



Hartlepool Local Planning Framework Emerging Local Plan

Local Plan

Transport and Infrastructure Topic Paper



October 2017



1. Introduction

- 1.1 The purpose of this topic paper is to set out the current position of infrastructure improvements required to ensure that the planned growth of the Local Plan can be met in full. This will provide further an update on changes in the position in relation to strategic infrastructure projects set out in the Local Infrastructure Plan (HLP03/20) ensuring that the evidence collated to inform the development of the Local Plan is up to date, robust and the infrastructure requirements proposed relating to the Strategic Road Network (SRN) are sound.

2. Background

- 2.1 The Council and Highways England along with development partners have been working closely together over the plan development period to ensure that the planned infrastructure improvements are robust and meet the policy requirements of the Local Plan. Given the current position of a number of planning applications which are for sites proposed as allocations within the Local Plan; the position in relation to highway improvements is developing as these applications progress.
- 2.2 In February 2017, in response the consultation on the Publication Version of the Local Plan, Highways England confirmed that they were content that the transport and infrastructure evidence base was complete, however expressed concern that this was not in a single evidence base. Given that all evidence has been provided a single source evidence base has not been developed and submitted to support the Local Plan evidence to date, this approach has been taken in light of the developing nature of the detail of the required infrastructure requirements given the advanced nature of planning applications in relation to housing development on proposed housing allocations. As an alternative this topic paper should be seen as a position statement providing an overview of the transport and infrastructure improvements required for the Local Plan.
- 2.3 Through the development of the Local Plan, the strategic infrastructure requirements for the level of development growth are set out in the Local Infrastructure Plan (LIP). The LIP sets out the strategic infrastructure projects required to ensure that sustainable development and growth can occur in a timely manner, critical to the avoidance of the delays in delivery, funding of projects is a key challenge to delivery.
- 2.4 A joined up approach to this is essential, the Council has worked closely with Tees Valley Combined Authority and Highways England to ensure that the infrastructure improvements are aligned with the requirements of the wider Tees Valley, especially in line with improvements programmed for the SRN, Table 1 of the LIP sets out the strategic priorities of the Tees Valley.

3. Key Transport Demands

- 3.1 Section 4 of the LIP provides a summary comprehensive overview of the development strategy in relation to:
- Population, household growth and housing development;
 - Economic development; and
 - Commercial/Retail/Leisure developments.
- 3.2 In relation to development strategy the main demand for highway improvements is to accommodate the planned level of housing growth. Appendix 1 details how the policy requirements of the plan link to the strategic infrastructure projects.
- 3.3 The key major infrastructure projects which are linked to the SRN required in the short-medium term to facilitate employment and housing growth related to policies LS1, HSG5, HSG5a, HSG6, HSG7 and EMP1 are:
- 1) The Elwick Bypass and Grade Separated Junction – Grade separated junction on A19 at northern Elwick junction & associated closure of existing accesses and Improvements to Elwick Road, including bypass to north of Elwick village. This transport infrastructure development is required to improve safety and capacity at the Elwick junctions and to facilitate the housing development to the western edge of urban Hartlepool. The estimated cost of the project is £18million, to be facilitated by funding opportunities and developer contributions. This requirement directly links to the following policies; LS1, INF1, INF2, HSG5, HSG5a, HSG7. The scheme will also provide direct benefits for existing and new residents in the western areas of Hartlepool and have indirect benefits for residents and businesses throughout Hartlepool through reduced traffic congestion and reduced journey times.
 - 2) A689 Wynyard improvements - Wynyard West /Additional capacity improvement to A689/A19 roundabout to provide an additional lane with one dedicated to eastbound traffic and two dedicated to southbound traffic and a footbridge over A19 to replace existing footpath which will be lost. This will be required to facilitate the level of growth proposed at Wynyard from the Hartlepool Local Plan and emerging Stockton-on-Tees local plan, full details of the infrastructure requirements are set out in the joint Statement of Common Ground between HBC, SBC and Highways England (EX/HBC/76).
- 3.4 There are additional works required to the A19/A179 junction, which are the signalisation of the whole junction and other improvements to enable capacity increase. These works are due to commence in the short term and have been funded by Highways England. These works are considered by the Council and Highways England to be the initial phase in relation to infrastructure requirements to facilitated development of High Tunstall (HGS5) and Quarry Farm (HSG5a).
- 3.5 Table 2 of the LIP sets out the highway schemes required for delivery of Local Plan proposals/policies, the key related local plan policies are set out in the final column of this table. The schemes detail sub-regional, strategic and local schemes. This table is attached as Appendix 2 and includes a current status update.

4. Current Status – Progress, Trigger Points and Funding

- 4.1 Since the latest version of the LIP was produced in November 2016, progress has been made in relation to the following strategic infrastructure projects.

Elwick Bypass and Grade Separated Junction

- 4.2 HBC in agreement with Highways England accept that there is capacity following the closure of the three central reservations on the A19 (Dalton Piercy, Elwick South and Elwick North) and the signalisation of the A19/A179 junction to allow the development to up to 428 dwellings (220 at Quarry Farm 2 and 208 at High Tunstall) of the 1500 dwellings proposed on the western edge of urban Hartlepool, this is in the context of these works being the first phase and a precursor to the strategic infrastructure improvements in this location. A Grampian condition is being drafted with the relevant developers to ensure all parties are clear on the timescales for the infrastructure requirements. The 428 dwellings are still required to make the £12,000 per dwelling contribution to the bypass and grade separated junction as without those the first phase would be unacceptable as a stand-alone proposal.
- 4.3 The funding of this infrastructure works is evidenced at, as deliverable and viable through the Deliverability Risk Assessment (DRA) (EX/HBC/64), which assumes the cost of the Elwick Bypass and Grade Separated Junction as an enabling cost for all development to the north western edge of urban Hartlepool. The 1500 homes assumes 1200 from High Tunstall (HSG5), 220 from Quarry Farm (HSG5a), 35 from Elwick Village (HSG7), 14 from Briarfields (HSG3) and the remaining 31 would be from other small scale developments.
- 4.4 The DRA shows that as a worst case scenario, the developments through s106 contributions can repay the cost of the highways works (albeit with a knock-on effect on levels of affordable housing, education provision etc), however in scenarios where grant funding is secured through the National Productivity Investment Fund (NPIF) or Housing Investment Fund (HIF) the deliverability and wider viability becomes significantly more favourable enhancing the sustainability of the sites. The result of the NPIF bid is expected in the Governments Autumn Statement.
- 4.5 In terms of timing, the aim is to provide the Grade Separated Junction and Elwick bypass highway works by the end of March 2020. Funding has been secured to deliver the detailed design of the works and acquisition of the land; the detailed design work has been finalised by the Councils engineers who are in the process of submitting a planning application (including all of the relevant supporting material). Initial offers have been sent to the majority of landowners where land is required. These landowners have been involved from the outset of the discussions regarding the bypass and grade separated junction and their comments have been taken into account in the design to ensure any impacts on the day to day operation of their land is minimised (for example through the provision of tunnels under the bypass to allow livestock to be moved safely from one side of the road to the other). If the Council is successful in obtaining NPIF funding, this funding would be for the financial year 2018/19 and would help to ensure the scheme could be delivered by the March 2020 date.

- 4.6 A Statement of Common Ground has been prepared between HBC, High Tunstall Homes and Highways England (EX/HBC/94). This covers the areas of agreement in relation to the infrastructure requirements of the High Tunstall development. The statement of common ground provides details of the route of the Elwick Bypass, Grade Separated Junction and over bridge; this also includes detail of discounted options for this infrastructure requirement.

A689 Wynyard improvements

- 4.7 The Wynyard highways delivery working group and the Wynyard Park Masterplan and Highways Steering Group recognise that the capacity of the A689 / A19 junction is a key issue in relation to highway capacity for the development in and affecting the Wynyard area. The Wynyard highways delivery working group has entered into a memorandum of understanding to undertake the traffic modelling necessary to test the impact of development and mitigation proposals with confidence. This work has been carried out by Arup under instruction from Stockton-on-Tees Borough Council, and reviewed on behalf of Highways England by CH2M and Systra.
- 4.8 The Wynyard highways delivery working group met most recently on 19th June 2017 to review the modelling. It was agreed that the maximum acceptable travel time between the A19/A689 roundabout and the 3rd junction to the west would be 10 minutes, with any impact greater than this considered to be severe when compared to current travel times along the same links. The Wynyard highways delivery working group commissioned Arup to carry out modelling for three main scenarios:
- A) Development considered to be committed, either by virtue of an implemented or extant planning consent or having been considered by and received a resolution to grant permission by the relevant planning authority's Planning Committee.
 - B) As scenario A), but including applications currently in the development control process.
 - C) As scenario B), but including the additional sites proposed within this plan.
- 4.9 The modelling of all three scenarios took into account the relevant highways mitigation measures associated with each level of development. Through the modelling, it was demonstrated that the mitigation measures proposed for scenario C in the representation from Wynyard Park in relation to the additional local plan allocation become necessary in order to allow development above the committed level (scenario A), but that this mitigation is adequate to ensure that the increase level of delay along the A689 will be below the level agreed as severe.
- 4.10 Highways England has reviewed the proposed mitigation and is satisfied based on the modelling work carried out that it is sufficient to mitigate the proposed development over the period of the plan. To the extent possible without the relevant structural investigations having been carried out, Highways England is content that there are no fundamental or in-principle impediments to the implementation of the proposed mitigation scheme as set out in the Wynyard Park representation and evidence submitted as part of the Local Plan consultation. The

members of the Wynyard highways delivery group agree that the proposed mitigation scheme would need to be delivered to enable the developments in scenario B should those applications be granted planning permission.

- 4.11 The most up to date transport modelling, VISSIM report (EX/HBC/74) has been submitted as part of the Examination Library. This transport modelling has assessed the capacity of the Wynyard site at various stages Option 1 – current committed development, including approved network Mitigation, Option 2 – adds the proposed development with live planning applications yet to be determined, Option 3 – adds the Local Plan allocations for both HBC and SBC, further works has been carried out to determine how much development can be accommodated before the maximum travel time between the A19/A689 roundabout and the 3rd junction to the west exceeds 10 minutes.
- 4.12 Hartlepool Borough Council, Stockton Borough Council and Highways England have jointly signed a Statement of Common Ground (EX/HBC/76); this covers highway requirements for the delivery of a sustainable development at Wynyard. Work will continue between all parties and the developer to agree trigger points for implementation of mitigation works which would be a condition of any planning approval. A further Statement of Common Ground (EX/HBC/93) has been prepared between HBC, Wynyard Park and Highways England to update part of the previous SOCG in relation to the timings of improvement works to the A19/A689 interchange. It also sets out details of an agreed modification to Policy HSG6 and its accompanying text, which allows some flexibility on the trigger point for undertaking these highways works.
- 4.13 To summarise, the additional mitigation works, which are shown to be viable through the Deliverability Risk Assessment, help to ensure that the development of the local plan allocations do not have a severe impact on the local road network or the strategic road network.

Local Road Network

- 4.14 The infrastructure projects required on the local road network set out in Appendix2 required to facilitate the policies and proposals of the plan are considered deliverable and viable and would be dealt with as part of individual planning applications.

5. Conclusion

- 5.1 This topic paper provides an overview of the progress that has been made towards the delivery of highway infrastructure required to support the policies of the Hartlepool Local Plan and has been produced for completeness with regard to the highway infrastructure evidence base.

Appendix 1 – Policy links to Strategic Highway Schemes

Policy	Strategic highway schemes					
	A19 Tees Valley (Medium Term +)	A19 Wynyard to Norton (Short Term - March 2020)	Additional crossing of the River Tees (Medium - Long Term)	A689 Wynyard Improvement (Short* - Medium Term)	A19/A179 junction (Short Term)	Access from Hartlepool to A19 at Elwick (Short Term)
Policy LS1: Locational Strategy	✓	✓	✓	✓	✓	✓
Policy INF1: Sustainable Transport Network	✓	✓	✓	✓	✓	✓
Policy INF2: Improving Connectivity in Hartlepool	✓	✓	✓	✓	✓	✓
Policy HSG1: New Housing Provision						
Policy HSG3: Urban Local Plan Sites						✓
Policy HSG4: The South West Extension Strategic Housing Site						
Policy HSG5: High Tunstall Strategic Housing Site						✓
Policy HSG5A: Quarry Farm Housing Site						✓
Policy HSG6: Wynyard Housing Developments						
Policy HSG7: Elwick Village Housing Developments						✓
Policy HSG8: Hart Village Housing Developments						
Policy EMP1: Prestige Employment Site Wynyard Business Park						
Policy EMP2: Queens Meadow Business Park						
Policy EMP3: General Employment Land						
Policy EMP4: Specialist Industries						

Policy	Strategic highway schemes					
	A19 Tees Valley (Medium Term +)	A19 Wynyard to Norton (Short Term - March 2020)	Additional crossing of the River Tees (Medium - Long Term)	A689 Wynyard Improvement (Short* - Medium Term)	A19/A179 junction (Short Term)	Access from Hartlepool to A19 at Elwick (Short Term)
How the need will be addressed:	Concept of 'Expressway' – incremental improvements including driver information (via overhead gantries), safety features, and fewer junctions	Additional lane between Wynyard (A689) junction and Norton (A1027/A139)	New crossing of the River Tees	Committed scheme: Capacity improvements at 5 roundabouts along A689: - A1185 Seal Sands Link Road* - Wolviston Services Access* - Wynyard Park Business Park* - Wynyard East* - Wynyard West* Additional capacity improvements (likely to include): - dedicated northbound slip road from eastbound A689 onto A19 - widening of northern part of A689/A19 roundabout to provide 3 traffic lanes - footbridge over A19 to replace existing footpath	Signalisation of junction between the A19 and A179 and other capacity improvements	Grade separated junction on A19 at northern Elwick junction & associated closure of existing right turns across the A19 at Dalton Piercy and Elwick. Improvements to Elwick Road, including bypass to north of Elwick village.

Policy	Strategic highway schemes					
	A19 Tees Valley (Medium Term +)	A19 Wynyard to Norton (Short Term - March 2020)	Additional crossing of the River Tees (Medium - Long Term)	A689 Wynyard Improvement (Short* - Medium Term)	A19/A179 junction (Short Term)	Access from Hartlepool to A19 at Elwick (Short Term)
Risk to deliverability of Local Plan policy	<i>This scheme is designed to improve links between Tees Valley and the rest of the UK by reducing journey times, increasing reliability, and promoting a positive message to potential inward investors. It is not critical to the deliverability of the Local Plan, particularly in the short to medium term, but in the longer term could prove important in continuing to attract economic growth and new investment.</i>	<i>The A19 between Wynyard and Norton experiences congestion, particularly at peak periods. Will be critical in the latter stages of the plan period as new housing is developed in the south west of the town and at Wynyard. Implementation of the scheme will improve the attractiveness of Hartlepool as a place to live and work, as well as improving access for Hartlepool residents to job opportunities elsewhere in the Tees Valley.</i>	<i>Although not critical to the delivery of the Local Plan in the short term the new Tees Crossing will become a key element in the Tees Valley highway network over the plan period. It will support economic growth and investment throughout the Tees Valley including Hartlepool, and will enable future development to take place with the confidence that the road network can accommodate the associated traffic growth.</i>	<i>The A689 committed scheme complements the Highways England Pinch Point Programme scheme at the A689/A19 junction. It allows a number of residential schemes at Wynyard to be implemented (see appendices 1 and 4) without further highway capacity improvements. Further mitigation/capacity improvements will be required to enable further development at Wynyard to be acceptable in highway terms and deliverable over the local plan period. See appendix 1: Strategic Site Wynyard</i>	<i>Although a critical junction for both the strategic highway network and the local network by facilitating traffic flows in/out of the north of the Borough, the project will have only a low impact on the deliverability of Local Plan policies.</i>	Critical – the scheme will support growth ambitions and provide a new strategic route for road traffic from Hartlepool to the A19. It will relieve pressure on the existing A179 and A689 routes from Hartlepool to the A19 and overcome safety concerns with regard to existing at-grade junctions. The project will provide direct benefits to the residents of Elwick village by significantly reducing through traffic, helping to make it a safer environment. The scheme will also provide direct benefits for existing and new residents in the western areas of Hartlepool and have indirect benefits for residents and businesses throughout Hartlepool through reduced traffic congestion and reduced journey times. The scheme will facilitate full development of the High Tunstall strategic housing site.

Appendix 2: Update to LIP Table 2: Highway schemes required for delivery of Local Plan proposals/policies

(Short term 2016 -2021; Medium term 2021- 2026; Long term 2026 -2031)

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
A19 Tees Valley	Central to economic growth of sub-region Improve connectivity with rest of UK	Concept of 'Expressway' – incremental improvements including driver information (via overhead gantries), safety features, and fewer junctions	Dept for Transport Highways England	Medium term onwards (2021+)	This scheme is designed to improve links between Tees Valley and the rest of the UK by reducing journey times, increasing reliability, and promoting a positive message to potential inward investors. It is not critical to the deliverability of the Local Plan, particularly in the short to medium term, but in the longer term could prove important in continuing to attract economic growth and new investment. Key Local Plan policies: LS1, INF1, INF2	As estimated timescales.
A19 Wynyard to Norton	Impact on future housing development and economic growth Delays and congestion, particularly on southbound carriageway in a.m. peak	Additional lane between Wynyard (A689) junction and Norton (A1027/A139)	Dept for Transport Highways England (Estimated cost £140m)	Delivery Plan Start of Works commitment – March 2020 Open for traffic commitment – March 2022	The A19 between Wynyard and Norton experiences congestion, particularly at peak periods. Will be critical in the latter stages of the plan period as new housing is developed in the south west of the town and at Wynyard. Implementation of the scheme will improve the attractiveness of Hartlepool as a place to live and work, as well as improving access for Hartlepool residents to job opportunities elsewhere in the Tees Valley. Key Local Plan policies: LS1, INF1, INF2	As estimated timescales.
Additional crossing of the River Tees	The existing A19 Tees Crossing experiences significant congestion at certain times. An additional crossing of the R. Tees is proposed to relieve the "bottleneck" of the existing A19 at the flyover and complement the A19 Wynyard to Norton	New crossing of the River Tees	The proposal is for the scheme to be added to the Dept for Transport/ Highways England Road Investment Strategy 2015-2020	Medium/long term	Although not critical to the delivery of the Local Plan in the short term the new Tees Crossing will become a key element in the Tees Valley highway network over the plan period. It will support economic growth and investment throughout the Tees Valley including Hartlepool, and will enable future development to take place with the confidence that the road network can	As estimated timescales.

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
	widening scheme				accommodate the associated traffic growth. Key Local Plan policies: LS1, INF1, INF2	
A689 Wynyard Improvement	Capacity improvements at access points along the A689 between Billingham & Wynyard to facilitate housing and business development	<p><u>Committed scheme:</u> Capacity improvements at 5 roundabouts along A689:</p> <ul style="list-style-type: none"> - A1185 Seal Sands Link Road - Wolviston Services Access - Wynyard Park Business Park - Wynyard East - Wynyard West <p><u>Additional capacity improvements</u> (likely to include):</p> <ul style="list-style-type: none"> - dedicated northbound slip road from eastbound A689 onto A19 - widening of northern part of A689/A19 roundabout to provide 3 traffic lanes - footbridge over A19 to replace existing footpath 	<p>Developer contributions</p> <p>Developer contributions</p> <p>Other potential funding sources for example: Growing Places Fund; HCA Home Building Fund; Tees Valley Patient Capital Investment Fund; Prudential Borrowing; Tees Valley Investment Fund (Devolution Deal)</p>	<p>Short term</p> <p>Medium term</p>	<p>The A689 committed scheme complements the Highways England Pinch Point Programme scheme at the A689/A19 junction. It allows a number of residential schemes at Wynyard to be implemented (see appendices 1 and 4) without further highway capacity improvements.</p> <p>Further mitigation/capacity improvements will be required to enable further development at Wynyard to be acceptable in highway terms and deliverable over the local plan period. See appendix 1: Strategic Site Wynyard.</p> <p>Key Local Plan policies: LS1, INF1, INF2, HSG6, EMP1</p>	The LGF is no longer available for this project therefore will need to be paid for by the developers. Additional capacity improvements estimated cost of £5million. This would be funded by the developer.
A19/A179 junction	Congestion due to capacity constraints at junction	Signalisation of A19 northbound exit slip road onto A179 and other capacity improvements	Funding secured as part of Upper Warren development – although improvement will exceed requirement from Upper Warren	Short term – scheme to be complete prior to occupation first dwelling at Upper Warren	Although a critical junction for both the strategic highway network and the local network by facilitating traffic flows in/out of the north of the Borough, the project will have only a low impact on the deliverability of Local Plan policies. Key Local Plan policies: LS1, INF1, INF2, HSG5, HSG5a	Funding has been secured by Highways England, work is due to commence shortly.
Access from Hartlepool to A19 at Elwick	<p>Economic growth and associated housing development, in particular potential for major housing schemes on the western edge of Hartlepool</p> <p>Current safety and capacity issues associated with</p>	<p>Grade separated junction on A19 at northern Elwick junction & associated closure of existing accesses</p> <p>Improvements to Elwick Road, including bypass to north of Elwick village</p>	<p>LGF3 bid submitted for bypass & grade separated junction (cost est. £18m)</p> <p>Developer contributions to repay LGF loan</p> <p>Other potential funding</p>	Strategic Outline Business Case July 2016; Feasibility design & costs July 2016 – March 2017; Modelling & appraisal Sept 2016 – March 2017; Outline Business Case March 2017 –	Critical – the scheme will support growth ambitions and provide a new strategic route for road traffic from Hartlepool to the A19. It will relieve pressure on the existing A179 and A689 routes from Hartlepool to the A19 and overcome safety concerns with regard to existing at-grade junctions. The project will provide direct	Works are due to commence in April 2018. £600k has been secured to facilitate design and land acquisition. A funding bid has been submitted for an NPfF grant; further funding

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
	existing access on A19 at Elwick & Dalton Piercy		sources: Growing Places Fund; HCA Home Building Fund; Tees Valley Patient Capital Investment Fund; Prudential Borrowing; Tees Valley Investment Fund (Devolution Deal)	Sept 2017; Full Business Case Sept 2017 – March 2018 Construction start Summer 2018 Completion Summer 2020	benefits to the residents of Elwick village by significantly reducing through traffic, helping to make it a safer environment. The scheme will also provide direct benefits for existing and new residents in the western areas of Hartlepool and have indirect benefits for residents and businesses throughout Hartlepool through reduced traffic congestion and reduced journey times. The scheme will facilitate full development of the High Tunstall strategic housing site. Key Local Plan policies: LS1, INF1, INF2, HSG5, HSG5a, HSG7	opportunities are being progressed. Related development will be required to make a per dwelling contribution towards the works.
Other Strategic schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
South West Extension – junction of Southern Access Road & A689	To provide vehicular principal access to the development from the A689 Provision at the junction for pedestrians and cyclists	New junction to operate under traffic signal control, with SCOOT system to optimise capacity Footway/cycleway to be provided at junction which will join existing National Cycle Route 14	Developer contribution; section 278 agreement Developer contribution	Short term – determined by housing starts Short term	This junction is essential to serve the South West Extension (southern phases) Key Local Plan policies: HSG4	Developer to fund works.
South West Extension – Northern Access Road from Brierton Lane	To provide vehicular access to northern phases of the SW Extension	New access road from Brierton Lane	Developer contribution	Short term – to be in place prior to occupation of first dwelling	Essential to serve South West Extension (northern phases) Key Local Plan policies: HSG4	Developer to fund works.
Arterial link along western fringe of Hartlepool urban area between SW Extension and proposed development in the High Tunstall area	To improve traffic flows and reduce congestion on the existing local road network and increase access options for new development	An alignment for the route should be protected from development. Parts of the route could be incorporated as part of new developments	Developer contributions	Medium/Long term	This proposal is not essential to serve new housing developments but could become more critical in the longer term to reduce congestion and provide accessibility options. Key Local Plan policies: HSG4, HSG5, HSG5a	This route is safeguarded by Local Plan policy INF2. Funding opportunities will be explored in the future.
Tees Road/Brenda Road	Improve capacity and traffic flows to/from key industrial areas of SE Hartlepool and Seal Sands/North Tees	Capacity improvements and potential widening – cross-boundary issue with Stockton BC	Local funding such as LGF, Local Transport Plan (LTP) Developer contributions	Long term	The adopted 2006 Hartlepool Local Plan reserved a corridor along the B1277 Brenda Road and the section of the A178 between Brenda Road and the boundary with	As estimated timescales.

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
	Potential construction of new nuclear power station				<p>Stockton-on-Tees at Greatham Creek to allow for future upgrading. The Brenda Road area of south east Hartlepool will remain a key industrial and employment area throughout the plan period and the potential construction of a new nuclear power station could lead to increasing traffic flows. The A178 could also link to the proposed additional Tees Crossing depending on its location.</p> <p>Currently not critical to Local Plan delivery but this may change in the longer term particularly of a decision is made on a new nuclear power station.</p> <p>Key Local Plan policies: LS1, INF2, EMP3, EMP4, EMP5</p>	
Local schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
High Tunstall/Quarry Farm links and improvements	Traffic coming into the town from new development at High Tunstall and Quarry Farm	Potential solutions will be established by a traffic assessment	Developer contributions LTP	Short/medium term	<p>Development at High Tunstall/Quarry Farm will require adequate links into the existing road network to minimise congestion and maintain traffic flows.</p> <p>Key Local Plan policies: HSG5, HSG5a</p>	Requirements being explored through planning application.
Elwick Road/Park Road/Wooler Road	This junction, which is partly signalised, is currently operating in excess of practical capacity even without any further housing development in the High Tunstall area	Options will be investigated to address both the existing and future capacity issues at this junction	Developer contributions LTP	Short term	<p>Development at High Tunstall/Quarry Farm will have a significant detrimental effect on the operation of this junction. The developer will need to provide an impact assessment and submit a scheme that will mitigate for traffic generated by the development</p> <p>Key Local Plan Policies: HSG5, HSG5a</p>	Requirements being explored through planning application.
Hart Lane/Duke Street/Jesmond Road junction	This signalised junction will operate in excess of practical capacity with and without further development at High Tunstall	Options will be investigated to address both the existing and future capacity issues at this junction	Developer contributions LTP	Short term	<p>Development at High Tunstall/Quarry Farm will have a significant detrimental effect on the operation of this junction. The developer will need to provide an impact assessment and submit a scheme to</p>	Requirements being explored through planning application.

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
	and Quarry Farm				mitigate impact at this junction Key Local Plan policies: HSG5, HSG5a	
Hart Lane/Serpentine Road junction	This signalised junction will operate in excess of practical capacity during the PM peak hour	An initial scheme has been designed involving widening and the provision on an additional lane on Hart Lane to the Tarnston Road junction	Developer contributions LTP	Short term – dependant on discussion with developer	An important improvement to address traffic issues arising from new development on the western edge of the urban area. Developers will need to provide an impact assessment and submit details to mitigate impact at this junction. Key Local Plan policies: HSG5, HSG5a	Requirements being explored through planning application.
Elwick Road/High Tunstall site access junction	To provide satisfactory access from the existing highway network into the High Tunstall site	Design details to be confirmed	Developer contributions	Short term	Essential to serve the High Tunstall development Key Local Plan Policies: HSG5	Requirements being explored through planning application.
Catcote Road/Brierton Lane junction	Improvement to staggered junction to cope with potential traffic increase to/from SW Extension	Standard crossroads and signalisation	Contribution as part of outline consent for 100 dwellings at Brierton Lane	Short term – to be in place prior to occupation of 300 th dwelling at the Brierton Lane end of the SW Extension.	An important improvement to provide an effective access into the northern part of the south west extension. If not improved congestion could become a significant problem at the junction. Key Local Plan policies: HSG4	As estimated timescales.
Catcote Road/Oxford Road	Increased traffic at junction	Although likely to be operating within capacity at 2023, developer of SW Extension has offered to undertake works to increase capacity at junction including construction of traffic islands, carriageway realignment & widening of pedestrian crossing	Developer funded	Medium/long term	A desirable improvement that will help to ease congestion and facilitate pedestrian movements Key Local Plan policies: HSG4	As estimated timescales.
A689/Brierton Lane	Increased traffic on existing junction from future housing development	Signalisation scheme and widening of Brierton Lane Also to include signal and pedestrian improvements at the nearby A689/Stockton Road junction	LTP	Short/medium term; to be implemented following completion of 600 th dwelling on SW Extension	Congestion could become a problem at this junction caused by increased traffic from the northern part of the south west extension Key Local Plan policies: HSG4	As estimated timescales.
A689/A179 corridor	Improve traffic flows along length of key	Junction/capacity improvements	Developer contributions	Ongoing	Improvements to key junctions along the length of the corridor	As estimated timescales.

Regional/Sub-regional schemes						
Identified infrastructure need	Key issues	How the need will be addressed	Funding source(s)	Estimated Timescale	Risk to deliverability of Local Plan policy	Current Status
	corridor, particularly through town centre		LTP		to ensure smooth flows of traffic through the town. Key Local Plan policies: LS1, INF2, RC2	
A689/Oxford Street	Pressure on Stockton Rd link from Burn Valley roundabout to Burn Rd roundabout – likely to increase due to future housing and redevelopment schemes	Potential to increase capacity/ signalisation	Developer contributions LTP	Long term	This junction is a key access to the town centre and also into the Longhill and Sandgate industrial estate. Improvements will be important to minimise congestion and improve traffic flows. Key Local Plan policies: EMP3, RC2	As estimated timescales. NB. The Bus Network Improvement Scheme is no longer in existence.
Easington Road link road into Middle Warren	Identified during investigation into Falcon Rd congestion levels – may be exacerbated through further housing developments	New link from Easington Rd into Middle Warren	Developer contributions LTP	Long term	This is a desirable link which would have a number of positive benefits but is not critical to the delivery of Local Plan policies. Key Local Plan policies: HSG3	As estimated timescales.
A179 to A19	Traffic flows in the north of the Borough	Dual sections of single carriageway on A179 from Middle Warren access to A19	Developer contributions LTP	Long term	This is a desirable improvement that may be needed in the long term, towards the end of the plan period to improve traffic flows. Key Local Plan policies: INF2, HSG3	As estimated timescales.