Cheshire East Council
Highways

A500, M6 to A5020

EAST and SWOT Analysis

Revision 0

April 2017

Cheshire East Council
Highways

A500, M6 to A5020

Project No:	B1832076
Document Title:	EAST and SWOT Analysis
Document No.:	B1832076-OD-23
Revision:	R0
Date:	April 2017
Client name:	Cheshire East Council
Project manager:	Dan Teasdale
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File name:	B1832076-OD-23 – Scheme Assessment Report

Jacobs U.K. Limited

Document history and status

Rev	Date	Description	By	Review	Approved
R0	10/04/17	For Information	E. Lachlan	J. Horas	D. Teasdale

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Contents

1 Introduction

1.1 Scheme Description

A500, M6 to A5020' ("the scheme") is a proposed upgrade of the existing 3.3km single lane carriageway road, between M6 Junction 16 and the A5020 roundabout, to a dual carriageway. The scheme is to the southeast of Crewe and is one of two main routes from the town to the M6 motorway. The scheme is currently being developed by Cheshire East Council (CEC), and is considered to be an integral part of the Local Plan.

1.2 Background to the Scheme

The A500 between M6 J16 and the A5020 was constructed in the mid-1980's, but developments in eastern Crewe and the construction of the A500 Hough Shavington Bypass immediately to the west (opened to traffic in 2003) have generated a significant increase in traffic flows, causing congestion. The proposed developments required to deliver 'All Change for Crewe' and included in the Local Plan will generate more traffic, and exacerbate problems on the link.

The scheme is to the southeast of Crewe and is one of two main routes from the town to the M6 motorway. The scheme is currently being developed by Cheshire East Council (CEC), and is considered to be an integral part of the Local Plan.

1.3 Purpose of the Report

The purpose of the report is to record the findings of the Scheme Objectives Workshop held in January 2017. The workshop was attended by a number of stakeholders, with the purpose of agreeing the problems within the study area; agreeing the Scheme Objectives, and; generating a long list of potential schemes that would solve the problems and meet the Scheme Objectives, either partly of in full.

Following the workshop the long list of potential schemes was subject to en 'Early Assessment and Sifting Tool' analysis, and the best performing options subject to a 'Strengths, Weaknesses, Opportunities, Threats' analysis. This report records the findings and makes a recommendation for a preferred improvement option.

2 Scheme Objectives Workshop

On January 27, 2017, a Scheme Objectives Workshop was held at Cheshire East Council's Municipal Buildings in Crewe, with the purpose of agreeing the problems within the study area; agreeing the Scheme Objectives, and; generating a long list of potential improvement schemes that would solve the problems and meet the objectives, either partly or in full.

The following report details the outcomes of the workshop. Meeting minutes can be found in Appendix A.

2.1 Problems

The following problems with the existing network:

- Existing capacity issues on the A500 and Meremoor Moss Roundabout cause delay
- A single carriageway A500 is not very resilient, and closures can impact on the M6 and the wider network
- The housing and employment growth identified in the Local Plans, the Northern Gateway Development Zone plans, and as a consequence of the HS2 hub station will generate more travel demand. The A500 will inhibit that growth and employment.
- Increase in construction traffic along the A500 during the construction of HS2
- Congestion on A500 affecting the reliability of public transport services serving the future HS2 hub station at Crewe
- The at-grade uncontrolled pedestrian crossings over a high speed road are undesirable

2.2 Scheme Objectives

Following a group discussion, the objectives were agreed to be the following;

- To support the economic, physical and social regeneration of Crewe and the Northern Gateway
- Improve journey time and reliability
- Improve the reliability of public transport
- Improve connectivity between important economic centres, LEP and local authority areas, regions and to North Wales
- Support delivery of key national infrastructure, i.e. HS2 and the Crewe Hub Station
- Support delivery of key employment and housing allocations

- Boost business integration and productivity; improve the efficiency and reliability of the highway network, reduce the conflict between the local and strategic traffic, and provide an improved route for freight and business travel.

- Facilitate future improvements to M6 J16

2.3 Potential Improvement Options

The following categories were used to facilitate a group discussion and identify potential improvement options;

- online improvements;

- offline improvements;

- public transport;

- demand management; and

- traffic management.

The group identified a total of 20 possible options that would solve the problems and meet the Scheme Objectives, either partly or in full. The long list of options can be found in the minutes in Appendix A.

3 Assessment

Following the workshop the 20 options were taken forward for further assessment. The assessment was undertaken in two stages. The first stage was to use the Department for Transport's 'Early Assessment and Sift Tool' (EAST). The second stage was to use a 'Strengths, Weaknesses, Opportunities, Threats' (SWOT) analysis.

3.1 East Assessment and Sifting Tool (EAST)

The tool analysed the options using strategic, economic, managerial, financial and commercial criteria. Much of the analysis used a rating system of high to low impact on objectives such as carbon emission, connectivity between communities and feasibility.

In addition to the long list of 20 options, a further 5 combinations of those options were identified for assessment.

The full assessment and results can be found in Appendix B.

3.2 SWOT Analysis

A total of six options were identified as the performing the best in the EAST assessment, and were taken forward the SWOT analysis. These options taken forward were:

- Dualling
- Localised improvements at Meremoor Moss Roundabout
- Wide single carriageway
- Tidal flow lane
- High occupancy vehicle lane
- Combination of Express Bus and High Occupancy Vehicle Lane

3.3 Recommendation

The analysis concluded that the best performing option was to dual the A500, and therefore this is taken forward as the preferred option. The option for localised improvements at Meremoor Moss Roundabout also performed well, and so that option will be taken forward as a low cost option, for comparison in later stages of the project.

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Appendix A – Scheme Objectives Workshop Minutes

JACOBS

Meeting Minutes

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Subject	**A500- Scheme Objectives Workshop**		
Project	A500, M6 to A5020		
Project No.	B1832076	**File**	A500- Scheme Objectives Workshop
Prepared by	Santosh Pandey	**Phone No.**	01612356125
Location	Municipal Buildings, Crewe	**Date/Time**	27 January 2017
Participants	Daniel Teasdale (Jacobs) Santosh Pandey (Jacobs) Daniel Caffrey (Jacobs) Paul Griffiths (Cheshire East Council) Dominic Flynn (Jacobs) Andrew Sellors (Jacobs) Neil Roberts (Transport Services Solutions) Chris Hindle (Cheshire East Council)		
Copies to	N/A	**Apologies**	Glenn Bubb (Transport Service Solutions)

Notes		**Action**
1	DC gave a summary of the scheme context, followed by a list of problems that DT and DC had generated before the meeting. Following a group discussion, the problems were refined to the following; - Existing capacity issues on the A500 and Meremoor Moss Roundabout cause delay - A single carriageway A500 is not very resilient, and closures can impact on the M6 and the wider network - The housing and employment growth identified in the Local Plans, the Northern Gateway Development Zone plans, and as a consequence of the HS2 hub station will generate more travel demand. The A500 will inhibit that growth and employment. - Increase in construction traffic along the A500 during the construction of HS2 - Congestion on A500 affecting the reliability of public transport services serving the future HS2 hub station at Crewe - The at-grade uncontrolled pedestrian crossings over a high speed road are undesirable The following potential problem was also identified, but further evidence is required to confirm;	PG to confirm - is the A500 is on a diversion route, as evidence to support this problem NR to investigate to

Notes		Action
	- Rat-running on local roads causing problems with reliability on public transport and impacting road safety? (evidence – bus delays? Safety stats?)	see if there is any evidence of delays on local bus routes in the vicinity of the A500. PG to provide accident data on local roads
2	The Scheme Objectives that were used in the previous phase were shared with the group. Following a group discussion, the objectives were amended to the following; • To support the economic, physical and social regeneration of Crewe and the Northern Gateway • Improve journey time and reliability • Improve the reliability of public transport • Improve connectivity between important economic centres, LEP and local authority areas, regions and to North Wales • Support delivery of key national infrastructure, i.e. HS2 and the Crewe Hub Station • Support delivery of key employment and housing allocations • Boost business integration and productivity; improve the efficiency and reliability of the highway network, reduce the conflict between the local and strategic traffic, and provide an improved route for freight and business travel. • Facilitate future improvements to M6 J16 In addition, there is the potential for a further objective relating to safety, if it can be demonstrated that rat running on the local roads is causing a safety problem.	
3	A group discussion was had in order to generate potential improvement schemes that could solve (or partially solve) the problems, and meet (or partially meet) the Scheme Objectives. The generated schemes are listed below;	
3.1	<u>Online Improvements</u> • Dualling • Localised improvement at Meremoor Moss roundabout approach. • Wide single carriageway.	

Notes		Action
	• Climbing lane on uphill section. • Tidal flow lane.	
3.2	Off-line Improvements • Improve M6 Junction 17 / New M6 Junction 17. • Improve local road network from Alsager to Crewe Green • New link road to connect M6 to J15a at Newcastle. • Dedicated/ alternative HS2 construction route.	
3.3	Public Transport • Improving rail link between Stoke and Crewe • Express bus between Stoke and Crewe • Local Bus services improvements between Crewe, Alsager and Kidsgrove. • Park and ride at M6 J16, plus bus priority lane (bus lane to Crewe) • Bus and high occupancy vehicle lane • Rail freight strategy	
3.4	Demand management • Cycling (park and ride) • Work place charging • Control traffic speed on dualled sections of the A500 with variable speed limits, to restrict flow • Restrict HGV usage during peak times	
3.5	Traffic Management • Interactive signing	
3.6	Following the meeting Jacobs will undertake an 'Early Assessment and Sifting Tool' exercise and a SWOT analysis on the generated options, in accordance with DfT guidance	DT to undertake EAST and SWOT analysis

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Appendix B – Early Assessment and Sifting Tool

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Dualling**	
Date	02/01/2017	
Description	Dualling of the A500 to provide 2 lanes in each direction of travel	

Strategic

Identified problems and objectives	This solution is attempting to resolve capacity issues which cause delays and also risk of impact on wider network in the incident of a closure. In addition it is to provide capacity for increased traffic during and after construction of HS2 hub station	
Scale of impact	4	Expected to significantly alleviate the problem by providing additional capacity and resilience to the network
Fit with wider transport and government objectives	4	Regional connectivity
Fit with other objectives	5. High	Supports HS2, delivery of local plan, NDGZ aspirations
Key uncertainties	Not achieving level of growth forecast (if HS2 is cancelled)	
Degree of consensus over outcomes	3	Some consultation has taken place with general support for solution.

Economic

Economic growth	**5. Green**	Dualling will improve the economic growth of Crewe and wider area associated with the expected new HS2 hub station, local plan and NDGZ.
Carbon emissions	**4. Amber/green**	Increased capacity will reduce queues by improving the flow of traffic along the link and also help reduce queues at M6 Exit.
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Some areas along the scheme will be affected by the increase of traffic. Mitigiation measures will reduce this impact.
Well being	**4. Amber/green**	Frustration in road users and travel time will be reduced due to the reduction in the congestion.
Expected VfM category	3. Medium 1.5-2	Benefit to Cost Ratio of 1.781

Managerial

Implementation timetable	5. 2-5 years	Expected delivery by 2020
Public acceptability	4	Stakeholder engagement so far inidicates a high level of local support for the scheme. Commuters into Crewe are likely to have a high level of support for the scheme.
Practical feasibility	4	CEC would promote and gobern the scheme implementation. Funding would need to be secured from DfT, and the scheme would need to go through the planning process, and possibly some statutory processes
What is the quality of the supporting evidence?	3	Traffic modelling - new WebTAG compliant model to be developed
Key risks	Land aquisition	

Financial

Affordability	4	
Capital Cost (£m)	05. 25-50	This includes 44% optimism bias
Revenue Costs (£m)		
Cost profile		
Overall cost risk	4	

Other costs	Optimism bias included, QRA to be done

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding, private developer contribution	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Localised improvement at MM Rbt**
Date	02/01/2017
Description	Localised improvements on the approach to Meremoor Moss Roundabout by providing an additional lane on each arm of the A500 approaching the roundabout, similar to the pinch point scheme implemented at M6 J16

Strategic

Identified problems and objectives	Improve journey time reliability by resolving existing and future capacity issues at Meremoor Moss Roundabout	
Scale of impact	3	Expected to alleviate some of the problem by providing additional capacity at Meremoor Moss Roundabout
Fit with wider transport and government objectives	3	Regional connectivity
Fit with other objectives	3	Supports Local Plan, but doesn't maximise HS2 and NGDZ benefits
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date, but unlikely to be controversial

Economic

Economic growth	**4. Amber/green**	Limited economic growth impact, support local plan growth but not HS2 + NGDZ
Carbon emissions	**4. Amber/green**	Maybe queues on the A500 Improvements will reduce queues and congestion on the approaches to the roundabout
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Reduced queuing will result in improved air quality.
Well being	**4. Amber/green**	Driver frustration and congestion will be reduced
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	4	Likely to have a high level of support
Practical feasibility	4	Would be delivered and operated by CEC. If improvements were in existing land take then likely to not require planning. External funding would be required.
What is the quality of the supporting evidence?	4	A similar scheme was implemented on the A500 approach to M6 J16
Key risks		

Financial

Affordability	4	Relatively minor works that would be affordable, but may require external funding
Capital Cost (£m)	02. 0-5	
Revenue Costs (£m)		
Cost profile		
Overall cost risk	4	
Other costs		

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding, private developer contribution	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Wide single carriageway**
Date	02/01/2017
Description	Widening of the existing carriageway cross-section to create a Wide Single carriageway (WS2 in accordance with TD 27/05). This could be marked as a WS2+1 layout, i.e. two lanes in one direction and one in the other, alternating half way along the link.

Strategic

Identified problems and objectives	To improve journey time reliability by resolving existing and future capacity issues on the A500	
Scale of impact	3	Expected to have a reasonably signficant impact on the problem by increasing capacity and improving network resilience
Fit with wider transport and government objectives	4	Regional connectivity
Fit with other objectives	4	Supports HS2, delivery of Local Plan, NGDZ aspirations
Key uncertainties	Uncertain whether a Wide Single would have sufficient capacity to accomodate the expected growth.	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**4. Amber/green**	Capacity will be increased which will contribute to the growth of Crewe, but unlikley to be sufficient capacity to fully alleviate future congestion problems
Carbon emissions	**4. Amber/green**	Increased capacity will reduce carbon emmissions, although queues may still fomr where the 'WS2+1' reduces from 2 lanes to 1.
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Some area along the link will suffer from increased traffic, although the increases are likely to be incremental and appropriate mitigation will be included in the design
Well being	**4. Amber/green**	Driver frustration and congestion will be reduced. Safety concerns about this option.
Expected VfM category		Likely to be less than dualling - similar construction costs for less benefit

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	4	Likely to be supported
Practical feasibility	4	
What is the quality of the supporting evidence?	3	Traffic modelling - new model to be developed
Key risks	Land acquisition	

Financial

Affordability	4	
Capital Cost (£m)	05. 25-50	Including Optimum Bias at 44%
Revenue Costs (£m)	Don't know	
Cost profile		

Overall cost risk	4
Other costs	

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding, private developer contribution	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Climbing lane on uphill section**	
Date	02/01/2017	
Description	Provide an extra lane on the uphill section of the A500, to better accomodate slow moving traffic, particularly HGVs	

Strategic

Identified problems and objectives	Improving journey time reliability for resolving existing and future capacity issues on the A500	
Scale of impact	2	Would have a modest impact on improving link capacity, but insufficient to accomodate future flows
Fit with wider transport and government objectives	3	Regional connectivity
Fit with other objectives	3	Supports Local Plan, but doesn't maximise HS2 and NGDZ objectives
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**4. Amber/green**	Will have a small contirbution to the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Will have a small contribution to a reduction in carbon emissions, as a result of less congestion
Socio-distributional impacts and the regions	**3. Amber**	
Local environment	**3. Amber**	
Well being	**2. Red/amber**	Driver frustration would be reduced in the direction of the climbing lane. However, drivers in the opposite direction may see it as an opportunity to overtake when it is unasfe to do so
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	4	Likely to have public support
Practical feasibility	4	
What is the quality of the supporting evidence?	3	
Key risks	Land acquisition	

Financial

Affordability	4	
Capital Cost (£m)	03. 5-10	Relative to the cost of dualling the entire link
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	4	
Other costs		

Commercial

Flexibility of option	2	

Where is funding coming from?	Major transport funding, private developer contribution

Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Tidal flow lane**
Date	02/01/2017
Description	Widen the existing carriageway in order to create an additional central lane, which would chnage direction (eastbound or westbound) in accordance with the direction of peak hour flow

Strategic

Identified problems and objectives	Aims to improve journey time reliability by resvoling existing and future capacity issues on the A500	
Scale of impact	4	Expected to signficantly alleviate the problem by providing additional capacity and adding resilience to the network
Fit with wider transport and government objectives	4	Regional connectivity
Fit with other objectives	5. High	Supports HS2, Local Plan, NGDZ aspirations
Key uncertainties	Not achieveing level of growth forecast (if HS2 is cancelled)	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**5. Green**	Would contribute to the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Would reduce congestion and queues along the link
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Some areas along the link would be affected by the increase in traffic. Appropriate mitigation would be included in the design
Well being	**1. Red**	Frustration and travel time would be reduced. However, the road layout would be unusual for the area and may result in an increase in head-on type road collisions
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	3	Level of public support uncertain
Practical feasibility	2	Would require a new operating regime for CEC
What is the quality of the supporting evidence?	2	
Key risks		

Financial

Affordability	4	
Capital Cost (£m)	05. 25-50	Similar to dualling - less road space, but additional technology and infrastrucutre required
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	2	
Other costs		

Commercial

Flexibility of option	2	

Where is funding coming from?	Major transport funding, private developer contribution

Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Improve or new M6 J17**
Date	02/01/2017
Description	Improvements to M6 J17, or relocation of the junction to a location further south. This would improve traffic flows for vehicles travelling southwards from the M6 towards Crewe, and also for vehicles travelling east to west from the direction of Congleton. If the junction was relocated it may also mean that traffic could avoid Sandbach town centre on the way to Crewe.

Strategic

Identified problems and objectives	This solution aims to reduce congestion on the A500 by ensuring that traffic travelling to Crewe from the north exits the M6 at J17, rather than travelling to J16 and via the A500. Aims to improve journey time reliability by solving existing and future capacity issues on the A500.	
Scale of impact	2	Unlikely to change traffic flows - drivers from the north are already likely to use M6 J17
Fit with wider transport and government objectives	1. Low	Does not improve connections between Crewe and Stoke, assist HS2 construction traffic, or maximise the benefits of HS2
Fit with other objectives	4	Improves regional connectivity between Crewe, Sandbach, Congleton and Macclesfield
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date and may be local objectives to the scheme

Economic

Economic growth	**2. Red/amber**	Economic growth in Crewe would still be limited due to the single carriageway along the A500
Carbon emissions	**2. Red/amber**	Traffic flows at M6 J17 would be improved which will reduce carbon emissions, but carbon emissions along the A500 would be largely unaffected
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**4. Amber/green**	The local environment in Sandbach would be improved by removal of through traffic from the town centre. The local environment at the A500 would be unaffected.
Well being	**1. Red**	Driver frustration on the A500 would continue to grow as congestion becomes worse
Expected VfM category		

Managerial

Implementation timetable	6. 5-10 years	
Public acceptability	4	Likely to have local support within Sandbach, and wider support in the region but may have some objections
Practical feasibility	3	
What is the quality of the supporting evidence?	3	
Key risks	Land acquisition, securing funds	

Financial

Affordability	3	

Capital Cost (£m)	06. 50-100	Relocation of junction, including two new structures, and link roads to tie into network. Scheme Cost Estimate has not yet been developed.
Revenue Costs (£m)		
Cost profile		
Overall cost risk	2	
Other costs		

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding, private developed contributions	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Improve local road network**
Date	02/01/2017
Description	Improve the local road network from Alsager to Crewe Green, via the B5077.

Strategic

Identified problems and objectives	Improves the local road network to accomodate rat-running traffic, and reducing problems with reliability on public transport and road safety	
Scale of impact	1. Small impact	Will not provide a solution to existing A500 capacity issues and resilience, and likely to increase the problem of rat-running
Fit with wider transport and government objectives	1. Low	Will not provide a solution to the problems on the A500, and likely to increase the problem of rat-running
Fit with other objectives	Don't know	
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date and possible local objectives

Economic

Economic growth	**1. Red**	Improvements on the local road network would likely do little to benefit the economic growth of Crewe
Carbon emissions	**2. Red/amber**	Traffic would be attracted to the local road network, which would increase carbon emissions
Socio-distributional impacts and the regions	**3. Amber**	
Local environment	**1. Red**	Traffic would be attracted to the local road network, which would negatively affect the local environment
Well being	**1. Red**	Busier local roads would likely increase severance, and make it less likely that people would walk or cycle along the routes
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	2	Will probably be perceived as attracting traffic to the local road network.
Practical feasibility	4	
What is the quality of the supporting evidence?	4	
Key risks		

Financial

Affordability	3	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs		

Commercial

Flexibility of option	4	Discrete improvements would mean that the scheme could be easily scaled up or down

Where is funding coming from?	CEC local transport fundings	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**New link road to a new M6 J15a**
Date	02/01/2017
Description	New link road to a new M6 J15a at the A525 to the west of Newcastle-under-Lyme

Strategic

Identified problems and objectives	New link road would create additional capacity for traffic travelling northwards towards Crewe, improving journey time and reliability, and solving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout. It also increase resilience on the road network.	
Scale of impact	4	Expected to signficantly alleviate the problem by adding additonal capacity and greater resilience to the network
Fit with wider transport and government objectives	2	Does not make best use of existing infrastructure
Fit with other objectives	4	Maximises the beenfits of HS2, the Local Plan, and NGDZ aspirations
Key uncertainties	Not achieving level of growth forecast (if HS2 is cancelled and growth aspirations not met)	
Degree of consensus over outcomes	1. Little	No consultation and likely to hence some local objections

Economic

Economic growth	**5. Green**	A new link road would signficantly benefit the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Significant construction work would be required, but a more efficient route would be created that would improve journey times and reduce congestion
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**1. Red**	The creation of a new link road would have significnat adverse impacts on the local environment
Well being	**3. Amber**	Would likely increase severance, but would also provide a safe road, and provide access to the amenities at Crewe
Expected VfM category		Likely to be poor value for money

Managerial

Implementation timetable	6. 5-10 years	
Public acceptability	3	Local support would likely be low due to the environmental impacts, but regional support is likely to be high
Practical feasibility	2	
What is the quality of the supporting evidence?	2	
Key risks	Land acquisition, public approval, acquiring funds and the planning and statutory processes	

Financial

Affordability	1. Not affordable	
Capital Cost (£m)	07. 100-250	Scheme Cost Estimate not yet developed. Costs would be for a new grade seperated junction on the M6, and a new 10km link road
Revenue Costs (£m)	Don't know	
Cost profile		

Overall cost risk	1.High risk
Other costs	

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Dedicated HS2 construct. route**	
Date	02/01/2017	
Description	Dedicated HS2 construction route off the existing highway network	

Strategic

Identified problems and objectives	This would remove construction traffic from the A500 route, and therefore not impact on journey time reliability during the construction period, and not contribute to existing capacity isues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	1. Small impact	Would provide HS2 construction a dedicated route, but no long term benefit to solving the problems on the A500
Fit with wider transport and government objectives	1. Low	Doesn't support any wider transport objectives
Fit with other objectives	3	Supports HS2 construction
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation has taken place

Economic

Economic growth	**1. Red**	Wouldn't provide any long term economic benefit to Crewe
Carbon emissions	**4. Amber/green**	Would provide a dedicated, efficient route for construction traffic
Socio-distributional impacts and the regions	**3. Amber**	
Local environment	**2. Red/amber**	Would negatively impact the local environment in the vicinity of the route for the duration of the construction period
Well being	**2. Red/amber**	May cause severance.
Expected VfM category		

Managerial

Implementation timetable	6. 5-10 years	HS2 construction is currently programmed from 2021 to 2027
Public acceptability	2	
Practical feasibility	2	
What is the quality of the supporting evidence?	1. Low	
Key risks	Land adquisition	

Financial

Affordability	3	
Capital Cost (£m)	03. 5-10	Dependant on the route - if the construction site were to be used as a route, then the costs would be much lower
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	3	
Other costs		

Commercial

Flexibility of option	1. Static	
Where is funding coming from?	HS2	

Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Improving rail link**
Date	02/01/2017
Description	Improving rail link between Crewe and Stoke

Strategic

Identified problems and objectives	Improving the rail link betweek Crewe and Stoke aims to reduce the number of people commuting between the cities via car, therefore improving journey time reliability, resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout, and improving connectivity between important economic centres	
Scale of impact	2	Only accomodates travellers between Stoke and Crewe and not the wider region, therefore unlikely to have the required impact
Fit with wider transport and government objectives	2	Support long term objective. Improve the rail connectivity in the local area.
Fit with other objectives	3	Doesn't assist HS2 construction. But would improve connections between economic centres of the NGDZ
Key uncertainties	Scheme would need to be progressed by Network Rail. CEC would have little influence.	
Degree of consensus over outcomes	1. Little	No consultation has taken place

Economic

Economic growth	**4. Amber/green**	Would contribute to the economic growth of Crewe by connecting important economic centres
Carbon emissions	**4. Amber/green**	Some commuters would transfer from road to rail, therefore reducing carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	An increase in train frequencies would have a slightly negative impact to some areas along the route
Well being	**5. Green**	Train is a safer form of travel than road, and improved rail link would improve jounrey times and improve reliability
Expected VfM category		

Managerial

Implementation timetable	6. 5-10 years	
Public acceptability	4	
Practical feasibility	2	
What is the quality of the supporting evidence?	2	
Key risks	Land acquisition, funding, works to be delivered by Netowrk Rail	

Financial

Affordability	Don't know	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs		

Commercial

Flexibility of option	1. Static	
Where is funding coming from?	Network Rail.	
Any income generated? (£m)	Yes	Fare Revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Express bus - Stoke and Crewe**
Date	02/01/2017
Description	Express bus between Stoke and Crewe

Strategic

Identified problems and objectives	This option aims to reduce the number of vehicles commuting between Crewe and Stoke, therefore improving journey time reliability, partly resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout, and improving connectivity between important economic centres	
Scale of impact	2	Only accomodates travellers between Stoke and Crewe and not the wider region, so unlikely to have the required impact
Fit with wider transport and government objectives	2	Improve bus links between Stoke and Crewe. Support wider objectives to improve public transport connectivity.
Fit with other objectives	3	Doesn't assist HS2 construction. Unlikley to maximise the benefits of HS2. But improves connections between economic centres in the NGDZ.
Key uncertainties	Uptake	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**4. Amber/green**	May have a slight positive benefit on the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Encouraging drivers to use the bus would reduce carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	Provides better connections between Stoke and Crewe
Local environment	**4. Amber/green**	
Well being	**4. Amber/green**	
Expected VfM category		

Managerial

Implementation timetable	3. 6-12 months	
Public acceptability	5. High	
Practical feasibility	5. High	
What is the quality of the supporting evidence?	3	
Key risks		

Financial

Affordability	4	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	4	
Other costs	May require subsidy support	

Commercial

Flexibility of option	5. Dynamic	

Where is funding coming from?	CEC and Staffordshire Council, bus operators	
Any income generated? (£m)	Yes	Rare Revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Local service improvements**
Date	02/01/2017
Description	Local improvements to the bus service between Crewe, Alsager and Kidsgrove

Strategic

Identified problems and objectives	This option aims to encourages commuters away from vehicles driving on the A500, and onto local bus services travelling along the B5077. This will improve the reliability of public transport, improve journey time reliability on the A500, and partly contribute to solving the existing and future capacity problems on the A500 and Meremoor Moss Roundabout	
Scale of impact	2	Would only benefit commuters within a relatively small catchment, and not those from the wider region, so unlikely to have a signficant impact
Fit with wider transport and government objectives	3	Small scale improvement to regional connectivity
Fit with other objectives	2	Does not support HS2 construction. Unlikely to maximise the benefits of HS2.
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultations to date

Economic

Economic growth	**4. Amber/green**	May have a slight benefit to the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Encouraging drivers to use the bus would reduce carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	Local services increase opportunities for low incomes
Local environment	**4. Amber/green**	
Well being	**4. Amber/green**	Increases access to amenities in Crewe. Reduces social exclusion
Expected VfM category		

Managerial

Implementation timetable	3. 6-12 months	
Public acceptability	5. High	
Practical feasibility	4	
What is the quality of the supporting evidence?	3	
Key risks		

Financial

Affordability	Don't know	
Capital Cost (£m)	01. None	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs	May require subsidy of service	

Commercial

Flexibility of option	5. Dynamic	
Where is funding coming from?	CEC and bus operatos	
Any income generated? (£m)	Yes	Fare Revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Park and ride plus bus priority**
Date	02/01/2017
Description	Park and ride at M6 J16 (option amended to remove bus priority element)

Strategic

Identified problems and objectives	Aims to improve journey time reliability by reducing traffic on A500 by moving commuters from low occupancy vehicles onto high occupancy vehicles (bus), and partly resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	2	Assists with capacity issues and local road rat-running, but unlikley to alleviate the problem entirely. Doesn't support HS2 construction or regional connectivity.
Fit with wider transport and government objectives	2	Doesn't support regional connectivity
Fit with other objectives	2	Doesn't support HS2 construction. Unlikely to fully alleviate the capacity problems on the A500, so does not maximise the benefits of HS2 or the NGDZ
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**2. Red/amber**	Compared to driving, journey times are likely to be longer.
Carbon emissions	**4. Amber/green**	Reduced carbon emissions due to reduced number of vehicles.
Socio-distributional impacts and the regions	**3. Amber**	Limited impact, because a car is required to get to the Park and Ride site
Local environment	**2. Red/amber**	Some negative impacts at the location of the Park and Ride site
Well being	**2. Red/amber**	Increases journey times and reduces reliability
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	4	
Practical feasibility	3	
What is the quality of the supporting evidence?	2	
Key risks	Low use of facility	

Financial

Affordability	3	
Capital Cost (£m)	04. 10-25	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	2	
Other costs	May require subsidy of service	

Commercial

Flexibility of option	3	
Where is funding coming from?	Major transport funding	

Any income generated? (£m)	Yes	Fare Revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**High occupancy vehicle lane**
Date	02/01/2017
Description	Existing carriageway widened to create a bus and high occupancy vehicle lane in each direction

Strategic

Identified problems and objectives	Aims to improve jounrey time reliability and the reliability of public transport by resolving existing and future capacity issues on the A500	
Scale of impact	4	Expected to signficantly alleviate the problem by increasing the network capacity, increasing network resilience, and changing behaivours towards travelling in buses or in the same vehicle
Fit with wider transport and government objectives	4	Would improve regional connectivity
Fit with other objectives	4	Supports HS2, delivery of Local Plan, NGDZ aspirations
Key uncertainties	Unsure whether there would be sufficient shift towards buses and high occupancy vehicles to alleviate existing and future capacity problems	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**5. Green**	Would contribute to the economic growth of Crewe
Carbon emissions	**5. Green**	Would encourage a shift to public transport and sharing of vehicles
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**2. Red/amber**	An increase in traffic would have negative environmental impacts for some areas along the route
Well being	**4. Amber/green**	Driver frustration would be reduced
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	3	General acceptability, but not as high as a dual carriageway option
Practical feasibility	4	
What is the quality of the supporting evidence?	1. Low	
Key risks	Enforcement of lane usage	

Financial

Affordability	4	
Capital Cost (£m)	05. 25-50	Similar to dualling
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	4	
Other costs		

Commercial

Flexibility of option	2	

Where is funding coming from?	Major transport funding, private developer contributions
Any income generated? (£m)	No

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Rail freight strategy**	
Date	02/01/2017	
Description	Develop a rail freight strategy for Crewe, to reduce the volume of road freight on the A500	

Strategic

Identified problems and objectives	Improvements to rail freight to reduce volume of road freight, and therefore improving journey time reliability, and resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	2	Unlikely to solve the existing and future A500 capacity issues on its own, would not support the construction of HS2, or maximise the benefits of HS2 and the NGDZ
Fit with wider transport and government objectives	2	Does not improve regional connectivity. May conflict with HS2 proposals
Fit with other objectives	2	Does not contribute to the Local Plan, or maximise the benefits of HS2 and the NGDZ
Key uncertainties	Decision to transport by road or rail is driven by business, little impact on local delivery market	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**4. Amber/green**	Would have some contribution to the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Rail freight has lower emissions than HGVs
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**4. Amber/green**	
Well being	**4. Amber/green**	
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	4	
Practical feasibility	Don't know	
What is the quality of the supporting evidence?	1. Low	
Key risks	Rail network capacity to support increased freight deliveries into Crewe	

Financial

Affordability	Don't know	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs		

Commercial

Flexibility of option	4	
Where is funding coming from?	Network Rail	

Any income generated? (£m)	No	Don’t know

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Cycling (park and cycle)**
Date	02/01/2017
Description	Provide park and cycle facilites at M6 J16

Strategic

Identified problems and objectives	Reduce volume of traffic on A500 by transferring commuters to a different method of transport, thus improving journey time reliability and partly resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	2	Very unlikely to solve the exsiting and future capacity issues on the A500, does not support HS2 construction, does not maximise the benefits of HS2 and the NGDZ
Fit with wider transport and government objectives	2	Does not improve regional connectivity
Fit with other objectives	2	Support local cycle policies.
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**2. Red/amber**	Journey time increased for cyclists, with little improvement expected for drivers. Minimal impact on the economic growth of Crewe.
Carbon emissions	**4. Amber/green**	Encouraging a chnage from car to bike would reduce carbon emissions
Socio-distributional impacts and the regions	**3. Amber**	Positive for affordability, not for the vulnerable or disabled. A car would be required for most people to access the site.
Local environment	**2. Red/amber**	The construction of a new park and cycle site would have some negative evironmental impacts in what is largely a rural site
Well being	**4. Amber/green**	Increased opportunity for physical activity
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	3	
Practical feasibility	3	
What is the quality of the supporting evidence?	1. Low	
Key risks	Public usage	

Financial

Affordability	Don't know	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs	May require revenue subsidy support.	

Commercial

Flexibility of option	2	

Where is funding coming from?	Major transport funding	
Any income generated? (£m)	Yes	Cycle hire and parking charges

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Work place charging**
Date	02/01/2017
Description	Financial implications for businesses based on the number of car parking spaces they provide

Strategic

Identified problems and objectives	Aim to reduce the provision of parking spaces to discourage commuters from driving into work or encourage higher vehicle occupancy. This aims to reduce volume of traffic and therefore improving journey time reliability, and resolving existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	2	Would contribute to the alleviation of capacity issue problems on the A500, but would not support HS2 construction, increase the resilience of the A500, or maximise the benefits of HS2 and the NGDZ
Fit with wider transport and government objectives	2	Does not improve regional connectivity
Fit with other objectives	2	Does not maximise the benefits of HS2 or the NGDZ.
Key uncertainties	Scale of impact is uncertain	
Degree of consensus over outcomes	1. Little	No consultation to date, and may be controversial and recive local objections.

Economic

Economic growth	**1. Red**	Option could reduce the number of business in town due to lack of parking spaces for their employees, or the financial burden of the charging
Carbon emissions	**4. Amber/green**	Will likely result in fewer car journeys into Crewe
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**5. Green**	Could improve air quality in Crewe town centre
Well being	**3. Amber**	Will reduce access to good and services, but may encourage other forms of transport, e.g. cycling
Expected VfM category		

Managerial

Implementation timetable	2. 1-6 months	
Public acceptability	2	Expected limited support from business and commuters
Practical feasibility	5. High	
What is the quality of the supporting evidence?	2	
Key risks	Public and political support	

Financial

Affordability	5. Affordable	
Capital Cost (£m)	01. None	
Revenue Costs (£m)	02. 0-5	
Cost profile		
Overall cost risk	5. Low risk	
Other costs		

Commercial

Flexibility of option	5. Dynamic	
Where is funding coming from?	CEC	
Any income generated? (£m)	Yes	Don’t know

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Controlled traffic speed**	
Date	02/01/2017	
Description	Control traffic speed with variable speed limits on the dualled sections of the A500, to the east of M6 J16, and to the west of the A5020. This will control the flow of traffic entering the single carriageway section of the A500 to an appropriate level to suit the capacity of the link	

Strategic

Identified problems and objectives	Aims to resolve congestion and bunching issues by restricting and regulating the flow of traffic.	
Scale of impact	1. Small impact	Would not alleviate the capacity issues on the A500, would not support HS2 construction, and would not maximise the benfits of HS2 and the NGDZ
Fit with wider transport and government objectives	2	Does not improve regional connectivity
Fit with other objectives	2	Does not support the Local Plan, or maximise the benefits of HS2 and the NGDZ
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**1. Red**	Restricting speed limits, and therefore the capacity of the A500, will restrict economic growth in Crewe
Carbon emissions	**4. Amber/green**	Smoother traffic flows will reduce carbon emissions
Socio-distributional impacts and the regions	**3. Amber**	
Local environment	**4. Amber/green**	Smoother traffic flows will improve air quality and noise levels along the route
Well being	**4. Amber/green**	Smoother traffic flows will result in fewer accidents
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	2	Likley to have low levels of support from users of the network
Practical feasibility	3	
What is the quality of the supporting evidence?	1. Low	
Key risks	New technology and operating regime for CEC	

Financial

Affordability	3	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs	May require additional revenue support.	

Commercial

Flexibility of option	3	

Where is funding coming from?	Major transport funding	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Restrict HGV usage**	
Date	02/01/2017	
Description	Ban HGVs from using the A500 during peak times	

Strategic

Identified problems and objectives	Aims to improve journey time reliability and to solve existing and future capacity issues on the A500 and at Meremoor Moss Roundabout.	
Scale of impact	3	Would have a reasonably signficant impact on alleviating existing and future capacity issues on the A500, but would impede HS2 construction
Fit with wider transport and government objectives	3	Would improve regional connectivity
Fit with other objectives	3	Would assist commuters travelling to HS2 and between economic centres of the NGDZ
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**1. Red**	Restricting HGVs would negatively impact the economic growth of Crewe
Carbon emissions	**4. Amber/green**	Restricting HGVs would reduce carbon emissions and improve the flow of other vehicles
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**1. Red**	Less HGV traffic would improve the local environment along the route but HGV may divert to local roads.
Well being	**1. Red**	Less congestion would reduce driver frustration but likely impact on other local roads.
Expected VfM category		

Managerial

Implementation timetable	3. 6-12 months	
Public acceptability	2	Some support from commuters, but low support from business
Practical feasibility	2	Enforcement would be required
What is the quality of the supporting evidence?	1. Low	
Key risks	Implementing and enforcing	

Financial

Affordability	3	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs		

Commercial

Flexibility of option	4	

Where is funding coming from?	CEC	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Interactive signing**
Date	02/01/2017
Description	Interactive signing to be provided on the surrounding network to inform drivers of alternative routes, congestion warnings, road closures etc. on the single carriageway section of the A500

Strategic

Identified problems and objectives	Signing would aim to inform drivers of alternative routes, steady the flow of traffic and reduce congestion	
Scale of impact	1. Small impact	Would not alleviate capacity issues on the A500, would not support HS2 construction, and would not maximise the benefits of HS2 and the NGDZ
Fit with wider transport and government objectives	2	Would have only a very small improvement to regional connectivity, particularly as there are no convenient alternative routes
Fit with other objectives	2	Does not maximise the benefits of HS2 of the NGDZ
Key uncertainties		
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**3. Amber**	Unlikley to have a signficnat affect on the economic growth of Crewe, because of the lack of convenient alternative routes
Carbon emissions	**4. Amber/green**	Slight reduction in carbon emissions as drivers would alter their speed to suit the conditions ahead
Socio-distributional impacts and the regions	**3. Amber**	
Local environment	**3. Amber**	Minimal impact on the local environment
Well being	**4. Amber/green**	Slight reduction in driver frustration
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	3	The scheme is likely to be acceptable to the public
Practical feasibility	5. High	
What is the quality of the supporting evidence?	3	
Key risks	New operating regime for CEC, to ensure messages are regularly updated with accurate information	

Financial

Affordability	2	
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs	Ongoing revenue support may be required.	

Commercial

Flexibility of option	2	

Where is funding coming from?	Major transport funding	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Comb- P+R and work place charge**	
Date	13/02/2017	
Description	Combination of work place charging (option ref.17) to reduce the number of vehicles, combined with park and ride (option ref. 13) to provide an alternative	

Strategic

Identified problems and objectives	The aim would be to reduce the number of vehicles commuting on the A500, therefore improving journey time reliability and resolving any existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	3	May have a reasonably significant impact on alleviating the capacity issues on the A500
Fit with wider transport and government objectives	2	Does not improve regional connectivity
Fit with other objectives	2	Does not maximise the benefits of HS2 of the NGDZ
Key uncertainties	The volume of traffic that it would remove from the road is uncertain, and therefore the extent to which it alleviates the capacity issues on the A500	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**1. Red**	Option could make Crewe less attractive to business
Carbon emissions	**5. Green**	Would encourage drivers to switch to public transport
Socio-distributional impacts and the regions	**3. Amber**	A car would be required to access the park and ride site
Local environment	**2. Red/amber**	Some negative impacts to the local environment at the Park and Ride site, which would be in a predominantly rural area
Well being	**2. Red/amber**	Would increase journey times and decrease reliability
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	2	Expected limited support from commuters and businesses
Practical feasibility	3	
What is the quality of the supporting evidence?	1. Low	
Key risks	Landtake required for a Park and Ride site. Public and political support for work place charging unlikely	

Financial

Affordability	4	
Capital Cost (£m)	05. 25-50	
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	2	
Other costs		

Commercial

Flexibility of option	3	Park and Ride site is inflexible, but work placed charging is flexible

Where is funding coming from?	Major transport funding	
Any income generated? (£m)	Yes	Parking charge and fare revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Comb- Express bus and hi occ ln**
Date	13/02/2017
Description	Combination of an express bus between Stoke and Crewe (option ref.11) and a high occupancy lane along the A500 (option ref.14)

Strategic

Identified problems and objectives	The aim would be to increase the attractivenes of public transport for those commuting between Stoke and Crewe and improving the reliability of public transport, therefore improving the journey time reliability for all travellers along the A500, resolving existing and future capacity issues along the A500 and at Meremoor Moss Roundabout, and improving connections between important economic centres	
Scale of impact	4	Expected to signficantly alleviate the problem by increasing network capacity, increasing network resilience, and changing driver behaivours to change to busses or sharing vehicles, particularly for commuters travelling from Stoke
Fit with wider transport and government objectives	4	Supports regional connectivity
Fit with other objectives	4	Increases the benefits from HS2 and the NGDZ
Key uncertainties	Unsure whether there would be sufficient shift to busses and high occupancy vehicles to alleviate the existing and future capacity issues on the A500	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**5. Green**	Would support the economic growth of Crewe
Carbon emissions	**5. Green**	Would encourage shift to busses and high occupancy vehicles, reducing carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Positive impact from reduction in cars, but negative impact from construction of lane and likely increase in flows closer to properties
Well being	**4. Amber/green**	Reduced driver frustration
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	3	
Practical feasibility	4	
What is the quality of the supporting evidence?	1. Low	
Key risks	Enforcement of high occupancy lane	

Financial

Affordability	3	
Capital Cost (£m)	05. 25-50	Similar to dualling
Revenue Costs (£m)	Don't know	
Cost profile		
Overall cost risk	Don't know	
Other costs		

Commercial

Flexibility of option	2	Express bus is flexible, but high occupancy lane is inflexible
Where is funding coming from?	Major transport funding, private developer contributions	
Any income generated? (£m)	Yes	Don’t know

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Comb- P+R, hi occ ln + work ch**
Date	13/02/2017
Description	Combination of a Park and Ride at M6 J16 (option ref.13), a bus and high occupancy lane (option ref.14), and work place charging (option ref.17)

Strategic

Identified problems and objectives	The aim of this combination is to reduce vehicles commuting into work and instead provide alternatives of a priority lane for those travelling by bus or car sharing, and a park and ride. This will improve journey time reliability along the A500, and aim to resolve existing and future capacity issues along the A500 and at Meremoor Moss Roundabout.	
Scale of impact	4	Expected to signficantly alleviate the problem by increasing network capacity, increasing network resilience, and changing driver behaivours to travel into Crewe by bus or a high occupancy vehicle
Fit with wider transport and government objectives	4	Improves regional connectivity
Fit with other objectives	3	Increases the benefits from HS2 and the NGDZ
Key uncertainties	Unsure whether there would be sufficient shift to busses and high occupancy vehicles to alleviate the existing and future capacity probelms on the A500	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**3. Amber**	The high occupancy lane would contribute to the economic growth of Crewe, whereas work place charging would detract. It's unclear where the balance would lie.
Carbon emissions	**5. Green**	Would encourage drivers to transfer to busses and high occupancy vehicles
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Positive impact from reduction in cars but negative impact from construction of lane and the Park and Ride site
Well being	**2. Red/amber**	Increased journey times and reduced journey time reliability, compared to travel by car
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	
Public acceptability	2	
Practical feasibility	3	
What is the quality of the supporting evidence?	1. Low	
Key risks	Enforecment of high occupancy lane. Public and political support for work placed charging.	

Financial

Affordability	3	
Capital Cost (£m)	06. 50-100	
Revenue Costs (£m)	Don't know	
Cost profile		

Overall cost risk	2	
Other costs		

Commercial

Flexibility of option	2	
Where is funding coming from?	Major transport funding. Private developer contributions.	
Any income generated? (£m)	Yes	Don’t know

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Comb - impr rail + work charge**
Date	13/02/2017
Description	Combination of work place charging (option ref.17) and an improved rail link between Crewe and Stoke (option ref.10)

Strategic

Identified problems and objectives	The aim of this combination is to deter people from driving, and therefore to solve existing and future capacity issues on the A500 and at Meremoor Moss Roundaout, and to improve the reliability and frequency of train services as an alternative mode of transport.	
Scale of impact	2	The rail link only benefits commuters from Stoke, so may only have a modest overall impact.
Fit with wider transport and government objectives	2	Support long term objectives of local rail improvements.
Fit with other objectives	3	Does not assist HS2 construction, and will not maximise the benefits of HS2. But would improve connections between important economic centres across the NGDZ
Key uncertainties	Rail scheme would need to be progressed by Network Rail. CEC would have little influence.	
Degree of consensus over outcomes	1. Little	No consultation to date

Economic

Economic growth	**2. Red/amber**	Rail link would contribute to the economic growth in Crewe, whereas work place charging would detract. Overall impact considered to be 'Red/amber'.
Carbon emissions	**5. Green**	Fewer cars, and transfer of some commuters to rail would reduce carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**3. Amber**	Some slight negative local impacts caused by more frequent train journeys
Well being	**5. Green**	Train is a safer form of travel than the car, and improved rail links would improve journey times and relability
Expected VfM category		

Managerial

Implementation timetable	6. 5-10 years	Improvement works to the rail link
Public acceptability	2	High support for improvments to the rail link, but low support for work placed charging
Practical feasibility	2	Assuming works to the rail link
What is the quality of the supporting evidence?	1. Low	
Key risks	Rail link - land acquistion, funding, works to be undertaken by Network Rail. Work placed charging - public and political support.	

Financial

Affordability	3	Assuming works to the rail link
Capital Cost (£m)	Don't know	
Revenue Costs (£m)	Don't know	
Cost profile		

Overall cost risk	Don’t know	
Other costs	May require ongoing revenue support.	

Commercial

Flexibility of option	2	Assuming works to the rail link
Where is funding coming from?	Network Rail, CEC	
Any income generated? (£m)	Yes	Fare Revenue

Early Assessment and Sifting Tool (EAST) - *Expanded Print View*

Option Name/No.	**Comb- rail freight+restrict HGV**
Date	14/02/2017
Description	Combination of a rail freight strategy (option ref.15) and banning HGVs along the A500 during peak hours (option ref.19)

Strategic

Identified problems and objectives	The aim of this combination is to transfer the mode of transport for freight from road to rail, therefore improving jounrey time reliability on the A500, and resolving the issue of existing and future capacity issues on the A500 and at Meremoor Moss Roundabout	
Scale of impact	3	Banning HGVs during the peak hours would have a resaonably significant impact on alleviating the capacity issues on the A500, but would impede HS2 construction and also other local roads
Fit with wider transport and government objectives	3	Banning HGVs would improve regional connectivity for commuters on A500 but would affect other local roads
Fit with other objectives	3	Banning HGVs would assist commuters travelling to HS2 and between important economic centres across the NGDZ on A500 but not on other local roads.
Key uncertainties	Unsure whether the rail freight startegy would sufficiently compenstae for banning HGVs	
Degree of consensus over outcomes	1. Little	No consultations to date

Economic

Economic growth	**2. Red/amber**	Restricting HGVs on the road would negatively impact economic growth. This might be somewhat offset by a rail freight strategy, but would limit the choice for businesses
Carbon emissions	**5. Green**	Transfer from road to rail would decrease carbon emissions
Socio-distributional impacts and the regions	**4. Amber/green**	
Local environment	**4. Amber/green**	Fewer HGVs on the road would improve the local environment in those areas
Well being	**4. Amber/green**	Driver frustration would be reduced for commuters
Expected VfM category		

Managerial

Implementation timetable	5. 2-5 years	Assuming improvements to rail
Public acceptability	2	Likely to be acceptable to commuters, but low acceptability to business
Practical feasibility	3	
What is the quality of the supporting evidence?	1. Low	
Key risks	Implementing and enforcing	

Financial

Affordability	3
Capital Cost (£m)	Don't know
Revenue Costs (£m)	Don't know
Cost profile	
Overall cost risk	Don't know
Other costs	

Commercial

Flexibility of option	5. Dynamic	Both parts of the option would be flexible
Where is funding coming from?	CEC, Network Rail	
Any income generated? (£m)	No	

Appendix C – SWOT Analysis

Table A: SWOT Analysis	
Option No. 1 - Dualling - Dualling of the A500 to provide 2 lanes in each direction of travel	
STRENGTHS	WEAKNESSES
Alleviates existing and future capacity issues along the A500	Likely to increase traffic flows further into Crewe, leading to capacity issues at some junctions
Increases resilience on the highway network by providing additional capacity, which could better support partial road closures / contraflows	Land acquisition would be required
Additional road capacity would help to accommodate construction traffic associated with delivery of HS2 and the Crewe hub station	Traffic management would impact traffic flows during construction
Improves regional connectivity, and helps to spread the benefits of HS2	
OPPORTUNITIES	THREATS
Removal of existing at-grade, uncontrolled pedestrian crossings over the A500	High costs which impact affordability and value for money.
Potential for significant developer contributions	HS2 hub station is cancelled
Would complement any upgrade to M6J16 by Highways England	Relies on the support of the Duchy of Lancaster, who own the majority of the land along the route

Table B: SWOT Analysis	
Option No. 2 – Localised improvements at Meremoor Moss Roundabout - Providing an additional lane on each arm of the A500 approaching the roundabout, similar to the pinch point scheme implemented at M6 J16.	
STRENGTHS	WEAKNESSES
Low costs associated to the construction of this option, relative to the other options	Unlikely to fully alleviate the future capacity issues along the A500
Land acquisition is probably not required	Land Acquisition maybe required
Is likely to be considered as permitted development	
Similar scheme has been successfully implemented on the approach to M6 J16	
OPPORTUNITIES	THREATS
Potential for significant developer contributions	May not deliver benefit required requiring further schemes in future causing further disruption and cost
Reduced construction period verses other options	

Table C: SWOT Analysis	
Option No. 3 - Wide single carriageway - Widening the existing carriageway cross-section to create a Wide Single carriageway (WS2 in accordance with TD 27/05). This could be marked as a WS2+1 layout, i.e. two lanes in one direction and one in the other, alternating half way along the link.	
STRENGTHS	WEAKNESSES
Contributes to alleviating existing and future capacity issues along the A500	May not sufficiently alleviate future capacity issues along the A500 to justify the investment
Increases resilience on the highway network by providing additional capacity, which could better support partial road closures / contraflows	Land acquisition would be required
Additional road capacity would help to accommodate construction traffic associated with delivery of HS2 and the Crewe hub station	Traffic management would impact traffic flows during construction
Improves regional connectivity, and helps to spread the benefits of HS2	Similar levels of construction and disruption to the dualling option (both bridges would need to be replaced, for example), but with less benefits
	Wide single carriageways can have questionable safety records
OPPORTUNITIES	THREATS
Removal of existing at-grade, uncontrolled pedestrian crossings over the A500	High costs which impact affordability and value for money.
Potential for significant developer contributions	HS2 hub station is cancelled
	Relies on the support of the Duchy of Lancaster, who own the majority of the land along the route

Table D: SWOT Analysis	
Option No. 5 - Tidal flow lane - Widening the existing carriageway to create an additional central lane, which could change direction (eastbound or westbound) in accordance with the direction of peak hour flow.	
STRENGTHS	WEAKNESSES
Contributes to alleviating existing and future capacity issues along the A500	Likely to increase traffic flows further into Crewe, leading to capacity issues at some junctions
Increases resilience on the highway network by providing additional capacity, which could better support partial road closures / contraflows	Land acquisition would be required
Additional road capacity would help to accommodate construction traffic associated with delivery of HS2 and the Crewe hub station	Traffic management would impact traffic flows during construction
Improves regional connectivity, and helps to spread the benefits of HS2	Would introduce new, relatively complex infrastructure for CEC to maintain
	Would require a new operating regime for CEC
	Would introduce a new operating regime for drivers, which would be unique within CEC, and unusual for a rural road.
	May increase the likelihood of head on collisions
OPPORTUNITIES	THREATS
Removal of existing at-grade, uncontrolled pedestrian crossings over the A500	High costs which impact affordability and value for money
Potential for significant developer contributions	HS2 hub station is cancelled
May complement any upgrade to M6J16 by Highways England	Relies on the support of the Duchy of Lancaster, who own the majority of the land along the route
	Potential for local public and political opposition
	Resources unavailable for maintaining and operating the tidal flow lane

Table E: SWOT Analysis	
Option No. 14 - High occupancy vehicle lane. - Existing carriageway widened to create a bus and high occupancy vehicle lane in each direction.	
STRENGTHS	WEAKNESSES
Contributes to alleviating existing and future capacity issues along the A500	Likely to increase traffic flows further into Crewe, leading to capacity issues at some junctions
Increases resilience on the highway network by providing additional capacity, which could better support partial road closures / contraflows	Land acquisition would be required
Additional road capacity would help to accommodate construction traffic associated with delivery of HS2 and the Crewe hub station	Traffic management would impact traffic flows during construction
Improves regional connectivity, and helps to spread the benefits of HS2	Similar levels of construction to the dualling option, but with less benefits in terms of traffic flow
Encourages modal shift to busses and high occupancy vehicles	Would require a new operating regime for CEC, which would require monitoring and enforcement
	Would introduce a new operating regime for drivers, which would be unique within CEC, and unusual for a rural road.
OPPORTUNITIES	THREATS
Removal of existing at-grade, uncontrolled pedestrian crossings over the A500	High costs which impact affordability and value for money
Potential for significant developer contributions	HS2 hub station is cancelled
May complement any upgrade to M6J16 by Highways England	Relies on the support of the Duchy of Lancaster, who own the majority of the land along the route
	Potential for local public and political opposition
	Resources unavailable for on-going enforcement of high occupancy lane.

Table F: SWOT Analysis	
Option No. 22 - Combination of Express Bus and High Occupancy Vehicle Lane. - Combination of an express bus between Stoke and Crewe, and widening the existing carriageway to create an additional bus / high occupancy vehicle lane in each direction.	
STRENGTHS	WEAKNESSES
Contributes to alleviating existing and future capacity issues along the A500	Likely to increase traffic flows further into Crewe, leading to capacity issues at some junctions
Increases resilience on the highway network by providing additional capacity, which could better support partial road closures / contraflows	Land acquisition would be required
Additional road capacity would help to accommodate construction traffic associated with delivery of HS2 and the Crewe hub station	Traffic management would impact traffic flows during construction
Improves regional connectivity, and helps to spread the benefits of HS2	Similar levels of construction to the dualling option, but with less benefits in terms of traffic flow
Encourages modal shift to busses and high occupancy vehicles	Would require a new operating regime for CEC, which would require monitoring and enforcement
Improves public transport reliability for users of the express bus, and any other busses using the route	Would introduce a new operating regime for drivers, which would be unique within CEC, and unusual for a rural road.
OPPORTUNITIES	THREATS
Removal of existing at-grade, uncontrolled pedestrian crossings over the A500	High costs which impact affordability and value for money
Potential for significant developer contributions	HS2 hub station is cancelled
May complement any upgrade to M6J16 by Highways England	Relies on the support of the Duchy of Lancaster, who own the majority of the land along the route
	Potential for local public and political opposition