



# **Appendix R: Warrington Western Link Social Impact Appraisal (SIA)**

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# 1 Introduction

Mott MacDonald has been commissioned by Warrington Borough Council to support the development of the outline business case (OBC) for the Warrington Western Link scheme. This report presents the results of the Social Impact Appraisal (SIA) of the scheme. The SIA has been carried out at a high level, proportionate to the size of the scheme, the availability of data and the stage of the appraisal. A detailed SIA will be prepared for the full business case.

## 2 Method

This SIA has been carried out drawing on WebTAG Guidance Unit A4.1. It assesses the human experience of the scheme and its impact on social factors. The eight social impacts covered in the WebTAG guidance (Unit A4.1) are:

- Accidents
- Physical activity
- Security
- Severance
- Journey quality
- Option and non-use values
- Accessibility
- Personal affordability

A screening stage was carried out to identify which impacts were relevant to the scheme and which could be assessed at this stage for the OBC. The number of impacts that were relevant to the scheme were narrowed down at this stage. A summary of the results is presented in Section 3.

The appraisal of each impact has a separate methodology set out in WebTAG Unit A4.1.

- The appraisal of accidents involves a quantitative analysis of the number of casualties using COBALT. The casualties are graded by severity and a monetised value is applied. The monetised benefits for accidents are included in the Appraisal Summary Tables (ASTs).
- Physical activity can be assessed quantitatively (where the data is available), by analysing the changes in cycling and walking. It is possible to estimate the monetised benefit of this as a result of reduced mortality and reduced absenteeism at work. However, on small to medium sized schemes, the physical activity assessment is generally a high level qualitative analysis.<sup>1</sup>
- Security, severance, journey quality and option and non-use values are all assessed qualitatively using WebTAG worksheets. Qualitative assessment scores for each of these areas are included in the ASTs on a seven-point scale of beneficial, neutral or adverse impacts.
- Accessibility is assessed for public transport schemes only.

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<sup>1</sup> Changes to the WebTAG SIA method are coming into place from November 2017. The changes involve a more refined quantitative appraisal of the physical activity. This analysis has been screened out for the outline business case stage of the appraisal.



### 3 Screening

This section presents the results of the SIA screening for this scheme. This screening identified which impact areas require further assessment based on threshold impact levels and availability of data. Table 1 below presents the threshold levels and the results of the screening process.

**Table 1: Warrington Western Link screening table**

Appraisal area	Screening requirement (WebTAG guidance Unit A4.1)	Screened in?	Rationale	Approach
Accidents	The guidance recommends it is proportionate in most cases to calculate and present monetary values for accidents	COBALT appraisal has been carried out.	To be determined	COBALT analysis
Physical activity	Physical activity may be monetised in cases where significant numbers of active mode users are affected by an intervention, which will chiefly occur as a result of schemes targeted at those modes.	Yes,	Data on NMUs unavailable	Qualitative assessment
Security	Security impacts are assessed and presented qualitatively in the AST	Yes	Limited information at this stage	Qualitative assessment
Severance	Severance impacts are assessed and presented qualitatively in the AST	Yes	Temporary severance will occur.	Qualitative assessment using google maps and the engineering designs
Journey quality	A new transport scheme can change travel conditions and hence journey quality, beneficially or adversely. This change must be assessed by comparing the without-scheme and with-scheme scenarios. Journey quality impacts can be monetised where sufficient evidence exists regarding the effectiveness of measures aimed at improving quality, where this is of significance	Yes	Changes to journey quality are likely to occur.	Qualitative assessment
Option and non-use values	Option and non-use values should be assessed if the scheme being appraised includes measures that will substantially change the availability of transport services within the study area	No	Not a public transport scheme.	N/A
Accessibility	Qualitative assessment (public transport schemes only)	No	Not a public transport scheme.	N/A
Affordability	Qualitative assessment	No	Impacts not likely to be significant.	N/A

Source: Mott MacDonald and WebTAG Unit A4.1

## 4 Accidents

An appraisal of the impacts on accident rates and the number of casualties was carried out using COBALT. Casualties are categorised by their level of severity:

- *Fatality: any death that occurs within 30 days from causes arising out of the accident;*
- *Serious injury: records casualties who require hospital treatment and have lasting injuries, but who do not die within the recording period for a fatality; and*
- *Slight injury: where casualties have injuries that do not require hospital treatment, or, if they do, the effects of the injuries quickly subside.*

The casualties have been monetised based on the level of severity, by multiplying the number of casualties by the cost. This has then been fed into the overall cost benefit analysis.

There is forecast to be a reduction in the rate of accidents and the number of casualties as a result of the scheme. There is likely to be a reduction of 5.1 accidents, and an economic benefit of £278,900 per annum over the 60 year appraisal period. The casualty figures and costs are presented in Table 2.

**Table 2: Casualties without and with the scheme**

Casualties	Without Scheme	With Scheme	Casualties saved by the scheme
Fatal	20.1	19.9	0.2
Serious	352.2	354.4	-2.2
Slight	5,759.30	5,760.90	-1.6

Source: Mott MacDonald

**Summary assessment score: Beneficial**

## 5 Physical activity

It is recognised that there is a relationship between transport, the environment and health.<sup>2</sup> Transport can affect levels of physical activity through the promotion of active modes such as cycling and walking. WebTAG guidance Unit A4.1 assesses physical activity impacts through the change in the activity levels and the resulting change in all cause morbidity.

There is very limited data currently available on non-motorised users (NMUs) using the route, so physical activity impacts have not been quantified at this stage. However, an uptake in physical activity is likely due to the introduction of a segregated footway along the extent of the scheme that is accessible to both pedestrians and cyclists. This may encourage the greater uptake of cycling amongst those apprehensive about cycling in the carriageway. The footway will also incorporate part of the Trans Pennine Trail. Part of the Trail will be replaced by the footway bringing cyclists and walkers closer to the road than the current off road route. This could discourage some users. Consequently the net impact on active mode users and physical activity is likely to be slight. Within Warrington as a whole 4% of journeys to work are by bike and 13% are by foot.<sup>3</sup>

In terms of the numbers of users that may be affected, there are an estimated 6,310 pedestrian trips and 2,150 cycle trips each day which could be affected.

**Table 3: Physical activity impacts**

**TAG Physical Activity Impacts Worksheet (Basic)**

	Pedestrians (i)	Cyclists (ii)	Equestrians and others (iii)
Numbers affected (a)	6,3104	2,1505	-
Change in journey time in minutes (b)	Not calculated	Not calculated	-
Combined impact (c=a*b)			

Source: Mott MacDonald

**Summary assessment score: Beneficial**

<sup>2</sup> Road Transport and Health, British Medical Association, 1997 cited in DfT (Nov 2014) Social Impact Appraisal Unit A4.1

<sup>3</sup> ONS 2011 National Census Original Destination Data

<sup>4</sup> ONS 2011 National Census Original Destination Data, Based on Warrington wide study area, Number of pedestrians

<sup>5</sup> ONS 2011 National Census Original Destination Data, Based on Warrington wide study area, Number of cyclists

## 6 Security

Transport interventions can have the potential to affect the level of security for transport users.<sup>6</sup> This section presents a high level assessment of the impacts of the Warrington Southern Link preferred route option on security using the WebTAG security impacts worksheet.

There is likely to be minimal impact on most aspects of security. In terms of lighting and visibility there will be an improvement due to the scheme incorporating LED white lights (designed to DMRB<sup>7</sup> standards) along the route to ensure greater visibility for motorised and non-motorised travellers.

In terms of the approximate number of users that may be affected, the new link road is forecast to carry 30,000 and 32,000 vehicles per annual average weekday.

**Table 4: Security impacts**

TAG Security Impacts Worksheet			
Security Indicator	Relative importance (High/Medium/Low)	Without scheme (Poor/Moderate/High)	With scheme (Poor/Moderate/High)
Site perimeters	N/A. Highways scheme	N/A	N/A
entrances and exits	N/A. Highways scheme	N/A	N/A
Formal surveillance	Low.	N/A	N/A
Informal surveillance	Unknown	Unknown	Unknown
Landscaping	Unknown	Unknown	Unknown
Lighting and visibility	Medium	Moderate	High
Emergency call	N/A	N/A	N/A

Source: Mott MacDonald

**Summary assessment score: Slight beneficial**

<sup>6</sup> There are no formal guidelines for appraising the impacts of road schemes on security. However WebTAG Unit A4.1 recommends that the guidance for public transport schemes can be used for road schemes.

<sup>7</sup> The Design Manual for Roads and Bridges provides design, assessment and operation of trunk roads, including motorways.

## 7 Severance

Community severance is defined in WebTAG as the separation of residents from facilities and services they use within their community caused by significant changes in transport infrastructure which impede pedestrian movement or present a physical barrier to movement.<sup>8</sup> This section presents an appraisal of the severance that is likely to occur during the construction and operational stages of the scheme.

### Construction stage

During the construction stage there is likely to be temporary severance of the Trans Pennine Trail, a 346km trail across the North of England for walkers and cyclists. Diversions will cause users to be rerouted.

### Operational stage

During the operational stage of the scheme the Trans Pennine Trail, will be reconnected via a segregated footway along the route of the new Western Link road. The Trail will be rerouted from country fields to the side of the new road along a short stretch of the route. The road will then pass over the Trail, with the route of the Trail going under the road and across to the north. The connection of the Trans-Pennine Trail, into the segregated footway provision will improve connectivity for cyclists, walkers and equestrians, and ensure linkage between the road and Trail networks. It may also lead to some users of the Trail feeling less safe with the route located along the road.

There may be some severance experienced by pedestrian users of Morley Common, an area of common land with a playground and football pitches. This severance may disproportionately impact local residents, particularly those living in houses around Eastford Road and Camberwell Drive.

New pedestrian facilities will be installed at the Sankey Way/Cromwell Avenue junction. This will improve NMU access to The Peace Centre, a community centre used for youth activities and conflict reconciliation.

An estimate of the population affected has not been calculated at this stage.

**Summary assessment score: Slight negative**

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<sup>8</sup> DfT (Nov 2014) WebTAG Unit A4.1

## 8 Journey quality

Journey quality is a measure of the real and perceived physical and social environment experienced whilst travelling. This section presents a qualitative assessment of the journey quality impacts of the scheme. It considers traveller care, travellers views and traveller stress. Each individual area is assessed in terms of whether it is better, neutral or worse. An overall score is given based on the combined effect, which is recorded as beneficial neutral or adverse. The areas that are likely to experience a change as a result of the Warrington West Link, are related to travellers' stress: frustration, fear of potential accidents and route uncertainty.

### Frustration

The creation of Warrington Western Link is likely to improve journey quality for motorists by reducing congestion, particularly during the peak AM and PM times. In addition, motorists will be able to avoid entering Warrington town centre, thereby better separating local and long distance traffic.

### Fear of potential accidents

The scheme also has the potential to reduce traveller stress through the likely reduction in the fear of potential accidents. There will be a segregated footway (designed to DMRB standards) running along the whole of the route, which will separate vehicles from NMUs.

### Route uncertainty

Following construction, there may be some initial route uncertainty for travellers, due to route alterations such as new junctions. However, any route uncertainty is anticipated to be temporary.

**Table 5: Journey Quality Impacts**

#### TAG Journey Quality Impacts Worksheet

Factor	Sub-factor	Better	Neutral	Worse
Traveller care	Cleanliness		X	
	Facilities		X	
	Information		X	
	Environment		X	
Travellers' views	-		X	
Traveller stress	Frustration	X		
	Fear of potential accidents	X		
	Route uncertainty	X		

Source: Mott MacDonald

**Summary assessment score: Beneficial**

## 9 Conclusions

The SIA of the scheme impacts will feed into the appraisal summary table (AST) for the preferred route. The following table provides a summary of the appraisal that can be used to inform the AST.

**Table 6: SIA conclusions of key impacts**

	Impacts	Summary of key impacts	Assessment		
			Quantitative	Qualitative	Monetary £(NPV)
<b>Social</b>	Physical activity	Introduction of a combined cycle and footpath segregated from vehicles on the road is likely to help increase in take up of cycling and walking, leading to increase physical activity. However, some existing users of the Trans Pennine Trail may be put off by the proximity of the route to the road.		Slight beneficial	
	Journey quality	Driver stress is likely to improve due to reduced congestion, particularly during the AM and PM peaks. New pedestrian facilities (at the junction on Sankey Way and Cromwell Avenue and the Forrest Way bridge) are likely to reduce the fear of potential accidents for motorists. There may be some route uncertainty following construction, but this is likely to be temporary.		Beneficial	
	Accidents	The Scheme will lead to an overall reduction in accidents, with a slight reduction in fatal casualties, and an increase in slight and moderate casualties.	Reduction of 5.1 accidents	Beneficial	£278,900
	Security	Lighting improvements with LED white lights.		Slight beneficial	
	Access to services	N/A			
	Affordability	N/A			
	Severance	Temporary severance of the Trans Pennine Trail. The trail will be rerouted to tie into the new link road		Slight negative	
	Option and non-use values	N/A			

Source: Mott MacDonald

