

Stubbington Bypass

TRANSPORT BUSINESS CASE

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1 Introduction

1.1 Introduction and Background

- 1.1.1 This document presents a transport business case for the Stubbington Bypass scheme which considers the overall strategic need and value for money of the scheme. This is in line with the Solent Local Enterprise Partnership's (SLEP) requirements for an outline business case submission.
- 1.1.2 In March 2014 the Solent LEP submitted its Strategic Economic Plan (SEP) to central government, setting out its strategic priorities to foster economic growth and proposals identified as necessary to support the delivery of the plan, focussing on job creation and delivery of housing.
- 1.1.3 The Solent LEP is committed to taking a comprehensive and joined-up approach to the improvement of the Fareham-Gosport area. A strategic programme of infrastructure and enabling works has been developed based on a number of interlinked projects to support growth and regeneration.
- 1.1.4 Within the SEP, the need to improve access to the Gosport and Fareham peninsula is identified as a key priority for the Solent LEP in order to remove transport barriers to economic growth and to help encourage new investment and development into the area. The SEP identifies a complementary package of highway infrastructure improvements focused on improving strategic connectivity to Fareham and Gosport and to support delivery of key strategic growth sites including Welborne and the Solent Enterprise Zone.
- 1.1.5 In July 2014 the Solent LEP agreed its Local Growth Deal (LGD) with central government. This included £19.7m funding towards initial elements of the 'Fareham and Gosport package', including investment in Peel Common roundabout, St Margarets roundabout, the A27 at Station roundabout and Gudge Heath Lane junction and dualling of the single carriageway sections of the A27 between St. Margaret's Roundabout and Titchfield Gyratory. In 2015 further funding was awarded through the LGD2 towards Newgate Lane South improvements and the A27 corridor improvements.
- 1.1.6 The Stubbington Bypass scheme builds on the LGD1 / LGD2 funding settlement and seeks to bring forward a package that is central to delivering the full benefits of the over-arching strategy for improved access to the Fareham and Gosport Peninsula. The scheme includes provision of a new bypass for Stubbington and on-line improvements to Titchfield Road and Gosport Road, to the west of Peel Common Roundabout.

- 1.1.7 An Expression of Interest was submitted to the SLEP in November 2015 and subsequently, in February 2016, the SLEP invited HCC to submit an outline business case, on the basis that a higher local funding contribution could be demonstrated.
- 1.1.8 Following consideration of this business case by the SLEP, should the scheme subsequently be approved to proceed the SLEP would invite HCC to submit a full business case.

1.2 Overview of the Stubbington Bypass Scheme

Scheme description and location

- 1.2.1 The proposed Stubbington Bypass scheme involves a package of transport infrastructure improvements including the following key elements:
- The provision of a new 3.5km long single carriageway road through an area of predominantly arable farmland that will run to the south of Fareham and to the north and east of the village of Stubbington, bypassing the existing B3334 through Stubbington;
 - New junctions at either end of the Bypass and at Peak Lane;
 - Junction and link improvement works at either end of the bypass on B3334 Titchfield Road and B3334 Gosport Road;
 - Supporting highway improvement works in Stubbington village; and
 - New / improved / modified facilities for pedestrians and cyclists.
- 1.2.2 The locational context of the scheme is illustrated in Figure 1-1 (included at full size in Appendix A).
- 1.2.3 Stubbington lies to the south of and within the borough of Fareham, separated from the main part of the town by open farmland. Whilst designated a village, its scale and facilities are more akin to a town. The former Royal Navy site of HMS Daedalus lies on the borough boundary with Gosport between Stubbington and neighbouring Lee-on-the-Solent, and is the location of the Solent Enterprise Zone.
- 1.2.4 The bypass will connect the B3334 Gosport Road and the B3334 Titchfield Road, avoiding the need to route through the centre of Stubbington Village. As part of the scheme, essential on-line improvements will be made to the existing sections of Gosport Road at the southern end of the alignment (between Rome Farm Cottages and Peel Common Roundabout) and to Titchfield Road at its northern end (between Titchfield Gyratory and Titchfield Nurseries).
- 1.2.5 The town of Gosport is located to the south east of the proposed bypass route and is accessed via Peel Common roundabout and then either the B3334 Rowner Road or Broom Way/Cherque Way. The village of Titchfield is located to the west of the northern section of Titchfield Road that will be improved as part of the scheme.



Figure 1-1: Locational context of the Stubbington Bypass scheme

Scheme rationale and benefits

- 1.2.6 Enabling flagship sites for housing and employment is critical to the delivery of the Solent LEP SEP and the strategy prioritises projects that enable housing growth, employment floorspace and activities that enhance transport connectivity across the sub-region. Access to the Gosport Peninsula is a challenging issue and improvements are seen as essential to help enhance the economic viability and vitality of the area and attract much needed new investment and growth. The issue of poor accessibility is becoming increasingly significant in relation to the need to encourage development at key strategic sites including the Solent Enterprise Zone and Welborne.
- 1.2.7 The Stubbington Bypass will create a direct connection between the designated assisted area in Gosport, which came into effect on 1 July 2014, the Solent Enterprise Zone and the M27 Junction 9. It will provide a much needed alternative north south route on the peninsula which delivers improved journey reliability for traffic wishing to travel from the Gosport Peninsula westwards towards the M27 Junction 9 whilst avoiding existing heavily congested parts of the transport network, particularly through Stubbington village centre, where limited network capacity and several junctions located in close proximity result in severe delays and long queues of traffic at peak times.
- 1.2.8 Enhanced journey time reliability and reduction in congestion for traffic originating in Gosport and Lee-on-the-Solent will help support regeneration and economic

growth on the peninsula. The traffic management improvements that will be provided in Stubbington Village will reduce severance and improve accessibility for pedestrians and cyclists in order to improve the local economy of the village. The scheme will also improve the resilience of the Peninsula's strategic road network, by providing a reliable alternative route to Newgate Lane. By removing significant volumes of traffic from the centre of Stubbington it will further allow the introduction of measures to encourage sustainable transport including better facilities for pedestrians and cyclists and improvements to bus services.

- 1.2.9 The scheme is central to the wider package of proposed transport improvement measures to improve access to Fareham and Gosport. Only the completion of the bypass will achieve the necessary improvements to journey times and accessibility that will help to attract growth and investment into the area and to bring forward and maximise development at the Solent Enterprise Zone.
- 1.2.10 The delivery of the Stubbington Bypass will therefore add value to the committed and proposed infrastructure investment within the Fareham and Gosport area by removing a significant congestion bottleneck on the western access to Gosport corridor.
- 1.2.11 The scheme will need to follow on from enhancements to the A27 east to west corridor between Segensworth and Titchfield gyratory¹, being funded in part by Solent LEP LGF funding.
- 1.2.12 The scheme is shown to represent good value for money overall with a BCR in the range of 1.85 to 2.07. The scheme will further provide wider economic benefits in relation to providing a key transport infrastructure improvement to support strategic growth sites including the Solent Enterprise Zone, and hence bringing forward jobs and housing. It is deliverable and scheme development /design work is well advanced. Planning permission for the scheme was granted in October 2015. Subject to funding availability, construction is indicatively planned to commence in early 2019.

1.3 Purpose of this Document

- 1.3.1 This business case has been prepared to demonstrate the case for investment in the Stubbington Bypass scheme, in particular by demonstrating the overall rationale, value for money and deliverability. This supports an application for Solent LEP LGF funding through the third round of the Local Growth Deal (LGD3).
- 1.3.2 An overarching Green Book compliant Business Case has been prepared for the 'Fareham and Gosport Intermediate Infrastructure Programme'², which focuses

¹ The A27 improvements will also complement the Highways Agency's proposals to improve the flow of traffic east /west along the M27 as part of their Route Based Strategy enhancements.

² Fareham and Gosport Intermediate Infrastructure Programme – Business Case (BBP Regeneration, March 2015)

upon economic outputs and specifically the facilitation of new housing and employment. The overarching business case provides a comprehensive appraisal of the delivery and benefit realisation of the package of schemes. Whilst that business case focused on the 'intermediate' package, to be funded through LGD1 / LGD2, it also considered the impact of the 'full' package, inclusive of a Stubbington Bypass scheme. It derived an overall Benefit Cost Ratio (BCR) for the 'intermediate' package of 3.6, which is considered to represent high value for money. However, it further stated that *"In addition, the Full Infrastructure Programme (i.e. with Stubbington Bypass) provides a 'High' BCR of 3.8 indicating that there is a positive investment case to be made for Stubbington Bypass if funding can be secured."*

- 1.3.3 This document, which comprises a standalone business case for the Stubbington Bypass scheme following WebTAG principles, should therefore be considered in conjunction with the wider business case for the 'Fareham and Gosport Intermediate Infrastructure Programme'. It demonstrates how the scheme performs in its own right, and also how it will contribute to the overall strategy.
- 1.3.4 The Business Case is structured around the Department for Transport's 'The Transport Business Case Guidance' (April 2011) in line with the Treasury's recommended five case model. WebTAG guidance has been taken into account with respect to the economic appraisal. Furthermore, the approach is in line with the Solent LEP guidance on Outline Business Case submissions.
- 1.3.5 The key components of this Business Case therefore include:
- **The Strategic Case** – providing an overview of the scheme rationale, aims and objectives, scheme development and the scheme components;
 - **The Financial case** – setting out the scheme costs and funding, including risk assumptions;
 - **The Economic case** – providing the overall value for money based on a Benefit Cost Ratio (BCR) and appraisal against economic, environmental and social impacts;
 - **The Commercial case** – outlining key aspects of the proposed procurement strategy; and
 - **The Management case** – considering the deliverability of the scheme, including project plan, governance, risks, stakeholder management and monitoring and evaluation.
- 1.3.6 In line with relevant guidance, a proportionate approach has been adopted, commensurate with the scale and value of the scheme.

1.4 Document Structure

1.4.1 The remainder of this document is structured as follows:

Chapter No.	Chapter Name
2	Strategic Case
3	Economic Case
4	Financial Case
5	Commercial Case
6	Management Case

1.4.2 Supporting material is included in a set of Appendices, as follows:

Appendix Ref.	Appendix Name
A	Supporting Plans and Drawings
B(i)	Scheme Description / Drawings
B(ii)	NMU Facilities
C	SRTM Model Overview
D(i)	Supporting Modelling / Appraisal Information
D(ii)	Summary Distributional Impacts Assessment
E	Appraisal Summary Table
F	TEE / PA / AMCB Tables (Economic Appraisal)
G	Project Plan
H	Risk Register / Quantified Risk Assessment
I	Risk Management Strategy

2 Strategic Case

2.1 Introduction

- 2.1.1 The Strategic Case sets out the context and rationale for the scheme, including demonstrating a strong fit with strategic policy objectives and the specific problems and issues that the scheme is intended to address. It also details how the scheme has developed over time, including the different options that have been considered.

2.2 Problems Identified – wider context

- 2.2.1 The Gosport peninsula and bordering Fareham Borough are located on the south coast of England and form part of the South Hampshire conurbation, characterised by its linear, coastal environment. Both Fareham town centre and the Gosport peninsula are built up urban areas, with the population of Gosport Borough being approximately 83,000 (Census, 2011). The unique geography is a defining factor in the area's economy and transport network.
- 2.2.2 Although considered relatively affluent with a significant skilled labour supply, South Hampshire also contains pockets of high unemployment and deprivation. In particular, the coastal fringes such as Gosport are performing significantly below regional and national average levels. Whilst Fareham's economy is around the national median value, Gosport's is well below the median value, has gross weekly earnings below the national median value and is in the bottom 20% of authorities nationally in terms of its employment rate.

From the 'Place Profile - An Economic, Social and Environmental Summary Profile of Gosport' (Local Futures, 2012):

- Relative to other districts, the size of the economy in Gosport is well below the national median, with an economic scale score of 31.03. By comparison, the Hampshire & The Isle of Wight score is 162.38 and the national average is 100.
- GVA per head in Gosport is £18,650, compared with £20,433 in Hampshire & The Isle of Wight and £20,685 nationally.
- At £22,800, the average total income in Gosport is below the national median, with the area ranking in the bottom 40% of districts nationally.
- Between Dec 2005 and Dec 2010, the employment rate in Gosport changed by -13.94%. This places Gosport in the bottom 20% of districts nationally. By comparison the employment rate changed nationally by -5.54%.

- 2.2.3 The decline in traditional industries as well as the budget reductions in public sector spending has led to a significant loss of local jobs, particularly in Gosport largely due to the weakening of the Ministry of Defence sector and over dependency on public sector employment in the Borough. In 2010 there was a total of 26,000 jobs based in Gosport including employee jobs, self-employed and HM Forces, which is a significant reduction in the number of jobs in the local economy from 33,000 jobs based in Gosport in 2000 (ONS

2010). The figure below shows that the decline in jobs was most acute in Gosport in comparison to other parts of the Solent LEP area.

Total jobs	Fareham	Gosport	Eastleigh	Havant	Portsmouth	Southampton	Hampshire
2000	53,000	33,000	64,000	47,000	120,000	123,000	641,000
2010	56,000	26,000	65,000	49,000	122,000	121,000	660,000
Absolute change	3,000	-7,000	1,000	2,000	2,000	- 2,000	19,000
% change	5.7%	-21.2%	1.6%	4.3%	1.7%	-1.6%	3.0%

Source: ONS (2010) [Cited by Nomis]

Figure 2-1: Change in jobs in Fareham and Gosport between 2000 and 2010³

- 2.2.4 Gosport ranks 375 on the 2013 UK competitiveness index and has dropped 94 places since 2010. Since EZ designation, the Gosport economy has come under increased threat: the local workforce supports the Portsmouth Naval Dockyard which has recently announced 940 redundancies as a result of restructuring Royal Navy shipbuilding operations. A programme has been put in place (at April 2014) to redeploy the redundant skilled workers from the Dockyard and clearly there is increasing pressure on the EZ to provide further employment opportunity.
- 2.2.5 The European Commission has approved parts of Gosport, Portsmouth and the Isle of Wight for inclusion in the 2014-20 Assisted Areas Map based on economic need and economic opportunity (see Figure 2-2). This status means these areas are recognised in European state aid rules as being less economically advantaged places that would benefit from additional support for development, including local businesses being eligible to bid for additional funding and tax breaks to create jobs, invest in new premises or machinery and grow.

³ Fareham and Gosport Intermediate Infrastructure Programme – Business Case (BBP Regeneration, March 2015)

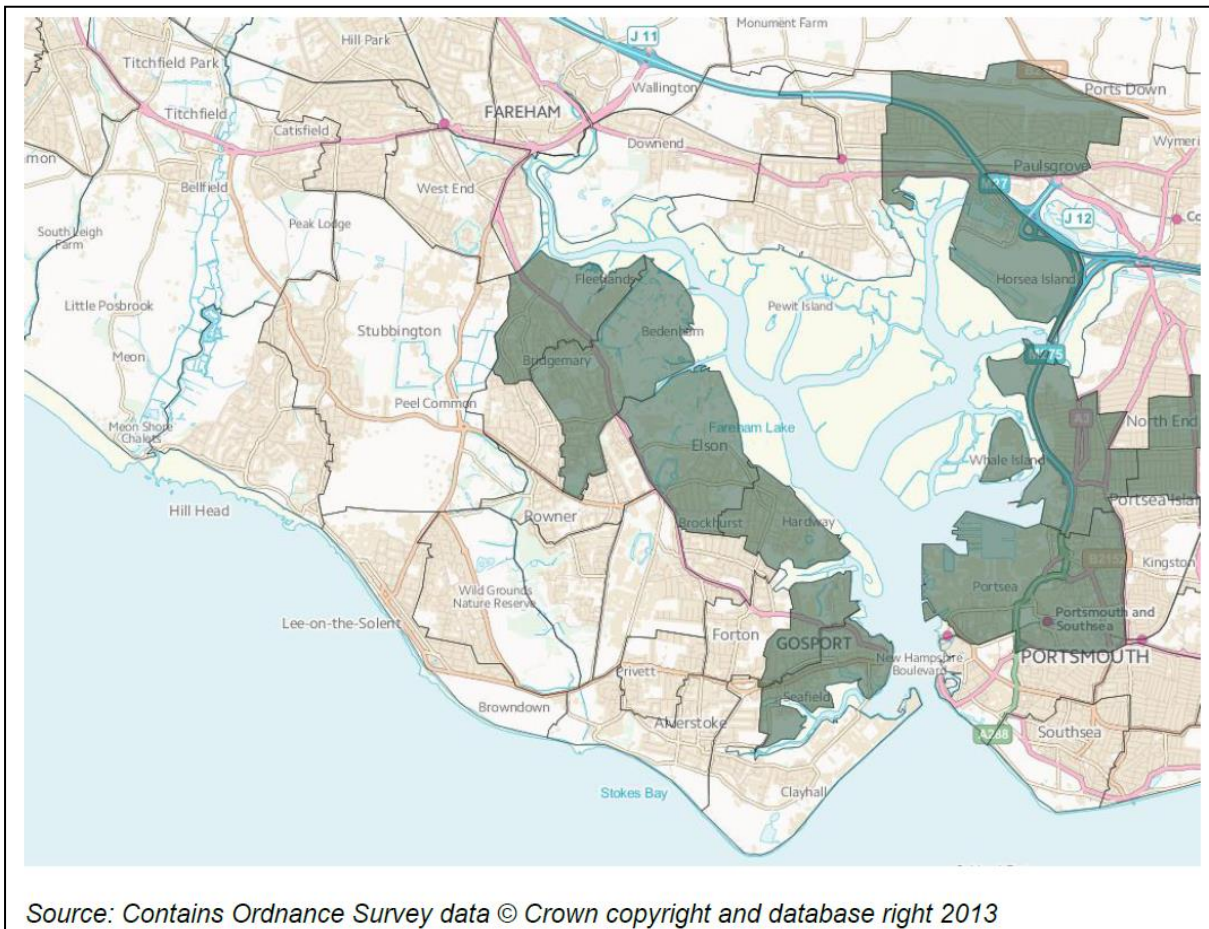


Figure 2-2: Assisted Areas designated by the European Commission⁴

- 2.2.6 Despite these challenges, there is significant potential for economic growth and regeneration in Fareham and Gosport – the area is identified as a strategic priority growth area in the Solent LEP Strategic Economic Plan and is home to key planned employment and housing sites, including the Solent Enterprise Zone at Daedalus, which are fundamental to the wider growth strategy for the South Hampshire conurbation and the delivery of housing and jobs.
- 2.2.7 Successful delivery of the growth strategy for the area depends upon high quality transport infrastructure. The role of transport is critical in Fareham and Gosport to support the Solent LEP priorities for new housing and economic growth, unlock strategic sites, improve access to both emerging and existing business and commercial centres in order to assist employment retention, growth and regeneration.
- 2.2.8 Within this context, the key strategic transport issues for the Fareham / Gosport area which act as a barrier to economic growth are:
- Poor connectivity to strategic growth sites;
 - Traffic issues relating to economic underperformance; and

⁴ Fareham and Gosport Intermediate Infrastructure Programme – Business Case (BBP Regeneration, March 2015)

- Congested transport networks in areas of employment.

2.2.9 These issues are illustrated in Figure 2-3 and discussed further below.

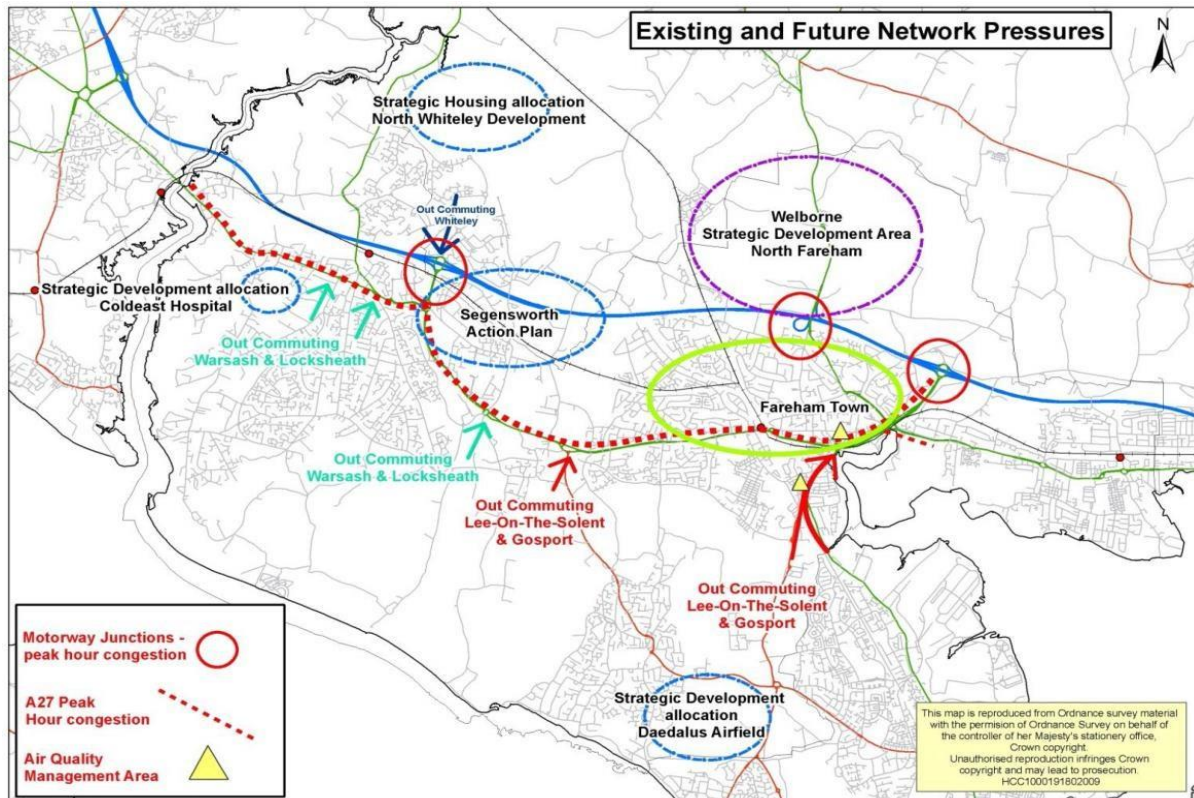


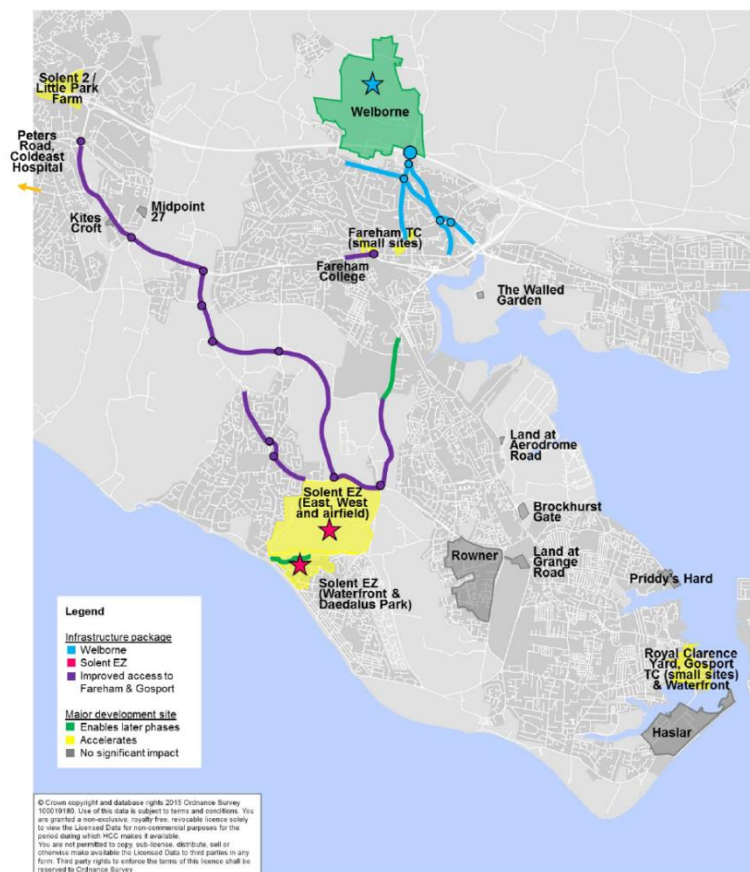
Figure 2-3: Existing and future transport issues in Fareham and Gosport

Poor Connectivity to Strategic Growth Sites

- 2.2.10 Improving access to the Gosport Peninsula has long been recognised as an important and challenging issue. Congestion, lack of network resilience and journey time delay are typical, with limited opportunities to upgrade existing infrastructure due to constraints. The issue of poor accessibility is becoming increasingly significant in relation to the need to encourage development into the area, not least at key planned, strategic sites including the Solent Enterprise Zone and Welborne, but also to help enhance economic viability and vitality and help attract much needed new investment and growth. Poor connectivity discourages investment and employment growth and also causes retention difficulties for existing employment leading to businesses moving out of the area.
- 2.2.11 Table 2-1 details key sites with jobs / housing potential within the Fareham /Gosport area for which poor transport connectivity, including western access via the B3334 Titchfield Road, is currently a barrier to growth. Figure 2-4 also illustrates the relationship of key sites in relation to the western access issues.

Table 2-1: Strategic jobs / housing sites in the Fareham and Gosport area

Growth Site	Details
Solent Enterprise Zone	79,000 sq. m employment floorspace; 350 homes
Daedalus East	500 jobs
Daedalus West	400 jobs
Waterfront	1250 jobs
Daedalus Park	150 jobs
Rowner	700 homes + 200 homes redeveloped : 2,250 sq m retail floorspace
Gosport Waterfront	700 homes
Haslar	300 homes 500 jobs
Brockhurst Gate	100 jobs
Grange Road	230 jobs
Welborne	6,000 homes 105,000 sq. m employment floorspace (5,735 jobs) 7,000 sq. m retail floorspace



Source: © Crown Copyright and database rights 2015 Ordnance Survey 100019180.

Figure 2-4: Relationship between key development sites and proposed transport improvements⁵

⁵ Fareham and Gosport Intermediate Infrastructure Programme – Business Case (BBP Regeneration, March 2015)

2.2.12 Figure 2-5 demonstrates the relatively poor employment catchment potential for Gosport compared to other parts of the South Hampshire sub-region. This is perpetuated by its strategic connectivity issues and a barrier to maximising the potential of the growth sites.

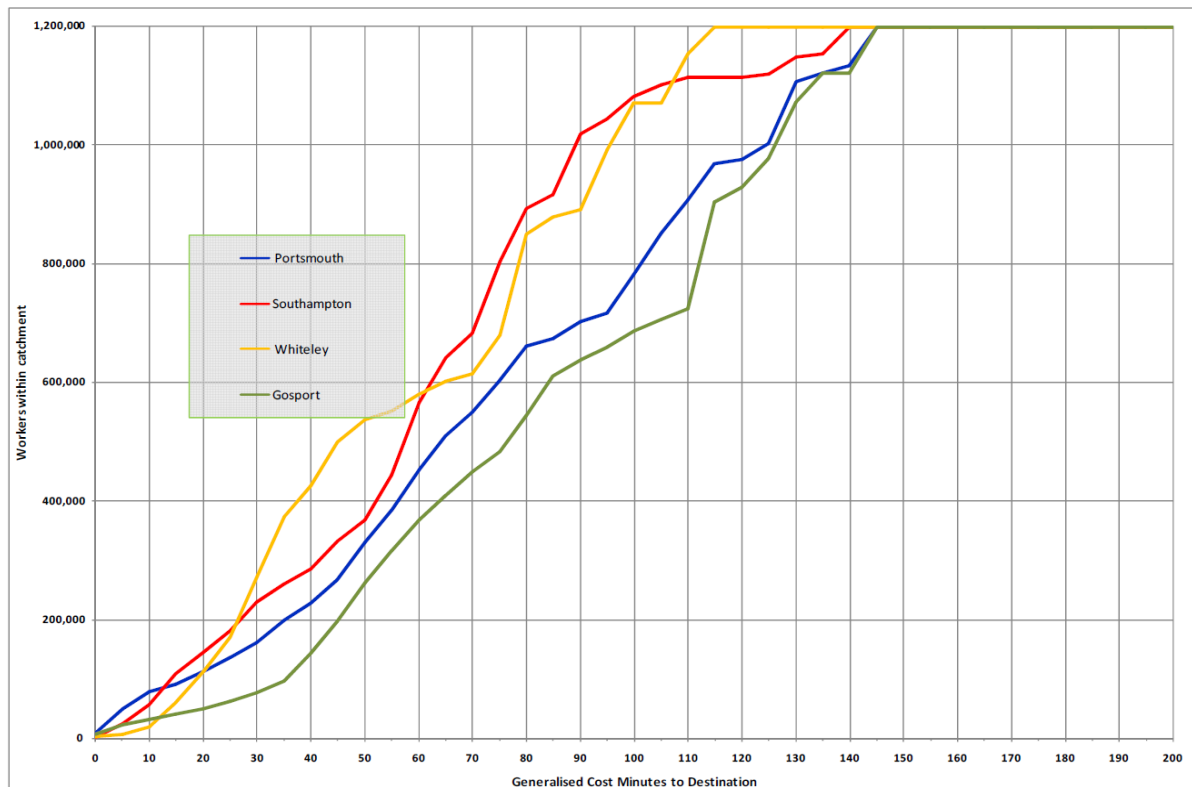


Figure 2-5: Worker catchments, by generalised cost minutes, for selected locations in South Hampshire⁶

2.2.13 All vehicular traffic leaving the Gosport Peninsula has to travel north into Fareham to gain access to the wider strategic road network (i.e. M27 and A27). North / south access roads onto and off the peninsula are via the the A32 and B3385 Newgate Lane. Western access to/from M27 J9 is via the B3334. These routes suffer from capacity constraints and poor traffic conditions. This hampers access onto the A27/M27 from the peninsula's strategic routes (A32, B3334 and B3385), which is further exacerbated by constraints at the key junctions onto the A27.

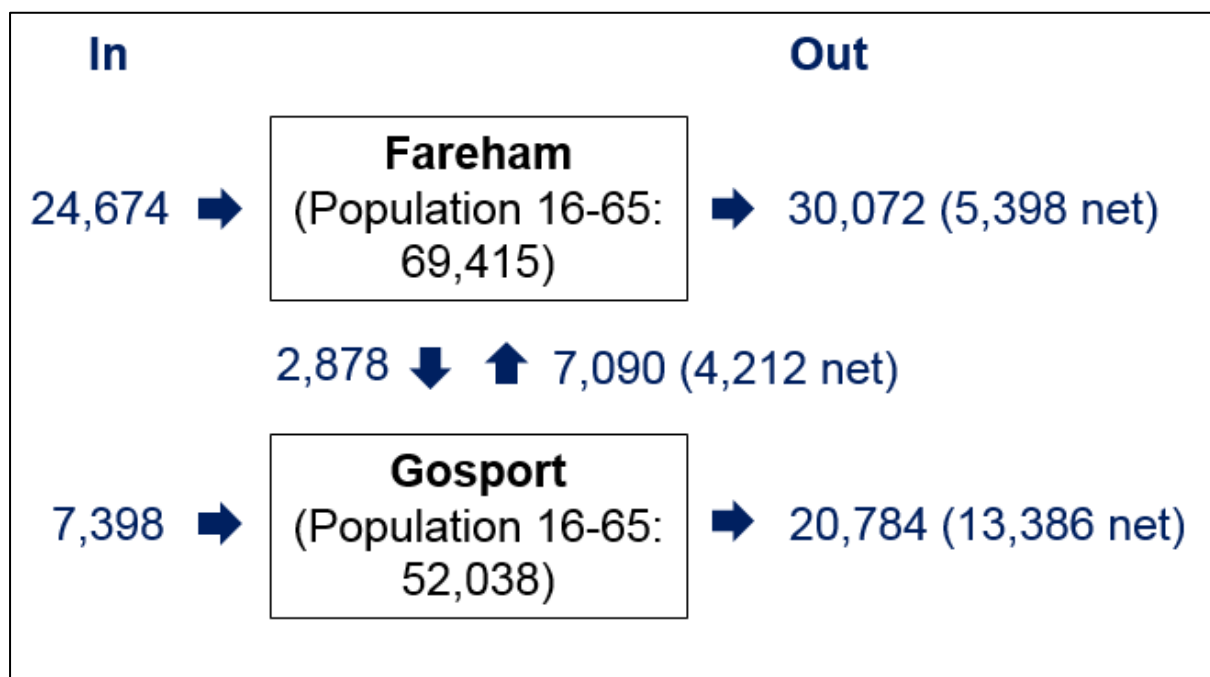
2.2.14 The north to south access roads all interface with the A27, which serves as a critical east to west artery for both local and strategic traffic heading towards the M27 junctions 9 and 11 for longer distance east to west movements.

⁶ Source: Transport for South Hampshire Evidence Base – Case and Options for Intervention (October 2012, MVA)

Traffic Issues Relating to Economic Underperformance

- 2.2.15 The peninsula is under performing economically, with high levels of deprivation linked to the decline of the MOD and high levels of public sector job losses. The reduction in jobs on the peninsula has resulted in significant levels of out commuting from Gosport which compounds peak hour traffic problems.

15 to 20 years ago Gosport had the highest work place self containment ratio within Hampshire with 74% of Gosport jobs being filled by local residents. Using the Census data, between 2001 and 2011, the number of jobs in Gosport decreased by over 11% from around 26,000 to 23,000. However, in the same period, the working population increased marginally from around 36,000 to 36,500 people. This has resulted in an increase in out-commuting, with 20,500 people now working outside the Borough, equivalent to 56% of the working population. In comparison, in 2001, only around 17,000 people out-commuted from Gosport, equivalent to around 47% of then working population of around 36,000 people. This increase in out-commuting, primarily due to the loss of jobs in Gosport, is consistent with the traffic problems.



- 2.2.16 Out commuting exacerbates congestion on the main south to north access routes off the peninsula, namely the A32 and the B3385 Newgate Lane for traffic wishing to head east and the B3334 Titchfield Lane and Peak Lane / Mays Lane (through Stubbington) for traffic wishing to head west. The north to south access roads all interface with the A27 corridor, which serves as a critical east to west artery for both local and strategic traffic heading towards the M27 junctions 9 and 11 for longer distance east to west movements. The A27 has key congestion points which act as a barrier to traffic wishing to exit Gosport in the am peak and the reverse in

the evening peak, with blockages at the key junctions. Whilst shorter distance movements are characteristic along the A27, congestion on the M27 and its associated junctions means that the A27 is heavily used and is performing as a strategic road as well as a local distributor feeding this major residential area. The poor transport infrastructure serving the area is therefore both a symptom and a cause of economic underperformance.

- 2.2.17 Rebalancing the economy and reducing its reliance on the public sector, and in particular the defence related dependency, in favour of investing in advanced manufacturing (which is largely capital intensive and has deep and locally based supply chains), sits at the heart of the growth strategy and the delivery of improved infrastructure facilitating enhanced access to the area is a key enabler.

Congested Transport Networks in Areas of Employment

- 2.2.18 Transport problems, particularly during peak periods, cause a huge amount of frustration for drivers trying to get on and off the peninsula via the very limited congested routes available. Congested road networks dominate the transport network in both Gosport and Fareham town centres and the wider peninsula where there is very little scope for improvements due to geographical and built up area constraints. Congestion on the peninsula's strategic routes creates unreliable journey times for both the car and public transport, and acts as a deterrent to the promotion of new employment sites.
- 2.2.19 Trafficmaster average delay data has been extracted for the morning peak (07:00-09:00) and the evening peak (1600-1800). Figure 2-6 illustrates the data for the morning peak.

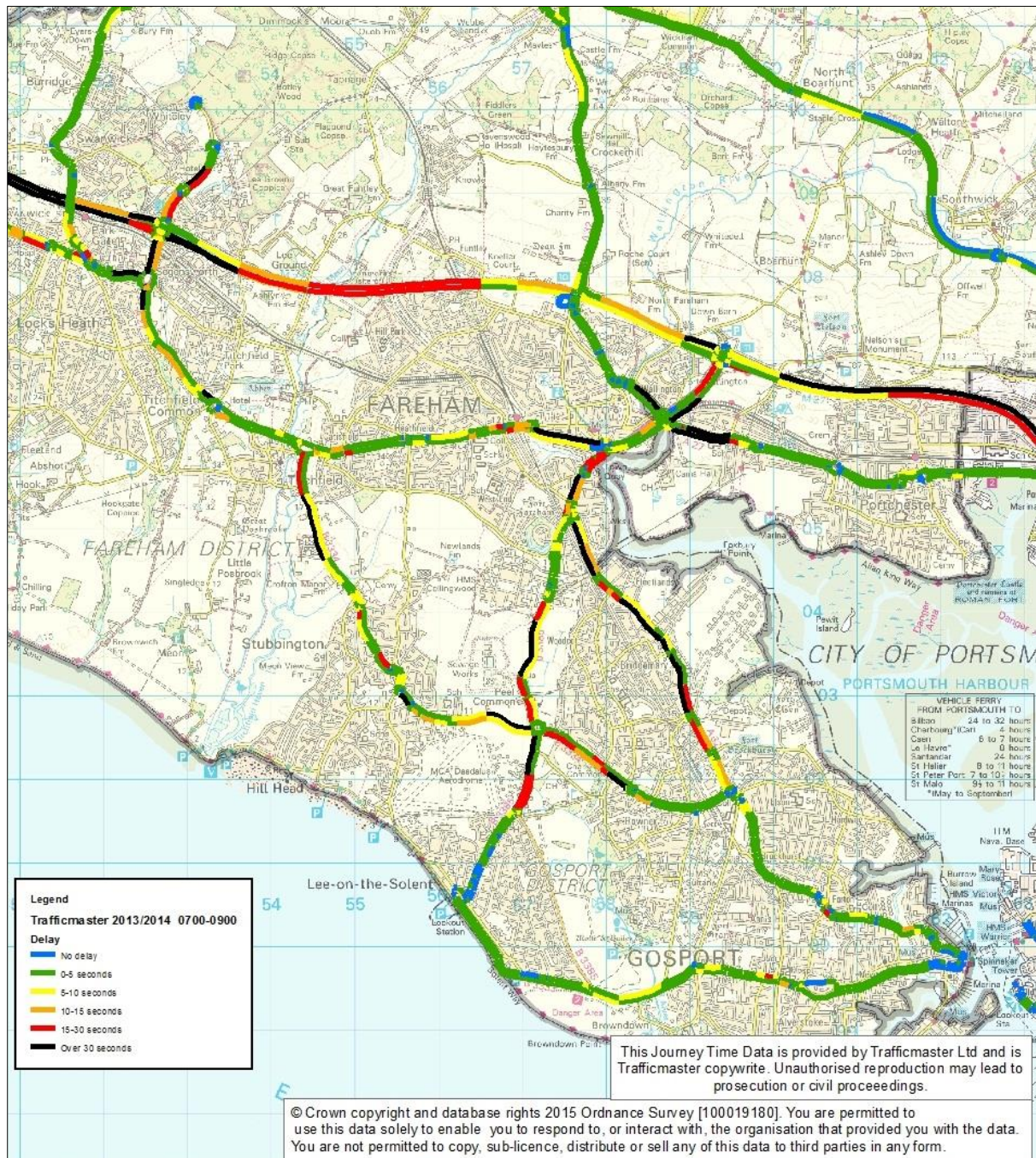


Figure 2-6: Vehicle Delays – TrafficMaster Data 2013/14 AM 07:00 to 09:00

2.2.20 The Trafficmaster data shows the average journey delay on the main roads in the Gosport Peninsula and wider area, including the M27. The data extracted is for the year 2013/14, Monday to Friday term time only. This data demonstrates that high levels of delay are experienced along Titchfield Road and Gosport Road through Stubbington, on a significant proportion of Newgate Lane, particularly the southern section; on the A32 Fareham Road/Gosport Road; on all approaches to the Peel Common roundabout, and along the A27.

- 2.2.21 These problems are particularly acute in the AM and PM peaks, with peak spreading taking place. Poor accessibility currently discourages investment and employment growth and also causes retention difficulties for existing employment leading to businesses moving out of the area. An uplift in the existing poor quality of the local network is essential to help make development sites attractive to investors. Reducing congestion hotspots, improving connectivity and network resilience is essential to help encourage business retention and new investment into an area of declining employment base, as well as to critically provide the necessary infrastructure upgrade to help bring forward development at key strategic sites.

Strategic Transport Improvements

- 2.2.22 The need to improve access to Fareham and Gosport Peninsula is a key priority for Hampshire County Council and the Solent LEP. Improvements are seen as essential to help enhance the economic viability and vitality of the area and to help attract much needed new investment and growth. The issue of poor accessibility is becoming increasingly significant in relation to the need to encourage development at key strategic sites including Welborne and the Solent Enterprise Zone, both of which are likely to deliver the biggest opportunities in employment and housing growth in the area.
- 2.2.23 It has been recognised that a co-ordinated approach is required to addressing the issues of access to Fareham and Gosport, and which responds to the additional needs and pressures of planned development sites.
- 2.2.24 A package of transport infrastructure measures has been identified for improving access to Fareham and Gosport. This has been informed by an evidence base including technical study work. The package of planned improvements is set out in Table 2-2 and illustrated in Figure 2-7. This formed the basis for the Fareham / Gosport infrastructure programme set out in the Solent LEP Strategic Economic Plan – elements of which have been allocated funding through the LGD process to date.

Table 2-2: Key components of the 'Improving Access to Fareham and Gosport' package

Improving Access to Fareham and Gosport Infrastructure Measures (excluding those within the scope of the Stubbington Bypass scheme)	
A27 east – west corridor improvements	<ul style="list-style-type: none"> • A27 / Redlands Lane / Gudge Heath Lane junction - An additional westbound lane on the A27 approach and exit from the junction • A27 / Station roundabout – An additional lane on the A27 Western Way and improvements for pedestrians, cyclists and buses • Capacity improvements at the A27 St. Margaret's roundabout; • Dualling of single carriageway sections of the A27 between Segensworth roundabout and Titchfield Gyratory in 2016/17.
Measures to improve access into Gosport from the east, and alleviate congestion on the A32	<ul style="list-style-type: none"> • Capacity improvements on the northern part of Newgate Lane from Tanners Lane to Palmerston Drive (delivered in 2014/15); • Capacity improvements at Peel Common roundabout in 2015/16; • Realignment of Newgate Lane from south of Palmerston Drive to Peel Common Roundabout.
Measures to support delivery of new development at Welborne	<ul style="list-style-type: none"> • Provision of an all moves motorway junction access at Junction 10 on the M27; and • Traffic management and capacity enhancement measures on the A32 between Delme roundabout and Welborne and on other local routes.

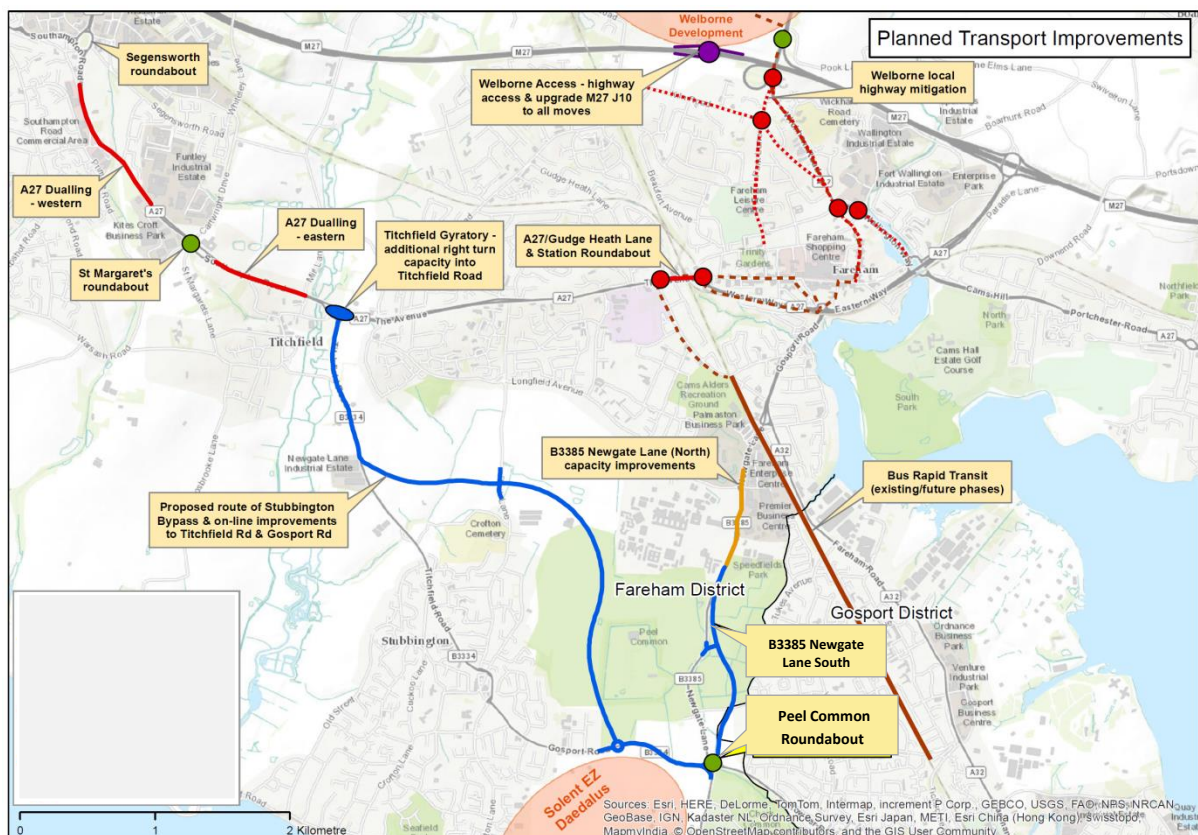


Figure 2-7: Planned transport improvements in Fareham and Gosport

- 2.2.25 The recently delivered Fareham-Gosport BRT (and proposed future extensions) also forms a key component of the overall transport infrastructure package for the area.
- 2.2.26 All of these infrastructure improvements are necessary to help attract growth and investment into the area and to bring forward and maximise development at the Solent Enterprise Zone (3,700 jobs planned by 2026) and Welborne (6,000 homes, 97,000 m² employment floorspace).
- 2.2.27 Whilst being fully justified on its own merits (as demonstrated within the Economic Case), the Stubbington Bypass scheme should therefore be considered within the context of this wider package and is complementary in nature.

2.3 Relevant Studies / Evidence Base

- 2.3.1 A substantial amount of work has been undertaken in relation to investigating transport barriers and constraints in the Fareham and Gosport area and the identification of potential solutions. This technical evidence base, which has underpinned the identification and development of the Stubbington Bypass scheme, includes:

Study Title	Brief Description / Relevance
Transport for South Hampshire Evidence Base – Case and Options for Intervention (October 2012, MVA)	Evidence base examining existing and future transport issues in the South Hampshire sub-region. Informed by the Sub-regional Transport Model (SRTM). Used to underpin development of the TfSH Transport Delivery Plan.
Transport for South Hampshire Evidence Base – Gosport Borough Local Plan 2011 – 2019 (March 2014, Systra)	The principal focus of this study was provide the evidence base to help inform and evidence the Local Plan by assessing the transport impacts of the current land use and transport proposals in the sub-region. Informed by the Sub-regional Transport Model (SRTM).
Strategic Access to Gosport (Feb 2010, Mott Gifford)	A transport planning study that identified high level actions and measures to improve strategic access to the Gosport Peninsula up to 2026. The focus of this study was deliverable measures which could contribute to the management of issues related to journey delays and accessibility by all modes, within the context of combating climate change, supporting the economy and accommodating planned growth up to 2026.

2.4 Problems Identified – scheme specific

- 2.4.1 Section 2.3 has set out the wider context and strategic transport issues relevant to the scheme. This section details the specific transport related problems that the scheme seeks to address.

B3334

- 2.4.2 The B3334 runs approximately south-east to north-west between the A32 in Gosport at the eastern end and the A27 in Fareham at the western end. It is a single carriageway road and forms one of only three principal routes to / from the Gosport peninsula and the wider strategic network, together with the A32 and the B3385. The road provides the most direct access to the west, towards the A27 / M27 junction 9.
- 2.4.3 In addition to the limited network of single carriageway 'B' roads providing access from the west, the lack of an operational railway serving the population of Gosport exacerbates traffic congestion.

B3334 Titchfield Road

- 2.4.4 Towards the western end of the B3334, Titchfield Road runs in a north-south direction, routing between the A27 to the north and the centre of Stubbington to the south. Between the A27 and the entrance to Stubbington (adjacent to Ranvilles Lane), the carriageway is subject to a 40mph speed limit and in most locations is flanked by a, generally, two metre wide footway on the carriageway's eastern side. As the road enters Stubbington, the speed limit reduces to 30mph, which is emphasised through a gateway feature on the periphery of the village.



Figure 2-8: B334 Titchfield Road north of Stubbington

- 2.4.5 Within the village of Stubbington, Titchfield Road has lit footways on both sides of the carriageway and to the north of St. Mary's Road there is a signal controlled pedestrian crossing. There are parking restrictions on both side of the road between the junctions with Canterbury Lane and Mays Lane in the centre of the village. There are also frontage accesses on both sides of the road within Stubbington.
- 2.4.6 Titchfield Road / Gosport Road carries significant volumes of traffic between the A27, Stubbington village and the wider Gosport Peninsula. Average daily traffic flows (07:00 to 19:00, both directions) on this section (East of Mays Lane) are in the region of 17,000 vehicles, with approximately 65% of traffic being northbound. Traffic flows are greatest in the AM peak hour northbound direction (approx. 1,500 vehicles), whilst in the PM peak the northbound / southbound traffic flows are more even. HGV's account for approximately 3% of traffic.
- 2.4.7 Within the village of Stubbington, Titchfield Road has lit footways on both sides of the carriageway and to the north of St. Mary's Road there is a signal controlled pedestrian crossing. There are parking restrictions on both side of the road between the junctions with Canterbury Lane and Mays Lane in the centre of the village. There are also frontage accesses on both sides of the road within Stubbington.



Figure 2-9: B334 Titchfield Road through Stubbington village

- 2.4.8 A significant proportion of the traffic is 'through traffic', routing between the Gosport Peninsula and the A27 / M27. This is related to the high level of out-commuting identified previously in Section 2.3.

2.4.9 Due to the configuration of the route through Stubbington village it is not suitable to carry these volumes of traffic. There is limited network capacity and there are several junctions located in close proximity.

2.4.10 The current situation therefore results in a number of related issues:

- Severe congestion, delays and queuing experienced by all users, including goods vehicles and buses, at peak times due to the high volume of traffic that uses Titchfield Road and Gosport Road;
- Unreliable / poor journey times on the B334 Titchfield Road (and the lack of any suitable alternative route) compromise western access to the Gosport Peninsula, including to the Solent Enterprise Zone;
- In an attempt to avoid the congested B334 route, vehicles use other, less suitable routes, such as Longfield Avenue (via Newgate Lane) – this also increases pressure on Newgate Lane and its function in serving north-south traffic towards the A27 and the M27. Vehicles travelling to / from Gosport and the M27 Junction 9 and beyond also route via the A32 / M27 Junction 11 (travelling onwards past Jctn 9), which increases pressure on this section of motorway;
- Community severance within Stubbington village, with pedestrians finding it difficult to cross the road - this is only partly mitigated by the provision of controlled pedestrian crossing facilities;
- Other local social and environmental impacts associated with heavy traffic flows (including HGVs) and localised congestion, including safety and noise / air quality impacts.



Figure 2-10: Traffic conditions through Stubbington village

2.5 Internal and External Drivers of Change

- 2.5.1 The commencement of development at the Solent Enterprise Zone and planned forthcoming new development at Welborne in North Fareham, have provided external drivers relating to the need for and timing of mitigation to improve accessibility on the Fareham and Gosport peninsula in order to help maximise opportunity and investment in relation to both of these strategic sites. The need to deliver the growth agenda has risen in profile over recent years and the need for investment in infrastructure to facilitate this is now critical.

2.6 Impact of Not Changing

- 2.6.1 There is clearly a very strong transport rationale for improving connectivity in the Fareham / Gosport area. There are also much broader benefits that need to be reflected such as the significant housing growth at Welborne and delivery of new employment floorspace. Without improved accessibility to the Gosport Peninsula, capacity issues and congestion will continue to have a negative impact upon investment which will not be attracted into the area, retention of existing employment will prove very difficult, and local employment will continue to decline.
- 2.6.2 With the expected growth in housing and employment within the Gosport Borough and southern part of Fareham Borough at the Solent EZ, traffic is expected to rise considerably on the B3334 Titchfield Road and Gosport Road through Stubbington village within the peak hours. Figure 2-11 illustrates forecast traffic growth (12hr) by 2026 without network improvements. All three main access routes into and out of Gosport are forecast to experience growth in traffic volumes, with traffic on the B3334 through Stubbington expected to increase by 20% by 2026.

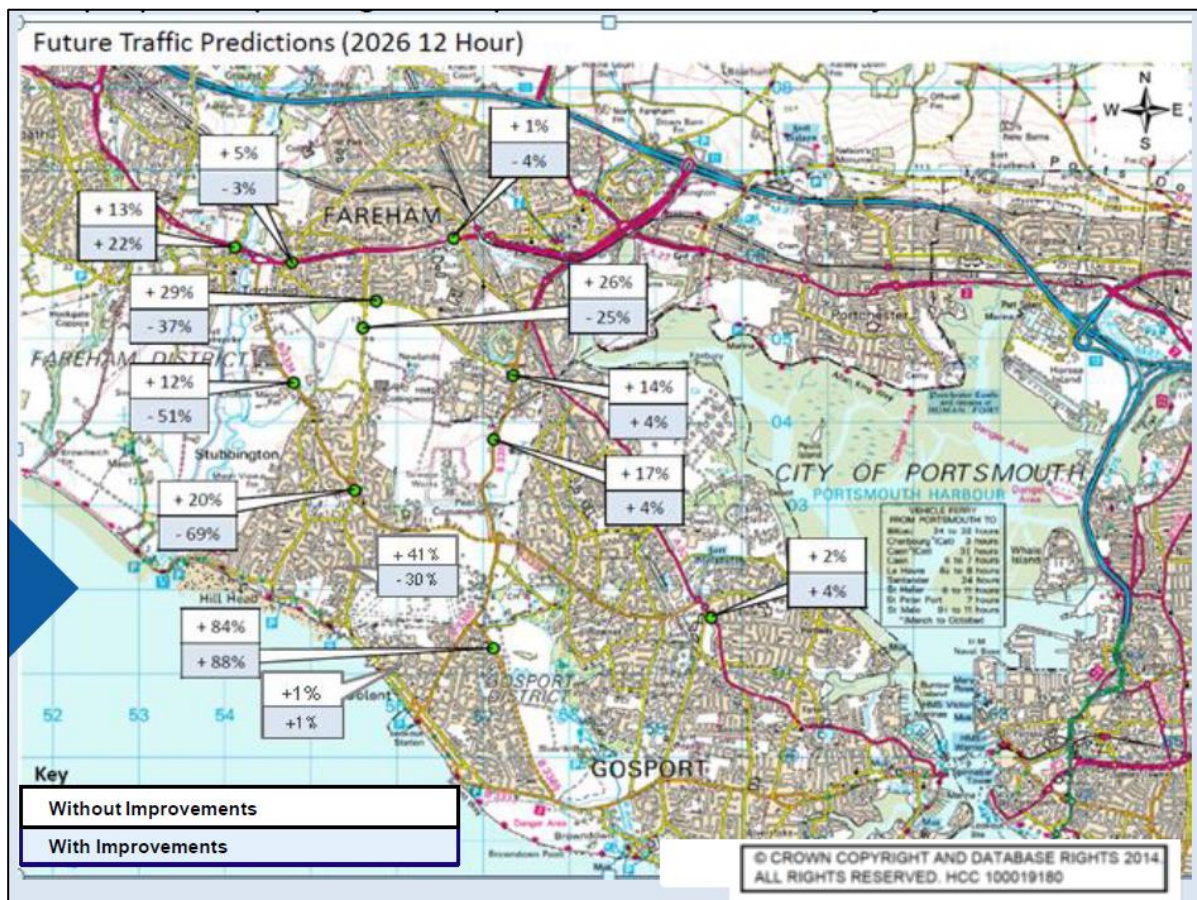


Figure 2-11: Forecast traffic growth 2026 (SRTM)

- 2.6.3 If the Stubbington Bypass and associated improvements are not delivered, inevitably with traffic volume growth journey times would increase on the B3334 Titchfield Road and Gosport Road and congestion and delay will worsen.
- 2.6.4 The forecast increase in traffic on these routes will have an adverse impact on the performance of the network. Figure 2-12 illustrates forecast link Volume to Capacity ratio (V/C) in 2026 AM peak⁷. Links coloured pink indicate V/C in excess of 80%, and those coloured red indicate V/C in excess of 100%. This clearly demonstrates the degradation in performance on the three routes providing access to / from Gosport without appropriate intervention - the B3334 Titchfield Road through Stubbington, the B3385 Newgate Lane and the A32.

⁷ Source: Stubbington Bypass SRTM Model Scenarios (SYSTRA, May 2014)

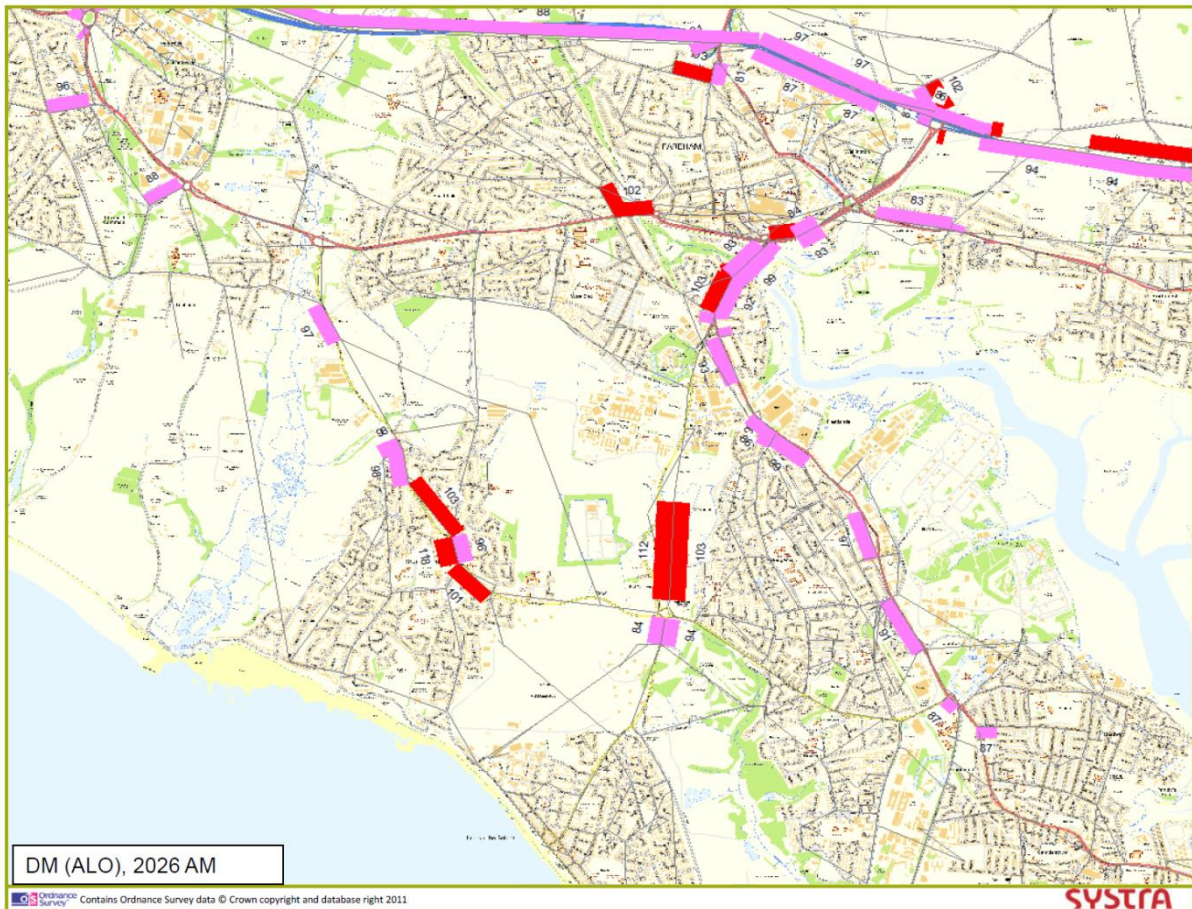


Figure 2-12: Forecast link Volume to Capacity ratio (V/C) in 2026 AM peak

- 2.6.5 Without financial support from the LGF, the delivery of congestion relief on the B3334 through Stubbington village would not be possible as only a minor percentage of local funding is currently available.
- 2.6.6 There are significant potential adverse impacts for local employment of not securing the LGF funding needed to deliver this package. Without investment to reduce congestion and delay on the B3334 Titchfield Road and Gosport corridor (the primary strategic access from the Solent LEZ to the west via the A27 and Junction 9 of the M27), new build commercial units planned at the EZ will prove very challenging to let. Existing businesses based on the Gosport peninsula will continue to face additional costs from congestion, and may choose to relocate out of Gosport to eliminate these accessibility issues. This will lead to further out-commuting from the peninsula, placing the three main access routes into and out of Gosport under even greater traffic pressures.
- 2.6.7 A lack of investment in the Stubbington Bypass will also fail to maximise the benefits of other related transport investments, including Solent LEP investment (from LGF fund), both committed and prospective, such as Newgate Lane South / Peel Common Roundabout and the A27 capacity improvement works.

2.6.8 HCC has explored a number of different funding sources to deliver the Stubbington Bypass scheme including HCC Integrated Transport Block funding, developer contributions and a Public Works Loan Board loan. Solent LEP funding is essential to enable these improvements to be delivered in the short term, when there is a high level of identified need.

2.7 Scheme Aims and Objectives

2.7.1 The proposed scheme aims to improve journey times, journey reliability and safety for the benefit of drivers, cyclists and pedestrians by providing a viable alternative route for traffic entering and leaving the Gosport Peninsula to/from the west. This will assist movement between Gosport, Fareham and Junction 9 of the M27, as well as freeing up capacity on other routes and removing a significant volume of traffic from residential areas, with resultant economic, social and environmental benefits.

2.7.2 The scheme objectives have been defined to directly address the problems and challenges discussed in Sections 2.3 to 2.6. They align closely with the business strategies for HCC, the Solent LEP and for Central Government. They are also complimentary to the wider Fareham / Gosport package objectives set out in the ‘over-arching’ business case.

Table 2-3: Objectives and outcomes of the Stubbington Bypass scheme

Scheme Objectives	Key Outcomes Sought
To provide a viable alternative route for traffic wishing to travel from the Gosport Peninsula westwards towards the M27 Junction 9, whilst avoiding heavily congested parts of the transport network	<ul style="list-style-type: none"> Reduced congestion and delays on the local highway network More reliable / improved journey times for western access to / from the Gosport Peninsula Traffic relief to Stubbington village –reduced severance Support housing / jobs growth Support inward investment at strategic growth sites, in particular the Solent Enterprise Zone
To help encourage regeneration, investment and growth in the area	
To help remove the transport barriers to growth	
To help unblock critical bottlenecks and congestion hotspots on strategic routes, in town centre areas and in areas of employment	
To provide new and improved existing infrastructure to help better manage traffic flows, particularly during peak periods	

2.8 Policy Context (Business Strategy and Strategic Fit)

2.8.1 A Stubbington Bypass scheme is well founded in, and strongly supports, local and national policy objectives. The overall policy context is summarised in Figure 2-13.

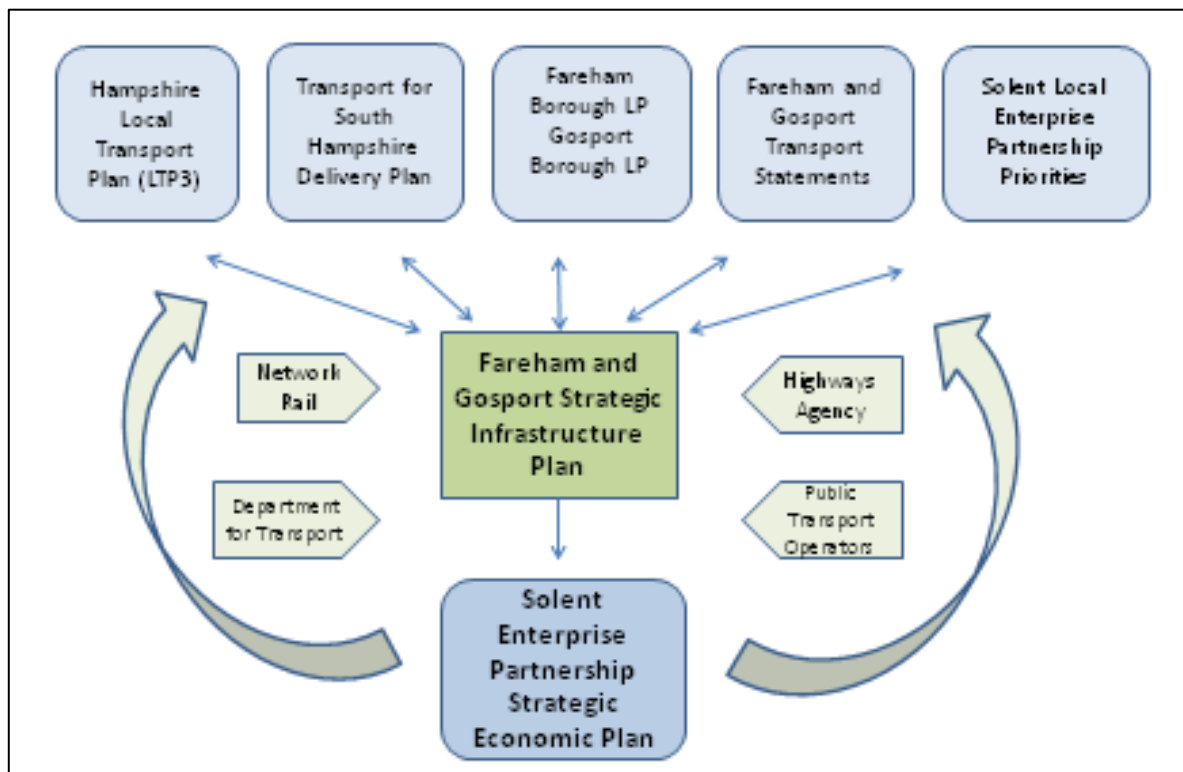


Figure 2-13: Key policy linkages

2.8.1 Overall, the scheme is demonstrated to have a strong strategic fit as it will:

- Support the Solent LEP objectives relating to inward investment, infrastructure, growth and priority sectors;
- Support key objectives of growth, regeneration and infrastructure provision in Fareham and Gosport's Local Plans;
- Support the Highways Agency's Route Based Strategies, Hampshire's Local Transport Plan, Transport for South Hampshire Local Plans;
- Help to address serious levels of social and economic deprivation and a deteriorating competitive position in Gosport;
- Support growth of jobs and homes at Welborne, the Solent Enterprise Zone and a range of other allocated development sites; and
- Reduce levels of out commuting from the Gosport peninsular and relieve congestion on north south and east west routes across the network.

2.8.2 The alignment of the scheme objectives with national and local / sub-regional policies and plans is considered further in the following sections.

Government Priorities for Transport

2.8.3 This scheme will support the following national transport policy objectives.

- Managing, improving and investing in the road network;
- Supporting economic growth through local enterprise partnerships and enterprise zones;
- Making roads safer; and
- Improving local transport.

2.8.4 The scheme will improve journey time and network reliability, by reducing congestion and delay, improve access to the Solent Enterprise Zone at Daedalus, improve road safety through casualty reduction and improve local transport options through improvements to provision for pedestrian, cycle and equestrian users.

Regional/ LEP/ County-level Policy

Solent LEP Strategic Economic Plan

2.8.5 The proposed scheme forms part of an overarching strategy which aims to improve access to Fareham and the Gosport Peninsula, where traffic congestion related issues have existed for many years. Improvements are a key priority of the Solent Local Enterprise Partnership's (Solent LEP) Strategic Economic Plan for growth in the area and to encourage investment in local strategic sites, namely the Solent Enterprise Zone (at Daedalus) and Welborne.

2.8.6 The Stubbington Bypass scheme is therefore central to the growth strategy for the Fareham and Gosport area, and a key enabler in terms of meeting the Solent LEP's specified jobs / GVA growth targets. The scheme will contribute to the delivery of the Solent LEP growth agenda by addressing a key barrier on the transport network which is required to connect people to businesses and facilitate sustainable economic growth in the area.

2.8.7 The Solent Strategic Economic Plan published in March 2014 identified six priorities for supporting the economy of the Solent area. Table 2-4 summarises how the Stubbington Bypass will support each priority.

Table 2-4: Strategic fit of the Stubbington Bypass scheme with Solent LEP priorities

Solent LEP Priority	How the Stubbington Bypass contributes to priority	Solent LEP Growth Targets
Enterprise	Improved accessibility will assist small and medium enterprise growth and retention in Gosport town centre and commercial areas and for the whole peninsula, and in particular the Solent EZ at Daedalus. New jobs and opportunities at the Solent EZ (3,700 new jobs in the period to 2026 and 122,000 sq m employment floor space, and through the new CEMAST centre) will help reverse trends and counter public sector job loss and MoD employment decline.	<ul style="list-style-type: none"> • Creation of 15500 new jobs
Infrastructure	<p>The delivery of the Stubbington Bypass will increase network capacity and improve strategic connectivity to/from the peninsula particularly to the west. The resultant improved resilience and journey time reliability, will help reduce congestion and the transport barriers to growth and encourage investment into the area. The package will help improve accessibility between people and jobs and cater for forecast growth in demand associated with the planned housing and employment development, including at the SEZ and at Welborne.</p> <p>The package will also unlock circa 230,000 sq m of new employment floorspace and also provide strategic connectivity to waterfront employment sites in Bridgemary North/ South and Hardway wards.</p>	<ul style="list-style-type: none"> • Achieve 3% GVA Growth • Increase: GVA per cap; employment rates; and economic activity • Create new business
Inward Investment	Improved accessibility through the delivery of the Stubbington Bypass and associated A27 corridor improvements and increased business confidence in journey time reliability on the transport network will encourage businesses to open up new sites following effective marketing and to invest in Solent EZ and Gosport. The scheme will help to remove the transport barriers to growth and counter the trend of decline in the area. The Stubbington bypass and A27 dualling work will provide improved strategic transport infrastructure to waterfront employment sites in the Gosport area identified within the Gosport Local Plan.	<ul style="list-style-type: none"> • Improve business survival Rate • Improve skills
Skills	Improved access to new CEMAST centre of excellence at the Solent EZ will help ensure local residents are equipped to take up the jobs that will be created, secure the transition of young people to employment and redress the balance of inappropriate skills for jobs in the area and create employment opportunities for the deprived areas in Gosport.	<ul style="list-style-type: none"> • Support further education attainment rates
Strategic Sectors	The proposed developments which will be facilitated by the bypass and associated improvements to the A27 and Newgate Lane, will help underpin growth in the area creating business gateways (including marine and advanced manufacturing etc) at both local and national levels and will help develop new local supply chains.	<ul style="list-style-type: none"> • Increase inward Investment

Innovation	Improved accessibility to the Gosport peninsula from the west will enable substantial knowledge assets in for instance the marine industry to be developed to support new business development and encourage innovation.	<ul style="list-style-type: none"> • Improve productivity
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Solent Transport

- 2.8.8 The scheme will support the following Solent Transport area **Joint Local Transport Plan (LTP) Strategy** policies. The Joint LTP Strategy was published in March 2011.
- 2.8.9 Of the seven key challenges for the South Hampshire area, those that are relevant to the proposed bypass are as follows:
- Ensuring the timely delivery of transport infrastructure to support housing and employment growth and regeneration opportunities;
 - Managing the existing transport network to ensure that journey time reliability is maintained and improved to help support economic competitiveness, regeneration, and growth; and
 - Mitigating the adverse impacts of transport activity on people, communities and habitats.
- 2.8.10 The Stubbington Bypass supports the following seven policies in particular, of the 14 set out in the Joint LTP Strategy:
- Policy A:** To develop transport improvements that support sustainable economic growth and development within South Hampshire
- Policy C:** To optimise the capacity of the highway network and improve journey time reliability for all modes
- Policy E:** To deliver improvements in air quality
- Policy G:** To improve road safety across the sub-region
- Policy H:** To promote active travel modes and develop supporting infrastructure
- Policy M:** To develop and deliver high-quality public realm improvements; and
- Policy N:** To safeguard and enable the future delivery of transport improvements within the South Hampshire area.
- 2.8.11 Delivery options for Policy N include safeguarding of proposed strategic routes such as Western Access to Gosport, where heavy volumes of traffic through local communities cause problems of severance, noise and poor air quality.
- 2.8.12 The other remaining policies relate to topics such as maintenance, public transport and ferries.
- 2.8.13 Alongside the Joint Strategy, a **Transport Delivery Plan (2012 – 2026)** was adopted by the Solent Transport Joint Committee on the 5th February 2013. The TDP identifies schemes for delivery in the period up to 2026. The TDP provides a clear statement of the transport scheme priorities to be progressed by Solent Transport

and its member authorities and provides a robust starting point from which to take forward scheme development and funding bid preparation. It also provides partners with a clear view of scheme priorities.

2.8.14 The TDP is a strategic delivery plan and as such includes improvements to the A27 Corridor. The TDP represents the position at early 2013 of Solent Transport on forecast growth.

2.8.15 The TDP contains 5 key objectives 4 of which are met by the scheme:

- enable higher levels of economic growth by improving local employment opportunities;
- improve sustainable access linking people to jobs and key facilities;
- reduce emissions by reducing the need to travel by car; and
- reduce unemployment in areas of high deprivation through improved sustainable access to employment centres.

2.8.16 The TDP evidences the statement that:

“there is a need for transport intervention to support sustainable economic growth and states that in the absence of transport intervention, transport will act as a constraint on sustainable economic growth”.

2.8.17 The Stubbington bypass will help overcome this constraint and help to achieve this goal.

2.8.18 The document recognises the key role of the Solent Enterprise Zone at Daedalus that hopes to generate an additional 3,500 jobs by 2026. The transport impact of this development has been assessed as part of the planning process with measures including:

- New access junctions;
- Contribution towards the delivery of highway infrastructure as identified in the Strategic Access to Gosport Study (2010) ; and
- Traffic management and mitigation measures in Stubbington village.

Hampshire Local Transport Plan (2011 – 2031)

2.8.19 The Stubbington Bypass contributes to all three of the LTP’s main priorities as explained below:

LTP Priority	How the Stubbington Bypass contributes
1. To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire;	The package will deliver additional capacity that will reduce delays and enable provision of a reliable and efficient western access to Gosport as an alternative to the congested A32 for trips towards the west (via Cherque Way, Broom Way, Gosport Road, the new bypass, Titchfield Road and the A27 and M27 at Junction 9), accommodating planned housing and employment growth. Existing jobs will be retained, and the new jobs created will support economic growth.
2. Provide a safe, well-maintained, and more resilient road network in Hampshire;	The bypass and online improvements to the B3334 Titchfield Road and Gosport Road will improve network resilience for journeys to/ from the Gosport peninsula.
3. Manage traffic to maximise the efficiency of existing network capacity, improving journey time reliability and reducing emissions, to support the efficient and sustainable movement of people and goods	The bypass and capacity improvements/ widening on Titchfield Road and Gosport Road and at Titchfield Gyratory and Peel Common roundabout will help improve network efficiency and capacity, thereby reducing delay and improving journey time reliability. Traffic management measures in the centre of Stubbington village will discourage through trips, thereby helping reduce emissions.

2.8.20 The Stubbington Bypass contributes to five of the LTP's 14 Policy objectives:

- PO1: Improve road safety (through delivery of casualty reduction and speed management). The scheme will support this objective by improved road geometry/ layout and good design;
- PO 9: Introduce the 'shared space' philosophy, applying Manual for Streets design principles to support a better balance between traffic and community life. The scheme will reduce through traffic volumes within Stubbington village and improve quality of life through delivery of public realm improvements in the village;
- PO 10: Contribute to achieving local targets for improving air quality and national carbon targets through transport measures. The scheme will deliver air quality improvements in Stubbington village;
- PO 12: Invest in sustainable transport measures, including walking and cycling infrastructure, principally in urban areas. The scheme design incorporates delivery of a shared footway/ cycleway along the bypass route;
- PO 14: Outline and implement a long-term transport strategy to enable sustainable development in major growth areas. The scheme improves access to Solent LEZ, and other development sites on the Gosport peninsula, helping support employment growth.

Fareham and Gosport Strategic Transport Infrastructure Plan (STIP) (Autumn 2013)

- 2.8.21 Stubbington Bypass is a central scheme for this HCC Strategic Plan which sets out the strategic transport infrastructure that will be needed to support planned growth in Gosport, and Fareham boroughs. The plan updates and expands upon previous strategy documents and recent reports relating to access to Fareham and Gosport.
- 2.8.22 The plan provides an interim position regarding potential infrastructure requirements, in advance of the resolution of the need for and preferred alignment of a potential Stubbington Bypass.

Local Plan Policy

Fareham Local Plan

- 2.8.23 The Fareham Borough Local Plan consists of 3 parts:
- Part 1: The Adopted Core Strategy;
 - Part 2: The Adopted Development Sites and Policies Plan; and
 - Part 3: The Adopted Welborne Plan.
- 2.8.24 The Local Plan is currently undergoing a review, although the above policy documents remain relevant at the present time.
- 2.8.25 The **Local Plan Part 1: Core Strategy** was adopted in August 2011 and sets out the planning framework for the Fareham Borough.

Policy CS5 – Transport Strategy and Infrastructure states that:

“The Council will, where necessary, work with the Local Highways Authority, Highways Agency and transport operators to promote, permit, develop and/or safeguard a high quality and sustainable integrated transport system for the Borough”.

- 2.8.26 The Stubbington Bypass would help enable delivery of a higher quality highway network within the southern part of Fareham Borough.
- 2.8.27 The bypass would support the delivery of Policy CS12 which relates to new development at Daedalus airfield.
- 2.8.28 The **Local Plan Part 2: Development Sites and Policies** was adopted in June 2015. Chapter 6 of this document summarises the facilities and infrastructure needed to support planned growth within the Borough. This includes reference to the Stubbington Bypass. The section on Improved Access to Fareham from the west contains the following policy:

Policy DSP49: Improvements to the Strategic Road Network

The alignments shown on the Policies Map are safeguarded for the following proposals, which will improve and maintain the effectiveness of the Strategic Road Network:

- (A) B3385 Newgate Lane, Palmerston Drive –Peel Common;
- (B) B3334 Gosport Road – B3334 Titchfield Road (Stubbington Bypass)

2.8.29 The supporting text to this policy states:

“Stubbington Bypass

Stubbington Bypass has been a longer term aspiration of Hampshire County Council for many years, the scheme is now being afforded an immediate priority in order to help deliver the Solent Local Enterprise Partnership objectives in relation to local economic growth and the need to help facilitate new investment and development in Gosport and Fareham Boroughs

The bypass is a major transport scheme, which will be very challenging to implement. After assessment of a series of potential route options a preferred route has been identified which connects the B3334 Gosport Road, south of Stubbington to the B3334 Titchfield Road north of Stubbington. Following consultation in summer 2014, the County Council has identified an indicative corridor which is 100m wide to allow design adjustments as work progresses. The actual corridor width will be approximately 20-25m.

The scheme will require careful consideration to ensure that the route does not undermine the purpose of the Strategic Gap and does not result in any significant adverse effect on the physical or visual separation of Stubbington/Lee on the Solent and Fareham/Gosport. All stages of design involved in the progression of this scheme will take account of the principles and criteria set out in Policy CS22 of the Core Strategy.”

Gosport Borough Local Plan Submitted Version

2.8.30 The Gosport Borough Local Plan (2011-2029) sets out the development strategy for Gosport and statutory policies to guide future development.

2.8.31 The objectives relevant to the bypass include:

- **Objective 3**: To regenerate the Solent Enterprise Zone at Daedalus, making the best uses of its key assets particularly the airfield, coastal location and historic core.
- **Objective 14**: To help facilitate improvements to the Borough’s transport infrastructure including public transport proposals, as well as improvements to the highway network and pedestrian and cycling routes.

2.8.32 The delivery of the Stubbington bypass would support the delivery of Policies relating to delivery of new housing and employment at strategic sites including:

Policy LP5: Daedalus

Proposals for the Daedalus airfield site should be for an employment-led regeneration scheme with a mix of uses. The balance of uses, infrastructure requirements and internal and external linkages will be planned in a comprehensive and co-ordinated way in close liaison between Gosport Borough Council, Fareham Borough Council, Hampshire County Council, the Solent Local Enterprise Partnership and landowner.

The Borough Council will work closely with Hampshire County Council as the Highway Authority for on-site and off-site transport improvements.

Policy LP21: Improving Transport Infrastructure

1. The Borough Council will work with the Highway Authority, the Highways Agency, Fareham Borough Council, transport providers, developers and other stakeholders where necessary to promote and provide a transport system that supports development within the Borough and enables sustainable economic growth through a policy of reduce, manage and invest.

2. Development proposals will need to contribute to the delivery of an integrated and sustainable transport network including, where appropriate, measures outlined in the latest Local Transport Plan and Transport Delivery Plan (or equivalent) and supporting documents.

3. Development proposals will not be permitted which prejudice the delivery of transport improvements as identified in the latest Local Transport Plan (or equivalent) and supporting documents.

2.8.33 The supporting text to this policy states:

Highways: *The Local Plan seeks to reduce and manage traffic congestion and promote sustainable travel. However there remains a need to improve strategic highway access to address journey time reliability, to support growth within the Borough and to enable proposed local employment sites to compete with other sites within South Hampshire. In particular it is necessary to improve the Newgate Lane corridor to an appropriate standard to accommodate commercial traffic to the Enterprise Zone at Daedalus and provide a safer and more attractive route for cyclists between Lee-on-the-Solent and Fareham. It is also desirable to provide a bypass to Stubbington Village and improve the Western Access.*

The Borough supports the findings of Solent Transport's Strategic Access to Gosport Study and the Transport Delivery Plan as amended by the Fareham & Gosport – Strategic Transport Infrastructure Plan. This policy reflects the broad scope of measures identified to improve strategic access to the Gosport Peninsula. The Infrastructure Delivery Plan accompanying the Local Plan provides a summary of the relevant transport interventions.

2.9 Constraints and Inter-dependencies

2.9.1 The area of interest for a Stubbington Bypass is broadly defined by the surrounding road network to which the bypass would connect, and includes:

- Longfield Avenue to the north;
- Land east of B3385 Newgate Lane; and
- B3334 Rowner Road, Gosport Road and Titchfield Road to the south and west.

2.9.2 The area is largely comprised of open farmland. The key constraints in terms of providing a bypass for Stubbington include:

- Residential and other property boundaries;
- The Peel Common Wastewater Treatment Works;
- The Newlands Farm and fishing lakes complex;
- The need to place a route sensitively in the vicinity of Crofton Stream or Oxley's coppice;
- The need to minimise the impact on Hollam Nurseries, on the east side of Titchfield Road; and
- The need to provide junctions at either end of the bypass on Gosport Road and Titchfield Road, which can only tie in at certain fixed locations
- The design speed of the route and the associated need to reduce the severity of the bends in order to provide a higher design speed (making the route more attractive to traffic);
- The need to provide adequate drainage;
- The need to minimise the diversion of statutory undertaker's plant; and
- The assessment of relative scheme costs for the different options.

Land constraints

2.9.3 The area is largely rural in nature and lies within the borough of Fareham, forming part of the strategic gap between Fareham, Stubbington, Lee-on-the-Solent and Gosport. It predominately comprises large, flat open fields currently used for arable farming with land tenants for farming and a number of stables. The periphery of the area is formed of built-up areas and gardens primarily comprising Peel Common, Peel Wastewater Works (Southern Water), HMS Daedalus and Newlands Farm.

2.9.4 The Strategic Gap comprises an area of land to the south of Fareham, east of Gosport and north of Stubbington. The south-east is relatively constrained, with key features of note including Peel Common Wastewater treatment works

accessed via Newgate Lane. North of the Wastewater Treatment Plant lies the newly approved Solar Panel Farm on a 27-hectare site. North of the Solar Panel Farm lies HMS Collingwood and the southern edge of the built up area of Fareham.

- 2.9.5 Newlands Farm is an important location where potential route alignment options converge to run to the east between the Farm building and HMS Collingwood, or west through a narrow gap between the farm house and a Nursery.
- 2.9.6 To the north-west of the Strategic Gap, Oxley's Coppice is a patch of ancient woodland located between Ranvilles Lane and Peak Lane and is designated a Site of Importance for Nature Conservation (SINC). Crofton stream tributary feeding the River Meon south of this location is designated as a Priority Habitat. This therefore presents a second important location with a restrictive gap for the passing of any potential route alignment.
- 2.9.7 Planning Consent was given on the 24th September 2013 by FBC for a 27-hectare photovoltaic Solar Farm on Newlands Farm, off Tanners Lane for a 25-year period of consent reflecting the lifetime of the Solar Farm. 3,649 arrays (racks) will support 87,876 modules. This is sited between HMS Collingwood to the north, Newgate Lane to the East, Peel Wastewater Treatment works to the south and open farmland to the west.
- 2.9.8 Discussions were held between HCC and the developer, Vogt Solar Limited and whilst these were positive in terms of the principle of routing a bypass through the Solar Farm, subsequent discussions on likely financial implications suggested this was potentially prohibitive.
- 2.9.9 Land ownership is a key constraint to delivery of a bypass. This has been a consideration in the appraisal of different options (see Section 2.10) and the implications in terms of the preferred scheme are covered in the Management Case (Chapter 6).

Environmental constraints

- 2.9.10 The study area is largely agricultural in nature, predominated by Newlands Farm and associated reservoir used as a fishing pond in the land between Tanner Lane to the south west boundary of HMS Collingwood, and Stroud Green Lane to the west.
- 2.9.11 Other known habitats within the area include a scattering of standing open water and streams surrounded by natural grassland, coniferous woodland and broadleaf woodland. The area is bisected by PROWs, rural roads bordered by hedgerows and several drainage ditches up to 2.0m in depth.
- 2.9.12 Notable points of importance include the Newlands Fishery and Oxley's Coppice, a patch of ancient woodland situated to the south of Rowan Way, which has been designated a Site of Importance for Nature Conservation. A stream feeding the River Meon (Crofton Stream Tributary) runs south of the woodlands and is

designated as a Priority Habitat. This therefore presents a critical location with a restrictive gap for any potential route alignment

- 2.9.13 The area is potentially a breeding ground for wintering Brent Geese.

Design constraints

- 2.9.14 The key early considerations around design and engineering issues included a review of the ability for the design solution to be delivered in accordance with the minimum design requirements of 40mph and desired 50mph design speeds. Key constraints have been identified that would affect the options, notably tight corners to achieve defined radius for curves, existing highways and Public Rights of Way (PROWs) intersecting the route alignment and presence of pylons and other known features of the landscape and environmental constraints.

Inter-dependencies

- 2.9.15 In order that the bypass can operate effectively capacity improvements are required along Titchfield Road, north of where the bypass joins, to its connection with the A27, at Titchfield gyratory, (which will also require capacity improvements).
- 2.9.16 Improvements to the A27 will essentially be required to ensure the new bypass can operate effectively once opened. Works on the A27 will be required in advance of the bypass opening and will allow for the upgrading of the single carriage sections to dual and the enhancement of the operational effectiveness of its junctions. The planned A27 works are being part funded from Solent LEP LGF funding. Without improved traffic flow along the A27, (which Stubbington Bypass and associated works will feed directly into), the substantial benefits which can be achieved through the provision of a Stubbington Bypass cannot be realised. Traffic management will be required in Stubbington Village to discourage the use of this route.
- 2.9.17 It is recognised that there are other related schemes proposed in meeting the overarching objective of improving access to Gosport. Other schemes of particular relevance in the context of the Stubbington Bypass scheme are:
- Peel Common Roundabout: Signalisation of the existing roundabout - Interim improvements including the provision of traffic light controls on the roundabout and revised pedestrian, cycle and bus stop facilities; and
 - Newgate Lane southern Section (south of Tanners Lane) - A bypass of Newgate Lane to the east, requiring Planning Approval and land acquisition.
- 2.9.18 A review of design issues and criteria for the southern section of the proposed Newgate Lane scheme, including measures to improve Peel Common roundabout,

has been developed in parallel to the study of Stubbington Bypass particularly in terms of whether this section could or should form part of a potential bypass route.

2.10 Options / Scheme Development

Scheme Background / Identification

- 2.10.1 The possibility for a bypass of Stubbington was first considered in detail in 2004, when a study commissioned by Hampshire County Council (HCC) assessed three broad corridors of interest for a potential bypass. At the time priorities changed and the work was not taken any further.
- 2.10.2 As set out in Section 2.3 several studies have considered the overall transport requirements of the Fareham and Gosport area, including the Strategic Access to Gosport study of 2010. This study work identified the need for a package of multi-modal transport improvements, including highways and public transport measures. Whilst being an important component of the overall package, public transport measures (such as the BRT), would not be sufficient to address the area's access issues in full. Strategic highways improvements, including to enhance western access, were therefore identified as a necessary component of the transport package.
- 2.10.3 Recent shifts in planning policy and establishment of the SLEP have meant that a bypass scheme has been afforded priority again, to help achieve the SLEP objectives outlined above.

Route options

- 2.10.4 On 7th October 2013 a report was presented to the HCC Executive Member for Economy Transport and Environment (EMETE) entitled 'Improving Access to Fareham and Gosport – Report of Consultation.' This report outlined the findings of a summer 2013 public consultation event at which the three previously identified route options for the bypass were presented as follows:
- Red route – From Gosport Road west of the wastewater treatment works routing north to the east of the Newlands Farm and then west to Titchfield Road;
 - Blue route – From Newgate Lane south of Tanners Lane routing west of Newlands Farm to Titchfield Road; and
 - Green route – From Newgate Lane south of Longfield Avenue routing west, broadly following the southern boundary of the residential area of Fareham in parallel to Longfield Avenue/Rowan Way to Titchfield Road.

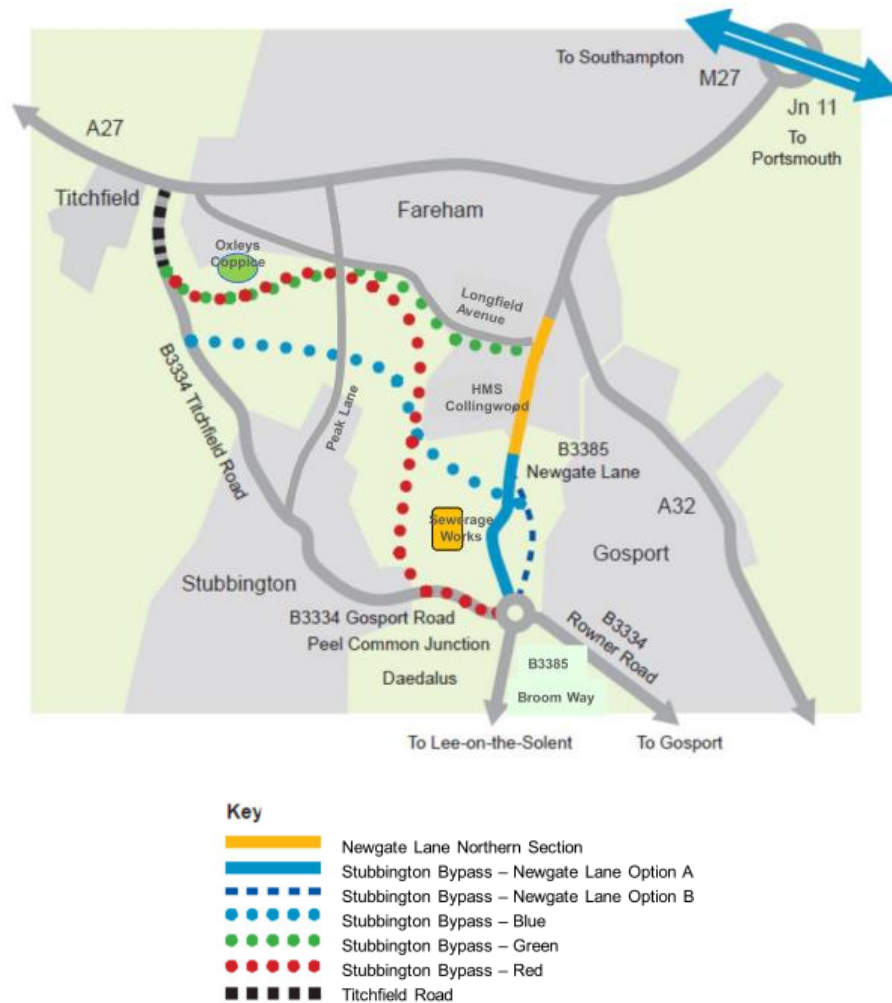


Figure 2-14: Initial route options considered

- 2.10.5 Following an evaluation of the consultation responses the EMETE report recommended that the focus of the development work for the preferred route of the bypass should be the blue or red routes, or combinations or variants thereof, and that the green route should not be pursued further. The Green Route was considered to present a southern bypass of Fareham rather than a bypass of Stubbington (traffic modelling also demonstrated that insufficient traffic was attracted to use the route). It also recommended that the focus of the development work for the section of the bypass west of Newlands Farm should be the blue route corridor of interest, in order to avoid the ancient woodland known as Oxleys Coppice.

Initial Optioneering and Route Appraisal

- 2.10.6 Two optioneering studies were commissioned by HCC in order to arrive at a preferred alignment, entitled 'Route Option Appraisal' and 'Transport Assessment of Route Options', with findings from the first report being partly fed into the

second report. The optioneering process was informed by consultation feedback, initial feasibility design work (including an engineering appraisal to identify key constraints) and traffic modelling.

2.10.7 The Route Option Appraisal report initially evaluated each of the three corridor options (Red, Blue and Green) against seven key criteria as follows:

- Strategic and Scheme Objectives;
- Planning Policy;
- Consultation Feedback;
- Land Ownership;
- Design and Engineering;
- Scheme Performance; and
- Environmental Constraints.

Criteria	Green	Red	Blue
Strategic & Scheme Objectives			
Planning Policy			
Consultation Feedback			
Land Ownership & Use			
Design & Engineering Issues			
Scheme Performance			
Environmental Constraints			
Sift Review	x	✓	✓

2.10.8 Following this appraisal the Green route was discounted as the worst performing option and a new third option titled 'Hybrid' was developed based on suggestions put forward at the summer 2013 public consultation. The Hybrid route option follows the red route to the east of Newlands Farm, but the Blue route north and west of Newlands Farm, connecting to Titchfield Road approximately half-way between the Bridge Street and Ranvilles Lane junctions.

EAST Assessment

2.10.9 Three alignments for each of the Red, Blue and Hybrid options were subsequently developed and tested using the Department for Transport (DfT) Early Assessment and Sifting Tool (EAST) – see below and Figure 2-15.

2.10.10 **Red Routes** connect the B3334 Titchfield Road in relative proximity to the junction with Bridge Street in the north to B3334 Gosport Road in the south:

- R1: routes to the west of Newlands Farm, skirting south of Oxleys Coppice to Titchfield Road (north);
- R2: routes to the east of Newlands Farm and north of the fishery, skirting south of Oxleys Coppice to Titchfield Road (north); and
- R3: routes to the east of Newlands Farm and south of the fishery, skirting north of Crofton stream tributary to Titchfield Road (north).

2.10.11 **Blue Routes** connect the B3334 Titchfield Road to the B385 Newgate Lane in the east from where dual carriageway will be required to Peel Common Roundabout in the south:

- B1: routes to the east of Newlands Farm and south of the fishery, crossing Crofton stream tributary to Titchfield Road (central);
- B2: routes to the west of Newlands Farm, skirting south of Oxleys Coppice to Titchfield Road (north); and
- B3: routes to the east of Newlands Farm and south of the fishery, skirting north of Crofton stream tributary to Titchfield Road (central).

2.10.12 **Hybrid Routes** connect the B3334 Titchfield Road either towards Stubbington village or from a central point towards Bridge Street and join the B3334 Gosport Road in the south:

- H1: routes to the east of Newlands Farm and south of the fishery, crossing Crofton stream tributary to Titchfield Road (south);
- H2: routes to the east of Newlands Farm and south of the fishery, crossing Crofton stream tributary to Titchfield Road (central); and
- H3: routes to the east of Newlands Farm and south of the fishery, skirting north of Crofton stream tributary to Titchfield Road (central).

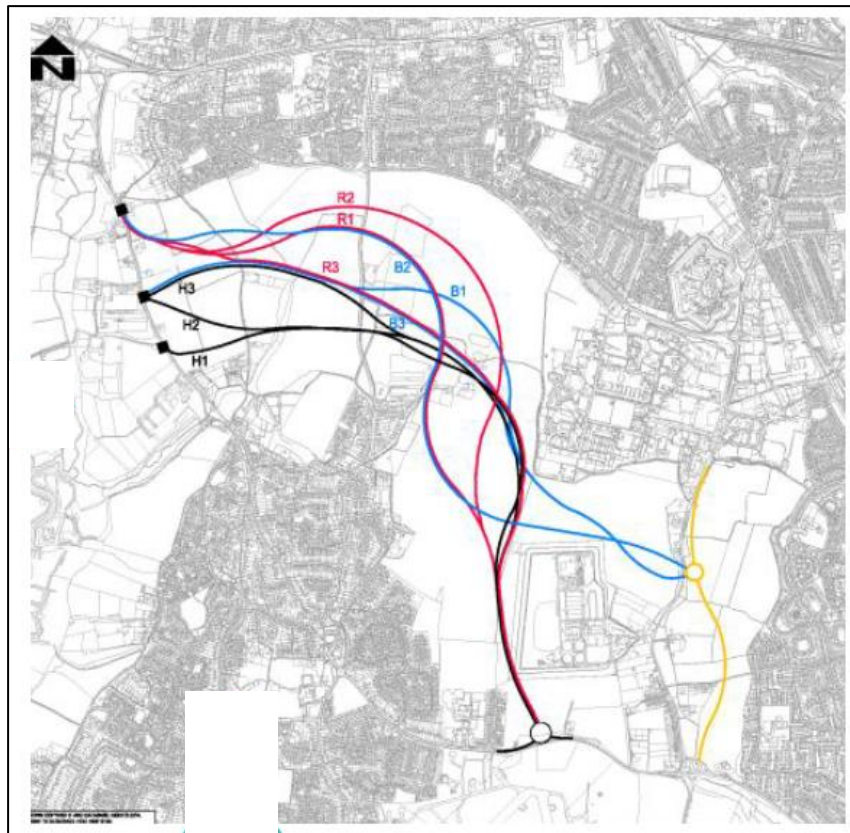


Figure 2-15: Further route options considered

2.10.13 The nine route options were assessed by a range of technical specialists including geotechnical, highway design, environmental, transport planning and traffic modelling, to inform the option appraisal process against the following EAST criteria:

- Strategic Case;
- Economic Case;
- Managerial Case;
- Financial Case; and
- Commercial Case.

2.10.14 A significant amount of transport modelling assessment work was undertaken in parallel to the option appraisal, the details of which are contained in the Transport Assessment of Route Options Report. Modelling was undertaken to assess the relative merits of the Hybrid, Red and Blue route options at both a strategic and local level. Strategic modelling was undertaken using the South Hampshire Sub Regional Transport Model (SRTM) operated by consultants SYSTRA. Local junction modelling was undertaken for a range of potential improvement schemes that

could be implemented in conjunction with the Bypass, with the best performing schemes being fed into the SRTM and tested in conjunction with the different bypass alignment options.

2.10.15 The SRTM modelling results indicated that the Red and Hybrid routes would attract the most traffic to the bypass and also that these two routes would offer better journey times than the Blue route. Accordingly the Transport Assessment of Route Options concluded that any alignment based on the Red and Hybrid options could be said to have positive benefits for surrounding local communities. Full details of the SRTM modelling are provided in the SYSTRA report 'Stubbington Bypass SRTM Model Scenarios.'⁸

2.10.16 Overall the Hybrid alignments scored the best, followed by the Red alignments and then the Blue alignments. The technical recommendation (subject to a more detailed environmental and engineering review to overcome localised constraints at Crofton stream tributary) was for the 'Hybrid 2' alignment, with its distinguishing feature being that it provided a better fit with other objectives, particularly relating to preservation of the strategic gap.

Mean score (Case)	Blue			Red			Hybrid		
	B1	B2	B3	R1	R2	R3	H1	H2	H3
Strategic	3.3	3.3	3.3	3.8	3.8	3.8	4.0	4.0	3.8
Economic	3.7	3.8	3.8	4.0	4.0	4.2	3.8	4.0	4.2
Managerial	3.7	3.7	3.7	4.0	4.0	4.0	4.3	4.3	4.3
Financial	2.0	2.0	2.0	3.0	3.0	3.0	3.5	3.5	3.5
Commercial	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total	14.6	14.8	14.8	16.8	16.8	16.9	17.7	17.8	17.8

Preferred Route Selection

2.10.17 A report was presented to the HCC EMETE on 17th March 2014 which summarised the substantial amount of design and appraisal work that was undertaken following the summer 2013 consultation, in order to arrive at a preferred alignment for the bypass. The EMETE decision was to approve the preferred alignment for the bypass, known as the Hybrid route and undertake a further round of public

⁸ Stubbington Bypass SRTM Model Scenarios (May 2014, Systra)

consultation in summer 2014 to present the preferred option and associated other works.

- 2.10.18 Following the summer 2014 public consultation, a paper was presented to the HCC EMETE on 4th November 2014 that detailed the outcome of the consultation events. The report noted that with regard to the bypass 75% of respondents supported the preferred route for the bypass. The overall decision was to give authority to progress the Stubbington Bypass preferred scheme and associated improvements to Titchfield Road, Gosport Road and Peel Common roundabout, leading to the submission of a planning application in Spring 2015. It was also noted that feedback from the consultation should be noted and taken on board as appropriate.

Refinement of the Bypass Design

- 2.10.19 Following the identification of the preferred route, a substantial amount of technical work has been undertaken to refine the design of the scheme to its current stage. This has included responding to feedback from consultation (see section on consultation / stakeholder engagement below) and further technical work including use of the Sub Regional Transport Model (SRTM) for South Hampshire to test different junction options and design speeds.

- 2.10.20 Table 2-5 below summarises some of the main refinements to the scheme design.

Table 2-5: Summary of some of the main refinements to the scheme design to date

Refinement of the Stubbington Bypass Scheme	
Design speed	The initial assessments were carried out with an assumed 60mph (de-restricted) design speed for the bypass. This was found to induce too much traffic onto the bypass with volume/capacity (V/C) values in excess of 100% for a single carriageway route. Increasing capacity to dual 2-lane standard was not considered desirable or appropriate as this would be inconsistent with the road hierarchy on the Gosport Peninsula.
Titchfield Road Alternative Alignment	During the public consultation an alternative alignment for the Bypass between Bridge Street and Crofton ditch was proposed (routing via Ranvilles Lane). Following careful consideration and investigation this alternative was rejected based upon several design factors / constraints.
Stubbington village junctions	At the time of the public consultation a traffic signal based solution was identified for two existing roundabout junctions, as a means of controlling and managing traffic flows through the village, following the opening of the Bypass. Initial feedback suggested that alternative options which achieved the same objectives should be considered. As a result a number of options have been explored, with the preferred option involving reducing the capacity of the existing roundabout, in order to discourage through traffic from routing via Stubbington and to use the Bypass instead
Titchfield Cutting	The original alignment was designed to minimise the impact on residential property and retaining walls were incorporated on the east side to the north of Bridge Street and to the west on the south side of Bridge Street in order to miss

	<p>Hollam Cottage.</p> <p>Subsequent investigation by EC's Geotechnical Department showed that the cutting could be dealt with as a reinforced earth cutting, using ground anchors. This would reduce the cutting slope to 1:1. However a retaining wall would still be needed to avoid Hollam Cottage.</p> <p>The current owner of Hollam Cottage was consulted with regard to the proposals and their preference was for the cottage to be demolished and rebuilt further away from the road, subject to appropriate financial agreements and planning permission. The horse arena would also be affected and would need to be extended.</p> <p>At Hollam Nursery trial pits were dug beside the cold store and barn adjacent to Titchfield Road to check the foundations. They were found to be sufficient to allow the reinforced earth cutting to be extended and negate the need for any retaining wall to the east side of Titchfield Road. Also, with no need to avoid Hollam Cottage, value engineering resulted in the horizontal alignment being adjusted such that there would be no need for any retaining wall to the west of Titchfield Road.</p>
Gosport Road tie-in	<p>An alternative location was investigated for the location of the roundabout on Gosport Road, with the roundabout to the east of Rome Farm Cottages. Following investigation, it was decided that the location of the roundabout should not be amended.</p>

Consultation / Stakeholder Engagement

- 2.10.21 'Improving Access to Fareham and Gosport' public consultation events have been held in the summers of 2013 and 2014. The Stubbington Bypass proposals formed part of this material.
- 2.10.22 These events provided the opportunity to inform the public and wider stakeholders of the latest information on the improvement works and to seek feedback to inform the scheme development.

Summer 2013 public consultation

- 2.10.23 The full outcomes from the 2013 consultation event were detailed in **a report published in February 2014.**

Consultation Summer 2013 (Feedback)

From a total of 617 respondents:

- 87% supported the principle of a new bypass,
- 58% favoured a red route,
- 28% favoured a blue route,
- 6% favoured a green route,
- and the remainder had no preference.

Summer 2014 public consultation

2.10.24 The 2014 consultation event closed in August 2014. Details of the consultation and the key outcomes are summarised below.

Consultation Summer 2014

A substantial publicity campaign was organised in order to advertise the public consultation to ensure that local residents were made aware of the event and had the opportunity to come along to exhibitions, if they wished or to respond online to the proposals. The consultation included a series of nine manned exhibitions which were undertaken throughout June and unmanned exhibitions which were maintained throughout June and July. An 8 week window was provided for members of the public to respond. The public consultation sought views relating to:

- the overarching strategy for improving access to Fareham and Gosport and the preferred scheme options;
- the more detailed matters specific to the Peel Common Roundabout scheme, to assist the progression of design work moving forward; and
- outstanding concerns prior to the completion of scheme designs

490 residents completed a questionnaire answering the questions provided and this information was recorded as quantitative data. 321 out of the 490 returned questionnaires included either one or more comments, all of which were independently logged as part of a qualitative data record.

2.10.25 The quantitative data identifies that 75% of respondents supported the preferred route for the Stubbington Bypass. The support was distributed across the peninsula with the main clusters of support located in Stubbington Village and around the southern end of Newgate Lane and Peel Common areas. Objection to the scheme principally related to one cluster of objection in Ranvilles Lane.

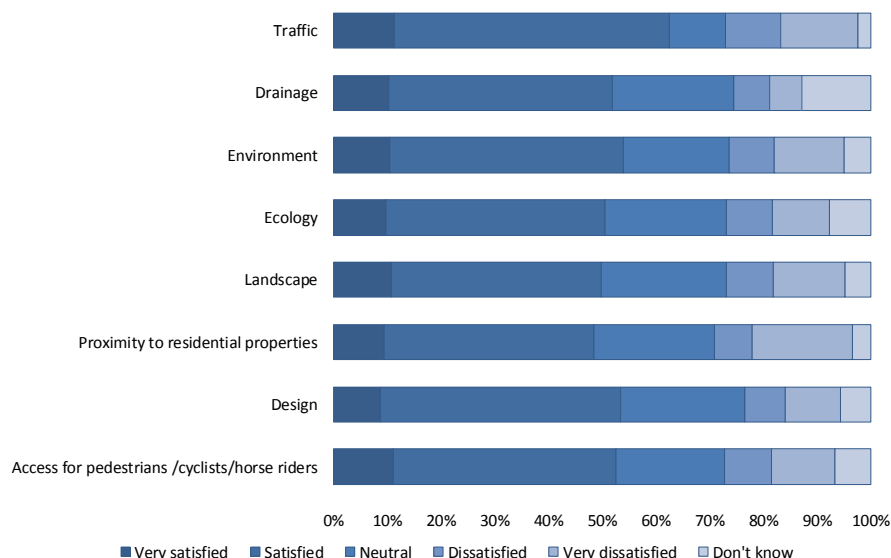
“Do you support the preferred route for Stubbington Bypass?”

	Total	Missing/No reply	Personal view as a member of the public	Representing the views of an organisation
Base	490	36	448	6
Missing/No reply	58 12%	6 17%	52 12%	- -
Yes	320 65%	20 56%	296 66%	4 67%
No	112 23%	10 28%	100 22%	2 33%

2.10.26 The largest number of open comments related to environmental matters, followed by those supporting the proposals followed by those concerned about increased development.

2.10.27 At least 70% of respondents were generally satisfied that the main issues of: traffic; drainage, environment, ecology, landscape, proximity to properties, design and accessibility identified in the questionnaire had been taken into account, notwithstanding additional comments which may have been made seeking clarification or identifying areas of concern. The biggest concern was the proximity of the route to properties.

“How satisfied are you that the issues below have been taken into account in the assessment work so far?”



- 2.10.28 Respondents were asked if they would support new and improved pedestrian and cycle routes and bridleway access. The majority of responses related to a wish for more cycle routes with the greatest demand totalling 218 responses seeking a route connecting Titchfield Road to Newgate Lane. New and improved walking routes were also very much supported with the highest demand for circular routes for dog walking totalling 203 responses. Fewer numbers responded in relation to bridleway provision, the greatest demand with 47 responses was for circular routes.
- 2.10.29 The consultation feedback informed the further development of the preferred scheme.
- 2.10.30 Written responses to the consultation were also received from both Fareham Borough Council and Gosport Borough Council expressing overall support for the proposals, notwithstanding some specific comments made.

Further Consultation / Engagement

- 2.10.31 Throughout the scheme design to date, landowners affected by the proposals have been consulted and their interests and concerns have been taken into account wherever feasible and practical.
- 2.10.32 A planning application in support of the scheme was submitted in July 2015 (with permission subsequently granted in October 2015). The statutory consultation period provided further opportunity for members of the public to comment upon the scheme prior to the application being determined.
- 2.10.33 Statutory environmental bodies have been consulted at various stages of scheme design and were consulted in relation to the scope of the Environmental Impact Assessment undertaken in support of the planning application.
- 2.10.34 Further details of stakeholder management are included in Section 6.5.

2.11 Stubbington Bypass - The Preferred Scheme

Overview

- 2.11.1 The overall scope of the scheme includes the following components, which are discussed in more detail in the following sections:
- A new off-line bypass road between B3334 Titchfield Road and B3334 Gosport Road, with associated tie-ins at each end, plus intermediate junction at Peak Lane;
 - Supporting highway improvement works on the existing network at either end of the bypass route (Titchfield Road and Gosport Road);
 - Supporting highway improvement works in Stubbington village; and

- New / enhanced facilities for non-motorised users.

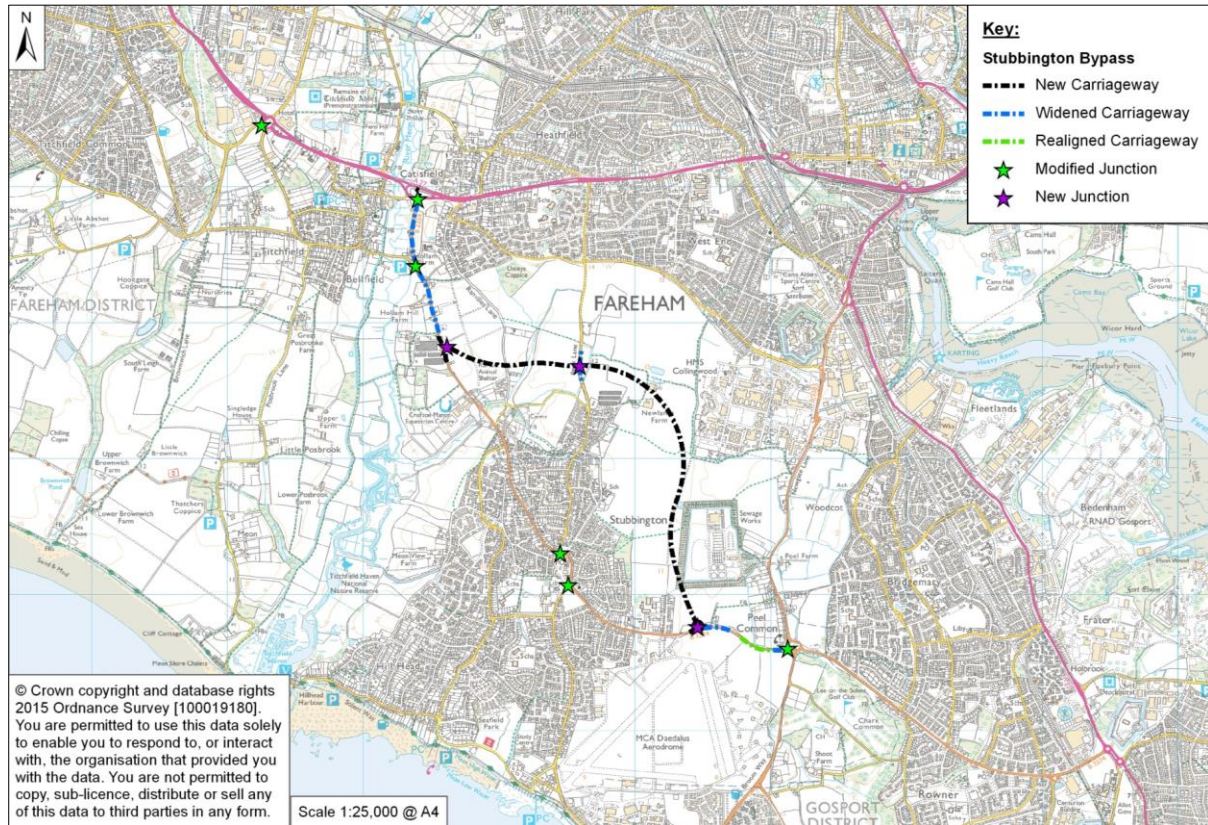


Figure 2-16: The Stubbington Bypass scheme

Bypass Route

- 2.11.2 The bypass will connect the B3334 Gosport Road and the B3334 Titchfield Road, avoiding the need to route through the centre of Stubbington Village. The route, as illustrated in Figure 2-17, is approximately 3.5km in length in total.

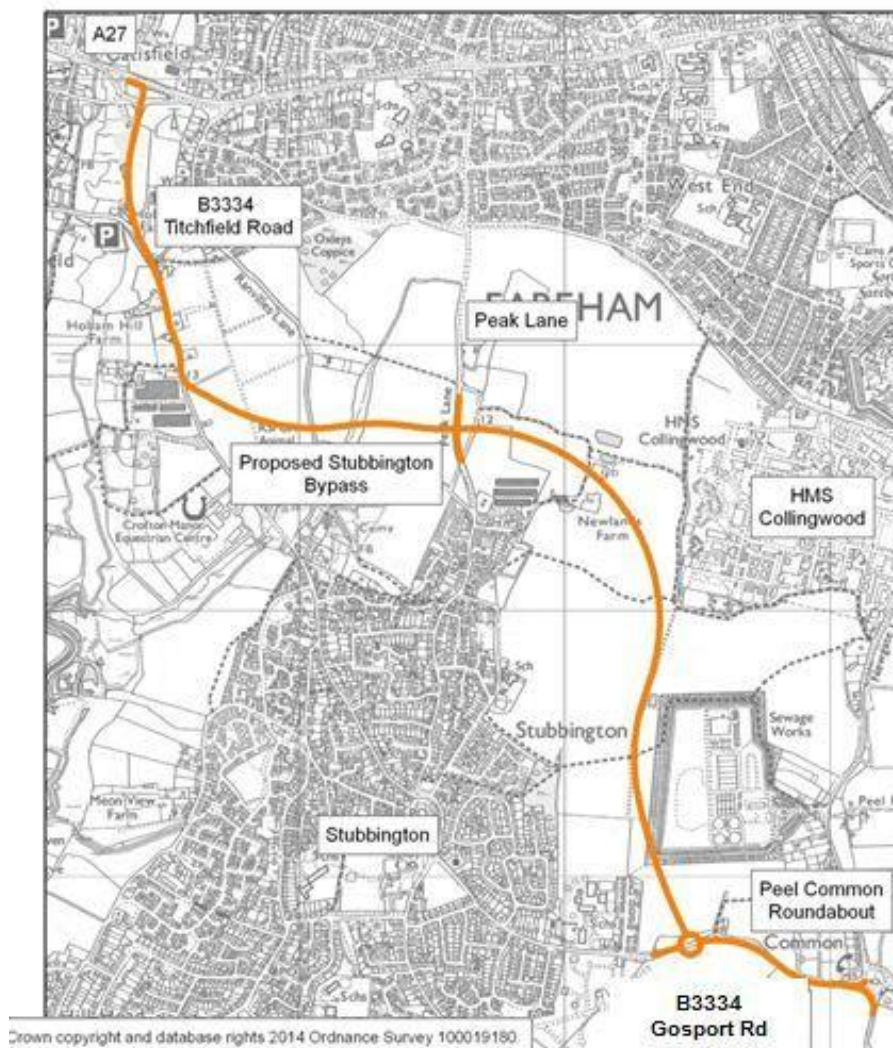


Figure 2-17: Alignment of the proposed Stubbington Bypass scheme

- 2.11.3 From the Titchfield Gyratory heading southwards to the Bypass the existing B3334 runs through an area that is semi-rural in nature, with the village of Titchfield to the west and Fareham to the east. The road then passes through a mixture of farmland and associated infrastructure with some residential properties until it reaches the bypass route at a point approximately 0.7km south of Titchfield Gyratory. This section of the B3334 is to be improved as part of the scheme (see below).
- 2.11.4 A new junction is to be provided where the bypass joins the B3334 Titchfield Road. Here, the new bypass heads east and crosses farmland and drainage ditches (in particular Crofton Stream Tributary - passing through a gap in a line of trees) and crosses Ranvilles Lane (currently closed to through vehicular traffic, with Stubbington Village to the south and the southern edge of Fareham to the north).

- 2.11.5 Continuing eastwards, the bypass then intersects Peak Lane before heading in a south-easterly direction as it threads between Newlands Farm House and the Newlands Fishery.
- 2.11.6 The route passes near the south west corner of the HMS Collingwood site as it heads in a more southerly direction through further farmland and passes closer to Stubbington village with Crofton Secondary School and residential properties along Marks Road to the west, and the Peel Common waste water treatment works to the east. It then re-joins the existing B3334 Gosport Road via a new junction at a point to the west of Rome Farm Cottages.
- 2.11.7 The B3334 Gosport Road continues east for approximately 0.5km, with the Solent Enterprise Zone at Daedalus located to the south, before joining the Peel Common Roundabout junction. This section of the B3334 is to be improved as part of the scheme (see below).

Bypass Design Features

- 2.11.8 The bypass has been designed in accordance with the DfT Design Manual for Roads and Bridges (DMRB) and has the following key design features:

Stubbington Bypass Key Design Features	
General	<ul style="list-style-type: none"> • A 7.3m wide single carriageway with a 2.5m wide segregated footway/cycleway alongside, separated from the road by a grass verge. • A design speed in accordance with a 50mph speed limit for the extent of the bypass. • The carriageway will be super-elevated along the majority of its length, with a drainage ditch provided along the high side of the road and a swale provided along the low side of the road. The carriageway will also be elevated above the existing ground level by approximately 0.5m for drainage and flood prevention purposes.
Junctions	<ul style="list-style-type: none"> • A new signalised junction at the intersection with the existing B3334 Titchfield Road at the western end of the bypass. • A new roundabout with a 40m ICD and left-turn 'fly-by' lane from the bypass at the intersection with the B3334 Gosport Road at the eastern end of the bypass. • A new signalised junction at the intersection of the bypass with Peak Lane, to the north of Stubbington. • New ghost island priority junctions at the intersections with Ranvilles Lane and the Newlands Farm access road, to provide local access for farm traffic only.
Structures	<ul style="list-style-type: none"> • A culvert to cross the Crofton Stream tributary.

Lighting	<ul style="list-style-type: none"> Street lighting will be provided on Titchfield Road from Titchfield gyratory to the Bypass junction. The Bypass itself will not be lit, including at the Peak Lane junction. Gosport Road will be lit from the Bypass junction to Peel Common roundabout.
Crossing facilities	<ul style="list-style-type: none"> Signalised crossing facilities for pedestrians and cyclists at the junctions with Peak Lane and Titchfield Road. Informal crossing facilities with central refuge islands, dropped kerbs and tactile paving at several locations along the route, including at the intersections with Ranvilles Lane and existing PRoWs.
Access	<ul style="list-style-type: none"> The provision of field access gates and associated waiting areas at several locations along the route, in order to provide local access to fields and areas of land adjacent to the route.

2.11.9 A typical cross-section for the bypass is shown in Figure 2-18 and this identifies several of the features referred to above, including the footway/cycleway, grass verge, swale, and drainage ditch.

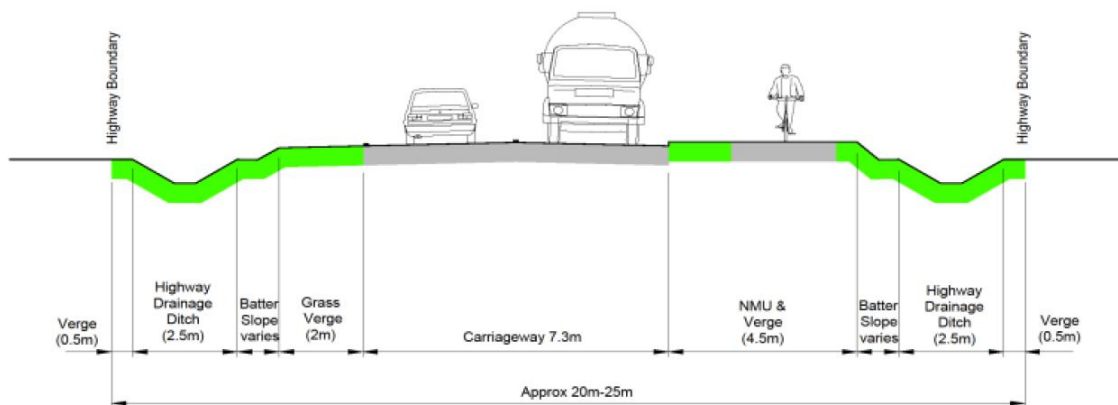


Figure 2-18: Typical cross-section of the bypass

2.11.10 A more detailed description of the design features of the bypass, with reference to the general arrangement drawings EC/RJ504603/02/022 to EC/RJ504603/02/024, is included at Appendix B.

Supporting Highway Works (in scope)

- 2.11.11 In order to accommodate the additional traffic that is likely to use the B3334 Titchfield Road and Gosport Road at either end of the new bypass, several improvement schemes are proposed as supporting infrastructure.
- 2.11.12 Furthermore, in order to reduce traffic volumes and speeds through Stubbington village, and to encourage the transfer of traffic onto the new Bypass, it is necessary that measures are put in place to ensure traffic speeds through the village are no quicker than at present, even though there will be much less traffic on the route.
- 2.11.13 These supporting improvement works are summarised in the table below.

Titchfield Road Improvements	
A27 / B3334 Titchfield Gyratory	<ul style="list-style-type: none"> Titchfield gyratory is to be improved with a new signal-controlled, right-turning facility provided off the A27, across the central island into Titchfield Road. The existing right-turning lane is to be removed and landscaped.
B3334 Titchfield Road (between the A27 Titchfield Gyratory and the junction with the Bypass)	<ul style="list-style-type: none"> Titchfield Road is to be widened by 7.3m on the east side to create a 14.6m wide four lane single carriageway north of Bridge Street. South of Bridge Street the carriageway is widened to generally create a 3.0m wide lane in each direction and a 2.5m centre hatch which will provide for right turning movements. The existing footway on the west side will remain, and a new 2.5m nominal width shared use foot/cycleway is to be provided on the east side of the road. The widening on the east side of the road will require a reinforced earth cutting slope. This will go as far as Hollam Nursery, and requires the demolition of Hollam Cottage and an extension to the horse arena.
B3334 Titchfield Road / Bridge Street junction	<ul style="list-style-type: none"> Provision of additional lanes on both the B3334 approaches and exits to increase capacity and pedestrian/cycle crossing facilities over the B3334 southern arm.
Gosport Road Improvements	
B334 Gosport Road	<ul style="list-style-type: none"> Gosport Road is to be improved to current alignment standards and generally widened to 7.3m. A shared use foot/cycleway is provided on the south side of the road. On the north side a gravel track is provided between the Bypass and the existing Rome Farm Cottages service road, and continuing beyond that service road to link with the new service road provided for the properties on the north side of Gosport Road, adjacent to Peel Common roundabout.

Peel Common Roundabout (Phase 3)	<ul style="list-style-type: none"> An improvement scheme that builds upon the already proposed signalisation of the existing junction, by signalising the Gosport Road approach and widening the carriageway to provide an additional traffic lane on the Gosport Road approach and exit, an additional lane on the circulatory carriageway at Newgate Lane, and creating a new two-lane slip road from Broom Way to Gosport Road.
Stubbington Village Improvements	
B3334 Titchfield Road / Mays Lane / B3334 Gosport Road junction	<ul style="list-style-type: none"> Provision of a new 'compact' roundabout layout, which would be achieved by narrowing the carriageway on all approaches to one lane and reducing the size of the circulatory carriageway. Un-controlled crossings with central refuge islands would be provided on all approaches and the aim is to slow traffic down and improve amenity for pedestrians and cyclists.
B3334 Gosport Road / Stubbington Lane / Stubbington Green junction	<ul style="list-style-type: none"> Provision of a new 'compact' roundabout layout by narrowing all approaches to one lane and reducing the size of the circulatory carriageway. Un-controlled pedestrian crossings with refuge islands would again be provided on all approaches.

Supporting Highway Works (not in scope)

- 2.11.14 In addition to the highway improvements listed above which fall within the scope of the package subject to this business case, there are other improvements being delivered, or planned to be delivered, which do not form part of this funding package but which complement the proposed scheme.

Stubbington Village Urban Realm Improvements

- 2.11.15 The two junction schemes in Stubbington Village that form part of the proposed scheme could be implemented as part of, or subsequently complemented by, wider urban realm improvements to Stubbington village centre. This could also involve the reconfiguration of traffic movements through the village centre, possibly looking at a new southern arm being added to the compact roundabout layout, with the eastern arm only linking to Burnt House Lane. These improvements would be subject to separate assessment and consultation and are independent to the Stubbington Bypass proposals; although they would only be appropriate in the context of the significantly reduced traffic flows through Stubbington village centre associated with providing the Bypass.

St Margaret's Roundabout and A27 Corridor Improvements

- 2.11.16 These improvements to the A27 corridor between Segensworth and Titchfield Gyratory, including improvements to St Margaret's roundabout (due to be completed Spring 2016), form another component of the overarching Solent LEP

transport package to improve access to Fareham and Gosport. In relation to the Stubbington Bypass, the additional capacity on the A27 corridor is necessary to realise the full benefits of improved access from the west.

Peel Common / Newgate Lane South

- 2.11.17 There are two initial phases to this scheme. The first phase will upgrade Peel Common roundabout to a signal-controlled roundabout, providing additional lane capacity to address existing congestion issues and to accommodate forecast increases in traffic demand. This is under construction (completion due Spring 2016). The second phase, planned for 2017/18, involves creating a new eastern alignment for the B3385 Newgate Lane southern section from Tanners Lane to Peel Common Roundabout. This will also require additional modifications to Peel Common Roundabout to accommodate the new route alignment. The Stubbington Bypass scheme would include a third phase, comprising of further improvements to the Gosport Road approach.

Provision for Non-Motorised Users

- 2.11.18 The scheme has been designed to consider the needs and desires of all user groups including pedestrians, cyclists, public transport users and disabled people. The following are some of the facilities proposed in order to cater for Non-Motorised Users (NMUs).
- A new 3m wide segregated shared-use path for pedestrians and cyclists that will route alongside the Bypass;
 - A series of uncontrolled and controlled pedestrian crossings to be provided at all locations where an existing public right of way or public highway crosses the route of the Bypass; and
 - New advisory on-road cycle routes will be provided along the B3334 Gosport Road / Titchfield Road through Stubbington, and along Ranvilles Lane.
- 2.11.19 Further details, including an illustrated plan are included within Appendix B(i).
- 2.11.20 All new crossing facilities to be provided as part of the scheme (as detailed above) will have dropped kerbs and tactile paving, to ensure safe access for disabled users. New sections of footway and path will have a minimum width of 2m and will be of predominantly level gradient; where short sections at gradient are required, these will be in accordance with recommended maximum standards.
- 2.11.21 In addition, a Non Motorised User Audit has been undertaken as part of the Road Safety Audit in order to ensure that the needs of disabled users are taken account of in all elements of the scheme design and that Disability Discrimination Act (DDA) compliance is achieved.

2.12 Partnership Bodies and Stakeholder Working

2.12.1 The scheme itself is planned to be delivered by HCC and there are no other formal delivery partners involved.

2.12.2 Key stakeholders (external) with a particular interest in the scheme are detailed in the table below. These include members of the public, existing business owners and potential new business, and land owners.

Table 2-6: Key stakeholders

Key Stakeholders	Involvement / interest
Solent LEP	Potential funding body Responsible for directing investment towards infrastructure projects to deliver housing and employment growth within the Solent LEP area. Successful implementation of its growth strategy for the Fareham and Gosport area is fundamental to achieving growth targets established with central government.
Gosport Borough Council	The scheme is critical to improving access to the Gosport Peninsula and supporting key development sites (including Solent Enterprise Zone) and the longer term regeneration of the area.
Fareham BC	Local Planning Authority (planning consent is required for the bypass).
Land owners	Various land parcels required for / impacted upon by the bypass route and supporting works. Land owner interests / concerns have been taken into account wherever feasible.
Utilities companies	Potential impact on utilities equipment sited within the area of proposed works
Local residents and local businesses	Potential impacts of the scheme (both positive and negative) on the lives of local residents and businesses
Local user groups e.g. cyclists, walking and disability groups	Particular interest in how the scheme may affect different user groups
Solent Enterprise Zone	The scheme will deliver improved western access to the SEZ, enhancing connectivity to the wider strategic highway network, e.g. via M27 Jctn 9.

2.12.3 Section 2.10 describes the stakeholder engagement and consultation activity that has been undertaken to date (and which has helped to shape the scheme development), and Section 6.5 of the Management Case considers the stakeholder management strategy.

2.13 Scheme Impacts/ Outcomes

2.13.1 The expected outcomes from the scheme were set out in Section 2.7, including enhancing the strategic connectivity of the Gosport peninsula to increase business confidence and support inward investment and employment growth. These outcomes will ultimately be delivered through enhanced transport infrastructure and network improvements in traffic conditions resulting from the new bypass. The proposed bypass is not only intended to relieve congestion in Stubbington, but form part of a wider package of measures to improve access to Gosport. The bypass route will provide a combination of new and improved existing routes to the M27 for longer distance traffic which will in turn help to open up the area for economic growth. Traffic relief will be provided to central Stubbington which can in turn deliver resultant health, environmental, economic and social benefits for this area. The scheme therefore delivers benefits to residents of the wider Gosport peninsula, but particularly to residents of Stubbington village and southern Fareham.

2.13.2 The key direct benefits that the scheme is expected to deliver include:

- Enhanced journey time reliability and reduction in congestion for traffic originating in Gosport and Lee-on-the-Solent that will help support regeneration and economic growth on the peninsula, including at the Solent Enterprise Zone;
- Improved resilience of the Peninsula's strategic road network, by providing a reliable alternative route to Newgate Lane;
- Reduced severance and a much more pleasant and safe environment in Stubbington Village, particularly in the community hub around the village centre. This will also create improved accessibility / amenity for pedestrians and cyclists and help to improve the local economy of the village; and
- Greater opportunities to encourage sustainable transport, including better facilities for pedestrians and cyclists and improvements to bus services, resulting from the removal of significant volumes of traffic from the centre of Stubbington.

2.13.3 The nature and scale of the traffic impacts of the scheme are set out in the following sections, in terms of traffic flows (all traffic / HGVs), vehicle delays and journey times. The impacts are based on forecast model outputs (forecast year 2036) with and without the bypass, using the Sub-Regional Transport Model

(SRTM)⁹. In all cases the model forecast data presented here is based upon a scenario which includes the Newgate Lane South scheme in the Do Minimum¹⁰.

- 2.13.4 The Economic Case (Chapter 3) demonstrates how these traffic impacts translate into economic benefits in relation to WebTAG guidance (e.g. user benefits). Wider (indirect) economic impacts are considered at the end of this section.

Traffic flows (all vehicles)

- 2.13.5 Table 2-7 shows vehicle flows (vehicle units) on selected roads (by direction) for the AM and PM peak hours, with and without the bypass.

Table 2-7: Forecast vehicle flows on selected roads - SRTM 2036

Road	Direction	2036 without bypass		2036 with bypass		Difference (With – without)	
		AM	PM	AM	PM	AM	PM
Stubbington Bypass – east of Peak Lane	WB	0	0	1426	1115	-	-
Stubbington Bypass – east of Peak Lane	EB	0	0	923	1119	-	-
Titchfield Rd – East of Mays Lane	NB	1840	1338	365	489	-1475	-849
Titchfield Rd – East of Mays Lane	SB	846	905	559	474	-287	-431
Newgate Lane – Sth of Tanners Lane	NB	968	853	994	843	26	-10
Newgate Lane – Sth of Tanners Lane	SB	1376	1571	944	1029	-433	-542
Peak Lane – Sth of Longfield Rd	NB	1448	677	516	380	-932	-297
Peak Lane – Sth of Longfield Rd	SB	266	403	161	274	-105	-130
Longfield Av – East of Peak Lane	WB	192	344	181	296	-11	-48
Longfield Av – East of Peak Lane	EB	1388	1013	696	411	-692	-601

- 2.13.6 Provision of the bypass is effective in removing traffic from Titchfield Road (Stubbington). Traffic volumes are forecast to reduce by 80% northbound and 34% southbound in the AM peak, and by 64% northbound and 48% southbound in the PM peak.

⁹ Stubbington Bypass SRTM Model Scenarios (Systra, May 2014)

¹⁰ An alternative scenario has also been considered without NGLS in the Do Minimum – see Economic Case (Chapter 3)

- 2.13.7 With the bypass, traffic through Stubbington village in the AM peak is approximately 1,840 vehicles northbound and 850 vehicles southbound.
- 2.13.8 Traffic flows on Peak Lane are forecast to reduce significantly with the bypass, by up to 64% in the AM peak northbound direction.
- 2.13.9 There is also a reduction in traffic on Longfield Avenue, with this traffic similarly being attracted to the new bypass route, particularly in the eastbound direction. The forecast reduction in traffic is 43% in the westbound direction and 55% in the eastbound direction for which the forecast reduction is 50% in the AM peak and 59% in the PM peak.
- 2.13.10 Figure 2-19 illustrates the change in traffic flows as a result of the bypass in the AM peak.

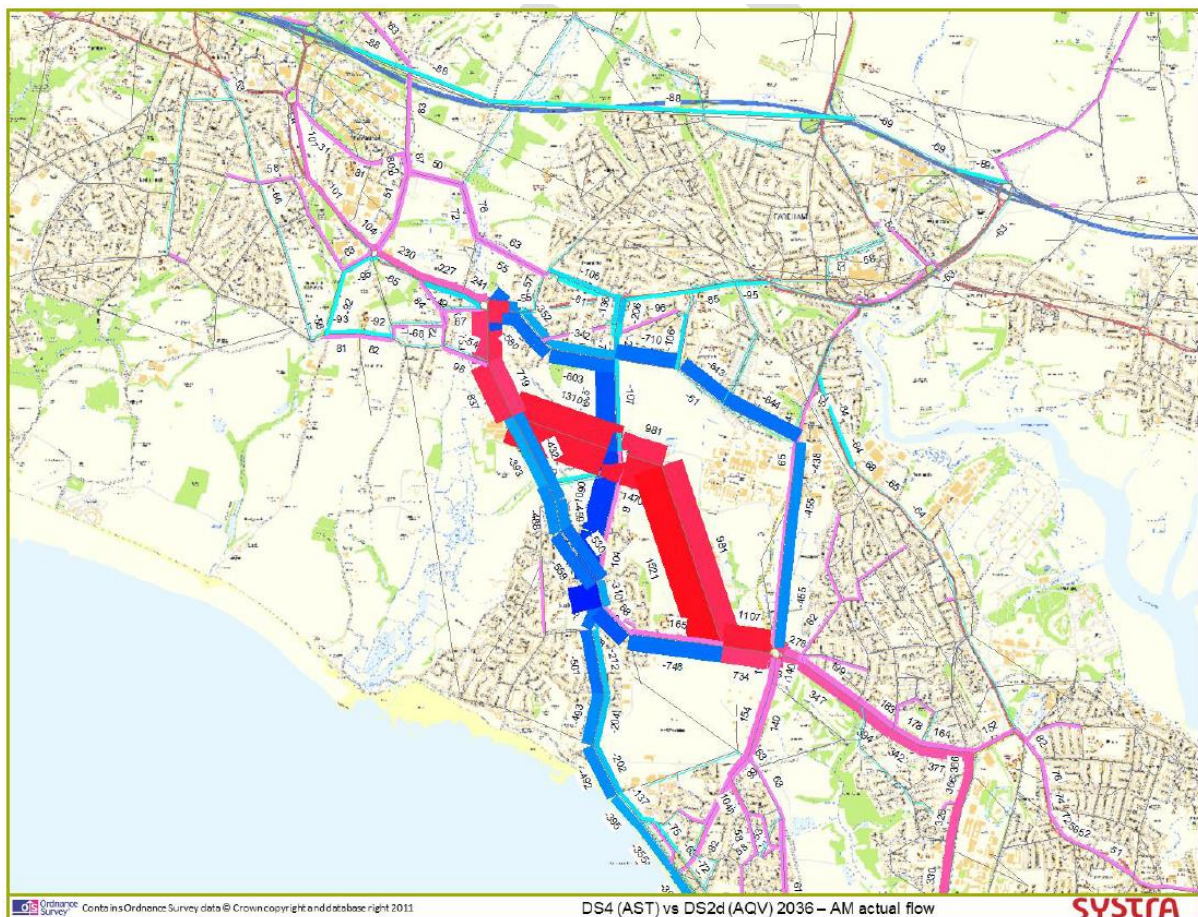


Figure 2-19: Forecast change in traffic flows – SRTM 2036 AM ‘with scheme’ compared to ‘without scheme’

HGV Flows

- 2.13.11 Table 2-8 shows HGV flows on selected roads (by direction) for the AM and PM peak hours, with and without the bypass.

2.13.12 The bypass is successful in significantly reducing the level of HGV traffic on Titchfield Road through Stubbington village, with forecast reductions of 89% and 94% in the AM and PM peak respectively for the northbound direction and forecast reductions of 52% and 97% in the AM and PM peak respectively for the southbound direction.

2.13.13 The changes in HGV flows are broadly consistent with the changes in overall traffic flows set out above. The forecast reduction in HGV traffic on Titchfield Road through Stubbington village in the AM peak equates to 84% northbound and 69% southbound. In the PM peak, the relative reduction in HGV traffic is greater, being 91% northbound and 96% southbound respectively.

Table 2-8: Forecast HGV flows on selected roads - SRTM 2036

Road	Direction	2036 without bypass		2036 with bypass		Difference (With – without)	
		AM	PM	AM	PM	AM	PM
Stubbington Bypass – east of Peak Lane	WB	0.00	0.00	43.93	20.81	-	-
Stubbington Bypass – east of Peak Lane	EB	0.00	0.00	57.33	13.94	-	-
Titchfield Rd – East of Mays Lane	NB	57.57	22.88	9.59	2.03	-47.99	-20.85
Titchfield Rd – East of Mays Lane	SB	32.14	11.79	9.76	0.51	-22.38	-11.28
Newgate Lane – Sth of Tanners Lane	NB	11.51	1.99	13.43	2.82	1.93	0.83
Newgate Lane – Sth of Tanners Lane	SB	33.94	7.12	11.66	3.84	-22.28	-3.28
Peak Lane – Sth of Longfield Rd	NB	17.16	1.39	10.61	0.11	-6.55	-1.28
Peak Lane – Sth of Longfield Rd	SB	3.81	0.30	1.48	0.09	-2.34	-0.21
Longfield Av – East of Peak Lane	WB	2.83	7.55	2.59	6.52	-0.24	-1.03
Longfield Av – East of Peak Lane	EB	49.17	6.18	31.37	2.17	-17.81	-4.01

Vehicle Delays

2.13.14 Figure 2-20 shows the change in forecast average delays (delay per vehicle, in seconds per vehicle) for the AM peak hour, with and without the bypass.

2.13.15 Both reductions and increases in vehicle delay are forecast on specific links as a result of the Stubbington Bypass scheme. There is a forecast increase in delays on Peak Lane where the new traffic signals deter rat-running to /from the bypass via Peak Lane. An increase in delay is also forecast on Bridge Street as a result of the modifications to the layout at the Bridge Street / B3334 Titchfield Road junction in

order to provide greater capacity on the B3334 route (this also reduces delay on the B3334 northbound).

- 2.13.16 Some additional delay is forecast at the new junctions where the bypass links back in to the B3334 with the increased delay experienced on the B3334 approaches (i.e. non-bypass traffic).



Figure 2-20: Forecast change in vehicle delay – SRTM 2036 AM ‘with scheme’ compared to ‘without scheme’

Journey times

- 2.13.17 Table 2-9 shows forecast journey times (minutes:seconds) on selected routes with and without the bypass. The bypass is effective in providing enhanced journey times between the Gosport peninsula and the wider strategic network, thus improving access.
- 2.13.18 This demonstrates that on the routes between the Rowner Road / Rowner Lane junction on the B3334 and M27 Junction 9 the construction of the Bypass is forecast to lead to a significant decrease in journey time when routing via the Bypass, than when routing via Titchfield Road in the DM scenario.

Table 2-9: Forecast journey times with and without bypass - SRTM 2036

Northbound

Route name	2036 without Bypass		2036 with Bypass	
	AM	PM	AM	PM
From Rowner Rd to M27 J9 (via Titchfield Road) From Rowner Rd/ Rowner Wy JCN	00:19:20	00:17:51	00:20:32	00:18:10
From Broom Way / Cherque Way to M27 J11 (via Newgate Lane) From Broom Way/ Cherque Way JCN	00:12:43	00:10:59	00:12:31	00:11:06
Newgate Ln only To Rowner Rd/ Rowner Wy JCN	00:12:00	00:10:13	00:12:03	00:10:09
To Broom Way/ Cherque Way JCN	00:10:47	00:09:01	00:10:35	00:09:11
Titchfield Rd only	00:06:44	00:06:06	00:06:59	00:05:57
From Rowner Rd to M27 J9 (via Bypass) To Rowner Rd/ Rowner Wy JCN			00:17:35	00:14:53

Southbound

Route name	2036 without Bypass		2036 with Bypass	
	AM	PM	AM	PM
From M27 J9 to Rowner Rd (via Titchfield Road) To Rowner Rd/ Rowner Wy JCN	00:17:43	00:18:24	00:17:45	00:17:51
From M27 J11 to Broom Way / Cherque Way (via Newgate Lane) To Broom Way/ Cherque Way JCN	00:16:05	00:16:07	00:15:53	00:16:03
Newgate Ln only To Rowner Rd/ Rowner Wy JCN	00:09:03	00:09:38	00:09:11	00:09:36
To Broom Way/ Cherque Way JCN	00:08:50	00:09:16	00:08:54	00:09:13
Titchfield Rd only	00:05:24	00:05:57	00:05:00	00:04:56
From M27 J9 to Rowner Rd (via Bypass) To Rowner Rd/ Rowner Wy JCN			00:14:42	00:15:03

2.13.19 In the AM peak, the forecast journey time savings (bypass route compared to Titchfield Road route without bypass) are approximately 2 minutes in the northbound direction and approximately 3 minutes in the southbound direction. In the PM peak, the forecast journey time savings (bypass route compared to Titchfield Road route without bypass) are approximately 3 minutes in the northbound direction and approximately 3 and a half minutes in the southbound direction.

- 2.13.20 With the exception of the Southbound PM peak journey time, the journey times through Stubbington village are forecast to increase (up to a maximum of 50 seconds in the AM peak northbound direction) despite the reduction in traffic. This is likely to be due to additional delay for vehicles at the Bypass / Titchfield Road junction, which gives priority to traffic routing on the Bypass, and also the amendments to the two roundabouts within Stubbington village.
- 2.13.21 With the bypass in place, journey times through Stubbington village remain approximately 3 minutes longer than the bypass journey times.
- 2.13.22 On the route between Broom Way and M27 Junction 11 via Newgate Lane there are generally forecast to be slight decreases in journey time.
- 2.13.23 On the route along Newgate Lane only there are generally forecast to be only minor changes in journey time in both directions, while on the route along Titchfield Road only there are forecast to be journey time savings of up to one minute in the southbound direction, but a slight increase in journey time in the northbound direction (AM peak).

Bus journey times

- 2.13.24 There are currently only two services operating within the area – the X5 (Fareham – Gosport) and the 21 / 21A (Stubbington – Fareham). Both of these services route through Stubbington village. Table 2-10 demonstrates the forecast impact of the Stubbington Bypass scheme on journey times for these bus services. It is assumed that the services will continue to route through the village on the existing B3334.
- 2.13.25 Although the introduction of the Bypass will significantly reduce the volume of traffic routing through Stubbington village (which would therefore be expected to reduce delay to buses in central Stubbington), the reality is that the supporting village traffic measures will restrict vehicular traffic from travelling through the village significantly faster than it does at present in order to maximise the effectiveness of the bypass - see the previous section on general journey time impacts.
- 2.13.26 Bus service X5 is forecast to experience an increase in journey time between Gosport and Fareham, in the region of up to 6 minutes in the AM peak and up to 2 minutes in the PM peak. This service currently uses Peak Lane / Mays Lane to route between Fareham and Stubbington, so the provision of a new junction where the Bypass crosses Peak Lane will introduce additional delay to this route.
- 2.13.27 Service 21/21A between Stubbington and Fareham is forecast to experience a reduction in journey times as a result of the Bypass scheme in the region of up to one minute, with the decrease being more pronounced in the AM peak period. In the reverse direction, between Fareham and Stubbington, the journey time saving is in the region of up to 70 seconds, with the reduction in journey time being more pronounced in the PM peak period.

2.13.28 The different impacts experienced by the two bus services is likely to be partly attributable to the delay incurred by Service X5 at the Bypass / Peak Lane junction, which is not experienced by Service 21/21A as it does not travel through this junction. Service 21/21A will also benefit more from the reduced volume of through traffic in the wider Stubbington village area, as this service routes through more residential roads in Stubbington than service X5.

Table 2-10: Forecast bus journey times with and without bypass - SRTM 2036

Route	Peak Period	2036 Without Bypass	2036 With Bypass	Change
		Time	Time	Time
X5: Gosport – F’ham	AM	00:47:32	00:53:57	00:06:25
	IP	00:45:23	00:48:00	00:02:37
	PM	00:46:19	00:48:37	00:02:18
X5: F’ham – Gosport	AM	00:46:24	00:47:21	00:00:57
	IP	00:45:18	00:46:31	00:01:13
	PM	00:45:49	00:46:59	00:01:10
21: Stub’tn – F’ham	AM	00:20:23	00:19:28	-00:00:55
	IP	00:17:58	00:17:12	-00:00:46
	PM	00:18:09	00:17:38	-00:00:31
21: F’ham – Stub’tn	AM	00:30:26	00:29:40	-00:00:46
	IP	00:28:28	00:27:41	-00:00:47
	PM	00:29:42	00:28:30	-00:01:12
21A: Stub’tn – F’ham	AM	00:24:40	00:23:29	-00:01:11
	IP	00:22:42	00:21:58	-00:00:44
	PM	00:21:49	00:21:07	-00:00:42
21A: F’ham – Stub’tn	AM	00:30:40	00:29:58	-00:00:42
	IP	00:30:09	00:29:21	-00:00:48
	PM	00:30:35	00:29:25	-00:01:10

Wider Impacts

2.13.29 By helping to remove the transport barriers caused by congestion, delay and unreliable journey times, which are symptomatic of western access to the peninsula, the Stubbington Bypass scheme will deliver benefits above and beyond standard transport user benefits. This includes contributing to unlocking new homes, employment floorspace, additional GVA growth, new jobs and local investment as well as supporting the re-positioning of the defence sector in the area.

2.13.30 The contribution of the scheme within this context is considered in detail in the wider business case which has been prepared for the Solent LEP Fareham and

Gosport Infrastructure Programme¹¹. This has been prepared in accordance with HMT Green Book appraisal guidance and focuses on the economic impacts of the Solent LEP infrastructure programme for the Fareham and Gosport area (including transport and non-transport measures).

2.13.31 The wider business case demonstrates that a full infrastructure package for Fareham and Gosport, including the Stubbington Bypass scheme, would be pivotal in supporting delivery of:

- C. 5,500 additional new homes, with approximately 1,500 in the period to 2021;
- C. 2,900 additional jobs;
- C. 83,200 sq metres of new employment (B-class) floor space;
- Additional £180 million private sector investment;
- Additional GVA of £660 million.

2.13.32 Within the wider business case the core assessment of benefits is based upon an intermediate infrastructure package, excluding the Stubbington Bypass scheme. However, additional analysis was also undertaken for a full infrastructure package, inclusive of the Stubbington Bypass scheme. From this, the incremental impact of the scheme can be determined, as demonstrated through the Benefit Cost Ratios.

	BCR
Intermediate Programme (no Stubbington Bypass)	3.6
Full Programme (with Stubbington Bypass)	3.8

2.13.33 Whilst the focus of the wider business case is on the intermediate programme it concludes that *“The Full Programme provides a ‘High’ BCR of 3.8, indicating that there is a positive investment case to be made for Stubbington Bypass when funding is available.”*

2.13.34 The incremental benefit of the Stubbington Bypass scheme is predominantly due to two main factors:

- **Acceleration effects on major development projects** (principally Solent Enterprise Zone, but also Gosport Town Centre, Gosport Waterfront – this is a result of the improved infrastructure and connectivity provided by the Stubbington Bypass (over and above the Intermediate Programme); and
- **Enhanced agglomeration benefits**, principally arising from the role of the Stubbington Bypass in strengthening connectivity of the peninsula to the surrounding area and supporting the intensification of the existing sectoral specialisms and clustering, focusing on Advanced Manufacturing

¹¹ Fareham and Gosport Intermediate Infrastructure Programme (BBP Regeneration, March 2015)

specialising in the marine, aerospace and aviation sectors¹². The wider business case estimates the effect of the Stubbington Bypass scheme in this regard to be an increase in GVA per job of approximately £4,600 (compared to the Intermediate Programme).

Access to new Interconnector facility

- 2.13.35 National Grid has identified the Daedalus Enterprise Zone, Lee-on-the-Solent, as the location for a new Interconnector facility. Interconnectors provide for the transfer of electricity generation capacity between European countries, improving the security of the UK's energy needs. The Daedalus site enables energy exchange between France and the south coast of England.
- 2.13.36 Implementation of this facility requires the delivery of four 320 tonne transformers to the northern area of the former Daedalus airfield. Overland transport on special vehicles brings the total load of each vehicle to approximately 500 tonne, which presents substantial logistical problems including the construction of temporary roads and significant temporary alterations to existing local roads through Stubbington.
- 2.13.37 Although the transformers have a life expectancy of 25 years they will require replacement in time and maintenance of the site requires large plant movements on an occasional but essential basis. To provide assured strategic road access to this interconnector site whilst minimising disruption to local communities and local transport networks the Stubbington bypass will offer a direct road corridor between the site and the UK motorway network.

¹² The UK is a world leader in the marine and maritime sector and the Solent's coastal location means that it is at the heart of the sector, accounting for 20.5% of Solent's GVA, provides 40,000 jobs, supports more than 3,000 businesses and is growing by five per cent per annum. Seven of the top 10 global aerospace companies have a presence in the Solent region in south Hampshire including EADS, Boeing, Lockheed Martin, Airbus Industries, and Finmeccanica. Defence features strongly in the south of Hampshire where Portsmouth Naval Base is home to almost two thirds of the Royal Navy's surface ships accounting for 17,200 jobs at peak times

3 Economic Case

3.1 Introduction

3.1.1 This Chapter presents the Economic Case for the Stubbington Bypass scheme. This provides an assessment of the various impacts (economic, environmental and social) of the scheme and demonstrates that it offers good value for money. The analysis has been undertaken in accordance with the methodology, techniques and underlying principles of the DfT Transport Appraisal Guidance (WebTAG), adopting a proportionate approach in line with the current stage of business case development and SLEP funding processes, and the scale and value of the scheme.

3.1.2 The analysis is not limited to monetised impacts, but also includes those that are assessed qualitatively and quantitatively.

3.2 Summary / Value for Money Statement

3.2.1 The Appraisal Summary Table (AST) in Appendix E provides an overview of the appraisal of the scheme against economic, environmental and social sub-impacts.

3.2.2 The analysis contained within this chapter shows that **the scheme will generate a Present Value of Benefits (PVB) of £54.2m** without the Newgate Lane South scheme assumed to be in place, **or PVB of £60.8m** if NGLS is assumed to be in place. The breakdown of the PVB is set out in Table 3-3.

Table 3-1: Breakdown of the Present Value of Benefits (PVB)

PV (£m)	Stubbington Bypass, with NGLS in Do Min (DS4d)	Stubbington Bypass, without NGLS in Do Min (DS3d)
Travel Time	58.9	52.7
Vehicle Operating Costs	0.3	-0.5
User Charges	-0.3	-0.5
Private Sector provider – revenue	-0.8	-0.8
Wider public finances (Indirect Taxation Revenues)	4.0	4.4
Greenhouse Gases	-1.3	-1.2
Total	60.8	54.1

3.2.3 The PVB compares against a **Present Value of Costs (PVC) of £29.3m** (which is the same for both scenarios).

3.2.4 This results in a **Benefit Cost Ratio (BCR) of 2.07** (with NGLS), which represents **high value for money**, or a **BCR of 1.85** (without NGLS), which represents **medium value for money**.

- 3.2.5 Additional monetised impacts have been calculated for noise (NPV -£1,082,946) and air quality (NPV £4,389,567).
- 3.2.6 Further economic, social and environmental impacts have been derived which, whilst not providing a monetised benefit for use in this appraisal, should be taken into consideration when deriving the overall Value for Money presented by the scheme:

Table 3-2: Non-monetised impacts

Non-monetised impact	Stubbington Bypass, with NGLS in Do Min (DS4d)	Stubbington Bypass, without NGLS in Do Min (DS3d)
Reliability	Moderate Beneficial	Moderate Beneficial
Regeneration	Moderate Beneficial	Moderate Beneficial
Wider Impacts	Moderate Beneficial	Moderate Beneficial
Landscape	Slight Adverse	Slight Adverse
Townscape	Neutral	Neutral
Historic Environment	Slight Adverse	Slight Adverse
Biodiversity	Neutral	Neutral
Water Environment	Neutral	Neutral
Severance	Slight Beneficial	Slight Beneficial
Personal Security	Slight Adverse	Slight Adverse
Physical Activity	Neutral	Neutral
Accessibility	Neutral	Neutral
Journey Quality	Slight Beneficial	Slight Beneficial
Affordability	Neutral	Neutral
Option Values	Neutral	Neutral

- 3.2.7 Whilst not being appraised benefits as defined by WebTAG, as they are not direct impacts on public accounts, the impact of the scheme on the local economy will also be substantial:
- The scheme will support housing and jobs growth at key development sites within the Fareham and Gosport area and, in particular, will help to accelerate development at the Solent Enterprise Zone where approximately 2,500 jobs are planned;
 - Construction activity associated with the scheme is estimated to generate in the region of 80 temporary construction jobs, equating to additional GVA of approximately £12m; and
 - The scheme is estimated to generate additional GVA of approximately £173m per annum, associated with a 12% uplift in GVA per job.

3.3 Overview of Appraisal Scope /Approach

- 3.3.1 The appraisal of the Stubbington Bypass scheme focuses on those areas / topics where there is expected to be the greatest impact, and hence a proportionate

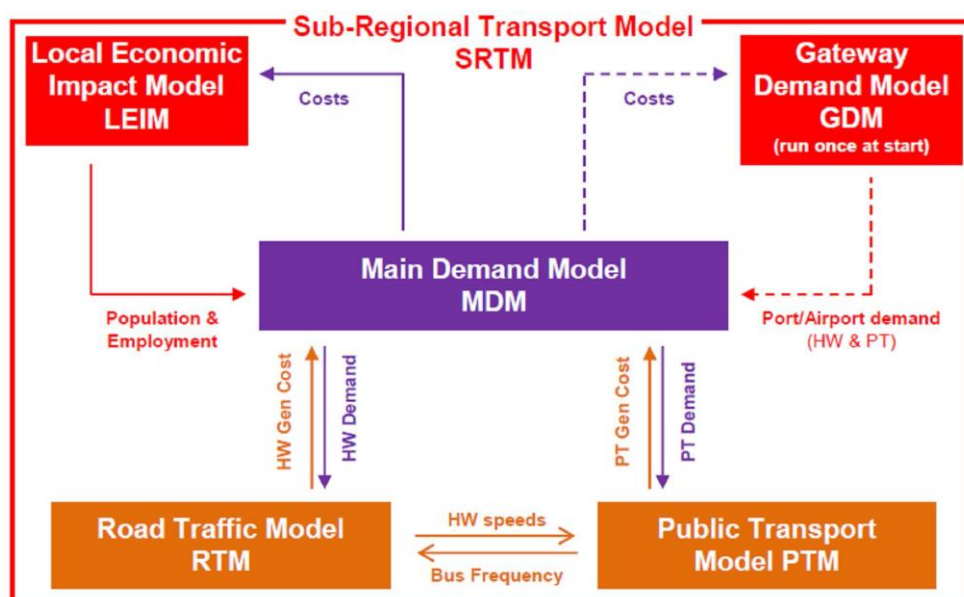
approach has been adopted in line with the current stage of business case development and SLEP funding processes. This has included undertaking a full monetised assessment of noise and air quality impacts, in addition to those impacts more typically presented in monetised form, such as transport user benefits. Other impacts have been appraised in a quantitative / qualitative manner. The appraisal is underpinned by evidence from a WebTAG compliant transport model (see Section 3.4 below), in addition to the EIA undertaken in support of the planning application. An overview of the appraisal is provided in the Appraisal Summary Table included in Appendix E.

3.4 Modelling Approach and Assumptions

3.4.1 A supporting modelling note is included in Appendix D.

3.4.2 Modelling for the scheme has made use of the Sub Regional Transport Model (SRTM) developed for Solent Transport in 2010. SRTM is an evidence-based, WebTAG compliant land-use and transport interaction model developed by Systra (formerly MVA) Consultancy to provide a strong analytical basis for the development of coherent, objective-led implementation plans to enable the changes in transport provision required to deliver prosperity to the area.

3.4.3 The forecasting approach contains a suite of transport models, comprising the main demand model, the port and airport gateway demand model, the road traffic model and public transport model, as illustrated in the diagram below. In addition, an associated Local Economic Impact Model (LEIM) provides the capability to forecast changes in jobs, housing and GVA as a result of implementing a transport intervention. The SRTM forecasts weekday transport movements, assessing morning, interpeak and evening peak conditions and applying changes to journey mode choice and trip distribution based on changes in relative travel costs.



3.4.4 Further details of the SRTM are included in Appendix C.

Scenarios Tested

3.4.5 Two main scenarios have been tested, based on a variation of the 'Do-Minimum' (SRTM Reference case plus committed schemes) with and without the Newgate Lane South (NGLS) scheme included, which is subject to full funding. The 'Do-Something' scenarios are based on the respective 'Do-Minimum' scenarios plus the Stubbington Bypass scheme. The schemes included in each of the scenarios are set out in the table below.

Scheme	Do Min 1 (without NGLS)	Do Min 2 (With NGLS)	Do Something 1 (Do Min 1 plus SB)	Do Something 2 (Do Min 2 plus SB)
SRTM Reference Case	X	X	X	X
Newgate Lane (North) 2014/15	X	X	X	X
Peel Common (Interim Scheme) 2015/16	X	X	X	X
St Margarets Rndbt 2015/16	X	X	X	X
Station Rndbt 2016/17	X	X	X	X
Gudge Heath Lane 2016/17	X	X	X	X
A27 Dualling (TF Gyratory to St Margarets) 2016/17	X	X	X	X
A27 Dualling (Segensworth to St Margaret's) 2016/17	X	X	X	X
Newgate Lane (South) + Peel Common bolt on 2017/18		X		X
Stubbington Bypass Scheme			X	X

3.4.6 The model is based in 2010. Forecast years were developed for 2019 and 2036 in order to provide benefit profile results required for cost benefit appraisal.

3.4.7 For the SRTM model runs utilised for the TUBA economic assessment, the Do Minimum assumes the land use quantum at the Daedalus Employment Zone (which lies just south of Peel Common) to be complete and fully occupied by 2026. The DM land use has also been used in the Do Something scenarios to ensure valid comparative TUBAs could be run (i.e. no changes in population and jobs between scenarios).

Appraisal assumptions

3.4.8 Standard input (scheme file) assumptions were used for the application of TUBA to assess the impact of demand and cost changes in matrices produced by SRTM. TUBA version 1.9.5 was used with a standard (TAG recommended) set of discount rates, value of time inflators etc. TUBA utilises cost and demand inputs from the highway and public transport assignment models. These were provided for the SRTM Do-minimum and Do-something scenarios for 2019 and 2036. Benefits

beyond 2036 (the final SRTM forecast year) to the end of the 60 year appraisal period are considered to be level in magnitude, although are influenced by changing value of time assumptions and the increasing impact of discounting, reducing their value as would be perceived in 2010. All costs and benefits are reported in 2010 prices and values with scheme opening assumed to be in 2020 and evaluation period running for 60 years.

- 3.4.9 TUBA's sector system functionality was utilised to firstly understand, but also to then remove, benefits (considered to be SRTM model "noise") in areas where the scheme is not expected to have an impact. Using the sector system only benefits for movements to or from the Gosport or Fareham sectors were considered, for all of the model runs.

3.5 Benefit Cost Ratio – Monetised Costs and Benefits

- 3.5.1 A cost benefit analysis of the scheme has been undertaken in accordance with TAG guidance using the SRTM / TUBA. The analysis was based on the scheme design (see Chapter 2) and scheme costs as presented in the Financial Case (see Chapter 4).
- 3.5.2 An overview of the cost benefits analysis is provided in Appendix D. The outputs from this appraisal are summarised in the Transport Economic Efficiency (TEE), Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) Tables provided in Appendix F.
- 3.5.3 Table 3-3 provides a summary of the (monetised) economic appraisal outputs.

Table 3-3: Summary of economic appraisal outputs

Scenario	BCR	NPV (£m)	PVC (£m)	PVB (£m)
Stubbington Bypass, with NGLS in Do Min (DS4d)	2.07	31.4	29.4	60.8
Stubbington Bypass, without NGLS in Do Min (DS3d)	1.85	24.9	29.3	54.2

- 3.5.4 The scheme results in a **Benefit Cost Ratio (BCR) of 2.07** (with NGLS), which represents **high value for money**, or a **BCR of 1.85** (without NGLS), which represents **medium value for money**.
- 3.5.5 The appraisal of Economic, Environmental and Social impacts follows in Sections 3.6 to 3.8. Monetised impacts included in the BCR calculation above are quoted, where relevant, together with other monetised and non-monetised impacts which should also be considered in determining the overall value for money of a scheme.

- 3.5.6 Where relevant, the appraisal is discussed separately for each of the two modelled scenarios, although for a number of the appraisal impacts the difference is considered to be insignificant or not relevant.

3.6 Economic impacts

- 3.6.1 The economic impacts of the scheme which have been considered include Transport Economic Efficiency (considering highway, bus and rail transport users and bus operators), indirect taxation, reliability, regeneration and wider economic impacts.

Scheme Costs

- 3.6.2 The total capital cost used in the economic appraisal amounts to £34 million. This value has been input to TUBA. The total costs, once converted to 2010 prices and values and discounted to 2010 using the default rates included in TUBA, produce a **PVC of investment of £29.3 million**. The Public Accounts Table is shown in Appendix F.

Transport Economic Efficiency

- 3.6.3 Transport Economic Efficiency comprises journey time and vehicle operating costs. The impacts of the scheme on journey times for highway, bus and rail passengers, as well as vehicle operating cost impacts for car users have been assessed using TUBA, based on outputs from the highway and public transport models (based on scenario DS4d).
- 3.6.4 Section 2.13 in the Strategic Case provides an overview of traffic flow / journey time / delay impacts as a result of the scheme based on the SRTM outputs.
- 3.6.5 Benefits accrue separately to transport users (business and non-business) and private sector operators. Business user benefits total £32.9m, whilst non-business user benefits amount to £26m, of which commuters contribute £8.6m and remaining non-business users £17.4m.
- 3.6.6 The vast majority of benefits from the scheme accrue from journey time savings, which are felt by both private road users and public transport passengers.
- 3.6.7 Improvements in travel time for non-business users account for £30.1m of the total benefits, comprised of £30.6m benefits to private road users and -£0.5m benefits to public transport users. Business users accumulate a £28.8m benefit from travel time reductions. The greatest part of this benefit is to goods vehicles, worth £17.5m, with business cars and LGVs gaining £11.4m in benefits from journey time savings.

Reliability

- 3.6.8 A qualitative assessment of reliability impacts has been undertaken. Reliability impacts refer to variation in journey times that individuals are unable to predict (journey time variability). In the context of the proposed scheme, such variation could come from recurring congestion on the B3334 Titchfield Road at the same period each day (day-to-day variability) or from non-recurring events, such as incidents. It excludes predictable variation relating to varying levels of demand by time of day, day of week, and seasonal effects which travellers are assumed to be aware of.
- 3.6.9 The bypass will attract a significant volume of traffic from the existing B3334 route, which suffers from congestion, particularly during peak periods. Furthermore, the nature of the existing route means that it is more susceptible to unpredictable and / or intermittent delays. The bypass will provide a free-flowing alternative to the existing route, providing improved journey time reliability, particularly benefiting through traffic, which will include HGVs / LGVs and those travelling for business related purposes. This is in line with the calculated travel time benefits of £28.8m which accrue to business users.
- 3.6.10 Whilst journey times via the existing B3334 through Stubbington may actually be increased with the bypass in place, some reliability benefits may also be expected on the existing route due to reduced congestion, with associated benefits to business users and, for instance, to delivery vehicles.
- 3.6.11 The overall impact on reliability has therefore been assessed as **moderate beneficial**.

Qualitative Assessment (seven point scale) - Reliability
Moderate Beneficial

Regeneration

- 3.6.12 Changes to transport networks can be expected to influence where businesses and workers choose to locate and where to make trips to and from. These impacts could occur by changing the travel costs for businesses of operating from, or supplying to, specific locations, and by changing the access of workers to jobs. The purpose of the assessment of regeneration impacts is to demonstrate how a proposed transport scheme will impact on the economy in regeneration areas.
- 3.6.13 WebTAG does not specifically define a regeneration area but it is considered that the economic challenges and opportunities of the Gosport peninsula are such that it is representative of a 'regeneration area', and that the Stubbington Bypass scheme will materially affect access to/ from that area.
- 3.6.14 As a key phase of the wider overarching package of improvements for Fareham and Gosport, the scheme will trigger significant wider economic benefits for the

surrounding area. The economic benefits will be widespread, helping to accommodate transport movements from key strategic sites at the Solent Enterprise Zone and Welborne as well as the benefits for Gosport peninsula and centres of employment at key business parks. The improvement of a key route between the SEZ / Gosport peninsula and the strategic network will ensure this area remains an attractive proposition for businesses and will help to safeguard jobs. Without this investment, the current employment in the immediate area is more vulnerable as infrastructure is not improved and businesses may seek to site their offices elsewhere.

3.6.15 A full assessment of regeneration impacts in line with TAG Unit A2.2 has not been undertaken. However, a broad qualitative assessment of the expected regeneration impacts for this scheme is provided below:

- Increased capacity and improved journey time reliability on a key route to /from the Gosport peninsula and the wider strategic network will improve access to those growth sites identified in Table 2-1. Forecast reliability and journey time savings for western access to the Gosport peninsula have been demonstrated to be significant. There are also beneficial impacts on other parts of the network due to the re-assignment of traffic to the bypass. Overall, this is expected to have a positive impact on the network and increase its ability accommodate growth and attract inward investment.
- Businesses (existing / prospective) on the peninsula will benefit from changes in travel conditions on the primary western access route, such as costs of access to customers and costs of access to supplies. This is particularly the case due to improved access to the wider strategic network, including the M27 (Junction 9).
- Businesses will also have access to a larger pool of labour.
- Workers will have access to a wider range of jobs - Improved access provided by the scheme will increase the ability of people living outside the regeneration areas to access jobs within the regeneration areas. Although there is a focus on attracting inward investment that creates jobs which are filled by local people (and hence contributes to reducing out-commuting), there is still likely to be a need for some specialist roles to be filled from further afield and the ability of the area to have access to a larger labour pool will be a more attractive proposition for businesses considering whether to invest in the area
- Overall, the improved capacity and performance of the highway network will help to make the Gosport / Fareham area more attractive as a business location, thereby encouraging new businesses to locate there or existing businesses to expand.

3.6.16 The scheme aims to unlock the potential for regeneration on the Gosport Peninsula, including the Solent Enterprise Zone. The improvements delivered will provide enhanced accessibility for residents of the Gosport Peninsula and, through the provision of the bypass, will improve journey time and reliability as a fundamental component within the overarching package. Given the key function of the scheme to complement the wider access improvements and act as a gateway to Fareham and the Enterprise Zone, the assessment shows that the impact on overall area wide regeneration will be beneficial with the more substantial benefits being accrued by the later stages of the overarching package.

3.6.17 Overall, the impact on regeneration has been assessed as **moderate beneficial**.

Qualitative Assessment (seven point scale) - Regeneration
Moderate Beneficial

Employment, Housing and GVA impacts

3.6.18 As previously identified in relation to the regeneration impacts of the scheme, the scheme has a crucial role in facilitating the delivery of jobs and housing within the Fareham and Gosport area, particularly as part of the wider 'overarching package'. The impacts of the scheme on unlocking jobs and housing growth and generating GVA are best considered at this level and are therefore assessed more comprehensively within the Fareham / Gosport 'over-arching' business case.

3.6.19 The scheme will indirectly facilitate job creation and delivery of housing at a number of sites. Key sites are shown in Table 3-4, together with the potential jobs / housing expected and also the relative degree of influence that the scheme will have in terms of facilitating their delivery.

Table 3-4: Potential jobs and housing facilitated by the scheme

Growth Site	Details	Level of influence
Solent Enterprise Zone	Total: c.140,000 sq. m employment floorspace; 200 homes	Higher
Daedalus East	c. 35,000 sq. m employment floorspace; 1,000 jobs	
Daedalus West	c. 35,000 sq. m employment floorspace; 1,050 jobs	
Waterfront / Daedalus Park	c. 72,500 sq. m employment floorspace; 1,600 jobs 200 homes	
Gosport Waterfront	700 homes c.40,000 sq. m employment floorspace	Higher
Gosport Town Centre	c.200 homes	Higher
Fareham Town Centre	240 homes	Moderate
Solent 2 / Little Park	c.35,000 sq. m employment floorspace	Moderate
Welborne	6,000 homes 105,000 sq. m employment floorspace (5,735 jobs) 7,000 sq. m retail floorspace	Lower
Haslar	c.300 homes	Lower

	c.4,000 sq. m employment floorspace; 500 jobs	
Rowner	c.700 homes + 200 homes redeveloped : 2,250 sq m retail floorspace	Lower
Peters Rd, Lockheath	c.250 homes	Lower

- 3.6.20 In particular, the scheme is expected to facilitate acceleration of some key sites including Gosport Town Centre, Gosport Waterfront and the Solent Enterprise Zone.
- 3.6.21 The scheme indirectly supports the delivery of approximately 140,000m² of planned employment floorspace at the SEZ (up to 2040). Significantly, the scheme would accelerate the delivery of employment spaces at these sites. The approximate breakdown of floorspace type is as follows:
- B1a – c.10,000m²
 - B2/B8 – c.84,000m²
 - Aviation – c.33,000m²
 - A1/A3 – c.2,500m²
- 3.6.22 The scheme would also support other planned employment sites, in particular Gosport Waterfront (c. 40,000m²) and Solent 2 / Little Park (c.35,000m²)
- 3.6.23 In terms of direct employment outputs, these are taken to be those created during the construction process of the scheme and have been estimated based on 12.5 FTE/£million of the total scheme spend.
- 3.6.24 This equates to 416 temporary construction jobs. At this stage it is not possible to predict whether, if this level of employment is achieved, the jobs will be ‘new’ to the local economy. A conservative view that only 20% will be net additional jobs would result in 83 new jobs. It should be noted that this is a notional estimate and it is anticipated that any net additionality could be as high as 40% as suggested by HM Treasury Guidance.
- 3.6.25 The 2011 Annual Business Survey, produced by the Office of National Statistics suggests that 37% of construction spend in the UK relates to the sector’s GVA contribution nationally. On this basis, the impact of the construction investment on GVA is therefore approximately £12m.
- 3.6.26 The wider business case for the Fareham & Gosport Intermediate Infrastructure Programme estimates that a full programme (inclusive of the Stubbington Bypass scheme) would result in a 12% increase in GVA per job (£4,600 per job), compared to the intermediate programme. The resultant uplift in GVA is estimated at approximately £173m per annum.

Wider Impacts

- 3.6.27 In WebTAG appraisal “Wider Impacts” is the term given to some of the economic impacts of transport that are additional to transport user benefits. Transport schemes are expected to have impacts in markets other than transport (such as the labour market, product market, and land market). Wider Impacts (WIs) may result as direct user impacts are amplified through the economy.
- 3.6.28 Whilst a full assessment of wider impacts in line with TAG Unit A2.1 has not been undertaken (and which is likely to be more appropriate at the ‘overarching package’ level), it is considered that the scheme could produce the following main impacts in general terms:
- Productivity in the local economy could be improved by bringing businesses closer together (in terms of enhanced transport connectivity) and closer to larger labour markets (so called agglomeration benefits) - the Stubbington Bypass will have an important role in strengthening connectivity of the peninsula to the surrounding area and supporting the intensification of the existing sectoral specialisms and clustering, focusing on Advanced Manufacturing specialising in the marine, aerospace and aviation sectors¹³. The wider business case for the Fareham & Gosport Intermediate Infrastructure Programme estimates the effect of the Stubbington Bypass scheme in this regard to be an increase in GVA per job of approximately £4,600 (compared to the Intermediate Programme);
 - WebTAG generally advises a 10% uplift to business user benefits owing to output change in imperfectly competitive markets – business user benefits account for approximately 56% of total user benefits and the impact would be approximately £3.3m; and
 - Increased tax revenues (received by government) arising from labour market impacts (from labour supply impacts and from moves to more productive jobs) – e.g. resulting from facilitating the expansion of advanced manufacturing and engineering jobs.

3.7 Environmental Impacts

- 3.7.1 The appraisal of environmental impacts considers the impact of the proposed scheme on the built and natural environment, and on people.
- 3.7.2 The potential environmental impacts of the scheme can generally be considered in terms of two categories:

¹³ The UK is a world leader in the marine and maritime sector and the Solent’s coastal location means that it is at the heart of the sector, accounting for 20.5% of Solent’s GVA, provides 40,000 jobs, supports more than 3,000 businesses and is growing by five per cent per annum. Seven of the top 10 global aerospace companies have a presence in the Solent region in south Hampshire including EADS, Boeing, Lockheed Martin, Airbus Industries, and Finmeccanica. Defence features strongly in the south of Hampshire where Portsmouth Naval Base is home to almost two thirds of the Royal Navy’s surface ships accounting for 17,200 jobs at peak times

- those that arise as a result of changes in traffic (both overall volume and distribution) - noise, air pollution and greenhouse gases; and
- those that arise in the surrounding area as a result of physical changes from the new bypass road and associated improvement works - landscape, townscape, biodiversity, heritage and the water environment.

3.7.3 In relation to the planning application for Stubbington Bypass, an Environmental Impact Assessment has been undertaken for the Stubbington Bypass in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. The assessment follows the guidance presented within the Design Manual for Roads and Bridges (DMRB), Volume 11 Environmental Assessment. The Environmental Statement (ES) sets out in full the potential impacts of the development, as determined through Environmental Impact Assessment (EIA), both during construction and operation, upon key environmental criteria. This includes an assessment of the air quality, cultural heritage, landscape, nature conservation, geology and soils, materials, noise and vibration, effects on travellers, community and private assets, and, road drainage and the water environment. It takes account of mitigation measures and cumulative effects of the development of this scheme and the Newgate Lane South scheme currently being developed.

3.7.4 The Environmental Statement (WSP / PB, June 2015) and supporting documents can be accessed at the following web link:
<http://www3.hants.gov.uk/mineralsandwaste/application-details.htm?id=16618>

3.7.5 An Environmental Scoping Report informed the EIA and statutory environmental bodies were consulted on the proposed methodology.

3.7.6 A Habitats Regulation Assessment (HRA) was also completed in relation to the planning application.

3.7.7 Based on the current stage of business case development, a proportionate approach has been adopted and suitable, available data has been used to inform the environmental appraisal including the environmental scoping and assessment work undertaken to date (referred to above), outputs from the traffic modelling (SRTM) and ecological /other environmental survey work undertaken to date.

Overview of the Surrounding Area

3.7.8 The primary area of interest for the Stubbington Bypass is currently designated as a Countryside Strategic Gap in the FBC Local Plan review and is comprised mainly of large, flat, open fields. Other habitats / features in the vicinity include:

- a few small ponds;
- several streams and drainage ditches up to 2m in depth;

- patches of natural grassland, coniferous and broadleaf woodland; and
- hedgerows.

3.7.9 The farmland is generally arable in nature with the overall landscape being relatively flat and open with few significant areas of trees, with the exception of the following notable features:

- **Oxleys Coppice**, a small patch of Ancient Semi-Natural Woodland situated to the south of Rowan Way and north of the bypass, also designated as a Site of Importance for Nature Conservation (SINC); and
- **Crofton Stream Tributary**, which runs in a south-westerly direction to the south of Oxleys Coppice to feed the River Meon and is designated a Priority Habitat. The bypass crosses this stream to the east of Ranvilles Lane; and
- **Tips Copse**, a small patch of Ancient Semi-Natural Woodland situated at the eastern edge of Stubbington to the west of the bypass and sewage works, also designated as a SINC.

3.7.10 The southern edge of the built up area of Fareham lies to the north and Stubbington village is located to the south. To the east lies the HMS Collingwood site and Peel Common Waste Water Treatment Works. Crofton Secondary School is located near to the eastern end of the bypass where it joins the B3334 Gosport Road.

3.7.11 A number of existing roads cross the area from north to south (Ranvilles Road, Peak Lane) as well as Tanners Lane that is broadly in an east west orientation linking Newgate Lane with Peak Lane.

3.7.12 The scheme is in the vicinity of a number of designated sites and other features which are important for environmental reasons. There are also a number of sensitive environmental receptors including those areas where increases in noise are likely to be experienced including local residential and community areas. The key environmental constraints in the area are highlighted in Figure 3-1 (repeated at full size in Appendix A).

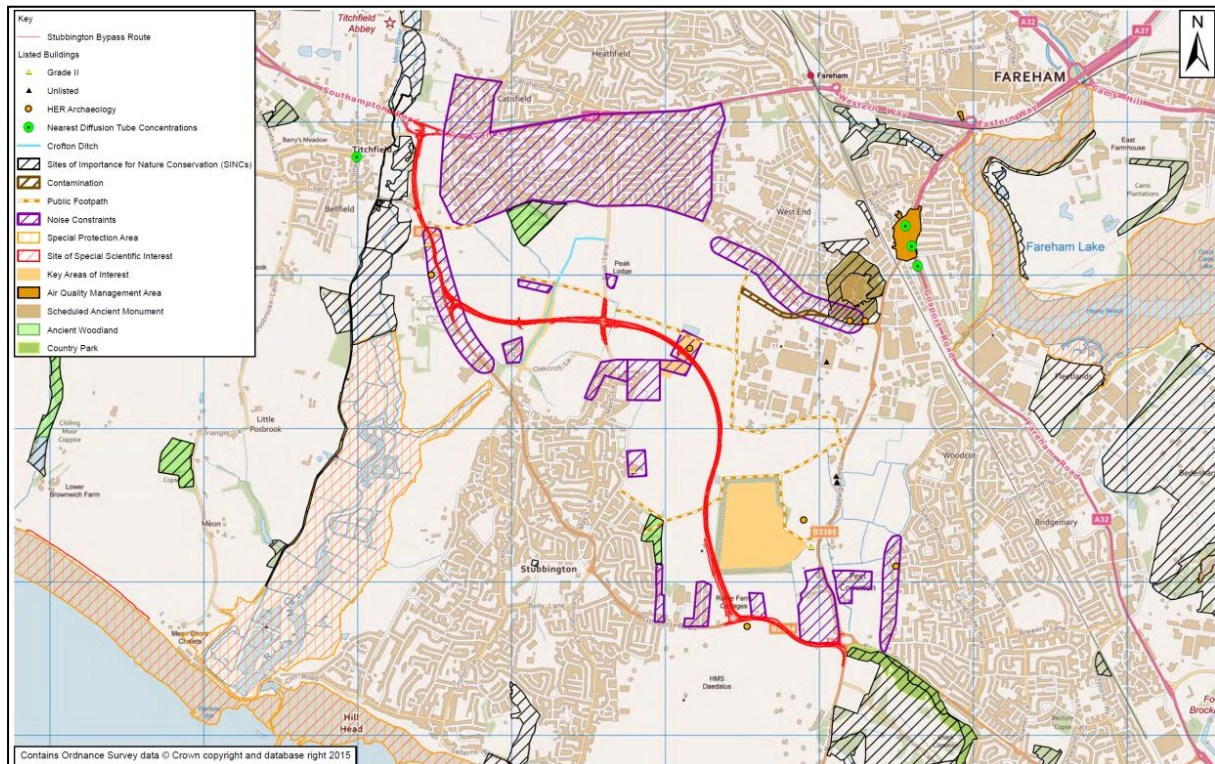


Figure 3-1: Key environmental constraints

Environmental Mitigation

3.7.13 The scheme incorporates environmental mitigation in terms of new and improved existing landscape to off-set the impact of the bypass. Mitigation measures include:

- Noise barriers/bunds;
- Landscape planting and screening;
- Drainage attenuation;
- Habitat replacements; and
- Measures for protected species.

3.7.14 These mitigation measures have been taken into account within the environmental appraisal.

Air Quality

3.7.15 The impact of the scheme on air quality considers changes in PM₁₀ and NO₂ emissions, which are major sources of local air pollution.

- 3.7.16 The impact on air quality through earthworks and general construction activities was assessed in the ES. Although a risk of air quality reduction in these phases has been identified, the assessment outlined that the impact can be mitigated through good site practice and suitable mitigation measures, which will ensure the effect of dust and PM₁₀ can be reduced and excessive releases prevented.
- 3.7.17 During operation, the assessment indicates that the scheme would result in both increases and decreases in NO₂ and PM₁₀ concentrations at assessment receptors located across the study area. This is attributable to the nature of the scheme which will predominantly result in a redistribution of existing traffic on the local road network.
- 3.7.18 Figure 3-2 illustrates the assessment of changes in NO₂ and PM₁₀ as a result of the bypass scheme, indicating the magnitude of change at a number of sensitive receptors.

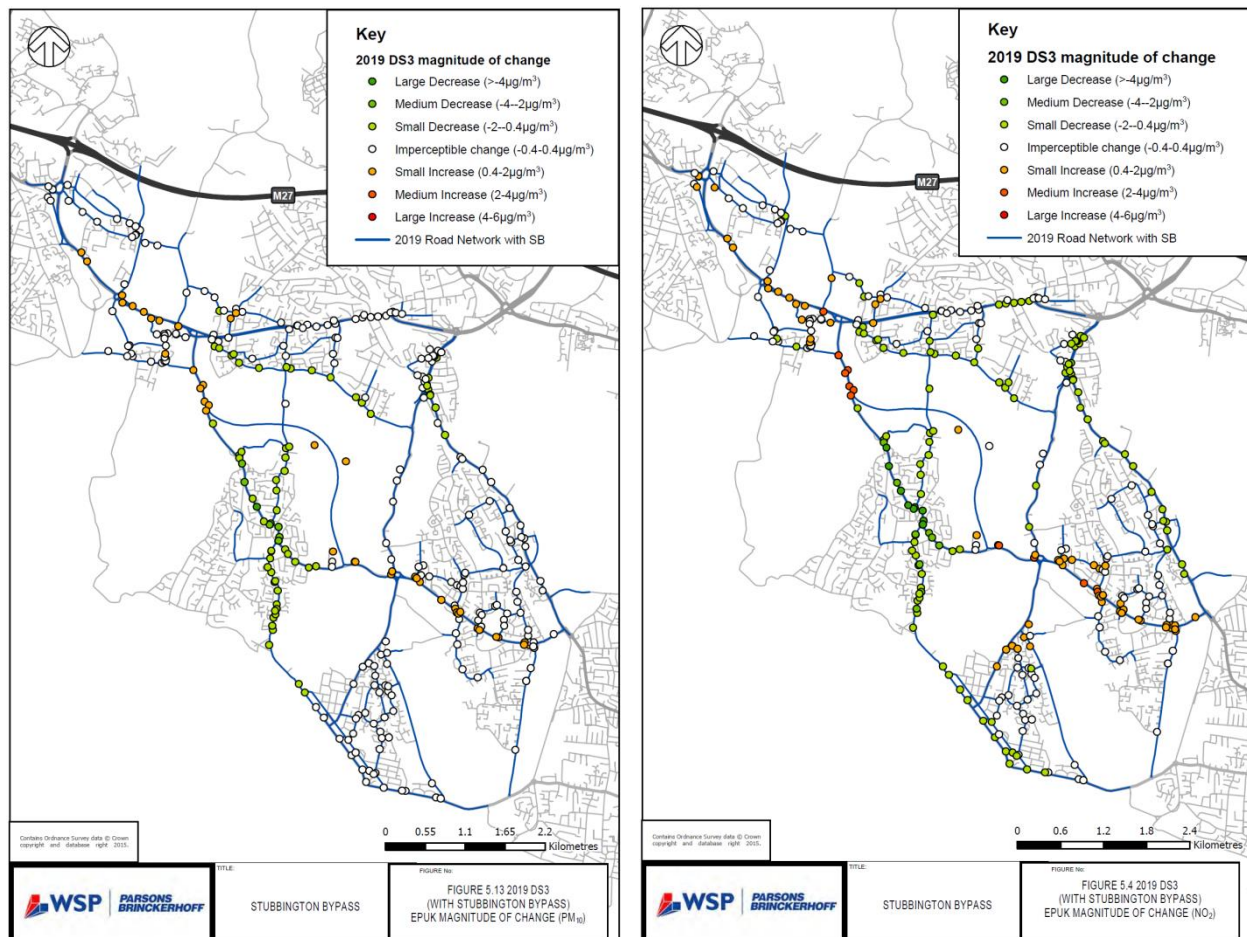


Figure 3-2: Predicted changes in PM₁₀ and NO₂¹⁴

¹⁴ Source: Stubbington Bypass Environmental Statement (WSP / PB, June 2015)

- 3.7.19 A WebTAG assessment has been undertaken to determine a monetary valuation of air quality impacts¹⁵ – see Appendix D. The assessment has been undertaken in line with WebTAG guidance and utilises the same underlying forecast traffic data as that used for the EIA. The assessment includes local air quality and regional air quality impacts.
- 3.7.20 With regards to local air quality, in 2019 (the anticipated opening year) and 2036 (the forecast year), the proposed scheme is assessed as having a positive effect on local air quality overall. The number of properties predicted to experience an increase or decrease in NO₂ and PM₁₀ concentrations as a result of the scheme are provided in the table below.

Year	Pollutant	Predicted Change (Number of Properties)		
		Improvement	No Change	Deterioration
2019	NO ₂	14359	3507	9392
	PM ₁₀	12473	7398	7387
2036	NO ₂	13944	1715	11599
	PM ₁₀	13217	5546	8495

Source: *Stubbington Bypass WebTAG Air Quality Letter Report (WSP /PB, July 2015)*

- 3.7.21 With regards to regional air quality, the scheme is predicted to result in a 1% increase in regional NO_x emissions in both 2019 (the anticipated opening year) and 2036 (the forecast year). This is unlikely to have a significant effect on regional air quality overall. A 0.2 to 0.4% reduction in PM₁₀ concentrations (aggregated net total) is forecast.
- 3.7.22 Based on the above assessment, the Net Present Value (NPV) of changes in PM₁₀ concentrations due to the scheme is £4.7 million (based on the central value). The NPV of changes in NO_x emissions (based on regional emissions) is £0.3 million, resulting in an overall NPV in the region of £4.4 million.
- 3.7.23 Overall, the scheme is predicted to have a positive effect on local air quality (notably NO₂ and PM₁₀ concentrations) with more properties predicted to experience an improvement in local air quality than a deterioration. The proposed scheme is predicted to result in an increase in regional NO_x emissions, however the predicted increases (in tonnes/year) in both 2019 (the anticipated opening year) and 2036 (the forecast year) are less than 1% and, therefore, the effect of the proposed scheme on regional air quality is unlikely to be significant. Furthermore, the proposed scheme is predicted to result in a NPV in the region of £4.4 million due to changes in air quality. Overall, the scheme is considered to be beneficial in terms of air quality.

¹⁵ Stubbington Bypass WebTAG Air Quality Letter Report (WSP /PB, July 2015)

Noise

- 3.7.24 Noise implications of the scheme are generally defined in terms of the change in levels of noise annoyance experienced by people. The two main factors which have the potential to affect noise levels in relation to this scheme are changes in traffic flows / patterns / speeds and proximity of receptors to the line of the route.
- 3.7.25 During construction of the scheme potentially significant noise and vibration impacts could occur in a worst case scenario. The use of mitigation measures will make sure that most of the construction work would have a small negative impact or no impact; although there is a chance that negative impacts could occur during some of the works.
- 3.7.26 The noise assessment undertaken for the EiA identifies that there are a number of areas - particularly along Titchfield Road (south of the scheme), Peak Lane, Rowan Way, Stubbington Lane and Gosport Road (west of the scheme) - that will experience a significant reduction in noise levels. However, there are also areas that are predicted to have a significant increase in noise levels and where mitigation measures are therefore required.

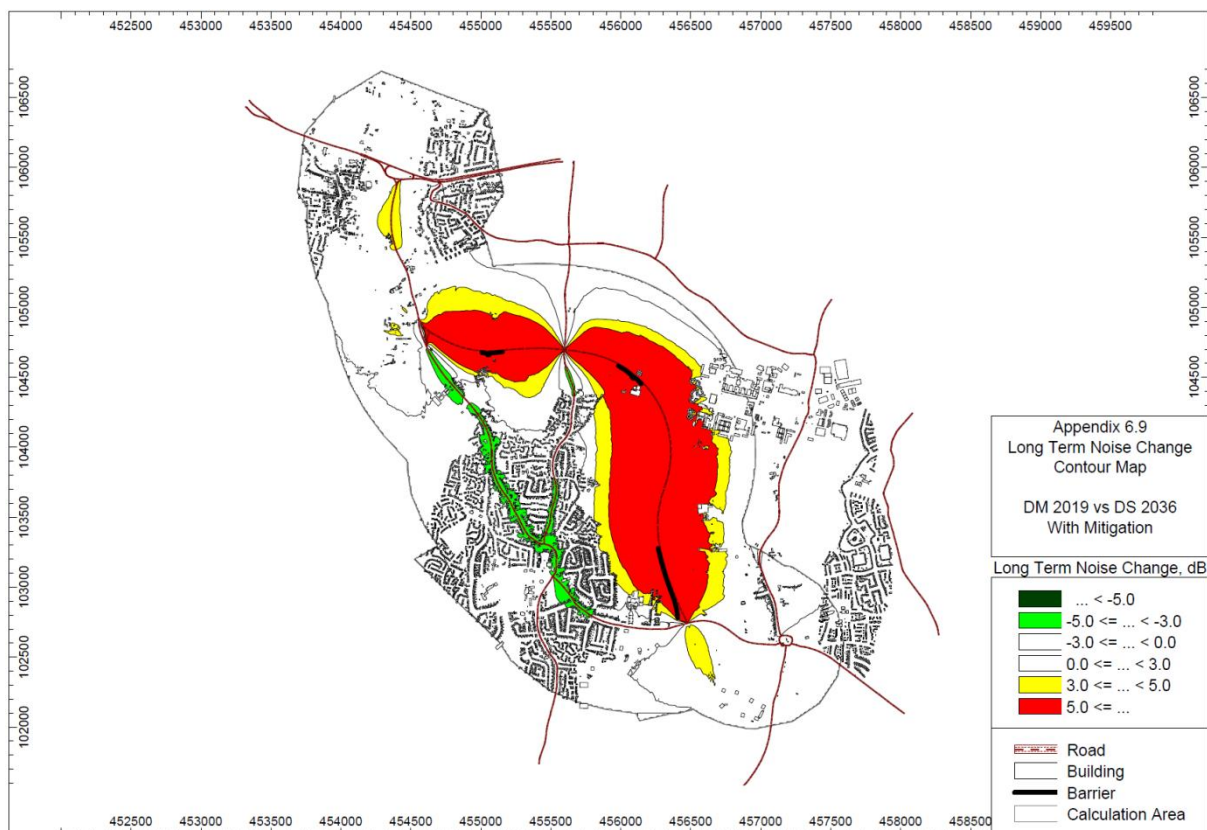


Figure 3-3: Predicted changes in noise¹⁶

¹⁶ Source: Stubbington Bypass Environmental Statement (WSP / PB, June 2015)

- 3.7.27 It is proposed to incorporate three noise barriers within the scheme design to reduce the noise impact during operation - one to the south of the scheme, close to the properties on Ranvilles Lane, one close to Newlands Farm and the third to the west of the scheme, parallel to Marks Road. With these barriers in place negative impacts of noise during operation will be reduced, but some homes are still likely to experience a significant increase in noise levels.
- 3.7.28 A WebTAG assessment has been undertaken to determine a monetary valuation of noise impacts¹⁷ – see Appendix D. The assessment is based upon a noise model and has been undertaken in line with the guidance set out in TAG UNIT 3: 2014 and the DMRB.
- 3.7.29 Following the DMRB methodology, which is based upon the least beneficial noise change for each receptor, the net change in annoyance is +22 people, which equates to a Net Present Value (NPV) of -£1,082,946.
- 3.7.30 The DMRB acknowledges that “the results from this assessment may often show the worst case and highlight mainly the adverse impacts of a road project”. In order to present a more balanced case, the greatest noise change has been selected for each receptor (regardless of whether that change is beneficial or adverse).
- 3.7.31 This alternative approach results in a net change in annoyance of -90 people, which equates to a NPV of £4,709,876.
- 3.7.32 Selecting the greatest noise change may be seen as too positive in that the benefits are not countered by any adverse impacts on other facades of the same dwelling. Therefore, a final approach has been adopted such that the average noise change across all façades of each receptor has been selected.
- 3.7.33 This alternative approach results in a net change in annoyance of -74 people, which equates to a NPV of £3,808,900.
- 3.7.34 The three different approaches produce a wide range of the monetary valuation of noise impacts of the scheme. WebTAG guidance points to the DMRB and therefore the first approach presented (and based on the least beneficial noise change) has been adopted for the purposes of the AST, resulting in a negative net present value of noise from the scheme of circa £1 million. This approach, however, does present worst case results and does not fully reflect the benefits (i.e. noise reductions) which will be experienced by some properties facing relieved roads.

Greenhouse Gases

- 3.7.35 The scheme is expected to result in an increase in vehicle kilometres travelled, which will have a direct impact on fuel based emissions. However, fuel efficiency is also a factor in emissions generated and reduced congestion and delays resulting

¹⁷ Stubbington Bypass WebTAG Noise Letter Report (WSP /PB, July 2015)

from the scheme is likely to have a small benefit to fuel efficiency, and thus an off-setting effect on total emissions.

- 3.7.36 The monetary value of the impact of the scheme on carbon emissions has been calculated as PVB -£1.3m. This is incorporated in the overall BCR for the scheme reported.

Biodiversity

- 3.7.37 The impacts on habitats and species have been considered and the assessment of ecological receptors has been informed by numerous surveys, including amphibians, badgers, bats, birds, dormice, invertebrates, reptiles, otters and water voles.

Designated Sites, Habitats and Species

- 3.7.1 Internationally and nationally designated sites lie within proximity of the scheme, including Solent to Southwater SPA, Solent to Southampton Water Ramsar, Portsmouth Harbour SPAQ, Portsmouth Harbour Ramsar, Titchfield Haven SSSI, Lee-on-the-Solent to Itchen Estuary SSSU, Portsmouth Harbour SSSI and The Wild Grounds SSSI.
- 3.7.2 The results of the ecological surveys show that the following species will need to be specially accommodated in the design of the scheme:
- Water vole – which inhabit part of the Crofton ditch and watercourses to the north of the Bypass
 - Badgers – there are several badger setts within the vicinity of the Bypass
 - Bats – roosts have been identified to the west of Titchfield Road and in the Newlands Farm piggery
 - Reptiles – slow worm, grass snake and common lizard are present within the site.
- 3.7.3 Great crested newts, dormice and Brent geese have not been identified in the area.

Impacts

- 3.7.4 Land will be lost to the scheme which will result in a permanent negative impact particularly during the construction works and until the new landscaping is operational. The scheme does not require land take from any statutory or non-statutory designated sites and effects on these are anticipated to be negligible.
- 3.7.5 Several hedgerows lie within, or are bisected by, the scheme which also crosses broadleaf plantation woodland on the Peel Common Sewage Works bund and requires demolition of some disused piggeries near Newlands Farm.

3.7.6 Temporary negative impacts will occur on a number of species including: amphibians, badgers, bats, reptiles, invertebrates, hedgehog, harvest mouse, breeding birds and water vole. The impacts are due to the habitat loss and the way in which the habitat would be broken up into smaller pieces as a result of the scheme, which will make ecological movements more difficult. However, these effects are mainly temporary effects which will occur during the construction works.

3.7.7 Specific mitigation measures for certain species include:

- Crofton ditch is to be widened and re-profiled so as to suit water vole. This is a specialist task and is likely to be undertaken by a specialist ecological contractor;
- Cut-off ditches between Ranvilles lane and Newlands Farm are to be as water vole friendly as possible;
- It is proposed to construct three Badger tunnels under the Bypass, one near Crofton ditch, one near the north boundary of the Peel Common Wastewater Treatment Works, and one near the south boundary;
- Bat boxes are to be provided in the trees around the fishing lakes; and
- A tunnel for reptiles and amphibians is to be provided just to the east of peak Lane, close to the alignment of the original road.

3.7.8 The creation of new habitats along the road verge and the replacement of important habitat such as the woodland on the Peel Common Sewage Works bund will help to reconnect the habitat and allow ecological movements. Overall a positive effect will occur once the recommended actions have been put in place; however it is likely that a negative impact will occur on breeding birds due to the loss of farmland. With mitigation there is expected to be no impact on conservation sites in the area.

Qualitative Assessment (seven point scale) - Biodiversity
Neutral

Water Environment

3.7.9 Most of the scheme is located in an area at low risk of flooding, although in places along the route the water table is high. To ensure there is no increased risk of flooding due to the presence of the new road, measures such as compensatory flood storage will be introduced.

- 3.7.10 The bypass will have a comprehensive drainage system to remove surface water from the carriageway. Along the majority of the bypass length Sustainable Drainage System (SuDS) solutions, such as swales, will drain water into holding ponds to ensure too much flow does not reach the local watercourses. The SuDS will be expected to process runoff pollutants, such as oils, fuels or chemicals and will be spill-proofed with the installation of impermeable layers, which the pollutants will not be able to pass through. The SuDS will need to be maintained to make sure the drainage system continues to work effectively.
- 3.7.11 It is considered that the scheme (and drainage strategy of the scheme) will not have a large negative impact on the floodplain areas or properties, and will not increase flood risk.
- 3.7.12 With various protection measures in place the scheme is therefore not expected to cause an environmental or ecological risk to the sensitive receiving waters, nearby designated areas or other water courses in the area.

Qualitative Assessment (seven point scale) – Water Environment
Neutral

Landscape

Base Situation

- 3.7.13 The area surrounding the scheme is mainly open and flat with only slight variations in level. It is semi-rural, made up predominantly of arable farmland which is broken up with sporadic ditches, hedgerows and trees.
- 3.7.14 The area can be divided into two different character zones. The northerly section follows the existing Titchfield Road and it is generally enclosed by a succession of features including cutting slopes, vegetation and/or properties. The southerly and larger part of the route is comprised primarily of flat, open agricultural land, with sections crossing existing roads, a few trees, hedgerows and ditches. There are few significant areas of trees, with the exception of Oxley's Coppice (which is designated Ancient Woodland) to the north west of the area, the tree line along the Crofton Stream tributary and the shelter belt around the Peel Common sewage works. A significant proportion of the hedgerows which traditionally divided this landscape into a series of small fields, have been removed over the last 30 – 40 years, to make way for large open arable fields bounded by fences and open ditches. Today the remaining hedgerows generally line roads and garden boundaries.
- 3.7.15 The area falls into Countryside Character Volume 7: South East and London and within National Character Area 126: South Coast Plain and Hampshire Lowlands. At a more detailed level, the area falls within two character areas within the

Hampshire County Integrated Character Assessment 2012 – the majority of the site lying within Landscape Character Area 9f: Gosport and Fareham Coastal Plain, with the northern extent being located within Landscape Character Area 3E: Meon Valley.

- 3.7.16 The open agricultural landscape is designated as a strategic gap between the settlements of Fareham to the north of the site, Stubbington village to the south and south west and Gosport to the east. Built form along the route comprises occasional farm buildings (some of which appear redundant), some light industrial units at Newlands Farm along with fishing lakes, and nursery grounds.
- 3.7.17 There are a number of Public Rights of Way across the site as well as a number of informal routes that are well used by local residents for recreation purposes.



- 3.7.18 Key visual receptors that could be impacted upon by the scheme include, but are not limited to:
- Users of, and residents along / off Titchfield Road, Ranvilles Lane, Bridge Street, Peak Lane, Tanners Lane, Marks Road and Gosport Road;
 - Workers at, and visitors to, the Alver Valley Country Park;

- Workers at, and visitors to, Lee-on-the-Solent Golf Club and MCA Daedalus Aerodrome;
- Workers at Stubbington sewerage works;
- Residents, workers and visitors to Peel Farm, Newlands Farm, HMS Collingwood, Crofton Manor Farm, Stubbington Ark Animal Shelter, Hollam Hill Farm and Hollam Farm;
- Workers at, and visitors to, Crofton Cemetery;
- Users of public rights of way within the site; and
- Users of the adjacent public rights of way network, informal paths and Public Open Space.



Assessment of Impacts

- 3.7.19 Site preparation, earthworks and construction may impact upon local character, the setting of built heritage assets and on visual amenity. Where the bypass cuts through existing open fields the local character will alter from vegetation and green open space to hard-surfaced built form with traffic movements and increased noise and artificial lighting.

- 3.7.20 In the north western sector of the site the bypass route crosses a drainage ditch (feeding into Crofton Stream) which forms a naturalised landscape feature in a more generally open area being bordered by trees and scrub for part of its length. The preferred route was located at a gap in the vegetation, at a mid point to keep the bypass further away from Oxley's Coppice and the residential properties along Longfield Avenue. It is proposed that the bypass will cross the drainage ditch via a culvert and appropriate mitigation is proposed to minimise the impact on the natural landscape at this location.
- 3.7.21 The site preparation and construction phases are likely to be more intrusive than the completed scheme, resulting from:
- Removal of existing vegetation
 - Earthworks and material stockpiles
 - Site traffic, working machinery, construction, fencing, signage, traffic controls and the construction compound and all its associated requirements.
 - Temporary lighting for the compound;
 - Creation of new landscape areas including noise/ screening bunds
- 3.7.22 The works will be visible from the adjacent Country Park, public rights of way within and adjacent to the site, and from surrounding residential areas. The construction activities are likely to alter the local character of the site and the local topography. These impacts are likely to be adverse, but short term.
- 3.7.23 Once operational, the bypass is likely to impact upon local character, the setting of built heritage assets and on visual amenity. The operation of the new road with traffic, signage and lighting will all have a permanent effect on the tranquillity, character and visual quality of the site. The visual assessment found that a number of the receptors were largely screened from the Proposed Scheme, even in winter, due to intervening vegetation, topography and/ or built form. However the Public Rights of way will be generally open to views.
- 3.7.24 Lighting of the route has been kept to a minimum and will generally be installed where it already exists i.e. along the Titchfield Road, and a new section of lighting around the junction with Gosport Road and linking into Peel Common Roundabout.

Summary

- 3.7.25 The impact of the scheme on landscape is considered to be larger during the construction works, due to the additional noise and visual intrusion of working machinery, plant and vegetation removal. The change in the overall character and setting of the location will result in a likely negative impact.

- 3.7.26 Mitigation measures are likely to include the protection of trees to the appropriate standards, tidy site management to reduce visual clutter associated with building works, retention of trees, additional tree and shrub planting, landscape bunds, traffic management and the implementation of a site specific CEMP.
- 3.7.27 It will take time to achieve the long term objective of the mitigation to reduce the visual and landscape character impacts. By twelve to fifteen years after planting it will have significantly grown and will be screening cars and the lower sections of lorries, total screening of all vehicles will take up to 20 years. After eight to ten years the planting will have blended into the surrounding landscape and the road will no longer be an alien feature.

Qualitative Assessment (seven point scale) - Landscape
Slight Adverse

Townscape

- 3.7.28 The scheme is predominantly within a rural setting and is not considered to have any material impact on the setting of the built environment.

Qualitative Assessment (seven point scale) - Townscape
Neutral

Historic Environment

- 3.7.29 Assessment of the impact on the historic environment includes any potential impacts on known:
- buildings (individually or in association) of architectural or historic significance;
 - areas, such as parks, gardens, other designed landscapes or public spaces, remnant historic landscapes and archaeological complexes; and,
 - sites such as ancient monuments, places with historical associations such as battlefields, preserved evidence of human effects on the landscape, etc
- 3.7.30 A number of HER records have been identified within the vicinity of the scheme, although many of these lie outside of the area of construction. This includes records west of Titchfield Road, north of Longfield Avenue and south of Gosport Road. One of the records lies within the vicinity of the fishing lakes at Newlands Farm.
- 3.7.31 There are no World Heritage Sites, Registered Historic Parks and Gardens Registered Battlefields within the Site or the 1km Study Area. There are no Listed

Buildings within or immediately adjacent to the Site. However, there are 126 within the 1km Study Area, the closest of which is Hollam House Grade II Listed Building, which lies approximately 15m to the east of the Site boundary. There is Conservation Area adjacent to the northern boundary of the Site; Titchfield Abbey. There are a further two Conservation Areas within the 1km Study Area, the Titchfield Conservation Area situated 200m to the west of the Site and Catsfield Conservation Area, located 265m to the north-east of the Site.

- 3.7.32 There is also some potential for previously unidentified archaeology to be present within the site. Site preparation, earthworks and construction activities may impact on archaeological remains and particularly buried prehistoric remains.
- 3.7.33 During construction of the scheme appropriate measures will be implemented to reduce any potential negative impact on any buried remains/surface archaeological deposits, however there is likely to be a small negative impact.
- 3.7.34 During construction and operation of the scheme a number of heritage assets will be directly impacted. The setting of a number of designated and non-designated heritage assets would be directly affected, including Foxbury Cottages, Foxbury Farmhouse Grade II Listed Building and locally listed Barn at Foxbury Farmhouse and Foxbury Farmhouse, Carriston Cottage Grade II Listed Building, Hollam House Grade II Listed Building and West Meon Girls School Grade II Listed Building. No measures are proposed to reduce the negative effects on these heritage assets. The level of impact will depend on the asset.
- 3.7.35 Further pre-construction investigations will be undertaken as appropriate and mitigation developed if necessary.
- 3.7.36 The overall impact on Historic Environment has been assessed as **Slight Adverse**.

Qualitative Assessment (seven point scale) – Historic Environment
Slight Adverse

3.8 Social Impacts

- 3.8.1 Social impacts cover the human experience of the transport system and its impact on social factors, not considered as part of economic or environmental impacts. In accordance with TAG Unit A4.1 there are eight social impacts to be considered:
- Physical activity;
 - Accidents;
 - Security;
 - Severance;

- Journey quality;
- Option and non-use values;
- Accessibility; and
- Personal affordability.

3.8.2 Each of these impacts in relation to the scheme is considered in turn below. A proportionate approach has been taken, in keeping with the level of investment and the nature of the scheme. The general principles from TAG Unit A4.1 have been followed.

Physical Activity

- 3.8.3 Physical activity impacts include changes in levels of walking and cycling and resultant changes in mortality and absenteeism.
- 3.8.4 The scheme does not directly promote increased walking / cycling activity. The improved cyclist / pedestrian facilities to be provided as part of the scheme, together with the removal of a significant volume of traffic from the centre of Stubbington village, are expected to contribute towards a safer, more welcoming environment. This could encourage more people to cycle / walk, or those that already cycle/ walk to do so more often. This would be expected to have a positive impact in terms of reduced mortality and absenteeism.
- 3.8.5 However, the improved traffic conditions as a result of the scheme are also likely to contribute to more people being attracted to drive (as suggested by the forecast changes in vehicle kilometres from the SRTM). Therefore, the overall impact on physical activity has been assessed as **neutral**.

Qualitative Assessment (seven point scale) – Physical Activity	
Neutral	

Accidents

- 3.8.6 A qualitative assessment of accidents has been undertaken. Personal Injury Accident (PIA) data for a five year period covering 1st September 2008 to 31st August 2013 indicates accidents recorded on links such as Peak Lane, the B3334 Titchfield Road and Gosport Road, and the B3385 Newgate Lane. However, there are no discernible trends associated with these accidents and none are recorded as fatal with the majority as 'slight' only.
- 3.8.7 There are existing accident clusters at several key junctions including: the A27 Titchfield Gyratory, A27 St Margaret's Roundabout, B3334 / B3385 Peel Common Roundabout and Peak Lane / Longfield Avenue / Rowan Way roundabout.

- 3.8.8 There are also a notably high number of accidents recorded along the B3334 Gosport Road through central and eastern parts of Stubbington. A total of 21 accidents were recorded between the junctions with Marks Road and Stubbington Lane, two of which were classified as 'Serious', with the remainder 'Slight' and eight of these accidents involved a pedal cyclist. A total of five accidents were recorded between the junctions with Stubbington Lane and Mays Lane, all of which were classified as 'Slight' in severity and one of which involved a pedal cyclist.
- 3.8.9 The implementation of the bypass will significantly reduce the volume of vehicular traffic routing along the B3334 through Stubbington and as such, the number of accidents would be expected to reduce accordingly. It is also possible that some pedal cyclists will choose to use the new off road cycle facility that will be provided alongside the bypass if they are routing to/from areas north of Stubbington, rather than routing through Stubbington on the B3334. This should also reduce the number of collisions involving cyclists. However, this may be offset by greater use of the B3334 through Stubbington by cyclists, due to the lower traffic volumes on the road making it a more attractive environment for cyclists, particularly if they are routing to/from destinations in Stubbington.
- 3.8.10 Stage 1 Road Safety Audits (RSAs) have been undertaken as part of the design of all new junctions and for all junction improvements schemes. Any points raised have been addressed through the current design and going forward the layouts will be subject to further RSAs before and after construction.
- 3.8.11 Modifications to the two roundabout junctions located in Stubbington village centre will provide new crossing facilities for pedestrians and reduce traffic speeds, thereby providing a safer environment for all road users.
- 3.8.12 Junction improvement schemes are proposed at the Titchfield Gyratory and Peel Common roundabout and will help to enhance the capacity and safety characteristics of these junctions.
- 3.8.13 These localised benefits may be partly offset by the forecast increase in overall vehicle kilometres travelled as a result of the scheme. Therefore, the overall impact of the scheme on accidents has been assessed as **slight beneficial**.

Qualitative Assessment (seven point scale) - Accidents
Slight Beneficial

Security

- 3.8.14 Potential impacts on security to be considered in accordance with Table 4.1 of TAG Unit A4.1 include: Formal / informal surveillance, site perimeters, entrances and exits, landscaping lighting and visibility and emergency call.

- 3.8.15 There is a degree of informal surveillance on the existing route through Stubbington village, for instance as provided by properties adjacent to the road. With the new bypass route, which largely runs through open fields, the level of informal surveillance will be reduced.
- 3.8.16 The existing route alignment has street lighting. It is proposed that the new bypass route itself would not be lit, due to its rural surroundings.
- 3.8.17 The overall impact on personal security has therefore been assessed as **slight adverse**.

Qualitative Assessment (seven point scale) - Security
Slight Adverse

Severance

- 3.8.18 The scheme has the potential to impact on severance through physical disruption of pedestrian / cyclist links (i.e. associated with the works) in addition to the resultant changes in traffic flows once the scheme is operational. As discussed elsewhere, redistribution of traffic is expected to result in localised increases and decreases in traffic flows.
- 3.8.19 Based upon the EiA assessment of changes in traffic flows on sixteen selected road links, the level of severance decreases on seven of the links from either severe to moderate and moderate to slight. On three links the severance increases from moderate to severe while on all other links the level of severance remains the same level, despite the links experiencing an increase or decrease in traffic flows. The re-assignment of traffic from Stubbington village to the bypass can reduce severance for pedestrians crossing the B3334. In the centre of Stubbington the traffic flows are forecast to drop by over 10,000 vehicles per day which will significantly improve residents accessibility to local facilities, especially the elderly crossing Titchfield Road or Gosport Road.
- 3.8.20 Urban realm improvements are also proposed for Stubbington village centre, which would seek to make the village centre more of a shared space, with lower traffic speeds and ample crossing points for pedestrians. Although not within the scope of the scheme assessed, the bypass is a key pre-requisite to enabling these measures.
- 3.8.21 The junction improvement schemes proposed at the Titchfield Gyratory, Peel Common roundabout, Titchfield Road/Bridge Street junction and Peak Lane / Longfield Avenue / Rowan junction will all provide new or improved crossing facilities for pedestrians.

- 3.8.22 In order to understand the current level of use of the PRowS and other informal walking routes that will be severed by the preferred alignment of the bypass, pedestrian surveys were undertaken in August to November 2014.
- 3.8.23 There will be no extinguishment of any Public Rights of Way (PRow) that are crossed by the Bypass. At all locations where the route of the Bypass crosses an existing PRow (three locations) informal crossing facilities would be provided, in the form of a central refuge with dropped kerbs.
- 3.8.24 Where the route of the Bypass crosses an existing public highway (at Ranvilles Lane and Peak Lane), crossing facilities will also be provided, with a signal-controlled crossing at Peak Lane and an informal crossing with central refuge and dropped kerbs at Ranvilles Lane. Where the route of the Bypass crosses the existing informal path that routes from the northern end of Marks Road, there will be an informal crossing with central refuge and dropped kerbs (this is the same location where the Bypass crosses the PRow to the west of the Sewage Works).

Qualitative Assessment (seven point scale) - Severance
Slight Beneficial

Journey Quality

- 3.8.25 A qualitative assessment of journey quality considers the three key elements set out in Table 6.1 of TAG Unit A4.1:
- Traveller stress: frustration, fear of accidents and route uncertainty;
 - Traveller's views: the view and pleasantness of the external surroundings in the duration of journeys made; and
 - Traveller care: aspects such as cleanliness, level of facilities, information and the transport environment.
- 3.8.26 In terms of traveller stress, the bypass is expected to reduce driver frustration, particularly in terms of providing more reliable and quicker journey times for travellers to /from the peninsula who would have previously had to travel through Stubbington village. For those who still need to travel on the existing B3334 through Stubbington (e.g. local residents) although journey times are likely to be slightly longer than at present, the reduction in the volume of traffic and congestion is expected to provide more reliable journey times which may be expected to have a positive impact on driver stress.

- 3.8.27 The significant reduction in traffic volumes in Stubbington is expected to reduce fear of accidents amongst pedestrians and cyclists and thus have a positive impact on traveller stress.
- 3.8.28 The scheme is considered to have a small negative impact on view from the road, due to it being constructed on land that is predominately flat, open fields that are undeveloped; although this will be reduced by appropriate landscaping.
- 3.8.29 There are not expected to be any material impacts in relation to traveller care.
- 3.8.30 Overall, the scheme is expected to have a slight beneficial impact on journey quality.

Qualitative Assessment (seven point scale) – Journey Quality	
Slight Beneficial	

Accessibility

- 3.8.31 Accessibility appraisal, as set out in TAG Guidance A4.2, includes a strategic accessibility assessment and an accessibility audit – these focus on public transport accessibility. Given that the proposed scheme is a highway improvement based scheme and has little direct influence on public transport services, a high level qualitative assessment has been undertaken.
- 3.8.32 The scheme is not considered to have any impact on access by rail. Bus services within the area relevant within the context of scheme impacts are shown in Table 3-5 and Figure 3-4. The introduction of the bypass is not anticipated to alter bus routes, which are assumed to continue to operate through Stubbington village. No significant changes to existing bus infrastructure (e.g. bus stops) are expected.

Table 3-5: Existing bus services within the study area

Service	Route	Weekday Frequency	
		AM Peak	PM Peak
X5	Southampton – Locks Heath – Fareham – Stubbington – Lee-on-the-Solent - Gosport	30 min's	30 min's
21	Fareham – Peel Common – Stubbington – Hill Head Circular Route	Approx. 60 min's	Approx. 60 min's

- 3.8.33 Bus journey times through Stubbington are currently unreliable and experience increased periods of delay during weekday peak periods when the road network is congested which increases journey times.
- 3.8.34 Impacts on bus journey times are considered in Section 2.13 in the Strategic Case.

- 3.8.35 Although the introduction of the Bypass will significantly reduce the volume of traffic routing through Stubbington village (which would therefore be expected to reduce delay to buses in central Stubbington), the reality is that the supporting village traffic measures will restrict vehicular traffic from travelling through the village significantly faster than it does at present in order to maximise the effectiveness of the bypass. However, the removal of a significant proportion of through traffic from Stubbington village is expected to have a positive impact on bus punctuality.

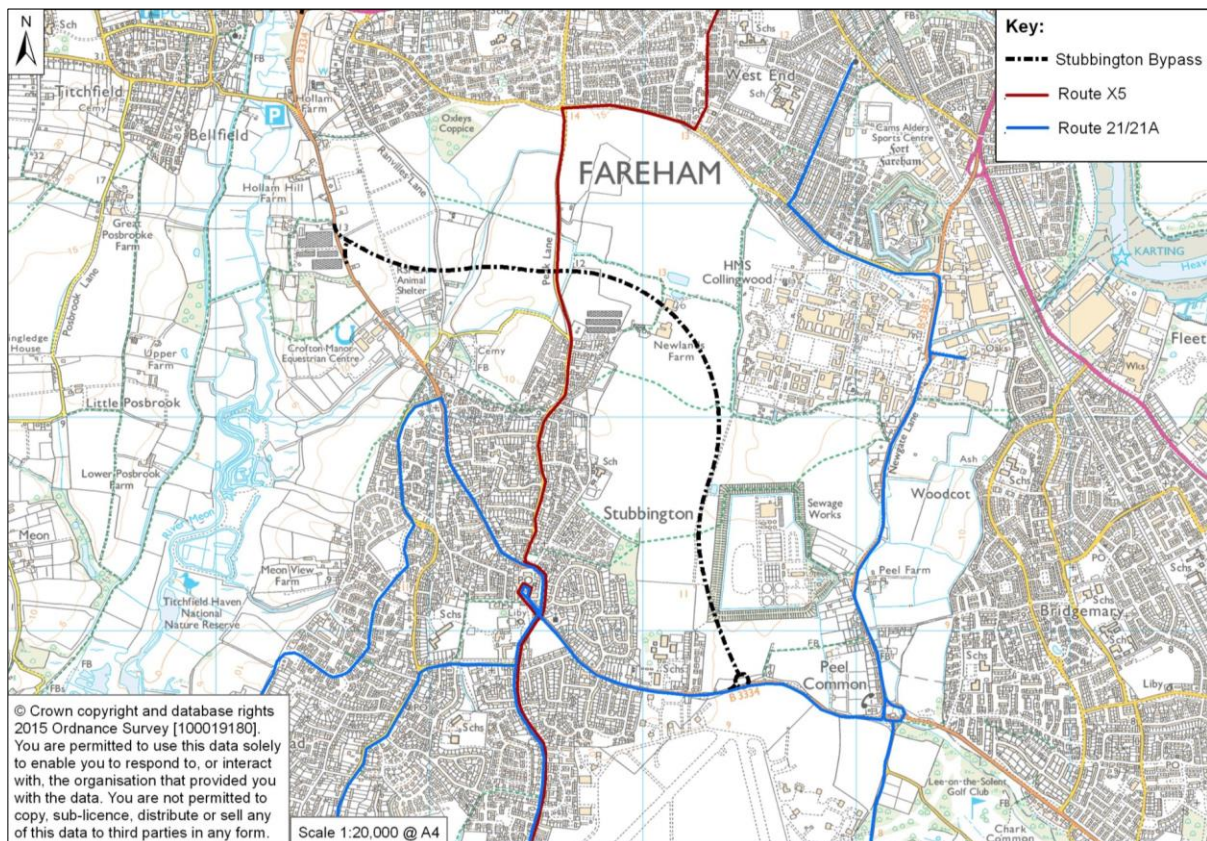


Figure 3-4: Existing bus services in the study area

- 3.8.36 The overall impact of the scheme on accessibility by public transport modes has been assessed as **neutral**.

Qualitative Assessment (seven point scale) - Accessibility
Neutral

Affordability

- 3.8.37 Given the nature of the scheme, the potential impact on the cost of travel, or the availability of low cost travel to vulnerable groups, is considered to be limited to changes in car fuel and non-fuel operating costs.

- 3.8.38 The TUBA analysis indicates some increases in vehicle operating costs (non-business users) associated with an increase in distance travelled with the bypass, but these are not considered to be significant overall in terms of personal affordability. The overall impact on affordability has therefore been assessed as **neutral**.

Qualitative Assessment (seven point scale) - Affordability
Neutral

Option and Non-Use Values

- 3.8.39 In line with the guidance provided in TAG Unit A4.1, this scheme is assessed as having a **neutral** impact as it does not “substantially change the availability of transport services within the study area.”

Qualitative Assessment (seven point scale) – Option and Non-Use Values
Neutral

3.9 Distributional Impacts

- 3.9.1 The main purpose of distributional impacts assessment is to consider how the scheme impacts may be expected to vary across different social groups. An initial summary distributional impacts assessment is included in Appendix D. A proportionate approach has been taken, in line with the value, scale and extent of impacts expected of the scheme proposed. It is not intended to be a fully comprehensive Distributional Impact appraisal, although key principles from TAG Unit A4.2 have been applied.

4 Financial Case

4.1 Introduction

- 4.1.1 The financial case sets out the profile of the scheme costs and provides justification of the affordability and details of funding responsibilities.

4.2 Scheme Costs

- 4.2.1 The total current outturn scheme cost estimate is **£33.3m**, as detailed in Table 4-1. These figures include the base cost, plus adjustments for risk allowance and inflation.

Table 4-1: Outturn scheme cost estimate (June 2015)

Project component – cost heading	TOTAL
Design / preparation fees	2,981,967
Supervision	795,191
Works costs ¹⁸	19,014,025
Supplementary Works	865,756
Statutory Undertakers	1,568,626
Land costs and Part 1 claims	3,000,000
Risk allowance	£1,326,791
Optimism Bias	£3,748,069
Total cost	33,300,425

- 4.2.2 The cost estimate has been prepared by Hampshire County Council Engineering Consultancy / HCC Quantity Surveyors, who have used their estimating and pricing database as the base for the unit rates. The scheme cost is based on a preliminary design estimate as at June 2015 and reflects the scheme design as described in Chapter 2 and Appendix B.
- 4.2.3 Base cost estimates for the scheme have been prepared, including the preparation costs, the design, supervision and construction of the road, and associated complementary and environmental mitigation. This includes the full scope of the scheme and is therefore inclusive of the main bypass plus supporting works to Titchfield Road / Gosport Road and within Stubbington village.

¹⁸ Works cost includes 20% contingency allowance.

- 4.2.4 Supplementary works include landscaping, ITS and lab testing. The cost estimate for statutory undertakings is predominantly based on C3 returns, with the main exception being for the works in Stubbington village for which an estimate has been made.
- 4.2.5 A more detailed breakdown of the main works construction cost component of the total base cost is provided in Table 4-2 below. This correlates with the totals for 'works costs' in Table 4-1 above, and excludes utilities.

Table 4-2: Construction costs breakdown

Construction cost component (excluding utilities)	Cost (£)
Preliminaries	1,625,000
Site clearance	128,285
Hedges and fencing	531,768
Safety fence	8,750
Drainage	2,476,708
Earthworks	2,083,820
Pavements	5,322,888
Kerbs and footways	1,221,705
Traffic signs and road markings	112,000
Street lighting	188,100
Electrical Work (ITS)	450,000
Landscaping and ecology	96,358
SUB-TOTAL MAIN WORKS	14,245,383
Night working (5%)	631,019
Works contingency (20%)	2,524,077
Inflation	1,613,546
TOTAL MAIN WORKS COSTS	19,014,025

- 4.2.6 Allowances have been made for inflation and risk within the scheme cost estimate, as set out below.

Inflation Assumptions

- 4.2.7 Investment costs have been forecast at current prices and inflated up to the point of expenditure.
- 4.2.8 For this financial case, the full rate of inflation has been included in cost forecasts. The assumed rate at the time of preparation of the cost estimate was 3% per annum. The Building Cost Information Service (BCIS) of the Royal Institution of Chartered Surveyors (RICS) issued a statement on 15 October 2015 that said, *'Tender prices in the civil engineering sector are set to rise significantly over the next five years. Prices have been stable over the past year but are forecast to rise by an average of over 5% per year for the next five years'*. Whilst it is therefore recognised that a higher rate of inflation may now be applicable, it is considered that there is sufficient contingency within the cost estimate at this stage to allow for this. A revised rate of inflation will be applied in relation to the detailed design cost estimate.

Risk / Contingency / Optimism Bias

- 4.2.9 As detailed above (Table 4-2), a 20% contingency for variations to the Contract during the construction period has been included in the Works Cost estimate.
- 4.2.10 The Quantified Risk Assessment has identified a project risk value of **£1,326,791** in relation to the scheme. This figure is included in the overall scheme cost.
- 4.2.11 The QRA has been based on a Monte Carlo simulation. This involves determining the impact of the identified risks by running simulations to identify the range of possible outcomes for a number of scenarios. A random sampling is performed by using uncertain risk variable inputs to generate the range of outcomes with a confidence measure for each outcome which determines a range of possible outcomes for risks and the probabilities they will occur. The simulation produces distributions of possible outcome values and this has been used to determine the risk cost value to be applied for the scheme. The P(Mean) value has been used.
- 4.2.12 The Risk Register, including details of the quantified risk costs, is provided in Appendix H. Further details on risk assessment and risk management are also provided in Appendix I.
- 4.2.13 Optimism bias has been applied at a level of 15%, which is considered to be appropriate for the stage of scheme development. Optimism bias therefore amounts to £3,748,069.

4.3 Scheme Funding

- 4.3.1 At this stage, full funding for the scheme is not allocated. The purpose of this business case is to support the application for funds from the Local Growth Fund, via future rounds of the Solent LEP's Local Growth Deal with central government.

LGF funding will be required to support other local financial contributions towards the total scheme cost.

Funding Sources

- 4.3.2 The funding sources initially proposed within the Expression of Interest submitted to the Solent LEP in November 2015 are summarised in Table 4-3.

Table 4-3: Summary of scheme funding sources- per Expression of Interest to Solent LEP (Nov 2015)

Funding Source	Funding Amount (£m)	Funding Amount (%)
HCC	2.0	6%
Solent LEP LGF 3	32.0	94%
TOTAL	34.0	100%

- 4.3.1 In February 2016 the Solent LEP subsequently invited HCC to submit an outline business case, on the basis that a higher local contribution could be demonstrated.
- 4.3.2 In accordance with this request, the County Council has been exploring various means of increasing the local contribution, to a greater proportion of the overall scheme cost. Consideration has been given to the principle of securing future business rate income associated with the Solent EZ in order to offset initial borrowing by the County Council. Discussions have taken place regarding the principal of using the business rates for Daedalus East. Modelling undertaken on behalf of the Solent LEP has identified the potential scale of future business rates from Daedalus East is likely to be sufficient to provide enough revenue to repay a loan used to provide increased local match funding, and that these future rates could be made available towards the match funding for Stubbington Bypass, on the basis that they have not yet been committed elsewhere. However in the short term, prior to the rate related funding being available, the County Council would need to secure upfront initial borrowing, which would increase the costs of the project overall if the loan is on an interest bearing basis.
- 4.3.3 Types of borrowing could potentially include prudential borrowing and / or a loan element from the Growing Places Fund (administered by the Solent LEP). These options require further detailed financial consideration and assessment and would need to be subject to the identification and agreement of an approach which brings minimal additional risk for the County Council. Identified potential risks relate to applicable interest rates and fees and would need to be subject to a full assessment of the financial risk to the County Council. Arrangements for any form of loan would also need to be subject to the receipt of satisfactory and legally binding guarantees from the Solent LEP that access to future rate income from the Solent EZ, sufficient to repay the full costs of any loan taken out by the County Council to

construct the bypass, and available for the duration of any loan period could be secured by the County Council.

- 4.3.4 The County Council is continuing to hold discussions with the Solent LEP regarding the potential for these arrangements and, in particular, the use of the Growing Places Fund and its associated conditions and are seeking support from the Solent LEP in order to confirm their position. It is therefore not feasible at this stage to confirm any increases in the level of match funding for the bypass, although the County Council are keen to work with the Solent LEP to identify an acceptable arrangement in relation to off setting borrowing, in order to increase local match funding in a way which minimises risks to the County Council.
- 4.3.5 Should a suitable arrangement be confirmed, it is expected that an increased level of local contribution could be provided in the region of 25% of the total scheme cost, though this is dependent on securing a loan from the growing places fund on preferential terms as well as absolute guarantees on access to future business rate income. It is therefore expected that the potential increased local match funding could help reduce the level of Local Growth Funding being sought to a figure closer to £24m.

4.4 Ongoing Revenue Liability

- 4.4.1 The scheme design will take into account the need to build resilience into the bypass construction methodology from the outset being mindful that maintenance liabilities will fall to HCC being beyond the funding window.

4.5 Spend / Funding Profile

- 4.5.1 Table 4-5 sets out the funding profile for the scheme as initially proposed within the Expression of Interest submitted to the Solent LEP in November 2015. As explained above, the split between LGF funds and local contribution will need to be reviewed and updated subject to the outcomes of potential arrangements to increase the local contribution. The total spend profile reflects the previously submitted projected delivery programme which will need to be updated to reflect delays in the start of the programme, once funding confirmation is secured, see Chapter 6.

Table 4-4: Scheme funding profile - per Expression of Interest to Solent LEP(Nov 2015)

£m	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Solent LEP LGF Funding	1.0	1.5	4.0	18.0	7.5	32.0
HCC Contribution	1.0	1.0				2.0
TOTAL	2.0	2.5	4.0	18.0	7.5	34.0

5 Commercial Case

5.1 Introduction

- 5.1.1 The Commercial Case sets out the commercial viability of the Stubbington Bypass scheme and the procurement strategy that will be used. This includes details of risk allocation and transfer, contract timescales and implementation timescale as well as details of the capability and skills of the team delivering the project and any personnel implications arising from the proposal.

5.2 Sourcing Options and Procurement Strategy

- 5.2.1 It is likely that there will be 3 work packages which could be progressed in tandem or sequentially dependent upon contractual preferences and any funding constraints at the time:

- Titchfield Road and associated traffic management;
- Gosport Road and associated traffic management; and
- the bypass itself (offline construction).

- 5.2.2 It is currently anticipated that the works would be procured via the Generation 3 Civil Engineering, Highways and Transportation Infrastructure Works Framework 2016-2020 (GEN3). The GEN3 Framework was introduced in April 2016 with a number of selected contractors in the framework. Framework contractors' performance will be monitored using Key Performance Indicators (KPI) and other performance data. 'Green' performing Framework contractors are incentivised and tender submissions are weighted depending on current dashboard status.

- 5.2.3 This mechanism provides an incentive for the Framework Contractors to maintain a high quality of work and standard of service whilst working for HCC. The GEN3 framework has been demonstrated to provide value for money and this procurement route is also most suitable for the proposed delivery timescales for the scheme, for instance when compared to the OJEU process which would extend the delivery programme significantly.

- 5.2.4 There are three different GEN3 framework levels which could be used dependent upon the nature and value of the works.

- 5.2.5 GEN3 (2) is a framework contract for specialist civil engineering structural works, complex highway infrastructure works, public authority civil engineering works and associated medium value construction work between the individual project values of approximately £50k to £10m. The GEN (2) Framework is available for use by HCC and other authorities across Southern England.

- 5.2.6 GEN3 (3) is for significant highway infrastructure development, civil engineering works and associated major value construction work between the individual project values of approximately £8m to £25m.

5.1 Procurement Timescales

- 5.1.1 The current indicative delivery programme (see Section 6.2) schedules the tender process for the period September 2018 to November 2018. Tender preparation would be undertaken in advance of this period. Procurement timescales will be considered further once there is greater funding certainty.

5.2 Specification

- 5.2.1 HCC has a standard specification that it uses on all of its highway projects. The SE7 Regional Highways Framework Model Contract Specification (which follows DMRB standard specification, contained in the Manual of Contract Documents for Highway Works (MCHW), published by Highways England in February 2016) will be used for the proposed works. If required, additional items will be added to the standard specification.

5.3 Contract Management

- 5.3.1 The Contract will be procured under the terms and conditions of the NEC 3 Engineering and Construction Contract, most likely using Option B: Priced contract with Bill of Quantities. An option could be that the Contract could be let with a Quality / Price bid. This would enable HCC to ask and score the Tenderers on specific questions relating to managing the highway network, public safety, and other key issues whilst constructing the works.
- 5.3.2 HCC Engineering Consultancy will prepare the Contract documents in-house. The contract will be tendered using the electronic tendering system In-Tend. This facility enables Tenderers to receive and submit Tender documents electronically. It also manages Tender queries and their responses.
- 5.3.3 The tender documents to be prepared and provided to Tenderers are expected to include:
- Specification
 - Works Information
 - Site Information
 - Contract Data
 - Bill of Quantities
 - Pre-Construction Health and Safety Plan

- 5.3.4 A Contract Audit will be carried out, and a full cost estimate including risk cost review will be provided prior to Invitation to Tender.
- 5.3.5 During construction the site will be managed by an experienced Resident Engineer. The Resident Engineer will be responsible for the day to day management of the Contract. Site engineers, Clerk of Works and Quantity Surveyors will also assist the Resident Engineer.
- 5.3.6 Particularly on the Titchfield and Gosport Road section, it is possible that the work will be required to be undertaken whilst causing the minimum of disruption to the surrounding road network. If necessary, the contract will be prepared to restrict the contractor to maintaining the capacity of the existing network as far as is reasonably practicable during the working day, 7 days a week.
- 5.3.7 Regular progress meetings will be held to monitor progress on site. The Project Manager will also attend these meetings and if need be will provide technical support and assistance to the Site Team. If needs be the Project Manager will inform the Client Manager of any significant events which can then be considered by the senior management teams
- 5.4 Commercial Risks to Delivery
 - 5.4.1 Project risks are identified in the Risk Register (see Appendix H) and risks will be allocated to the relevant party that will take on each risk. Some of the risks to delivery will be mitigated by transferring them to the identified Contractor to manage. This will be achieved by the risks being part of their contractual duty to manage, or by ensuring specific additional clauses are written into the Contract to allow the Contractor to price as part of the scheme costs. The risks that the contractor will take on will be identified within the contract. Where possible, risks will be reduced throughout the design period and those remaining risks identified as part of the contract documents.
- 5.5 Human Resource Issues
 - 5.5.1 There are no HR issues that have been identified at this stage in relation to the contracting for this scheme.

6 Management Case

6.1 Introduction

- 6.1.1 The Management Case demonstrates that the scheme is deliverable and that there are appropriate processes in place to support effective delivery.

Overview of Deliverability

- 6.1.2 It is considered that the Stubbington Bypass scheme is deliverable, although not without challenges. A significant milestone has been achieved with planning permission being granted in October 2015.
- 6.1.3 The scheme requires land acquisition and early negotiations / discussions have taken place with relevant landowners. At this stage, it is not known whether a CPO process will be required (although this will be advanced in a parallel with ongoing negotiations to mitigate impacts on timescales if it is required).
- 6.1.4 From an engineering perspective, the scheme is not considered to be particularly complex or unusual. Key construction activities will include:
- Enabling works, including site preparation (including earthworks), excavation of detention basins,
 - ecological and arboricultural works (protection of trees to be retained and removal of those to be lost);
 - Diversion and of utilities and installation of new services;
 - Construction of substructures and provision of infrastructure, footpath/cycleway links, mains
 - drainage and other services etc.;
 - Construction of Proposed Scheme and other hard surfaced areas;
 - Structural landscaping; and
 - Construction of the green infrastructure.
- 6.1.5 The majority of the Bypass will be constructed on a green field site which will not impact on the travelling public, but will impact on the local farmers. The construction of the improvements along Titchfield Road and Gosport Road will impact on the travelling public, as will the new junction on Peak Lane. Three stages of construction strategy are proposed for each of Titchfield Road, Peak Lane and Gosport Road. Possible locations for site compounds and haul routes have been identified.
- 6.1.6 There may be an opportunity to close Titchfield Road if the western end of the Bypass, between Titchfield Road and Peak Lane, is opened to traffic early. This will be investigated during the detailed design.

- 6.1.7 Proposed diversion routes have been established for the temporary closures of Titchfield Road, Peak Lane and Gosport Road. These could be used when traffic management cannot not be put in place without severe constraints on the contractor's method of work, or the safety of road workers is compromised, subject to agreement with the Area Office and the police
- 6.1.8 Local residents and businesses will be kept informed with ample publicity well in advance of, and during, the roadworks.
- 6.1.9 Subject to funding, an indicative delivery programme assumes construction of the scheme to commence in early 2019 and to be completed by mid 2020. This is based on a construction period of approximately 18 months, including services diversions.

6.2 Governance

Project governance

- 6.2.1 The project will be delivered by Hampshire County Council (HCC). In all projects, HCC assembles a qualified and experienced team of individuals best suited to deliver major projects. Figure 6-1 below illustrates the high level project governance / management arrangements to oversee successful delivery of the scheme. A more detailed illustration of the proposed delivery team structure / governance for this project is also provided in **Error! Reference source not found.**

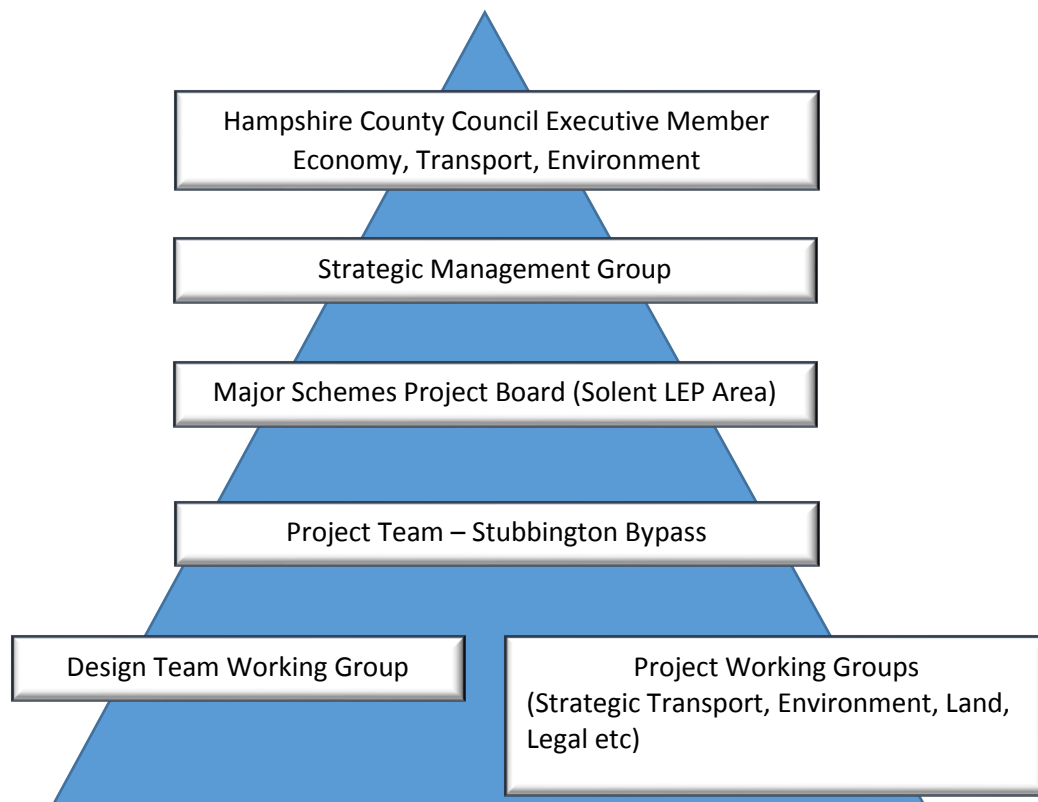


Figure 6-1: High level project governance

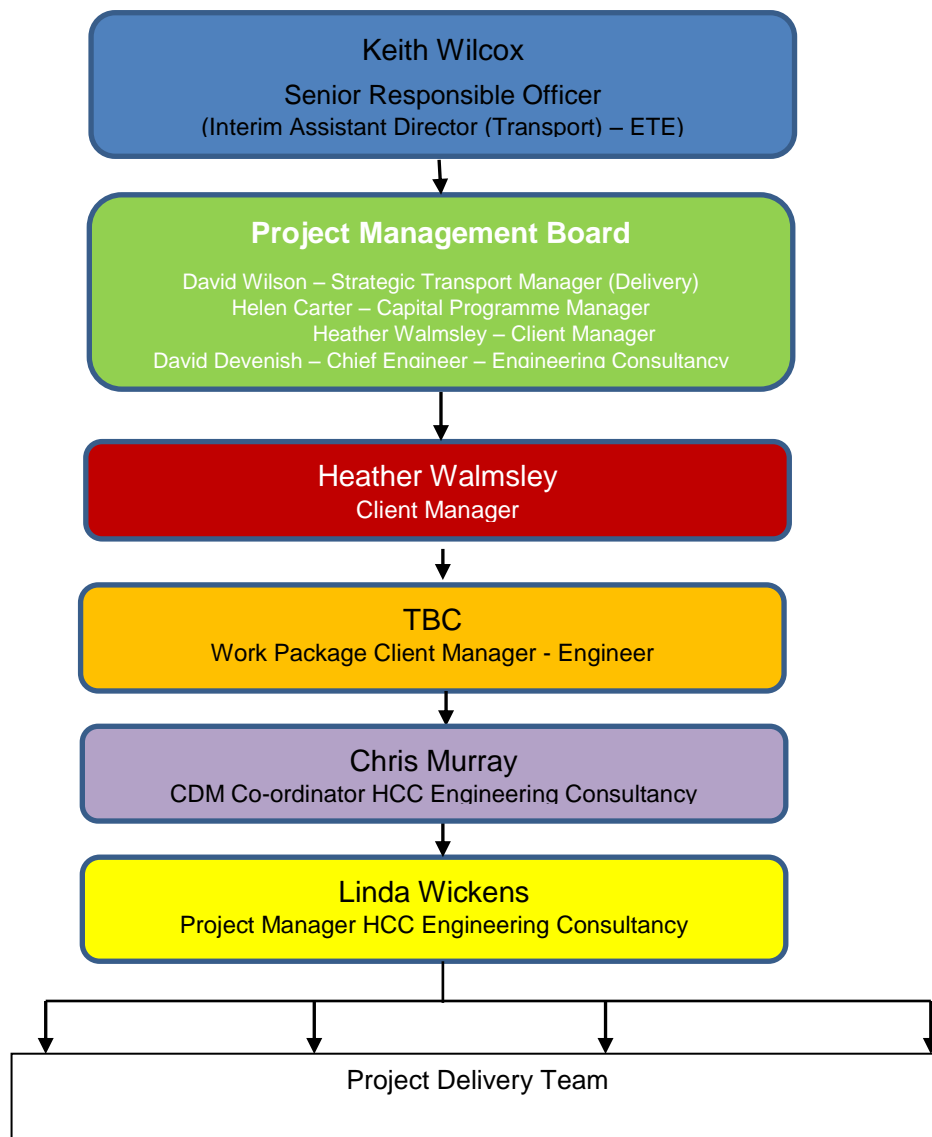


Figure 6-2: Project delivery governance

Project Management Board

- 6.2.2 The HCC Major Schemes Project Board (Solent LEP area) comprises officers with responsibility for the strategic delivery of all HCC major schemes within the Solent LEP area, thus ensuring effective co-ordination between all schemes. The Project Management Board has met regularly and will continue to do so throughout the delivery of the scheme. It will have a key focus on ensuring project assurance objectives are met, ensuring that the project remains on target in terms of business, user and technical objectives. It will also consider and approve contract management arrangements.

Senior Responsible Officer / Project Manager

The Senior Responsible Officer (SRO) for the project delivery is: Keith Willcox (Interim Assistant Director (Transport) – Economy, Transport & Environment. The Client Manager for the project is Heather Walmsley. The Project Manager for the scheme is Linda Wickens. Their role is to oversee the implementation of the scheme and provide the interface between the Project Teams and the Project Board.

Project teams

- 6.2.3 The project teams will be organised around project working groups focusing on a particular technical delivery topic. Project teams will consist of a combination of HCC staff and consultants. The Project Manager will co-ordinate the work of the project teams.

Project assurance

- 6.2.4 The project lifecycle will be underpinned by Hampshire County Council through a Gateway Review Process (GRP) to ensure each stage is critically assessed by personnel with the relevant skills and experience, prior to commencing the next stage. The GRP provides an audit trail and ensures relevant scrutiny and challenge, visibility and transparency, and compliance. The GRP process enables:

- Realistic and achievable targets;
- Deployment of relevant skills and competencies to a project;
- Stakeholders understanding of a project and issues involved;
- Less chance of a project failing;
- Identification of issues within a project and lessons learnt;
- Compliance and governance of standing orders and best practice;
- Visibility of the procurement process; and
- Provision of a comprehensive audit trail.

- 6.2.5 Project Appraisals will be produced as part of the Gateway process. In line with the indicative delivery timescales (see Section 6.3) a G3 Project Appraisal is currently planned to be considered by the Executive Member for Economy Transport and Environment in July 2018.

6.3 Project Plan

Phasing

- 6.3.1 It is currently planned that the main Bypass element of the scheme could be constructed during 2018/19 /20, subject to funding confirmation. Supporting highway works would be constructed prior to this, based on the following programme:

- B3334 Titchfield Road works; including the Titchfield Gyratory and Bridge Street junctions – 2018/2019

- Stubbington Village junctions - 2019/20;
- Peel Common Roundabout (Phase 2) – 2019/2020

Delivery Milestones

6.3.2 An indicative project plan, assuming confirmation of funding by mid 2016, could be as follows:

Table 6-1: Key delivery milestones (indicative)

Project Milestone	Expected completion date
Planning application granted	October 2015 (actual)
Detailed Design commences	September 2016
Land acquisition concluded	September 2018
Detailed Design complete	September 2018
Tender preparation complete	September 2018
Tender Process concluded	November 2018
Advanced works commence	November 2018
Advanced works complete	January 2019
Main Construction works commence	January 2019
Construction complete	Mid 2020

6.3.3 A project gantt chart is included in Appendix G which illustrates the key project tasks and delivery timescales (indicative only). This will be reviewed and developed in more detail once there is greater certainty over funding.

Key Dependencies and Critical Path

6.3.4 Key dependencies that are critical to the successful delivery of the planned programme include:

- Funding allocation / approval;
- Timely procurement of contractor;
- Project appraisal (G3) approval by the HCC Executive Member for Economy Transport and Environment;
- Acquisition of the land required; and
- application for PROW diversions.

Land Requirements / Acquisition

- 6.3.5 It will be necessary to acquire various third party land interests in order to implement the scheme. The progression of land acquisition can not commence until funding certainty has been secured. Land is required for the Bypass and also for the Titchfield Road and Gosport Road improvements. Temporary use of additional land throughout the construction period will also be required to enable reduced impact of the construction of the improvements.
- 6.3.6 Discussions have been held with affected land owners and occupiers with respect to the impact of the scheme on their property. Meetings held to date have been reasonably positive and have provided the opportunity to discuss appropriate mitigation measures. It is expected that more active engagement would be undertaken once there is greater funding certainty. CPOs will be prepared in parallel in case they are needed in the event that negotiations to acquire the necessary land by agreement are unsuccessful, however their use generates the risk of a Public Inquiry, which could lengthen the programme. The delivery programme makes provision for a period of two years to cover a potential CPO process, if required. Once again, the CPO process can not be commenced without funding certainty.
- 6.3.7 The timescale associated with any potential CPO is a key dependency with other parts of the delivery programme which can not start until land issues are resolved.

Planning Permission

- 6.3.8 Planning permission for the scheme was granted in October 2015.

Statutory Undertakers

- 6.3.9 C2 and C3 returns have been received from all the service providers. Services of particular note are:
- a Southern Water syphon which crosses Titchfield Road just north of Hollam Nursery; and
 - foul sewers running to Peel Common Wastewater Treatment works, crossing Gosport Road approximately 150m west of Peel Common roundabout.
- 6.3.10 As much of the works associated with the bypass are off-line, this substantially reduces service diversions and traffic management requirements. The route is principally across open fields and utilities are predominantly expected to be encountered at the sections of Titchfield Road and Gosport Road at either end of the bypass.

- 6.3.11 The risks to the project delivery programme (and costs) associated with utilities have been identified and suitable mitigation measures developed in order to minimise the potential impact on delivery. See Section 6.6 for further details.

6.4 Evidence of Scheme Delivery

- 6.4.1 Hampshire County Council (HCC) has a strong track record in delivering transport infrastructure schemes, including major schemes. The County Council is confident that this project can be completed within the stated timescales and milestones. The scale and types of works involved in the Peel Common roundabout scheme are familiar to those delivering them. Some examples of HCC delivery of transport infrastructure schemes are provided below.

Fareham to Gosport BRT (Redlands Lane to Titchborne Way) dedicated busway - Phase 1A

- 6.4.2 This £25m scheme was delivered to budget by Hampshire County Council within an extremely rapid timescale given the nature of scheme complexities and legal opposition. The project faced legal opposition on environmental grounds and was ultimately taken to the Supreme Court where the final Appeal was dismissed and Objections overturned. In addition the County Council faced two separate Village Green Applications one of which was rejected the other partly accommodated.

- 6.4.3 The overall impact of the legal challenges resulted in a 9 month delay to construction programme, disruption and heavy legal costs. These impacts are considered to be relatively modest given the significant challenges faced.



M27 Junction 5 Phase 1

- 6.4.4 This scheme was completed in July 2010 and delivered by HCC on time and within budget, overcoming significant ecological and environmental constraints. Phase 1 provided a segregated left turn lane from the westbound off slip to the southbound A335 Stoneham Way, removing queuing traffic from the M27 westbound carriageway

6.5 Stakeholder Management and Engagement

- 6.5.1 Hampshire County Council has a good understanding of the key stakeholders involved in the delivery of this scheme. Stakeholder engagement has included, and will continue to include, internal groups and external bodies as necessary, including Emergency Services, Environment Agency, Fareham Borough Council (planning, traffic management), specialist user groups, and others as necessary.

Consultation / Engagement Undertaken to Date

- 6.5.1 'Improving Access to Fareham and Gosport' public consultation events were held in the summers of 2013 and 2014. The Stubbington Bypass formed a central part of this material.
- 6.5.2 These events provided the opportunity to inform the public and wider stakeholders of the latest information on the improvement works and provided opportunity for comments and feedback to inform the scheme development. See Section 2.10 for further details.
- 6.5.3 Furthermore, the planning application submitted (and subsequently approved) in 2015 was subject to a statutory consultation period and provided the opportunity for the public and wider stakeholders to comment upon the proposed scheme. Consultation feedback was considered in respect of granting planning permission.

Stakeholder Management Strategy

- 6.5.4 During further scheme development and delivery effective stakeholder management will be undertaken in line with a scheme specific communications plan (currently being prepared and to be provided in the Full Business Case). The communications plan will set out the key events / actions that have been identified throughout the full life cycle of the scheme, the key messages that require dissemination, and the preferred means of achieving this. The principal communication approaches will include the web site, press releases, events, meetings and formal reporting, depending upon the target audience. Co-ordination between departments within the Council, the Solent LEP, and partner organisations will ensure that information is released in a co-ordinated fashion, reducing confusion and supporting the process. Media relations will be co-ordinated through the Council's press team and local media will be kept informed.
- 6.5.5 The table below provides a summary of the key stakeholders and their influences/ interests and summarises the overall strategy for management / engagement. The most appropriate approach has been identified based upon the particular stakeholder interests and / or their role in scheme implementation.

Table 6-2: Key stakeholders and stakeholder management framework

Who	Role/ Relevance / interest	How	Involve / Inform / Consult	When
All Councillors	Political representatives	Internal Member documents	Raise awareness and consult	At key points in the project
Solent Local Enterprise Partnership	Funding body	One to one briefings	Inform, involve and consult	As necessary
Members of the public	General interest	Press releases, website and electronic newsletters	Inform, raise awareness	Regular updates to web site; at least every two months
Local MPs and MEPs	Political representatives	One to one briefings	Consult and gain buy in	As necessary, and at key decision points
District Officers	Interest in localised scheme impacts	Communications meetings	Inform, involve and consult	Regular updates
Local large and small employers	Interest in localised scheme impacts	Public consultation	Consult and gain buy in	As necessary
Emergency services	Emergency access routes	Regular meetings	Consult and gain buy in	As project progresses
Natural England	Statutory Consultee	One to one briefings	Involve in design decisions	At appropriate times
Environment Agency	Statutory Consultee	One to one briefings	Involve in design decisions	At appropriate times
Disability Groups	Implications of scheme design on access	Email, meetings, consultation seminar	Consult and inform	As necessary
Cycle groups	Provision for cyclists, including safety	Letters / e-mail updates	Inform	At key points in the project
Bus operators	Traffic management impacts	Letters / e-mail updates	Inform	At key points in the project
Public Utilities	Direct impacts of scheme on equipment	Letters / e-mail updates	Inform and involve	As necessary

Who	Role/ Relevance / interest	How	Involve / Inform / Consult	When
Crofton CAT. Titchfield Parish Council	Political representatives	Letters / e-mail updates	Raise awareness and consult	At key points in the project

Scheme Acceptability

- 6.5.6 Overall, based on the consultation and engagement undertaken to date, the scheme has been demonstrated to have strong local support amongst the public and wider stakeholders – see also Section 2.10.
- 6.5.7 There is a high public demand for improving western access to the Gosport peninsula. There is good support from drivers and local residents for a bypass. The proposed alignment follows the route of the historical bypass shown on the Local Plans, and has political support from Fareham and Gosport Borough Councils.

6.6 Risk Management

Risk Management Approach

- 6.6.1 In the context of this scheme, risk is defined as the potential for future events which have a negative impact on the achievement of scheme objectives.
- 6.6.2 Risk management is a key process underpinning scheme governance and the achievement of scheme objectives. Risk management will underpin strong scheme governance and achievement of scheme objectives in a cost effective manner. An appropriate framework (comprising managing, reporting, process and responsibilities) has been developed.
- 6.6.3 Appendix I sets out the Risk Management Strategy and Appendix H includes the Risk Register.

Risk Identification, Assessment and Review

- 6.6.4 A full review of scheme risks was undertaken in June 2015 by the Project Team and this has formed the basis of the Risk Register. This took the form of a risk workshop to identify a comprehensive range of risks falling under various risk categories. The register includes details of individual risks, their potential impact and likelihood, any mitigating actions, and the responsible owner. Key risks identified from this process are summarised in Table 6-3.

Table 6-3: Summary of key risks

Risk	Impact	How risk will be managed/mitigated
Land not acquired - negotiations with landowners do not reach satisfactory conclusion	Need for CPO process – delays and additional legal costs	Early dialogue with landowners to keep them informed of design process and alignment, and to discuss /agree mitigation measures that could reasonably be delivered. Prepare CPO's in parallel
Challenges to CPOs	Delays and additional legal costs	Early communication with land owners. Ensure nil detriment scheme.
Extent / cost of environmental mitigation is greater than anticipated.	Delays scheme and increases costs	Early surveys carried out
Tender price exceeds budget, estimated cost not based on robust prices.	Increase in scheme costs. Potential delays.	Seek early expressions of interest.
Possible increase in material costs and low material availability that increases contractor costs and tender	Delays scheme and increases costs	None- outside of realistic control
Statutory undertakers – unknown services encountered and / or delays to diversions	Increases fee costs and civil works costs(contractor prolongation costs) and delays programme	Trial pits to establish locations of services
Complications with construction of retaining walls on Titchfield Road.	Delays scheme and increases costs	Further investigations being undertaken.
Lack of co-ordination with other highway improvement projects (A27 dualling, St. Margarets/ Peel Common/ Newgate Lane South) causes disruption/ overlap of works.	Potential delays to start of scheme construction	Close working between project teams, regular meetings on details throughout scheme development.
Insufficient funding to cover scheme costs – LGF funding required.	Scheme can not be delivered within planned timescales.	Solent LEP bid for additional LGF funds. Business case developed to demonstrate Value for Money of the scheme.

6.6.1 Based on the identified risks in the Risk Register, a Quantified Risk Assessment has been undertaken to provide an expected risk cost value, and this has informed the risk-adjusted scheme cost estimate (see Chapter 4).

6.6.2 The Risk Register will be kept under review throughout the life of the project and will be the responsibility of the Project Manager. Risk reporting and review will be an integral component of Project Management Board meetings.

6.7 Monitoring and Evaluation

6.7.1 A monitoring and evaluation framework will support the wider monitoring and evaluation of the Solent LEP for the Solent Growth Deal. The primary purpose of undertaking monitoring and evaluation of the scheme is to:

- Measure the success of the scheme against the identified scheme objectives;
- Demonstrate that the scheme has achieved value for money; and
- Identify key lessons learned.

Monitoring

6.7.2 A Monitoring and Evaluation framework will be developed to assess the performance of the proposal against the specific scheme objectives –defined in terms of key outputs and outcomes.

6.7.3 Development of the monitoring framework will include the identification of the scope and requirements for the collection of before and after monitoring data. This likely to include traffic flows through Stubbington village (and on the new bypass), journey time information, air quality monitoring, and accident data.

6.7.4 The facilitation of development is not so easy to monitor specifically in relation to transport elements due to commercial sensitivities and the many and varied complex economic factors at play. They also tend to be longer term impacts. The potential monitoring of economic benefits will be explored through HCC's Economic Development and Research and Intelligence teams who collect data annually on housing and employment development completions. This could potentially be used to assess the impact of transport infrastructure improvements through the following indicators:

- Level of job retention;
- Actual job growth; and
- Increase in GVA.

Evaluation

6.7.5 Following scheme completion, evaluation of the Stubbington Bypass scheme would be undertaken to audit performance against aims and objectives in relation to activity performance, financial projections, construction and commissioning. The outcomes that the project has delivered will be identified. The evaluation could potentially extend beyond a desk-based study to involve interviews with key project officers and a process review workshop with key parties and stakeholders.

6.7.6 The evaluation is expected to include an assessment of:

- Programme management, success factors and key obstacles to delivering the scheme. Provide details of project plan assessment, delivery at key milestones, etc. This will help identify good practice in this area, which can be shared in the future;
- A review of evidence collated through HCC's project management and governance procedures;
- Consultation with key stakeholders to collate a range of views of the operation and success of the scheme;
- The evolution of the risk register and the effectiveness of the risk management strategy e.g. safety during construction, delays to transport users, impacts on local business during construction;
- If and how the context and rationale behind the scheme has changed;
- Identify any changes to the delivered scheme from the planned scheme and the reasons behind any changes;
- Assess how well scheme objectives are being realised at this stage; and
- All costs involved in the management, construction and delivery of the scheme compared to the forecast costs including an assessment of risk and optimism bias in pricing.

6.7.7 Lessons learned from the implementation of the scheme will be identified on completion of key stages. The Project Manager will oversee the maintenance of a Lessons Learned Log from which will derive a Lessons Learned Report at project closure. This information will be shared with stakeholders and other authorities as appropriate.