Peel Common Roundabout / B3385 Newgate Lane South

TRANSPORT BUSINESS CASE

January 2015

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SOLENT LOCAL ENTERPRISE PARTNERSHIP

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Contents

1 Introduction

1.1 Introduction and Background

1.1.1 This document presents the Transport Business Case for the Peel Common Roundabout / Newgate Lane South scheme.

1.1.2 In March 2014 the Solent Local Enterprise Partnership (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 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 (SEZ).

1.1.4 In July 2014, the Solent LEP agreed its Growth Deal with central government. This included investment in relation to the Fareham / Gosport package:

i. preliminary works associated with the Stubbington Bypass (focused largely on the package of A27 works);
ii. a Local Road network improvement package (including Peel Common Roundabout),
iii. initial site preparation work/land remediation at Welborne; and
iv. a provisional allocation to M27 Junction 10 upgrade to "all moves" starting beyond 2016.

1.1.5 The financial commitment to the overarching package (from the Local Growth Fund – LGF) is currently £19.7m, to improve transport connectivity in Fareham and Gosport and to support enabling works at Welborne. This figure includes **an allocation of £2m towards Peel Common Roundabout (interim improvement) in 2015/16 and £3m towards Newgate Lane South improvements in 2017/18**. A further £6m is being sought by the Solent LEP for the Newgate Lane South improvements.

1.1.6 It is recognised that, in addition to this initial investment, the local area has identified a requirement for further investment to support the wider raft of improvements to the strategic transport infrastructure on the Fareham /Gosport peninsula (including the construction of the Stubbington bypass), as well as onsite development at Welborne. This is informing the negotiation of the next iteration of the Solent Growth Deal (due to be agreed in January 2015).

1.2 Overview of the Peel Common Roundabout / Newgate Lane South Scheme

1.2.1 This is a two phase 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. New cycleway / footway provision and crossing points will also be provided. This is planned for delivery in 2015/16. This phase will deliver immediate economic benefits in addition to facilitating the Phase 2 works.

1.2.2 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 existing Newgate Lane alignment would be retained as a service road for the residential properties at Peel Common and for the provision of a cycle route.

1.2.3 The B3385 runs north south between the A27 / M27 and Lee-on-the-Solent. Peel Common Roundabout is located at the intersection between the B3385 and the B3334 (which runs approximately east-west between Titchfield / Stubbington and Gosport), close to the Fareham / Gosport boundary. The route is predominantly semi-rural in nature, passing through mixed farming and equestrian land use, together with residential frontage at Peel Common.

1.2.4 The Solent Enterprise Zone of Daedalus and airfield lies to the south-west of the roundabout, and to the south east the River Alver runs through an overgrown area of scrub and trees. To the north-east of the roundabout is Brookers Field Recreation Ground.

1.2.5 The locational context of the scheme is illustrated in **Figure 1-1**.

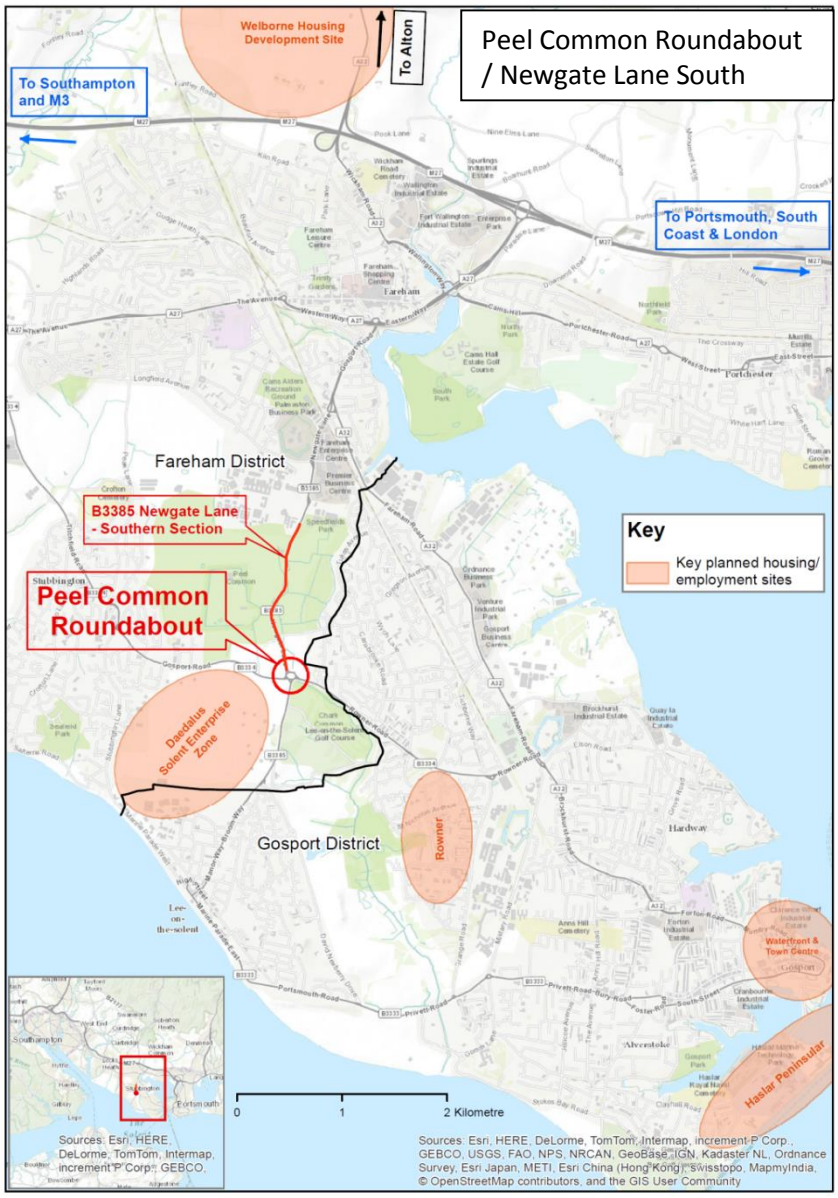


Figure 1-1: Locational context of the Peel Common Roundabout / Newgate Lane South Scheme

1.2.6 Newgate Lane is a key artery from the Gosport peninsula and the existing route has been over capacity for many years. This scheme will help to promote the Newgate Lane corridor by providing a key link to the strategic road network (including the A27, A32 and M27) and Fareham Railway Station.

1.2.7 The scheme supports a wider package of proposed transport improvement measures to improve access to Fareham and Gosport. The need to improve access to the Gosport and Fareham peninsula is 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. A package of measures has been identified to help address the issues (including this proposed scheme), to help improve access to Gosport and facilitate economic growth in the area. Improving

accessibility in the area will have a positive impact upon the local economy and important strategic sites including the Solent Enterprise Zone.

1.2.8 Phase 1 alone demonstrates very high value for money with a BCR of 5.28. The overall scheme (Phases 1 and 2) produces a BCR of 1.88. There is significant jobs and housing growth which would be indirectly facilitated by this scheme, including approximately 2,350 jobs at the SEZ, plus approximately 830 jobs at other sites within the Gosport peninsula. The scheme is deliverable, with construction planned to commence in May 2015. The improvement works for Phase 1 are contained wholly within the existing highway boundary and scheme development /design work is well advanced. Third party land and planning permission is required for Phase 2.

1.3 Purpose of this Document

1.3.1 In line with the Solent LEP guidance[1], a ratified Business Case is required before LGF funding can be fully approved / released for scheme construction.

1.3.2 An overarching Green Book compliant Full Business Case is being prepared for the full Fareham / Gosport package, which will focus upon economic outputs and specifically the facilitation of new housing and employment. The overarching business case will provide a comprehensive appraisal of the delivery and benefit realisation of the entire package of schemes. As a supplement to the overarching business case, a series of four WebTAG compliant full business cases have been prepared to demonstrate how each of the respective packages perform in their own right and also how they will contribute to the overall strategy.

1.3.3 This document presents the transport business case for the proposed improvements to Peel Common Roundabout and Newgate Lane South. It should be read alongside the overarching Full Business Case.

1.3.4 For the Phase 1 Peel Common Roundabout works, this Business Case is considered to provide the necessary due diligence in relation to value for money, financial appraisal, relevant consents, project delivery, risk register, and contracting arrangements – as required by the Solent LEP for full approval. For the Phase 2 Newgate Lane South, given the current stage of scheme development not all aspects of the due diligence can be met through this business case at this stage. As such, it may be necessary to provide minor updates / supplementary information at a future date.

1.3.5 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

[1] Advice to Scheme Promoters on the Development of Full Business Cases (Solent LEP, October 2014)

respect to the economic appraisal. Furthermore, the approach is in line with the Solent LEP guidance on Full Business Cases.

1.3.6 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.

1.3.7 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	Scheme Plans and Drawings
B	Stakeholder Letters
C	Overview of Modelling Tools
D	Modelling and Appraisal Approach
E	Appraisal Summary Table
F	TEE, ACMB and Public Accounts Tables
G	Summary Assessment of Distributional Impacts
H	Project Plan
I	Draft Communications Plan
J	Risk Register
K	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 The peninsula is underperforming economically. The following key economic challenges for the area have been identified in 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 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.

2.2.4 A number of wards in Gosport have recently been given Assisted Area status[2].

2.2.5 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.

2.2.6 Successful delivery of the growth strategy for the area depends upon high quality transport infrastructure. 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
- Congested transport networks in areas of employment.

2.2.7 These issues are illustrated in **Figure 2-1** and discussed further below.

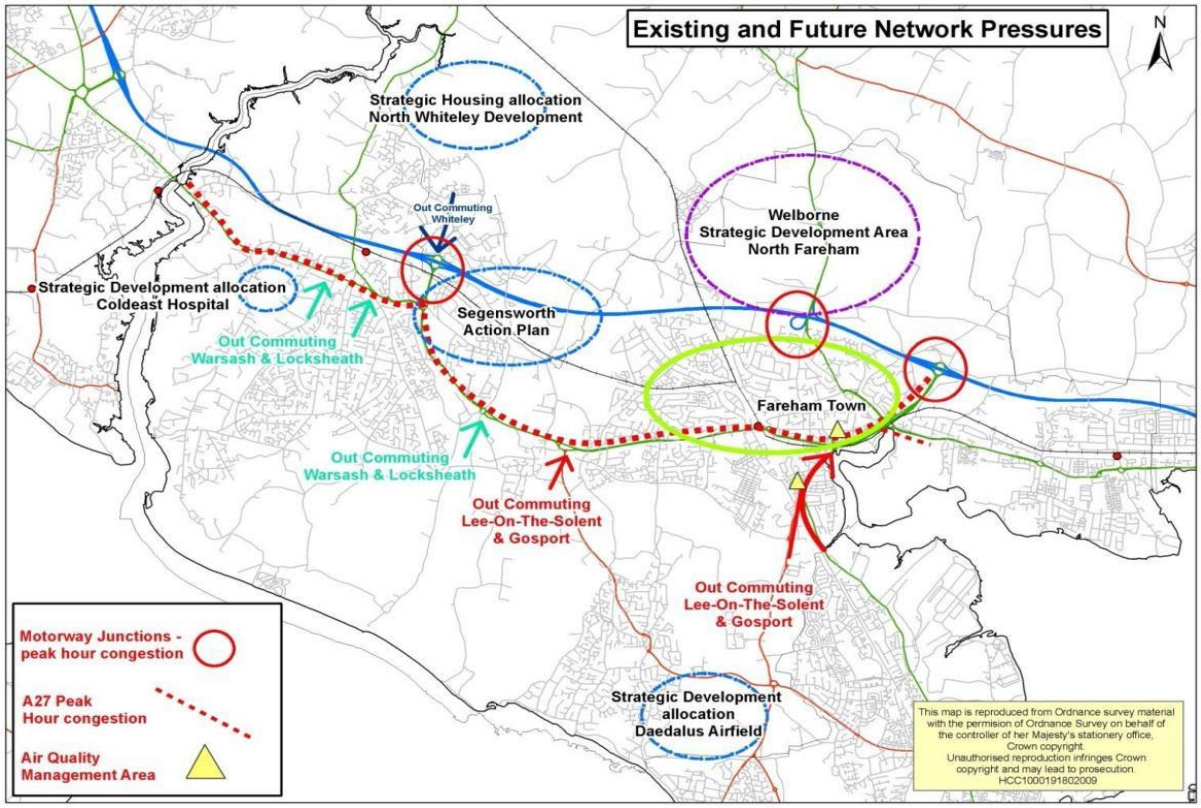


Figure 2-1: Existing and future transport network pressures in the Fareham and Gosport area

[2] Assisted areas are recognised in European state aid rules as being less economically advantaged places that would benefit from additional support for development.

Poor Connectivity to Strategic Growth Sites

2.2.8 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.

2.2.9 **Table 2-1** details key sites with jobs / housing potential for which poor transport connectivity, including the B3385 Newgate Lane corridor, is currently a barrier to growth.

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

2.2.10 **Figure 2-2** 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.

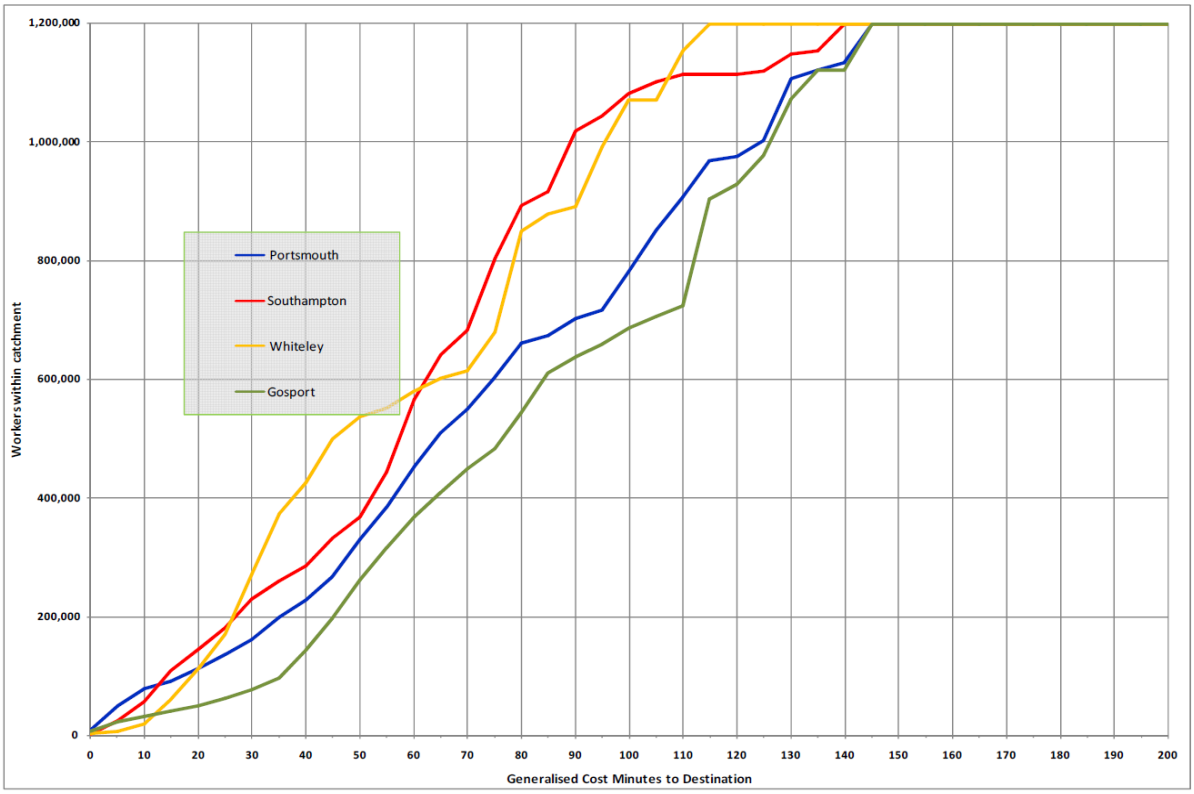


Figure 2-2: Worker catchments, by generalised cost minutes, for selected locations in South Hampshire[3]

2.2.11 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 limited, with the A32 and B3385 Newgate Lane providing the primary connections. The B3385 Newgate Lane provides the most direct link between the Solent Enterprise Zone and the Fareham railway station and the M27 at Junction 11, but suffers from capacity constraints along its length. 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.

2.2.12 Outbound traffic generally needs to travel along the critical east to west A27 artery through central Fareham. 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.

[3] *Source: Transport for South Hampshire Evidence Base – Case and Options for Intervention (October 2012, MVA)*

Traffic Issues Relating to Economic Underperformance

2.2.13 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 experienced.

2.2.14 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 is therefore both a symptom and a cause of economic underperformance.

2.2.15 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

2.2.16 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.

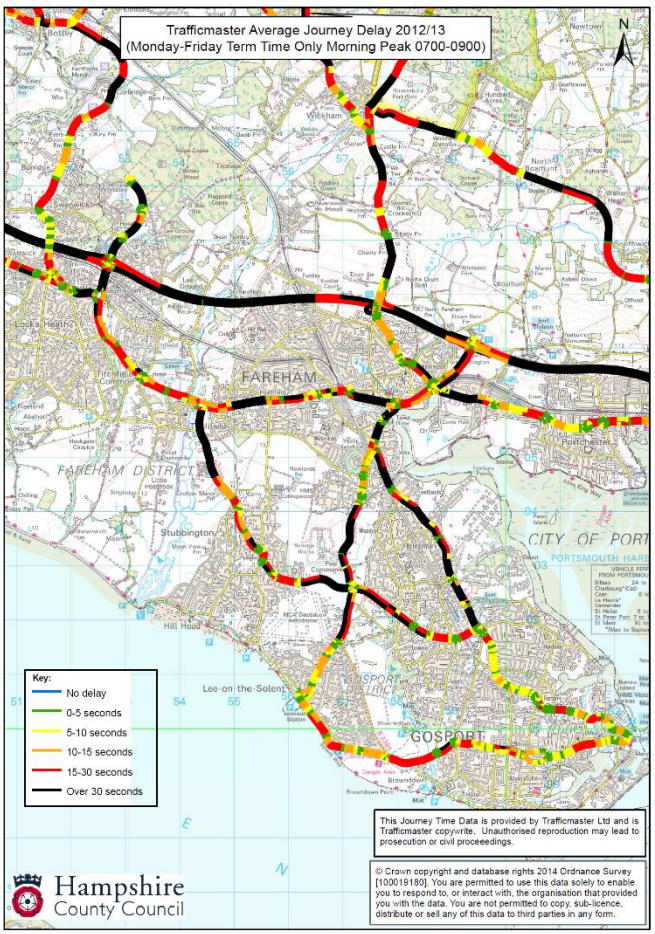


Figure 2-3: Average journey delay by link, 0700-0900 - Trafficmaster

2.2.17 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

2.2.18 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.

2.2.19 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 (see Section 2.11 for details). The package of planned improvements, together with the current anticipated delivery timescales, are illustrated in **Figure 2-4**.

2.2.20 The proposed scheme complements improvements already being made to the northern section of the B3385 Newgate Lane. Other planned measures include several improvements on the A27 east-west route, an enhanced M27 Junction 10 and other supporting infrastructure to enable development at Welborne (the largest single mixed housing and employment site in the south), and the provision of the Stubbington Bypass (plus supporting measures) to enhance western access to the peninsula. The recently delivered Fareham-Gosport BRT (and proposed future extensions) also form a key component of the transport infrastructure package.

2.2.21 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 m^2 employment floorspace).

2.2.22 Whilst being fully justified on its own merits (as demonstrated within the Economic Case), the B3385 Newgate Lane South and Peel Common Roundabout scheme should therefore be considered within the context of this wider package and is complementary in nature.

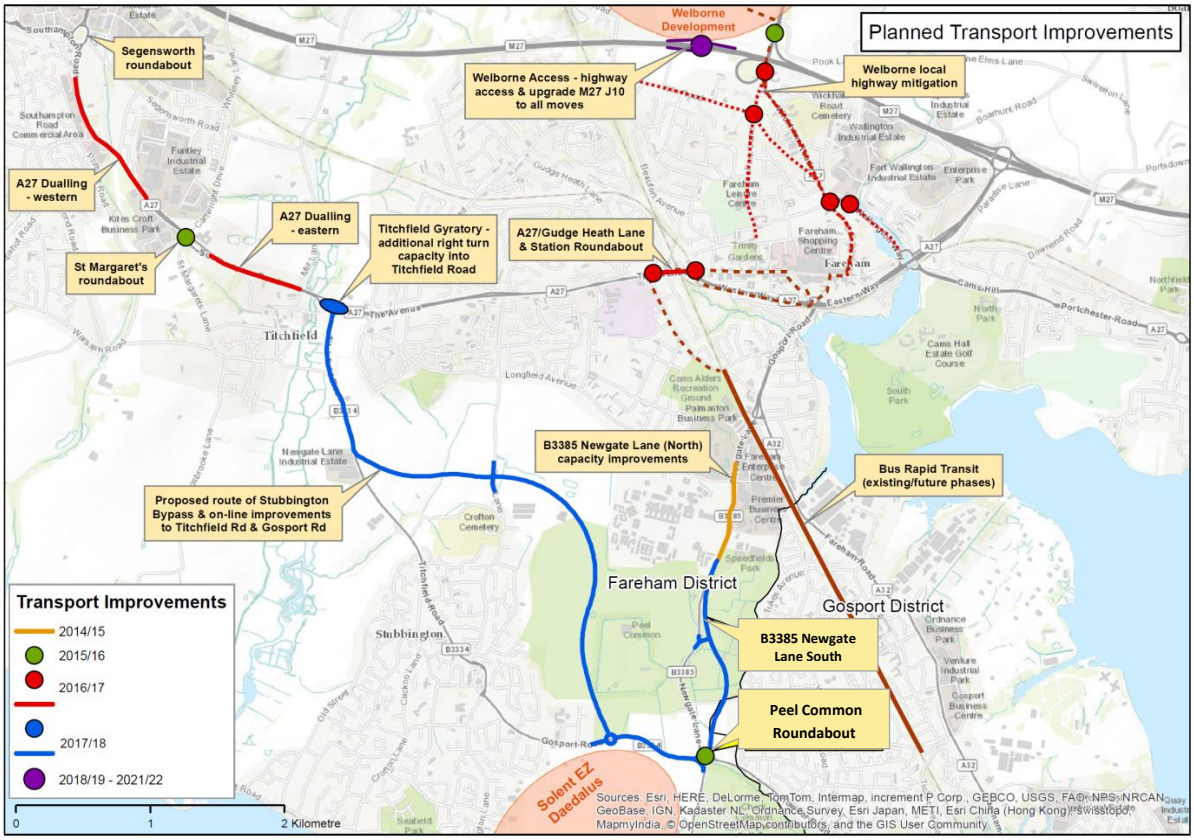


Figure 2-4: Planned transport improvements in Fareham and Gosport

2.3 Problems Identified – scheme specific

2.3.1 The previous section 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.

Newgate Lane

2.3.2 The B3385 Newgate Lane strategic corridor, although wholly within the Borough of Fareham, is of fundamental importance to Gosport residents who rely on the route as one of only two main access routes onto the peninsula. As there are future employment and residential developments proposed at the Daedalus, HMS Sultan and Rowner sites, significant investment is required if it is to cope with the additional traffic from these developments.

2.3.3 The existing southern section of Newgate Lane (between Peel Common roundabout and Tanners Lane) is lit by street lighting and a 40mph speed limit exists. There is a rural footway on the east side of the road to a point approximately half way towards Peel Common roundabout where the footway continues on the west side of the road. The route is served by public transport and limited bus stop facilities exist along the route.

2.3.4 This section of Newgate Lane is narrow and winding, with the carriageway width varying between 6.1m to 6.5m. The highway geometry and traffic composition

(high incidence of cyclists and lack of overtaking locations) can result in slow traffic speeds and potential conflicts particularly during peak hours. These factors, together with the level and nature of traffic flows, compromises the effective operation of the route in terms of providing strategic access to the Gosport peninsula (see Section 2.2).

Figure 2-5: Newgate Lane looking north

2.3.5 Annual Average Daily Flow (AADF) on the B3385 Newgate Lane is approximately 24,000 vehicles (both directions) per day.

2.3.6 Northbound B3385 traffic data demonstrates a prominent tidal flow in the AM peak, approximately 1,200 vehicles per hour in the northbound direction in 2008 compared to approximately 800 vehicles per hour in the southbound direction.

2.3.7 Southbound PM peak flows correspond reasonably well with northbound AM peak flows (in the region of 1,200 vehicles per hour) - illustrating the tidal flow.

2.3.8 **Figure 2-6** and **Figure 2-7** illustrate the hourly traffic profiles on the B3385 Newgate Lane in both the northbound and southbound direction. These demonstrate the tidal flow across the day as discussed above.

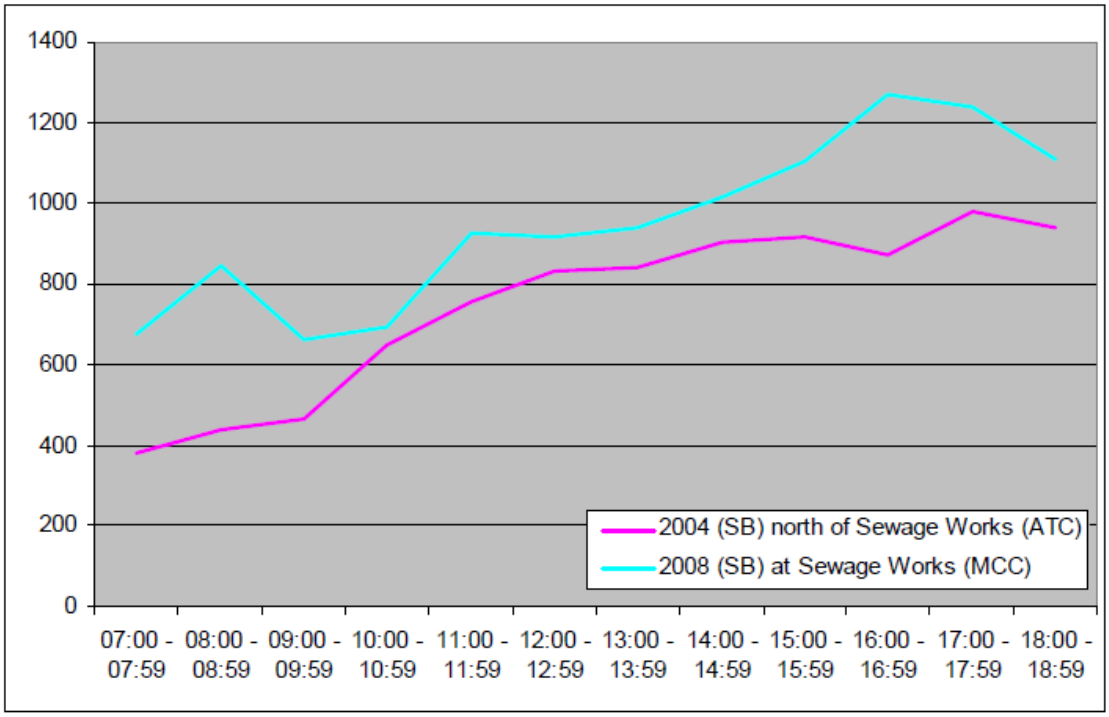


Figure 2-6: Historic traffic data on Newgate Lane (B3385) Southbound

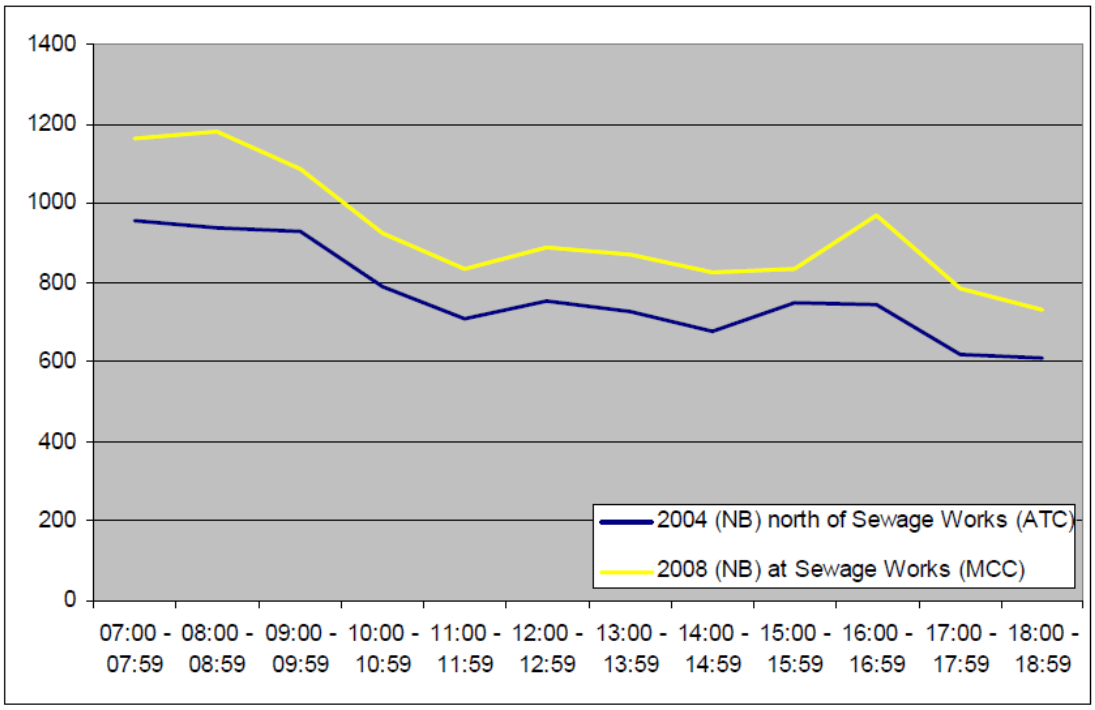
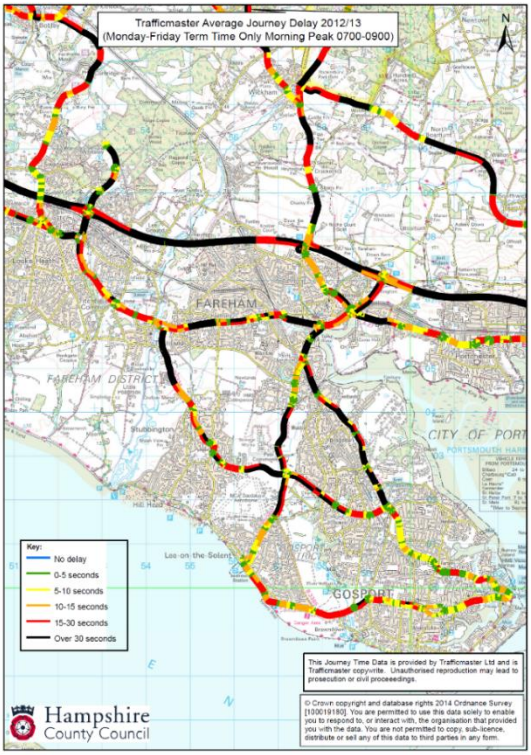


Figure 2-7: Historic traffic data on Newgate Lane (B3385) Northbound

2.3.9 The B3385 Newgate Lane converges with the A32 Fareham Road at Fareham, connecting onto the A27 and M27 Junction. Congestion on these routes is notorious, and occurs at most times of day. Journey times in excess of 30 minutes are not uncommon on these routes into Fareham, for a distance of approximately 4.5 miles from the usual start of the queue. The plot opposite, using Trafficmaster journey time data, illustrates the average delay experienced in the AM peak on strategic routes, including the B3385. This highlights the high level of existing delays experienced, particularly on the approaches to Peel Common roundabout and northbound on the B3385, reflecting the dominant traffic movements within that time period.



2.3.10 Based on data collected in 2009/10, during the morning peak (0700-0900), Newgate Lane is the 13th most congested traffic route (measured in terms of total vehicle delay) in Hampshire, and during the evening peak (1600-1800) is the 8th most congested route in Hampshire; in both cases the more congested routes are primarily either motorways, trunk roads or major links to motorways.

2.3.11 The heavy vehicle flows continue throughout the working day but are characterised by particularly heavy flows in the morning and evening peak times, where in the morning peak (0700 – 0900 hours) a northbound stop/start rolling queue extends from Speedfield Park roundabout back to and through the Peel Common roundabout. In the evening peak (1600 – 1800 hours) similar queues form in the southbound direction, particularly on the approaches to the Longfield Avenue, Speedfield Park, and Peel Common roundabouts. The rolling queues can be exacerbated by the presence of onroad cyclists when a combination of the existing alignment and heavy oncoming traffic flows prevent overtaking opportunities. The route is therefore heavily congested and journey time reliability is adversely affected.

2.3.12 Bus journeys are delayed in the same congestion. There are currently no bus priority measures on the B3385 Newgate Lane southern section.

Peel Common Roundabout

2.3.13 The existing configuration of the Peel Common roundabout is illustrated in **Figure 2-8**. It is a four arm non-signalised roundabout and comprises the junction of four roads:

- B3385 Newgate Lane to the north;
- B3334 Rowner Road to the east;
- B3385 Broom Way to the south; and
- B3334 Gosport Road to the west.

2.3.14 This roundabout has a large (60 to 80m) radius and two circulating lanes. Each approach arm has two entry lanes (using long flares of approximately 20m). Each exit arm has just one lane.

2.3.15 Inside the roundabout is a local pumping station linked to the nearby Sewage Works, a potential constraint on junction improvements. The southern and eastern approaches have segregated walk/cycle route provision. There are signalised crossings immediately to the west and north of the roundabout. A cycle route runs between the west side of Broom Way and across both Toucan facilities, to the north side of Rowner Road.

2.3.16 The dominant traffic movement in the AM peak is from Rowner Road to Newgate Lane, with the reverse being the dominant movement in the PM peak.

Figure 2-8: Peel Common roundabout existing layout

2.3.17 The Peel Common Roundabout suffers from morning and evening peak congestion. Queues regularly form at peak times at the roundabout, typically on Broom Way and Rowner Road in the morning peak, and southbound on Newgate Lane in the evening peak. Contributing factors to the poor traffic conditions at Peel Common Roundabout include:

- The existing Toucan crossing on Newgate Lane to the north of the roundabout can contribute to delays on Newgate Lane and at the roundabout.
- The operation of the roundabout is also partly influenced by queues that can block back from Newgate Lane during parts of the morning peak hour, thus restricting traffic wishing to join from Rowner Road, Broom Way and Gosport Road.
- Furthermore, the nearside flare lane on the Gosport Road arm (left turn only) is consistently under-used, whilst the main movement to Rowner Road can only use lane 2.

2.3.18 Traffic modelling has been undertaken which identifies that improvements to the roundabout are needed in advance of improvements to either an improved Newgate Lane southern section and / or Stubbington Bypass.

2.4 Impact of Not Changing

2.4.1 Without improvement, the problems of congestion and delays on the Newgate Lane southern section will persist and the corridor will continue to act as a key constraint on access to / from the Gosport peninsula to the wider strategic road network. Furthermore, with forecast growth in traffic, the problems are expected to worsen as this part of the network is already over capacity. Traffic modelling demonstrates the extent of worsening conditions with no intervention.

2.4.2 **Table 2-2** shows the capacity (in terms of Ratio of Flow to Capacity) and queuing (in terms of maximum average queues) modelled at Peel Common roundabout for 2012. **Table 2-3** shows the comparable performance criteria for a forecast year of 2026, without any intervention. By 2026, the roundabout is shown to operate over capacity on three of the four arms, with extensive queuing also forecast as a consequence.

Table 2-2: Peel Common Roundabout modelled capacity and queuing - 2012[4]

Roundabout arm	2012 AM peak		2012 PM Peak	
	Max RFC	Max Av. Queue (PCU)	Max RFC	Max Av. Queue (PCU)
Newgate Lane	0.57	1.29	**1.05**	**44.34**
Rowner Road	0.66	1.96	0.5	1.01
Broom Way	0.43	0.75	0.42	0.72
Gosport Road	0.53	1.11	0.68	2.08

Table 2-3: Peel Common roundabout modelled capacity and queuing - 2026

Roundabout arm	2026 AM peak		2026 PM Peak	
	Max RFC	Max Av. Queue (PCU)	Max RFC	Max Av. Queue (PCU)
Newgate Lane	**1.20**	**158.27**	**1.14**	**91.03**
Rowner Road	0.79	3.59	0.54	1.17
Broom Way	0.50	0.98	0.74	2.78
Gosport Road	0.65	1.78	**1.00**	**20.73**

2.4.3 **Figure 2-9** illustrates forecast link Volume to Capacity ratio (V/C) in 2026 AM peak[5]. 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 southern section of the B3385 Newgate Lane without appropriate intervention.

[4] *Source: B3385/B3334 Peel Common Roundabout Improvements – Option Appraisal Report, Volume 1 – Main Report (Parsons Brinckerhoff, December 2012)*

[5] Source: Stubbington Bypass SRTM Model Scenarios (SYSTRA, May 2014)

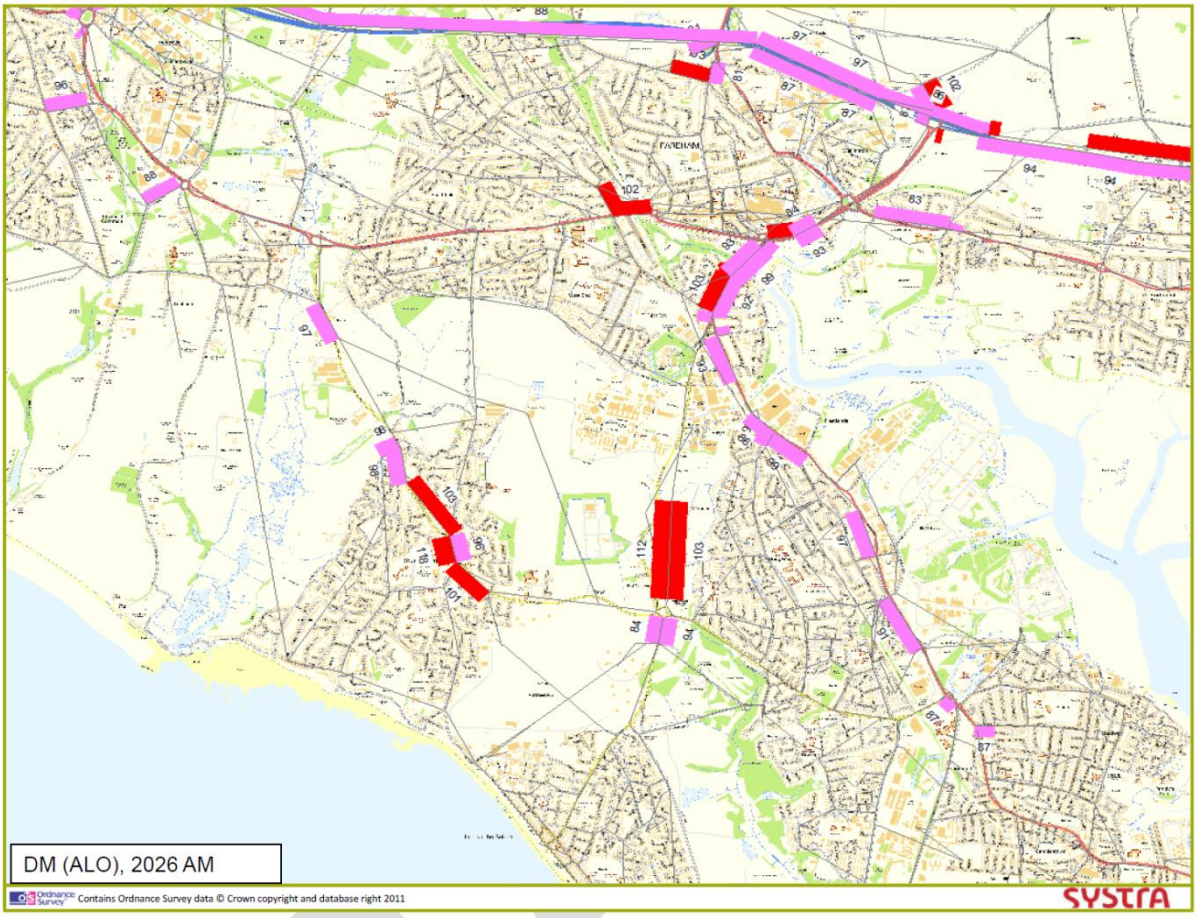


Figure 2-9: Forecast link flow Volume to Capacity ratio – 2026 AM peak

2.4.4 The successful implementation of the Solent Enterprise Zone at Daedalus is of critical importance to the delivery of the growth strategy for the area. With the B3385 Newgate Lane being the primary route connecting the Solent Enterprise Zone to the A27 / M27 and Fareham station, the poor existing traffic conditions and unreliable journey times will act as a deterrent to businesses and could have an adverse impact on the successful implementation and occupation of the SEZ, thus threatening the planned job creation targets. Unresolved traffic problems will not provide the business community with confidence that the Solent Enterprise Zone will be a location where transport costs can be minimised and that is readily accessible to customers and employees. It is therefore vital that these improvements are implemented as soon as possible, commencing with the Phase 1 Peel Common roundabout improvement in 2015/16, in order to support the wider growth strategy, particularly in relation to the SEZ.

2.4.5 A lack of investment in the Newgate Lane southern section will also fail to maximise the benefits of other related transport investments, including the investment (through the Solent LEP Growing Places Fund) in improvements to the northern section of the B3385 Newgate Lane (due for completion Spring 2015), and also in

terms of other future planned transport investments, including the Stubbington Bypass.

2.4.6 HCC has explored a number of different funding sources to deliver these improvements. 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.

2.5 Scheme Aims and Objectives

2.5.1 The scheme objectives have been defined to directly address the problems discussed in Sections 2.2 to 2.4. They align closely with the business strategies for HCC, the Local Economic Partnership and for Central Government. They are also complimentary to the wider Fareham / Gosport package objectives set out in the 'over-arching' business case.

Scheme Objectives	Key Outcomes Sought
To deliver capacity enhancements for existing traffic movements along Newgate Lane	• Reduction in congestion and delays on the B3385 Newgate Lane Corridor • Improved journey time reliability on the B3385 Newgate Lane Corridor • Reduction in road casualties • Support local investment and delivery of jobs, particularly at the Solent Enterprise Zone
To improve strategic access and journey time reliability to the Gosport peninsula from Fareham and the strategic road network at Junction 11 of the M27	
To improve connectivity and network resilience, along Newgate Lane and at Peel Common Roundabout, to uplift the quality of the local network to help make the area attractive to investors	
To promote the B3385 Newgate Lane corridor as a key link to the Solent Enterprise Zone from the strategic road network and Fareham Railway Station which, in combination with the proposed Stubbington Bypass, will provide viable alternatives for existing and potential future traffic (particular lorries) utilising roads via Stubbington	
To support proposed employment and housing development sites, including the Solent Enterprise Zone, by improving strategic access to Gosport.	
To support workplace travel policies associated with the development at the SEZ by providing a safer and more welcoming environment for cyclists and pedestrians on Newgate Lane and at Peel Common Roundabout	

2.6 Constraints and Inter-Dependencies

2.6.1 The key constraints and dependencies in terms of addressing the identified problems and issues and meeting the scheme objectives can be summarised as follows:

- On-line constraints on the southern section of Newgate Lane – e.g. property frontages;
- Land constraints;
- The presence of utilities equipment located within the centre of Peel Common Roundabout;
- Environmental constraints –e.g. the SINC located to the south east of Peel Common Roundabout, presence of the River Alver;
- Successful implementation of the improvements to Newgate Lane northern section, which are necessary to fully address the transport issues on Newgate Lane, in conjunction with the proposed scheme; and
- Association / linkages with other planned improvements, in particular a future Stubbington Bypass.

2.6.2 Delivery programme dependencies are considered in more detail in the Management Case (see Chapter 6).

2.7 Options / Scheme Development

2.7.1 There is a long history of consideration of potential solutions on this section of Newgate Lane, going back to 1988, reflecting the longstanding traffic issues. Relevant aspects of the most recent options appraisal work is considered below.

Newgate Lane Southern Section

2.7.2 A total of twelve options have been considered, using the DfT's Early Assessment Sifting Tool (EAST)[6] to appraise the different options against a wide range of criteria. The twelve options originally identified represented a mix of potential on-line and off-line improvements. An initial sifting exercise undertaken in October 2012 resulted in a short-list of five potential options. Options were discounted at the initial sifting stage based on factors such as significant safety concerns, environmental impacts, and lack of improvement over the existing situation.

[6] EAST is a decision support tool that has been developed by the Department for Transport to quickly summarise and present evidence on options in a clear and consistent format. It provides decision makers with relevant, high level, information to help them form an early view of how options perform and compare. The tool itself does not make recommendations but provides the evidence to do so.

2.7.3 The five rationalised options, together with a 'Do Nothing' option were subsequently subject to further appraisal using the EAST tool. This was undertaken in Summer 2013, and reviewed and updated in Summer 2014[7]. The outcomes of the latest assessment are summarised in **Table 2-4** below.

Table 2-4: Newgate Lane South summary of EAST options appraisal

	RAG Scores					
Criteria	**Do Nothing**	**Option A** On-line Widening with Service Road	**Option B** Eastern Alignment	**Option C** On-line Widening 2 Lanes	**Option D** Three Lane Tidal Flow	**Option E** On-line Widening with Central Hatching
Strategic						
Economic						
Managerial						
Financial						
Commercial						

Key:

Red
Red/Amber
Amber
Amber/Green
Green

2.7.4 Options A and B achieved similar overall scores and were therefore subject to preliminary stage design and further assessment. This process identified Option B (Eastern Alignment) as the best performing option for Newgate Lane southern section in terms of meeting all the scheme objectives, with the main reasons being that it:

- Has no junctions except at the link to the existing route;
- Has no accesses to residential properties, only field accesses;
- Has minimal disruption to existing traffic flows on Newgate Lane during construction; and
- Provides the opportunity to use the existing road as a north / south cycle route.

[7] B3385 Newgate Lane Southern Section - Route Options Appraisal Report (Engineering Consultancy, Oct 2014)

2.7.5 The disadvantage with Option B is that it requires the most land-take and will be disruptive to the local agricultural business.

2.7.6 Whilst improvement to Newgate Lane is justified independently from the provision of a Stubbington Bypass, the consideration of options has also been undertaken in the context of options for the bypass route.

2.7.7 In order to determine the appropriate shape and form of the road improvement scheme, traffic modelling has been undertaken to ensure the proposals are fit for purpose given the overarching scheme objectives. This was undertaken at a strategic level in conjunction with the modelling for a Stubbington Bypass and also at a more detailed level independently from the bypass appraisal work. The traffic modelling has taken into account the existing situation and provides forecast flows for 2014 and 2026. The forecast flows take into account known development traffic. The junctions along the route have also been modelled to ensure they are appropriate.

2.7.8 In March 2014, the preferred bypass route was confirmed as the 'blue route' – linking in to Gosport Road to the west of Peel Common Roundabout. Traffic modelling identifies that a 7.3m wide single two way carriageway for the southern half of Newgate Lane will cater for the expected traffic demand to 2026[8]. The modelling work has also identified the wider impacts of the scheme and helped to identify capacity requirements on links and the form of junctions, including Peel Common Roundabout.

Peel Common Roundabout

2.7.9 The appraisal of options for Peel Common Roundabout has been undertaken in parallel with the appraisal work for the Newgate Lane southern section. A long list of 14 options were initially considered in 2012, including assessment of junction capacity. The initial options appraisal is summarised in **Table 2-5**.

[8] If a preference for a bypass route connecting in to Newgate Lane had been established, south of the bypass connection it would have been necessary to upgrade Newgate Lane to dual carriageway standard. Notwithstanding this, if the need were to arise in the future it is likely that, whilst both Options A and B could be extended to provide a dual carriageway, Option A would require substantially more reconstruction to accommodate it compared to the preferred Option B.

Table 2-5: Peel Common Roundabout initial options appraisal[9]

Option	RAG capacity score	Lowest PRC	Key comments
Do Nothing		n/a	Nearside left turn only lane 1 on Gosport Rd under-used.
Option B – Partially signalled roundabout with dedicated free-flow left turn from Newgate Lane to Rowner Rd		-19.0	Nearside left turn only lane 1 on Gosport Rd under-used. Land take probably required to the north.
Option C – Roundabout replaced by two signalled junctions and one priority junction.		-119.0	None.
Option D – Similar to Option B, but with a two-lane movement from Rowner Rd to Newgate Lane and no dedicated free-flow lane.		2.9	Land take probably required to the north.
Option E – Similar to Option D, but also with dedicated free-flow lane.		6.3	Land take highly likely to the north. Road safety issue with lane merge on Rowner Rd exit.
Option F – Development of Option C with three signalled junctions, at the Newgate Lane, Rowner Rd and Broom Way / Gosport Rd entries.		-15.9	Land take probably required to the north. Right-turn ban enforcement issues at Broom Way / Gosport Rd.
Option G – Development of Option F with different routes through the network.		-63.8	Land take probably required to the north.
Option H – Development of Option G with different routes through the network.		-29.7	Land take probably required to the north.
Option I – Development of Option H with different routes through the network.		1.9	Land take very likely to the north.
Option J – Roundabout replaced by large signal-controlled cross roads at the southwest corner.		-19.8	Potential for long NMU wait times. Land may be required to the south. Potential road safety issues.
Option K – Larger uncontrolled roundabout.		n/a	Land take required to the north and probably to the east also.
Option L – Roundabout replaced by three signalled T-junctions.		7.1	Potential issues with locating three T-junctions along the south side of the site.
Option M – Roundabout replaced by two signalled T-junctions.		5.3	None.
Option N – Gyratory roundabout. Uncontrolled roundabout retained but mini		n/a	None.

[9] *Source: B3385/B3334 Peel Common Roundabout Improvements – Option Appraisal Report, Volume 1 – Main Report (Parsons Brinckerhoff, December 2012)*

Option	RAG capacity score	Lowest PRC	Key comments
roundabouts located at the four entries, connected by two-way link roads.			

2.7.10 Following this initial option appraisal, three options (Options D, I and M) were recommended for further consideration. Further testing on these shortlisted options was subsequently undertaken, using updated traffic flows. The outcomes are summarised below in **Table 2-6**.

Table 2-6: Peel Common Roundabout further options appraisal[10]

Location	Option D	Option I	Option M
Newgate Lane Ped. Crossing	Sufficient capacity.	N/A (incorporated in junction)	Sufficient capacity.
Newgate Lane Junction	Sufficient capacity.	Insufficient capacity in 2014 PM & 2026 PM.	N/A (no signalled junction).
Newgate Lane Exit Merge	Excessive queues in 2026 AM and PM.	Queues not excessive.	Queues not excessive.
Rowner Road Junction	Just has insufficient capacity in 2014 PM.	Insufficient capacity in 2014 PM & 2026 PM.	Insufficient capacity in 2014 AM & 2026 AM/PM.
Rowner Road Exit Merge	Queues not excessive.	N/A (single lane free-flow exit)	Excessive queues in 2014 PM & 2026 PM.
Broom Way Junction	Sufficient capacity.	Insufficient capacity in 2014 PM & 2026 PM.	Sufficient capacity.
Gosport Road Junction	Sufficient capacity.		
Gosport Road Exit Merge	N/A (single lane exit)	Queues not excessive.	Excessive queues in 2014 AM.
Gosport Road Ped. Crossing	Sufficient capacity.	N/A (incorporated in junction)	N/A (incorporated in junction)

2.7.11 Option D (partial signalisation on three arms) was identified as being the best performing overall. The improvements could also be contained wholly within the existing highway boundary and there were benefits in terms of cost and construction traffic management. Therefore, further development work on this option was undertaken in order to optimise its performance and operation, incorporate additional pedestrian / cyclist facilities and also taking into account the longer term modification of the roundabout associated with the planned Newgate Lane southern section and Stubbington Bypass improvements. Junction modelling demonstrates that both the proposed Phase 1 (interim) and Phase 2 (with Newgate

[10] *Source: Technical Note 10 – Peel Common Roundabout Tranche 2 Appraisal Initial Results (Parsons Brinckerhoff, Feb 2013).*

Lane southern section) forms of the junction operate within capacity with forecast traffic flows.

2.7.12 With a future Stubbington Bypass (preferred 'blue route'), the Phase 2 scheme would lend itself to modification of the Gosport Road arm – again, junction modelling demonstrates that the Peel Common Roundabout would operate within capacity with the forecast traffic flows under this scenario.

Consultation / Stakeholder Engagement

2.7.13 'Improving Access to Fareham and Gosport' public consultation events have been held in the summers of 2013 and 2014. The Newgate Lane southern section and Peel Common Roundabout proposals formed part of this material.

2.7.14 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 process.

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

Consultation Summer 2013 (Feedback)

- 56% of respondents were satisfied with the provision of new traffic lights at Peel Common roundabout.
- 61% supported the provision of additional pedestrian and cycle facilities to the south of the junction.
- 44% supported upgraded bus facilities along Newgate Lane.
- 8-16% expressed dissatisfaction, with the most common reason given being scepticism that traffic lights could improve the traffic situation
- With regards to Newgate Lane southern section - 73% of respondents preferred a new route east of Newgate Lane, adjacent to Brooker's field.

2.7.16 The 2014 consultation event closed in August 2014.

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.

Phase 1 (Peel Common Roundabout)

2.7.17 The quantitative data identified that 83% of respondents supported the planned improvements (excluding the incomplete / missing responses for the appropriate question). 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.

Table 2-7: Peel Common Roundabout 2014 consultation response

"Do you support the planned improvements to Peel Common Roundabout programmed for 2015/2016?"

	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	61 12%	7 19%	53 12%	1 17%
Yes	354 72%	15 42%	335 75%	4 67%
No	75 15%	14 39%	60 13%	1 17%

2.7.18 As part of the qualitative data analysis 51 respondents made comments that were recorded. Some respondents made more than one comment and these were all recorded additionally. The largest number of comments related to a preference for alternative solutions, followed by concerns that the scheme would not reduce congestion, followed by environmental matters and comments supporting the proposals.

Phase 2 (Newgate Lane southern section)

2.7.19 The quantitative data for the southern section of Newgate Lane identified that 79% of respondents supported the preferred route (excluding the incomplete / missing responses for the appropriate question). The support was distributed across the peninsula with the main clusters of support located in Stubbington and around the southern end of Newgate Lane and in areas of Titchfield and along the A27. Objection to the scheme was high along Woodcote Lane (being most directly impacted by the scheme) and also along Ranvilles Lane (more remote from the scheme).

Table 2-8: Newgate Lane South 2014 consultation response

"Do you support the preferred route for the southern section of Newgate Lane?"

	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	57 12%	4 11%	52 12%	1 17%
Yes	340 69%	18 50%	320 71%	2 33%
No	93 19%	14 39%	76 17%	3 50%

2.7.20 At least 75% 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. The biggest concerns related to access for pedestrians, cyclists and horse riders and drainage issues.

2.7.21 Residents of Newgate Lane were asked how they would like to see the existing connection between Peel Common Roundabout and Newgate Lane managed when the new connection is put in place. The highest proportion of respondents stated a preference for limited or no access.

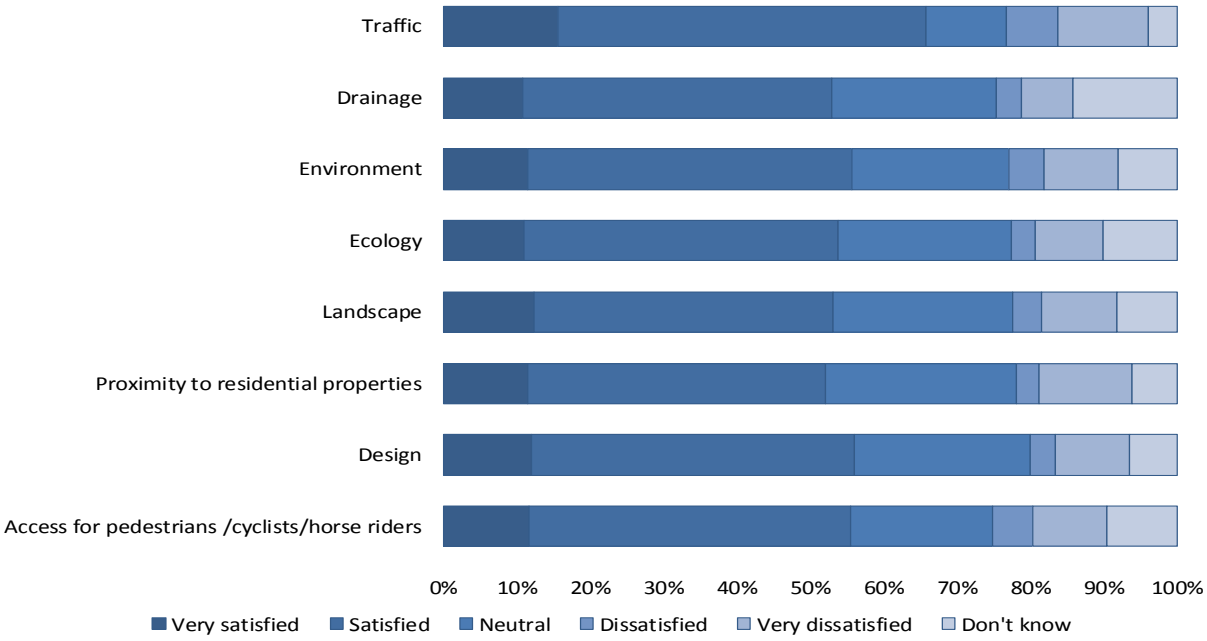


Figure 2-10: Newgate Lane South satisfaction with consideration of different factors (from 2014 consultation responses)

2.7.22 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. The letters of support are included in Appendix B.

2.7.23 Further details of stakeholder management are included in Section 6.5.

2.8 The Scheme

2.8.1 The preferred scheme consists of two phases. 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. New cycleway / footway provision and crossing points will also be provided. This is planned for delivery in 2015/16.

2.8.2 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 existing Newgate Lane alignment would be retained as a service road for the residential properties at Peel Common and for the provision of a cycle route.

Phase 1 – Peel Common Roundabout (Interim)

2.8.3 The works associated with Phase 1 are illustrated in **Figure 2-11** below. More detailed scheme drawings are also included in Appendix A.

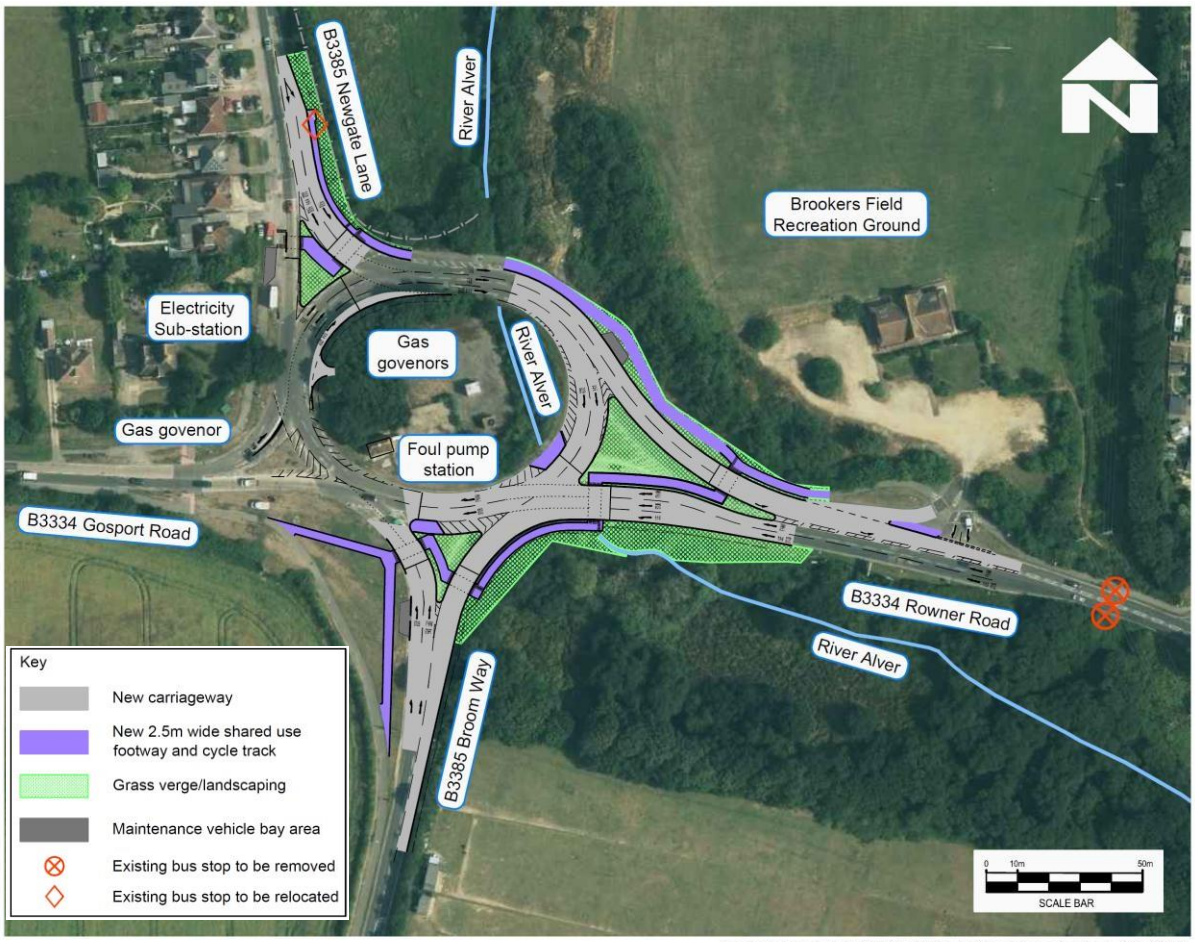


Figure 2-11: Phase 1 works (Peel Common roundabout interim scheme)

2.8.4 The main components of the Phase 1 works include:

- The installation of traffic lights on the Newgate Lane, Rowner Road and Broom Way approaches to the roundabout;
- Widening on the Newgate Lane approach to the roundabout to improve traffic capacity;
- The provision of additional lanes on the roundabout between Newgate Lane and Rowner Road to improve traffic capacity;
- Widening on the Rowner Road approach to the roundabout;
- Existing crossing point on the Newgate Lane arm relocated in front of the stop line at the new signals;
- Existing footway on the northern side of the roundabout to be converted to a shared use cycle and pedestrian path;
- The provision of a new pedestrian / cyclist crossing facility across the eastern arm (Rowner Road); and
- The provision of a shared use footway / cycleway along the southern side of the roundabout, linking the new crossing facility on Rowner Road to the

existing footway / cycleway provision on Gosport Road and Broom Way, and including a controlled crossing point on the Broom Way arm.

2.8.5 Providing traffic signals in this phase will help to share capacity and overcome the dominance of traffic from Rowner Road over traffic trying to join the roundabout from Broom Way, in the morning peak period. Localised widening to flare the approach from Newgate Lane together with widening the circulating carriageway and the exit to Rowner Road will also increase capacity for this movement.

2.8.6 There is insufficient approach or circulating capacity to accommodate traffic signals on Gosport Road, so this would retain priority control, and its existing Toucan crossing at this stage.

2.8.7 The two lane exit from the roundabout to Rowner Road provides greater flexibility in lane usage and helps balance queues on the circulating carriageway at the point where Newgate Lane joins the roundabout. The lane arrangement/markings have been designed such that vehicles exiting the roundabout towards Newgate Lane are not blocked by any other circulating movements on the roundabout. The two lane exit on Rowner Road merges to a single lane after approximately 100m.

2.8.8 Currently pedestrian demand is concentrated at the existing Toucan crossing at the southern end of Newgate Lane, which creates congestion and impacts on the performance of the roundabout. The provision of new pedestrian and cycle facilities aims to provide enhanced off road pedestrian and cycle facilities at or near to the roundabout to spread demand and improve access to the existing cycle routes on Gosport Road, Rowner Road and Broom Way.

2.8.9 The Phase 1 improvement will be designed to avoid abortive works during the development of subsequent phases.

2.8.10 Being a busy road junction, the works will be undertaken in a manner to minimise disruption to the junction and the surrounding road network.

Phase 2 – Newgate Lane Southern Section

2.8.11 Phase 2 consists of the provision of the new eastern alignment for the southern section of Newgate Lane. This is illustrated in **Figure 2-12** and described below, starting from Peel Common Roundabout at the southern end and working northwards.

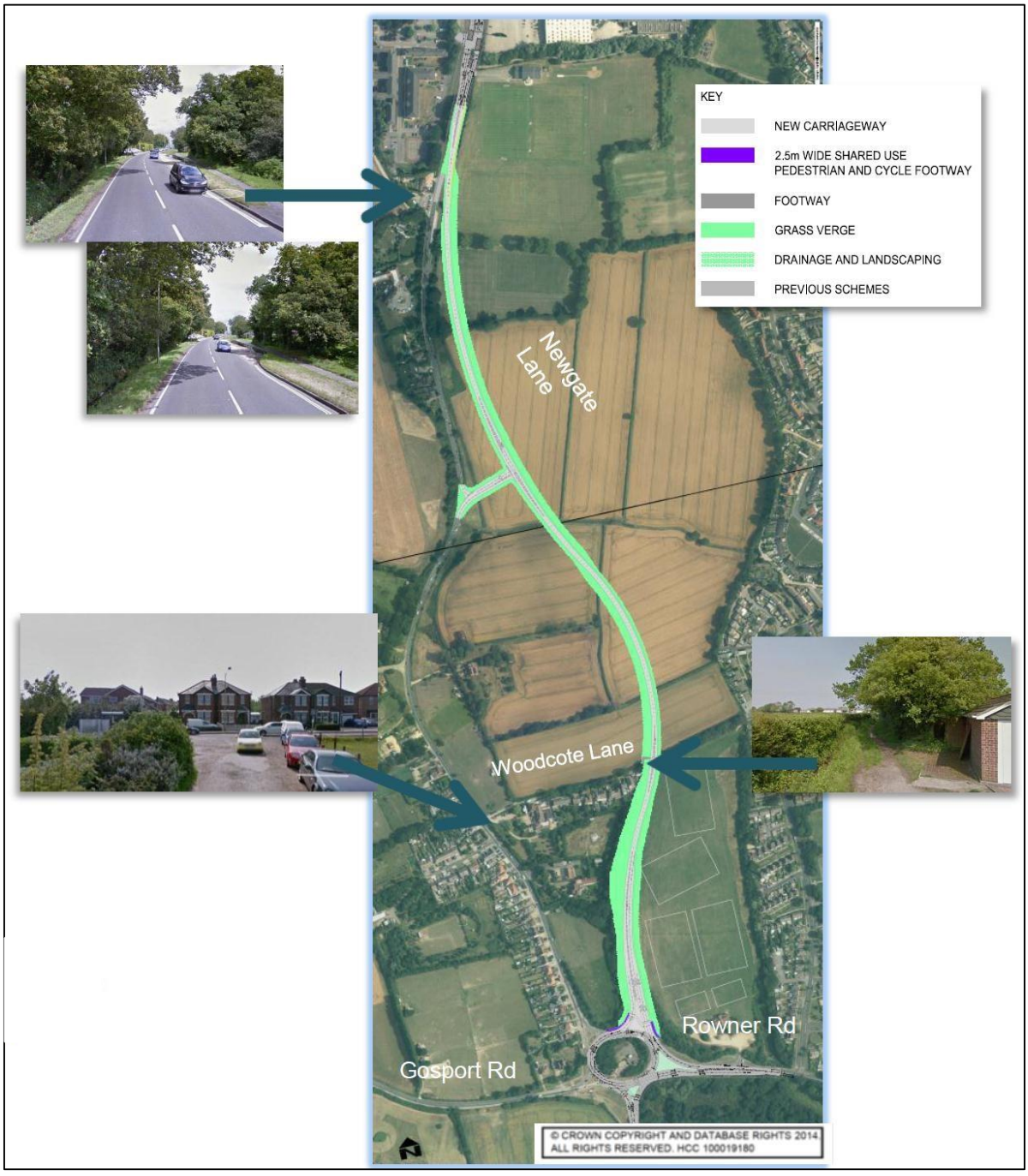


Figure 2-12: Phase 2 works (Newgate Lane South)

2.8.12 The new route commences at Peel Common Roundabout with a new arm being provided on the northern side of the roundabout. Modifications to Peel Common Roundabout, building upon the Phase 1 works (see above), include:

- Re-lining work on the circulatory carriageway;

- Relocation of traffic signals from the existing Newgate Lane exit/ approach; and

- Closure of the existing Newgate Lane upon completion of the new Newgate Lane to cars and buses at Peel Common roundabout.

2.8.13 The route heads northwards from Peel Common Roundabout between Brookers field and the River Alver to tie in with the northern section of Newgate Lane at a point near the junction with Tanners Lane – the northern section is currently subject to improvement works to increase capacity and this scheme is complementary to this improvement.

2.8.14 The route is approximately 1.5km in length and will be a single two-way carriageway 7.3m wide and with a 40mph speed limit. A pedestrian refuge is to be provided in the centre of the carriageway at Woodcote Lane to facilitate crossing of the new road, and a new junction with a short link road will be provided to connect with the existing Newgate Lane to serve the local community. The new road will not be lit, except where it joins the existing road network at either end at Peel Common roundabout and at Tanners Lane.

2.8.15 **Figure 2-13** illustrates a typical cross section of the route.

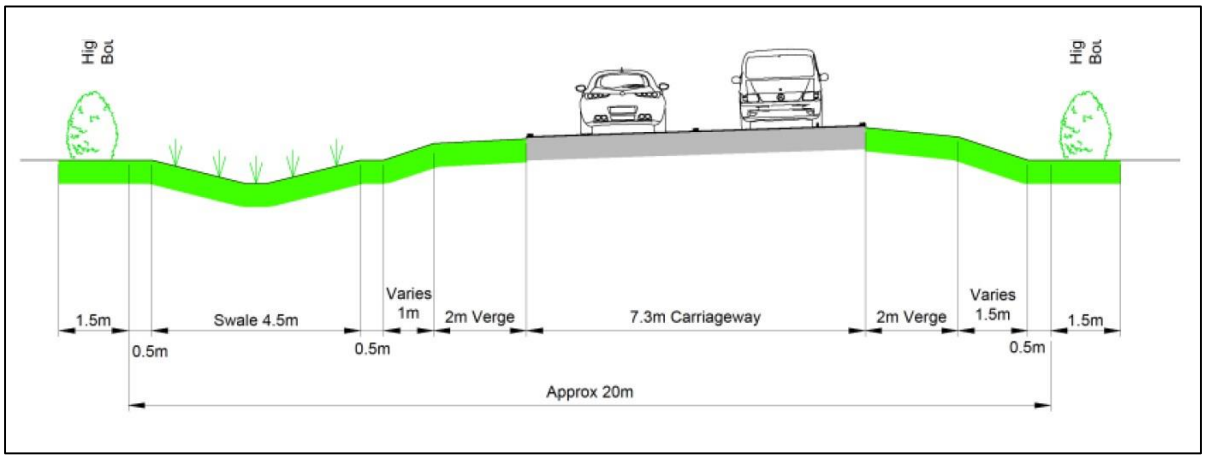


Figure 2-13: Typical cross section (illustrative) for the new Newgate Lane South route

2.8.16 A minimum width for the new road is achieved by maintaining the existing road as a service road, and for utility and leisure cyclists, thus providing a clearway (without frontage access / junctions) for through traffic and a safe route for local residents and NMUs. This would enable a continuous north-south link to be established between the new / existing facilities at Tanners Lane and at Peel Common Roundabout.

2.8.17 The improvement scheme will better enable Newgate Lane to cope with its share of traffic accessing the Gosport peninsula as well as future traffic generation from

known development sites including the Solent Enterprise Zone at the former Daedalus airfield.

2.8.18 Buses will be diverted to the realigned Newgate Lane, with the existing Newgate Lane being retained for access and for use by pedestrians and cyclists.

2.8.19 Pedestrian and cycle movements in an east-west direction across Newgate Lane, towards the existing properties on the east side of the Newgate Lane (including the Peel Common Church) and beyond towards Brookers Lane, can be retained utilising uncontrolled pedestrian and cycle crossings with pedestrian refuges. The existing track at the east end of Woodcote Lane where it joins Brookers Lane would be retained with an at grade uncontrolled pedestrian crossing utilising a pedestrian refuge, to aid crossing movements.

2.9 Policy Context (Business Strategy)

2.9.1 This scheme is well founded in, and strongly supports, local and national policy objectives. The overall policy context is summarised in **Figure 2-14** below.

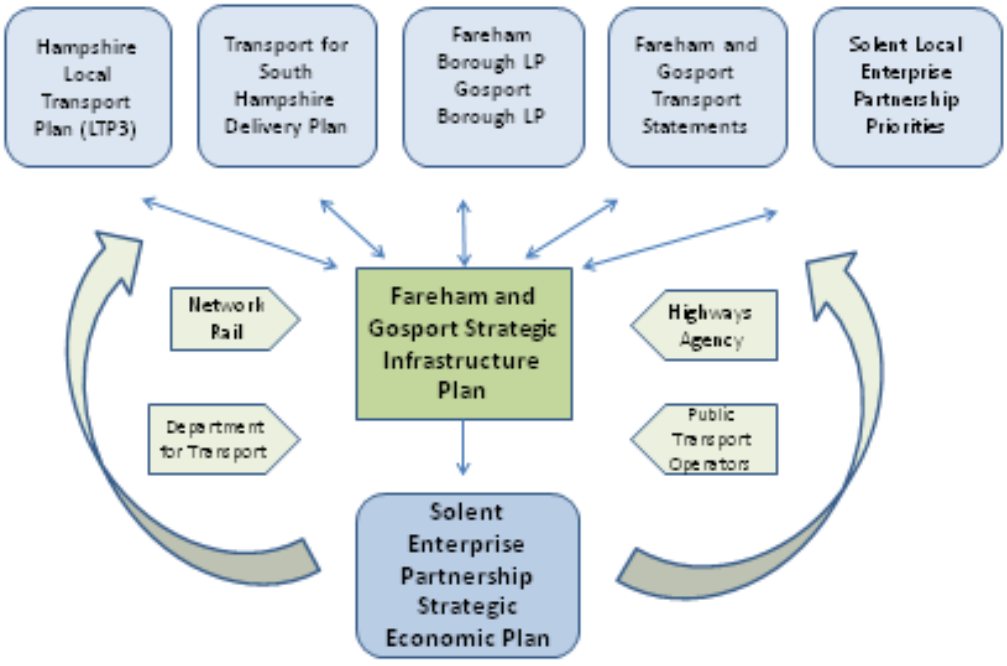


Figure 2-14: Policy context

2.9.2 The alignment with policy is not considered in detail in this business case. Consideration of the alignment of the scheme with strategic transport and economic policy objectives is covered in detail in the Fareham and Gosport 'overarching business case', within the context of the wider package of transport improvements for the area. The Planning Statement in support of the planning

application for Newgate Lane South will also set out the policy context in detail. Some of the key policy linkages, in terms of how the scheme aligns with strategic objectives, are summarised below.

Strategic Fit – Solent LEP SEP

2.9.3 In particular, the Newgate Lane / Peel Common Roundabout scheme is central to the growth strategy for the Fareham and Gosport area set out in the Solent LEP's Strategic Economic Plan, and a key enabler in terms of meeting the LEP's specified jobs / GVA growth targets. The scheme will contribute to the early 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.

2.9.4 The strong strategic fit of the scheme with the Solent LEP priorities is demonstrated in **Table 2-9** below.

Table 2-9: Strategic fit of the scheme with the Solent LEP priorities

Solent LEP Priority	Contribution of the Newgate Lane South / Peel Common Roundabout Scheme	Solent LEP Growth Targets
Enterprise	Improved accessibility will assist small and medium enterprise growth and retention in existing town centre and commercial areas and for the whole peninsula, and in particular the Solent EZ. New jobs and opportunities at the Solent EZ (3,700 new jobs), and through the new CEMAST centre will help reverse trends and counter public sector job loss and MOD decline. Improved accessibility to the new agglomeration of business and services at the Solent EZ and throughout Gosport will help improve productivity.	• Creation of 15500 new jobs • Achieve 3% GVA Growth
Infrastructure	This package will increase network capacity and strategic connectivity to/from the peninsula particularly to the east. 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. The scheme will help to cater for forecast growth in demand associated with the planned housing and employment development, including at the SEZ and at Welborne.	• Increase: GVA per cap; employment rates; and economic activity • Create new business

Inward Investment	Improved accessibility and increased business confidence in journey time reliability on the transport network will encourage business to open up new sites following effective marketing and to invest in Solent EZ and Gosport, helping to remove the transport barrier to growth and counter the trend of decline in the area.	• Improve business survival Rate • Improve skills • Support further education attainment rates • Increase inward Investment • Improve productivity
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.	
Strategic Sectors	The proposed developments which will be facilitated by this scheme 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.	
Innovation	Improved accessibility to the peninsula will enable substantial knowledge assets in for instance the marine industry to be developed to support new business development and encourage innovation.	

Fareham Borough and Gosport Borough Local Plans

2.9.17 The scheme is consistent with, and supports, strategic development objectives of the FBC and GBC Local Plans – in particular through providing enhancements to the transport infrastructure necessary to support delivery of planned housing and jobs.

2.9.18 The scheme supports Policy CS5 (Transport Strategy and Infrastructure) in the FBC Local Plan Part1:Core Strategy. It also supports the delivery of Policy CS12 which relates to new development at Daedalus airfield.

2.9.19 In relation to the Gosport Borough Local Plan (2011-2029) the implementation of improvements to Newgate Lane would support the delivery of policies relating to delivery of new housing and employment at strategic sites, including Policy LP5 (Daedalus) and Policy LP21 (Improving Transport Infrastructure).

2.9.20 Fareham Borough Council (FBC -the local planning authority) and Hampshire County Council (the Highway Authority) have prepared a Joint Position Statement (dated November 2014) regarding improved access to Fareham and Gosport with

the purpose of clarifying the implications on FBC's Development Sites & Policies Plan (LP2), which is undergoing Examination in Public.

2.9.21 The Joint Position Statement can be viewed at: http://www.fareham.gov.uk/PDF/planning/local_plan/Examination/DCD-17JointStatementAccesstoFarehamandGosport.pdf

2.9.22 Both parties agree that the proposed safeguarded route for the Newgate Lane Southern Section can be delivered without there being a detrimental impact on the integrity of the Strategic Gap.

2.9.23 All stages of design involved in the progression of the scheme will take account of the principles and criteria set out in Policy CS22 of the Core Strategy.

2.9.24 The Joint Position Statement concludes that:

"Given the issues addressed in the above sections, particularly in relation to the integrity of the Strategic Gap, it is proposed that the routes of the Stubbington Bypass and the Newgate Lane Southern Section, as detailed in Appendix 1, should be safeguarded through LP2. The Council will be considering the insertion of a new policy covering the safeguarding of the routes of the Stubbington By-pass and Newgate Lane Southern Section, which will include the relevant designation on the Policies Map."

This new policy is expected to be included within a revised submission version of the FBC Development Sites & Policies Plan (LP2).

Transport Strategies and Plans

2.9.25 The scheme contributes to fulfilling the objectives and priorities of Hampshire County Council's **Local Transport Plan (2011 – 2031)**. It is further specifically identified as a necessary infrastructure improvement within evidence based sub-regional transport plans including the **Transport for South Hampshire Transport Delivery Plan** and the **Fareham and Gosport Strategic Transport Infrastructure Plan** (HCC, 2013).

2.10 Internal and External Drivers of Change

2.10.1 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.

2.11 Relevant Studies / Evidence Base

2.11.1 In addition to the work specifically undertaken in support of the business case, a substantial amount of work has previously 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 Newgate Lane South / Peel Common Roundabout scheme, is summarised in **Table 2-10**.

Table 2-10: Key evidence based studies relating to scheme identification and development

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.

2.12 Partnership Bodies and Stakeholder Working

2.12.1 The scheme will 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 **Table 2-11**.

Table 2-11: Key stakeholders

Key Stakeholders	Involvement / interest
Solent LEP	Funding body
Gosport Borough Council	Scheme is critical to improving access to the Gosport Peninsula.
Fareham Borough Council	Local Planning Authority (planning consent required for Phase 2 (NGLS alignment)
Land owners	Various land parcels required for Phase 2 (NGLS alignment)
Southern Gas Networks	Utilities equipment sited within Peel Common Roundabout including a compound housing gas regulators
Southern Water Services Ltd	Foul sewer pumping station sited within Peel Common Roundabout
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	B3385 Newgate Lane provides the most direct access between the SEZ and the wider strategic highway network (A27 / M27).

2.12.3 Section 2.7 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 2.5, including its contribution to 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 improvements in traffic conditions resulting from the additional capacity and improved network performance provided by the improvements to Peel Common Roundabout and the southern section of Newgate Lane. The scheme will provide an enhanced route between the Gosport peninsula (including the SEZ) and the A27 / M27, providing more reliable access and strengthened connectivity. Traffic relief will be provided to the southern section of Newgate Lane, which can in turn provide economic and social benefits for this area.

2.13.2 The nature and scale of the anticipated traffic impacts of the scheme are set out in the following sections, in terms of traffic flows, vehicle delays and journey times. The impacts are based on forecast model outputs (forecast year 2036) with and without the scheme, using the Sub-Regional Transport Model (SRTM). The Economic Case (Chapter 3) demonstrates how these traffic impacts translate into economic benefits.

Traffic Flow Impacts

2.13.3 **Figure 2-15** illustrates the modelled change in vehicle flows resulting from the scheme (Phases 1 and 2 combined) compared to the Do Minimum, for a 2036 forecast year AM peak. The scheme results in increased traffic flows on Newgate Lane, including due to the effects of traffic re-routing (with the route becoming more attractive as a result of capacity and journey time improvements). The re-routing effects are primarily from the A32 and Peak Lane / Mays Lane / Gosport Road, and hence there are corresponding reductions in flows on these routes.

Figure 2-15: 2036 AM Flow difference (Phases 1 and 2 combined compared to Do Minimum)

Vehicle Delays

2.13.4 **Figure 2-16** illustrates the modelled change in vehicle delays within the vicinity of Peel Common Roundabout resulting from the scheme (Phases 1 and 2 combined) compared to the Do Minimum, for a 2036 forecast year AM peak.

2.13.5 The scheme results in reduced delays, particularly at the junction itself. The modelling indicates some smaller increases in delay on some of the approaches, associated with the increased traffic throughput achieved by the scheme.

Figure 2-16: 2036 AM Delay Difference (Phases 1 and 2 combined compared to Do Minimum)

Network Performance

2.13.6 **Table 2-12** details the modelled change in a number of network performance indicators resulting from the scheme (Phases 1 and 2 combined) compared to the

Do Minimum, for a 2036 forecast year (extracted for the Fareham and Gosport model sectors).

2.13.7 The scheme results in an overall increase in vehicle travel time and distance, associated with the additional traffic generated by the enhanced network performance. Total network delays reduce, with the greatest reduction in the PM peak. The majority of vehicle trips affected by the scheme experience a change in journey time of 15 seconds or less.

Table 2-12: Modelled network performance statistics - Phases 1 and 2 combined compared to Do Minimum (2036)

Performance Indicator	Units	AM Peak Hr	PM Peak Hr	IP Hr
Total vehicle travelled time	Pcu hrs	+20	+5	+12
Total vehicle travelled distance	Pcu kms	+1296	+1541	+1087
Total network delays	Pcu hrs	-5	-21	-7
No. highway trips affected +/- 15 secs	Vehicles	5186	10075	3353
No. highway trips affected +/- 30 secs	Vehicles	2964	6692	2254
No. highway trips affected +/- 2 mins	Vehicles	-	-	-

Journey Times

2.13.8 **Table 2-13** details the modelled change in journey times resulting from the scheme (Phases 1 and 2 combined) compared to the Do Minimum, for a 2036 forecast year on selected routes using Newgate Lane. The two routes are based on a north-south route from Lee-on-the-Solent (in the south) to the A27 (in the north) and an east-west route from Rowner Road (in the east) to Titchfield Gyratory on the A27 (in the west).

2.13.9 The scheme results in reductions in journey times with the greatest saving in journey time experienced in the southbound direction on Newgate Lane in the PM peak. This is reflected in both the southbound Route 1 and the eastbound Route 2 results, as both involve travelling southbound on Newgate Lane. In absolute terms, the journey time saving for these routes is 79 seconds for Route 1 and 98 seconds for Route 2. There is a modest increase in journey time forecast for Route 2 westbound direction.

Table 2-13: Change in journey times (2036 - Phases 1 and 2 combined compared to Do Minimum)

	AM				PM			
	DM	DS	Abs Diff	% Diff	DM	DS	Abs Diff	% Diff
Route1(NB)	690	654	-35	-5%	538	531	-7	-1%
Route1(SB)	556	520	-37	-7%	620	541	-79	-13%
Route2(WB)	800	796	-4	-1%	748	778	30	4%
Route2(EB)	695	646	-49	-7%	784	685	-98	-13%

Wider Impacts

2.13.10 By helping to remove the transport barriers caused by congestion, delay and unreliable journey times, which are symptomatic of access to the peninsula via the B3385 Newgate Lane corridor, the scheme will help to unlock new homes, employment floorspace, additional GVA growth, new jobs and local investment as well as support the re-positioning of the defence sector in the area.

2.13.11 The contribution of the scheme within this context is considered in detail in the 'overarching Fareham / Gosport business case'. The key outcomes that the scheme will be pivotal in supporting delivery of include:

- 6000 new homes at Welborne, with 1,500 in the period to 2021;
- 112,000 sq metres of new employment floorspace at Welborne;
- 137,000 sq metres of employment floorspace on the Solent Enterprise Zone;
- An additional 1076 new jobs across the area by 2021;
- Additional £150 million private sector investment;
- Additional local public investment of £17.5 million; and
- Additional GVA of £55 m per annum

3 Economic Case

3.1 Introduction

3.1.1 This Chapter presents the Economic Case for the Peel Common Roundabout / Newgate Lane South 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 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

3.2.1 The economic assessment shows that this scheme represents good value for money. In terms of monetised costs and benefits, Phase 1 (DS1) has a BCR of 5.28, which represents very high value for money. Phases 1 and 2 combined (DS2) produces a BCR of 1.88, which represents medium value for money. Scheme benefits are largely derived from travel time savings as a result of the infrastructure improvements delivering capacity/ operational improvements.

3.2.2 In addition, a range of (non-monetised) economic, environmental and social impacts have been identified, including beneficial impacts associated with reliability, regeneration, wider impacts and journey quality. Some potential adverse impacts have also been identified, including for air quality and noise, landscape and biodiversity.

3.2.3 Appendix E contains an Appraisal Summary Table for each of the options appraised (see below), providing an overview of the main economic, environmental and social impacts. Key impacts are discussed in more detail in the following sections. Section 3.10 at the end of this chapter also provides an overview of all key aspects of the appraisal.

3.3 Options Appraised

3.3.1 To clearly demonstrate the benefits of the scheme elements, the following options were appraised:

- Do-minimum (standard SRTM Reference Case)
- Do-something 2a – 'DS2a' (including the interim Peel Common Roundabout proposed improvements – 'Phase 1')
- Do-something 2b – 'DS2b' (as DS1 plus Newgate Lane South alignment and further modifications to Peel Common Roundabout –'Phase 2').

3.3.2 In addition to appraising the full scheme (DS2), the DS1 option allows the benefits of Phase 1 only to be determined in isolation.

3.4 Modelling Approach and Assumptions

3.4.1 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 MVA Consultancy (now SYSTRA) 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.

3.4.2 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 **Figure 3-1**). 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.

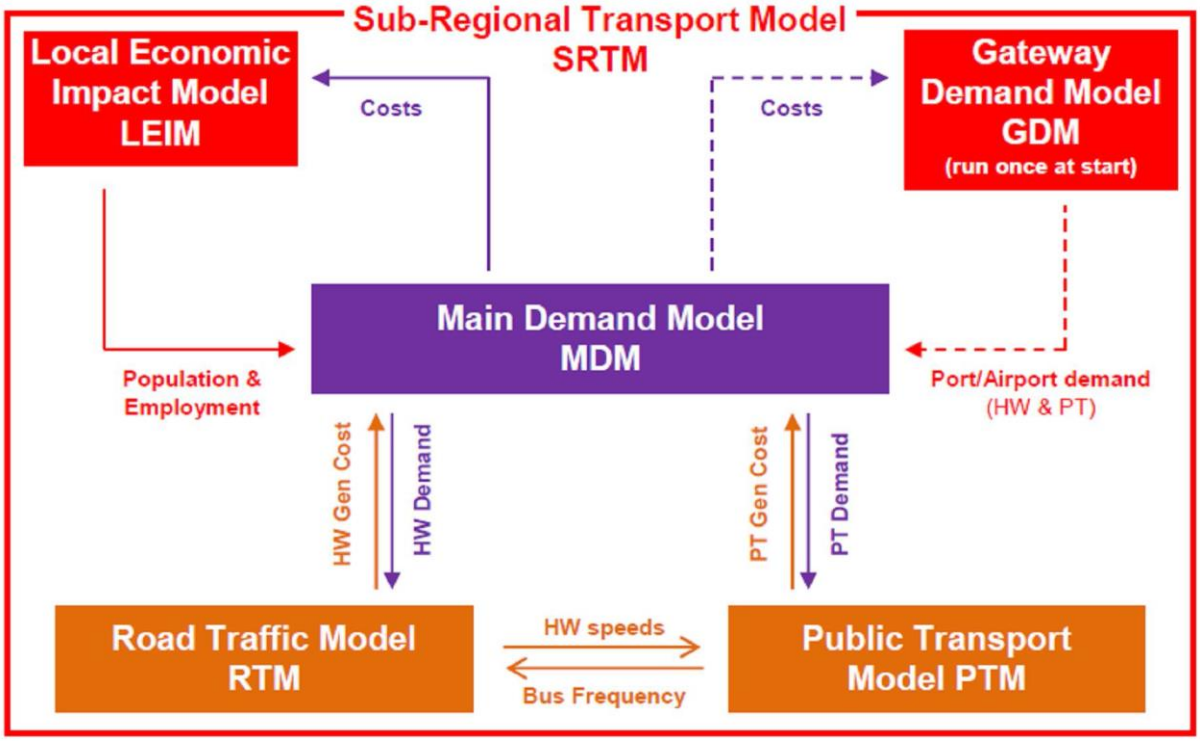


Figure 3-1: Overview of the Sub-Regional Transport Model (SRTM)

3.4.3 Further details of the traffic modelling tools utilising the SRTM are included in Appendix C.

3.4.4 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.

3.4.5 For the SRTM model runs utilised for the TUBA economic assessment, the Do Minimum land use inputs were also used for the Do Something tests.

Appraisal assumptions

3.4.6 Appendix D includes details of the modelling and appraisal approach. 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. All costs and benefits have been appraised using spend profiles to assess the present values of costs and a 60 year assessment of scheme benefits starting from the opening year of 2015 (Phase 1).

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. The analysis was based on scheme design layouts as appended (see Appendix A) and scheme costs as presented in the Financial Case (see Chapter 4).

3.5.2 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 3-1** provides a summary of the (monetised) economic appraisal outputs.

Table 3-1: Summary of economic appraisal outputs

Scenario	BCR	NPV	PVC	PVB
DS2a	5.28	£12.0m	£2.8m	£14.8m
DS2b	1.88	£9.3m	£10.6m	£20.0m

3.5.4 Phase 1 (DS2a) has a BCR of 5.28, which represents very high value for money. Phases 1 and 2 combined (DS2b) produces a BCR of 1.88, which represents medium value for money.

3.5.5 The appraisal of Economic, Environmental and Social impacts follows in Sections 3.6 to 3.9. Monetised impacts included in the BCR calculation above are quoted, where relevant, together with other, non-monetised, impacts which should also be considered in determining the overall value for money of a scheme.

3.6 Economic impacts

3.6.1 The economic impacts of the scheme have been assessed, considering highway, bus and rail transport users, bus operators, indirect taxation, costs to HCC and funding required from the LEP.

3.6.2 User benefits assessed include journey time savings, vehicle operating costs, and reliability improvements.

Public Accounts

3.6.3 Public accounts is defined as net costs incurred by central or local government bodies. It includes investment and operating costs, grant and subsidy and changes in indirect tax and other revenues.

3.6.4 The total capital cost value has been input to TUBA to reflect the allocation of expenditure between Local and Central Government. This is made up of a number of categories of cost, which accrue separately to either Local Government or Central Government. Local Government costs include the initial scheme investment costs, loss in parking revenue, scheme operating costs and capital maintenance costs. Central Government costs principally include any lost fuel duty revenue. The Public Accounts Table is shown in Appendix F.

3.6.5 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 £2.8 million for DS1 and £10.6m for DS2**.

Transport Economic Efficiency

3.6.6 Transport Economic Efficiency (TEE) comprises journey time and vehicle operating costs, in addition to user charges and private sector provider impacts. 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.

TEE Benefits – DS2a

3.6.7 Benefits accrue separately to transport users (business and non-business) and private sector operators. Business user benefits total £6.2m, whilst non-business user benefits amount to £8.4m, of which commuters contribute £6m and remaining non-business users £2.4m.

3.6.8 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. This results from the increased capacity provided at the junction and the improved operation under signal control.

3.6.9 Improvements in travel time for non-business users account for £9.6m of the total benefits. Business users accumulate a £6.0m benefit from travel time reductions. The greatest part of this benefit is to business cars and LGVs, worth £3.6m, with goods vehicles also gaining £2.7m in benefits from journey time savings.

3.6.10 The scheme is found to primarily generate benefits traveling from Fareham into Gosport and is consistent with the improved capacity/ reduced delay on the Newgate Lane approach to Peel Common benefiting trips in to Gosport. There are disbenefits on the reverse journey that appear to be both a function of an increase in delay time westbound on Rowner Road (in the PM) and an increase in flow and delay on A32 on the approach to the tear-shaped junction with B3385. See Section 2.13 in the Strategic Case for further details of traffic impacts.

3.6.11 Increased vehicle operating costs account for an overall disbenefit of £0.69m, with a larger increase in operating costs for non-business other users offset, in part, by decreases in operating costs for non-business commuting and business users.

TEE Benefits – DS2b

3.6.12 Benefits accrue separately to transport users (business and non-business) and private sector operators. Business user benefits total £8.5m, whilst non-business user benefits amount to £11.7m, of which commuters contribute £7.5m and remaining non-business users £4.2m.

3.6.13 As with DS1, the vast majority of benefits accrue from journey time savings, which are felt by both private road users and public transport passengers. This results from the increased capacity provided at the Peel Common Roundabout junction and the improved operation under signal control, plus further benefits produced by the increased capacity associated with the new Newgate Lane alignment.

3.6.14 Improvements in travel time for non-business users account for £13.8m of the total benefits. Business users accumulate a £8.6m benefit from travel time reductions. The greatest part of this benefit is to business cars and LGVs, worth £4.8m, with further benefits of a similar magnitude falling to goods vehicles.

3.6.15 The scheme is found to primarily generate benefits traveling from Fareham into Gosport and is consistent with the improved capacity/ reduced delay on the Newgate Lane approach to Peel Common benefiting trips in to Gosport. Similar to DS2a there are disbenefits on the reverse journey that appear to be both a function of an increase in delay time westbound on Rowner Road (in the PM) and an increase in flow and delay on A32 on the approach to the tear-shaped junction with B3385. See Section 2.13 in the Strategic Case for further details of traffic impacts.

3.6.16 Increased vehicle operating costs account for an overall disbenefit of £1.6m, with the majority of the increase in operating costs affecting non-business other users.

Reliability

3.6.17 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 B3385 Newgate Lane corridor 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.

3.6.18 The improved capacity at Peel Common roundabout and the enhanced alignment of Newgate Lane southern section is expected to improve traffic conditions and reduce recurring congestion and delays on this section of the network, producing a positive impact on journey time variability. Furthermore, the signalisation of the Peel Common roundabout, together with the limited access points and separation of vehicular traffic / pedestrians and cyclists associated with the new eastern alignment for Newgate Lane, will contribute to a reduction in accidents – thus reducing incidences of unexpected disruption on the network.

3.6.19 The overall impact on reliability has therefore been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) - Reliability
DS2a	Moderate Beneficial
DS2b	Moderate Beneficial

Regeneration

3.6.20 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.

3.6.21 WebTAG does not specifically define a regeneration area but it is considered that the scheme is influential in facilitating economic development on the Gosport peninsula and surrounding Fareham area where there is significant potential for job creation, including at the Solent Enterprise Zone which is a key growth priority. Parts of the area have also been granted Assisted Area status.

3.6.22 A full assessment of regeneration impacts in line with TAG Unit A2.2 has not been undertaken – whilst these impacts are considered to be relevant in the context of the scheme, impacts on housing, employment and GVA have been assessed at the

full Fareham / Gosport package level, as reported in the 'over-arching' business case. 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 regeneration areas identified above. Forecast reliability and journey time savings on the B3385 Newgate Lane corridor have been demonstrated to be significant.
- Businesses (existing / prospective) in the regeneration areas will benefit from changes in travel conditions on the key B3385 Newgate Lane corridor, 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.
- 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.
- Overall, the improved capacity and performance of the highway network will help to make the identified regeneration areas more attractive as a business location, thereby encouraging new businesses to locate there or existing businesses to expand.

3.6.23 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 by increasing capacity and removing a key junction constraint will improve journey time and reliability as a pre-cursor (and complementary measure) to the implementation of other improvements within the overarching package, including the implementation of a bypass for Stubbington. However, given the potential 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 disproportionately being accrued by the later stages of the overarching package**.

3.6.24 Overall, the impact on regeneration has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) - Regeneration
DS2a	Moderate Beneficial
DS2b	Moderate Beneficial

Employment, Housing and GVA impacts

3.6.25 As previously identified in relation to the regeneration impacts of the scheme, it 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.

3.6.26 The scheme will indirectly facilitate job creation and delivery of housing at a number of sites. Key sites are shown in **Table 3-2**, 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 3-2: Potential jobs and housing facilitated by the scheme

Growth Site	Details	Level of influence
Solent Enterprise Zone	79,000 sq. m employment floorspace; 350 homes	**Higher**
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	**Moderate**
Gosport Waterfront	700 homes	**Moderate**
Haslar	300 homes 500 jobs	**Moderate**
Brockhurst Gate	100 jobs	**Moderate**
Grange Road	230 jobs	**Moderate**
Welborne	6,000 homes 105,000 sq. m employment floorspace (5,735 jobs) 7,000 sq. m retail floorspace	**Lower**

3.6.27 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.

3.6.28 For DS2a, this equates to 40 temporary construction jobs. For DS2b, this equates to 152 temporary construction jobs.

3.6.29 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 8 new jobs under DS2a and 30 new jobs under DS2b. 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.

3.6.30 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 £1.2m for DS2a and approximately £4.5m for DS2b.

3.6.31 The Solent LEP calculate that the expected growth delivered by new development and job creation, particularly in advanced manufacturing, will generate a 3% increase in GVA equating to an additional contribution of £55.8m per annum and £52,000 GVA per capita.

Wider Impacts

3.6.32 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.

3.6.33 As an initial 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.

3.6.34 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;
- WebTAG generally advises a 10% uplift to business user benefits owing to output change in imperfectly competitive markets – business user benefits account for approximately 40% of total user benefits and therefore this impact would be beneficial; 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:

- those that arise as a result of changes in traffic - noise, air pollution and greenhouse gases; and
- those that arise in the surrounding area as a result of physical changes from the changes to the Peel Common junction and new alignment for Newgate Lane southern section - landscape, townscape, biodiversity, heritage and the water environment.

3.7.3 In relation to the planning application required for the Phase 2 works, a Scoping Report has been submitted and a full Environmental Impact Assessment is to be undertaken under the Town and Country (Environmental Impact Assessment) Regulations 2011. Environmental scoping work has been undertaken (including a number of ecological surveys) which provides an assessment of the existing conditions and the potential environmental impact assessment of the proposals. 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.

3.7.4 In line with TAG Unit A3, a proportionate approach has been adopted and suitable, available data has been used to inform the environmental appraisal including the environmental scoping work (referred to above), outputs from the traffic modelling (SRTM) and ecological /other environmental survey work undertaken to date.

Overview of the Surrounding Area

3.7.5 The land to the east of Newgate Lane consists of horse paddocks, a few residential properties, an Evangelical Church, a Nursing and Residential Care Home, scrub land, arable farm land and MoD playing fields.

3.7.6 Residential properties front onto the west side of Newgate Lane from Peel Common Roundabout for about 500m, the land then becomes more rural, with an access to Peel Common Wastewater Treatment Works. Further north, there is a cluster of residential properties including a Nursing Home.

3.7.7 The new alignment for Newgate Lane runs beside Brookers Recreation Ground, which has been set aside for the original safeguarded route (and therefore has

become overgrown), crosses Brookers Lane, runs across arable land and then across the corner of the MoD playing fields before re-joining Newgate Lane. To the east, not less than 100m away, lie residential estates of Bridgemary and Woodcot.

Air Quality

3.7.8 The impact of the scheme on air quality considers changes in PM_{10} and NO_2 emissions, which are major sources of local air pollution.

3.7.9 Background concentrations of nitrogen dioxide and particulate matter in the area are well below the EU limits. The scheme is not located within, and does not affect, any Air Quality Management Area (AQMA).

3.7.10 The scheme has the potential to influence emission levels and air quality through changes to traffic levels and traffic conditions. TAG guidance suggests that air quality impacts as a result of changes in traffic levels are not likely to be significant if the change is less than 1,000 vehicles (24 hrs AADT), or 200 HGVs. Similarly, impacts are not expected to be significant if the change in average vehicle speeds is less than 10kph (daily average) or 20kph (peak hour).

3.7.11 There is expected to be a modest increase in vehicle kilometres travelled as a result of the scheme (for instance SRTM modelling suggests an increase of less than 1% of total vehicle kilometres across the whole Fareham and Gosport area, under both DS scenarios). The SRTM has an in-built Emissions Assessment Tool (EAT) application, which provides outputs for carbon and other greenhouse gas emissions. The SRTM-EAT uses the same underlying methodology as used in the DEFRA Emissions Factor Toolkit. A slight increase in PM10 and Nox emissions is forecast for the Fareham and Gosport area under the DS2b scenario, with a negligible impact under the DS2a scenario.

3.7.12 There may be localised changes in terms of traffic flow and patterns and speed which could also have a bearing on emissions and air quality. Traffic modelling suggests increases in traffic flows on Newgate Lane under both scenarios, with the impact being greatest in the PM peak (c. 480 vehicles for DS2a and c. 700 vehicles for DS2b). Some other routes are forecast to experience reductions in traffic, such as the A32 and Peak Lane / May's Lane.

3.7.13 There are approximately 100 properties within a 100m buffer of the existing Newgate Lane (southern section). A significant proportion of these are located on the western side of the road at the southern end (near Peel Common roundabout), with a smaller number of properties on the eastern side (e.g. Woodcote Lane). There are a similar number of properties within a 200m buffer of the existing road.

3.7.14 The new Phase 2 eastern alignment brings traffic closer to the properties at Bridgemary / Woodcot to the east (and hence further away from the properties on the existing Newgate Lane). There are approximately 45 properties within a 100m buffer of the new road alignment. The majority of these are properties on the

western side of the existing Newgate Lane alignment, at the very southern end. Bridgemary / Woodcot properties are just outside a 100m buffer. Within a 200m buffer, the number of properties increases to approximately 200, including some properties on the western edge of the Bridgemary area (The Drive and associated cul-de-sacs).

3.7.15 A reduction in congestion and stop/start conditions, particularly in the vicinity of Peel Common Roundabout, could have a positive impact on emission levels within the localised scheme area.

3.7.16 Overall, there is expected to be a modest increase in total vehicles emissions, with potential increases and decreases at a more localised level on different routes. An air quality simple assessment (in line with DMRB requirements) is planned to be undertaken for the Newgate Lane South EIA to confirm air quality impacts.

3.7.17 Overall, the impact on air quality has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Air Quality
DS2a	Slight Adverse
DS2b	Slight Adverse

Noise

3.7.18 Noise implications of the scheme are generally defined in terms of the change in levels of noise annoyance experienced by people.

3.7.19 The existing noise climate is considered to be typical of an area which, whilst rural, is well connected to the major highway network. The area around the scheme is currently shown to have moderate to low noise levels from road traffic, with front line properties experiencing noise levels between 55 and 60 dB[11].

3.7.20 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.

3.7.21 There is expected to be a modest increase in overall vehicle kilometres travelled as a result of the scheme, with some localised changes in traffic flows as a result of the scheme including increased traffic flows on B3385 Newgate Lane (see section on Air Quality above). The main impacts are summarised below separately for Peel Common Roundabout and the southern end of Newgate Lane.

[11] DEFRA noise mapping - http://archive.defra.gov.uk/environment/quality/noise/environment/documents/actionplan/firstpriority/portsmouth-agglomeration.pdf

DS2a (Peel Common Roundabout)

3.7.22 Forecast increases in traffic flows on Newgate Lane could result in increased noise disturbance at adjacent properties. Signalisation may reduce noise levels if it results in lower traffic speeds for vehicles on the roundabout and its approaches. A reduction in congestion and extensive stop/start conditions could also have a positive impact on noise levels. The localised carriageway widening and realignment of the approaches and exits to the roundabout are likely to be generally beneficial to occupiers of the properties at the southern end of Newgate Lane because their distance from the traffic noise source line will be increased. The scheme at Peel Common Roundabout is therefore not expected to be a significant cause of increased noise annoyance.

DS2b (DS2a plus Newgate Lane southern section)

3.7.23 As the scheme involves displacement of traffic from one section of road to another (new section of road) the impacts are considered to be material due to the associated increase / decrease in traffic on each section.

3.7.24 In addition to the impacts described for DS2a, the main potential impacts resulting from the new route alignment provided to the east include:

- To the west of the length between Newgate Cottage, just before Tanners Lane junction, to Paddock Cottage (201 Newgate Lane), the alignment changes are considered to be minor and effects are likely to be negligible.

- At the point at which the route passes the access roads to Peel Common Wastewater Treatment Works on the west and Peel Farm on the east, the alignment is shifted eastwards moving the traffic noise source closer to Peel Farm by approximately 10m. Currently, the distance is approx. 90m and, on its own, this level of reduction is considered unlikely to result in a significant increase in noise at Peel Farm House.

- For all the properties to the west of the realigned southern section the changes in noise level are likely to be beneficial. It is estimated that decreases of up to 6dB could result.

- For the small number of properties on the east side of the route in the immediate route corridor there may be significant increases in road traffic noise level due to their reduced distance from the new road noise source line. It is estimated that the effect could be an increase of up to 3dB for the closest property.

3.7.25 Mitigation may include noise barriers where appropriate in order to minimise impacts. Furthermore, the 40mph speed limit and newly laid road surface will mitigate the extent of traffic noise generation.

3.7.26 As Newgate Lane is traffic sensitive, construction works would generally only be permitted over-night, due to the disruption that temporary signals can cause. There is potential for temporary noise and vibration effects. However, the type of construction work undertaken at night would be noise limited due to the proximity of residential properties. Notwithstanding this, some temporary noise and vibration disturbance is expected during the construction period.

3.7.27 At this level of assessment, the specific magnitude of changes in road traffic noise levels can not be determined. As scheme development progresses further noise assessment will be undertaken to determine any specific impacts and appropriate mitigation.

3.7.28 Overall, the impact on noise has therefore been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Noise
DS2a	Slight Adverse
DS2b	Slight Adverse

Greenhouse Gases

3.7.29 The proposed scheme involves a highway junction improvement (Phase 1) and a new, enhanced road alignment (Phase 2). As mentioned previously, both the DS2a and DS2b scenarios are forecast 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 from the scheme is likely to have a small benefit to fuel efficiency, and thus an off-setting effect on total emissions.

Scenario DS2a

3.7.30 The SRTM EAT tool forecasts a very slight increase in carbon emissions as a result of the scheme – mainly associated with increased vehicle kilometres travelled. The forecast increase is 13.5kg of carbon per 12hr period in 2036. This equates to approximately 6 tonnes per annum[12]. This results in a forecast carbon increase of 22 tonnes of carbon dioxide equivalents per annum[13].

3.7.31 The monetary value of the overall impact of the scheme on greenhouse gases has been calculated as PVB -£0.15m. This is incorporated in the overall BCR for the scheme reported (as a negative benefit).

Scenario DS2b

[12] Assuming a factor of 1.265 for the 12hr period between 1900 – 0700 based on variation in highway demand in the SRTM.

[13] Since November 2011, TAG guidance has measured greenhouse gas impacts in terms of tonnes of carbon dioxide equivalents – prior to this it was measured in tonnes of carbon equivalent. In order to convert the SRTM EAT outputs to the latest unit of measures it has been multiplied by the conversion factor of 44/12 based on the relative molecular mass of carbon dioxide to carbon.

3.7.32 The SRTM EAT tool forecasts a slight increase in carbon emissions as a result of the scheme – mainly associated with increased vehicle kilometres travelled. The forecast increase is 96kg of carbon per 12hr period in 2036. This equates to approximately 44 tonnes per annum, or 161 tonnes of carbon dioxide equivalents per annum.

3.7.33 The monetary value of the overall impact of the scheme on greenhouse gases has been calculated as PVB -£0.31m. This is incorporated in the overall BCR for the scheme reported (as a negative benefit).

Biodiversity

3.7.34 The impacts on habitats and species have been considered. The appraisal has been informed by ecological surveys undertaken between 2012 and 2014 and the environmental scoping work for the planning application (Phase 2 works). Further surveys are currently ongoing.

Designated sites

3.7.35 Designated sites in the vicinity of the scheme are illustrated in **Figure 3-2**.

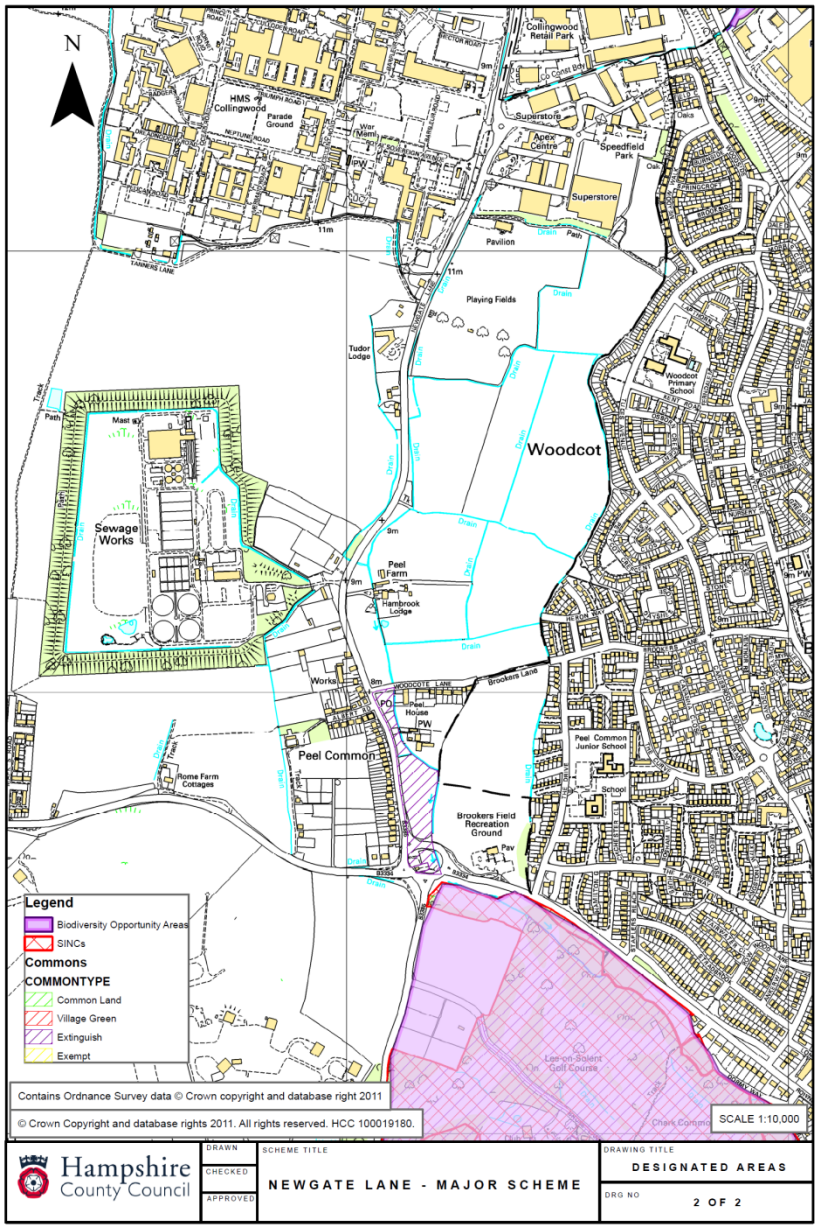


Figure 3-2: Designated Sites within the vicinity of the scheme

3.7.36 Parts of the scheme (the northern end of the new Phase 2 Newgate Lane alignment) lie within 1km of sections of the internationally designated Portsmouth Harbour SPA and Ramsar (to the north east of the new alignment), although the scheme is not expected to have any direct impacts (for either DS2a or BS2b) and there are no water courses which may be impacted that connect directly to this designated site.

3.7.37 The Wild Grounds have been designated a Site of Special Scientific Interest (SSSI) by Natural England. These are a Local Nature Reserve managed by Gosport Borough Council, located approximately 1.2km to the south east. There are not expected to be any impacts resulting from the scheme.

3.7.38 In terms of non-statutory designated sites, there are several local Sites of Importance for Nature Conservation (SINC) adjacent to the River Alver. The Lee-on-the-Solent Golf Course SINC located on the south side of Rowner Road and east of Broom Way is within the vicinity of the scheme (to the south east of Peel Common Roundabout). The Phase 1 works (DS2a) have the greatest potential to impact on this SINC. However, the scheme is not expected to have any direct impact as all works in this area are within the existing highway boundary. Nevertheless, any site clearance work and construction work will need to take account of the presence of the SINC.

Other Habitats

3.7.39 The area contains a typical mix of lowland habitats including woodland, scrub, hedgerows, tall herbaceous vegetation, semi-improved and improved grassland and bare ground.

3.7.40 A total of 19 native hedgerows have been identified within the vicinity of the scheme, with six of these qualifying as 'Important Hedgerows' under the Wildlife and Landscape criteria. Hedgerow has been identified within the new route alignment (Phase 2) which is considered to be of Local conservation value – this relates to a hedgerow corridor to the north and south of a public footpath which runs perpendicular to the route alignment. Where hedgerows can not be maintained possible mitigation measures include planting new hedgerows within the verges of the road, of at least equivalent length to that lost (and, where possible, enhanced to be more species rich than those lost).

3.7.41 At Peel Common Roundabout, the hedgerows on the west side of Broom Way and the north side of Gosport Road were identified as being Important Hedgerows. However, these hedgerows are unaffected by the proposed works for either Phase 1 or Phase 2.

3.7.42 Three trees on the north-west verge at Peel Common Roundabout were identified as having bat roosting potential – however, none of these trees is to be felled as a result of the scheme.

3.7.43 A tree survey (2012) identified that none of the trees in the area are covered by a Tree Preservation Order (TPO). There is potential for visually important parts of the treescape to be lost, with a negative impact on both visual amenity and ecological value of the area. Further Arboricultural Impact Assessment is to be undertaken to inform any required Arboricultural Method Statements and Tree Protection Plans.

Protected species

3.7.44 Reptiles (including slow worm, common lizard and grass snake) have been recorded within the vicinity of the scheme (100m radius), particularly within arable field margins in the centre of the survey area and at the south-east and south-west verges of Peel Common Roundabout. These are of value at a local level. No other reptile species (including great crested newts, water vole and otter) have been

recorded during surveys to date. During construction, the reptiles will need to be collected and provided with a new habitat equal to that lost by the improvement works. Fencing will need to be provided to keep the reptiles out of the construction site.

3.7.45 The route for the new road alignment is likely to directly affect, or increase the isolation of, habitat suitable for these species. A suitable mitigation strategy will be developed which may include relocating reptiles to alternative habitats.

3.7.46 Badgers have been identified in the area (including a sett to the south east of Peel Common roundabout, adjacent to the SINC). Badger foraging / commuting habitat may be disrupted and the new road (Phase 2 – DS2b) may result in increased badger fatalities due to traffic collision. Suitable mitigation is likely to be required. Further surveys are due to be undertaken.

3.7.47 Bat surveys have identified the area within the vicinity of the scheme to generally be of low suitability for foraging and commuting bats as it comprises open arable land, although areas of moderate potential have also been identified. The majority of trees have also been identified as having negligible potential to support bat roosts.

3.7.48 The design and works will be sympathetic to the natural environment with appropriate ecological mitigation measures being incorporated where necessary. A Detailed Assessment of nature conservation impacts is due to be undertaken in support of the EIA for the planning application for the Phase 2 works.

3.7.49 Overall, the impact on biodiversity has therefore been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Biodiversity
DS2a	Neutral
DS2b	Slight Adverse

Water Environment

3.7.50 The principal local watercourse in the area is the River Alver. It is classified as a Main River by the Environment Agency - it runs to the east of Newgate Lane across Peel Common roundabout before heading in a more easterly direction around Lee-on-the-Solent golf course.

3.7.51 The scheme is not located within, or expected to impact upon, any Flood Zones 2 or 3. The area is located within a Zone 1 flood plain (i.e. low risk) but is designated as in a Groundwater Vulnerability Zone and an area susceptible to Ground Water Flooding.

<u>DS2a (Phase 1)</u>

3.7.52 A Simple Assessment (in accordance with DMRB) has been undertaken for the Phase 1 Peel Common roundabout works.

3.7.53 The roundabout works will increase the hard surface area by a relatively small amount. Surface water will be collected by road gullies connected to the existing storm water drainage network. The EA have given approval for the discharge of surface water into a Main River watercourse and for working in the vicinity of Hoeford Stream. It has also been agreed with EA to mitigate any risk of increased flooding in the catchment by restricting the surface runoff from the road to a 1:2 year storm rate. In addition, all the Flood Defence Consent Conditions have been addressed and included within the contract documents and scheme Water Management Plan.

3.7.54 The Simple Assessment concluded that the net impact of the proposals is considered to be neutral and the proposed scheme is unlikely to affect the integrity of the water environment. Furthermore, it is anticipated that there will be no appreciable effect, either positive or negative, on the identified attributes of the River Alver.

DS2b (Phases 1 and 2)

3.7.55 In addition to the impacts associated with DS2a, the following impacts have been identified for Phase 2.

3.7.56 The new Newgate Lane alignment will have new ditches constructed at the bottom of the embankment, at each side of the road. It is expected that these will be sufficient to attenuate flows without the need for balancing ponds. Flow from the ditches will outfall into the River Alver.

3.7.57 Protective measures will need to be identified for the construction stage, and any alterations to highway supporting structures identified. With appropriate mitigation measures, the proposals are not anticipated to have any impact on the River Alver. A Flood Defence Consent will be obtained from the EA.

3.7.58 Overall, there is considered to be a small potential for impacts to the water environment to occur during the temporary construction and long term operation period, but this will be mitigated through the design stages of the project and by the contractor during the works. A Simple Assessment, in line with DMRB requirements, is due to be undertaken for Phase 2 works to confirm the expected impacts on the water environment.

3.7.59 The overall impact on the water environment has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Water Environment
DS2a	Neutral
DS2b	Neutral

Landscape

3.7.60 The HCC Integrated Landscape Assessment 2010 defines the area as within the 'Gosport and Fareham Coastal Plain' landscape character area. The landscape type is recorded as 'Coastal Plain Open', which constitutes a flat, low lying coastal landscape.

3.7.61 From, and including, Peel Common Roundabout to the access to the Wastewater Treatment Works the landscape is of low to medium importance and rarity at a local scale. From this point to the MoD playing fields the landscape is of medium to high importance and rarity, and north from the MoD playing fields the townscape is of low importance and rarity.

3.7.62 Key visual receptors that could be impacted upon by the scheme include:

- Users of Brookers Field Recreation Ground;
- Residential receptors at the southern end of Newgate Lane (and particularly including those on Woodcote Lane);
- Residential receptors to the east of the new alignment at Bridgemary; and
- Users of Public Rights of Way.

3.7.63 Overall, where the road alignment cuts through existing open fields, the local character will alter from green open space to hard-surfaced built form with traffic movements. This is likely to result in a longer term, adverse impact on landscape character and on the views from visual receptors. Potential mitigation could include provision of landscape bunds, tree planting and landscape screening.

<u>DS2a (Phase 1 – Peel Common Roundabout)</u>

3.7.64 Peel Common Roundabout is an unusually large roundabout that has a field and a number of buildings located in the centre. It is generally enclosed by overgrown native hedgerow vegetation both around and in the middle of the roundabout except in the south west quadrant which is open to Daedalus airfield. Access to Brookers Field Recreation Ground and the clubhouse is just to the west of the roundabout.

3.7.65 Construction activities associated with this junction will generally retain the land in the centre of the roundabout, except for a limited strip around the north-east quadrant which will result in the loss of some mature vegetation. The increased size and scale of the road resulting from localised carriageway widening is expected to have a moderate adverse impact on the landscape character and on views from

residential receptors. In the long term there is space to carry out mitigation planting which would reduce the effects in the longer term. No long term significant issues are therefore anticipated.

DS2b (Phases 1 and 2)

3.7.66 In addition to the impacts identified with scenario DS2a, the following further impacts have been identified relating to Phase 2 (and hence are incremental impacts to DS2b).

Newgate Lane – southern end

3.7.67 At the southern end of the route, construction activities are likely to have an adverse effect on the visual and physical amenity of Brookers Field recreation ground. Properties to the west of the route that may be affected include Peel Nook and the houses on Woodcote Lane – the retention of vegetation along the River Alver would help to maintain a status quo. Properties to the east of the recreation ground (located off The Drive) may also be subject to slight visual intrusion during the winter months. Mitigation planting will be feasible and reduce effects in the longer term.

3.7.68 The new alignment will result in the loss of a significant area of vegetation at the southern end – mitigation planting will be feasible and would replace the screening that is lost in the longer term. Land take from the recreation ground would result in the loss of trees and shrubs along the western boundary and the presence of the road will have a substantial adverse impact on the open space. There will be mitigation opportunities for screen planting to properties and the open space.

3.7.69 For the majority of residents along the existing Newgate Lane road, the transfer of traffic to the new route alignment to the east would have a significant beneficial impact.

Newgate Lane – North of Woodcote Lane to MoD Playing Fields

3.7.70 Construction activities would have a moderate adverse impact resulting from the fragmentation of the agricultural landscape – the road would pass through the middle of an open arable landscape. This landscape has few significant features, although it is one of the few remaining tracts of open agricultural land in this part of South Hampshire. The loss of land would result in the farm units integrity being disrupted and fragmented.

Newgate Lane – MoD Playing Fields to Tanners Lane

3.7.71 To the north of the farmland, the proposed route would cut through the edge of the MoD playing fields, retaining the existing mature vegetation along the edge of Newgate Lane. Screen planting mitigation would be required for individual properties such as Hambrook Lodge, properties in the vicinity of Tanners Lane and to absorb the impact of the road on the landscape character.

Summary

3.7.72 In relation to DS2b, the long term impacts include provision of a new road in the open countryside and retention of the existing Newgate Lane for access to properties. This will result in a low to moderate adverse impact on the landscape character in the medium to long term. The opportunities for mitigation along both sides of the road create the potential to improve the vegetation cover in the longer term.

3.7.73 During construction, stockpiling, temporary lighting, plant and machinery will have an effect on the tranquillity, character and visual quality of the area. Construction impacts are likely to be greater in terms of visual amenity than the impact once the scheme has been completed. These impacts are likely to be adverse, but short term.

3.7.74 The overall impact on landscape has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Landscape
DS2a	Neutral
DS2b	Moderate Adverse

Townscape

3.7.75 Townscape is the physical and social characteristics of the built and non-built urban environment and the way in which we perceive those characteristics. The potential impact on townscape considers the likely extent of its visibility from key public approaches and view corridors, and the changes to townscape features, townscape character and key viewpoints.

3.7.76 The area within the vicinity of the scheme is predominantly semi-rural with few defining townscape features. Neither scenario is therefore expected to have a significant impact upon the existing townscape character of the area.

3.7.77 The overall impact on landscape has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Townscape
DS2a	Neutral
DS2b	Neutral

Historic Environment

3.7.78 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

3.7.79 There are no known scheduled ancient monuments or conservation areas identified within the vicinity of the scheme (within 100m). Three historic buildings have been identified on the west side of the existing Newgate Lane, south of Tudor Lodge. These are:

- Foxbury Stables – an unlisted 19th century stable block, since converted to a dwelling; and

- 2 Foxbury Cottages and Foxbury Farmhouse – these are Grade II listed buildings which form a timber framed house of 17th century or earlier date.

3.7.80 There is not expected to be any direct impact on these buildings as a result of the scheme (either phase) although the design of the scheme at this location will need to be sensitive to the setting of these heritage assets.

3.7.81 There is 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. Pre-construction investigations would be undertaken as appropriate and mitigation developed if necessary.

3.7.82 The overall impact on historic environment has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Historic Environment
DS2a	Neutral
DS2b	Neutral

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.

DS2a (Phase 1 - Peel Common Roundabout)

3.8.4 The scheme does not directly promote increased walking / cycling activity. The improved cyclist / pedestrian facilities to be provided at Peel Common Roundabout) will provide a safer, more welcoming environment and 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 an opposite impact, with more people being attracted to drive (as suggested by the forecast changes in vehicle kilometres from the SRTM).

DS2b (Phases 1 and 2)

3.8.6 The scheme does not directly promote increased walking / cycling activity. In addition to the improved cyclist / pedestrian facilities to be provided at Peel Common Roundabout, the use of the low trafficked service road (existing Newgate Lane) will provide a safer, more welcoming environment and 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.

3.8.7 However, as with scenario DS2a, the improved traffic conditions as a result of the scheme are also likely to contribute to an opposite impact, with more people being attracted to drive (as suggested by the forecast changes in vehicle kilometres from the SRTM).

3.8.8 The overall impact on physical activity has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Physical Activity
DS2a	Neutral
DS2b	Neutral

Accidents

DS2a (Phase 1 – Peel Common Roundabout)

3.8.9 An analysis of STAT19 data on accidents within the vicinity of Peel Common Roundabout shows that there were 18 personal injury accidents (PIAs) in the 5 year period between September 2009 and August 2014. Of these, 15 were slight and 3 were serious. The roundabout is a notable accident cluster within the area. A high proportion of accidents were recorded as shunts on the approaches.

3.8.10 Signalisation of three of the arms of the roundabout is expected to improve overall safety through increased traffic control. It is anticipated that this will contribute to a reduction in the incidence of accidents at the roundabout, particularly rear end shunts and errors of judgement in joining the roundabout. The enhanced and additional crossing provision is also expected to help reduce pedestrian / cyclist conflict with general traffic, and thus improve general safety.

DS2b (Phases 1 and 2)

3.8.11 The following impacts identified are in addition to DS2a above,

3.8.12 A total of 17 PIAs were recorded on the Newgate Lane southern section between the junction with Tanners Lane to the north and Peel Common roundabout to the south (in the 5 year period between September 2009 and August 2014). Of these, 14 were slight and 3 were serious. A number of accidents were conflicts between vehicles and pedestrians / cyclists and also involving manoeuvres to local accesses.

3.8.13 With the new Newgate Lane route alignment to the east, the existing alignment (functioning as a service road), will provide a safer environment for pedestrians and cyclists and significantly reduce potential for conflicts with general traffic on this section of the road. As the number of accesses / junctions with the new route alignment are limited, it is expected that this will also reduce the incidence of accidents on this section of the route.

3.8.14 In both scenarios, 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 follows:

Scenario	Qualitative Assessment (seven point scale) – Accidents
DS2a	Slight Beneficial
DS2b	Slight Beneficial

Security

3.8.15 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.

3.8.16 There is not considered to be any material impact on security under the DS2a scenario.

3.8.17 In relation to DS2b (including Newgate Land southern section), there is a degree of informal surveillance on the existing route, provided by properties adjacent to the road, particularly at the southern end. With the new route alignment further east, which runs through open fields, the level of informal surveillance will be reduced.

3.8.18 The existing route alignment has street lighting. It is proposed that the new alignment to the east would not be lit, except at the approaches to junctions, due to its rural surroundings.

3.8.19 The overall impact on personal security has therefore been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Security
DS2a	Neutral
DS2b	Slight Adverse

Severance

DS2a

3.8.20 There are presently no crossing facilities on both the eastern and southern arms of Peel Common Roundabout. This acts as a barrier, particularly to pedestrian and cyclist movements between Rowner Road and Gosport Road and also between Broom Way and Rowner Road. The existing conditions represent moderate severance.

3.8.21 Phase 1 will provide new crossing facilities on the Rowner Road and a shared use footway / cycleway across the south of the roundabout. This will help to reduce severance and, in particular, better serve school children travelling from the Peel Common estate (to the east of the roundabout) to Crofton Secondary school (approximately 500m to the west of the roundabout). The proposals will therefore enhance the existing pedestrian and cycling facilities and better cater for desire

lines – journey lengths are likely to be reduced, although journey times could also increase slightly due to the need to cross the roundabout arms in two stages.

DS2b

3.8.22 The existing Newgate Lane route is busy, with no pedestrian crossing facilities between the toucan crossing at Peel Common Roundabout and just south of Speedfields Park. Many cyclists use the footway (illegally), rather than stay on road where vehicles have trouble passing due to the narrow width. The new road alignment delivered through Phase 2 has a beneficial effect by moving the traffic to the east of the community.

3.8.23 A two-stage toucan crossing will provide access across the route where it joins Peel Common roundabout. Where the route crosses Brookers Lane, which is currently a pedestrian and cycle link to Woodcote Lane, a 2.5m wide pedestrian refuge is proposed to make crossing the new road easier for pedestrians and cyclists.

3.8.24 An assessment of the change in severance resulting from the scheme demonstrates slight severance, compared to moderate severance in the existing scenario. Therefore, this represents a **slight beneficial** impact overall, in accordance with Table 5.1 of TAG Unit A4.1.

Scenario	Qualitative Assessment (seven point scale) – Severance
DS2a	Slight Beneficial
DS2b	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 care: aspects such as cleanliness, level of facilities, information and the transport environment;
- Traveller's views: the view and pleasantness of the external surroundings in the duration of journeys made; and
- Traveller stress: frustration, fear of accidents and route uncertainty.

3.8.26 Under both scenarios a positive impact is expected in terms of reduced congestion and delays to transport users, including bus users. Driver stress is currently classified as high. The scheme is expected to result in more reliable journey times and less frustration experienced by those travelling along this corridor, particularly at peak times.

3.8.27 The alignment of the new route, running through open fields, will offer pleasant views to travellers.

3.8.28 Furthermore, enhanced facilities are provided for pedestrians and cyclists, with the provision of foot /cycleways linking in to the existing networks at Peel Common roundabout and the use of the service road (existing Newgate Lane alignment). This will serve to create a safer, more pleasant environment for pedestrians and cyclists, improve journey quality, and reduce fear of accidents.

3.8.29 Overall, the impact on journey quality has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Journey Quality
DS2a	Slight Beneficial
DS2b	Slight Beneficial

Accessibility

3.8.30 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.

3.8.31 There is currently one bus service (21) which operates through Peel Common Roundabout at a frequency of approximately one bus per hour. This serves Stubbington / Lee-on-the-Solent / Fareham.

3.8.32 With the implementation of Phase 2, buses travelling on Newgate Lane would be diverted to the new road. However, this is not expected to result in significant changes to the frequency or availability of bus services, and hence the opportunity to travel (the key measure of accessibility). There could be some relatively small increases in time / distance to access the service for residents on Newgate Lane. Some improvements to bus journey time reliability / punctuality could be expected as a result of the service running on the new route.

3.8.33 There is a bus stop on Newgate Lane to the north of Peel Common roundabout that is to be relocated to accommodate minor carriageway widening at this point as part of the Phase 1 works – this is not expected to have any significant impact. The existing stops on Rowner Road (to the west of The Drive) are also to be removed, although these are currently not served by any bus routes.

3.8.34 There will be no bus stops on the new eastern alignment for Newgate Lane – the existing bus stops will remain. Bus gates at the south end of the service road will allow buses to use the existing stops. There are a total of eight bus stops on the Newgate Lane southern section – six will be retained in their current state and at

their current location but the Tudor Lodge bus stops will be re-located approximately 80m to the south, on the service road, close to the junction with the new road and with some upgrade of the infrastructure. The re-location is not expected to have a material impact on accessibility and the upgraded infrastructure will have a slight beneficial impact.

3.8.35 Whilst the accessibility appraisal focuses on public transport, the scheme does also provide enhanced accessibility by walking / cycling through the provision of enhanced / additional pedestrian and cyclist facilities including a new shared use footway / cycleway to the south of Peel Common roundabout (which will contribute to improved access on foot /cycle to Crofton Secondary school for children from the Peel Common area). The scheme provides enhanced linkages to the wider footway / cycleway network. There will be no adverse impacts on cycle / walk journey lengths or time in the Newgate Lane southern section, as pedestrians and cyclists will be able to use the service road (existing Newgate Lane road), albeit under improved conditions due to the removal of significant traffic volumes.

3.8.36 The overall impact of the scheme on accessibility by non-car modes has been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Accessibility
DS2a	Neutral
DS2b	Neutral

Affordability

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

3.8.38 The TUBA analysis indicates some relatively minor changes in vehicle operating costs as a result of reduced congestion / delays, but these are not considered to be significant overall in terms of personal affordability. The overall impact on affordability has therefore been assessed as follows:

Scenario	Qualitative Assessment (seven point scale) – Affordability
DS2a	Neutral
DS2b	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."

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. A summary distributional impacts assessment is included in **Appendix G**. 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.

3.10 Overall Value for Money

3.10.1 The analysis contained within this chapter shows that **the full scheme (DS2b) will generate a Present Value of Benefits (PVB) of £19.96m** and **the Phase 1 Peel Common interim improvement (DS2a) will generate a PVB of £14.79m.** The breakdown of the PVB is set out in **Table 3-3**.

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

PV (£m)	DS2a (Peel Common 15/16)	DS2b (DS2a + NGLS)
Travel Time	15.601	22.330
Vehicle Operating Costs	-0.687	-1.648
User Charges	-0.324	-0.440
Private Sector provider - revenue	-0.716	-1.608
Wider public finances (Indirect Taxation Revenues)	1.072	1.638
Greenhouse Gases	-0.150	-0.310
Total	**14.796**	**19.962**

3.10.2 The PVB compares against a **Present Value of Costs (PVC) of £10.6m for DS2b and £2.8m for DS2a**.

3.10.3 This results in a **Benefit Cost Ratio (BCR) of 1.88 for DS2b** and a **BCR of 5.28 for DS2a**.

3.10.4 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. These are set out in **Table 3-4**.

Table 3-4: Non-monetised impacts

Non-monetised impact	DS1 (Peel Common 15/16)	DS2 (DS1 + NGLS)
Reliability	**Moderate Beneficial**	**Moderate Beneficial**
Regeneration	**Moderate Beneficial**	**Moderate Beneficial**
Wider Impacts	**Moderate Beneficial**	**Moderate Beneficial**
Noise	**Slight Adverse**	**Slight Adverse**
Air Quality	**Slight Adverse**	**Slight Adverse**
Landscape	**Neutral**	**Moderate Adverse**
Townscape	**Neutral**	**Neutral**
Historic Environment	**Neutral**	**Neutral**
Biodiversity	**Neutral**	**Slight Adverse**
Water Environment	**Neutral**	**Neutral**
Severance	**Slight Beneficial**	**Slight Beneficial**
Personal Security	**Neutral**	**Slight Adverse**
Physical Activity	**Neutral**	**Neutral**
Accessibility	**Neutral**	**Neutral**
Journey Quality	**Slight Beneficial**	**Slight Beneficial**
Affordability	**Neutral**	**Neutral**
Option Values	**Neutral**	**Neutral**

3.10.5 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 – this includes facilitating the delivery of jobs and housing, in particular at the Solent Enterprise Zone, in addition to directly generating approximately 30 temporary jobs associated with scheme construction (DS2b).

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 As set out earlier in this business case, the scheme comprises two distinct phases. The total current outturn scheme cost estimate for both Phase 1 and Phase 2 combined is **£12,210,896**, as detailed in **Table 4-1**. The total cost for Phase 1 is £**3,256,447** and the total cost for Phase 2 is £**8,954,449**. These figures include the base cost, plus adjustments for risk allowance and inflation. Each of these elements is discussed in turn below.

Table 4-1: Outturn scheme cost

Project component – cost heading	Phase 1 Cost (£)	Phase 2 Cost (£)	TOTAL
Design / preparation fees	719,000	962,302	2,258,683
Supervision		577,381	
Works costs[14]	1,952,566	3,492,524	5,445,090
Utility diversion costs	344,256	75,000	419,256
Land costs and Part 1 claims	n/a	1,335,000	1,335,000
Base cost sub-total (excludes risk, inflation, optimism bias)	**3,015,822 (Q3 2014 prices)**	**6,442,207 (Q1 2014 prices)**	**9,458,029**
Inflation	82,625	356,685	439,310
Risk allowance	158,000	2,155,557	2,313,557
Total cost	**3,256,447**	**8,954,449**	**12,210,896**

Base Costs

4.2.2 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. A detailed cost estimate has been produced for Phase 1, with costs prepared by Hampshire County Council Quantity

[14] Works costs includes 10% contingency allowance.

Surveyors, who have used their estimating and pricing database as the base for the unit rates. The cost estimate for Phase 2 represents a feasibility stage estimate. The price base for the base costs (for each Phase) is indicated in **Table 4-1**.

4.2.3 The total base cost estimate, which excludes allowances for inflation and risk (and optimism bias), is therefore **£9,458,029**, as shown in **Table 4-1** above. The split between Phase 1 and Phase 2 is **£3,015,822** and **£6,442,207** respectively.

4.2.4 A more detailed breakdown of the 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)	Phase 1 Cost (£)	Phase 2 Cost (£)	TOTAL
Preliminaries	659,152	582,087	**1,241,239**
Site clearance	12,632	8,335	**20,967**
Main works (inc 10% contingency)	1,262,581	2,677,249	**3,939,830**
Landscape and Ecology	18,201	224,853	**243,054**
Total	**1,952,566**	**3,492,524**	**5,445,090**

4.2.5 Allowances have further been made for inflation and risk (see below).

Inflation Assumptions

4.2.6 Investment costs have been forecast at current prices and inflated up to the point of expenditure.

4.2.7 For the purposes of appraisal only, real inflation (i.e. the rate of inflation of costs above the rate of background inflation) has been considered (see Economic Case). For this financial case, the full rate of inflation has been included in cost forecasts.

4.2.8 An allowance for inflation of 4% increase per annum has been assumed (ROADCON Tender Price Index).

Risk Allowances

4.2.9 A 10% contingency for variations to the Contract during the construction period has been included in the Works Cost estimates for both phases.

4.2.10 In addition, a general project risk allowance has been provided for. The approach to quantification of risk cost allowance differs between the two scheme phases, due to the different stages of development.

Phase 1 risk allowance

4.2.11 Risk costs are based on an assessment of risks and a Quantified Risk Assessment (QRA). A proportionate approach to the QRA has been taken and a full Monte Carlo approach has not been used. Instead the QRA is based on a simplified assessment of probability and likelihood together with upper and lower estimates of the financial impact. The mean value of all risk costs has been calculated. This approach is considered to be appropriate given the scale / value of the Phase 1 works.

4.2.12 The QRA has identified a risk value of £158,000 in relation to the scheme. This figure is included in the overall scheme cost and spend profile. The Risk Register, including details of the quantified risk costs, is provided in Appendix J. Further details on risk assessment and risk management are also provided in Appendix K.

Phase 2 risk allowance

4.2.13 A general 40% risk allowance has been provided for at this stage. A detailed QRA will be undertaken as the scheme develops.

4.2.14 The approach to risk management and an explanation of how HCC will mitigate financial risks and the risk appraisal and register is fully reported later on in the Management Section of this Business Case.

4.2.15 Any cost overruns, if they arise, will be funded through Hampshire County Council Capital resources.

Scheme Cost Profile

4.2.16 **Table 4-3** sets out the quantified cost estimate for Phase 1 (outturn cost), which includes risk and inflation and shows the years in which the costs are incurred.

Table 4-3: Scheme cost profile - Phase 1

Cost element	Year costs are incurred (£)					Total
	14/15	15/16	16/17	17/18	18/19	
Design / preparation and supervision	375,060	250,719	105,595			**731,375**
Works costs		1,829,965	192,851			**2,022,816**
Utility diversion costs		344,256				**344,256**
Land costs and Part 1 claims						

Risk		158,000				**158,000**
Total	**375,060**	**2,582,940**	**298,446**			**3,256,447**

Ongoing Revenue Liability

4.2.17 Operation and maintenance liabilities will fall to HCC. These costs have not been included in the cost estimate as they will be become part of the maintenance and operations costs for the principal road network authority.

4.3 Scheme Funding

4.3.1 The scheme will be funded through a combination of HCC funds and Local Growth Fund (LGF), as summarised in **Table 4-4**.

Table 4-4: Summary of scheme funding sources

Funding Source (£m)	HCC	Solent LEP LGF 1	Solent LEP LGF 2 (tbc)	Other	TOTAL
Phase 1	1.250	2.000	-		3.250
Phase 2		3.000	6.000		9.000

HCC Funding

4.3.2 Hampshire County Council will invest £1.250m towards Phase 1, being 38% of the cost of Phase 1 works and 10% of the total scheme cost. This contribution will come from its capital resources and any relevant Section 106 receipts in order to help bring this scheme forward. This shows a local commitment to the scheme and underlines the belief that investment in access to the Gosport Peninsula will help remove the transport barriers to growth and will encourage investment at key sites including the Solent Enterprise Zone, and will also help to reduce journey times in congested urban areas.

4.3.3 No further HCC funds have currently been identified in relation to Phase 2. HCC will continue to investigate opportunities to increase the total contribution towards scheme costs.

LGF Funding

4.3.4 Through the Solent LEP Growth Deal (July 2014), a total of £5m of Local Growth Fund (LGF) has been allocated towards this scheme (42% of the total scheme cost). This comprises £2m towards Phase 1 and £3m towards Phase 2.

4.3.5 Phase 1 is therefore fully funded by LGF / HCC funding. The gap funding required to deliver Phase 2 is approximately £6m, which equates to 50% of the total cost. This funding is being sought by the Solent LEP through a further application for LGF as part of an enhanced Growth Deal.

4.4 Funding Profile

4.4.1 **Table 4-5** sets out the intended funding profile for the scheme, with Phase 1 and Phase 2 identified separately.

Table 4-5: Scheme funding profile

£m	<2015-16	2015-16	2016-17	2017-18	2018-19	TOTAL
PHASE 1 (funding approved subject to business case approval)						
Solent LEP LGF Funding (committed)		2,000,000				2,000,000
HCC Contribution	286,065	682,344	288,038			1,256,447
TOTAL	**286,065**	**2,682,344**	**288,038**			**3,256,447**
PHASE 2 (subject to outcome of LGF2)						
Solent LEP LGF Funding (committed)				3,000,000		3,000,000
Solent LEP LGF Funding (subject to approval)				6,000,000		6,000,000
HCC Contribution						
TOTAL	-	-	-	**9,000,000**	-	**9,000,000**

5 Commercial Case

5.1 Introduction

5.1.1 The Commercial Case sets out the commercial viability of the Peel Common Roundabout / Newgate Lane South 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 Certainty of delivery

5.2.1 Hampshire County Council has a proven track-record for delivery and is therefore confident that this project can be completed within the stated timescales and milestones. The scale and types of works are familiar to those delivering them.

5.3 Sourcing Options and Procurement Strategy

5.3.1 Phases 1 and 2 will be procured separately. For each phase the preferred procurement route is to divide the works into the following contracts:

Main works contract

5.3.2 The main works will be procured via the SE7 Regional Framework, which covers schemes with a value between £350k and £5m. The SE7 Framework was introduced in April 2012 with 10 selected contractors in the framework. Framework Contractors performance is monitored, quarterly, using key performance indicators. The KPI scoring is used as an incentive enhancement mechanism for Tender Assessments. Depending on a contractors performance their Tender Assessment Value used for the purpose of Tender Analysis can vary by plus or minus 10%.

5.3.3 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 SE7 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.

5.3.4 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, and will be let under the Regional Framework Contract. This Contract is applicable to both the value and the timescales required for the scheme and is used for contracts up to £5m. The Contract will be let with a Quality / Price bid. This will 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.

5.3.5 Whilst use of the SE7 framework would be the preferred option for Phase 2 works, the value of the works contract is likely to be close to the £5m threshold. Should the value exceed this threshold it is anticipated that an OJEU tender process would be followed.

Advanced works contract

5.3.6 For Phase 1, the necessary advanced works (vegetation clearance) is to be carried out by HCC's framework contractor Amey. The same approach will be considered for advanced works for Phase 2. Alternatively, these works may require a contract to be let under the SE7 -Regional Framework.

Landscaping

5.3.7 A separate landscaping contract is anticipated. The main works will provide topsoil and grass seeding, in accordance with the landscape design. A 3 year maintenance period is to be incorporated into the landscaping contract.

Traffic Signals

5.3.8 ITS will be responsible for the design and site supervision of the traffic signal installation. Civils works will be carried out by the main contractor; however a separate contract is to be let with Siemens for the installation of the traffic signals and the software to operate them.

5.4 Procurement Timescales

Phase 1

5.4.1 In terms of advanced works, tree and scrub clearance is to be carried out before the end of February in order to avoid the nesting bird season. Use of HCC's framework contractor Amey means that lead in times are minimal.

5.4.2 For the main works, tender preparation is scheduled to be ongoing until end of January 2015. The tender process is expected to run between early January 2015 and end of March 2015, with key stages to include:

- Expression of Interest – 1st Jan to 27th Jan
- Tender Period – 29th Jan to 12th March
- Tender appraisal – 12th March to 26th March
- Contract award – 31st March 2015

Phase 2

5.4.3 Tender preparation is scheduled to take place between April and August 2016. The tender process is expected to run for a 15 week period, with the tender process concluding in December 2016.

5.5 Specification

5.5.1 HCC has a standard specification that it uses on all of its highway projects. The SE7 Regional Highways Framework Model Contract Specification will be used for the proposed works. If required, additional items will be added to the standard specification.

5.6 Commercial Risks to Delivery

5.6.1 The risks that the contractor will take on are as identified in the NEC3 conditions of contract under which this scheme will be let. Other project risks are identified in the Risk Register (see Appendix J) and risks will be allocated to the relevant party that will take on each risk, with some risks being mitigated by transferring the risk to the contractor to manage. Where possible, risks will be reduced throughout the design period and those remaining risks identified as part of the contract documents. Separate Risk Reduction meetings will also be held on a regular basis by the Site Team and the Contractor.

5.7 Human Resource Issues

5.7.1 There are no HR issues that have been identified in relation to the contracting for this scheme.

5.8 Contract Management

5.8.1 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.

5.8.2 The following tender documents will be prepared and provided to Tenderers:

- Specification
- Works Information
- Site Information
- Contract Data
- Bill of Quantities
- Pre-Construction Health and Safety Plan

5.8.3 A Contract Audit will be carried out, and a full cost estimate including risk cost review will be provided prior to Invitation to Tender.

5.8.4 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.

5.8.5 Being a busy road junction, the work will be required to be undertaken whilst causing the minimum of disruption to the junction and the surrounding road network. If necessary, the contract will be prepared to restrict the contractor to maintaining the capacity of the existing road junction as far as is reasonably practicable during the working day, 7 days a week.

5.8.6 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.

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 The two phase approach to this scheme means that the initial works to Peel Common Roundabout can be delivered early (2015/16), followed by the new eastern alignment for Newgate Lane southern section (2017/18) - this allows time to proceed with the necessary land acquisition and planning matters for the latter.

Phase 1

6.1.3 Phase 1 of the scheme is wholly within existing highway land and is therefore Permitted Development, which does not need planning permission.

6.1.4 There is not expected to be any impact upon the existing utility equipment and apparatus in the form of the water pumping station and gas network interchange located in the vicinity of the Peel Common roundabout.

6.1.5 Whilst this is not considered to be a particularly complex scheme in terms of construction, disruption to the travelling public during construction will be severe. The traffic around Peel Common Roundabout is heavy all day, and any form of restriction causes traffic to back up across the entrances. However, a fair proportion of the work involves ducting and infrastructure for the new signals. This is mostly in the verge/ footway, so this aspect of the works is unlikely to restrict traffic flows.

6.1.6 It is estimated that the scheme will take approximately 6 months to construct, including services diversions.

Phase 2

6.1.7 Phase 2 will require the acquisition of land and planning permission. Discussions with the landowners have commenced prior to the submission of the planning application. CPOs will be prepared in parallel in case they are needed, and whilst their use generates the risk of a Public Inquiry, the programme has taken the potential delay into account.

6.1.8 The majority of the bypass construction is off-line, so disruption to the travelling public will generally be limited to the construction of the tie-ins.

6.1.9 It is estimated that the bypass will take approximately 9 months to construct.

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 **Figure 6-2**.

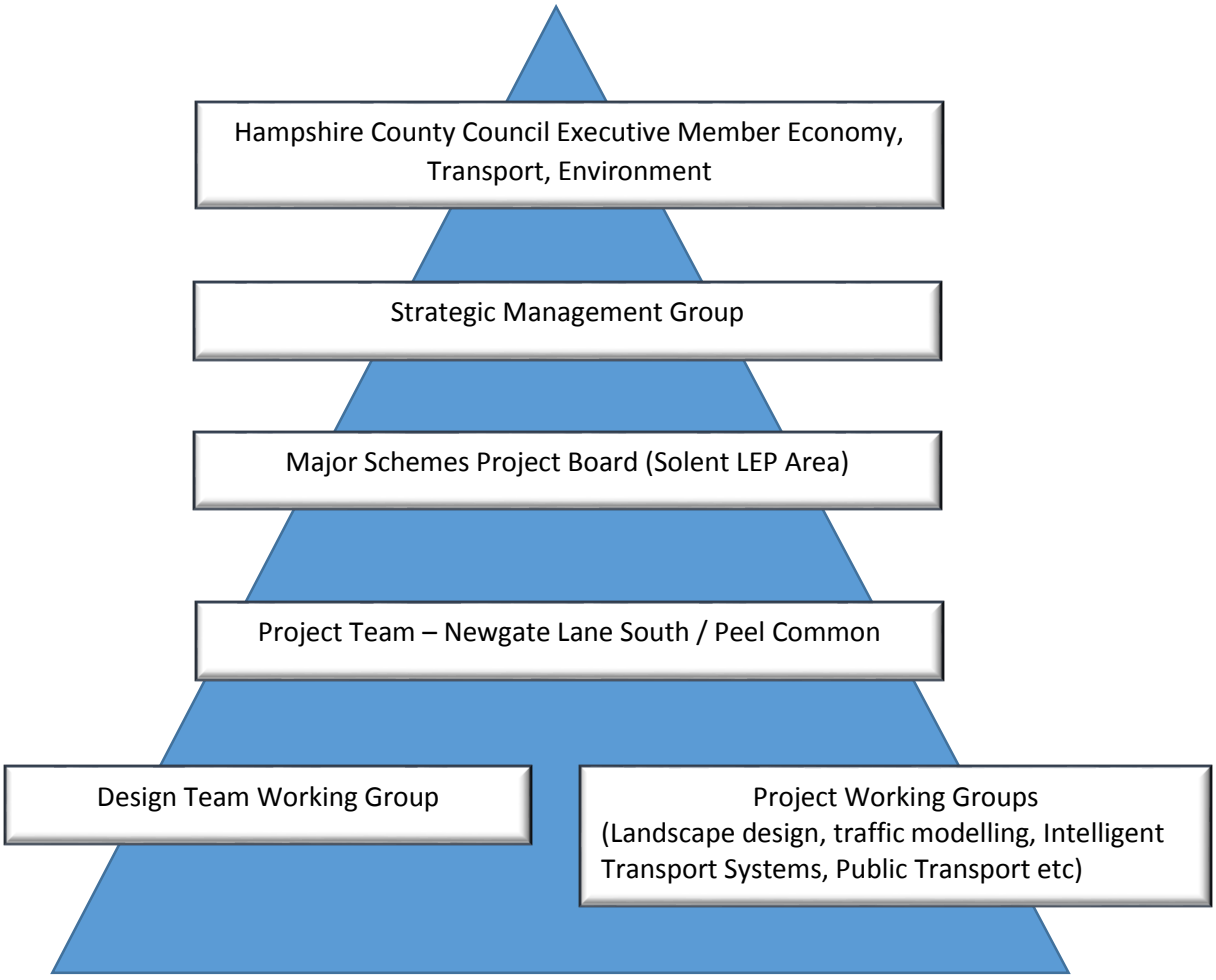


Figure 6-1: High level project governance

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

6.2.3 The Senior Responsible Officer (SRO) for the project delivery is: Keith Wilcox (Head of Strategic Transport). The Client Manager for the project is Jon Ryder. 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

6.2.4 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

6.2.5 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.

6.2.6 Project Appraisals will be produced as part of the Gateway process. In order to meet the delivery timescales (see Section 6.3) a G3 Project Appraisal for Phase 1 is currently planned to be considered by the Executive Member for Economy Transport and Environment on the 20th January 2015. Approval for delegated authority to implement the advanced site clearance operations was secured at the EMETE decision day on 4th November 2014. For Phase 2, a G3 Project Appraisal is planned for September 2015.

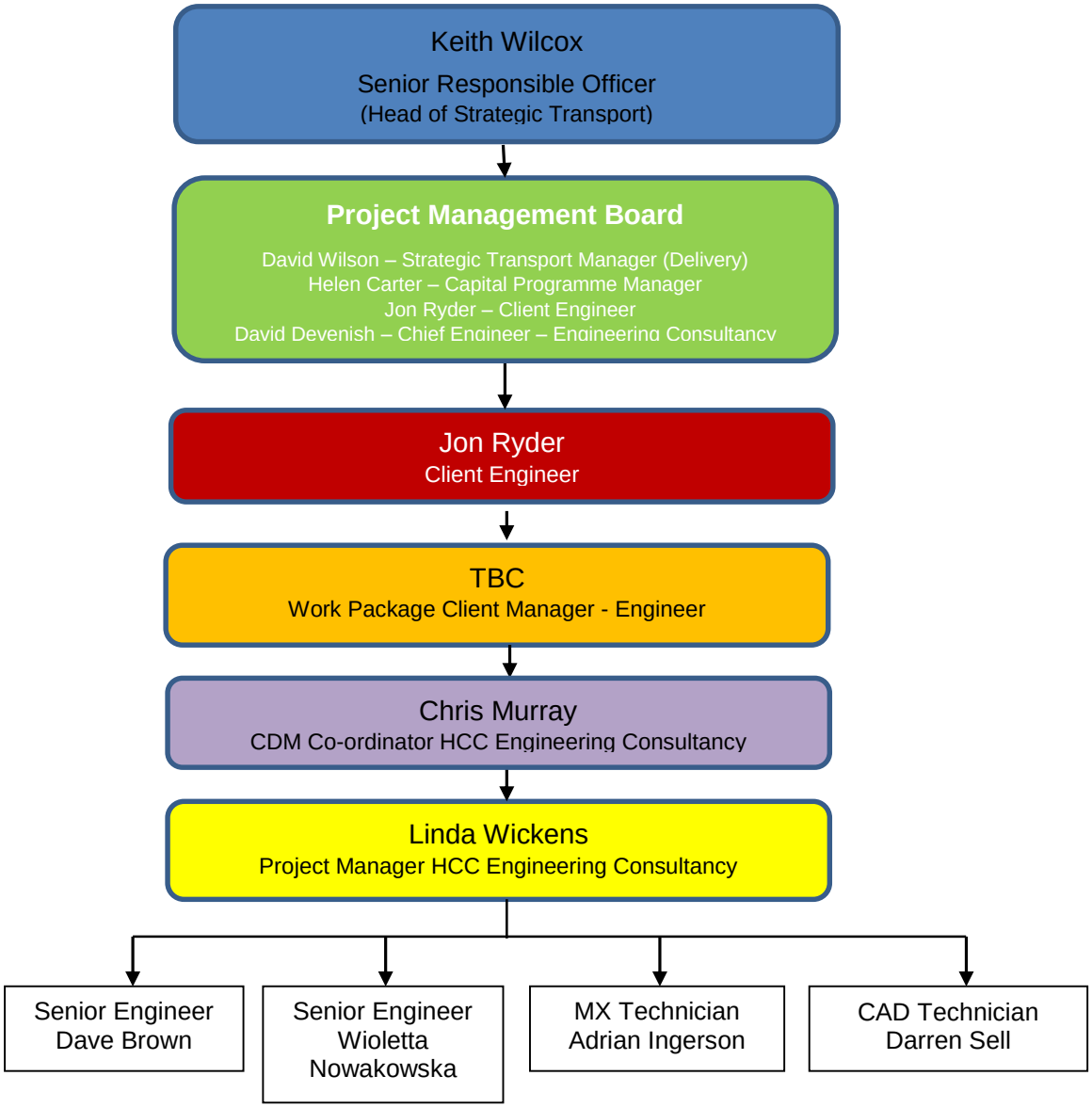
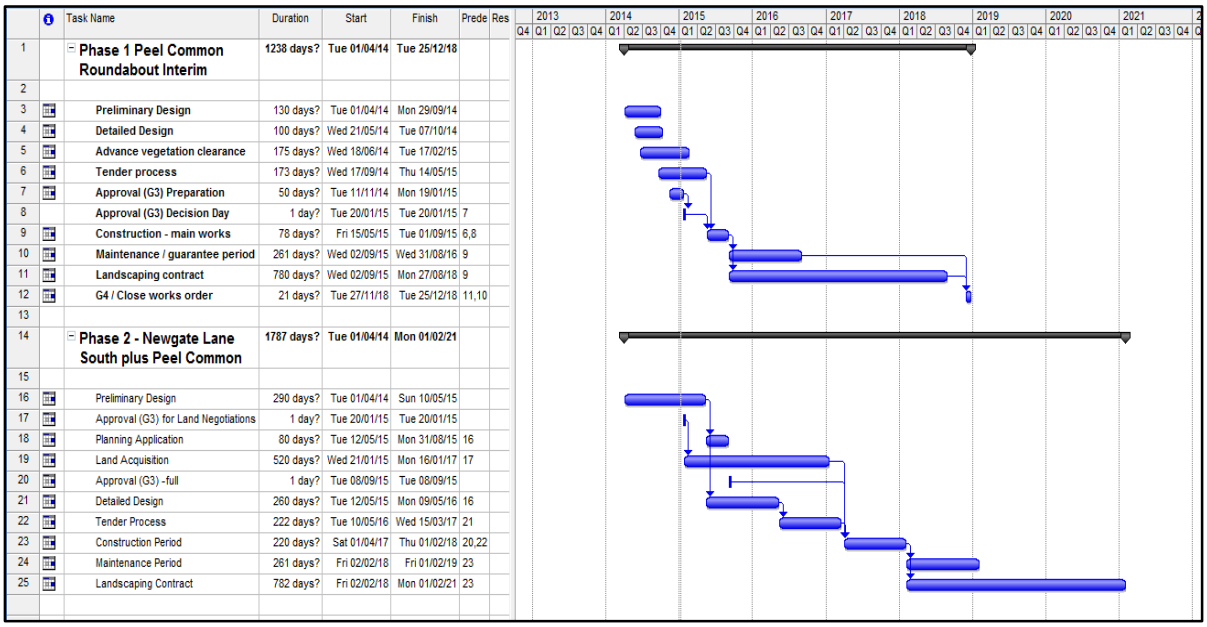


Figure 6-2: Delivery team structure / governance

6.3 Project Plan

6.3.1 A high level project plan for both phases is presented in **Figure 6-3** below. A more detailed project plan, including a gantt chart for Phase 1, is included in Appendix H - this illustrates the key project tasks and delivery timescales, including the key inter-dependencies.



	Task Name	Duration	Start	Finish	Prede	Res
1	**Phase 1 Peel Common Roundabout Interim**	**1238 days?**	**Tue 01/04/14**	**Tue 25/12/18**		
2						
3	Preliminary Design	130 days?	Tue 01/04/14	Mon 29/09/14		
4	Detailed Design	100 days?	Wed 21/05/14	Tue 07/10/14		
5	Advance vegetation clearance	175 days?	Wed 18/06/14	Tue 17/02/15		
6	Tender process	173 days?	Wed 17/09/14	Thu 14/05/15		
7	Approval (G3) Preparation	50 days?	Tue 11/11/14	Mon 19/01/15		
8	Approval (G3) Decision Day	1 day?	Tue 20/01/15	Tue 20/01/15	7	
9	Construction - main works	78 days?	Fri 15/05/15	Tue 01/09/15	6,8	
10	Maintenance / guarantee period	261 days?	Wed 02/09/15	Wed 31/08/16	9	
11	Landscaping contract	780 days?	Wed 02/09/15	Mon 27/08/18	9	
12	G4 / Close works order	21 days?	Tue 27/11/18	Tue 25/12/18	11,10	
13						
14	**Phase 2 - Newgate Lane South plus Peel Common**	**1787 days?**	**Tue 01/04/14**	**Mon 01/02/21**		
15						
16	Preliminary Design	290 days?	Tue 01/04/14	Sun 10/05/15		
17	Approval (G3) for Land Negotiations	1 day?	Tue 20/01/15	Tue 20/01/15		
18	Planning Application	80 days?	Tue 12/05/15	Mon 31/08/15	16	
19	Land Acquisition	520 days?	Wed 21/01/15	Mon 16/01/17	17	
20	Approval (G3) -full	1 day?	Tue 08/09/15	Tue 08/09/15		
21	Detailed Design	260 days?	Tue 12/05/15	Mon 09/05/16	16	
22	Tender Process	222 days?	Tue 10/05/16	Wed 15/03/17	21	
23	Construction Period	220 days?	Sat 01/04/17	Thu 01/02/18	20,22	
24	Maintenance Period	261 days?	Fri 02/02/18	Fri 01/02/19	23	
25	Landscaping Contract	782 days?	Fri 02/02/18	Mon 01/02/21	23	

Figure 6-3: High level project plan

Delivery Milestones

6.3.2 Key project milestones are provided in **Table 6-1** below.

Table 6-1: Key project delivery milestones

Project Milestone	Expected completion date
PHASE 1 – PEEL COMMON ROUNDABOUT	
Preliminary Design complete	29/09/2014
Detailed Design complete	07/10/2014
Project Appraisal (G3) Preparation commences	11/11/2014
Project Appraisal (G3) decision day	20/01/2015
Advance vegetation clearance complete	17/02/2015
Tender Process concluded	12/05/2015
Construction works commence	13/05/2015
Construction complete	25/08/2015
Maintenance period ends	23/08/2016
Landscaping maintenance period ends	21/08/2018
PHASE 2 – NEWGATE LANE SOUTH (Including modifications to Peel Common Roundabout)	
Project Appraisal decision day	08/09/2015
Detailed Design complete	09/05/2016
Tender process concluded	15/03/2017
Construction works commence	01/04/2017
Construction complete	01/02/2018
Maintenance period ends	01/02/2019
Landscaping maintenance period ends	01/02/2021

6.3.3 Construction works for Phase 1 of the scheme will follow on after the completion of the Newgate Lane North scheme – currently expected to be late April 2015. As the main construction work is therefore planned to commence in May 2015, this requires an advance contract for site clearance activities in January / February 2015. Tree and scrub clearance is to be carried out before the end of February in order to avoid the nesting bird season.

6.3.4 Phase 1 construction works are scheduled to commence in May 2015 with a duration of approximately 3 months. Phase 1 is therefore planned to be completed by the end of September 2015. The landscaping contract, including a three year maintenance period, will continue until October 2018. Formal project closure is expected to follow by the end of 2018.

6.3.5 Phase 2 construction works are scheduled to commence in April 2017 with a duration of approximately 9 months.

Key Dependencies and Critical Path

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

- Confirmation of funding approval from Solent LEP;
- Completion of the Newgate Lane North scheme;
- Timely procurement of contractor;
- Project appraisal (G3) approval (for each phase) by the HCC Executive Member for Economy Transport and Environment;
- Acquisition of the land required for the Phase 2 works; and
- Planning consent required for the Phase 2 works.

Statutory Powers and Consents

6.3.7 Phase 1 of the scheme is wholly within existing highway land and is therefore Permitted Development, which does not need planning permission. This eliminates the risks of delay to the programme associated with obtaining planning consents.

6.3.8 Phase 2 will require the acquisition of land and planning permission. It will be necessary to acquire various land interests in order to implement the improvement proposals. Temporary use of additional land throughout the construction period will also be required to enable reduced impact of the construction of the improvements, southwards to the wastewater treatment works at Peel Common. South of the wastewater treatment works further land interests will be required on

the east side of the road to construct the new offline alignment southwards to the Peel Common junction.

6.3.9 Discussions with the landowners have commenced prior to the submission of the planning application. 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. The use of CPO's generates the risk of a Public Inquiry, which could cause delay, hence this has been factored in to the programme.

6.3.10 A planning application for the Phase 2 works will be submitted to the County Planning Officer under Regulation 3 of the Town and Country Planning Act 1990. The planning application is due to be submitted in May 2015, with determination expected by September 2015.

Statutory Undertakers

Phase 1

6.3.11 From C3 returns it has been established that moderate levels of either protection or diversionary work will likely be required for the following:

- British Telecom – communications cables
- Scottish & Southern Energy – high and low voltage electricity cables
- Southern Gas Networks – low, medium and intermediate pressure gas mains
- Southern Water – foul water sewers
- Portsmouth Water – water supply.

6.3.12 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.

Phase 2

6.3.13 As the majority of the works are off-line, this substantially reduces service diversions and traffic management requirements. The route is principally across open fields and utilities are only expected to be encountered at the tie-ins. From C3 returns it has been established that it is unlikely that any services will need to be diverted.

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. HCC is confident that this project can be completed within the stated timescales and milestones. The scale and types

of works involved 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 Tichborne 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, being opened in April 2012. 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 ecolological 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 have been held in the summers of 2013 and 2014. The Newgate Lane southern section and Peel Common Roundabout proposals formed 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 2.7 for further details.

Stakeholder Management Strategy

6.5.3 Effective stakeholder management is undertaken in line with a scheme specific communications plan. A draft summary communications plan (in the context of the wider package of transport improvements for Fareham / Gosport) is included in Appendix I. This sets 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.

6.5.4 **Table 6-2** 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: Summary of the Stakeholder Management Strategy

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
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
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
Public Utilities	Direct impacts of scheme on equipment	Letters / e-mail updates	Inform and involve	As necessary
	Political representatives	Letters / e-mail updates	Raise awareness and consult	At key points in the project

Scheme Acceptability

6.5.5 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.

6.5.6 There is a high public demand for improving Newgate Lane. The Newgate Lane residents are expecting a service road and the majority would be located further away from the heavy traffic flows, so would support the proposed bypass scheme, although the few local businesses may object to the loss of passing trade. 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.

Risks have been considered separately for each phase to ensure all relevant risks are captured. **Appendix J** includes Risk Registers for Phase 1 and Phase 2 separately. Whilst risks associated with each phase have been identified separately, a consistent approach to monitoring and managing risks is in place. Effective risk management will be underpinned by the strong scheme governance and will support the achievement of scheme objectives in a cost effective manner. An appropriate framework (comprising managing, reporting, process and

responsibilities) has been developed. **Appendix K** sets out the overall Risk Management Strategy.

Risk Identification, Assessment and Review

6.6.2 Risk workshops have been held for both phases of works to identify a comprehensive range of risks falling under various risk categories. A full review of scheme risks for Phase 1 was recently undertaken in December 2014 by the Project Team, reflecting the more advanced nature of the design process, and this has formed the basis of the Risk Register.

6.6.3 The Risk Registers include 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** below. The likelihood / impact is based on a five point scale, as defined in **Figure 6-4**.

Table 6-3: Key risks

Risk	Likelihood	Impact	How risk will be managed/ mitigated
Phase 1			
Statutory Undertaker services need diversion, not just protection	2	2	Substantial survey work carried out in advance. If possible undertake some works in advance of main contract
Southern Water HE3/4 Sewage upgrade work programme conflicts with planned construction works	2	3	Early consultation with SU companies
No road space available at the time of the construction period.	2	3	Early contact with Area Office. Ensure correct Elgin noticing is carried out.
Ecological Constraints	2	3	Carry out ecological and environmental surveys to establish mitigation requirements. Carry out advance clearance of vegetation Jan/Feb 15 outside bird nesting season
Unforeseen Ground Conditions	2	2	Carry out ground investigation to establish ground conditions and locations of services

Phase 2			
Failure to acquire necessary land	4	3	Careful negotiations with landowners, sympathetic to accommodation works
Land owner takes HCC to the Lands Chamber of the Upper Tribunal (formerly known as the Lands Tribunal) if entry taken under confirmed CPO. Tribunal awards in favour of third party based on evidence put before it	3	4	Early communication with land owners. Ensure watertight nil detriment scheme
Legal challenges / difficulties in obtaining CPO	3	2	Obtain formal safeguarding/delete existing bypass safeguard Review appropriateness of EAST assessment
Fibre optic cables need to be installed once the scheme is complete	4	2	Consultation with communications companies
Tender price exceeds budget	2	2	Check rates for non standard items

		Likelihood				
		1	2	3	4	5
Impact score		Rare	Unlikely	Possible	Likely	Almost certain
5	Catastrophic	5	10	15	20	25
4	Major	4	8	12	16	20
3	Moderate	3	6	9	12	15
2	Minor	2	4	6	8	10
1	Negligible	1	2	3	4	5

Figure 6-4: Risk likelihood / impact scoring framework

6.6.1 The Risk Register has informed the assessment of risk cost allowance to be included in the total scheme cost. Details of quantified risk costs are included in 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 The Monitoring and Evaluation plan will assess the performance of the proposal against the specific scheme objectives – these have been defined in terms of key outputs and outcomes. Before and after scheme monitoring will be undertaken to assess the performance of the scheme.

6.7.3 **Table 6-4** below summarises a potential approach to monitoring against these outputs and outcomes, including the data sources to be used and the timeframe for collection / reporting. It is anticipated that monitoring would continue up to 5 years after implementation of Phase 2 (2023). HCC is willing to discuss the approach to monitoring further with the Solent LEP, particularly in terms of integration with the LEP's wider monitoring of the SEP programme.

Table 6-4: Summary of the scheme monitoring framework

Ref	Benefit	Indicator	Base	Target	Data	Timeframe
Desired outputs						
1	Increased capacity and improved operation of Peel Common Roundabout	Phase 1 roundabout works implemented successfully	Not implemented	Fully implemented	None	Autumn 2015 (planned opening)
2	Improved provision for pedestrians and cyclists at Peel Common roundabout	Phase 1 associated foot and cycleways implemented successfully	Not implemented	Fully implemented	None	Autumn 2015 (planned opening)

3	A new eastern alignment for the southern section of Newgate Lane	Phase 2 carriageway works implemented successfully	Not implemented	Fully implemented	None	Spring 2018
Desired outcomes						
1	Reduced delays on the approaches to Peel Common Roundabout	Time spent in queued traffic / queue lengths	Yr - 2015 TBC	TBC	Journey time / queue surveys Traffic Master data	Spring 2016 (6mths after opening) then at intervals up to 2023 max.
2	Improved journey time reliability along the B3385 Newgate Lane	Standard deviation of journey times (AM & PM peak hours)	Yr - 2015 TBC	TBC	Journey time surveys Traffic Master data	Spring 2016 (6mths after opening) then at intervals up to 2023 max.
3	Improve access to the Solent Enterprise Zone	Journey time	TBC	TBC	Journey time surveys	Spring 2016 (6mths after opening) then at intervals up to 2023 max.
4	Reduce accidents	No. of accidents (Slight /Serious)	2010 to 2015 (five year average) TBC	TBC	Personal Injury Accident Data	Annually
5	Improve cycling / walking provision	No. of pedestrians/ cyclists	Yr - 2015 TBC	TBC	Ped / cycle count data	Spring 2016 (6mths after opening) then at intervals up to 2023 max.
6	Support delivery of housing	Housing delivered in Gosport / Fareham	Yr - 2015 TBC	TBC	HCC's Economic Development and Research and Intelligence	5 years after opening (up to)
7	Support delivery of jobs	Level of job retention in Gosport / Fareham Actual job growth in Gosport / Fareham	Yr - 2015 TBC	TBC	HCC's Economic Development and Research and Intelligence	5 years after opening (up to)

6.7.4 The scheme is to be delivered in two phases and the monitoring will enable some assessment to be made of the impact of each individual phase. The majority of monitoring data will be collected before the implementation of Phase 1, and then at intervals until a period after implementation of Phase 2 (up to a maximum of five years). The 'after monitoring' for Phase 1 will therefore effectively form the baseline for Phase 2. Comparison of the post Phase 2 results can be compared to this baseline to isolate the impacts of Phase 2, and the post Phase 2 results can be compared to the original baseline (pre Phase 1) to assess the impact of the whole scheme overall.

6.7.5 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 economic benefits could be monitored through HCC's Economic Development and Research and Intelligence teams who collect data annually on housing and employment development completions, which can then be used to assess the impact of transport infrastructure improvements through the following indicators:

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

Evaluation

6.7.6 Following scheme completion, an evaluation team will carry out an evaluation of the Peel Common Roundabout / Newgate Lane South scheme to audit performance against aims and objectives in relation to activity performance, financial projections, construction and commissioning. A summary analysis of the outcomes that the project has delivered will be provided. If appropriate, and feasible, the evaluation could extend beyond a desk-based study and involve interviews with key project officers and a process review workshop with key parties and stakeholders.

6.7.7 The evaluation may cover the following areas, as appropriate:

- 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 garner 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.

6.7.8 Lessons learned from the implementation of the scheme will be documented on completion of key stages. The evaluation team, identified to carry out Post Project Evaluation (PPE), will audit performance against aims and objectives in relation to activity performance, financial projections, construction and commissioning. 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.