

**For: Lake District National Park Authority**

**Repairing flood damage, adding resilience and improving the Keswick to Threlkeld Railway Path  
(multi-user trail)**

**Assessment of value for money**

**MTRU**

**March 2017**

## **Executive Summary**

### ***Background***

This report provides an assessment of the value for money of repairing flood damage to the Keswick Threlkeld Railway Path. It covers both:

- ***Transport related benefits*** such as health from greater walking and cycling, less pollution from car use and reduction in time spent on or next to the existing road network, and
- ***Economic benefits*** through the restoration of losses caused by the closure, and the resumption of business growth and investment.

It builds on a preliminary economic assessment undertaken last year by drawing on a new survey of users and businesses, and a number of structured individual business interviews. This gathered further data on the impacts to assess the value for money of a scheme to restore the path as closely as possible to its pre-flood state, and to explore lower cost alternatives. Both sets of respondents were comparing their activities and spend before closure with the current alternative route.

### ***Results from the survey***

There were 2346 responses from users, covering daily use before closure and how they had responded, for example driving to an alternative, or not undertaking a similar activity. There were 54 responses from businesses, including estimates of how much business had been affected. The 4 business interviews allowed a much more detailed analysis of impact on turnover and employment.

It was clear that the respondents alone estimated their use of the path at over 90,000 trips a year, to put this in perspective the previous total estimate was over 130,000. Since only a proportion of users will have responded his supports the original and suggests that it may have been conservative.

The businesses set out in detail the very significant impact that the closure had on the local economy, with turnover losses averaging about 14%. Two estimates were undertaken, one from the users' estimate of how much less they spent, the other from the businesses. The former was lower (£1.13million a year) but the survey covered mostly local users. The business survey produced a higher figure (£2.5million) but included all users. Adding in the non-local C2C losses to the local survey produced £1.8million a year and this was the figure used for the value for money assessment.

### ***Results of the assessment***

Details are given in the report, but over a 30 year appraisal period (normal for this type of scheme) benefits of 58.55million are predicted. The capital cost of £6.16million (which includes contingency and optimism bias) would be paid back in two years. The overall benefit to cost ratio was 9.51 – exceptionally high for a public investment.

A low cost option for repair, and an option avoiding some of the major bridge work, was also assessed. These performed worse at a BCR of 3.6 and 4.85 respectively but with higher risk. There was little confidence from the businesses that they would restore significant economic value.

Within the assessment, health and absenteeism benefits were £13.34million, net local travel benefits including lower car use were £10.51million, restoration of local user spend in the economy was £21.81million and for C2C users £12.9million.

Overall the local economy has suffered a major one off loss and this is continuing. This was reflected in the strong sense of urgency expressed in the business interviews. The restoration could bring back about £1.9-2.5million a year and 60 jobs, without allowing for any local multiplier effect.

## 1 Introduction

This report expands upon the MTRU preliminary assessment of value for money, which combined elements of transport and economic appraisal working within Government guidelines for appraisal. It builds on the regional analysis of the impact of flood damage which made clear that there has been significant disruption to the Right of Way (RoW) network throughout Cumbria and in the Lake District National Park (LDNP) in particular. About 10% of the whole Cumbria network was compromised, with just over 18% in the LDNP out of service.

The Keswick to Threlkeld Railway Path (KTRP) is one of the individual routes which has been damaged and could cost a significant amount to repair (in excess of £5million). The damage has prevented its former use as a continuous mixed use route between Keswick and Threlkeld.

This facility also differs from other parts of the network in that it is flat and accessible to all types of user, including families, buggies and wheelchair users, and is part of the LDNP “Miles without Stiles” (MwS) network and the Keswick end of the KTRP hosts the weekly 5 km “Park Run”. It is also part of the nationally recognised Sea to Sea (C2C) route from the Irish to the North Sea. It provides a major source of revenue for a number of local businesses such as refreshment and accommodation, retail outlets and bike hire as well as health and leisure benefits to its users. While an overall economic assessment of the damage to the main part of the RoW network was set out in another report, in view of its cost and importance the KTRP is being assessed as a key individual link.

The aim of the assessment is to give a realistic assessment of the wide range of economic and social losses incurred as a result of the closure of key sections of the KTRP, and how far these can be recouped by either as close a restoration of the route as possible or other alternatives. The latter include the road based current alternative route which is taken as a “Do Minimum”. The benefits fall into two categories:

- **Transport related benefits** such as health from greater walking and cycling, less pollution from car use and reduction in time spent on or next to the existing road network.
- **Economic benefits** through the restoration of losses caused by the closure, and the resumption of business growth and investment.

In the preliminary report attention was drawn to the need for further detailed work for this specific scheme, in particular a better idea of changes in the pattern of use and the subsequent economic impacts. This report reviews the original assessment and draws on a new user and business survey and business interviews to complete the picture.

The preliminary report included the following:

- Economic benefits from walking derived by factoring from the regional scale
- Economic benefits at the regional scale from restoring any lost use of the C2C route
- Journey quality benefits from restoring the superior mixed use route
- Health benefits from restoring any losses in walking and cycling.

This report includes:

- Specific local economic impacts including turnover and employment
- More detailed impact on walking and cycling by local people
- The impact for users who find other walking routes difficult to manage, for example people with small children and mobility problems
- Increased car use caused by driving to more distant destinations

## **2 Overall approach**

### ***New survey***

The new survey gathered 2346 responses from users, covering daily use before closure and how they had responded, for example driving to an alternative, or not undertaking a similar activity at all. There were 54 responses from businesses, including estimates of how much business had been affected. There were also 4 structured business interviews which allowed a much more detailed analysis of impact on turnover and employment, again comparing before and after the path was damaged. This drew on real world data from their accounts and employment records.

It was clear that the respondents alone estimated their use of the path when open at over 90,000 trips a year, to put this in perspective the previous total estimate was over 130,000. Since only a proportion of users will have responded, for example not picking up previous C2C use, this supports the original estimate and suggests that it may have been conservative. If so, this would clearly have the impact of increasing all the benefits in the assessment.

The business respondents (54) did include the clients they considered were on the C2C route and provided an estimate for the overall proportion of business lost. This was also the case for the structured telephone interviews with four businesses and turnover figures from annual accounts for before and after the closure were used. Additional detail on growth prior to the closure and investment plans was also included. Data was also collected on how employees travelled to work, seasonality and views on different approaches to restoration.

A realistic approach to valuation is the loss of revenue in the local economy as a result of the damage – the tourist industry is a major employer and source of economic value added, both locally and in view of the Park's unique character, nationally. However, there are challenges in terms of how far the money which would have been spent locally by people who visit to walk will be spent anyway on other activities (deadweight) or how far it would move to other areas (displacement). The overall assessment here uses a reduction calculated from the user survey (-52%).

### ***Resilience, cost and urgency***

In addition there is an issue of building in resilience to the repair work. Again this is hard to value but is significant. The LDNPA estimate that about a third of the repair cost will be to ensure greater resilience but valuing this in conventional terms would depend on assumptions, for example about future weather events.

Before describing the results of the assessment it is important to repeat the observation that such a loss of infrastructure in other circumstances would elicit prompt action to make good the damage on the grounds of network integrity and in terms of restoring capital value. It is clear that revenue for the local, regional and national economy has already been lost, economic damage is being done and continues to be so. This is a special situation in which a natural asset is an essential part of the business. This point was made strongly in the business interviews – there was also concern that cheaper, if less resilient, repairs were held back by the need to negotiate with a variety of agencies and to have to produce complex justification for the restoration.

It is important to understand that it will be virtually impossible to monitor the precise impact of the restoration in the context of already growing visitor numbers and the future impact of the falling value of the pound. However, once restored, the network can be monitored for visitor use.

### ***Special nature of the Keswick to Threlkeld Railway Path***

As well as being a popular part of the LDNP Miles without Stiles network, this section of route is part of the wider Sea to Sea (C2C) route from the Irish to the North Sea opened in 1994. The whole route takes around 4 days to complete. Sustrans describes it as:

*“The UK’s most popular challenge cycle route passing through the northern Lake District before climbing the Pennines, and descending to the railway paths of County Durham.”*

The route disrupted is an important high quality off road section (39% of C2C is off road) and an alternative route is available but it is on road and is not part of the National Cycle Network. Thus it is not a traffic-free experience and includes a very steep climb out of Keswick to Castlerigg (1 in 6) and two more climbs of around (1 in 10).

Thus it is not a comparable experience for key audiences such as family groups and those who seek a flat surface to cycle on, in a traffic-free setting. For example the C2C website describes this alternative as: “only for the fit”. The disrupted route is also an important walking route and is suitable for wheelchair and pushchair users, with high numbers of walkers in the summer months. Recent pre-flood data for cyclists and walkers is not available, but there were surveys undertaken from opening to 2003 from which some projections can be made. These have assumed a growth rate of 5% for both user types which was a consistent average from 1995 to 2003 for cycling. Walking was higher but showed some levelling off (to around 6% by 2003) so the 5% figure has been used. Overall we estimate pre-flood use of over 130,000 trips a year.

As in the value for money assessment for the wider RoW network, there is the issue of the loss of productive output as a result of the damage – the tourist industry is a major employer and source of economic value added, both locally and in view of the Park’s unique character, nationally.

In this case there are the additional challenges of the deterrence factor in terms of those who would wish to cycle the C2C route. This could mean delaying the journey until it is reopened, choosing another route, or undertaking another activity. This is hard to estimate from the current data. Figures for likely spend of those cycling the route can be derived from visitor survey data. The new data from businesses in the on line survey and the individual interviews has been used to support these estimates.

As with other walking and cycling projects, there will be health and journey quality benefits as well as economic benefits. The DfT toolkit for these benefits has been used for this assessment.

### ***Original benefits***

There were several sources of benefit which were estimated for the preliminary report:

- 1) improved health from restoration of lost walking and cycling,
- 2) removal of the loss of journey quality on the alternative route for cyclists,
- 3) time savings from restoration of the alternative route for cyclists,
- 4) restored economic value in terms of user spend from walking, and
- 5) restored economic value in terms of user spend from cycling.

The last two were differentiated between losses to the LDNP area from lower levels of walking (network wide) and from loss of revenue from cycling visitors who choose not to undertake C2C. Apart from the C2C cycling benefits all the benefits have been recalculated.

### 3 New assessment

#### *Transport benefits*

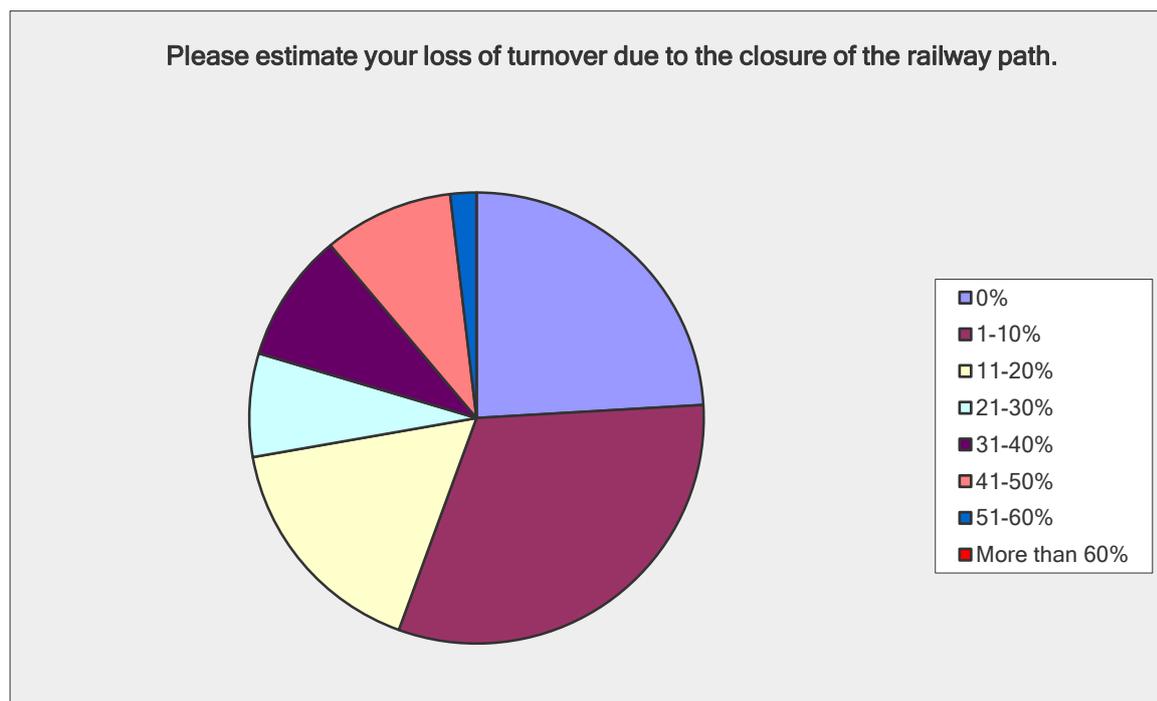
The DfT Active Mode Appraisal Toolkit has been used as the basis to produce most of the transport benefits. The toolkit is designed for revenue projects as well as capital and it is possible to set a decay rate where the impact of the initial “soft” expenditure declines over time. A decay rate was not used in this case in view of the permanent capital nature of the scheme. The benefit flow was limited to a 30 year period.

Separate assumptions were used for health; for journey quality; and for car reduction; and the summary sheets showing the detailed differences are attached in the Annex. Thus journey quality benefits are assumed for **all** users when the route is restored while the numbers for car reduction benefits and health benefits are reduced significantly in line with the survey results (-47% and -44% respectively). The overall results are summarised later and the detailed outputs from the Toolkit are reproduced in the Annex.

#### *Economic impacts: on-line survey*

The new business/user survey provided two views of the loss of economic activity. From the user point of view it was possible to calculate an average spend per trip on local businesses and how many people had stopped spending because they no longer undertook the activity. This was uprated by a factor of 1.54 to match the sample to the full user forecast. This gave a first year loss estimate of £1.13million. This has been used for the appraisal.

From the business point of view it is possible to analyse the sample of 54 who gave an estimate of how much turnover they had lost as a result of the closure. The chart showing the distribution is reproduced below and indicates the breadth of response as would be expected from the spread of business activities. It also shows how some businesses have been very seriously affected. This was confirmed in the business interviews. Of those who were affected the average loss was 19% across all businesses the loss was 14%.



### ***Economic impacts: structured interviews***

The on line survey did not gather actual turnover for all the businesses responding, but the four telephone interviews asked respondents to draw on their annual accounts to give specific numbers. The firms covered food, liquid refreshments, accommodation, and bicycle hire, sales and repair.

The interviews allowed for a qualitative and quantitative assessment of the nature of the business before and after closure and included questions which covered:

- the number of employees, full and part time
- mode of travel to work
- key items of revenue, for example food, drink, accommodation, bike maintenance, bike hire
- variation of demand by weekday/weekend and summer/winter
- estimate of turnover using accounts where possible
- type of visitors and whether they were in organised groups or attending events
- if aware of different options for repairing the KTRP, whether they had any views on how far the three main alternatives would restore their business

The different ways in which the path could be restored or an alternative found are reported later in this section.

The 4 employers varied in size from 3 employees to over 30, with a total of about 50. These are full time equivalents (FTEs) although an amount of employment (between 10 and 20%) was in fact part time and/or seasonal. The total annual turnover before path closure was about £2.7million and the annual loss estimated from their accounts was £350-375,000 (13-14%). This is reasonably in line with the level of loss from the survey (14-19%). Employment reduction was estimated by interviewees separately and was about 6.5 FTEs (13%) which is very much in line with the reduction in turnover.

### ***Overall economic and social impact***

It is clear that the closure has had a dramatic impact on some employers and a very significant one for the local economy as a whole. One reported a small neighbouring business (café) closing as a result of the reduced user numbers. While it is difficult to come to a precise figure due to not having turnover for all the businesses, the 54 who responded to the survey are estimated to have lost of the order of £2.5million in the year after the closure with the loss of about 60 jobs (FTEs). The interviewed businesses were all agreed that turnover is not so far recovering and thus do not believe the current alternative route is acceptable to previous or potential users.

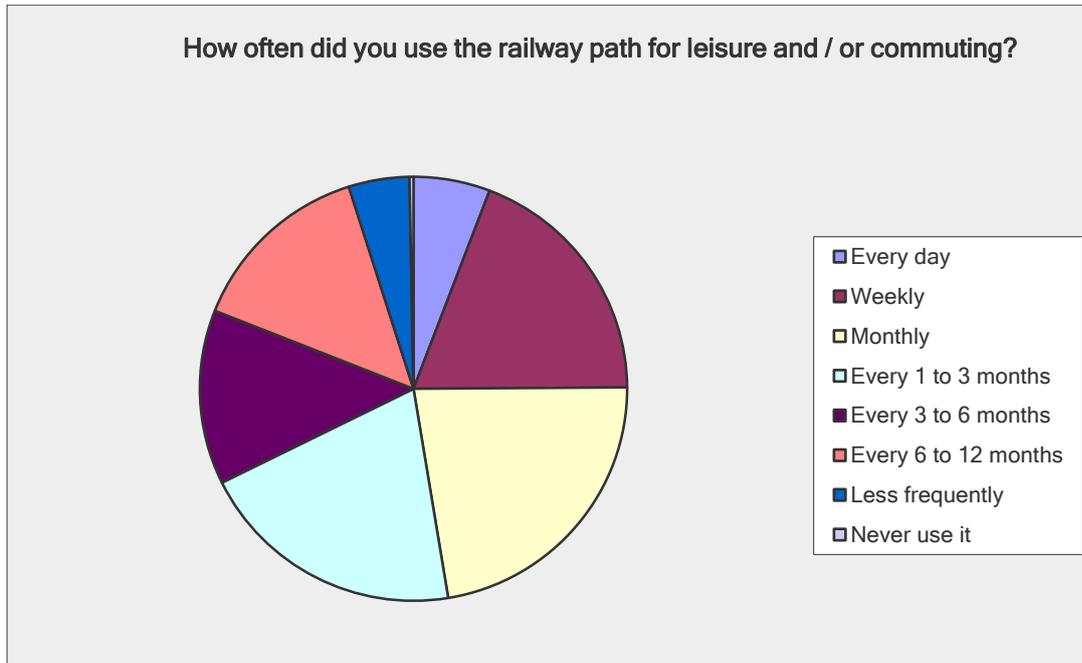
All businesses interviewed reported quite strong growth in turnover (5-10%) in the period preceding the closure and made the point that this had also been lost. Two businesses of the four had deferred investment in expanding their operations directly as a result of the closure.

They also provided considerable detail on the profile of their users: in particular there were often groups with mixed walking or cycling ability, plus wheelchair users. The majority, for example, were said to wear ordinary clothes and shoes rather than specialist walking or hiking gear. As well as family groups there were locally organised groups with guided walks or rides, again for the non-specialists. Some visitors were getting back on a bike for the first time since their childhood and some children for the first time ever.

The interviewees said that's seasonality was an issue but in the last decade or so had become far less important and the idea of shutting in the middle of winter was now virtually unknown. Again the ease of use of KTRP was a factor in making it a year round attraction.

Employees were often quite local and walked or cycled to work. Only 28% came by car.

The walk was very popular and there was a significant amount of repeat visitors, either locals or visitors from further away. This backed up the finding in the survey, shown below.



### ***C2C transport and economic impacts***

While the survey data produced a figure for loss of local spending, an estimate for C2C losses was calculated for the preliminary report using regional visitor spending figures, length of trip and an estimate for user numbers. This was adjusted downwards on the assumption that 90% of the cyclists will continue to use the C2C using the alternative route. It is shown as item 6) in the Assessment Table below.

The loss of journey quality for these remaining users is calculated using the DfT toolkit (see Annex) and shown in item 2) below. However, there remains the issue of the time penalty imposed on those same users from being forced onto the alternative. This was estimated using the values in the DfT's WebTAG Transport Analysis Guidance Data Book. The length of the alternative is 4.435 kms and, as set out above, will require care and effort in view of its on-road nature and gradients. It is thus considered not to be enjoyable in its own right. A slower average cycling speed of 8 kph has been assumed for this route. Raising this to 10kph is within the rounding process for the BCR. This is shown in item 3) in the Table.

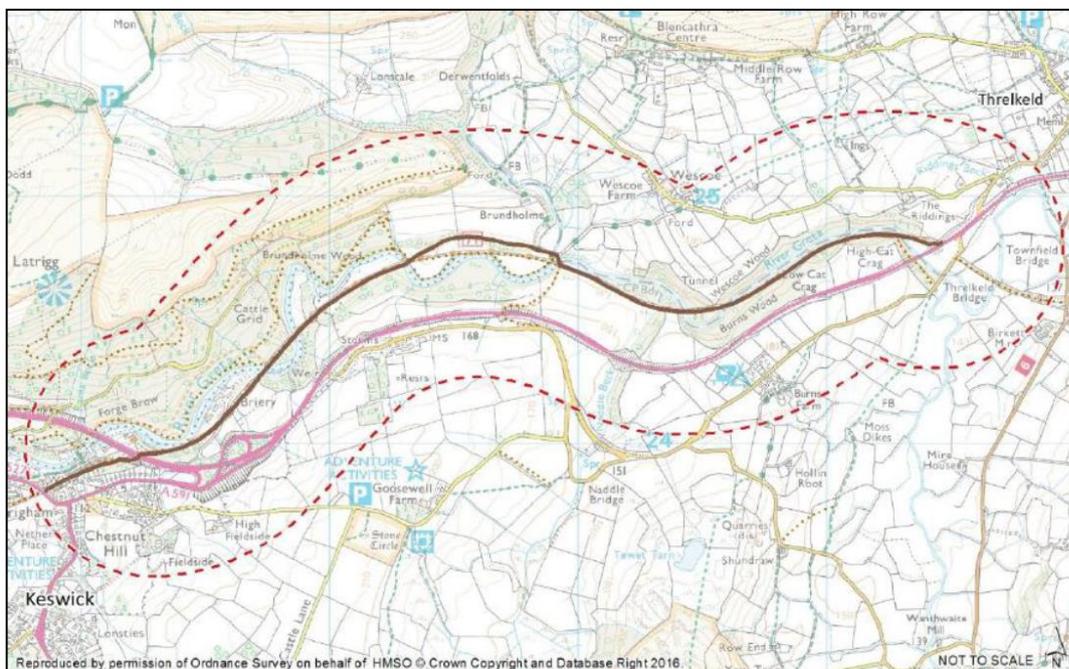
These results were brought together in the following table. This uses a conventional cost benefit approach but also includes the economic impacts. The benefits are assessed over a 30 year period using Treasury discount rates (3.5%). The results are set out below in current prices in £million.

### Keswick Trail Restoration Economic Appraisal Table

1) Health and absenteeism benefits	13.34
2) Local journey quality restoration	1.97
3) Time benefits	2.39
4) Benefits from reduced car travel	7.14
5) Local business losses	21.81
6) C2C cycling restoration economic benefits:	12.90
7) Less loss of tax revenue from fuel	-0.99
Total benefits	58.55
Cost	6.16
<b>Benefit to Cost Ratio (BCR)</b>	<b>9.51</b>

#### *Cost of restoration*

The cost above includes an amount for contingencies and an increase for optimism bias, which is normal for appraisal. The latter can be reduced as detailed preparation proceeds and tenders are received. For reference, the route considered in the Capita report is set out below and the cost includes three major bridging structures.



**Figure 4.7** Route 7 (brown) long list alignment

#### 4 Options for restoration and alternatives

As with any value for money assessment there remains the issue of lower cost options for continuing a walking and cycling route between Keswick and Threlkeld. In the recent Capita report three options have been studied in some detail from a longer list of alternatives. In essence these represent a route very close to the original (Brown), a very low cost option close to the current, mainly on road alternative route (Orange), and an alternative off road route avoiding the need for some expensive structures but necessitating additional length, more frequent gradients and some environmental damage in terms of landscape and nature conservation (Blue). These are shown in the maps below.

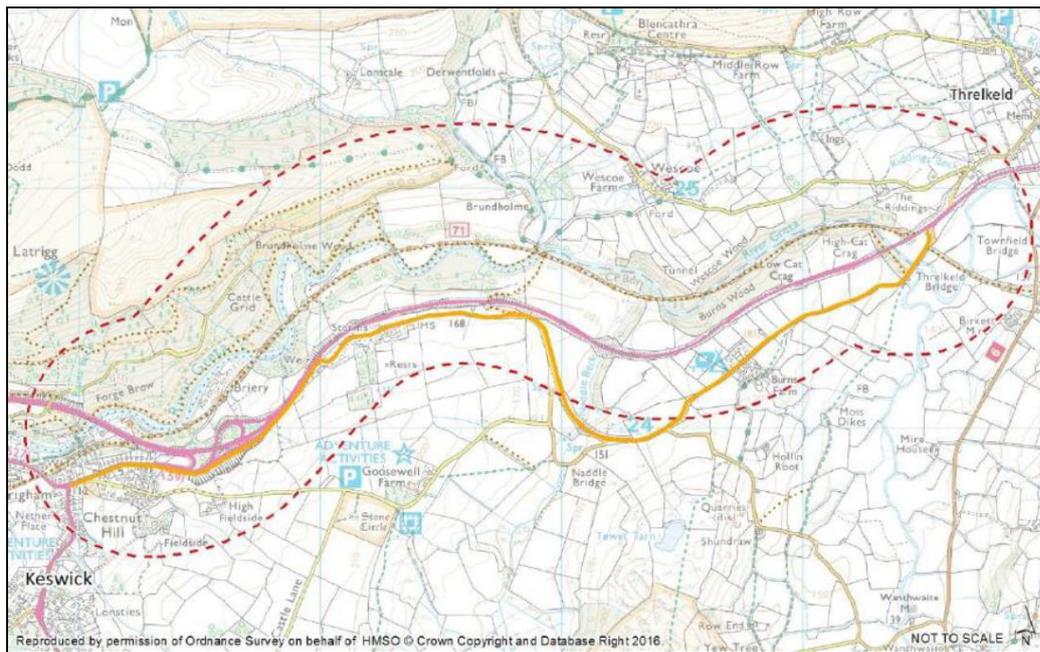


Figure 4.5 Route 5 (orange) long list alignment

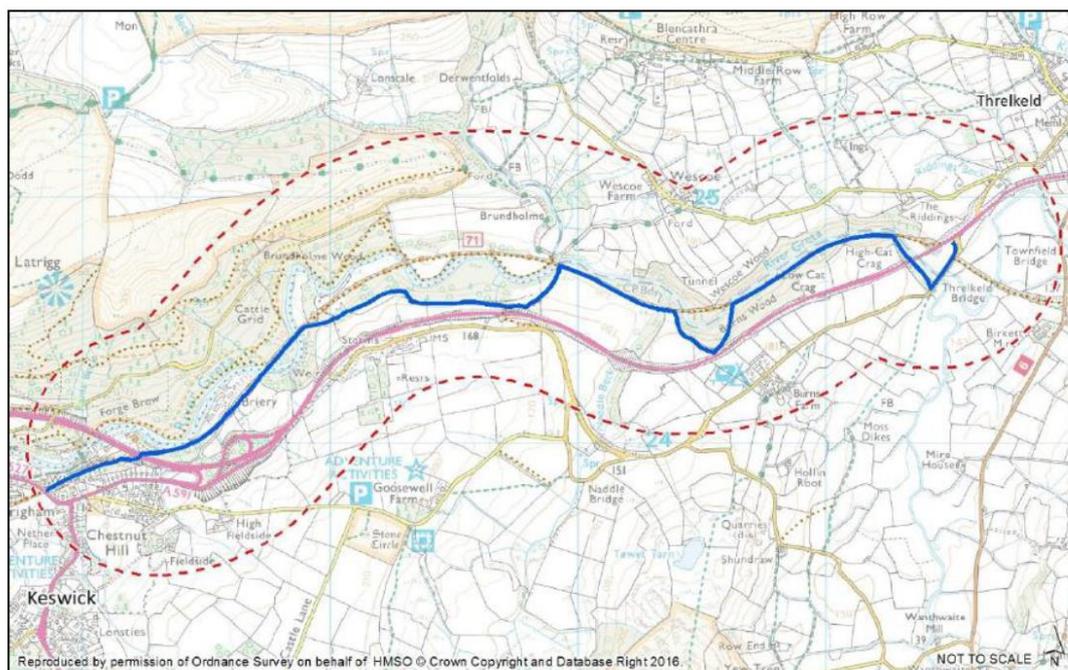


Figure 4.3 Route 3 (blue) long list alignment

It is clear from the nature of the Orange route that many of the advantages of the original route would not be restored and it is only a marginal improvement on the existing alternative route. Despite its low cost the likelihood of any comparable level of benefits is also very low and this was strongly confirmed in the business interviews. None of them believed a roadside route would have any significant impact. To test its performance 10% of the benefits were assumed and despite its very low cost this resulted in a BCR of 3.6. The option would need to perform more than 26% better than the current alternative in terms of capturing the benefits from a restored route to match the Brown option. Capita found it unpopular in their consultation and this was strongly confirmed in the interviews.

The Blue route is more difficult to assess but the extensive rising and falling (and subsequent ramping) would be a strong deterrent to those who previously used the path. Without prompting the interviewees all mentioned the ease of use for families, people with some mobility problems and people who hardly ever cycled. They were very doubtful that the use of ramping to avoid bridge construction would be acceptable to their customers, some of whom were regular visitors.

For example, businesses reported that hardly any of those who arrived without knowing that the KTRP had been damaged went on to use the alternative. They stressed the importance of the easy gradients and it was considered that they were very sensitive to the introduction of extensive “zig zagging” or gradients. There was a strong feeling that the restoration had to be as close as possible to the original, only matched by their anxiety that something should be done as quickly as possible – even if it were temporary.

To assess the benefits of the Blue Route, it was assumed that it would capture 20% of the local benefits but, given the commitment of the cyclists who would undertake it, 50% of the C2C benefits (higher than local businesses believed). This produced a BCR of 4.85. The Blue route would need to capture 53% of the local benefits to match the Brown option. This is considered extremely unlikely. There are also some landscape and associated issues with the Blue route which makes it less attractive than the Brown option.

One final point is that there was some concern about the timescale for repair and that nothing could be done to temporarily restore the route. This extended to using less resilient permanent structures which might be cheaper and faster to implement. We have done no detailed work on this but simply report it as a consistent message from the business interviews.

## **5 Conclusions and Recommendations**

### ***Conclusions***

As recommended in the original report, much of the uncertainty associated with the economic benefits has been addressed in the quantitative and qualitative survey of users and businesses and the assessment is considered robust.

Despite significant capital cost for the Brown option, overall the benefit to cost ratio is 9.51.

This indicates a very strong performance, for example it well exceeds the DfT's highest performance category of over 4 ("Very High").

The restoration could bring back about £1.9-2.5million a year to the local economy and up to 60 jobs without allowing for any multiplier effect.

Overall the local economy has suffered a serious one off loss and that this is continuing. Some businesses have closed and investment decisions have been postponed. This was reflected in a strong sense of urgency to restore the path expressed in the business interviews.

### ***Recommendations***

A great deal of work has been undertaken studying options for repair, the engineering challenges and the need for resilience to comply with all agencies involved. Given the performance of the option which most closely restores the original path, and the support from both users and businesses, it is clear that this should be implemented as soon as possible.

A key issue is funding, but in terms of the formal economic appraisal, as well as the strength of community feeling, the cost would be more than justified in terms of local and central Government tests for value for money. While the possible sources of funding are outside the scope of this report, in this sense there should be confidence that they can be pursued vigorously in the light of the strong economic performance of the restoration project.

# Annex: DfT Toolkit summaries

## Health benefits

Please answer the following questions with your best estimates to obtain a benefit cost ratio of your scheme. By varying your answers you can test the importance of the input data on the overall value for money of your scheme. The answers provided are for the example case study from Appendix B of WebTAG unit A5.1. This case study provides further helpful commentary that users of this tool might want to refer to.

### Scheme details

When would the scheme be likely to open?   
 What is the last year of initial funding?   
 Decay rate (starting from last year of funding)

WebTAG A5.1 explains - the impacts especially of revenue funded initiatives such as cycle training or personalised travel planning are likely to diminish year by year following the investment. For the case study here this is likely to be conservative.

Appraisal period (should be the expected asset life, maximum 50)  yrs

### Do Nothing scenario

This is what is most likely to happen if the scheme is not implemented. The data could for example be from automatic or manual traffic counts.

Number of cycling journeys  per day, average length  km and speed  kph  
 Number of walking journey  per day, average length  km and speed  kph  
 Ideally the data is taken from 'average weekday' in spring or autumn to avoid seasonal bias. A return trip involves two journeys and would need to be counted as such. To identify how many individual users this implies, please estimate the share of journeys that form part of a return trip here:

### Do Something scenario

Once your scheme has reached it's full impact (ignoring any initial build up here), how would these figures have changed (due to the intervention)?

Number of cycling journeys  per day, e.g. from automatic or manual cycle count.  
 Number of walking journey  per day  
 For simplicity it is assumed that the length and speed of journeys is largely unaffected by the intervention.

### Journey Quality Impacts

WebTAG units A5.1 and A4.1 provides guidance, the Databook provides suggested values that users might place on the improved infrastructure your scheme provides. The values are shown in the WebTAG journey quality tab. The improvement over the 'do nothing' scenario should be valued, rather than the absolute level.

For cyclists  pence per minute  pence per trip (e.g. shower facilities)  
 For pedestrians  pence per km  
 As demonstrated in the case study, these values should take account of the proportion of the average journey that would be made on the improved infrastructure.

### Decongestion benefits

What proportion of new users would most likely be using a car in the do nothing scenario?  
 for cyclists   
 for pedestrians

Which area type from the drop down is most similar to the area your scheme is located in?

### Additional information

#### Background Growth

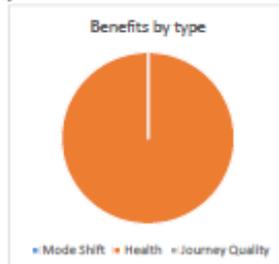
If you have an estimate of the growth in background use (in both scenarios), please set the annual growth rate   
 the period over which this applies  years

Number of days in the year that you would expect the above usage figures  days p.a.  
 In the case study this is assumed to the typical number of working days - but might more appropriately be set to the number of weekdays.

### Results

#### Analysis of Monetized Costs and Benefits (in £'000)

Noise	0.00
Local Air Quality	0.00
Greenhouse Gases	0.00
Journey Quality	0.00
Physical Activity (incl. absenteeism)	13353.90
Accidents	0.00
Decongestion	0.00
Indirect taxation	0.00
Private contribution	0.00
Present Value of Benefits (PVB)	13353.90
Present Value of Costs (PVC)	4494.74
<b>Benefit Cost Ratio (BCR)</b>	<b>2.97</b>



The case study in WebTAG unit A5.1 uses slightly different assumptions on the valuation of decongestion benefits which result in a higher estimated benefit there. This is due to the specific nature of the case study and to fully replicate this approach here would have increased the complexity of this tool with no apparent benefit.

### Costs

Please provide estimates for upfront costs as well as future maintenance costs in the table below. Please enter the full costs of the scheme in the first column and any private sector contribution to those costs in the second. All other funds are assumed to be from local or central Government.

Please use a constant price base and specify the year here   
 Please refer to WebTAG unit A1.2 to set Optimism Bias

Year	Total scheme costs '000£	3rd party contributions '000£
2009		
2010	0	
2011	0	
2012	0	
2013	0	
2014	0	
2015	0	
2016	0	
2017	1,667	
2018	1,667	
2019	1,667	
2020	0	
2021	0	
2022	0	
2023	0	
2024	0	
2025	0	
2026	0	
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# Journey Quality

Please answer the following questions with your best estimates to obtain a benefit cost ratio of your scheme. By varying your answers you can test the importance of the input data on the overall value for money of your scheme. The answers provided are for the example case study from Appendix B of WebTAG unit A5.1. This case study provides further helpful commentary that users of this tool might want to refer to.

### Scheme details

When would the scheme be likely to open?   
 What is the last year of initial funding?   
 Decay rate (starting from last year of funding)

WebTAG A5.1 explains - the impacts especially of revenue funded initiatives such as cycle training or personalised travel planning are likely to diminish year by year following the investment. For the case study here this is likely to be conservative.

Appraisal period (should be the expected asset life, maximum 50)  yrs

### Do Nothing scenario

This is what is most likely to happen if the scheme is not implemented. The data could for example be from automatic or manual traffic counts.

Number of cycling journeys  per day, average length  km and speed  kph  
 Number of walking journey  per day, average length  km and speed  kph

Ideally the data is taken from 'average weekday' in spring or autumn to avoid seasonal bias. A return trip involves two journeys and would need to be counted as such.

To identify how many individual users this implies, please estimate the share of journeys that form part of a return trip here:

### Do Something scenario

Once your scheme has reached it's full impact (ignoring any initial build up here), how would these figures have changed (due to the intervention)?

Number of cycling journeys  per day, e.g. from automatic or manual cycle count.  
 Number of walking journey  per day

For simplicity it is assumed that the length and speed of journeys is largely unaffected by the intervention.

### Journey Quality impacts

WebTAG units A5.1 and A4.1 provides guidance, the Databook provides suggested values that users might place on the improved infrastructure your scheme provides. The values are shown in the WebTAG journey quality tab. The improvement over the 'do nothing' scenario should be valued, rather than the absolute level.

For cyclists  pence per minute  pence per trip (e.g. shower facilities)  
 For pedestrians  pence per km

As demonstrated in the case study, these values should take account of the proportion of the average journey that would be made on the improved infrastructure.

### Decongestion benefits

What proportion of new users would most likely be using a car in the do nothing scenario?

for cyclists   
 for pedestrians

Which area type from the drop down is most similar to the area your scheme is located in?

### Additional information

#### Background Growth

If you have an estimate of the growth in background use (in both scenarios), please set the annual growth rate   
 the period over which this applies  years

Number of days in the year that you would expect the above usage figures  days p.a.  
 In the case study this is assumed to be the typical number of working days - but might more appropriately be set to the number of weekdays.

### Results

#### Analysis of Monetised Costs and Benefits (in £'000)

Noise	0.00
Local Air Quality	0.00
Greenhouse Gases	0.00
Journey Quality	1995.64
Physical Activity (incl. absenteeism)	0.00
Accidents	0.00
Decongestion	0.00
Indirect taxation	0.00
Private contribution	0.00
Present Value of Benefits (PVB)	1995.64
Present Value of Costs (PVC)	4494.74
<b>Benefit Cost Ratio (BCR)</b>	<b>0.44</b>



The case study in WebTAG unit A5.1 uses slightly different assumptions on the valuation of decongestion benefits which result in a higher estimated benefit there. This is due to the specific nature of the case study and to fully replicate this approach here would have increased the complexity of this tool with no apparent benefit.

### Costs

Please provide estimates for upfront costs as well as future maintenance costs in the table below. Please enter the full costs of the scheme in the first column and any private sector contribution to those costs in the second. All other funds are assumed to be from local or central Government.

Please use a constant price base and specify the year here   
 Please refer to WebTAG unit A1.2 to set Optimism Bias

Year	Total scheme costs '000£	3rd party contributions '000£
2009		
2010	0	
2011	0	
2012	0	
2013	0	
2014	0	
2015	0	
2016	0	
2017	1,667	
2018	1,667	
2019	1,667	
2020	0	
2021	0	
2022	0	
2023	0	
2024	0	
2025	0	
2026	0	
2027	0	
2028	0	
2029	0	
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## Mode Shift (reduced car use)

Please answer the following questions with your best estimates to obtain a benefit cost ratio of your scheme. By varying your answers you can test the importance of the input data on the overall value for money of your scheme. The answers provided are for the example case study from Appendix B of WebTAG unit A5.1. This case study provides further helpful commentary that users of this tool might want to refer to.

### Scheme details

When would the scheme be likely to open?

What is the last year of initial funding?

Decay rate (starting from last year of funding)

WebTAG A5.1 explains - the impacts especially of revenue funded initiatives such as cycle training or personalised travel planning are likely to diminish year by year following the investment. For the case study here this is likely to be conservative.

Appraisal period (should be the expected asset life, maximum 60)  yrs

### Do Nothing scenario

This is what is most likely to happen if the scheme is not implemented. The data could for example be from automatic or manual traffic counts.

Number of cycling journeys  per day, average length  km and speed  kph

Number of walking journey  per day, average length  km and speed  kph

Ideally the data is taken from 'average weekday' in spring or autumn to avoid seasonal bias.

A return trip involves two journeys and would need to be counted as such.

To identify how many individual users this implies, please estimate the share of journeys that form part of a return trip here:

### Do Something scenario

Once your scheme has reached it's full impact (ignoring any initial build up here), how would these figures have changed (due to the intervention)?

Number of cycling journeys  per day, e.g. from automatic or manual cycle count.

Number of walking journey  per day

For simplicity it is assumed that the length and speed of journeys is largely unaffected by the intervention.

### Journey Quality Impacts

WebTAG units A5.1 and A4.1 provides guidance, the Databook provides suggested values that users might place on the improved infrastructure your scheme provides. The values are shown in the WebTAG journey quality tab. The improvement over the 'do nothing' scenario should be valued, rather than the absolute level.

For cyclists  pence per minute  pence per trip (e.g. shower facilities)

For pedestrians  pence per km

As demonstrated in the case study, these values should take account of the proportion of the average journey that would be made on the improved infrastructure.

### Decongestion benefits

What proportion of new users would most likely be using a car in the do nothing scenario?

for cyclists

for pedestrians

Which area type from the drop down is most similar to the area your scheme is located in?

### Additional information

#### Background Growth

If you have an estimate of the growth in background use (in both scenarios), please set

the annual growth rate

the period over which this applies  years

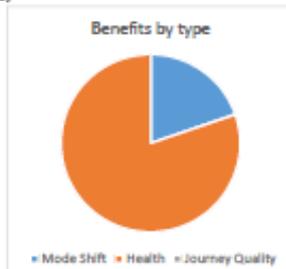
Number of days in the year that you would expect the above usage figures  days p.a.

In the case study this is assumed to the typical number of working days - but might more appropriately be set to the number of weekdays.

### Results

#### Analysis of Monetized Costs and Benefits (in £'000)

Noise	40.77
Local Air Quality	0.00
Greenhouse Gases	214.11
Journey Quality	0.00
Physical Activity (incl. absenteeism)	25130.71
Accidents	569.87
Decongestion	6312.30
Indirect taxation	-988.25
Private contribution	0.00
Present Value of Benefits (PVB)	31279.51
Present Value of Costs (PVC)	4458.19
<b>Benefit Cost Ratio (BCR)</b>	<b>7.02</b>



The case study in WebTAG unit A5.1 uses slightly different assumptions on the valuation of decongestion benefits which result in a higher estimated benefit there. This is due to the specific nature of the case study and to fully replicate this approach here would have increased the complexity of this tool with no apparent benefit.

### Costs

Please provide estimates for upfront costs as well as future maintenance costs in the table below. Please enter the full costs of the scheme in the first column and any private sector contribution to those costs in the second. All other funds are assumed to be from local or central Government.

Please use a constant price base and specify the year here

Please refer to WebTAG unit A1.2 to set Optimism Bias

Year	Total scheme costs '000£	3rd party contributions '000£
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2020	0	
2021	0	
2022	0	
2023	0	
2024	0	
2025	0	
2026	0	
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