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Lancashire County Council

Burnley / Pendle Growth Corridor Strategy

Stage 2: Option Development, Appraisal and Strategy Report

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1 Introduction

1.1 Background

East Lancashire comprises the boroughs of Burnley, Hyndburn, Pendle, Rossendale and Ribble Valley together with the unitary authority of Blackburn with Darwen Borough Council. It is an area that has seen significant economic decline over a sustained period of time. The decline of industry and the resultant erosion of the local economic base have led to significant economic and social deprivation, high levels of worklessness and a relatively poor skills base. Labour markets tend to be relatively self-contained or with adjacent districts, where residents with low wages, poor skills and low aspirations will only travel limited distances for employment opportunities.

The five shire districts between them nevertheless provide employment for over 136,000 people, with almost a quarter of all employment in manufacturing. East Lancashire has a growing portfolio of higher value industries, with aerospace, advanced manufacturing, advanced flexible materials, digital and creative industries all featuring strongly. The Enterprise Zone at Samlesbury lies on the boundary with Central Lancashire and the launch of the Lancashire Advanced Engineering and Manufacturing Zone in April 2012 has focused attention on the area's transport links and wider connectivity. Other priorities for the Lancashire Enterprise Partnership include a Local Growth Accelerator Strategy for East Lancashire, focused on delivering economic change but also supporting innovative ways of tackling deprivation and economic inactivity, in particular, enabling residents from deprived communities to access new jobs or enterprise opportunities.

There is a strong perception locally that East Lancashire is poorly connected, with both road and rail networks hindering the efficient movement of people and goods, and that this relative isolation is having a negative impact on economic development and impeding regeneration. A key challenge for the East Lancashire Highways and Transport masterplan is to establish the optimum balance between outward connectivity and internal accessibility to jobs, education and training.

Apart from the M65 and M66/A56, roads tend to follow historic routes dictated by the topography rather than travel demand; consequently, most are poorly aligned and unsuitable for carrying high volumes of traffic, particularly heavy goods vehicles. Main line rail links are likewise constrained by topography, with resulting low line speeds having a significant impact on journey times, or as is the case with Rossendale, no longer exist. Although both road and rail routes continue eastward across the Pennines into Yorkshire, they are of a much lower quality than those further south that link Liverpool and Manchester with Leeds, Sheffield and the Humber ports.

1.2 Rationale for Study

The Burnley Pendle Growth Corridor (BPGC) Strategy was identified as the priority component of the East Lancashire Connectivity Study (ELCS). The ELCS has been identified in the East Lancashire Highways and Transport Masterplan which was published for consultation by Lancashire County Council (LCC) in October 2013 and subsequently adopted in February 2014.

The key components to be adopted as part of the development of the ELCS are summarised in Figure 1-A. This report focuses on the first component of the ELCS, the Burnley / Pendle Growth Corridor Strategy.

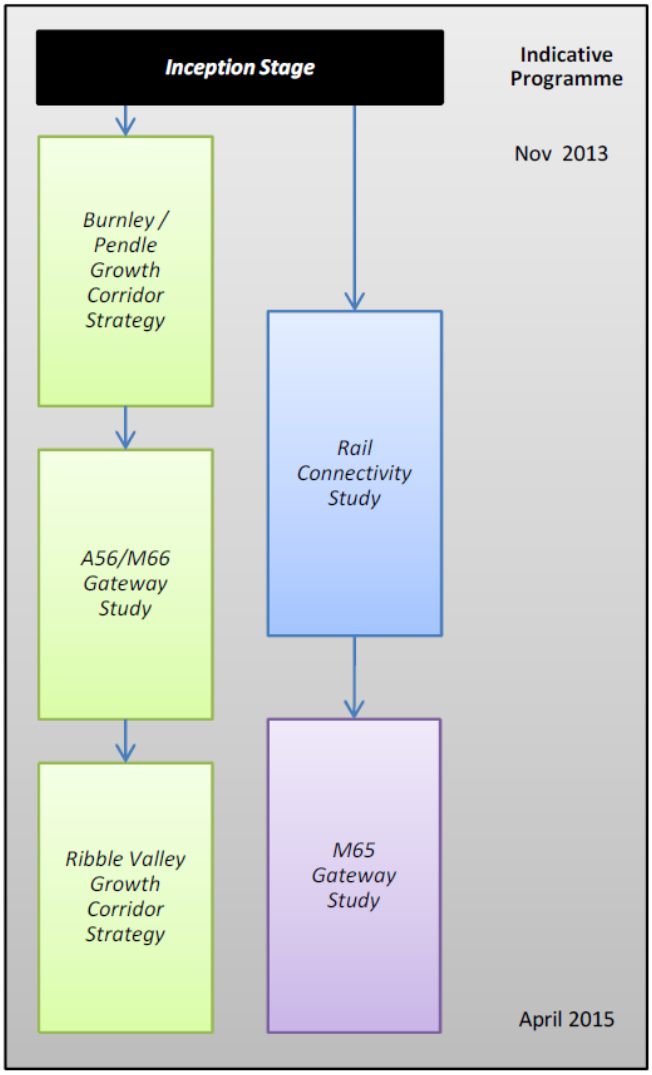


Figure 1-A: East Lancashire Connectivity Study Key Components

Burnley is one of two key economic drivers in East Lancashire and one of Lancashire County Council's three key priority growth locations. The Burnley / Pendle Growth Corridor comprises a number of existing and future strategic employment sites across Burnley, Pendle and Hyndburn, including Burnley Bridge, Weaver's Triangle, the Aerospace Supply Park, Pendle Gateway and other developments such as the UCLan Knowledge Zone in Burnley town centre. Many of these development sites lie in close proximity to the M65 and/or require effective access to and from it. Congestion on the highway network during peak periods is likely to increase as a result of these major developments, which will increase travel demand across all modes.

The M65 is a part two / part three lane motorway within the Growth Corridor and many of the junction slip roads do not meet current motorway design standards. Junction 10 at Gannow Top is the only all movement junction serving Burnley town centre. In addition to the motorway junctions, there are other potential pinch points on the adjacent local road network, including the A646/A679 junction in Rose Grove and various junctions in Burnley town centre.

The rationale for this study is to establish a strategy that will support economic growth through the identification of localised interventions focused on reducing current and projected congestion, improving journey time reliability and widening sustainable travel opportunities.

1.3 Study Area

The study has focussed primarily on the key issues affecting the M65 motorway between Junction 7 and its terminal roundabout at Colne (Junction 14). Consideration has also been given to the parallel A679/A682 route, starting from the M65 Junction 9 passing through Burnley town centre, Brierfield and Nelson, rejoining the M65 at Junction 13. This route has been referred to as the parallel route for the remainder of this report.

The extent of the study area is illustrated in Figure 1-B.

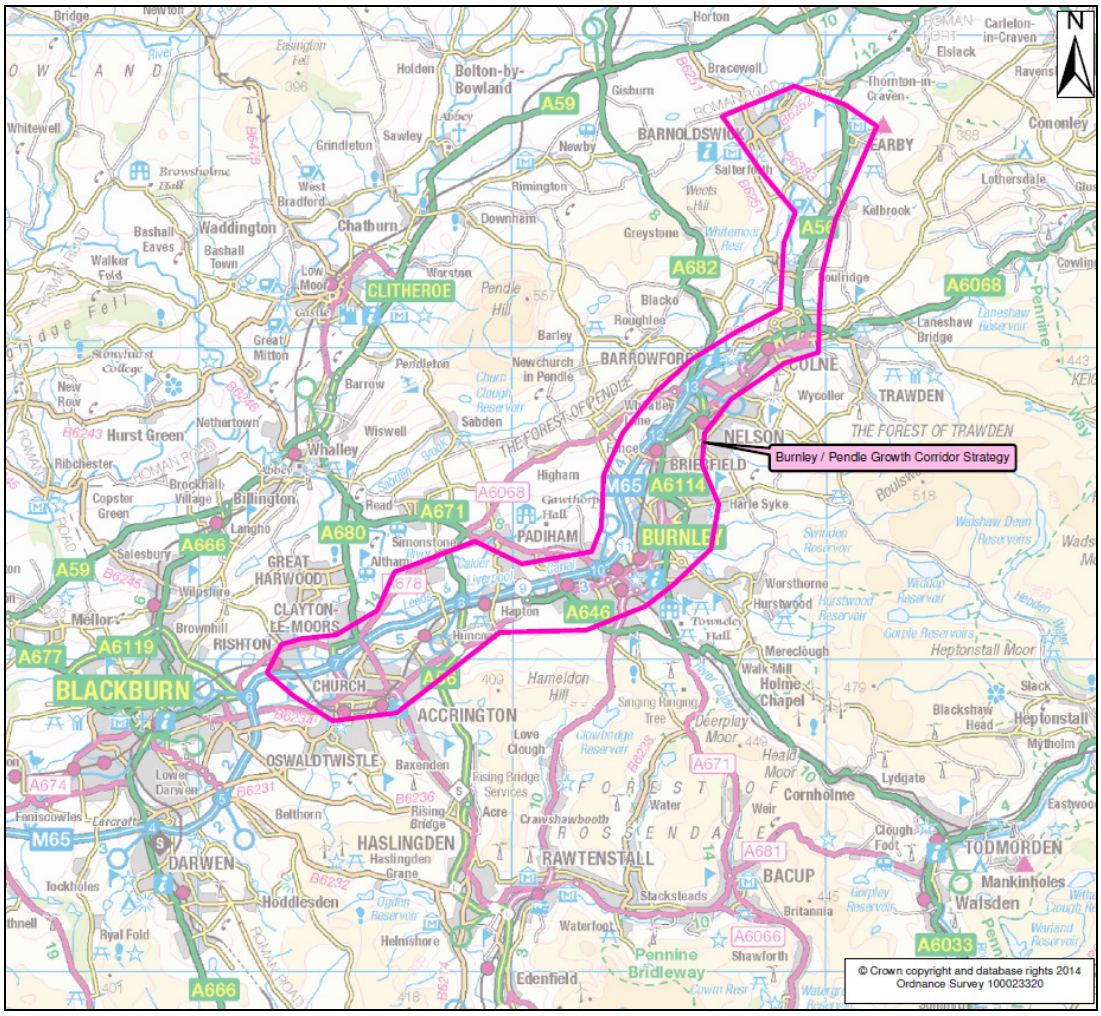


Figure 1-B: Study Area

1.4 Methodology

The Burnley / Pendle Growth Corridor strategy follows the methodology outlined in Figure 1-C below.

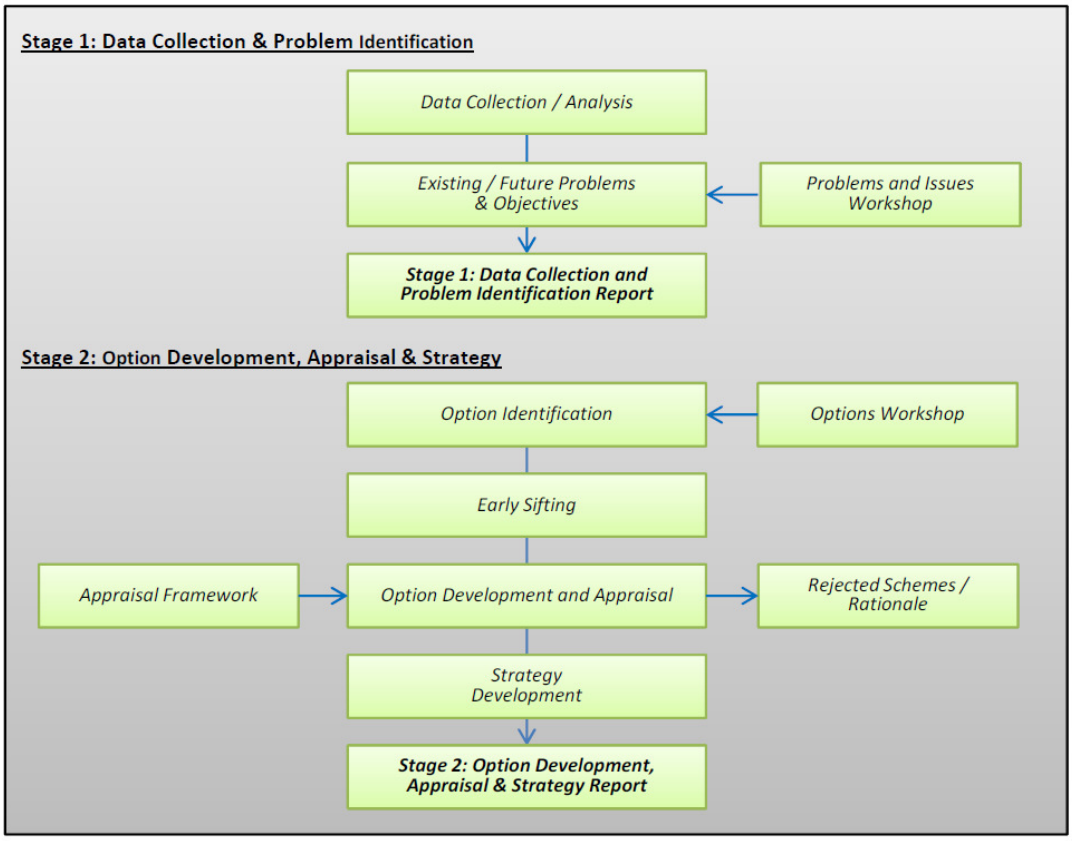


Figure 1-C: Burnley / Pendle Growth Corridor Strategy Methodology

1.5 Report Purpose

The purpose of this report is to summarise the Option Development, Appraisal and Strategy stage (Stage 2) of the Burnley / Pendle Growth Corridor Strategy.

1.6 Sources of Information

The following sources of information were used to inform this report:

- *Transport Analysis Guidance, The Transport Appraisal Process (Department for Transport, January 2014)*

For full details of the data collection and problem identification stage of this study, please consult the *Burnley / Pendle Growth Corridor Strategy Stage 1 Report (Jacobs, February 2014),* which is available upon request from the County Council.

1.7 Report Structure

The remainder of this report is structured as follows:

- *Chapter 2: Option Development, Appraisal and Strategy Methodology;*
- *Chapter 3: Option Identification;*
- *Chapter 4: Options Workshop;*
- *Chapter 5: Option Appraisal Tool;*
- *Chapter 6: Option Appraisal;*
- *Chapter 7: Strategy Development; and*
- *Chapter 8: Summary and Conclusions.*

2 Option Development, Appraisal and Strategy Methodology

2.1 Introduction

The Option Development, Appraisal and Strategy stage concludes with the identification of an overall strategy for the BPGC. It includes the identification of potential options aimed at alleviating the underlying transport problems and issues and provides an opportunity to appraise potential options against the chosen study objectives.

The key elements of the Option Development, Appraisal and Strategy stage (Stage 2) are shown in Figure 2-A, and discussed below.

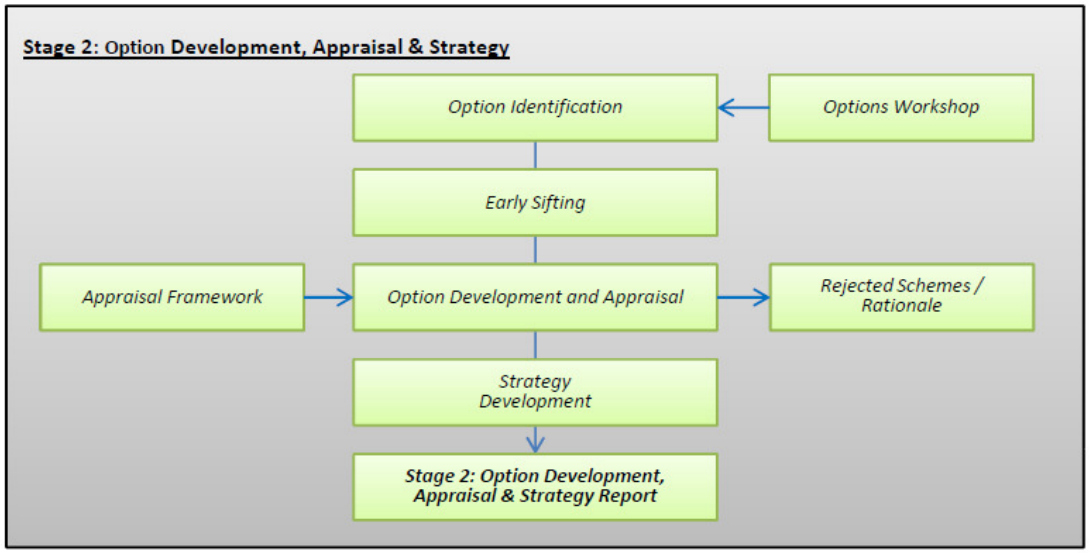


Figure 2-A: Option Development, Appraisal and Strategy Methodology

2.2 Option Identification

This stage in the process included discussions with the County Council and other key stakeholders such as Burnley Borough Council (BC), Pendle Borough Council, Hyndburn Borough Council and the Highways Agency at an Options Workshop. This ensured that a range of views was captured from stakeholders with significant local knowledge, expertise and experience. It included consideration of both new and historic proposals that have not been progressed in the past.

The Options Workshop facilitated agreement of a set of study objectives to be used as the framework for the identification and appraisal of potential interventions (referred to as options throughout this report). It also provided an opportunity to discuss the types of options to be considered further as part of the study. The format and findings of the Options Workshop are discussed in detail in Chapter 4 of this report.

In line with best practice contained within DfT guidance, a broad range of potential options across different modes of transport has been identified. Full details of the option identification stage are included in Chapter 3.

2.3 Early Sifting

The standard approach to option identification and development is to first sift out any options that would clearly not meet key deliverability criteria. This enables a reduced number of options to be taken forward for further consideration.

A number of the potential options identified were rejected during the initial stages of the option appraisal process based upon feasibility, deliverability, potential cost and value for money criteria. The rationale for any such decisions has been recorded within the option appraisal tool and is discussed in more detail in Section 6.2 (Option Filtering) of this report.

2.4 Option Development and Appraisal

At this stage, all potential options were considered as concepts only. Site investigation and detailed design work were not undertaken as part of this study. This work will need to be undertaken if potential solutions are prioritised for delivery and funding secured.

A bespoke option appraisal tool was developed in order to assess the likely impact of the potential options. The appraisal tool is based on previous experience from similar studies and uses an approach that is 'objective-led' and 'problem-driven' in line with best practice guidance on scheme appraisal. Full details of the option appraisal tool are documented in Chapter 5 of this report.

Analysis of the option appraisal results is detailed within Chapter 6 of this report.

2.5 Strategy Development

This stage involves the development of a package of options that make up the overall strategy. The strategy will consist of options that could support economic growth through reducing current and projected congestion, improving journey time reliability and widening sustainable travel opportunities.

Chapter 7 provides details of how the strategy has been formulated and presents a factual account of the likely benefits, based upon the evidence and analysis collated within the Stage 1: Data Collection and Problem Identification Report.

2.6 Option Development, Appraisal and Strategy Report

The Stage 2 Option Development, Appraisal and Strategy Report presents the final Burnley / Pendle Growth Corridor Strategy as well as discussing the option development, option appraisal and strategy development processes.

3 Option Identification

3.1 Introduction

Following the identification of the problems and issues within the study area a range of potential options aimed at improving the current situation were identified.

The purpose of this chapter is to summarise the methodology adopted as part of the option identification stage.

3.2 Option Identification

DfT guidance *(Transport Analysis Guidance, The Transport Appraisal Process, January 2014)* describes how a broad range of potential options should be considered in order to ensure that the most appropriate solution to an identified problem is pursued. Therefore, in line with best practice DfT guidance, a long list of potential options was generated with an unbiased view of historic proposals and local aspirations. The option identification process was informed by the draft study objectives included in the Stage 1: Data Collection and Problem Identification Report.

The following sources were used to identify potential options to be considered as part of the study:

- *Discussions at the Growth Corridor Strategy Problems and Issues Workshop (05/12/13);*
- *Options from previous studies. This was important to ensure that this study takes account of the findings of previous studies which have been undertaken; and*
- *New options which have emerged as a result of the findings of the data collection and problem identification stage (Stage 1) of the Growth Corridor Strategy.*

This process resulted in the identification of 39 potential options.

At this stage in the process, the potential options were considered as concepts only. Detailed investigations into the exact scope and locations were not undertaken.

For audit trail purposes, an option identification spreadsheet was developed to record all of the potential options that were identified for further consideration.

The 39 options were categorised into the following scheme types:

- *21 x Network Improvement options;*
- *11 x Public Transport options;*
- *5 x Traffic Management options; and*
- *2 x Non-Motorised User options.*

The 39 options were presented to key stakeholders at the Options Workshop on 13th January 2014. Further detail on the Options Workshop is included in Chapter 4.

4 Options Workshop

4.1 Introduction

In order to agree the study objectives and discuss potential options, an options workshop was undertaken involving key stakeholders. The workshop was held at County Hall on Monday 13th January 2014.

The aim of this chapter is to outline the workshop purpose, attendees, agenda and to summarise the outcome of the discussion regarding the proposed study objectives and potential options.

4.2 Workshop Purpose

The purpose of the Options Workshop was to:

- *Review progress to date;*
- *Agree the study objectives; and*
- *Discuss potential options.*

The Options Workshop also provided an opportunity to utilise the local knowledge and experience of the key stakeholders and to gather their thoughts on potential options that should be considered as part of the study.

4.3 Attendees

The Options Workshop was facilitated by Jacobs staff and attended by a number of County Council, Pendle Borough Council, Burnley Borough Council and Hyndburn Borough Council officers and key stakeholders. A list of attendees is provided below:

- *Dave Colbert* *(LCC: Specialist Advisor - Transport Planning)*
- *Helen Norman* *(LCC: Strategy and Policy)*
- *Martin Porter* *(LCC: Transport & Strategic Highways)*
- *Simon Emery* *(LCC: Lancashire County Developments Team)*
- *Chris Anslow* *(LCC: Public Transport)*
- *Oliver Starkey* *(LCC: Public Realm Manager Hyndburn)*
- *Chris Hadfield* *(LCC: Sustainable Travel Manager)*
- *Kathryn Molloy* *(Lancashire Enterprise Partnership)*
- *Richard Askew* *(LCC: Strategy and Policy)*
- *Peter Atkinson* *(Pendle BC)*
- *Dean Langton* *(Pendle BC)*
- *Peter Lord* *(Burnley BC)*
- *Mike Cook* *(Burnley BC)*
- *Paula Fitzgerald* *(Hyndburn BC)*
- *David Wild* *(Highways Agency)*
- *Mike Cammock* *(Jacobs Project Manager)*
- *Peter Hibbert* *(Jacobs Assistant Project Manager)*
- *Mark Romanowski* *(Jacobs Project Support)*
- *Steve Webb* *(Jacobs Project Support)*

4.4 Meeting Agenda

The agenda used to structure discussions at the Options Workshop was as follows:

1. Introductions
2. Purpose of the workshop
3. Progress to Date
4. Data Collection Exercise Review
5. Study Objectives
6. Options Discussion
7. Next Steps

The options discussion section formed the focus of the Options Workshop.

4.5 Study Objectives

In advance of the Options Workshop, the knowledge gained through the data collection and problem identification exercise was used to draft a set of study objectives for discussion and agreement with key stakeholders.

DfT guidance *(Transport Analysis Guidance, The Transport Appraisal Process, January 2014)* outlines how a clear set of objectives designed to address the identified problems should be set. The guidance indicates that objectives should be consistent with the following criteria:

- *Be informed by an appropriate level of stakeholder engagement and by a realistic appreciation of the issues and context;*
- *Reflect opportunities and constraints;*
- *Reflect underlying causes;*
- *Avoid indications of preferred solutions;*
- *Be consistent with wider local, regional and national objectives identified in, but focused on addressing the identified need, rather seeking to contribute to all of these objectives; and*
- *Enable more specific targets to be developed in due course.*

The study objectives that have been derived utilise these criteria and build upon them using the following sources of evidence:

- *Key observations from the data collection exercise;*
- *Problems and issues raised at the Problems and Issues Workshop;*
- *Options suggested at the Problems and Issues Workshop; and*
- *Schemes identified in previous studies.*

The key observations, data analysis, stakeholder views and local knowledge were collated into a single database and categorised based on topic. This process identified five key topics that informed the initial draft study objectives, which were discussed and debated in detail at the Options Workshop.

The collective discussions which took place at the Options Workshop ensured that a range of stakeholders were consulted and given the opportunity to influence the overarching aims of the study.

All attendees of the Options Workshop agreed with the scope of the preliminary study objectives that were presented. Some minor revisions were suggested at the

workshop; the objectives were updated to reflect these comments and circulated to all stakeholders the following day.

Comments were again invited on the updated study objectives before they were finalised. The agreed study objectives, which have been adopted to form the focus of the Growth Corridor Strategy going forward, are listed below:

1. *Improve the operation of the M65 motorway junctions and ensure journey time reliability on the M65 mainline is maintained;*
2. *Improve highway safety issues within the study area;*
3. *Reduce congestion on the local road network;*
4. *Improve access to existing developments (including town centres) and proposed development sites;*
5. *Improve the effectiveness of public transport facilities within the study area; and*
6. *Improve walking and cycling facilities within the study area.*

The adopted study objectives have been used to inform the option identification and appraisal stage of the Growth Corridor Strategy. This process is discussed in more detail in the following chapters of this report.

4.6 Options Discussion

As discussed in Section 3.2 of this report, a total of 39 options were identified by the Jacobs project team in advance of the Options Workshop. These options were presented to the workshop attendees for discussion and comments were invited on their suitability, viability and relevance to the study objectives. Further potential options were also invited for discussion and potential inclusion.

Following the Options Workshop, an updated list of options was compiled. An additional 16 options were suggested through discussion at the workshop, whilst six options were superseded.

Therefore a total of 49 options were agreed to be brought forward to the Option Appraisal stage.

A copy of the option identification spreadsheet, which documents every option which was considered, is included in Appendix A.

5 Option Appraisal Tool

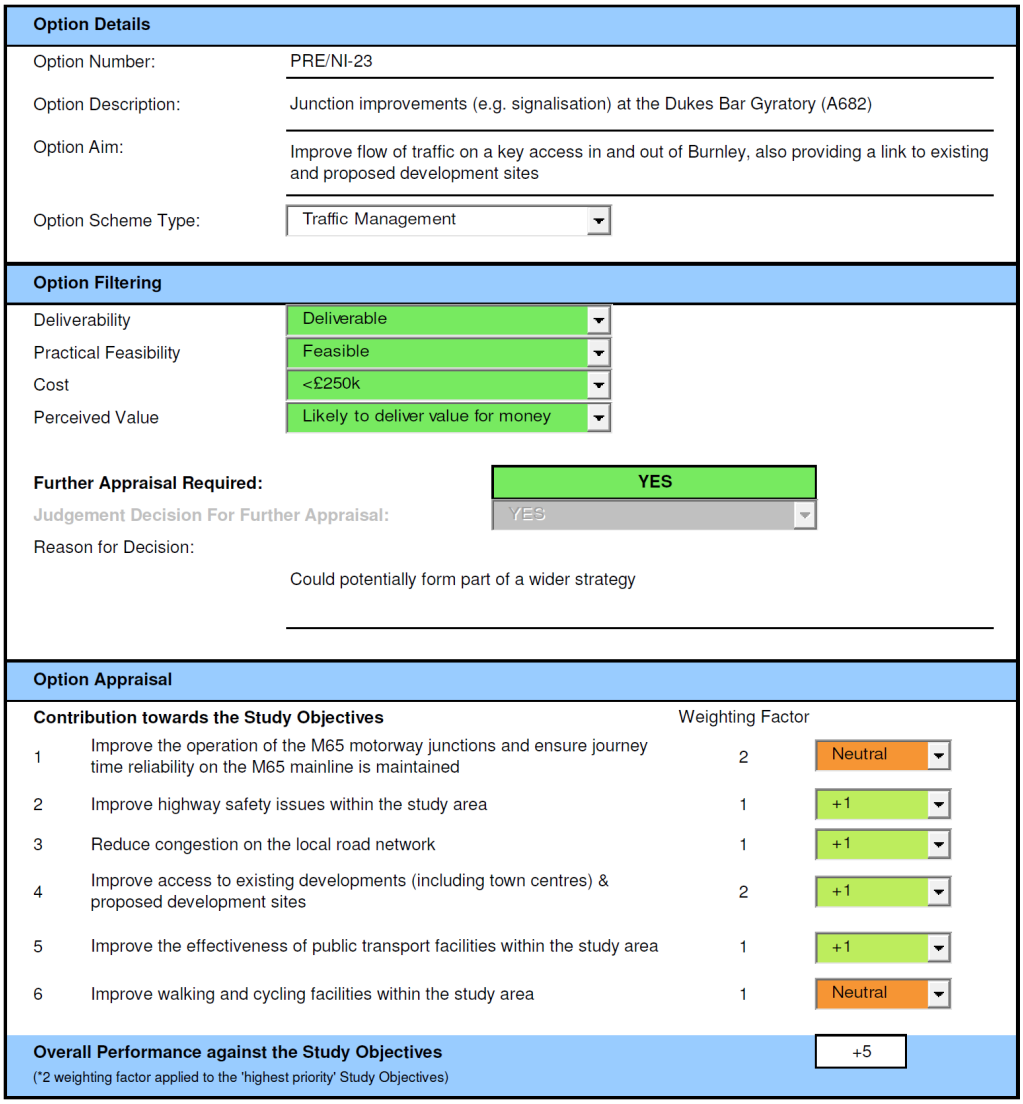
5.1 Introduction

Following the finalisation of the options to be appraised through input from key stakeholders at the Options Workshop, the next stage in the process was to undertake an appraisal of each of the potential options. This was undertaken using a bespoke option appraisal tool.

5.2 Option Appraisal Tool

The option appraisal tool has been developed to an appropriate level of detail to support development of the Growth Corridor Strategy. The tool is based upon the underlying principles set out within the DfT's Transport Appraisal Process guidance and the DfT's Early Assessment and Sifting Tool (EAST).

Figure 5-A provides a screenshot of the option appraisal tool.



Option Details

Option Number:	PRE/NI-23
Option Description:	Junction improvements (e.g. signalisation) at the Dukes Bar Gyratory (A682)
Option Aim:	Improve flow of traffic on a key access in and out of Burnley, also providing a link to existing and proposed development sites
Option Scheme Type:	Traffic Management

Option Filtering

Deliverability	Deliverable
Practical Feasibility	Feasible
Cost	<£250k
Perceived Value	Likely to deliver value for money

Further Appraisal Required: YES

Judgement Decision For Further Appraisal: YES

Reason for Decision: Could potentially form part of a wider strategy

Option Appraisal

	Contribution towards the Study Objectives	Weighting Factor	
1	Improve the operation of the M65 motorway junctions and ensure journey time reliability on the M65 mainline is maintained	2	Neutral
2	Improve highway safety issues within the study area	1	+1
3	Reduce congestion on the local road network	1	+1
4	Improve access to existing developments (including town centres) & proposed development sites	2	+1
5	Improve the effectiveness of public transport facilities within the study area	1	+1
6	Improve walking and cycling facilities within the study area	1	Neutral

Overall Performance against the Study Objectives +5

(*2 weighting factor applied to the 'highest priority' Study Objectives)

Figure 5-A: Option Appraisal Tool Screenshot

The option appraisal tool has been developed in conjunction with the County Council to ensure that it is consistent with their Scheme Prioritisation System (SPS). The approach provides a quantitative and qualitative appraisal and will be used as the basis for selecting and prioritising the most appropriate options that will form the final strategy. The appraisal tool used for this study is an advancement of the tool successfully used for a number of other studies commissioned by the County Council.

The option appraisal tool comprises three sections discussed in more detail under the following headings:

- *Option Details*
- *Option Filtering; and*
- *Option Appraisal*

5.3 Option Details

This section of the appraisal tool provides a brief overview of the option that is being assessed. The *'Option Number'* consists of a unique reference code, which indicates both the type and number of the option. A description of the option, along with the option aim is also included. The type of option is selected from the following categories:

- *Network Improvement (NI);*
- *Traffic Management (TM);*
- *Public Transport (PT); and*
- *Non-Motorised (NM).*

Figure 5-B illustrates the *'Option Details'* section of the option appraisal tool.

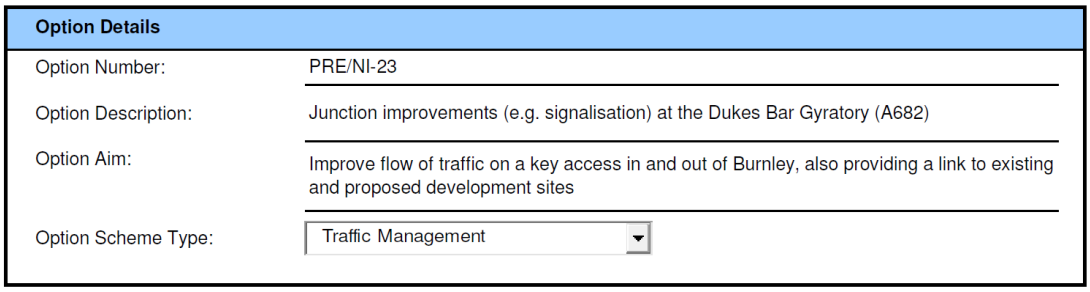


Figure 5-B: Option Details

5.4 Option Filtering

The purpose of the *'Option Filtering'* section is to ensure that each option being assessed is viable for further consideration as part of the Growth Corridor Strategy. It ensures that options are both feasible and deliverable and as such warrant further consideration.

The following criteria have been considered:

- *Deliverability (e.g. political issues, planning constraints, timescale or third party issues);*
- *Practical Feasibility (e.g. physical constraints, land availability or design standards);*

- *Cost (e.g. estimated option cost from the broad cost ranges provided; detailed cost estimates are not provided); and*
- *Perceived Value (e.g. is the option likely to provide value for money? Answers based on experience of similar types of options delivered elsewhere).*

The purpose of the cost criteria is to provide an indication of the likely cost of each option based on knowledge of previous studies undertaken.

Each question in the '*Option Filtering*' section is assessed based upon the criteria in Figure 5-C.

Deliverability	Feasibility	Cost	Perceived Value
Very difficult to deliver	Not Feasible	>£5m (major scheme)	Not likely to deliver value for money
Deliverable, but with challenges	Potential Issues	£1m - £5m	May deliver value for money
Deliverable	Feasible	£250k - £1m	Likely to deliver value for money
		<£250k	

Figure 5-C: Option Filtering Criteria

Figure 5-D shows the *'Option Filtering'* section of the option appraisal tool.

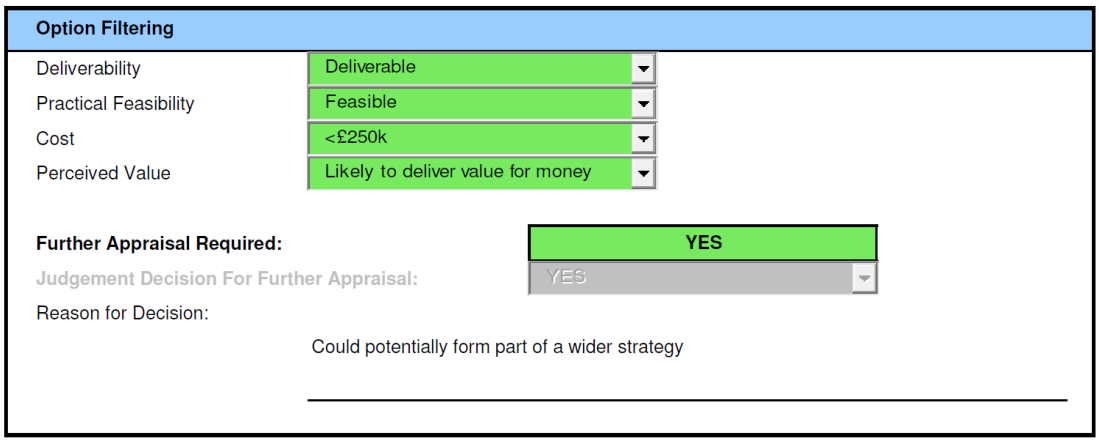


Figure 5-D: Option Filtering

Options which satisfy all four criteria in the option filtering section were progressed to the next stage of option appraisal. However, where an option had a mixed score against one or more of the criteria (e.g. due to potential issues such as uncertainty regarding feasibility), a judgement decision was made and justification given as to whether or not there was merit in appraising that particular option further.

Any options which clearly do not meet one or more of the above criteria were discounted from future consideration within this study. Adequate justification for this decision was recorded to provide a robust audit trail of the process.

5.5 Option Appraisal

The purpose of this section is to appraise each option against its potential contribution towards each of the six study objectives.

Figure 5-E shows the *'Option Appraisal'* section of the option appraisal tool.

Option Appraisal			
Contribution towards the Study Objectives		Weighting Factor	
1	Improve the operation of the M65 motorway junctions and ensure journey time reliability on the M65 mainline is maintained	2	Neutral
2	Improve highway safety issues within the study area	1	+1
3	Reduce congestion on the local road network	1	+1
4	Improve access to existing developments (including town centres) & proposed development sites	2	+1
5	Improve the effectiveness of public transport facilities within the study area	1	+1
6	Improve walking and cycling facilities within the study area	1	Neutral
Overall Performance against the Study Objectives (*2 weighting factor applied to the 'highest priority' Study Objectives)			+5

Figure 5-E: Appraisal Against Study Objectives

Each option is appraised against how well it contributes to each study objective. This is undertaken using a five point scale, as illustrated in Figure 5-F. Further information on the scoring criteria for each study objective is provided in Appendix B.

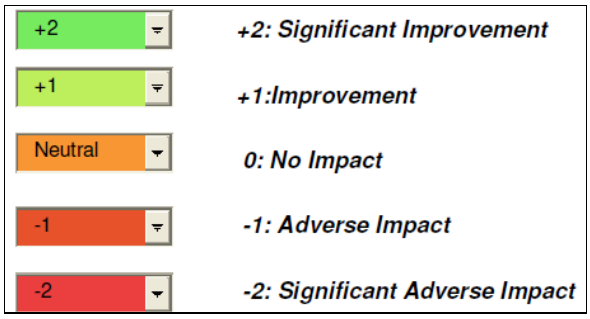


Figure 5-F: Option Scoring Criteria

Knowledge gained from the extensive data collection process has been used to inform the scoring process. In addition, the scoring of each option has been challenged through discussions between Jacobs and County Council officers to ensure that scores are both representative and consistent.

Prior to undertaking the option appraisal exercise, it was agreed that study objectives 1 and 4 were critical to the success of the Growth Corridor Strategy. Both of these study objectives relate specifically to the rationale for developing the strategy, as set out in Chapter 1, and the key problems and issues that have been identified in the Stage 1 report. In order to reflect the increased importance of study objectives 1 and 4, a weighting factor of 2 has been applied to those scores.

Therefore, the maximum appraisal score that can be achieved by an option against the study objectives is 16, as shown in Table 5-A.

	Weighting Factor	Maximum Score
Study Objective 1	2	4
Study Objective 2	1	2
Study Objective 3	1	2
Study Objective 4	2	4
Study Objective 5	1	2
Study Objective 6	1	2
Maximum Overall Appraisal Score		**16**

Table 5-A: Maximum Overall Appraisal Score

6 Option Appraisal

6.1 Introduction

This chapter summarises the results of the option appraisal process and is structured as follows:

- *Option Filtering;*
- *Appraisal Results; and*
- *Appraisal Summary.*

A complete set of appraisal worksheets for each of the options appraised is included in Appendix C. The appraisal worksheets also include a more detailed description of each option.

Plans showing the location of all 49 options appraised are included in Appendix D.

6.2 Option Filtering

Of the 49 potential options that were taken forward to the option appraisal stage, 20 options were excluded at the option filtering stage. These 20 options are listed in Table 6-A, along with a brief explanation of the reason why the option was not progressed any further.

As indicated previously, the following abbreviations have been used in the reference column:

- *NI = Network Improvement Option;*
- *PT = Public Transport Option;*
- *NM = Non-Motorised User Option; and*
- *TM = Traffic Management Option.*

Ref	Option	Reason for exclusion at the Option Filtering Stage
NI-05	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J11 (to improve access to the Weavers Triangle Development, Burnley Town Centre and Burnley Knowledge Park).	*This junction currently operates well and therefore improvements are unlikely to deliver good value for money. In addition there are no conflicting traffic movements and therefore signalisation is not required.*
NI-09	Make the M65 J9 an all movements junction in order to relieve congestion at J10.	*DMRB (TD22/06) indicates that a 2km gap between two motorway junctions (from merge to diverge) is required. The distance between J9-10 is only 1.4km. Other engineering constraints (e.g. the railway) would make this option difficult to deliver.*
NI-10	Make the M65 J11 an all movements junction in order to relieve congestion at J10.	*DMRB (TD22/06) indicates that a 2km gap between two motorway junctions (from merge to diverge) is required. The distance between J10-11 is only 0.6km. Other engineering constraints (e.g. the river, topography and proximity to residential properties) would make this option difficult to deliver.*
TM-11	Review signing strategy for Burnley Town Centre and destinations further afield from the M65 motorway.	*Burnley Central, South and West are already correctly signed from the M65, therefore this option is unnecessary.*
PT-18	Provide bus services that connect with new & existing development sites and rail stations to improve local access to employment sites.	*This option is unlikely to be a viable commercial service and therefore it is not considered deliverable. This type of bus service could be delivered as part of a travel plan condition.*
PT-20	New railway station at Greenbank (to serve Whitebirk development site at J6).	*Although the business case for this scheme could be relatively strong, it is not considered possible to add another station within such close proximity to the other stations along the line. In addition, Network Rail have expressed concerns that this scheme could decrease service reliability.*
PT-21	Electrification of the railway line to improve service provision.	*This option will be considered as part of the Rail Connectivity Study.*
TM-24	Traffic signal optimisation on the A682 parallel route (e.g. MOVA validation or install SCOOT).	*Options for the majority of the major junctions on the A682 parallel route have already been identified for appraisal. This option is therefore not required.*
PT-25	Improve bus passenger facilities in the corridor (e.g. RTPI and shelters) in order to encourage modal shift.	*No specific issues have been identified.*
PT-26	Improve school bus facilities.	*No specific issues have been identified.*
TM-27	Promote walking and cycling in the study area through travel plans for the businesses located at the key development sites.	*No specific issues have been identified. Specific walking and cycling schemes have been included as individual options.*
PT-30	Express bus service on the motorway linking Burnley and Blackburn and serving the development sites.	*This option is unlikely to be a viable commercial service and therefore it is not considered deliverable.*
PT-33	Introduce a Park & Ride scheme to access Burnley.	*For such a system to work efficiently priority bus corridors would be required so as to offer reliable journey times for passengers. In addition, the proximity of the M65 motorway to Burnley town centre means that a Park & Ride scheme is unlikely to be popular. This option is therefore not considered to be feasible*
NI-34	Junction improvements and carriageway widening on A679 between M65 J9 and Barracks Roundabout.	*Carriageway widening is not required on this route as the issue is the Rose Grove junction pinch point and not the carriageway capacity. A separate option (NI-15) has investigated Rose Grove junction improvements.*
NI-39	Junction improvements at Boundary Mill junction (M65 J14)	*This option would be looked at as part of the North Valley Road Do Minimum option (Alternative Strategy from the M65 to Yorkshire Study). In addition, this option was considered unlikely to deliver value for money.*
NI-40	Colne Bypass (as investigated by the M65 to Yorkshire Corridor Study)	*This scheme has already been investigated as part of the M65 to Yorkshire Corridor Study and will be considered separately to this study.*
NI-42	Junction improvements (e.g. signal optimisation / capacity improvements) on Vivary Way / North Valley Road junction	*This scheme has already been investigated as part of the M65 to Yorkshire Corridor Study and will be considered separately to this study. Proposals are currently being investigated by LCC.*
NI-44	Provide a northern access from Lomeshaye Industrial estate to the M65 J13 via the A6068.	*This option would provide an additional access point to an existing development site and therefore should be considered as part of the site redevelopment process.*
NI-47	Signal optimisation and pedestrian crossing provision from Heasandford Industrial Estate to the M65 J10.	*Options for the majority of the major junctions on the route from the M65 J10 to Heasandford Industrial Estate have already been identified for appraisal. This option is therefore not required.*
PT-52	Develop bus access to Burnley Bridge development site.	*The Burnley Bridge development site is still under construction and therefore this option should not be progressed. In addition, this option is likely to be covered by the travel plan for the development site.*

Table 6-A: Options Excluded at Option Filtering Stage

6.3 Appraisal Results

The remaining 29 options have been appraised using the option appraisal tool.

As referenced previously, the scoring of each option has been challenged through discussions between Jacobs and County Council officers to ensure that scores are both representative and consistent and also to minimise the risk of subjective scoring judgement.

The maximum overall appraisal score that can be achieved by any option is 16, as indicated in Table 5-A.

The results of the appraisal process are presented in Table 6-B. The options have been sorted into descending order by score.

The results of the option appraisal process are also presented graphically in Figure 6-A.

Option Ref	Option Description	Score	Cost Range
NI-04	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J10 (Option being delivered by LCC)	13	£250k - £1m
NI-06	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J12 and Colne Road/Manchester Road/Churchill Way roundabout	11	£250k - £1m
NI-07	Junction Improvements to both roundabouts (e.g. signalisation / lane optimisation / pedestrian facilities) at the M65 J13	11	£250k - £1m
NI-01	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J7 and Dunkenhalgh Way/Blackburn Rd junction	10	£250k - £1m
NI-03	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J9	10	£250k - £1m
NI-15	Junction improvements (e.g. signal optimisation / capacity improvements) at the Rose Grove Junction (A646/A679)	9	£250k - £1m
NI-31	Junction improvements (e.g. signalisation / capacity improvements / pedestrian facilities) at the A679 Active Way / B6434 Royle Road junction	9	£250k - £1m
NI-35	Junction improvement (signalisation) at Westgate / St. James St junction	9	<£250k
NI-02	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J8 including safety improvements	8	£250k - £1m
NI-14	Junction improvements (e.g. signal optimisation / capacity improvements / pedestrian facilities) at the Hare and Hounds junction (A680/A678) at Clayton-le-Moors	8	£250k - £1m
NI-49	Junction Improvements (e.g. signal optimisation / capacity improvements / pedestrian crossing provision) at the Mitre junction on the parallel route	8	<£250k
NI-50	Junction improvements (e.g. signalisation / optimisation) at either end of Burnham Gate, in order to maximise route capacity	8	£250k - £1m
NI-53	Junction improvements (e.g. signal optimisation / capacity improvements) at junctions along Dunkenhalgh Way & Hyndburn Road	7	<£250k
NI-54	Junction improvements (e.g. signalisation / capacity improvements) at the Burnley College access junction	7	£250k - £1m
NI-36	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Kingsway	6	<£250k
NI-37	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Church St	6	<£250k
NM-45	Improve walking and cycling facilities from Burnley Rail Stations to Burnley Town Centre	6	£250k - £1m
PT-16	Improvements to Rose Grove railway station, including pedestrian accessibility	6	£250k - £1m
NM-22	Improve walking and cycling facilities between Burnley Bridge and Burnley Town Centre.	6	£250k - £1m
NI-43	Junction improvements (e.g. signal optimisation / capacity improvements) for Nelson town centre - Manchester Rd/Broadway/Sagar St/Netherfield Rd/Lomeshaye Rd (as investigated part of the Nelson to Rawtenstall RMS).	6	<£250k
TM-28	Install two VMS signs on the M65 motorway and congestion monitoring in Burnley Town Centre to advise traffic of congestion, with real time congestion information available to the public online.	6	<£250k
PT-46	Improve public transport access and parking management at Burnley College and UCLan with updated travel planning and ticketing options	6	<£250k
NI-23	Junction improvements (e.g. signalisation) at the Dukes Bar Gyratory (A682)	5	<£250k
NI-32	Junction improvements (e.g. signal optimisation / capacity improvements) at the A682 Burnley Rd / B6248 Railway Street junction in Brierfield	5	<£250k
TM-38	Update existing VMS and car park occupancy hardware in Burnley	5	<£250k
PT-17	Improvements to Huncoat & Hapton railway stations	4	£250k - £1m
PT-55	Provide additional car parking at Burnley Manchester Road railway station	3	£250k - £1m
NI-13	Provide a consistent lighting strategy along the M65 motorway	2	<£250k
PT-41	Improve connectivity between Colne bus and rail stations	2	£250k - £1m

Table 6-B: Option Appraisal Results

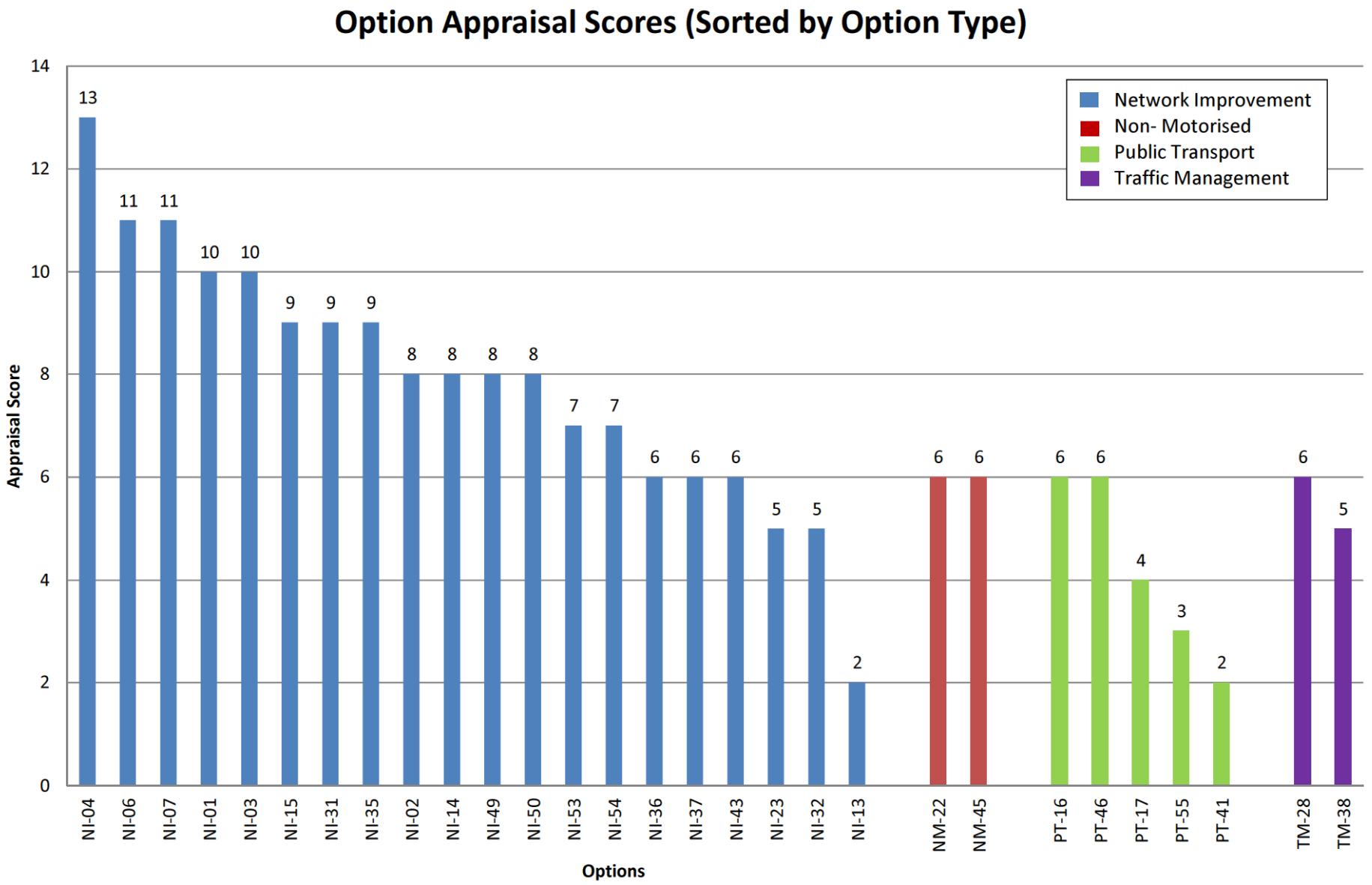


Figure 6-A: Option Appraisal Scores by Option Type

6.4 Appraisal Summary

All of the options that were appraised provide an overall positive contribution towards the study objectives.

Table 6-C provides a high level summary of the appraisal scores by option type. As referenced previously, the maximum overall score that an option can achieve is 16.

Option type	Overall Score			
	0-4	5-8	9-12	>12
Network Improvement	1	11	7	1
Public Transport	3	2	0	0
Non-Motorised User	0	2	0	0
Traffic Management	0	2	0	0

Table 6-C: Appraisal Score Summary

Table 6-C indicates that overall the Network Improvement options have scored better that any other option type. All of the Public Transport, Non-Motorised User and Traffic Management schemes scored in the lower two quartiles.

The five highest scoring options are improvements to junctions along the M65, which is the key strategic route through the study area. They all scored the maximum against Study Objectives 1 and 4, which, as discussed in Section 5.5, relate specifically to the rationale for developing the strategy.

The only option to score greater than 12 was NI-04, (Junction improvements at the M65 Junction 10) which achieved an overall score of 13 out of a possible 16. However, this scheme is already being delivered by the County Council and funding has been secured.

Seven options scored between 9 and 12; of these, four were improvements to motorway junctions as previously discussed. The remaining three options are all junction improvements, which scored 9. Improvements to the Rose Grove Junction (NI-15) scored consistently well against all study objectives. NI-31 and NI-35 are located on the A679/A682 parallel route between the M65 Junction 9 and Junction 13.

Chapter 7 of this report discusses the development of the final strategy, which consists of packages of options aimed at addressing the identified problems and issues.

7 Strategy Development

7.1 Introduction

Based on the option development and appraisal process undertaken as part of this study, a number of potential options which would deliver benefits to the Burnley / Pendle Growth Corridor have been identified.

The aim of the strategy development stage is to develop an overall strategy consisting of several packages of options, designed to deliver a broad range of benefits across the study area.

The remainder of this chapter is structured as follows:

- *Strategy Development Process; and*
- *Proposed Strategy.*

7.2 Strategy Development Process

The aim of the strategy is to bring together a range of options that could support economic growth, reduce current and projected congestion, improve journey time reliability and widen sustainable transport opportunities within the Growth Corridor. The strategy should seek to provide the best possible contribution towards the six study objectives formulated as part of the Growth Corridor strategy.

The first stage of the strategy development process involved identification of options which complemented each other. This ensured that a strategy could be developed which provided the greatest overall benefit to the study area. Options were considered to be complementary if they provided additional overall benefit when delivered in conjunction with nearby options.

As part of the strategy development process it became apparent that a number of options were dependent upon other options being delivered. Dependent options would need to be delivered in conjunction with each other to ensure that associated problems could be resolved.

Remaining options were classified as standalone options. The potential level of benefits of these options is not altered by other nearby options being delivered.

Once the options had been classified it became clear that a number of packages of options could be identified based on their location. These packages of options would contribute the greatest overall potential benefit to the Growth Corridor. The Growth Corridor strategy consists of all of the packages of options that have been identified.

Generally, the potential benefit to the corridor of standalone options was not considered to be significant, with the exception of Option NI-02 (M65 Junction 8 improvements).

Table 7-A indicates the dependency classification given to each of the options that were appraised. The packages of options identified have been colour coded as per the key below:

C = Complementary Option
D = Dependent Option (option that it is dependent on)
S = Standalone Option

	Pendle Gateway Access Improvements
	Burnley town centre Access Improvements
	Burnley Bridge Access Improvements
	Accrington Junction Improvements
	M65 Junction 8 Improvement
	Options not to be considered further

Option Ref	Option Dependency	Option Description	Score	Cost Range
NI-04	N/A	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J10 *(Option being delivered by LCC)*	13	£250k - £1m
NI-06	C	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J12 and Colne Road/Manchester Road/Churchill Way roundabout	11	£250k - £1m
NI-07	C	Junction Improvements to both roundabouts (e.g. signalisation / lane optimisation / pedestrian facilities) at the M65 J13	11	£250k - £1m
NI-01	C	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J7 and Dunkenhalgh Way/Blackburn Rd junction	10	£250k - £1m
NI-03	D (NI-15)	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J9	10	£250k - £1m
NI-15	C	Junction improvements (e.g. signal optimisation / capacity improvements) at the Rose Grove Junction (A646/A679)	9	£250k - £1m
NI-31	D (NI-31,35,49,36,37)	Junction improvements (e.g. signalisation / capacity improvements / pedestrian facilities) at the A679 Active Way / B6434 Royle Road junction	9	£250k - £1m
NI-35	D (NI-31,35,49,36,37)	Junction improvement (signalisation) at Westgate / St. James St junction	9	<£250k
NI-02	I	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J8 including safety improvements	8	£250k - £1m
NI-14	C	Junction improvements (e.g. signal optimisation / capacity improvements / pedestrian facilities) at the Hare and Hounds junction (A680/A678) at Clayton-le-Moors	8	£250k - £1m
NI-49	D (NI-31,35,49,36,37)	Junction Improvements (e.g. signal optimisation / capacity improvements / pedestrian crossing provision) at the Mitre junction on the parallel route	8	<£250k
NI-50	C	Junction improvements (e.g. signalisation / optimisation) at either end of Burnham Gate, in order to maximise route capacity	8	£250k - £1m
NI-53	C	Junction improvements (e.g. signal optimisation / capacity improvements) at junctions along Dunkenhalgh Way & Hyndburn Road	7	<£250k
NI-54	C	Junction improvements (e.g. signalisation / capacity improvements) at the Burnley College access junction	7	£250k - £1m
NI-36	D (NI-31,35,49,36,37)	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Kingsway	6	<£250k
NI-37	D (NI-31,35,49,36,37)	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Church St	6	<£250k
NM-45	C	Improve walking and cycling facilities from Burnley Rail Stations to Burnley Town Centre	6	£250k - £1m
PT-16	C	Improvements to Rose Grove railway station, including pedestrian accessibility	6	£250k - £1m
NM-22	C	Improve walking and cycling facilities between Burnley Bridge and Burnley Town Centre.	6	£250k - £1m
NI-43	I	Junction improvements (e.g. signal optimisation / capacity improvements) for Nelson town centre - Manchester Rd/Broadway/Sagar St/Netherfield Rd/Lomeshaye Rd (as investigated part of the Nelson to Rawtenstall RMS).	6	<£250k
TM-28	I	Install two VMS signs on the M65 motorway and congestion monitoring in Burnley Town Centre to advise traffic of congestion, with real time congestion information available to the public online.	6	<£250k
PT-46	I	Improve public transport access and parking management at Burnley College and UCLan with updated travel planning and ticketing options	6	<£250k
NI-23	I	Junction improvements (e.g. signalisation) at the Dukes Bar Gyratory (A682)	5	<£250k
NI-32	I	Junction improvements (e.g. signal optimisation / capacity improvements) at the A682 Burnley Rd / B6248 Railway Street junction in Brierfield	5	<£250k
TM-38	I	Update existing VMS and car park occupancy hardware in Burnley	5	<£250k
PT-17	I	Improvements to Huncoat & Hapton railway stations	4	£250k - £1m
PT-55	I	Provide additional car parking at Burnley Manchester Road railway station	3	£250k - £1m
NI-13	I	Provide a consistent lighting strategy along the M65 motorway	2	<£250k
PT-41	I	Improve connectivity between Colne bus and rail stations	2	£250k - £1m

Table 7-A: Option Packages and Dependency

7.3 Proposed Strategy

The proposed strategy consists of the five packages identified in Table 7-A, with each package consisting of a mixture of complementary, dependent and standalone options. It includes a range of different types of options, including Network Improvement, Non-Motorised User and Public Transport options.

The proposed strategy is summarised in Figure 7-A and presented in Table 7-B overleaf.

Appendix E includes plans showing the location of each option by package.

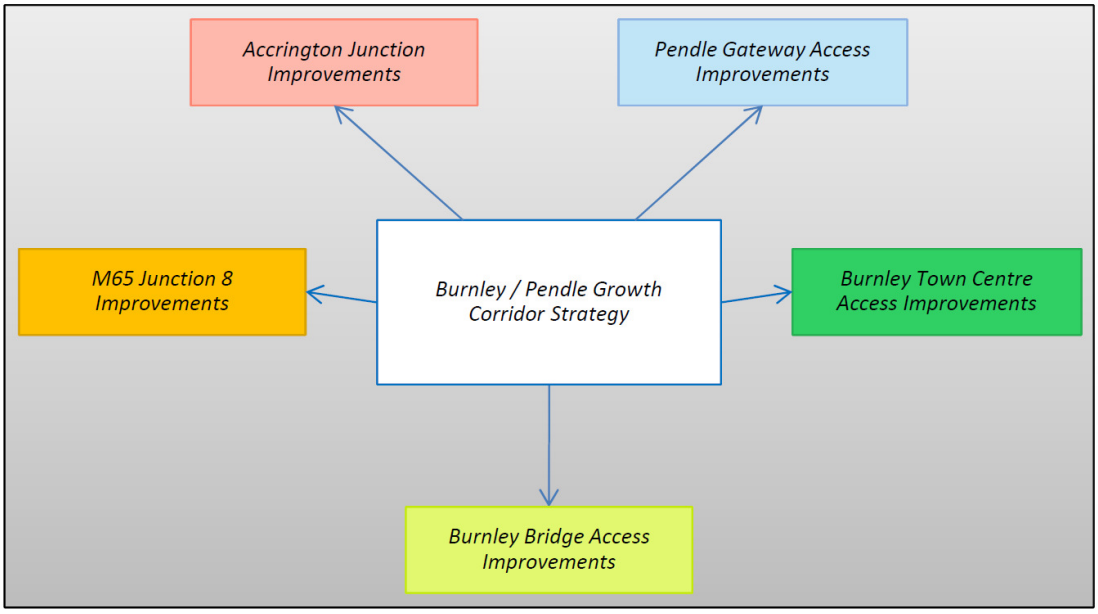


Figure 7-A: Burnley / Pendle Growth Corridor Proposed Strategy

Package	Option Ref	Option Description	Score	Cost Range
Pendle Gateway Access Improvements	NI-06	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J12 and Colne Road/Manchester Road/Churchill Way roundabout	11	£250k - £1m
	NI-07	Junction Improvements to both roundabouts (e.g. signalisation / lane optimisation / pedestrian facilities) at the M65 J13	11	£250k - £1m
Burnley Town Centre Access Improvements	NI-31	Junction improvements (e.g. signalisation / capacity improvements / pedestrian facilities) at the A679 Active Way / B6434 Royle Road junction	9	£250k - £1m
	NI-35	Junction improvement (signalisation) at Westgate / St. James St junction	9	<£250k
	NI-49	Junction Improvements (e.g. signal optimisation / capacity improvements / pedestrian crossing provision) at the Mitre junction on the parallel route	8	<£250k
	NI-50	Junction improvements (e.g. signalisation / optimisation) at either end of Burnham Gate, in order to maximise route capacity	8	£250k - £1m
	NI-54	Junction improvements (e.g. signalisation / capacity improvements) at the Burnley College access junction	7	£250k - £1m
	NI-36	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Kingsway	6	<£250k
	NI-37	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Church St	6	<£250k
	NM-45	Improve walking and cycling facilities from Burnley Rail Stations to Burnley Town Centre	6	£250k - £1m
Burnley Bridge Access Improvements	NI-03	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J9	10	£250k - £1m
	NI-15	Junction improvements (e.g. signal optimisation / capacity improvements) at the Rose Grove Junction (A646/A679)	9	£250k - £1m
	PT-16	Improvements to Rose Grove railway station, including pedestrian accessibility	6	£250k - £1m
	NM-22	Improve walking and cycling facilities between Burnley Bridge and Burnley Town Centre	6	£250k - £1m
Accrington Junction Improvements	NI-01	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J7 and Dunkenhalgh Way/Blackburn Rd junction	10	£250k - £1m
	NI-14	Junction improvements (e.g. signal optimisation / capacity improvements / pedestrian facilities) at the Hare and Hounds junction (A680/A678) at Clayton-le-Moors	8	£250k - £1m
	NI-53	Junction improvements (e.g. signal optimisation / capacity improvements) at junctions along Dunkenhalgh Way & Hyndburn Road	7	<£250k
M65 Junction 8 Improvement	NI-02	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J8 including safety improvements	8	£250k - £1m

Table 7-B: Proposed Strategy

7.3.1 Pendle Gateway Access Improvements

The Pendle Gateway Access Improvements package comprises of options NI-06 and NI-07. This package will provide junction improvements at M65 Junctions 12 and 13. Both of these options achieved an option appraisal score of 11.

Table 7-C summarises the Pendle Gateway Access Improvements package.

Package	Option Ref	Option Description	Score	Cost Range
Pendle Gateway Access Improvements	NI-06	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J12 and Colne Road/Manchester Road/Churchill Way roundabout	11	£250k - £1m
	NI-07	Junction Improvements to both roundabouts (e.g. signalisation / lane optimisation / pedestrian facilities) at the M65 J13	11	£250k - £1m

Table 7-C: Pendle Gateway Access Improvements

M65 Junction 13 was identified in the Stage 1: Data Collection and Problem Identification as experiencing a high level of delay in the peak hours. Improvements at Junction 12 include the adjacent roundabout on the local road network between Colne Road, Manchester Road and Churchill Way. This junction also suffers from congestion in both peak hours and affects the motorway junction.

This package of options should contribute to a reduction in congestion in this part of the Growth Corridor and improve access to Lomeshaye Industrial Estate and the Riverside Business Park to facilitate future development.

Detailed cost estimates have not been calculated as part of this study. However, based upon the estimated cost ranges of each option provided in Table 7-C, the Pendle Gateway Access Improvements package is estimated to cost up to £2m.

7.3.2 Burnley Town Centre Access Improvements

The Burnley Town Centre Access Improvements package comprises eight options. Five of these options are located on the A679 / A682 parallel route and are dependent on each other to deliver the optimum result in terms of increased capacity and reduced congestion. The remaining three options are close to the parallel route and provide complementary benefits.

Table 7-D summarises the Burnley Town Centre Access Improvements package.

Package	Option Ref	Option Description	Score	Cost Range
Burnley Town Centre Access Improvements	NI-31	Junction improvements (e.g. signalisation / capacity improvements / pedestrian facilities) at the A679 Active Way / B6434 Royle Road junction	9	£250k - £1m
	NI-35	Junction improvement (signalisation) at Westgate / St. James St junction	9	<£250k
	NI-49	Junction Improvements (e.g. signal optimisation / capacity improvements / pedestrian crossing provision) at the Mitre junction on the parallel route	8	<£250k
	NI-50	Junction improvements (e.g. signalisation / optimisation) at either end of Burnham Gate, in order to maximise route capacity	8	£250k - £1m
	NI-54	Junction improvements (e.g. signalisation / capacity improvements) at the Burnley College access junction	7	£250k - £1m
	NI-36	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Kingsway	6	<£250k
	NI-37	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Church St	6	<£250k
	NM-45	Improve walking and cycling facilities from Burnley Rail Stations to Burnley Town Centre	6	£250k - £1m

Table 7-D: Burnley Town Centre Access Improvements

Options NI-31, NI-35, NI-36, NI-37 and NI-49 are the five dependent options, all of which are situated on the A679 / A682 parallel route assessed as part of the Stage 1: Data Collection and Problem Identification Report. These dependent options should contribute to improving access between Burnley town centre and the M65 Motorway.

In line with the study rationale, option NM-45 has the potential to widen sustainable travel opportunities by improving access to and from the railway stations close to Burnley town centre.

As a package of options, the Burnley Town Centre Access Improvements package should improve access to and from existing and proposed development sites located at the Heasandford Industrial Estate, Weavers Triangle, Burnley Knowledge Park and Burnley town centre.

Detailed cost estimates have not been calculated as part of this study. However, based upon the estimated cost ranges of each option provided in Table 7-D, the Burnley Town Centre Access Improvements package is estimated to cost up to £5m.

7.3.3 Burnley Bridge Access Improvements

The Burnley Bridge Access Improvements package comprises four options. It was agreed at the Options Workshop that Option NI-03 (Junction Improvements at M65 J9) is dependent upon Option NI-15 (Improvements at the Rose Grove Junction) being delivered.

Table 7-E summarises the Burnley Bridge Access Improvements package.

Package	Option Ref	Option Description	Score	Cost Range
Burnley Bridge Access Improvements	NI-03	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J9	10	£250k - £1m
	NI-15	Junction improvements (e.g. signal optimisation / capacity improvements) at the Rose Grove Junction (A646/A679)	9	£250k - £1m
	PT-16	Improvements to Rose Grove railway station, including pedestrian accessibility	6	£250k - £1m
	NM-22	Improve walking and cycling facilities between Burnley Bridge and Burnley Town Centre	6	£250k - £1m

Table 7-E: Burnley Bridge Access Improvements

Three development sites are accessed from the M65 Junction 9: Network 65 Business Park, Rossendale Road Business Park and Burnley Bridge Business Park, which is currently under construction. Option NI-03 has the potential to improve access to all three of these development sites.

Congestion at the A679/A646 Rose Grove Junction was highlighted as a key issue in the Stage 1: Data Collection and Problem Identification Report. Option NI-15 would address congestion issues at this junction and subsequently improve access to the three development sites above as well as Burnley town centre.

Options PT-16 and NM-22 have the potential to improve sustainable travel opportunities by improving access between the identified development sites and Rose Grove railway station and Burnley town centre.

Detailed cost estimates have not been calculated as part of this study. However, based upon the estimated cost ranges of each option provided in Table 7-E, the Burnley Bridge Access Improvements package is estimated to cost up to £4m.

7.3.4 Accrington Junction Improvements

The Accrington Junction Improvements package consists of three complementary junction improvement options which would improve access between Accrington and the M65 motorway.

Table 7-F summarises the Accrington Junction Improvements package.

Package	Option Ref	Option Description	Score	Cost Range
Accrington Junction Improvements	NI-01	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J7 and Dunkenhalgh Way/Blackburn Rd junction	10	£250k - £1m
	NI-14	Junction improvements (e.g. signal optimisation / capacity improvements / pedestrian facilities) at the Hare and Hounds junction (A680/A678) at Clayton-le-Moors	8	£250k - £1m
	NI-53	Junction improvements (e.g. signal optimisation / capacity improvements) at junctions along Dunkenhalgh Way & Hyndburn Road	7	<£250k

Table 7-F: Accrington Junction Improvements

There are proposals to increase the size of the existing Junction 7 Business Park, which is accessed via the Dunkenhalgh Way / Blackburn Road junction. Option NI-01 would improve the operation of this junction and subsequently improve access to this key development site.

Congestion at the 'Hare and Hounds' junction (A680/A678) in Clayton-le-Moors was highlighted as an issue in the Stage 1: Data Collection and Problem Identification Report. The junction is set to be improved as part of the Pennine Reach rapid bus transport scheme which is currently being delivered. Option NI-14 would seek to further tackle congestion at this junction and subsequently improve access to the Junction 7 Business Park and Accrington town centre.

Detailed cost estimates have not been calculated as part of this study. However, based upon the estimated cost ranges of each option provided in Table 7-F, the Accrington Junction Improvements package is estimated to cost up to £2.25m.

7.3.5 M65 Junction 8 Improvement

The M65 Junction 8 Improvement package comprises one standalone option. This option achieved an overall appraisal score of 8 and has subsequently been included in the proposed strategy.

Table 7-G summarises the M65 Junction 8 Improvement package.

Package	Option Ref	Option Description	Score	Cost Range
M65 Junction 8 Improvement	NI-02	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J8 including safety improvements	8	£250k - £1m

Table 7-G: M65 Junction 8 Improvement

The Stage 1: Data Collection and Problem Identification Report identified that a high number of accidents were occurring at M65 Junction 8. There were a total of 47 accidents at Junction 8 between 2008 and 2012, which accounted for 24% of the total number of accidents occurring at the M65 motorway junctions between Junctions 7 and 14. Option NI-02 includes safety improvements in an attempt to reduce the number of accidents occurring at Junction 8.

The Stage 1 Report also identified Junction 8 as experiencing a high level of delay in the peak hours. Option NI-02 will aim to reduce current and future congestion which in turn would improve access to nearby development sites, including Altham, Shuttleworth Mead and Huncoat.

Detailed cost estimates have not been calculated as part of this study. However, based upon the estimated cost ranges of each option provided in Table 7-G, the M65 Junction 8 Improvement package is estimated to cost up to £1m.

8 Summary and Conclusions

8.1 Summary

The rationale for this study was to establish a strategy that supports economic growth in the Burnley / Pendle Growth Corridor through the identification of localised interventions. The interventions should focus on improving access to current and future development sites by reducing congestion, improving journey time reliability and widening sustainable travel opportunities.

Work to develop the Burnley / Pendle Growth Corridor Strategy comprised three key stages:

- *Stage 0: Inception*
- *Stage 1: Data Collection and Problem Identification*
- *Stage 2: Option Development, Appraisal and Strategy*

This Stage 2 Report summarises the findings of the option development and appraisal stage and also presents the strategy formulation process employed.

The option development and appraisal process has focused on the issues affecting the Burnley / Pendle Growth Corridor, as identified in the Stage 1: Data Collection and Problem Identification Report.

An Options Workshop was held to provide key stakeholders with an opportunity to influence the study objectives and the option identification process.

A total of 29 potential options have been identified and appraised using a bespoke option appraisal tool, which appraised each option against the study objectives. A proposed strategy was subsequently formulated.

The Growth Corridor Strategy has informed transport spending priorities in the Strategic Economic Plan (SEP) that Lancashire's Local Enterprise Partnership (LEP) submitted to the Government at the end of March 2014.

8.2 Conclusions

The option appraisal process demonstrated that there are a number of options which deliver a positive contribution to the six Growth Corridor Strategy objectives that were formulated as part of the option development process.

The proposed strategy comprises a range of options that when combined will provide significant improvements to travel within the Burnley / Pendle Growth Corridor and deliver the maximum contribution towards the study objectives.

The proposed strategy consists of five packages of options which include a range of different types, including Network Improvement, Non-Motorised User and Public Transport options.

The proposed strategy is presented in Table 8-A.

Package	Option Description
Pendle Gateway Access Improvements	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J12 and Colne Road/Manchester Road/Churchill Way roundabout
	Junction Improvements to both roundabouts (e.g. signalisation / lane optimisation / pedestrian facilities) at the M65 J13
Burnley Town Centre Access Improvements	Junction improvements (e.g. signalisation / capacity improvements / pedestrian facilities) at the A679 Active Way / B6434 Royle Road junction
	Junction improvement (signalisation) at Westgate / St. James St junction
	Junction Improvements (e.g. signal optimisation / capacity improvements / pedestrian crossing provision) at the Mitre junction on the parallel route
	Junction improvements (e.g. signalisation / optimisation) at either end of Burnham Gate, in order to maximise route capacity
	Junction improvements (e.g. signalisation / capacity improvements) at the Burnley College access junction
	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Kingsway
	Junction improvements (e.g. signal optimisation / capacity improvements) at Active Way / Church St
	Improve walking and cycling facilities from Burnley Rail Stations to Burnley Town Centre
Burnley Bridge Access Improvements	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J9
	Junction improvements (e.g. signal optimisation / capacity improvements) at the Rose Grove Junction (A646/A679)
	Improvements to Rose Grove railway station, including pedestrian accessibility
	Improve walking and cycling facilities between Burnley Bridge and Burnley Town Centre
Accrington Junction Improvements	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J7 and Dunkenhalgh Way/Blackburn Rd junction
	Junction improvements (e.g. signal optimisation / capacity improvements / pedestrian facilities) at the Hare and Hounds junction (A680/A678) at Clayton-le-Moors
	Junction improvements (e.g. signal optimisation / capacity improvements) at junctions along Dunkenhalgh Way & Hyndburn Road
M65 Junction 8 Improvement	Junction Improvements (e.g. signalisation / lane optimisation) at the M65 J8 including safety improvements

Table 8-A: Burnley / Pendle Growth Corridor Proposed Strategy

In conclusion, it is considered the proposed strategy will support economic growth by delivering localised interventions focused on reducing current and projected congestion, improving journey time reliability and widening sustainable travel opportunities.

Appendix A Option Identification Spreadsheet

Appendix B Appraisal Scoring Justification

Appendix C Option Appraisal Work Sheets

Appendix D Appraised Options Plans

Appendix E Proposed Strategy Plans