
Transport Business Case Report

Maidstone Integrated Transport Package – Phase 1 (amended) Willington Street

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1 Introduction

1.1 SELEP Schemes – Business Case preparation

- 1.1.1 Pell Frischmann have been commissioned by Kent County Council (KCC) to develop this business case for proposed improvements to Willington Street, part of the Maidstone Integrated Transport Package (MITP). It references appropriate sections of Treasury Green Book, supplementary guidance and WebTAG method.
- 1.1.2 The MITP is promoted by Kent County Council and majority-funded by the South East Local Enterprise Partnership (SELEP) South East Growth deal, itself part of the Government's Local Growth Fund. Additional funding is available from developer contributions.

1.2 Purpose of this document

- 1.2.1 This business case will justify funding improvements to Willington Street at its junction with A20 Ashford Road using the 5 case model as its basis. It will demonstrate to SELEP the scheme merits and its contribution towards delivering objectives set out in the Maidstone Integrated Transport Package.

1.3 Maidstone Integrated Transport Package, MITP

- 1.3.1 The MITP aims to reduce congestion and ease traffic movements through the town. Its purpose is to help fulfil SELEP housing and employment growth targets, delivering the Maidstone Borough Council Transport Strategy and Local Plan, while reflecting DfT scheme performance and approval criteria. The packages of measures were agreed at the Maidstone Joint Transport Board October 2015.
- 1.3.2 The MITP has an estimated value of £13.9m from 2016 to 2020 and comprises £8.9m LGF contribution and £5.0m private sector contributions.
- 1.3.3 Additional funding from the Local Authority is under review including contribution from developers via Maidstone Borough Council.
- 1.3.4 MITP works are required to note ongoing M20 Managed Motorway works.
- 1.3.5 2nd November 2018 KCC proposed to SELEP that these Willington Road improvements be brought forward from initial MITP phasing approved in 2015, to form an amended Phase 1.

1.4 Area description – Willington Street, Maidstone

1.4.1 The proposed scheme is located on a key route leading to the town centre via P&R and new housing sites. The location is shown in Figure 1-1.

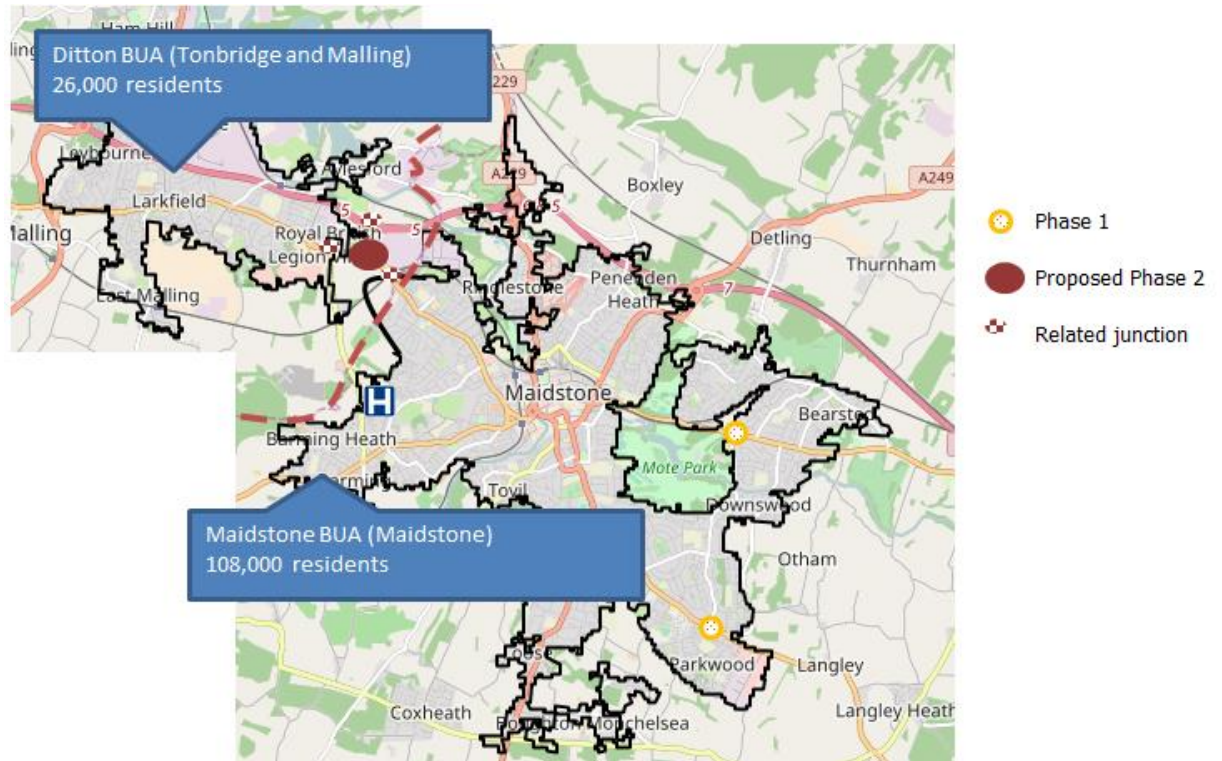


Figure 1-1 : Maidstone and Ditton built-up areas (scheme shown)

1.4.2 It should be noted that these Phase 1 (amended) works now address only Willington Street at its junction with A20 Ashford Road. MITP originally contained proposals for the south junction with Wallis Avenue as well. These have been deselected for this Business Case owing to low public support.

1.5 Background to this Business Case

- 1.5.1 The local growth white paper, published in October 2010, set out the roles that Local Enterprise Partnerships can play depending on their local priorities. The Chancellor of the Exchequer announced the first 11 zones in the 2011 Budget. The government has now created 39 enterprise zones.
- 1.5.2 A new approach to funding local major transport schemes, that are to be constructed in England (outside London) during the 2015-2021 period, was established in response to Lord Heseltine's report 'No Stone Unturned'. At its heart is a powerful case for decentralising economic powers from central government to local areas and leaders, as those best placed to understand and address the opportunities and obstacles to growth in their own communities.
- 1.5.3 On 18th March 2013, the government published its 'Response to the Heseltine Review', accepting in full or in part 81 of Lord Heseltine's 89 recommendations. Each of the 39 local enterprise partnerships was invited to submit a Strategic Economic Plan (SEP) by 31 March 2014, outlining their local priorities to maximise growth.
- 1.5.4 In July 2014, the government negotiated a Growth Deal with all 39 Local Enterprise Partnerships (LEPs), which awarded a significant proportion of the £12 billion Local Growth Fund to LEPs.

1.5.5 The following elements of WebTAG, and other guidance, are considered either disproportionate to the level of investment for Willington Street (and therefore deselected) or summarised in the appropriate section of this business case:

Item	Rationale
Project Plan/PID/Project Approach	Largely set by Joint Transport Board 2015 and project development work conducted since.
Options Appraisal Report, OAR	Already decided by Joint Transport Board 2015. Covered in 3.12.
Procurement Strategy	6.3 refers.
Integrated Assurance Strategy (IAS)	7.9 refers.
Benefits Realisation Strategy, BSR	7.9 refers.
Wider Economic Benefits, WEBS	Beyond scope.
Transport Economic Efficiencies, TEE	Beyond scope.
Economic Impacts Assessment, EIA	Beyond scope.
VfM costs from Environment, Social, Public accounts and Social and distributional impacts	Beyond scope.
Social and Distributional Impacts, SDI assessment	Beyond scope.
Comms and/or PR Strategy	7.8 refers.
Risks, Assumptions, Issues and dependencies, RAID	MITP Risk Register refers.
Quantified Risk and Cost Assessment QRCA (or Monte Carlo assessment)	MITP Risk Register refers.

1.5.6 This business case therefore meets SELEP's robust arrangements to ensure value for money through project and options appraisal, business case development, prioritisation and project management.

1.6 Scheme Development History

- 1.6.1 In 2015, the Maidstone Joint Transportation Board agreed 8 locations which suffer from congestion and unreliable journey times. Indicative schemes were presented and subsequently a SELEP Business Case approved in 2016 based on indicative layouts. As with any major junction improvement, engagement with local Members and stakeholders is undertaken to ensure the proposal meets the objectives.
- 1.6.2 Following engagement, feedback demonstrated a wish to maximise benefits at the A20 Ashford Road, Willington Street junction by increasing scope of the scheme and addressing the flow of traffic in east and westbound directions, as opposed to the original which only offered benefits travelling westbound.
- 1.6.3 A larger scheme, in 2015, was discounted due to the requirement for acquisition of adjacent Mote Park land, removal of vegetation and re-siting of the historic listed rag stone wall. However, during engagement, it was identified these challenges would not preclude this option from being progressed and the decision was taken in favour of a larger scheme that benefitted all arms at this highly-congested junction.
- 1.6.4 The scheme proposal was presented to the Maidstone Joint Transportation Board in October 2018 and was endorsed.

1.7 Structure of this document

- 1.7.1 This Business Case is structured in accordance with DfT guidance:
- Chapter 2 provides a description of the scheme;
 - Chapter 3 states the Strategic Case;
 - Chapter 4 presents the Economic Case including the Value for Money Statement;
 - Chapter 5 outlines the Financial Case;
 - Chapter 6 details the Commercial Case;
 - Chapter 7 provides the Management Case;
 - Chapter 8 offers Conclusions and Recommendations.

2 Willington Street, Maidstone, Kent

2.1 Introduction

- 2.1.1 Willington Street experiences significant congestion particularly during the AM and PM peak periods. It is therefore of strategic importance to address in order to deliver the objectives set out in the MITP and LTP4 and promote economic stability for Maidstone.
- 2.1.2 The scheme comprises removal of signals, widening, junction realignment with turning lane facility, lining, pavement works and pedestrian facilities including the take down and relocation of a wall of historic value. Plans showing the specific improvements are presented in Appendix A.
- 2.1.3 A Stage 1 Road Safety Audit, was conducted by Pell Frischmann who visited site 20th September and reviewed during October 2018. The basis for the audit was HD19/15. The Audit highlighted six issues, to which the Designer provided a suitable response 10th October 2018 summarising the appropriate amendments. Copy is in the Appendix.
- 2.1.4 Stage 2 Road Safety Audit has not been completed at the time of preparing this business case.

2.2 Purpose of the scheme

- 2.2.1 Improvements to Willington Street junction will reduce congestion and promote economic stability, particularly in terms of future developments.
- 2.2.2 A20 Ashford Road is a defined route on KCC's Resilient Network, thus heightening the need to manage queuing: particularly in the event of an incident on the network. Its strategic importance is such that congestion can have an associated impact not only on KCC's network but also parallel agencies.
- 2.2.3 Willington Street is not defined as a site of Special Engineering Difficulty, or of designated Traffic Sensitivity, but is instead considered of local importance.
- 2.2.4 The general area has suffered six incidents between October 2012 and September 2017 in which injury was recorded, each being classified by attending Officers as "Slight."
- 2.2.5 Accordingly these works may have some improvement on road safety, particularly in terms of "failure to stop at traffic signals" type risks, through removing signals and

smoothing traffic flow.

3 Strategic Case – Willington Street improvements

3.1 Introduction

3.1.1 This section sets out the 'case for change', by explaining how junction improvements on Willington Street meet Kent County Council (KCC) strategic objectives for the MITP.

3.1.2 This Strategic Case establishes for Willington Street the:

- Context, outlining KCC's strategic aims and responsibilities;
- Transport-related problems identified on Willington Street, using evidence and examining the impact from not making an investment;
- Specific, Measurable, Achievable, Realistic and Time-bound (SMART) objectives that solve the problem, aligned with KCC's strategic aims and responsibilities;
- Measures for determining successful delivery of those objectives;
- Scheme scope, determining what the project will and will not deliver;
- Analysis of constraints and opportunities for investment;
- Breakdown of interdependencies on which success depends;
- Details of main stakeholder(s) and
- Evaluation of the options considered.

3.2 Strategic context

National Transport Priorities

3.2.1 The Government has long-term objectives to improve economy, environment and society against which major transport infrastructure projects are assessed.

National Infrastructure Delivery Plan 2016-2021

3.2.2 In its National Infrastructure Delivery Plan 2016-2021, the Government presents Highways England's 8 objectives during Road Period 1:

- Making the network safer: with a target of 40% reduction in the number of people killed or seriously injured on the SRN against 2005-09 period by the end of 2020;
- Improving user satisfaction: by March 2017, 90% of people responding to the National Road Users' Satisfaction Survey need to be either fairly or very satisfied;
- Supporting the smooth flow of traffic: minimise delay and inconvenience to road users and ensuring at least 97% of the SRN is available to road users and ensuring at least 85% of incidents are cleared within 1 hour;
- Encouraging economic growth by working to minimise delay on the SRN;
- Delivering better environmental outcomes;
- Helping cyclists, pedestrians and other vulnerable road users of the SRN;
- Achieving real efficiency: delivering total capital savings of at least £1.2 billion by the end of Road Period 1; and
- Keeping the SRN in good condition: including an ambitious resurfacing programme.

3.2.3 The scheme will reduce congestion for both private motor vehicles and for bus routes between Maidstone and Malling. Important bus routes are the 71/72 Arriva Greenway (Maidstone – Ditton), and one of the routes from the hospital to the town centre. These are shown in Figure 3-1.



Figure 3-1: Bus routes

National Planning Policy Framework 2012

3.2.4 The National Planning Policy Framework (NPPF) was published in March 2012 and is designed to set out how planning authorities are expected to enable sustainable development. In order to achieve this it sets out an overarching presumption in favour of sustainable development, taking account of the three dimensions of:

- An economic role relating to building a strong responsive and competitive economy. In relation to the planning system this is fundamentally about ensuring that sufficient land is available to enable job creation, together with the infrastructure to support this;
- A social role in supporting strong, vibrant and healthy communities, with an emphasis on the provision of housing in the context of high-quality built environment and access to local services; and
- An environmental role in terms of protecting and enhancing the local environment and helping mitigate and adapt to climate change.

3.2.5 Transport and connectivity play a key role in all of these. NPPF contains a section which outlines this and sets out key requirements in terms of planning and decision-making by local planning authorities. Much of this is about limiting the impact from developments and improving their long-term sustainability.

Regional Transport Priorities

South East LEP: Growth Deal and Strategic Economic Plan 2014

3.2.6 Kent is South East England's fastest recovering region and has potential for successful economic growth. Over the last 20 years Kent has seen 100,000 more people living in the county, housing stock increase by over 60,000 homes and 130,000 more cars on the road. The pace of change is set to accelerate further over the next 20 years with a projected 8% population increase.

3.2.7 In March 2014, the SELEP submitted their Strategic Economic Plan (SEP). Within the six year period covered by the SEP (2015/16 to 2020/21) several considerable developments are planned within Kent.

3.2.8 Through the Kent and Medway Growth Deal (as part of the Strategic Economic Plan), the public and private sectors intend to invest over £80 million each year for the next six years to unlock potential through:

- Substantially increasing the delivery of housing and commercial developments;
- Delivering transport and broadband infrastructure to unlock growth;
- Backing business expansion through better access to finance and support; and
- Delivering the skills that the local economy needs.

3.2.9 MITP was included in the South East Local Enterprise Partnership allocation for transport schemes, started 2016-17.

Local Transport Priorities

Growth without Gridlock/ LTP4 2016-2031

3.2.10 Growth without Gridlock is the delivery plan for transport investment in Kent, published in 2010. It sets out the priorities for transport investment and how these will be delivered in order to meet the current and future demands of the County in the context of its crucial role in the UK and European economy.

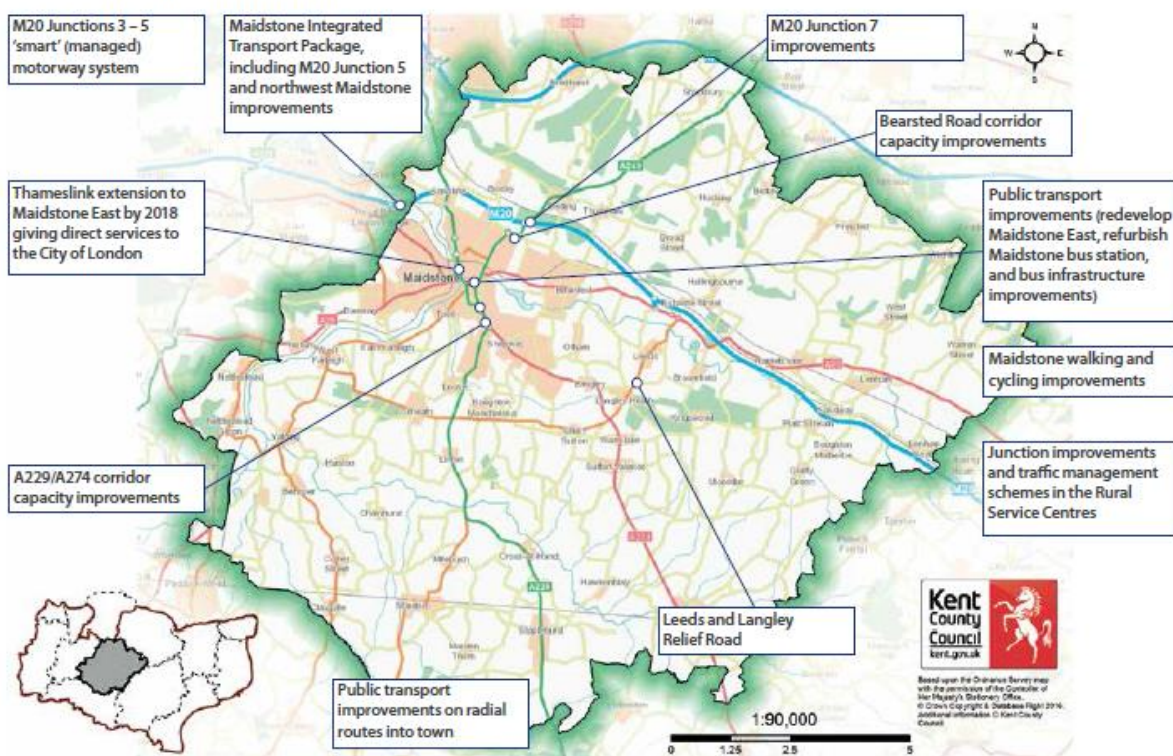
3.2.11 Growth without Gridlock will enable growth and prosperity for Kent and the UK as a whole. Although predating the SELEP Strategic Economic Plan, the key elements of both are entirely in accord. This has enabled an effective package of transport schemes to be brought forward as part of the Local Growth Fund investment.

3.2.12 Maidstone is identified In Growth without Gridlock as experiencing severe congestion. Some of its key challenges are;

- Tackling congestion hotspots and areas of poor air quality, particularly in the town centre and on the A roads into Maidstone;
- Maintaining accessibility to the town centre by public transport;

3.2.13 A general summary of transport investments in the area is presented below:

Transport Priorities for Maidstone

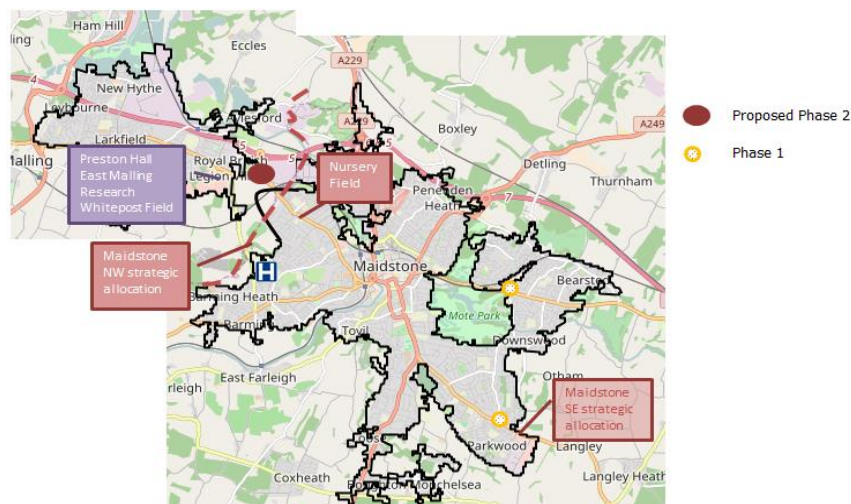


Local Plans – Maidstone and Tonbridge and Malling

3.2.14 Willington Street improvements are endorsed by the Maidstone Borough Council and Kent County Council Joint transportation Board (JTB). This business case therefore reflects the objectives of both local plans.

Co-ordinating roadspace – development sites

3.2.15 The development locations in close proximity to Willington Street are shown in Table



3-1 and

3.2.16 Figure 3-2.

Development name	Location	Dwellings
Kent Medical Campus	Maidstone	Hospital site
Maidstone NW	Maidstone	1200
Whitepost Field, Aylesford (Gladman)	Tonbridge and Malling	800
East Malling Research (EMR)	Tonbridge and Malling	1300
Preston Hall	Tonbridge and Malling	200
Nursery Fields	Maidstone	400
Total		3900

Table 3-1 Development sites nearby Willington Street

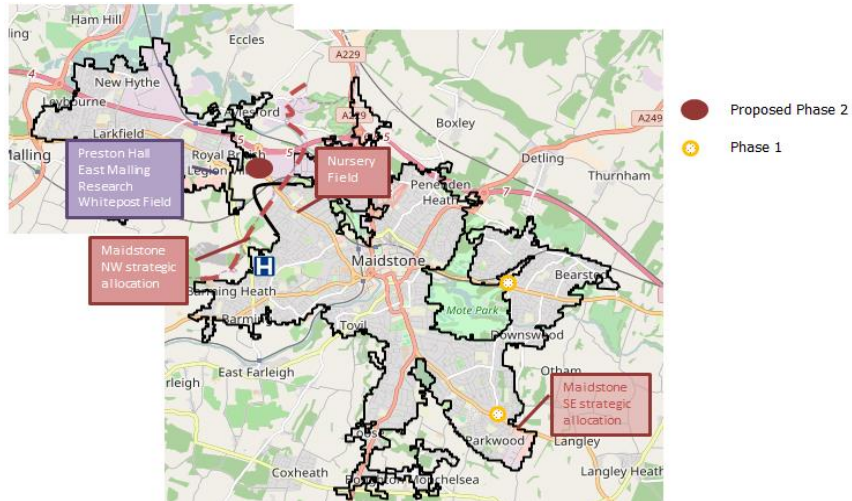


Figure 3-2: Development sites

3.2.17 In addition there is broader growth in both Maidstone and Malling, of which a proportion may affect the scheme area.

3.3 The identified problem

3.3.1 LTP4 identified the following transport-related problems affecting the county;

- Transport congestion;
- Supporting economic growth;
- The need to improve access to jobs and services;
- The need for a Resilient Network;
- Importance as a UK gateway; and
- A safer and healthier county.

3.3.2 Maidstone suffers traffic congestion on major radial routes during the peak periods. The network is dominated by such routes and potential for traffic to move between them is limited. There are 'hotspots' wherever traffic converges.

3.3.3 The highway network in Maidstone is operating close to capacity during peak periods. Delays are prone to rapid escalation when problems arise at hotspots and from any other interruption to traffic flow. This is exacerbated by incidents on the M20; the impact from which rapidly affects the whole town. Traffic searches out alternative routes in such cases, often using inappropriate roads.

Air Quality Management Area

3.3.4 Willington Street is not within an AQMA but significant queuing can affect nearby AQMAs in Maidstone.

3.4 Current conditions

3.4.1 A Manual Classified Count (MCC) survey was undertaken on Tuesday 2nd December 2014 between the hours of 07:00 to 10:00 and 16:00 to 19:00. To ensure a representative assessment, the 2014 surveys have been 'growthed' to a 2018 base year using the Department for Transport (DfT)'s TEMPRO v.7.2 software, in accordance with WebTAG guidance.

3.4.2 The peak hour turning movements and queue length surveys are summarised in Appendix C.

3.5 Impact from no change

- 3.5.1 Congestion may worsen if improvement to Willington Street isn't made. Introduction of additional homes and employment opportunities nearby will add pressure and increased congestion may encourage drivers to use minor roads or take circuitous routes.
- 3.5.2 Excessive congestion may make the town less accessible and less attractive as a retail and business centre.
- 3.5.3 The reliability of bus services may reduce, some of which may be of particular community value or subsidised by KCC.
- 3.5.4 Air quality recorded at the nearest monitoring station (approx. 1.5km away) is above the recommended threshold. It could deteriorate as a consequence of increased queuing.

3.6 Internal drivers for change

- 3.6.1 "Growth without Gridlock" outlines how economic growth and regeneration can be delivered using an integrated transport network. Kent's network must therefore offer capacity and resilience to provide efficient and reliable journeys.
- 3.6.2 Improvement to Willington Street will reduce delay and congestion. This will allow the surrounding network to operate more efficiently and better accommodate trip growth from new developments.

3.7 External drivers for change

- 3.7.1 Journey time reliability and congestion are primary drivers for these works. KCC can control development within its boundaries but not across the South East region, where planned growth may exacerbate problems in Kent indirectly.

3.8 Objectives

3.8.1 The following are objectives for improving Willington Street junction with A20 Ashford Road:

- Improve efficiency of the junction thereby relieving congestion;
- Improve journey times and journey time reliability.

3.8.2 Achieving these may unlock other benefits:

- Increase capacity on the network, to better accommodate further development;
- Reduced queuing may arrest deterioration in air quality;

3.8.3 The objectives and other benefits from these works accord with strategic aims of both the Local Authority and national policy.

3.9 Measures for success

3.9.1 Success will be measured by reduced travel delays and queueing during peak hours. Data will be collected after completion of the works and reported to SELEP.

3.9.2 Suitable Benefits Realisation Strategy is offered in 7.9 of this Business Case.

3.10 Constraints

3.10.1 Key constraints are summarised below:

- LGF funding allocation granted by SELEP;
- KCC committee approval;
- Statutory procedures completed in time.
- Liaison with internal KCC streetworks team in relation to roadspace booking is already being carried out. This includes a wider audience, for example Highways England, to ensure no clashes.

3.11 Stakeholders

3.11.1 Stakeholders play a key role in ensuring that the scheme is not only delivered successfully, but also safely operated and maintained in future. The sample list below is not exhaustive:

- South East Local Enterprise Partnership;
- Maidstone Borough Council;
- Tonbridge & Malling Borough Council;
- Highways England;
- Bus operators, including Arriva;
- Land-use developers;
- Local residents and businesses;
- Statutory Undertakers; and
- Regular users of affected transport facilities (road, walk and cycle).

3.11.2 A number of KCC staff will be consulted across a range of departments.

3.12 Options

3.12.1 Options Appraisal Report (OAR) was considered disproportionate owing to endorsement from the Joint Transport Board 2015 and the comparatively small nature of these works.

3.12.2 The following options were nevertheless considered:

- Option 1 proposed retention of existing signals with an un-signalised, priority left turn filter lane from Willington Street to the A20 Ashford Road (W). Additionally, two “ahead” lanes would be provided on the Ashford Road (W) approach and exit.
- Option 2: proposed signalised left turn with extended right turn lane and dedicated left turn lane on A20 (E)
- Option 3 proposed removal of existing signals and replacement with a three-arm roundabout.

Options 1 and 3 were discounted owing to insufficient benefits being demonstrable and known public support for a major improvement to congestion on Willington Street.

Option 2 builds upon design concepts first heard by Joint Transport Board 2015. JTB expressed some support but aspired to a greater degree of improvement. The design revisions now included in Option 2 therefore present the most significant improvements to congestion and were therefore endorsed by the Joint Transport Board for delivery in the MITP.

4 Economic Case – Willington Street improvements

4.1 Overview

4.1.1 This Economic Case demonstrates how the scheme is predicted to perform in relation to its objectives, identified problems and targeted outcomes. It determines if the proposed improvement to the Willington Street junction with A20 Ashford Road is a viable investment, whose strengths outweigh its weaknesses and provides good value for money.

4.2 Appraisal

4.2.1 The appraisal was based on the time-savings between the current (modelled in LINSIG) and proposed layout. A spreadsheet based (TUBA-like) comparison of vehicle-hours between the DM ('without'-scheme) and DS ('with-scheme) was undertaken. Whilst this method is appropriate, it is noted that it does not provide all the output and 'spreads' that TUBA is able to. Nonetheless, this approach quantifies the key metric of delay (s) changes, as a proxy for journey-time benefits. This is broken down by time-peak.

4.2.2 The approach above is consistent with MITP and other SELEP schemes.

4.2.3 Assumptions and points of note:

- A conservative approach has been used. If such an approach achieves a high value-for-money, then uncertainty is minimised;
- AM and PM weekday peak-hours only, annualised at 253 days. Whilst there may be peak-shoulder and inter-peak benefits, these are not expected to be significant and are not included;
- All vehicles normalised as Passenger Car Units, for the purposes of modelling;
- Value of time is kept constant;
- Current flows used for both opening year and forecast year. This is to be both conservative and to reflect a proposed new link which will mitigate traffic growth.
- Opening year assumed as 2020;

- Appraisal limited to 10 years, broadly the local plan end-date (2029). This was chosen as the most representative horizon to use, noting WebTAG A1.1. Unknowns beyond this serve to limit the reliability of such models. 10y is therefore deemed reasonable as the intervention itself is comparatively minor junction improvement;
- Maintenance and renewal costs are excluded due to the short appraisal period and ease of absorbing the measures into existing network maintenance work;
- No downstream capacity constraints are expected. The adjacent junctions are being considered and will be modified if required;
- Wider network reassignment has been dismissed as there are no likely O-D pairs which would re-route. However, the appraisal spreadsheet has been adjusted to undertake, as a sensitivity test, an approximation of reassignment in the DS ('with'-scheme scenario);

4.3 Junction Capacity Assessment

4.3.1 A technical assessment of the operation of the existing junction layout was undertaken using LinSig software. Outputs include the Degree of Saturation (DoS), the Mean Maximum Queue (MMQ) and the Practical Reserve Capacity (PRC) units of measure. The DoS (in percent) is a ratio of demand to capacity for each traffic phase, with a value of 90 percent indicating that an arm is operating at practical capacity. The PRC is calculated from the maximum percentage DoS and is a measure of how much additional traffic could pass through the junction before it reaches full capacity. The MMQ provides an indication of how the overall junction performance may affect adjacent junctions on the highway network.

4.3.2 The junction was assessed for the weekday AM and PM peak hours in the base year (2018) and the future year (2029). The full LinSig report is included at Appendix B, with a summary shown below.

Year	Junction Arm	Base Flows			
		AM	AM	PM	PM
		DoS	MMQ	DoS	MMQ
2018	Ashford Rd (W)	105.9%	63	103.1%	50
	Ashford Rd (E)	107.0%	53	104.3%	32
	Willington St	103.6%	31	101.0%	14
	PRC	-18.9%	-15.8%		
	Average Delay (s/pcu)	133.1	88.8		
2029	Ashford Rd (W)	127.5%	169	143.2%	261
	Ashford Rd (E)	125.6%	113	138.2%	125
	Willington St	125.7%	213	141.8%	80
	PRC	-41.7%	-59.1%		
	Average Delay (s/pcu)	453.6	452.6		

Existing Junction Capacity – Summary of LinSig Results

4.3.3 Having established that the existing junction would operate significantly over its design capacity in the 2029 horizon year, several potential improvement schemes were identified, including two signalised options and a roundabout scheme. Option 2, comprising of a signalised left turn filter from Willington Street, an extended right turn lane on the Ashford Road (W) approach and a dedicated left turn lane on the Ashford Road (E) approach, was found to be the best performing option in highway capacity terms.

4.3.4 This option was assessed for the 2018 and 2029 AM and PM peak hours. A summary of the resulting LinSig assessment is shown in Table 0-2 below, with the full report included at Appendix B.

Year	Junction Arm	Base Flows			
		AM	AM	PM	PM
		DoS	MMQ	DoS	MMQ
2018	Ashford Rd (W)	97.3%	31	90.1%	19
	Ashford Rd (E)	98.9%	33	91.6%	15
	Willington St	94.5%	25	90.1%	12
	PRC	-9.8%	-1.7%		
	Average Delay (s/pcu)	64.3	34.9		
2029	Ashford Rd (W)	110.2%	97	125.2%	187
	Ashford Rd (E)	121.2%	100	125.5%	95
	Willington St	122.9%	199	123.9%	61
	PRC	-36.5%	-39.4%		
	Average Delay (s/pcu)	342.3	321.8		

Option 2 – Summary of LinSig Modelling

4.3.5 Whilst the junction is forecast to continue operating over its design capacity with the Option 2 scheme in place, it nevertheless offers significant betterment relative to the existing layout and latent congestion. This option has therefore been carried forward for economic assessment.

4.4 Total Economic Efficiency (TEE)

- 4.4.1 Utilising Transport Analysis Guidance (TAG) Unit A1.3: User and Provider Impacts, the monetary value of the average delay experienced by vehicles in existing and proposed layouts can be quantified: the difference between the two equating to Total Economic Efficiency (TEE), expressed in terms of travel time savings. Section 4 of the guidance outlines the Value of Travel Time Savings, Section 4.5 specifying the Value of Time per Vehicle. Taking account of delay and the number of vehicles utilising the junction, it is possible to assign a monetary value to the reduction in delay from the completed scheme.
- 4.4.2 For the purposes of this assessment, average delay has been considered in terms of seconds, as these can be isolated per vehicle in the LinSig model. It is noted that to provide the most accurate assessment, the seconds per Passenger Car Unit (PCU) for each arm of the junction have been extracted from the individual LinSig reports, rather than using the average detailed above.
- 4.4.3 WebTAG notes that people travel for a variety of reasons during peak periods, for business, commuting or for non-work purposes (e.g. shopping or visiting friends and relatives). Table A1.3.4 outlines the proportions of these trips made during different time periods, with Table 0-3 (below) highlighting the proportion of trips made in work and non-work time by percentage. The 0700- 1000 and 1600-1900 periods have been highlighted, as it is these periods to which this appraisal exercise relates.
- 4.4.4 For the purposes of this assessment and ease of analysis, it has been assumed that all vehicles utilising the junction are cars. This is considered appropriate since the baseline traffic survey of the junction confirms that only small percentages of heavy goods vehicles (HGVs) and buses (PSVs) currently utilise it (at 3% and 4% of total movements in the AM and PM peak hours respectively). Moreover, this provides for a robust assessment of economic impact, in that average market price values of time per vehicle based on distance travelled are significantly higher for HGVs and PSVs than for cars. This is due to their greater work-related usage compared to cars.

Proportion of Trips made in Work and Non-work Time (%)								
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	Proportion of Trips made in Work and Non-work Time (%)							
		7am-10am	10am-4pm	4pm-7pm	7pm-7am	Average	Weekend Average	All Week Average
Car	Work	7.0	7.2	5.1	4.3	6.2	2.0	5.3
	Commuting	38.3	11.3	32.6	28.8	25.2	8.4	21.3
	Other	54.7	81.5	62.3	66.9	68.6	89.6	73.

Summary of TAG Table A1.3.4 (2018) - Percentage of Vehicle Trips by Journey Purpose

4.4.5 Table A1.3.6 of TAG assigns each journey purpose a monetary value, which is summarised in Table 0-4 below for the years 2010, 2018 and 2029. The 2018 and 2029 figures are highlighted, as these have been utilised in this appraisal exercise. The 2010 figures have been provided for comparison to give an understanding of the temporal changes in price.

Market Price Values of Time per Vehicle based on Distance Travelled (£ per hour, 2010 prices)						
	2010		2018		2029	
	7am-10am	4pm-7pm	7am-10am	4pm-7pm	7am-10-am	4pm-7pm
Car Work	20.0	20.3	22.0	22.4	25.3	25.6
Commuting	11.3	11.3	12.4	12.5	14.2	14.3
Other	7.8	8.1	8.6	9.0	9.8	10.3

Summary of TAG Table A1.3.6 (2018) – Value of Time per Vehicle

4.4.6 Using the LinSig modelling results, the total number of vehicles traversing the junction and the average delay (in seconds) per PCU have been considered. The total seconds of delay have been factored to account for journey purpose and multiplied by the relevant monetary values in Table 0-4 above. This provides an overall monetary figure for vehicle delay during the AM and PM peak hours for both the 2018 and 2029 scenarios.

4.4.7 To ensure a robust assessment, the resulting figures have then been multiplied by 253 to identify the annual value. This figure removes both weekends and bank holidays, as the traffic demand experienced on these days is generally lower than that experienced on a typical weekday. Tables outlining this process in numerical format are included at Appendix C. 1.3.8 The resulting figures are shown below:

2018			
	Do Minimum	Do Something	Difference
AM Peak	£269,361.39	£130,173.22	£139,188.17
PM Peak	£176,582.32	£69,301.68	£107,280.64
Total saving	£246,468.80		
2029			
	Do Minimum	Do Something	Difference
AM Peak	£1,355,848.96	£1,023,081.93	£332,767.03
PM Peak	£1,328,007.55	£944,023.26	£383,984.30
Total saving	£716,751.33		

Travel Time Saving Benefits – A20 Ashford Road / Willington Street

4.4.8 The 2018 scenario has been considered to provide a baseline from which the incremental year-on-year impact of the scheme can be established until the horizon year of 2029. The 2018 base year itself has been discounted from the final figure, as it is assumed that the scheme will be implemented in 2019. It has, however, been utilised as the baseline for the associated capacity modelling assessment.

4.4.9 The 2018 annual value has been subtracted from 2029 to provide net difference. This has been divided by 11 to provide an annual increase to 2029. The resulting annual increase from 2018 to 2029 is shown below:

Year	Benefit
2018	£ 246,468.80
2019	£ 289,221.76
2020	£ 331,974.72
2021	£ 374,727.67
2022	£ 417,480.63
2023	£ 460,233.59
2024	£ 502,986.54
2025	£ 545,739.50
2026	£ 588,492.46
2027	£ 631,245.41
2028	£ 673,998.37
2029	£ 716,751.33

Table 0-6: Annual Travel Time Saving Benefits (2018-2029)

4.4.10 In accordance with 'The Green Book: Central Government Guidance on Appraisal and Evaluation' the above figures have been subject to a discount rate of 3.5 per cent, known as the Social Time Preference Rate (STPR). Discounting within the public sector allows for both costs and benefits with different time spans to be compared on a common 'present value' basis. The resulting discounted figures are shown in Table 0-7 below.

Year	Benefit
2018	£ 237,842.39
2019	£ 279,099.00
2020	£ 320,355.60
2021	£ 361,612.20
2022	£ 402,868.81
2023	£ 444,125.41
2024	£ 485,382.01
2025	£ 526,638.62
2026	£ 567,895.22
2027	£ 609,151.82
2028	£ 650,408.43
2029	£ 691,665.03

Annual Travel Time Saving Benefits (2018-2029) – Discount Rate Applied

- 4.4.11 Taking the assessment period of 2019 to 2029, the total Travel Time Savings as a result of the improvement scheme equate to **£5,339,202.15**.
- 4.4.12 The estimated construction cost used in TEE was **£2,013,148**. Relating the respective costs and benefits of the scheme enables a Benefit to Cost Ratio (BCR) to be identified, which for this scheme is **2.65**.

4.5 TEE summary and conclusion - initial BCR

- 4.5.1 This TEE has been prepared to assess economic benefits associated with the proposed capacity improvement scheme at the A20 Ashford Road / Willington Street signal junction in Maidstone, Kent.
- 4.5.2 It has been established, with reference to the Department for Transport (DfT) Transport Analysis Guidance (TAG), that the scheme would provide for Travel Time Savings worth £5,339,202.15 over the period 2019 to 2029. When related to the estimated construction cost of the scheme, a Benefit to Cost Ratio (BCR) of **2.65** has been calculated.
- 4.5.3 A further influence can be seen below in AMCB in which the effect of Section 106 contributions can be seen, raising BCR to 1.22.

4.6 Analysis of Monetised Costs and Benefits

- 4.6.1 This project is broadly in-line with WebTAG A1.2 Table 7, Stage 2 Optimism Bias (15%).
- 4.6.2 Value for money is improved when developer contribution is subtracted from both PVB and PVC.

Analysis of Monetised Costs and Benefits (2010 present values and prices)	
Net Outcome: Do-Something Preferred Scheme minus Do Minimum	Present Values in 2010 market prices and values (£)
User Present Value Benefit (PVB)	£5,339,202.15
Capital Present Value Cost (PVC)	£2,013,148
Scheme Net Present Value (NPV) = PVB - PVC	£3,326,054.15
Scheme Initial Benefit to Cost Ratio (BCR) = PVB/PVC	2.65

Table 4-1: Initial BCR without 15% optimism bias (10 year appraisal)

- 4.6.3 Noting 1.5.4, Value for Money assessment in accordance with DfT WebTAG has been deselected for this scheme along with its companion DfT "Value for Money, Moving Britain ahead" Framework 2015.

4.7 Value for Money statement

- 4.7.1 The initial BCR shows value for money, and can be adjusted upwards to reflect journey reliability, improved safety, other time peaks, and unlocked housing.
- 4.7.2 BCR may be improved further with competitive tendering, Target Cost pricing or Early Contractor Involvement each acting to reduce scheme cost forecasts.
- 4.7.3 An AST (Appraisal Summary Table) is included as Appendix D.

5 Financial Case – Willington Street improvements

5.1 Overview

5.1.1 This Financial Case for Willington Street junction with A20 Ashford Road gives a breakdown of costs and a spending profile. It identifies where and when external contributions will be obtained and confirms that sufficient budget is available at the point which expenditure is forecasted for payment. It discusses how secure contributions are likely to be, reviews risks and mitigation.

5.2 Project budget

5.2.1 Funding for the wider Maidstone ITP is from SELEP LGF with supporting funds from developer contributions. The total SELEP contribution for MITP is £8.9 million, payable 2016-2020. A budget summary for the MITP is in Table 5-1:

Funding Sources	Total MITP £(m)
LGF Funding from SELEP	£8.9m
Developer Funding / Contribution	£5.0m
Other Local Funding / Contribution	£0
Total	£13.9m

Table 5-1: MITP budget, including its allocation per phase

5.2.2 A budget summary for Willington Street is Table 5-12:

Funding Sources	Total £(m)	Funding year
LGF Funding from SELEP	£1.7m**	FY2019/20
Section 106 Contribution from	£0.128m	FY2019/20
Other Local Funding / Contribution	TBC*	FY2019/20
FY sub-total	£1.828m	
LGF Funding from SELEP	£0.3m	FY2020/21
Developer Funding / Contribution	£1.822m	FY2020/21
FY sub-total	£2.172m	
Total	£4.0m	

Table 5-2: Willington Street budget

** KCC has applied to SELEP to use the £1.3m for MITP Phase 1 to deliver the enlarged Willington Street junction with A20 Ashford Road scheme only. An additional £0.7m LGF allocation is required to meet the funding requirement of £2m LGF.

***KCC PM is liaising with Maidstone Borough Council for release of S106 funds for these works.

5.2.3 Funding contributions have been secured through Section 106 Agreements totalling £128,000 towards the delivery of Willington Street improvements. Monies have been secured from Countryside Developments Ltd. in respect of planning consent 15/509015.

5.2.4 KCC Officers are reviewing supplementary Section 106 contributions with colleagues from Maidstone Borough Council and anticipate award to KCC before the scheme delivery period.

5.2.5 No direct KCC funding will be allocated to this scheme.

5.3 Cost estimate

5.3.1 The scheme is dependent on SELEP LGF funding and developer contributions. Delivery will be hindered if scheme costs escalate.

5.3.2 A revised estimate for improving Willington Street junction with A20 Ashford Road is summarised in Table 5-3 below with detailed breakdown from Allen Dadswell Consultants in Appendix B.

Item	Cost	Expenditure year
Non-construction estimate, incl. Fees (Business Case and design)	£489,500	FY2018/19
Land acquisition	£0	-
Main works estimate, inc. Prelims, and extra overs	£1,011,679	FY2019/20
Works cost sub-total (exc. Risk and OB)	£1,501,179	FY2019/20
Contractor's risk	£134,686	FY2019/20
1y allowance for Inflation, assuming works complete and invoiced FY20/21.	£114,699	FY2019/20
Stage 2 Optimism Bias @ 15% applied to works est. incl risk and inflation.	£262,584	FY2019/20
Grand total	£2,013,148	FY2019/20

Table 5-3: Willington Street – estimate summary

Source	2019/20	2020/21
LEP (£m)	£0.3m	£0
Developer (£m)	£1.7m	£0
Other Local Funding / Contribution	£0	£0
Total (£m)	£2.0m	£0

Table 5-4 Willington Street expenditure profile, per budget

- 5.3.3 A competitive tendering process may refine this estimate still further, including KCC Officers' consideration of Target Costing. 6.3.7 refers.
- 5.3.4 Remaining elements that are currently being investigated to be included as part of a phase 3 submission for MITP are set out in Table 5-5 and shown in Figure 5 6.

A229 Loose Road junction with Cripple Street/Boughton Lane
A229 Loose Road junction with Armstrong Road/Park Way
A229 Loose Road junction with A274 Sutton Road (Wheatsheaf junction)
B2246 Hermitage Lane junction with St Andrews Road/A26 Tonbridge Road junction with Fountain Lane
A20/Hall Rd/Mills Rd

Table 5-5: Forward design

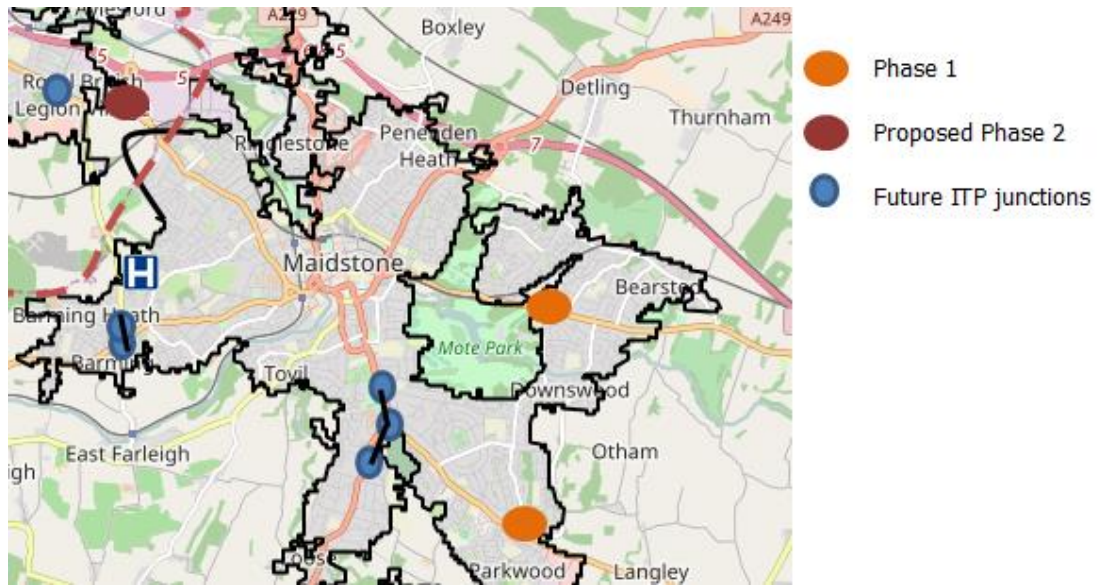


Figure 5-6: Future ITP phases

5.4 Optimism Bias

- 5.4.1 Optimism Bias refers to the tendency for scheme promoters to be overly-optimistic about cost. It is applied as a percentage uplift and can be useful in forecasting final outturn expenditure.
- 5.4.2 HM Treasury guidance document "*...Early financial cost estimates...and the treatment of uncertainty and risk March 2015*" suggests that Optimism Bias may be waived by organisations demonstrating Level 4 and above on the National Audit Office (NAO) Project Maturity scale. However KCC may not have sufficient evidence to demonstrate this, meaning that Optimism Bias will be used for this Business Case.
- 5.4.3 DfT WebTAG unit A1.2 sets out levels of bias which should be added for each defined level of maturity in a scheme. Willington Street has reached Stage 2, meaning that 15% Optimism Bias should be applied.
- 5.4.4 Through use of cost challenge and Optimism Bias, the risk-adjusted estimate is considered robust but will be reviewed as the scheme proceeds.

5.5 Cost overrun - Section 151 Officer Sign Off

- 5.5.1 A signed letter by KCC's Section 151 Officer was presented in the MITP Phase 1 Business Case to SELEP. Any cost overruns above the risk allowance will be payable by KCC.

6 Commercial Case – Willington Street improvements

6.1 Overview

6.1.1 This Commercial Case provides evidence that the proposed scheme can be procured, implemented and operated in a viable and sustainable way. The aim is to achieve best value by engaging with the market.

6.1.2 This commercial strategy must:

- Confirm procedures to procure the scheme successfully;
- Check that budget is available and will cover contractor and construction costs;
- Verify that risk allowance is sufficient;
- Ensure that arrangements have been made to handle cost overruns.

6.1.3 Assumptions made in the cost estimate:

- The tender price/contract sum is obtained through competitive tendering
- Standard forms of contract with no significant amendments
- Liquidated/delay damages set at levels that are commercially acceptable
- Non-excessive risk transfer to the Main Contractor
- Construction works conducted in a single stage
- Opportunity for the Contractor to conduct work will be the maximum practicable set by KCC i.e. 24-7, within guidelines.
- Site works will not be subject to noise restriction above sensible guidelines i.e. no noisy processes beyond 2000.
- No below ground contamination is present on site
- The works contain elements of phasing therefore a 10.0% allowance included
- The works contain elements of night/ weekend working therefore a 10.0% allowance included.

6.2 Scheme Procurement Strategy

Procurement Options

6.2.2 KCC have identified two options for delivery of LEP-funded schemes:

Option 1 - Full OJEU Tender

6.2.3 This option is required for schemes, such as MITP, with an estimated value exceeding £4,551,413.

6.2.4 KCC will either produce an 'open' tender, where anyone may submit a tender, or a 'restricted' tender, where a Pre-Qualification Questionnaire (PQQ) is used.

6.2.5 The minimum tender period is 6 weeks but could be longer for larger schemes. Once tenders are received they are assessed and a preferred supplier identified. There is a mandatory 10 day 'standstill' period, during which unsuccessful tenderers may challenge the process.

Option 2 - Delivery through KCC's existing Amey Highways Term Maintenance Contract (HTMC)

6.2.6 HTMC is based on an agreed Schedule of Rates. The price for each scheme is determined by summarising items into a Bill of Quantities. Amey may price 'star' items for any items required by the scheme which aren't in the SoR already. KCC Officers then review and approve the star rate.

6.2.7 Option 1, open tender, is preferred in order to encourage competition and drive value for money. All tender documents will be entered on KCC's procurement portal. Tender evaluation will then be carried out by a nominated Officer panel and outcomes reported to the Procurement Board with completed scoring, weighting and the preferred bidder. The KCC Director will then approve and the contract awarded.

6.2.8 KCC Officers will consider use of Target Cost methodology in the tender with a view to reducing scheme costs and mitigating risk.

6.3 Commercial Risk Assessment

- 6.3.1 The construction industry is buoyant at present. Discussion with supply chain leaders indicates that the market is becoming more competitive owing to sustained demand from Clients. However, larger or more prestigious projects are generally felt to remain attractive to tenderers. This means that KCC has opportunity to drive economies through an attractive offering to the marketplace.
- 6.3.2 There is a risk from limited number of suppliers; overall capacity in the industry to tender Willington Street. KCC has experience successfully procuring Local Growth Funded projects M20 J4 and Maidstone Bridges Gyrotory and early discussions indicate that there is interest in these works from potential tenderers. This contract will also promote Early Contractor Involvement (ECI), allowing greater time to plan works and a platform for Value Engineering. These can be attractive items for potential tenderers. Combined, it means that KCC is confident in market appetite to tender for Willington Street.
- 6.3.3 The 1Q18 RICS UK Construction and Infrastructure Market Survey indicates that higher costs and a shortage of labour is continuing to restrict profit margins. Whilst unit cost pressures may ease with a strengthening pound, tender prices are still expected to rise.
- 6.3.4 The survey also touches on uncertainty in the markets regarding the United Kingdom's withdrawal from the European Union. Suppliers may become more selective of opportunities they pursue; prospective tenders perhaps being reviewed on procurement route, risk apportionment, programme, robustness of documentation and the cost of tendering. Projects with potential pitfalls, inappropriate risk transfer and non-standard contract conditions may cause tenderers to decline, or attract a pricing premium. It is therefore essential that Project Definition and Procurement Strategy are reviewed by KCC. This should help ensure that procurement is appropriate, Project Documentation comprehensive and risk effectively addressed.
- 6.3.5 Design risks will be resolved through a review process. Once environmental requirements and Statutory Undertaker issues are addressed residual risk will be in delivery onsite, manageable via the project governance process.

7 Management Case – Willington Street improvements

7.1 Overview

7.1.1 This Management Case outlines how the proposed scheme will deliver its intended outcomes. It demonstrates that the scheme content, programme, resources, impacts, problems, affected groups and decision makers will each be handled appropriately. It also discusses how scheme performance will be monitored.

7.2 Project delivery programme

7.2.1 An overall Project Delivery Programme has been developed for MITP. The key project milestones are:

- Complete outline design – March 18
- Complete detailed design – November 18
- Complete procurement – April 19
- Public Engagement – October 18
- Site clearance and preparation – February 19
- Complete construction – February 20

7.2.2 KCC Officers will liaise with Environmental Health, Traffic Management colleagues and key stakeholders; the intention being their endorsement of a 24h working window for Willington Street. Double shifts would then be possible for the Contractor to maximise working efficiency.

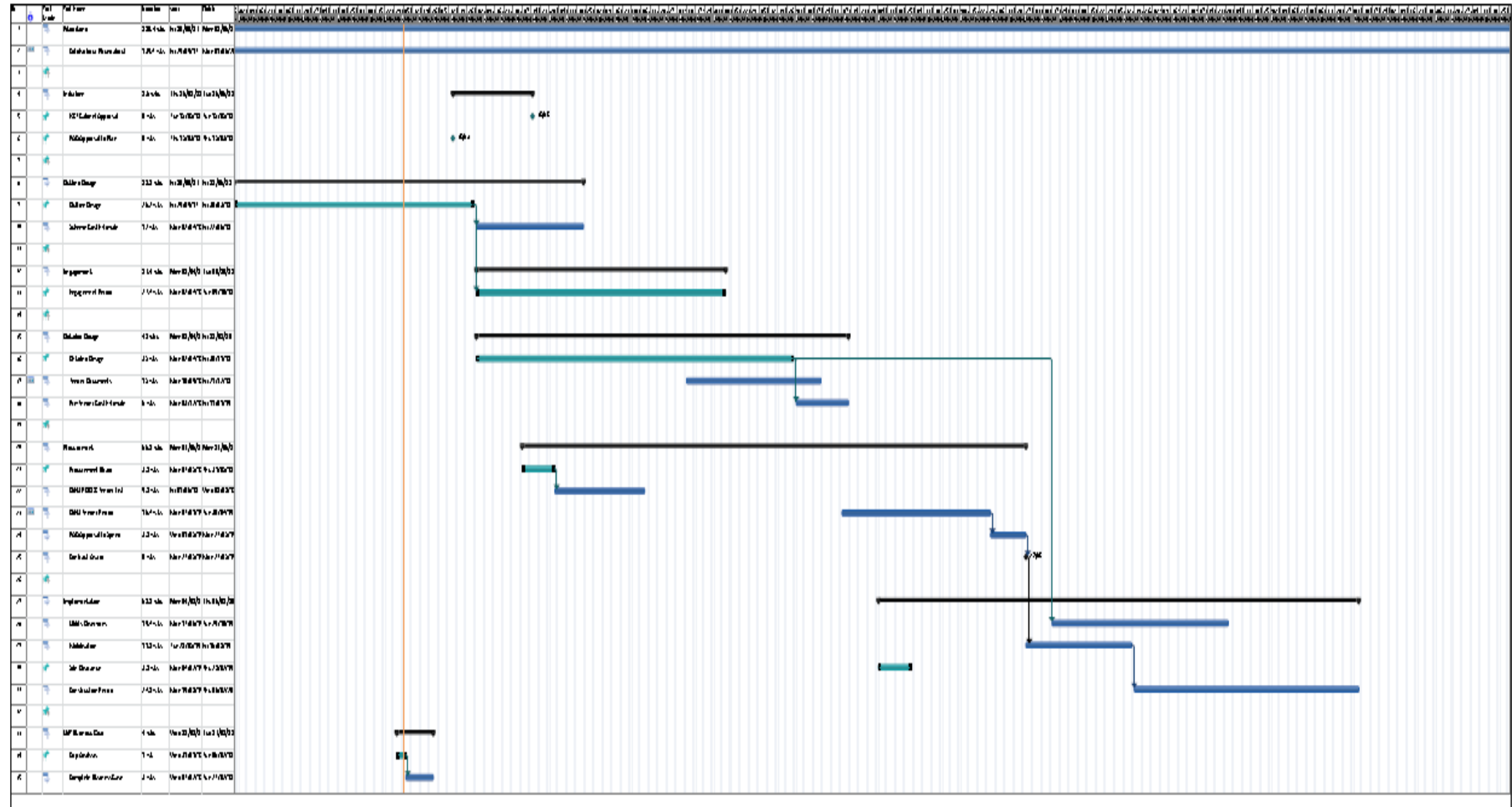


Figure 7-1: MITP Delivery Programme

7.3 Project governance, roles and responsibilities

7.3.1 KCC have a robust structure to provide accountability and an effective decision-making process for LEP-funded schemes. Each scheme has a designated Project Manager (Russell Boorman for the MITP, including Willington Street improvements) who is qualified and a suitably experienced KCC Officer.

7.3.2 Figure 7-2 provides an outline of the overall governance structure.

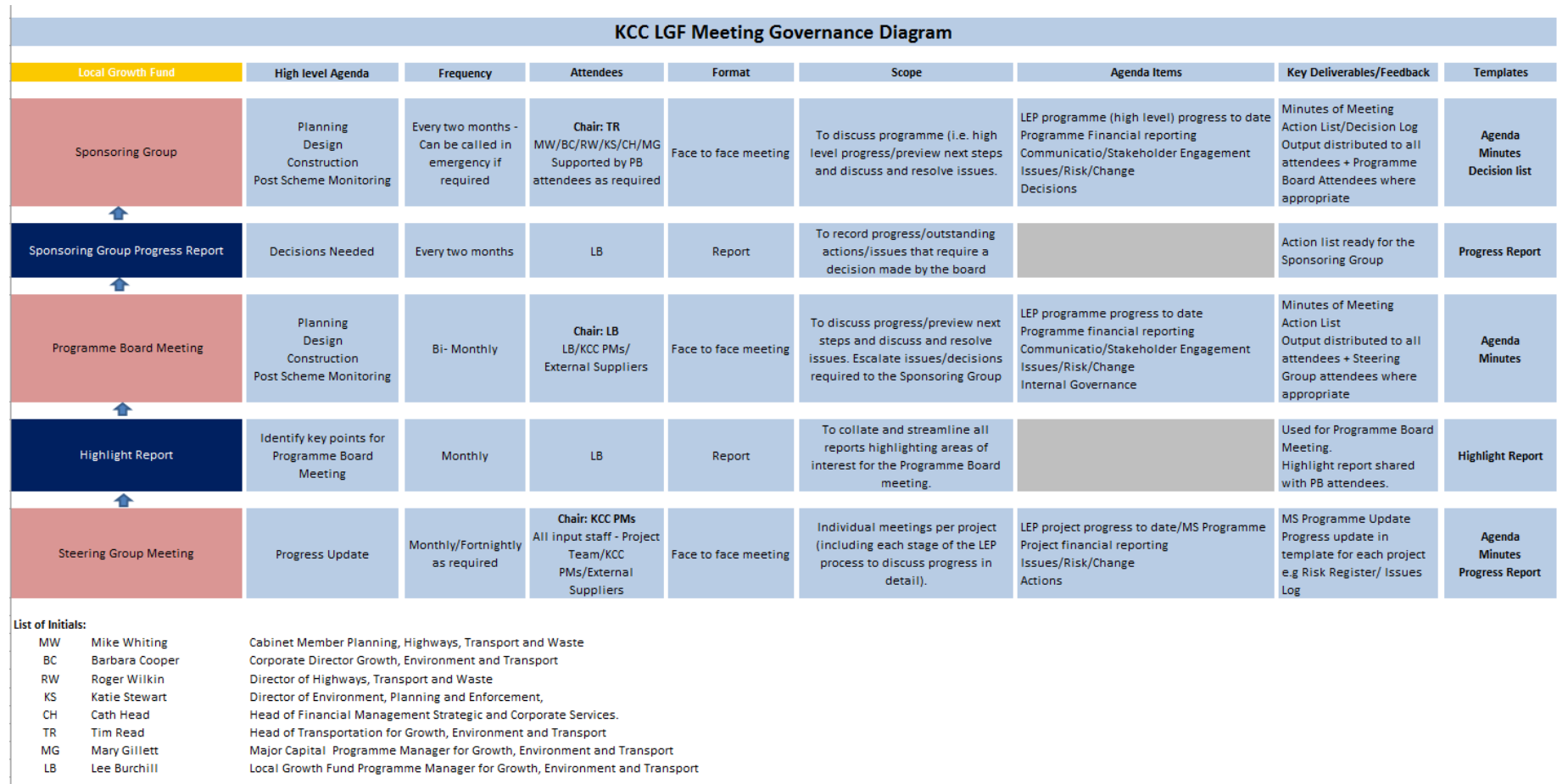


Figure 7-2: KCC Project Governance Structure

Addendum: Simon Jones – Director of HTW, Major Capital Programme Manager, vacant post to be covered by Russell Boorman and Andy Moreton as an interim arrangement.

7.3.3 Project roles and responsibilities are set out in Table 7-1.

Role	Name
KCC Cabinet Member	Mike Whiting
KCC SELEP Schemes Delivery Manager	Lee Burchill
KCC Commissioning Officer for Wellington Street (known as Project Sponsor)	Russell Boorman

Table 7-1: Roles and responsibilities

7.3.4 The governance process is managed by a series of meetings. Attendees, scope and output of each is below.

Project Steering Group (PSG) meetings

7.3.5 Fortnightly PSG meetings discuss progress. Technical detail is challenged by delegates, duly raising concerns and issuing actions. A progress report, minutes and updated programme dates are summarised into a Highlight Report and presented to Programme Board (PB)

Highlight Report

7.3.6 The Highlight Report variously comprises progress, finances, risks, issues and governance meeting dates. It identifies areas of concern and decisions required of PB or the LEP Programme Manager.

Programme Board (PB) Meeting

7.3.7 PB is monthly and is chaired by the LEP Programme Manager. Its outputs are the Highlight Report and minutes. Attendees include LEP Management and Bidding, Sponsors, PMs, External Consultant and Construction Representatives. PB discusses progress to date, reviewing each issue or action identified by PSG. PB also considers finances and next steps.

Escalation Report

7.3.8 PB escalates actions and decisions it has been unable to resolve to the Sponsoring Group (SG) meeting to discuss and ultimately resolve.

Sponsoring Group (SG) Meeting

- 7.3.9 SG is monthly and chaired by Tim Read (KCC Head of Transportation). Attendees are Barbara Cooper (Corporate Director), Simon Jones (Director of Highways, Transportation and Waste) and Tim Read (KCC Head of Transportation). SG reviews high-level programme progress, finances, next steps and closes out actions from the Escalation Report. Lee Burchill distributes the outcomes from SG. Technical advisors may be invited to expand upon an issue. All actions from the start of this governance cycle are closed out by SG (i.e. no actions roll over).

7.4 Availability and suitability of staff resources

- 7.4.1 The Willington Street improvements will be delivered using a collaborative approach between KCC and the successful tenderer. KCC have ringfenced experienced staff as Project Sponsor and Project Manager with more junior staff to support them.

7.5 Previously successful schemes in Kent

- 7.5.1 KCC has a track record of successfully delivering major transport schemes including Maidstone Bridges Gyrotory (MBG) project, M20 J4 bridge widening, Westwood Relief Strategy, Poorhole Lane, North Farm Improvements and the East Kent Access Phase 2 (EKA2).

- 7.5.2 The MBG, completed in March 2017, was designed to reduce congestion, improve journey time reliability and support economic growth. A complex project within the heart of a busy county town was successfully delivered on time and to budget whilst maintaining access for local businesses and commuters alike. Excellent



Maidstone Bridges Gyrotory

working relations with Maidstone Borough Council have been formed which will be beneficial to the delivery of the Maidstone Integrated Transport Package project, should this bid be successful. The total value of the scheme was £5.74m of which £4.6m was funded by LGF.

-
- 7.5.3 M20 Junction 4 Eastern Overbridge Widening was implemented to reduce congestion and support local housing growth in the surrounding area. A project that had a significant level of interface with Highways England to ensure safety to all network users through delivery was completed in January 2017. This was a £5m LGF scheme delivered on time and within budget.
- 7.5.4 Westwood Relief Strategy, Poorhole Lane Widening was a 'Local Pinch Point' funded scheme that has seen the reduction in congestion at the highly trafficked location near the Westwood Cross shopping centre in Thanet. The £5m project was successfully completed in June 2015 within budget despite being a challenging construction scheme due to the amount of utility diversions required and large number of fibre optic cables requiring a close working relationship with a diverse range of companies.
- 7.5.5 North Farm Improvements, also funded through 'Local Pinch Point' was completed in October 2015 on budget but delayed due to very complex utility diversions and lack of co-operation from Statutory Undertakers. KCC has mitigated this risk on subsequent projects of a similar nature by engaging a dedicated Statutory Undertaker Co-Ordinator. With a total project cost of £7.35m, the scheme, similar in nature to the MBG was delivered to reduce congestion, improve journey time reliability and benefit the air quality in a busy business area. Engagement with the adjacent business community was key to the successful delivery of the scheme. A complex retaining structure was constructed which required the need for a multidisciplinary project team.
- 7.5.6 The East Kent Access 2 scheme, completed in May 2012, was designed to support economic development, job creation and social regeneration, improving access with high quality connections between the urban centres, transport hubs and development sites in East Kent. The overall objectives of the scheme were to unlock the development potential of the area, attract inward investment and maximise job opportunities for local people. The scheme was successfully delivered within budget and ahead of programme through the adoption of a robust management. The total value of the scheme was £87.0m of which £81.25m was funded by Central Government and was awarded a regional Institution of Civil Engineers (ICE) Excellence Award.

7.6 Risk Management

7.6.1 Risk is managed in the governance structure set out in 7.3 above. A Risk Register is updated at each Project Steering Group meeting. The Project Manager is responsible for the register and provides a summary for the monthly Progress Report.

7.6.2 High risks are identified on the Highlight Report for consideration by Programme Board (PB) along with proposed mitigation measures. Those endorsed by PB are actioned by the KCC PM.

7.6.3 Table 7-2 summarise the risk assessment. This includes higher level risks associated with the improvements, their potential, effects, likelihood of occurring and mitigation. The scoring is based on a 5 point scale where 1 = unlikely and 5 = extremely likely.

		Scheme Risk Management Strategy			
Risk description	Likelihood	Impact	Likelihood x Impact	Owner	Mitigation
Increase in Scheme Costs	2	3	6	KCC/Consultant	Investigate scheme design and amend to achieve greater BCR & VFM
Funds do not cover costs	2	3	6	KCC/Cost Consultant	Lobby alternative sources for shortfall in funding
Changes in direction (from government, LEP, Local Authority)	2	3	6	KCC	Ensure co-operation and communication between all concerned parties
Scheme Performance e.g. downstream capacity erodes benefits	2	3	6	KCC	Mitigation if necessary
Statutory Undertakers	1	4	4	KCC/Consultant	KCC to ensure that relevant searches along scheme

					corridor are conducted as early as is practicable to flag up any issues at the earliest possible juncture
Issues uncovered during construction (environmental, archaeology etc.)	1	4	4	KCC/Consultant	Early liaison with geotechnical, environmental and archaeology specialists to minimise impact
Opposition to scheme (Residents/ Cyclists/ Road Users)	3	2	6	KCC	Ensure clear and effective consultation is undertaken with all relevant consultees providing fullest possible information

Table 7-2: Scheme Risk Assessment

7.7 Scheme Risks

7.7.1 Any transport scheme has risks to be managed. The main risks of MITP are summarised in Table 7-3.

Risk	Likelihood	Impacts	Owner	Mitigation
Scheme becomes unnecessary due to failure of wider main schemes	Low	High	KCC	Constant programme review and reallocation of funds
Stakeholders reject scheme as unsuitable or inappropriate	Low	Moderate	KCC	Active consultation, building on existing relationships
Highway design issues prove costly	Low	Moderate	Consultant	Early engagement of highway design specialists
Key stakeholders (e.g. LEP or DfT) insist on additional quantitative appraisal	Low	Moderate	Consultant	Prepare Transport Business Case with as much quantitative information as possible
Related highway scheme designs affect scheme or scheme affects these schemes	Low	Moderate	Consultant	Co-ordination of design and explicit requirement in design brief
Benefits achieved do not match those predicted in the example used in the Business Case	Moderate	Moderate	KCC	Use scheme selection process to ensure best schemes are selected

Table 7-3: Key Risks

7.7.2 It should also be noted that there are risks from *not* proceeding with MITP, for example:

- Kent's reputation as the UK's "front door" may be damaged without effective highway management;
- Existing transport conditions inhibit growth, private sector investment attracted to other areas instead (those with better accessibility);
- Ongoing Air Quality issues in Kent may be exacerbated;
- Pockets of social disadvantage in Kent may worsen.

7.8 Communication and Stakeholder Management Strategy

7.8.1 A list of Key Stakeholders is presented in 3.11 above.

7.8.2 Consultation and stakeholder support is a key element of any project. A formal Stakeholder and Communication Strategy has been adopted by the MITP, similar having been successfully adopted on the Maidstone Bridges Gyratory project.

7.8.3 KCC is aware of both public and Member support for improvements to Willington Street through the work of the Joint Transport Board since 2014/15. Initial optioneering work indicated that early, smaller, proposals provided insufficient improvement. JTB therefore concluded that more significant works would be required of the MITP in order to meet public demand for reduced congestion.

7.8.4 Accordingly, while works onsite in Willington Street require suitable consultation with stakeholders the basic premise of reducing congestion is well-supported.

7.8.5 KCC's approach is summarised in Figure 7 4. Early engagement has commenced and will continue throughout the project. To date, this has included Maidstone Borough Council, with businesses and the local population engaged through a full programme of events, briefing sessions and project newsletters. Planned stakeholder engagement will also be undertaken with public transport operators on the route (Arriva and Nu-Venture) and the Parish Councils.

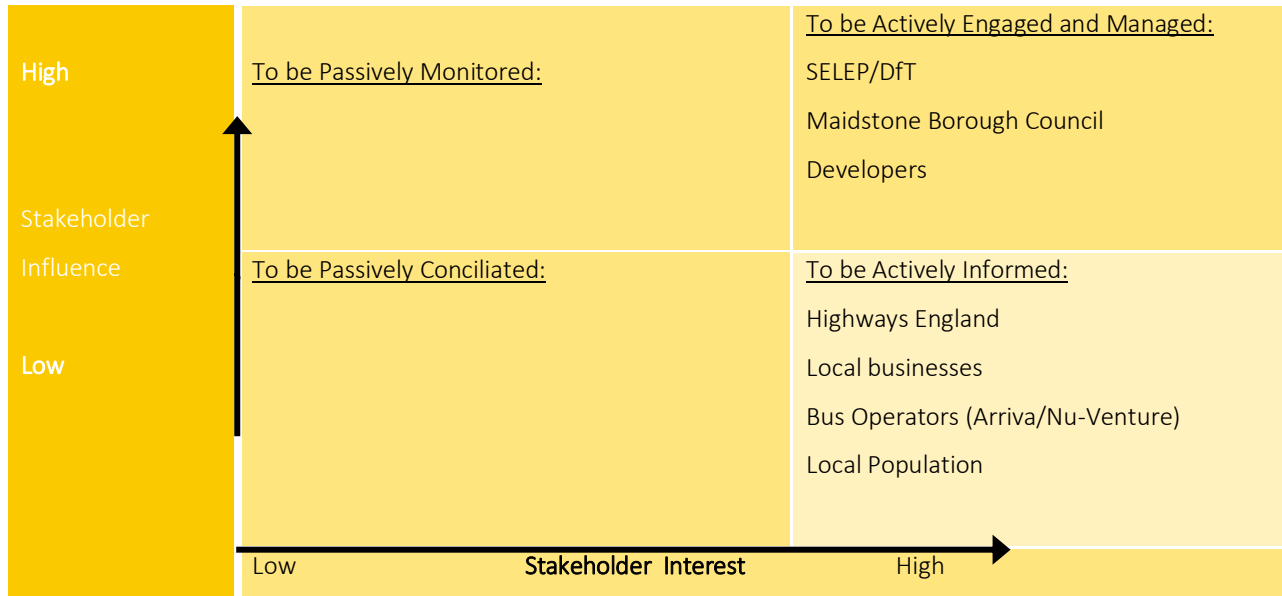


Figure 7-4: Stakeholder Management Plan

7.9 Benefits Realisation Plan

7.9.1 The scheme objectives in 3.8 above inform outputs and outcomes for Willington Street:

- **Outputs** – tangible effects, funded by and produced directly by the scheme
- **Outcomes** – final impacts brought about by the scheme in the short and medium/long term.

7.9.2 Outputs and outcomes have been converted into measurable indicators in Table 7-4:

Measures	Monitoring	Benefits Realisation	Comments
Travel-time improvement	Journey times Queues	KCC	One and five year post-opening
Air Quality improvement	Nitrogen Dioxide	MBC/TMBC	
Impact on accidents and safety	Number and type of accidents	KCC	Five year post-opening
Growth (housing, jobs)	Not measured directly – part of wider LGF package	Realisation involves other schemes, including non-transport (e.g. development)	
Wider economic benefits	Not measured directly – part of wider LGF package	Realisation involves other schemes, including non-transport (e.g. development)	Part of SELEP SEP Performance Management and Local Plan management

Table 7-4: Benefits Realisation Plan

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- 7.9.3 KCC will evaluate the performance of Willington Street after it is completed, reporting one and five years after opening, using information above. This will be shared with SELEP colleagues to help accountability to stakeholders, transparency to SELEP and to understand their contribution towards MITP objectives. Performance outturns will be presented in the MITP Monitoring and Evaluation plan.
- 7.9.4 Unexpected effects of the scheme will also be reported and, where appropriate, remedial measures identified.

7.10 Powers and Consents

- 1.1.1 The scheme is located on the Local Authority Network and does not require consents from Highways England. The scheme does not require Side Roads Orders.
- 1.1.2 Planning permission is required for the relocation of the rag stone wall, the majority of works are contained within the existing highway boundary.
- 1.1.3 Statutory Powers and Consents are not required to improve Willington Street junction.

8 Conclusion

8.1 Summary

The Maidstone Integrated Transport Package (MITP) will deliver infrastructure to support the Maidstone Local Plan. Improvements to Willington Street junction with A20 Ashford Road will successfully meet MITP objectives and will work harmoniously alongside its other elements.

8.2 Initial BCR / Value for Money statement

The scheme is deliverable and will provide value-for-money, based on a method of monetising the improved journey time. It delivers an important benefit in managing both immediate, and future, traffic pressures in Maidstone.

8.3 Recommendation

Improvements to Willington Street, as a phase of the MITP, should be approved and delivery should proceed. This requires the release of SELEP and Section 106 funds to KCC.

Appendix A Scheme Drawings

Appendix B Works cost breakdown

Sawyer and Fisher, project M2245 dated 2nd October 2018 was presented in OBC Rev0 submitted to KCC November 2018.

This work was superseded by that from Allen Dadswell Consultants January 2019, appended below.

Appendix C Traffic modelling results

Traffic data has been collected and assessed by DHA Consultants September 2018.

Total Economic Efficiency assessment has also been provided by DHA Consultants November 2018.

Appendix D Appraisal Summary Table