

LNMS Evaluation Report

A2 Kingston Bridleway Bridge



July 2011

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Glossary of Terms

Term	Abbreviation	Description
Accessibility	-	Accessibility can be defined as 'ease of reaching'. The accessibility objective is concerned with increasing the ability with which people in different locations, and with differing availability of transport, can reach different types of facility.
Annual Average Daily Traffic	AADT	Average of 24 hour flows, seven days a week, for all days within the year.
Area of Outstanding Natural Beauty	AONB	An Area of Outstanding Natural Beauty (AONB) is an area of countryside considered to have significant landscape that has been specially designated by Natural England on behalf of the United Kingdom government.
Automatic Traffic Count	ATC	An automated method of recording the volume (and sometimes classification) of vehicles passing a particular point on a road.
Appraisal Summary Table	AST	This records the impacts of the scheme according to the Government's five key objects for transport, as defined in DfT guidance contained on its Transport Analysis Guidance web pages, WebTAG
At-Grade Crossing	-	A junction at which two or more transport axes cross at the same level (or grade).
Average Weekday Traffic	AWT	The 24hr total traffic flow on an average weekday (Monday – Friday)
Benefit Cost Ratio	BCR	Benefit Cost Ratio is a ratio identifying the relationship between cost and benefits of a proposed project.
Billion Vehicle Kilometres	Bvkm	Traffic that is measured in terms of vehicle kilometres and is sometimes known as the volume of traffic. This is not the same as congestion. For example, traffic levels could increase without increasing congestion if traffic were more evenly spread during the day, with less during peak periods and more at other times.
Capitalisation Factor	-	The process by which benefits for a scheme are factored to give an estimate for the appropriate appraisal period.
Department for Transport	DfT	A Government department whose objective is to oversee the delivery of a reliable, safe and secure transport system that responds efficiently to the needs of individuals and business whilst safeguarding our environment. The Highways Agency is an executive of the DfT .

Term	Abbreviation	Description
Discounting	-	A technique used to compare costs and benefits that occur in different time periods and is the process of adjusting future cash flows to their present values to reflect the time value of money, e.g. £1 worth of benefits now is worth more than £1 in the future. A standard base year needs to be used which is 2002 for the appraisal used in this report.
Environmental Assessment Report	EAR	This is a preliminary document that identifies the probable effects of the proposed scheme on the natural environment. An EAR was carried out for this scheme which highlighted a number of potential impacts during construction and implementation.
Evaluation Summary Table	EST	In POPE studies, this is a summary of the evaluations of the TAG objectives using a similar format to the forecasts in the AST .
First Year Rate of Return	FYRR	First Year Rate of Return is the ratio of money gained on an investment relative to the amount of money invested.
Highways Agency	HA	An Executive Agency of the Department for Transport (DfT), responsible for operating, maintaining and improving the strategic road network in England.
Killed or Seriously Injured	KSI	A term used to describe the number of people killed or seriously injured as a result of PIAs .
Local Network Management Scheme	LNMS	LNMS are improvement schemes whose total overall estimated cost (including design, land, works, supervision, risk and VAT) is less than £10 million. They are categorised by the Government under Safety, Economy, Accessibility, Integration and Environment.
Managing Agent Contractor	MAC	Responsible for the operation, maintenance, and improvement of the motorway and trunk road network of a Highways Agency area.
New Approach to Appraisal	NATA	Used for transport scheme appraisal since 1998
Non Motorised User	NMU	Includes pedestrians, cyclists, horse riders and disabled people, whose needs must be addressed. An NMU audit considers the specific needs of these road users.
Optimism Bias	-	Is a demonstrated systematic, tendency for project appraisers to be overly optimistic, and in effect, results in an underestimation of scheme costs. The base cost estimate is adjusted to account for optimism bias in order to obtain more accurate cost estimates.

Term	Abbreviation	Description
Project Appraisal Report	PAR	A key document summarising the need for a project, plus its costs and benefits (including those that cannot be quantified in monetary terms).
Personal Injury Accident	PIA	A road traffic accident in which at least one person required medical treatment.
Post Opening Project Evaluation	POPE	The Highways Agency's programme for measuring and monitoring the impacts of schemes implemented on England's strategic road network.
Present Value		Present Value is the value today of an amount of money in the future. In cost-benefit analysis, values in differing years are converted to a standard base year by the process of discounting giving a present value.
Present Value Benefits	PVB	Present Value Benefits is the value of a stream of Benefits accruing over the appraisal period of a scheme expressed in the value of a Present Value
Present Value of Costs	PVC	Present Value Cost is as for PVB but for a stream of costs associated with a project
Public Right Of Way	PROW	A Public Right Of Way is a route over which the public have a legal right under highway law to pass. Public rights of way are found in towns, villages and the countryside and are commonly known as public footpaths, public bridleways and public byways.
Severance	-	Community severance is the separation of adjacent areas by road or heavy traffic, causing negative impact on non-motorised users, particularly pedestrians.
-	STATS19	A database of injury accident statistics recorded by police officers attending accidents.
Traffic Database System	TRADS	Traffic count database developed by the Highways Agency, to hold data from the country's traffic monitoring sites.

1. Introduction

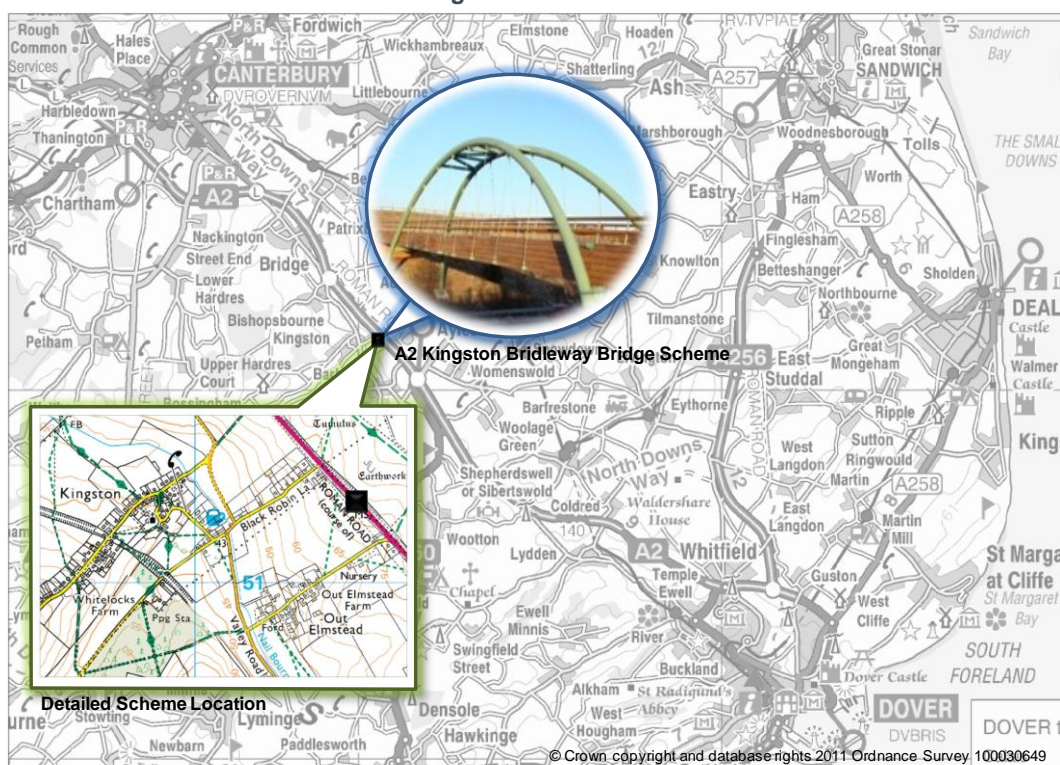
Background to Scheme

- 1.1 The A2 Kingston Bridleway Bridge scheme, which opened in February 2010, is a Highways Agency (HA) Local Network Management Scheme (LNMS). The main objective of the scheme was to provide a safe crossing for pedestrians, cyclists and horse riders across the A2. This report presents a Post Opening Project Evaluation (POPE) of the impacts of the scheme.

Scheme Location

- 1.2 The scheme is located within HA Area 4 in Kingston (Kent) on the stretch of A2 between Canterbury and Dover. The bridge itself is located mid way between Black Robin Lane and Out Elmstead Lane as illustrated in **Figure 1.1**.

Figure 1.1 – Scheme Location



- 1.3 The Kingston Bridleway Bridge is within an Area of Outstanding Natural Beauty (AONB), and provides a link between the North Downs Way National Trail and the Elham Valley Way.
- 1.4 The North Downs Way is a route of international importance and runs for 157 miles between Farnham (Surrey) and Dover. This trail is predominantly for pedestrians although there are stretches of bridleway open for access by equestrians and cyclists. The Elham Valley Way is a popular promoted regional route which is located to the south west of the A2 and runs for 22 miles between Canterbury and Hythe. Both the North Downs Way and the Elham Valley Way are strong desire lines for Non-Motorised Users (NMUs).
- 1.5 The A2 traverses through the Kent Downs AONB and isolates an area that is not easily accessible on the north side of the A2. In the vicinity of the Kingston Bridleway Bridge, near to Black Robin Lane, there are two bridleways and three Public Right of Way (PROW) footpaths that all cross the A2. It should be noted that not all the PROW that cross the A2 have gaps in the central reservation.

Scheme History and Objectives

- 1.6 In 1990, a Feasibility and Options study concerning NMUs and the Motorways and Trunk Road Network on the A2 at Kingston was completed by Kent County Council (KCC). This study identified the need for improvements at this location.
- 1.7 In 2002, Atkins undertook a similar study for the HA which was followed by an NMU audit report by InterRoute in December 2007. The studies found that the A2 restricted access to bus stops and communities on either side of the A2 and also hindered access to the North Downs Way for walkers, equestrians and cyclists. This was due to pedestrians and equestrians being required to cross a 70mph dual carriageway at-grade, which was considered dangerous. Equestrians in particular were prevented from crossing the A2 at this location.
- 1.8 In addition, the A2 creates severance and reduced access to the adjacent villages whilst preventing access to the North Downs Way. Therefore, a shared access bridleway bridge was identified as the best solution to this problem and accommodation works for the scheme began in November 2009. The A2 Kingston Bridleway Bridge opened fully to the public in February 2010.
- 1.9 The scheme objectives are as follows:

A New Bridge and it's NOT for CARS!

“Earlier in the year a rare - and consequently exciting - event took place. A new bridge was installed. But it's not for motorised vehicles. It isn't even connecting a road. It is a bridge connecting a bridleway by Kingston in Kent that was cut in two when the Canterbury bypass was built some twenty odd years ago. So it's a bridge for walkers and riders of horses and bikes. All the work has been completed now and the bridge is open. So, if you want to try a new bridge on your bike, then head off towards Kingston between Barham and Canterbury. It's quite a pretty bridge too.”

Excerpt taken from SPOKES Newsletter, 2010

- To provide a safe means of crossing the A2 for pedestrians, disabled persons, cyclists and equestrians including the communities of Out Elmstead, Kingston and Barham; and
- Improving access to the North Downs Way.

Purpose of this Report

Post Opening Project Evaluation (POPE)

- 1.10 As part of an ongoing programme to evaluate the impacts of trunk road schemes, Atkins are commissioned to undertake POPE of LNMS with an implementation cost of between £25k and £10m. The aim of this process is to:
- Quantify the outturn benefits, disbenefits and costs accruing from new schemes and to ascertain which schemes offer the greatest value for money;
 - Develop the pre-scheme appraisal processes and ensure that accurate predictions are made about the possible impacts of highway schemes on safety, economy, environment, accessibility and integration in the future; and
 - Enable the HA to select schemes that offer the greatest value for money and that are the most effective solutions to problems on the trunk road network.
- 1.11 This report specifically sets out the results of the POPE of the A2 Kingston Bridleway Bridge scheme in accordance with the POPE methodology. POPE is based on an evaluation of the scheme's outturn impacts against the five core New Approach to Appraisal (NATA) objectives as listed below:
- **Economy** – concerned with improving the economic efficiency of transport, for example, journey time savings and reliability;
 - **Safety** – concerned with reducing the loss of life, injuries and damage to property resulting from transport incidents and crime;

- **Environment** – reducing the direct and indirect impacts of transport facilities on the physical and social environment of both users and non-users;
- **Accessibility** – concerned with people’s ability to reach different locations and facilities by different modes, and the ease with which they can do so; and
- **Integration** – aims to ensure that all decisions are taken in the context of the Government’s integrated transport policy.

1.12 As detailed in the Project Appraisal Report (PAR) document, the scheme has been categorised as an **Accessibility** scheme.

1.13 Furthermore, this report presents the following:

- A comparison of the ‘before’ and ‘after’ traffic volumes at the link to illustrate how overall traffic conditions have changed following scheme opening;
- An outline of changes in the number of accidents at the link following scheme opening;
- A comparison of predicted and outturn environment, accessibility and integration impacts;
- A summary of scheme performance from the perspective of key stakeholders engaged in the original scheme development including the HA Project Manager;
- The PAR assessment which forecast the benefits of the scheme. Where required, values are converted to 2002 prices and discounted to the opening year; and
- An Evaluation Summary Table (EST) based on the outturn effects of the scheme using a methodology consistent with the PAR assessment undertaken prior to the scheme opening.

Structure of this Report

1.14 Following on from this introduction, the remainder of the report is structured as follows:

- **Section 2 – Scheme Detail:** Provides details of the scheme including photos illustrating the scheme key features;
- **Section 3 – Data Collection and Stakeholder Feedback:** Contains an outline of the data which has informed the evaluation and the responses from key stakeholders regarding the scheme;
- **Section 4 – Traffic Impacts:** Outlines the traffic changes in the study area;
- **Section 5 – Safety Impacts:** Outlines the safety impacts of the scheme through analysis of personal injury accidents;
- **Section 6 – Economy:** Summarises the value for money of the scheme by comparing the scheme costs and benefits;
- **Section 7 – Environment, Accessibility and Integration Issues:** Summarises the scheme impacts on these issues; and
- **Section 8 – Summary of Conclusions and Recommendations:** Summarises the impact of the scheme based on the data available to evaluate the scheme.

1.15 It is intended that the findings from this report shall feed into a wider summary of the outcomes of POPE of LNMS in the annual report.

2. Scheme Detail

Introduction

- 2.1 This section of the report examines the details of the scheme and highlights the key features and other options that were considered at the scheme conception stage. The aims of this section are to identify and provide further details of the measures implemented.

Pre Scheme Layout

- 2.2 The A2 is a highly trafficked (see Chapter 4) dual carriageway with a 70mph posted speed limit. There were, prior to the scheme, no crossing points and the bus lay-bys were accessed via a gap in the central reserve (**Figure 2.1**).

Figure 2.1 – Gap in the Central Reserve (Before Scheme)



Scheme Features

- 2.3 A site visit was conducted in February 2011 to assess whether the scheme had been implemented as described in the PAR. This visit observed that all measures had been implemented as described, and these are discussed within this section.
- 2.4 The bridge has the following key design features:
- Arched steel and timber construction with connection to existing bridleways. The bridge has timber cladding to be in keeping with the environment (see **Figure 2.2**);
 - A length of 50m, and a walkway width of 3.5m;
 - A height of 12.5m above the road level at its highest point;
 - A width large enough to accommodate pedestrians, equestrians and cyclists use simultaneously;
 - Designed to prevent the need for equestrians and cyclists to dismount to use the bridge; and
 - Positioning in the deepest part of the embankment to minimise the visual impact on the surrounding landscape (See Section 7).

- 2.5 As well as the bridge itself, the scheme added a number of footways to enable access from the various roads and rights of way in the vicinity. To the south of the A2, footway access has been provided from both Black Robin Lane and Out Elmstead Lane to the bridge. Access from the former is partly via an existing access road to properties adjacent to the A2 and partly via a new footway. On the north side of the A2, new footways have been provided to link the bridge with three rights of way, namely the bridleway opposite Out Elmstead Lane (leading towards lleden Wood); the footpath opposite Black Robin Lane (leading towards lleden Farm); and the bridleway also providing access (for vehicles) to lleden Farm. All three routes provide access to the North Downs Way.

Figure 2.2 – Bridge Structure with Timber Cladding



- 2.6 The Bridleway Bridge was constructed to allow safe crossing for equestrians, cyclists and ramblers but also allow pedestrians and disabled persons to cross the A2 between two bus stops located either side of the A2. **Figure 2.3** shows the location of the northbound bus stop in relation to the new bridge and the footway leading up to the bridge. Note that no changes were made to the bus stops themselves.

Figure 2.3 – Bus Stop Location (in relation to the bridge)



- 2.7 In addition to the new bridge, the scheme also included the re-planting of trees and bushes post construction to help ensure there was a minimal impact of the bridge on the natural environment.

Figure 2.4 – Re-Planting of Trees and Bushes



- 2.8 Since the opening of the scheme, Mott MacDonald received the Institute of Civil Engineers (ICE) South East Thomas Brassey Award 2010 for the design and construction of the bridge. These awards are intended specifically to recognise excellence in engineering and projects that make a positive difference to the environment or community. The bridge was deemed by the judges to be the 'best all round' for engineering ingenuity and innovation, and was believed to have had a positive impact on the local community and to have taken exceptional care of the environment.

Other Options Considered

- 2.9 One other option was considered during the feasibility stage, which was the construction of a tunnel that would pass below the A2. However, this option was discounted due to the geography and topography of the site not lending itself to this solution.

Summary – Section 2:

Following a site visit in February 2011, the scheme appears to have been implemented as per the proposals set out in the Implementation PAR.

The primary component of the scheme was the construction of a new Bridleway Bridge to cross the A2 near Kingston. In addition, trees and bushes were re-planted to reduce the impact of the bridge on the surrounding environment.

Since opening, the bridge won the ICE South East Thomas Brassey Award 2010 for its engineering and design.

An alternative scheme option was to construct a tunnel underneath the A2; however this was discounted for geographical and topographical reasons.

3. Data Collection and Stakeholder Feedback

Introduction

- 3.1 This section of the report sets out the data collection process and sources of data that have been used to undertake the POPE assessment. It also provides a summary of the feedback from key stakeholders regarding the overall effectiveness of the scheme in achieving its intended objectives.

Data Collection

- 3.2 The following datasets and information have been used to support this evaluation:

- A site visit conducted in February 2011 to ensure that the scheme was implemented as per the PAR;
- A further site visit of the scheme on 11th March 2011 to assess the visual impact of the scheme and other environmental issues;
- A2 Kingston Bridleway Bridge Context Report 01 - NMU Audit (Dec 2007);
- Accident data provided by the MAC for the period between 01/01/2003 and 01/03/2011;
- Stakeholder feedback (included within this section); and
- Pedestrian Survey Data collected by Sky High Limited for a 12 hour period on Saturday 2nd July 2011.

Stakeholder Feedback

- 3.3 A number of stakeholders provided feedback on the scheme at the conception stage. This consultation has been re-visited as part of the POPE and, where possible, feedback has been sought from the same stakeholders/organisations. Stakeholders were contacted by letter and/or email and asked to complete a questionnaire (See **Appendix C**). In summary the questionnaire contained the following questions:

- How aware are you of this scheme?
- Do you have any indication of how often the bridge is being used and by what sort of users? (for example, pedestrians or equestrians)
- What do you see as the major benefits of the scheme?
- Do you perceive there to be any weaknesses with this scheme? If so please can you suggest ways that these weaknesses could be overcome?
- Have you received any feedback (positive or negative) regarding this scheme?
- Do you have any further comments on this scheme?

- 3.4 A number of respondents chose to provide additional information/comments. Full details of all feedback received can be viewed in **Appendix D**, however a summary of the level of support from each stakeholder and their opinions regarding the benefits and weaknesses of the scheme can be found in **Table 3.1** (each row represents a separate stakeholder).

- 3.5 Feedback from stakeholders specifically relating to environmental issues has been included in the environment chapter of this report.

Table 3.1 – Summary of Stakeholder Feedback

Stakeholder	Level of Support	Scheme Benefits	Scheme Weaknesses
Public Rights of Way Area Manager (East Kent)	Support	<ul style="list-style-type: none"> • A safe crossing; • Appears to be well used; • Links communities; • Links extensive PROW network; • Tourism and economic benefits. 	<ul style="list-style-type: none"> • Took a long time to reach the top of the priority list; • Lack of promotion from the HA post-construction; • A stile on one of the bridleways and a fence on the link to Illeden Lane prevented use by equestrians.
Canterbury City Council (Officer)	Support	<ul style="list-style-type: none"> • Bridge is being used by walkers, cyclists and equestrians; • Eliminates the need to cross a live dual carriageway at-grade; • Links up the PROW network and offers new opportunities to explore the AONB; • Countryside more accessible – increase in green tourism; • Reduces community severance. 	<ul style="list-style-type: none"> • Link path between the southern end of the bridge and Black Robin Lane has a ‘cyclists dismount’ sign because the path is narrow. If this path was widened, this would enable a direct and unhindered shared use cycle path connection between Black Robin Lane and the bridge; • This would then improve accessibility and convenience.
Canterbury City Council (Member for Barham Downs)	Support	<ul style="list-style-type: none"> • Safe for residents of the villages to cross the road from the bus stops (especially school children); • Safer route for people walking the national trail. 	
Kingston Parish Council (Councillor)	Support	<ul style="list-style-type: none"> • Kingston is no longer separated by a major road; • Provides a link to the PROW. 	<ul style="list-style-type: none"> • Bus stop coming from Canterbury should be closer to the bridge; • Some people cross at the crash barrier instead of the bridge to save time.
Adisham Parish Council (Councillor)	Support	<ul style="list-style-type: none"> • Aware that many dog walkers use it; • Provides safe access and good walks. 	
Royal Oak Riding Club	Support	<ul style="list-style-type: none"> • Well used by riders, cyclists, walkers and bus users; • Equestrians can now ride the North Downs Way and adjoining bridleways; • Provides a safe crossing. 	
British Horse Society	Support	<ul style="list-style-type: none"> • Well used by all types of user; • Reconnects roads and bridleways; • The width of the bridge, the infill and parapet height, the 	<ul style="list-style-type: none"> • Equestrians banned from using the link between the bridge and Black Robin Lane; • A fenced off multi-user path between Black Robin Lane and

Stakeholder	Level of Support	Scheme Benefits	Scheme Weaknesses
		clear view from end to end of the bridge, surfacing all help horses and their riders feel secure when crossing this major route.	Bridleway CB269 has also not been provided; <ul style="list-style-type: none"> This means riders from the north have to negotiate hazardous roads.
Ramblers Association	Support	<ul style="list-style-type: none"> Safely connects two parts of the PROW network; Feedback from residents and walkers has been positive; Early involvement of user groups helped eliminate potential downsides. 	
SPOKES	Support	<ul style="list-style-type: none"> Provides a safe crossing; Reconnected communities that were severed by the A2; Reconnects bridleways and the PROW network; Used regularly by cyclists. 	<ul style="list-style-type: none"> Could have been part of a bigger scheme to benefit the whole of the South East; Improved cycle routes would connect villages to Canterbury and help tourism.
Canterbury City Council (Council Leader)	Opposed	<ul style="list-style-type: none"> Well engineered. 	<ul style="list-style-type: none"> No need for the bridge – money should have been spent on A2 slip roads; Cost, especially when the country was / is in a dire financial situation; Bridge rarely used.
Canterbury City Council (Councillor)	Mixed	<ul style="list-style-type: none"> Correctly sited in respect of the surrounding AONB; Beneficial for recreational users. 	<ul style="list-style-type: none"> Funding would be better spent on A2 on-slip at Wincheap; Bus users from main part of Kingston have further to walk for the Dover / Folkestone bound bus; This bus stop should be moved nearer to the bridge.
Kingston Parish Council (Councillor)	Mixed	<ul style="list-style-type: none"> Safety improvements – no longer necessary to cross a major dual carriageway; Improved access to the North Downs Way; Kingston is no longer separated by a major road. 	<ul style="list-style-type: none"> Location of the bus stop on the Dover side of the bridge causes pedestrians to walk a longer distance to cross the bridge; The bus stop could be moved closer to the bridge.
Stagecoach – East Kent	Mixed	<ul style="list-style-type: none"> Ticket machine data shows that average users of the bus stops has increased since the opening of the scheme. However this does include adjacent stops. 	<ul style="list-style-type: none"> Some pedestrians still crossing the road at ground level; Issue of motorists parking in the bus stop lay-bys. Disappointed that the bus stop markings were refreshed rather than marked fully out.

- 3.6 On the whole the bridge has been well received by recreational users however some minor design issues have been identified. In itself, the scheme seems to be beneficial and has been well received, however, there is a question over whether it was a high priority scheme that justified the investment cost. The main weakness seems to be in relation to the access to the bus stops which is now via a longer route compared to crossing the A2 at grade. Anecdotal evidence suggests that due to this longer route when using the bridge there is a worrying trend of bus users (particularly school children), crossing the road at ground level to avoid delays in their journey home.

Summary – Section 3:

A number of datasets have been used to support this evaluation, including two site visits, NMU Audit report, accident data, pedestrian survey data and stakeholder feedback.

Stakeholders that provided feedback on the scheme at the conception stage were also asked to provide feedback now the scheme had been implemented.

The bridge has been well received by recreational users; however some minor design issues were identified.

4. Vehicle Traffic and Non Motorised Users Flows

Introduction

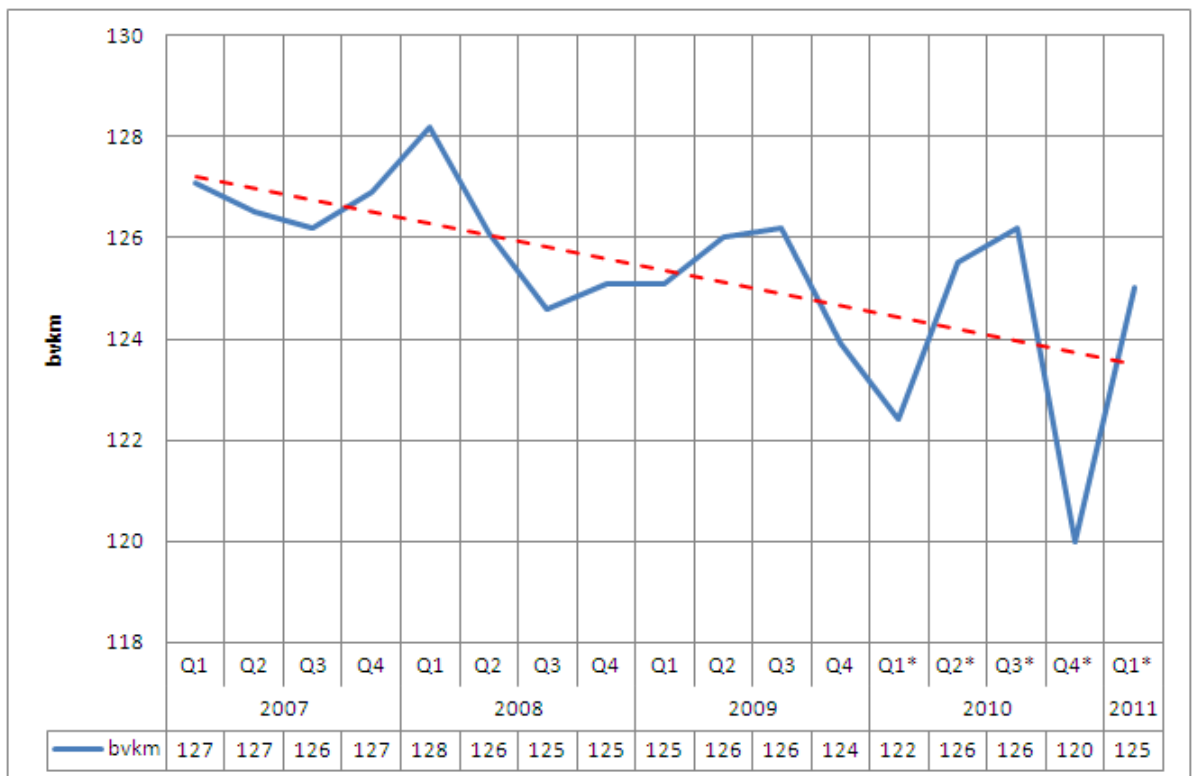
4.1 This section of the report summarises the analysis that has been undertaken to assess the impacts of the scheme on traffic and NMUs. Data collected pre and post scheme opening is assessed to quantify the changes that have occurred. Whilst any changes in traffic flows are unlikely to be a result of the scheme itself it is important to know what changes there have been in the vicinity of the scheme when considering any changes in accident rates which have occurred since the opening of the scheme.

Vehicle Traffic Volumes

National Trends

4.2 Nationally observed changes in traffic levels are provided in the Transport Statistics Bulletin: Road Traffic & Congestion in Great Britain produced by the Department for Transport (DfT). These statistics provide trends in billion vehicle kilometres (bvkm) by road type and vehicle type, for each quarter. The statistics for rural A roads for all vehicles since 2007 are illustrated graphically in **Figure 4.1**.

Figure 4.1 – Nationally Observed Trends in Vehicle Kilometres (Rural A Roads)



***Note:** results are based on observed data, 2010 and 2011 Q1 estimates are provisional. Q1 2009 Q1 2010 and Q4 2010 figures were affected by heavy snowfall (more so in Q4 2010).

4.3 The national trends (shown in **Figure 4.1**) demonstrate that:

- There has been a decline in bvkms on rural A roads since Quarter 1 of 2008;
- Traffic in the first two quarters of 2010 has been lower than in the three previous years;
- Provisional data demonstrates a slight downturn in each quarter of 2010 compared to the corresponding quarter in 2009;
- Provisional data for quarter one of 2011 demonstrates an upturn in bvkms compared to the corresponding quarter of 2010 and is in line with quarter one of 2009. It should however be noted that quarter 1 of 2009 and 2010 were affected by heavy snowfall and quarter one of 2011 is still considerably lower than quarter one of 2008; and
- The downturn in traffic flow is likely to be due (in part) to the economic downturn.

Local Trends

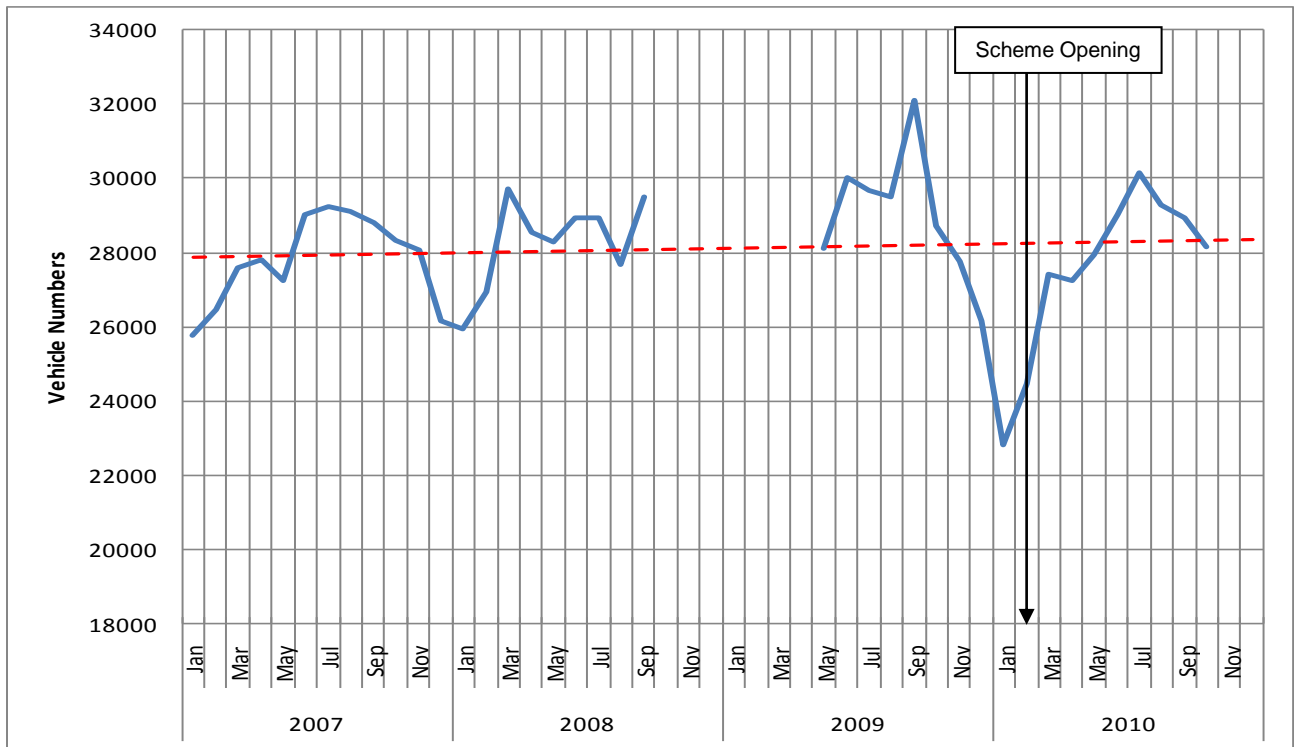
4.4 Long term traffic count data was available from the Highways Agency TRADS database for the A2 north of the scheme (within 3 miles of the scheme). Whilst traffic data was not available within the immediate vicinity of the scheme it is considered that the TRADS sites used are representative of any change in local traffic volumes in the area.

4.5 **Figure 4.2** shows the trend in two-way Average Daily Traffic (ADT) by month for this section of the A2. Analysis of recent trends in traffic flows in the vicinity of the scheme not only helps to establish the context in which any changes have occurred, but also helps to set the scene in relation to traffic conditions before the scheme was constructed. It should be noted that no traffic data was available at these sites for the latter half of 2008 and early 2009.

4.6 From **Figure 4.2**, the following observations can be made regarding trends in traffic on the A2:

- There is some seasonal variation with higher flows in the summer months;
- The A2 carries between 22,000 and 32,000 vehicles per day on average; and
- Overall the A2 has exhibited a slight increase in traffic since 2007 as demonstrated by the linear trend line. This is in contrast to national trends.

Figure 4.2 – Long Term Traffic Trends (ADT) for the A2 north of the scheme



NMU Volumes

- 4.7 Prior to the scheme there was no recent data available on the numbers of pedestrians, cyclists and equestrians that crossed at or around the location of the bridleway bridge. Previous surveys produced very low numbers of NMUs attempting to cross the A2. The NMU audit report (2007) stated that *'this maybe as a result of the difficulties experienced when trying to cross a 70mph, two-lane dual carriageway with 1m hard strips to the nearside only, and a 3m wide central reservation, which provides little protection to either pedestrians or equestrians waiting to cross the second carriageway. As a result this makes it nearly impossible for equestrians to cross.'*
- 4.8 In order to determine the level of use on the bridge following the implementation of the scheme a non motorised user survey was commissioned and undertaken on Saturday 2nd July 2011. The results of the survey are presented in **Table 4.1**.

Table 4.1 – Non Motorised User Survey (12 hour results)

Direction	User Type	Number of Users
Eastbound	Pedestrians	6
	Cyclists	0
	Equestrians	0
Westbound	Pedestrians	6
	Cyclists	1
	Equestrians	0
Two Way	Pedestrians	12
	Cyclists	1
	Equestrians	0

- 4.9 Whilst the user flows can be deemed to be relatively low, this survey, being a Saturday count, does not include commuters and school children using the bridge for access to the bus stops for their commute to school/work. The survey can therefore be considered to be a snapshot of leisure users only however it should be noted that you would expect user flows to be highest on a sunny Saturday in July (the time of the survey).
- 4.10 Evidence from Stagecoach shows that passenger boarding at the stops in the vicinity of the bridge averaged 8.9 per day in June 2009 (before the scheme) and 15.7 per day in June 2010 (after the scheme). However, it should be noted that these figures include passenger boarders at adjacent stops, not just those immediately next to the bridge. Even so, this increase seems to be likely, at least in part, to be due to increased use of the bus stops next to the bridge owing to their improved accessibility. This cannot be quantified or proved, though, given that the figures include adjacent stops.

Summary – Section 4:

Nationally, there has been a decline in bvkms on rural A roads since 2008. This is likely to be related to the economic climate;

Overall, the A2 has shown a slight increase in traffic since 2007 in contrast with national trends.

The snapshot survey showed the number of NMUs using the bridge for leisure appeared to be low however this is based on one day only and does not include commuters on a weekday. Evidence suggests there has been an increase in bus patronage since the scheme was implemented suggesting an increase in use of the bridge by commuters.

5. Safety Impacts

Introduction

5.1 This section examines the accidents both pre and post scheme opening to establish whether the scheme has resulted in a post opening safety benefit or disbenefit. The aims of the section are:

- To determine whether the scheme has achieved its safety objectives;
- To determine whether there has been any change in the number, location and causation of Personal Injury Accidents (PIAs) following scheme opening; and
- To determine if the scheme has resulted in an overall safety benefit or disbenefit and to quantify this change.

5.2 The accident data referred to in this report has not necessarily been derived from the national validated accident statistics produced by the DfT. As such, the data may subsequently be found to be incomplete or contain inaccuracies. The requirement for up-to-date information and site specific data was a consideration in the decision to use un-validated data and, as it is sourced from Local Processing Units through the HA's MACs, it is sufficiently robust for use in this context.

PAR Analysis and Assumptions

The PAR

5.3 The PAR used accident data from 01/01/2003 to 31/12/2007 and revealed the following:

- Six accidents occurred over a period of five years, amounting to an observed accident rate of 1.2 PIA/yr; and
- The KSI severity index¹ was 16.7% over the same five year period, with no fatal accidents, and one serious accident.

5.4 A summary of the accident analysis as detailed in the PAR is shown in **Table 5.1**.

Table 5.1 – Summary of Accident Numbers as detailed in the PAR (All Accidents)

	Period	PIA No./Rate	Slight	Serious	Fatal	Total	Severity Index
'Before' Scheme Opening (PAR)	1 st Jan 2003 to 30 th Dec 2007	PIA Number	5	1	0	6	16.7%
		PIA rate per year	1	0.2	0	1.2	

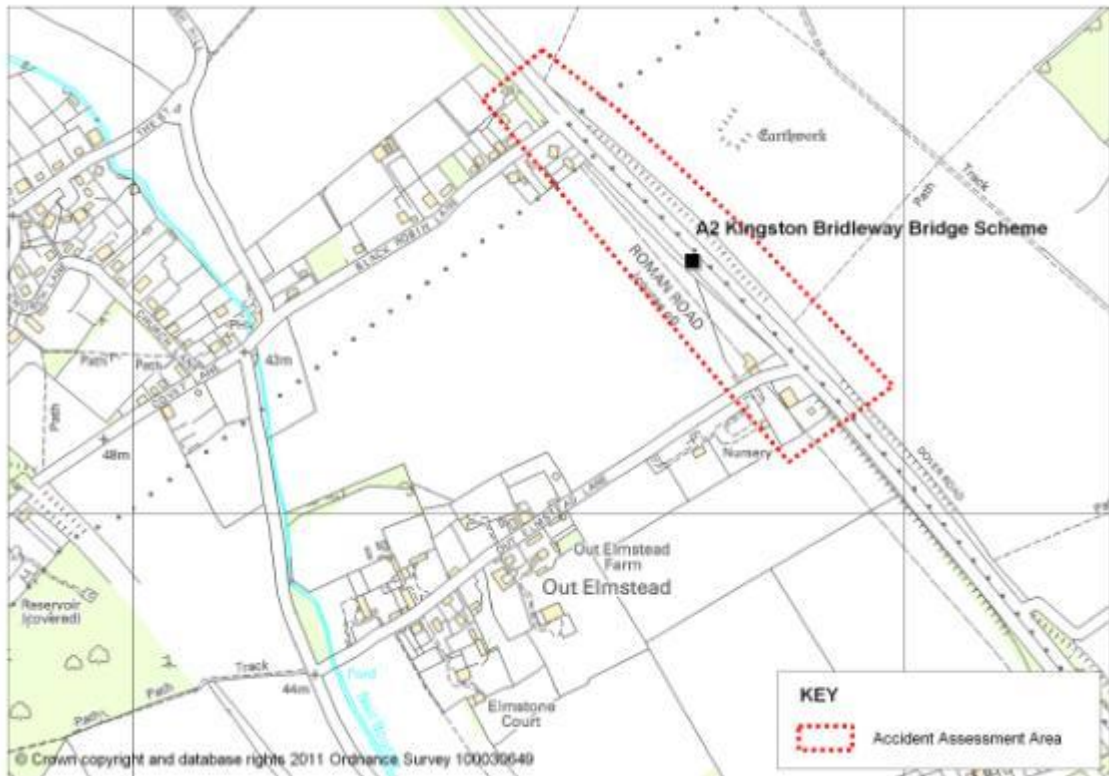
5.5 The PAR predicted that there would be an accident saving of 1 PIA in the opening year, which amounts to virtually all accidents. The number of accidents likely to be saved over the full assessment period (60 years) is calculated by multiplying the first year estimate of accidents saved by the appropriate capitalisation factor. In this case the capitalisation factor is 55.3. Capitalisation factors are calculated for the appropriate road type and the traffic growth predicted for the chosen assessment period. Over the full assessment period the total saving was predicted to be 55 accidents.

¹ The number of fatal and serious accidents taken as a percentage of all personal injury accidents.

Post Opening Evaluation

- 5.6 To ensure a like-for-like comparison of the predicted and outturn safety impacts of the scheme, a PAR predicted corrected appraisal of the scheme has been undertaken. In this instance, this has been done to ensure that the same geographical area is used for both the pre and post opening periods as the area used in the PAR was unknown.
- 5.7 The location of the accident analysis area is presented in **Figure 5.1**:

Figure 5.1 – Accident Analysis Area



- 5.8 The data is based on the records of PIAs accidents recorded in the STATS19 data collected by the police (damage only accidents are not included). It is considered that traffic management during the period of construction would have affected driver behaviour; therefore this period has been excluded (November 2009 to February 2010).
- 5.9 **Table 5.2** provides a summary of the accident numbers occurring in the study area both before and after the scheme opened. Unlike the PAR analysis the before (predicted corrected) and after data presented below are based on the same geographical area and are therefore directly comparable.
- 5.10 Two 'before' scheme opening periods have been presented as follows:
- For the years as detailed in the PAR (January 2003 to December 2007) referred to as the 'PAR Years' assessment; and
 - The most recent five years prior to construction (November 2004 to October 2009) referred to as the 'Most Recent' assessment.
- 5.11 As per the PAR guidance, all accidents regardless of their causation or nature have been included in the table below.

Table 5.2 – Summary of Accident Numbers before and after scheme opening

Scheme Opening	Period	PIA No./ Rate	Slight	Serious	Fatal	Total	Severity Index
(a) 'Before' (PAR Years)	Jan 2003 to Dec 2007 (60 months)	PIA Number	0	0	0	0	0%
		PIA rate per year	0	0	0	0	
(b) 'Before' (Most Recent)	Nov 2004 to Oct 2009 (60 months)	PIA Number	1	0	0	1	0%
		PIA rate per year	0.2	0	0	0.2	
'After' scheme opening	Mar 2010 to Feb 2011 (12 months)	PIA Number	0	0	0	0	0%
		PIA rate per year	0	0	0	0	
Annual Accident Saving (per year)*			0.2	0	0	0.2	0%

* Saving calculated from (b) 'Before' (most recent) to 'After' scheme opening

5.12 Key points to note from **Table 5.2** include:

- There were no accidents within the study area in the five years that were used in the PAR. This demonstrates that the PAR used a larger study area than that considered appropriate for the POPE of LNMS analysis;
- An annual accident rate of 0.2 PIA/year was observed in the most recent period prior to the scheme construction;
- The severity index prior to the scheme was 0% with no fatal or serious accidents reported;
- No PIAs have been reported within the study area since the opening of the scheme; and
- The annual accident saving of the scheme alone amounts to 0.2 PIA per year.

Non Motorised User Accidents

5.13 Whilst the PAR (in line with guidance) presented all accidents regardless of causation or casualty type, due to the nature of the scheme, only NMU accidents are deemed to be appropriate for consideration with respect to accident savings in the predicted corrected and outturn scenarios. There were no accidents involving NMUs in either the pre or post scheme opening period in the immediate vicinity of the scheme. The annual accident saving is therefore deemed to be zero.

5.14 There was an accident involving a pedestrian in 2004 before the scheme opened however this was 600m to the north of the bridge location and outside the area deemed appropriate for accident analysis. It is by no means certain that this accident would or indeed wouldn't have been prevented should the bridge have been in place at the time of the accident. Due to this uncertainty it is not considered appropriate to apply a monetary benefit that would be attributed to the saving of this accident.

5.15 It is the conclusion of this assessment that no accidents have been saved by the Kingston Bridleway Bridge as there have been no NMU (for which this scheme was aimed) accidents before or after the scheme in the vicinity of the bridge. As such, no monetary benefit has been applied. That said, it can be concluded that the risk and fear of potential accidents involving NMUs has reduced with the implementation of the scheme.

Comparison of Accident Analysis

- 5.16 By comparing the PAR and PAR predicted corrected with the outturn accident savings presented in this section, we can comment on the scheme’s accident savings compared to those forecast, see **Table 5.3**. The predicted corrected accident savings have been taken as zero given that, as discussed previously, no accidents involving NMUs were reported within the study area, either pre or post scheme opening.
- 5.17 For completeness all PAR predicted corrected scenarios are presented in **Table 5.3** however, for the purposes of this evaluation it is deemed appropriate that the economic benefit of the scheme be derived from the comparison of the outturn accident savings with that of the PAR predicted corrected (most recent), therefore there will be no monetary benefit attributed to accident savings for this scheme.

Table 5.3 – PAR Predicted, PAR Predicted Corrected & Outturn Accident Saving

		Opening Year Saving (PIAs)	60 Year Saving (PIAs)
PAR Predicted*	PAR Years	1	55
Predicted Corrected	PAR Years	0	0
	Most Recent	0	0
Outturn (compared to PAR)*	PAR Years	1	55
Outturn (compared to predicted corrected)	PAR Years	0	0
	Most Recent	0	0

**Note: Capitalisation factors and geographical area of analysis differ from Predicted Corrected and Outturn*

Summary – Section 5:

The PAR predicted an accident saving of 1 PIA in the opening year amounting to 55 over the 60 year assessment period;

Using the predicted corrected assessment area just 1 PIA occurred in the most recent period prior to scheme construction, a rate of just 0.2 PIAs per year however this accident did not involve a NMU and it is not deemed likely that this accident would have been prevented by the scheme;

The actual outturn accident saving is considered to be zero as there were no NMU accidents before or after the scheme opened.

6. Economy Impacts

Introduction

- 6.1 This section of the report presents information regarding the forecast and outturn economic impacts of the scheme based on observed data collected pre and post scheme opening. A review of the outturn scheme costs against those predicted is also undertaken.
- 6.2 Economic benefits presented in this section of the report are derived from safety benefits associated with a reduction in the number of accidents only. As you would expect for a scheme of this type, no journey time benefits were predicted in the PAR and no journey time benefits have been estimated in this section of the report.

Safety Benefits

- 6.3 In scheme appraisal, the economic impact of changes in safety is calculated by assigning monetary benefits to the predicted reduction in the number and severity of PIAs over the appraisal period.

Forecast Safety Benefits

- 6.4 The forecast safety benefits for the scheme have been derived from the PAR and are presented in **Table 6.1** below alongside a PAR predicted corrected safety benefit (for both the PAR years, and the most recent years prior to construction), which have been calculated based on the revised geographical area used in the accident analysis in Section 5 of this report.

Table 6.1 – Calculation of Forecast Safety Benefits: PAR and PAR predicted corrected

	PAR	Predicted Corrected	
		PAR Years	Most Recent
Opening year accident saving (a)	1	0	0
Average cost of accident in opening year (b)	£0.089m		
Accident Benefits Capitalisation factor (c)	48.55		
Accident Numbers Capitalisation factor (d)	55.43		
60 year accident saving (a) x (d)	55	0	0
Accident benefit in opening year undiscounted (e) = (a) x (b)	£0.089m	£0m	£0m
Accident benefits over 60 year assessment period (e) x (c)	£4.321m	£0m	£0m
Accident benefit in 2002 prices discounted to opening year	£0.070	£0m	£0m
Accident benefits over 60 year assessment period in 2002 prices discounted to opening year	£3.410	£0m	£0m

Note: Capitalisation factors, average cost of accident in opening year and discount rates derived from PAR v4.1d guidance

- 6.5 It can be seen from **Table 6.1** that the PAR predicted corrected safety benefits are zero with no NMU accidents savings as detailed in Section 5. The accident benefits are therefore significantly lower than the PAR prediction.

Outturn Safety Benefits

6.6 As with the forecast safety benefits, a 60 year monetary benefit has been calculated for the outturn, based on the accident saving observed since the scheme opened compared to pre and post scheme opening.

Table 6.2 – Calculation of Outturn Safety Benefits: Compared to PAR and Predicted Corrected

	Outturn Compared to PAR	Outturn Compared to PAR Predicted Corrected:	
		PAR Years	Most Recent
Opening year accident saving (a)	1	0	0
Average cost of accident in opening year (b)	£0.089m		
Accident Benefits Capitalisation factor (c)	48.55		
Accident Numbers Capitalisation factor (d)	55.43		
60 year accident saving (a) x (d)	55	0	0
Accident benefit in opening year undiscounted (e) = (a) x (b)	£0.089m	£0m	£0m
Accident benefits over 60 year assessment period (e) x (c)	£4.321m	£0m	£0m
Accident benefit in 2002 prices discounted to opening year	£0.070	£0m	£0m
Accident benefits over 60 year assessment period in 2002 prices discounted to opening year	£3.410	£0m	£0m

Note: Capitalisation factors, average cost of accident in opening year and discount rates derived from PAR v4.1d guidance

6.7 As mentioned previously, for the purposes of this evaluation it is deemed appropriate that the economic benefit of the scheme be derived from the comparison of the outturn accident savings with that of the PAR predicted corrected for the most recent years prior to scheme construction.

6.8 On this basis there is no outturn safety benefit for this scheme.

Scheme Costs

6.9 This section compares the forecast cost of the scheme with the outturn cost. The opening year was forecast to be 2009. The forecast cost has been derived from the PAR and outturn costs provided by the HA MAC. The predicted corrected cost differs from the PAR predicted due to the use of Government RPI values in the predicted corrected. Unlike the PAR predicted, the predicted corrected and outturn costs in the table below utilise the updated government RPI values and are therefore directly comparable. Predicted and Outturn costs are included in **Table 6.4**:

Table 6.3 – Scheme Costs (2002 Prices discounted to opening year)

Costs	PAR Predicted	Predicted Corrected	Outturn
Works, Land & Other costs (<i>including general taxation</i>)	£1.903m	£1.945m	£1.472m
Maintenance Costs	£0m	£0.053m	£0.053m
Total Project Costs	£1.903m	£1.998m	£1.525m

6.10 **Table 6.4** shows that the outturn cost of the scheme was lower than predicted. The MAC was unable to provide an explanation as to why the scheme was delivered significantly below the cost predicted however they confirmed the scheme was delivered as expected.

Summary of Economic Benefits

6.11 **Table 6.5** provides a summary of the monetised benefits of the scheme. The Benefit Cost Ratio (BCR) is used as a summary of the overall value for money of a scheme over its forecast lifetime (60 years).

Table 6.4 – Summary of Scheme Benefits (Predicted, Predicted Corrected and Outturn)

	Predicted	Predicted Corrected	Outturn
First Year Safety Benefits	£0.070m	£0m	£0m
60 Year Safety Benefits	£3.410m	£0m	£0m
First Year Costs*	£1.903m	£1.945m	£1.472m
Total 60 Year Costs**	£1.903m	£1.998m	£1.525m
Benefit Cost Ratio (BCR)	1.8	0	0
First Year Rate of Return (FYRR)	3.7%	0%	0%

Note: All costs are in 2002 prices and discounted to the opening year

*No maintenance costs in first year

**Includes 60 year maintenance costs

6.12 Key points to note from **Table 6.5** include:

- The scheme was delivered at a cost of £1.472m compared to a predicted corrected of £1.945m; and
- There were no outturn monetary benefits of the scheme compared to £3.410m predicted (over 60 years).

Summary – Section 6:

There were no outturn annual accident monetary benefits as the scheme was not deemed to have saved any accidents;

The scheme had a first year cost of £1.472m which is 23% lower than the predicted cost of £1.903m;

The FYRR and BCR are zero which means the scheme will not recoup the cost of its construction.

7. Environment, Accessibility and Integration Impacts

Introduction

- 7.1 This section of the report presents an evaluation of the scheme's impacts on the Environment and Accessibility and Integration objectives, against the forecast impacts stated in the scheme's full PAR and Appraisal Summary Table (AST).

Environment Impacts

- 7.2 The **Environment** objective consists of ten elements:

- Noise;
- Local Air Quality;
- Greenhouse Gases;
- Landscape;
- Townscape;
- Heritage of Historical Resources;
- Biodiversity;
- Water Environment;
- Physical Fitness; and
- Journey Ambience.

- 7.3 As during the scheme conception stage, post scheme consultation was carried out with Natural England, the AONB Board, Campaign to Protect Rural England (CPRE), Canterbury City Council and Kingston Parish. Stakeholders were contacted regarding their views on the impacts they perceive the scheme has had on the environment and whether they feel that the mitigation measures implemented have been effective. Discussion has also taken place with the members of the HA team designers and the MAC for the scheme.

- 7.4 A site visit was undertaken in March 2011 which allowed a general overview of the scheme with access from public footpaths and local roads.

- 7.5 An Environmental Assessment Report (EAR) was produced in the pre-scheme appraisal that highlighted a number of potential impacts during the construction and implementation of the A2 scheme. The key environmental effects identified were:

- **Landscape and visual intrusion** – visual impacts on houses and rights of way in close proximity to the scheme and on the landscape of the surrounding area particularly to the west. This area is part of the Kent Downs AONB. The impacts were considered to be slight adverse initially reducing to neutral by Year 15.
- **Physical Fitness** – under the topic 'Effects on All Travellers' in the EAR, overall slight beneficial effects were predicted with moderate beneficial effects for NMUs.

- 7.6 With the exception of Landscape and Physical Fitness sub-objectives, the scheme was predicted to have no impact on the environment sub-objectives. This has been assessed as the case in this POPE assessment and as such the impact on Landscape and Physical Fitness only is discussed within this section.

Landscape

- 7.7 The AST indicated that the effects of the scheme on landscape were not applicable.

- 7.8 This assessment in the EAR concluded that the anticipated impacts associated with the proposed A2 Kingston Bridleway Bridge Scheme would be slight adverse at Year 1. The nature of the local landscape and the siting of the bridge within the local landform restricted anticipated impacts mainly to an area to the south west of the A2 with the scheme visible over a very small area to the north east of the A2. Landscape mitigation was proposed adjacent to the bridge which it was

anticipated would reduce impacts to neutral in the longer term. It is unknown why this was not followed through into the AST.

- 7.9 The receptors most affected were properties on Black Robin Lane and Out Elmstead Lane which run perpendicular to the A2, south west from the highway. Individual properties were not identified but an overall slight adverse impact at Year 1 diminishing to negligible by Year 15 was predicted. Some PROW in close proximity to the scheme were identified as having slight adverse impacts at Year 1 but again these were predicted to diminish to negligible in Year 15 with the establishment of planting.
- 7.10 Overall impacts were predicted to be slight adverse in the worst case scenario in Year 1 and Neutral in Year 15.
- 7.11 The scheme is located on the edge of the Kent Downs AONB in an area of attractive countryside and the impact of the scheme on the AONB was an important issue.
- 7.12 In response to consultation comments by the AONB Board the bridge was painted a pale green colour and used untreated timber (which would fade to a silvery grey colour) as a parapet. This was to reduce the apparent heaviness of the structure and make it blend into the background of sky and fields particularly when viewed from lower ground to the south west. This colour scheme does help to reduce the impact of the scheme making it blend into views.
- 7.13 The location of the bridge in a section of deep cutting is well chosen, as it reduces the need for approach embankments or ramps / steps associated with a bridge built at surrounding ground level. There is a small amount of fill on the southern end of the bridge to reach the footway level but this has been planted with native trees and shrubs which will help screen the bridge over time. Sections of new hedgerow have been planted along the footpath connections to the local PROW network. At the site visit the planting was establishing well and suggested that screening would be achieved in due course. Clearance of existing vegetation had been kept to a minimum so screening of the scheme was achieved from the outset in certain views. **Figure 7.1** displays new planting at the southern end of the bridge.

Figure 7.1 – New Planting at the Southern End of the Bridge



- 7.14 The structure of the bridge is a twin steel arch form with the deck suspended from steel hawsers and was chosen for its ease of construction, safety in construction and operation and for aesthetic reasons when compared with the truss bridge alternatives. The arch form does however increase the height of the structure making it more visible in the landscape (see **Figure 7.2**). A simpler truss form of bridge would have had less impact in the landscape and perhaps been barely

noticeable from the surrounding area. The wooden clad parapets also tend to give a heavier appearance to the structure (as noted by the AONB Board during consultation) and open parapets might have appeared lighter. The wooden parapets are really only seen from close up views or from the road below so the value of using wood could be questioned.

Figure 7.2 – Bridge Structure Visible Over Top of the Cutting



- 7.15 The unplanted earthworks particularly to the north of the bridge have been left as bare chalk cuttings which at the time of the visit were slowly colonising with vegetation. This will provide an increase in chalk grassland habitat in time and did not appear as a noticeable scar in the landscape for most views. The AONB's comments regarding the use of cleft chestnut fencing instead of standard motorway type fencing appears to have been ignored and similarly standard tarmac surfacing to paths had been laid rather than a more attractive bound gravel surface for instance. There is adequate signage but it is of standard, 'off the shelf' rather than something of special design appropriate for an AONB setting.
- 7.16 Due to the factors listed above, a **slight adverse** score has been given for Landscape in the EST.
- Physical Fitness**
- 7.17 The AST stated that people were deterred from using the crossing at-grade level and that people with disabilities were deterred from crossing at all. The AST predicted a **moderate beneficial** impact on Physical Fitness as safe access across the A2 would increase the ability of pedestrians, walkers, cyclists and disabled persons to gain access to the villages and the North Downs Way. The EAR however did not deal with physical fitness.
- 7.18 A number of PROW ran up to or cross the A2 at grade which formed a dangerous barrier to movement for pedestrians, cyclists and equestrians. The scheme included proposals to link the bridge to the footpath and bridleway network with new 3m and 5m wide combined pedestrian, equestrian and cycle paths.
- 7.19 As well as the bridge itself, the new combined paths have created a link to the local PROW network and bus stops on the A2. These are of full tarmac construction, fenced off from local fields and provide good surfaces which can be used by all types of NMUs. They are generally 3m wide, the 5m sections appear to not have been constructed. The AONB board at consultation suggested that a more attractive non standard surface would be appropriate but this has not been adopted. Rubber tiles have been used on the bridge deck to reduce the noise of horse's hooves to make it more attractive to equestrians despite this appearing to have been rejected at consultation

stage (see **Figure 7.3**). Overall the proposal would seem to have made the A2 crossing much safer and more attractive promoting greater use and increased physical fitness.

Figure 7.3 – Rubber Tiles on Bridge Deck to Reduce Noise



- 7.20 Consideration of the health implications of transport proposals has been identified through an assessment of changes in the opportunities for increased physical activity through cycling and walking. Providing increased opportunities to walk and cycle may also have additional benefits including improvements to the physical environment within communities, fostering well-being and community spirit which also have implications for health. Whilst providing the opportunities for increased physical activity through cycling and walking the number of users suggests the impact on physical fitness will be minimal.
- 7.21 Due to the factors listed above, a **slight beneficial** score has been given for Physical Fitness in the EST.

Accessibility Impacts

- 7.22 The **Accessibility** objective consists of three main elements:
- Option values;
 - Severance; and
 - Access to the Transport System.
- 7.23 This section examines each of these elements in relation to the A2 Kingston Bridleway Bridge scheme.
- Option Values**
- 7.24 For the option values sub-objective the AST states that the impact is not applicable. There has been no change in the availability of transport services within the study area and therefore it is agreed that option values is **neutral** in this case.

Severance

- 7.25 Severance is concerned with the affects of traffic on those using non-motorised modes, especially pedestrians but also includes cyclists and equestrians. The AST states that the impact is **moderate beneficial** in that:

'The Bridleway Bridge will open up easy access to the North Downs Way to equestrians, ramblers and cyclists as well as providing access for residents and disabled persons in the local villages coming from the bus stops on either side of the A2'

- 7.26 Prior to the opening of the scheme, the A2 caused severance between the villages of Kingston and Barham and the North Downs Way. Pedestrians, cyclists and equestrians were required to cross a 70mph dual carriageway at the previous at-grade crossing. The central reservation is 3m wide and this provided little protection to either pedestrians or equestrians waiting to cross the carriageway, and as a result made it nearly impossible for equestrians, in particular to cross. **Figure 7.4** shows the A2, where previously pedestrians, cyclists and equestrians would have to attempt to cross.

Figure 7.4 – A2 Southbound (previous crossing place)



- 7.27 The new bridge reduces severance for a number of reasons. Firstly, the bridge provides a link between the North Downs Way National Trail and the Elham Valley Way. Both of these routes are existing strong desire lines for NMUs¹. This now enables equestrians to cross the route, where previously they would not have been able to cross the A2. The British Horse Society has confirmed that there are up to 1,000 horses within a five mile radius of the new bridge, which suggests that the scheme is likely to have had a beneficial impact on the severance sub-objective for a large number of equestrians.
- 7.28 The previous route also provided difficulties in accessing the bus stops either side of the A2. The new bridleway bridge enables the safe crossing of the A2 and anecdotal evidence suggests that the bridge is being used to access the bus stops.
- 7.29 One group which can be particularly susceptible to severance is those aged over 65 years of age and the disabled. Demographic analysis of the local area (2001 Census) shows that there is a higher than average proportion of people aged over 65 years in the area (21% for Kingston and Barham, compared to 16% in the south east). It is likely that this group of people may be more likely to cross the A2 following the provision of a safe crossing point. It should be noted that the

¹ A2 Kingston Bridleway Bridge Context Report 01 NMU Audit, December 2007

bridge deck has been surfaced in rubber tiles to make it more attractive for equestrians to use despite this surface appearing to have been ruled out at a consultation meeting prior to scheme construction because it was thought to be less suitable for wheelchair users.

- 7.30 It has been noted that the bridge is located some way from the bus stops and as such is not serving the desire line for either stop. Therefore the predicted impact of **moderate beneficial** as opposed to large beneficial can be considered to be correct, and this score has been specified in the EST.

Access to the Transport System

- 7.31 For the Access to the Transport System sub-objective, the AST states that the impact is **not applicable**.
- 7.32 There are two bus stops which are located either side of the A2. There are five different bus services which run along this stretch of the A2 with an average bus frequency of approximately 15 minutes. There is also an hourly service operating between Canterbury and Folkestone which serves this route. This stretch of A2 is also used by a number of Eurolines services that run between London and then on to many Continental destinations.
- 7.33 In 2002, Atkins undertook a study which was followed by an NMU audit report by InterRoute in December 2007. Both studies found that the A2 restricted access to bus stops on either side of the A2. Any person wanting to access the bus stop on the opposite side of the A2 would have had to use the previous crossing at-grade level which may have deterred some bus users from using the bus stop.
- 7.34 The new bridge provides a safe crossing point and may have encouraged public transport users to use these bus stops on the A2 which will provide them with services to locations across the region. A representative from Stagecoach states that ticket machine data has shown an increase in the number of passengers boarding at the two bus stops since the opening of the scheme. As stated previously, data in the 2001 Census shows that the area has a higher than average number of people over the age of 65. This group may, to a greater extent, have a propensity to use public transport when compared to the general population and therefore may be more reliant on public transport. This makes it even more imperative that they have a safe means of accessing the transport system.
- 7.35 This sub-objective has therefore been given a **moderate beneficial impact** score in the EST due to the provision of a safer access to the transport system which is likely to have had a beneficial impact on public transport access.

Integration Impacts

- 7.36 The **Integration** objective consists of the following elements:
- Interchange with other transport modes;
 - Land Use Policies; and
 - Other Government Policies.
- 7.37 Integration is aimed at ensuring that all decisions are taken in the context of the Government's integrated transport policy.

Transport Interchange

- 7.38 The impact of the scheme on the integration with other transport modes sub-objective was predicted to be **not applicable**.
- 7.39 The scheme does not affect access to park and ride, bus or rail stations and does not affect interchange facilities and therefore the impact can be considered **neutral**.

Land Use and Other Government Policies

- 7.40 The impact of the scheme on Land Use Policy and Other Government Policy sub-objectives was predicted to be not applicable.
- 7.41 The scheme has improved accessibility for pedestrians, cyclists and equestrians across the A2 carriageway. This fits in with Kent County Council's transport Vision:
- "..to provide good accessibility to jobs and services for all sections of the community in Kent and to improve the environment by reducing congestion and pollution, widening the choice of transport available and by developing public transport, walking and cycling.."*
- 7.42 The scheme meets the Council's Vision as it provides a better link for pedestrians and cyclists (and also equestrians) and widens the transport choice, improves access to the bus stops on the A2 and thus encourages travel by non car modes.
- 7.43 Access to Green Spaces and the Countryside is also one of the targeted improvement areas in the Kent Local Transport Plan 31 (LTP3) Implementation Plan and the Countryside Access Improvement Plan (CAIP). The LTP3 states the following:
- "Being able to access and enjoy Kent's countryside is important to health and wellbeing and many people use the County's footpaths, bridleways and byways to do this. This Public Rights of Way (PROW) network accounts for 42% of the highway network by length and is managed by KCC's Countryside Access Service. In 2007, the County Council published its Countryside Access Improvement Plan (CAIP), a ten year strategy which sets out KCC's proposed approach to accommodating the present and future demands on the PROW network. The CAIP is linked to the Local Transport Plan and sets out the priorities and aspirations for the PROW network in the period 2007-2017. Amongst the priorities identified within the CAIP is improved maintenance of the PROW network, greater off-road access for equestrians and cyclists, and the removal of limitations such as stiles; all of which contribute to the core objectives of LTP3".*
- 7.44 As the scheme involves providing greater access for pedestrians, equestrians and cyclists, the scheme appears to fully align with the policies in the LTP3 and CAIP.
- 7.45 On a national level, the scheme also helps to meet some of the Government objectives outlined in a number of White Papers. For instance, the **A New Deal for Transport: Better for Everyone**² White Paper was keen to promote schemes that enabled transport choices to be widened. In particular this White Paper sought to increase the attraction of buses, and encourage priority being given to walking and cycling by providing more direct and convenient routes along with more crossing points of carriageway. Since this White Paper was introduced a further White Paper (**The Future of Transport**³) was published in 2004, which provided a strategy to reaffirm the commitment of the 1998 White Paper. The scheme helps to meet these aims by providing a safe and convenient crossing point across the A2 carriageway.
- 7.46 More recently, another White Paper Creating Growth, Cutting Carbon (2011)⁴ was released which outlines a vision for a transport system that is an engine for economic growth, and one which is greener and safer. The White Paper states that by improving transport links and targeting projects that promote green growth, a dynamic, low carbon economy can be created. It is anticipated that the scheme will encourage use of this route which promotes travelling by

¹ Kent County Council, 2011. *Local Transport Plan for Kent 2011 – 16*.

² Department for Transport. *A New Deal for Transport: Better for Everyone* (1998). Available at: <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/about/strategy/whitepapers/previous/aneddealfortransportbetterfo569>

³ Department for Transport. *The Future of Transport* (2004). Available at: <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/about/strategy/whitepapers/previous/fof/>

⁴ DfT. *Creating Growth, Cutting Carbon White Paper* (2011) Available at: <http://www.dft.gov.uk/pgt/regional/sustainabletransport/pdf/whitepaper.pdf>

sustainable modes. It is also hoped that by providing a safer route across the carriageway to the bus stops, the use of local public transport services will be enhanced.

7.47 As the scheme aligns with both regional and national policy, a Slight Beneficial score for Other Government Policy has been given in the EST. As the scheme has had no impact on Land Use Policy it is considered that the impact on this is Neutral in this case.

Summary – Section 7:

A summary of the PAR predicted and outturn environment, accessibility and integration impacts is as follows. Overall the scheme evaluation has found that there were more beneficial impacts than were predicted in the scheme appraisal:

	<u>PAR Predicted</u>	<u>Outturn</u>
Noise	<i>Not Applicable</i>	<i>Neutral</i>
Local Air Quality	<i>Not Applicable</i>	<i>Neutral</i>
Landscape	<i>Slight Adverse</i>	<i>Slight Adverse</i>
Greenhouse Gases	<i>Not Applicable</i>	<i>Neutral</i>
Townscape	<i>Not Applicable</i>	<i>Neutral</i>
Heritage of Historic Resources	<i>Not Applicable</i>	<i>Neutral</i>
Biodiversity	<i>Not Applicable</i>	<i>Neutral</i>
Water Environment	<i>Not Applicable</i>	<i>Neutral</i>
Physical Fitness	<i>Moderate Beneficial</i>	<i>Slight Beneficial</i>
Journey Ambience	<i>Not Applicable</i>	<i>Neutral</i>
Option Values	<i>Not Applicable</i>	<i>Neutral</i>
Severance	<i>Moderate Beneficial</i>	<i>Moderate Beneficial</i>
Access to the Transport System	<i>Not Applicable</i>	<i>Moderate Beneficial</i>
Transport Interchange	<i>Not Applicable</i>	<i>Neutral</i>
Land Use Policy	<i>Not Applicable</i>	<i>Neutral</i>
Other Government Policies	<i>Not Applicable</i>	<i>Slight Beneficial</i>

8. Conclusions and Recommendations

Introduction

8.1 This POPE assessment of the A2 Kingston Bridleway Bridge scheme has utilised all available data to evaluate the outturn impacts of the scheme compared to those forecast in the PAR. The purpose of this section of the report is to:

- Report whether the scheme has met its objectives;
- Summarise the key findings of the evaluation; and
- Suggest recommendations that may facilitate, and increase the accuracy of, future PAR appraisals for schemes similar to that implemented on the A2 at Kingston.

Scheme Specific Objectives

8.2 The evaluation of the scheme's specific objectives as reported in this study are summarised in **Figure 8.1**.

Figure 8.1 – Success against Scheme Objectives



• **Objective 1 - To provide a safe means of crossing the A2 for pedestrians, disabled persons, cyclists and equestrians including the communities of Out Elmstead, Kingston and Barham.**

- While there has not been an accident saving at the scheme location (due to there being no pre scheme accidents occurring in the vicinity of the bridge), evidence from the stakeholder feedback shows that the scheme has provided a safe means of crossing the A2.
- A number of stakeholders alluded to the bridge providing a 'safe crossing' and the increase in bus patronage since the scheme opened suggests the fear of potential accidents has reduced.
- There is little doubt that the bridge has provided a safe crossing of the A2 regardless of whether accidents have been saved. the risk of potential accidents is likely to have been reduced.



• **Objective 2 - Improving access to the North Downs Way**

- Whilst the NMU snapshot survey demonstrated relatively few NMUs using the bridge anecdotal evidence from stakeholders suggests the bridge is well used.
- KCC public rights of way officer and local rider stated that "*The North Downs Way National Trail, for example, has previously sat on the hillside tantalisingly close and yet perilous to get to.*"
- In particular access is now possible for equestrians where previously there was no opportunity of crossing the A2.

Key Findings

8.3 The key findings from this evaluation are as follows:

- The objectives of the A2 Kingston Bridleway Bridge have been met in terms of improving access to the North Downs Way and providing a safe means of crossing the A2 for NMUs and the communities of Out Elmstead, Kingston and Barham.
- No non motorised user accidents were deemed to have occurred within the vicinity of the bridge either before or after opening and therefore no monetary benefit can be attributed to the scheme;
- Stakeholder feedback on the scheme has been positive for the most part with improved safety, linking communities, improved access to the PROW network and reduced severance cited as the major benefits; and
- Some adverse stakeholder feedback was centred on issues of prioritisation of this scheme over others and the convoluted route to the bus stops which, it has been suggested, can lead to some continued crossing of the A2 at-grade.

Recommendations

8.4 The following are recommendations that may help facilitate and increase the accuracy of future PAR appraisals of schemes similar to the A2 Kingston Bridleway Bridge scheme. Whilst these recommendations are in line with existing guidance it is deemed appropriate to reiterate these here in order to ensure their compliance in future appraisals of this type:

- A reduction in accidents of one per year was predicted at the scheme conception stage. This report demonstrates that outturn savings were zero as no NMU accidents were found within a reasonable distance of the scheme in either the before or after scheme opening scenarios. It is recommended that future schemes whereby an NMU bridge is implemented, only NMU accidents within a reasonable walking distance of the scheme are used when determining a predicted accident saving; and
- An NMU survey should be undertaken for schemes of this type before the opening of the scheme, to provide quantitative evidence of the need for the scheme and to allow a directly comparable post opening survey to be undertaken; and
- Where schemes of this type have no before accidents and therefore no monetary benefit on which to justify the investment then the focus in the PAR should be on the benefits of accessibility and integration and the clear benefits to the community. It should not be the case that an accident(s) has to occur in order to justify a scheme of this nature.

Appendix A – Appraisal Summary Table (AST)

Objective	Sub Objective	Qualitative Impacts	Quantitative Measure	Assessment
Environment	Noise	Not Applicable	N/A	N/A
	Local Air Quality	Not Applicable	N/A	N/A
	Greenhouse Gases	Not Applicable	N/A	N/A
	Landscape	Not Applicable	N/A	N/A
	Townscape	Not Applicable	N/A	N/A
	Heritage of Historic Resources	Not Applicable	N/A	N/A
	Biodiversity	Not Applicable	N/A	N/A
	Water Environment	Not Applicable	N/A	N/A
	Physical Fitness	At the moment pedestrians and cyclists are deterred from using the at-grade crossing and people with disabilities are prevented from crossing at all.	Moderate Beneficial	0
	Journey Ambience	Not Applicable	N/A	N/A
Safety	Accidents	Accidents averaged over 3 years at 1.33 but have used 1.0	55 accidents saved over 60 years	60 year PVB £3.410m
	Security	Not Applicable	N/A	N/A
Economy	Public Accounts	None	N/A	£1.496m
	Business Users & providers	Not Applicable	N/A	N/A
	Consumer Users	Not Applicable	N/A	N/A
	Reliability	Not Applicable	N/A	N/A
	Wider Economic Impacts	Not Applicable	N/A	N/A
Accessibility	Option Values	Not Applicable	N/A	N/A
	Severance	Bridleway Bridge will open up easy access to the North Downs Way to equestrians, ramblers and cyclists as well as providing access for residents and disabled persons in the local villages coming from the bus stops on	There is no recent data available on the number s of pedestrians, cyclist and equestrians that cross at or	Moderate Beneficial

Objective	Sub Objective	Qualitative Impacts	Quantitative Measure	Assessment
		either side of the A2	around the crossing	
	Access to the Transport System	Not Applicable	N/A	N/A
Integration	Transport Interchange	Not Applicable	N/A	N/A
	Land Use Policy	Not Applicable	N/A	N/A
	Other Government Policy	Not Applicable	N/A	N/A

Appendix B – Evaluation Summary table (EST)

Objective	Sub Objective	Qualitative Impacts	Quantitative Measure	Assessment
Environment	Noise	Not Applicable	N/A	As Expected
	Local Air Quality	Not Applicable	N/A	As Expected
	Greenhouse Gases	Not Applicable	N/A	As Expected
	Landscape	The scheme has limited effect with the structure just visible in the landscape but with new planting likely to reduce impact over coming years.	Slight Adverse	As Expected
	Townscape	Not Applicable	N/A	As Expected
	Heritage of Historic Resources	Not Applicable	N/A	As Expected
	Biodiversity	Not Applicable	N/A	As Expected
	Water Environment	Not Applicable	N/A	As Expected
	Physical Fitness	Construction works appear to have been carried out as proposed. Whilst providing the opportunities for increased physical activity through cycling and walking the number of users suggests the impact on physical fitness will be minimal.	Slight Beneficial	Worse than Expected
	Journey Ambience	Not Applicable	N/A	As Expected
Safety	Accidents	There have been no accidents involving NMUs in either the before or after scheme opening scenarios in the vicinity of the scheme	N/A	Worse than Expected
	Security	Not Applicable	N/A	As Expected
Economy	Public Accounts	Scheme costs lower than expected	PVC - £1.525m (60years)	Better than Expected
	Transport Economic Efficiency	Not Applicable	N/A	As Expected
	Reliability	Not Applicable	N/A	As Expected
	Wider Economic Impacts	Not Applicable	N/A	As Expected
	Option Values	There has been no change in the availability of transport services within the study area and therefore it is agreed that option values is neutral in this case	Neutral	As Expected

Accessibility	Severance	The Bridleway Bridge has opened up easy access to the North Downs Way to equestrians, ramblers and cyclists as well as providing access for residents and disabled persons in the local villages coming from the bus stops on either side of the A2	Moderate Beneficial	As Expected
	Access to the Transport System	The scheme provides a safe crossing for those wanting to access bus stops on either side of the A2 and anecdotal evidence has suggested that use of the bus stops has increased since the opening of the scheme.	Moderate Beneficial	Better than Expected
Integration	Transport Interchange	The scheme does not affect access to park and ride, bus or rail stations and does not affect interchange facilities and therefore the impact can be considered neutral.	Neutral	As Expected
	Land Use Policy	The scheme fits in with national and local policy in terms of helping to increase walking and cycling and also by providing a safe crossing point across the carriageway.	Slight Beneficial	Better than Expected
	Other Government Policy			

Appendix C – Stakeholder Questionnaire

28th February 2011

Dear _____,

Ref: A2 Kingston Bridle Bridge

Atkins Transport Planning & Management, on behalf of the Highways Agency (HA), is undertaking a Post-Opening Evaluation of improvement schemes on the HA's trunk road network costing between £1m and £10m.

The aim of this process is to assist the HA and their managing agents to:

- Quantify the benefits and dis-benefits accruing from new schemes and to ascertain which offer greatest value-for-money, to guide future investment; and
- Develop the pre-scheme appraisal processes and ensure that accurate predictions are made about the possible impacts of schemes on safety, congestion, environment, accessibility and integration in the future.

As part of this process, I am currently studying the impacts of the A2 Kingston Bridle Bridge, a scheme that was completed in March 2010. A major component of this work is to consult with local interested parties, to gain their views. To this end, I would greatly appreciate your views on the success or otherwise of this scheme, via a series of questions overleaf.

I have included a brief description of the scheme below, and a photograph of the bridge that I took during a recent site visit.

The Scheme

A new shared-use bridle bridge was constructed over the A2 dual carriageway between Dover and Canterbury, close to the village of Kingston. The bridge is located between the junctions of the A2 with Out Elmstead Lane and Black Robin Lane.

Prior to this scheme, non-motorised users (including pedestrians, cyclists and equestrians) had to cross the A2 dual carriageway at road level. The new bridge intends to provide a safe crossing point for non-motorised users, and provides access to existing bus stops on either side of the A2 and access to several footpaths and bridleways.

The objective of this scheme was to:

“Prevent further accidents and provide a safe means of crossing the A2 for pedestrians, disabled persons, cyclists and equestrians including the communities of Out Elmstead, Kingston and Barham. The scheme will also improve access to the North Downs Way.



Based on your knowledge of the scheme (and that of other people in your organisation), please answer the following six questions.

1) How **aware** are you of this scheme?

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2) Do you have any indication of **how often** the bridge is being used and by what sort of users? (for example, pedestrians or equestrians?)

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3) What do you see as the major **benefits** of this scheme?

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4) Do you perceive there to be any **weaknesses** with this scheme? If so, please can you suggest ways that these weaknesses could be overcome?

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Appendix D – Stakeholder Feedback

Public Rights of Way Area Manager (East Kent)

The PROW area manager responsible for East Kent at Kent County Council (KCC) has been seeking the construction of a bridge within this locality for several years and has been involved in discussion with HA and agents over the years, including more recently in the design & planning of this structure. He provided the following comments:

“Locals and User groups, in particular the Ramblers Association (RA) and the British Horse Society (BHS) have been very keen to see a bridge constructed here. I cannot give any quantitative figures but comments from residents that live very close to the bridge have been along the lines of “I’m surprised just how many people are using the bridge” (Positive). I am aware that locals do use it for recreational purposes and also to access the bus services. I have seen people using it when I have been on site myself. I am aware that the RA & BHS and local riders have organised walks and rides that specifically take in the bridge. KCC organised a ‘celebration’ of the bridge construction on 4 October 2010 which was very well attended, covered by the media and included walks and rides which took in the bridge.”

Scheme Benefits

- *A safe crossing - for KCC identified as our number 1 dangerous crossing locality in the county;*
- *Links communities (villages of Kingston & Barham on one side to Adisham & Aylesham);*
- *Safer access to existing bus routes;*
- *Links extensive PROW network either side of the A2, which just couldn’t be used without the bridge;*
- *Links North Downs Way (national trail of international importance) with Elham Valley Way (county promoted route);*
- *Replaces several at grade PROW crossing points on this stretch of A2; and*
- *Tourism and therefore economic benefits - Rural recreation including walking/riding/cycling promoted by both KCC and Canterbury City Council (& others).*

Scheme Weaknesses

- *It took a long time for the scheme to reach the top of the priority list;*
- *A stile was installed across one of the bridleways on the northern side preventing use by equestrians and the link on the Northern side to Ileden Lane had a fence constructed at the end which again prevented use;*
- *There was a lack of promotion by the HA following construction. My understanding is that the scheme was receiving some criticism (cost) from a very small minority. Unfortunately this was the side of the story picked up by the media. However there was in reality far greater support for the scheme, from many quarters.*

Canterbury City Council Councillor

D.1.1 The leader of Canterbury City Council had the following comments:

“I have opposed this Bridge from the very beginning. My opposition was based on the lack of need, the trumped up excuse for building it and of course the cost when the country was and is in

such a dire financial situation. In my knowledge to date the bridge is rarely if ever used, even in fine weather.

I do not take issue with the design or construction and it is beautifully engineered and expertly emplaced but I would rather the funds have been directed towards the desperately required A2 slip roads.

The council strongly disapproved of the scheme but were unable to change the initial support given in 2002 when the local councillor was Leader of the majority party. The fight against the build reached the Minister, Lord Adonis, through our MP but we were not able to make any impression.

The access to the bus stops is still long and tortuous and there has never been an accident with people coming up from Kingston to catch the bus (there is also a bus route through the Valley)."

Canterbury City Council Councillor

D.1.2 The councillor for Canterbury City Council and a resident near to the bridge had the following comments:

"Though the bridge is an object of beauty and correctly sited in respect of the surrounding Area of Outstanding Natural Beauty, as a member of Canterbury City Council I believe that the funding would have been much better spent on the earlier construction of the A2 on slip at Wincheap.

The benefits of the scheme relate to the road safety of bus users and walkers and it opens up additional safe walking access to the North Downs Way and other footpaths. However, because of the gap in the central reservation at the top of Straight Hill (0.5 miles north-west of Black Robin Lane) was closed, bus users from the main part of Kingston have another 0.8 miles to walk after leaving the Dover or Folkestone bound bus.

Bus users would be helped by moving Dover bound bus stop as near to the bridge as possible, save 50 yards walking. School children still cross the central reservation dangerously to save time going home!

The bridge is fine for aesthetic and recreational considerations, but the requirements of bus users have only been met marginally by the improvements of the bus stops, in situ and nice bus boarders."

Canterbury City Council

D.1.3 The transportation officer at Canterbury City Council stated they are very aware of this scheme and helped to lobby the Secretary of State for Transport and submitted a joint letter of support with Kent Highway Services in 2003.

"No monitoring has yet been undertaken for this scheme, however, anecdotal evidence shows that it is being used by walkers, cyclists and equestrians alike."

Scheme Benefits

- *Improvements to safety for walkers, cyclists, equestrians and all road users of the A2 (T) by eliminating the need for people to cross a live dual carriageway at-grade.*
- *Linking up the Public Rights of Way network on both sides of the A2 and offering new opportunities to explore this Area of Outstanding Natural Beauty. The bridge provides a safe link between the North Downs Way (a route of international importance) and the Elham Valley Way (a popular promoted regional route).*
- *The bridge has made the countryside more accessible which may also result in an increase in green tourism.*
- *The bridge has helped to help reduce community severance.*

Scheme Weaknesses

“The link path between the southern end of the bridge and Black Robin Lane, Kingston (i.e. towards the north west) has a ‘cyclists dismount’ sign because the path is narrow. If the path could be widened this would enable a direct and unhindered shared use cycle path connection between Black Robin Lane and the bridge, thereby improving accessibility and convenience.”

Canterbury City Council

D.1.4 The county councillor for the area when the idea of the bridge was first suggested, and who actively supported it, had the following comments:

- *It makes it safe for residents of the villages below the A2 to cross the road from the bus-stops. This is especially relevant for older school children who invariably attend schools in Canterbury;*
- *It makes it possible for people walking the national trail (North Downs Way) to walk safely down into the villages below, to use pubs and shop; and to access the rights-of-way network in the AONB beyond; and*
- *It makes it possible for residents of those villages to walk, cycle or ride up onto the downs.*

Kingston Parish Council

D.1.5 The comments provided by one Kingston Parish councillor are as follows:

“There has been positive feedback from users. Some negative feedback has been received from non-users who think the public money could have been spent more usefully.”

Scheme Benefits

- *Improvements to safety – no longer necessary to dice with death crossing a major dual carriageway;*
- *Improved access to the North Downs Way;*
- *Two parts of the Parish of Kingston are no longer separated by a major road.*

Scheme Weaknesses

“The location of the bus stop on the Dover side of the bridge causes pedestrians to walk an unreasonably long distance to cross the bridge. The bus stop could be much closer to the bridge.”

Kingston Parish Council

D.1.6 The comments provided by Kingston Parish councillor are as follows:

“The major benefit of the scheme is that our parish is now accessible both sides of the A2. In addition it provides an invaluable link to the extensive PROW on both sides of the A2.

The only weakness I can see is the siting of the bus stop coming from Canterbury. If it had been closer to the bridge it would be a shorter distance to walk especially if carrying shopping. As it is I know one Councillor living in Black Robin Lane who says that if the road is clear he crosses it and the crash barrier instead of using the bridge.

Adisham Parish Council

D.1.7 The comments provided by an Adisham Parish councillor are as follows:

“From Adisham we are aware that many dog walkers use it but not aware of how often. The major benefit is safe access and good walks. We are not aware of any weaknesses with the scheme and certainly it has not been brought to anybody’s attention.”

Royal Oak Riding Club

- D.1.8 The member has been involved with campaigning for a safe, non motorised, bridge crossing of the A2 at Kingston, particularly for equestrians, for at least 20 years and has also helped with the official opening of the bridge hosted by KCC. The comments provided by the Royal Oak Riding club are as follows:

"I am really pleased it is now in place and being used by riders, cyclists and walkers, as well as local people catching buses to/from Canterbury and Dover.

For the first time in many years it is now possible to ride both the North Downs Way and adjoining bridleways on the north side of the A2 and safely cross to ride on the bridleways and Forestry Commission woodlands on the south side, something it has not been possible to do safely since before this section of the A2 was built in the 1970s.

Since its opening we have organised several riding events that have incorporated the A2 bridge crossing and plan more for this year. On one occasion we met about 30 cyclists crossing the bridge as part of a long distance competitive ride; fortunately they were kind enough to give way to the horses and let us cross first!

The bridge is one of the best of its kind; the width, rubber surfacing and parapet height and shape give the rider confidence and, as a result, the majority of horses have no problem making the crossing."

British Horse Society

- D.1.9 British Horse Society is very aware of the scheme having been campaigning for a bridleway bridge at this location for decades and they were consulted about its design and location. The following comments were received:

"We understand that it is already well used by all types of user. However, its use by Horse riders is likely to increase in the summer, when there is more daylight (allowing longer rides and riding out after work) and when the ground conditions on the North Downs Way will be less muddy.

The benefits of the scheme are that it reconnects some of the roads and bridleways that were severed from each other by the dualling of the A2 and the heavy traffic to and from the Channel Ports. It enables horse riders from Kingston and beyond to reach the North Downs Way National Trail, and vice versa.

The major weakness for horse riders is that they have been banned from using the link between the bridge and Black Robin Lane. A fenced off multi user path between Black Robin Lane and Bridleway CB269 has also not been provided. We had originally understood that both of these would be provided and failure to provide these links means that the bridleway (CB 269) remains severed. Riders coming from the north of the village have to negotiate hazardous roads, and riders whose horses will not go through water (some horses absolutely refuse to go through water) are prevented from using the bridge by the ford on Elmstead Lane.

I have had a very positive feedback from horse riders about the bridge itself. The width of the bridge, the infill and parapet height, the clear view from end to end of the bridge and the surface all help to make horses and their riders feel secure when crossing this major route. The higher than usual solid infill is particularly appreciated."

Ramblers Association

- D.1.10 The Ramblers Association are aware of the scheme and the local Ramblers members were involved at the feasibility stage. The following comments were received:

"The benefits of the scheme were primarily to safely connect two parts of the Public Rights of Way network that had become severed by the A2. Anecdotal feedback has all been positive and the scheme was well received by locals and walkers alike. The scheme was well thought out,

particularly the needs of equestrians and the early involvement of user groups was important in eliminating some of the potential downsides.”

SPOKES

- D.1.11 SPOKES have been involved in the scheme from the outset and provided the following comments:

“There had been several fatalities along this section of road over the years and as the A2 is nothing more than a motor road by default, crossing at road level is very dangerous. The scheme is also very important that it effectively reconnected communities that were severed by the building of the A2 and reconnecting bridleways and access to the North Downs Way.

The new bridge is used regularly by cyclists who can now access the various bridle paths and byways. I use the bridge fairly frequently myself as I look after a property in Ilden. I have often seen ramblers, horses and cyclists using the bridge when I have been going to Ilden. I know several horse riders who regularly cross the bridge in order to use bridle paths to the south of the new bridge and access the villages of Barham, Kingston and Bishopsbourne. Several cycle clubs utilise the bridge and bridleways on both sides. This wasn't possible before. Many walkers from local villages can now ramble in safety across for the same reason.

The benefits of this scheme are fairly obvious and certainly very positive and beneficial. The bridge provides a safe crossing point for pedestrians accessing the bus stops, school children and the elderly and connects communities that were severed by the A2. The bridge provides a safe and easy access to the North Downs Way and linking up of lots of bridleways and footpaths and providing links with other areas like Adisham to the North and neighbouring parishes and the Elham Valley villages to the South.

I don't see any real weakness in the actual bridge scheme but and this is a big but, it should have been part of a bigger scheme that could benefit the whole South East. There is a great opportunity here of creating a tourist route from the Dover to Canterbury and also connecting Elham Valley villages like Barham, Kingston, Bishopsbourne and Bridge to Canterbury. Thousands of cycle tourists travel to Canterbury and beyond from Dover every year. The North Downs Way if surfaced properly and utilising the new bridge and quiet roads would create an amazing cycle route that would benefit thousands. Connecting the villages to Canterbury with a safe off road route would benefit local people and lower car usage and air pollution.

The scheme has reconnected communities and opened up the countryside to walkers, equestrians and cyclists and on the whole is excellent. I think the money for the project has been well spent but there is the potential for an even greater scheme utilising the bridge that would benefit far more people”

Stagecoach in East Kent

- D.1.12 Stagecoach that operates bus services from the stops in the vicinity of the scheme provided the following comments:

“The bridge is situated midway between two pairs of bus stops (Kingston Turning, by Black Robin Lane and at Out Elmstead Lane). The stops do not serve a significant centre of population, so have always been only lightly used, but usage comes from a small core of regular users.

Ticket machine data shows passengers boarding at the two pairs of stops averaged 8.9 users per day in June 2009, and 15.7 users per day in June 2010. These figures do include passenger boarders at adjacent stops.

The scheme included the construction of footpaths connecting the bus stops to the bridge, thus creating a safe pedestrian route. However, to get from one side of the road to the other via the bridge is still a circuitous route and there is anecdotal evidence that some pedestrians are still taking the risk of crossing the road at ground level.

The bus stops themselves were upgraded with raised kerbs to meet current DDA standards. However the lay-bys, having originally been constructed in the 1970s are rather awkward for modern buses to access easily and still stop correctly at the raised kerb. Remedying this would have required extending and re-profiling the lay-bys, probably at great expense, which the relatively low level of usage would not justify. However, we would contend that this should not be taken to mean that this design of lay-by would be acceptable at other locations, should the opportunity arise to upgrade them as part of a similar scheme.

We have had long standing issues with motorists using the lay-bys to park in, usually while they make or receive mobile phone calls, or lorries parking in them while their drivers take breaks. This means that on the, albeit rare occasions that buses need to serve these stops our drivers cannot pull into the lay-by. Our drivers then have to choose between leaving customers behind (if they wish to board)/taking customers who wish to alight to the next stop which is some distance away, thus forcing them to walk back, or stopping on the carriageway which is both unsafe and illegal. The bus stops therefore need to be marked out as "at any time" Bus stop clearways with appropriate plates displayed so that they cannot be used as parking bays. It is disappointing that the bus stop markings were merely "refreshed" as part of this scheme, rather than marked fully out in accordance with DfT Diagram 1025.4.