

**A57 LINK ROADS
TRO10034**

DEADLINE 4 - 16th FEBRUARY 2022

**SUPPLEMENTARY SUBMISSION TO
DEADLINE 2 SUBMISSION REP2-070**

**CAR FREE LOW CARBON TRAVEL
FOR LONGDENDALE AND GLOSSOPDALE**

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for
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Unique Reference: 20029243**

A57 Scheme Alternatives package

Introduction

The original CPRE submission on alternatives (REP2-070) had some detail but awaited certain data from NH. Some of this has now been received but the public transport flow data is awaited. The select link analysis for HGVs is useful in that it has confirmed the estimate for the proportion of HGV traffic which would be local and not affected by any control scheme. The new data confirmed 10% one direction and 11% in the other. The original estimate was 10%. Work is ongoing but there is nothing which negates the material in the original submission. The final step is to assess trip lengths which are not available in the NH data. These will have to be estimated from the sector to sector flows and is not yet complete. Since there is a delay on the public transport flows we cannot produce a costs and benefits table for the whole package at this stage.

Towards a BCR for the package

Despite awaiting some final data, it has been possible to produce an assessment for the walking and cycling elements of the package. To do so the local car traffic at Mottram was estimated and mode transfer assumptions from the Committee on Climate Change 6th Budget were used. These provided a high and low estimate. These were used as inputs to the DfT Active Mode Appraisal Tool (AMAT). This is in common use and MTRU has used it for a number of assessments, including some for National Park Authorities. The detailed assumptions and results are annexed to this submission but one important one is that the appraisal runs from 2023 up to the net zero end date of 2050 which is when the CCC forecasts also stop.

The results are as follows:

Table 1
Key outputs from AMAT

	Low CCC	Central	High CCC
Number of users 2025	700	840	980
Rate of growth	5.5%	6.1%	6.7%
BCR	5.34	7.98	10.21

There is one difference from the material in the original submission in that an additional ongoing sum of £100,000 per year up to 2050 has been added to the Low forecast, and £50,000 to the High and central forecast. This is intended to provide sensitivity testing. A variation in the appraisal period, which would normally be done as a sensitivity test is not required since it is being run up to the specific end date for the net zero policy.

In all cases the optimism bias was raised from the AMAT standard 15% to 44% as in our original submission.

The inputs to the capital side used the list behind our original estimate, which we have been circulating for comment. We may have some feedback subsequent to this submission but the costs we have used are detailed below.

The items included in the walk and cycle BCR calculations are indicated with a *. Travel planning has been split 50-50 between walk/cycle and public transport, as has the cost of the Woolley Bridge signals including bus/cycle priority.

Table 2

A57 Road scheme

Alternatives package capital costs

These are broad brush so are subjected to a 44% optimism bias at the end of the estimate.

Woolley Lane junction signalisation and provision of bus/cycle priority entry	£1,000,000*
Three new signalised pedestrian crossings	£450,000*
One new pedestrian crossing with bus gate	£250,000*
One bus gate at existing crossing	£150,000
Two additional pedestrian phases at existing signals	£150,000*
Three new electric buses	£1,000,000
Travel planning initial survey and planning	£500,000*
Travel plan start up incentives 3 years @ £350k	£1,050,000*
Walking route improvements (50 kms @ £5k)	£250,000*
Cycling improvements (includes 50 kms plus parking and other incentives)	£500,000*
20 mph speed limit plus public realm (20 kms @ £10k)	£200,000*
HGV signs including advance warning on motorways	£1,200,000
Total	£6,700,000
Plus Optimism Bias 44%	£9,650,000

Please note that no additional costs are given for signalisation of the M67 roundabout. This could be modest if undertaken within the existing layout, but would become more expensive if more construction work was needed. NH have said they will not supply estimates for their roundabout costs separate from the rest of the scheme. It also seems likely that the roundabout will have to be signalised as part of new development conditions so may not need funding from this source.

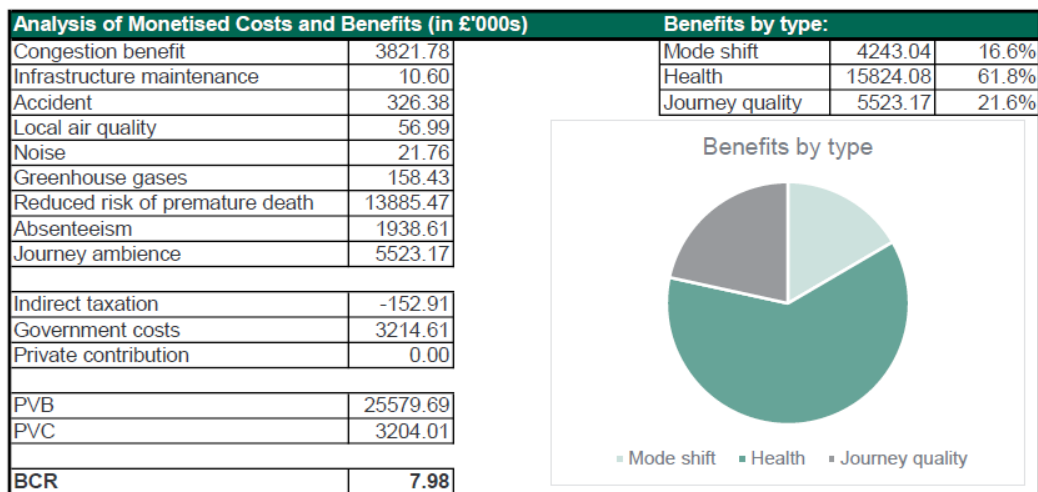
Conclusion on economic assessment

As is common for such interventions, the walking and cycling interventions provide very high and robust value for money, far outperforming the current proposal. The other parts of the package await final information and will be assessed separately as soon as this is available.

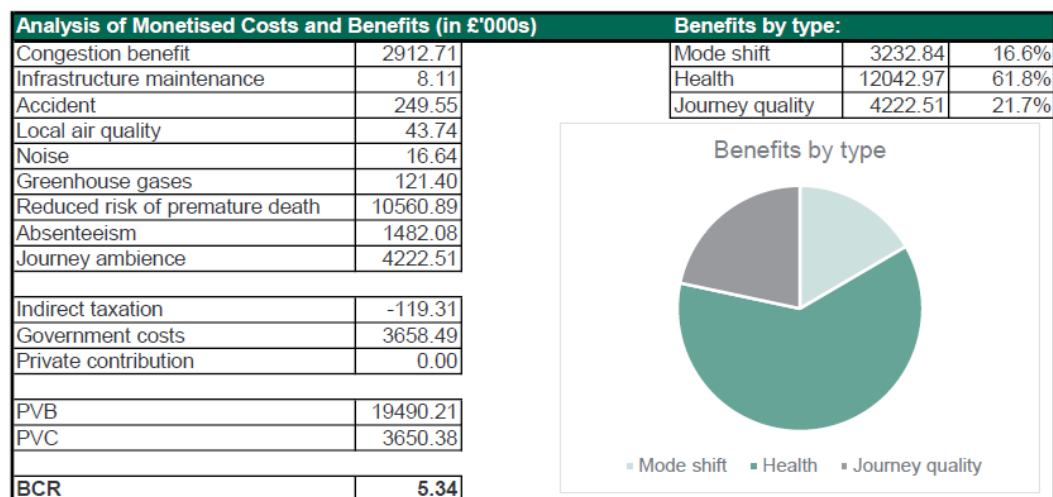
Annexes:

1 Output summaries for the DfT Active Mode Appraisal Toolkit (AMAT)

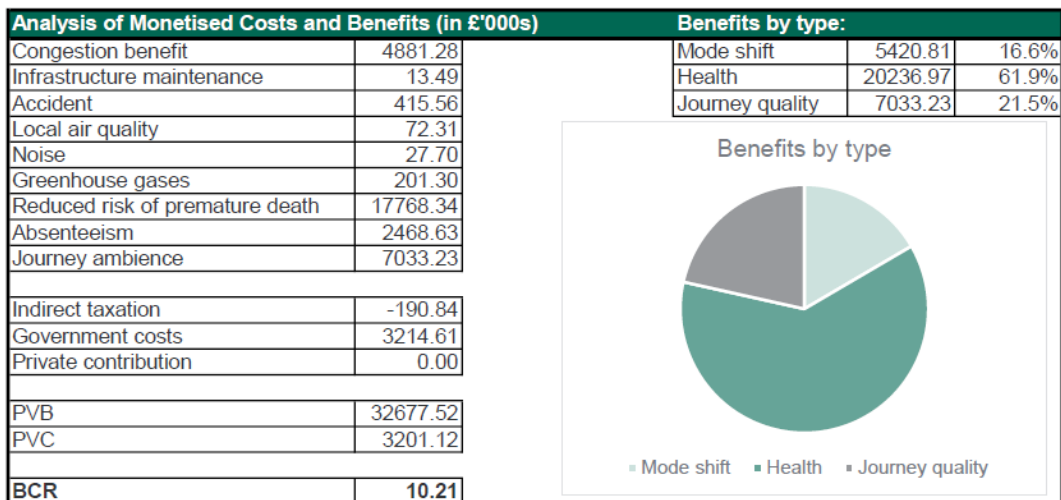
Central



Low



High



2 Example AMAT input sheet

Active Mode Appraisal Toolkit User Interface Intervention			
Intervention-specific Information			
User input required for all interventions			
Intervention name	Longfields package Low		
Intervention promoter	CPRX		
<p>Please fill in the 'Intervention details' to obtain a benefit cost ratio for an intervention. If local evidence is available, users may revise the default assumptions below but must also provide additional sources or supporting evidence to justify any changes (column H). A worked example is provided in the accompanying AMAT User Guidance document to provide the user with a step-by-step guide to completing an assessment using AMAT.</p>			
Intervention details			
Appraisal year	2021	Current year	
Intervention starting year	2023		
Last year of funding	2025		
Appraisal period	37	years	The appraisal period should correspond to the expected asset life. This should not exceed 60 years.
Local area type	Inner and Outer Conurbations		For applying Marginal External Costs used in mode shift calculations. Choices: London, Inner and Outer Conurbations, Other Urban, Rural, National Average
Mode Information			
Please fill out the cycling and walking sections where relevant. If an intervention does not directly affect the number of users of a specific mode, the relevant section should be left blank. Ideally, forecast trip numbers should be based on counts representing an average weekday in spring or autumn to avoid seasonal bias. Both automatic and manual counts can be used. The number of trips currently (without the intervention in place) and expected (with the intervention in place). These sections require projections of the number of users in a 'do-something' scenario (with the intervention in place) can be based on data from evaluations of historical interventions, case studies, or surveys. If the user does not have current or proposed numbers, please refer to the AMAT User Guide on potential sources of data to inform your assessment. For behaviour change schemes: 'How much of an average... trip will use the intervention?' should be set to zero and there should be no change in the Current and Proposed Infrastructure.			
Cycling			
User input required for all cycling interventions			
Number of trips without the proposed intervention	0	per day	Evidence/Source
Number of trips with the proposed intervention	300	per day	
How much of an average cycling trip will use the intervention?	75.00%	%	maximum 100%
Current cycling infrastructure for this route	No provision		
Proposed new cycling infrastructure for this route	Off-road segregated cycle track		
Are any additional shower facilities being added?	No		
Are any additional secure storage facilities being added?	Yes		
Walking			
User input required for all walking interventions			
Number of trips without the proposed intervention	0	per day	
Number of trips with the proposed intervention	300	per day	
How much of an average walking trip will use the intervention?	75.00%	%	maximum 100%
Current walking infrastructure for this route			
Street lighting	No		
Kerb level	No		
Crowding	No		
Pavement evenness	No		
Information panels	No		
Benches	No		
Directional signage	No		
Proposed walking infrastructure for this route			
Street lighting	Yes		
Kerb level	Yes		
Crowding	No		
Pavement evenness	Yes		
Information panels	Yes		
Benches	Yes		
Directional signage	Yes		
Assumptions			
Default assumptions (can be revised with supporting justification)			
Default TAG assumptions have already been entered. Users should only revise these if they can provide supporting evidence. Any additional evidence should be described in column H.			
Decay rate	0.00%	%	
TAG A5.1 explains that the impact of a cycling intervention is likely to diminish year by year following investment. The decay rate has been set at 0% for an infrastructure investment. For revenue-funded initiatives, such as cycle training or personalised travel planning, the decay rate may be positive. The default assumption is that 0% of new users are already active. This means all new users experience intervention-related health impacts.			
Cycling			
Average length of trip	4.84	km	National Travel Survey Data 2012-14
Average speed	15	km/h	National Travel Survey Data 2016
Proportion of cyclists who are employed	50.40%	%	National Travel Survey Data 2018
Proportion otherwise using a car	50.00%	%	Targeted through Travel Plan
Proportion otherwise using a taxi	0.00%	%	Literature Review carried out by RAND Europe/Opstra for DfT
Please provide local evidence			
Walking			
Average length of trip	1.1	km	National Travel Survey Data 2012-2014
Average speed	5	km/h	National Travel Survey Data 2016
Proportion of pedestrians who are employed	50.40%	%	National Travel Survey Data 2018
Proportion otherwise using a car	50.00%	%	Targeted through Travel Plan
Proportion otherwise using a taxi	0.00%	%	Assumed to be the same as cycling diversion factors
Please provide local evidence			
Additional Information			
Return journeys	90%	%	National Travel Survey Data 2018
A return journey involves going to and from your destination using the same route. Trips that make up return journeys will appear twice in the daily trip count (opposite directions).			
Background growth rate in trips	5.00%	%	Higher rate to reach OGC 2050 estimate
Period over which this growth rate applies	37	years	To 2050 (not zero data)
Please provide local evidence			
This is an annualised growth rate for increases in active travel trips. This could be due to a increase in population, changes in demographics or travel trends.			
Number of days for which intervention data is applicable per year	365	per year	To be compatible with AADT for A57
Please provide local evidence			
Car occupancy rate	1.8		Source: National Travel Survey 2002-16
Taxi occupancy rate	2.4		Source: TAG Data Book 2010
Promoters may want to change this depending on the intervention. For example, if the intervention is designed to shift modes from car to walking or cycling the occupancy rates may be higher.			

The A57 scheme and negative impact on Government and local policies for sustainable travel

Introduction

A key point that CPRE PDSY is making is that this scheme is clearly within and mainly affecting an urbanised area, not a rural one. Transport policy in such areas does not usually include major increases in road capacity such as this one. This applies to TfGM where they are not developing highway schemes themselves. They are however aware that others are, including NH and must acknowledge them in their plans.

The emphasis on sustainable modes in these urbanised areas is well established, however there are new Government and local policies which reinforce this even more strongly, and are reflected in legislation. These are driven primarily by climate change which has targets to move car drivers to sustainable modes. However, better health through Active Travel and air quality improvement are also key factors – discouraging car use is a key part of implementing those policies. It must follow that encouraging car dependency undermines it.

The key pathways for mode change in the latest policies include:

- From driver to passenger (car sharing/household consolidation). This is reflected in the Government target for increased car occupancy.
- From car driver to walking and cycling. This is reflected in the Government 2030 target “half journeys by walking and cycling” in towns and cities.
- From car driver to public transport. This is supported in Government policy statements but has no specific target. In GM there is the “50-50” target for sustainable modes overall by 2040, but this includes public transport.

Translating policy conflict into economic values

One problem with assessing the negative impact of a scheme on a different scheme designed to promote a competing mode (as in this case) is that it is often expressed verbally or in a criteria analysis – for example red, green, amber. On the other hand the benefits of many schemes are expressed in hard money terms, for example £2010, and cover a wide range of journeys which make it hard to make a negative impact, for example on sustainable travel, transparent.

This has led some transport practitioners to introduce the idea of compensating within an individual scheme appraisal for negative impacts. For example the Decarbon8 partnership, which has as partners Greater Manchester and Sheffield Combined Authorities, and academic institutions such as Leeds Transport Studies Group, suggest this approach for carbon.

Nothing like this has been done in the current case and indeed would be difficult, since the extent of the sustainable transport modelling appears to be limited to car drivers who might choose public transport. This became clear during the technical meeting with NH (19 Jan 2022) and details of what is available is awaited from them. There may be more material we do not know about since a further model was referred to by NH during the Issue Based Hearing on public transport.

Clarification from NH has been requested. Our original request was simple: what were the public transport use figures for the Do Minimum and Do Something in 2025 and 2040. As far as we know this is not in the modelling and thus not available. Given the location of this scheme and its potential impact on public transport this is a major omission.

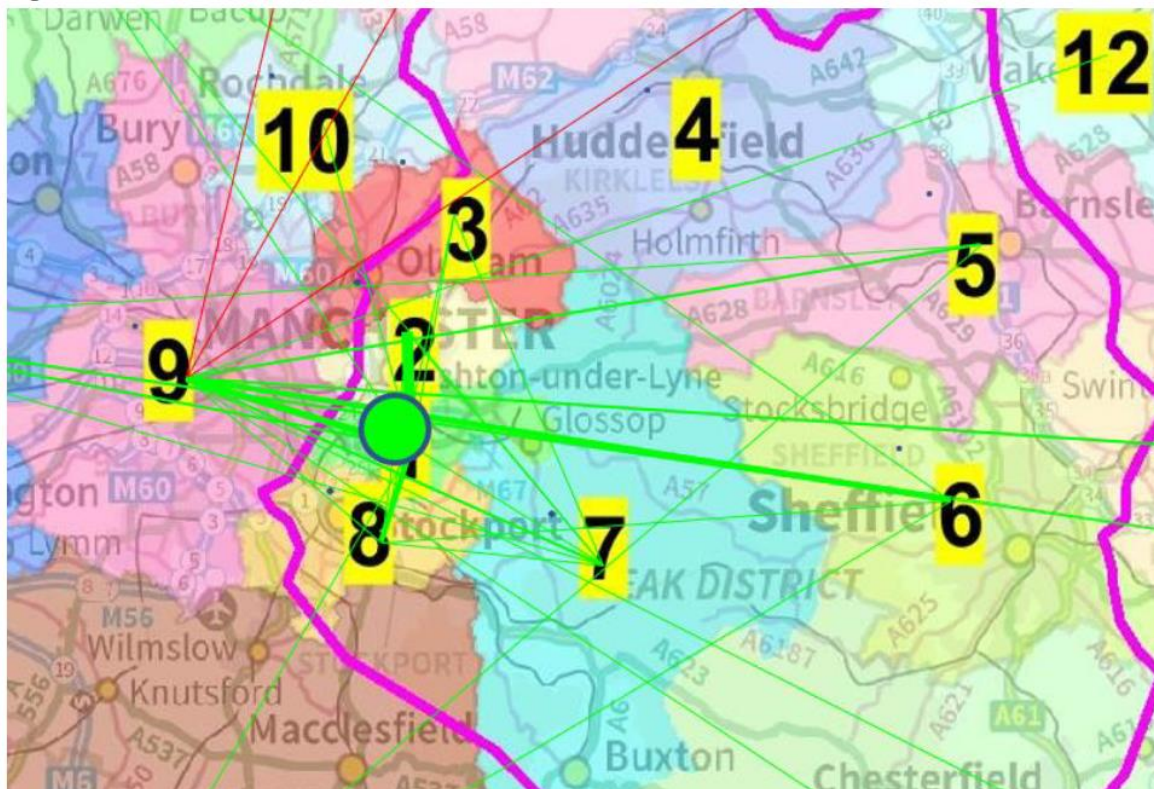
However the lack of monetisation of negative impacts need not be the case. Indeed it must be true that if Government policy is to discourage car travel in certain circumstances, any encouragement to driving will need to be compensated for in a direct way. This extra expenditure will have to be in place just to maintain the relative competition between driving and sustainable travel before any

new policies are implemented. . The level of encouragement to driving is in fact measured by A57 model through the time savings and lower operating costs. The estimates which follow have been based on the detailed NH data requested which allows the monetised benefits in the relevant areas to be extracted. This is new and has not been presented to the Examination until now due to delays in receiving the information.

The proposed A57 scheme: negative impact on sustainable travel

A key point in our analysis is that the main impact of the scheme is on car travel in urbanised areas. This was not explained in the Deadline 2 submitted material (REP2-070) and required a new analysis of where the predicted benefits were located, using detailed information requested from and supplied by NH. This was supplied in a 25 Sector format designed by them which is not perfect, but allows a reasonable approximation. The material first submitted by NH has a diagram which is not sufficiently clear for this to be done which is why the detailed information was requested. The diagram is reproduced below.

Figure 14-1 - TPU Benefit Distribution



The actual matrix of benefits is supplied in the table on the following page.

It is clear from this cautious approach that two thirds of the benefits are in areas where strong sustainability policies apply, from both central and local Government.

One reason that road capacity increases designed to speed up car journey times are not used in towns and cities is that this makes it harder to attract people onto alternatives. It would be against the laws of economics if that were not the case. The same matrix analysis shows the extent of this problem. If two thirds of the benefits are in areas where sustainability needs to be prioritised and targets achieved, this amounts to £146million in today's prices over the appraisal period. This represents 66% of the user benefits.

		Combined vehicle cost savings 2025										£million, 2010	
		1	2	3	4	5	6	7	8	9	10		
Study Area (Mottram)	1	29.3	5.1	1.6	0.2	0.1	0.8	1.7	3.1	7	0.8	49.7	
Rest of Tameside	2	12.6	0	0	0	0	0.2	1.8	1.2	0.1	0	15.9	
Oldham	3	2	0	0	0	0	0.3	0.8	0.5	0.1	0	3.7	
Kirklees	4	0.1	0	0	X	X	X	X	0.1	-0.1	X	0.1	
Barnsley	5	0.1	0	0	X	X	X	X	0.1	0.8	0	1	
Sheffield	6	0.2	0.1	0.1	X	X	X	X	0.5	4.1	0.1	5.1	
Rest of High Peak	7	0.4	0.6	0.3	X	X	X	X	0.2	1.9	0.2	3.6	
Stockport	8	6.5	1	0.7	0.2	0.3	0.8	1.3	0.6	1.2	0.1	12.7	
Manchester (North West Region)	9	11.2	0.3	0.2	0.6	3.5	6	2.4	0.7	0	0	24.9	
Rochdale	10	0.6	X	X	X	0	0.2	0.2	0	X	X	1	
		63	7.1	2.9	1	3.9	8.3	8.2	7	15.1	1.2	117.7	65.9%

Orange is "masked" - i.e. not counted. 2021 prices £mn 145.95

X This shows where flows have been excluded from the analysis due to the Sectors not allowing precise definition of the urban areas

However this needs to be modified to allow for different sustainability policies applied to goods transport. The benefits have therefore been discounted by 25% to allow for this effect.

The next issue is how to represent this number in a realistic way. This is because the value to drivers occurs each year over the whole appraisal period (although the costs are in the short construction period). We have therefore used the benefit profile in the Combined Economics and Modelling Report (Figure 14,2 REP2-090 page 635/790 in pdf) to translate the 60 year figure into an annual figure which shows the ongoing impact year by year – the same way the benefits unfold in the NH computer programme which produces the data for the economic assessment. The calculation is: annual benefit X .75 (to allow for goods vehicles) X .659 (proportion of benefits in relevant area) X 1.24 (2010 prices to current prices). This illustrates how far sustainable travel spending would have to compensate each year going forward.

The benefit to drivers in the sustainable policy areas amounts to £3.75million in today's prices in the opening year (2025), rising to £7.4million in 2050 (again in today's prices and undiscounted). This illustrates the significant and growing negative impact the scheme will have on achieving local and national policies. Local budgets would have to find this money at least until 2050 but probably well beyond.

We have not considered the negative health aspects of discouraging active travel.

In relation to value for money, the walking and cycling elements of the alternative package which would achieve such policies (such as that proposed by CPRE) has been tested using the DfT Active Travel toolkit. This is in the accompanying note updating the alternative package. Assessment of bus improvements await further details from NH on public transport use.

Above all this analysis illustrates the fact that this represents a significant increase in urban road capacity in the Greater Manchester area and as such is a significant anomaly in that area. It suggests that the development of alternatives would better meet the existing and most recent local and national transport policies. It would be possible for a joint approach by local authorities and the National Park to seek funding for alternatives from various sources including National Highways.