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Transport Business Case Report

Sustainable Access to Maidstone Employment Areas

CO04300262/028 Revision 03

October 2015

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Document Control Sheet

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1 Introduction

1.1 SELEP Schemes – Business Case Preparation

Amey have been commissioned by KCC (Kent County Council) to prepare Transport Business Cases, appropriate to the size and scope of each scheme, for each of the projects which have been allocated Local Growth Fund finance.

1.2 Purpose of Report

The overall purpose of this report is to provide a Business Case covering the scheme. In doing so it draws on the results of the earlier Gap Analysis exercise and on the original detailed above.

It also forms the basis of a brief to deliver the required elements in order to assist Kent County Council in delivering these elements or in procuring resource to deliver them.

The report broadly follows the 5-Case Model for Transport Business Case preparation, incorporating design and environmental issues as well as a summary of the overall risks in terms of project delivery and project funding approval. This includes:

- The potential for the project to be called in for review by (Department for Transport (DfT) or other bodies before it is delivered
- The potential for challenge from stakeholders which may jeopardise or delay the project
- The potential that a subsequent review of the project after implementation may identify issues relating to the delivery of overall outcomes (e.g. job creation or transport modal shift)

1.3 Specific Scheme

This scheme, in previous submission to the SELEP, is entitled:

Sustainable Access to Maidstone Employment Areas

This describes the function of the proposal, though the scheme itself consists of a cycle path along the River Medway between Barming and Aylesford. In order to differentiate this scheme from other sustainable transport schemes with similar titles, this document refers to the scheme as the *Maidstone Cycleway*.

2 Scheme Summary

2.1 Introduction to Project

This scheme will deliver significant improvements to cycle commuter links in the Maidstone area. This includes the construction of an entirely new pathway along the River Medway between Aylesford Village and Allington Lock, complemented by improvements to the existing pathways along the River Medway to the north and south of Maidstone. These improvements will in turn be augmented by better links into residential, employment and educational locations, together with active marketing of the routes. These enhancements will provide attractive, direct routes for commuters and others, offering car-competitive journey times which will attract people away from their cars. There are over 7,126 households, 3,165 Business's and 7 schools within 1km of the route. The Planned 10 year growth on the corridor includes 3,880 homes (980 new homes per year) with approximately 3,000 jobs. This scheme provides an important means to reduce growing demand on the road network. The scheme is co-ordinated with road improvements in the area and will help to 'lock in' the benefits of these investments by reducing car travel. The health and wellbeing of residents will also be improved through increases in healthy exercise.

2.2 Project Roles

Role	Name
KCC Project Manager for SELEP schemes	Mary Gillett
KCC Commissioning Officer for specific scheme (Project Sponsor)	Colin Finch
Amey Project Manager for SELEP schemes	Stephen Whittaker
Amey Highway Design Lead	Nick Flood
Amey Environmental Lead	Ian Fuller
Amey contacts for specific scheme Business Case	Gareth Elphick

2.3 Category of Transport Business Case

With a projected expenditure of £3m, this scheme is categorised as 'small'.

2.4 Overall Summary of Gap Analysis Exercise

The scheme is fairly well advanced and the outline scheme has been identified. There are few identified gaps which would jeopardise this scheme. A detailed option appraisal has been undertaken previously. There are some remaining design/delivery risks, including:

- Detailed design and associated costing issues
- Environmental issues, including working in a riparian environment and meeting the requirements of the Environment Agency in that context
- Land ownership and rights of way issues

There are some additional gaps in the business case and scheme appraisal elements, though these must be seen in the context that this 'small' scheme should only require a light touch appraisal which is generally recognised as being based on:

- A narrative argument supported where possible with existing information
- The strategic fit of the scheme, which is already well established in this case in relation to supporting housing and employment growth in the area
- Complementary support for larger schemes, which in this case includes the Maidstone Integrated Transport Schemes and the Maidstone Gyratory project (as well as the housing and employment growth proposals for the area)

Should additional quantitative evidence be required, it will be possible to provide this through the modelling work undertaken as part of the wider Maidstone area, including the Maidstone Gyratory proposals. Using the WHO HEAT toolkit and the DfT Carbon toolkit it would be feasible, if required, to calculate the carbon and health economic impacts of the scheme alongside decongestion/accidents benefits and disbenefits. This could be supplemented further by additional pedestrian and cyclist monitoring.

As indicated above, there are links between this scheme and the Maidstone Gyratory:

- Outcome benefits, especially in terms of the role of the cycleway scheme in helping 'lock in' the decongestion benefits of the gyratory scheme by encouraging more use of non-car modes between new developments and employment sites.
- Design issues whereby the designs of both schemes must take into account the requirements of the other to ensure that conflicts are avoided and there is maximum scope for synergy between the schemes.

2.5 The Transport Business Case

The UK Treasury 'Green Book' sets out a process for presenting the business case for investment schemes involving public funds. This approach involves three stages:

Strategic Outline Case (SOC)

This is the scoping stage of the investment process. The purpose of the SOC is to confirm the strategic context of the investment; to make a robust case for change; and to provide stakeholders and customers with an indication of the proposed way forward, together with indicative costs. Since an earlier pre-feasibility review has already established that the scheme can achieve an economic benefit, the SOC in this case takes account of this in the context of the modified design. More detailed design work will be conducted as the Transport Business Case progresses.

Outline Business Case (OBC)

This is the detailed planning phase of the investment, revisiting the OBC in more detail and to identify a preferred option which demonstrably optimises value for money. It also sets out the likely approach to funding; demonstrates its affordability; and details the supporting procurement strategy, together with management arrangements for the successful rollout of the scheme.

Full Business Case (FBC)

This takes place within the procurement phase of the project, though before a formal decision to proceed has been made and prior to the formal signing of contracts and the procurement of goods and services. The purpose of the FBC is to revisit the OBC and record the findings of the subsequent procurement process. It also sets out the recommendation for an affordable solution which continues to optimise VFM, and includes detailed arrangements for the successful delivery of goods and implementation of services from the recommended supplier.

2.5.1 5-Case Model

The Transport Business Case process is designed to ensure that investments are directed at the right schemes and that these are managed and delivered in the best way. This ensures that transport investment addresses important issues in an effective way, delivering value for money.

The core of each stage of the Transport Business Case is the 5-Case Model which ensures that schemes:

- Are supported by a robust **case for change** that fits with wider public policy objectives – the 'strategic case';
- Demonstrate **value for money** – the 'economic case';
- Are **commercially viable** – the 'commercial case';
- Are **financially affordable** – the 'financial case'; and
- Are **achievable** – the 'management case'.

This document uses this 5-case model in an appropriate and proportionate way to demonstrate the merit of investing in the proposed Maidstone Cycleway scheme.

2.6 Context of the Transport Business Case

Currently promoters of all schemes involving an investment of public funds over £5m ('major schemes') are required to prepare and submit a Transport Business Case. Previously a Business Case would be submitted to the Department for Transport (DfT).

Recent Government policy changes have involved the devolution of decision-making for smaller major schemes to Local Enterprise Partnerships (LEPs). These bodies are designed to direct investment for an area based on economic priorities set through a partnership which is private-sector led. Kent County Council is in the South East LEP (SELEP) area.

The devolved funding arrangements were put in place in July 2014 through the Local Growth Deal announcements, including devolution of funds to the SELEP.

This Transport Business Case will be submitted to the SELEP effectively forms a bid to request confirmation of the already allocated LGF funding for the scheme.

2.7 Maidstone Cycleway Description

The scheme is located on the River Medway between Barming and Aylesford. It will provide a riverside walk/cycle route which links housing and employment areas in and around Maidstone, and its border with Tonbridge & Malling. The scheme includes a completely new section of path between Allington Lock and Aylesford, along with improvements to the rest of the path.

The areas served are expected to grow significantly in terms of both jobs and housing. To cater for this growth a number of other schemes are proposed in the area, including the Maidstone Gyratory Scheme which will increase capacity. The Sustainable Access Scheme (shared-use path) will complement the Gyratory scheme by providing walk and cycle access which will help 'lock in' the benefits of the capacity improvement.

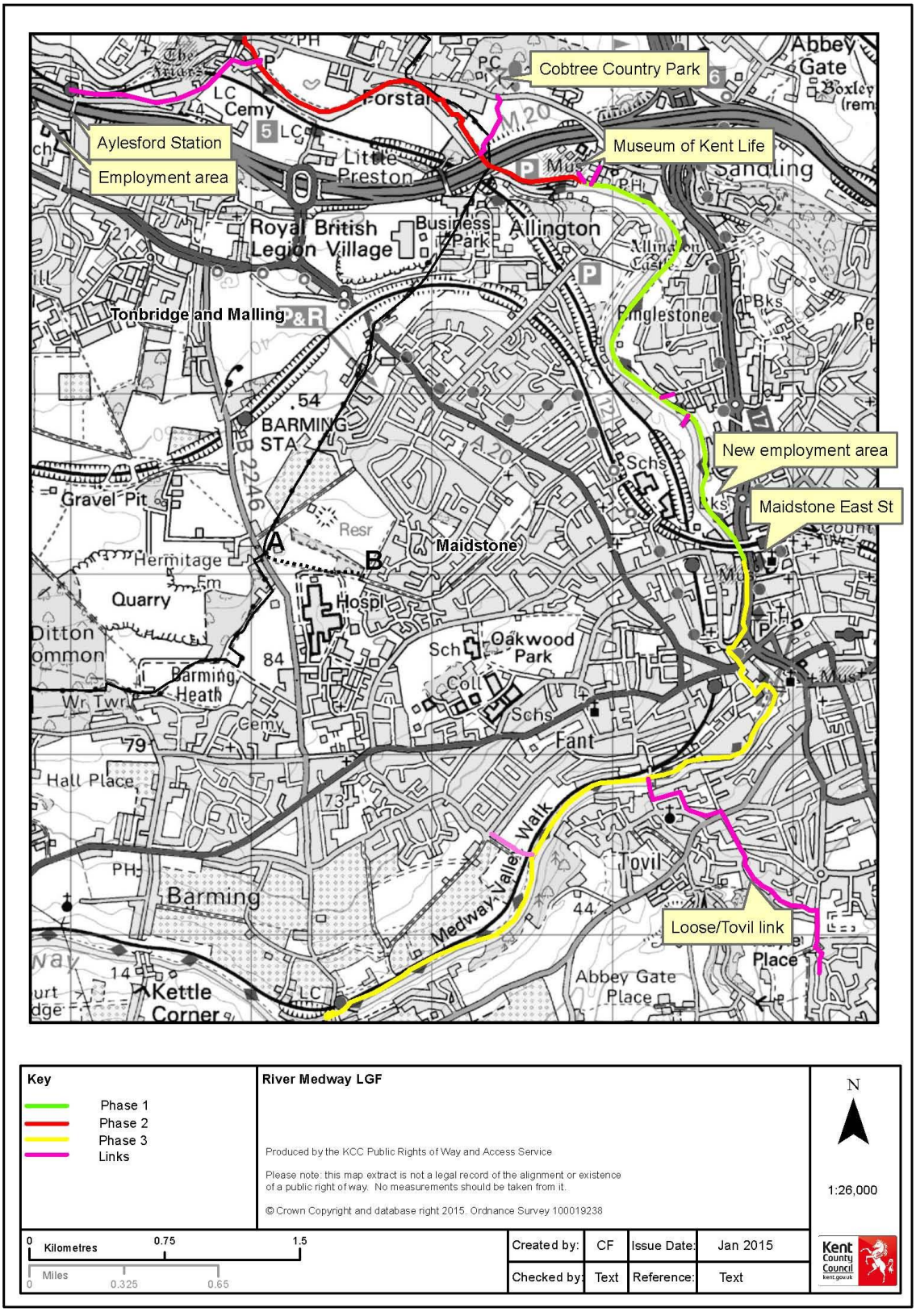


Figure 1 – Scheme Location

2.8 Existing Situation, Proposed Improvements and Options

Although a route already exists along the River Medway to the south-west of Maidstone, it is not continuous and is of a very poor standard in parts. Mud and poor surface conditions make the existing route unsuitable for commuter use outside the driest summer conditions.

However, as can be seen from Figure 3, the route is attractive, providing the potential for a direct off-road route to serve employment sites from the growing housing in the area.

Figure 3 - Part of existing route

To the north of Maidstone there is no direct route along the river beyond Allington Lock, though the southernmost section has already been improved, with the provision of a high quality 3m tarmac surfaced track along the eastern bank of the river. This demonstrates the potential of a more comprehensive route in providing a commuter link.

The proposal incorporates significant improvements to the surface on the existing section to the south-west of Maidstone, improvements to the signage and route within Maidstone itself (where the route uses existing highways and bridges); together with a completely new link from Allington Lock Aylesford Village on the eastern bank.

A variety of options were considered for the provision of this new link, including the use of existing paths on the western bank and the provision of a bridge across the river. These were part of the Valley of Visions Partnership proposals for the route. Taking account of the potential for linking to employment sites and the implications of ongoing maintenance of the route, the preferred option involves the provision of a new route along the eastern bank, with links to existing rights of way and highways incorporated.

3 Strategic Case

3.1 Purpose of the Proposed Investment

The overall purpose of the investment is to encourage cycling and walking by providing attractive, direct routes for cyclists and pedestrians to access employment, education and other facilities in Maidstone Town Centre and the River Medway corridor.

By encouraging the use of active travel (cycling and walking) this will provide health benefits for existing and future resident in the area.

By attracting people to use cycling and walking, alongside complementary LSTF schemes, the scheme will help 'lock in' the benefits of highway investments (including the Maidstone Gyratory) and will free up road space. This in turn will enable the sustainable growth of Maidstone and its surrounding area, supporting the housing and employment growth plans set out in the Local Plans of Maidstone Borough Council (Consultation Draft) and Tonbridge and Malling Borough Council (Adopted).

These goals are to be achieved with reference to other important factors such as the local environment, the safety of road users and any impact on drivers of climate change.

Figure 6 sets out these elements in a Causal Chain.

3.2 Strategic Fit – National Transport Priorities

The Government has long-term objectives aimed at improving the economy, environment and society. These are the three tenets against which major transport infrastructure projects are assessed, and will continue to be assessed in future.

In its National Infrastructure Plan 2014, the Government presented its vision for the UK transport system:

- Transport infrastructure can play a vital role in driving economic growth by improving the links that help to move goods and people around and by supporting the balanced, dynamic and low-carbon economy that is essential for future prosperity;
- Local transport systems must enable suburban areas to grow. The transport network must support good value and rapid movement of goods around the country. The transport system must be efficient but also resilient and responsive to infrequent an unexpected pressures; and

- Airports and ports are the gateways to international trade and the Government will work to improve the road and rail connectivity to major ports and airports.

Local sustainable transport schemes such as the Medway Cycleway complement larger schemes and in themselves provide access to jobs and longer-distance routes. Sustainable transport, by transferring trips from car, also reduces carbon emissions and helps improve local air quality, both of which are important National policies. Since sustainable transport schemes 'lock in' the benefits of highway schemes and complement rail schemes, they are entirely supportive of the wider National connectivity and economic agendas.

3.3 Strategic Fit – Infrastructure Bill 2015

The Infrastructure Bill 2015 has become an Act, and so for the first time the Secretary of State for Transport will be required by law to set out a strategy for cycling and walking infrastructure and importantly the funding provided to meet it.

This echoes the 2013 Active Travel (Wales) Act introduced by the Welsh Assembly, and builds on the 2013 report by the All Party Parliamentary Cycling Group (Get Britain Cycling).

3.4 Strategic Fit - National Planning Policy Framework

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

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

Transport and connectivity play a key role in all three of these dimensions and the NPPF contains a section which outlines this and sets out a number of key requirements in terms of planning and decision-making by local planning authorities. Much of this is about limiting the impacts of developments and improving their long-term sustainability. In relation to this project, this includes:

- The use of technology and the balancing of land use to reduce the need to travel and minimise journey lengths (e.g. walking to school and working from homes or local hubs)
- Balancing the transport system in favour of sustainable models for the movement of goods and people, including priority to pedestrian and cycle movements and access to high quality public transport
- Creating safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter
- Encouraging the reduction of congestion and of greenhouse gas emissions
- The effective use of tools including Transport Statements (TS), Transport Assessments (TA) and Travel Plans (TP)
- Protection of sites and routes which could be critical in developing infrastructure to widen transport choice
- Inclusivity, including meeting the needs of disabled people

This should be seen in the context of the imperatives for economic growth as set out in the South East LEP Growth Deal and Strategic Economic Plan.

This proposal, involving the provision of a high-quality cycle and walk route designed to attract commuting and other trips is clearly consistent with this National policy.

3.5 Strategic Fit – Kent Local Transport Plan

Kent is South East England's fastest recovering region and has great potential for successful economic growth. In the last 20 years, Kent has seen 100,000 more people living in the county, housing stock increase by over 60,000 homes and 130,000 more cars on roads. This pace of change is set to accelerate further over the next 20 years with a projected 8 per cent population increase, accompanied by the presence of two of the UK's four Growth Areas in Thames Gateway and Ashford.

Local growth alone is predicted to result in 250,000 extra journeys on Kent's roads by 2026. Coupled with a forecast increase in international traffic this leads to tackling congestion being regarded as one of the main priorities for Kent. KCC's framework for regeneration "Unlocking Kent's Potential" defines what Kent should look like in 20 years' time and includes as 1 of its 5 priorities "delivering growth without transport gridlock" - by designing communities that will encourage walking, cycling, and healthy leisure activities. Based on this Growth without gridlock: A transport delivery plan for Kent ***(see Section 3.6)*** establishes transport priorities for the next 20 to 30 years to support Kent's Environment Strategy target of reducing greenhouse gas emissions by 20% by 2020 and 80% by 2050.

Kent's third "Local Transport Plan (LTP3), 2011-16" sets out KCC's Strategy and Implementation Plans for local transport investment in the short term. It proposes a new approach to prioritising investment in transport infrastructure in order to support housing and employment in Kent's Growth Areas and Growth Points, make Kent a safer and healthier county, improve access to jobs and services, especially in disadvantaged areas, and cut carbon emissions. Its planned measures are prioritised under five themes: Growth Without Gridlock, A Safer and Healthier County, Supporting Independence, Tackling a Changing Climate and Enjoying Life in Kent. Under each theme the Plan prioritises a range of sustainable transport initiatives, by area and by mode. Whilst some of these initiatives have already been put in place or are in progress, a number of them provide the basis for the proposals prioritised by the SE LEP for capital investment support, including all those for sustainable transport. These initiatives have also subsequently been aligned with the local area development and regeneration plan produced or in the process of being produced by the 12 District or Borough Councils in the County.

The Medway Cycleway scheme strongly fits with these local policies.

3.6 Strategic Fit – Growth without Gridlock

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

The overarching goal of Growth without Gridlock is to enable growth and prosperity for Kent and the UK as a whole. Although predating the South-East LEP Strategic Economic Plan, the key elements of both are entirely in accord. This has enabled the development of an effective package of transport schemes to be brought forward as part of the Local Growth Fund investment, including the Maidstone Cycleway scheme.

Growth without Gridlock recognises that road transport is responsible for around 30% of Kent's greenhouse gas emissions and that the way forward is to provide low carbon transport options allied with better planning to reduce the need to travel, which in turn will support economic growth, housing growth and tackle climate change.

The Plan states that: "the private car will continue to remain the most popular and dominant form of transport for our residents and these expectations and demands increase pressure on our transport network, on our environment and on us as individuals. This reliance is also the reason why our road network is congested and in response our vision is to create a high quality integrated transport network which will create opportunities for real transport choice as well as enabling economic growth and regeneration". Some of the key transport challenges identified by the Plan are:

- Transferring existing and new car trips onto public transport, walking and cycling, especially for short journeys;
- Tackling congestion hotspots;
- Integrating rail services and improving connectivity between stations; and
- Providing sufficient transport infrastructure to mitigate the impact of the planned development including walking and cycling routes.

3.6.1 Maidstone is identified in *Growth without Gridlock* as a Growth Point, with ambitious plans for growth in housing and jobs (see 3.9 below). These ambitions are augmented by further growth plans in the neighbouring borough of Tonbridge and Malling. *Growth without Gridlock* identifies both congestion and air quality issues which will constrain the planned growth. In particular, there are congestion 'hot-spots' in and around the town centre.

A number of specific proposals are identified to address this. In relation to the Maidstone Cycleway scheme the relevant action, to which this scheme contributes significantly, is:

Improved walking and cycling networks, supported by travel plan requirements for major new developments

The delivery of this imperative by this scheme, in the context of wider schemes, is set out in Figure 6 – Scheme Causal Chain. The scheme is complementary to the planned improvements to the Maidstone Gyratory, a scheme which is also in receipt of Local Growth Funding through SELEP. By reducing the number of car trips made, especially at peak time, the cycleway will help 'lock in' the benefits of the gyratory investment. The cycleway scheme is itself complemented by the Local Sustainable Transport Fund scheme (also LGF funded) which will encourage people to use the route, further improving its effectiveness.

3.7 Strategic Fit - South Eastern Local Enterprise Partnership

Local Enterprise Partnerships (LEPs) are voluntary partnerships between businesses and local authorities which are intended to determine economic priorities for an area and to take a lead in fostering economic growth and creating jobs. There are 39 LEPs in England.

The South East LEP (SELEP) is one of the biggest, encompassing Thurrock, Essex and Southend to the north of the Thames, along with East Sussex, Kent and Medway to the south.

Each of the LEPs was invited by Government to submit Strategic Economic Plans (see Section 3.8) as the basis for negotiating a portion of the Local Growth Fund (LGF) to be allocated over the period between 2015 and 2021. Although the initial amount, to be announced in July 2014, is £1.4bn, this funding stream is expected to be up to £2bn per year for the six year period. Clearly this will depend on the Government Spending Reviews and on any change of Government on 2015.

This process is linked to the devolution of local major scheme funding decisions, previously decided by DfT, to LEPs. Although the precise details are not yet clear, the application of the Transport Business Case process and the transport appraisal guidance (WebTAG) is expected to continue, though their use is intended to be 'proportionate'.

The SELEP Growth Deal and Strategic Economic Plan emphasises the importance of 'investment in our transport growth corridors/areas'. This is alongside the four other themes of 'building on our economic strengths'; 'boosting productivity',' improving skills' and 'building more houses and re-building confidence'. Clearly in each of these four themes, transport and connectivity have an additional role to play.

3.8 Strategic Fit – Strategic Economic Plan

Published in March 2014, the SELEP Strategic Economic Plan (SEP) sets out the investment strategy for the area. This document includes the SELEP bid for Local Growth Fund, the primary source of funding for this project.

A component element of this is the Kent and Medway Growth Deal which sets out plans for the public and private sectors intent to invest over £80 million each year for the next six years to unlock our potential through:

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

The SEP involves delivering the biggest local transport programme in the country to realise the potential of the growth corridors and sites, transforming connectivity for our businesses and residents unlocking jobs and homes, and bringing substantial benefits to the UK economy;

As part of the overall growth programme for 200,000 new private sector jobs and 100,000 new homes, there are specific plans for 7,000 jobs and 8,500 homes on the London-Maidstone-Ashford Corridor over a six-year period.

These plans are supported through a programme of transport investment. This in turn includes:

- A request for Government commitment to deliver specific national rail network, motorway, and national trunk road investments by agreed dates and;
- A corresponding commitment from local authorities and private developers to meet a significant proportion of the costs

These are complemented by proposals for local sustainable transport funding to ensure that growth occurs in a sustainable manner, including the 'locking in' of benefits from highway and other investments.

£154.2m of SEP Local Growth Fund investment in transport schemes over the six year period will be focused on capital investments in sustainable transport measures, and in 2015/16 this amounts to £43.6m. The Maidstone Cycleway scheme (referred to as *Sustainable Access to Maidstone Employment*) is a part of this programme of complementary sustainable transport investment.

Maidstone Programme

The SEP recognises that Maidstone's future growth will require significant investment in transport infrastructure, which is vital to sustain the town's role as a major retail and employment centre. The key elements taken forward as part of the LGF settlement, designed to unlock sites for employment and housing development are:

- A gyratory relief scheme to overcome the severe constraints inherent in the highway network;
- The Medway Cycleway (this scheme);
- A package of complementary Local Sustainable Transport Funding initiatives as part of the wider West Kent LSTF scheme;

A further scheme involving an integrated transport package (including key junction and road capacity improvements and enhanced public transport) is currently being developed for the Borough.

Appraisal and Business Case Preparation

The SEP sets out the process through which schemes will be identified, appraised and prioritised for delivery. This process if based on the HM Treasury 5-Case Model. For transport schemes, the SELEP has adopted the Assurance Framework agreed between the former Local Transport Board and the Department for Transport (DfT). For smaller schemes, this sets out a 'light touch' approach geared towards the following:

- Value for Money – based on BCR and wider Economic Benefits.
- Environmental and Community Impact – Potential benefits and adverse impacts.
- Contribution to Objectives – LTP, SE LEP and SELTB Objectives.
- Deliverability – affordability. Practicality, key risks, stakeholder and public support

This Transport Business Case is designed to conform to this process.

3.9 Strategic Fit – Local Plans (Housing and Employment Growth)

Growth plans in the Maidstone and Tonbridge & Malling areas are ambitious and contribute to the targets set out in the SEP. It is important that these developments take place in a sustainable manner.

Along with the National Planning Framework (see Section 3.3), the Town and Country Planning Act 2012 set out requirements for Local Planning Authorities to develop and adopt Local Plans which set out the strategic priorities for the development of the area. This process replaced the previous arrangements put in place in 2004 for Local Development Frameworks.

The Local Plan for Maidstone is still in preparation and some key elements, including the size and location of housing developments, have not been fully defined. Whilst this makes it difficult to be precise about the growth in trips which will be served by the Medway Cycleway, it is clear that significant growth (around 980 homes/year) will take place and that many trips generated by existing and new housing developments will terminate at employment and education sites (including in Maidstone Town Centre) which are served by the cycleway. Many of the housing and employment sites identified in the draft plans are close to the route and the scheme has been designed largely with this in mind, as shown in Figure 4 below.

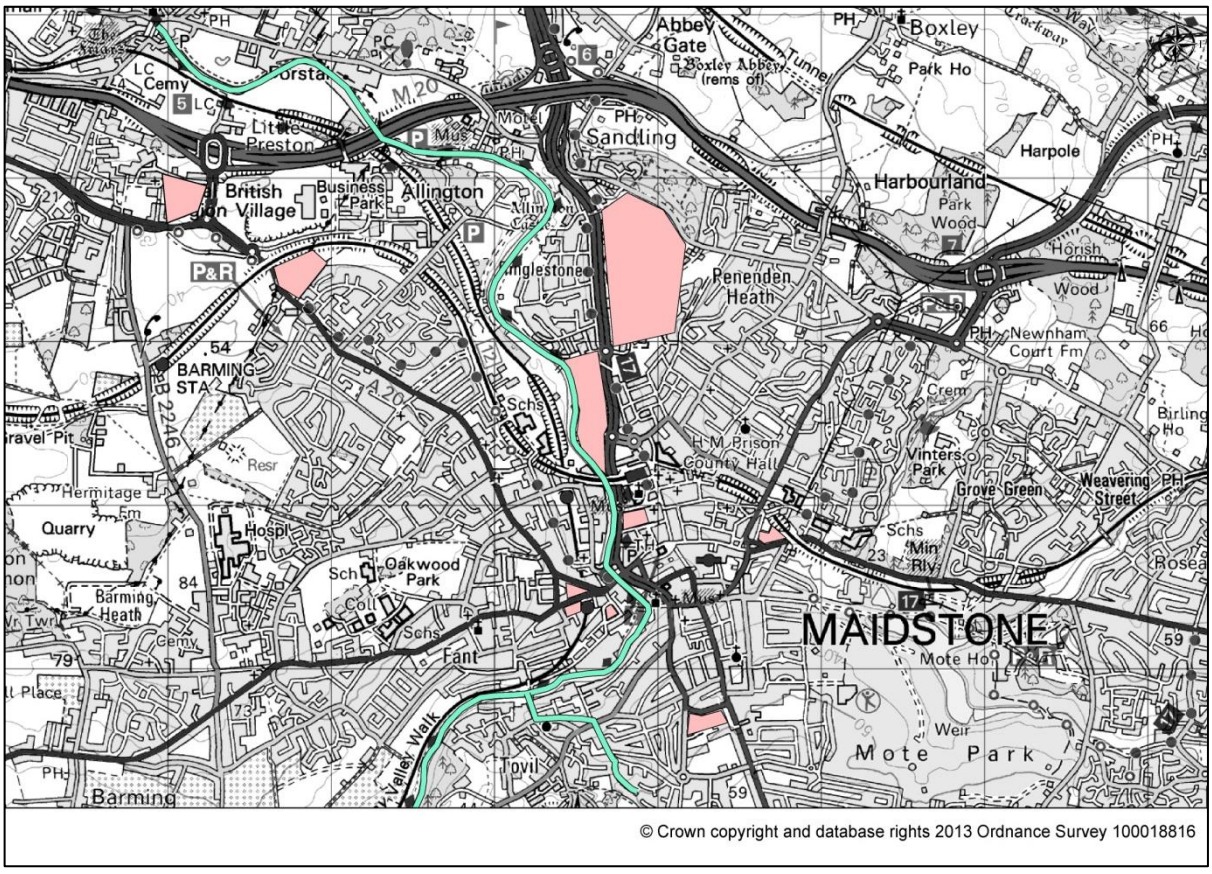


Figure 4 - Housing Growth Areas - Maidstone

The route also serves sites identified in the Tonbridge and Malling Local Plan, based on the LDF which was adopted in 2007. This plan includes an explicit policy (Policy CP2; Sustainable Transport) encompassing elements intended to ensure that new developments likely to generate significant numbers of trips should be located and developed such as to ensure that trips can be undertaken by sustainable modes (including walk and cycle). This scheme is designed to provide the facility to achieve this for sites close to the route, including a number of existing and proposed developments near the Aylesford end of the route. Trips generated by these locations have been incorporated in the demand projections set out in Section 4.6.

3.10 Strategic Fit – Valley of Visions

The Valley of Visions Landscape Partnership brings together organisations from the public, private and voluntary sector to: -

- Ensure that the unique character of the Medway Gap is conserved, understood and enjoyed by local people and visitors of all ages and backgrounds.
- Build confidence and capacity to ensure that residents and businesses can actively engage in decision making and management.

The Valley of Visions Landscape Partnership Scheme is primarily funded by the Heritage Lottery Fund and delivered through the Kent Downs Area of Outstanding Natural Beauty (AONB) unit.

Valley of Visions is working on a variety of projects with communities, landowners and local groups to conserve the landscape, wildlife and rich heritage of the area and encourage communities to learn about, enjoy and celebrate their local area.

The Valley of Visions Partnership fully supports the development of the River Medway Shared Use Footpath and has significantly assisted the development of the scheme through the commissioning of an Options Study[1].

The access to the area provided by the path, as well as the additional usage of the path by commuters and others, are entirely consistent with the goals of the Valley of Visions Partnership.

[1] Options Appraisal for a Shared Use Footpath by the River Medway Allington Lock to Aylesford Village. Valley of Visions Partnership 2011.

3.11 Case for Change - Rationale for the Scheme

The key rationale for the scheme is primarily in its role in supporting the planned growth in housing and employment, helping ensure that this takes place in a sustainable manner. This is within the following context:

- Housing and employment growth (and resultant activities such as education and shopping) will generate additional trips in the area;
- Investment in the highway network (especially the Maidstone Gyratory scheme) is designed to cater for these additional trips, enabling the developments to take place;
- The benefits of these investments can be 'locked in' if a proportion of the trips can be undertaken by sustainable modes, including public transport, walking and cycling;
- This 'locking in' will ensure that growth can continue as planned and not become unsustainable through rising congestion

In order to achieve this, safe, attractive and direct routes for walkers and cyclists are required. This will attract users who would normally travel by car, especially if traffic-free routes can be designed to provide car-competitive journey times. Although the River Medway offers the potential for such traffic-free routes, the current alignment and quality of the existing paths precludes their use for commuting, especially during the winter.

The Medway Cycleway scheme is designed to address this by:

- Providing a high quality route which uses the river corridor to avoid traffic and traffic congestion. This will provide car-competitive journey times for cyclists, attracting commuters and other users with time constraints;
- Linking into existing and planned housing, employment and education locations along the river, including Maidstone Town Centre;
- Providing an attractive, direct route for all cyclists and pedestrians, whether travelling for work, education or leisure.

There are over 7,126 households, 3,165 Business's and 7 schools within 1km of the route. The Planned 10 year growth on the corridor includes 3,880 homes (980 new homes per year) with approximately 3,000 jobs. By capturing a proportion of these trips, the impact of the growth will be reduced. The cycleway scheme will enable this housing/jobs growth to be achieved and to be achieved in a sustainable way. The carbon emissions generated by the new trips will also be

A further significant issue is that active travel provides major health benefits, both in terms of reduced mortality and better overall health, leading in turn to higher productivity. The scheme will encourage cycling and walking, transferring many trips which would otherwise be made by car. The health benefits achieved by this are a significant part of the rationale for the scheme.

The route serves a number of areas which are relatively deprived, as shown in the Index of Multiple Deprivation map in Figure 5. By providing safe, direct access to employment and education, the benefits to these communities will be significant, enabling people to access jobs, training and other services without the need to own a car.

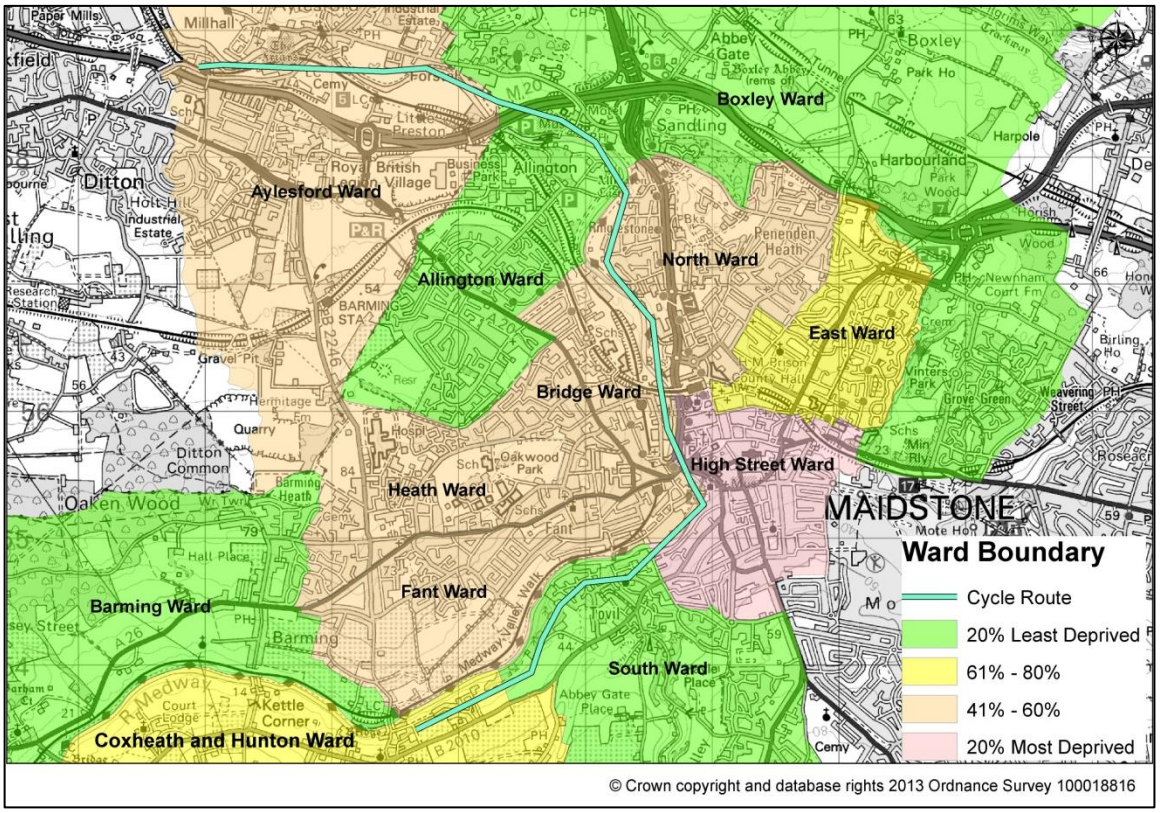


Figure 5 - Index of Multiple Deprivation

The scheme is also designed to encourage leisure and tourism, including linkage to the NCN17 long-distance route. As well as further enabling active travel (with its health benefits), visitors to the area will help support local businesses, including those within Maidstone Town Centre.

3.12 Causal Chain

In order to present the scheme and its objectives in its overall context, a Causal Chain has been prepared.

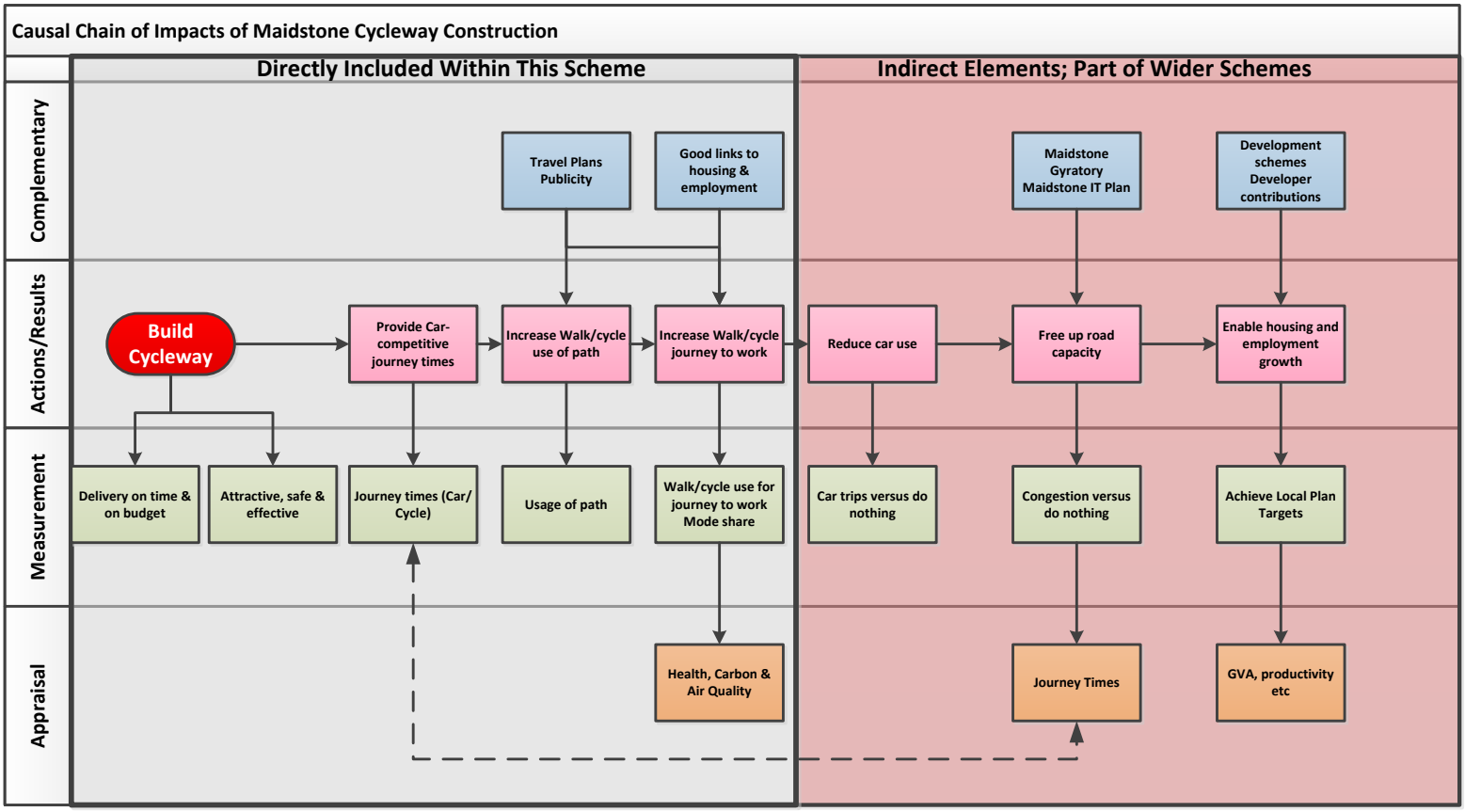


Figure 6 – Scheme Causal Chain

Table 1 - Summary of Appraisal Criteria

	Impacts	Inclusion in SOC	Design Development (Later Stages)
Economy	Business users & transport providers	Journey time based. Calculated in conjunction with Gyratory and LSTF schemes	Revision to take account of housing/jobs in Maidstone Local Plan (draft stage at present)
	Reliability impact on Business users	Journey time reliability identified as a benefit but not quantified.	Response from LEP and other stakeholders will reinforce case, though this is unlikely to be quantifiable
	Regeneration	Housing and employment growth projections included within cost/benefit calculation	Any revisions to forecasts will be incorporated
	Wider Impacts		
Environmental	Noise	Qualitative appraisal alongside Gyratory and LSTF schemes	Refinement as housing/jobs plans developed and as Gyratory is designed
	Air Quality		
	Greenhouse gases	GHG calculated using DfT Carbon Toolkit	Revision to take account of housing/jobs in Maidstone Local Plan (draft stage at present)
	Landscape	Landscape issues central to design of cycleway	Will be refined as design progresses
	Townscape	Linkage to Maidstone town centre will be key part of design process	Will be refined as design progresses
	Historic Environment	Not assessed at this stage	Will require assessment as scheme is developed
	Biodiversity	Biodiversity and water/riparian issues central to design of cycleway	Will be refined as design progresses
	Water Environment		
Social	Commuting and Other users	Journey time based. Calculated in conjunction with Gyratory and LSTF schemes.	Revision to take account of housing/jobs in Maidstone Local Plan (draft stage at present)
	Reliability impact on Commuting and Other users	Journey time reliability identified as a benefit but not quantified.	Response from LEP and other stakeholders will reinforce case, though this is unlikely to be quantifiable
	Physical activity	Key element of scheme, appraised using WHO HEAT tool, plus adjustment for other benefits	Limited assessment of local walk/cycle routes and impact on physical activity to be done later
	Journey quality	No specific assessment but overtaking opportunity will enhance journey quality	Revision to take account of housing/jobs in Maidstone Local Plan (draft stage at present)
	Accidents	Incorporated as qualitative factor and important part of design	Will be refined as design progresses
	Security	Incorporated as qualitative factor and important part of design	Will be refined as design progresses
	Access to services	Improved journey times and reliability will enhance access. Scheme will improve non-car access to services, including rail stations.	Will be refined as design progresses
	Affordability	Indication that scheme can be funded from Local Growth Fund & S106	Will be reappraised as scheme design progresses
	Severance	Scheme will reduce severance from river, strategic highways and local roads	Will be refined as design progresses
	Option and non-use values	Will have positive benefit, calculated as qualitative factor	Will be reappraised as scheme design progresses

	Impacts	Inclusion in SOC	Design Development (Later Stages)
Public Accounts	Cost to Broad Transport Budget	Encompassed within this SOC	Will be reappraised as scheme design progresses
	Indirect Tax Revenues	Encompassed within this SOC	Will be reappraised as scheme design progresses

3.13 Summary of Scheme Objectives

The scheme will provide an attractive, direct, traffic-free route for walkers and cyclists to travel between housing and employment locations. The scheme itself runs between Aylesford Village (to the north of Maidstone) and Barming and links into existing paths and roads to provide good access to a large number of sites, including Maidstone Town Centre.

The journey times achievable by cyclists on the route will in many cases are faster than can be achieved by car, capturing existing and future commuters. Current targets are 100,000 trips per year by 2018. Usage will be encouraged by complementary measures, including publicity and travel plans.

Active travel will provide health benefits and the reduced car trips will reduce CO2 emissions. The Economic Case uses the WHO HEAT tool and the DfT Carbon Toolkit to calculate the most significant economic benefits, which have been subsumed into the DfT Active Mode Appraisal Toolkit. The latest version available references the May 2014 Databook and clarity has been sought from DfT, although it is assumed that there will be minimal, if any, significance.

This and other sustainable initiatives (including public transport and other walk/cycle improvements) will reduce car trips and complement highway investment, freeing up road space and improving overall journey times for all road users.

This freeing-up of road space will support the plans for growth in jobs and housing in the area, contributing to overall economic growth.

The above objectives are set out in the Causal Chain (see Figure 6) and are summarised in the table below which has been used for the initial Options Appraisal set out in Section 4.4.

Table 2 - Scheme Objectives

Primary Objectives	***1. Increase cycle and walk trips through the construction of a new/improved path between Aylesford and Barming*** • Increase journey to work by cycle/walk • Increase cycle/walk for other trips, including education and leisure • Provide car-competitive journey times for cycle users • Estimated 100,000 trips per year, based on experience of similar schemes
Secondary Objectives	***2. Deliver a sustainable scheme*** • Limit long-term maintenance liabilities ***3. Delivery of an attractive, safe and effective scheme*** • Providing safety and security for all users • Providing safe, direct and attractive routes on the route and onto and off the cycleway at suitable points ***4. Enhance the local environment*** • Avoid construction in designated areas of the river, including managed retreat • Maintaining or improving the local environment around the scheme

Scheme Scope:

- The scheme will deliver the route improvement, including undertaking all necessary actions to ensure its suitability for a riparian location. This encompasses environmental aspects, flood resilience, maintainability, safety, security, attractiveness and usability.
- The planning of the scheme is encompassed within the context of the Valley of Visions Landscape Partnership scheme.
- Links into existing rights of way (including the highway network) are included within the scheme. Improvements to these linked routes are not included within the scheme itself but will be identified for inclusion within related schemes such as the Maidstone Gyratory Improvement Scheme.
- Further links to the route from within development schemes (e.g. housing, employment, healthcare, leisure, retail, education etc. developments) are not included within the scheme but will be identified through the planning and development control processes to ensure that they are identified, funded and delivered separately in order to improve connections to the route.

- The selection of route has been undertaken in part to optimise the maintainability of the route. However, maintenance is not included in the scheme costs. Maintenance will be undertaken through established processes and budgets for highway and rights of way maintenance by Kent County Council and the Maidstone and Tonbridge and Malling Borough Councils.

3.14 Critical Success Factors (CSFs)

The key CSFs for the Maidstone Cycleway Scheme project, using the 5-Case Model headings are as follows:

- **CSF1: Strategic Fit (Strategic Case)**
  - Reduced car use and increased active travel;
  - Enables sustainable development (housing; employment) to take place;
  - Locks in benefits of other transport investments in Maidstone and surrounding area;
  - Improved public health through active travel;
  - Reduces CO_2 emissions;
- **CSF 2: Value for Money (Economic Case)**
  - Maximises return on investment, striking a balance between the cost of delivery and the cost to the economy of non-delivery.
- **CSF 3: Achievability (Commercial Case)**
  - Deliverable utilising current engineering solutions
  - Limits long-term maintenance liabilities
- **CSF 4: Affordability (Financial Case)**
  - Deliverable within the likely capital funding available;
  - Revenue liabilities for the option are affordable within current budgets.
- **CRF 5: Timescale for Implementation (Management Case)**
  - Deliverable within the timescale during which funding is likely to be available.

3.15 Interdependencies

This scheme is seen as important in locking in the benefits of another LGF scheme, Maidstone Gyratory Bypass. However, in terms of this appraisal it is seen as stand-alone and not subject to any dependencies.

3.16 Stakeholders

Stakeholders have been defined and analysed in relation to:

- All stakeholders, categorised in terms of their interest in the scheme how they will be engaged with and consulted through the design and delivery process

- Further analysis of stakeholders benefitting from the scheme. These scheme beneficiaries have been mapped against the scheme objectives, enabling consultation to be targeted effectively and assisting in framing the Benefits Realisation Plan for the scheme.

3.16.1 Stakeholder Categorisation

Category	Detail
Beneficiary	Stakeholders which will receive some direct or indirect benefit from the scheme. For details see separate table
Affected	Stakeholders which are directly affected by the scheme in terms of its construction or operation
Interest	Stakeholders with some interest in the scheme though not affected directly by its construction or operation
Statutory	Stakeholders with a statutory interest in the scheme, its construction, operation or wider impacts
Funding	Stakeholders involved in the funding of the construction or operation of the scheme

3.16.2 Engagement Categories

Category	Detail
Intensive consultation	Stakeholders who are directly affected by the scheme and whose agreement is required in order for the scheme to progress. Consultation throughout the design and implementation.
Consultation	Stakeholders who are affected by the scheme and can contribute to the success of its design, construction or operation. Consultation at key stages
Information	Stakeholders with some interest in the scheme or its use. Information to be provided at appropriate stages

Stakeholder Matrix

Stakeholder	Categories	Engagement and Consultation	Comments
Scheme users	Beneficiary	Consultation Information	Through established mechanisms. Focus on scheme design, construction and operation
Rights of way users	Beneficiary Affected	Consultation Information	
Other road users	Beneficiary Affected	Information	
Wildlife groups	Interest	Consultation	
Access and rights of way groups (including cycling)	Interest	Consultation	
Disabled access groups and individuals	Interest Affected	Consultation	
Riparian landowners	Affected	Intensive consultation	Specific consultation dependent on interest in relation to scheme design
Other landowners	Affected	Intensive consultation	
Elected Members	Interest	Intensive consultation	
Local authorities	Beneficiary Statutory	Intensive consultation	County, District & Parish
NHS (& local authorities in relation to Public Health)	Beneficiary Statutory	Intensive consultation	All levels. May involve funding
Environment Agency	Statutory	Intensive consultation	Specific consultation
River navigation and recreational users	Affected	Consultation	Through established River

Stakeholder	Categories	Engagement and Consultation	Comments
Fishing users	Affected	Consultation	Medway Users Association
Local Enterprise Partnership	Beneficiary Funding	Information	Through LGF Business Cases & progress reports
Developers	Beneficiary Affected	Consultation	Only as relevant to scheme
Residents adjoining route	Beneficiary Affected	Information	
Businesses adjoining route	Beneficiary Affected	Information	Travel plan contact as part of benefit realisation plan
Wider business community	Beneficiary	Information	As part of wider LGF consultation
Wider community	Beneficiary	Information	
Local taxpayers	Beneficiary	Information	
Tourists and visitors	Beneficiary	Information	Through established channels

3.16.3 Benefit Stakeholders and Relationship to Scheme Objectives

Investment Objectives	Main benefits Criteria by Stakeholder
Investment Objective 1A Increase the number and proportion of trips being made to work by walk and cycle;	**Users** Health benefits through active travel Financial benefits through less need to own or use a car Improved access to employment and other services for those without cars **Other Road Users** Reduced congestion due to fewer car trips **Local Authorities, NHS and Local Enterprise Partnership** Public health benefits of active travel Locking in the decongestion benefits of transport investment in Maidstone area Improved attractiveness of the area for inward investment and job creation Improved attractiveness of the area for housing **Developers and Employers** Ability to develop schemes without excessive planning conditions Ability to create employment and attract employees
Investment Objective 1B Increase the number and proportion of trips being made for other purposes by walk and cycle;	
Investment Objective 2 Deliver a financially sustainable scheme which limits long-term maintenance liability	**Local Taxpayers** Reduced demand on local taxation **Local Authority** Reduced budgetary demands
Investment Objective 3A Provide safety and security for all users	**Users and their families** Personal safety and security for users of the route and their families **Local authority & Local Enterprise Partnership** Maintaining the attractiveness of the area for jobs and housing
Investment Objective 3B Provide safe, direct and attractive routes on the route and onto and off the cycleway at suitable points	**Users** Easy, safe and direct access to employment and services via the cycleway **Local residents and businesses** Maintenance of the attractiveness and utility of the area **Local authority & Local Enterprise Partnership** Locking in the decongestion benefits of transport investment in Maidstone area Improved attractiveness of the area for inward investment and job creation Improved attractiveness of the area for housing

Investment Objectives	Main benefits Criteria by Stakeholder
Investment Objective 4 Maintain or improve the local environment around the scheme	**Local residents and businesses** Maintaining the attractiveness of the area Preserving and improving the natural and built environment **Local authority** Meeting statutory duties **Local Enterprise Partnership** Maintaining the attractiveness of the area for investment, jobs and housing

4 Economic Case

4.1 Introduction

In accordance with the Capital Investment Manual and requirements of HM Treasury's Green Book (*A Guide to Investment Appraisal in the Public Sector*), this section of the SOC documents the options that have been considered in response to the potential scope identified within the strategic case.

Whilst this scheme is expected to contribute to the wider economic development of the area, it is focused on increasing the number of trips (especially commuter trips) made between residential locations and local employment and education locations and other services and facilities in the area. As set out in Figure 6 – Scheme Causal Chain, this will provide health benefits for user of the path, reductions in CO_2 emissions and (in conjunction with complementary schemes) will contribute to decongestion benefits. These in turn will enable economic growth in the area, especially in terms of jobs and housing. Consequently the Economic Case is focused on these specific benefits.

4.2 Background

The objectives set out in the Strategic Case, along with their expression as stakeholder benefits, provide a framework for what the scheme must achieve. These Critical Success Factors (CSFs) in turn provide the basis for the appraisal of the scheme. In line with HM Treasure guidance these CSFs are categorised according to Strategic Fit, Value for Money, Achievability, Affordability and Timescale. These effectively map onto the 5-case model, enabling the scheme and its options to be appraised and compared in order to identify the most effective solutions.

The following subsections describe the scheme options, their advantages and disadvantages and whether they have shown sufficient merit to take forward for more detailed economic appraisal. A summary of the options, mapped against the scheme objectives and CSFs is provided.

Following this, the approach towards more detailed economic appraisal is described, followed by the scheme option appraisal itself.

An Appraisal Summary Table, setting out the key issues relevant to this scheme is provided. Although some aspects of this (including the economic appraisal) have been explored at this (Strategic Outline Case) stage, other aspects will not be explored in detail until Outline Business Case or Full Business Case stage.

4.3 Appraisal Assumptions

With devolution of major scheme approval to Local Enterprise Partnerships, it is important that an approach to appraisal is used which gives regard to local priorities (especially in enabling investment, job creation and housing construction). This must be done with due regard to standard practice, which in transport terms means the use of WebTAG guidance. Discussions with the Department for Transport have indicated that a 'proportionate' approach to WebTAG should be used. Kent County Council has held discussions with the South East Local Enterprise Partnership, in the light of Government Guidance[2], on how the appraisal of devolved small major schemes should be handled. As a result of this the following approach has been used for this Strategic Outline Case:

- All anticipated scheme design and delivery costs (as set out in Section 6) have been calculated as accurately as possible, given the relatively early stage of the design;
- In line with WebTAG principles, an 'optimism bias' of has been added to the costs;
- As the design process progresses, this 'optimism bias' will be replaced by quantified project risk estimates.

4.4 Options Considered

A comprehensive Options Appraisal was prepared by consultants on behalf of the Valley of Visions Landscape Partnership Scheme (December 2011). This is a lengthy document and has not been appended to this Transport Business Case, though is available from Kent County Council.

Since the publication of this Options Appraisal, further considerations by Kent County Council have led to a change to the preferred option. The summary analysis below encompasses these further considerations.

The key elements identified in the original Options Appraisal and subsequent reconsideration have been analysed against the scheme objectives and critical success factors and have been incorporated into a table at the end of the summary analysis.

[2] Growth Deals; Initial Guidance for Local Enterprise Partnerships. HM Government July 2013

Option 1.1: Do Nothing

Description

This option will leave the existing pathway along the River Medway unchanged. The path is seriously degraded in parts and unsuitable for cyclists.

Advantages

There will be no expenditure on the route;

Disadvantages

There will be no improvement in the route for walkers or cyclists;

As a result there will be no increase in the access to employment or other services;

This will jeopardise the long-term feasibility of the jobs and housing creation planned for the area

Conclusion

The 'do nothing' option is rejected.

Option: Not carried forward but used as 'baseline' for appraisal

Option 1.2: Upgrade to the existing path on the north bank of the River Medway

Description

This option will upgrade the existing riverside path on the north bank of the River Medway. This involves minor improvements (including signage) to sections which are already well surfaced. Sections which are severely degraded will need significant works, in some cases involving the provision of a new walkway where the proposed route is constrained. A link to the Forstal area is an important part of ensuring that this option can deliver the required links to employment sites.

Note that following further considerations subsequent to the original Options Appraisal this has become the preferred option. The reasons for this are included in the Advantages and Disadvantages within this option and in Option 1.6 which was the original preferred option.

Advantages

The required route upgrade and links to employment sites will be achieved;

The route will be sufficiently attractive to deliver the required increases in walk/cycle;

The proposal will avoid the need for future repairs to the existing river wall to protect adjoining land and keep the river channel open for navigation;

Owners have agreed in principle to the proposal;

The use of an existing footpath will avoid the ongoing maintenance liability of a new path on the south bank;

This option avoids the construction of a new bridge (Option 1.6), with its ongoing maintenance liability and location within 'managed retreat' (Medway Shoreline Management Plan)

Disadvantages

Expenditure would be approximately £2.9m

High impact construction requiring extensive river walkway construction and specialist marine contractor

Conclusion

Option 1.2 is the preferred option in terms of delivery of overall goals, management of risks and the long-term maintainability of the scheme.

Option: Preferred Option

Option 1.3: Upgrade to the existing path on the north bank of the River Medway, with diversion of part of route onto Forstal Road

Description

This option is a variant of Option 1.2 and is designated as such in the Options Appraisal. In order to avoid one of the more constrained sections of riverbank, the proposal involves taking the route away from the river, through the Forstal employment area and along a section of Forstal Road before re-joining the river near the former dock at Travis Perkins. This reduces the amount of walkway construction required (in comparison with Option 1.2).

Advantages

The required route upgrade and links to employment sites will be achieved;

The proposal will avoid the need for future repairs to the existing river wall to protect adjoining land and keep the river channel open for navigation;

The use of an existing footpath will avoid the ongoing maintenance liability of a new path on the south bank;

This option avoids the construction of a new bridge (Option 1.6), with its ongoing maintenance liability and location within 'managed retreat' (Medway Shoreline Management Plan)

Disadvantages

Extremely difficult to secure land for access to Forstal Road

Expenditure would be approximately £2.5m

High impact construction requiring some river walkway construction and specialist marine contractor

Forstal Road is a very busy road and it is likely that the loss of off-road access will reduce the attractiveness of the route, leading to failure to achieve the required usage increases

Conclusion

Although this option would deliver at lower cost, it is likely that it will not achieve the project goals and may be subject to significant delays through land purchase issues.

Option: Option not carried forward

Option 1.4: Upgrade existing path on south side of River Medway

Description

This option uses existing paths to the south of the River Medway, though some sections of the route are a considerable distance from the river, including a significant diversion adjacent to an industrial estate (20/20 Business Park). The route includes a level crossing across the Medway Line with poor sightlines and user-operated gates. A further variant to this route (not separately appraised) involves a second level crossing to bypass the diversion around the industrial estate.

Advantages

Construction expenditure is limited to £1.4m;

Access to the 20/20 Business Park would be provided;

Disadvantages

Some sections are narrow and the woodland sections of the route are oppressive, affecting perceived personal security and amenity;

Difficult to upgrade bridges on woodland section;

Amenity and safety will be compromised, either with rail level crossings or diversions;

Land acquisition uncertain, with potential for delay in project delivery;

The reduced amenity makes it unlikely that usage targets can be met

Conclusion

This option is not considered suitable, though it is possible that separate upgrades to routes in this area (improving access to the 20/20 Business Park) could be the subject of a later scheme.

Option: Not carried forward

Option 1.5: Upgrade existing path on south side of River Medway (avoiding level crossing)

Description

This option also uses existing paths to the south of the River Medway, with a variant to the route which avoids the level crossing. This involves a woodland path and the use of an existing footbridge over the railway. The same variant to this route (not separately appraised) involves a level crossing to bypass the diversion around the industrial estate.

Advantages

Construction expenditure is limited to £1.2m;

Access to the 20/20 Business Park would be provided;

Disadvantages

The some sections are narrow and the woodland sections of the route are oppressive, affecting perceived personal security and amenity;

Significant work to improve access to railway footbridge;

Steep gradients and difficult to upgrade bridges on woodland section;

Land acquisition uncertain, with potential for delay in project delivery;

The reduced amenity makes it unlikely that usage targets can be met

Conclusion

This option is not considered suitable, though it is possible that separate upgrades to routes in this area (improving access to the 20/20 Business Park) could be the subject of a later scheme.

Option: Not carried forward

Option 1.6: New path on south bank and new footbridge over river

Description

This involves a new path (currently used informally) on the south bank, adjacent to the river and skirting arable land. A new footbridge would be constructed just upstream of the Travis Perkins dock. Although this was the preferred option from the original Options Appraisal, further consideration has led to Option 1.2 becoming the preferred option.

Advantages

The required route upgrade and links to employment sites will be achieved;

The route is expected to be sufficiently attractive to deliver the required increases in walk/cycle;

Disadvantages

Capital Cost of £2.8m;

The new bridge would be constructed on land which is within "managed retreat" land in the Medway Shoreline Management Plan;

The proposal will involve the need for future repairs to the existing river wall to protect adjoining land and keep the river channel open for navigation;

This option involves the construction of a new bridge, and a new right of way, with ongoing maintenance liability

Conclusion

This option is not considered sustainable in the long terms.

Option: Not carried forward following subsequent appraisal of future maintenance liabilities

The table below summarises this analysis against the objectives and success factors of the scheme:

Table 3 - Summary of Scoping Options

Reference to:	Option 1.1	Option 1.2	Option 1.3	Option 1.4	Option 1.5	Option 1.6
Description of Option:	**Do Nothing**	**North Bank Path Upgrade**	**North Bank Diverted Path (Forstal Rd)**	**Medway Valley Path – South Side Upgrade**	**Medway Valley Path via Rail Bridge**	**South Bank Path with Footbridge**
Investment Objectives						
1A Increased travel to work (walk/cycle)	×	✓	×	×	×	✓
1B Increased travel to other (walk/cycle)	×	✓	×	×	×	✓
2 Financial sustainability	✓	✓	✓	✓	✓	×
3A Provide safety and security for all users	✓	✓	×	×	×	✓
3B Safe, Direct Access	✓	✓	✓	×	✓	✓
4 Environment	✓	✓	✓	✓	✓	×
Critical Success Factors						
Strategic Fit	×	✓	✓	×	×	✓
Value for Money	**N/A**	✓	✓	✓	✓	✓
Potential Achievability	✓	✓	×	×	×	×
Potential Affordability	✓	✓	✓	✓	✓	✓
Timescale for Implementation	✓	✓	×	×	×	×
Summary	**Discounted**	**Preferred**	**Discounted**	**Discounted**	**Discounted**	**Discounted**

* Will be included in the detailed design stage and reported in OBC

4.5 Economic Overview

As set out in the Strategic Case, this scheme represents an important complementary measure in supporting the development of jobs and housing in the Maidstone area. It provides a means for commuters to choose to walk or cycle on an attractive, direct and safe route, often achieving faster commute times than are available by car.

However, at £3m, it is in itself a low-value scheme which cannot justify a fully WebTAG compliant economic appraisal as required for schemes above £5m. In addition, the complementary nature of the scheme does not lend itself to such an appraisal in isolation. Consequently the Economic Case for this scheme is focused on:

- The direct benefits of the scheme, including health economic benefits and greenhouse gas emission savings stemming from usage of the new pathway, especially usage involving transfer from car.
- Qualitative appraisal of the wider benefits in the context of the planned developments in the area, major transport schemes in the area (including the Maidstone Gyratory) and complementary sustainable transport schemes (including those being introduced as part of the Local Sustainable Transport Fund). These benefits include decongestion benefits which are impossible to attribute to individual scheme components.
- Direct scheme construction costs, not taking into account any additional measures such as travel planning or improved connectivity from new developments.

For the purposes of this small scheme, the direct employment benefits (i.e. people employed in constructing the scheme) have not been calculated, though these may be aggregated into the direct employment generated by the LGF programme as a whole.

As detailed in the Causal Chain, the benefits of the scheme and the overall approach to the appraisal of these are as follows:

Table 4 - Key Appraisal Elements

Appraisal Item	Direct/ Indirect	Approach to Appraisal
Social - Health benefits from active travel using the path	Direct	Use of World Health Organisation HEAT tool to calculate health economic benefits, based on usage projections
Journey Quality	Direct	Use of recommended WebTAG approach as set out in TAG A5.1
Decongestion and other benefits from mode-shift	Direct	As detailed in Webtag A5.4 (Marginal External costs)
Economy - Journey time reduction on highway network (decongestion)	Indirect	Estimates based on package of schemes, including Maidstone Gyratory and other sustainable transport schemes (including LSTF)
Economy - Wider economic benefits (GVA, productivity etc.)	Indirect	Not calculated separately – incorporated in above transport economic benefits.

In addition to these, a number of other key benefits have been taken into account and included in the Appraisal Summary Table alongside less detailed commentary on all relevant aspects:

Table 5 - Additional Appraisal Elements

Appraisal Item	Direct/ Indirect	Approach to Appraisal
Economy - Regeneration	Indirect	Narrative approach based on enabling development of the area, linked to other initiatives. Includes tourism.
Environmental – Landscape/Townscape	Direct	Narrative approach based on improvement to the local area through design, planning and consultation processes
Environmental – Flooding & Flood Resilience	Direct	Narrative approach based on improvements to flood resilience through design, planning and consultation processes
Social - Inclusion	Direct	Narrative approach based on provision of improved access to employment, training and education without the need for a car
Social – Road Safety	Direct	Narrative approach based on design/audit of safe links into highway (including Maidstone Gyratory) and rights of way network
Social – Security of users	Direct	Narrative approach based on sound design, backed by consultation with users, residents and businesses on route
Social - Accessibility	Direct	Narrative approach based on improved access to employment, education and other services for residents

4.5.1 Appraisal Flowchart

The approach to economic appraisal, using WebTAG principles is shown in Figure 7 below.

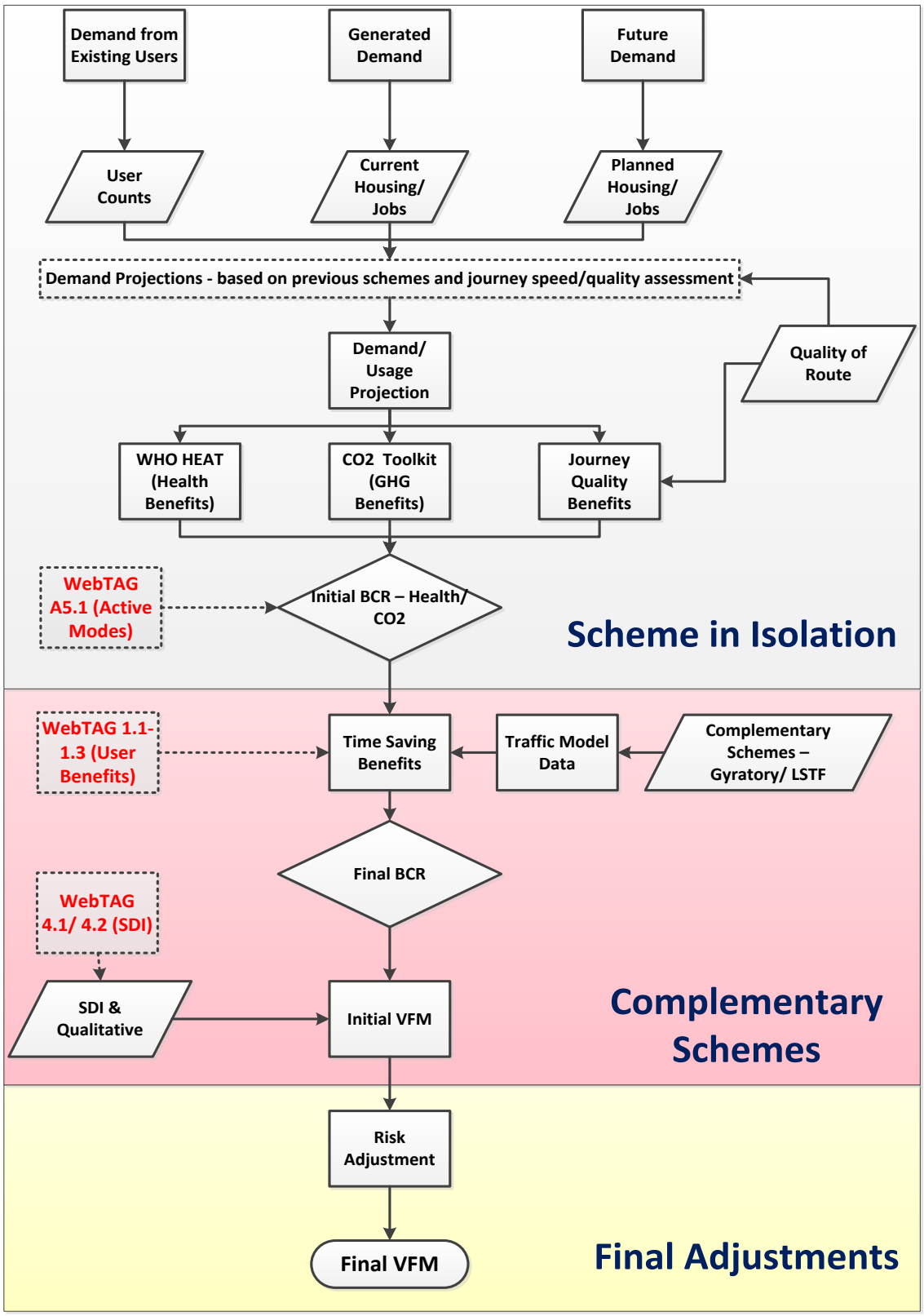


Figure 7 - Appraisal Flowchart

4.5.2 Appraisal Scenarios

The Preferred Option has been identified through a rigorous options appraisal process, taking into account the long-term maintainability of the scheme as well as its effectiveness against the core objectives. This is detailed in the Strategic Case.

In view of this, with only one option demonstrating overall cost-effectiveness, the appraisal has been undertaken against two options:

- Do Nothing, with the scheme not delivered
- Do Something, with delivery of Option 1.2 (North Bank Path Upgrade)

4.6 Projected Scheme Usage – Demand Projections

This scheme provides a very significant improvement in the quality and attractiveness of the route, including the provision of an entirely new riverside section between Aylesford and Allington Lock. Other sections will be improved. As set out in Figure 7, these improvements will:

- Retain existing users. Counters at Tovil (to the south of Maidstone) will be used to provide a baseline demand level for the scheme appraisal, including the 'do nothing' scenario;
- Attract new users travelling between existing housing, employment and education locations. Analysis of housing located 1km from the route has been used to provide a baseline. Demand projections are based on experience from elsewhere in Kent, the UK and Internationally where cycle/walk links have been significantly improved;
- Attract further new users as new housing and employment locations are developed. Demand projections are based on the Tonbridge and Malling Local Plan (adopted) and the Draft Maidstone Local Plan, using TRICS to estimate the additional trips which will be generated by the new developments.
- Attract additional leisure users and tourists, including those using the link to NCN17. These additional users have not been factored in at this stage.

In all cases, it is assumed that effective complementary activities will be undertaken to accompany the opening of the improved route and to support its continued use especially by new residents. These are incorporated into the Benefits Realisation Plan (Section 7.3) and include:

- Adequate maintenance of the route, including vegetation clearance, litter removal (especially broken glass) and surface repairs
- Attractive, direct connections (with signage and markings) onto the route from/to existing and future housing, employment and education sites, including Maidstone Town Centre;
- Publicity materials to ensure that the availability of the route is continually presented to potential users;
- Complementary 'soft' measures, including residential, employment and education travel plans, coupled with the provision of suitable facilities such as cycle storage
- Integration with other transport modes, especially at local rail stations

4.6.1 Existing Demand

Current usage is based on the surveys of the existing cycle route using automatic counters at Tovil. Usage of the current (unimproved) cycle route at Tovil shows around 16,000 trips during the period Mid March 2014 to Mid October 2014. Winter use of the unsurfaced path is very low and the northern section is not currently served at all since the proposal is for a new route.

In the 2011 Census the cycle mode share in Maidstone Borough is 1.2%.

4.6.2 Increased Demand Predictions – Case Examples

Experience from elsewhere in Kent, other parts of the UK and across Europe demonstrates that new and improved cycle infrastructure gives rise to very significant increases in usage. These case examples have been used to help predict the usage of the improved Medway Cycleway. Examples include:

Lancaster to Morecambe

In the Mid 1990s the Morecambe to Lancaster off-road cycle route network was surfaced, but it terminated on the north-western bank of the River Lune. Cyclists then had to use busy road bridges to cross the river into Lancaster. The Lune Millennium Bridge was designed to complete the 5km off-road cycle route.

This provides a high quality off-road route with car competitive journey times. Cycle counts showed a large increase in the number of cyclists using the bridge, increasing each year since it opened. 1,000 cyclists are now using the bridge every day.

Bristol and Bath

The Bristol and Bath path was built in the 1980s on a disused railway between the neighbouring West Country cities. The route was significantly improved under the *Cycling City* programme.

The improved route offers fast, safe and attractive access for commuters, shoppers and schoolchildren from the edge of the cities right into the city centres. Since it runs on an old rail line, it is segregated from traffic.

Initial assessment showed that in the summer of 2011 the path carried 3,000 cycle journeys per day and even more journeys on foot, with usage growing by 10% every year.

Royal Military Canal, Folkestone

This Kent scheme, though aimed primarily at the leisure market, provides an example of how significant improvements to the quality of a route give rise to significant increases in usage.

The route runs for approximately 10km along the length of the canal from east of Hythe past a number of tourist attractions. It links to a wider network of on-road and off-road routes in the area.

Following the provision of the route, usage rose to around 54,000 users per year, with usage increasing year-on-year since opening.

Cycling Demonstration Towns

Six English towns were chosen to be cycling demonstration towns to promote the use of cycling as a means of transport in 2005. Each year for three years the towns received £500,000 to spend on cycling (apart from Aylesbury which received £300,000). In 2009 this was further expanded to cover 12 towns and cities.

Results from the first three years of the Cycling Demonstration Towns programme show that it has been a major success. The original six towns achieved their aim of getting more people cycling, more safely, more often. For the first time in the UK outside London, the national trend of a gradual decline in cycling levels was reversed. A comprehensive evaluation of the investment in Aylesbury, Brighton & Hove, Darlington, Derby, Exeter and Lancaster with Morecambe has shown:

- An average increase in cycling across all six towns of 27%
- The increase is the result of more people starting to cycle, or returning to cycling again, not just the result of cyclists using their bikes for more trips
- Cycling to school has more than doubled where towns invested most in children
- Cycling investment generates town-wide increases in physical activity
- These results were not found in comparable towns
- This growth matches the cycling growth rates in London
- Investment in cycling pays back at least 3:1

The Cycling Demonstration Towns programme included area-wide initiatives (such as travel planning) as well as improvements to specific routes. This has been built into this Medway Cycleway programme, with the key investment in the route being matched by complementary actions, as set out in Figure 6.

European Experience

Sustained investment in cycling facilities has enabled many European cities to achieve significant increases in cycling. An overall analysis of schemes[3] has established that increasing the length of dedicated cycle infrastructure gives rise to a mode shift towards cycling. Each country studied has different values for increased cycle mode share, with those with the most developed infrastructure tending to show higher values. For an investment akin to that proposed in Maidstone, a shift in overall mode share of around 0.3% is indicated. Since the cycle mode share for Maidstone (2011 Census) is 1.2%, the study indicates that the major investment provided by the Medway Cycleway would lead to a mode share of 1.5% overall. This estimated to represent circa 70,000 additional cycle trips per year, without taking account of planned housing and employment growth or leisure use.

Specific examples in European cities bears out these predictions:

[3] Factors influencing the cycling level in cities – international comparison and literature overview; Hana Brůhová-Foltýnová, Jan Brůha; Kolin Institute of Technology. 2013

Table 6 - European Comparisons

City	Investment	Impact (% Increase Cycle Trips)	Time Period (years)
Hanover	Increased infrastructure	100%	11
Munster	Upgrade to existing infrastructure	50%	11
Munich	Increased infrastructure	225%	22
Seville	Increased infrastructure. Cycle hire	165%	5
Zurich	Opening of one-way streets to 2-way cycling	43%	20
Graz	Increased infrastructure	150%	20
Vienna	Increased infrastructure	300%	20

Though these examples are in much larger cities than the town of Maidstone, the impact of increasing the infrastructure provision (as in Maidstone) is illustrated, with less significant improvements having more modest impacts. Note that these increases in cycling are overall increases rather than increased use of the improved infrastructure alone.

4.6.3 Housing and Employment Growth – Increased Demand

The Planned 10 year growth on the corridor includes 3,880 homes (980 new homes per year) with approximately 3,000 jobs.

Using TRICS database, the proposed development of 3,880 residential units (assuming a figure of 2.4 persons per dwelling) would generate 3386 and 2243 two-way person trips during the AM and PM peaks respectively. To provide a robust assessment, if we assume 1% travel via bike, this would mean an additional 33 new trips during the morning peak.

In reference to trip rates for employment, whilst this is more difficult to assess, redevelopment sites such as Maidstone East, means that if we follow the same methodology as above and assume a cycle rate of 1%, we can expect reasonably expect 30 new trips along the cycle corridor.

These two figures combined provide 48 new trips should be viewed as worst case scenario as they do not include leisure cyclists, who would use the route, especially during the summer months.

4.6.4 Overall Demand Prediction

Based on the above calculations, the projected usage of the facility is 100,000 cycle trips per annum, made up of the 20,000 existing trips, 70,000 new trips transferring existing journeys and 10,000 trips from housing and employment growth in the area.

The analysis is assuming that the benefits are mainly obtained from attracting cyclists, as the isochrones for cycling clearly covers a larger catchment. In addition the demand is broadly assuming we are attracting commuter journeys. Leisure trips are expected due to the attractive riparian nature of the route linking leisure amenities in both Aylesford and Barming villages, such as the pleasant areas around the locks and the Malta Inn public house.

4.6.5 Distance of trips

For simplicity trips are assumed to be from one of the two ends (Barming or Aylesford) to the town centre; and a respective return journey. This gives journeys of a similar distance to the average for cycling trips; and also reflects the town centre as attractor. It is noted that Maidstone to Aylesford is around 4 miles and Maidstone to Barming around 2.5 miles. Other origins are noted on the route, Tovil to the south of Maidstone and Ringlestone to the North, and an adjustment has been made to account for these.

As there is potential for the scheme attracting transfer of longer distances, either only partially on the route or making use of the full route, a higher demand will be used as a proxy to reflect this potential.

4.7 Economic Benefit Calculations

The approach set out in Table 4 and Figure 7 detail the key components of the appraisal of the scheme in isolation. These are absorbed into the DfT Active Mode Appraisal Toolkit and that has been used for convenience and consistency.

- Health benefits from active travel, based on reduced mortality benefits and calculated using the World Health Organisation HEAT tool;
- Greenhouse gas emission benefits arising from transfer of trips from car to walk/cycle, calculated using the DfT Carbon Toolkit

- Journey quality benefits, stemming from the improvement of the route and the benefit derived by users from this. This is calculated as set out in WebTAG Unit A5.1 and the TAG Data Book.
- Decongestion benefits and accident benefits, obtained by applying the Marginal External Costs Methodology (WebTAG A5-4)
- A decay rate has been assumed of 2%. The lower decay rate is to reflect the ongoing promotion of sustainable intervention within Kent.
- Appraisal is over twenty-five (25) years, noting the advice that a sixty year appraisal is not seen as appropriate for active modes.

These benefits are in turn based on the usage of the scheme as defined in Section 4.6 of this report.

The economic contribution of the scheme, in terms of journey time savings due to reduced congestion, is delivered in conjunction with the complementary LSTF schemes and alongside the capacity improvements as a result of the Maidstone Gyratory project. In view of this, the time-saving benefits are calculated at this 'package' level.

Additional benefits, as set out in Table 5, are brought in after the calculation of a BCR, in order to provide an initial assessment of overall Value for Money. This is adjusted for risk to provide a final Value for Money category in the Value for Money Statement (Section 4.10)

The key elements are including higher demand as a proxy for leisure trips and lengthening trips, and a lower decay rate due to sustainable travel promotion.

Decay rate: **2%**

Demand: **320 users per day**

Distance: **9km**

*(This is the return distance and the number so trips are users * days * 2.*)

Car available for journey: **35%**

A summary of predicted economic benefits is provided in Table 7. The breakdown for the proportions is an output of the 'toolkit' and is given in Figure 8. The toolkit spreadsheet is contained within this report as **Appendix A**.

Table 7 - Summary of Predicted Economic Benefits

Reference to:	Option 1.1	Option 1.2
Description of Option:	**Do Nothing**	**North Bank Path Upgrade**
Inherent benefits (Scheme in Isolation) over 20 years (£m)		
Health Benefits	0	3.72
Mode choice (Noise, Air Quality, Greenhouse Gases, Accidents & Decongestion)	0	0.53
Journey Quality Benefits	0	1.49
Isolated scheme impacts (Health, CO2 & Quality) (£m) - Discounted		
User Present Value Benefit (PVB)	0	5.3
Capital Present Value Cost (PVC)	0	2.5
Scheme Net Present Value (NPV) = PVB - PVC	0	
Scheme benefit to cost ratio (BCR)	0	2.12

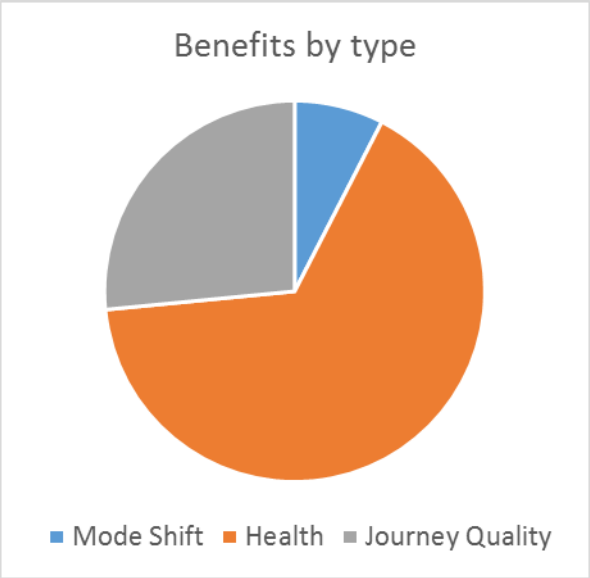


Figure 8 Proportion of benefits

4.8 Financial Information

The following table contains the financial information used for the cost-benefit calculations.

Scheme Cost Breakdown and Profile									
Project Cost Components	**Example Capital Cost Items**	*** Cost Estimate Status (O/P/D/T)**	**Costs by year (£000)** Year of Estimate: 2014 Q4						
			2014/15	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Construction	Preliminaries Main Works Ancillary Works Work by Other Authorities (e.g. SU) On-Site Supervision & testing		0	0	1644	0	0	0	0
Land & Property	Acquisition Legal Process Property Management Compensation		0	33	0	0	0	0	0
Preparation, Administration & Supervision	Surveys and Data Collection Option Development & Appraisal Scheme Design		0	461	862	0	0	0	0

Scheme Cost Breakdown and Profile								
Project Cost Components	**Example Capital Cost Items**	*** Cost Estimate Status (O/P/D/T)**	**Costs by year (£000)** Year of Estimate: 2014 Q4					
			2014/15	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
	Project Management & Procurement Public Consultation Public Inquiry Statutory Process & Approvals Compensation On-Site Supervision & testing Consultant & Agent Fees								
Traffic-Related Maintenance	Non-Routine Re-construction Re-Surfacing Surface Dressing		0	0	0	0	0	0	0
Scheme Operation	Routine & Non-Traffic-Related Maintenance		0	0	0	0	0	0	0
Indirect Tax	Non-Recoverable VAT (if applicable)		0	0	0	0	0	0	0
Contingency	(If appropriate)		0	0	0	0	0	0	0
Quantified Risk Adjustment	Risks from Policy Change Risks of Scheme Delivery Risks of Scheme Operation Risks from Unexpected User Demand & Operator Revenue Outcomes		0	49.4	250.6	0	0	0	0
Indirect Tax	Non-Recoverable VAT (if applicable)		0	0	0	0	0	0	0
Optimism Bias	3% for cycle scheme		0	16.3	82.7	0	0	0	0
Total Cost	Incl. Risk Excl. Optimism Bias (Financial Case)		0	543.4	2757	0	0	0	0
	Incl. Risk Incl. Optimism Bias (Economic Case)			559.7	2839	0	0	0	0

*O = Outline estimate, P= Preliminary estimate, D = Detailed estimate, T = Tender price,

There is a developer contribution of £0.4m and this has been factored into the cost-benefit analysis.

The totals fed into the appraisal spreadsheet (given as Appendix A) are highlighted. This includes the QRA of 10%. The optimism bias is excluded as it can be included in the DfT toolkit. Sunk costs are assumed to be subsumed in normal council operations.

The toolkit also handles inflation and discounting as appropriate.

4.9 Appraisal Summary Table

The Appraisal Summary Table in Table 8 has been completed to take account of the qualitative benefits of the scheme (see Table 5) as well as those which have been monetised in Table 7.

Table 8 - Appraisal Summary Table (Assuming Option 1.2)

Impacts		Summary of key impacts	Assessment		
			Quantitative	Qualitative	Monetary £'000(NPV)
Economy	Business users & transport providers (Combined with Commuting and Other users)	Journey time improvements due to transfer from car to walk/cycle In conjunction with Gyratory & LSTF Schemes		Slight beneficial	407.45
	Reliability impact on Business users	Improved journey time reliability	Not quantified, though comparison with existing dual carriageway indicates strong positive impact	Slight beneficial	No
	Regeneration	Support for sustainable housing growth, job creation and inward investment in the area	Growth projections included in appraisal	Moderate beneficial	No
Environmental	Noise		Some improvement due to transfer from car to walk/cycle	Slight beneficial	Minimal
	Air Quality				Minimal
	Greenhouse gases	Reduction in carbon emissions	Change in non-traded carbon over 20y (CO2e). Annual tonnes (1000s)	Moderate beneficial	21.57
	Landscape	Work to date (Including *Valley of Visions*) indicates that these elements will be positive or neutral. Ongoing design process and consultation will enhance further	Not quantified	Moderate beneficial	No
	Townscape				
	Historic Environment				
	Biodiversity				
	Water Environment				
Social	Commuting and Other users (Combined with Business Users and transport Providers)	Journey time improvements due to transfer from car to walk/cycle In conjunction with Gyratory & LSTF Schemes		Slight beneficial	407.45
	Reliability impact on Commuting and Other users	Improved journey time reliability	Not quantified, though comparison with existing dual carriageway indicates strong positive impact	Slight beneficial	No
	Physical activity	Mortality Benefits calculated using WHO HEAT tool, based on projected usage		Moderate beneficial	3722.54
		Additional health benefits (reduced absenteeism, increased productivity)		Moderate beneficial	
	Journey quality	Journey quality improved through improved/new facility	**Value of Journey Quality Benefits (WebTAG Unit A5.1)**	Moderate beneficial	1499.25

Impacts		Summary of key impacts	Assessment		
			Quantitative	Qualitative	Monetary £'000(NPV)
	Accidents	Slight reduction in overall accidents due to reduction in car trips. Slight reduction in cycle accidents due to transfer of on-road trips to off-road		Assumed slight beneficial	97.45
	Security	Personal security will be a design factor in the scheme. Overall security will improve due to increase in usage	Not quantified as effects will be small	Assumed slight beneficial	No
	Access to services	The availability of an off-road route well connected with housing, employment, education and Maidstone Town Centre will improve accessibility, especially for low-income groups. Effects already calculated as part of usage, though SDI benefits will increase these	Not quantified beyond usage calculations, though higher positive impact on young and low-income will increase overall benefit	Moderate beneficial	No
	Affordability	Provision of LGF funds and local contribution	Local funding committed	Neutral	
	Severance	Severance will be reduced, especially in the context of natural severance (River Medway) the availability of the path to avoid town centre roads and the crossing under M20	Not quantified, though clearly a positive impact	Moderate overall benefit – significant in some cases	No
	Option and non-use values	The presence of the pathway will be valued by household members near the route, irrespective of whether they use it	Not quantified but anticipated that there will be a moderate benefit	Moderate beneficial	
Public Accounts	Cost to Broad Transport Budget	Capital funds from LGF and Section 106 User benefits			2487.14
	Indirect Tax Revenues	Slight reduction in fuel tax due to reduction in car trips		Slight cost	-108.66

4.10 Sensitivity testing

The appraisal spreadsheet can be easily adjusted to judge the possible sensitivity of certain parameters.

Some examples are given below, showing the change in BCR from the reported 2.1:

- Decay rate (changed from 2%): 5% gives BCR of 1.5, 1% gives BCR of 2.4;
- Demand (changed from 320 cycling journeys): 250 journeys gives BCR of 1.6, 350 journeys give BCR of 2.4;
- Increasing appraisal period to 30 years (from 25 years) give a BCR of 2.4.

In conclusion, assuming the demand projections are reasonably robust the sensitivity testing does not give any undue concerns about value for money.

4.11 Value for Money Statement

4.11.1 Initial BCR

The initial BCR, taking account of the quantified benefits of reduced mortality, CO_2 emission reductions, journey quality improvements and decongestion is 2.12 ('High' VfM).

4.11.2 Additional Benefits

There are a number of additional benefits which have not been quantified but which contribute significantly to the value for money of the scheme:

- The cycleway scheme will help 'lock-in' the benefits of the Maidstone gyratory scheme, augmenting the long-term success of the gyratory in providing additional capacity.
- Pedestrian journeys, particularly on the new section.
- Housing and employment development benefits in terms of encouraging people to move to Maidstone, making use of the cycleway to travel car-free to employment in Maidstone or (via the rail network) further afield, including London.
- Regeneration and social benefits gained by providing car-free access to employment, education, training and other facilities in deprived areas served by the route.

- Environmental benefits in terms of active management of the route, encouraging wildlife diversity.
- Tourism economy benefits in terms of making Maidstone a more attractive destination and through the link to NCN17.
- Safety benefits gained through the transfer of cycle and walk trips from on-road to off-road
- Security benefits gained through the increased usage of the route

4.11.3 VfM Category

Taking into account the additional benefits discussed above, the Value for Money category of the scheme is considered 'high'. The risks inherent in this project are low. In view of this, the Final VfM Category remains 'high'.

4.11.4 Summary of Benefits and Costs

The immediate benefit from the scheme will be the provision of an attractive, direct route which will facilitate a large increase in cycle and walk trips between residential areas around Maidstone and employment and education facilities.

In combination with the Maidstone Gyratory improvements and the complementary LSTF scheme, the scheme will help 'lock in' the benefits of transport investment and will facilitate the sustainable growth of housing and employment set out in the SELP Strategic Economic Plan and the Local Plans of Maidstone and Tonbridge and Malling Councils.

This in turn will encourage inward investment and enable commercial and employment growth in the area.

The primary financial benefits which have been used to calculate the value of the scheme are:

- The health benefits of cycling and walking in terms of reduced mortality
- A reduction in greenhouse gas emissions from the transfer of car trips to walk/cycle
- Journey quality benefits for users of the route
- Decongestion/journey time saving benefits, calculated alongside the Maidstone Gyratory and LSTF schemes

In addition, there are a number of additional benefits which have not been monetised, the most important of which are:

- Economy – Regeneration

The scheme will support the sustainable development of employment, retail and housing, including on brownfield and contaminated lands in the area

- Environmental – Landscape/Townscape

  The river environment will be enhanced and its enjoyment will be improved through the better access
- Environmental – Flooding & Flood Resilience

  The flood resilience of the route will be significantly improved
- Social – Inclusion

  The availability of a safe, direct and attractive route for cyclists and walkers will provide significantly improved access for people of low income, the young and the elderly
- Social – Road Safety

  The improved an off-road route will enable safe, attractive links to residential, employment, education and the town centre
- Social – Security of users

  The route will be designed with personal security in mind and the increased usage will enhance this further
- Social – Accessibility

  The availability of a safe, direct and attractive route for cyclists and walkers will provide significantly improved access for people of low income, the young and the elderly

The main costs of the scheme are:

- Scheme construction costs totalling £3.085m (2014 prices)

4.11.5 Key Risks, Sensitivities and Uncertainties

The following key risks have been identified and mitigation approaches have been defined to address these:

- Rights of way - Landowners reject requests for access or rights of way or unplanned land purchase is required
- Stakeholders reject scheme as unsuitable or inappropriate
- Unknown riparian design issues arise
- Highway interface design issues prove costly
- Significant habitat or other wildlife issues arise
- Maidstone gyratory designs affect scheme or scheme affects Maidstone Gyratory
- Levels of usage do not meet targets

4.11.6 Appraisal Summary Table

The Appraisal Summary Table included as Table 8 summarises the appraisal results in a standard format.

4.12 Monitoring, Evaluation and reporting – performance management

The Causal Chain (Figure 6) sets out the primary measures which will be used to judge the success of the scheme. These will be monitored, evaluated and managed as follows:

Table 9 - Measures of Scheme Success

Measures	Monitoring	Performance Management	Comments
Delivery on time	Through contract management	Through contract management	
Delivery on budget	Through contract management	Through contract management	
Delivery of safe, attractive, direct route	User satisfaction surveys	Through existing KCC rights of way management	
Car-competitive journey times	User satisfaction surveys	Through existing KCC rights of way management	
Usage	Counters on route	Through existing KCC rights of way management and complementary Smarter Choices	Key element of demonstrating secondary benefits – e.g. health & congestion reduction
Mode share	Not measured directly – part of general traffic monitoring	Through existing traffic management	
Health benefits	Not measured directly – derived from usage	Through existing KCC rights of way management and complementary Smarter Choices	Links with NHS monitoring could enhance this

Measures	Monitoring	Performance Management	Comments
Decongestion, air quality, noise, CO_2 emissions	Not measured directly – derived from usage	Through existing traffic management	
Growth (housing, jobs)	Not measured directly – derived from usage	Local Plan management	
Wider economic benefits	Not measured directly – part of wider LGF package	SELEP SEP management	

5 Commercial Case

5.1 Commercial Issues

5.1.1 The commercial case provides evidence on the commercial viability of the scheme and the procurement strategy that will be used. It sets out the financial implication of the proposed procurement strategy and presents evidence on risk allocation and transfer, contract timetables and implementation timescale as well as details of the capability and skills of the team delivering the project.

5.1.2 The outcomes which the procurement strategy must deliver are to:

- Achieve cost certainty, or certainty that the scheme can be delivered within the available funding constraints;
- Minimise further preparation costs with respect to scheme design by ensuring best value, and appropriate quality;
- Obtain contractor experience and input to the construction programme to ensure the implementation programme is robust and achievable; and
- Obtain contractor input to risk management and appraisals, including mitigation measures, to capitalise at an early stage on opportunities to reduce construction risk and improve out-turn certainty thereby reducing risks to a level that is As Low As Reasonably Practicable.

5.2 Scheme Procurement Strategy

Procurement Options

KCC have identified two procurement options for the delivery of their LEP funded schemes. The alternative options are:

Full OJEU tender

This option is required for schemes with an estimated value of over £4,322,012.

KCC will then need to opt for an 'open' tender, where anyone may submit a tender, or a 'restricted' tender, where a Pre-Qualification is used to whittle down the open market to a pre-determined number of tenderers. This process takes approximately one month and the first part is a 47 day minimum period for KCC to publish a contract notice on the OJEU website.

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

Delivery through existing Amey Highways Term Maintenance Contract (HTMC)

This option is strictly not procurement as the HTMC is an existing contract. The HTMC is based on a Schedule of Rates agreed at the inception of the contract. The price for each individual scheme is determined by identifying the quantities of each required item into a Bill of Quantities. Amey may price 'star' items if no rate already exists for the required item. If the scope of a specific scheme is different from the item coverage within the HTMC contract a new rate can be negotiated.

Preferred Procurement Option

The preferred procurement route for the Maidstone Medway Cycle Route is through existing Amey Highways Term Maintenance Contract (HTMC).

This option has been selected as the value of the scheme is less than the OJEU scheme value threshold.

5.3 Potential for Risk Transfer

Although many of the design risks can only be resolved through rigorous design and review processes, once the design options are clear and the scope of land acquisition, planning requirements, environmental requirements are fully identified; the primary risks will be related to construction. There is potential for transferring these risks through the construction procurement process. This will be explored fully as the design and procurement process progresses.

6 Financial Case

6.1 Sources of Funding

The total sum requested from the Local Growth Fund is £2m, with other contributions (from Maidstone Borough Council and developer contributions) being just over £1m. The details are provided below:

Table 10 - Sources of Finance

Funding Source	2014/15 £000	2015/16 £000	2016/17 £000	2017/18 £000	2018/19 £000	2019/20 £000
Local Growth Fund (SELEP)	0	0	2,000	0	0	0
Local Contribution Total (leverage) – Local Authority (Maidstone Borough Council)	**0**	**300**	**300**	0	0	0
Other Funding (ensure naming every institution; insert as many rows as required) – Private Sector	**0**	**200**	**200**	0	0	0
TOTAL FUNDING	**0**	**500**	**2,500**	0	0	0

These funding sources are understood to be likely and no funding constraints are identified.

6.2 Cost Breakdown

The breakdown of costs for the scheme area as follows (this was previously included in 4.8).

Table 11 - Breakdown of Costs

	* Est type	2014/15 £000	2015/16 £000	2016/17 £000	2017/18 £000	2018/19 £000	2019/20 £000
Procurement Cost	E						
Feasibility Cost			0	0			
Detail Design Cost			461				
Engineering Cost				859			
Equipment Cost							
Construction Cost				1,644			
Audit Cost				3			
Other, Land acquisition			33				
VAT							
TOTAL COST			**D 494**	**D 2,506**			

*D = Detailed estimate, T = Tender price.

6.2.1 Overall Affordability

The scheme design is well advanced and the costs are reasonably well defined. In view of this, with the existing committed LGF, LTP and Section 106 funds are considered adequate for delivery of the scheme.

7 Management Case

7.1 Project Plan

The project timetable is still at an early stage and will be refined as the design and procurement processes become clearer. The current project programme is shown in Figure 9 below.

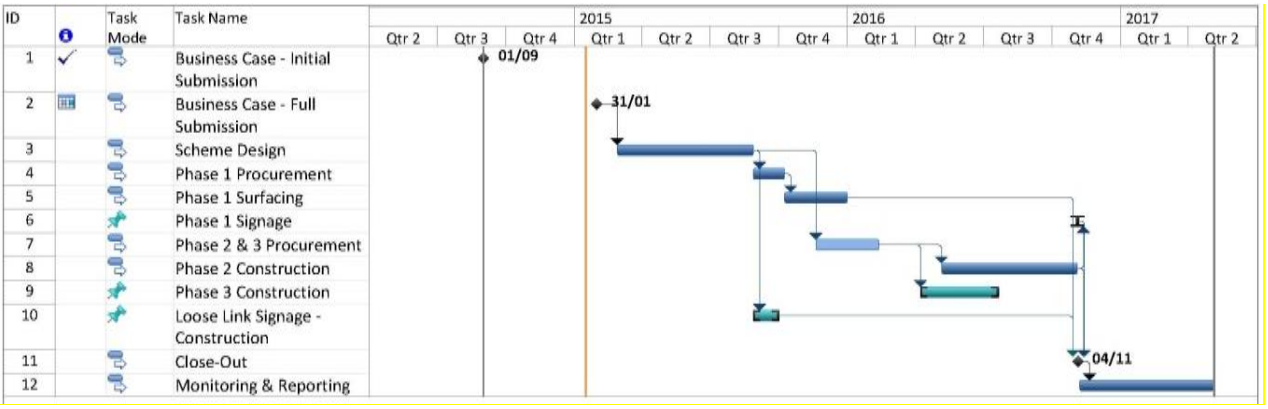


Figure 9 - Project Programme

The scheme phases identified in the project programme involve the following:

- Phase 1 (As at business case submission, 70% completed) – Largely surfacing works with a little additional work being completed now. Signage will be installed in 2016/17 when the route is nearing completion;
- Phase 2 – Vegetation clearance and ecology surveys underway. Programme to follow includes river wall repairs, links to Aylesford station and the Museum of Kent Life, surfacing, widening and signing. This phase incorporates most of the significant works linking the train station to business park and town centre;
- Phase 3 – Largely surfacing and minor widening, along with some localised river bank repairs;
- Loose Link – Signing a link to the new "Loose Greenway" (access to/from South Maidstone). Timing of this will be geared towards the delivery schedule of this project, which is the subject of a separate LGF Business Case geared towards the Kent Rights of Way Improvement Plan.

7.2 Project management arrangements

Although not fully defined at this stage, the scheme is likely to be project managed in house by PRINCE2 trained and experienced Council staff using a well-established governance structure that has successfully delivered large projects across Kent.

7.3 Project Governance, Roles and Responsibilities

KCC have set up a clear and robust structure to provide accountability and an effectual decision making process for the management of the LEP funded schemes. Each scheme will have a designated project manager who will be an appropriately trained and experienced member of KCC staff.

Figure 10 overleaf provides an outline of the overall governance structure implemented to manage the delivery of each scheme.

A detailed breakdown of the meetings (along with the attendees, scope and output of each) which make up the established governance process is set out below.

Project Steering Group (PSG) Meetings

PSG meetings are held fortnightly to discuss individual progress on each scheme and are chaired by KCC Project Managers (PMs). Attendees include representatives from each stage of the LEP scheme (i.e. KCC Bid Team, KCC sponsor, KCC PMs, Amey design team and construction manager). Progress is discussed in technical detail raising any issues or concerns for all to action. A progress report, minutes of meeting and an update on programme dates are provided ahead of the Programme Board (PB) meeting for collation and production of the Highlight Report.

Highlight Report

The Progress Reports sent by the KCC PMs comprise of the following updates; general progress, project finances, issues, risks and governance meeting dates. The Highlight Report identifies any areas of concern or where decisions are required by the PB meeting or higher to the KCC LEP Programme Manager. An agreed version of the Highlight Report is issued to the PB meeting attendees during the meeting.

Figure 10 – KCC Project Governance Structure

KCC LEP Meeting Governance Diagram

Bid / Design / Construction	High level Agenda	Frequency	Attendees	Format	Scope	Agenda Items	Key Deliverables/Feedback	Templates
Sponsoring Group	Bid Design Construction	Monthly - Can be called in emergency if required	**Chair: TR** BC/JB/MG Supported by IPM attendees as required	Face to face meeting, rotating venue	To discuss programme (i.e. high level progress/preview next steps and discuss and resolve issues.	LEP programme (high level) progress to date Programme Financial reporting Next steps Issues/Risk/Change Actions	Minutes of Meeting Action/Decision Log Output distributed to MG	Agenda Minutes Decision list
Escalation Report	Decisions Needed	Monthly	MG/JW	Report	To record outstanding actions/issues that require a decision made by the board		Action list ready for the Steering Group	Action List
Programme Board Meeting	Bid Design Construction	Monthly	**Chair: MG** MG/FQ/KCC Promoters/KCC PMs/ AQ or RC/Amey TE's SW&IC/JW	Face to face meeting, rotating venue	To discuss progress/preview next steps and discuss and resolve issues	LEP programme progress to date Project financial reporting Next steps Issues/Risk/Change Actions	Minutes of Meeting Action List Output distributed to all attendees	Agenda Minutes
Highlight Report	Identify key points for Programme Meeting	Monthly	JW/MG	Face to face meeting/report	JW to collate and streamline all reports highlighting areas of interest for the programme meeting. To be fed back to MG by report/meeting		Highlight report for MG to use for Programme Meeting. Highlight report shared with PR attendees.	Highlight Report
Steering Group Meeting	Progress Update	Monthly/Fortnightly as required	**Chair: KCC PMs** All input staff - KCC Bidding/KCC Promoters/KCC PMs/Amey Design/TMC/JW	Face to face meeting	Individual meetings per project (including each stage of the LEP process to discuss progress in detail).	LEP project progress to date/MS Programme Project financial reporting Issues/Risk/Change Actions	MS Programme Update Progress update in template for each project	Progress Report

List of Initials:

BC	Barbara Cooper
JB	John Burr
TR	Tim Read
MG	Mary Gillett
FQ	Fayyaz Qadir
AQ	Andrew Quilter
CM	Chris Morris
RC	Richard Cowling
SW	Steve Whittaker
IC	Ian Cook
JW	Joanne Whittaker

Programme Board (PB) Meeting

The PB meeting is held monthly and is chaired by the KCC LEP Programme Manager. Attendees include representatives from all three stages of the schemes (i.e. KCC LEP Management, KCC LEP Bidding, KCC Sponsors, KCC PMs, Amey Account Manager, Amey Technical Advisors, Amey Construction representatives). This meeting discusses project progress to date, drilling into detail if there is an issue or action (as identified in the PSG meeting), financial progress, next steps and actions. Outputs of this meeting are the Highlight Report and the minutes of meeting.

Escalation Report

A list of actions and decisions that the PB meeting was unable to resolve is prepared ready for the Sponsoring Group (SG) meeting to discuss and ultimately resolve.

Sponsoring Group (SG) Meeting

The SG is held monthly and will be chaired by Tim Read (KCC Head of Transportation). Attendees are Barbara Cooper (Corporate Director), John Burr (Director of Highways, Transportation and Waste), Tim Read and Mary Gillett (KCC Major Projects Planning Manager). This meeting discusses high-level programme progress to date, financial progress, next steps and closes out any actions from the escalation report. Output is sent to Mary Gillett for distribution. Technical advisors are invited if necessary to expand upon an issue. All actions from the start of this meeting cycle are to be closed out by the SG when they meet (i.e. no actions roll over to subsequent meetings).

7.4 Evidence of Previously Successful Scheme Management Strategy

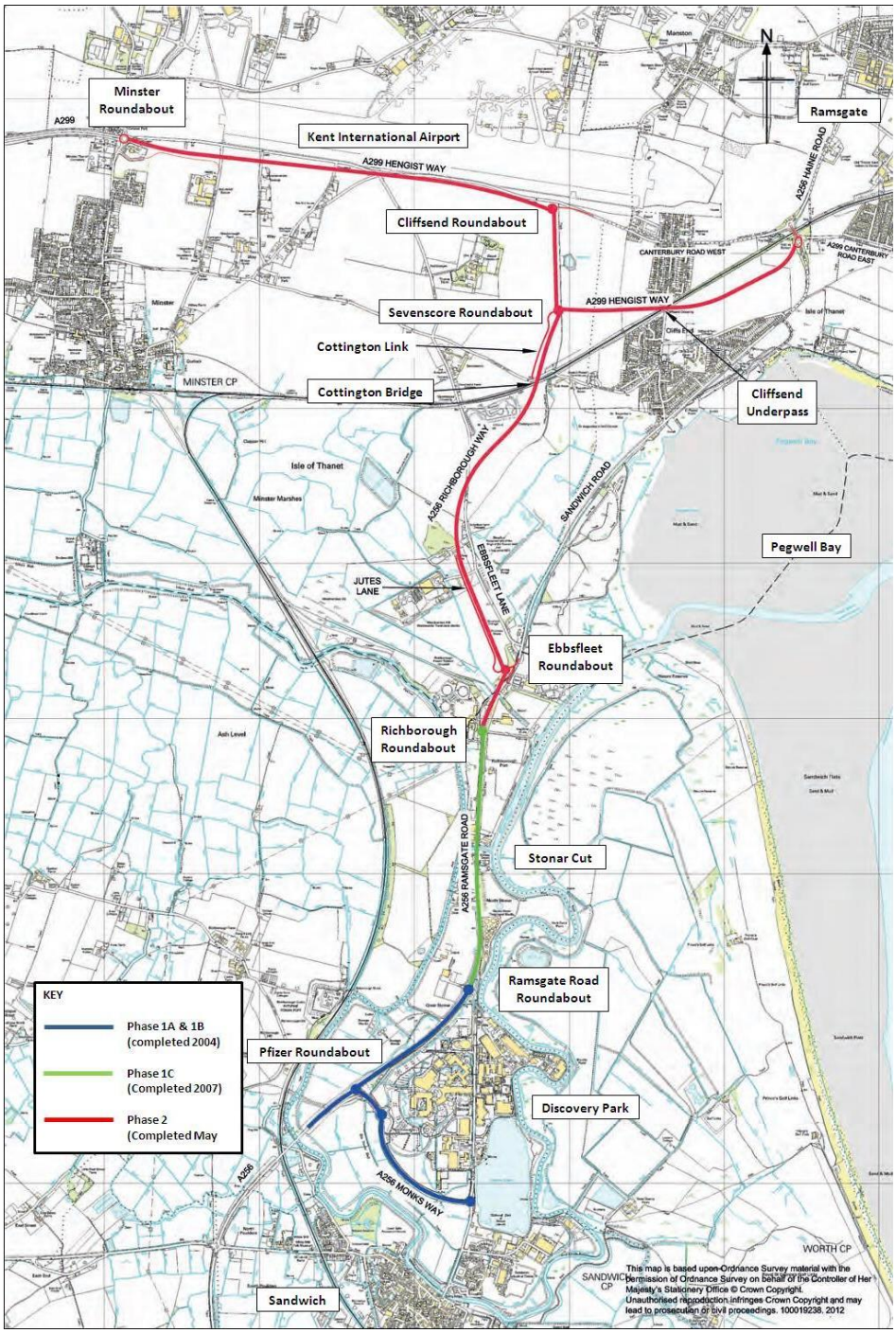
KCC have a successful track record of delivering major transport schemes within the county. The most recent of which were the East Kent Access Phase 2 (EKA2) and Sittingbourne Northern Relief Road schemes (SNRR).

The EKA2 scheme, completed in May 2012, was designed to support economic development, job creation and social regeneration, improving access with high quality connections between the urban centres, transport hubs and development sites in East Kent. The overall objectives of the scheme were to unlock the development potential of the area, attract inward investment and maximise job opportunities for local people. The extent of the scheme is shown in Figure 11 overleaf.

The scheme was successfully delivered within budget and ahead of programme through the adoption of a robust management approach similar to that set out above to deliver the proposed scheme. The total value of the scheme was £87.0m of which £81.25m was funded by Central Government.

The intended scheme outcomes are currently being monitored but the intended benefits of the scheme are anticipated to be realised.

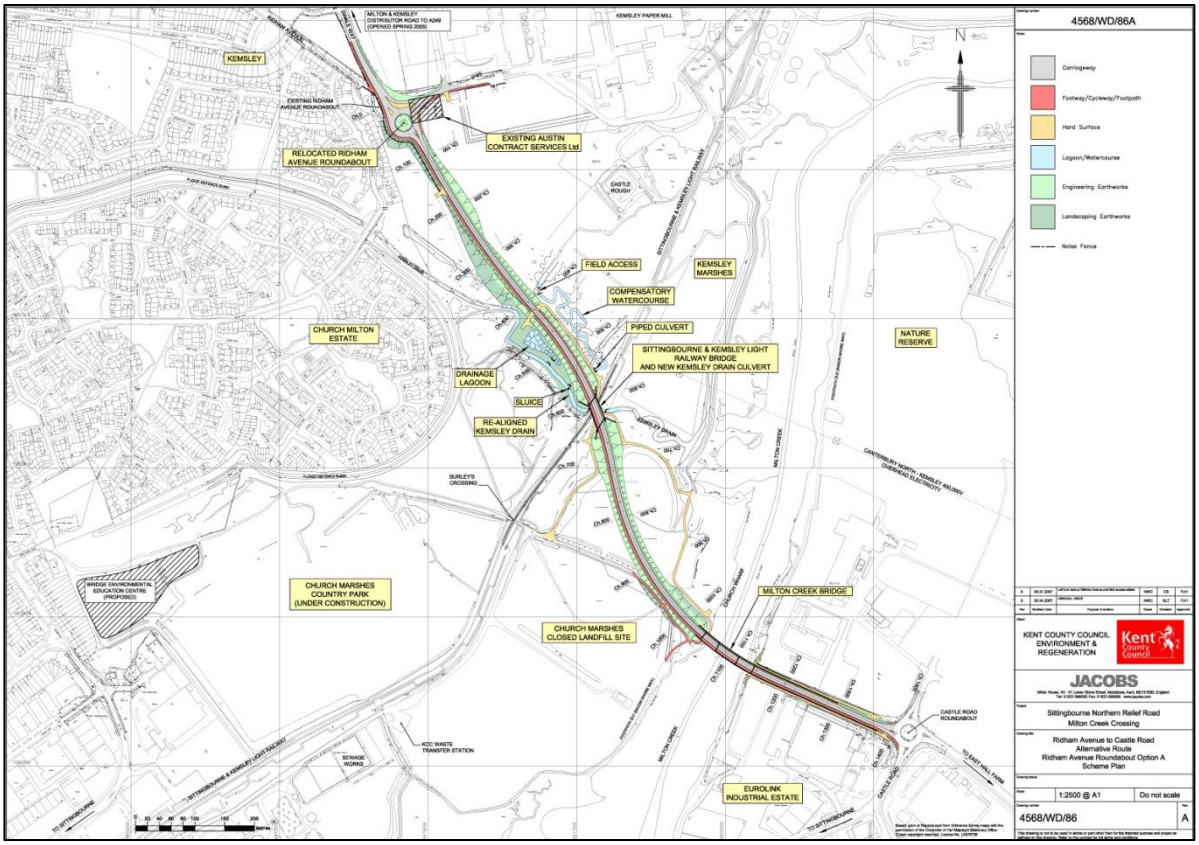
Figure 11 – EKA2 Scheme Layout



The SNRR scheme, completed in December 2011, was designed to remove the severance caused by Milton Creek and give direct access to the A249 trunk road for existing and new development areas, thereby relieving Sittingbourne town centre.

The delivered scheme is shown in Figure 12 below:

Figure 12 – SNRR Scheme Layout



The project is an excellent example of multi agencies working towards a common aim. The scheme was funded by the Homes & Communities Agency in its Kent Thameside regeneration role, by the Department of Transport in its support of local major schemes and by private sector S106 contributions. The scheme was delivered under budget and to programme.

Both the EKA2 and SNRR schemes have since been awarded regional Institute of Civil Engineers (ICE) Excellence Awards.

7.5 Project Risk Management

7.5.1 Risk Management Strategy

Project risk is managed as an on-going process as part of the scheme governance structure, as set out in section 7.2 of this report. A scheme risk register is maintained and updated at each of the two-weekly Project Steering Group meetings. Responsibility for the risk register being maintained is held by the KCC PM and is reported as part of the monthly Progress Reports.

Any high residual impact risks are then identified on the highlight report for discussion at the Programme Board (PB) meeting. Required mitigation measures are discussed and agreed at the PB meeting and actioned by the KCC PM as appropriate.

An example scheme risk register is shown in Figure 13 below:

Figure 13 – Example Risk Register

7.6 Project Assurance

A signed Section 151 officer letter is provided as **Appendix B**.

7.7 Benefits Realisation Plan and Monitoring

Tracking of the scheme benefits will be a key element in understanding the success of a specific intervention. The realisation of benefits is intrinsically linked to the Monitoring and Evaluation plan.

Figure 6 – Scheme Causal Chain details how the scheme benefits are derived either directly through the scheme itself or collectively with other schemes.

The scheme objectives set out in Section 3.13 have been used to develop the desired outputs and outcomes for the scheme. The desired outputs are the actual benefits that are expected to be derived from the scheme and are directly linked to the original set of objectives. The definition of outputs and outcomes are:

- **Outputs** – tangible effects that are funded and produced directly as a result of the scheme; and
- **Outcomes** – final impacts brought about by the scheme in the short and medium/long term.

Measures	Monitoring	Benefits Realisation	Comments
Delivery on time	Through contract management	Through contract management	
Delivery on budget	Through contract management	Through contract management	

Measures	Monitoring	Benefits Realisation	Comments
Delivery of safe, attractive, direct route	User satisfaction surveys	Includes key aspects of existing highway infrastructure and linked schemes	Delivery will be enhanced through use of existing partnership working
Car-competitive journey times	User satisfaction surveys	Includes key aspects of existing highway infrastructure and linked schemes	Delivery will be enhanced through use of existing partnership working
Usage	Counters on route	Requires complementary schemes; publicity and travel planning including LSTF funded elements	Key element of demonstrating secondary benefits – e.g. health & congestion reduction
Mode share	Not measured directly – part of general traffic monitoring	Realisation involves other schemes, e.g. LSTF, ROWIP and Gyratory	Delivery will be enhanced through use of existing partnership working
Health benefits	Not measured directly – derived from usage	Requires complementary schemes; publicity and travel planning including LSTF funded elements	Links with NHS monitoring could enhance this
Decongestion, air quality, noise, CO_2 emissions	Not measured directly – derived from usage	Realisation involves other schemes, e.g. LSTF, ROWIP and Gyratory	

Measures	Monitoring	Benefits Realisation	Comments
Growth (housing, jobs)	Not measured directly – derived from usage	Realisation involves other schemes, including non-transport (e.g. development)	Part of SELEP SEP Performance Management and Local Plan management
Wider economic benefits	Not measured directly – part of wider LGF package	Realisation involves other schemes, including non-transport (e.g. development)	Part of SELEP SEP Performance Management

KCC will conduct a full evaluation of the impact of the scheme in the period after it is completed. The Council will prepare evaluation reports one year and five years after scheme opening, using the information to be collected as set out above to gauge the impact of the scheme on the traffic network, and assess the success of the scheme in meeting the objectives of the KSCMP. Unexpected effects of the scheme will be reported upon and, where appropriate, remedial measures identified.

7.8 Key Project Risks and Risk Management Strategy

Although this business case has been developed on the basis of the most relevant and accurate information available, there will be changes to the design as the scheme progresses towards delivery. This introduces a number of risks which will require active management as the design and delivery progresses.

Table 12 - Key Project Risks

Risk	Likelihood	Impacts	Mitigation
Rights of way - Landowners reject requests for access or rights of way or unplanned land purchase is required	Low	Moderate	Active consultation
Stakeholders reject scheme as unsuitable or inappropriate	Low	Moderate	Active consultation, building on Valley of Dreams to date

Risk	Likelihood	Impacts	Mitigation
Unknown riparian design issues arise	Moderate	Moderate	Early involvement of experienced designers. Active early engagement with Environment Agency
Highway interface design issues prove costly	Moderate	High	Early engagement of highway design specialists
Significant habitat or other wildlife issues arise	High	Moderate	Early assessment of environmental issues
Maidstone gyratory designs affect scheme or scheme affects Maidstone Gyratory	Moderate	Moderate	Co-ordination of design and explicit requirement in design brief
Levels of usage do not meet targets	Low	High	Ensure complementary schemes are developed in co-ordinated way. Effective communication

7.9 Gateway Review Arrangements

Since this scheme is being funded through a completely new arrangement of devolved major scheme funding, the Gateway Review arrangements are as yet undefined. As the Transport Business Case progresses, these will be fully defined and reported, in consultation with the LEP and other stakeholders.

8 Conclusions and Recommendation

8.1 Conclusions

The proposal to construct a cycleway along the River Medway involves a combination of upgrades to existing paths, improvements to the alignment in Maidstone Town Centre and a new route between Allington Lock and Aylesford Village.

The scheme will attract significant numbers of users, all of whom will benefit from the improved health attendant on cycling and walking as part of daily life. Since the route is largely off-road, it provides an attractive and valuable leisure route as well as an effective way to travel to work, school or to access other services.

The availability of the route for commuter use will act as a significant attractor for people wishing to move to Maidstone. People will be able to use the path for cycle and walk commuting, both within the Maidstone area and further afield using the rail network. The housing growth plans for the area are dependent on providing an attractive offer and also ensuring that trips generated by new residents will not cause damaging congestion, noise and air pollution.

Complementary schemes include Smarter Choices activities which will encourage use, as well as linked schemes such as cycle parking and improved access to the rail stations. In addition, the highway schemes in the area (including the Maidstone Gyratory) will be made more effective through the delivery of the Medway Cycleway scheme by 'locking in' the benefits of the highway scheme by transferring to walk and cycle trips which would otherwise be made by car.

Although this proposed route is presented in the context of a stand-alone Transport Business Case, it is a key part of an integrated approach towards the sustainable economic development of Maidstone.

8.2 Recommended Next Steps

This business case will be updated as necessary to reflect any significant changes, e.g. to cost or design.

8.3 Value for Money Statement

A Value for Money Statement has been prepared (see Section 4.10) and has produced an overall category of 'high', taking account of a combination of quantitative and qualitative factors.

The scheme has wider impacts that will benefit the town considerably more than solely from a transport perspective and further adjustments have been made with regard to this. This includes the dual-nature of the route as both a commuter desire line and an attractive leisure route.

This VfM is based on the quantified initial BCR for the scheme of High with further adjustments for non-quantified BCR components, qualitative outcomes and risks/sensitivities.

8.1 Funding Recommendation

It is recommended that the funding stream required for the scheme from SELEP, through the LGF, should be released to Kent CC. This involves funding of £2.0m during 2016/17.

Appendix A DfT Active Mode Appraisal Toolkit

Appendix B S151 Officer Letter