



Unlocking Pinch Points -Growth without Gridlock in Kent

M20 Junction 4 Eastern Overbridge Widening

Local Pinch Point Fund Application Form

Supported by





Preface

I am delighted to submit this bid for Tranche 4 funding under the Local Pinch Point Fund. In Kent we are passionate about delivering growth and boosting both the local and regional economies while positively contributing to the wider national picture. We fully recognise the vital role transport can play in unlocking growth and as such welcome this opportunity to fund a project which will remove congestion that is currently holding up the delivery of jobs and homes in Kent.

We are already on schedule to meet the March 2015 deadline for our two schemes, North Farm Improvements and Westwood Relief Strategy, already funded through the Local Pinch Point Fund. In addition, as a local transport authority, our considerable experience of delivering transport schemes, and the delivery of the widening the Junction 4 Western Overbridge in 2006 should give you sufficient assurance that the widening of the eastern side of this overbridge from 2 to 3 lanes will be delivered within budget by March 2015. Finally, the fact that this scheme does **not require planning permission or land acquisition**, and that the external contribution has already been received, should give further confidence that the delivery deadline will be met.

This scheme offers excellent value for money by generating **cross-boundary direct and wider economic benefits** in Medway, the Borough of Tonbridge and Malling and the wider Kent area. The scheme will reduce traffic delays for local communities and businesses and will improve economic growth by facilitating the delivery of 3,729 new houses and 104,000 square metres of mixed use development in the area. These direct and wider economic benefits would be realised very quickly.

Our proposal is fully aligned to Kent's Local Transport Plan and 20 year transport delivery plan, **Growth without Gridlock**, our economic strategy and the South East LEP's agenda for economic growth. As such I commend it to Government.

A handwritten signature in black ink, appearing to read 'David Brazier', written in a cursive style.

David Brazier
Cabinet Member for Transport and Environment

Checklist

SECTION A	Section / page
A3. Have you appended a map?	Section A3/ p7
A6. Have you included supporting evidence of partnership bodies' willingness to participate in delivering the bid proposals?	Appendices E, F, G, H, N and R
A7. Have you appended a letter from the relevant LTB(s) / LEP(s) confirming the priority of the proposed scheme?	Appendix I

SECTION B	
B4. Have you enclosed a letter from an independent valuer to verify the market value land if land is being included as part of the non-DfT contribution towards scheme costs?	N/A
B4. Have you enclosed a letter confirming the commitment of external sources to contribute to the cost of the scheme will be required?	Appendix E
B6. Have you provided a completed Appraisal Summary Table in a format readable by Excel 2003?	Appendix O
B6. Have you provided a completed Scheme Impacts Pro Forma in a format readable by Excel 2003?	Appendix M
B6. Have you provided relevant supporting material – and for large schemes – a WebTAG compliant bid?	Appendix L
B7. Have you attached a joint letter from the local authority's Section 151 Officer and Head of Procurement confirming that a procurement strategy is in place that is legally compliant and is likely to achieve the best value for money outcome?	Appendix P
B8. Has a letter been appended to demonstrate that arrangements are in place to secure the land to meet the construction milestones?	N/A
B8. Has a Project Plan been appended to your bid?	Appendix C
B11. Has a QRA been appended to your bid?	Appendix J
B11. Has a Risk Management Strategy been appended to your bid?	Appendix K

SECTION D	
D1. Has the SRO declaration been signed?	Section D1/ p45
D2. Has the Section 151 Officer declaration been signed?	Section D1/ p45

List of Appendices

Appendix	Title
Appendix A	Plan of Proposed Improvements
Appendix B	Equality Impact Assessment Initial Screening Report
Appendix C	Project Plan – Gantt Chart
Appendix D	Section 106 Agreements
Appendix E	Support Letters Confirming Local Contributions
Appendix F	Support Letter from Medway Council
Appendix G	Support Letter from Tonbridge and Malling Borough Council
Appendix H	Support Letter from Highways Agency
Appendix I	Support Letter South East LEP
Appendix J	Quantified Risk Assessment (QRA)
Appendix K	Risk Management Policy
Appendix L	Description of Data Sources/ Forecasts/ Assumptions
Appendix M	Scheme Impact Pro-Forma
Appendix N	Support Letter West Kent Partnership
Appendix O	Appraisal Summary Table
Appendix P	Joint Letter from Section 106 Officer and Head of Procurement
Appendix Q	Social and Distributional Impact Assessment
Appendix R	Support Letter from Tracey Crouch MP
Appendix S	Support Letter from Kings Hill development

Applicant Information

LOCAL AUTHORITY NAME

Kent County Council

BID MANAGER NAME AND POSITION

Ann Carruthers, Transport Strategy Delivery Manager

CONTACT TELEPHONE NUMBER

01622 221615

EMAIL ADDRESS

Ann.Carruthers@kent.gov.uk

POSTAL ADDRESS

Kent County Council,
Environment and Planning,
Invicta House, County Hall,
Maidstone,
Kent ME14 1XX

WEBLINK FOR PUBLISHED BID

www.kent.gov.uk/transportfunding



Kings Hill Residential Development

Section A –

PROJECT DESCRIPTION AND FUNDING PROFILE

A1. PROJECT NAME

M20 Junction 4 Eastern Overbridge Widening

A2. HEADLINE DESCRIPTION

The scheme involves widening the Eastern Overbridge of the grade separated gyratory junction of the M20 and the A228 from two to three lanes. The works involve extending the existing bridge abutments, new beams across the M20 to support the widened carriageway and 'stitching' the new and existing decks together.

The scheme will enhance connectivity between West Kent and Medway and will fully mitigate the significant committed and planned housing and commercial development in the area. The scheme will specifically facilitate the delivery of 3,729 dwellings and 104,000 square metres of commercial development in Medway and West Kent.

A3. GEOGRAPHICAL AREA

The M20 Junction 4 is located adjacent to the village of Leybourne, within the Borough of Tonbridge and Malling. This grade separated gyratory junction forms the intersection between the M20 motorway, which links the M25 at Swanley with the A20 at Folkestone, and the A228 strategic road, which links the Isle of Grain in Medway with the A21 at Pembury near Tunbridge Wells.

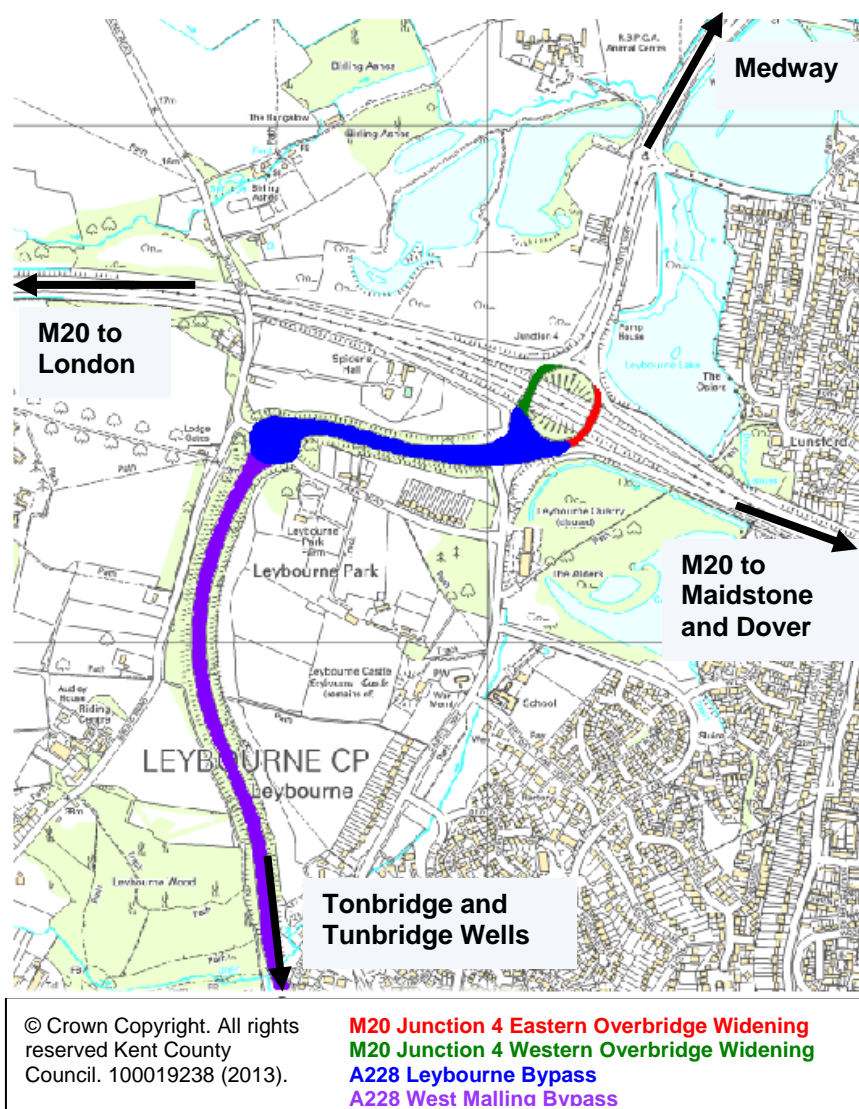
Appendix A presents a series of plans depicting the existing geometry of the junction and the scope of the proposed scheme.

OS Grid Reference: **TQ6959**

Postcode: **ME19 5TR ME20 6HG**

Shortly after the completion of the A228 Leybourne and West Malling Bypass, the Western Overbridge at the M20 Junction 4 was successfully widened from two to four lanes by Kent County Council in 2006. The proposed scheme involves the widening of the Eastern Overbridge from two to three lanes in a similar way. **Figures A.1** below shows the scheme location and existing transport infrastructure in the surrounding area.

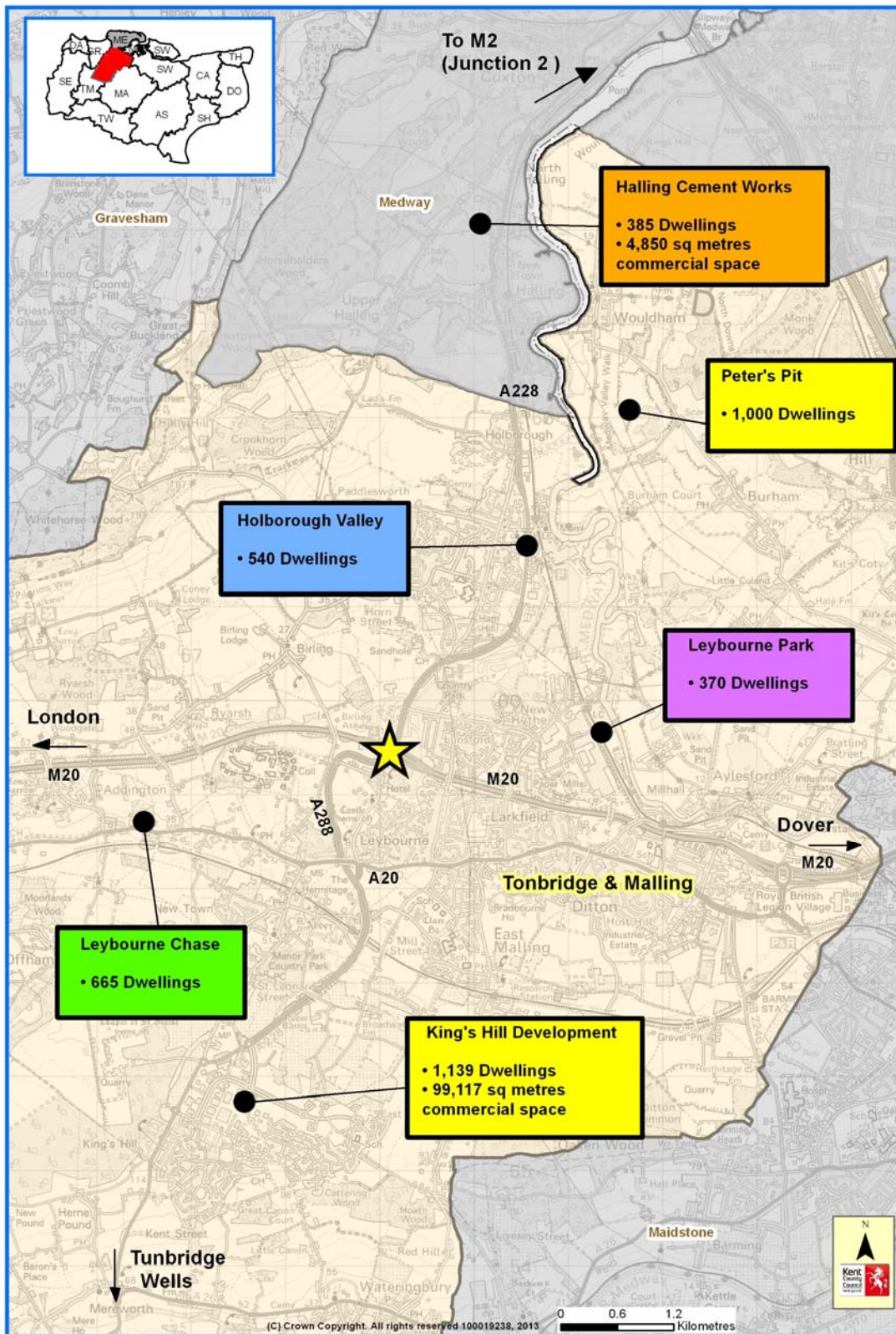
Figure A.1 Scheme Location and Existing Transport Infrastructure



By delivering the proposed scheme in a timely manner, the connectivity to the committed and planned development sites in Medway and the Borough of Tonbridge and Malling will be improved substantially. The proposed scheme is vital to ensuring quick and reliable journeys between Kent and Medway and unlocking the new development proposed in the emerging Medway Local Plan (17,930 new homes and 21,500 new jobs to 2028) and Tonbridge and Malling Local Plan (over 450 new homes per year to 2031). **Figure A.2** below presents the housing and commercial development sites that have received planning permission and will be directly benefited from the quick delivery of the proposed scheme.

Figure A.2 also depicts the Kings Hill growth area, which is one of the largest and most successful mixed-use developments in Europe. The businesses at Kings Hill will directly benefit from the proposed scheme in the form of improved and reliable journeys to London, Medway and North Kent.

Figure A.2 Outstanding Development for Completion Depending on the Delivery of the Proposed Scheme



Note: Planning application for 975 homes at Kings Hill has been submitted and yet to be determined. All other development sites shown have planning consent. The figure also excludes the future housing and employment development as being planned in the emerging Tonbridge & Malling and Medway Local Plans.

A4. TYPE OF BID

Small project bids (requiring DfT funding of between £1m and £5m)

Scheme Bid ☒
Structure Maintenance Bid ☐

Large project bids (requiring DfT funding of between £5m and £20m)

Scheme Bid ☐
Structure Maintenance Bid ☐

A5. EQUALITY ANALYSIS

Has any Equality Analysis been undertaken in line with the Equality Duty?

☒ Yes ☐ No

An Equality Impact Assessment Initial Screening Report has been completed in line with the Kent County Council's guidance on Equality and Diversity. The assessment report, reviewed by the Council's Corporate Equality and Diversity team, concludes that a full Equality Impact Assessment will not be required for the proposed scheme. The assessment identifies a low impact of the scheme and does not have an adverse impact on any particular group of protected characteristics.

Appendix B shows a completed copy of the Equality Impact Assessment Initial Screening Report.



Sculpture Exhibited at Kings Hill

A6. PARTNERSHIP BODIES

Kent County Council will deliver the scheme by working closely with the Highways Agency, Tonbridge and Malling Borough Council and Medway Council building on existing strong relationships with these organisations.

Kent County Council will act as joint Technical Approval Authority for the scheme along with the Highways Agency. For this, we will enter into a Section 6 Agreement under the provisions of the Highways Act 1980 to enable the HA to delegate to the County Council its functions with respect to motorways and trunk roads to deliver the scheme. Full allowance has been made in the programme (see **Appendix C**) for securing the Section 6 Agreement and other relevant approvals from the Highways Agency.

Tonbridge and Malling Borough Council (the Local Planning Authority), Medway Council and Kent County Council have entered into Section 106 Agreements with developers under the Town and Country Planning Act 1990 to deliver the proposed scheme in order to unlock key housing and commercial development sites in their areas. A full copy of these Section 106 Agreements and support letters from developers are provided in **Appendices D and E** respectively.

Kent County Council has a proven track record of successful working with the Highways Agency and Tonbridge and Malling Borough Council to deliver the widening of the Western Overbridge at the M20 Junction 4 from two lanes to four in 2006.

Medway Council, Tonbridge and Malling Borough Council and the Highways Agency have confirmed their support for the Eastern Overbridge Widening Scheme in their letters of support attached to this bid as **Appendices F, G and H** respectively.

Within the Highways Agency's support letter, assurance is given that they will provide the necessary support to ensure the delivery of the scheme by March 2015. This support from the Highways Agency will assist with the process of entering into a Section 6 Agreement, securing relevant approvals and delivering the scheme on time and within budget.

The selected text from the Highway Agency's support letter (**Appendix H**) is given below:

"Should the Local Pinch Point funding be awarded for the scheme, the HA would provide all appropriate support to KCC to ensure its delivery by March 2015."

A7. LOCAL ENTERPRISE PARTNERSHIP / LOCAL TRANSPORT BODY INVOLVEMENT

Have you appended a letter from the LEP / LTB to support this case?

☒ Yes ☐ No

Appendix I shows a support letter from the Chairman on the South East LEP.

Section B – THE BUSINESS CASE

B1. THE SCHEME – SUMMARY

- ☒ Improve access to a development site that has the potential to create housing
- ☒ Improve access to a development site that has the potential to create jobs
- ☐ Improve access to urban employment centres
- ☐ Improve access to Enterprise Zones
- ☐ Maintain accessibility by addressing the condition of structures
- ☒ Ease congestion / bottlenecks
- ☒ **Unlock 3,729 dwellings and 104,000 square metres of commercial development in Medway and the Borough of Tonbridge and Malling.**

B2. THE STRATEGIC CASE

a) Problems, barriers to growth and reasons not addressed previously

Existing Transport Problems

The Borough of Tonbridge and Malling, in which the M20 Junction 4 is located, has a strong economy, with high levels of employment (72.7%¹) and median weekly full time earnings (£600.20²) above the Kent average of 69.9% and £538.80 respectively. Tonbridge and Malling Borough Council (TMBC) has been very successful in delivering new houses and jobs at development sites such as Kings Hill and Leybourne Park, and has a reputation of being a desirable area in which people want to live and work.

The Borough has a high level of car ownership reflecting this strong economic activity. Changes to local rail services in 2009, which included the removal of services between West Malling and London Cannon Street, have caused to many rail commuters who previously travelled from West Malling to Cannon Street to travel to other stations within Kent, such as Ebbsfleet, for faster rail services into the City. This modal shift to road has led to additional car trips through Junction 4 of the M20.

The importance of the A228 corridor as a primary investment route connecting housing and commercial developments in West Kent and Medway is obvious from the existing journey-to-work trips originating within the Borough of Tonbridge and Malling, from Medway and other areas in Kent (for example, Maidstone). Most of these trips, especially those originating from Medway and Maidstone and the northern part of Tonbridge and Malling, put pressure on the already congested bottleneck of Junction 4, leading to tailbacks on to the M20 and the loss of valuable commuting and business time.

¹ KCC Statistics, November 2012, Economic Active People aged 16 and 74.

² KCC Business Intelligence Statistics Bulletin, 2013.

Barrier to Potential Growth

TMBC and Medway Council have plans for future growth and development along the A228 investment corridor. TMBC is planning for significant future housing growth to be included in the next Local Plan (up to 2031, which is expected to be adopted by 2015). It is currently too early in the plan process to confirm the extent of that growth or the locations where needs may be met, but the plan will have to take into consideration an annual rate of housing growth in excess of the current target of 450 units per year.

Medway Council's emerging Local Plan proposes development targets for housing (up to 17,930 new homes³) and employment (up to 21,500 extra jobs⁴) to 2028.

The implementation of the proposed scheme would not only unlock future planned development sites but also facilitate the delivery of sites which have already secured planning permission in Medway and Tonbridge and Malling. Figure B.1 below shows a profile of consented development in both areas and the level of outstanding development which requires improved and reliable access to and from the Eastern Overbridge. **Failure to deliver the proposed scheme would have a severe impact on our ability to deliver the committed and planned development in Kent and Medway.**

Figure B.1 Eastern Overbridge Widening Unlocks Development Sites

Development Name	Housing Growth up to 2021 (Dwellings)			Commercial Floorspace Area Growth up to 2021 (Square Metres)		
	Consented	Completed	Outstanding for Completion	Consented	Completed	Outstanding for Completion
Kings Hill Phase-1	1,850	1,850	-	92,000	78,816	13,184
Kings Hill Phase-2	750	586	164	92,900	6,967	85,933
Kings Hill Phase-3*	975	-	975	-	-	-
Holborough Valley	1,000	460	540	-	-	-
Leybourne Chase	730	65	665	-	-	-
Halling Cement Works	385	-	385	4,850	-	4,850
Peter's Pit	1,000	-	1,000	-	-	-
Total	6,690	2,961	3,729	189,750	85,783	103,967

* Planning Application submitted to TMBC (yet to be determined).

³ <http://www.medway.gov.uk/pdf/Housing%20&%20Employment%20Growth%20Targets%202012.pdf>, accessed on 24 October 2013.

⁴ Ibid.

The traffic modelling work undertaken in support of this bid demonstrates that this considerable level of housing and employment development will have a direct impact on the operation of the M20 Junction 4 Eastern Overbridge which cannot be accommodated without the timely provision of additional highway capacity. The 2011 base year model shows that the existing Eastern Overbridge is operating at 90% (nearside) and 85% (offside) of its design capacity during the morning peak hour (0800-0900)⁵. Furthermore, the modelling work indicates that the existing congestion situation (queue length of 13 vehicles⁶) at the eastern section of the M20 Junction 4 would substantially worsen in the future year 'without scheme' scenario in 2021 due to traffic flows associated with the developments summarised in **Figure B.1** above. The modelling results show that the two lane Eastern Overbridge will operate beyond its design capacity and the affected vehicles will experience significant delays of 270 vehicle-hours in the morning peak hour. It is important to note that the modelling work does not include other future developments that are being planned by TMBC and Medway Council.

These levels of delay will negatively impact the local economy and reduce the viability of the committed and planned housing and mixed-use developments in Medway and Tonbridge and Malling. In addition, the excessive delays and queues could extend east along the M20 London-bound off-slip, presenting a severe highway safety risk to the mainline and diverging traffic (the Highways Agency's support letter in Appendix H confirms this safety risk). This bid therefore seeks funding to ensure the successful delivery of the additional highway capacity identified by Kent County Council and the Highways Agency as being required on the M20 Junction 4 Eastern Overbridge to unlock substantial residential and mixed-use development at sites (see **Figure B.1**) including Peter's Pit and Halling Cement Works.

As a Local Highway Authority, the County Council cannot allow congestion at M20 Junction 4 to become a barrier to economic growth in Kent. The growth of the economy, creation of new jobs and delivery of new houses has been outlined as a **key priority by the Government**, the **South East Local Enterprise Partnership** and Kent County Council (within documents such as ***Bold Steps for Kent*** – a medium term plan 2010-15 and ***Growth without Gridlock*** – a 20 year transport delivery plan 2010-30). The proposed scheme is vital to remove a critical pinch point on our network that has become a barrier to already committed development sites. **Failure to deliver the proposed scheme would have a substantial negative impact on our ability to create new jobs, deliver new homes, provide quick and safe journeys and generate wider benefits in Kent and Medway.**

Reasons why the issue was not addressed previously

In the past, various interventions were introduced to mitigate the impact of development trips on the local and strategic highway network. The A228 Leybourne and West Malling Bypass and widening of the Western Overbridge at the M20 Junction 4 were completed by Kent County Council, with funding contributions from the Kings Hill, Leybourne Chase and Holborough Valley developments. The delivery of these interventions has facilitated a considerable amount of development, attracted inward investment and promoted regional economic growth. For example, Kings Hill alone has created 5,000 jobs, delivered homes currently occupied by 7,700 residents and attracted over 200 companies to date.

More housing and commercial developments have been planned in Medway and the Borough of Tonbridge and Malling to further boost the local and regional economy.

⁵ Transport Assessment Reports, 2012.

⁶ Queue Length Survey, TRANSYT 2011 Base Year Model.

These developments would safeguard existing jobs and generate new jobs for local people in Medway, Maidstone and West Kent. The existing capacity of the Eastern Overbridge, however, is unable to handle the existing traffic demand during peak periods and has become a barrier to committed and planned developments in the area.

The lack of funding in recent years is the main reason that Kent County Council has not been in a position to improve capacity at the Eastern Overbridge to date. The County Council is determined to deliver the proposed scheme rapidly in order to unlock the committed 3,729 dwellings and 104,000 square metres of commercial development in the Medway Gap⁷. Our determination to facilitate economic growth in Kent is obvious as the County Council has already managed to secure funding totalling £2.257 million from a combination of private sector (through Section 106 Agreements) and Kent County Council contributions. However, a funding gap of £2.178 million remains and this amount is requested from the Local Pinch Point Fund to help Kent and Medway to improve their economy in line with the Government's growth agenda. Without this funding, the delivery of the committed and planned housing and employment development would not happen and further economic benefits would not be realised in the Medway Gap.



Congestion at M20 Junction 4 Eastern Overbridge

b) What options have been considered and why have alternatives have been rejected?

There are limited options available to improve capacity at the M20 Junction 4 due to issues associated with cost, environment and local residents. The following options have been considered:

Option A (do-nothing): If the Eastern Overbridge is left to operate in its current state this would lead to further levels of congestion both directly and within the surrounding areas, thus hindering future economic development in Kent and Medway. The lack of capacity will cause a significant congestion cost to existing businesses and consequently they

⁷ Medway Gap – the area sandwiched between the M2 and urban areas of Medway to the north, and the M20 and the development of Maidstone and Malling settlements to the south; and the Medway Towns/Sittingbourne strategic gap designated to keep the open character between Sittingbourne and neighbouring villages and Rainham.

may move out of the area. The success of previous transport interventions in the area will be lost.

Option B (traffic signal optimisation): The principal alternative would be the further optimisation of the traffic signals on the Junction 4 gyratory. Our evidence shows that this intervention would not release sufficient capacity on its own to fully mitigate the increased traffic flows associated with the committed developments in Medway and Tonbridge and Malling.

Furthermore, the considerable forecast increase in journey times and queue lengths is likely to be compounded by the junction's accident record, with 11⁸ recorded incidents occurring between 2009 and 2012. When an incident takes place, the combination of long existing queues and insufficient capacity on the Eastern Overbridge with which to manage an incident further compounds the already considerable problems for local communities and businesses.

Option C (widening of lane): This option refers to increasing capacity on the Eastern Overbridge by undertaking physical measures which involve widening the carriageway from two to three lanes, extending existing bridge abutments and attaching the new and existing decks together. This is Kent County Council's and the Highways Agency's preferred option as it allows the efficient use of the existing assets in a much more sustainable and deliverable way. The improvements to the Eastern Overbridge will remove this critical pinch point from the local road network and provide much needed capacity without creating adverse effects elsewhere. This option will facilitate the delivery of 3,729 dwellings and 104,000 square metres of commercial development in Medway and West Kent.

A full scheme diagram showing the proposed improvements can be found at **Appendix A**.

c) GVA Benefits

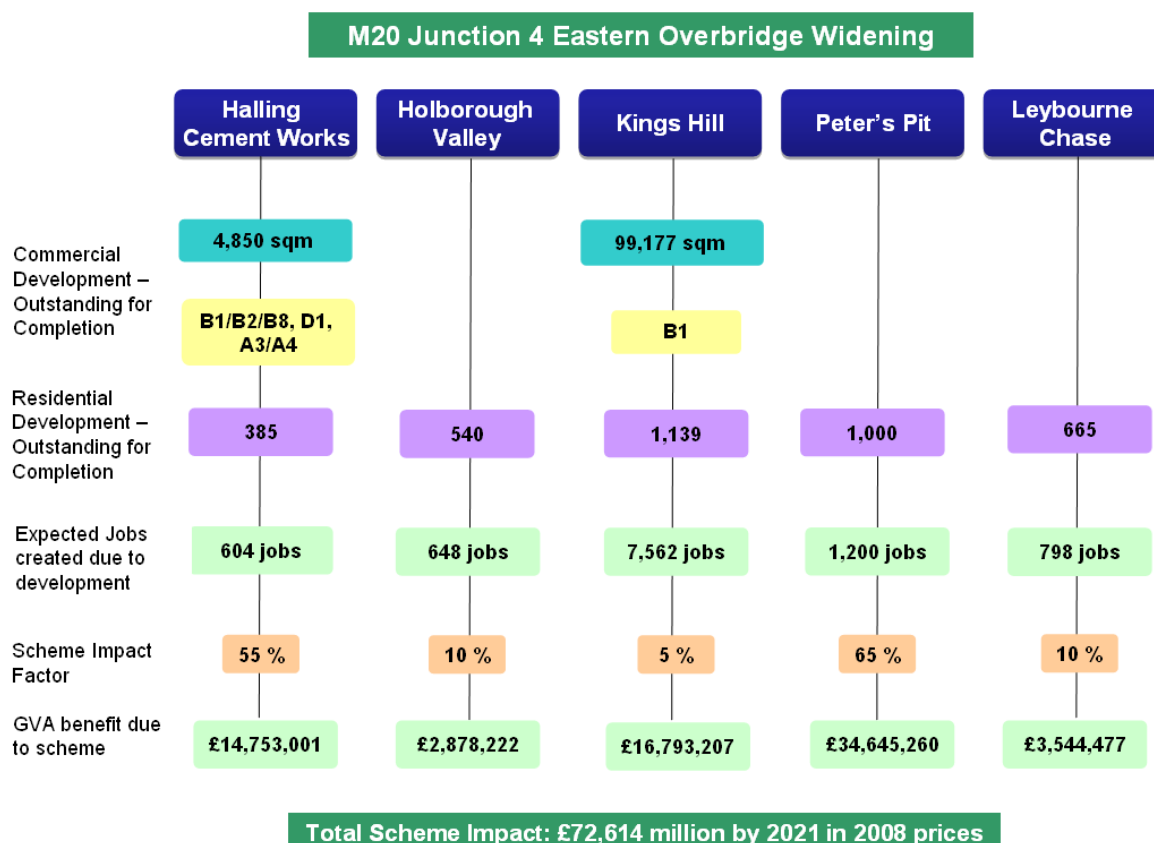
The proposed scheme will enable growth and job creation, connecting residents to employment and supporting investment throughout the Medway Gap, especially in Medway and Tonbridge and Malling. The scheme would not only unlock future planned development sites but also facilitate the delivery of housing and commercial sites which have already secured planning permission. The GVA analysis presented in this section does not take into account future development being considered for inclusion in the new Medway and Tonbridge and Malling Local Plans. The analysis therefore presents a conservative estimate of GVA benefits. Similarly the other assumptions made in this section also follow a conservative approach.

Figure B.1 above shows that development at some sites has completed since planning permission was secured but these sites cannot be further developed due to the lack of sufficient capacity at the M20 Junction 4. At other sites, such as Peter's Pit, no development has commenced. The GVA analysis in this section considers only outstanding development for completion at each site.

The benefits of facilitating committed development sites are shown in **Figure B.2** below in terms of job creation, housing numbers and their impact on local GVA.

Figure B.2 Growth in Housing and Commercial Floorspace Area- GVA Benefits

⁸ Halling Cement Works, Transport Assessment Reports, 2012.



Developing new housing creates jobs both during construction and through new consumer spending after the homes have been occupied. The Government's strategy for housing (published in November 2011) states that up to 2 new jobs can be created in the construction industry for a year for each new home built. We have used a conservative figure that only 60% of new jobs materialise and the remaining 40% will be used to safeguard existing jobs. This assumption is based on current slow economic activity in the construction industry.

The expected creation of jobs by delivering commercial development is estimated using the second edition of Employment Densities⁹. The net internal area for each development site is assumed 75% of gross internal area and assumed that the area will be fully occupied by 2021.

Different discounting factors have been assumed based on the dependency of each development site on the delivery of the proposed scheme. The development growth at the Peter's Pit and Halling Cement Works sites greatly depends on the rapid implementation of the scheme.

Applying an average GVA per job filled (£44,417 in 2008 prices¹⁰) in Kent County and a discounting factor will provide wider economic benefits of £72.614 million (in 2008 prices) in GVA terms, which equates to 1,635 new jobs being created by the proposed scheme by 2021. The present value benefits of these new jobs in 2010 prices and level are around £49.737 million. These wider economic benefits of £49.737 million to local

⁹ Homes and Communities Agency (2012).

¹⁰ The Office of National Statistics.

people in the Borough of Tonbridge and Malling, Medway and wider Kent would not be realised without the £2.178 million funding from the Local Pinch Point Fund to deliver the proposed scheme.

The scheme's traditional transport economic benefits are presented in **Section B6(a)**. In addition, the operation of the junction will be safer and will not lead to tailback on to the M20 mainline carriageway.

d) Potential to reduce costs

No. Since this scheme is being re-submitted for funding, our previous scheme cost estimates have been audited by an external quantity surveyor and reviewed by consultants who had experience of designing and delivering the widening of the M20 Junction 4 Western Overbridge in 2006. The revised cost estimates include a detailed Quantified Risk Assessment of the proposed scheme. The cost estimates provided are considered robust with limited scope for value engineering at detailed design stage.

e) Any Obstacles in realising the scheme's full economic benefits

None. Land acquisition is not required to improve the capacity of the Eastern Overbridge as the proposed scheme can be accommodated within the existing highway boundary.

Since Kent County Council as the highway authority is promoting the scheme, it qualifies as permitted development as an improvement of the existing highway network and is considered to be a genuinely standalone scheme. Therefore, no planning permission is required.

As discussed in **Section A6**, we have worked with the Highways Agency to deliver a similar scheme in 2006 on the Western Overbridge. The Highways Agency's support letter is appended to provide assurance that they will provide the necessary support to ensure the delivery of the scheme by March 2015 (shown in **Appendix H**). The selected text from the Highways Agency's letter states:

***"We believe that KCC can successfully deliver the scheme by March 2015.....
.....Should the Local Pinch Point funding be awarded for the scheme, the HA
would provide all appropriate support to KCC to ensure its delivery by March
2015."***

f) Consequences of failing to secure funding

No lower cost solutions have been identified which are acceptable to KCC and the Highways Agency.

If the required funding (£2.178 million) is not secured from the Local Pinch Point Fund then the scheme will not go ahead in a timely manner. The scheme will be delayed until such time as the funding shortfall is secured. If the funding gap is wholly reliant on securing developer contributions, this could be a significant period of time.

In addition, the delayed delivery of the scheme will cause a significant risk to the availability of a Section 106 payment (£1.129 million) from Ward Homes (Frantschach development site). This financial contribution is available to Kent County Council on the condition that highway improvement works at the M20 Junction 4 Eastern Overbridge commence by March 2016. A copy of the Section 106 Agreement with Ward Homes is provided in **Appendix D**.

Failure to quickly deliver the scheme would have a substantial negative impact on our ability to:

- Deliver the committed 3,729 dwellings and 104,000 square metres of commercial development
- Enhance residents' connectivity to employment in West Kent and Medway
- Enable the junction to operate effectively by minimising the queue lengths and improving highway safety for mainline and merging traffic
- Facilitate planned housing and commercial development sites identified in the emerging Tonbridge and Malling (over 450 new homes per year to 2031) and Medway (17,930 new homes and 21,500 new jobs to 2028) Local Plans.
- Improve the confidence of existing businesses, attract inward investment and promote regional economic growth
- Create at least 1,635 new jobs and strengthen the local and regional economy by £49.737 million in 2010 prices and values.

g) Impact on any statutory environmental constraints

It is not considered that mitigation measures are required as a consequence of the proposed scheme. The area affected by the scheme is very limited and does not contain any nearby properties.

The scheme will have a positive impact on air quality, noise pollution and greenhouse gas emissions particularly at a local level by facilitating more efficient operation of the junction, reducing congestion and the number of queuing vehicles at the junction and associated stop/start movements.

The scheme will have no landscape related impacts in comparison to the existing situation. The scheme design includes grassed landscaping.

As a widening of an existing motorway overbridge, there will be no adverse impact on biodiversity or the water environment. However, it is expected that there may be some reptiles in the embankments and bats under the bridge structure. An allowance is made in our cost estimate to undertake ecological mitigation measures.

The scheme is not expected to have any impact on heritage as it is not anticipated that there are any historic resources located in the vicinity of the site. The area is well surveyed and established and it is very unlikely that any heritage finds will occur either before or during the works.

This scheme is located outside an urban area in a highways dominated environment. It is not therefore anticipated that there will be any impact on townscape.



Bridge over River Medway, Tonbridge

B3. THE FINANCIAL CASE – PROJECT COSTS

Figure B.3 Funding Profile (Nominal terms)

£000s	2013-14	2014-15	2015-16	Total
DfT funding sought	350	1,828		2,178
Local Authority contribution	-	484	-	484
Third Party contribution	-	1,773	-	1,773
TOTAL	350	4,085	-	4,435

Note 1- Since our submission earlier this year, Kent County Council has already spent £20,750 on the following activities:

- (a)- Liaised with design consultants to agree terms and get advice on scheme technical matters
- (b)- Received advice from the Highways Agency on as-builts and traffic management matters
- (c)- Scheme cost estimates audited by an independent quantity surveyor and reviewed by design consultants

(d)- Commissioned topographical, geotechnical, structural and environmental surveys from design consultants to complete the scheme detailed design and

(e)- Revised modelling work in line with Local Pinch Point Fund Supplementary Guidance on Tranche 4.

It is important to note that the incurred cost of £20,750 is not included in **Figure B.3** above and not considered in scheme appraisal in **Section B6(a)**.

Note 2- The total scheme cost reported in **Figure B.3** includes an allocation of quantified risk derived from the Quantified Risk Assessment as required by WebTAG 3.5.9. The total scheme cost assumes no consideration of optimism bias. However, an adjustment of 15% for optimism bias is made in the scheme cost for appraisal purposes in **Section B6(a)** in line with WebTAG 3.5.9.

Figure B.4 Cost Estimate (Nominal terms)

Cost heading	Cost (£000's)	Date Estimated	Status
Site clearance and demolition of existing footway	75	23/10/2013	Estimated based on scheme design (Appendix A) and verified using experience gained from delivering the Western Overbridge Widening scheme in 2006. Sufficient allowance is made to deal with any uncertainty in undertaking the works
Fencing and Barriers	95		
Earthworks and Foundations	330		
Bridge Structure	1,390		
Pavements	85		
Traffic Signals	100		
Lighting	20		
Signs	55		
Vehicle Recovery	50		
Sub Total – Main Works	2,200	23/10/2013	
Preliminaries	350	23/10/2013	Estimated based on experience gained from delivering the Western Overbridge Widening scheme in 2006
Detailed Traffic Management	360	23/10/2013	
Design and Supervision Fees	675	23/10/2013	Estimated based on staff cost using hourly rates of identified individuals using agreed rates with our design consultants. The estimate was verified with the Western Overbridge Widening scheme
Highways Agency Fees and Charges	150	23/10/2013	
Committed Sums for Bridge Maintenance	100	23/10/2013	Estimated based on the committed value of the maintenance interventions for the bridge structure. The estimate was verified with the Western Overbridge Widening scheme
Quantified Risk Assessment	600	23/10/2013	Estimated in line with WebTAG 3.5.9
TOTAL	4,435	23/10/2013	

The cost estimates are based on technical drawings depicted in **Appendix A**. The cost estimates have been audited by an external quantity surveyor and reviewed by consultants who had experience of designing and delivering the widening of the M20 Junction 4 Western Overbridge in 2006. The cost estimates include an allowance for the detailed Quantified Risk Assessment (see **Appendix J**).

B4. THE FINANCIAL CASE - LOCAL CONTRIBUTION / THIRD PARTY FUNDING

a) Non-DfT contributions

We have secured 51% of the total scheme cost through a combination of third-party funding (in the form of Section 106 planning obligations) and local contribution (through Kent County Council's Highways and Transportation capital budget). These non-DfT contributions are fully secured reflecting an urgent need to improve this local pinch point to benefit communities and businesses in Medway, Tonbridge and Malling and the wider Kent area. The details of non-DfT contributions are given below in **Figure B.5**.

Figure B.5 Distribution of Non- DfT Contribution

External Contributor	Contribution (£000s)	Source of Contribution	Contribution Certainty	Availability of Contribution
Frantschach (Ward Homes)	1,129	Section 106 (signed March 2006)	100% (trigger point passed)	2013 (Received)
Halling Cement Works – Tranche 1 (Redrow Homes)	70	Section 106 (Signed August 2013)	100% (trigger point passed)	2013 (Received)
Halling Cement Works – Tranche 2 (Redrow Homes)	574	Section 106 (Signed August 2013)	100% (trigger happening in 2014-15)	2014-15 (Confirmed)
Kent County Council	484	KCC Highways and Transportation capital budget	100%	2013 (Received)
Total Contribution	2,257			

b) External body's commitment letter

Have you appended a letter(s) to support this case?

☒ Yes ☐ No ☐ N/A

Appendix E includes letters from Ward Homes (Frantschach residential development), Redrow Homes (Halling Cement Works mixed-use development) and Kent County Council (local contribution) expressing their support for the proposed scheme, their level of commitment to contribute to the scheme cost and when their contribution will become available.

In addition, copies of the Section 106 agreements for the Frantschach and Halling Cement Works developments are provided in **Appendix D**.

c) Provision of land in the local contribution

Have you appended a letter to support this case?

☐ Yes ☐ No ☒ N/A

Land acquisition is not required to improve the capacity of the eastern overbridge as the proposed scheme can be accommodated within the existing highway boundary.

d) Other funding applications for the scheme

The scheme is being resubmitted for Tranche 4 funding under the Local Pinch Point Fund. No other funding application is made for the scheme or its variants.

B5. THE FINANCIAL CASE – AFFORDABILITY AND FINANCIAL RISK

a) Risk allowance

A Quantified Risk Assessment (QRA) has been undertaken by following WebTAG 3.5.9. The QRA has identified all foreseeable risks that could have any adverse impact on the scheme cost estimate (£4,435 million) and its delivery by March 2015. Each risk has been analysed to quantify the likelihood of the impact of risks. With careful planning, mitigation measures for each risk are proposed and allocated to an appropriate party in the project governance structure. The QRA has identified an expected risk value of £600,000. It is important to mention that the QRA does not include any risk associated with the scheme ongoing operational costs.

A summary of the QRA in the form of risks and their expected value is given below in £000s:

Commuted sum	£20
Accuracy of estimate	£150
Utilities Diversions	£50
Scope of works	£20
Highway/surface water drainage	£10
Ground conditions	£5
Contaminated material	£5
Signals and lighting specifications	£10
Ecology	£5
Acoustic mitigation measures	£12
Protection of existing carriageway	£7
Traffic management	£71
Other compensation events	£200
Poor performance of statutory undertakers	£10
Adverse weather	£25
Total QRA expected value	£600

Details of the QRA are included in **Section B11** and **Appendix J** of this application.

The expected risk value of £600,000 can be further reduced at the detailed design stage, or by adopting bespoke implementation practices backed up by method statements during construction. Early discussions with the Highways Agency on key risks and choosing an appropriate procurement strategy to transfer some risks to a contractor would help Kent County Council to further reduce the expected risk value associated with the proposed scheme.

b) Cost overruns

The cost estimates (provided in **Figure B.4**) have been subject to an independent, external audit to ensure that the cost estimates are sound and robust in accordance with current material prices. In addition, the cost estimates have been reviewed by consultants who had experience of designing and successfully delivering the widening of the M20 Junction 4 Western Overbridge in 2006. A suitable allowance for risk in the form of the QRA is provided in our cost estimates. We believe that the likelihood of cost overruns would be minimal. If this situation arises, any cost overruns would be funded by Kent County Council as the promoting authority.

The following activities will be implemented to minimise the likelihood and scale of cost overruns:

- Follow robust project and risk management procedures
- Use existing framework contract with AMEY for scheme design and supervision purposes
- Appoint a principal contractor using NEC3 ECC Contract Option B
- Utilise previous experience of delivering similar schemes in Kent, for example, the Western Overbridge Widening scheme
- Apply Value Engineering
- Issue early warnings
- Maximise the benefits of close partnership working

The risk register will be a live functional document that will both inform the Project Board and act as a tool to monitor and control costs throughout the whole project timeline. It will be the Project Manager's responsibility to maintain, update and monitor the risk register. As the project develops issues will come to light that will be put through the QRA process and added to the risk register.

The risk register and scheme spends will be reported to the Project Board via monthly Project Highlight Reports in order to closely monitor and control the scheme spend. Any issues related to the project cost and programme will be escalated to the Project Board within the timescale agreed in the Project Initiation Document in order to avoid or minimise cost overrun.

Our existing framework contract with AMEY allows us to transfer some of the cost overrun risk to them for engineering design services and project supervision whilst the proposed scheme is implemented. We have already agreed a schedule of rates with AMEY based on quality and value for money criteria (50/50). AMEY's performance in meeting its performance obligations will be measured against set targets and a percentage of each month's payment will be set against meeting key targets.

We have agreed with AMEY to sub-contract the scheme detailed design work to Peter Brett Associates (PBA). We have also agreed with PBA to use the same project team

which designed and delivered the Western Overbridge Widening scheme at the M20 Junction 4 in 2006. We have already discussed terms and conditions with PBA and received their advice on the scheme cost estimates and other technical matters. The use of PBA's previous experience would assist the County Council to design the proposed scheme in line with the Highways Agency's expectations, get approvals from the Agency quicker and deliver the proposed scheme within budget and time.

We aim to appoint a contractor to undertake the scheme works using the NEC3 Engineering and Construction Contract "Option B". This contract option is appropriate to transfer greater risk to the contractor. It also allows Kent County Council to estimate the Bill of Materials to a higher degree of detail for this small scale scheme and will provide the best balance of client control and risk transfer to a contractor.

We shall maximise the benefit of close partnership with the Highways Agency, Tonbridge and Malling Borough Council and Medway Council and issue any warnings pre-construction and during construction to avoid any delay to the delivery of the proposed scheme. All partners have registered their strong support for the scheme as evidenced by the following text extracted from the Highways Agency's support letter:

"Should the Local Pinch Point funding be awarded for the scheme, the HA would provide all appropriate support to KCC to ensure its delivery by March 2015."

c) Main risks to project delivery timescales

The principal risks to project delivery timescales as identified in the QRA are associated with a poor traffic management strategy, poor performance of statutory undertakers and poor weather conditions.

Extensive traffic management measures are required and therefore an early consultation with key stakeholders needs to be initiated to address their concerns. The traffic management measures such as lane closures, temporary barriers and vehicle recovery should be considered in detail so that the works can be undertaken as anticipated. We have already included £360,000 and £50,000 respectively in our cost estimate to prepare a detailed traffic management strategy and deal with vehicle recovery. In addition, a sufficient allowance of £71,000 is made in the QRA to deal with any unforeseen problems associated with traffic management.

The poor performance of statutory undertakers could delay commencement of the works or disrupt the works. This risk would be avoided by undertaking as much of the statutory undertaker works before the main works commence and sequence what is required to allow the maximum flexibility. The cost estimates (in **Figure B.4**) already include an allowance for statutory undertakers in 'preliminaries' (£350,000) and an additional consideration of £10,000 has been made in the QRA.

Exceptionally adverse weather conditions could delay the project and result in Compensation Events. This could be particularly an issue if the poor weather coincides with lane closures or other time critical events. The scheme cost estimates for the main works include a reasonable consideration for any uncertainty during the undertaking of the works. The QRA includes £200,000 for Compensation Events and additional £25,000 to deal with this risk.

d) Sharing cost overruns

Kent County Council as a promoting authority accepts full responsibility for any cost overruns. However, as mentioned above in **Section B5(b)**, any cost overruns associated with the engineering design and project supervision will be shared with AMEY, our existing framework contractor.



Commercial Development Kings Hill

B6. The Economic Case – Value for Money

a) Description of scheme impacts

This section provides information on the following aspects:

- Transport Modelling Approach
- Traditional Transport Benefits
- Wider Economic Benefits
- Economic Appraisal
- Key Risks and Uncertainties

Transport Modelling Approach

Use of TRANSYT and proportional Modelling

The operational assessment of the M20 Junction 4 was undertaken using the TRANSYT (version 12) software package. TRANSYT was selected to investigate in detail the interactions between the junction and the motorway carriageway through consideration of queue lengths at the junction approaches, its arms and on the slip roads. TRANSYT will help us to understand any reduction in highway safety risk to the mainline and diverging traffic by analysing whether there are still excessive queues that extend east along the M20 London-bound off-slip. At the same time TRANSYT will be also be necessary to ensure that the operation of the remaining arms of the junction is not

compromised by the proposed measures and a balanced view is taken on the overall junction performance and network impacts.

The use of TRANSYT for assessing the impact of the proposed scheme is also justified as the A228 corridor is the principal route connecting West Kent (Tonbridge, Tunbridge Wells, West Malling and Kings Hill) with Medway via the M20 Junction 4. The A228 has strategic importance, from commuting and business trip viewpoints, linking major employment and housing sites in West Kent and Medway. The M20 Junction 4 provides the principal link to the M20 and the wider strategic road network. To the south of Junction 4 there is no realistic alternative connection to the strategic road network. Junction 4 is a key interchange between the local principal route network and the national strategic route network. As such it performs both a national and local role and its efficient operation is important to both networks. TRANSYT focuses on the local benefits of improvements although enables assessment of the M20 to confirm it would remain free flowing. The Local Pinch Point funding is intended to remove bottlenecks on the local highway network and therefore it is entirely appropriate that the modelling of the benefits focuses on the local network, albeit with proper regard to the adjoining strategic network.

The modelling approach adopted is 'proportionate' to the scale and complexity of the proposed scheme as suggested by WebTAG. As a promoter of a small scale scheme (£4.435 million), KCC has used the best available information and modelling technique to quantify the scheme benefits. In addition, the guidance states that the modelling and appraisal techniques should be proportionate with respect to the scheme benefits. The aim of the proposed scheme is to reduce excessive delays and queue lengths at this junction that is hindering the delivery of already committed developments in Medway and Tonbridge and Malling. The use of TRANSYT and a spreadsheet based appraisal is undertaken by following the principle of 'proportional modelling and appraisal'.

Base Year Modelling

The base year TRANSYT model is based on manual traffic counts and queue length surveys. The traffic counts were undertaken separately for M20 Junction 4 and the adjoining A228/Castle Way junction which operate under the same signal control and hence were modelled together in TRANSYT. A copy of observed traffic counts for the M20 Junction 4 and A228/Castle Way junction is provided in **Appendix L**. All surveys were carried out on Thursday 23rd June 2011 between 0700-1000 hours (AM peak period) and 1600-1900 hours (PM peak period).

Queue length surveys were also undertaken of peak hour queuing at the M20 Junction 4 and the A228/Castle Way junction. Vehicle queues were recorded every five minutes across the peak periods. A summary of the average and maximum recorded queue lengths at each junction is included at **Appendix L** for both the AM and PM peak periods.

The 2011 base year model has three time periods: morning peak (0800-0900); inter-peak (1000-1600); and evening peak (1700-1800). The modelled results were compared with the observed queue to validate the base modelling. The results show that the modelling is consistent with the observed data and provides a valid basis for assessing future year operation. The comparison of observed and modelled queues for the M20 Junction 4 and the A228/Castle Way junction is included in **Appendix L**.

In addition, the base year model was reviewed by transport consultants, Parsons Brinckerhoff, on behalf of the Highways Agency and on 6th June 2012 the base year

models were approved and found satisfactory for further traffic modelling and testing work for the M20 Junction 4. **Annex 7** of **Appendix L** shows the outcome of the Highways Agency's audit of the TRANSYT model and confirms model fitness for purpose and its ability to forecast future traffic related attributes with a sufficient level of confidence. The queue length validation results and the Highways Agency's audit provide sufficient assurance that the base year model is fit-for-purpose.

Future Year Modelling

The scheme assessment is provided for two future years: opening year 2015 and design year 2021. The scheme opening year assessment is specifically developed for the Local Pinch Point Funding bid. The 2021 assessment already existed, as part of our testing work, to examine the medium term impacts of the proposed scheme.

For the purposes of the scheme assessment, the following developments are considered committed and site-specific build-out rates are used for these developments in the 2015 and 2021 future year models, taking into account all sites will be fully occupied by 2021:

- Kings Hill Phase 2
- Holborough Valley (net remaining development)
- Leybourne Grange
- Frantschach
- Halling Cement Works
- Peter's Pit

The assessment of the scheme is based on two scenarios: variable demand and fixed demand. The variable demand shows that the percentage increase in highway trips affected in the do-minimum and do-something as +0.2% and +5% respectively for the 2015 and 2021 assessment years. The percentage increase in the do-minimum and do-something scenario is within a limit of +/-5% as mentioned in the Local Pinch Point Fund guidance.

The selection of a fixed demand scenario between the do-minimum and do-something models is specifically made to follow the Local Pinch Point Fund guidance. The scheme impacts and economic appraisal are presented below for both scenarios.

Traditional Transport Benefits

The modelling outputs are extracted from our developed TRANSYT model which was audited and accepted by the Highways Agency. As described above, the aim of the proposed scheme is to reduce excessive delays and queue lengths on the eastern section of Junction 4 and to improve the overall junction performance. The number of highway trips affected and the total network delays are extracted from the model and presented in **Figure B.7** below.

No public transport benefits are claimed as there is only one hourly bus service using Junction 4 of the M20.

A summary of modelling outputs is given below in **Figures B.7** below.

Figure B.7 Modelling Outputs

			Fixed Demand			Variable Demand		
Scenario	Key Performance Indicators	Unit	AM Peak Hr	PM Peak Hr	Inter-Peak Hr	AM Peak Hr	PM Peak Hr	Inter-Peak Hr
Do-Minimum 2015	Number of highway trips affected	vehicles	6,513	6,060	3,903	6,513	6,060	3903
	Total network delays	vehicle-hours	59.6	51.22	21.05	59.6	51.22	21.05
Do-Something 2015	Number of highway trips affected	vehicles	6,513	6,060	3,903	6,521	6,079	3911
	Total network delays	vehicle-hours	56.92	50.5	20.51	56.92	50.5	20.51
Do-Minimum 2021	Number of highway trips affected	vehicles	7,817	7,279	4,686	7,817	7,279	4686
	Total network delays	vehicle-hours	270.04	66.86	54.43	270.04	66.86	54.43
Do-Something 2021	Number of highway trips affected	vehicles	7,817	7,279	4,686	8,184	7,672	4922
	Total network delays	vehicle-hours	71.25	72.37	27.41	74.54	76.6	28.78

Figure B.7 above shows that widening the Eastern Overbridge slightly reduces the total network delays in the 2015 future year model. The committed development sites fully built and occupied by 2021 create substantial delays in the 2021 AM do-minimum scenario. The scheme significantly improves the total network delays in the 2021 AM and inter-peak models, but the PM model predicts a slight increase in the total network delays.

Further investigation identifies that the slight increase in the total network delays in the 2021 PM do-something model, as compared with the do-minimum model, is a consequence of revised signal timings identified by TRANSYT based on the proposed scheme. With added capacity on the Eastern Overbridge, TRANSYT re-appraises the overall signal timings to achieve what is the optimum for the junction as a whole – this includes delay, but also the number of vehicle stops and queue lengths. Overall, the junction performance is similar but the delay for some movements increases – specifically with more capacity for north to west movements; south to north/east have slightly less capacity, with a slight increase in delay.

The following conversion factors are used for annualising the peak hour delay savings, derived from the 2011 Automatic and Manual Traffic Count data collected at the A228 in the study area:

2.571	Weekday morning peak from 0800-0900 to 0700-1000
6.000	Weekday inter-peak 1000-1600
2.565	Weekday evening peak from 1700-1800 to 1600-1900
8.218 of weekday IP	Saturday 1000-1800

Nights and Sundays delay savings are ignored.

Figure B.8 Annual Delay Savings

Scheme Impacts	2015 (Opening year)			2021 (Design year)		
	Do-Minimum	Do-Something	% change	Do-Minimum	Do-Something	% change
Variable Demand						
Annual highway trips affected (vehicles)	15,761,645	15,794,741	+0.2%	18,924,096	19,876,946	+5%
Annual network delays (veh-hrs)	112,955	109,695	-2.9%	323,301	154,181	-52.3%
Fixed Demand						
Annual highway trips affected (vehicles)	15,761,645	15,761,645	0%	18,924,096	18,924,096	0%
Annual network delays (veh-hrs)	112,955	109,695	-2.9%	323,301	146,631	-54.9%

The scheme's negative impacts are associated with the increased level of noise and air quality during the construction period but these impacts are minor and short term. Overall, the scheme will have a positive impact on air quality, noise and greenhouse gas emissions particularly at a local level by facilitating more efficient operation of the junction, reducing congestion and the number of queuing vehicles at the junction and associated stop/start movements.

Economic Appraisal

A traditional economic assessment of the scheme is undertaken over a 60-year period from the opening year (2015). A spreadsheet based economic analysis is carried out by following the latest WebTAG and Green Book requirements and all entries are presented as 2010 prices and values.

The A228 corridor is a key route connecting housing and commercial developments in West Kent and Medway via the M20 Junction 4 and is used by all vehicle types for different journey purposes. In order to avoid any complexity to the economic assessment, the value of time for an average car value for an average weekday is taken from WebTAG 3.5.6 Table 9 as a basis for converting the delay savings calculated from the TRANSYT model outputs into monetary values. The values of time were adjusted for the changing vehicle occupancy predicted in Table 6 of WebTAG 3.5.6 and further adjusted for the predicted growth in non-work value of time from Table 3b of WebTAG 3.5.6. This process resulted in the values of time and the present value of delay benefits for average car users shown in **Figure B.9** below.

Figure B.9 Value of Time and Present Value of Delay Benefits

	Average Car		
	2010	2015	2021
Change in average car occupancy (average weekday) – WebTAG 3.5.6 table 6	-	0.97	0.94
Growth in non-work value of time – WebTAG 3.5.6 Table 3b	-	1.05	1.14
Value of time per average car (average weekday) – 2010 market prices and level, £/hr - WebTAG 3.5.6 Table 9	13.76	13.96	14.73
Present value of delay benefits - average car users (£, 2010 prices and level) FIXED DEMAND	-	45,068	2,433,844
Present value of delay benefits - average car users (£, 2010 prices and level) VARIABLE DEMAND	-	48,687	2,491,378

A 60-year appraisal of the delay benefits is carried out for non-modelled years by assuming a linear interpolation between the two model years (2015 and 2021) and keeping the 2021 benefits constant for the remaining non-modelled years up to 2074. The benefits are produced in 2010 prices and discounted to 2010 by applying a 3.5% discount rate for first 30 years from the current year and then reduced to 3% afterwards, as required by HMT Green Book (WebTAG 3.5.2). The PVB is calculated to be £47.403 million and £48.531 million respectively in 2010 prices and discounted to 2010 for the fixed and variable demand scenarios.

For the estimation of the present value of scheme cost, an adjustment of 15% for optimism bias is made to the risk adjusted scheme cost (presented in Figure B.3 above) for appraisal purposes in line with WebTAG 3.5.9. The risk and optimism bias adjusted cost is converted in 2010 prices using the Retail Price Index in 2013 (245.8) and 2010 (217.9), taken from the Office of National Statistics. A discount factor of 3.5% is applied to calculate the discounted cost by considering that the scheme construction completes in 2015. An indirect tax correction factor of 1.19 is used to estimate the market prices. The net present value of the capital cost is calculated as £2.955 million.

Figure B.10 Present Value of Capital Cost

	Total cost – Capital (£)	Private Contribution – Capital (£)
Risk and optimism bias adjusted cost (2013 prices exc VAT)	5,100,250	1,773,000
Risk and optimism bias adjusted cost in 2010 prices	4,521,336	1,571,752
Discounted Risk and optimism bias adjusted cost in 2010 prices	3,806,844	1,323,373
Discounted Risk and optimism bias adjusted cost in 2010 market prices	4,530,144	1,574,814
Total PVC – Capital		2,955,330

From the scheme's ongoing cost viewpoint, the bridge structure will be maintained by the Highways Agency. The resurfacing of the pavement will be maintained by Kent County Council and should not need renewing until 20 years after opening. The ongoing annual maintenance costs should be nil, while the estimated renewal cost of the surfacing is approximately £14,000 at 2013/14 prices. The scheme will require 3 renewals throughout the 60 year appraisal period. The present value of the ongoing cost is estimated as £11,471 and hence the total PVC is £2.967 million.

Figure B.11 below presents a summary of economic appraisal over the 60 year period.

Figure B.11 Summary of Economic Appraisal

	(2010 market prices and values) All entries are £'000s	
	Variable Demand	Fixed Demand
PVB (Delay savings)	48,531	47,403
PVC (Capital and Ongoing)	2,967	2,967
Net Present Value = PVB-PVC	45,564	44,436
Benefit Cost Ratio = PVB/PVC	16.36	15.98

The economic analysis for the fixed demand scenario shows that the proposed scheme offers excellent return on the investment indicating that for every £1 of investment made there will be more than £15.98 worth of benefits generated over the appraisal period.

Wider Economic Benefits

In **Section B2(c)** above, we have shown that the proposed scheme presents significant opportunities to develop and grow the local and wider Kent economy. This scheme will unlock 3,729 new housing units and 104,000 square metres mixed-use floorspace area which will create more than 10,000 new jobs in the Borough of Tonbridge and Malling, Medway and the wider Kent area. Different discounting factors have been assumed based on the dependency of each development site on the delivery of the proposed scheme. Our analysis, based on conservative assumptions, shows the proposed scheme itself would unlock 1,635 new jobs in the area. The 1,635 new jobs as a minimum will increase the local economy in GVA terms by £49.737 million (in 2010 prices and values).

The £49.737 million GVA benefits do not include the benefits of safeguarding existing jobs. In addition, the GVA analysis does not take into account the future development being considered in the emerging Tonbridge and Malling Local Plan (over 450 new homes per year up to 2031) and Medway Local Plan (17,930 new homes and 21,500 new jobs up to 2028). It is clearly evident that we have adopted a cautious approach to estimate the GVA benefits associated with the scheme.

Without the £2.178 million funding from the Local Pinch Point Fund, the benefits of creating these 1,635 new jobs and safeguarding existing jobs due to the proposed scheme would not be realised by local communities and businesses in Kent and Medway. In terms of value for money, the analysis shows that each new job would be created with every £1,332 of investment made by the Department – presenting excellent value for money.



Congestion at M20 Junction 4 Eastern Overbridge

Key Risks and Uncertainties

Key risks relate to our ability to demonstrate optimistic benefits of the scheme calculated from the TRANSYT model outputs and an underestimation of the scheme cost estimate presented in **Figure B.4** above.

As mentioned above, the TRANSYT model provides a more comprehensive assessment of Junction 4, taking into account delay changes over time, which is not possible to obtain by using a strategic transport model. We also understand that the TRANSYT model provides more localised benefits, which is entirely appropriate in order to meet the Local Pinch Point Fund's objective to remove bottlenecks on the local highway network which are impeding growth. Junction 4 performs both a national and local role and its efficient operation is important to both networks. TRANSYT focuses on the local benefits of improvements. For the national benefits, we have applied a reduction factor to TRANSYT-based economic benefits to reflect as these are estimated using a strategic transport model.

The A228 corridor provides direct connectivity between West Kent and Medway through Junction 4 of the M20. This corridor is popular for work and non-work journeys due to the level of housing and commercial development that has already occurred and the level of future development committed and planned along this corridor. The other possible routes between West Kent and Medway use either the A229 (via Junctions 4 and 6 of the M20), the A227/A228 (via Junction 4 of the M20), or the M25/A2 corridor. In addition, journeys originating from West Malling to London and North Kent fully depend on the performance of Junction 4. It would be appropriate to say that the use of Junction 4 for both local and strategic traffic is extensive and there are no real alternatives routes to Junction 4 especially when congestion at this junction increases.

Furthermore, the proportion of journeys-to-work that are local vs. strategic provides strong evidence to see how much of localised benefits can be discounted for strategic traffic. Based on the 2001 census, around 20% of journeys originating in Tonbridge and Malling could be considered strategic being more than 30km distance.

A strategic model would show the future situation (with no improvement to the Eastern Overbridge) not as severe as the TRANSYT as a proportion of traffic would re-assign away from Junction 4 to alternative routes (i.e. the number of vehicles affected would be lower). However, the with improvement scheme is likely to attract vehicles through Junction 4 and hence the number of vehicles benefiting from reduced journey times would increase. Assuming a fixed matrix would largely balance out these considerations, i.e. it over-estimates the delay with present Junction 4, but under-estimates the benefit with improved Junction 4.

Based on the above discussion, as a worst case sensitivity, TRANSYT-based economic benefits have been discounted by 40% to reflect as these benefits are estimated using a strategic transport model. Our economic analysis shows that the BCR reduces to 6.54 and 6.39 respectively for the variable and fixed demand scenarios.

To understand the impact of an underestimation of scheme cost, we have undertaken a sensitivity test with 40% optimism bias in our cost estimate. The results of the sensitivity test shows that the original BCR reduces to 12.28 and 11.99 respectively for the variable and fixed demand scenarios, which are still considered very high BCR values.

We believe that the following evidence would give sufficient assurance and confidence in the economic analysis carried out using TRANSYT outputs. The facts are:

- a fixed demand approach provides a robust assessment
- the road network and settlement pattern severely limits route choices for local traffic to/from destinations/origins along the A228 corridor, thus strategic modelling not provide substantially different results

- as a worst case sensitivity a discount factor of 40% is applied to the benefits estimated using TRANSYT
- the application of guidance on 'proportionate modelling and appraisal'
- conservative assumptions made for the modelling and appraisal work
- the use of TRANSYT model to estimate localised benefits is entirely appropriate in order to meet the Local Pinch Point Fund's objective to remove bottlenecks on the local highway network which are impeding growth
- 15% optimism bias and detailed QRA costs are included in the scheme total cost. A sensitivity test with 40% optimism bias is undertaken.

In summary, under the fixed demand scenario, the traditional transport benefits (£47.403 million) and wider economic benefits (£49.737 million) would not be delivered to local communities and businesses in Medway, Tonbridge and Malling and wider Kent without the £2.178 million funding from the Local Pinch Point Fund.

b) Small project - supporting material

Has a Scheme Impacts Pro Forma been appended?

☒ Yes ☐ No ☐ N/A

Appendix M shows a completed scheme impact pro-forma.

Has a description of data sources / forecasts been appended?

☒ Yes ☐ No ☐ N/A

Appendix L describes details of data sources, base year modelling and future year modelling.

Has an Appraisal Summary Table been appended?

☒ Yes ☐ No ☐ N/A

Appendix O shows a completed Appraisal Summary Table.

Has assessment of Social and Distributional Impacts (Step 0) been appended?

☒ Yes ☐ No ☐ N/A

Appendix Q is attached to the bid showing a completed Step 0 assessment of Social and Distributional Impacts of the scheme.

B7. The Commercial Case

a) Risk allocation and transfer between the promoter and contractor, contract timescales and implementation timescales

The scheme risks have been identified in the QRA in **Appendix J**, recorded and will be actively managed throughout the process. Risk owners have been allocated and tasked with eliminating risks, where possible, or identifying mitigation measures for residual risks. The same ethos will be taken through to the delivery stage of the scheme. Risk allocation will be discussed with our design and works contractors in the next stage of the scheme development. The project plan is attached as **Appendix C**.

For the delivery of the proposed scheme, we will follow the Council's Risk Management Policy (2012/13) which is annually reviewed and reported for change to the Corporate Management Team and Cabinet Members prior to agreement of revisions by the Governance and Audit Committee. This strategy is based on the Office of Government Commerce publication *Management of Risk: Guidance for Practitioners* and derived from the HM Treasury 'Orange Book' and is closely aligned and informed by the international standard for risk management ISO: 31000. A copy of the Council's Risk Management Policy is attached to the bid as **Appendix K**.

We shall maximise the use of our existing framework contract with AMEY to allocate and transfer risks related to engineering design services. We have already agreed a set of rates of services with AMEY following a competitive Official Journal of the European Union (OJEU) process based on good quality and value for money criteria (50/50) during the framework procurement process.

The civil engineering design services for this scheme and project supervision whilst the scheme is constructed will be commissioned from AMEY. Our contract with AMEY started on the 1st April 2013 for an initial five year period, with possible extensions for a further five years, based on levels of performance. AMEY's performance in meeting its obligations will be measured against set targets. A percentage of each month's payment will be set against meeting key performance targets, including working to time, to cost and to expectation.

AMEY and KCC have a set assurance framework covering strategic and contract boards that meet monthly. The main objectives of these boards are to provide strategic leadership and direction while scrutinising budget and finance, performance management, service delivery and continually pushing for innovation and improvements.

The scheme works cost estimate (£2.20 million) is less than the OJEU threshold (£4,348,350 for works as of 22nd October 2013) so the appointment of a contractor for works will be made by following a restrictive procurement route in line with KCC's procurement code of practice. An invitation to tender will be published in the Kent Business Portal. A competition will be held among the selected contractors, registered with the Portal, to shortlist at least 5 bidders using a Pre-Qualification Questionnaire stage. The shortlisted contractors will then be invited to submit their tender documents. This whole procurement process will be completed within 3-4 months.

The contract agreement let with the successful engineering contractor will use the NEC3 Engineering and Construction Contract (ECC) suites, which allow efficiencies in procurement time, delivery and associated costs. It is envisaged that the NEC3 "Option B" form of contract with Bill of Materials will be used which provides KCC the best balance of client control and risk transfer for a small scale scheme of this type. The

NEC3 ECC Option B contract has been used by KCC previously and has demonstrated time and cost savings in implementing the scheme.

The NEC3 ECC contract provides a robust risk management process which ensures that construction risks are raised at the earliest opportunity and dealt with expeditiously thus optimising key project targets such as expenditure of project funds and impact of the project on the public. During the contract formulation stage, a thorough and detailed examination of risks are interpreted into a contract Risk Register, which transfers the ownership of each risk to either the KCC or Contractor on the basis of which party is best placed to deal with the risk should it arise.

The contract implementation timescales are given in the detailed project plan (**Appendix C**).

We can find the best deal by maximising the possibility of allocating and transferring design and construction related risks to contractors and setting their performance targets. We have the right skills and resources to deliver this scheme within budget and on-time based on our performance of delivering major schemes in the last 5 years as evident in **Section B8(d)**.

b) Preferred procurement route

As mentioned in **Section B7(a)**, our preferred procurement route is to commission civil engineering design from AMEY, who were selected by following a robust and competitive process of OJEU procurement. AMEY was selected based on their expertise and experience of successfully delivering services elsewhere in the UK and their match to our specified requirements. We can procure services (and any sub-contracting work) from AMEY within a very short time period of 1-2 months. Using this process will not only minimise cost but will also mean minimal time spent on procurement and so ensuring delivery can be achieved within the set timescales.

The preferred procurement route for undertaking works is a restricted tender process which conforms with the Public Contracts Regulations. The restricted process is most suitable as it will give a degree of control to ensure that only the most suitable contractors only are invited to tender and that the quality of the technical aspects of the bids are not overlooked for the sake of price alone.

Kent County Council has its own procurement strategy ***Spending the Council's Money*** which provides details on how we can comply with certain rules and regulations when buying goods and services, which include EU directives on public procurement. As part of our procurement strategy, the procurement plan of undertaking works for the proposed scheme needs to be approved by the Procurement Board as the works will be commissioned outside our existing frameworks.

The first stage will involve inviting tenders from the open market by publishing it in the Kent Business Portal. A competition will be held among the selected contractors, registered with the Portal, to shortlist at least 5 bidders using a Pre-Qualification Questionnaire stage. The shortlisted contractors will then be invited to submit their tender documents. This whole procurement process will be completed within 3-4 months. The basis for tender award will follow the most economically advantageous tender which will evaluate both technical (qualitative) and price aspects of the tender. It is envisaged that this will be a 60% (Price) / 40% (Quality) split. The tender process will be managed to ensure that there is a suitable period from the point of tender award to the point of commencement of the works, ensuring that a schedule of meetings takes place between

the parties to the contract to best guarantee a smooth transition onto the construction period.

c) Joint letter from Section 151 Officer and Head of Procurement

Has a joint letter been appended to your bid?

☒ Yes ☐ No

Appendix H shows a joint letter from Section 151 Officer and Head of Procurement.

B8. Management Case – Delivery

a) Detailed project plan

Has a project plan been appended to your bid?

☒ Yes ☐ No

A detailed project plan, in Gantt chart form, is provided as **Appendix I**, covering the period from submission of the bid to scheme completion. The project plan shows that the scheme will be delivered by the end of February 2015 and an allowance of 4 weeks is made for construction period float. The key milestones are clearly shown in the plan and explained in **Section 8(c)** below in **Figure B.9**.

It is important to mention here that all activities are critical to achieve the March 2015 delivery timescales so for the sake of simplicity no critical path is shown in the project plan. It has been assumed in the project plan that the Local Pinch Point funding decision will be made by 16th December 2013. If our bid is successful in securing the funding earlier than this assumed date then further savings in the timescales can be made.

b) Land acquisition arrangement

Has a letter relating to land acquisition been appended?

☐ Yes ☐ No ☒ N/A

Land acquisition is not required for the proposed scheme as the proposed scheme can be accommodated within the existing highway boundary.

The proposed scheme involves widening the Eastern Overbridge of the grade separated gyratory junction of the M20 and the A228. The works involve extending the existing bridge abutments, new beams across the M20 to support the widened carriageway and 'stitching' the new and existing deck together in a similar way to how the Western Overbridge was widened in 2006.

The widened bridge will require very local amendments to the slip roads where they join/leave the widened gyratory.

The scheme is also some distance from nearby homes and will not attract any valid Part 1 claims under the Land Compensation Act 1973.

c) Construction milestones

Figure B.12 Construction Milestones

Construction milestone	Estimated Date
Tender period – Principal Contractor	April 2014
Award Contract	August 2014
Starts of works	August 2014
Complete Piling for the abutments	October 2014
Complete abutments	November 2014
Construct new deck	January 2015
Completion of works	February 2015
Full handover to the Highways Agency	April 2015

d) Evidence of delivering major transport schemes

KCC has extensive relevant experience of delivering projects similar to the M20 Junction 4 Eastern Overbridge Widening, including major highway infrastructure schemes and local junction improvements. The most relevant example, provided above, relates to the successful delivery of the M20 Junction 4 Western Overbridge Widening in 2006 by working closely with the Highways Agency. **Figure B.13** below shows a list of major transport schemes delivered by KCC in the last 5 years.

We have also delivered a number of significant transport schemes costing less than £5 million in the last 5 years.

In delivering major transport schemes on time and within budget as shown in **Figure B.13**, we have clearly demonstrated that we have the necessary governance, leadership and mechanisms in place. We strongly believe that these examples provide hard evidence that KCC is capable of delivering the M20 Junction 4 Eastern Overbridge Widening scheme on time and within budget.

Figure B.13 Major Schemes Delivered by KCC in Last 5 Years.

Scheme name	Delivery timescale		Total cost (£m)		Comments
	Planned	Actual	Estimate	Actual	
Sittingbourne Northern Relief Road	November, 2011	December, 2011	35.5	33	Significant Value Engineering reduced cost. Slight delay in opening due to wet winter in 2010/11.
East Kent Access	September, 2012	May, 2012	87.0	86.5	Complex scheme successfully delivered under budget. Well managed archaeology and Design and Build of underpass contributing to early completion.
Rushenden Relief Road	November, 2011	November, 2011	14.0	14.0	Successfully delivered - cost and programme influenced by SEEDA for whom scheme was delivered.
A2 On-slip, Canterbury	August, 2011	August, 2011	1.9	2.0	Slight increase in cost due to additional requirements of the Highways Agency.

Kent County Council has made excellent progress with the delivery of schemes which were awarded Local Pinch Point Funding during Tranches 1 and 2. Works towards the North Farm Improvements, which was awarded funding in Tranche 1, are progressing rapidly, with the procurement of a principal contractor currently being undertaken in line with the project plan submitted within the bid document.

B9. MANAGEMENT CASE – STATUTORY POWERS AND CONSENTS

a) Powers / consents obtained and their details

The scheme qualifies as permitted development as an improvement of the existing highway network and is considered to be a genuinely standalone scheme.

All works to implement the proposed scheme are fully contained within the existing highway boundary of the M20 and hence do not require land to be acquired.

The scheme is also some distance from nearby homes and it is unlikely that it will generate any form of controversy.

Therefore, the scheme does not require any statutory powers or consents.

b) Outstanding statutory powers / consents

We have liaised with the Highways Agency to get their advice on as-builts and traffic management matters. We are working with the Highways Agency to secure a Section 6 Agreement by the end of 2013 to deliver the works. The sign off of the scheme traffic management strategy (by December 2013), design approval in principle (by February 2014), final scheme design (May 2015) and tender proposals (June 2014) will be secured from the Highways Agency. The detailed timescales are shown in the project plan in **Appendix C**.

B10. MANAGEMENT CASE – GOVERNANCE

KCC has a comprehensive approval process to ensure robust decisions are made on spending public money on improving our road network. **Section B8(d)** above demonstrates that we have proven governance mechanisms to deliver major transport schemes on time and within budget. We plan to build on this delivery record. The governance of the scheme requires management at three levels: corporate management; project board; and project delivery. The hierarchy for governance arrangements for the scheme are shown in **Figure B.14** below. This follows a PRINCE2 compliant project management structure.



Waitrose at Kings Hill

Figure B.14 Project Governance Structure

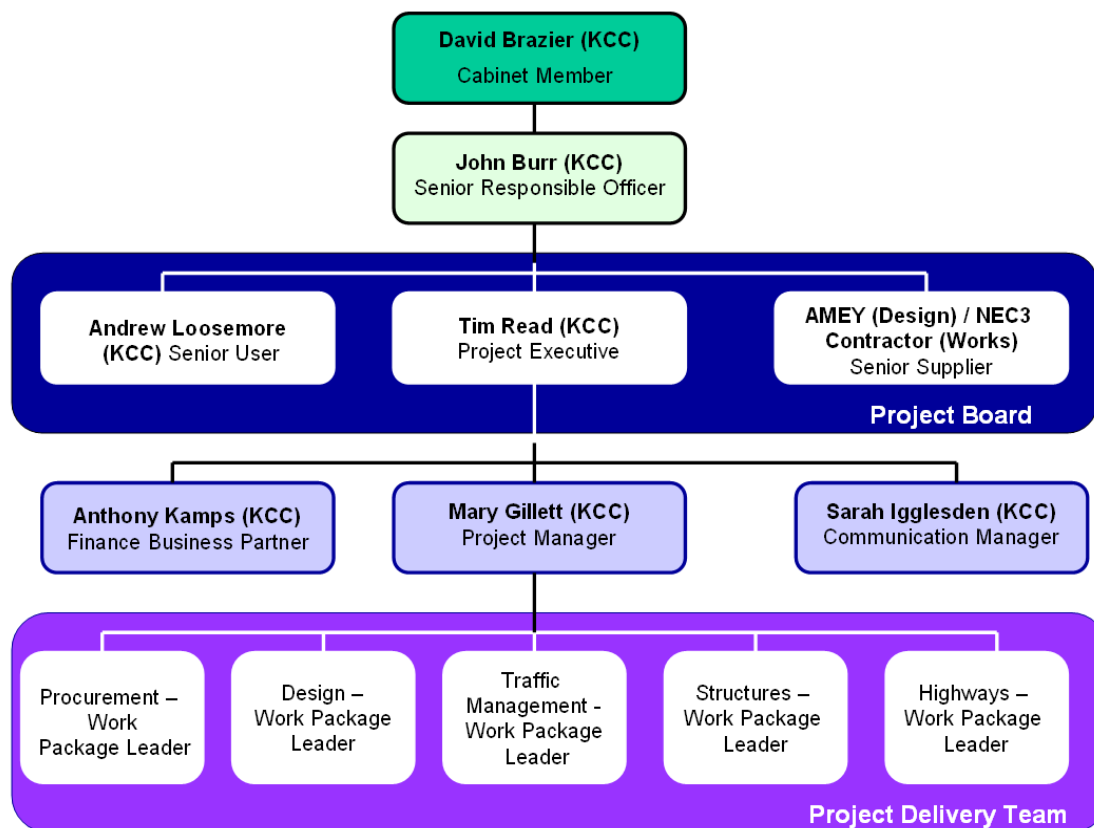


Figure B.15 below details all three levels with a description of their role, accountabilities and responsibilities. These arrangements are in accordance with PRINCE2 standards.

Figure B.15 Project Management Role and Responsibilities

Role in Project Governance	Name	Role outside Project Governance	Accountabilities in Project Governance	Responsibilities in Project Governance
Corporate Management				
Cabinet Member for Transport and Environment	Elected member, David Brazier	Cabinet Member for Transport and Environment	Give mandate to the Senior Responsible Officer (SRO) and Project Board to proceed with the investment.	<p>Provide strategic leadership to the Project Board.</p> <p>Lead the decision-making on KCC's transport strategy and directs all transport investment.</p> <p>Provide direction and guidance to the Project Board and ensure effective governance of the project.</p>

Role in Project Governance	Name	Role outside Project Governance	Accountabilities in Project Governance	Responsibilities in Project Governance
Senior Responsible Officer	John Burr	Director of Highways and Transportation	Ultimate decision making authority (at officer level) and responsible for scheme delivery, including ensuring that project objectives are met and benefits are realised.	<p>Work with the Project Board to create a suitable mandate for financial control in order to satisfy the funding requirements.</p> <p>Delegate responsibilities on any of his obligations to the Project Board.</p>
Project Board				
Senior User	Andrew Loosemore	Head of Highway Operations	Accountable for ensuring that user needs are specified correctly and that the solution meets those needs	<p>Make necessary decisions to allow the scheme to progress at a number of key stages in the project lifecycle.</p> <p>Approve major changes to the delivery programme and constituent/fundamental elements of the project delivery including budget.</p>
Project Executive	Tim Read	Head of Transportation	Protect the interests of the council	Obtain and provide the SRO with stakeholder / technical input to decisions affecting the project.
Senior Supplier	AMEY/ NEC3 Contractor	Framework Contractors	Accountable for the quality of the products delivered by consultant(s)/ framework contractors	<p>Assist the SRO in decision-making and on-going progress of the project. Agree all major plans.</p> <p>Approve all budgets and tolerances for time, quality and cost along with reporting and monitoring requirements.</p> <p>Have overall responsibility for managing risk on the project. Meet on a monthly basis and will be chaired by Project Executive.</p>

Role in Project Governance	Name	Role outside Project Governance	Accountabilities in Project Governance	Responsibilities in Project Governance
Project Manager	Mary Gillett	Major Scheme Manager	Ensure the needs of the project are being met and co-ordinated and that the project is progressing to agreed time and budget	<p>Be responsible for delivering the scheme on a day-to-day basis.</p> <p>Identify packages of work and agrees with the Finance Business Partner the appropriate budget for each individual work package.</p> <p>Ensure the follow up of all decisions by SRO and the Project Board.</p> <p>Prepare Lessons Learned Report, Progress Report and End of Project Report.</p> <p>Brief local councillors and officers on progress and ensure their buy-in.</p> <p>Ensure appropriate stakeholder management and communication strategy in place and implemented</p> <p>Ensure suitable monitoring and evaluation framework is in place to realise scheme benefits.</p>
Project Delivery Team				
Work Package Leaders	AMEY/ NEC3 Contractor		Ensure the technical work is delivered as per agreed standards of time, quality and cost.	<p>Responsible to the Project Manager.</p> <p>Make decisions on scheme design, construction and risks</p> <p>Report on progress on a weekly basis to the Project Manager and attend to Project Progress meetings that will be held every 4 weeks to discuss design engineering and delivery progress, issues, risk, and fees.</p>

B11. MANAGEMENT CASE - RISK MANAGEMENT

As with other sections of the Management Case, the approach to risk management will follow the established methodology that has supported the successful delivery of other projects in Kent; examples are shown in **Section B8 (d)**. Risks associated with the project are managed by the Project Manager; however some of the critical risks will be transferred to the Senior Supplier. A risk log and register along with their associated financial mitigation implications will be shared with Project Board at regular intervals. Risks allocated with high likelihood and high impact will be immediately escalated to the SRO.

Has a QRA been appended to your bid?

☒ Yes ☐ No

The Quantified Risk Assessment (QRA) has been undertaken by following WebTAG 3.5.9, which has identified all foreseeable risks that could have any adverse impact on the scheme cost estimates (£4.435 million) and delivery by March 2015.

Each risk has been analysed to quantify the likelihood and the impacts of risks. With careful planning, mitigation measures for each risk are proposed and allocated to an appropriate party in the project governance structure. The QRA has identified an expected risk value of £600,000. It is important to mention that the QRA does not include any risk associated with the scheme's ongoing operational costs

The expected risk value of £600,000 can be further reduced at the detailed design stage or by adopting bespoke implementation practices backed up by method statements during construction. Early discussions with the Highways Agency on key risks and choosing an appropriate procurement strategy to transfer some risks to a contractor would help Kent County Council to further reduce the expected risk value associated with the proposed scheme

Appendix J presents the detailed QRA.

Has a Risk Management Strategy been appended to your bid?

☒ Yes ☐ No

Section B5(b) above presented a list of actions which will be undertaken in order to avoid or reduce any risk related to scheme cost overrun and delivery delay. The detailed QRA identifies possible risks to the project, their impact and the likelihood of these impacts. Mitigation measures and their expected value along with their owner in the project governance structure are presented in the QRA.

In addition, Kent County Council believes that risk management is at the heart of our good management practice and our corporate governance arrangements. To deliver the proposed scheme, we will follow the **Council's Risk Management Policy (2012/13)** which is annually reviewed and reported for change to the Corporate Management Team and Cabinet Members prior to agreement of revisions by the Governance and Audit Committee. This strategy is based on the Office of Government Commerce publication **Management of Risk: Guidance for Practitioners** and derived from the HM Treasury 'Orange Book' and is closely aligned and informed by the international standard for risk management ISO: 31000.

Appendix K presents Kent County Council's Risk Management Policy (2012/13) which will be followed throughout the scheme development and delivery timescales.

B12. MANAGEMENT CASE - STAKEHOLDER MANAGEMENT

a) Stakeholder Management Strategy

The stakeholder management strategy for the proposed scheme will be a living document that will need to be updated as the scheme evolves and stakeholders change. The success of the scheme will mainly depend on the involvement of the right stakeholders at the right time. An effective stakeholder management strategy will enable Kent County Council to achieve support from the Highways Agency, the local planning authority, local residents, businesses and other interested parties to the objectives and design of the proposed scheme. **Figure B.16** below presents a stakeholder management strategy consisting of the following information:

- Who the stakeholders are
- The interests of each stakeholder
- The contributions of stakeholders to the project
- The benefits of the project to stakeholders
- The stakeholder's concerns over project
- The means of communication with each stakeholder
- The frequency and duration of communication.

Stakeholders will be communicated with regularly through a combination of the following mechanisms:

- Presentations
- Formal/informal face-to-face meetings
- Local newspaper
- Letters/Emails
- Phone calls
- Press releases and website

The stakeholder management strategy will be monitored at a set frequency. The Project Board will be updated on stakeholder management in a monthly report from the Project Manager. The report will be based on the number and nature of enquires/ complaints, the quality and effectiveness of responses, the nature and level of media coverage and stakeholder contacts. The stakeholder management strategy will be updated, if it is required, based on the monthly report.

Figure B.16 Stakeholder Management Strategy

Stakeholder name	Organisation	Why they are interested in project?	What stakeholders contribute to project?	What stakeholder will gain from project?	Stakeholder concerns over project	Stakeholder Management Strategy
Member of Parliament and Local Councillors	Kent CC / Tonbridge and Malling BC / Medway Council / Local Parish Councils / South East Local Enterprise Partnership	Politically important scheme to support economic growth in Kent, Medway and wider SELEP. Elected representatives of local residents and businesses.	Political support, representation of the views of local residents and businesses.	Delivery of high profile transport infrastructure enhancement within their electoral division. Improved journey times and accessibility to major developments in their constituents.	Disruption to journeys during construction phase.	The Tonbridge and Malling Joint Transportation Board, bringing together Borough and County Council Members, is provided with a full update on the status of all developer-funded transport improvements at each of its quarterly meetings. The existing quarterly liaison meetings between KCC and Medway will be used to discuss progress and issues to ensure successful delivery of the scheme. Members are therefore well apprised of the scheme and its strategic benefits. Should KCC be successful in this funding application, local Members will be invited to regular project briefings in order that any specific concerns or requirements can be identified and addressed.
Emergency services	Kent Police / Kent Fire and Rescue Service / South East Coast Ambulance Service	Impact of construction phase on emergency response times. Impact of scheme on road user safety.	Review of safety impacts of scheme and review of traffic management whilst scheme is implemented.	Enhanced road user safety and better layout of the junction.	Potential lengthening of emergency response times during construction phase.	Early consultation by letters to explain the purpose of the scheme and the likely impacts during its construction phase in order that any specific concerns or requirements can be identified and addressed. Communicate project plans and schedule to get their early feedback on the junction's new layout and traffic management strategy. Regular dialogues to keep them informed.
Highways Agency	Highways Agency	Authority responsible for the management of the M20 motorway.	Joint Technical Approval Authority and co-signatory to Section 6 Agreement (with KCC)	Improvements to the efficiency and safety of Junction 4	Disruption to the M20 during construction phase. Safety and structural integrity.	Early and continuing engagement between KCC, AMEY (Design Consultant Team), Contractor and the HA, drawing upon related experience (e.g. delivery of Western Overbridge widening). Advanced programming of motorway closures. Keep informed through KCC/HA liaison meetings

Stakeholder name	Organisation	Why they are interested in project?	What stakeholders contribute to project?	What stakeholder will gain from project?	Stakeholder concerns over project	Stakeholder Management Strategy
Bus operators	Arriva / Nu-Venture	Impact of construction phase and new layout on bus services. Impact of scheme on journey times and punctuality.	Support, advice regarding optimum diversion routes during construction phase.	Improved journey times, enhanced road user safety.	Disruption to services during construction phase. Longer journey times and low punctuality.	Discuss junction layout plans and keep informed of traffic management arrangements. Early consultation by letters to explain the purpose of the scheme and the likely impacts during its construction phase in order that any specific concerns or requirements can be identified and addressed. Regular dialogue thereafter.
Local residents and businesses	Various	Impact of construction phase on journeys to employment and amenities. Impact of increased accessibility to businesses. Impact of scheme on road user safety and journey times.	Support.	Improved journey time reliability, reduced traffic delays and enhanced road user safety. Improved access to employment and businesses from the motorway.	Disruption to journeys during construction phase.	Early consultation by letters to explain the purpose of the scheme and the likely impacts during its construction phase in order that any specific concerns or requirements can be identified and addressed. Hold public meetings (including manned exhibition) and discussions with major businesses to consult on plans. Keep informed through website,.
Statutory Undertakers (if any affected by the scheme)	Various	Impact of scheme on their infrastructure and customers	Review of scheme programme, design and work together to deliver the scheme on-time and within budget.	Continuity in their services to their customers.	Disruption to their services during construction phase.	Consult on programme, design and work through any issues arising. Early consultation by letters to ensure the diversions are carried out effectively and efficiently.

b) Can the scheme be considered as controversial in any way?☐ Yes☒ No

Given that the scheme involves the partial widening of an existing highway structure, distant from housing, to improve the operation of a strategic motorway junction, it is unlikely that it will generate controversy other than the limited disruption to journeys that will be caused during the period of construction. For this, a detailed traffic management strategy will be developed by working together with the Highways Agency, emergency services, bus operators and statutory undertakers.

c) Have there been any external campaigns either supporting or opposing the scheme?☒ Yes☐ No

The West Kent Partnership fully supports the proposed scheme as it meets the needs of their Action Plan (2010-15). Their Action Plan is based on the outcome of their wide consultation with local businesses and principal stakeholders to identify the need of key interventions to promote economic growth in West Kent. The membership of this Partnership includes representatives of the Kent Invicta Chamber of Commerce, the Federation of Small Businesses, Voluntary Action West Kent, the County and District Councils.

A support letter from the West Kent Partnership is attached to the bid document as **Appendix N**.

The scheme has also received political support. A support letter from Tracey Crouch Member of Parliament for Chatham and Aylesford has been appended in **Appendix R**.

In addition, Kings Hill, which is one of the largest and most successful mixed-use developments in Europe, has offered their support to the scheme from business and development viewpoints. The support letter from Kings Hill is attached to the bid as **Appendix S**.

B13. MANAGEMENT CASE – ASSURANCE

Section 151 Officer's confirmation is provided in **Section D1**.

Section C – MONITORING, EVALUATION AND BENEFITS REALISATION

C1. BENEFITS REALISATION

The expected positive outcomes of the proposed scheme will be achieved in full by ensuring a suitable benefit realisation plan is in place. The likely benefits will be owned and managed by KCC who will be responsible for their delivery, the timescale for delivering the benefits and a suitable review process are presented in **Figure C.1** below.

Figure C.1 Benefits Realisation Plan Responsibilities

Expected Benefits	Ownership	Base Data	Outcomes/ Impact	Monitoring Timescale	Evaluation Method
Improve accessibility to employment sites	Promoting Authority, Delivery partners, participating businesses	Number of businesses in the area	Increase in business start ups compared with base data	Every 5 years	Data collected from KCC's Research and Evaluation Team
Improve accessibility to housing sites	Promoting Authority, Delivery partners, participating developers	Number of houses in the area	Increase in newly built houses compared with base data	Every 5 years	Data collected from KCC's Research and Evaluation Team
Contribute to improved business productivity	Promoting Authority, Delivery partners, participating businesses	Number of employment and the level of average GVA	Increase in levels of employment and GVA	Every 5 years	Data collected from KCC's Research and Evaluation Team
Reduce levels of congestion	Promoting Authority, Delivery partners	Existing delay and queue length data	Changes in peak hour traffic delays and queue lengths	One in the 1 st year and one in the 2 nd year	Queue length surveys
Reduce journey time unreliability	Promoting Authority, Delivery partners	Existing journey times reliability for vehicles passing through the junction	Smooth journeys and increase in journey time reliability	One in the 1 st year and one in the 2 nd year	Use of CJAMs data
Increase business satisfaction with the transport network	Promoting Authority, Delivery partners, participating businesses	Existing level of business satisfaction	Increase in reported satisfaction levels from businesses	One in the 1 st year and one in the 2 nd year	Surveys undertaken by KCC's Research and Evaluation Team
Improved road safety at the junction and on the motorway	Promoting Authority, delivery partners	Existing crash data	Reduction in the number of accidents and their level of severity	One in the 1 st year and one in the 2 nd year	Crash Data collected by Kent Police

We are happy to share any existing data to be used as a baseline and are keen to coordinate this activity with the DfT, to ensure the data collected can help gain robust insights into the effectiveness of this investment, to be used for future decision-making.

C2. MONITORING AND EVALUATION

A monitoring and evaluation framework has been developed to ensure that the expected benefits of the proposed scheme are fully realised. This framework will examine the outcomes and the impacts of the scheme. The outcomes/impacts will be reviewed at a set frequency using an appropriate monitoring methodology. Figure C.1 above shows how the expected benefits will be monitored and evaluated.

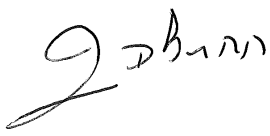
An output of the proposed scheme will be an evaluation report. The results of the monitoring and evaluation programme will be published on KCC's website.



Tonbridge Castle

Section D – DECLARATIONS

D1. SENIOR RESPONSIBLE OWNER DECLARATION

D1. SENIOR RESPONSIBLE OWNER DECLARATION	
As Senior Responsible Owner for M20 Junction 4 Eastern Overbridge Widening I hereby submit this request for approval to DfT on behalf of Kent County Council and confirm that I have the necessary authority to do so.	
I confirm that Kent County Council will have all the necessary statutory powers in place to ensure the planned timescales in the application can be realised.	
Name: John Burr	Signed: 
Position: Director of Highways and Transportation	

D2. SECTION 151 OFFICER DECLARATION	
As Section 151 Officer for M20 Junction 4 Eastern Overbridge Widening I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Kent County Council	
<ul style="list-style-type: none"> - has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution - accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties - accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme - accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2014/15 - confirms that the authority has the necessary governance / assurance arrangements in place and, for smaller scheme bids, the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place - 	
Name: Andy Wood	Signed: 