site specific Travel Plans.

7.2. Road Network Enhancements

7.2.1. The Fareham Borough Council Local Plan Part 3 – The Welborne Plan highlights the need for a package of measures to minimise the adverse effect of the Welborne development on the network. Key to the consideration of the impacts is that making Junction 10 an all-moves junction will reduce the number of trips between Junctions 10 and 11, as motorists would no longer need to travel to Junction 11 to travel west on the M27.

7.2.2. The Welborne Plan identifies several other mitigation measures proposed as part of the development of Welborne. This is shown in **Table 7-1**.

Table 7-1 The Welborne Plan Mitigation Measures

Location	Details
A32/A334 Fareham Road, Wickham	• To the north of the development on the A32 • Three-arm roundabout junction with two lanes on all approaches. • Likely that the approach lanes on the A32 will need widening to accommodate additional traffic generated by the development • Appears to be sufficient carriageway and verge space to realign the carriageway • May be more appropriate to manage additional demand through traffic management measures in the town centre and appropriate measures will need to be identified and locally agreed
North Hill/Kiln Road/ Old Turnpike/Park Lane	• Kiln Road provides the main link to Funtley from the north of Fareham • New development is likely to generate some additional demand on Kiln Road for traffic travelling to an improved Junction 10 of the M27 motorway • Improvements to the Kiln Road signal junction are likely to be required
A32 Wickham Road/North Hill/Furze Court	• Junction lies just to the south of Junction 10, providing the main route into Fareham town centre from the north • Likely to require some upgrade to increase traffic capacity and enable bus priority measures to be incorporated
A32 Wickham Road/Wallington Way/Southampton Road	• Comprised of two roundabouts closely situated, on the A32 • Provides access to the Broadcut Retail Park and Fareham Industrial Estates • Roundabouts are linked by dual carriageway, presenting the opportunity to implement bus priority measures through this section down to the A27 junction
Delme Roundabout A32/A27	• Large, grade-separated junction links the main A27 to the A32 and connections south to Gosport - A27 has significant congestion problems

Location	Details
	• Introduction of an all movements operation at Junction 10 will relieve some of this east-west traffic flow • Traffic management measures would be required at this junction to facilitate bus priority movements on the A27 westbound approach to the junction for BRT
A27/A32 Quay Street Roundabout	• Main access to the Gosport peninsula • Significant recent improvements because of development within Fareham Town centre and a scheme to deliver bus priority measures has been proposed by HCC
A27 Railway Station Roundabout	• Junction will require remodelling to improve traffic control and connectivity between the railway station and the BRT service serving the new development • Remodelling will also seek to improve cycle and pedestrian accessibility to the railway station from the adjoining highway network. A scheme to deliver significant improvements to this roundabout commenced in May 2016

7.2.3. The junctions that are forecast to be most impacted by the incremental traffic generated by all site allocations in combination, in terms of aggregate traffic delay are:

- Junction 1: A32 Hoad's Hill / A334 Fareham Road / A32 School Road – this may be due to being located on Hoad's Hill, which is a key route north from Welborne;
- Junction 3: A32 Wickham Road/Pook Lane/M27 EB On Slip/Welborne development: this is located within the Welborne development boundary;
- Junction 4: (M27 Junction 10);
- Junction 10: (M27 Junction 11);
- Junction 11: Delme Roundabout – this is in Fareham adjacent to both the Fareham Town Centre and Portchester Down site allocations;
- Junction 13: Station Roundabout – this is located within Fareham Town Centre;
- Junction 19: Longfield Avenue / Peak Lane / Rowan Way – this is not located near any site allocation;
- Junction 46: Warsash Road / Common Lane – this is not located near any site allocation; and
- Junction 47: Peters Road/Lockswood Roundabout – this is located close to the Warsash site allocation.

7.2.4. The proposed site allocations significantly increase traffic flows at three of the identified accident hotspots, as follows:

- The Warsash allocation is likely to increase the use of Warsash Road, marked as location 9;
- Newgate Lane sites 8 and 13 are likely to see increased traffic due to the Newgate Lane allocation;
- Site 4 on Portchester Road will likely see more traffic due to the two Portchester allocations, although this route is being investigated by the Road Safety Foundation for investment into safety; and
- Town Centre allocations will probably increase congestion in the area, including at sites 6, 7, and 8.

7.2.5. This means that the traffic impact of the proposed site allocations could have a potential adverse impact on road safety at these locations.

7.2.6. Consequently, it may be appropriate to seek developer contributions towards accident investigation and/or remedial measures at these locations, in addition to, and to compliment any junction capacity improvement proposals.

8. Summary

8.1.1. This Transport Assessment has been prepared to identify and describe the transport impacts of the proposed development site allocations within the emerging FBC Local Plan. It also considers what potential interventions may be required to address any identified incremental impacts specifically resulting from the proposed site allocations that would have significant transport related adverse effects.

8.1.2. A summary of the national, regional and local policy context relevant to this study has been provided. Broadly these are all aimed at facilitating sustainable development to support population and economic growth, nationally, regionally and locally within FBC, with an emphasis on promoting travel by public transport, walking and cycling to lessen road traffic growth.

8.1.3. Fareham Borough is well connected in transport terms, with connections to the National Strategic Road Network and routes of both regional and sub-regional importance. It is served by three rail stations and has a comprehensive bus network, with services connecting all the key settlements. The Borough also has a good network of cycling routes.

8.1.4. Key transport related issues currently experienced in the Borough include: peak period traffic congestion on several key routes due to high levels of car use and dependency; road safety at specific locations; some lack of connectivity, especially by public transport and for non-motorised users; areas of poor air quality due to high traffic volumes; and funding constraints to address these issues.

8.1.5. There are currently thirteen housing sites allocated for development in Fareham Borough as listed in the emerging Local Plan, which were selected through a predefined and agreed process that took a wide range of factors into consideration, including transport and access implications. Most of the site allocations are located either within or on the edge of existing conurbations and therefore provide good opportunities for trips to be made by modes of transport other than the private car compared to alternative locations remote from existing conurbations that would inevitably be very car dependent. Consequently, the site allocations are generally in sustainable locations in terms of transport and access.

8.1.6. A sub-regional traffic model has been developed to assess the current operation of the road network and the traffic impact due to forecast population and economic growth up to 2036, both with and without the proposed site allocations in the FBC Local Plan. It should be noted that the forecast trip generation for the site allocations is based on typical trip rates and does not therefore take account of any reduction in traffic generation that may be achieved through the delivery of Travel Plan measures aimed at reducing sole occupancy car trips for these developments by promoting journeys by public transport, walking and cycling.

8.1.7. The traffic modelling has identified that traffic congestion is forecast to worsen across the road network, both with and without the proposed site allocations. Demand at several key junctions is forecast to exceed available capacity which will result in significant addition delays, particularly during peak periods. The forecast growth in traffic will also have an adverse impact on air quality.

8.1.8. Consequently, minimising the number of vehicle trips generated by the site allocations through a combination of maximising the accessibility of sites by modes of transport other than the private car and the implementation of robust, site specific travel plans, that have ambitious targets for maximising trips by alternative sustainable modes of travel, should be considered prior to investment in junction improvements to alleviate forecast incremental traffic congestion caused by the proposed site allocations.

8.1.9. By comparing the traffic models with and without the proposed site allocations, the potential incremental traffic impact of the site allocations has been established. This has indicated that the proposed site allocations are likely to have a significant incremental adverse traffic impact at the following junctions:

- Junction 1: A32 Hoad's Hill / A334 Fareham Road / A32 School Road – this may be due to being located on Hoad’s Hill, which is a key route north from Welborne;
- Junction 3: A32 Wickham Road/Pook Lane/M27 EB On Slip/Welborne development: this is located within the Welborne development boundary;
- Junction 4: (M27 Junction 10);
- Junction 10: (M27 Junction 11);

- Junction 11: Delme Roundabout – this is in Fareham adjacent to both the Fareham Town Centre and Portchester Down site allocations;
- Junction 13: Station Roundabout – this is located within Fareham Town Centre;
- Junction 19: Longfield Avenue / Peak Lane / Rowan Way – this is not located near any site allocation;
- Junction 46: Warsash Road / Common Lane – this is not located near any site allocation; and
- Junction 47: Peters Road/Lockswood Roundabout – this is located close to the Warsash site allocation.

8.1.10. It may be appropriate to seek developer contributions towards capacity enhancements at these locations. The FBC Local Plan highlights the need for a package of measures to minimise the adverse effects of the Welborne development on the network. Key to the consideration of the impacts is that making Junction 10 an all-moves junction will reduce the number of trips between Junctions 10 and 11, as motorists would no longer need to travel to Junction 11 to travel west on the M27. However, the need for junction capacity enhancements and their scale should be reassessed based on the forecast traffic impacts of the site allocations taking into consideration any reduction in vehicle trip generation predicted to be achieved by the implementation of site specific Travel Plans.

8.1.11. The comparison has also indicated that the proposed site allocations are likely to result in a significant increase in traffic demand at three junctions identified as current accident hot spots. Therefore, they could have a potential adverse impact on road safety at these locations, which are:

- The Warsash allocation is likely to increase the use of Warsash Road, marked as location 9;
- Newgate Lane sites 8 and 13 are likely to see increased traffic due to the Newgate Lane allocation;
- Site 4 on Portchester Road will likely see more traffic due to the two Portchester allocations, although this route is being investigated by the Road Safety Foundation for investment into safety; and
- Town Centre allocations will probably increase congestion in the area, including at sites 6, 7, and 8.

It may be appropriate to also seek developer contributions towards accident investigation and/or remedial measures at these locations, in addition to, and to compliment any junction capacity improvement proposals.

Appendices

Appendix A. Junction Table

ID	Junction	Approach Arms	Junction Type
5	A32 Wickham Road / North Hill	A32 Wickham Road (N)	Roundabout
		A32 Wickham Road (S)	
		North Hill	
6	Kiln Road / North Hill / Old Turnpike Lane	**North Hill**	Signalised junction
		Old Turnpike	
		Park Lane	
		Kiln Road	
10	M27 J11	**A27 (S)**	Motorway junction
		M27 EB off slip	
		To Boardhunt Rd	
		M27 WB off slip	
11	Delme Roundabout	A32 Wallington Way	Roundabout
		Wallington Shore Road	
		A27 Eastern Way SB off slip	
		A27 Cams Hill	
		A32 Eastern Way NB off slip	
		East Street	
13	Station Roundabout	**A27 The Avenue**	Roundabout
		Station Access	
		West Street	
		A27 Western Way	
14	Longfield Avenue / Newgate Lane	**Newgate Lane (S)**	Roundabout
		Longfield Avenue	
		B3385 Newgate Lane (N)	
15	Peel Common Roundabout	**B3335 Newgate Lane**	Roundabout
		B3334 Rowner Road	
		Broom Way	
		B3334 Gosport Road	
19	Longfield Avenue / Peak Lane / Rowan Way	**Peak Lane (N)**	Roundabout
		Longfield Avenue	
		Peak Lane (S)	
		Rowan Way	
21	Titchfield Gyratory	A27 Southampton Rd	Gyratory
		A27 The Avenue	
		B334 Titchfield Road	
		Titchfield Hill	
22	A27 Southampton Road / Mill Lane	A27 Southampton Rd (E)	Signalised junction
		Mill Lane	
		A27 Southampton Rd (W)	
23	St Margaret's Roundabout	**Warsash Road**	Roundabout
		A27 Southampton Road (NW)	
		Cartwright Drive	
		A27 Southampton Road (SE)	
		St Margaret's Lane	
24	Segensworth Roundabout	**A27 Southampton Rd (S)**	Roundabout
		Southampton Road (S)	
		A27 Southampton Road (W)	
		Little Park Farm Rd	

ID	Junction	Approach Arms	Junction Type
		A27 (N)	
		Segensworth Rd	
25	M27 J9	A27	Motorway junction
		M27 EB off slip	
		Whiteley Way	
		M27 WB off slip	
26	West Street / High Street	**West Street**	Priority
		High Street	
		East Street	
27	A32 Gosport Road / Old Gosport Road / Mill Road Roundabout	A32 Gosport Road (N)	Roundabout
		Zone Access	
		A32 Gosport Road (S)	
		Mill Road	
28	A32 Gosport Road / Newgate Lane	**A32 Gosport Road (SE)**	Gyratory
		B3385 Newgate Lane	
		Palmerston Drive	
		A32 Gosport Road (N)	
29	A27 The Avenue / Redlands Lane / Gudge Heath Lane	**A27 The Avenue (E)**	Signalised junction
		Redlands Lane	
		A27 The Avenue (W)	
		Gudge Heath Lane	
32	B3334 Titchfield Road / Bridge Street	**B3334 Titchfield Road (S)**	Signalised junction
		Bridge Street	
		B3334 Titchfield Road (N)	
33	Highlands Road / Kiln Road	Kiln Road (E)	Priority
		Highlands Road	
		Kiln Road (W)	
35	Barnes Wallis Road / Whiteley Lane / Cartwright Drive	**Barnes Wallis Road**	Roundabout
		Whiteley Lane (N)	
		Cartwright Drive	
		Whiteley Lane (S)	
37	Barnes Wallis Road / Brabazon Road / Witherbed Lane	**Barnes Wallis Road (W)**	Roundabout
		Brabazon Road	
		Barnes Wallis Road (E)	
38	Primate Road / Prelate Way	Primate Road (S)	Priority
		Prelate Way	
		Primate Road (N)	
39	Hunts Pond Road / Abshot Road	Hunts Pond Road (S)	Roundabout
		Abshot Road	
		Hunts Pond Road (N)	
40	Lower Church Road / Southampton Road	**Lower Church Road**	Priority
		Southampton Road	
41	Lower Church Road / Primate Road / Longacres	**Lower Church Road**	Priority
		Primate Road	
42	Lower Church Road / Hunts Pond Road Roundabout (southern mini roundabout)	Lower Church Road	Roundabout
		Hunts Pond Road	
		North Mini Roundabout	
43	Lower Church Road / Hunts Pond Road Roundabout (northern mini roundabout)	**Lower Church Road**	Roundabout
		Hunts Pond Road	
		Southern Mini Roundabout	
44	Warsash Road / Abshot Road	**Warsash Road (W)**	Roundabout

ID	Junction	Approach Arms	Junction Type
		Abshot Road	
		Warsash Road (E)	
		Little Abshot Road	
45	Warsash Road / Locks Road	**Warsash Road (W)**	Priority
		Locks Road	
		Warsash Road (E)	
49	A27 Bridge Road / Station Road / Brook Lane Roundabout	**A27 Bridge Road (W)**	Roundabout
		Station Road	
		A27 Bridge Road (E)	
		Brook Lane	
50	Lockswood Road / Brook Lane Roundabout	**Brook Lane (N)**	Roundabout
		Lockswood Road	
		Brook Lane (S)	
51	Botley Road / A27 / Hunts Pond Road / Southampton Road	**A3051 Botley Road**	Roundabout
		Southampton Road	
		Hunts Pond Road	
		A27 Bridge Road	
52	Southampton Road / Telford Way Roundabout	**Southampton Road (W)**	Roundabout
		Telford Way	
		Southampton Road (E)	
53	Botley Road / Yew Tree Drive	**A3051 Botley Road (N)**	Roundabout
		Yew Tree Drive	
		A3051 Botley Road (S)	
55	Sweethills Crescent / Yew Tree Drive Roundabout	**Yew Tree Drive (W)**	Roundabout
		Sweethills Crescent	
		Yew Tree Drive (E)	
56	Parkway South Roundabout	**Rookery Avenue**	Roundabout
		Whiteley Way (N)	
		Parkway	
		Whiteley Way (S)	
57	Parkway / Zone Access	**Parkway (W)**	Priority
		Zone Access	
		Parkway (E)	
58	Castle Street Roundabout	Station Road	Roundabout
		A27 Southampton Road (W)	
		Castle Street	
		A27 Southampton Road (E)	
59	Cornaway Lane Roundabout	Dore Avenue	Roundabout
		A27 West Street	
		Cornaway Lane	
		A27 Portchester Road	