

DECEMBER 2017

Melton Mowbray Distributor Road

OUTLINE BUSINESS CASE



Dear Mr Grayling,

We are pleased to enclose the Outline Business Case for the Melton Mowbray Distributor Road (MMDR) and we thank you for the support given to us so far; in particular the £1.9m from the Department for Transport to develop this vitally important project.

The evidence within the Outline Business Case clearly demonstrates that the MMDR will reduce congestion, improve journey times and provides high value for money (with a Benefit Cost Ratio in excess of 3.0). By addressing existing and future transportation issues in the town of Melton Mowbray, the MMDR has a key role to play in continuing to ensure that the town thrives as a 'Rural Capital of Food' and that existing businesses are able to operate as effectively and efficiently as possible.

Furthermore, there is a considerable need for additional housing across Leicester and Leicestershire. As the main urban area in the borough, Melton Mowbray is a key focus for significant growth. The MMDR will support delivery and acceleration of a nationally significant level of housing and employment; more than 6,000 jobs and 5,000 new houses by 2036, with 2,250 dwellings and 3,000 jobs in the short term to 2026 through the sustainable neighbourhoods to the North and South of the town.

The MMDR is strongly supported by Leicestershire County Council (it is one of the Council's top transport infrastructure priorities), Melton Borough Council, the Leicester and Leicestershire Enterprise Partnership and all Districts through the development of the Strategic Growth Plan. Local residents and businesses have also long pressed for the town to be 'bypassed' and there is strong local support for the project, too, including from Sir Alan Duncan MP, County Councillors, public transport providers and the business sector, including large businesses, such as Jeldwen, Samworths, SJ Haulage and Truframe. Additionally, Highways England has noted resilience benefits to their network (A46/A1) from the Melton Mowbray Distributor Road.

We are confident that there is a strong and robust case for the continuation of vital investment in the MMDR. As a demonstration of this confidence, Leicestershire Council and Melton Borough Council have already committed their own £4m of funding to this project and are committed to continue work on it beyond submission of the Outline Business Case, such that we would be in a position to begin construction of the MMDR in summer 2020. The two authorities are also proactively working to conclude an agreement to cash-flow developer contributions in advance of their receipt, thereby enabling the accelerated delivery of housing growth whilst simultaneously delivering the necessary transportation infrastructure without placing an undue upfront financial burden on developers.

We await your positive decision in anticipation.

Yours sincerely



Mr. J. Sinnott
Chief Executive
Leicestershire County Council



Mr. E. de Coverly
Chief Executive
Melton Borough Council



Mr. M. Rai
Director
Leicester & Leicestershire Enterprise Partnership
(LLEP)



1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 This document represents the Outline Business Case (OBC) for the Melton Mowbray Distributor Road (MMDR) Scheme.
- 1.1.2 This scheme is designed to tackle longstanding congestion and traffic related problems in Melton Mowbray, enabling and facilitating the acceleration of significant housing and employment growth.
- 1.1.3 Melton has a historic and constrained town centre network that is at the convergence of six major routes. Levels of congestion are some of the highest on a per mile basis on the County, with a significant cause of the congestion in the town being through and cross-town traffic; with high levels of LGV and HGV movements.
- 1.1.4 The Local Plan incorporates highly significant levels of growth, with over 4,500 dwellings and 6,000 jobs to be delivered in the plan period. This represents a growth in the town of over 35%, and a necessary acceleration of housing delivery that the MMDR enables and then sustains- particularly in terms of delivery of the Northern and Southern Sustainable Neighbourhoods and associated employment land, as the prime focus for growth in the town.
- 1.1.5 Alongside current levels of congestion, numerous planning applications, totalling 2,500 dwellings are already approved, submitted or coming forward in the town as part of the overall housing and employment growth in the Local Plan, and why the scheme is needed now.

1.2 PURPOSE OF DOCUMENT

- 1.2.1 This document has been developed to support the scheme's submission to Department for Transport (DfT) as part of the Large Local Major's Fund; for which the scheme received support from the DfT to develop an OBC in late 2016.
- 1.2.2 The OBC presented in this document for the MMDR scheme has been developed in accordance with DfT's Transport Business Case guidance, and therefore sets out how the scheme is:
 - Supported by a robust case for change that fits with wider policy objectives (**the Strategic Case**);
 - Demonstrates value for money (**the Economic Case**);
 - Financially affordable (**the Financial Case** – accounting analysis);
 - Commercially viable (**the Commercial Case** – procurement issues); and
 - Achievable (**the Management Case** – deliverability assessment).

1.3 DOCUMENT STRUCTURE

- 1.3.1 The remainder of the document is structured as follows:
 - Chapter 2: DfT Submission Checklists
 - Chapter 3: Executive Summary of Outline Business Case
 - Chapter 4: Scheme Description & Overview
 - Chapter 5: The Strategic Case
 - Chapter 6: The Economic Case
 - Chapter 7: The Financial Case

- Chapter 8: The Commercial Case
- Chapter 9: The Management Case
- Chapter 10: Summary and Conclusions

2 OUTLINE BUSINESS CASE SUBMISSION CHECKLISTS

2.1 LARGE LOCAL MAJOR SCHEMES: BID FOR CONSTRUCTION FUNDING PART TWO: CHECKLIST

Please complete this checklist by referencing locations where the relevant material can be found in the OBC document

2.2 STRATEGIC CASE

Item		Section/Page
A detailed description of the physical scope of the scheme		OBC- Section 4.1, 5.2 and Appendix A
The objectives of the scheme		OBC- Section 5.7
A description of the process by which the scheme came to be identified as the preferred option for meeting those objectives including why alternative options were discarded		OBC- Section 5.8-5.15 OAR- Annex 1
How the objectives of the scheme align with national transport objectives <i>We do not expect all schemes to meet <u>all</u> of these objectives so please mark n/a if necessary.</i>	1. to ease congestion and provide upgrades on important national, regional or local routes	OBC- Section 5.3, 5.5, 5.23
	2. to unlock economic and job creation opportunities	OBC- Section 5.6, 5.23
	3. to enable the delivery of new housing developments	OBC- Section 5.6, 5.23
For schemes that directly aim to facilitate commercial or housing development on specific sites, details of the sites, current planning status, status of developer commitment and the expected impact of the scheme		OBC- Section 5.6
The impact the scheme would have on	The Strategic Road Network	OBC Section 5.2, 5.5; 5.5.50
	Access to planned HS2 stations or sites	n/a
	Access to International Gateways	OBC Section 5.5; 5.5.50
Details of public consultation activities on the scheme to date, and key findings including how any key questions/concerns have been addressed.		OBC Section 5.18-5.22 Consultation Report- Annex 10

ECONOMIC CASE

As well as referencing the location of these within the OBC, please supply each of the following documents and refer to Annex A for the checklist of appraisal and modelling supporting material.

Item	Section/Page
Option Assessment Report (OAR)	OBC Strategic Case- Chapter 5 Complete Document- Annex 1
Data Collection Report	OBC Economic Case – Chapter 6 Complete Document- Annex 3
Local Model Validation Report (LMVR)	OBC Economic Case – Chapter 6 Complete Document- Annex 4 (Local LMVR) Annex 9 (Additional information on same Model)
Present Year Validation Report (if required)	N/A
Forecasting Report	OBC Economic Case – Chapter 6 Complete Document- Annex 7
Economic Appraisal Report	OBC Economic Case – Chapter 6 Complete Document- Annex 8
Social and Distributional Impacts Assessment	OBC Economic Case – Chapter 6 Complete Analysis and Proforma- Annex 8

MANAGEMENT CASE

Item	Section/Page
Governance structure <i>including SRO, Project Board, Project Manager, and other key roles, and resourcing levels</i>	OBC- Section 9.4

Detailed Project Plan		OBC- Section 9.5, Appendix J
Risk Management	Detailed Risk Register	OBC- Section 9.8, Appendix D
	Narrative to explain the most significant risks, how they are being managed and their potential impact on time and budget	OBC- Section 9.4 - 9.8
	Risk management strategy	OBC- Section 8.6- Commercial OBC- Section 9.8
Project Assurance <i>e.g. Gateway Reviews</i>		OBC- Section 9.6
Evaluation <i>Outline evaluation plan including a statement of core evaluation objectives</i>		OBC- Section 9.9- 9.10

COMMERCIAL CASE

Item	Section/Page
Description of the preferred procurement strategy	OBC- Section 8.2, 8.3
Rational for the selection of preferred procurement route against possible alternatives	OBC- Section 8.3, 8.4, 8.5, 8.6
Explanation of how costs and risks will be shared throughout the contract	OBC- Section 8.7

FINANCIAL CASE

Item	Section/Page
Detailed cost breakdown	OBC- Section 7.2, Appendix C
Independent surveyor's report verifying cost estimates	OBC- Section 7.4, Appendix E
Details of and justification for inflation assumption used.	OBC- Section 7.5
Quantified Risk Assessment <i>All scheme costings should include an amount for risk, based on the results of a Quantified Risk Assessment (QRA) which should be proportionate to the nature and complexity of the project.</i>	OBC- Section 7.4 EAR- Appendix A; Annex 8
Evidence of commitment for any third party contributions	OBC Section 7.8; S151 Officer Letter

2.3 ANNEX A: CHECKLIST OF APPRAISAL AND MODELLING SUPPORTING MATERIAL

Option Assessment

Item	Section/Page
An Option Assessment Report to include steps 1 to 8 set out in WebTAG – the transport appraisal process.	OBC Document Summary: - Chapter 5- Section 5.7 to 5.15 Complete OAR Document: - Annex 1 - Sections 1-8 for the 8 WebTAG Stages

Modelling

Item	Section/Page
An Existing Data and Traffic Surveys Report to include:	
Details of the sources, locations (illustrated on a map), methods of collection, dates, days of week, durations, sample factors, estimation of accuracy, etc.	LLITM 2014 Base Model Specification Report: - Chapter 3 PR205 - LLITM 2014 Base Data Collection Report: - Chapter 2 (traffic counts) - Chapter 3 (roadside interviews) - Chapter 4 (mobile phone data) - Chapter 5 (journey times) - Chapter 6 (bus ETM data) - Chapter 7 (rail LENNON data) - Chapter 8 (bus passenger interviews) - Chapter 9 (rail passenger interviews) - Chapter 10 (public transport service data)
Details of any specialist surveys (e.g. stated preference).	n/a
Traffic and passenger flows; including daily, hourly and seasonal profiles, including details by vehicle class where appropriate.	PR205 - LLITM 2014 Base Data Collection Report: - Section 2.7 TN001 - MMDR Annualisation Factors: - Chapter 1 MMDR – OAR Refresh: - Chapter 2
Journey times by mode, including variability if appropriate.	PR205 - LLITM 2014 Base Data Collection Report: - Chapter 5 LLITM 2014 Base Local Melton Highway LMVR: - Chapter 2 - Chapter 5 PR202 - LLITM Public Transport LMVR: - Section 5.2
Details of the pattern and scale of traffic delays and queues.	MMDR – OAR Refresh: Chapter 2
Desire line diagrams for important parts of the network.	LLITM 2014 Base Local Melton Highway LMVR: Figures 4.2-4.4
Diagrams of existing traffic flows, both in the immediate corridor and other relevant corridors.	MMDR – OAR Refresh: - Chapter 2 LLITM 2014 Base MMDR OBC Forecasting Report: - Figures 4.14-4.16
An Assignment Model Validation Report to include:	

Description of the road traffic and public transport passenger assignment model development, including model network and zone plans, details of treatment of congestion on the road system and crowding on the public transport system.	LLITM 2014 Base Model Specification Report: • Chapter 2 • Chapter 6 • Chapter 8 PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 4 (model dimensions) • Chapter 5 (calibration validation data) • Chapter 6 (network development) • Chapter 7 (matrix development) LLITM 2014 Base Local Melton Highway LMVR: • Chapter 3 PR202 - LLITM Public Transport LMVR: • Chapter 2 (model overview) • Chapter 3 (network development) • Chapter 4 (matrix development)
Description of the data used in model building and validation with a clear distinction made for any independent validation data.	LLITM 2014 Base Model Specification Report: • Chapter 3 • Chapter 5 • Chapter 7 PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 5 (calibration validation data) LLITM 2014 Base Local Melton Highway LMVR: • Chapter 2 PR202 - LLITM Public Transport LMVR v3: • Chapter 3 • Section 6.2 • Chapter 8
Evidence of the validity of the networks employed, including range checks, link length checks, and route choice evidence.	LLITM 2014 Base Model Specification Report: • Chapter 6 • Chapter 8 PR201 - LLITM 2014 Base Highway Model LMVR: • Section 6.5 LLITM 2014 Base Local Melton Highway LMVR: • Chapter 3 PR202 - LLITM Public Transport LMVR v3: • Section 5.2 • Section 5.3
Details of the segmentation used, including the rationale for that chosen.	LLITM 2014 Base Model Specification Report: • Section 4.4 PR201 - LLITM 2014 Base Highway Model LMVR: • Section 4.7 PR202 - LLITM Public Transport LMVR v3: • Section 3.6
Validation of the trip matrices, including estimation of measurement and sample errors.	LLITM 2014 Base Model Specification Report: • Chapter 5 • Chapter 7 PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 7 • Chapter 10 LLITM 2014 Base Local Melton Highway LMVR: • Chapter 4 PR202 - LLITM Public Transport LMVR v3: • Chapter 6

Details of any 'matrix estimation' techniques used and evidence of the effect of the estimation process on the scale and pattern of the base travel matrices.	LLITM 2014 Base Model Specification Report: • Section 5.7 • Section 7.12 PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 7 • Chapter 10 LLITM 2014 Base Local Melton Highway LMVR: • Section 4.5 PR202 - LLITM Public Transport LMVR v3: • Chapter 7
Validation of the trip assignment, including comparisons of flows (on links and across screenlines/cordons) and, for road traffic models, turning movements at key junctions.	PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 11 LLITM 2014 Base Local Melton Highway LMVR: • Chapter 5 PR202 - LLITM Public Transport LMVR v3: • Chapter 8
Journey time validation, including, for road traffic models, checks on queue pattern and magnitudes of delays/queues.	PR201 - LLITM 2014 Base Highway Model LMVR: • Chapter 11 LLITM 2014 Base Local Melton Highway LMVR: • Chapter 5 PR202 - LLITM Public Transport LMVR v3: • Section 5.3
Detail of the assignment convergence.	PR201 - LLITM 2014 Base Highway Model LMVR: • Table 3.7
Present year validation if the model is more than 5 years old.	n/a
A diagram of modelled traffic flows, both in the immediate corridor and other relevant corridors.	MMDR – OAR Refresh: • Chapter 2
A Demand Model Report to include:	
Where no Variable Demand Model has been developed evidence should be provided to support this decision (e.g. follow guidance in WebTAG M2 Variable Demand Modelling – section 2.2).	n/a
Description of the demand model.	PR203 - LLITM 2014 Base Demand Model Development Report • Chapter 1 • Chapter 2
Description of the data used in the model building and validation.	PR203 - LLITM 2014 Base Demand Model Development Report • Chapter 3 • Chapter 4
Details of the segmentation used, including the rationale for that chosen. This should include justification for any segments remaining fixed.	PR203 - LLITM 2014 Base Demand Model Development Report • Chapter 2
Evidence of model calibration and validation and details of any sensitivity tests.	PR203 - LLITM 2014 Base Demand Model Development Report • Chapter 7
Details of any imported model components and rationale for their use.	PR203 - LLITM 2014 Base Demand Model Development Report • Chapter 4 (CTripEnd/DELTA) • Chapter 5 (supply model)
Validation of the supply model sensitivity in cases where the detailed assignment models do not iterate directly with the demand model.	n/a

	Details of the realism testing, including outturn elasticities of demand with respect to fuel cost and public transport fares.	PR203 - LLITM 2014 Base Demand Model Development Report Chapter 7
	Details of the demand/supply convergence.	PR203 - LLITM 2014 Base Demand Model Development Report - Section 8.3 LLITM 2014 Base MMDR OBC Forecasting Report: - Section 6.3
A Forecasting Report to include:		
	Description of the methods used in forecasting future traffic demand.	LLITM 2014 Base Model Specification Report: - Chapter 11 LLITM 2014 Base MMDR OBC Forecasting Report: - Chapter 2
	Description of the future year demand assumptions (e.g. land use and economic growth - for the do minimum, core and variant scenarios).	LLITM 2014 Base MMDR OBC Forecasting Report: Chapter 3
	An uncertainty log providing a clear description of the planning status of local developments	LLITM 2014 Base MMDR OBC Forecasting Report: Tables 3.6, 3.7, 3.8
	Description of the future year transport supply assumptions (i.e. networks examined for the do minimum, core scenario and variant scenarios).	LLITM 2014 Base MMDR OBC Forecasting Report: Tables 3.3, 3.4, 3.5
	Description of the travel cost assumptions (e.g. fuel costs, PT fares, parking).	LLITM 2014 Base MMDR OBC Forecasting Report: Tables 3.2
	Comparison of the local forecast results to national forecasts, at an overall and sectoral level.	LLITM 2014 Base MMDR OBC Forecasting Report: Chapter 4
	Presentation of the forecast travel demand and conditions for the core scenario and variant scenarios including a diagram of forecast flows for the do-minimum and the scheme options for affected corridors.	LLITM 2014 Base MMDR OBC Forecasting Report: - Chapter 4 (Core Scenario) - Chapter 5 (With Scheme)
	If the model includes very slow speeds or high junction delays evidence of their plausibility.	LLITM 2014 Base MMDR OBC Forecasting Report: - Chapter 4 - Appendix C
	An explanation of any forecasts of flows above capacity, especially for the do-minimum, and an explanation of how these are accounted for in the modelling/appraisal.	LLITM 2014 Base MMDR OBC Forecasting Report: - Chapter 4 - Appendix C
	Presentation of the sensitivity tests carried out (to include high and low demand tests).	LLITM 2014 Base MMDR OBC Forecasting Report: Chapter 6

Cost Benefit Analysis

Item	Section/Page
A clear explanation of the underlying assumptions used in the Cost Benefit Analysis.	LLITM 2014 Base MMDR OBC EAR: • Chapters 2-11
Information on local factors used. For example the derivation of growth factors and annualisation factors in TUBA (to include full details of any calculations).	LLITM 2014 Base MMDR OBC EAR: • Section 3.3 (local TUBA annualisation factors) • Section 4.3 & 4.4 (local accident rates)
A diagram of the network (if COBALT used).	LLITM 2014 Base MMDR OBC EAR: • Figure 4.1
Information on the number of junctions modelled (if COBALT used), for both the do-minimum and the do-something.	Combined link and junction approach used for accident appraisal– detail of network extent shown in Figure 4.1.
Details of assumptions about operating costs and commercial viability (e.g. public transport, park and ride, etc.).	LLITM 2014 Base MMDR OBC EAR: • Section 2.4 (monitoring & maintenance)
Full appraisal inputs/outputs (when used, COBALT and/or TUBA input and output files in text format should be supplied).	See TUBA, CoBA-LT and QUADRO folders in the <i>MMDR Worksheets Submission Folder</i> including input and output files for: • TUBA • CoBA-LT • QUADRO
Evidence that TUBA/COBALT warning messages have been checked and found to be acceptable.	LLITM 2014 Base MMDR OBC EAR: • Section 3.7 (TUBA) • Section 4.6 (CoBA-LT)
Spatial (sectoral) analysis of TEE benefits.	LLITM 2014 Base MMDR OBC EAR: • Section 3.6 • Figure 3.8 • Figure 3.9
Details of the maintenance delay costs/savings.	LLITM 2014 Base MMDR OBC EAR: • Section 5.3
Details of the delays during construction.	LLITM 2014 Base MMDR OBC EAR: • Section 5.2
Appraisal tables (AMCB, PA, TEE) in excel format .	See TEE PA AMCB folder in <i>MMDR Worksheets Submission Folder</i>

Economic Case Assessment

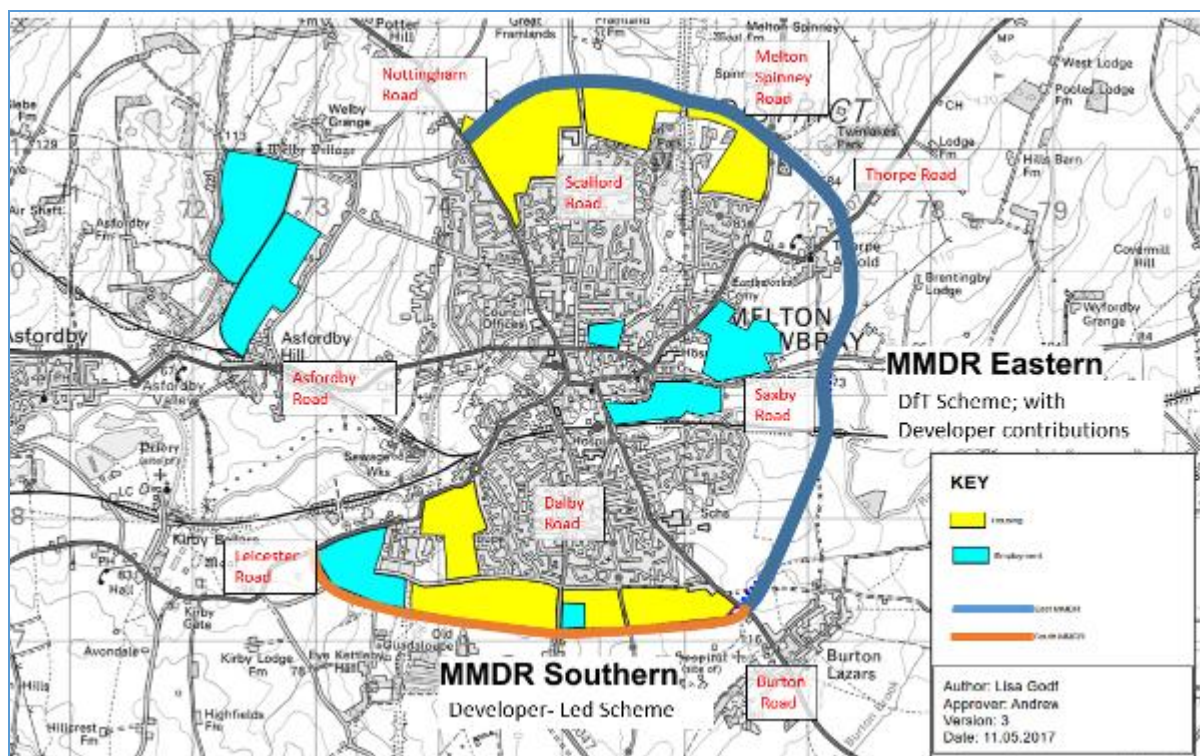
Item	Section/Page
A comprehensive Appraisal Summary Table in excel format .	See AST folder in <i>MMDR Worksheets Submission Folder</i>
Assessment of Economic impacts.	OBC Document- Economic Case • Chapter 6 Economic Appraisal Report • Annex 8
Economic impacts worksheets.	See WebTAG worksheets folder in <i>MMDR Worksheets Submission Folder</i>
Assessment of Environmental impacts, to include an environmental constraints map.	OBC Document- Economic Case • Chapter 6- Section 6.10- 6.14 Economic Appraisal Report • Annex 8

Environmental impacts worksheets.	See WebTAG worksheets folder in <i>MMDR Worksheets Submission Folder</i>
Assessment of Safety impacts and the assumed accident rates presented (when used, COBALT output should be provided).	OBC Document- Economic Case - Chapter 6- Section 6.7 Economic Appraisal Report - Annex 8
Assessment of Social impacts.	OBC Document- Economic Case - Chapter 6- Section 6.14 onwards Economic Appraisal Report - Annex 8
Assessment of Distributional impacts.	OBC Document- Economic Case - Chapter 6- Section 6.22 onwards LLITM 2014 Base MMDR OBC EAR: - Chapter 11 - EAR Appendix- DI Screening Proforma
Social and distributional impacts worksheets (including DI screening pro forma).	See WebTAG worksheets folder in <i>MMDR Worksheets Submission Folder</i>
Cost pro forma	See TEE AMCB PA folder in <i>MMDR Worksheets Submission Folder</i>

3 EXECUTIVE SUMMARY OF OUTLINE BUSINESS CASE

3.1 SCHEME DESCRIPTION & OVERVIEW

- 3.1.1 The Melton Mowbray Distributor Road (MMDR) is part of the Melton Mowbray Transport Strategy, and represents the preferred option to overcome existing traffic congestion and traffic related problems in the town, enabling future growth in the town.
- 3.1.2 The scheme is a 6.9km, single carriageway road that extends from the A606 Nottingham Road at the north-western edge of the town to the A606 Burton Road in the south, crossing Scaford Road, Melton Spinney Road, A607 Thorpe Road and B676 Saxby Road to Burton Road.
- 3.1.3 It will provide connection to a developer-led masterplan to the south of Melton Mowbray, which in turn connects to the A607 Leicester Road. The scheme will create new junctions with the radials on its route and provide crossings over the railway line and the River Eye.
- 3.1.4 Walking and cycling facilities are to be provided alongside the carriageway for the full extent of the route. The location of the proposed scheme and of key adjoining roads is shown below. DfT funding is being sought for the part of the road shown in blue, that is, from Nottingham Road to Burton Road.
- 3.1.5 The Southern section, shown in orange, will be provided by the developers as part of the current planning application for 1,450 dwellings and associated employment to the south of Melton Mowbray.



3.2 BACKGROUND

- 3.2.1 Congestion in the centre of Melton Mowbray has been a long standing issue recognised by both Leicestershire County Council and Melton Borough Council; this can be dated back to the late 1990's and early 2000's, and through successive Local Transport Plans.
- 3.2.2 However, the issue has become increasingly pronounced and is likely to be exacerbated further, both in terms of recent trends in traffic growth, and in light of the significant levels of growth planned for the town as part of the emerging Local Plan.
- 3.2.3 Historically, options considered have generally been developed to tackle existing congestion issues, rather than simultaneously focusing on improving network conditions and accommodating and accelerating the high levels of housing and employment growth now proposed in the town.
- 3.2.4 Importantly, a significant number of dwellings (totalling more than 2,500) are currently part of active planning applications in the town - as part of the emerging Local Plan delivery of over 4,500 dwellings in Melton Mowbray.
- 3.2.5 It is both the current levels of congestion in Melton Mowbray, and the active nature of these applications that make the scheme a priority, and **why it is needed now**.
- 3.2.6 Importantly, this scheme is just one part of a wider Melton Mowbray Transport Strategy, which will include other measures to address localised traffic issues, public transport improvements, walking and cycling connectivity.

3.3 STRATEGIC CASE

EXISTING ISSUES

1) HIGHLY SIGNIFICANT LEVELS OF CONGESTION

- 3.3.1 Melton Mowbray experiences congestion at numerous points in the town centre and along key approach routes to the town centre. This is on almost all radials, and at a number of critical junctions.
- 3.3.2 The extent of congestion is therefore right across the town, and covers all cross-town routes. This represents a key point in terms of the need for intervention.
- 3.3.3 This congestion arises due to the extent of through traffic, intra-town traffic, and traffic with destinations in Melton Mowbray itself, alongside network capacity that is limited by the number (and historic scale) of cross town routes, as well as geographical constraints from the river and rail line that funnel traffic to a limited number of key junctions.
- 3.3.4 On a delay per mile basis Melton Mowbray has one of the highest levels of delay of any area in Leicestershire, including the City of Leicester, and this is exacerbated when incidents arise on the Strategic Road Network (A46/A1) to the west and east of the town respectively.

2) TOWN CENTRE JUNCTION DELAYS

- 3.3.5 The volume of through traffic passing through Melton Mowbray town centre results not only in congestion on links but also significant delays at numerous junctions across the town centre, as shown below.

- 3.3.6** Market days present a particular problem whereby the strong visitor economy to Melton Mowbray interacts with current levels of local and through-traffic demands. This results in levels of traffic being particularly high on these days, with capacity limitations on the network leading to consistent delay problems even outside of traditional peak periods.
- 3.3.7** Importantly, many vehicles have to pass through several of these junctions to reach, or cross, the town centre, so the overall level of delay experienced by through traffic is significant. For example, traffic crossing the town centre north-south or east-west would encounter three or four of main delay locations respectively, resulting in a typical (neutral day) delay of 4-5 minutes in total on this part of the journey.
- 3.3.8** To give these values some context, the centre of Melton Mowbray is little more than 500m across, and alongside the scale of delay, this also creates network resilience issues; with limited route choice, and no alternatives across the town centre that don't already experience delay themselves.

3) HIGH LEVELS OF THROUGH TRAFFIC

- 3.3.9** Through traffic, via Melton Mowbray town centre, is one of the main contributors to heavy congestion during the peak periods.
- 3.3.10** Of all routes, the largest concentration of through traffic movement is along the A606 axis, constituting more than 40% of total traffic on that route. This is also the most congested on a delay/mile basis and is highly susceptible to variability given it is the only recognised northbound route through the town. The percentage of through traffic in the east-west direction is also high, at over 30% on these routes.
- 3.3.11** LGV and HGV proportions of through traffic are higher still, and typically between 50-90% of through traffic, depending on the corridor, but again with the A606 Axis as the corridor with the highest levels of through traffic movements.

4) HGV MOVEMENTS THROUGH THE TOWN CENTRE

- 3.3.12** The centre of Melton Mowbray faces two traffic problems related to Heavy Goods Vehicle (HGV) and Light Goods Vehicle (LGV) movements.
- 3.3.13** First, the industrial area to the east of the town centre generates a significant number of HGV and LGV movements, many of which use the town centre to access or egress manufacturing premises (particularly for the industrial estate in the east of the town).
- 3.3.14** Secondly, there are a significant number of through traffic HGV and LGV movements, with non-Melton Mowbray destinations. Both types of HGV and LGV movement create problems in the town centre, including safety, noise and air quality problems, with Melton an axis for HGV movements in all directions, but particularly for traffic towards the A1, and A14 to eastern coastal ports as a result of the strong manufacturing base of the town, and surrounding area.
- 3.3.15** HGV and LGV through traffic volumes are forecast to increase significantly and will be a major component of the overall projected growth in through traffic, especially given Melton Mowbray's growth as a designated Food Enterprise location.

5) FUTURE TRAFFIC-RELATED IMPACTS IN TOWN CENTRE AND VILLAGES

- 3.3.16 In the future, traffic-related problems and issues are likely to extend beyond the town centre. As the traffic grows in the future, and as the developer-link road to the south is built out during the 2020's, forecasts suggest that without the scheme, there would be a significant rise in vehicle movements through adjacent local villages.
- 3.3.17 This creates additional concerns in the context of traffic volumes, safety, and severance through some rural villages adjacent to Melton Mowbray itself- notably Asfordby, and Kirby Bellars.

IMPACTS OF DOING NOTHING

1) A CONTINUATION OF CURRENT TRANSPORT PROBLEMS

- 3.3.18 Without the scheme, the problems and issues identified will continue and likely worsen. This means that roads will remain congested, with some of the highest levels of delay per mile in the County - impacting on both local residents, and those from a wider catchment seeking to make longer distance movements to/from Leicester, Nottingham, Loughborough, the M1 or A1.
- 3.3.19 Melton Mowbray will continue to have high levels of through traffic - through traffic that impacts on residents as a result of the routes that such traffic is forced to take, as well as additional rat-running, and further impacts on the attractiveness of the town to the visitor economy, curtailing the extent and attractiveness of the historic market town centre.
- 3.3.20 This is particularly the case given the proportion of traffic that is HGV and LGV – both as a percentage of overall traffic, and absolute volumes - with the corresponding noise, safety, severance and air quality problems also brought by these movements; alongside significant forecast growth of such movements in the future.
- 3.3.21 As a result of the current network configuration converging on several key junctions, and with the geographical constraints provided by the river and rail line, resilience of the network will remain poor with corresponding impacts on reliability. This will be exacerbated as Melton Mowbray continues to grow, with impacts over time also extending to adjacent villages as well as the town centre, if no improvements are delivered.

2) DELIVERY OF HOUSING, JOBS AND ECONOMIC GROWTH

- 3.3.22 As noted in the Leicester and Leicestershire Strategic Economic Plan, Melton Mowbray is a thriving market-town, with a strong housing market and industrial base, offering significant local employment opportunities. Unemployment is exceptionally low against UK averages at <1%.
- 3.3.23 The town is the main economic centre for the Borough of Melton, providing a base for the larger employers and functioning as the key retail, leisure and service destination for the residents of the Borough.
- 3.3.24 Significant levels of growth are anticipated for the town within the emerging Local Plan, with 4,500 dwellings and 6,000 jobs to be delivered in the plan period. This represents a growth of over 35% in the plan period and importantly, and demonstrative of Melton Mowbray's current vitality, over 2,500 dwellings associated with the emerging Local Plan total are already being actively put forward by developers through the planning process; and that makes the time for investment now.
- 3.3.25 Despite previous investment in highway improvements, there continues to be significant traffic problems in the town and by virtue of this insufficient residual highway capacity to accommodate planned growth. In recent years this has become a constraint on the town's growth; with MBC, as the Local Planning Authority, having been advised by the County Council, as the Local Highway Authority, to consider refusing a number of planning applications on the grounds of severe traffic impacts.

- 3.3.26 As a result, doing nothing will lead to the above problems and issues slowing (and potentially actually curtailing) the significant levels of economic growth, job creation and housing delivery proposed.
- 3.3.27 Investment will also enhance the vitality of the town centre, with the removal of traffic providing opportunities for town centre regeneration and renewal of the urban fabric, as well as providing opportunities for walking/cycling and better bus travel times to ensure that the new housing growth has greater sustainable travel opportunities than those offered presently; and is particularly important given the level of growth in the town.

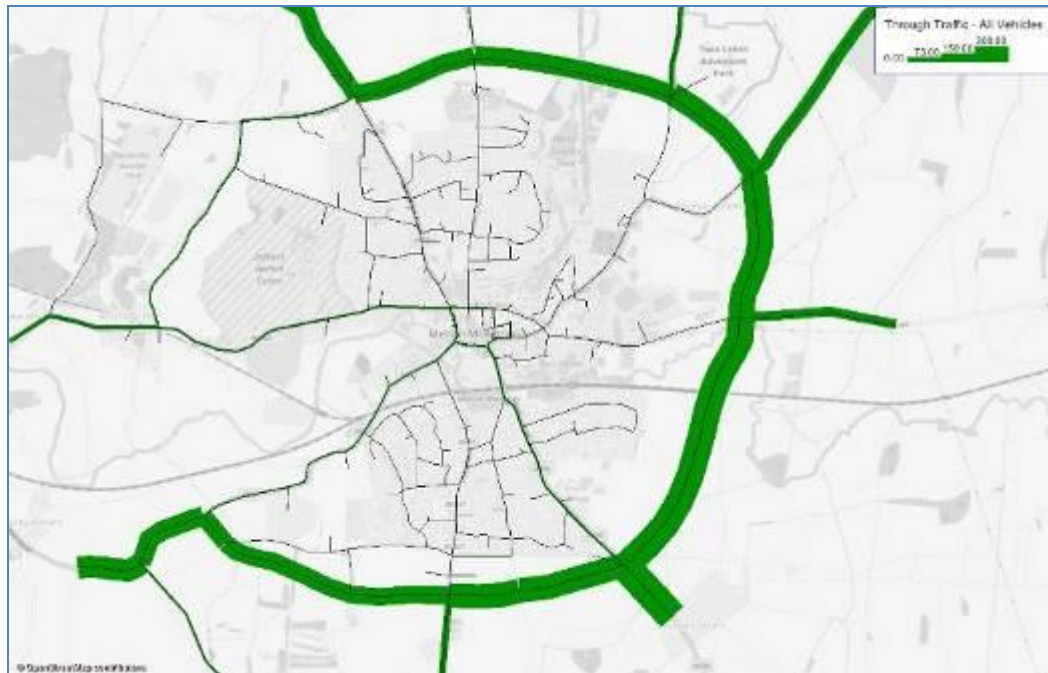
ALTERNATIVE OPTIONS

- 3.3.28 The Melton Mowbray Distributor Road scheme has been developed as the best performing option to overcome existing traffic congestion and traffic-related problems, and tackle future traffic issues, to enable the town's future growth. The scheme has been developed from an evidence and objective-led optioneering process, assessing a range of options across modes, and different scales and route(s) of highway intervention in coming to the final preferred scheme.
- 3.3.29 Over 60 different potential interventions, covering a wide range of scheme types, were assessed against a range of criteria to identify the better performing options. This assessment was derived from the evidence base, and used local Melton Mowbray transport stakeholder reference groups as part of the decision making process.
- 3.3.30 The results demonstrated that strategic highways interventions (of various kinds) performed as the highest ranking options, and as the only category of options able to provide benefits to both current and future residents, and ensure sufficient longer-term capacity to underpin the ambitious growth proposals in the emerging Local Plan.
- 3.3.31 Testing of a range of more strategic highways options demonstrated that an Eastern Distributor Road was clearly the preferred option for solving congestion problems in the town and for accelerating housing delivery and economic growth (this was shown through assessment of transport user benefits, costs, wider economic benefits and a range of locally-led objectives).
- 3.3.32 As a result of this evidence, during the summer of 2016, Leicestershire County Council, Melton Borough Council and the Leicester and Leicestershire LEP submitted a bid to the DfT to seek funding towards the further development of the Distributor Road scheme.
- 3.3.33 The scheme presented in this OBC has been subject to further optioneering through 2017 as part of the OBC development process, using an updated transport model, and updated datasets, that shows the same comparative transport user benefits between the options, reinforcing the earlier evidence through further independent study.
- 3.3.34 In addition, within the identified corridor the scheme design has been optimised, taking account of costs, land ownership issues and environmental considerations, with a view to securing planning permission in the first half of 2018.

KEY BENEFITS OF THE PREFERRED SCHEME

- 3.3.35 The preferred scheme is the most effective at tackling the following problems in the town, both now and in the future:
- Highly significant levels of congestion;
 - High levels of through traffic, with very limited route options;
 - Delay at all key junctions in the town centre;
 - A large number of HGV and LGV movements to and through the town centre;
 - Consequent constraint to jobs, housing delivery and economic growth;
 - Future negative externalities in adjacent villages as the town, as traffic grows beyond the constraints of the town centre; and
 - A limited ability to enhance public transport, walking and cycling, without removing traffic from the town centre first.
 - Severance of the town centre from other parts of the town, impairing its ability to prosper and grow
- 3.3.36 The scheme is consistent with Local, Sub-Regional and National policies, with a particular benefit of the scheme being accelerated housing delivery in support of the 4,500 dwellings and 6,000 jobs in Melton Mowbray proposed as part of the Local Plan. The Local Plan has recently been submitted for Examination in Public and is expected to be adopted in Spring 2018.
- 3.3.37 The scheme also supports the Leicester and Leicestershire Strategic Growth Plan to 2050, and that sees Melton as a future Growth Node in the County through to 2050.
- 3.3.38 Melton is a vibrant, attractive and thriving market town, with a strong manufacturing base, significant visitor economy and is a national and international centre of food manufacturing activities. Unemployment in the town is exceptionally low and the scheme helps support delivery of a further 30ha of employment land for business expansion in Melton- as well as resolving current and future HGV issues in the town created by its manufacturing and agricultural base.
- 3.3.39 The OBC and associated Options Reports indicate that on both quantitative and qualitative bases, that an Eastern MMDR scheme represents the preferred solution.
- 3.3.40 The preferred scheme has:
- A highly significant increase in the level of user benefits compares to the next nearest option (60%);
 - The greatest benefit for through traffic, and thus to the town centre and critically constrained junctions as a result;
 - Support through Consultation results, with a majority of Melton residents expressing that they agreed with the preferred route;
 - A lower cost than a similar route to the west, with consequential impacts on the Economic Case and ability of government to fund (and afford) the scheme;
 - The ability to deliver the full extent of housing and employment growth proposed in the emerging Local Plan; unlike the Northern or Southern sections on their own;
 - Scored more highly on almost all qualitative scheme objectives than alternative options, assessed from the perspective of three different transport groups; and
 - The greatest opportunity to support walking, cycling public transport and urban realm improvements in the town as a result.

- 3.3.41 LLITM modelling and analysis of traffic movements in 2036 demonstrates the benefit of the scheme below:



3.4 ECONOMIC CASE

- 3.4.1 The Economic Case identifies all of a scheme's impacts, and the resulting value for money, to fulfil HM Treasury's requirements for appraisal and to demonstrate value for money in the use of taxpayers' money.
- 3.4.2 The Economic Case has been driven by use of the latest version of the LLITM Model (2014 Base), supported by DfT and industry standard software usage. The model and appraisal approach has been built in accordance with the Department for Transport's modelling and appraisal guidance (WebTAG), and has been independently assured in terms of its development and usage.
- 3.4.3 The economic appraisal has been tailored to reflect the needs of the MMDR Outline Business Case, and has specifically monetised: as part of the Benefit Cost Calculation:
- Transport User Benefits (including travel time and vehicle operating cost savings)
 - Safety
 - Noise
 - Air Quality
 - Greenhouse Gases
 - Active Mode Travel Benefits
 - Changes in delays during maintenance
 - Delays during construction
- 3.4.4 These form the core Benefit Cost Ratio (BCR) for the scheme.
- 3.4.5 Additional valuations of other objectives has also been monetised as part of the Economic Case, and these are included in the scheme's adjusted BCR.

3.4.6 These benefits of the scheme include:

- Journey Time Reliability Benefits
- Wider Economic Impacts

3.4.7 In line with HM Treasury's appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised. The economic, environmental, social and distributional impacts of the proposal have been examined, using qualitative, quantitative information in the Economic Case. These include impacts on:

- Landscape
- Townscape
- Water
- Biodiversity
- Historic Environment
- Security
- Severance

SCHEME BENEFITS

3.4.8 The Economic Case reports the sum of the above calculations. The total present value of scheme benefits is estimated at **£107m** (in DfT's 2010 values and prices).

3.4.9 This is calculated using the above approach for the scheme benefit calculations.

SCHEME COSTS FOR ECONOMIC APPRAISAL

3.4.10 Scheme costs used in the Economic Case are as per those developed in the Financial Case detailed in the next section, and built up from detailed construction, land (inc Part 1 claims), preparation and supervision costs associated with the scheme's design; supported by ECI involvement, and monitoring and evaluation costs.

3.4.11 Risk allowances have been determined through a detailed Quantified Risk Analysis (QRA), and along with inflation to the year of forecast expenditure are both included in the appraisal.

3.4.12 In addition, and as per DfT requirements, a further 15% Optimism Bias has been applied to the risk adjusted capital costs of the scheme, with additional uplifts for structures cost components (23%).

3.4.13 Future costs of maintaining the new infrastructure have also been calculated, termed the capital costs of maintenance, and these have also been added to the costs used in the Economic Case.

3.4.14 These calculations lead to a present value of scheme cost (PVC) of **£55.5m** (in 2010 values and prices), excluding private sector contribution and do-minimum costs.

3.4.15 When these are taken into account the PVC is **£43.5m** (2010 values and prices) respectively.

BENEFIT COST RATIO (BCR)

- 3.4.16 The core Benefit Cost Ratio for the scheme has been calculated on the basis of the scheme benefits and scheme costs above.
- 3.4.17 This results in the outturn BCR for the scheme being **2.45**.
- 3.4.18 The scheme will also generate an additional £29m of journey time reliability and wider economic benefits not incorporated in the initial BCR. With these included, the adjusted BCR is **3.12**.
- 3.4.19 A Value for Money Statement is included in the Economic Case, as required by DfT, and which confirms this is **High Value for Money** in the most likely, core scenario.
- 3.4.20 As expected, the majority of the benefits generated by the MMDR scheme are associated with travel time savings for business and non-business road users. The results show strong time savings in the 2-5 minute category, which is both important, and in line with expected ranges from the problem identification. Improvements in Noise, Local Air Quality, changes in indirect taxation, physical activity also provide a small contributions to the total monetised benefits of the scheme.
- 3.4.21 Negative benefits are expected from greenhouse gas emissions, accidents and scheme delays during construction. However, these changes are minor compared to the total value of benefit. It is anticipated that the scheme will have a slight adverse effect on the local landscape and its tranquillity, and in passing close to locally important heritage sites.
- 3.4.22 The scheme will also have the potential for a moderate adverse effect on Historic Environment and slight adverse on the landscape, water environment and biodiversity sub-objectives; with severance and journey quality being slight beneficial.
- 3.4.23 As a result of the above assessments, it is considered that the non-monetised impacts above lead to an overall slight reduction in the value for money of the scheme overall, although the scale of these will not significantly impact the VFM category.
- 3.4.24 A range of sensitivity tests have been carried out to understand the impact of alternative growth forecasts, and to test the robustness of base data – all tests show the scheme will be high value for money. All results are reported in the AST for the scheme, and include detailed distributional analysis as required by guidance.

3.5 FINANCIAL CASE

- 3.5.1 Scheme costs for the Financial Case have been built up from detailed construction, land, preparation and supervision costs associated with the scheme's design; supported by EC1 involvement.
- 3.5.2 The base scheme costs are **£63.5m** in 2017 prices, and include land costs, preparation costs, construction costs and supervision costs.
- 3.5.3 The OBC includes a detailed breakdown of the base scheme costs into these spend areas, including an anticipated profile by year for each spend area. To these base costs, risk allowances have been added (as determined through a detailed Quantified Risk Analysis), along with inflation to the year of forecast expenditure.
- 3.5.4 An independent surveyor's report verifying cost estimates has been submitted as part of the OBC.
- 3.5.5 The total local contribution towards the risk adjusted scheme cost is 22.1%, comprised of local and cashflowed private sector contribution in advance of their receipt
- 3.5.6 A signed letter from LCC's Section 151 Officer has been included as part of the OBC submission confirming the above.

3.6 COMMERCIAL CASE

- 3.6.1 The Commercial Case provides evidence on the commercial viability of a proposal and the procurement strategy that will be used to engage the market. It presents evidence on risk allocation and transfer, contract timescales and implementation timescale as well as details of the capability and skills of the LCC team delivering the project.
- 3.6.2 LCC have considered a full range of procurement options to secure best value through ensuring a strong, fair and open competition, in line with best practice for managing public money.
- 3.6.3 The Preferred Option for procurement and delivery is the Midlands Highways Alliance (MHA) Framework.
- 3.6.4 The benefits of this route for both LCC and ensuring taxpayer value have been made clear in the Commercial Case. These benefits are as follows:
- Obtain contractor experience and input to the construction programme to ensure the implementation programme is robust and achievable. This thereby reduces risks to a level that is 'as low as reasonably practicable'.
 - Allow mobilisation quickly and allows greatest time and opportunity for ECI to achieve lowest outturn cost.
 - Use of an NEC3 Option C contract, with mature and well established risk allocation and transfer between parties; along with established tolerances to provide greater cost and programme certainty, along with a pain/gain mechanism to incentivise delivery against both programme and target cost.
 - The ability to measure performance through the MHA framework and management tools, with significant previous experience and demonstrable best value of this procurement route.
- 3.6.5 The Commercial Case, using existing details from the MHA framework, describes how LCC, and named and resourced personnel will set-up, run and manage the procurement activities, and will place risk with the party best placed to manage or mitigate that risk, or manage the consequences should they transpire.
- 3.6.6 Through to procurement and as part of scheme delivery, the contractor will produce a priced risk register. This will be reviewed as part of the process of target setting and decisions made on the mechanism for sharing risk between the contractor and LCC, ensuring that the proposed allocation provides the best value for money for the project for both LCC and DfT.
- 3.6.7 The above approach builds on LCC experience with such delivery mechanisms on recently and successfully delivered schemes, with a clear understanding between contractor and authority of how they work and what their processes are. This is not just in terms of roles, but also agreed standards, mechanisms and clarity over risk and risk allocation and transfer through the design and construction phases.

3.7 MANAGEMENT CASE

- 3.7.1 The Management Case demonstrates that LCC has successfully procured and delivered a number of similar projects of varying sizes and complexity.
- 3.7.2 The knowledge gained and the strategic procedures developed/adopted during the delivery of these schemes will be used for the delivery of the MMDR, using similar team structures and experienced personnel, who are confirmed as available and committed to the MMDR project.
- 3.7.3 Opportunities will be taken, wherever possible, to improve delivery processes by acting upon the lessons learnt from recent schemes.
- 3.7.4 The Project Governance Structure for any scheme undertaken by LCC consists of a three tier structure as follows:
- The Programme Board – Provides governance at the overall programme level via a Programme Board.
 - The MMDR Project Board – Provides governance for the specific MMDR delivery project.
 - Delivery Teams – Responsible for particular issues, topic areas or activities spanning two or more of the component projects via a series of Working Groups
- 3.7.5 To ensure the successful delivery of the schemes within its jurisdiction LCC has established a governance structure the MMDR project. This will include both internal audit, and external project assurance, with the SRO, Ian Vears, having direct responsibility for these for the MMDR Project.
- 3.7.6 LCC recognises that effective risk management is vital, and a continual process involving the identification and assessment of risks. A risk and opportunity register was developed May 2017, and will continue to be reviewed and updated on a monthly basis to consider risks associated with the preferred scheme, and to provide up-to-date input in line with the Project Governance.
- 3.7.7 Carillion Tarmac Partnership (CTP) were appointed through the Midlands Highways Alliance Medium Schemes Framework contract to work with Leicestershire County Council (LCC) and their designers, AECOM, to deliver an Early Contractor Involvement (ECI) service for the proposed Melton Mowbray Distributor Road (MMDR). Invested knowledge will be retained to support detailed design, prior to full procurement.
- 3.7.8 A Benefits Realisation Plan has been prepared, linked to the scheme objectives and desired outcomes. This will be used by LCC to ensure that the benefits and dis-benefits from the project to can be planned, tracked, managed, and realised (or mitigated).
- 3.7.9 An Outline Monitoring and Evaluation Plan has also been prepared, and this plan will be used to help demonstrate whether the scheme objectives identified in the Strategic Case are being achieved in terms of the desired “measures for success”. In addition, the Management Case also highlights the ongoing stakeholder management plans and the future communication strategy plans and programme.
- 3.7.10 The Management Case concludes that LCC has a track record of successfully procuring and delivering projects of varied size and complexity, and in relation to the MMDR scheme in particular has the adequate project management, governance and assurance systems in place, alongside resources required, to deliver the MMDR.

Melton Mowbray Distributor Road

OUTLINE BUSINESS CASE

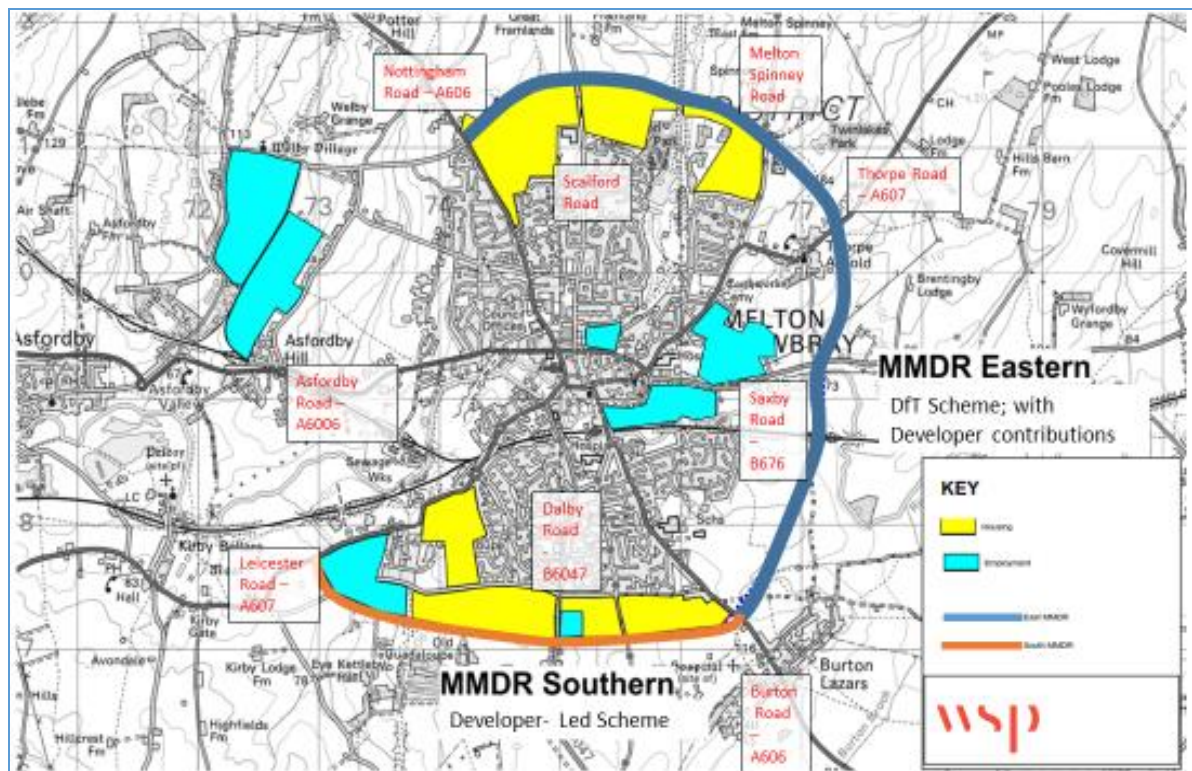


4 SCHEME DESCRIPTION & OVERVIEW

4.1 SCHEME DESCRIPTION

- 4.1.1 The Melton Mowbray Distributor Road (MMDR) is part of the Melton Mowbray Transport Strategy, and represents the preferred option and alignment from a comprehensive options assessment exercise to reduce congestion in the town, enable and accelerate housing and employment delivery as part of the Local Plan.
- 4.1.2 The scheme consists of the construction of a single carriageway road, to the east of Melton Mowbray.
- 4.1.3 The route extends from the A606 Nottingham Road at the north-western edge of the town to the A606 Burton Road in the south, crossing Scaford Road, Melton Spinney Road, A607 Thorpe Road and B676 Saxby Road to Burton Road
- 4.1.4 It will provide connection to a developer-led masterplan to the south of Melton Mowbray, which in turn connects to the A607 Leicester Road. The scheme will create new junctions with the radials on its route and provide crossings over the railway line and the River Eye.
- 4.1.5 The location of the proposed scheme and of key adjoining roads is shown in Figure 4-1.
- 4.1.6 DfT funding is being sought for the part of the road shown in blue in Figure 4-1, that is, from Nottingham Road to Burton Road. The Southern section, shown in orange, will be provided by the developers as part of the current planning application for 1,450 dwellings and associated 20ha of employment to the south of Melton Mowbray.

Figure 4-1: Scheme Location & Context



- 4.1.7 Further detailed scheme plans, alignments and drawings are included in Appendix A.

4.2 SCHEME BACKGROUND

- 4.2.1 Congestion in the centre of Melton Mowbray has been a long standing issue recognised by both Leicestershire County Council and Melton Borough Council; and this can be dated back to the late 1990's and early 2000's, and through successive Local Transport Plans.¹
- 4.2.2 However, the issue has become increasingly pronounced and is likely to be exacerbated further, both in terms of recent trends in traffic growth since the recession, and in light of the significant levels of growth planned for the town as part of the emerging Local Plan.
- 4.2.3 Historically, options considered over this period have generally been developed to tackle existing congestion issues, rather than simultaneously focusing on improving network conditions *and* accommodating and accelerating the high levels of housing and employment growth now proposed in the town.
- 4.2.4 Importantly, a significant number of dwellings (totalling more than 2,500) are currently part of active planning applications in the town - as part of the emerging Local Plan delivery of over 4,500 dwellings in Melton Mowbray.
- 4.2.5 It is both the current levels of congestion in Melton Mowbray, and the active nature of these applications that make the scheme a priority, and why it is needed now.
- 4.2.6 In 2015 and 2016, work undertaken on the Transport Strategy Evidence Base and the Melton Mowbray Options Appraisal Report (OAR) highlighted current levels of congestion, significant levels of through traffic and limited spare capacity for growth as critical issues facing the town.
- 4.2.7 The OAR tested a range of smaller-scale public transport, walking and cycling, demand management and inner bypass improvements in close proximity to the town centre.
- 4.2.8 This led to an assessment, against a range of criteria, of over 60 different potential interventions for the town across these modes to identify the better performing options. This assessment was derived from the evidence base, and used local Melton Mowbray transport stakeholder reference groups as part of the decision making process.
- 4.2.9 The results demonstrated that strategic highways interventions (of various kinds) performed as the highest ranking options, as the only category of options to provide benefits to both current and future residents, and able to ensure sufficient longer-term capacity to underpin the ambitious growth proposals in the emerging Local Plan- as a key part of the locally-derived objectives used in the OAR.
- 4.2.10 Testing of a wide range of more strategic highways options demonstrated that an Eastern Distributor Road was the preferred option for solving congestion problems in the town and for accelerating housing delivery and economic growth (this was shown through assessment of transport user benefits, costs, wider economic benefits and a range of locally-led objectives).
- 4.2.11 As a result of this evidence, during the summer of 2016, Leicestershire County Council, Melton Borough Council and the Leicester and Leicestershire LEP submitted a bid for £2.8 million to the DfT to seek funding towards the further development of the Distributor Road scheme.
- 4.2.12 In November 2016, the government announced it would support the development of a business case for the proposed Distributor Road with £1.9 million of public funds, with the scheme also forming a key part of the emerging Local Plan, currently under examination.

¹ A Melton Bypass scheme was developed by Leicestershire County Council as part of Local Transport Plan 2 covering the period 2006-2011. This proposed road was not allocated regional transport funding in 2009, but Leicestershire County Council continued to study further options for a Melton by-pass as part of Local Transport Plan 3 for the period 2011-2026.

- 4.2.13 The OAR (presented to DfT as part of this submission in 2016, and refreshed in 2017 on the basis of a new model also being available for the OBC) informed the development of the current MMDR scheme.
- 4.2.14 The scheme presented in this OBC has been subject to further optioneering through 2017 as part of the development process. Within the identified corridor the scheme design has been optimised, taking account of costs, land ownership issues and environmental considerations, with a view to securing planning permission in the first half of 2018.
- 4.2.15 This scheme is just one part of a wider transport strategy for the town which will include other measures to address localised traffic issues, public transport improvements, walking and cycling connectivity.

5 THE STRATEGIC CASE

The Melton Mowbray Distributor Road scheme has been developed as the preferred option to overcome existing traffic congestion and traffic-related problems in the town centre thereby enabling its future growth (as set out in the Local Plan). The scheme has been developed from an evidence and objective-led optioneering process, assessing a range of options across modes, and different scales and route(s) of highway intervention in coming to the preferred scheme.

Melton is a vibrant, attractive and thriving market town, with a strong manufacturing base, significant visitor economy and a national and international centre of food manufacturing activities. The MMDR is a key infrastructure scheme detailed in the Local Plan, and the scheme supports the delivery of 4,500 dwellings in Melton through to 2036, as well as the ambitions of the Strategic Growth Plan for Leicester and Leicestershire through to 2050.

Local Unemployment in the town is <1%, and the scheme also helps facilitate business expansion, job creation and the delivery of a further 20ha of employment land expansion in Melton- as well as resolving current and future HGV issues in the town created by its manufacturing and agricultural base.

The scheme is in line with National, Sub-Regional and Local policies, with a particular benefit of the scheme being accelerated housing delivery in support of the 4,500 dwellings in Melton Mowbray proposed as part of the Local Plan, that has recently been submitted for Examination and expected to be adopted in Spring 2018.

5.1 INTRODUCTION

5.1.1 This Outline Business Case is being submitted as part of the DfT's Large Local Majors Fund.

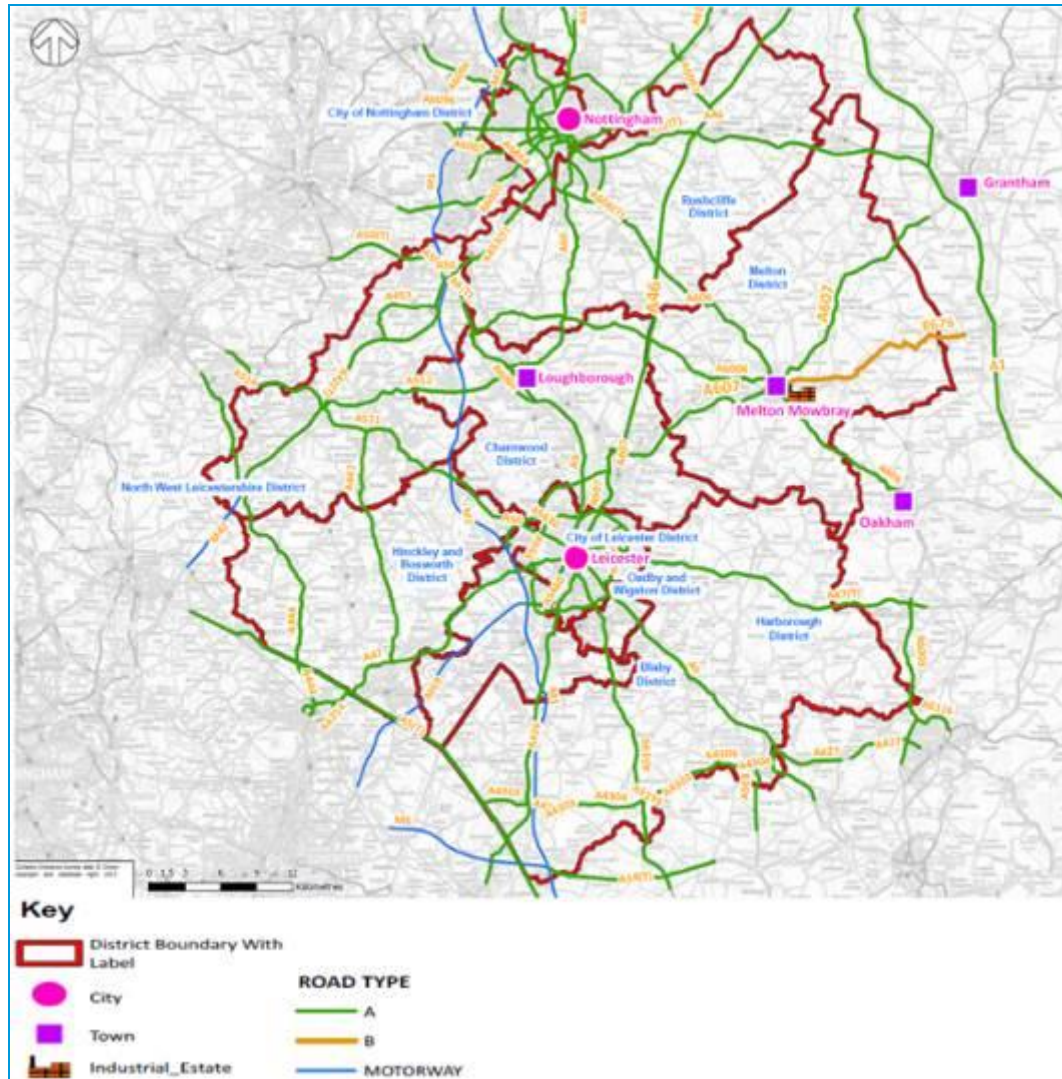
5.1.2 The Strategic Case is discussed in detail under the following sub-headings, which are derived from DfT guidelines as part of the recommended 5 cases:

- Existing Arrangements
- Identified Problems and Issues
- Scheme Objectives
- Option Assessment Report
- Strategic Fit
- Political Support
- Stakeholders
- Internal or External Business Drivers
- Synergy
- Conclusion

5.2 EXISTING ARRANGEMENTS: MELTON'S LOCATION & NETWORK CONNECTIVITY

5.2.1 The town of Melton Mowbray is located in the Borough of Melton in the north-eastern corner of the county of Leicestershire, 20 miles north-east of Leicester, 20 miles south-east of Nottingham and 15 miles east of Loughborough.

- 5.2.2 The population of the town is just over 25,000, which represents just over half of the 50,000 people who live in the Borough of Melton.
- 5.2.3 The size of Melton Mowbray is important with respect to the proposed growth of the town in the emerging Local Plan, and as part of current planning applications.



- 5.2.4 With over 6000 dwellings up to 2036 proposed for the borough of Melton as a whole by the emerging Local Plan, 65% of which are intended to take place in the town of Melton Mowbray, the size and population of Melton Mowbray will increase considerably. At present, planning applications are being progressed in locations both North and South of the town.
- 5.2.5 In terms of travel patterns, around 1,000 people commute to the Borough of Melton to work from Charnwood and Leicester, and around 500 commute to the Borough from Rushcliffe and Rutland. Conversely, around 1800 residents of the Borough of Melton travel to work in Leicester, while roughly 1000 commute to Charnwood, 1000 to Rutland, 850 to Nottingham.
- 5.2.6 Overall, there is a current net outflow of 4,000 people from the Borough of Melton to other districts for work trips, with around 6,000 people commuting into the Borough for work and 10,000 leaving it. This contributes to the through-traffic issue in Melton Mowbray: since not all employment is located in the centre of the town, in-commuters must cross the town to reach employment locations on the edge of the town. The scale of commuting in and out of the town is also factor behind the scale of future employment provision (50ha and 6,000 jobs proposed for the borough of Melton) which will help provide an enhanced local labour market for the town of Melton's key industries, and its national and international importance and reputation for food production in particular.

- 5.2.7 In terms of connectivity to other key economic centres in the Midlands, the town is connected to Nottingham and Oakham by the A606 and to Leicester and Grantham (and the A1) by the A607.
- 5.2.8 These routes provide the strategic connectivity to Melton Mowbray, but are also a key source of through-traffic issues; especially in terms of access to Leicester, Nottingham and the A1.
- 5.2.9 The same radials also serve the town's residential neighbourhoods. The main industrial area is to the east of the town centre, and is served by the B676 and the A607. Melton Mowbray's manufacturing and food production activities are typically located in this area, and include some of the country's largest food producers, including Just Egg Chilled Foods, Quadex, Pukka Pies, Sundeen and Mars.
- 5.2.10 These businesses serve a national and international marketplace, and as a result also generate significant HGV and LGV movements.
- 5.2.11 Market days present a particular problem whereby the strong visitor economy to Melton Mowbray interacts with current levels of local and through-traffic demands. This results in levels of traffic being particularly high on these days, with capacity limitations on the network leading to consistent delay problems even outside of traditional peak periods.
- 5.2.12 Melton Mowbray is not directly served by the Strategic Road Network, but it is located roughly ten miles by car from the A46 to the west and 13 miles from the A1 to the east.
- 5.2.13 This proximate location leads to significant re-routing of traffic through the town, particularly when accidents or incidents occur on the A46 or M1.
- 5.2.14 In addition, Melton is at a key strategic intersection of various major A roads. Indeed, the A606 and A607 routes through the town are both proposed in the draft Major Road Network for the Midlands, under development by Midlands Connect. This is to be submitted to DfT in early 2018 as part of the proposed DfT consultation of the Major Road Network, itself developed from the Rees-Jeffreys Road Fund report in 2016.
- 5.2.15 The importance of this is that the MRN comprises approximately 3,800 miles of local authority A-roads which carry 43% of England's traffic and that therefore provides a critical function in meeting the transport and economic needs of the country.
- 5.2.16 Melton Mowbray is at the heart these routes, and their convergence through its historic and constrained town centre.

5.3 EXISTING ARRANGEMENTS: TOWN CENTRE CONSTRAINTS

- 5.3.1 The local highway network in Melton Mowbray consists of seven key radial routes, which are shown in Figure 5-1. These include the A606 and the A607, which bisect the town, along with Scaford Road, Saxby Road (B676), Dalby Road (B6047) and the A6006, which terminate in or on the edge of the town centre.
- 5.3.2 The River Eye and the railway line (a key east-west link between Birmingham, Leicester, Peterborough and Cambridge) both bisect the town just south of the town centre in two parallel lines running from east to west. The river and railway line create constraints for vehicular traffic in the town, and as a result of these physical constraints there are only a small number of routes (2) possible for crossing the railway and river to access, or travel through, the town.
- 5.3.3 This results in three north-south routes crossing the railway line (A607, Dalby Road B6047, and A606) and two north-south routes crossing the river (A607 and A606).
- 5.3.4 However, and importantly, traffic on any of these routes is funnelled onto the A607 in the town centre where there is significant congestion and delay from the convergence of these routes to a few key junctions. These include the junctions of the A607/A6006 (4), the junction of A607/ Leicester Road (2), the junction of A607/Thorpe Road (1), which are all circled red in Figure 5.1 overleaf.



Lorry turning from Leicester Street A606 to Leicester Road A607



A606 Nottingham Road queuing with lorry mounting the pavement



A6006 Asfordby Road, looking towards Melton Town Centre



B676 junction with A607 Thorpe End

5.3.5 Once these junctions reach capacity, further congestion issues are then experienced at a range of other junctions on the approaches to the town centre, and including the following locations as also highlighted in Figure 5.1.

1. A607/Thorpe End
2. A607/Leicester Street
3. A607/Snow Hill
4. A607/A6006/A606
5. A607/Scaford Road
6. A607/B6047 Dalby Road
7. A606/Mill Street
8. A606/Ankle Hill
9. B6047/Warwick Road

Figure 5-1: Map of Melton Mowbray town centre, showing key traffic pinchpoints (1-9)



5.4 EXISTING ARRANGEMENTS: PUBLIC TRANSPORT & ACTIVE MODES

- 5.4.1 Melton Mowbray has a railway station, located south of the town centre, which is used for longer distance trips. Situated on the Birmingham to Peterborough line, there are direct services to Stanstead Airport, Cambridge, Ely, Peterborough, Nuneaton, Leicester and Birmingham New Street. However, there are no railway stations in the suburbs of the town or in the surrounding towns and villages; therefore local public transport is comprised solely of bus services.
- 5.4.2 Public transport currently plays a limited role in meeting the transport needs of the town and there is limited ability to enhance public transport services.
- 5.4.3 In the 2011 Census, for residents of the Borough of Melton, the mode share for bus was 2% and for rail it was 0.1%, compared to 72% for car and 15% for walking and cycling, which demonstrates that public transport is currently not popular.
- 5.4.4 Whilst there are currently 13 bus services that serve Melton Mowbray, frequencies are generally low that require users to plan their journeys in advance (rather than “turning up” to travel) and offer limited flexibility in terms of departure times. Service spans are limited with less frequent services in the evenings.
- 5.4.5 Bus routes within the town are short with very slow speeds as a result of being part of general traffic. Bus journey times are negatively affected by the same congestion encountered by other vehicles.
- 5.4.6 Importantly, the majority of bus services, including most of the local town services, are subsidised and are on the margins of what is commercially viable. Through the development of the overall Melton Mowbray Transport Strategy, opportunities will be explored to improve public transport journeys, but on the basis of the evidence above in terms of current usage, and ability to effectively improve the bus offer without solving congestion in the town centre first, any increases in trips by public transport are only likely to have marginal benefits in terms of tackling the town’s existing and future traffic problems in order to support growth.
- 5.4.7 Bus services are shown in Figure 5-2.

Figure 5-2 Map of bus services in Melton Mowbray (Leicestershire County Council)

- 5.4.8 Walking is a more appealing alternative to car trips than bus or rail, not least because distances in the town are usually relatively short: it is less than three miles from the northern edge of the town to the southern edge and around 1.5 miles from east to west.
- 5.4.9 However, there are limited, dedicated routes for walkers and cyclists in the town at present, with particular issues for pedestrian severance crossing Norman Way, Nottingham Road and Leicester Road junctions. The removal of traffic from the town centre, and associated key junctions needing to be traversed represents an important consideration of the scheme.
- 5.4.10 There are a number of pedestrian pinch points that become particularly apparent on market days. Crossing the A607 at Scalford Road to access the town and the market, and vice versa. There are often more pedestrians than footway space. The second is pedestrians crossing Leicester Street (A606/A607) in the town centre one way system to access the pedestrianised Market Place. There is a pelican crossing; however it is not located where most pedestrians attempt to cross. Pedestrians tend to use Park Lane and Church Street as this provides direct access to the large car park off Burton Road, and keeps them away from the busy, heavily trafficked Burton Street (A606). At the point where many pedestrians attempt to cross, the footway is very narrow on the south side of the road, and it is also where there is a pinch point in the carriageway making it a narrow pass for two cars, which inevitably get very close to the edge of the footway.
- 5.4.11 There are also issues regarding the crossing of Wilton Rd which is significant as it has a sizeable car park and bus drop off location on its west side, but the town centre is east. Crossing points are not ideally located here and a refuge aligned with the entrance to the car park encourages pedestrian crossing across 3 lanes of traffic.
- 5.4.12 Any improvements to town centre traffic conditions, will also offer significant corresponding benefits for the public transport offer in Melton Mowbray too.

5.5 IDENTIFIED PROBLEMS AND ISSUES

5.5.1 As part of the process of developing the transport strategy for Melton Mowbray, detailed feasibility studies have been undertaken to evaluate the existing and future problems and issues prevailing within the town without any transport intervention - and to consider a range of potential transport measures as the emerging Local Plan has developed.

5.5.2 These studies include:

- Melton Transport Strategy Evidence Base (Stage 1 – Through Traffic Analysis, 2014);
- Melton Transport Strategy Evidence Base (Stage 2 – Non-Through Traffic Analysis, 2014);
- Melton Transport Strategy Evidence Base (Stage 3 – Analysis of Traffic at Points of Interest, 2015);
- Cumulative Development Impacts Assessment (2014); and
- Option Appraisal Report (2016, refreshed in 2017 with the new LLITM model).

5.5.3 These documents have been used, together with the recently updated LLITM model (in 2017 to a 2014 base), to inform and evidence the current traffic-related problems and issues in Melton Mowbray.

5.5.4 This refreshed evidence, alongside that being presented in the Strategic Case, is also detailed in the 2017 Options Assessment Report- Annex 1.

5.5.5 The model validation report for the LLITM 2014 Base Model has been made available to DfT as part of the submission, alongside a Local LMVR that highlights the performance of the (same) model in the vicinity of the Melton Mowbray to specifically support the OBC.

1) HIGHLY SIGNIFICANT LEVELS OF CONGESTION

- 5.5.6 Melton Mowbray experiences congestion at numerous points in the town centre and along key approach routes to the town centre. This is on almost all radials, and at the critical junctions identified in the previous section.
- 5.5.7 The extent of congestion is therefore right across the town, and covers all cross-town routes. This represents a key point in terms of the need for intervention.
- 5.5.8 Further, Melton Mowbray experiences high levels of congestion. Melton Mowbray has one of the highest levels of delay per mile of any area in Leicestershire, including the City of Leicester (HPIG Report, 2015).
- 5.5.9 This congestion arises due to the extent of through traffic, intra-town traffic, and traffic with destinations in Melton Mowbray itself, alongside network capacity that is limited by the number (and historic scale) of cross town routes, as well as geographical constraints from the river and rail line that funnel traffic to a limited number of key junctions.
- 5.5.10 As well as issues at these junctions, the slow speed of traffic through the centre of Melton Mowbray also encourages rat-running - especially through the historic centre, via routes such as Chapel Street and King Street that are not intended for such purposes.
- 5.5.11 Traffic data for Melton Mowbray, shown in Figures 5-3 to 5-6, reveals the extent of the congestion problem. On these maps, red indicates slow-moving traffic (<10mph) while green indicates smooth traffic flow.
- 5.5.12 These plots show that traffic congestion is demonstrated on all links in the town approaching the town centre, and across the whole extent of the town centre on a typical AM and PM peak. Vehicle movements are particularly slow on the A606 (north and south of the town), the A607 (east and west of the town) and on the western and southern sides of the town centre.
- 5.5.13 Figure 5.5 indicates that on market-days there are significant levels of congestion even in the inter-peak, in addition to those experienced in the AM and PM peaks. Vehicle movements are slow in the town centre and on the northern radials across large parts of the day.
- 5.5.14 To demonstrate this above is actually traffic-related congestion, Figure 5.6 shows a typical off-peak hour in Melton Mowbray by comparison.
- 5.5.15 It is noted that travel speeds are consistently green across the town and town centre in the off-peak; demonstrating that the AM and PM peak patterns, as well as non-traditional peak hours on market days are reflective of the constraint placed on traffic by the town centre network. Many routes show at least a 20mph difference between peak and off-peak speeds.

Figure 5-3: AM Peak hour Speeds- Melton Mowbray

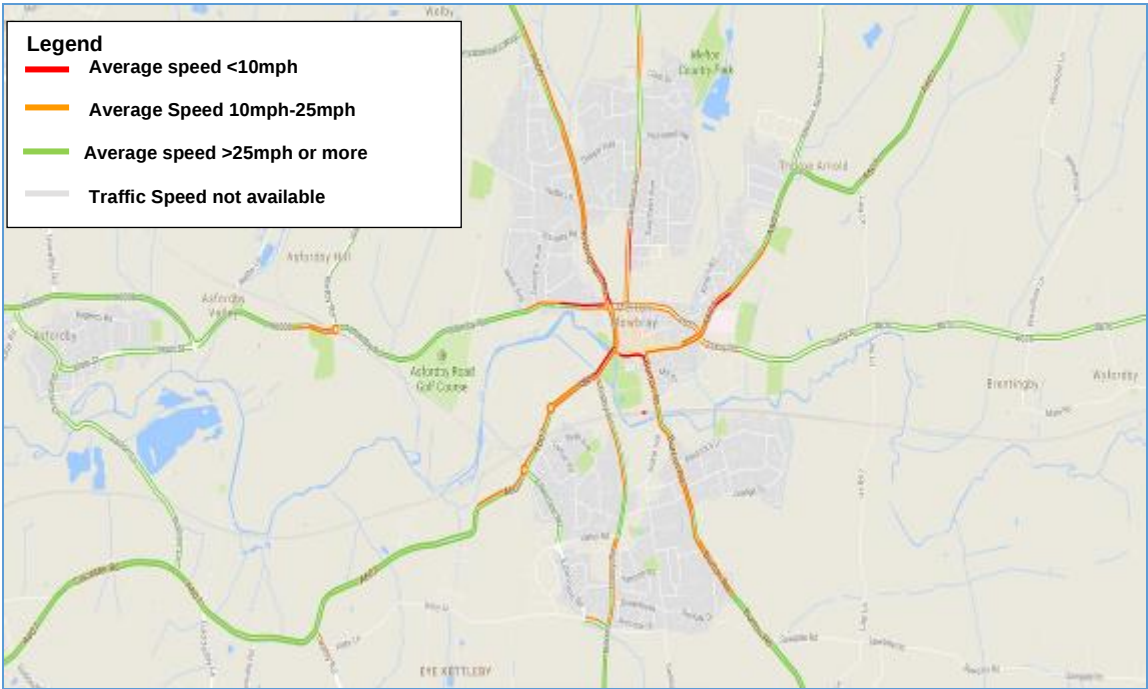


Figure 5-4: PM Peak hour Speeds- Melton Mowbray



Figure 5-5: Inter-Peak Hour- Melton Mowbray on Market Days

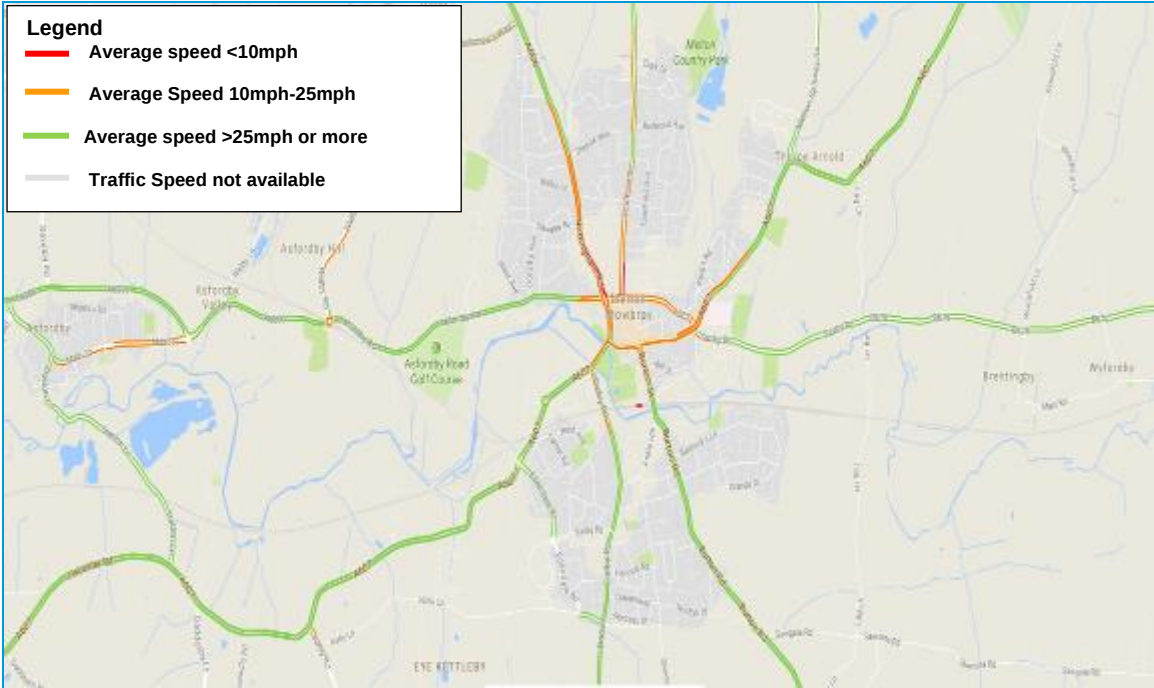


Figure 5-6: Off-Peak Hour- Melton Mowbray (No delays)



- 5.5.16 This pattern is created as a function of traffic volumes, through a constrained market town centre. Indeed, traffic volumes have seen significant increases in recent years, with traffic volumes in the town being significantly higher than previous 2008 pre-recession peaks.
- 5.5.17 To analyse this further, traffic data on a number of key links into the Melton Mowbray town centre have been obtained from LCC for the periods 2008 and 2016, to understand recent traffic growth in and around Melton town centre.

Traffic counts have been obtained for the following links, shown in Figure 5-7

- 5.5.18 Figure 5-7 and a summary of the counts provided in Table 5-1:

- Melton Spinney Road;
- Scaford Road;
- Burton Road;
- Saxby road;
- Dalby Road;
- Leicester Road; and
- Nottingham Road.

Figure 5-7: Traffic Counts Location

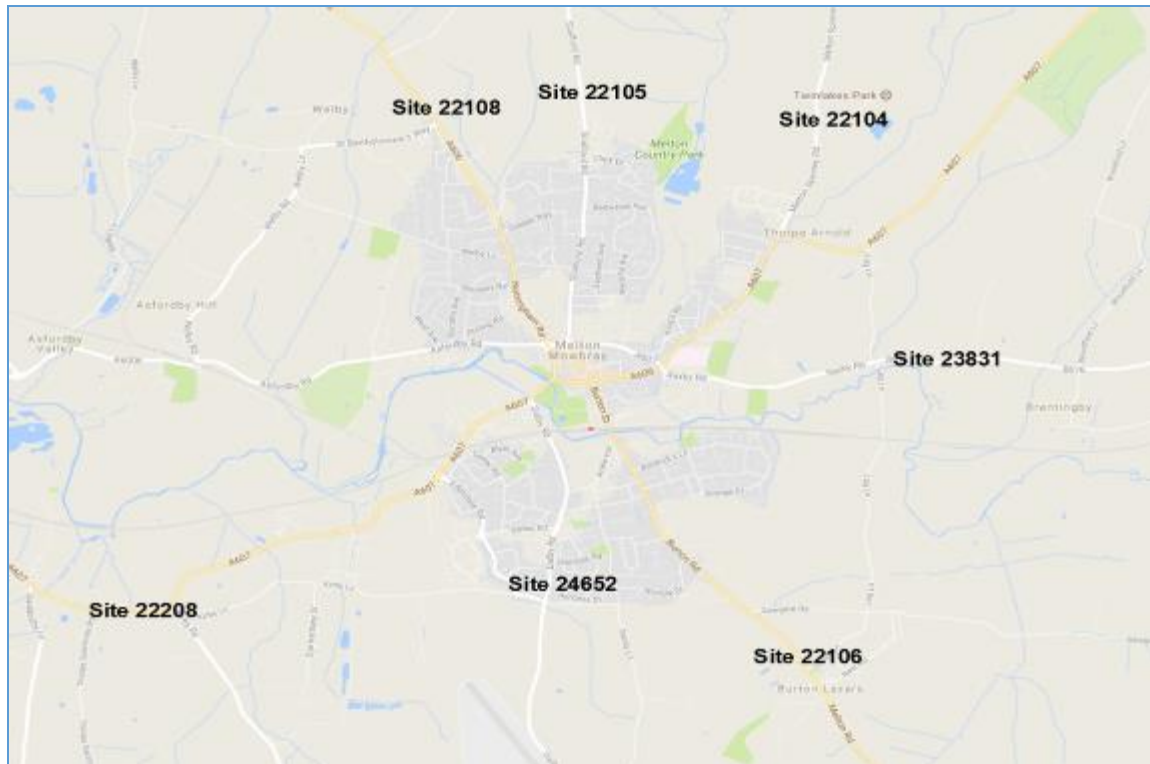


Table 5-1 2008 and 2016 Traffic Counts on Key Links (Vehicles)

Site Number	Location	Direction	2008			2016			% Growth		
			AM	PM	24h	AM	PM	24h	AM	PM	24h
22104	Melton Spinney Road, N of Thorpe Arnold	IN	97	99	926	92	134	1088	-5%	35%	17%
22104	Melton Spinney Road, N of Thorpe Arnold	OUT	46	86	948	64	87	1103	39%	1%	16%
22105	Scaford Road, N of Clark Drive	IN	134	123	1393	112	126	1340	-16%	2%	-4%
22105	Scaford Road, N of Clark Drive	OUT	120	120	1321	111	115	1288	-8%	-4%	-2%
22106	Burton Road, Burton Lazars	IN	492	447	5597	443	524	5655	-10%	17%	1%
22106	Burton Road, Burton Lazars	OUT	445	513	5682	512	452	5462	15%	-12%	-4%
23831	Saxby Road, E of Lag Lane	IN	210	165	2087	277	292	3367	32%	77%	61%
23831	Saxby Road, E of Lag Lane	OUT	127	170	1912	187	196	2412	47%	15%	26%
24652	Dalby Road, N of Kirby Lane	IN	217	191	2294	226	238	2478	4%	25%	8%
24652	Dalby Road, N of Kirby Lane	OUT	196	166	2129	195	196	2295	-1%	18%	8%
22208	Leicester Road, E of Kirby Bellars (A607)	IN	692	697	7595	671	695	7700	-3%	0%	1%
22208	Leicester Road, E of Kirby Bellars (A607)	OUT	684	650	7874	594	676	7955	-13%	4%	1%
22108	Nottingham Road, N of St Barts Way	IN	395	412	4597	402	491	4637	2%	19%	1%
22108	Nottingham Road, N of St Barts Way	OUT	344	392	4686	438	385	4706	27%	-2%	0.4%
Total On All Routes		IN	2237	2134	24489	2223	2500	26265	-1%	17%	7.3%
		OUT	1962	2097	24552	2101	2107	25221	7%	0%	2.7%
		Two-Way	4199	4231	49041	4324	4607	51486	3%	9%	5.0%

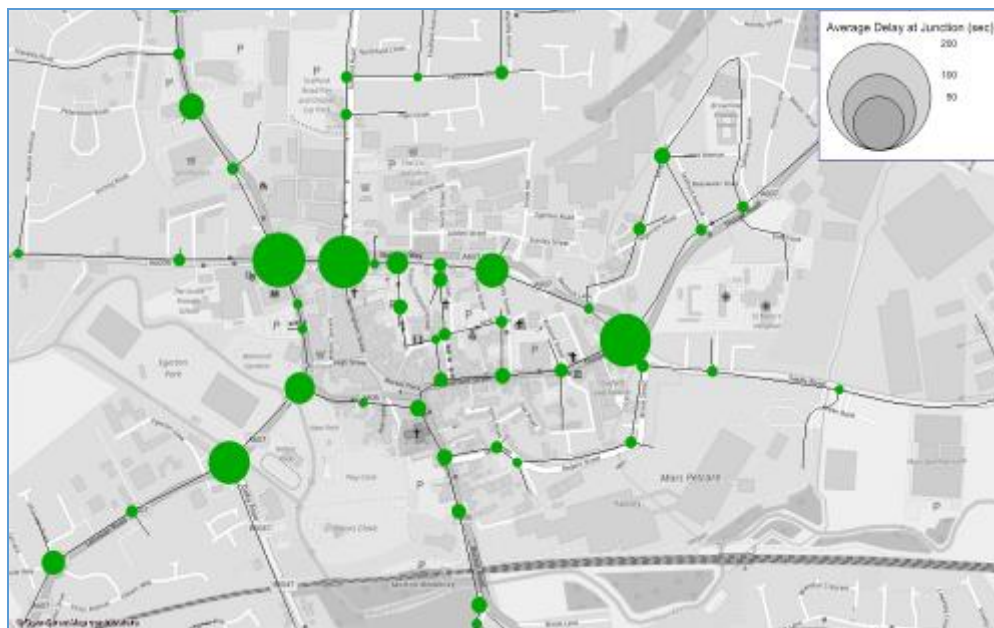
* No 2016 data, 2015 data used instead

- 5.5.19 A comparison of the two sets of counts (i.e. 2008 & 2016) shows that the overall traffic into Melton town centre has shown an increase from 2008 pre-recession peaks to 2016 of over 5% on a two-way basis; with a 7.3% increase in all-day traffic levels into the town.
- 5.5.20 The highest percentage increase traffic into the town centre is experienced on Saxby Road, followed by Melton Spinney Road and then Dalby Road.
- 5.5.21 Importantly, the primary, and already congested routes have the least amount of traffic growth in the AM and PM peaks. These are Burton Road, Leicester Road, Nottingham Road and Scaford Road. Such a pattern is highly demonstrative of significant rat-running through the town given existing peak hour constraints and congestion on main routes to/from and through the town.
- 5.5.22 Indeed, more detailed analysis of the above table indicates no traffic growth in the AM or PM peak for trips in the direction of most congestion (inbound to Melton in the AM Peak and outbound from Melton in the PM peak), whilst the opposing direction and all-day traffic totals continue to see strong traffic growth.
- 5.5.23 The above highlights the extent of current congestion issues surrounding the town centre, and shows that commuters are generally avoiding the use of these key routes as a result.

2) TOWN CENTRE JUNCTION DELAYS

- 5.5.24 The volume of through traffic passing through Melton Mowbray town centre results not only in congestion on links but also significant delays at several junctions.
- 5.5.25 There are two peak traffic movements: one related to school traffic, within and across the town; and another, in the more traditional peak hours, related to commuting and through traffic in the town.
- 5.5.26 Figure 5-8 from the LLITM SATURN model shows the average level of delay at pinch points in the town centre in the AM peak in 2014.

Figure 5-8 Node delays in the AM Peak in Melton Mowbray Town Centre in 2014



- 5.5.27 It should be noted that these are presented as demand weighted averages of the turning movements - rather than maximum delays observed for any turning movement - as well as being an average across the peak hours, in a neutral month.
- 5.5.28 The analysis therefore tends to underestimate peak hour congestion, but serves to highlight the capacity related delays at a number of key junctions in and around the town centre.
- 5.5.29 As an average across all turning movements, the A607/ Nottingham Road junction, Scalford Road, and Thorpe End junctions all experience 1.5 minutes average delay; with right and straight ahead movements at these junctions higher than this average.
- 5.5.30 Other junctions typically experience between 30 seconds to 1 minute of delay, as an average across all turning movements.
- 5.5.31 Importantly, it should also be noted that many vehicles have to pass through several of these junctions to reach, or cross, the town centre, so the overall level of delay for through journeys extends significantly beyond these levels.
- 5.5.32 For example, traffic crossing the town centre east-west or north-south would encounter three or four of the main pinch points and delay locations respectively, resulting in a typical (neutral day) delay of 4-5 minutes in total on this part of the journey.
- 5.5.33 To give these values some context, the centre of Melton Mowbray is little more than 500m across.

- 5.5.34 Alongside the scale of delay, this also creates network resilience issues; with limited route choice, and no alternatives across the town centre that don't already experience delay themselves.
- 5.5.35 To highlight this, journey time survey data carried out in 2014 on key routes across Melton Mowbray town centre has been obtained from LCC and reviewed to understand the level of delays and speeds currently experienced in and around the Melton Mowbray town centre.
- 5.5.36 The key routes for which journey time data has been obtained are shown in Figure 5-9 and a summary of the data in terms of journey time, average speed and delays provided in Table 5-2.

Figure 5-9 Melton Mowbray Town Centre – Journey Time Survey Routes in 2014

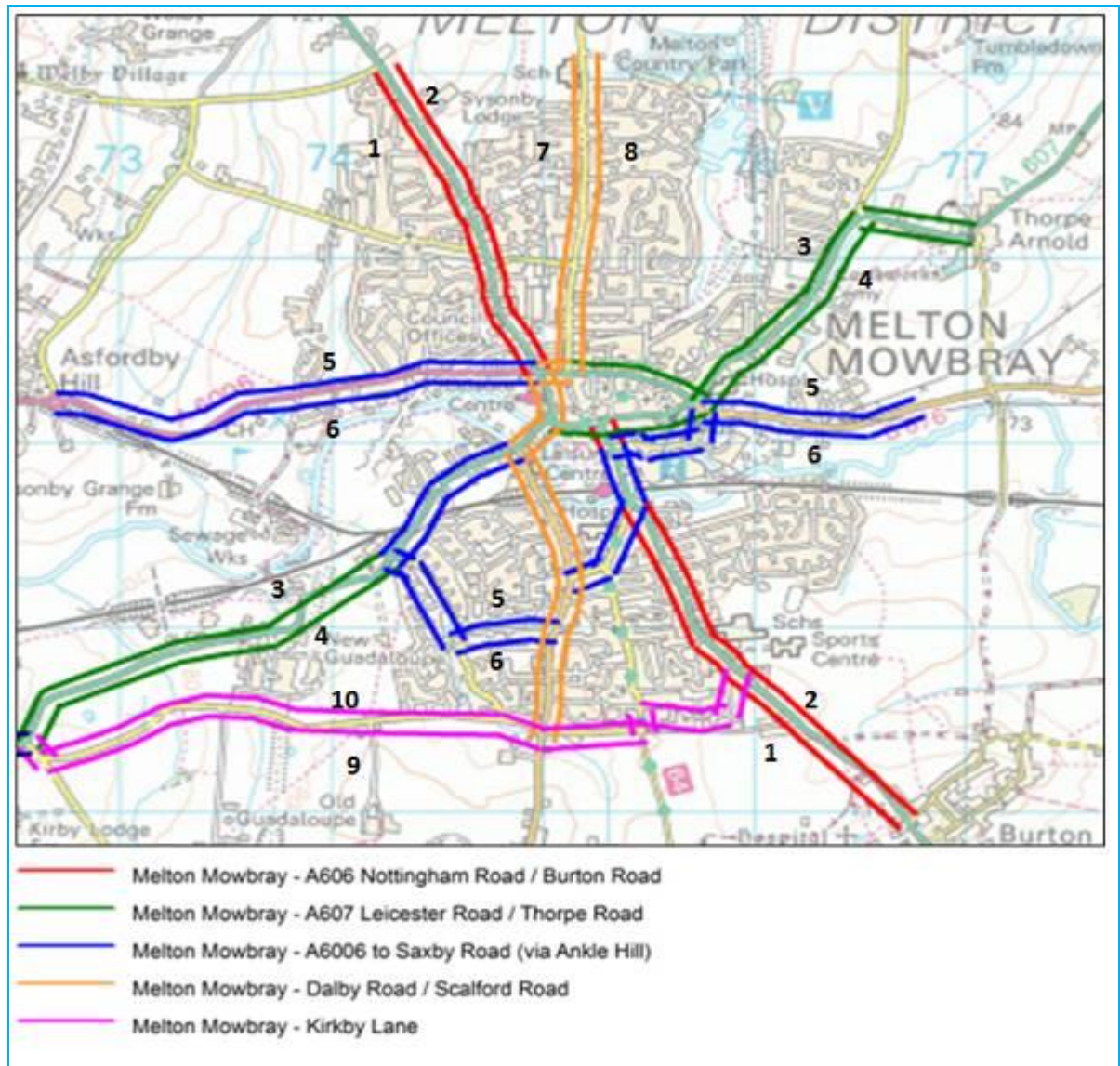


Table 5-2 Travel Speed and Delays in Melton Town Centre in 2014

Time Period	Route No.	Distance (miles)	Total Journey Time (seconds)	Average Speed (miles per hour)	Average Speed Town Centre (miles per hour)	Lowest Speed (miles per hour)	Lowest Speed Town Centre (miles per hour)	Total Delay (seconds)
AM	1	3.17	549.48	20.76	14.36	4.02	4.02	142.05
	2	3.62	742.48	19.41	13.77	4.10	4.10	270.22
	3	3.77	637.36	22.07	14.59	4.02	4.02	221.28
	4	3.59	577.00	22.48	13.67	6.90	6.90	176.74
	5	4.61	845.55	20.01	11.07	5.82	5.82	216.70
	6	4.61	802.89	20.69	16.25	4.02	4.02	174.03
	7	2.42	515.86	20.71	16.96	4.02	4.02	195.00
	8	2.42	519.38	20.44	12.47	1.88	1.88	198.58
	9	7.64	333.10	25.15	N/A	13.48	N/A	19.18
	10	7.64	336.34	24.47	N/A	14.05	N/A	22.41
PM	1	3.17	572.32	20.22	14.13	3.52	3.52	164.88
	2	3.62	726.34	19.37	13.50	4.90	4.90	254.06
	3	3.77	669.74	21.70	14.15	3.52	3.52	253.65
	4	3.59	570.00	22.56	13.45	5.81	5.81	169.73
	5	4.61	847.59	20.06	11.00	5.45	5.45	218.73
	6	4.61	820.23	20.59	15.97	3.52	3.52	191.37
	7	2.42	535.15	20.43	16.47	3.52	3.52	214.32
	8	2.42	516.71	20.30	12.36	2.74	2.74	195.88
	9	7.64	332.57	25.15	N/A	13.47	N/A	18.64
	10	7.64	336.26	24.46	N/A	14.06	N/A	22.35

- 5.5.37 As show in Table 5-2 travel speeds along these key routes typically average between 20mph to 25mph along the whole route; however the town centre is notably slower on average at 11-16mph, across most routes.
- 5.5.38 The lowest speeds are very low for most routes, ranging from 1.8mph to 4mph and occur in the town centre.
- 5.5.39 Total delays along all these routes except Kirby Lane (Route 9 and 10 that does not pass through the town centre) range from 2 minutes to 4.5 minutes across the town centre, on average.
- 5.5.40 The highest delays are experienced along the A606 Nottingham Road / Burton Road, followed by the A607 Leicester Road / Thorpe Road, and then Scaford Road.
- 5.5.41 It should be noted that the above represents typical average hour delays; peaks within the peak hour, typically around 08:30 and 17:00 are greater than those above.

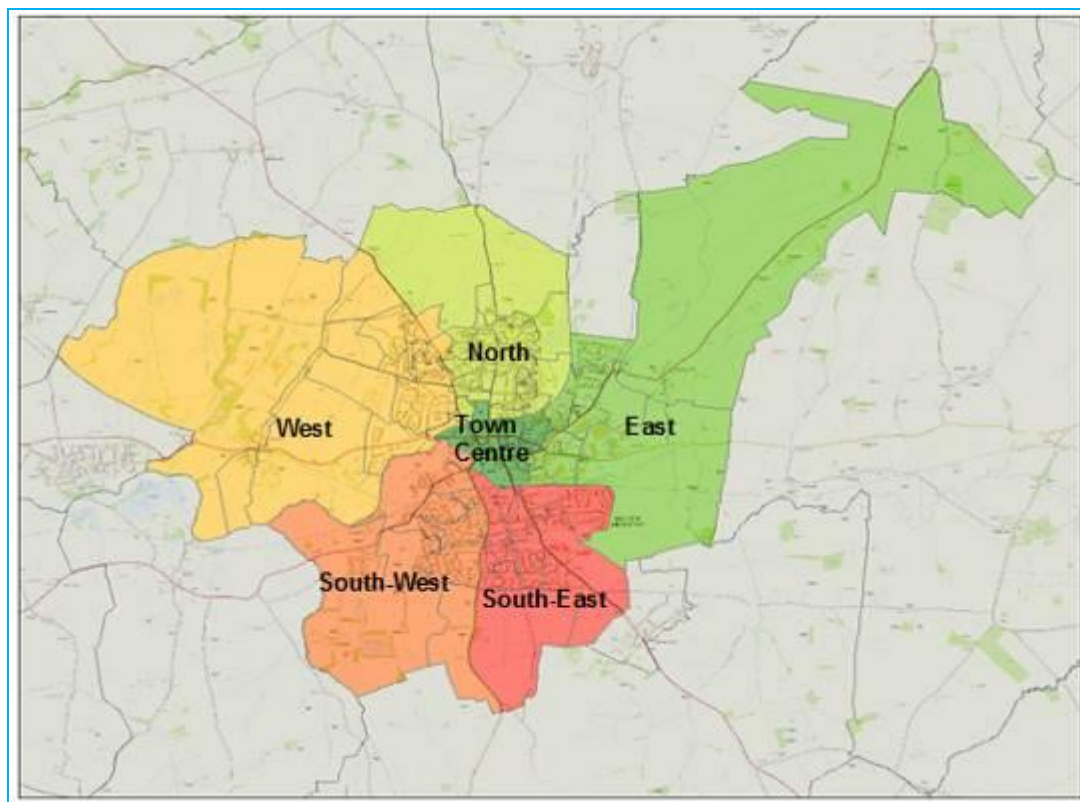
3) HIGH LEVELS OF THROUGH TRAFFIC

- 5.5.42 Analysis as part of the LLITM 2014 Base Model and the Transport Strategy Evidence Base notes that through traffic, via Melton Mowbray town centre, is one of the main contributors to heavy congestion during the peak times.
- 5.5.43 To highlight the levels and patterns of current through traffic in the town, sector-to-sector trip analyses were undertaken using 2014 base year traffic data.
- 5.5.44 Table 5-3 provides a list of the internal and external sector zones considered in the analysis, and Figure 5-10 shows the location of internal sector zones within Melton.

Table 5-3 Internal and External Sector References

SECTOR	DESCRIPTION	LOCATION
1	Town Centre	Internal
2	East	Internal
3	North	Internal
4	West	Internal
5	South-West	Internal
6	South-East	Internal
11	A606_NottinghamRd	External
12	ScalfordRd	External
13	MeltonSpinneyRd	External
14	A607_ThorpeRd	External
15	B676_SaxbyRd	External
16	A606_BurtonRd	External
17	DalbyRd	External
18	KirbyRd	External
19	A607_LeicesterRd	External
20	A6006_AsfordbyRd	External

Figure 5-10: Internal Sector Locations



5.5.45 Total overall (12 hour) traffic volumes for all movements (i.e. internal, internal-external and external and external) and just the through traffic (i.e. external-external) by route through Melton Mowbray town centre are shown in Table 5-4 and Table 5-5 respectively.

Table 5-4 2014 All Movement Traffic Flow – All Vehicles

2014_Base	Town Centre	East	North	West	South-West	South-East	A606_NottinghamRd	ScafordRd	MeltonSpinneyRd	A607_ThorpeRd	B676_SaxbyRd	A606_BurtonRd	DalbyRd	KirbyRd	A607_LeicesterRd	A6006_AsfordbyRd	Total	Percentage of Traffic on Road associated with Through Traffic
Town Centre	2,235	1,610	1,749	762	1,689	2,074	563	101	77	682	215	585	194	0	736	847	14,121	
East	1,640	1,400	1,116	231	767	1,102	221	1	484	739	380	329	145	0	564	434	9,552	
North	1,653	1,078	1,284	655	1,406	1,418	1,120	582	8	79	207	398	144	0	416	298	10,747	
West	824	309	614	1,092	676	187	760	112	3	85	135	362	95	0	50	2,010	7,313	
South-West	1,659	732	1,406	541	1,768	753	184	113	30	276	75	480	205	134	2,434	40	10,831	
South-East	1,446	866	1,277	144	548	999	178	0	58	335	86	675	198	0	598	257	7,667	
A606_NottinghamRd	668	251	1,059	669	143	166	0	0	0	4	77	885	56	0	2	8	3,988	25.9%
ScafordRd	136	9	490	78	43	15	0	0	0	0	0	80	0	0	0	9	861	10.4%
MeltonSpinneyRd	113	447	7	2	79	98	0	0	0	5	1	114	31	0	16	2	916	18.6%
A607_ThorpeRd	748	727	52	63	278	375	3	0	6	0	1	19	151	0	246	79	2,749	18.4%
B676_SaxbyRd	321	573	181	49	85	86	23	0	1	1	0	0	5	0	328	106	1,758	26.4%
A606_BurtonRd	571	321	434	357	479	617	1,304	0	29	19	0	0	54	0	977	237	5,400	48.5%
DalbyRd	206	178	113	79	244	263	63	0	25	133	5	72	0	0	6	18	1,405	23.0%
KirbyRd	37	0	31	19	134	0	0	0	0	0	0	0	0	0	202	0	423	-
A607_LeicesterRd	884	520	490	85	2,283	602	5	16	3	216	225	840	7	237	0	1	6,412	24.2%
A6006_AsfordbyRd	1,133	581	359	1,884	25	48	9	16	2	119	147	187	22	0	1	0	4,532	11.1%
Total	14,275	9,604	10,660	6,711	10,645	8,802	4,434	942	726	2,693	1,553	5,026	1,308	371	6,578	4,348	88,675	
Percentage of Traffic on Road associated with Through Traffic							31.8%	3.5%	9.0%	18.4%	29.3%	43.7%	24.9%	-	27.0%	10.6%	32.1%	

Table 5-5 2014 External to External Traffic Flow – All Vehicles

2014_Base	A606_NottinghamRd	ScafordRd	MeltonSpinneyRd	A607_ThorpeRd	B676_SaxbyRd	A606_BurtonRd	DalbyRd	KirbyRd	A607_LeicesterRd	A6006_AsfordbyRd	Total
A606_NottinghamRd	0	0	0	4	77	885	56	0	2	8	1,033
ScafordRd	0	0	0	0	0	80	0	0	0	9	90
MeltonSpinney Rd	0	0	0	5	1	114	31	0	16	2	170
A607_ThorpeRd	3	0	6	0	1	19	151	0	246	79	505
B676_SaxbyRd	23	0	1	1	0	0	5	0	328	106	465
A606_BurtonRd	1,304	0	29	19	0	0	54	0	977	237	2,620
Dalby Rd	63	0	25	133	5	72	0	0	6	18	323
Kirby Rd	0	0	0	0	0	0	0	0	202	0	203
A607_LeicesterRd	5	16	3	216	225	840	7	237	0	1	1,549
A6006_Asfordby Rd	9	16	2	119	147	187	22	0	1	0	501
Total	1,408	33	66	497	456	2,196	326	237	1,779	461	7,458

- 5.5.46 Analysis of the LLITM 2014 base model shows that there are approximately 7,500 through traffic movements (7am-7pm) per day across all routes.
- 5.5.47 When looking at the breakdown by route, the largest concentration of through traffic movement is along the A606 axis, constituting more than 40% of total traffic on that route.
- 5.5.48 The percentage of through traffic in the east-west direction is also high, at 25 to 30% of traffic on these routes, with similar through traffic percentages also observed on Dalby Road and Melton Spinney Road.
- 5.5.49 Importantly, Table 5-4 and Table 5-5 show that:
- Whilst most traffic to/from the town has origins and destinations in the town centre, there is a significant amount of through traffic in Melton Mowbray in total;
 - This varies by route, but is highest for the A606 Burton Road, followed by the A606 Nottingham Road. The A607 Leicester Road and Saxby Road have the next highest percentages.
 - Internal through traffic within the town is also apparent, with the North and South of Melton Mowbray creating the most traffic demands (origin and destination).
 - The A607 Leicester Road is the highest trafficked road, but most demand is to/from south-west Melton Mowbray and the town centre to Leicester, and that does not pass through the town;
 - East-West movements internally across Melton Mowbray are typically lower than those North-South and that North-South represents the greater total traffic volume.
- 5.5.50 However, it is important to note that being able to cater for east-west movements is important from a network resilience point of view. Melton Mowbray is not a main through-route for freight between the M1 (including East Midlands Airport) and the A1 (onto ports such as Felixstowe), but is an alternative freight route for such movements during periods of network disruption; as well as being a key freight trip generator and attractor in its own right.
- 5.5.51 Total through traffic volumes on all routes are shown graphically in Figure 5-11 for the 2014 Base AM Peak and Figure 5-12 for the 2014 Base PM Peak.
- 5.5.52 Figure 5-11 to Figure 5-12 also show the use of Church Street and King Street as a rat-run through the town centre, as well as Dalby Road and minor routes such as Ankle Hill to the south of the town centre to avoid the key, capacity constrained junctions.

Figure 5-11: Through Traffic in the AM Peak in 2014 (All vehicles)

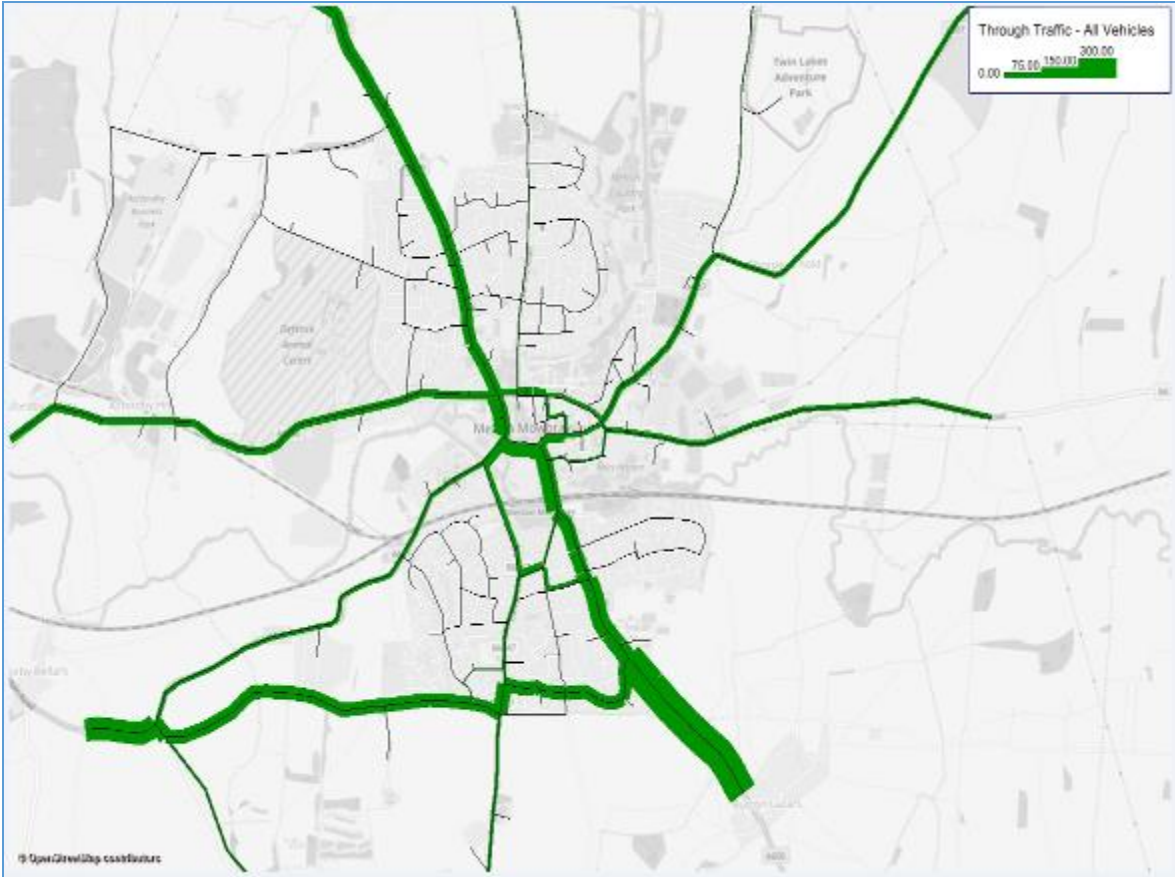
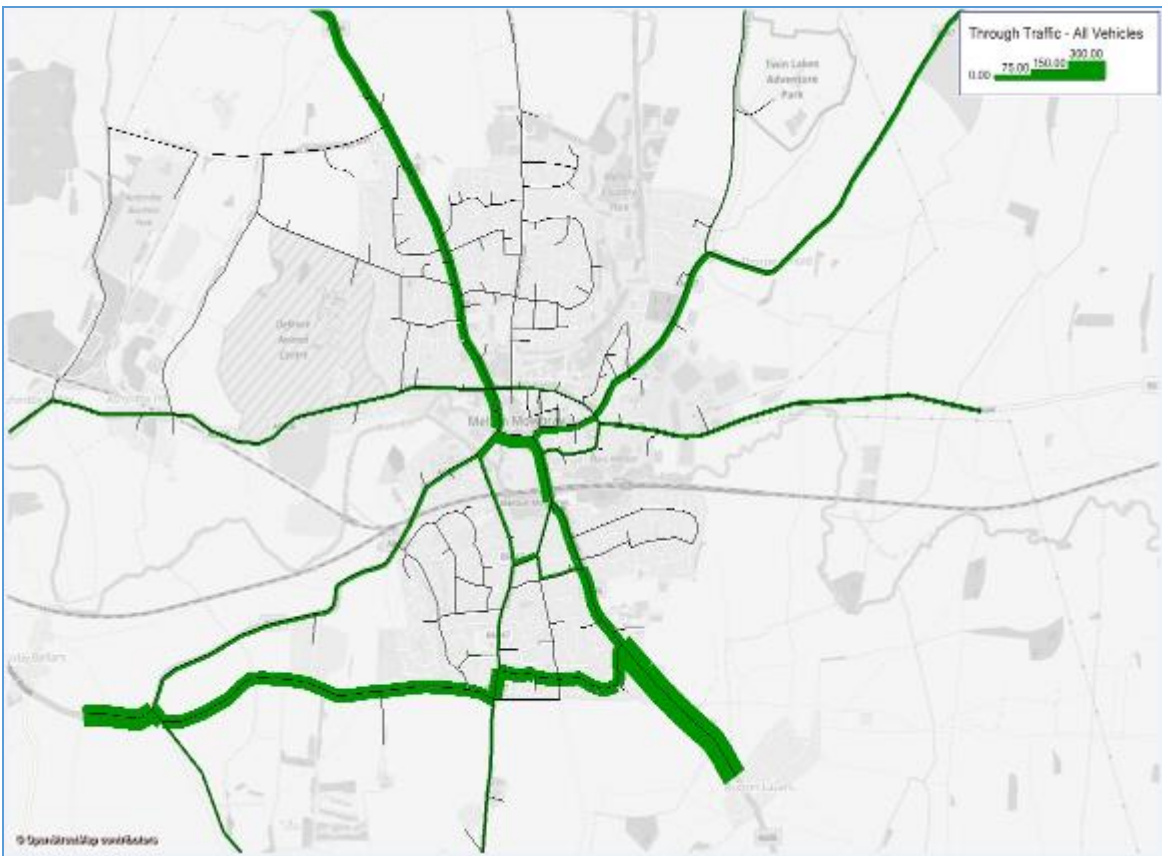


Figure 5-12: Through Traffic in the PM Peak in 2014 (All vehicles)



4) HGV MOVEMENTS THROUGH THE TOWN CENTRE

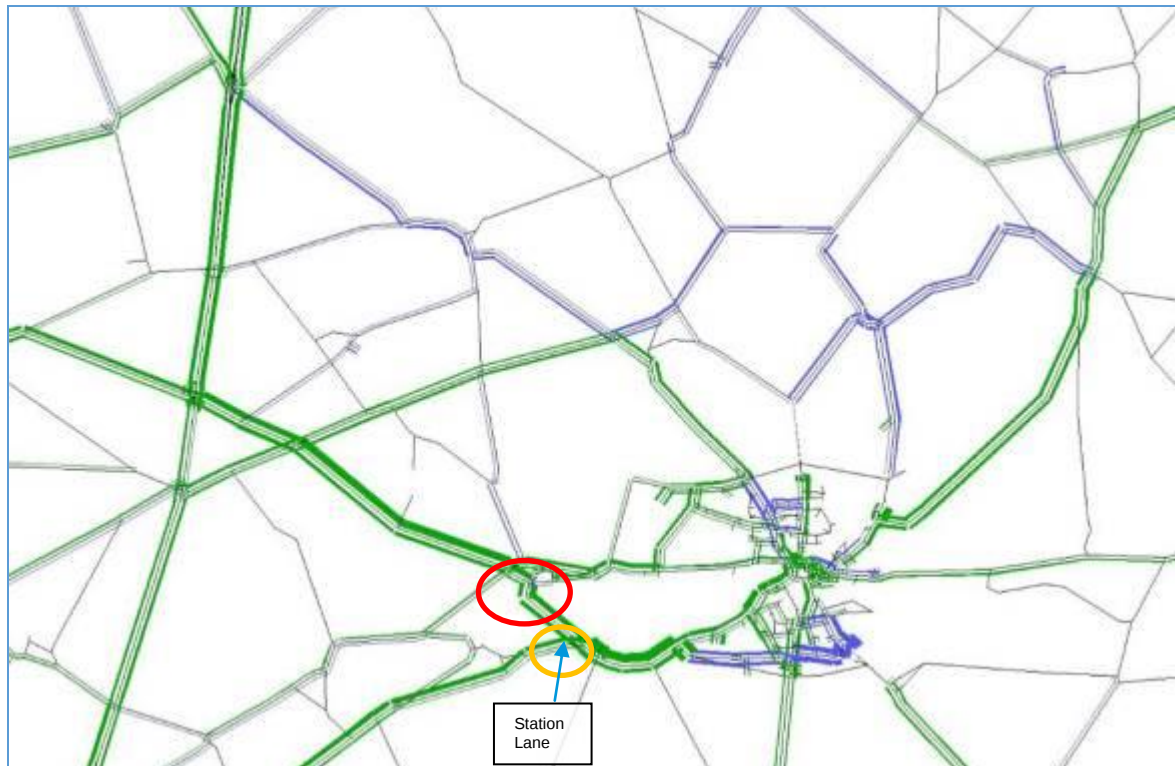
- 5.5.53 The centre of Melton Mowbray faces two traffic problems related to Heavy Goods Vehicle (HGV) and Light Goods Vehicle (LGV) movements.
- 5.5.54 First, the industrial area to the east of the town centre generates a significant number of HGV and LGV movements, many of which use the town centre to access or egress manufacturing premises (particularly for the industrial estate in the east of the town).
- 5.5.55 Secondly, there are a significant number of through traffic HGV and LGV movements, with non-Melton Mowbray destinations. Both types of HGV and LGV movement create problems in the town centre, including safety, noise and air quality problems.
- 5.5.56 The 2017 Options Assessment Report (Annex 1- Section, Appendix C) provides a full breakdown of through traffic movements by route, disaggregating the total above further into LGV and HGV movements.
- 5.5.57 The analysis shows that LGV and HGV's both have typically higher proportions of through movement than car vehicles as a whole. LGV proportions vary between routes, but through traffic proportions are typically between 25 and 70%; and that are generally highest on the main A road routes.
- 5.5.58 The highest values are noted on the A606 Burton Road (73%) followed by the A606 Nottingham Road (60%). Leicester Road (A607) whilst having the highest total number of LGV movements, has a relatively low proportion of through traffic movements. This is because it is the main route between Leicester and the employment area to the south west of Melton, which the majority of trips using Leicester Road have destinations. Importantly, therefore they do not cross through the town.
- 5.5.59 The same pattern is noted in terms of HGV movements. Most HGV movements are generated/ attracted to/from the South West and Eastern parts of Melton Mowbray, where most existing employment and manufacturing activities are located. However, given Melton's position on a number of major A roads, and a wide range of manufacturing, supplier and agricultural destinations around the town and in the rest of the Borough overall HGV through traffic proportions are higher still, and typically ranging between 50-90%, with the highest proportions generally to the East, North and North West of the town.
- 5.5.60 Moreover, HGV and LGV through traffic volumes are forecast to increase significantly and will be a major component of the overall projected growth in through traffic. This is especially given Melton Mowbray's growth as a designated Food Enterprise location, and as a result of the significant expansion proposed in the emerging Local Plan given the current capacity constraint to expansion of the town's key businesses associated with current sites.
- 5.5.61 This will increase the contribution that HGVs and LGVs make to congestion, and associated issues with HGVs and LGVs in the town centre without improvement.

5) FUTURE TRAFFIC-RELATED IMPACTS IN TOWN CENTRE AND VILLAGES

- 5.5.62 Because of the above problems, and extent of congestion in Melton Mowbray town centre, LLITM modelling shows that in the future, traffic-related problems and issues are likely to extend beyond the town centre without the scheme.
- 5.5.63 As traffic grows in the future and as the developer-link road to the south is built out during the 2020's, forecasts suggest that without the scheme, there will be a significant rise in vehicle movements through adjacent local villages.
- 5.5.64 This creates additional concerns in the context of traffic volumes, safety, and severance through some rural villages adjacent to Melton Mowbray itself- notably Asfordby, and Kirby Bellars.
- 5.5.65 This is as a result of continued slow speeds through the town centre, and the provision of the southern link road; if not also developed in conjunction with the wider MMDR scheme.

- 5.5.66 Figure 5-13 below shows an increase of nearly 300 pcu's an hour in each direction along Station Lane to the west of the town of Melton Mowbray, and through the villages of Asfordby, Asfordby Hill and Asfordby Valley (marked by a red circle) and surrounding settlements, including Kirby Bellars (marked by an orange circle).
- 5.5.67 This represents a diversion of traffic that is seeking to travel to the A46, and should be doing so via the A606, rather than through adjacent village locations.

Figure 5-13 LLITM 2021 v 2036 Core AM Peak Flows (Green indicates increase; blue indicates decrease)



- 5.5.68 As very rural routes, with limited visibility, sharp bends, a single lane humpback bridge and village locations, these routes are unsuitable for strategic traffic movements across the town - with the MMDR enabling a shift for such traffic onto the most appropriate routes in directly connecting the A606-A607-A606 corridor.
- 5.5.69 Any such increase in traffic will have a negative effect on road safety, air quality and severance in Asfordby and surrounding villages.

5.6 IMPACTS OF DOING NOTHING

A CONTINUATION OF CURRENT TRANSPORT PROBLEMS

TRAFFIC & CONGESTION

- 5.6.1 Without the scheme, the problems and issues identified in Melton Mowbray in the above section will continue and potentially worsen.
- 5.6.2 This means that roads will remain congested, with some of the highest levels of delay per mile in the County - impacting on both local residents, and those from a wider catchment seeking to make longer distance movements to/from Leicester, Nottingham, Loughborough, the M1 or A1.
- 5.6.3 Melton Mowbray will continue to have high levels of through traffic - through traffic that impacts on residents as a result of the routes that such traffic is forced to take, as well as further impacts on the attractiveness of the town to the visitor economy, curtailing the extent and attractiveness of the historic market town centre.
- 5.6.4 This is particularly the case given the proportion of traffic that is HGV and LGV – both as a percentage of overall traffic, and absolute volumes - with the corresponding noise, safety, severance and air quality problems also brought by these movements; alongside significant forecast growth of such movements in the future.
- 5.6.5 As a result of the current network configuration converging on several key junctions, and with the geographical constraints provided by the river and rail line, resilience of the network will remain poor with corresponding impacts on reliability. This will be exacerbated as Melton Mowbray continues to grow, with impacts over time also extending to adjacent villages as well as the town centre, if no improvements are delivered.
- 5.6.6 Considering the existing traffic conditions within the town, further improvements to public transport will also be difficult to bring into practice, alongside the further housing delivery and economic expansion of the town proposed in the emerging Local Plan.

DELIVERY OF HOUSING, JOBS AND ECONOMIC GROWTH

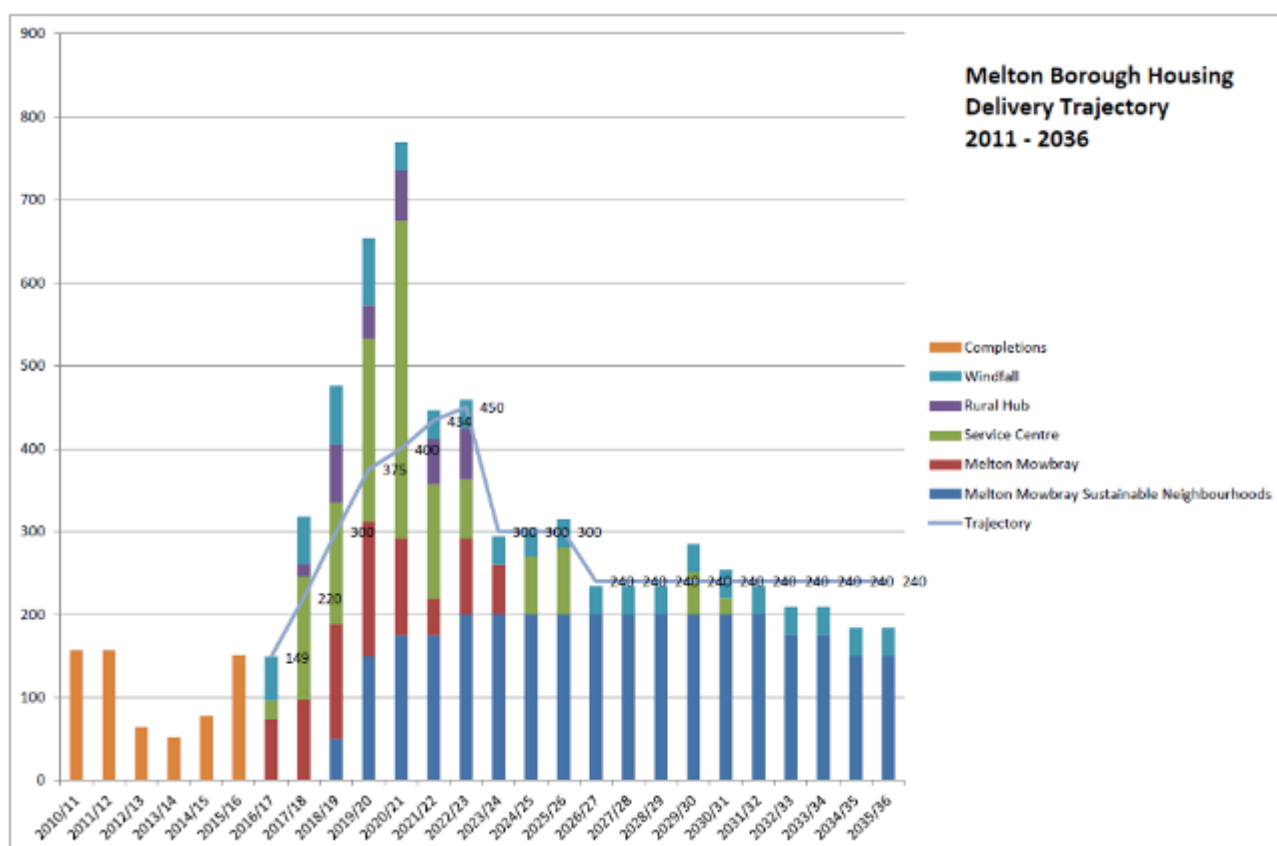
- 5.6.7 As noted in the Leicester and Leicestershire Strategic Economic Plan, Melton Mowbray is a thriving market-town, with a strong housing market and industrial base, offering significant local employment opportunities. Unemployment is exceptionally low against UK averages, at only 1.3%.
- 5.6.8 The town is the main economic centre for the Borough of Melton, providing a base for the larger employers and functioning as the key retail, leisure and service destination for the residents of the Borough.
- 5.6.9 Melton Mowbray is one of the key places to contribute to the wider economy of the County and the Country. It is nationally recognized as the “Rural Capital of Food” and the only place in Leicestershire to pioneer a Food Enterprise Centre, as detailed in the Leicester and Leicestershire LEP’s Strategic Economic Plan (SEP).
- 5.6.10 The SEP notes that ‘the Food Enterprise Centre has the potential to improve the performance of 40 businesses, create or attract 37 new businesses to the region, and support 55 graduates into SMEs and rural land management businesses.’ In addition, the market alone already attracts 167,000 visitors annually, with average spend of £30 per visitor and a gross spend estimated at £5.3m per annum.
- 5.6.11 Doing nothing will lead to the above problems and issues, slowing (and potentially actually curtailing) the significant levels of economic growth, job creation and housing delivery proposed as part of the emerging Local Plan; itself delivering over 4,500 dwellings and 6,000 jobs in total in Melton Mowbray, from over 31ha of such employment land being made available for expansion.

- 5.6.12 The economic mechanisms that will be specifically enabled by the MMDR to deliver this growth; for both housing and employment are detailed in the next two sections. This is also linked to the effective monitoring and benefits realisation management that LCC will be specifically undertaking in relation to these key objectives, as discussed in the Management Case Section 9.9.

HOUSING DELIVERY

- 5.6.13 A major constraint imposed by the existing transport system is the limitation to grow the town's economy and labour market catchment through delivery of housing and employment sites, and to attract further employment investments. An efficient, strategic transport solution is therefore the key to enable the town to deliver its development plan proposals - to solve local housing needs, those required to sustain local jobs growth, and support a national policy issue. Importantly, and demonstrative of Melton Mowbray's current vitality and demand for housing, over 2,500 dwellings associated with the emerging Local Plan total are already being actively put forward by developers through the planning process; and that makes the time for investment now.
- 5.6.14 This is not just to accelerate planned housing delivery - but also to accelerate the timings of further applications - as well as being able to act at the most opportune time to co-ordinate plans with the private sector (and secure private sector contributions) to reduce costs to the taxpayer and make the emerging Local Plan ambitions a reality.
- 5.6.15 Key evidence to support MMDR plans are provided by the developers, particularly of the Northern consortium and Southern Developers in the Letters of Support, appended to the Business Case in Appendix K.
- 5.6.16 These confirm commitment to develop, and submit an outline planning application for the first phase of development for the Northern Sustainable Neighbourhood in early 2018. Letters of support are also provided from Davidsons, on behalf of the Melton South Sustainable Neighbourhood, and whom have already submitted an outline planning application.
- 5.6.17 Further to developer commitment, it is important to note the particular role and function of the MMDR scheme in the acceleration of housing delivery plans for the town. Melton Mowbray has not only a significant amount of overall growth in the Local Plan, but that this growth is supported by infrastructure investment, specifically the MMDR that is referenced as a key infrastructure scheme in the Local Plan, and enabling a longer term acceleration of housing delivery in the town.
- 5.6.18 This is shown from the Local Plan delivery trajectory as detailed in Figure 5-14. It is important to note that this profile is itself derived from known approvals, planning applications made and developer returns regarding their own profiles of expected housing delivery as part of the Local Plan.
- 5.6.19 Firstly, Figure 5-14 highlights the significant growth in housing delivery already starting to happen in Melton Mowbray, through approved and submitted planning applications already underway in the town and surrounding Service Centres, prior to the delivery of the MMDR in 2021/22.
- 5.6.20 Equally importantly, the Northern and Southern Sustainable Neighbourhoods then ramp-up in terms of delivery from this point onwards; delivering a long term rate of growth double that of historic averages.
- 5.6.21 The MMDR scheme specifically supports this acceleration by providing the Northern section of the route earlier- by 2022, rather than on a gradual and more piecemeal basis, otherwise funded and delivered by the developers through housing sales receipts.
- 5.6.22 This 15 year acceleration of the northern link, provided for by the MMDR allows easier and multiple access to multiple land parcels associated with the Northern Sustainable Neighbourhood in particular, and that is the transport-led mechanism for enabling *and sustaining* an accelerated development profile from 2022 onwards.
- 5.6.23 It will also mean earlier transport benefits for residents.

Figure 5-14 Melton Mowbray Housing Delivery Trajectory



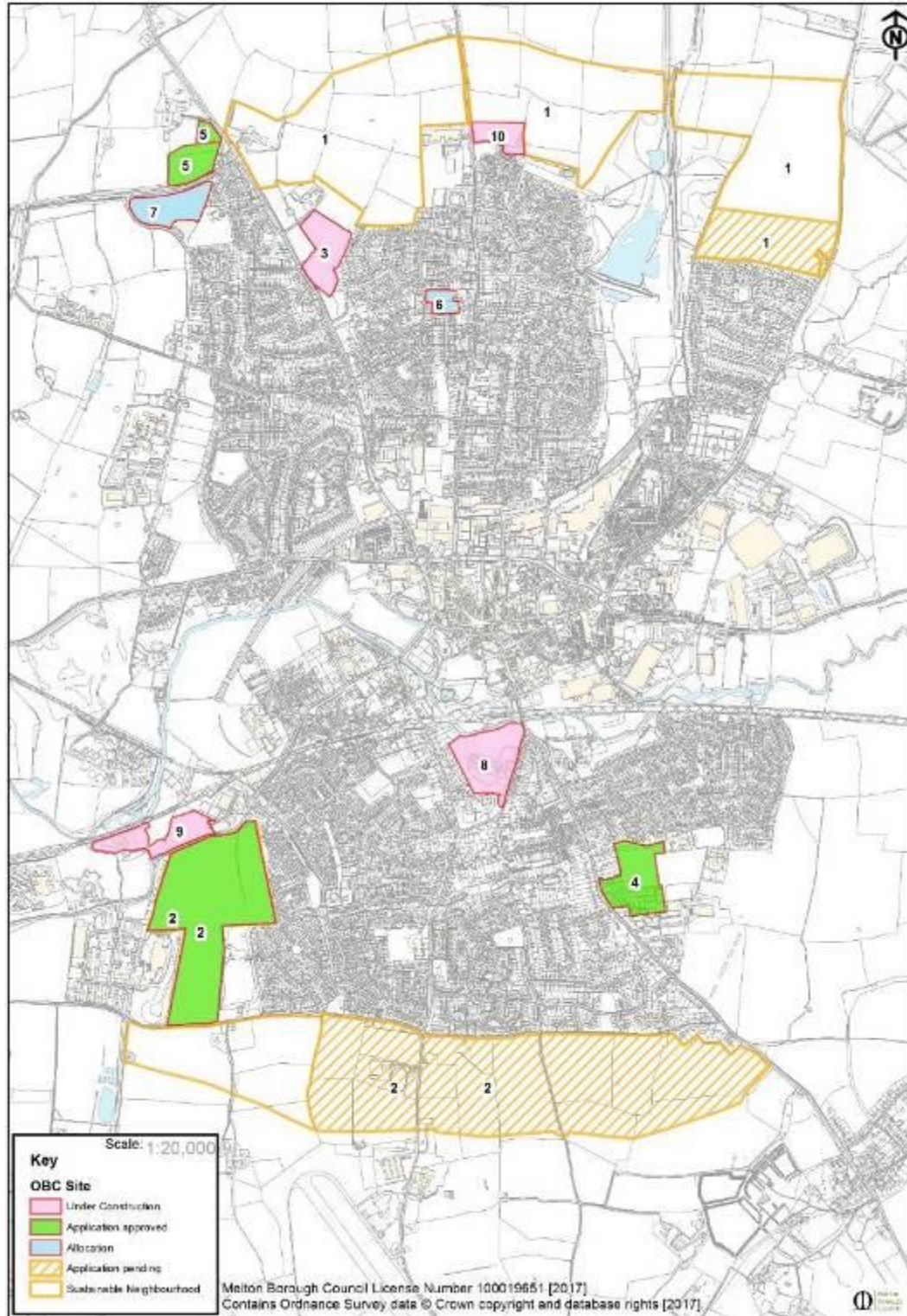
5.6.24 Table 5-6 and the supporting map following the table provides an overview of the key housing developments within Melton Mowbray, along with their planning status.

Table 5-6 Melton Mowbray Distributor Road – Key Housing Growth Sites

Ref. No.	Input	Description Central Assumption (dwellings)	Comments
Melton Mowbray			
1	Melton North Sustainable Neighbourhood	125dw	Planning submission 14/00808/OUT for 200dw pending; start date identified (19/20), with remainder post 2021
		1500dw	Land identified in local plan for housing provision. Planning applications for remainder of site in process of development
2	Melton South Sustainable Neighbourhood	205dw	Permission 15/00910/OUT approved for up to 520dw. Remainder for delivery after 2021.
		1675dw	Planning applications submitted to local planning authority; 16/00515/OUT for 1,500 dwellings, and 15/00127/OUT for further 175 dwellings
3	Land at Nottingham Road	85dw	Permission 14/00078/OUT approved for 85dw; start date identified (17/18)

4	King Edward VII – Burton Road	120dw	Permission 27/102016/OUT approved for 120dw; start date identified (18/19)
5	Hilltop Farm – Nottingham Road	45dw	Permissions 16/00281/OUT and 15/00593/OUT approved for 45dw; start date identified (19/20)
6	Land fronting Dieppe Way - Scaford Road	37dw	Allocated in Local Plan
7	Land adjacent Bartholomew's Way	70dw	Allocated in Local Plan
8	War Memorial Hospital, Ankle Hill, Melton Mowbray	98dw	Planning application 07/00733/FUL approved
9	Land West Of Bowling Green, Leicester Road, Melton Mowbray	97dw	Planning application 16/00290/FUL approved
10	Field No. 3310, Scaford Road, Melton Mowbray	80dw	Planning application 15/00178/FUL approved
11	Windfall Sites	88dw	With Planning Permission
12	Windfall Sites	34dw per annum	Near Certain to come forward

Melton Mowbray residential sites. MMDR Business Case



EMPLOYMENT

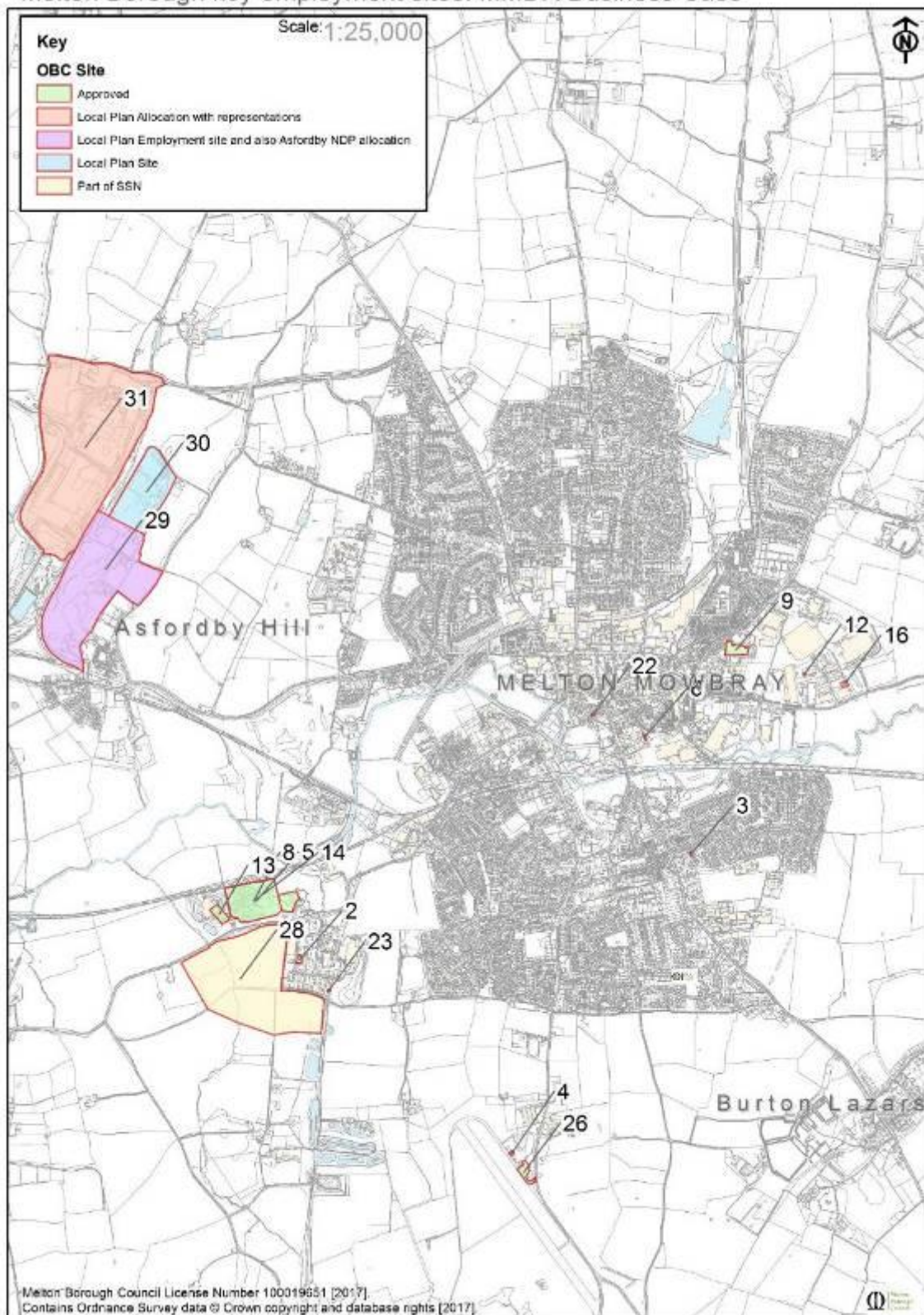
- 5.6.25 The MMDR will allow new land to be opened up to development to support growth. According to the evidence obtained in support of the Melton Local Plan (as detailed in the Employment Land Review 2015, and the Melton Economic Strategy 2015-2020), a number of the Borough's key employers are currently unable to grow due to a lack of local labour and shortage of freehold development sites available.
- 5.6.26 Melton has a very low unemployment rate (only 0.9% of the working age population claim Job Seekers Allowance). To enable businesses in the Borough to grow, increased labour supply must be provided in the locality.
- 5.6.27 More jobs require an increase in the working age population, which will arise from planned new households, mostly located within the two proposed Sustainable Neighbourhoods to the north and south of the town.
- 5.6.28 This is the key function that the MMDR helps enable, and sustain for the town, and is the primary employment expansion mechanism that the infrastructure directly helps unlock.
- 5.6.29 This is particularly important given the demographic challenges the town faces. The population is ageing so it is critical that sufficient housing is supplied to serve a growing workforce.
- 5.6.30 Moreover, in allocating 30ha of employment land, businesses will have the opportunity to expand and grow. The above reports highlight a lack of sufficiently large and suitable premises in the town, particularly around the east of the town centre. The additional housing and labour supply enabled by the MMDR (both from direct housing acceleration and wider catchment areas through enhanced accessibility of the town), as well as reduced congestion in the town provide the mechanisms for internal business growth and external investment into the town.
- 5.6.31 This is particularly highlighted in the letters of support for the scheme from Local Businesses, and that are provided in Appendix K.
- 5.6.32 It is of note that LUTI modelling undertaken as part of the Economic Case highlights that the change in accessibility to Melton as a whole will lead to an additional 762 jobs in the town. This total is derived only as a function of the accessibility and decongestion benefits brought about by the MMDR scheme; with further internal expansion of businesses expected as a function of the delivery of larger and expanded employment sites.
- 5.6.33 Table 5-7 and the supporting map following the table provides an overview of the key employment developments within Melton Mowbray, along with their planning status.

Table 5-7 Melton Mowbray Distributor Road – Key Employment Sites

Ref. No.	Input	Description of Model Central Assumption (GFA – sqm)		Comments
1	Barlows Lodge, Colston Lane	400	GFA	Planning approved- application 14/00664/FUL
2	25 - 29 Pate Road	1130	GFA	Planning approved- application 14/00704/FUL
3	Turnstyle Woodturners, Burton Road	110	GFA	Planning approved- application 14/00739/COU
4	The airfield, Dalby Road	9900	GFA	Planning approved- application 14/01013/FUL
5	Melton Foods, 3 Samworth Way	62900	GFA	Planning approved- application 15/00029/FUL
6	Flextraction Ltd, 44 Mill Street	307	GFA	Planning approved- application 15/00268/COU
7	Belvoir Brewery, Crown Business Park	3227	GFA	Planning approved- application 15/00272/FUL

8	Melton Foods, 3 Samworth Way	53449	GFA	Planning approved- application 15/00336/FUL
9	Melton Building Supplies, 52 Thorpe Road	6575	GFA	Planning approved- application 15/00716/FUL
10	Unit 13 Ground Floor, Crown Business Park	2256	GFA	Planning approved- application 15/00767/FUL
11	The Wheel, 9 High Street	239	GFA	Planning approved- application 15/00807/FUL
12	SEME, Unit 8, Hudson Road	136	GFA	Planning approved- application 15/00835/FUL
13	Kettleby Foods, 2 Samworth Way, Melton Mowbray, LE13 1GA	5000	GFA	Planning approved- application 15/00946/FUL
14	Melton Foods, 3 Samworth Way, Melton Mowbray, LE13 1GA	250	GFA	Planning approved- application 16/00258/FUL
15	Brickfield Farm, Whissendine Road, Leesthorpe, LE14 2XJ	486.6	GFA	Planning approved- application 16/00274/FUL
16	Land At Rear Of MasterFoods 2-8, Hudson Road, Melton Mowbray	2000	GFA	Planning approved- application 16/00449/FUL
17	Agricultural building off Melton Road	1520	GFA	Planning approved- application 16/00460/FUL
18	The Paddock, Brook Farm, Hickling Lane, Long Clawson	27500	GFA	Planning approved- application 16/00472/FUL
19	Land Adjacent of Unit 9, Station Road, Old Dalby	942	GFA	Planning approved- application 16/00585/FUL
20	The Manor, Plungar Lane, Barkestone le Vale, Nottingham	2000	GFA	Planning application 16/00595/COU
21	Woodhill Farm, Nottingham Lane, Old Dalby, LE14 3LX	4200	GFA	Planning approved- application 16/00602/FUL
22	Spencer Osteopath, 18 Church Street, Melton Mowbray, LE13 0PN	128	GFA	Planning application 16/00747/COU
23	28 Digby Drive, Melton Mowbray, LE13 0RQ	100	GFA	Planning approved- application 16/00868/FUL
24	The Garage. 17 Main Street, Stathern, LE14 4HW	327	GFA	Planning approved- application 17/00090/FUL
25	Perfectos Inks Ltd, Units 4 To 5, Normanton Lane, Bottesford	3159	GFA	Planning application 17/00332/COU
26	Land adjacent to Wendover Dalby Road Airfield, Dalby Road, Melton Mowbray	6000	GFA	Planning approved- application 17/00353/FUL
27	Field 7300, Six Hills Lane, Old Dalby	994.49	GFA	Planning approved- application 17/00462/FUL
28	Melton South Employment	200000	GFA	Part of Melton South Sustainable Neighbourhood, and Local Plan
29	Asfordby Hill Employment Site (Holwell Business Park)	150000	GFA	Local Plan Protected Employment Site
30	Asfordby Hill Employment Site (Holwell Business Park) (Asfordby Neighbourhood Plan)	32300	GFA	Local Plan Employment site and also part of Asfordby Neighbourhood Plan Allocation
31	Asfordby Business Park (Rebranded as Melton Commercial Park)	100000	GFA	Local Plan Allocation with representations

Melton Borough key employment sites. MMDR Business Case



ENSURING LOCAL BENEFIT FROM ECONOMIC GROWTH

- 5.6.34 In order to accelerate delivery of this growth, and in light of existing network constraints, the convergence of routes at congested junctions in the town centre, and highly significant levels of growth, it is recognised in the emerging Local Plan that a strategic intervention by means of the MMDR is required.
- 5.6.35 This is needed to support and accelerate housing and employment delivery, but also to enhance the vitality of the town centre, with the removal of traffic providing opportunities for town centre regeneration and renewal of the urban fabric.
- 5.6.36 Melton has a strong and active visitor economy; and one that will be promoted by the removal of through traffic from the town centre; enabling easier journey to and from the town. This is a key aspect of both Melton Borough Council's Economic Strategy, but also that of the Leicester and Leicestershire LEP in creating thriving market towns, with unique characters and economic/ cultural activities and attractions.
- 5.6.37 The scheme provides opportunities for walking/cycling and better bus travel times to ensure that the new housing growth, and existing residents, have greater sustainable travel opportunities than those offered presently.
- 5.6.38 Both of these elements, whilst not formally part of the funding request for the MMDR scheme, are key components of the overall Melton Transport Strategy, being progressed in parallel with MMDR scheme delivery.

5.7 SCHEME OBJECTIVES

5.7.1 The scheme objectives have been derived from the comprehensive evidence base previously detailed that has been collected and agreed by Leicestershire County Council as the Highway Authority and Melton Borough Council.

5.7.2 The schemes objectives are thus as follows:

- **Objective 1: Improve access to Melton Mowbray town centre enabling full growth potential:** To improve accessibility to jobs and retail centre via significantly reducing current severe levels of congestion and journey time unreliability in the peaks.
- **Objective 2: Reduce congestion on the local network, in particular key pinch points in and around Melton Mowbray town centre:** To divert the through traffic away from the town centre onto more suitable roads and therefore to improve the vitality and viability of the town centre;
- Objective 3: Reduce impact on rat-run routes via improving the south-north connectivity.
- Objective 4: Remove HGV and LGV through traffic in Melton Mowbray town centre.
- Objective 5: Improve access to the areas of potential development in the Local Plan.
- Objective 6: Promote a quality space in the town centre, suitable for non-transport uses and attractive to inward investment.
- Objective 7: Increase levels of public transport, walking and cycling use within the Study Area.
- Objective 8: Improve highway safety for all road users within the Study Area.

5.7.3 The objectives were derived from an evidence-led process, agreed through consultation undertaken between 2014 and 2016 with Local Authorities, the Local Melton Mowbray Transport Stakeholder Reference Group and workshops with local highways officers.

5.8 OPTION ASSESSMENT REPORT: SUMMARY OF OPTIONS TESTED

5.8.1 A full WebTAG-compliant Options Assessment Report (OAR) has been developed prior to the OBC being developed.

5.8.2 This is provided as a standalone Options Assessment Report in Annex 1, and summarised in this section.

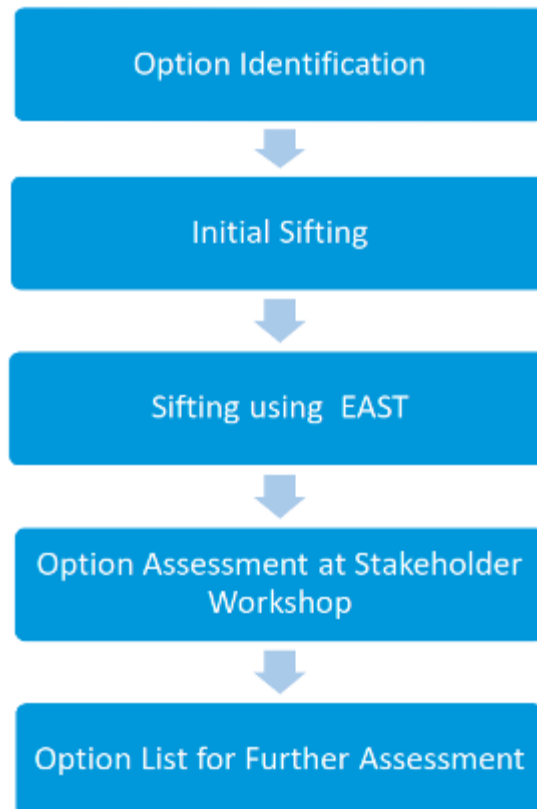
5.8.3 The OAR started from the underlying Transport Strategy Evidence Base, then being informed by a WebTAG, objective-led transport planning and option sifting process, with LLITM modelling and initial economic appraisal of preferred options to support final decision making and the development of options from a long-list to a short-list.

5.8.4 The development of the Options Assessment Report followed the recommended 8 steps detailed in Section 2.11.1 of Department for Transport (DfT)'s Transport Appraisal Guidance (TAG), with the Option Assessment Report documenting the process of identifying the need for intervention and the process of option development and selection.

5.8.5 This is highlighted in the Options Assessment Report- Annex 1- Sections 1 to 5.

5.8.6 A substantial amount of work has previously been carried out in the option development and initial sifting stage for this scheme. The Option Assessment Report therefore consolidates a number of previous reports (including the Transport Evidence Base for Melton - Phase 1 & 2 reports) – and presents the most recent analysis from the latest LLITM 2014 Base (2017 release) model and datasets, which supports development of the preferred scheme.

- 5.8.7 In 2015 and 2016, work undertaken on the Transport Strategy Evidence Base and the Melton Mowbray Options Appraisal Report highlighted current levels of congestion, through traffic and limited spare capacity for growth as critical issues facing the town.
- 5.8.8 The approach to generating options was led from the evidence base, following the steps indicated below, as recommended in DfT's WebTAG guidance.



- 5.8.9 Importantly, long list of potential options was generated with local stakeholder, officer and consultant input to provide an unbiased view of all historic proposals and local aspirations.
- 5.8.10 The long list was informed by the transport evidence base produced, and the conclusions of the Melton Transport Study Phase 1 Stage 1, which in summary were that:
- The town centre is already congested;
 - About one third of total traffic is from within the town, crossing the town centre;
 - Longer distance through traffic is about one fifth of total traffic;
 - HGV numbers are relatively low, but as they need to cross the town centre their impact is high;
 - Melton is relatively self-contained, with an average trip length of around 4km;
 - There is highly significant rat running to avoid congested junctions;
 - Low public transport connectivity, and slow journey times leads to a high car and walk/cycle share; and
 - Any additional development would have an area wide impact affecting several congestion points in the town as well as surrounding communities.
- 5.8.11 Options were proposed at the workshop consultation events with Melton Borough Council, Leicestershire County Council and other stakeholders, including local residents, held in December 2014.

- 5.8.12 A wide range of options were compiled which covered all modes and scales of options, and included public transport, highway infrastructure, and traffic demand management e.g. park and ride, land-use changes and cycling and pedestrian improvements.
- 5.8.13 The range of options also varied in terms of cost from low-cost, such as a junction improvement, to high-cost such as major highway infrastructure. Each option was placed in one of the following categories:
- Demand Management.
 - Network Improvement.
 - Non-motorised.
 - Public Transport.
 - Traffic Management.
- 5.8.14 In total, a long list of 60 transport options were identified and categorised as follows:
- 14 x Demand Management Options
 - 17 x Network Improvement Options
 - 5 x Non-Motorised User Options
 - 16 x Public Transport Options.
 - 8 x Traffic Management Options.
- 5.8.15 This list is included in Appendix A and B of the OAR- Annex 1.
- 5.8.16 The results of the initial sifting exercises are included in Appendix A and B with scores for options and the reason for not progressing further clearly recorded.
- 5.8.17 Options were generally not progressed where they:
- would clearly fail to meet the key objectives identified for intervention;
 - do not fit with existing local, regional and national programmes and strategies, and do not fit with wider government priorities; or
 - would be unlikely to pass key viability, deliverability and acceptability criteria (or represent significant risk) in that they are unlikely to be:
 - deliverable in a particular economic, environmental, geographical or social context e.g. options which would result in severe adverse environmental impacts which cannot be mitigated against or where the cost of doing so is too high;
 - technically sound;
 - financially affordable; and,
 - acceptable to stakeholders and the public.
- 5.8.18 Following initial sifting, 36 transport options were removed from the long list and 24 options were taken forward for further sifting. A spreadsheet-based tool, called the Melton Option Appraisal Tool (MOAT), was developed, based on the EAST tool recommended by DfT, and used for further sifting of the remaining options. This is detailed in Section 5.5 of the OAR- Annex 1, and is used to develop, summarise and present evidence on options in a clear and consistent format.
- 5.8.19 An example of the MOAT tool is shown below.

Option Details	
Option Number:	MM/PT-03
Option Description:	Improve/provide school bus services
Option Aim:	Reduce car trips to schools in particular during the AM Peak
Option Scheme Type:	Public Transport
Option Filtering	
Deliverability	Deliverable
Practical Feasibility	Feasible
Cost	<£250k
Perceived Value	May deliver value for money
Further Appraisal Required:	Judgement Required
Judgement Decision For Further Appraisal:	YES
Reason for Decision:	Success is dependent on cooperation of schools & parents, benefits are long term changes in travel habits, which may lead to a reduction in car trips generated by the schools
Option Appraisal	
Contribution towards the Study Objectives	Weighting Factor
1 Improve access to Melton Town Centre and the areas of potential development	2 Neutral
2 Reduce congestion on the local network, in particular key pinch points in and around Melton Mowbray Town Centre	2 +1
3 Address HGV impact in Melton Mowbray town centre	1 Neutral
4 Improve connectivity to local and regional centres for example Leicester and Nottingham	1 Neutral
5 Improve effectiveness of public transport facilities within Melton Mowbray	1 +1
6 Increase levels of walking and cycling within the study area	1 Neutral
7 Improve highway safety for all road users within Melton Mowbray	1 +1
8	1 Neutral
Overall Performance against the Study Objectives (*2 weighting factor applied to the highest priority Study Objectives)	
+4	

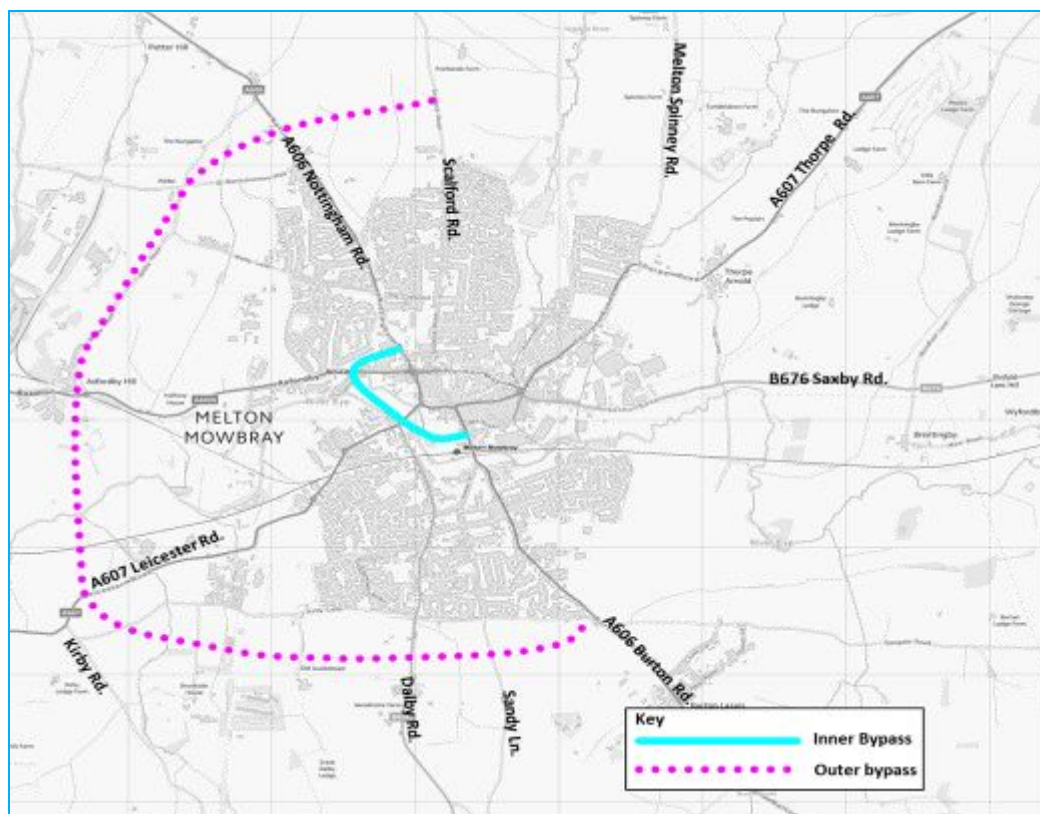
- 5.8.20 Importantly this stage comprised local resident and stakeholder inputs into the scoring, undertaken in Melton and with the local Melton Transport Reference Group in 2015, and across all options consistently, whether higher or lower cost, and across all modes.
- 5.8.21 A key and agreed outcome from this process was that due to the scale of current congestion, its causes and future growth levels, this generally ruled out the initially identified walking/cycling, and PT options, which would not provide sufficient amelioration of the problem. It was agreed that these measures would however be considered as part of the Wider Melton Transport Strategy.
- 5.8.22 The evidence base and scoring also highlighted that both congestion and through traffic within the town is a particular issue, especially north-south.
- 5.8.23 This drives a requirement for an intervention to cross the river/ rail line in the town to be effective - both in terms of mitigating current congestion and traffic pinch points in the town, as well as supporting and accelerating growth.

- 5.8.24 Subsequently, modelling in LLITM of potentially preferable and highest ranking options from the multi-criteria analysis of the 60 potential interventions assessed was undertaken.
- 5.8.25 This resulted in 6 bypass options of varying extents and locations around the town that could broadly be grouped into two categories: inner bypass options and outer bypass options.
- 5.8.26 The sets of options were appraised and modelled in detail using the LLITM model as part of the options sifting process; first to determine the scale of the highway scheme required, and second to identify the best location which would be the most cost-effective, while providing the greatest level of benefits to the town.

5.9 INNER BYPASS V. OUTER BYPASS OPTION ASSESSMENT (2015)

- 5.9.1 The option generation and multi-criteria analysis exercise for Melton Mowbray was conducted in April 2015 with the potential better performing schemes were modelled in LLITM v5.2.
- 5.9.2 This work tested a shorter Inner Bypass, as a lower cost option, and an Outer Bypass (at that time to the west of Melton Mowbray) to provide additional capacity to accommodate traffic from upcoming development proposals. The purpose was to decide the scale of highway intervention required.
- 5.9.3 The locations of these 2015 options are shown in Figure 5-15.
- 5.9.4 The outcome of the initial option assessment reconfirmed that a bypass option would form a sensible, required, and proportionate backbone to an integrated package of measures for Melton Mowbray given the current issues and scale of growth proposed.
- 5.9.5 However, the LLITM modelling tests concluded that an Inner Bypass would provide only very limited, and short term capacity to relieve congestion at some current congestion pinch points, and not significantly benefit through traffic or the town more generally. This is largely as a result of creating more complex, and still constrained junctions, where such a route needs to tie in with the existing, local network at and around the town centre.
- 5.9.6 Moreover, whilst acting as a bypass for the Nottingham Road (A606)/ Asfordby Road (A6006) junction, a short, inner bypass scheme has little benefit on other congested junction locations around the town centre; on approaches north and south to/from the town centre, and on key congestion points further east. The route would also be difficult to deliver, cutting through three of Melton's town centre parks.

Figure 5-15: Inner and Outer Bypass Options – 2015 Assessment

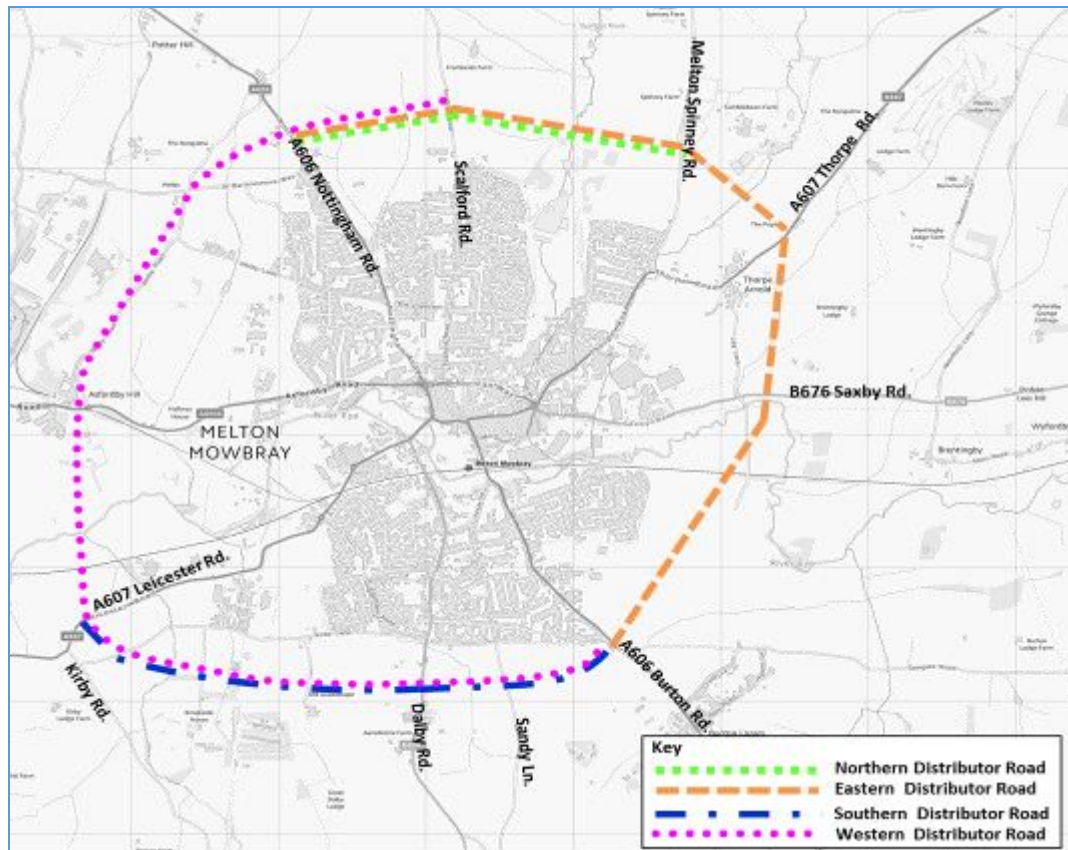


- 5.9.7 On the other hand, a potential Outer Bypass appeared to be a longer term solution for the town not only to address pinch points but also to support town's Local Plan growth.
- 5.9.8 Compared to the without scheme scenario, a significant proportion of the traffic flows were shown to reduce with the introduction of an Outer Bypass across Melton Mowbray.
- 5.9.9 As a result, this assessment recommended that the Outer Bypass accompanied by a series of network improvements within the town centre would be a potential long term solution to reduce the prevailing congestion and to support delivery of Local Plan development plan proposals. These development plans were themselves crystallising by 2015 at proposed levels approaching 5,000 dwellings at the time in the Borough, and with a similar expansion of employment also proposed.
- 5.9.10 The outcome of this work was therefore the emergence of an outer relief road as the preferred option for providing significant additional highway capacity, as reflected by the September 2015 Cabinet resolution *"That the County Council should work jointly with Melton Borough Council (MBC) to seek to develop a Melton Mowbray Transport Strategy, which would focus at this time on work to identify a preferred corridor for an outer relief road for the town"*.
- 5.9.11 However, it is important to note that due to its stage of development, the September 2015 Cabinet decision did not commit to pursuing a specific route or corridor (including either to the east or west of the town) for the outer relief road. Indeed, as part of the Cabinet resolution, further resources were committed towards developing a preferred corridor and associated further phases of assessment.

5.10 OUTER BYPASS OPTIONS ASSESSMENT (2016)

- 5.10.1 Following the appraisal of potential Inner and Outer 'Bypass' Options within Melton Mowbray in Mid-2015, and the preceding Transport Evidence Base for Melton (Phase 1 & Phase 2 Reports), further assessment was undertaken to determine the most beneficial and cost effective location of the 'Outer Bypass'. This was reported in the 2016 Options Assessment Report, and submitted to the DfT at the end of 2016.
- 5.10.2 Based on the knowledge gained from the Phase 1 and Phase 2 work on the Transport Strategy, especially in relation to both longer distance through traffic, and intra-town through traffic, the options became subsequently known as distributor roads.
- 5.10.3 On the basis of the patterns of through traffic identified in the town from this work, and the emerging locations of housing and employment growth in the emerging Local Plan, a total of four 'outer' distributor road options were tested, as developed from the options generation and shortlisting stage, and defined as follows:
- A Western Distributor Road, the pink dotted line in Figure 5-16. Linking the A606 Burton Road to the A607 Leicester Road to the A606 Nottingham road and on to Scaford Road;
 - A Northern Distributor Road shown by the green line in Figure 5-16. This option will link the A606 Nottingham Road to Scaford Road and Melton Spinney Road;
 - A Southern Distributor Road represented by the dark blue line in Figure 5-16 joining the A606 Burton Road and A607 Leicester Road; and,
 - An Eastern Distributor Road presented by the orange dashed line in Figure 5-16. The Distributor road would link the A606 Burton Road and the A606 Nottingham Road, via B676 Saxby Road; A607 Thorpe Road; Melton Spinney Road and Scaford Road.

Figure 5-16: Outer Distributor Road Options – 2016 Assessment



- 5.10.4** This comprised all options that were known, considered to be plausible and based on the evidence available, including traffic routing through the town and future demand, specifically:
- Two 'comprehensive' options providing a complete parallel route to the existing A606 through the town, to the eastern and western sides of the town respectively. The decision to assess 'A606 to A606' routes, rather than any other point-to-point alternatives, was based on the findings of the initial MMTS work. This showed A606 to A606 movements to be the highest volume through-traffic corridor within the town and therefore provided the greatest potential for significant traffic relief to the town if alternative routes were developed.
 - Two partial/lower-cost options around the northern (A606 Nottingham Road to Melton Spinney Road) and southern (A607 Leicester Road to A606 Burton Road) outskirts of the town respectively. The partial options were respective approximations for new link roads to be provided by developers, as part of the new Northern and Southern Sustainable Neighbourhoods proposed through the draft Melton Local Plan.
- 5.10.5** Critically each of these options connect together 2 (or more) of the main A-road radial routes into Melton, directly linked to the evidence base on through traffic movements and delay locations in the town. The inclusion of the Northern and Southern options on their own allows for clear, comparative evidence regarding the additional transport benefits of a fuller (more expensive) Eastern or Western route, as part of the scheme development process. This was considered important to ensure different scales of option were looked at, as well as route.
- 5.10.6** Each of these options were comparatively and consistently tested in the LLITM v5.2 model, the latest available at the time, and reported with a WebTAG compliant OAR produced in 2016 to assess these highway options. As the Local Plan was not yet at submission stage, two levels of growth were tested to see if the levels of growth made any difference to preferred options as recommended in DfT guidance.
- 5.10.7** Importantly, the OAR, for either level of growth, concluded that based on the traffic flow analysis, delay reduction impacts, transport user benefits and the lower cost of an Eastern Route, a distributor road to the east of the town was likely to be the most successful option in meeting the key objectives defined for Melton Mowbray above.
- 5.10.8** In particular, a scheme to the East was forecast to have 60-80% greater levels of travel time savings and user benefits compared to alternative options (depending on the level of growth); provide the highest level of congestion reduction at the key junctions in Melton Mowbray town centre, and provide the greatest benefits to through traffic as a shorter route. As a result, an eastern route could best accommodate future growth.

5.11 EVIDENCE FROM THE UPDATED MODEL (2017 OAR REFRESH)

- 5.11.1 As the Southern and parts of the Northern Route are coming forward as part of active developer planning applications, the core Western and Eastern Route options have been re-tested in the 2017 updated LLITM 2014 Base model.
- 5.11.2 This compares the Eastern and Western options (only), in recognition of the fact that the North and Southern routes, against WebTAG uncertainty level guidance (TAG Unit M4), are now both 'more than likely', and thus included in the model's do-minimum forecasting.
- 5.11.3 These tests were also undertaken to re-confirm the key choice of route (essentially east vs west) in the context of having an updated model available, and to further de-risk final decision making from the options work that has informed the Local Large Majors submission.
- 5.11.4 The conclusion of this work, using the latest LLITM 2014 model, shown in Table 5-8 and Table 5-9 reiterates that the transport user benefits remain significantly higher for the Eastern option than the Western option, together with a likely lower cost, and improved deliverability potential as a result.
- 5.11.5 Qualitative analysis against objectives, detailed in the next section, also reiterated the benefits associated with an Eastern Route.
- 5.11.6 Transport User benefits of the preferred MMDR solution, remain largely the same in the new 2017 version of the model as the previous assessments, at £108m, in comparison to £70m for the Western Route from the updated 2017 version of the model (that is also largely unchanged from the previous assessments), despite a new LLITM 2014 Base model.
- 5.11.7 This represents a near 60% difference in levels of benefit between the options, with consequential impacts on scheme BCR's, since the Western Route is also longer and likely to be more expensive.
- 5.11.8 As a result, the Eastern Route is the only option tested that is capable of offering a strong value for money case whilst also being able to accommodate the highly significant growth levels planned for Melton Mowbray in the Local Plan.

Table 5-8 Outer Distributor Road Options – Comparison of Modelled Benefits

Category	Western Distributor Road	Eastern Distributor Road
Benefits (PVB) New LLITM 2014 Base Model⁷	£70.7m	£110.3m
Benefits (PVB) Previous LLITM v5.2 OAR Assessment	£68.0m (£81.6m including off peak and weekends to compare directly to the new model values above)	£101.3m (£121.6m including off peak and weekends to compare directly to the new model values above)

Table 5-9 Outer Distributor Road Options – 2017 Value for Money Assessment

Category	Western Distributor Road (Including Southern DR)	Eastern Distributor Road
Benefits (PVB) New LLITM 2014 Base Model	£70.7m	£110.3m
Cost (PVC) Inc. 44% OB and 15% Risk	£97.0m	£86.1m
Indicative BCR (TUBA only)	0.7	1.3

5.12 ASSESSMENT AGAINST OVERALL OBJECTIVES

- 5.12.1 The OAR also compares these options against the qualitative objectives, as well as through the LLITM modelling described above.
- 5.12.2 The outputs of this process are shown in the next two pages, and were developed from the scoring from three independent transport groups put together by Leicestershire County Council to ensure independence of results, as well as cross-challenge.
- 5.12.3 The results of this supporting qualitative exercise against the scheme objectives also found that Eastern Route was the preferred option for the town, as demonstrated by the results of the analysis in Table 5-10 below.

Table 5-10 Qualitative Distributor Road Options – Objectives Assessment

Objective	Group 1 Assessment	Group 2 Assessment	Group 3 Assessment	Comments On Decision
Improve access to Melton Town Centre enabling full potential	East	East	East	An Eastern Route provides more in terms of higher overall numbers of vehicles using the route. The maximum loading of traffic on the Eastern and Western routes are similar but the Eastern Route showed a relatively even/consistently high loading along the entire length. This therefore makes the town centre more accessible to traffic that needs to access the town itself. These benefits are spread across the town more widely compared with the west.
Reduce congestion on the local network in particular key pinch points in and around Melton Town Centre	No Difference	East	East	Both routes achieve benefits towards objectives however given that East positively affects more junctions assumed this equates to the better overall benefit. Particular area where east had more benefit than west was to the south of the town centre i.e. Burton Street Sherrard Street.
Reduce impact on rat run routes	East	East	No Difference	Assessment of the evidence shows that the East offers relief to more congested junctions therefore encouraging greater use of appropriate routes. East saw greater reductions on town centre rat runs whereas west saw greater reductions in residential areas in the west of the town on existing routes to avoid the town centre.
Remove HGV through traffic in Melton Mowbray town centre	East	West (plus Southern)	East	All groups found this difficult to distinguish. If employment development was to 'go west' then west provides a direct connection for HGVs however overall relief for HGVs crossing the town centre could be better met with an eastern option. However East could also allow more trips to/from the existing industrial area on that side of the town to avoid going through the town completely.
Improve access to the areas of potential development enabling full potential	East	West (plus Southern)	East	An Eastern Route supports development in both the cumulative development and higher growth scenarios. An Eastern Route also maximises employment at existing sites would enable more existing businesses to stay put ensuring a greater proportion of the strategic employment site at Asfordby Hill is kept free for new/growing businesses rather than just relocating from elsewhere in the town. Further commercial evidence is needed to understand whether growth at Asfordby Hill could occur with an Eastern Route (only). A Western plus Southern route was based on the need to link to Melton Spinney Road; this could be achieved through Eastern Route too in conjunction with a

				Southern route.
Promote a quality road space in town centre suitable for non-transport uses and attractive to inward investment	East	No Difference	East	An Eastern Route provides relief across more junctions and therefore offers more opportunity for changes to the town centre. However neither probably offers 'transformational' opportunities
Increase levels of public transport, walking and cycling use within the Study Area.	No Difference	No Difference	No Difference	The delivery of the growth itself will improve viability of the PT network and therefore both West & East benefit the public transport network in this way. In terms of reliability improved junction performance will add to PT journey time reliability and therefore the Eastern Route may have a marginal advantage
Improve highway safety for all road users within the Study Area	East	East	East	New purpose built road constructed to modern standards is generally safer than old/non-purpose built roads through town. As the Eastern Route appears to have potential to attract more traffic off the old roads through the town than the Western Route it is possibly marginally better in safety terms.

5.12.4 Based on a range of objectives it can be seen that no single option is preferable against the full set of objectives, but that for the majority of the objectives it has been found against the evidence base and above results that an Eastern Route is likely to offer greater levels of benefit.

5.12.5 This corroborates evidence on the transport user benefits, and value for money differences between the options in earlier sections in coming to the view that the Eastern Route is, and remains, the preferred option.

5.13 KEY BENEFITS OF THE PREFERRED MMDR SCHEME

5.13.1 The above work shows that on both quantitative and qualitative bases, that an Eastern MMDR scheme represents the preferred solution.

5.13.2 The preferred scheme has:

- A highly significant increase in the level of user benefits of the next nearest option (60%);
- The greatest benefit for through traffic, and thus to the town centre and critically constrained junctions as a result;
- Support through Consultation results, with a majority of Melton residents expressing that they agreed with the preferred route;
- A lower cost than a similar route to the west, with consequential impacts on the Economic Case and ability of government to fund (and afford) the scheme;
- The ability to deliver the full extent of housing and employment growth proposed in the emerging Local Plan; unlike the Northern or Southern sections on their own;
- Scored more highly on almost all qualitative scheme objectives than alternative options, assessed from the perspective of three different transport groups; and
- The greatest opportunity to support walking, cycling public transport and urban realm improvements in the town as a result.

5.13.3 LLITM modelling demonstrates the benefit of the scheme in Figure 5-16 below for the opening year of 2021.

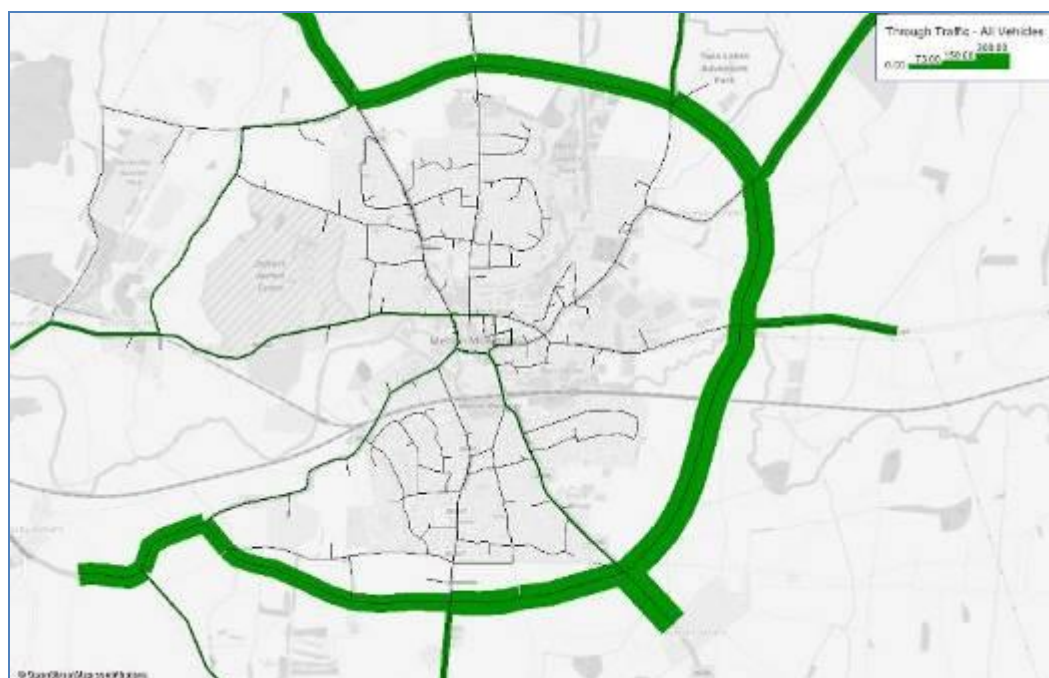
5.13.4 This shows that the road is attractive to almost all through traffic in the town, and with limited through movements crossing the town.

5.13.5 Figure 5-17 shows how this grows with the full extent of current planning applications and Local Plan growth by 2036.

Figure 5-16 Through Traffic (without scheme- top left: with scheme- bottom right: 2021)



Figure 5-17 Through Traffic (2036)



5.14 EASTERN ALIGNMENT OPTIONS

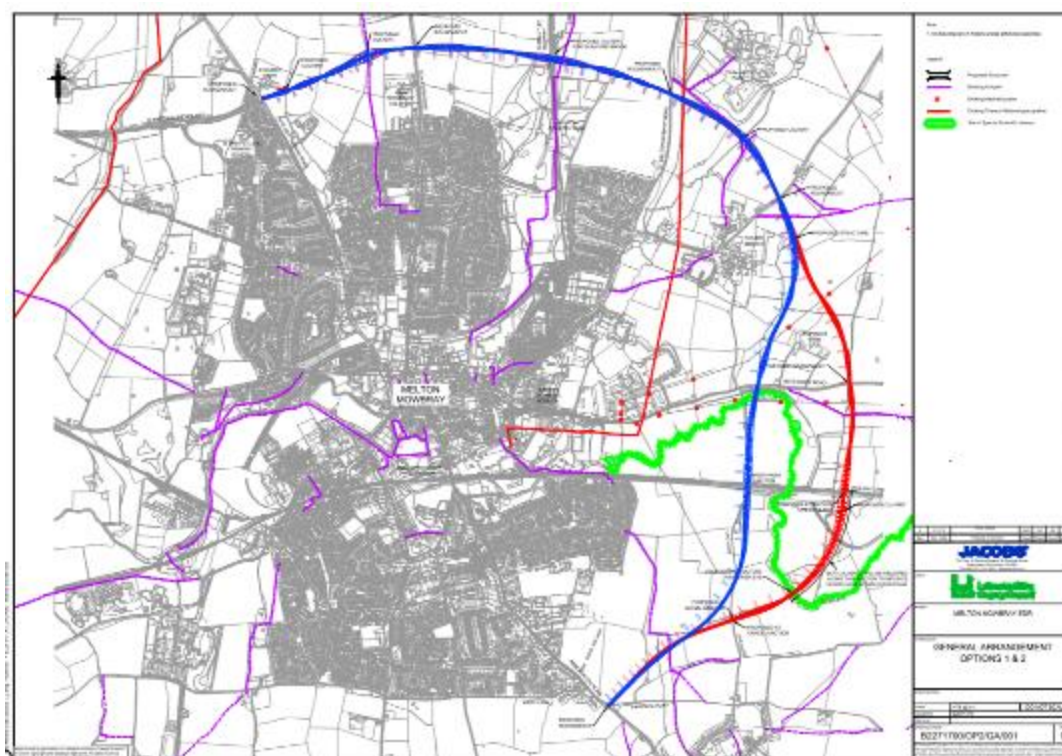
5.14.1 As part of the further development of the Eastern option two main alignments were considered, as shown in terms of the Blue Alignment (Option 1) and Red Alignment (Option 2) in Figure 5-18 below.

5.14.2 These were developed from the environmental constraints and preliminary design work undertaken; and with a need to cross both the river and rail line, only a small number of options are feasible. Work and consultation on these routes revealed a number of key, and critical points in terms of the options:

- The alignment of Option 2 runs through the Brentingby flood relief storage area. The Environment Agency stated that they would view any proposal that directly impacted on the flood storage area very negatively. This was restated through the consultation. *“From a flood risk perspective we are pleased that the proposed route (Option 1) avoids crossing our flood defence asset at Brentingby.”*
- Option 2 is 0.45km longer than Option 1. A sensitivity test was run on the additional length of Option 2 and scheme benefits were reduced by around 7% or £9m from the Option 1 alignment as tested.
- The Concept Design report identified that an additional structure would be required for Option 2. Furthermore, the alignment of Option 1 crosses the River Eye in a location where the width of the flood plain is significantly narrower in comparison to Option 2. The reduction of length of the multi span culvert would be approximately 470m whilst providing adequate flood flow.
- Option 1 alignment has a shorter crossing of the floodplain of the River Eye, reducing the extent of ground engineering measures possibly required to address the presence of potentially soft / compressible alluvial deposits.

5.14.3 Importantly, and as detailed in the Consultation outcomes in Section 5.18, only 3 respondents expressed a view or preference in relation to Option 2. The outcomes, and on-going LCC actions associated with this consultation feedback are detailed in Table 5-11.

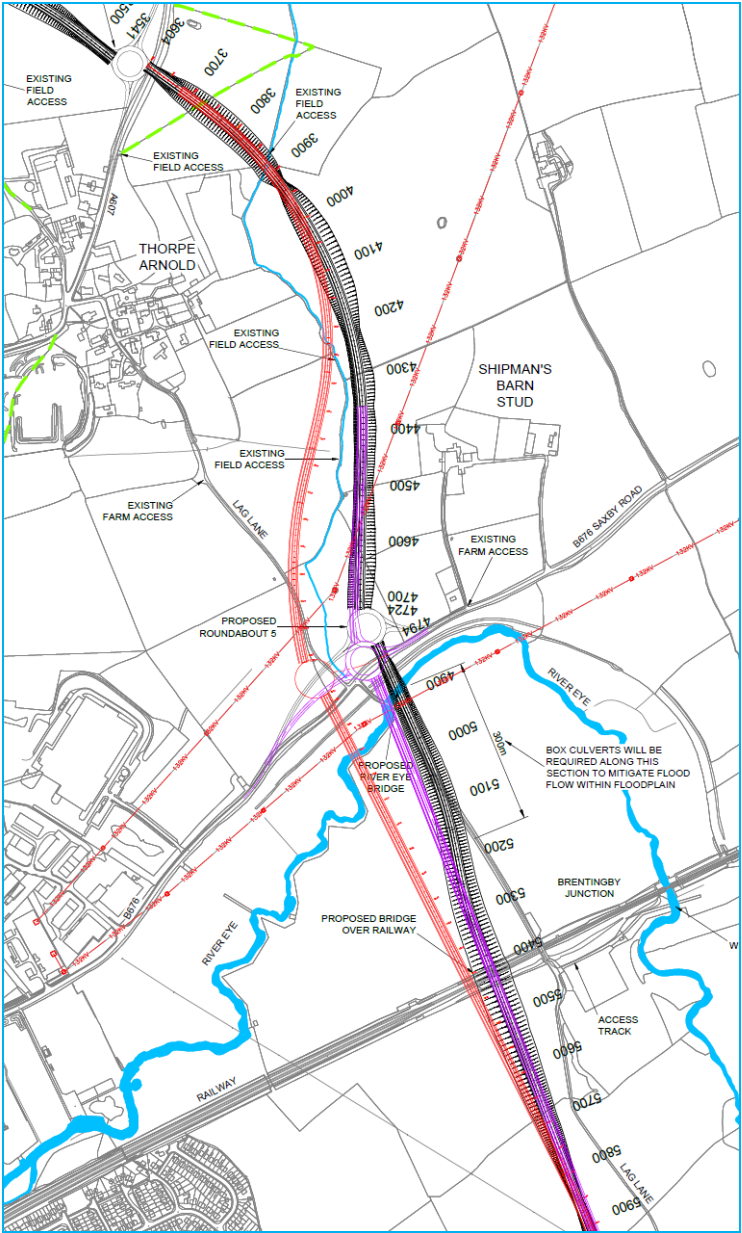
Figure 5-18 Eastern Alignment Options Considered



5.14.4 As part of further design work on Option 1 a number of detailed sub-variant alignments were also considered, following local land owner engagement and feedback.

5.14.5 These are shown in Figure 5.19 below, with the Purple alignment (Option 1b) as the preferred alignment to reduce land take created by the roundabout with Saxby Road, and whilst also ensuring that the alignment is maintained as far away as possible from Thorpe Arnold.

Figure 5-19 Eastern Alignment Options Considered



5.15 STRATEGIC AND POLICY FIT

- 5.15.1 The Red Amber Green (RAG) assessment below summarises the strategic fit of the scheme with key national, regional and local policy documents.
- 5.15.2 Table 5-11 below shows that the scheme has a good fit with local, sub-national and national policies in relation to housing delivery, transport and economic growth - as identified through the scheme objectives themselves:

Table 5-11 Strategic Fit

Policy	Key Extracts	Strategic Fit
National Policy		
Transport Investment Strategy 2017	The government's Transport Investment Strategy seeks to use transport investment to achieve the following objectives.' 'create a more reliable, less congested, and better connected transport network that works for the users who rely on it.' 'enhance our global competitiveness by making Britain a more attractive place to trade and invest.' 'support the creation of new housing.' This scheme complements these goals because it seeks to reduce traffic congestion in and around Melton Mowbray, promote the regeneration of employment areas and attract new employment investment, and enable, support and accelerate housing growth sites. The new road will improve journey time and journey time reliability for all users of the highway network in and around Melton and make the town a more attractive location for investment. The focused goals of this scheme are in line with the Strategy's commitment to schemes which 'take clearly defined problems or unlock specific opportunities.' The Strategy reaffirms the government's commitments to working with sub-national bodies to developing transport investment plans for local areas. This scheme is promoted by Leicestershire County Council and aligns with the Midlands Connect Transport Strategy (see below). The Transport Investment Strategy is informed by 'A Major Road Network for England', a document produced by the Rees Jeffreys Road Fund, which explains the importance of the Major Road Network (MRN) which will be the subject of public consultation in Autumn 2017. The MRN comprises 3,800 miles of local authority A-roads, which do not fall under Highway England's Strategic Road Network. The MRN plays a significant role in supporting regional economies and national economic growth and it services a range of users and the wider public interest. As a result, it requires consistent planning, management and funding. In Melton the A607 is part of the proposed Rees Jeffrey's MRN and the A606 is part of the draft Midlands Connect MRN proposals for the Midlands, in response to DfT consultation on the MRN in Early 2018. These facts speak to the importance of both routes in terms of their role in delivering economically important connectivity, and that the MMDR will support the direct connectivity between.	

Policy	Key Extracts	Strategic Fit
Industrial Strategy Green Paper 2017	The Industrial Strategy Green Paper seeks views on the government's proposals 'to improve living standards and economic growth by increasing productivity and driving growth across the whole country.' This high level goal is consistent with the broad objective of this scheme which will foster economic growth in Melton by enable, support and accelerate the delivery of homes and jobs, attracting inward investment and improving accessibility to key employment locations. It does so in a region where GVA per capita is below the UK average, which helps to address the imbalance in the national economy. The scheme also supports three key pillars of the proposed Strategy: 'Upgrading infrastructure.' 'Supporting businesses to start and grow.' 'Driving growth across the whole country.' As part of the emerging Industrial Strategy, the government will produce a 25 Year Plan for Food, Farming and Fisheries. Given Melton hosts nationally and internationally significant food manufacturing industry, the ability of the town to support future growth in this sector will help to deliver the goals of this 25 Year Plan.	
Housing White Paper 2017	The Housing White Paper sets out the government's plans to increase the scale and pace of house-building to ensure that sufficient homes built in the right places to meet people's needs and aspirations. This scheme is in line with this ambition because it will facilitate the delivery of 5,000 new houses. It also supports the White Paper's commitment to ensuring infrastructure is provided 'in the right place at the right time' to ensure housing development is not stalled.	
DfT Low Carbon Transport- A Greener Future (2010)	'Low carbon transport: a greener future' is a component of the 'UK low carbon transition plan'. In this paper DfT acknowledge the challenges ahead for the transport sector and outline plans for a future low carbon transport system; in line with meeting obligations under carbon budgets for the period to 2022. The strategy also outlines how government is putting the building blocks in place for longer-term change for the period to 2050. In this context the scheme will provide some benefit, but also potential disbenefit. It is likely that whilst travel distances may be slightly longer, increasing likely carbon emissions, there will be a trade-off against reduced carbon emission by low/moving and stationery traffic in the town centre. The balance of this is not yet fully known, but will also need to consider embedded carbon as part of scheme design and delivery. On opening however, and following the removal of through-traffic from the town centre, the scheme is also designed to encourage better use of public transport, as well as deliver improvements to walking and cycling connectivity as part of the scheme's design.	
The air quality strategy for England, Scotland, Wales and Northern Ireland	This Air Quality Strategy sets out air quality objectives and policy options to further improve air quality in the UK from today into the long term.	

Policy	Key Extracts	Strategic Fit
	As well as direct benefits to public health, these options are intended to provide important benefits to quality of life and help to protect our environment The scheme will remove traffic from a significant number of residential and business receptors, and thus provide an overall net benefit in terms of air quality and exposure to pollutants. This is especially in the town centre- where pedestrian activity and pollutant exposure is also strongest.	
Sub National Policy		
Midlands Connect Transport Strategy, 2017	By alleviating congestion and increasing journey time reliability for movements within and around Melton, the scheme will help to achieve two of the outcomes contained in the Strategy: ‘Strategic road and rail networks that bring the country’s economic regions closer together boosting productivity, access to markets and international gateways.’ ‘Boosting productivity and growth by providing reliable road and rail networks – reducing costs to businesses.’ For this reason, the scheme is also in line with the Strategy’s main ambitions for the road network in the region: ‘Improve Journey Times’ and ‘Increase Network Resilience.’ The scheme is located between two of the ‘intensive growth corridors’ identified in the Strategy as priorities for investment in connectivity: ‘Corridor 1: Birmingham – Coventry/Leicester – Northamptonshire – Milton Keynes and the South and includes connections to Kettering, Corby and the East of England’ and ‘Corridor 5: Nottingham – Leicester – Coventry – Warwick and Thames Valley’. This means that investment in the scheme is consistent with the goal of ‘focusing on exploiting the locational and economic advantages of our hubs and corridors to enable and support economic growth in those locations where conditions are already favourable.’ The development of the MRN for Midlands Connect has commenced. Melton Mowbray is a key node and route on the possible MRN network (subject to the concept receiving government approval following public consultation in Early 2018).	
Midlands Engine Prospectus 2016	In seeking to foster growth and boosting productivity in Melton, the scheme is in line with the vision in the Prospectus for ‘powering up’ the Midlands Engine: ‘We will focus on driving the productivity of our existing key sectors, through business investment, research and development, innovation, skills and connectivity improvements.’ The Prospectus set out the high level objectives of the emerging Midlands Connect Transport Strategy. By alleviating congestion and improving journey time reliability on key routes within and around Melton, the scheme is consistent with three of the issues to be addressed by the Strategy: ‘A long term solution to the congestion and	

Policy	Key Extracts	Strategic Fit
	unreliability of movements within and through the region.' 'Reduced journey times and improved reliability between key centres.' 'Addressing the interaction of national, regional and local movements within key strategic transport hubs in the Midlands.' By supporting the growth of food and drink manufacturing and production businesses in Melton, the scheme supports a key ambition in the Prospectus for this sector to expand and innovate: 'The Midlands Engine's food and drink sector will evolve as the UK's larder.' '[We] are ideally placed to improve productivity across the food cycle, from farm to fork.'	
Local Policy		
Leicester and Leicestershire Strategic Economic Plan, 2014-2020	The proposed Distributor Road will assist in achieving wider economic objectives proposed by Leicester and Leicestershire Enterprise Partnership's (LLEP) current Strategic Economic Plan The SEP's strategic priorities that the proposed scheme will support are: 'Investing in our place - to unlock key development sites and improve connectivity to enable the efficient transport of people and goods' The scheme will support delivery and acceleration of a nationally significant level of housing and employment; more than 6,000 jobs and 5,000 new houses by 2036, with 2,250 dwellings and 3,000 jobs in the short term to 2026 through the sustainable urban extensions to the North and South of the town. It is evident that the scheme's objectives in delivery of residential and employment sites aligns with LLEP's focus to create over 19,000 of the 45,000 planned new jobs by 2020 through five Growth Areas & Transformational Priorities. Each of these growth areas is expected to deliver a similar level of jobs, as the emerging Melton Local Plan Growth scenario. Additionally, the Distributor Road will have wider impacts in reducing congestion and improving journey time reliability and north-south connectivity in Melton Mowbray town centre, resulting in more efficient transport of people and goods. It will improve accessibility to jobs and training as well as supporting local businesses within Melton's main urban area, and enhance HGV and LGV access to/from the strategic road network. 'Investing in our businesses - to provide a comprehensive business support service for our SMEs to accelerate growth of our priority sectors.' The scheme will have a direct positive impact on journeys to the existing employment sites in the town centre and specifically those to the eastern side of the town for its workforce, as well as for local/ national business travel. Through provision of better connectivity it will promote the town for business investment, especially with the advantage that Melton	

Policy	Key Extracts	Strategic Fit
	is the only place in Leicestershire to pioneer a nationally and internationally orientated Food Enterprise Zone. The scheme will also contribute towards accelerating existing enterprise growth in sectors such as food & drink manufacturing for which there is high concentration of employment in Melton Mowbray and the vitality of market towns in Leicestershire. It is particularly of importance to support LLEP's Growth Deal investment of £5.75m in Melton Mowbray Cattle Market & Food Enterprise Centre to regenerate the market, equip it to meet future needs and to support the rural economy. This investment is part of LLEP priority projects and programmes in Growth Deal and 'will enable new economic activity, significant business opportunities and a unique regional attraction for Leicestershire in keeping with its rural heritage. The Market attracts 167,000 visitors annually, with average spend of £30 per visitor and a gross spend estimated at £5.3m. The Food Enterprise Centre has the potential to generate 162 jobs, improve performance of 40 businesses, create or attract 37 new businesses to the region, and support 55 graduates into SMEs and rural land management businesses.' Since the market is located between Scalford Road and Nottingham Road to the north of the town centre, the proposed highway scheme will directly contribute to the success of the Market regeneration project through reducing congestion level within the town centre and provision of additional road capacity to accommodate traffic from the market. The proposed scheme also supports the overall vision and strategic priorities of Melton Mowbray Economic Development Strategy 2015-2020 '...to promote and support sustainable economic growth, making sure Melton is an exciting and inspiring place to do business' and the third strategic priority 'improving the vitality of the town and surrounding villages', which depends on sustainable transport solutions to achieve its economic growth. By enabling people and businesses to move more efficiently in and around the town, the scheme will support the LEP's goal of raising productivity and creating a more efficient labour market.	
Leicester and Leicestershire LEP, Building Our Industrial Strategy, 2017	This document contains the LEP's response to the government's consultation on the Industrial Strategy White Paper. It contains the outlines of an industrial strategy for Leicester and Leicestershire. By promoting the growth and modernisation of the food and drink manufacturing sector in Melton, the scheme is in line with the document's commitment to developing and building upon existing sectoral strengths. The document cites 'Food and Drink Manufacturing' as one sector where there are 'opportunities to increases in GVA and productivity.' As a significant investment in infrastructure which is designed to stimulate local growth in housing and employment, the scheme is consistent with the document, which holds that infrastructure projects 'are	

Policy	Key Extracts	Strategic Fit
	critical in driving growth and job creation.'	
Leicestershire Local Transport Plan 3: 2011-2026	By promoting the growth of the manufacturing section in Melton, scheme will support the following strategic goal in LTP3: 'Goal 1: A transport system that supports a prosperous economy and provides successfully for population growth.' By enabling public realm improvements in Melton Mowbray town centre, the scheme will support the following strategic goal in LTP3: 'Goal 6: A transport system that helps to improve the quality of life for our residents and makes Leicestershire a more attractive place to live, work and visit.' By alleviating congestion and increasing journey time reliability, the scheme will also help to deliver the following strategic outcomes: 'Our transport system provides more consistent, predictable and reliable journey times for the movement of people and goods.' 'There is improved satisfaction with the transport system amongst both users and residents.'	
Leicester and Leicestershire Food and Drink Growth Plan, 2015	The scheme helps to enable, support and accelerate growth and modernisation in the food and drink manufacturing sector in Melton by providing more reliable and faster links to the strategic road network. This is in line with the Plan, which explains that 'transport and connectivity are also important issues affecting the growth potential of businesses in the sector.' The scheme will enable, support and accelerate news sites for the future expansion of businesses in this sector. This is in line with the Plan which describes how a 'perceived lack of food grade premises and supporting services' is an important issue for these businesses.	
Emerging Melton Mowbray Local Plan, Examination Submission Draft, 2017	The Pre-Submission version of the emerging Local Plan was published in November 2016; consultation on this version took place in November and December 2016 and a series of 'focussed changes' were published for consultation in July 2017. Consultation responses were considered and the Local Plan was submitted to the Government for Examination in October 2017. The Local Plan is currently subject to public examination, with the examination taking place end Jan 2018 to early Feb 2018. Developers are already submitting planning applications based on the Pre-Submission Draft of the Local Plan. The Melton Mowbray Distributor Road forms a key plank of the Local Plan and it enables several of the other components of the Plan, including economic growth, 5,000 new homes, 6,000 new jobs, and new investment in industry. The road complements proposals in the Local Plan for link roads to facilitate 'Sustainable Neighbourhoods' on the northern, and southern sides of the town. The Local Plan explains that road 'will pave the way for internal business growth and external investment	

Policy	Key Extracts	Strategic Fit
	coming into the town' and maintains that it will tackle congestion in the town centre. The Distributor Road thus forms a key part of the Housing and Economic Development Strategy and Infrastructure Delivery Plan.	
Leicester and Leicestershire Strategic Growth Plan	The Strategic Growth Plan is emerging and will provide an approach for the development of Leicester and Leicestershire up to 2050. The first stage, the 'Strategic Growth statement' was agreed by all partner authorities (the 7 district councils, Leicester City Council and Leicestershire County Council) in 2016 which includes objectives for the Plan as: • We will provide a deliverable supply of land for housing, providing high quality homes, reflecting local styles and distinctiveness, in a range of types, sizes and tenures suited to local needs. • We will strengthen the economic base and maintain its diversity by providing a range of employment sites that respond to the needs of industry • We will maximise the potential of our transportation corridors to deliver sustainable development and enable the creation of an integrated public transport network • We will support the City of Leicester, Loughborough, Hinckley and the other market towns across the County as accessible business, service and cultural centres • We will focus on the importance of communities, ensuring that place-making delivers high quality development which supports the needs of both existing and new communities. Stage two of the Strategic Growth Plan identifies the approach to growth following these priorities. This has been recently been published for consultation, and reinforces the role of Melton Mowbray as a focal point of its Borough and a future, and on-going Growth Point in its own right. The Strategic Growth Plan identifies a further 2,000 dwellings in Melton Mowbray (up to 3,647 in the Borough) through to 2050, that will also be supported by the MMDR scheme.	
The Melton Economic Development Strategy 2015 - 2020	This Plan identifies the following four Strategic Priorities: 1. Promoting Innovation, Enterprise and Growth in Key Sectors: To develop a strong competitive economy by encouraging emerging technologies and innovation 2. Enhancing Aspirations, Skills and Economic Activity in the Borough: To develop a work force to meet the needs of the local marketplace and raise ambition 3. Improving the Vitality of the Town and	

Policy	Key Extracts	Strategic Fit
	surrounding Villages: To create better places for local employment, shopping and entertainment 4. Maximising Inward Investment Opportunities: To work with other agencies to maximise resources and promote a competitive economy	
Strategic Fit with Scheme X		
 Strong strategic fit with policy		
 Neutral / minimal strategic fit with policy		
 Negative strategic fit with policy		

5.16 POLITICAL SUPPORT

- 5.16.1 There has been ongoing political support for the need for intervention in Melton Mowbray from Leicestershire County Council and Melton Borough Council ever since the first Local Transport Plan, with a number of considerations over this time. Since 2014 there has been accelerated development of a comprehensive and evidence-led options appraisal exercise to meet the demands of both existing congestion and traffic related impacts in Melton Mowbray, as well as seeking to deliver on the high levels of housing and employment growth proposed for the town in the emerging Local Plan.
- 5.16.2 Melton Borough Council and Leicestershire County Council have undertaken a number of transport studies to assess current and future pattern of traffic within Melton Mowbray as well as the extent to which the existing transport system can absorb existing and future demand from growth envisaged in the emerging Local Plan.
- 5.16.3 In the case of Melton Borough Council the need for a strategic intervention has been strongly recognised and has become an integral element of the emerging Local Plan as a key measure to enable and deliver economic and housing growth. The Plan has recently been submitted for Examination, with the Examination in Public Scheduled to take place across the final week in January 2018, and the first week of February 2018.
- 5.16.4 This received the agreement from Melton's Full Council at 'Pre Submission' stage on 8th October 2016 and a more detailed approach – including specification of the 'corridor of search' for the MMDR and policies to support its development and funding were approved by Full Council as part of a package of 'focussed changes' on 4th July 2017.
- 5.16.5 The scheme enjoys LCC Cabinet support, with the following resolutions agreed at each stage of the development process:
- March 2014 the Cabinet approved the principles set out in the Leicester and Leicestershire Enterprise Partnership's (LLEP) Strategic Economic Plan, which prioritises support for the economy of Market Towns and rural Leicestershire.
 - The County Council's Enabling Growth Action Plan (approved in March 2015) supports the development of Market Towns for employment land as a priority and includes a specific action to work with Melton Borough Council to plan for the future growth of Melton Mowbray.
 - In September 2015 the Cabinet considered a report on the development of a Melton Mowbray Transport Strategy and agreed the principle of supporting the strategic growth of Melton Mowbray through transport investment.
 - In May 2016 the Cabinet agreed, inter alia, with the continued development of the Melton Mowbray Transport Strategy (MMTS) and authorised the Director of Environment and Transport to undertake the necessary consultations and negotiations to enable the definition of a preferred route for an outer relief road.

- In March 2017 the Cabinet agreed an indicative timetable for the MMDR business case. It authorised the Director to undertake further work to develop this and to identify a preferred route, including consultation to take place in summer/ autumn 2017.
- In December 2017 Cabinet:
 - Noted responses to the consultation and evidence from the further work undertaken to develop the Outline Business Case for the northern and eastern sections of the Melton Mowbray Distributor Road (MMDR)
 - Authorised continued discussions with landowners and stakeholders, with a view to reaching voluntary agreement over the purchase and/or reservation of land for the northern and eastern sections of the MMDR
 - Reaffirmed its decision to prioritise and progress the development of the northern and eastern sections of the MMDR
 - Agreed the recommended route for the purposes of further development
 - Agreed finance arrangements, including an appropriate local contribution and forward-funding contributions to be provided by developers and/or third parties as necessary
 - Approved completion of all further work necessary to prepare the scheme for construction by spring 2020.
 - Authorised submission of the Outline Business Case.

5.16.6 As detailed in the Covering letter to the Business Case, the MMDR scheme is strongly supported by LCC and its Executive Team, Melton Borough Council and its Executive Team, and the Leicester and Leicestershire LLEP.

5.16.7 Sir Alan Duncan, MP for Rutland and Melton has also expressed strong support for the scheme, as detailed in his letter of support in Appendix K.

5.16.8 The scheme is also viewed very favourably by local residents, MP, the LLEP and key project stakeholders.

5.16.9 Councillor Blake Pain, LCC cabinet member for highways, said: *“Melton’s congestion is constraining the town’s growth and we need to unlock this so that the town can achieve its potential. I hope people take the time to share their thoughts on these exciting proposals.”*

5.16.10 Councillor Tejpal Bains, mayor of the borough of Melton, said: *“The consultation and exhibition is a chance for everyone to have their say and find out more about this much needed and eagerly anticipated road.”*

5.16.11 Melton Council deputy leader Pam Posnett said: *“The county council has now given its support to the development of an eastern bypass. This will enable the creation of an economic corridor around the town connecting residents to high quality jobs and with improved access to retail, education and leisure facilities. This is an important step towards achieving the growth needed to support the town and borough’s economy in line with the council’s emerging Local Plan.”*

5.16.12 Melton MP the Rt Hon Sir Alan Duncan, who has campaigned strongly for a Melton bypass over the years, added: *“I’m delighted that Leicestershire County Council’s Cabinet have backed plans for a relief road to the east of Melton Mowbray. This is fantastic news for the town. Melton needs a relief road - there is no other option - we have been overlooked for too long.”*

5.16.13 The scheme is also supported by private developers, particularly those for the North and South Sustainable Neighbourhoods. For instance, Gladman Developments Ltd, to the south of Melton have agreed to contribute £4.5m towards part of the scheme with further significant developer contributions towards the scheme also expected. (<https://www.meltontimes.co.uk/news/transport/update-green-light-given-to-homes-scheme-which-will-provide-first-chunk-of-new-melton-bypass-1-7344268>).

5.16.14 Strong letters of support for the scheme from the developers of the Melton North Sustainable Neighbourhood, and Melton South Sustainable Neighbourhood are included in Appendix K, and that emphasise both the need for the scheme and housing delivery benefits that the MMDR scheme will bring.

5.16.15 A number of additional letters of support have also been received from key businesses in the town, generally highlighting the congestion reduction benefits, the benefits of this to their businesses, and for associated expansion plans.

5.17 STAKEHOLDERS

5.17.1 Stakeholders for the project include Leicestershire County Council, Melton Borough Council, the other Leicestershire district councils, Leicester and Leicestershire LEP, Federation of Small Businesses, the Southern Developers (led by Pegasus Group), the Northern Developers (as a consortium of developers), the Melton Transport Stakeholder Reference Group, Midlands Connect, Highways England, the DfT, ORR, Transport Focus, Homes and Communities Agency and the Crown Estate.

5.17.2 This is alongside key businesses in the town, bus operators, schools, ward members, parish councils, small landowners and local residents themselves.

5.18 CONSULTATION AND STRENGTH OF SUPPORT FOR THE SCHEME

5.18.1 Consultation to date has identified strong local support for a distributor road, and workshops with key stakeholders have informed the Transport Strategy Evidence Base, and Options Assessment Report. For instance, on 3rd July 2014 around 100 residents attended a conference in Melton Mowbray for consultation on the Issues and Options in the emerging Local Plan, which included this scheme.

5.18.2 As part of this process, LCC held a public consultation in September and October 2017 to present the recommended route and request feedback on the scheme.

5.18.3 A report was prepared by Jacobs on the behalf of LCC detailing the findings of the consultations, as shown in Annex 10.

5.18.4 In total, 226 responses were received on the consultation. Responses were received from across the Melton Borough scheme area and beyond.

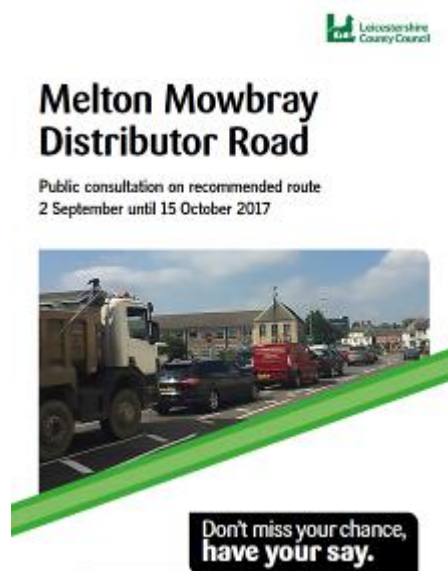
5.18.5 Responses were received from a broad range of residents, based on analysis of the demographic questions on the consultation questionnaire. Most residents travel into or through Melton Mowbray on a weekly basis (92%). The majority of respondents (88%) were car drivers and reside in the local area (88%).

5.18.6 The majority of the comments made in relation to the scheme were positive (71%), 18% were negative and 11% were neutral.

5.18.7 Based on the responses from the questionnaire, most respondents (51%) agreed with the recommended route for the distributor road, 34% disagreed.

5.18.8 Examples of consultation feedback is provided below:

→ *"The road is obviously badly needed and we support it"*



- *"As a business operating in the centre of the town, we care more about the existence of the Distributor Road to take unnecessary traffic away from the town centre than its exact route, though we would like to see the full ring completed in due course."*
- *"A good balance of impact on the landscape with reduction of congestion in Melton town."*
- *"Eastern distributor Road seems to be a sensible option & will be a good start. A bypass is needed asap"*
- *"Could do with the bypass extending to Leicester Road but this bypass will be a good start."*
- *"Anything to improve the traffic situation in Melton can only be a good thing. The route is as good as can be."*
- *"Recommended route will ease congestion and will allow development of business infrastructure."*
- *"I believe it will relieve the congestion in the town and even allow Market Place (the street south of the market place) to be free of lorries and much of the through traffic in the very centre of town."*
- *"Melton and the surrounding area desperately needs this road, to relieve the frequent serious congestion that stifling growth."*
- *"Recommended route will ease congestion and will allow development of business infrastructure."*
- *"Sensible route taking into account the crossings with other roads. Hope the link to Leicester Road will happen soon after this distributor road is done."*
- *"Melton clearly needs a distributor road. I've considered the routes carefully and I can see that the geography, topography and land use around the town makes it difficult to create a 'perfect' route. By that I mean that the recommended route is not perfect, but it's the best of the options available."*

5.18.9 Of those that disagreed with the route, respondents highlighted the point that they believe the recommended route does not address Leicester road traffic (12 mentions); that Melton needs a full ring road bypass around the town (12 mentions); and that the scheme won't solve the problems experienced in the town, mainly as it also needs to connect to Leicester Road (9 mentions).

5.18.10 Of the 226 responses to the consultation, the proportions that agreed the following factors had been sufficiently taken into account in identifying the recommended route were:

- 45% agreed that minimising the impact on the environment had been taken into account, whilst 28% disagreed. The remaining respondents felt unable to comment.
- 46% agreed that minimising the impact on residents (including noise and air quality) had been taken into account; and 30% disagreed.
- 56% agreed that minimising congestion in the town had been taken into account and 33% disagreed. Of those that disagreed responses were generally related either to alternative routes, or the need for a further extended/ ring road route around the town in equal magnitudes.

- 5.18.11 Comments related to the environment also received a considerable number of mentions, with noise pollution (18 mentions) and air quality impact/ air pollution (17 mentions) being the most prominent.
- 5.18.12 Further comments included consideration of noise and concerns were raised regarding the effects of the scheme on the wildlife corridor in Melton Country Park (4 mentions).
- 5.18.13 Table 5-11 provides more details of the main issues raised by respondents during the consultation process, and the plans to be adopted for further consultation and scheme design.

Table 5-12 Outcome of Public Consultations for MMDR & LCC Actions

Issue	Evidence	Decision / further comment
Some consultees expressed a preference for a Western Route over the recommended route.	- Both 2016 and 2017 Option Appraisal Reports reaffirmed significantly higher benefits of recommended route over western option - Western is a longer route due to environmental and built environment constraints (0.6-1km) leading to lower benefits, and likely greater scheme cost. - Additional rail structure and wider span bridges compared to recommended route to the west adds to comparative cost. - Additional built environment constraints of presence of gas main and MOD land	Proceed with recommended route on the basis that this remains the most popular from consultation, and 60% higher transport user benefits, and is a shorter route.
Impact of the alignment on Melton Country Park. Concerns raised through consultation with residents and Friends of Country Park: - Effects on ability of wildlife to migrate north/south - Visual and noise impact including lights	- Northern Edge Development parcel and road constraint - Performance of the route in fulfilling its function as a distributor road.	Continue to meet with, with Friends of Country Park to discuss possible mitigation. - Wildlife corridor under the proposed Scalford Brook open-span bridge. - Possible landscaping mitigation - No plans for lighting away from junctions. - Consideration of access arrangements north south including options for re-routing Jubilee Way

A small number of consultees (3) expressed a preference for Option 2 Eastern Route over the recommended Eastern Route.	1. Additional cost due to longer route of Option 2. Estimated impact of £7m-9m. 2. Less appealing route to road users due to additional length 3. Location of Environment Agency's Brentingby Flood Alleviation Scheme along route of Option 2. EA negativity towards this alignment option. 4. Additional structures involved leading to greater scheme. 5. Greater expanse of floodplain to cross	With indications regarding costs, the impact on BCR and the fact that EA would almost certainly not approve a route that impacted on the flood alleviation scheme, the recommended route is to be taken to detailed design.
Why was southern section connecting A606 (Burton Road) to A607 (Leicester Road) not included in the scheme.	1. Developer led section, as part of planning permission submitted. 2. Although the southern link will provide benefit, including this in the recommended route scheme would lower the overall BCR and reduce the chance of gaining funding.	Continue to work with developer and support forward funding on the understanding that developer contributions will be sought at a later date.
Move the alignment east, away from Thorpe Arnold village	1. As discussed under Option 1/2 above 2. To maintain a distributor road route that is an attractive option for through traffic a balance has to be sought between impact on residents and the delays to journey times of an option that pushes the alignment further east.	Work to understand the noise and visual impact of the route and options for mitigation is already underway. This might include landscaping, low noise surfacing and noise barriers.

Move the alignment west at Saxby Road/River Eye crossing away from single residential properties.	1. Pushes alignment closer to residential estate to the east of Melton Mowbray and Thorpe Arnold – noise and visual impact on greater number of people 2. Slightly longer route 3. River and powerline constraints	The original alignment has been moved west as part of its development from concept design, lessening the direct impact on individual properties and any noise and visual impacts. Work to understand the noise and visual impact of the route and options for mitigation is already underway. This might include landscaping, low noise surfacing and noise barriers.
Impact on residential estate to east of Melton Mowbray. Move alignment east	1. As discussed under Option 1/2 above 2. To maintain a distributor road route that is an attractive option for through traffic a balance has to be sought between impact on residents and the delays to journey times of an option that pushes the alignment further east.	Work to understand the noise and visual impact of the route and options for mitigation is already underway. This might include landscaping, low noise surfacing and noise barriers.

5.19 STATUTORY CONSULTEES

5.19.1 Alongside local engagement, LCC has also undertaken early and proactive engagement with statutory consultees. This has been developed through regular dialogue and specific meetings on key items, with outcomes from these meetings summarised below.

Consultee	Key Remarks
Environment Agency	Following early engagement the Environment Agency expressed that they are <i>“pleased that the proposed route avoids crossing our flood defence asset at Brentingby.”</i> However the EA have also expressed concerns about the potential impacts on the River Eye SSSI and the possible adverse effects on protected habitats and species. During the consultation the EA raised the issue of flooding at the River Eye and stated that our Hydraulic modelling should demonstrate that the development does not increase flood risk elsewhere. The authority has taken the comments of the EA fully on board and has continued to meet with officers to find a satisfactory way forward. The hydraulic modelling that will support the scheme development and our understanding of the impact of the proposal on flooding is well underway.
Natural England	Natural England has expressed that it very much welcomes the approach by Leicestershire County Council to engage at an early stage, as <i>“this will be key to resolving any issues at the design stage and prevent progress</i>

	<i>from being stalled later on.”</i> Initial engagement has highlighted concerns about the potential impact of the MMDR on the integrity of the River Eye SSSI. At an early stage NE indicated that they would be unlikely to consider a diversion of the River Eye in order to accommodate a crossing over a particularly constrained section of the proposed route. During meetings with NE and EA, Natural England has maintained this stance, although accepted that an options appraisal for the River Eye crossing on behalf of the authority could include the diversion as an option.
Historic England	In their response to the consultation Historic England raised concerns regarding the impact of the developer led Southern Sustainable Neighbourhood section (at the join of the proposed MMDR A606 Burton Road roundabout) on the setting of the Scheduled Monument of St Mary and St Lazarus Hospital. Whilst the impact is related to setting, a further meeting to discuss the proposed route for the southern sustainable neighbourhood is currently being arranged.
Highways England	Highways England have expressed support for the scheme and recognise the importance for the scheme in the context of growth for Melton Mowbray. <i>“Highways England recognise the need for growth in Leicestershire, as well as this being best concentrated in urban centres. Any improvements to infrastructure, including the Melton Mowbray Distributor Road are seen as supporting this growth.”</i>
Sports England	Have confirmed that they have no issues to raise with regard to the proposal.

5.20 CONSULTATION & ENGAGEMENT WITH DEVELOPERS- MELTON NORTH

- 5.20.1 Over the last six months LCC and representatives of the Northern Sustainable Neighbourhood (NSN) consortium of developers have worked together to progress an alignment that satisfies the need to accommodate and accelerate housing and the requirement for a distributor road that is fit for purpose.
- 5.20.2 A series of design meetings took place between June and December of 2017 in order to discuss the detail of any amendments to the draft alignment and design to reflect local development access.
- 5.20.3 In addition to meetings and other communication throughout the preliminary design period the NSN consortium participated in the consultation process that took place between September and October 2017.
- 5.20.4 The consortium is strongly supportive of the scheme and appreciative of its role in accelerating the delivery of growth in Melton Mowbray. Communications throughout this period have enabled both parties to gain an understanding of requirements both in terms of the functioning of the road and practicalities around design and environmental constraints and ensuring that the alignment and design does not impact on the need to deliver the housing allocation set out in the Local Plan.
- 5.20.5 This is documented in their letter of support, in Appendix K.
- 5.20.6 The collaborative work to date will be incorporated into the masterplan for the first stage of the Northern Sustainable Neighbourhood delivery between Nottingham Road and Scaford Road; this will form part of their planning submission scheduled for early 2018.
- 5.20.7 An important part of this commitment is also in relation to developer contributions, and as detailed in the Northern consortium letter of support in Appendix K.
- 5.20.8 Developer contributions towards the Distributor Road from the Northern Sustainable Neighbourhood proposals are expected, and whilst these are not known at this time, significant contributions have been secured in Melton from recent planning application approvals; which will be sought to reduce cost to the taxpayer of the Northern section of the route. (<https://www.meltontimes.co.uk/news/transport/update-green-light-given-to-homes-scheme-which-will-provide-first-chunk-of-new-melton-bypass-1-7344268>).
- 5.20.9 Delivery of the MMDR scheme, with taxpayer funding accelerating the full completion of the Northern section of the route to 2021 will enable this section to be delivered up to 15 years earlier than as currently proposed by developers, in terms of their inability to forward fund this section of infrastructure until the full extent of housing delivery is substantively complete.
- 5.20.10 Otherwise, the northern section of the route would be unlikely to be fully built by the private sector before the mid-2030s, meaning the scheme provides at least 15 years of transport user and housing delivery acceleration benefits.
- 5.20.11 The MMDR scheme will also help to provide further market confidence to private sector housing delivery because it will result key infrastructure in the Local Plan being delivered as a whole in one phase, rather than in staggered phases. This is important because the full benefits will only be realised once the entire route is delivered.

5.21 CONSULTATION & ENGAGEMENT WITH DAVIDSONS DEVELOPMENTS- MELTON SOUTH

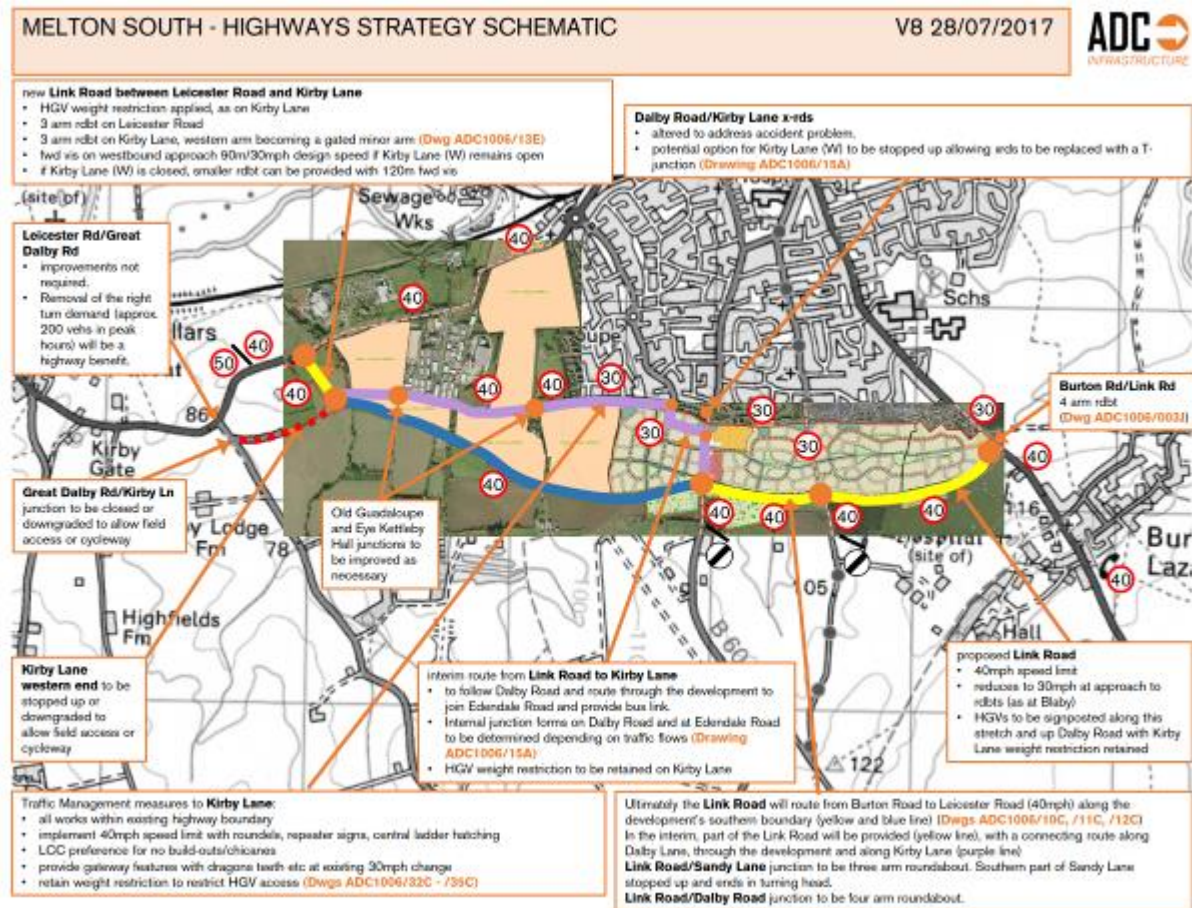
- 5.21.1** In developing proposals for a sustainable neighbourhood to the South of Melton Mowbray, Davidsons developments has sought to work collaboratively with the Borough Council and engage with the local community.
- 5.21.2** A public consultation event took place in July 2014. This consultation invited comments on the proposals for a southern extension including a new distributor road from Leicester Road to Burton Road alongside more detailed proposals for a first phase of development off Burton Road.
- 5.21.3** A public exhibition was held on the 18th July 2014 and was advertised through the delivery of some 3,000 leaflets to homes and businesses in the surrounding area. Leaflets were also distributed to Burton and Dalby Parish Councillors and Borough Councillors for the wards of Melton Craven, Dorian and Warwick. Posters advertising the exhibition were placed in the vicinity of the site and in a number of local venues. A website was also set out providing information on the proposed development.
- 5.21.4** As part of the engagement on the emerging local plan, Melton Borough Council set up reference groups as a forum to keep residents and other parties informed of progress on the plan and get input as the plan was progressed. Davidsons Developments attended sessions of the Landowners and Developers Reference Group and Full Reference Group between November 2014 and March 2016, providing information on the proposals for the South Melton Sustainable Neighbourhood as required.
- 5.21.5** Meetings were also held with representatives of Swallowdale Primary School and local sports clubs to explain the emerging proposals. Representatives for Davidsons have also attended Shout4Residents meetings to explain the development proposals.

5.22 SYNERGY

- 5.22.1** There is a synergy between the MMDR scheme and the planned Southern Distributor Road which will serve the Southern Sustainable Neighbourhood. The Southern Distributor Road, which will be funded and delivered by private developers, will connect with the Distributor Road at the A606.
- 5.22.2** As mentioned earlier, the southern section of the distributor road (from the A606 Burton Road to the A607 Leicester Road) is currently planned to be delivered by developers as part of the Melton South Sustainable Neighbourhood (one of the key strategic development sites within the Local Plan).
- 5.22.3** In relation to this, a planning application has already been submitted by Davidsons (Developers of the SSN for up to around 1,500 dwellings (along with a primary school and local centre including community facilities) across a large portion of the SSN area stretching from the A606 Burton Road to a parcel of land immediately to the west of the B6047 Dalby Road.
- 5.22.4** A diagram showing the Melton South developers proposals (including supporting transport infrastructure) is provided in Figure 5-20 below.

- 5.2.2.5 Davidsons' latest proposals would result in the short section of the MMDR Southern from the A607 Leicester Road across to Kirby Lane (in yellow on the west of the plan) being completed by 2021, and the longer section from the A606 Burton Road to the B6047 Dalby Road (in yellow to the east of the plan) by 2027, with the blue section being delivered thereafter.

Figure 5-20: Melton SSN Transport Infrastructure Proposals



5.23 SUMMARY OF STRATEGIC CASE

- 5.23.1 The Strategic Case has demonstrated the range and extent of traffic-related problems and issues in Melton Mowbray, and assessed through quantitative and qualitative means a large number of potential solutions to solve them, as well as accelerate and support the significant level of housing delivery and economic growth in the emerging Local Plan.
- 5.23.2 The results demonstrate that the proposed MMDR scheme is the most effective at tackling the following problems in the town, both now and in the future:
- Highly significant levels of congestion;
 - High levels of through traffic, with very limited route options;
 - Delay at all key junctions in the town centre;
 - A large number of HGV and LGV movements to and through the town centre;
 - Consequent constraint to jobs, housing delivery and economic growth;
 - Future negative externalities in adjacent villages as the town, as traffic grows beyond the constraints of the town centre; and
 - A limited ability to enhance public transport, walking and cycling, without removing traffic from the town centre first.
 - Severance of the town centre from other parts of the town, impairing its ability to prosper and grow
- 5.23.3 By providing additional highway capacity at key points on the network, the scheme will reduce traffic congestion in the town centre, accelerate and support housing delivery and jobs creation, and prevent traffic congestion emerging as a problem in surrounding rural communities.
- 5.23.4 As a result, the preferred scheme has:
- A highly significant increase in the level of user benefits compares to the next nearest option (60%);
 - The greatest benefit for through traffic, and thus to the town centre and critically constrained junctions as a result;
 - Support through Consultation results, with a majority of Melton residents expressing that they agreed with the preferred route;
 - A lower cost than a similar route to the west, with consequential impacts on the Economic Case and ability of government to fund (and afford) the scheme;
 - The ability to deliver the full extent of housing and employment growth proposed in the emerging Local Plan; unlike the Northern or Southern sections on their own;
 - Scored more highly on almost all qualitative scheme objectives than alternative options, assessed from the perspective of three different transport groups; and
 - The greatest opportunity to support walking, cycling public transport and urban realm improvements in the town as a result.
- 5.23.5 A core part of the MMDR scheme is that it allows the town to accelerate delivery of the Local Plan, and the significant economic growth of the town.
- 5.23.6 With over 4,500 dwellings in Melton and 6,000 jobs as part of the Local Plan, this represents a growth in the town of over 35% in the Plan period, with over 25% growth already identified through planning applications in the planning process, or being developed. This is the key reason why the scheme is needed now.

- 5.23.7 The scheme is a key infrastructure component of the Local Plan that accelerates housing delivery in the town; with housing delivery also being the critical mechanism to support further and sustained employment and business growth in the town- whether for new investment or existing industry expansion through expanding local labour markets.
- 5.23.8 These benefits provide an estimated 762 jobs in the town and the local economy as a direct function of the accessibility changes brought about by the scheme alone; as well as supporting key export industries located in Melton at the national level.
- 5.23.9 In providing additional highway capacity, the scheme also facilitates regeneration in the town centre, safeguarding the town's heritage, and avoiding the potential negative externalities associated with growth; whether in the town centre, or elsewhere
- 5.23.10 In achieving this outcome, the scheme is consistent with the goals of national, sub-national and local policy on economic growth, housing and transport. It supports the government's economic growth agenda, and the national challenge of housing delivery.
- 5.23.11 It furthers the Leicestershire LEP's efforts to boost productivity and investment in highly skilled employment. It is in line with the Leicestershire Transport Plan and it helps Melton Mowbray to deliver its targets for new housing and employment development.
- 5.23.12 The scheme will also help enable, support and accelerate enhancements to public realm in the town centre as town centre roads will no longer have to cater for through traffic. This will contribute to the long term prosperity of the town and the county, making Melton Mowbray and Leicestershire a more attractive place for investment by supporting highly important industries at the national and international level.

6 THE ECONOMIC CASE

6.1 INTRODUCTION

6.1.1 The Economic Case assesses the impacts of the preferred scheme, and the resulting value for money, to fulfil HM Treasury's requirements for appraisal and demonstrate value for money in the use of taxpayers' money.

6.1.2 In line with HM Treasury's appraisal requirements, the impacts considered are not limited to those directly impacting on the measured economy, nor to those which can be monetised. The economic, environmental, social and distributional impacts of a proposal are all examined, using qualitative, quantitative and monetised information. In assessing value for money, all of these are consolidated to determine the extent to which a proposal's benefits outweigh its costs.

6.1.3 The economic appraisal has been tailored to reflect the needs of the Outline Business Case and is discussed under the following headings:

- Methodology
- Assumptions
- Transport Economic Efficiency
- Safety Benefits
- Environmental and Social Impacts
- Wider Economic Benefits
- Appraisal Summary Table (AST)
- Value for Money Statement
- Conclusion

6.2 OVERVIEW OF TRANSPORT MODELLING METHODOLOGY

6.2.1 The economic assessment is based on the detailed modelling of traffic in Melton Mowbray, both with and without the proposed scheme.

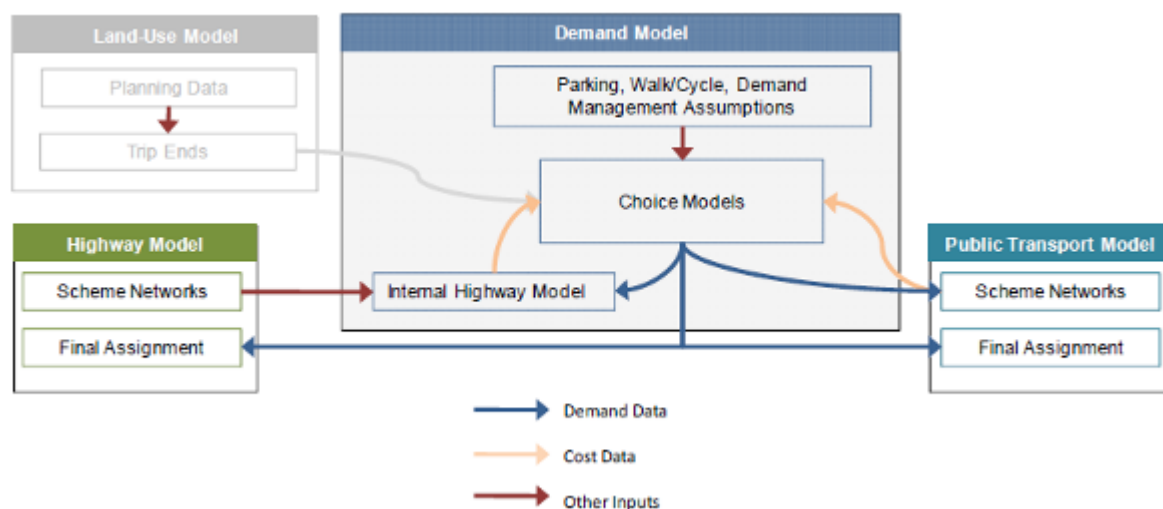
6.2.2 The modelling methodology has been set out in detail in the Appraisal Specification Report (ASR), and incorporates use of the latest and updated LLITM 2014 Base Model to undertake the Economic Case of the MMDR scheme.

6.2.3 The development of, and subsequent use, of the 2014 LLITM has been independently reviewed by WSP (on behalf of LCC), as well as being reviewed by the DfT during the development of, and on submission of the Outline Business Case.

6.2.4 The Leicester and Leicestershire Integrated Transport Model (LLITM) has been used for the assessment of the MMDR. LLITM was first built in 2009, significantly updated in 2013 (but retaining the base of 2008) and has most recently been updated, to a consistent 2014 base year across the County incorporating new O-D data in particular, derived from a combination of mobile phone and RSI information respectively.

6.2.5 A diagram showing the structure of the LLITM model is shown in Figure 6-1 below.

Figure 6-1 - Structure of the LLITM Model (Source: AECOM)



6.2.6 The development, validation and use of the new LLITM 2014 model are described in the following reports, provided as supporting Annex documents to the OBC.

- Annex 2- LLITM 2014 Base Model Specification Report
- Annex 3- LLITM 2014 Base Data Collection Report
- Annex 4- LLITM 2014 Base Highway Model LMVR – Local Area Validation
- Annex 5- LLITM 2014 Base PT Model LMVR
- Annex 6- LLITM 2014 Base Demand Model Report
- Annex 7- LLITM 2014 Base Local Forecasting Report
- Annex 9- LLITM 2014 Base Highway Model LMVR

6.2.7 Two further technical notes, TN001 and TN002 on key model processes have also been submitted to the DfT as appendices supporting the above documentation. TN003 reports the active mode appraisal, and TN004 the Wider Impacts assessment undertaken in the LLITM Land use model.

6.3 OVERVIEW OF ECONOMIC APPRAISAL METHODOLOGY AND ASSUMPTIONS

6.3.1 The Value for Money assessment is a staged process which includes appraisal of the scheme's economic, environmental, social, distributional and fiscal impacts using qualitative, quantitative and monetised information.

6.3.2 It starts with analysis of monetised costs and benefits and calculation of the initial Benefit Cost Ratio (BCR) of the Scheme.

6.3.3 An adjusted BCR is then calculated by adding the monetised benefits from those aspects with lower levels of assurance, including wider economic benefits and journey time reliability. The next stage is to capture and analyse those impacts which cannot be monetised but can be presented as qualitative information.

6.3.4 Finally, it looks at how the impacts of the scheme are distributed across different social groups within society.

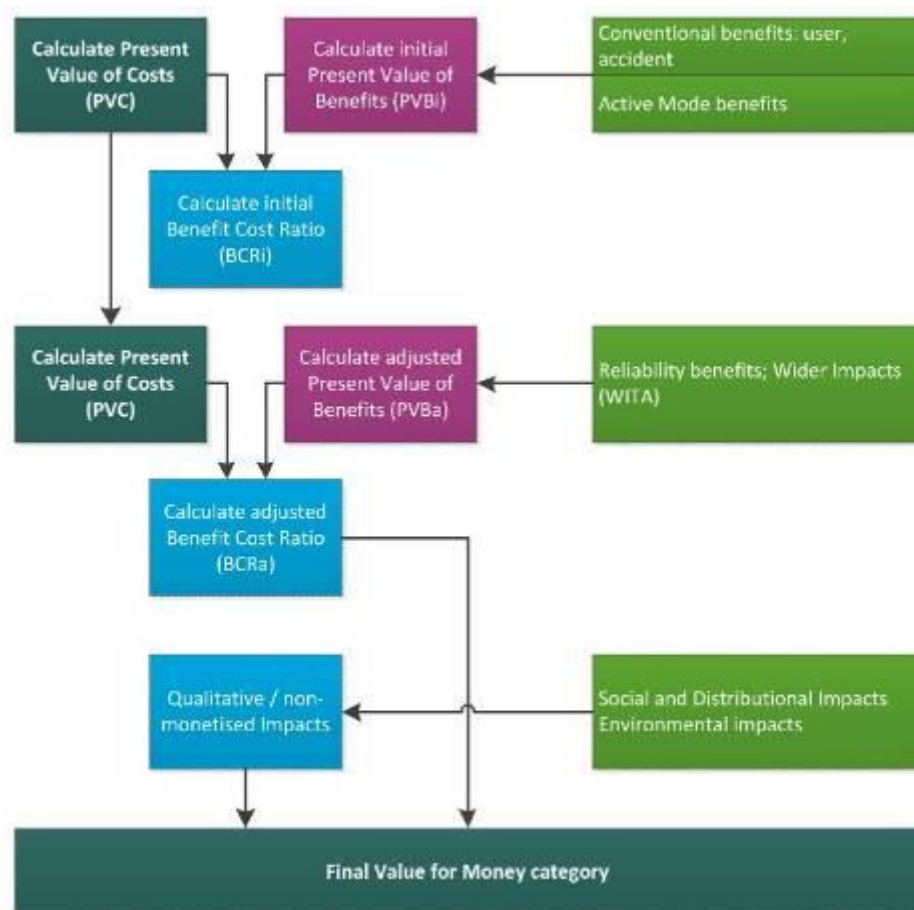
6.3.5 The economic assessment of the scheme has been undertaken in accordance with current WebTAG guidance, including:

- TAG Unit A1 cost-benefit analysis;

- TAG Unit A2 economic impacts;
- TAG Unit A4 social and distributional impacts; and
- TAG Unit A5-1 Active Mode Appraisal.

6.3.6 The methodology is based on the DfT Value for Money Framework (July, 2017) and is illustrated in Figure 6-2.

Figure 6-2 - Summary of Economic Appraisal Methodology



6.3.7 The basic steps for calculating an **initial benefit-cost ratio** (BCR) are summarised below:

- The present value of cost (PVC) is calculated using the discounted **whole life costs** of the scheme incorporating future maintenance and developer contributions to costs.
- TUBA (Transport User Benefit Analysis) is used to calculate the **user benefits** from time and vehicle operating cost savings, and reductions in **greenhouse gas** emissions.
- QUADRO (QUEues And Delays at Roadworks) is used to calculate and value the delays experienced by road users during the **construction** of the scheme.
- CoBA-LT (Cost and Benefit to Accidents – Light Touch) is used to assess benefits arising from savings in **accidents**.
- Air Quality Worksheet from WebTAG Unit A3 is used to calculate the change in **Air Quality** for the life of the scheme and associated monetary value.
- Noise Spreadsheet from WebTAG Unit A3 will be used to calculate the change in **noise levels** during the life of the scheme, the change in numbers of people “annoyed” and the monetary value of those changes.

→ An active mode appraisal is undertaken to determine the economic benefits of increases in **active travel**, specifically cycling, likely as a result of the dedicated infrastructure provided as part of the MMDR scheme.

6.3.8 Other monetised benefits are then taken into consideration, producing an adjusted present value of benefit (PVB), which is used to calculate an **adjusted BCR**. These are as listed below:

→ Journey Time Reliability assessed using the method as described in WebTAG Unit A1.3.

→ Analysis assessing the contribution of the scheme on the Wider Economy.

6.3.9 The Core BCR includes private sector developer contributions of £10m (in 2017 prices), as noted through LCC's and MBC's formal agreement to cashflow these in advance of receipt in the Financial Case, and supporting signed Officer letter submitted to confirm this as part of the Bid.

6.3.10 This is supported, in a practical sense, by recent approved planning applications in the town also making significant developer contributions. This establishes proof of viability, and that these are sufficiently certain (from both private sector and public sector agreement) to include within the scheme's BCR calculation.

6.3.11 The Core BCR is also calculated including the future discounted costs of the northern route (since it is in the future year do-minimum modelling), net of developer contribution to ensure no double-counting.

6.3.12 The BCR's described above are all related to the Central case, which assumes the most likely future scenario in terms of economic growth, traffic growth and the level of future development expected. Low and High growth forecasts have also been modelled, with a further sensitivity test incorporating a 2051 forecast year.

6.3.13 As part of this analysis, the impact of removing do-minimum costs of the BCR is also made clear.

6.3.14 Other impacts which are not capable of being fully monetised – social, distributional and further environmental impacts – are then assessed qualitatively. These are not included in the BCR, but are used, together with the final BCR, to determine a final value for money category for the scheme.

6.3.15 As detailed in *TN002 Assessment of Dependent Development*, it should be noted that the assessment of dependent development concluded that following the tests outlined in WebTAG Unit A2.3 none of the development within Melton Mowbray can be considered as dependent, and therefore no additional appraisal related to dependent development benefits has been considered.

6.4 SCHEME COSTS

- 6.4.1 In line with DfT guidance, Value for Money assessment starts with the calculation of those impacts that can be expressed in monetary terms. These monetised impacts are summed to construct an Initial Benefit Cost Ratio (Initial BCR) – that is the amount of benefit being realised for every £1.00 of cost.
- 6.4.2 The summary of the monetised information along with the BCR is presented in the standard Analysis of Monetised Costs and Benefits (AMCB) Table, detailed in the Economic Assessment Report (Annex 8).
- 6.4.3 Estimation of the scheme costs include both the actual cost of the scheme during its construction, as well as the capital cost of maintenance of the scheme in future years.
- 6.4.4 Base costs for land, construction, preparation and supervision, including adjustment for risk following a quantified risk assessment, and inflation have been estimated by LCC based on the latest scheme design.
- 6.4.5 For the Economic Case, these costs also include Part 1 claims with respect to land.
- 6.4.6 In addition, and as defined within Table 8 of WebTAG Unit A1.2, optimism bias of 15% has been assumed for the road element of the scheme, at OBC stage and with independent cost review having been undertaken, with 23% optimism bias applied to the fixed link (bridge) elements of the scheme. The summary of scheme construction costs and profile is shown in Table 6-1.

Table 6-1 - Summary of Discounted Construction Costs, 2010 prices and values

YEAR	COST (000'S)
2018	£2,047
2019	£5,930
2020	£21,535
2021	£19,180
2022	£5,330
2023	£163
TOTAL	£54,185

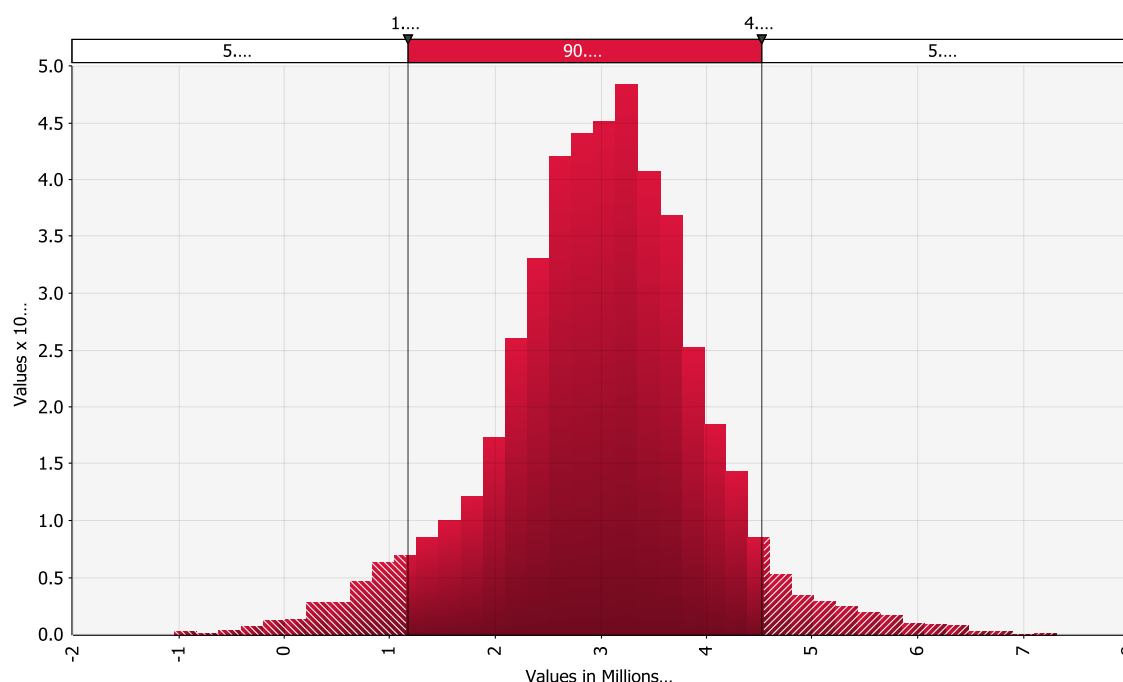
- 6.4.7 Cost risk and uncertainty has been assessed using a Quantified Risk Assessment (QRA) which is then used to produce a risk-adjusted cost estimate, following WebTAG Unit A1.2 guidance.
- 6.4.8 Risks have been assessed for preparation, construction and supervision costs. QRA has not been undertaken for land costs; these have therefore been risk-adjusted by increasing the land cost by 15%.
- 6.4.9 A comprehensive risk register has been created and risk modelling has been undertaken following the methodology based on WebTAG Unit A1.2.
- 6.4.10 This risk register has been developed in association with AECOM and Carillion, the ECI contractor for the proposed scheme, consisting of 32 preparation (design) risks and 27 construction risks. The detailed risk registers are shown in Appendix D.
- 6.4.11 The early involvement of Carillion has combined the complementary expertise of client, designer and contractor, and facilitated the early identification of project risks. This process has used the knowledge gained by the organisations and the individuals on the ECI team during the development

and construction of many similar schemes such as; Lincoln Eastern Bypass, A45 Bridge Replacement in Solihull, Finningley and Rossington Regeneration Route in Doncaster, and the nearby A606/A6003 Oakham Bypass.

- 6.4.12 Carillion have also included a 5% construction risk in their preliminaries to specifically allow for likely inaccuracies in the estimate of quantities from the outline design stage information currently available.
- 6.4.13 For each risk, the minimum and maximum likely impacts have been monetised, using empirical evidence, previous experience on similar projects, or common sense approximations as appropriate. For construction costs, these have been derived pre- and post-risk mitigation; the post-mitigation impacts have been used for the QRA assessment, which are the residual risks following mitigation spending, which has been treated as a fixed cost within the QRA.
- 6.4.14 Carillion have an established ECI and construction phase risk management process that was used to develop the project Risk Register. The project team identified the risks and impacts, with potential costs, associated with the project. These were further evaluated for the likelihood of occurrence resulting in a risk rating measure between 'high' and 'low'. Mitigation measures identified were reviewed by the project team to give a revised risk rating with a residual cost impact on the project.
- 6.4.15 The outputs of this process are shown in Table 6.2.

Table 6-2 - Mean, P50 and P80 values from the QRA

	MEAN	P50	P80
QRA Assessment	£2,977,552	£3,017,916	£3,711,943



- 6.4.16 The cost estimate for maintenance has been produced using Table 9.1 within the CoBA manual. Costs of maintenance for the scheme have been assumed to be £7,400 per kilometre in 2002 prices. The length of the proposed scheme is 6.9km, and using a GDP inflation assumption, this results in maintenance costs of around £69,000 per annum in 2017 prices. Maintenance is assumed to commence in 2023, and continue annually until the end of the appraisal period in 2080.

- 6.4.17 For monitoring and evaluation, a budget of £150,000 (in 2017 prices and values, and factor prices) has been assumed to be spent between 2018 and 2026. £50,000 of this budget is assumed to be allocated to 2018, with the remaining £100,000 split evenly between 2020 (pre-opening), 2022 (post-opening) and 2026 (five years after opening). These costs have been converted to market prices, and 3% inflation per annum has been assumed.
- 6.4.18 Both the maintenance and monitoring and evaluation costs have been converted to 2010 prices and values, to provide the following estimates for the economic assessment:
- Scheme Maintenance: £1,241,955
 - Monitoring and Evaluation: £110,352
- 6.4.19 Combined with the scheme construction costs (including Part 1 claims), this provides an overall present value of costs of **£55,540,851** in 2010 prices and values. The breakdown by the elements described above is shown in Table 6-3.

Table 6-3 - Summary of Scheme Costs, 2010 prices and values

	COST	CUMULATIVE COST
Scheme Base Costs (Market Prices)	£44,088,308	
Land Risk Cost	£556,509	£44,644,817
Preparation, Construction and Supervision Risk Cost	£2,073,035	£46,717,852
Optimism Bias	£7,467,381	£54,185,233
Monitoring and Evaluation	£113,663	£54,298,896
Scheme Maintenance	£1,241,955	£55,540,851

- 6.4.20 It should be noted that costs and benefits occur in different years throughout the assessment period, e.g. the construction costs occur before the scheme opens, whilst the benefits occur over the DfT standard appraisal period of 60 years. Therefore, the costs used in scheme appraisal differ from the outturn costs used for funding decisions. The appraisal costs are discounted and converted to the DfT's standard present value year for appraisal (2010) to allow direct comparison with the monetised benefits. The combination of having costs and benefits in a standard price base and discounted to a common year means that all costs and benefits in this Economic Case are in 2010 prices, discounted to 2010 (unless explicitly stated).

- 6.4.21 As described earlier, there are committed developer contributions to the capital cost of the scheme, and these reduce the impact on the broad transport budget at a national level.
- 6.4.22 The developer contributions also reduce the benefits from the scheme to business users by the same figure, and this has been accounted for in the BCR calculations.
- 6.4.23 In the Do Minimum modelling, the northern link as part of the scheme is included in future forecast years. The costs of this element of the scheme has been calculated in the same way as the whole scheme, with similar inflation, QRA, optimism bias and future maintenance cost assumptions.
- 6.4.24 The cost of this link, in 2017 prices is £19.41m, which is assumed to be built, without the scheme in 2030/2031.
- 6.4.25 This represents a PVC of £12.05m in 2010 prices and values in terms of Do Minimum costs.
- 6.4.26 These are incorporated in the appraisal, with the impact of this on the BCR considered net of the PVB of developer contributions, to avoid double counting.

6.5 KEY ASSUMPTIONS MADE AS PART OF THE VALUE FOR MONEY APPRAISAL OF THE SCHEME.

- 6.5.1 Traffic growth for the scheme assessment has been based on the inputs to the land use model and subsequent travel demand as predicted by the incorporation of the DfT's CTripEnd software within the LLITM 2014. Forecasts for related economic parameters, such as values of time and fuel prices have been taken from WebTAG.
- 6.5.2 The appraisal of the scheme has been based on a Core Scenario, with detailed use of a locally specific and up-to-date uncertainty log, as defined by WebTAG and detailed within the Forecasting report.
- 6.5.3 Levels of optimism bias have been applied as defined by Table 8 of WebTAG Unit A1.2. A 15% uplift has been applied to the majority of the scheme costs (87.7%) with a higher level (23%) for the 12.3% of scheme costs relating to the fixed link (bridge) elements.
- 6.5.4 Prior to application of optimism bias the results of a quantified risk assessment have been applied to the base scheme costs. Costs have taken into account inflation of these costs over time, as well as on-going future maintenance costs and scheme monitoring and evaluation costs.
- 6.5.5 In all Core BCRs produced, developer contributions are accounted for within the benefits and costs, taking into account the likely profile of this source of funding. Future discounted do-minimum costs for the northern section (excluding the developer contribution amount) are also included to be consistent with its inclusion in the future year do-minimum modelling.
- 6.5.6 The standard economics file within TUBA v1.9.9 has been amended to be consistent with the LLITM 2014 user classes. Single categories have been created for LGV and HGV based on DfT and WebTAG vehicle and purpose splits.
- 6.5.7 The modelled periods within LLITM 2014 have been factored to estimate the annual benefits expected for the weekday period of 07:00 to 19:00 utilising local traffic flow and travel purpose data to assign relevant demand and costs. The off peak and weekend periods have also been included within the appraisal, utilising the inter-peak demand and costs, as detailed in *TN001- Approach to Annualisation*.
- 6.5.8 The appraisal of benefits has included changes in travel costs from the traffic modelling as follows:
 - all movements to / from Melton Borough have been included in the assessment; and
 - for non-Melton Borough movements, only those which may pass through the Area of Influence of the scheme (such as Leicester City to / from Lincolnshire) have been included.

6.5.9 In line with WebTAG advice, a 60 year appraisal period has been adopted, with no growth in traffic beyond the final modelled year.

6.5.10 Sensitivity tests are presented to ensure a robust Economic Case by way of WebTAG High and Low Growth BCR's, an alternative Base Model BCR (using controls to RSI sector movements rather than mobile phone data), and a 2051 final forecast year.

6.6 TRANSPORT ECONOMIC EFFICIENCY

6.6.1 The Transport Economic Efficiency (TEE) benefits consist of the components set out below and summarised in Economic Assessment Report- Annex 8:

- Travel time and Vehicle Operating Costs (VOC) benefits as a result of the scheme
- Travel time and Vehicle Operating Costs (VOC) dis-benefits as a result of construction activities
- Developer contributions to the scheme costs (seen as dis-benefits here).

6.6.2 Travel time and VOC benefits were calculated with the use of the Transport User Benefits Analysis (TUBA) software. TUBA is the industry-standard software used to derive the travel time and VOC elements of the TEE benefits of a scheme. TUBA requires input from the transport model in the form of trip, time and distance matrices by year, time period and user class as well as scheme specific information such as years of appraisal, time slices, costs etc.

6.6.3 TUBA assesses travel time savings over the modelled area and then applies monetary values (known as Values of Time (VOT)) to derive the monetary benefits of those time savings.

6.6.4 TUBA also calculates Vehicle Operating Cost (VOC) changes which occur due to changes in costs associated with such items as fuel, maintenance, and wear and tear. These occur due to changes in speed and distance when the scheme is implemented and can include both positive and negative values depending upon the scheme's impact upon traffic flows and routing.

6.6.5 The full details of TUBA analysis for the MMDR can be found in the Economic Assessment Report, Annex 8, Section 3.

6.6.6 The impact of scheme construction in terms of delays related to traffic management and diversion of traffic were calculated using the DfT's QUEues And Delays at ROadworks (QUADRO) software. QUADRO is used to incorporate into the appraisal the travel time and VOC dis-benefits related to the construction of the scheme.

6.6.7 The full details of the QUADRO analysis can be found in section 5 of the Economic Assessment Report- Annex 8. It is important to note that maintenance delay savings in the do-something scenario have not yet been considered in the analysis. This is due to the exact nature and timing of future road maintenance requirements on the bypassed route not being precisely known. However, it should be noted that these will be included at FBC stage following further analysis, and are expected to be positive benefits for the Transport Economic Efficiency.

6.6.8 The completed Transport Economic Efficiency (TEE) table is shown below, and also provided in EXCEL format for DfT.

6.6.9 The Transport Economic Efficiency (TEE) benefits are derived from travel time and vehicle operating cost benefits as a result of the scheme. The dis-benefits related to construction are also assessed and included in the table.

6.6.10 The full Transport Economic Efficiency (TEE) Table is summarised in Table 6-4.

Table 6-4 - TEE Table summary by user (Central Case)

Transport Economic Efficiency (TEE) Benefits		£,000s 2010 prices, discounted to 2010
Consumer – commuting user benefits	Travel Time	29,726
	Vehicle operating costs	-2,832
	Construction	-13
	Subtotal	26,881
Consumer – other user benefits	Travel Time	42,970
	Vehicle operating costs	-8,464
	Construction	-65
	Subtotal	34,441
Business benefits	Travel Time	44,840
	Vehicle operating costs	3,085
	Construction	-25
	Developer Contributions	-7,420
	Subtotal	40,480
Total TEE benefit		101,802

- 6.6.11 The benefits by time period from TUBA (including the impact on indirect tax revenues but excluding greenhouse gases) are summarised in Table 6-5.

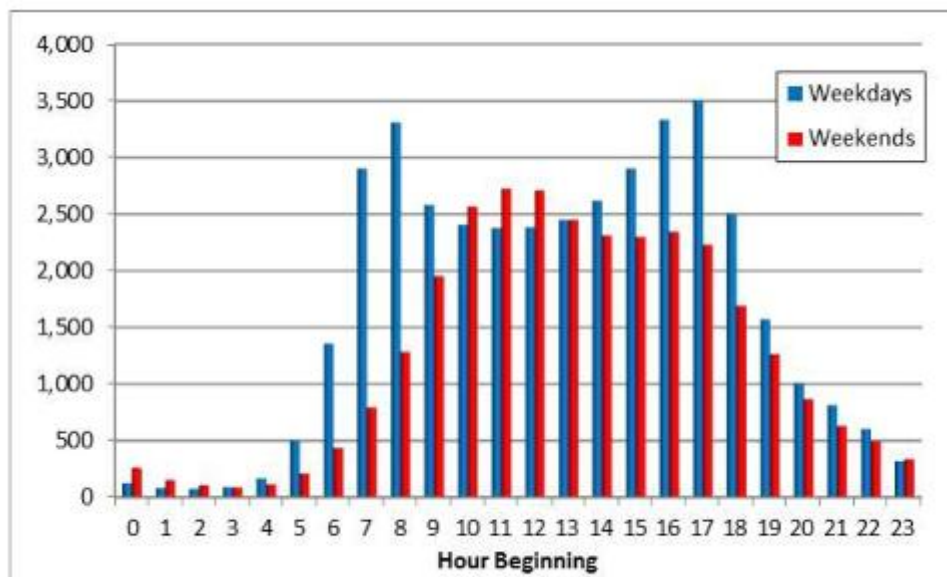
Table 6-5 - TEE Table summary by time period (Central Case)

Time Period	PV Benefits £,000
AM Peak Early	2,275
AM Peak	11,644
Inter Peak	37,573
PM Peak Early	11,142
PM Peak	11,491
PM Peak Late	4,728
Off Peak	14,032
Weekend	31,120

- 6.6.12 Table 6-3 shows that benefits round 30% of benefits are forecast to occur within the interpeak period, around 25% of benefits occur during the weekends during the weekends, around 22% in the PM Peak time periods combined, around 11% in the AM Peak time periods combined, and around 11% in the off-peak.

6.6.13 This analysis is, in part, influenced by the assumed annualisation factors, as detailed in the Economic Assessment Report- section 3, which are largest for the interpeak and weekend time periods.

6.6.14 The graph below, extracted from the EAR, shows the levels of flow on weekends, and that as a function of Melton's strong visitor economy and role as key market town, show consistently high levels of traffic across the day (with the exception of the AM peak at the weekend), and typically higher levels of traffic in the weekend interpeak than the weekday interpeak.



6.6.15 The EAR- Section 3, Figure 3.7 also analyses the forecast scheme benefits within the eight time periods per hour, i.e. excluding the effects of annualisation.

6.6.16 This Figure shows that forecast scheme benefits per hour are forecast to be highest in the morning and evening peaks, with the lowest levels of scheme benefits per hour forecast during the interpeak, off-peak and weekends.

6.6.17 This is consistent with the traffic patterns and levels of congestion noted in both the Strategic Case, and Local Model Validation report; with a longer PM peak than AM peak noted in the traffic data. These peak hour benefits also highlights the particular benefit of the scheme in improving travel times and reducing peak hour congestion in Melton town centre.

6.6.18 In terms of benefits by user class and vehicle type, the Economic Assessment Report, Section 3 Table 3.12, highlights that non-business user classes combined are forecast to constitute around 55% of total benefits, of which around 23% is commuting demand and 32% is 'other' demand. This is consistent with travel patterns across the day, and with Melton having relatively short (but intensive) peak periods of congestion, typically 90 minutes in the AM peak, and up to 2 hours in the PM peak.

6.6.19 LGV and car business travel are forecast to contribute around 20% and 19% respectively to overall benefits, with HGV travel forecast to be around 7% of benefits. LGV's and HGV's as noted in the strategic case has high levels of through traffic movement in the town; and whilst smaller in number than car vehicles, contribute to benefits as a function of their greatest propensity for through traffic movement better facilitated by the MMDR scheme.

6.6.20 The results show strong time savings in the 2-5 minute category, for business, commuting and other users, and is in line with expected ranges from the problem identification.

Business Users- Net journey time changes (£)		
0 to 2min	2 to 5min	> 5min
£20.9m = £30.1m-£9.2m	£20.8m = £22.3m-£1.5m	£3.1m = £3.4m-£0.3m

Commuting & Other Users- Net journey time changes (£)		
0 to 2min	2 to 5min	> 5min
£34.8m = £43.3m-£8.6m	£33.4m = £33.7m-£0.3m	£4.5m = £4.5m - £0m

6.7 SAFETY IMPACTS

- 6.7.1 Transport interventions may alter the risk of individuals being killed or injured as a result of accidents. Therefore, WebTAG recommends that the impact of the scheme on safety should be assessed.
- 6.7.2 The assessment of safety benefits and costs was undertaken using CoBA-LT Cost Benefit Analysis (Light Touch) version 2013_02, the DfT's cost-benefit analysis software for accident savings, in line with the guidance set out in WebTAG Unit A4.1.
- 6.7.3 Local accident rates have been calculated by road type for the road categories in the Area of Influence (AoI) defined for the assessment of the proposed scheme. Accident data from the STATS19 database have been used for the years 2011 to 2015 (the most recently available data at the time of the analysis), with five years' of data being used to increase the sample size.
- 6.7.4 Analysis undertaken showed that accident rates in the AoI are marginally lower than national rates (although not statistically significantly lower), except on B/C/unclassified roads with speed limits greater than 40mph, where local accident rates are significantly higher than CoBA-LT's nationally-derived data. This led to the use of locally derived accident rates for B/C/U roads given the statistically significant difference found, and CoBA-LT rates for other road types
- 6.7.5 Given the differences found between road types based on local observations, and the likely design differentiation between the MMDR and other existing A roads in the town, local accident rates were also derived for the MMDR scheme links by utilising the accident data associated with the nearby Oakham Bypass. The Oakham Bypass, which opened in 2007, is of a comparable design standard to the MMDR, and also carries a similar level of traffic as forecast for the MMDR. Thus this scheme is considered representative of long-term outcomes for MMDR and the 8 years of available traffic accident data have been used to derive a local accident rate for the scheme links.
- 6.7.6 The safety benefits were assessed for a 60 year period (2021 to 2080) with an opening year of 2021, a design year of 2036 and a horizon year of 2041.
- 6.7.7 The latest CoBA-LT economic parameter file (included in the Economic Appraisal Report as a text file- Annex 8) was used to calculate accident impacts in line with WebTAG guidance. The data tables provide the inputs required to calculate accident and casualty numbers and costs for each year of the appraisal period.
- 6.7.8 CoBA-LT uses "Do Minimum" and "Do Something" outputs from the SATURN traffic model to forecast changes in the number of accidents as a result of the scheme, using details of link and junction characteristics, relevant accident rates and costs and forecast traffic volumes by link.
- 6.7.9 The CoBA-LT analysis indicates that there would be 71 additional accidents by 2080 as a result of the scheme, as shown in Table 6-6 and Table 6-7:

Table 6-6 – Summary of Accidents over 60 years

Accidents in 60 years		
Do minimum	Do something	Reduction in Accidents
6,141	6,212	-71

- 6.7.10 CoBA-LT also provides a summary of the change in the number of casualties as a result of the scheme, as shown in Table 6.7 below:

Table 6-7 - Casualty reduction over 60 years

Casualty reduction over 60 years	Do minimum	Do something	Reduction in Casualties
Slight	7,613	7,728	-115
Serious	1,031	1,054	-23
Fatal	116	121	-5
Total	8,760	8,903	-143

- 6.7.11 The economic value of the change in accidents is set out in Table 6.8.

Table 6-8 - Present value of accident savings over 60 years (2010 prices, discounted to 2010)

Accident savings over 60 years	Do minimum cost	Do something cost	Accident Savings
Accident costs (£,000)	641,842	649,548	-7683

- 6.7.12 The scheme is thus forecast to generate overall accident dis-benefits, despite the proposed scheme itself having a relatively low accident rate, and meeting one of its strategic aims of removing through traffic from Melton Mowbray.
- 6.7.13 The main driver of this dis-benefit is the additional traffic that is attracted into the Area of Influence (AOI) as a result of the improved connectivity provided by the proposed scheme, that traffic is travelling longer distances in using the scheme, and traffic induction.
- 6.7.14 However, and importantly, there are strong Distributional Impacts associated to the accident pattern, as noted in Section 6.22.
- 6.7.15 In terms of age groups, there is a large beneficial outcome for children in particular, and the scheme is beneficial for users of all vulnerable modes of travel; given existing traveller patterns through the town centre, and with dedicated walking and cycling facilities also provided by the scheme's design.

6.8 SCHEME CONSTRUCTION IMPACTS

- 6.8.1 As part of the economic Case, an assessment of the delays during construction of the proposed Melton Mowbray Distributor Road has also been undertaken. This is detailed in the Economic Assessment Report- Annex 8- Section 5.
- 6.8.2 The reason for this assessment is to capture the costs to road users during the construction of the junctions along the proposed route, where road temporary traffic lights will be required to control traffic through the works.
- 6.8.3 Highways England's QUADRO (QUEues And Delays at ROadworks) has been used to estimate the effects of roadworks on user travel times, user vehicle operating costs and accidents. These impacts are monetised along with changes in indirect tax revenues and carbon dioxide emissions. QUADRO2017 (v4.15.0.1) was used for the assessment.
- 6.8.4 QUADRO has been used to assess the impact of building each junction on the proposed route separately, and these results were added together to obtain a total cost for implementing the entire proposed scheme. In this assessment, only the construction of the junctions was analysed as offline construction of the distributor road will not itself affect traffic.
- 6.8.5 The analysis covered the six new junctions associated with the scheme; the A606 Nottingham Road, Scaford Road, Melton Spinney Road, A607 Thorpe Road, B676 Saxby Road and A606 Burton Road.
- 6.8.6 Four of the six junctions required for the proposed scheme road are already scheduled to be built for the northern and southern distributor roads associated with development within Melton Mowbray and included within the Core Scenario. To account for this, the delay costs of construction of these junctions in their respective Core Scenario future years have been removed from the costs of construction in 2021, effectively evaluating the change in cost of accelerating their construction.
- 6.8.7 The total user impacts of construction is **-£88,121k**

6.9 ACTIVE MODE BENEFITS- CYCLING BENEFITS

- 6.9.1 As a result of the MMDR scheme new routes will be opened up for pedestrians and cyclists as well as dedicated facilities on the scheme itself. Given the nature and location of the scheme it is anticipated the largest impact will be on cycle users and hence this has been the focus of the analysis.
- 6.9.2 To quantify these benefits, an active mode appraisal has been conducted over a 20 year appraisal period, using an elasticity approach as suggested by WebTAG guidance (Unit A5.1). This gave a demand uplift on base levels of cycling in Melton of 4.05% as a result of the MMDR scheme.
- 6.9.3 This positive impact was assessed using WebTAG unit A5.1 Active Mode Appraisal (November 2014) and unit A4-1 Social Impact Appraisal (November 2014 and forthcoming changes document, November 2017), using the associated November 2017 DfT active mode health benefits worksheet. Values of economic benefits were calculated using the TAG Databook v1.8.2 dated October 2017.
- 6.9.4 A full report on the calculation of active modes benefits is contained in *TN003- MMDR Active Mode Appraisal Report*.
- 6.9.5 The present value of benefits for each active mode impact are summarised in Table 6-9.

Table 6-9 –Present Value of Active Mode Impacts over 20Yr Appraisal Period (2010 prices and value)

Impact	Total (000's)
Health Benefits	£293.5
Business Benefits	£53.8
Collisions	-£58.8
Marginal External Cost Savings	£55.6
Total Present Value of Benefits	£344.1

- 6.9.6 It is calculated, using the November 2017 guidance, that the present value of the active modes benefits for the MMDR over a 20 year assessment period is **£344,125** (2010 prices discounted to 2010).
- 6.9.7 In line with guidance, a sensitivity test was also undertaken using an alternative approach- using empirical examples from other UK schemes to provide a comparison.
- 6.9.8 This indicated that the scheme could generate a potential 10% uplift in cycling based on other examples, including orbital routes, and thus a **£848,833** present value of benefit at such levels.
- 6.9.9 This therefore leads to a potential range in terms of the benefits, but the elasticity methodology presented above has been used in the BCR calculations as it is considered to provide a more robust and conservative appraisal.
- 6.9.10 The supporting WebTAG active mode appraisal health benefits toolkit, and physical activity worksheets are also submitted to DfT in the WebTAG Worksheets folder to support these calculations, alongside *TN003- MMDR Active Mode Appraisal Report*.

6.10 ENVIRONMENTAL IMPACTS- MONETISED

6.10.1 This section summarises the monetised impacts of the scheme on the environment.

6.10.2 The environmental impacts include monetised impacts for Noise, Air Quality and Greenhouse gases.

6.11 ENVIRONMENT - AIR QUALITY

6.11.1 The likely effects on air quality once the scheme is in place, relate predominantly to the changes in traffic emissions from vehicles travelling along affected roads in the study area.

6.11.2 Plan level calculations and regional calculations have been used to value the air quality impacts of the scheme. The standard Air Quality Worksheet from WebTAG Unit A3 has been used to calculate the impact of the scheme on local air quality, regional air quality and the economic valuation of air pollution for the life of the scheme. This has been submitted to DfT alongside the results in the Economic Assessment Report.

6.11.3 The results of the air quality assessment are detailed in Section 8 of the Economic Appraisal Report- Annex 8.

6.11.4 The scheme is anticipated to lead to an improvement in air quality (exposure to PM10 and NO2 concentrations) overall for residential receptors, non-residential receptors as well as schools, nurseries, and hospitals.

6.11.5 The decrease in PM10 and NO2 concentrations will provide a monetary benefit over 60 years of **£0.59m**.

6.12 ENVIRONMENT - NOISE

6.12.1 Changes in traffic flows can also result in changes in noise, depending on whether properties are located adjacent to affected roads or not.

6.12.2 The standard Noise Worksheet from WebTAG Unit A3 has been used to calculate the change in noise levels during the life of the scheme, the change in numbers of people “annoyed” and the monetary value of those changes (PVB). This has been submitted to DfT alongside the results in the Economic Assessment Report.

6.12.3 The results output from the Noise analysis show that there is predicted to be a net benefit from changes in noise levels, equating to **£3.8m** over the 60 year appraisal period.

6.12.4 No households are forecast to experience daytime traffic noise levels in excess of 80dB LAeq, 16h (façade) in the opening year (2021) or the forecast year (2036). Three households are identified as potentially qualifying under the Noise Insulation Regulations.

6.12.5 The study area defined to assess the noise impacts of the scheme (following DMRB guidance) included 8,312 residential households.

6.12.6 Of these, based on the facade of the property which experiences the worst case change in the short-term (opening year), 35 are predicted to experience a major increase in traffic noise consisting of one individual property north of Saxby Road, 2 on the edge of Thorpe Arnold and 32 on the northern edge of the town east of Salford Road.

6.12.7 3% of households are forecast to experience a moderate increase in traffic noise in the short-term primarily on the north and east sides of Melton Mowbray closest to the proposed scheme, Thorpe Arnold and Burton Lazars, with 41% of households forecast to experience a minor or negligible increase.

6.12.8 8% of households experience no change in the short-term and 47% a negligible or minor reduction.

6.12.9 Of the 42 non-residential sensitive receptors in the study area, 1 school on the northern edge of the town, west of Scafford Road, experiences a moderate increase in traffic noise, 14 experience a negligible or minor increase, 4 no change and 23 a negligible or minor reduction.

6.13 ENVIRONMENT – GREENHOUSE GASES

6.13.1 Changes in greenhouse gas emissions from vehicles depend on changes in flows, speeds and distance travelled as a result of the scheme.

6.13.2 The TUBA programme has been used to calculate the total carbon dioxide emissions (tonnes) for the life of the scheme. TUBA outputs information on carbon dioxide emissions per year.

6.13.3 Benefits for the MMDR scheme are **-£6.8m**

6.13.4 The proposed scheme results in significant journey time savings; however the scheme also is forecast to increase typical journey distances resulting in increases in fuel consumption, and therefore disbenefits for vehicle operating costs and greenhouse gases.

6.13.5 There is no change in traded carbon dioxide emissions as a result of the scheme.

6.13.6 The monetary values of Air Quality, Noise and Greenhouse Gas impacts have been added to the PVB and included in the calculation of the scheme BCR.

6.14 ENVIRONMENTAL & SOCIAL IMPACTS- NON-MONETISED

6.14.1 This section considered non-monetised impacts on the environment (Landscape, Townscape, Historic Environment, Biodiversity and Water Environment).

6.14.2 The social impacts described in this section are also not typically monetised and include Journey Quality, Severance and Security.

6.15 ENVIRONMENT – LANDSCAPE

6.15.1 The impact assessment on landscape was undertaken using the standard Landscape Worksheet from WebTAG Unit A-3. The output of the assessment was that the scheme would have a slight adverse impact on the landscape.

6.15.2 Whilst the landform will be permanently altered with the new highway development on a local level, the scheme does not impact loss of agricultural pattern or landscape elements beyond the highway corridor. Loss of screening vegetation would be offset by the landscape mitigation proposals.

6.15.3 There will also be a reduction in tranquillity levels in the immediate vicinity of the proposed development due to an increase in perception of highway infrastructure within the rural landscape. This includes Melton Country Park. However, this potential impact will be partially reduced by mitigation planting.

6.15.4 The results of the Landscape impact appraisal presented in the supporting WebTAG worksheet show that the scheme will have a **slight adverse** effect on the local landscape.

6.16 ENVIRONMENT – TOWNSCAPE

6.16.1 Townscape covers the physical and social characteristics of the built and non-built urban environment and the way in which people perceive those characteristics. The methodology used for appraising the impact of the scheme on townscape is based on a qualitative approach and uses the standard Townscape Worksheet from WebTAG Unit A-3.

6.16.2 The results of the Townscape impact appraisal worksheet in the supporting WebTAG worksheet show that the scheme will have very little effect on the character of the townscape, given that the proposed development is based away from the main urban area.

6.16.3 It is considered that there will be a slight beneficial impact, arising from the reduction of traffic within the town, on human interaction and character, but is in overall terms considered a **neutral impact**.

6.17 ENVIRONMENT – HISTORIC ENVIRONMENT

6.17.1 The Historic Environment comprises buildings and sites of architectural and historic significance. The impact of the scheme on historic environment has been appraised qualitatively using the standard WebTAG Worksheet from WebTAG Unit A-3.

6.17.2 The study area contains 122 heritage assets. These include three scheduled monuments and 13 listed buildings (one grade I listed, two listed at grade II* and ten listed at grade II.). The scheduled monuments are St Mary and St Lazarus Hospital, Sysonby Grange and a moated grange at Spinney Farm. Other heritage assets include earthworks, negative earthworks, cropmarks, buildings and individual artefacts.

6.17.3 The results output from the Worksheet show that the scheme will have a potentially **moderate adverse** impact on the historic environment.

6.17.4 Whilst there will be no direct physical impacts on scheduled monuments or listed buildings, there is the potential for impacts on the setting of heritage assets, and in particular on the setting of the St Mary and St Lazarus Hospital, 400m from the A606 Burton Road roundabout. There is also potential of direct physical effects on both recorded and unrecorded heritage assets.

6.18 ENVIRONMENT – BIODIVERSITY

- 6.18.1 In common with the other non-monetised environmental impacts, Biodiversity has been assessed using the qualitative and quantitative techniques set out within the WebTAG and by completing the standard TAG Worksheet as part of the OBC submission.
- 6.18.2 The scheme has the potential to generate a range of effects upon statutory and non-statutory designated sites, habitats and protected species (in particular the potential for large adverse effects upon the River Eye SSSI).
- 6.18.3 However, with the implementation of appropriate avoidance measures, and mitigation to support and enhance the restoration of the River Eye SSSI it is predicted that this effect can be reduced to, at worse, a minor negative impact, but with appropriate support and implementation, a slight positive impact.
- 6.18.4 A scheme wide mitigation strategy will aim to deliver no net loss to biodiversity within the extent of the proposed scheme boundary, including mitigating for potential adverse effects on bats, badgers and great crested newts, through avoidance measures and scheme design to support animal crossings points.
- 6.18.5 When these measures are considered the scheme has a slight adverse effect on biodiversity that are not significant, in the medium to long term.
- 6.18.6 Without specific mitigation, the proposal includes the potential for a diversion of the River Eye SSSI which will result in the direct loss of a section of a nationally important site for nature conservation, as an exceptional example of a semi-natural clay lowland river (including associated macrophyte assemblages).
- 6.18.7 A large adverse score would be assessed on the basis of a river diversion being undertaken as part of the MMDR scheme. However, this is *not planned*, would only be undertaken with express permission of the Environment Agency and Natural England.
- 6.18.8 Whilst more expensive, primary mitigation is to move the power cables to the north of the river, such that the river does not need to be diverted. This has been incorporated within the scheme costings, risk register and programme based on most likely anticipated outcomes.
- 6.18.9 Other, additional mitigation plans include:
- realignment of the road layout and in particular moving the roundabout as far away from the SSSI as possible to reduce effects of surface run-off.
 - optioneering and modelling to determine whether a river diversion can actually positively contribute to and aid / enhance the existing restoration plan, by restoring natural processes in line with the objectives for the site, including benefits for invertebrate species.

- 6.18.10 Even with mitigation following best practice standard guidelines, degradation to habitats and water quality arising from surface run-off has the potential to adversely affect the River Eye SSSI, given the close proximity of roundabouts and the requirement for the river to be bridged.
- 6.18.11 This leads to a range of scores with mitigation from slight adverse, to neutral with suitable mitigation, and potentially large beneficial (if the scheme helps to aid and encourage the site's restoration plan).
- 6.18.12 The predominant habitats through which the route would pass are improved grasslands and associated field boundaries. The potential adverse effect on some species with the introduction of the new road will be mitigated by appropriate habitat management, with generally neutral scores.
- 6.18.13 There will however be a slight adverse to the Melton Country park local wildlife site. Whilst there will be no direct effects, the site is ecologically connected to the scheme by the disused railway embankment which runs north out of the local wildlife site and hydrologically by the Scaford Brook.
- 6.18.14 Therefore the overall impact of the bypass on biodiversity is expected to be **slight adverse**, although variations as a result of final mitigation implementation are very important to this outcome.

6.19 ENVIRONMENT – WATER ENVIRONMENT

- 6.19.1 The Water Environment Appraisal Worksheet in WebTAG has been completed to assess the potential impact of the scheme for different water environment features.
- 6.19.2 The Melton Mowbray Distributor Road Scheme is located within the catchment areas of the River Eye, Scaford Brook, Thorpe Brook, Burton Brook and numerous of their tributaries within the study area. The area is mainly in Flood Zone 1, but there are areas of higher risk associated with the River Eye, Thorpe Brook and Scaford Brook (EA Main Rivers).
- 6.19.3 There are areas at risk of fluvial flooding with Flood Zones 2 and 3 (including 3b, functional floodplain) present at the locations of the proposed watercourse crossings. The drainage strategy for the proposed improvement scheme will include attenuation features to ensure no increase in runoff as a result of the increased impermeable areas and hence no detrimental increase in flooding potential in receiving catchments
- 6.19.4 The main impact to the water environment is expected to result from morphological impacts relating to watercourse crossings, and the potential option to divert the River Eye which is a SSSI.
- 6.19.5 Diversion to the River Eye would have significant impacts in terms of morphology. However, a diversion may also represent a potential opportunity to implement and augment parts of the River Eye restoration strategy and help restore the river which was assessed as 'non-improvement' in 2010.
- 6.19.6 As with biodiversity, the river will only be diverted if it could be demonstrated that this would provide enhancement of the river and support Water Framework Directive and SSSI objectives (i.e. have a beneficial effect). However, any such benefit has been discounted at this stage of the assessment as it is yet to be agreed.
- 6.19.7 Other than minor watercourses, open span structures are proposed to convey the road across watercourses, the design and span of which will take account of flood risk, morphology and ecological considerations. Road runoff will be treated by sustainable urban drainage systems (SuDS).
- 6.19.8 If the diversion option is not taken there is considered to be an overall Slight Adverse score resulting from morphological impacts to watercourses resulting from new crossing structures and/or culverting.
- 6.19.9 As a result, an overall **slight adverse** score has been assessed for the Water Environment impact.

6.20 SOCIAL – JOURNEY QUALITY

- 6.20.1 Journey Quality depends on a number of factors all of which have been qualitatively assessed in line with WebTAG Unit A-3 and the journey quality worksheet to make a judgement on the impact of the scheme on journey quality.
- 6.20.2 These factors include traveller care, traveller views, traveller stress as well as additional sub-factors.
- 6.20.3 The results of the assessment show that the MMDR will have a **large beneficial effect** on journey quality, in directly reducing driver frustration for more than 10,000 users per day, as well as dedicated facilities for walking and cyclist users.
- 6.20.4 Impacts on traveller care, views and other sub-factors are considered neutral.

6.21 SOCIAL - SEVERANCE

- 6.21.1 Severance is defined within WebTAG as the separation of residents from community facilities and services caused by substantial changes in transport infrastructure or by changes in traffic flows. To understand the impact of the MMDR on severance, the difference in the levels of severance in the with-scheme and without scheme cases have been examined.
- 6.21.2 The results of this assessment are presented in the Severance worksheet.
- 6.21.3 The Scheme is likely to have a slight adverse effect on ease of access to facilities and agricultural land during construction. However, the proposed scheme will reduce severance during the operation phase because of the provision of new dedicated facilities for pedestrians and cyclists along the route, and at intersections with existing highways and footpaths.
- 6.21.4 The proposed scheme would also have beneficial effects on severance through the reduction of traffic on other roads in the town centre.
- 6.21.5 In summary, the scheme would have a slight beneficial impact on severance.

6.22 ANALYSIS OF DISTRIBUTIONAL IMPACTS

- 6.22.1 To understand the impacts of the scheme on different social groups, including those which are potentially more vulnerable to the effects of transport the Distributional Impacts (DI) appraisal has been undertaken.
- 6.22.2 The assessment of Distributional Impacts (DIs) is designed to help understand the impacts of transport interventions on different groups of people, including those potentially more vulnerable to the effects of transport. Consideration of the DIs of transport schemes is a mandatory requirement of the Department for Transport's (DfT) Transport Analysis Guidance (WebTAG).
- 6.22.3 As per TAG Unit A4.2 the DI Appraisal requires the consideration of the following eight DI Indicators:
 - Noise;
 - Air Quality;
 - Accessibility;
 - Security;
 - Severance;
 - User Benefits (journey times and vehicle operating costs);
 - Personal Affordability; and
 - Accidents

- 6.22.4 The full appraisal process is based on a three step approach:
- Step 1 – Screening Process
 - Step 2 – Assessment
 - Step 3 – Appraisal of Impacts
- 6.22.5 Step 1 identifies which of the eight DI indicators should proceed to Step 2, by assessing whether their impacts are either significant or concentrated. In the case of the MMDR, four of the DI indicators were found to fulfil the criteria to be taken to Step 2 of the appraisal. Security, Severance, Accessibility and Personal Affordability did not need to be taken further.
- 6.22.6 The DI analysis is mandatory in the scheme appraisal process and as a minimum, following the DI screening proforma (incorporated in the Economic Assessment Report- Annex 9), is required for the MMDR for the following four impacts:
- User Benefits,
 - Noise,
 - Air Quality, and,
 - Accidents.
- 6.22.7 Full details of the methodology and results for each DI impact are presented in the final section of the Economic Appraisal Report and included as Annex 9.
- 6.22.8 In line with WebTAG the identification of social groups within the affected area is initially limited to identifying the groups of people with different level of income within the scheme impact area.
- 6.22.9 LLITM has been used to provide inputs to the appraisal for this scheme. This includes data from the land-use model, based ultimately on 2011 census data, which is able to provide population estimates by household and person type. The 33 household types in the LLITM land-use model have been grouped into three income “bands” as for the transport model as shown in Table 6-10.

Table 6-10 - Income Bands Modelled within LLITM, 2010 prices

Income Band	Gross Household Income
1	£0 to £25,000
2	£25,000 to £50,000
3	Above £50,000

- 6.22.10 These data allow geographic data such as air quality and noise levels to be mapped to income levels. In addition, because of the existence of a transport model, travel data (such as user benefits) can be mapped to income levels of travellers. The production of estimates of base year travel demand in LLITM by income took into consideration both trip productions (home end of trip) and trip length (with higher income individuals typically making longer trips).
- 6.22.11 In the following tables the assessments rate the impact on each income band as per Table 5 from WebTAG Unit A4.2, reproduced below.

Table 6-11 - General system for grading of DIs for each of the identified social groups

Impact	Assessment
Beneficial and the population impacted is significantly greater than the proportion of the group in the total population	Large Beneficial ✓✓✓

Beneficial and the population impacted is broadly in line with the proportion of the group in the total population	Moderate Beneficial ✓✓
Beneficial and the population impacted is smaller than the proportion of the group in the total population	Slight Beneficial ✓
There are no significant benefits or disbenefits experienced by the group for the specified impact	Neutral
Adverse and the population impacted is smaller than the proportion of the population of the group in the total population	Slight Adverse ✕
Adverse and the population impacted is broadly in line with the proportion of the population of the group in the total population	Moderate Adverse ✕✕
Adverse and the population impacted is significantly greater than the proportion of the group in the total population	Large Adverse ✕✕✕

6.23 DISTRIBUTIONAL IMPACTS- USER BENEFITS

6.23.1 The results of the assessment for user benefits are presented in Table 6-12.

Table 6-12 - Distributional Impacts of User Benefits

	Income Bands			Total
	Low	Medium	High	
Total benefits	£18.98m	£26.81m	£32.23m	£78.02m
Total disbenefits	£5.34	£7.89m	£9.88m	£23.11m
Share of user benefits	24%	34%	41%	100%
Share of user disbenefits	23%	34%	43%	100%
Share of population in income band	45%	33%	22%	100%
Assessment	✓	✓✓	✓✓✓	

- 6.23.2 The scheme is forecast to disproportionately benefit the better off, although it does provide overall user benefit to all three income bands.
- 6.23.3 Minor traveller dis-benefits also fall disproportionately on the better off.
- 6.23.4 This is generally to be expected for a relatively strategic road scheme of the sort proposed, as users of strategic roads (and car vehicles) tend to have higher incomes than average.

6.24 DISTRIBUTIONAL IMPACTS- NOISE

- 6.24.1 The results of the assessment for noise are presented in Table 6-13 and Table 6-14.

Table 6-13 - Distributional Impacts of Noise on Households by Income Base (2021)

	Income Bands			Total
	Low	Medium	High	
Households with increased noise	85	53	29	167
Households with decreased noise	20	16	10	46
Households with no change in noise	3,427	2,941	1,731	8,099
Net number of 'winners'	-65	-37	-20	-121
Proportion of net 'winners' by category	-53%	-30%	-16%	
Share of population in income band	42%	36%	21%	
Assessment	***	*	*	

Table 6-14 - Distributional Impacts of Noise on Households by Income Base (2036)

	Income Bands			Total
	Low	Medium	High	
Households with increased noise	78	54	21	153
Households with decreased noise	8	7	4	19
Households with no change in noise	3,870	2,845	1,425	8,140
Net number of 'winners'	-70	-47	-17	-134
Proportion of net 'winners' by category	-52%	-35%	-13%	
Share of population in income band	48%	35%	17%	
Assessment	***	**	*	

6.24.2 WebTAG Unit A4.2 3.4.10 states that “the analyst should also take into account changes in noise levels that could occur at night”. In order to identify the distributional impacts of changes in night-time noise levels, a distributional impacts assessment by income group has also been carried out using night-time noise levels (LAeq,8 hour, façade) for the two forecast years. The results of this assessment are shown in Table 6-15 and Table 6-16.

Table 6-15 - Distributional Impacts of Night-time Noise on Households by Income Base (2021)

	Income Bands			Total
	Low	Medium	High	
Households with increased noise	56	31	17	104
Households with decreased noise	3	3	1	7
Households with no change in noise	3,473	2,977	1,751	8,201
Net number of 'winners'	-53	-29	-16	-97
Proportion of net 'winners' by category	-54%	-30%	-16%	
Share of population in income band	42%	36%	21%	
Assessment	***	*	*	

Table 6-16 - Distributional Impacts of Night-time Noise on Households by Income Base (2036)

	Income Bands			Total
	Low	Medium	High	
Households with increased noise	61	42	16	119
Households with decreased noise	5	4	2	12
Households with no change in noise	3,890	2,860	1,431	8,181
Net number of 'winners'	-56	-38	-14	-107
Proportion of net 'winners' by category	-52%	-35%	-13%	
Share of population in income band	48%	35%	17%	
Assessment	***	**	*	

- 6.24.3 The forecast noise increases generated by the scheme disproportionately affect the less well off, especially at night. Similarly, the forecast noise decreases disproportionately benefit the better off (relative to the population levels), although this effect is slight.
- 6.24.4 The overall assessment is thus weighted in favour of the better off, and all three income groups experience overall dis-benefit.
- 6.24.5 WebTAG Unit A4.2 3.3.3 states that “the DI analyst should consider social groups living in the area that are vulnerable to changes in noise levels, including children and older people”. At the non-residential sensitive receptors in the study area, noise impacts in both the opening year and design year are forecast to be negligible (i.e. less than 3dB change), and in the majority of cases (33 out of 42) the forecast impact is a decrease in noise levels.
- 6.24.6 On the basis of the assessments of magnitude of impacts on local amenities, and in particular on schools, the overall assessment score for impact on children and older people is considered to be neutral for the scheme.

6.25 DISTRIBUTIONAL IMPACTS- AIR QUALITY

- 6.25.1 The results of the assessment of local air quality in terms of PM₁₀ emissions are shown in Table 6-17 and Table 6-18.

Table 6-17 - Distributional Impacts of PM₁₀ on Households by Income Base (2021)

	Income Bands			Total
	Low	Medium	High	
Households with increased PM ₁₀	136	108	83	327
Households with decreased PM ₁₀	373	321	187	881
Households with no change in PM ₁₀	2,090	1,764	1,068	4,922
Net number of 'winners'	237	213	104	554
Proportion of net 'winners' by category	43%	38%	19%	
Share of population in income band	42%	36%	22%	
Assessment	✓✓	✓✓✓	✓	

Table 6-18 - Distributional Impacts of PM₁₀ on Households by Income Base (2036)

	Income Bands			Total
	Low	Medium	High	
Households with increased PM ₁₀	35	23	16	75
Households with decreased PM ₁₀	364	248	117	729
Households with no change in PM ₁₀	2,542	1,815	968	5,326
Net number of 'winners'	329	225	100	654
Proportion of net 'winners' by category	50%	34%	15%	
Share of population in income band	48%	34%	18%	
Assessment	✓✓	✓✓	✓	

6.25.2 As shown above, the proposed scheme is forecast to have a net beneficial effect in terms of PM₁₀ concentrations, i.e. there would be more properties with improved air quality (reduced PM₁₀) than with worse air quality. All income bands are forecast to be net winners in terms of PM₁₀ concentrations; however residents in the highest income band are forecast to experience a lower proportions of benefits compared to their proportion of population.

6.25.3 The results of the assessment of local air quality in terms of NO₂ emissions are shown in Table 6-19 and Table 6-20.

Table 6-19 - Distributional Impacts of NO₂ on Households by Income Base (2021)

	Income Bands			Total
	Low	Medium	High	
Households with increased PM ₁₀	306	254	176	737
Households with decreased PM ₁₀	1,095	933	556	2,584
Households with no change in PM ₁₀	1,197	1,006	605	2,809
Net number of 'winners'	789	678	379	1,847
Proportion of net 'winners' by category	43%	37%	21%	
Share of population in income band	42%	36%	22%	
Assessment	✓✓	✓✓	✓	

Table 6-20 - Distributional Impacts of NO₂ on Households by Income Base (2036)

	Income Bands			Total
	Low	Medium	High	
Households with increased PM ₁₀	225	147	111	483
Households with decreased PM ₁₀	1,038	725	356	2,119
Households with no change in PM ₁₀	1,678	1,215	634	3,528
Net number of 'winners'	813	578	245	1,636
Proportion of net 'winners' by category	50%	35%	15%	
Share of population in income band	48%	34%	18%	
Assessment	✓✓	✓✓	✓	

- 6.25.4 As shown in Table 6-19 and Table 6-20, the proposed scheme is forecast to have a net beneficial effect in terms of NO₂ emissions, i.e. there would be more properties with improved air quality (reduced NO₂) than with worse quality. As with PM₁₀ concentrations, the highest income band's proportion of NO₂ benefits is lower than the proportion of population which is in this income band.
- 6.25.5 In terms of vulnerable users, the locations of schools and hospitals within 200m of the air quality affected road network were identified. These are referred to as sensitive receptors. Eight sensitive receptors were identified within the detailed air quality modelling.
- 6.25.6 The proposed scheme is forecast to decrease levels of PM₁₀ at 5 of the 8 of the identified sensitive receptors included in the detailed air quality modelling, increase levels at one location, and have negligible impacts (less than 0.1µg/m³ change) at two sensitive receptors.
- 6.25.7 In terms of NO₂ emissions, 6 of the 8 identified sensitive receptors included in the detailed air quality modelling are forecast to experience a decrease in emissions, with increases at one location, and negligible impacts (less than 0.1µg/m³ change) at the remaining location.
- 6.25.8 Overall, the forecast air quality distributional impact of the proposed scheme is positive, and disproportionately more positive for the more vulnerable groups.

6.26 DISTRIBUTIONAL IMPACTS- ACCIDENTS

- 6.26.1 The assessment of the accident appraisal in terms of social distribution is shown in Table 6-21 and Table 6-22.

Table 6-21 - Distributional Impact Assessment of 60-year Accidents by Vulnerable Social Group

	Casualties	Age (<16)	Age (16-25)	Age (>70)
"without" scheme	3,429	449	935	183
"with" scheme	3,671	438	997	194
Change	241	-12	61	11
% of impact		-5%	25%	5%
Observed proportions		13%	26%	6%
Assessment		✓✓	xx	x

Table 6-22 - Distributional Impact Assessment of 60-year Accidents by Vulnerable Modes of Travel

	Casualties	Pedestrian	Cyclists	Motorcyclists
"without" scheme	3,429	628	236	370
"with" scheme	3,671	598	230	379
Change	241	-30	-5	9
% of impact		-12%	-2%	4%
Observed proportions		14%	4%	13%
Assessment		✓✓	✓✓	✓✓

6.26.2 In terms of age groups, there is a beneficial outcome for children, however the 16-25 and over 70 age groups (as car drivers) see dis-benefits in terms of safety.

6.26.3 However, the scheme is beneficial for users of all vulnerable modes of travel.

6.27 INITIAL BENEFIT-COST RATIO (BCR)

6.27.1 The Benefit-Cost Ratio (BCR) is defined by dividing the Present Value of Benefits (PVB) by the Present Value of Costs (PVC).

6.27.2 According to the Value for Money Framework, Value for Money categories are defined as follows:

- Poor VfM if BCR is below 1.0;
- Low VfM if the BCR is between 1.0 and 1.5;
- Medium VfM if the BCR is between 1.5 and 2;
- High VfM if the BCR is between 2.0 and 4.0; and
- Very High VfM if the BCR is greater than 4.0.

6.27.3 The initial BCR is based on the appraisal of elements which contain the highest level of assurance. Based on the AMCB shown in Table 6-23 below, the total monetised benefits exceed the costs by £63.2m.

6.27.4 Thus the Net Present Value of the MMDR scheme is £63.2m.

6.27.5 The initial BCR of the scheme is 2.45, and means that the initial value for money category is **High**.

Table 6-23 - AMCB table for Initial BCR (000's)

Noise	£3,797.5
Local Air Quality	£591.2
Greenhouse Gases	-£6,839.4
Journey Quality	n/a
Physical Activity	£344.1
Accidents	-£7,682.8
Economic Efficiency: Consumer Users (Commuting)	£26,881.1
Economic Efficiency: Consumer Users (Other)	£34,440.5
Economic Efficiency: Business Users and Providers (inc. developer contributions)	£40,480.4
Wider Public Finances (Indirect Taxation Revenues)	£14,703.5
Present Value of Benefits (PVB)	£106,716.1
Present Value of Costs (PVC)	£43,489.9
Net Present Value (NPV)	£63,226.3
Benefit-Cost Ratio (BCR)	2.45

- 6.27.6 This initial value of BCR includes the monetised benefits of transport economic efficiency, Noise, Local Air Quality, greenhouse gases, physical activity, accident savings and indirect taxation impacts, but does not include benefits accruing from journey time reliability or wider impacts.
- 6.27.7 The impact of developer contributions and do minimum costs as detailed earlier is taken into account in the costs and benefits.

6.28 ADJUSTED BCR

- 6.28.1 Two further components have been monetised for the MMDR scheme adjusted BCR, and are detailed in the next two sections.

JOURNEY TIME RELIABILITY

- 6.28.2 The change in journey time reliability has been estimated based on the guidance contained within WebTAG Unit A1.3, Section 6.3 for urban roads.
- 6.28.3 This approach considers the ratio of the assigned time within the highway model to the free-flow time as a measure of the standard deviation in journey times, and monetises this using the same assumptions as adopted within the TUBA assessment of the forecast scheme impacts. This is described in detail within section 6 of the EAR (Annex 8).
- 6.28.4 The assessment of impacts upon journey time reliability predict benefits of **£7.25m** over the 60 year appraisal period.

WIDER ECONOMIC BENEFITS

- 6.28.5 In accordance with guidance set out in WebTAG Unit A2.1, the wider economic benefit of the MMDR has been assessed. This additional benefit would be added into the calculations for an adjusted BCR also including journey time reliability benefits.
- 6.28.6 In undertaking the assessment, wider benefits software developed by David Simmonds Consultancy for use with the DELTA package was utilised. Use of this software, rather than the WITA software, ensures consistency between the basic static calculation of wider impacts and the dynamic LUTI calculation conducted as a sensitivity test.
- 6.28.7 The approach to wider impacts has covered the following areas:
- Calculation of Agglomeration. The approach to calculating this is set out in WebTAG unit A2.1 paras 4.1.1 to 4.1.7.
 - A calculation of the effect of output change in imperfectly competitive markets. This required the Transport Economic Efficiency (TEE) analysis undertaken by the transport consultants. The approach to calculating this is set out in WebTAG unit A2.1 paras 4.1.8 to 4.1.10.
 - A calculation of the tax revenue from labour market impacts. This requires calculating the labour supply impact and the move to more productive jobs impact. The approach to calculating this is set out in WebTAG unit A2.1 paras 4.1.8 to 4.1.25.

- 6.28.8 The wider economic benefits from the elements above are shown in Table 6-24 as a 60 year present value of benefit (PVB).
- 6.28.9 The benefit due to increased output in imperfectly competitive markets has been calculated based on the business user benefit, generated by the transport economic efficiency analysis. This information is only provided at the LLITM modelled area level.
- 6.28.10 This shows a total benefit of £21.5m due to WITA based Wider Impacts.
- 6.28.11 Full details of the calculations, and the results of supporting dynamic land use sensitivity test as recommended in WebTAG are detailed in the supporting TN004- Melton WEI Report (David Simmonds Consultancy).
- 6.28.12 It should be noted that the results of the sensitivity test report higher values (+£1.4m greater) than the static, core assessment reported, and claimed in the Adjusted BCR.

Table 6-24 - Summary of Wider Economic Benefits (£m, 2010 prices and values)

Benefit	Melton Borough	LLITM Modelled Area
Agglomeration	16.14	Not reported
More People in work	0.60	Not reported
Increased output in imperfectly competitive markets	Not Calculated	4.79
Total	16.74*	Not reported

*Excluding any benefit due to increased output in imperfectly competitive markets

6.29 ADJUSTED BENEFIT COST RATIO

- 6.29.1 In order to calculate an adjusted BCR for the scheme, the calculation of benefits from improved journey time reliability and the impact on the wider economy have been undertaken and added to the benefits of the scheme.
- 6.29.2 An adjusted AMCB table incorporating the journey time reliability and wider economic benefits is shown in Table 6-25 below.

Table 6-25 - AMCB Table for Adjusted BCR (000's)

Noise	£3,797.5
Local Air Quality	£591.2
Greenhouse Gases	-£6,839.4
Journey Quality	n/a
Physical Activity	£344.1
Accidents	-£7,682.8
Economic Efficiency: Consumer Users (Commuting)	£26,881.1
Economic Efficiency: Consumer Users (Other)	£34,440.5
Economic Efficiency: Business Users and Providers (inc. developer contributions)	£40,480.4
Wider Public Finances (Indirect Taxation Revenues)	£14,703.5
Journey Time Reliability	£7,252.0
Wider Economic Impacts	£21,530.0
Present Value of Benefits (PVB)	£135,558.0
Present Value of Costs (PVC)	£43,489.9
Net Present Value (NPV)	£92,068.0
Benefit-Cost Ratio (BCR)	3.12

6.29.3 It can be seen that with the additional sources of benefit, there is a modest uplift in the BCR, bringing the BCR above 3, and well within the 'High' Value for money category.

6.30 SENSITIVITY TESTS OVERVIEW

- 6.30.1 A number of sensitivity tests have been carried out to help understand uncertainty in the appraisal of the scheme - particularly related to input assumptions such as future economic growth, fuel prices and employment levels. These sensitivity tests will help decision makers to understand the robustness of the scheme appraisal to such input assumptions and how these might affect the value for money.
- 6.30.2 WebTAG (Unit M4) has been used to define low and high growth sensitivity tests for the MMDR scheme. Using these alternative growth scenarios, TUBA assessments of the scheme benefits have been undertaken.
- 6.30.3 In addition to core WebTAG requirements, additional sensitivity tests have also been undertaken for:
- Inclusion of a 2051 forecast year.
 - An alternative base model (constrained to RSI sector totals, rather the mobile phone data)
- 6.30.4 A 2051 forecast year has been added in line with guidance recommending that forecasts should be undertaken as far into the future practical, and helps understand the impact of the scheme further into the appraisal period.
- 6.30.5 An alternative base model test is also included as it helps quantify impact of any uncertainties in base demand patterns (between mobile phone- the core model- and RSI O-D data in particular).

6.31 ALTERNATIVE GROWTH SCENARIOS & 2051 FORECAST YEAR TESTS

- 6.31.1 The low and high growth scenarios are documented in the LLITM 2014 Base Traffic Forecasting Report- Annex 7, and the Economic Assessment Report- Annex 8.
- 6.31.2 These sensitivity tests, alongside the central case results, are provided in Table 6-26Table 6-26 below, with full breakdown by time period and user class presented in the Economic Assessment Report- Annex 9- Section 3 for all sensitivity tests.
- 6.31.3 TUBA input/ output files are also provided as text files accompanying the EAR for the OBC submission.

Table 6-26 - Summary of Discounted TUBA Benefits (excluding greenhouse gases) by Modelled Year, 2010 prices and values

User Class	Central Case	Central Case to 2051	High Growth	Low Growth
2021	£2,229,000	£2,229,000	£2,677,000	£2,161,000
2036	£2,144,000	£2,144,000	£2,903,000	£1,843,000
2041	£2,469,000	£2,469,000	£2,983,000	£1,886,000
2051	-	£2,500,000	-	-
60 year Total	£124,004,000	£134,351,000	£153,482,000	£100,364,000

- 6.31.4 The results show that the alternative growth scenarios (low and high) have a significant impact on the benefits forecast by TUBA, a reduction of 19% and increase of 24% respectively.
- 6.31.5 However, even for the low growth forecast the benefits remain well above twice the present value of costs for the adjusted BCR, indicating that the scheme will remain high value for money even in the case of lower growth in traffic.
- 6.31.6 The 2051 forecast year adds approximately £10m to the scheme present value of benefits.

6.32 ALTERNATIVE BASE MODEL

- 6.32.1 Within LLITM 2014 there are two sources of demand data for Melton Mowbray: the processed mobile phone data; and a series of roadside interviews. It is unusual for a model to have two independent sources of (partially observed) demand data to be able to perform an independent check on the base year demand.
- 6.32.2 There are uncertainties with both sources of demand data; both of which are samples and therefore subject to biases. However, a comparison of the demand patterns for Melton Mowbray has been undertaken between the base year matrices developed primarily from mobile phone data, and a series of roadside interviews.
- 6.32.3 In order to estimate the impact of the differences in demand patterns between the two sets of observations, an alternative base year model has been developed. This alternative base year model has used the roadside interview data to provide sector-sector totals for fully observed movements to, from and through Melton Mowbray for car and LGV traffic.
- 6.32.4 Using the same forecast growth as detailed for the “central” forecasts in ‘LLITM 2014 Base MMDR OBC Forecasting Report’, “without” and “with” scheme forecasts have been produced using the alternative base year model for 2021, 2036 and 2041. The results of these forecasts have been used to estimate the TUBA benefits of the proposed scheme with this alternative base year.
- 6.32.5 The present value of benefits is forecast to be around £102m, as detailed in the Economic Assessment Report- Annex 8, which is a 13% reduction from the central case detailed above, mainly due to small reductions in the forecast travel time savings.
- 6.32.6 Whilst this sensitivity test forecasts a lower level of benefits from the proposed core scenario, the forecast benefits are within the range given by the high and low growth scenarios.
- 6.32.7 This demonstrates that the forecast scheme benefits with the alternative base year is within the uncertainty in scheme benefits defined by the WebTAG high / low growth scenarios.
- 6.32.8 Further, this alternative base model also demonstrates that the BCR remains above 2 for both initial and adjusted BCR’s for the scheme, providing a high degree of confidence that the scheme represents high value for money from two different sources of O-D data.

6.33 APPRAISAL SUMMARY TABLE

- 6.33.1 The Appraisal Summary Table (AST) presents evidence from the analysis that is undertaken to inform the Economic Case of an intervention.
- 6.33.2 Applying the principles of HM Treasury Green Book, the AST has been designed to record all impacts - Economic, Environmental, Social, Public Accounts and Distributional - at the national level.
- 6.33.3 The Scheme AST detailing the above monetised values or qualitative scores, is included in Appendix I.

6.34 VALUE FOR MONEY STATEMENT

- 6.34.1 The Value for Money assessment of the MMDR scheme has been undertaken in line with WebTAG to support the Business Case of the scheme. As part of the assessment the economic, environmental, social, distributional and fiscal impacts of the proposed scheme have been appraised using qualitative, quantitative and monetised information.
- 6.34.2 WebTAG guidance recommends Benefit Cost Ratio (BCR) metrics to define the Value for Money category of a scheme. The categories include:
- Poor VfM if BCR is below 1.0
 - Low VfM if the BCR is between 1.0 and 1.5
 - Medium VfM if the BCR is between 1.5 and 2
 - High VfM if the BCR is between 2 and 4, and Very High VfM if the BCR is greater than 4.0
- 6.34.3 The initial BCR for the scheme is 2.45, with an adjusted BCR of 3.12. This indicates the scheme offers **high value for money** based on DfT guidance.
- 6.34.4 As expected, the majority of the benefits generated by the MMDR scheme are associated with travel time savings for business and non-business road users. The results show strong time savings in the 2-5 minute category, which is both important, and in line with expected ranges from the problem identification. Improvements in Noise, Local Air Quality, changes in indirect taxation, physical activity also provide a small contributions to the total monetised benefits of the scheme.
- 6.34.5 The scheme is also expected to have a moderate beneficial impact on journey quality due to reduction in driver frustration as well as improvement to non-motorised user (NMU) facilities; which also leads to a slight beneficial impact in terms of severance.
- 6.34.6 Negative benefits are expected from greenhouse gas emissions, accidents and scheme delays during construction. However, these changes are minor compared to the total value of benefit.
- 6.34.7 It is anticipated that the scheme will have a slight adverse effect on the local landscape and its tranquillity, and in passing close to locally important heritage sites.
- 6.34.8 The impact on Water Environment and Biodiversity is expected to also be slight adverse on the basis of power lines being diverted during construction, rather than a diversion of the River Eye watercourse and the SSSI.
- 6.34.9 The scheme will also have the potential for a moderate adverse effect on Historic Environment. This is related to impacts on potential setting, rather than physical impact.
- 6.34.10 As a result of the above assessments, it is considered that the non-monetised impacts above lead to an overall slight reduction in the value for money of the scheme overall, although it is not considered that the scale of the impacts would affect the VFM category.
- 6.34.11 A number of sensitivity tests have also been carried out to provide further assurance around the value for money of the scheme. The results show that the low and high traffic growth forecasts result in a reduction of scheme benefits of 19% and increase in scheme benefits of 24% respectively.
- 6.34.12 However, the scheme will remain high value for money, and with an adjusted BCR significantly greater than 2, even in the case of lower growth in traffic.
- 6.34.13 A 2051 forecast year has also been tested and adds approximately £10m to the scheme present value of benefits.

6.34.14 Further, an alternate base model test (using RSI sector O-D distributions rather than mobile phone data) has been carried out. The results of this test show a 13% reduction from the central case BCR; well within the range of high and low growth tests.

6.34.15 Importantly this alternative base model also demonstrates that the BCR remains above 2 for both initial and adjusted BCR's for the scheme, which means the scheme provide high value for money when a range of alternative forecast and modelling assumptions are considered.

6.35 CONCLUSION

6.35.1 Analysis of the usually monetised impacts shows that the MMDR scheme offers 'High Value' for Money.

6.35.2 In addition, the assessment found that with the inclusion of benefits related to journey time reliability and wider economic impacts the scheme remained in the same value for money category.

6.35.3 Sensitivity testing has shown that even with lower levels of future growth of the economy and traffic the scheme is expected to continue to have high value for money including all usually monetised impacts.

6.35.4 As expected, the majority of the benefits generated by the MMDR scheme are associated with travel time savings for business and non-business road users, and which is in line with scheme objectives.

6.35.5 It is noticeable, and highly relevant against scheme objectives, and problem identification that strong benefit exist for LGV and HGV movements too.

6.35.6 The results show a large proportion of time savings in the 2-5 minute category, and is also in line with expected ranges from the problem identification. Improvements in Noise, Local Air Quality, and physical activity also provide contributions to the total monetised benefits; again these are key objectives of the scheme.

6.35.7 Whilst accidents in the Area of Influence are forecast to increase slightly overall (as a result of more car travel and demand in the area of interest), accidents benefits in the town centre are noticeably apparent from the Distributional Analysis, and in particular benefit all vulnerable road users in the town.

6.35.8 It is anticipated that the scheme will have a slight adverse effect on the local landscape and its tranquillity, and the impact on Water Environment and Biodiversity is expected to also be slight adverse on the basis of mitigation being provided by way of power lines being diverted during construction, and in seeking to minimise environmental impact. The scheme will also have the potential for a moderate adverse effect on Historic Environment. This is related to impacts on potential setting, rather than physical impact, and will be sought to be further reduced through further consultation and mitigation design.

7 THE FINANCIAL CASE

7.1 INTRODUCTION

- 7.1.1 This chapter, the Financial Case, details the affordability of the proposal, its funding arrangements and technical accounting issues (value for money being detailed in the Economic Case).
- 7.1.2 The cost of delivering the Melton Mowbray Distributor Road (MMDR) will be £63.47m at out-turn prices. This allows for inflation and quantified risk.
- 7.1.3 The above removes Part 1 claims, monitoring and evaluation costs, and optimism bias from the costs otherwise used in the preceding Economic Case; as well as ongoing maintenance costs of the scheme that will be met by LCC.
- 7.1.4 The cost of delivering the MMDR are presented in this chapter step by step with base costs discussed in section 7.3, adding risk in 7.4, and inflation in 7.5.
- 7.1.5 The structure is as follows:
- Section 7.2 sets out the methodology used
 - Section 7.3 provides explanation of the base costs
 - Section 7.4 explains the risks considered, management of these risks and quantifies them
 - Section 7.5 presents the spend profile
 - Section 7.5 sets out the assumptions for inflation
 - Section 7.6 presents the scheme costs
 - Section 7.7 sets out the whole life costs of the scheme
 - Section 7.8 covers funding arrangements
 - Section 7.9 provides a summary of the financial case

7.2 METHODOLOGY

- 7.2.1 The Financial Case for the MMDR is based on scheme design, development and Early Contractor Involvement (ECI) relating to the costing of the preferred route option, by LCC and the appointed designers AECOM.
- 7.2.2 Carillion Tarmac Partnership (CTP) were appointed through the Midlands Highways Alliance Medium Schemes Framework contract to work with Leicestershire County Council (LCC) and their designers, AECOM, to deliver an ECI service for the proposed Melton Mowbray Distributor Road (MMDR). This has focussed on the deliverability and refinement of approach and costs associated with key cost items (and subsequent risks) associated with structures and potential power line diversions in particular.
- 7.2.3 As shown in the general arrangement Diagram in Appendix A, and detailed cost breakdown in Appendix C, the following list of items is included in the costings developed for the MMDR scheme from this process:
- 6.9km of 9.3m carriageway with 3.0m combined cycleway/footway
 - 6 roundabouts and tie-ins with existing side roads (30m inlay at each tie in location)
 - 20km of post and rail fencing
 - 4,800m of 3.0m high environmental barrier
 - 11,500m of safety fence with associated terminals

- Highway drainage system (carrier drains, filter drains, gullies, headwalls, interceptors and balancing ponds)
- Earthworks 415,000m³ cut, 410,000m³ fill
- Topsoil strip 300mm, resoiling 300mm to batters, 150mm to verges
- Kerbs, KDUs and edgings
- Traffic signs and road markings
- Street lighting and associated electrical works in vicinity of roundabouts
- Statutory undertakers diversions (gas MP/LP 125mm HDPE, electric 11Kv, water 280mm HDPE) and provision of protection slabs
- Diversion of 132Kv cables (£2m)
- 3 No. 1.5m x 1.5m Box culverts (57m, 26m and 55m in length), erosion protection provision of 3m x 4m at both upstream and downstream ends
- Open span structures to Thorpe Brook and Scalford Brook (span 31.5m between centres of bearings) with 12m piles
- Bridge over River Eye (35m span)
- Railway bridge (46.75m span)
- Box culverts to flood plain (Between Ch4880 and Ch5180) spaced at 20m centres (16no in total), average length 38m (25 - 48m), headwalls (no trough)
- Landscaping, seeding and planting
- Translocation of ecological habitat/ bats, badgers etc. (£150k)
- Offline traffic signing works in Melton Mowbray and surrounding roads.

7.2.4 The scheme costs have been independently reviewed by Watermans as part of the OBC submission. Their report, and AECOM/ Carillion responses to the points made are detailed in Appendix E, as well as being considered in this chapter.

7.3 BASE COSTS

7.3.1 The estimated base costs for the scheme are set out in Table 7-1.

7.3.2 In line with guidance, these include preparatory costs associated with the scheme design, business case, land acquisition, construction preliminaries and scheme construction and supervision.

7.3.3 Scheme delivery arrangements and commercial terms have been taken into account as has the determination of base costs.

7.3.4 The funding breakdown and spend by financial year is discussed in Section 7.8.

BASE COST OF SCHEME DEVELOPMENT AND CONSTRUCTION

7.3.5 The estimated base cost of the scheme, in 2017 Q4 prices, excluding part 1 claims, monitoring and evaluation, future inflation, risk and non-recoverable VAT, is £56,809,552.

7.3.6 A full and detailed breakdown of the costs is provided in Appendix C and are summarised in Table 7-1 below.

Category	Estimated Base Cost October 2017 Q4 prices (£,000)
Land Costs	2,048
Construction Costs	49,467
Preparation Costs	3,215
Supervision Costs	2,080
Total base cost	56,810

Table 7-1: Base Costs

- 7.3.7 As can be seen from the table above the majority (>85%) of the overall scheme base cost can be attributed to construction costs. With the other expenditures of land, preparation and supervision making up the remainder of the £56.8m base cost total.
- 7.3.8 All costs have been calculated from the date of publication, and include expected expenditure from the end of December 2017. Any costs previous to this have not been included.
- 7.3.9 The allowance for fees includes all costs which will be incurred beyond December 2017 for detailed design, EIA and planning, along with future expected CPO.
- 7.3.10 Cost estimates have been prepared by an experienced Principal Quantity Surveyor in AECOM's Highways Team, together with ECI contractor Carillion to provide particular advice on higher risk items. Land costs have been calculated from LCC's dedicated in-house land and valuation team.
- 7.3.11 A full independent check of the scheme costs has been undertaken by Waterman's, and is included in Appendix E, along with scheme designer responses.

7.4 ESTIMATING UNCERTAINTY

- 7.4.1 The estimate of the scheme cost at its current stage of delivery includes an allowance for risk and uncertainty. There are multiple elements that could affect the final cost, and for this reason, the scheme cost estimate includes allowances for both estimating uncertainty and events-driven uncertainty, or risk².
- 7.4.2 An allowance for estimating uncertainty is included in the base costs for each element of the scheme, based on experience with similar schemes at this stage of development.
- 7.4.3 The treatment of risk, and the calculation of quantified risk – the Quantified Risk Assessment (QRA) - is described below.

MANAGING RISK

- 7.4.4 The Treasury Green Book states that “*effective risk management helps the achievement of wider aims, such as effective change management, the efficient use of resources, better project management, minimising waste and fraud, and supporting innovation*”.
- 7.4.5 The process of managing and reviewing a wide range of project risks, and ensuring an appropriate transfer of risk to the contractor, is described more fully in the Management and Commercial Cases.
- 7.4.6 A four stage risk management process has been followed, as illustrated in Figure 7-1 below.

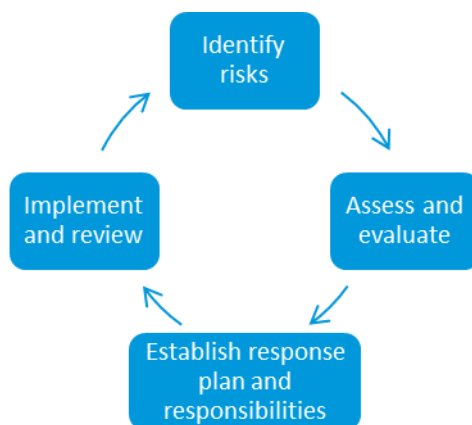


Figure 7-1: The four stage risk management process

IDENTIFYING RISKS

- 7.4.7 Risks have been identified through the development of a full and detailed risk register for the scheme’s development, planning and construction. Key, specific risks for the development of the MMDR have been included in this section, with full Risk Registers shown in Appendix D.
- 7.4.8 The Risk Registers cover both design and construction, and cover risks under the following categories:

Design	Construction
→ Staff resources	→ Earthworks
→ Highways	→ Ecology
→ Structures/ Power Lines	→ Operational
	→ Third Party

² Risk allowance is a factor applied to project costs to act as a contingency for unforeseen circumstances.

- Drainage
- Geotechnics
- Environmental
- Operations
- Planning
- Economy
- Funding
- Measurements
- Pavements
- Network Rail
- Statutory Undertakers
- Archaeology
- Weather

Headline risks identified for the MMDR scheme include:

- Buildability constraints for the River Eye crossing
- Potential for increased structure sizes to meet EA/NE requirements
- Insufficient clearance to overhead high voltage lines adjacent to the River Eye overbridge
- Overrunning of National Grid programme for overhead power cable diversion
- Limited ground investigation information currently available
- Encountering tar bound materials on site
- Poor existing carriageway construction could lead to more extensive reconstruction
- Delays in the legal process and potential for public inquiry
- Discovery of uncharted statutory undertakers plant
- Cancellation of programmed Network Rail possessions at the railway bridge
- Design changes to the works information
- Severe weather conditions

- 7.4.10 The impact of these has been rated using a risk score matrix combining probability and impact factors and are shown within Appendix D, and Appendix A of the Economic Assessment Report (Annex 8).

QUANTIFIED RISK

- 7.4.11 TAG Unit A1.2 requires that all project related risks that may impact on the scheme costs should be identified and quantified in a Quantified Risk Assessment (QRA), in order to produce a risk-adjusted cost estimate.
- 7.4.12 This has been undertaken for the MMDR scheme based upon the risk register, and probability and impact factors. The range of possible costs associated with each risk was estimated, and each risk was assigned a high, medium or low value.
- 7.4.13 Cost risk and uncertainty has been assessed using a Quantified Risk Assessment (QRA) which is then used to produce a risk-adjusted cost estimate, following WebTAG Unit A1.2 guidance.
- 7.4.14 Risks have been assessed for preparation, construction and supervision costs. QRA has not been undertaken for land costs; these have therefore been risk-adjusted by increasing the land cost by 15%.
- 7.4.15 For preparation, construction and supervision costs, the following methodology has been adopted, based on WebTAG Unit A1.2 §3.2.

RISK IDENTIFICATION

- 7.4.16 A comprehensive risk register has been developed listing identified risks (and their owners) that are likely to affect the delivery of the scheme. This risk register has been developed in association with Carillion, the ECI contractor for the proposed scheme, consisting of 32 preparation (design) risks and 27 construction risks. The detailed risk registers are shown in Appendix D.
- 7.4.17 The early involvement of Carillion has combined the complementary expertise of client, designer and contractor, and facilitated the early identification of project risks. This process has used the knowledge gained by the organisations and the individuals on the ECI team during the development and construction of many similar schemes such as; Lincoln Eastern Bypass, A45 Bridge Replacement in Solihull, Finningley and Rossington Regeneration Route in Doncaster, and the nearby A606/A6003 Oakham Bypass.
- 7.4.18 Carillion have advised and included a 5% construction risk in their preliminaries to specifically allow for likely inaccuracies in the estimate of quantities from the outline design stage information currently available.

ASSESSING THE IMPACTS OF RISK TO DETERMINE POSSIBLE OUTCOMES

- 7.4.19 For each risk, the minimum and maximum likely impacts have been monetised, using empirical evidence, previous experience on similar projects, or common sense approximations as appropriate. For construction costs, these have been derived pre- and post-risk mitigation; the post-mitigation impacts have been used for the QRA assessment, which are the residual risks following mitigation spending, which has been treated as a fixed cost within the QRA.
- 7.4.20 Carillion have an established ECI and construction phase risk management process that was used to develop the project Risk Register. The project team identified the risks and impacts, with potential costs, associated with the project. These were further evaluated for the likelihood of occurrence resulting in a risk rating measure between 'high' and 'low'. Mitigation measures identified were reviewed by the project team to give a revised risk rating with a residual cost impact on the project.
- 7.4.21 The use of this process allows the client to identify areas of more significant risk and their associated mitigation opportunities, enabling an informed decision to be made on the value of allocating upfront funds to provide options for alternative design or construction solutions. The overall benefit of this ECI risk management process is the lowering the potential outturn cost and/or budget uncertainty.
- 7.4.22 The established process used by the project team working in collaboration, provides a realistic assessment of risks at this stage in the scheme's development. The risk profile naturally alters as project scope, design details, and constraints change over time. The Risk Register will require periodic review, and will be continually updated as the scheme develops to incorporate any new, mitigated, or revised risks, as also detailed in the Management Case.

ESTIMATING THE LIKELIHOOD OF THE OUTCOMES OCCURRING

- 7.4.23 The likelihood of each outcome occurring has been based on experience of past experience on similar schemes. As recognised in WebTAG Unit A1.2 §3.2.14, defining the likelihood of each outcome occurring is not an exact science.
- 7.4.24 The assumptions made are shown in the Economic Assessment Report- Annex 9.

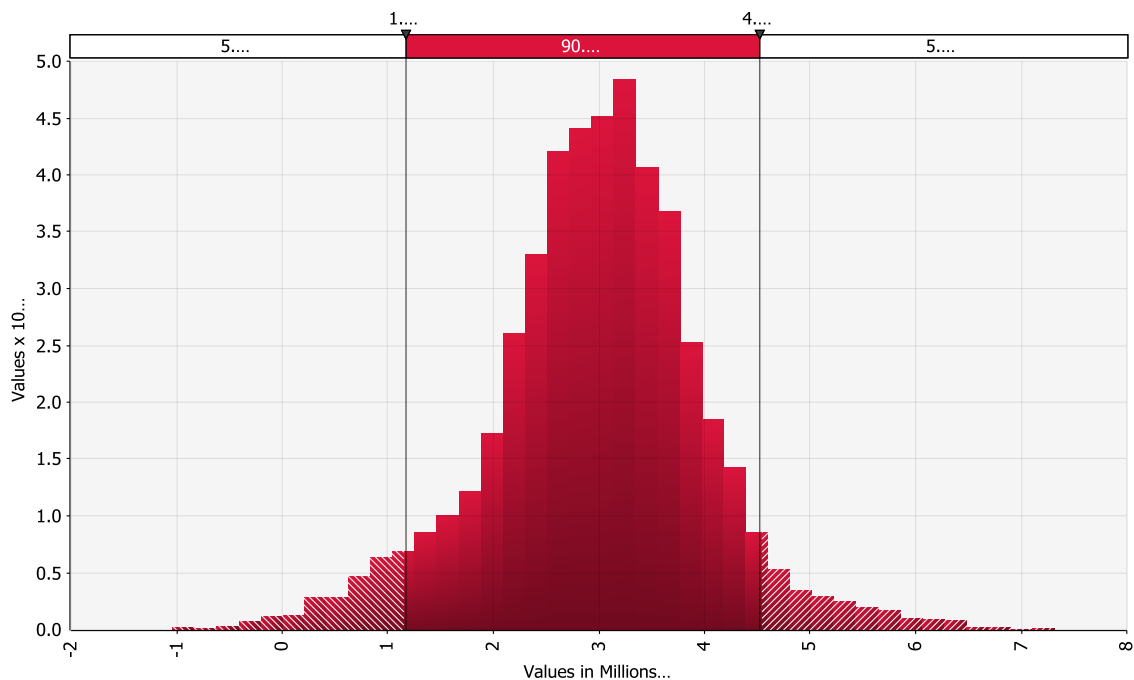
DERIVING THE PROBABILITY DISTRIBUTION FOR THE COSTS OF THE SCHEME

- 7.4.25 A QRA allows a probability distribution around the costs of the scheme to be derived and enables the expected risk-adjusted cost estimate to be obtained.
- 7.4.26 This expected outcome, also known as the 'mean' or 'unbiased' outcome is the weighted average of all potential outcomes and associated probabilities. This is the (risk-adjusted) mean estimate of the cost of the scheme, and it is to this that optimism bias will be applied.

7.4.27 A Monte Carlo risk model has been developed using MS Excel and @RISK. Potential correlations between the individual risks have been considered, with one fully dependent variable identified³. Sensitivity tests have been undertaken to assess the impact of unknown correlations being present; the impact on the output probability distribution is relatively small.

7.4.28 The Monte Carlo risk model has been run with 10,000 iterations, with the probability distribution for the QRA shown in Figure 7.2.

Figure 7.2: Probability Distribution for the Scheme Cost QRA



QRA OUTPUTS TO BE USED IN THE ECONOMIC ASSESSMENT REPORT

7.4.29 The resulting P50, P80 and mean values from the probability distributions are given in Table 7.2.

Table 7.2: Mean, P50 and P80 Values from the QRA

	MEAN	P50	P80
QRA Assessment	£2,977,552	£3,017,916	£3,711,943

Note: Land cost risk is not included in the QRA; a 15% uplift to the land costs will be used and is added in Table 7-3

³ Risk C27 is a scenario where the Environment Agency agrees to diversion of the River Eye at Roundabout 5; in this scenario, Risk C4 (relating to the diversion of powerlines) is obsolete.

- 7.4.30 The values for the preparation, construction and supervision QRA are those used to adjust the Base Cost for the proposed scheme, having first adjusted to 2010 prices and values. The risk register has not considered phasing, so the QRA outputs will be applied with the same profile as the assumed spend profile for preparation, construction and supervision costs.

RISK ADJUSTED COST

- 7.4.31 The risk adjusted total cost at is set out in Table 7-3 below.

Table 7-3: Scheme costs adjusted for risk

	2017 Q4 prices (£)
Base cost	£56,810
Quantified Risk (from QRA)	£2,978
Land Risk Amount (15%)	£307
Total risk-adjusted base cost	£60,095

ESTABLISH RISK RESPONSE PLAN & RESPONSIBILITIES

- 7.4.32 Having identified scheme risks, responsibilities will be allocated to the most appropriate party and response plans developed.
- 7.4.33 Design risks will rest with the Designers, supported by ECI involvement. Design and risk mitigation/reduction work will continue straight after submission of the OBC to minimise timescales of detailed design and future statutory procedures. This will also help further reduce risks, prior to scheme construction procurement, at which point risks will become shared between the contractor and LCC.
- 7.4.34 This progression of more detailed early work around critical risk items, in particular around structures, potential power line diversions and ground investigation works is discussed further in the Commercial and Management Cases, on the basis of one of four possible strategies will being adopted for each risk:
- **Accept or tolerate consequences** in the event that the risk occurs – In the event that a) the cost of taking any action exceeds the potential benefit gained; or b) there are no alternative courses of action available;
 - **Treating the risk** – Continuing with the activity that caused the risk by employing four different types of control including preventative, corrective, directive and detective controls;
 - **Transferring the risk** – Risks could be transferred to a third party e.g. insurer or contractor; and
 - **Terminating the activity** that gives rise to the risk.

7.5 OUT-TURN PRICE ADJUSTMENT (INFLATION)

- 7.5.1 Inflation will mean that the actual amount of money to be spent on the scheme will differ from the 2017 Q4 estimates, even when including additional risk.
- 7.5.2 An allowance for inflation has therefore been calculated for each future year.
- 7.5.3 Construction inflation has been set at 3% per annum which aligns with the HTMI (index) used by the Midlands Highway Authority (MHA).
- 7.5.4 This is currently running at 2.3% and 2.4% for major projects; although a 3% future assumption has been incorporated in the costs to ensure robustness to future variation.
- 7.5.5 3% per annum has also been used for land cost inflation. Two years of inflation has been applied to the 2017 Q4 costings, but it is expected that all land purchase will be completed before the end of 2019.
- 7.5.6 The total inflation allowance for the scheme costs is therefore **£3.36m**.
- 7.5.7 Added to the previous total of £60.1m, provides an overall scheme cost of **£63.47m**, matching that presented in the introduction of this chapter in section 7.1.2.
- 7.5.8 This is broken down by key item as follows:

Scheme cost				
	Preparation costs (between OBC and start of construction)	Land purchase	Construction costs	TOTAL
Base cost	£5,294,994	£2,048,000	£49,466,528	£56,809,522
Risk	£285,929	£325,908	£2,691,623	£3,303,460
Inflation	£411,454	£124,723	£2,823,317	£3,359,494
TOTAL	£5,992,377	£2,498,631	£54,981,468	£63,472,476

Notes: excludes any costs prior to completion of the OBC, Part 1 claims and evaluation and monitoring

- 7.5.9 This is the amount of money actually needed to deliver the scheme, and is the basis for the funding bid and future local contributions.

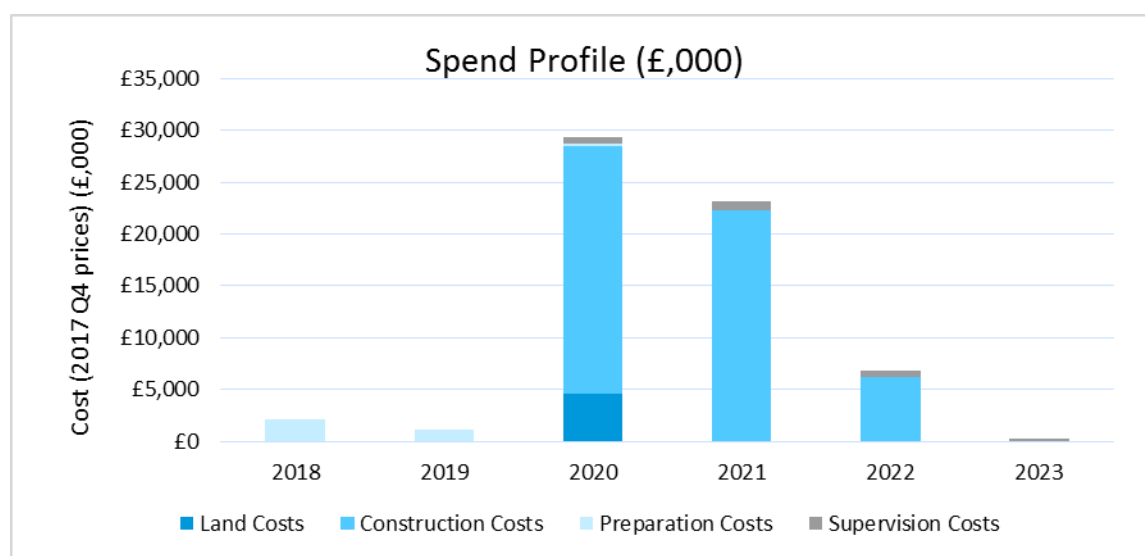
7.6 SPEND PROFILE

- 7.6.1 In line with guidance, Table 7-4 shows the costs broken down and profiled over the length of the scheme delivery period.
- 7.6.2 Subject to funding, construction of the scheme will start in mid-2020 and the new road will open to traffic in mid-2022.

Table 7-4: Risk adjusted forecast expenditure (2017 Q4 prices)

(£,000, inc inflation)	Total	2018	2019	2020	2021	2022	2023
Land Costs	£2,499		£2,499				
Construction Costs	£52,290			£23,851	£22,302	£6,137	
Preparation Costs	£3,352	£2,114	£1,066	£173			
Supervision Costs	£2,354			£624	£854	£656	£219
Total inc inflation	£60,495	£2,114	£3,564	£24,648	£23,156	£6,793	£219
QRA	£2,978	£108,512	£182,997	£1,137	£1,189	£349	£11
Risk-adjusted base cost	£63,472	£2,222	£3,747	£25,786	£24,345	£7,142	£231

Figure 7-3: Chart of spend profile



7.7 WHOLE LIFE COSTS

- 7.7.1 Although the funding bid is for a contribution towards the capital costs only of delivering the scheme, the business case must also consider its whole-life costs.
- 7.7.2 These include the costs of maintaining the highway and associated infrastructure and the longer term costs of infrastructure renewal.
- 7.7.3 The maintenance cost of the scheme is estimated to be £69,065 annually at 2017 prices. This is then inflated by 2% over the appraisal period.
- 7.7.4 Total maintenance costs of the scheme including inflation (and prior to discounting) therefore amount to **£9.96m** over the appraisal period.
- 7.7.5 These costs are used in the economic appraisal to calculate the present value of costs and overall scheme BCR, which is described in the Economic Case in the preceding chapter.
- 7.7.6 These costs will be paid for by Leicestershire County Council, and a commitment to the future costs of maintaining the road and assets is included in the S151 officer letter supporting the scheme.
- 7.7.7 The scheme is not expected to generate any direct income.

7.8 BUDGETS AND FUNDING COVER

FUNDING STRATEGY

- 7.8.1 The MMDR will be funded from a combination of national government, LCC and private sector contributions.

LOCAL CONTRIBUTION

- 7.8.2 The local contribution is comprised of LCC funding, and private sector contributions (cashflowed as a forward commitment by LCC).
- 7.8.3 The local contribution totals £14m towards the scheme costs, and represents just over 25% of the total scheme cost.
- 7.8.4 This is made up of a £4m commitment by the County Council to the ongoing development of the scheme post OBC submission, such that it would be possible to commence construction of the MMDR in summer 2020 (subject to successful award of funding and completion of all necessary Statutory procedures).

THIRD PARTY CONTRIBUTION

- 7.8.5 The remainder of the local contribution, i.e. £10m, will come from private sector (developer) contributions, through Community Infrastructure Levy (CIL) and S106 agreement.
- 7.8.6 The County Council and Melton Borough Council have formal agreement to cash-flow developer contributions in advance of their receipt, thereby enabling the accelerated delivery of housing growth; whilst simultaneously delivering the necessary transportation infrastructure without placing an undue upfront financial burden on developers. This is detailed in the signed S151 Officer Letter submitted as part of the Bid.

FUNDING REQUEST AND PROFILING

- 7.8.7 The amounts and profiling of funding arrangements from 2018 are set out in in Table 7-5 below. This does not include expenditure prior to completion of the OBC in Dec 2017.

- 7.8.8 It is important to note in terms of the profile that significant construction spend is anticipated during the financial years of 2020 and 2021, although we would be happy to engage with the Department over this profile, and how it might be front-loaded, either in respect of construction costs, or in terms of the balance of Local and DfT monies in early years.
- 7.8.9 Table 7-5As shown below, a contribution of £49.47m of government funding is being sought from the Department for Transport.
- 7.8.10 Leicestershire County Council and Melton Borough Council will make a local contribution from 2018 onwards of £4m, with private sector contributions of £10m cash-flowed by LCC.
- 7.8.11 It is important to note in terms of the profile that significant construction spend is anticipated during the financial years of 2020 and 2021, although we would be happy to engage with the Department over this profile, and how it might be front-loaded, either in respect of construction costs, or in terms of the balance of Local and DfT monies in early years.

Table 7-5: Funding request and profiling

Funding request and profiling (£000s)								
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Total	% total
Requested funding from DfT			£22,795	£21,204	£5,474		£49,472	77.9%
LA contribution	£2,222	£1,120	£658				£4,000	6.3%
Third Party contribution		£2,627	£2,333	£3,141	£1,668	£231	£10,000	15.8%
Total	£2,222	£3,747	£25,786	£24,345	£7,142	£231	£63,472	100%

7.9 SUMMARY OF FINANCIAL CASE

- 7.9.1 The cost of delivering the Melton Mowbray Distributor Road, including allowances for risk and inflation will be £63.47m.
- 7.9.2 Leicestershire County Council and Melton Borough Council are making a local contribution of 22.1% towards the scheme costs and is a contribution of £49.47m from the Department for Transport towards the capital costs of the scheme.
- 7.9.3 This is confirmed by a signed S151 officer letter, and that confirms cash-flowed use of private sector funding in advance of their receipt toward the scheme to deliver a total local contribution of £14m in recognition of its local importance to both LCC and MBC.
- 7.9.4 A robust risk management strategy is in place to identify, quantify, manage and review risks that has been developed design and ECI involvement, alongside use of a QRA. Details of the risks identified can be found in Appendix D and further details of risk and contract management are also included in the Commercial and Management Cases respectively.

8 THE COMMERCIAL CASE

8.1 INTRODUCTION

8.1.1 This chapter, the Commercial Case, outlines the commercial viability of the scheme, and the procurement strategy which will be used to by Leicestershire County Council to engage the market.

8.1.2 It provides the intended approach to procurement, risk allocation and transfer, contract and implementation timescales, as well as how the capability and technical expertise of the team to deliver the project will be secured.

8.1.3 The Commercial Case is discussed under the following headings:

- Output Specification
- Procurement Method
- Alternative Contract Options
- Procurement & Contract Management
- Programme and Risk
- Conclusion

8.2 OUTPUT SPECIFICATION & CERTAINTY OF OUTPUTS TO BE PROCURED

8.2.1 The Commercial Case is based on strategic outcomes and outputs, against which alternative procurement and contractual options are assessed.

8.2.2 Fundamentally, the approach and its management by LCC has been developed to secure best value through the procurement process and ensuring a strong, fair and open competition, in line with best practice for managing public money.

8.2.3 The outcomes that LCC have identified, and which the preferred procurement strategy and contract must deliver are to:

- Achieve cost certainty, or certainty that the scheme can be delivered within the available funding constraints;
- Minimise further preparation costs with respect to scheme design by ensuring best value, and appropriate quality;
- Obtain contractor experience and input to the construction programme to ensure the implementation programme is robust and achievable; and
- Obtain contractor input to risk management and appraisals, including mitigation measures, to capitalise at an early stage on opportunities to reduce construction risk and improve out-turn certainty thereby reducing risks to a level that is 'As Low as Reasonably Practicable'.

- 8.2.4 LCC recognise the need to be clear at the outset what is to be bought and to test with the market to ensure commercial viability.
- 8.2.5 As part of this, Carillion Tarmac Partnership (CTP) were appointed to work with Leicestershire County Council (LCC) and their designers, AECOM, to deliver an Early Contractor Involvement (ECI) service for the proposed Melton Mowbray Distributor Road (MMDR), drawing on best practice and successful outcomes of partnership working and ECI involvement on the recent Bridge to Growth, M1 Lubbethorpe Crossing scheme.
- 8.2.6 This has led to an initial output specification, as detailed in the Financial Case, designed to meet both cost requirements, and to assist with future procurement specification of what is to be purchased as part of the procurement. Specific benefits and knowledge around mitigation of key risk items, such the river and rail crossings, cut/fill balance and potential powerline re-routing have been secured from this involvement, and allowing this to feed through into a specific and detailed procurement exercise.
- 8.2.7 Further outcomes of detailed design will also feed directly into the procurement, such that further detail can be provided to bidders ahead of the procurement exercise commencing.
- 8.2.8 This shows, together with ECI involvement to date, that the scheme is viable, with known market interest and detailed understanding of items to be procured as part of procurement and commercial approach.

8.3 PROCUREMENT METHOD

- 8.3.1 LCC has developed the scheme through to preferred option stage during the production of this Outline Business Case.
- 8.3.2 AECOM will be retained to produce the Full Business Case and associated tasks, which will include undertaking the detailed design and preparing the documents required for the Environmental Impact Assessment, Planning and anticipated Compulsory Purchase Order process.
- 8.3.3 This ensures continuity of approach and retains invested scheme knowledge to build a robust defence against any potential objections, before the procurement of the construction contract.
- 8.3.4 In order to accelerate the programme to a point where LCC could meet timescales for an application to Local Large Major funding in December 2017 and to be well placed to make further progress on scheme development in early 2018, the decision was taken to appoint AECOM through the existing Professional Services Partnership (PSP2) as part of the Midlands Highways Alliance.
- 8.3.5 Although, design and build will be an option open to the authority through the new Midlands Highways Alliance Framework (June 2018), given the stage in the design process we will be at when this is in place, and critically the importance of continuity in delivery, it is not considered desirable to transfer the design role to an alternative supplier at a later stage.

8.4 PROCUREMENT OPTIONS

- 8.4.1 In determining the core success measures of procurement identified at the start of this section, a number of routes to market are available to LCC for the construction of the MMDR scheme.
- 8.4.2 These include:
- In House Delivery
 - Midlands Highways Alliance Framework
 - Full OJEU procurement (and sub-variations thereof)
 - National and Regional Frameworks

8.4.3 The advantages/ disadvantages of each of these are discussed in the following section.

In House Delivery

- LCC has no capacity to deliver a scheme of this size in house, and whilst considered this was dismissed at an early stage.
- LCC does however retain commercial and procurement specialists, and an in house major projects delivery team that will be used to oversee the procurement exercise, and manage the contract. This is detailed in the subsequent contract management section.

Midland Highways Alliance Framework (MHA)

- MHA is now in its tenth year, and its key and over-riding original objective is to develop an effective procurement option for the delivery of highway schemes.
- The MHA is developed and run with the support of the Regional Improvement and Efficiency Partnership, now working together with other similar regional construction frameworks. The current MSF2 framework closely follows the most recent *National Construction Category Strategy for Local Government - Effective Construction Frameworks*, January 2016.
- The scope of both previous frameworks has been defined as being for the execution of highway, civil and municipal engineering, and that makes it suitable for procurement for the MMDR scheme.
- A new version of this framework, MSF3 will commence in June 2018, run through an OJEU procurement exercise, and with no Lot restrictions on suppliers (i.e. the framework selection will be wider, with existing Lot 1 and Lot 2 to widen the pool). Presently there are 5 Lot 1 suppliers and 3 suppliers on Lot 2. LCC has significant and consistent experience in use of the framework. The maturity of the framework and contractual protocols provides a number of advantages, in particular on management of risk, no upper ceiling on scheme cost, and offers additional NEC contract options that can be selected as part of the procurement exercise and market testing.
- The framework also allows for Early Contractor Involvement. The ability to mobilise quickly and allows greatest time and opportunity for ECI to achieve lowest outturn cost. ECI has generated savings of over £16 million through MSF2 up to March 2017. Case studies demonstrating these benefits are available on the MHA website.



Full OJEU Tender

OJEU Tender can take a number of forms; from fully open procedures, to more restricted procedure, with/without competitive dialogue and negotiation.

The following were considered by way of full OJEU procurement routes for the MMDR scheme in developing the Commercial Case:

→ Open Procedure

This procedure allows an unlimited number of interested parties to tender against defined parameters. There are no restrictions (e.g. pre-qualification) on the parties who are permitted to tender, meaning that some parties may not be suitable to carry out the work.

This procedure is straightforward and transparent but can attract a large number of potential bidders (which will require a greater degree of assessment and resource requirements).

However, and importantly, this route is not usually recommended for construction projects due to the high number of tenders that could be expected and the particular skills and experience that may be required of potential bidders.

It also takes considerable time and resource, as well as limiting time for ECI, and buildability input by the contractor.

→ Restricted procedure

This would be a two-stage procedure. The first stage allows the contracting authority to set the minimum criteria relating to technical, economic and financial capabilities that the potential bidders have to satisfy. Following evaluation of the responses to the first stage a minimum of five bidders (unless fewer qualify) are invited to tender in the second stage.

Whilst advantageous, this has already been recently undertaken with respect of the MSF2 and MSF3 framework for MHA with a wide range of contractors in place; and with future opening up on Lot 1 and Lot 2 to all parties to further widen the procurement pool under MSF3 to be used for the MMDR scheme.

→ Competitive Procedure with Negotiation

This relatively new procedure is intended to be used where minimum requirements are able to be specified but negotiations with bidders may be needed to improve the initial tenders. This is generally however used where needs cannot be met without adaptation of readily available solutions, or where the contract includes design or innovative solutions. This is not considered appropriate for the MMDR scheme as neither of these are considered to apply based on design and ECI input to date

Other National and Regional Frameworks

Other routes to market also considered as part of the Commercial Case have included:

National

- SCAPE National Infrastructure Framework (sole provider)
- Highways England Collaborative Delivery Framework

Regional (these all include various size lots and different forms of contract)

- Yor Civils
- Southern Construction Framework
- Eastern Highway Alliance

- 8.4.4 These routes generally take significant time to do the necessary internal audit checks, delaying procurement. In addition, on other regional frameworks it may not be possible to meet the criteria to join or make use of the framework in the scheme delivery timescales.
- 8.4.5 Whilst other available regional and national frameworks have been considered, internal workshops have established a greater degree of knowledge, operation and experience with contractors on the MSF2, and soon to be widened MSF3 pool.
- 8.4.6 In short, there are no perceived advantages of these options over other procurement routes, and in particular MHA.

8.5 PREFERRED PROCUREMENT ROUTE

- 8.5.1 As a result of the above considerations, the MHA framework is the preferred procurement route.
- 8.5.2 The MSF3 framework under the MHA has been specifically designed to build upon the current and evidenced added value of the existing MSF2 framework to local authorities in the Midlands (and beyond by way of the regional construction frameworks).
- 8.5.3 Alongside the advantages noted earlier, at a practical and managerial level, the benefits of this route also include:
- High levels of participation in the regular Framework Community Board.
 - The ability to measure performance through the Framework Community Board that is well attended by all partners.
 - Benchmarking MSF projects against projects delivered through other routes.
 - Collaboration and shared learning The FWCB hold meetings regularly, usually every two months. It provides a great opportunity to share information about:
 - target price
 - outturn cost
 - time predictability
 - KPI Information
 - innovations
 - near misses
 - lessons learnt.
 - Performance management – two monthly reporting of performance shows high levels of client satisfaction including a number of regional awards.

- Investment in skills – every project has an Employment and Skills Plan in place to maximise and monitor job creation, learning and skill development for the industry. This is part of the MHA Skills Community, Construction Industry Training Board (CITB), and recognised by the Institution of Civil Engineers Training Ltd (ICE) to address the skills gap in our industry as the demand for infrastructure projects increases.

MSF1 and MSF2 have shown a steady increase in the amount of savings achieved by the investment in the development of the frameworks. **Savings in time and money** have been made, by removing the need for each authority to separately conduct EU compliant procurement procedures.

The development of **early contractor involvement** through the frameworks has led to very significant client savings now being reported by the majority of projects delivered through MSF2. It is proposed that measures to further develop this approach are included in MSF3.

Finally **the pain/gain mechanism** has driven the use of value engineering throughout the construction phase. The regular performance reporting has ensured that the quality of the works and the service delivered remains satisfactory whilst further shared savings have been reported; with reported savings of **over £26million to date**. Whilst MSF2 is regarded as a leading framework in the local authority highway sector, it has been agreed that MSF3 could be further improved, and will incorporate the following proposals:

- Safety
 - Ensure that CSCS cards are held by all local highway authority staff working on framework projects
- Dependable
 - Simplify contractor selection process
 - Abandon the Lot1/ Lot 2 split to widen the procurement pool.
- No delay, No surprise,
 - Make further improvements to early contractor involvement including an option for making payments to the contractor during the ECI period.
- Good value
 - Use shovel ready projects to develop prices for model schemes
 - Increase the use of the local supply chain to achieve additional value when possible
- Customer focussed
 - Use the Social Value Act to quantify community benefits
- Collaboration
 - Improve information sharing within projects, consider the increased use of BIM
 - Make provision for design and build with associated risk transfer
 - Increase the use of back to back contracts in appropriate circumstances
 - Audit the provisions of the fair payment charter and link to performance measures

- 8.5.4 The above benefits make the MSF3 framework LCC's preferred route to engage the market and procure the MMDR scheme. Indeed MSF2 has been used to secure ECI involvement on the scheme to date, to maximise the length of time for these advantages to be delivered through the scheme's development and design.
- 8.5.5 The use of the framework also ensures long term relationship building, particularly in terms of well-known, recognised and understood processes, protocols and contractual terms between contractor and authority of how they work and what their processes under MHA awarded projects are.
- 8.5.6 This is particularly important in terms of risk, and risk allocation and transfer between parties. MHA has established contractual terms for these, and it is anticipated that the following division of risk will be applied to maximise local input to the process, whilst also achieving and incentivising on-time, on-budget and most efficient delivery mechanisms; as detailed in the next section under contract management.
- 8.5.7 It is important to note that ECI involvement to date is presently time defined, and that a mini-competition across the full MSF3 widened pool will be run as part of procurement to ensure maximum value to LCC and the national taxpayer.
- 8.5.8 The activities and parameters of this are detailed in the next section on procurement and contract management.

8.6 PROCUREMENT & CONTRACT MANAGEMENT

- 8.6.1 Procurement will be managed and delivered by a dedicated and experienced LCC procurement manager: Martin O'Connor. Martin forms a key part of the project team detailed in the Management Case, and will be supported by a dedicated Midlands Highways Alliance Framework advisor within the Council, John Hooper.
- 8.6.2 The Project Delivery Team has a proven track record of delivery with local and broader expertise to effectively deliver to the accelerated timescales, as shown in Table 8.1.
- 8.6.3 Given the recent completion of the M1 Bridge and Lubbethorpe SES schemes, the capacity of the group, along with links to other LCC officers and developer partners has been well established and can quickly mobilise.

Table 8.1- Procurement Experience in relation to MMDR Requirements

MMDR Requirement/ LCC Procurement Experience	M1 bridge	Loughborough Inner Relief Road	Earl Shilton Bypass	Enderby Park and Ride and Birstall Park and Ride	A511 corridor	Syston Northern Bypass
ECI	y	y	y	y	y	
New standard carriageway	y	y	y	y	y	y
Roundabout junctions		y	y		y	y
Culverts/bridge over water	y		y			y
Rail bridge						y
Major earthworks	y	y	y	y	y	y
Benefit congestion	y	y	y	y	y	y
Regeneration benefits	y	y	y	y	y	y

- 8.6.4 LCC will publish a well-defined tender package for bidders to price against although variant tenders would be accepted in order to allow bidders to propose alternative solutions.
- 8.6.5 This will include defined timescales for each stage which will allow the Council to ensure that the tenders can be received by the dates required by the overall project programme.
- 8.6.6 The information required from the bidders during the ITT stages will ensure that the objectives set out within the Strategic Case are achieved, particularly the timely completion of the works in order to realise the economic benefits arising from the scheme.
- 8.6.7 The responses received from potential bidders will be scored according to pre-determined criteria in order to identify those who will be eligible to participate in the tender.
- 8.6.8 The bidders who are successful on the MHA MSF3 framework will be issued with the Invitation to Tender (ITT) documentation through mini-competition, open to all on the framework, which will include the following documents:
- Instructions for Tendering and Guidance Notes;
 - MHA Contract Data;
 - Form of Tender, Form of Agreement;
 - Works Information;
 - Contract Drawings;
 - Bill of Quantities;
 - Site Information; and
 - Pre-Construction Information.
- 8.6.9 The bidders will be expected to return the following information within their tender:

QUALITY STATEMENT

- 8.6.10 The following information will be required in the Quality Statement:

1) The following issues will be considered by the Employer when determining relative mini-tenders' weightings and scores for all or any number of the quality performance measures (Q1 to Q10) listed above:

Measure:	<u>Q1 - Product</u>
Purpose:	To determine the overall level of <i>Employer</i> satisfaction with the completed product.
Factors:	Construction of main <i>works</i> ; handover, acceptance, inspections and as-built records; post-project review; risk register; sustainable construction, minimising waste creation and maximising recycling and opportunities plan.
Measure:	<u>Q2 - Service</u>
Purpose:	To determine the overall level of <i>Employer</i> satisfaction with the service of the supplier during the project.
Factors:	Organisation and management; procurement of specialists and suppliers; supply chain; management and improvement of <i>Employer</i> relationships; management and improvement of customer and third party relationships; innovation and value for money; management of change; collaborative working.
Measure:	<u>Q3 - Right First Time</u>
Purpose:	To assess the impact on the <i>Employer</i> of any defects and reworking.
Factors:	Avoiding defective <i>works</i> ; quality management system.
Measure:	<u>Q4 - Cost Management</u>
Purpose:	To measure the accuracy of cost predication and reliability of cost control.
Factors:	Ensuring accurate estimating and forecasting, predictability of cost, and accuracy of cost and payment records.

Measure:	Q5 - <u>Time</u>
Purpose:	To measure the reliability of time estimates for both design and construction.
Factors:	Reliability of programming; predictability of time. Detailed programme including the pre-construction, construction and commissioning/handover phases of the project with critical path analysis.
Measure:	Q6 - <u>Safety</u>
Purpose:	To measure health and safety aspects on the project.
Factors:	Health, welfare and development of the workforce; compliance with safety legislation and regulations; safety of the public.
Measure:	Q7 - <u>Learning and development</u>
Purpose:	To measure the success of skills development against the Employment and Skills Plan (ESP).
Factors:	New entrants' skills development, existing workforce skills development, progression into employment.
Measure:	Q8 - <u>Community</u>
Purpose:	To measure how the impact of projects on the local community is minimised before, during and after completion.
Factors:	Customer Care, working with the local community, Considerate Constructor.
Measure:	Q9 - <u>Traffic management</u>
Purpose:	To measure the success of minimising the impact of projects on highway users through appropriate traffic management.
Factors:	Disruption and congestion, all highway users considered, appropriate and up to date information for highway users, safety of measures.
Measure:	Q10 - <u>Innovation and value for money (VFM)</u>
Purpose:	To measure the success of innovation through cashable and non-cashable efficiency savings and, demonstrate on-going value for money.
Factors:	Continuous improvement through <i>Contractor</i> and supply chain, early <i>Contractor</i> and <i>Supplier</i> involvement, opportunities plan, innovation and value for money.

Weightings between quality criteria vary depending on the work package.

8.6.11 Other items, already submitted at a framework level, will also be required to evidence and support the quality scores:

- Key staff and contract management – details of key individuals, including CVs with their skills and experience.
- Stakeholder management and communication – description of the bidder's approach to stakeholder engagement and management, including the use of electronic and social media.
- Insurances – details of insurance policies, including a statement undertaking responsibility for dealing with claims, or parts of such claims, within the excess amount.

8.6.12 Bidders will be given the opportunity to submit alternative designs (where improvements to quality, cost, or delivery can be identified) as variant bids. If they intend to do this, they will be requested to supply the following information:

- The revised plans, drawings and documentation;
- Schedule of changes from the original design;
- Report on the Environmental Impact of the alternative design, including mitigation measures;
- A statement on how the outline Health & Safety Plan would change resulting from the alternative design;
- Approval in Principle forms for each alternative structure;

- Addendum Approval in Principle Forms;
- Stage 1 Safety Audit Certificate.

FINANCIAL STATEMENT

8.6.13 The following information will be required in the Financial Statement:

- Completed Form of Tender;
- Target cost with activity schedule; and
- Completed Contract Data.

8.6.14 If a variant bid is submitted in Part A then the following additional information will be required:

- A priced extension to the bill of quantities;
- A statement setting out the cost savings; and
- All other information required to be submitted at the tender stage.

8.6.15 Each tender will be assessed by pre-determined weightings to the sections of information provided in the Quality and Financial Statements.

8.6.16 A final assessment will require the three top-scoring bidders from the mini-competition to make a presentation to a tender assessment panel and answer questions, usually based on the quality aspect of their submission.

8.6.17 The Employer will meet with the selection of the highest scoring Contractors, to clarify their proposals prior to finalising the evaluation scores. The Contractor with the highest aggregate score (i.e. for price and quality) will be issued with an Instruction to follow the quotation procedure for the Work Package.

PRICING FRAMEWORK AND CHARGING MECHANISMS

8.6.18 The proposed form of contract used will be the Engineering and Construction Contract (ECC), part of the New Engineering Contract (NEC3) family of contract documents, the standard form of construction contract in the UK and in widespread use across Europe.

8.6.19 There are six main payment options within the ECC:

- A: Priced contract with activity schedule
- B: Priced contract with bill of Quantities
- C: Target contract with activity schedule
- D: Target contract with Bill of Quantities
- E: Cost reimbursable contract
- F: Management Contract

8.6.20 The contract options legally define the responsibilities and duties of Employers (who commission work) and Contractors.

8.6.21 The NEC/ECC is published in the form of a set of core clauses with a range of main and secondary option clauses enabling scheme specific contracts to be produced depending on individual requirements. The choice of option is a balance between risk, apportionment of risk and certainty of cost.

8.6.22 As discussed in the development of the MHA MSF2 and MSF3 framework, the contract will be used with Main Option C. From cross-authority experience under MHA, and feedback and shared lessons

learned through the MHA Framework Board, Framework Option C has been judged to provide the greatest benefit to authorities.

- 8.6.23 Target cost provides the incentive to achieve best value through the pain/gain mechanism. Contractors are incentivised to reduce costs as they will take a share of the savings; the greater the saving the greater the contractor's share of the benefit. Conversely, if the contractor goes over budget they will have to accept a share of the "pain".
- 8.6.24 Option A is also available under MHA MSF3, but is fixed price and has no pain/gain mechanism; and as a result no incentive for the contractor to beat the price. Risk is built into the fixed price so this could result in the authority and DfT paying for risks under a fixed price contract that subsequently don't materialise.

CONTRACT MANAGEMENT

- 8.6.25 The target cost will be managed by Martin O'Connor, an assigned NEC project manager, and project support from the Engineering Services Team and assigned Quantity Surveyor from LCC's Contract Services. Management of risk and cost will continue to be supported by AECOM's assigned project manager, bringing consistency throughout the life of the project.
- 8.6.26 The contractor will therefore submit a target costs activity schedule for the works at tender stage which will be reviewed at each assessment date and payment made for completed activities.
- 8.6.27 Under Option C risk is not included in the target cost – the risk budget identified through the QRA will be managed within the project budget by LCC. The QRA provides a level of funding needed to cover risks that may occur and, should risks materialise, the risk level reduces and the target cost increases through a compensation event. This ensures the project only pays for risks as they occur.
- 8.6.28 As part of the contract, the contractor is incentivised through a pain/gain mechanism to reduce costs as they will receive a share of the saving. All risk is incentivised. Likewise, should costs increase beyond the target price, the contractor will have to share the burden.
- 8.6.29 Pain/Gain share will therefore form part of the contract terms, to be gained/ levied against the contractor if the works run beyond the completion date shown in the accepted programme.
- 8.6.30 The MHA framework has established the pain/gain share as detailed below. This has been reviewed in establishing the business case for MSF3 it has been agreed that this provides a fair and effective incentive to both parties, and has been used on nearly all package orders procured through the framework to date.
- 8.6.31 Contractors are incentivised to beat the target cost as they will benefit from the savings as follows:

The Contractor's share percentages and the share ranges are

<i>share range</i>	<i>Contractor's share percentage</i>
less than 80%	30%
from 80% to 110%	50%
greater than 110%	100%

- 8.6.32 Conversely if costs go over budget the contractor will have to bear their share of that cost.
- 8.6.33 LCC will use the MHA Performance Management Toolkit to assess scheme progress and contractor performance against KPIs. Scores against indicators will be continually reviewed throughout the life of the scheme.
- 8.6.34 Through the ECI period, risk will be reviewed by the contract management team through a series of workshops to assess if work to date has impacted on risk level and cost.
- 8.6.35 Through the construction period, risk will continue to be reviewed by the same team through progress meetings. During this phase, risk probability and cost impact will be reviewed and risks closed where appropriate. Progress meetings will also be utilised to raise opportunities to make savings on the target cost or identify further risk.

8.7 RISK ALLOCATION AND TRANSFER

- 8.7.1 At a project level, risks will be managed by the Project Board however the Commercial Case describes how the Midlands Highway Authority procurement strategy will seek to place risk with the party best placed to manage or mitigate that risk, or manage the consequences should they transpire.
- 8.7.2 A strategic aim and objective of the MHA framework and LCC's management of the contract is that risk is appropriately proportioned through the careful management of relationships within, and throughout the project.
- 8.7.3 The contractor will be required to produce a priced risk register. This has already been developed to inform the QRA, and will be updated on commencement of detailed design in Jan 2018 and regularly through to tendering. Potential issues having been identified will be allocated a risk owner and appropriate resolutions sought to mitigate or eliminate the risk where possible.
- 8.7.4 Design risk will be retained by the council contractor. Delivery and programme risk will be shared and incentivised through the MHA pain/gain mechanism detailed in the previous section as part of the construction contract.
- 8.7.5 The risk of costs being higher than currently predicted remains until the tendering process is complete, which is the point that this risk can be shared and incentivised through the pain/gain mechanism under NEC Option C.
- 8.7.6 The indicative allocation of risks resulting from the contractual and procurement arrangements is summarised in Table 8.2 below.
- 8.7.7 At this Outline Business Case stage, ticks have been provided to indicate where each risk type rests: with the public sector (the Council / Government Treasury) or the private sector (the consultants and contractors), or whether these risks are shared between the two.
- 8.7.8 At Full Business Case stage, once the procurement and contractual arrangements have been finalised, these ticks will be converted into percentages.

Table 8.2- Risk Allocation & Transfer

Risk Category	Public	Private	Shared
Design risk		✓	
Construction risk			✓
Transition and implementation risk			✓
Operating risk	✓		
Termination risks			✓
Financing risks	✓		
Legislative risks	✓		

8.8 PROCUREMENT PROGRAMME

8.8.1 Table 8.3 shows the procurement programme, linked to the activities that LCC will undertake.

8.8.2 ITT development will commence on finalisation of detailed design, from which point being part of MHA allows for fairly compressed timescales compared to other routes, with notifications to preferred supplied by December 2019, allowing pre-construction and mobilisation activities to commence shortly after.

8.8.3 The contract would run from March 2020 to August 2022.

Table 8.3- Procurement Programme & Activities

Procurement Programme Activity	Start Date	End Date
MSF3 Framework Awarded	Jun 18	
Detailed design, review and approval	May 18	Sept 19
ITT Development	Jul 19	Sept 19
ITT Review & Approval	Sept 19	
Scheme/ market Engagement Session?	Oct 19	
Tender period	Oct 19	Dec 19
Presentations & Notification to Preferred Supplier	Dec 19	
Full approval submission to DfT	Jan 20	March 20
Award Contract	March 20	March 20
Pre-construction and mobilisation	March 20	June 20
Construction period	Jun 20	Aug 22
Scheme Opening	Oct 22	

PAYMENT MECHANISMS

- 8.8.4 Payment would be made to the contractor by monthly valuation with a BACS payment within 28 days of issue of the initial valuation.

HUMAN RESOURCE ISSUES

- 8.8.5 No significant human resources issues have been identified that could affect the deliverability of the scheme. Further details of the required capabilities and assigned LCC and Senior Supplier resources are set out in the Management Case.
- 8.8.6 The skills required to deliver the scheme are already engaged and committed to MMDR.

8.9 CONCLUSION

- 8.9.1 As part of the Commercial Case a series of procurement options have been identified and assessed by LCC.
- 8.9.2 The Preferred Option for procurement and delivery is the Midlands Highways Alliance (MHA) Framework.
- 8.9.3 The scheme is commercially viable with a robust contracting and procurement strategy. It will use the Midlands Highways Alliance Framework (MSF3, starting in June 2018), previous versions of which have been utilised by the Council.
- 8.9.4 The benefits of this route for both LCC and ensuring taxpayer value have been made clear in the Commercial Case. These benefits are as follows:
- Obtain contractor experience and input to the construction programme to ensure the implementation programme is robust and achievable. This thereby reduces risks to a level that is 'as low as reasonably practicable'
 - Allow mobilisation quickly and allows greatest time and opportunity for ECI to achieve lowest outturn cost.
 - Use of an NEC3 (4) Option C contract, with mature and well established risk allocation and transfer between parties and incentivised performance to provide greater cost and programme certainty.
 - The ability to measure performance through MHA framework and management tools, with significant previous experience and demonstrable best value of this procurement route as noted previously.
- 8.9.5 There is a well-developed market for the proposed procurement approach and it is anticipated, based on interest in MSF3 and previous evidence of procuring large infrastructure schemes in the County, that there will be a high demand and strong competition amongst engineering contractors to secure the contract for the construction of this scheme.
- 8.9.6 The procurement and contract management procedures have been developed in full accordance with the Council's procurement systems and processes, with the Council's Senior Procurement Officer consulted and agreeing the approach.
- 8.9.7 The procurement route includes risk management as a core principle, using strategies of risk allocation and pain/gain sharing with the contractor, including the use of incentives to achieve delivery on time to the required quality.
- 8.9.8 The Council have confidence that the contractual and commercial arrangements proposed are appropriate and workable, having applied the arrangements to previously delivered schemes in the

County, and that have achieved programme and cost certainty; with lessons learned on the framework from other Midlands Highway Authorities also actively shared and implemented.

- 8.9.9 The information required from the bidders during the future mini-competition and ITT stages will ensure that the objectives set out within the Strategic Case are achieved, particularly the timely completion of the works in order to realise the economic benefits arising from the MMDR scheme.
- 8.9.10 The scheme is on programme for award of the construction contract in Dec 2019 with a June 2020 start on site and resources are in place to oversee the construction contract. Risk is being minimised through the Pain/Gain mechanism in the Contract which provides LCC with a high degree of cost certainty and risk transfer.

9 THE MANAGEMENT CASE

9.1 INTRODUCTION

- 9.1.1 The Management Case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance
- 9.1.2 The Management Case for the Melton Mowbray Distributor Road (MMDR), detailed in this Chapter therefore assesses whether the scheme is capable of being delivered successfully in line with the recognised best practice. It describes the processes that LCC have put in place to ensure that the project is effectively delivered, with a clear and agreed risk plan, covering what needs to be done, why, when and how; with measures processes, governance, independent assurance and communication plans in place to identify and manage risks.
- 9.1.3 The Management Case also sets out the Benefits Realisation Plan LCC have put together to ensure that the benefits set out in the Economic Case are realised and will include measures to assess and evaluate this.
- 9.1.4 The Management Case for the MMDR is discussed under the following headings:
- Evidence of Similar Projects
 - Programme and Project Dependencies
 - Project Governance, Organisational Structure and Roles
 - Programme and Project Plan
 - Assurance and Approvals Plan
 - Communications and Stakeholder Management
 - Project Reporting
 - Risk Management Strategy
 - Benefit Realisation Plan
 - Monitoring and Evaluation

9.2 EVIDENCE OF SIMILAR PROJECTS

PROMOTER EXPERIENCE

- 9.2.1 Leicestershire County Council has successfully procured and delivered a number of projects of varying sizes and complexity. Some of the key and most recent projects delivered by the LCC similar to the MMDR scheme include:
- Loughborough Inner Relief Road & Town Centre Improvements (19.7m) 2015
 - Earl Shilton Bypass (22.76m) 2009
 - M1 Bridge to Growth (15m) 2016
- 9.2.2 Importantly, each of these has been delivered to time, and within original budget.
- 9.2.3 The latest M1 Bridge to Growth scheme, involving significant structures work and risk, is particularly relevant, with many of the internal projects and contract management practices used on this also being applied, with experienced personnel, and a similar, but expanded project structure to deliver the MMDR scheme.

- 9.2.4 The Leicestershire County Council Delivery Team will work with the Midland Highway Alliance (MHA) procurement team and within the MHA procurement process which has been used successfully on major infrastructure schemes, including the above and this approach will again be followed for the MMDR scheme; as detailed in the Commercial Case.
- 9.2.5 The Midland Highway Alliance formed in July 2007 and is made up of over 20 partner local authorities. The Alliance operates 5 work streams including Medium Schemes, Term Maintenance, Professional Services, Assets, Standards and Commodities and Skills Community.
- 9.2.6 The MHA and the existing ECI contractor has delivered a number of projects successfully both in terms of planning and appraisal but also in terms of construction advice, especially around risk management in pre construction and buildability for major schemes.
- Hucknall Inner Relief Road for Nottinghamshire CC (£8.2m) Pre-Construction/Buildability and Construction (CTP, procured through MHA);
 - Finningley and Rossington Regeneration Route Scheme (FARRRS) for Doncaster Metropolitan Borough Council (DMBC) (£40m) Pre-Construction/Buildability and Construction;
 - Leeds City Council “A Decade of Collaboration” for Leeds City Council (LCC) (£80m) ECI and Construction; and
 - A50 Growth Corridor for Staffordshire CC (£29m) Pre-Construction/Buildability and Construction (CTP, procured through MHA).
- 9.2.7 The MHA won Team Achievement Award at the Institution of Civil Engineers (ICE) East Midlands Merit Awards 2016 in recognition for their Professional Services Partnership 2 (PSP2) Frameworks’ success in delivering a wide range of projects for MHA members, many in combination with LCC.
- 9.2.8 Both LCC and MHA have developed significant experience in terms of major infrastructure projects and it is the same teams being deployed for the MMDR scheme.
- 9.2.9 Opportunities will be taken, wherever possible, to improve delivery processes by acting upon the lessons learnt from recent schemes, particularly the M1 Bridge to Growth and Earl Shilton Bypass included:
- A high level of *good cooperation and efficiency* by all involved is required for a successful bid document and reduces the potential for legal issues later in projects while good communication from the outset can result in legal agreement issues being resolved quickly;
 - Where applicable, changes within the design process are appreciated as early as possible and there is an understanding that there is in general a reluctance to change further into the detailed design stage;
 - A strong emphasis in the public consultation process is important to help ease tensions and avoid political pressure especially from local residents regarding noise, dust and visual intrusion;
 - Provision of meetings and discussions during the ECI stage along with risk workshops help to mitigate risks and should be held as part of both the ECI and CDM Health & Safety processes;
 - Use of section 6 rather than a S278 can save planning officer time.
 - Significant appreciation of anticipated risks and the unforeseeable risks require good management. Consideration of risks at meetings and discussions should be undertaken during the ECI stage along with risk workshops to mitigate risks as part of both the ECI and CDM Health & Safety processes.

9.2.10 Table 9-1 sets out the scope of the works, costs, timescale and procurement strategy of the schemes identified above. Two of the projects, the Loughborough Inner Relief Road & Town Centre Improvements and the M1 Bridge to Growth used the Midland Highway Alliance MSF 1 and MSF2, which are the same routes as applied to the MMDR project to maximise consistency and the use of previous experience to ensure on-time and budget delivery of the MMDR scheme through known and effective management processes.

Table 9-1 Examples of Similar Schemes Managed & Delivered by LCC

Scheme Title	Scheme Description	Costs	Construction Timescales	Procurement Strategy
Loughborough Inner Relief Road & Town Centre Improvements	Completion of the remaining section of Loughborough Inner Relief Road, and upgrading junctions on the existing relief road to carry traffic flow diverted from the closed A6. Improvements to related junctions on the Loughborough A6004 Ring Road to help reduce traffic demand on the relief road and the town centre road network. Closure of A6 Swan Street/Market Place and an improved pedestrian environment to help combine the shopping and commerce areas in the heart of the town centre. Provision of new high quality bus waiting/interchange facilities both in High Street/Baxter Gate and The Rushes/Derby Square areas.	£19.73M	Construction started in Feb 2013 and was completed in May 2015. Delivered on time and to budget	MHA MSF1
Earl Shilton Bypass	The Bypass is a 5km long, 7.3m wide single carriageway with one metre wide hard strips alongside. Quiet road surfacing material has been used throughout its length. A combined footway/ cycleway 2.5 metre wide has been provided along the length of the Bypass with connections to the existing cycle facilities along the Hinckley Northern Perimeter Road and to the side roads at each junction.	£22.76M	Construction started in Sep 2007 and was completed in March 2009 due to great crested newts during construction (no evidence in extensive pre-works surveys).	Competitive tender
M1 Bridge to Growth	£15.0m project that was jointly funded from the New Lubbesthorpe land owner (£10.0m) with HCA Large Infrastructure Funding and Department for Transport Local Pinch Point Fund (£5.0m). The bridge was built over a 19 month period and provided early access to development land to accelerate the delivery of the primary infrastructure and development of 4,250 homes.	£15M	April 2015 – Nov 2016 (on programme and to budget)	MHA MSF2

- 9.2.11 The specific experience of Leicestershire County Council in terms of contract management, and focussed on the particular, key risk items of relevance to the MMDR scheme is shown for these more recent projects below, along with other schemes that have also been delivered over the past decade.

Contract Management Experience in relation to MMDR Requirements

MMDR Requirement/ LCC Contract and Risk Management Experience	M1 bridge	Loughborough Inner Relief Road	Earl Shilton Bypass	Enderby Park and Ride and Birstall Park and Ride	A511 corridor	Syston Northern Bypass
ECI	y	y	y	y	y	
New standard carriageway	y	y	y	y	y	y
Roundabout junctions		y	y		y	y
Culverts/bridge over water	y		y			y
Rail bridge						y
Major earthworks	y	y	y	y	y	y
Benefit congestion	y	y	y	y	y	y
Regeneration benefits	y	y	y	y	y	y

CONTRACTOR EXPERIENCE

- 9.2.12 Carillion Tarmac Partnership (CTP) were appointed through the Midlands Highways Alliance Medium Schemes Framework contract to work with Leicestershire County Council (LCC) and their designers, AECOM, to deliver an Early Contractor Involvement (ECI) service for the proposed Melton Mowbray Distributor Road (MMDR). The selection of the contractor is discussed within the Commercial Case.
- 9.2.13 Carillion and Tarmac have worked with a number of clients under various Early Contractor Involvement (ECI) and construction arrangements, successfully delivering nearly £4bn of infrastructure projects, either through formal ECI arrangements with responsibility for the Design and delivery of the Statutory Planning Process, or an informal supporting role to the client.
- 9.2.14 Table 9-2 below highlights the specialist requirements of the MMDR project and similar schemes that Carillion and Tarmac have gained on relevant project examples, demonstrating CTPs position to add value to the MMDR project prior to construction tender and award.

Table 9-2 CTP relevant project experience examples matched to Key MMDR requirements

MMDR Requirement	A50 Growth Corridor	Hucknall Inner Relief Road	Morpeth Northern Bypass	FARRS	Leeds CC Decade of Collaboration
Early Contractor Involvement	✓	✓	✓	✓	✓
New standard carriageway	✓	✓	✓	✓	✓
Roundabout / Junctions	✓	✓	✓	✓	✓
Culverts / Bridge over water		✓	✓	✓	✓

Railway Bridge				✓	✓
Major Earthworks	✓	✓	✓	✓	✓
Benefits to Congestion	✓	✓	✓	✓	✓
Benefits to Regeneration	✓	✓	✓	✓	✓

9.2.15 The use of ECI arrangements has been proactively used by LCC on the MHA framework in the development, understanding and management of key risks associated with the project at an early stage, and has helped provide significant advantages in relation to the following points:

- Adopting a structured approach, and focussing on programme and delivery implications of key risk items, and how they can be mitigated, avoided and/or reduced;
- Setting clear goals and taking timely decisions;
- Investing time and money proportionate to likely returns;
- Including potential suppliers and sub-contractors in decisions at an early stage; and
- Ensuring good communications and building trust with all stakeholders.

CONSULTANTS- DESIGN & SPECIALIST ADVICE

9.2.16 AECOM has more than 100 years of experience managing and delivering highway projects for both government and private industry. They will bring the experience, confidence and surety of successfully delivering recent schemes including A1 Morpeth Bypass, A5-M1 Link Dunstable Northern Bypass, M6 J10a to 13 Smart Motorways, A46 Newark to Widmerpool and A52 Nottingham Junctions. For the MMDR AECOM will provide highways design and support services including, environment, structures and geotechnics, largely delivered from their Chesterfield and Nottingham offices. Their resources will be underpinned by a national resource of over 1800 transportation staff, providing a flexible and scalable resource to meet demands.

9.2.17 WSP work with government, local authorities and leading contractors to drive efficiency and innovation for public sector clients. A Highways England long-time trusted partner, WSP deliver cost-effective improvements to England's strategic road network within challenging social, political, fiscal and time constraints. Innovative projects undertaken by WSP include the M25 widening (J27-30) and the A35 Weymouth Roundabout improvements.

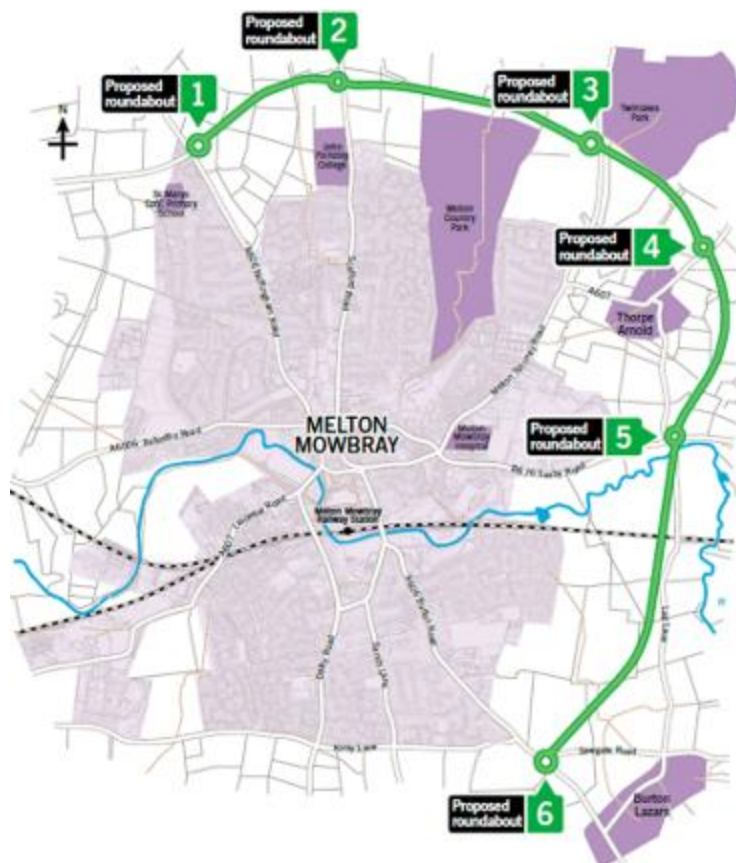
9.2.18 Working with local authorities such as Northamptonshire County Council, WSP manage and improve local roads, through the provision of new infrastructure and routine maintenance services, achieving cost savings, reduced carbon emissions and improved public satisfaction.

9.2.19 Both consultants, and respective teams are well known to Leicestershire County Council and a proven track record in accelerating scheme delivery, and identifying critical risks and path activities to meet programme.

9.3 PROGRAMME AND PROJECT DEPENDENCIES

- 9.3.1 The Melton Mowbray Distributor Road is a “stand-alone” scheme, which can be delivered independently of any other highway infrastructure schemes or development. However it forms part of the wider Melton Mowbray Transport Strategy which will enable the benefits of the scheme to be enhanced, such as schemes that support access to and regeneration of the town centre, schemes to promote the active modes, improvement in public transport to enhance service coverage and patronage, and local traffic management measures to improve safety in the town centre and local roads.
- 9.3.2 The MMDR will be delivered first and other schemes, currently in development, will follow.
- 9.3.3 From the legislative perspective, MMDR is dependent on the following:
- Adoption of the Melton Local Plan (fundamentally as submitted for Examination; Examination due Feb 2018);
 - Planning permission being granted (anticipated October 2018) ; and
 - Completion of other statutory duties such as Compulsory Purchase Orders where necessary (anticipated summer 2019).
- 9.3.4 The scheme is specifically referenced in the Local Plan and, as noted in the Strategic Case, is important to the delivery and acceleration of new housing in Melton (4,500 dwellings), alongside the 30ha of employment land, to ensure Melton Mowbray remains a vibrant, active and highly-viable, growth location in the County.
- 9.3.5 The scheme includes six new junctions to connect the proposed distributor road to the existing road network, these are shown within Figure 9-1.

Figure 9-1 MMDR and Junction Locations



9.4 PROJECT GOVERNANCE, ORGANISATION STRUCTURE AND ROLES

GOVERNANCE

- 9.4.1 The governance structure established by LCC for delivery of the MMDR is described below. This follows an established structure that has been used by Leicestershire County Council for successful delivery of previous schemes, including those identified in the previous local experience (see Table 9-1), LCC also benefit from experience gained from other neighbouring authorities of local major schemes through hosting other MHA Framework Boards.
- 9.4.2 The Project Governance Structure for the MMDR scheme consists of a three tier structure, due to the fact that it forms part of the overall Melton Mowbray Transport Strategy (MMTS) and is linked to wider projects under the MMTS umbrella. The three tiers are as follows:
- The Melton Mowbray Transport Strategy Programme Board – Provides an overview at a strategic level in relation to Melton Mowbray Transport Strategy as a whole.
 - The MMDR Project Board – Provides governance for the specific MMDR Project and is the decision making body for the purposes of delivery of the scheme. Other project boards will be established to cover other projects under the overall MMTS umbrella, including the identification and development of the wider elements of the transport strategy.
 - Delivery Teams – Responsible for product delivery collaboratively between consultants, contractors and LCC staff.
- 9.4.3 The proposed structure breaks the overall project down along the following lines:
- High-level, strategic governance related to the strategy as a whole alongside more detailed work relating to delivery of specific schemes.
 - Governance related to the Melton Mowbray Distributor Road (MMDR) specifically alongside work on the transport strategy as a whole and the wider (i.e. non MMDR) schemes/measures which emerge from the strategy.
- 9.4.4 As other schemes/measures emerge from the work to develop the wider transport strategy and are taken forward for delivery, proportionate governance structures will be established (potentially including additional project boards) to oversee these as required, albeit still within the overall MMTS programme.
- 9.4.5 The roles and responsibilities of each of the tiers of the governance structure are covered in more detail in the following sections.

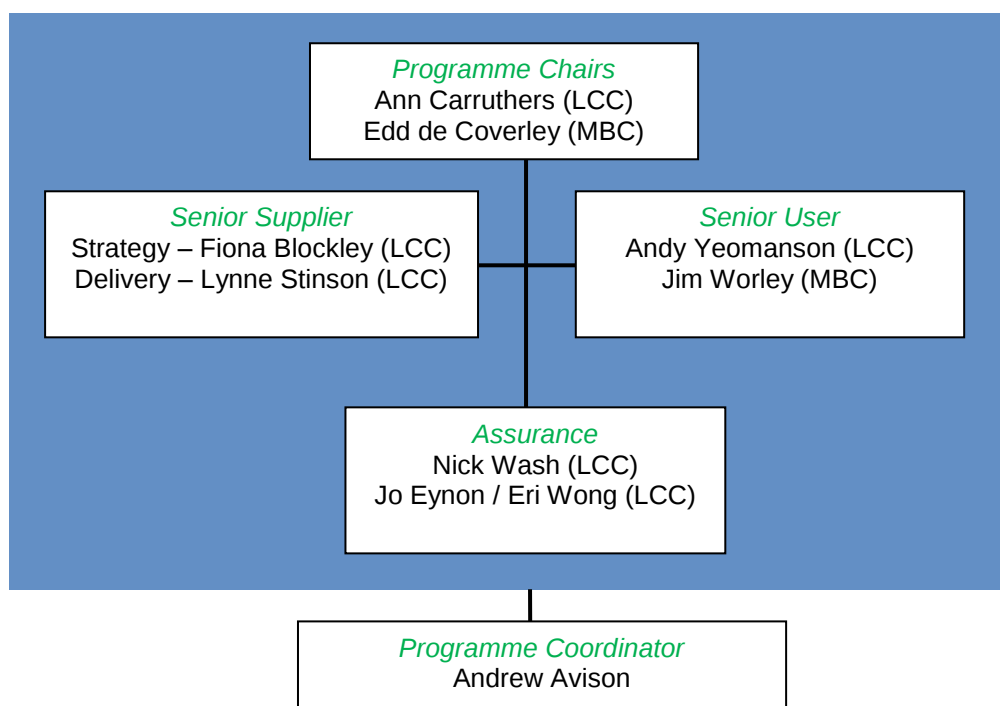
9.4.6 MMTS Programme Board

9.4.7 MMTS Programme Board is at the top of the proposed structure and provides:-

- A strategic steer and overview, monitoring programme-wide progress of the overall Melton Mowbray Transport Strategy;
- Overall MMTS projects programme, including high-level milestones and budgets for component projects;
- An overall Programme Coordinator, Andrew Avison, reports to the Programme Board, who receives written reports from the MMDR Project Manager prior to Programme Board Meetings.

9.4.8 The composition of the MMTS Programme Board is set out in Figure 9-2 below.

Figure 9-2 Composition of the MMTS Programme Board



9.4.9 The MMTS Programme Board will take place at every quarter. Andrew Avison acting as the Programme Coordinator has specific responsibility within the Council for NE Leicestershire & Melton; Andrew has over a number of projects developed an in-depth understanding of the local area, while having also had direct involvement in the MMDR scheme from inception has an intimate knowledge of the evidence base.

9.4.10 Ann Carruthers for Leicestershire County Council and Edd de Coverley from Melton Borough Council will undertake the roles of Programme Chairs. LCC's head of Transport Policy Andy Yeomanson and Jim Worley (Head of Local Plan Melton) will undertake the roles of senior users.

9.4.11 Project assurance covering finance and strategy will be undertaken by Nick Wash and Jo Eynon from a transport planning and development perspective.

THE MMDR PROJECT BOARD

- 9.4.12 The MMDR scheme will be delivered through the MMDR Project Board, which reports to the overall Programme Board for the Melton Mowbray Transport Strategy through the Programme Coordinator (Andrew Avison).
- 9.4.13 The MMDR Board represents a continuation of invested knowledge and ability to make key, important decisions quickly. The board has been meeting every month since the beginning of 2017 in order to deliver the OBC to DfT. Some changes in personnel are expected as the scheme transitions to contractor and scheme delivery compared to the current phase, and as shown in Figure 9-3.
- 9.4.14 The MMDR Project Board will support the Senior Responsible Owner for the MMDR project (Ian Vears) in providing overall direction and management for the project and by making key decisions including commitment of resources. This Board is already established and meets monthly to initially produce the Outline Business Case (to Dec 2017) and will continue to meet monthly from Jan 2018 to progress scheme development and design from Jan 2018, and through the detailed design, planning, orders, procurement and Full Business Case stage for delivering the MMDR; and at later stages prepare for and undertake construction (subject to receipt of funding for the scheme).
- 9.4.15 The MMDR Project Board is responsible for, and will have direct decision making powers over:
- Managing progress - against the Project plan;
 - Agreeing/quality assuring key Project products - these are usually relatively process focussed and are concerned with project level plans, communications and HR transition planning;
 - Managing Project-level risks;
 - Managing Project-level issues;
 - Managing Project finance
 - Managing dependencies between the MMDR and other projects in the Transport Strategy
 - Committing (or sourcing from elsewhere) resources required by the Project to enable the activities to be successfully achieved.
 - The Project Board will ensure reciprocal line of communication between the MMDR Project Board and the MMTS Programme Board.

KEY ACHIEVEMENTS TO DATE

- 9.4.16 The Project Board have delivered several key achievements to date of which several are summarised below:
- The CDM design review conducted on 11th October and the DHAR updated.
 - Management of communications and stakeholder engagement – including agricultural surveys and interviews; Meeting with Natural England and arrangement of regular on-going meetings; Archaeology WSI submitted to LCC Planning archaeology; Scoping report has been submitted to planning for LCC comment; A series of meetings with North Sustainable Neighbourhood Consortium developers to discuss alignment; Various meeting with landowners to discuss issues.
 - Delivery of Outline Business Case (OBC) – including OAR Refresh; Strategic Case; Transport Model Forecasting: Do Minimum Scenario & Schemes Review; Transport Model Forecasting: Specification of Sensitivity Tests; Development of Economic; Financial, Commercial and Management Cases.
 - Oversight and challenge on key project risks, programme dependencies and the prioritisation of critical path activities to ensure that each of the above has been delivered on time, and within existing budgets.

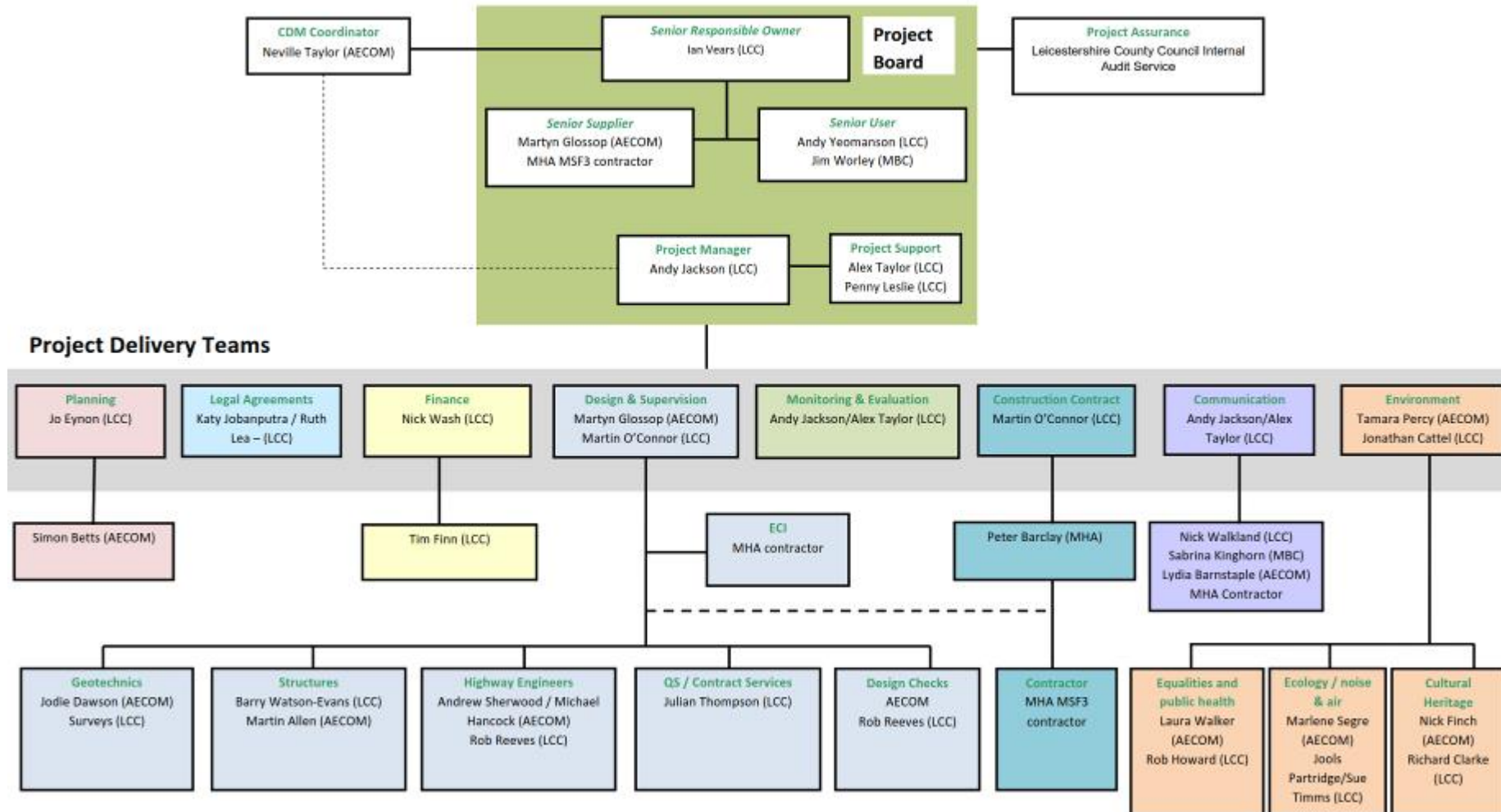
PROJECT BOARD MEMBERS AND ROLES

- 9.4.17 Ian Vears is the Senior Responsible Owner (SRO) for the MMDR Project, he is a senior professional with over 28 years' highways and transportation experience, undertaking various managerial roles over 15 years, with the last 4 years at a senior level. He has a track record of successful commissioning or providing an extensive range of customer focused services, delivering major strategic, politically sensitive projects and transformational cultural change. Combined with over 12 years military engineering experience gained concurrently he has developed the abilities needed to form and maintain partnerships, resolve conflict and mobilise resources to deliver shared outcomes and targets. Ian's responsibilities will include:
- Project direction;
 - Monitor and control Project Plan;
 - Monitor financial expenditure;
 - Monitor and review Project controls
 - Organise / Chair Project Board
- 9.4.18 **Ian Vears** has been the **Senior Responsible Officer** for the delivery of numerous projects and programmes including, each year accountable for the delivery of for £30-40 million capital programme and £37 million revenue spend, £13.0 million Local Sustainable Transport Program, M1 Junction 22, A42 Junction 13, A46/A50 Junction improvements.
- 9.4.19 **Andy Yeomanson** is an Incorporated Engineer, with over 30 years' experience of highways and transportation the last nine of which in managerial roles. He has a strong track record of working with a range of internal and external partners to build effective and productive relationships that realise mutual benefits. Andy has undertaken **Senior User** responsibilities on a wide range of projects, including the development of transportation evidence for 5 successfully adopted Core Strategies/Local Plans; the development of successful multi-million pound Growth Deal bids; and the development of the Leicester and Leicestershire Enterprise Partnership's Strategic Economic Plan. As Senior User Andy will represent the end users and those interested in the project to ensure end users views are fully represented.
- 9.4.20 As **Senior Supplier**, **Martyn Glossop** led the AECOM input for the recently opened (November 2017) £550m Mersey Gateway project. He was responsible for coordinating the development and delivery of highway design packages for the landside works in collaboration with design joint venture partners, the construction joint venture, Mersey Gateway Crossing Board and Halton Borough Council. He co-ordinated the multi-disciplinary design including input from geotechnical specialists designing complex earthwork solutions and environmental specialists providing remediation measures in heavily contaminated areas. Martyn has a detailed understanding of highway design codes and the design of roundabouts and link roads. As Senior Supplier, Martyn will manage and ensure resources to deliver the project are available
- 9.4.21 **Andy Jackson**, who is part of the Asset and Major Programmes team at LCC, will be the **Project Manager**. Andy has 15 years' of experience managing projects at Leicestershire County Council. Qualified in PRINCE2 he will continue to use PRINCE2 principles in the delivery of the MMDR project. Andy has excellent partnership working skills; an excellent communicator he has worked with a huge range of stakeholders from landowners and community groups to statutory organisations such as Natural England and the Environment Agency. Having worked for local authorities and interest groups and closely with statutory organisations Andy is sensitive to the priorities and working practices of a range of organisations. In recognition of Andy's commitment to delivery for people in Leicestershire he was presented with the County Council's Customer Focus Award.

- 9.4.22 As described in the Commercial Case, dedicated and experienced resource is allocated to **contract management** and that will be managed by **Martin O'Connor**, a NEC project manager, with project support from the LCC Engineering Services Team and an assigned Quantity Surveyor from LCC's Contract Services.
- 9.4.23 The composition of the MMDR Project Board, and delivery team are set out in Figure 9-3.

Figure 9-3 MMDR Project Board and Delivery Team

Melton Mowbray Distributor Road Project Board and Delivery Teams



MEETING FREQUENCY

- Board meetings will occur on a monthly basis.
- Where the need arises to discuss issues or exceptions, meetings may be called more regularly.

PROJECT REPORTING

9.4.24 There will be two key reporting lines (this relates to actual reporting of progress, risks, issues etc. rather than general provision of information to Board members) for this project as follows:

- The Project Manager will report to the Project Board formally at each Project Board meeting and on an as and when required basis to the Senior Responsible Owner, **Ian Vears**.
- Delivery Team leads will report to the Project Manager, **Andy Jackson**, on a monthly basis in advance of the Project Board meeting while report exceptions will be made to the Programme Coordinator on an as when required basis. The Project Delivery Team will report through Andy Jackson (Project Manager) to the Project Board with decisions made by the Senior Responsible Owner, **Ian Vears**.

9.4.25 The same Project Manager, **Andy Jackson**, has been, and will be, in place at both the ECI and construction stages to ensure a smooth transition between delivery stages.

9.4.26 In addition the Delivery Team will continue to hold “weekly calls” to discuss cross-discipline issues, as is already established, and working well.

DELIVERY TEAM

9.4.27 The MMDR Project Delivery Team has a proven track record of previous delivery with the local and broader expertise to effectively deliver to the accelerated timescales.

9.4.28 Given the recent completion of the M1 Bridge and Lubbethorpe SES schemes, the capacity of the group, along with links to other LCC officers, District Council officers and developer partners has been well established and can quickly mobilise. The MMDR scheme will also benefit from the continuation of staff in roles they have undertaken on aforementioned projects, bringing a significant degree of expertise to the project.

9.4.29 The team includes:

- LCC ‘Project Manager’ (Andy Jackson)
- Key LCC officers from the Assets & Major Programmes Team
- Midland Highway Alliance and LCC engineers specialising in highway design, structures, lighting, traffic signals and network management;
- LCC and AECOM environmental specialists covering flood risk, landscape, biodiversity, the historic environment and rights of way;
- The County Council’s Term Consultants, providing additional independent specialist advice as required, including business case preparation, traffic modelling, risk analysis and noise and air quality appraisals
- Developers’ consultants providing additional support and advice as required
- Melton Borough Council officers advising on Local Plan and Development Control issues
- LCC’s S151 Officer

9.4.30 These will be supported by LCC’s internal Project Audit team, with further independent project health checks held at key OGC gateways. This is discussed further under Project Assurance.

- 9.4.31 In addition to support the planning permission, significant detailed design has already gone into elements of the highway infrastructure and early contact has been made with the site supervision and construction team from the M1 Bridge project in the development of the scheme's design, costing and OBC development.
- 9.4.32 This is important as the team already understand the key risks, and need for definitive, programmed actions in the first part of 2018 to make clear decisions around the main risks. This includes the power line diversions in particular to ensure that initial advice in relation to programme- which has been taken on board in the project plan- is firmed up prior through detailed investigative work prior to OBC funding announcement, to enable agreement prior to this becoming a critical path activity.
- 9.4.33 The Project Delivery Team will follow best practice in terms of structure, governance and the monitoring of programme and delivery - as embodied in LCC's project management procedures- founded on PRINCE2 methodologies, accountabilities and audit/ review.

9.5 PROGRAMME / PROJECT PLAN

- 9.5.1 The in depth programme is under continuous review and is provided for the OBC submission in Appendix J.
- 9.5.2 As noted above, and with particular respect to the management of key risks, LCC are committed to continuing work on design and planning for the scheme post OBC submission.
- 9.5.3 This has been incorporated in the programme, and will be progressed by LCC to remove any potential for programme delay whilst decisions are being made in relation to the OBC itself.
- 9.5.4 LCC will commence some works prior to potential funding award to enable the commencement of construction activity in Spring 2020. Early provision of ground investigation information is required to enable geotechnical design work to commence to feed into the structures design. The environmental surveys have to be completed within specific survey windows prior to the end of June 2018.
- 9.5.5 There are two sets of 132kv powerlines in the vicinity of the proposed River Eye bridge. Unless approval is received to divert a short section of the River Eye one of these will require diverting as we will have to construct a bridge abutment directly beneath the cables and will also have to lift bridge beams into place. Discussions are ongoing with the Environment Agency and Natural England regarding a potential river diversion negating the need to divert the powerlines. Although Natural England initially responded negatively to a potential river diversion (due to SSSI) this remains a potential option, if overall benefit can be brought. We have programmed regular meetings with the EA and Natural England to progress this issue, but have programmed and costed on the basis of potential powerline diversions likely being required.
- 9.5.6 In parallel to the river diversion, we have progressed a potential powerline diversion and have obtained details from Western Power Distribution. The next step will be for them to complete a feasibility study to determine the precise nature of diversion works. We do not intend to make such a request until the potential for a river diversion, based on Natural England and the Environment Agency advice has been fully completed. If we fail to agree a river diversion prior to 23rd March 2018, this aspect will become time critical and we will instruct Western Power Distribution to complete a feasibility study, enabling the powerline diversion works to be completed by June 2020.
- 9.5.7 If we are challenged and a public inquiry is required, this will be programmed for January 2019, with the decision and legal challenge period running in parallel with the ongoing detailed design.
- 9.5.8 We have a full understanding of land ownership and intend to progress the planning and orders process for submission at the end of June 2018. Design work will progress in tandem, with the technical approval of the structures design, programmed for completion at the end of September 2019. This controls the commencement of the procurement process and subsequent appointment of a contractor.
- 9.5.9 The key milestones of the project are listed in Table 9-4.

Table 9-4 Key Milestones

Timing	Stage
22/12/2017	Submission of OBC to DfT
Jan/Jun 2018	Environmental surveys
	Internal LCC communication regarding planning and democratic process
29/1/18 to 28/2/18	Commission and mobilise GI
1/3/18 to 28/3/18	Complete GI works
23/03/2018	Instruct Western Power Distribution to complete feasibility study if river diversion not agreed
May-2018	Funding Milestone - Announcement of funding from DfT Large Local Majors.
30/5/18 to 27/6/19	Detailed design
1/5/18 to 26/6/18	Report to Cabinet & request to submit planning and orders
25/06/2018	Instruct Western Power Distribution to complete powerline diversion
29/06/2018	Submit Planning Application
July- Sept 2018	Preparation for and planning and orders exhibition
Oct 2018	Outcome of planning application announcements
Jan 19 -Oct 19	Public Inquiry, decision and challenge period
28/6/19 to 30/9/19	Structures review and approval
09/10/19 (to 09/3/20 award)	Procurement (and award pending full approval)
Nov-2019	Land acquisition
Jan 2020 to March 2020	Full approval submission to DfT
10/03/20 to 05/6/20	Mobilisation
05/06/20	Construction activities begin
25/06/2020	Western Power Distribution diversion complete
Aug-2022	Scheme construction complete
Oct 2022	Road opens
Oct 2022 – June 2023	After scheme monitoring and surveys (details to be defined)

9.6 AUDIT & ASSURANCE

- 9.6.1 Assurance activity is defined in the PSIAS as 'An objective examination of evidence for the purpose of providing an independent assessment on governance, risk management and control processes for the organisation. Examples may include financial, performance, compliance, system security and due diligence engagements'.
- 9.6.2 Internal LCC Project Audit will be provided through the LCC Internal audit Charter (November 2016), which was adopted by Leicestershire County Council Internal Audit Service (LCCIAS). It is developed based on the Public Sector Internal Audit Standards (PSIAS). The PSIAS were revised in April 2016 and a Local Government Application Note (LGAN) developed by CIPFA produced setting out practical guidance on how to apply the PSIAS.
- 9.6.3 LCCIAS conducts a wide range of engagements (assignments) designed to evaluate the quality of risk management processes, systems of internal control and corporate governance processes, across all aspects of the Council's control environment (including working in partnership with, and leading on behalf of others).
- 9.6.4 LCCIAS will act to provide 6-monthly project audits on project management, delivery, programme and overall critical success factors that lie behind successful project delivery, using the above guidance to undertake reviews, and with a particular focus on internal and external risk management.
- 9.6.5 LCCIAS aims to co-ordinate its assurance activity with other internal and external providers of assurance services to ensure sufficient and proper coverage over the control environment and minimise duplication of efforts.

INDEPENDENT ASSURANCE – GATEWAY REVIEWS

- 9.6.6 It is essential that large, complex and long running projects are monitored effectively. All major transport schemes have to demonstrate that a system for monitoring progress is part of the management structure and plan. The Gateway review process is proposed to be used by LCC for this project, as a Large Local Major scheme, and in recognition of this being an independent, and recognised best practice route to deliver the benefits of wider, and fully encompassing project assurance at key project milestones.
- 9.6.7 This will therefore represent a formal assessment of the progress of a project at key stages in its development and was established by the Office of Government and Commerce (OGC).
- 9.6.8 The OGC Gateway Review process offers a structure for projects following these procurement routes, based around a series of independent peer reviews carried out at key stages to verify that projects should be allowed to progress to the next stage.
- 9.6.9 The OGC Gateway Process (now part of the Efficiency and Reform Group) provides a snapshot view of progress, at a point in time and, therefore, is seen as complementary to the LCC internal processes described above, and not a replacement for them.
- 9.6.10 These peer reviews, or 'gateway reviews' will be commissioned on a confidential basis by the Senior Responsible Owner, Ian Vears.
- 9.6.11 These are anticipated to be undertaken by LCC at the following stages, with indicative dates provided against each below:
- OGC Gateway Review: Detailed Design (3a)- June 2018
 - OGC Gateway Review: Investment decision (3b)- June 2019
 - OGC Gateway Review: Readiness for service (4) – January 2020
 - OGC Gateway Review: Operations review & benefits realisation (5) - 2022

9.6.12 These Gateway review provides assurance and support to Ian Vears as the SRO that:

- Suitable skills and experience are deployed on the project;
- All stakeholders understand the project status and issues;
- There is assurance that the project can progress to the next phase;
- Time and cost targets have a realistic basis;
- Lessons are learned; and
- The project team are gaining input from appropriate stakeholders.

9.6.13 This is shown in Table 9-5, as part of the process of managing stage boundaries.

9.6.14 It is recognised that formal OGC Gateway reviews, particularly for Stage 2 have not yet been undertaken (although both ECI design input and challenge, and independent cost assurance has been obtained by LCC and delivered as part of the OBC development.

9.6.15 LCC would be happy to consider a Stage 2 OGC review during early 2018, in terms of helping set a suitable platform for future stages to be undertaken.

Table 9-5 Gateway review stages

Gateway		Major Project phase / stage
1	Business justification	Entry to the options phase (undertaken on behalf of DfT) (option identification stage)
2	Delivery strategy	Entry to the development phase (preliminary design stage)
3a	Investment decision	Entry to the statutory procedures and powers stage
3b	Investment decision	End of the construction preparation stage
4	Readiness for service	Prior to open for traffic or consent to operate
5a	Operational review and benefits realisation	Following handover into operations and before the end of the defects period
5b	Operational review and benefits realisation	A further operational benefits review may need to be undertaken. The timing is at the discretion of the SRO.

9.6.16 Stage 3a for the MMDR scheme will define the delivery strategy and focus on establishing a clear definition of the project and a plan for its implementation. Outstanding assumptions from the business justification for the project will be verified at this stage.

9.6.17 The OGC Gateway will assess the project's viability, the value for money to be achieved, and the proposed approach for achieving delivery of the project's objectives. This approach will allow the review to assure the Project Board that the selected delivery approach is appropriate.

9.7 COMMUNICATIONS AND STAKEHOLDER MANAGEMENT

COMMUNICATION AND ENGAGEMENT STRATEGY

- 9.7.1 LCC have developed a Communications Strategy which defines and sets out the principles, objectives and approach for the engagement with stakeholders and consultation with interested parties on the proposed Melton Mowbray Distributor Road. The Communications Strategy sets out to ensure an inclusive approach during the ongoing dialogue throughout the scheme development and construction process.
- 9.7.2 The Communication Strategy for the scheme has been developed and will be expanded in future in accordance with the Leicestershire's Equalities obligations under the Equality Act 2010 and the associated Public Sector Equality Duty (Section 149 of this Act) which places emphasis on maintaining an ongoing dialogue with interested parties using appropriate communications channels to ensure an inclusive approach.
- 9.7.3 The Council's Equality and Diversity Strategy (2016 -2020) commits LCC to make sure that anyone who accesses services will be treated fairly and without discrimination and ensuring that discrimination on the grounds of any of the protected characteristics is avoided.
- 9.7.4 In developing communication and engagement strategies for schemes promoted by LCC, the Council seeks to:
- Identify all key stakeholders; both individuals and groups to enable effective engagement with each stakeholder group through the life of the project;
 - Understand and 'map' the interest and influence of each of the stakeholders;
 - Identify the different channels of communication that will be used to successfully engage with stakeholder groups to seek their views on the proposed scheme. The strategy will identify how these channels will be used, when they will be used, and what information will be provided and by whom while also underpinning future activities such as planning and communications with landowners.

COMMUNICATION PRINCIPLES

- 9.7.5 The following principles are taken from the County Council's Corporate Communication Strategy (Section 5) and form the basis for the MMDR communication plan.
- 9.7.6 Communication principles will be owned by the SRO, Ian Vears, and set at Project Board level. These will be:
- honest, open and accurate;
 - available in a range of accessible formats;
 - clear, simple and user-friendly;
 - consistent and relevant;
 - timely and current;
 - legitimate, in accordance with relevant legislation, codes of practice and with the Council's own protocols and guidelines;
 - high quality;
 - monitored and reviewed on a regular basis; and
 - Cost-effective.

COMMUNICATION OBJECTIVES

9.7.7 The communications objectives will be owned by the LCC Project Manager, **Andy Jackson**, and are to:

- To inform stakeholders of the MMDR scheme and to seek their views to inform the scheme design and its continued design through to detailed design, and any measures required to mitigate against any environmental, community or other negative impacts arising from the scheme;
- To communicate clearly, openly and in a timely manner the need for the scheme, details of the proposed route and any updates as the scheme design and planning process progresses;
- Working collaboratively with our internal and external stakeholders to ensure information is shared effectively and consistently across communications channels.
- To define the channels and processes necessary to effectively manage the on-going dialogue between the project team and all stakeholders to keep interested parties informed of the scheme as the design and statutory processes progress;
- Proactively and inclusively communicate with all stakeholders throughout the scheme development, ensuring clarity and consistency of message at each stage of the scheme to all stakeholder groups.
- To inform detailed design and the planning process and to regularly report on progress;
- Regularly review the impact of project communications and identify opportunities and methods to improve poor engagement levels or a lack of participation of any particular group.
- Effectively manage communications risks identified in the stakeholder action plan and project risk register.
- Stakeholders and communities affected by the MMDR scheme are engaged with and given opportunities to feedback and provide comments.
Pro-active regular communications and engagement with the media and stakeholders to share good news stories and correct inaccurate or misleading views or articles.
- Reputational objectives:
- Record engagement with and feedback from stakeholders and demonstrate where this has influenced modifications to the scheme and mitigation measures.
- To manage communications in a structured and proactive manner
- To ensure that communication is led by LCC.
- Improve customer experience of engagement with LCC.

9.7.8 Success will be judged by seeking feedback from stakeholders and community organisations who were engaged in the consultation process but also by seeking the views of those who did not engage, but who may have been expected to engage, to understand why.

COMMUNICATION SCHEDULE

9.7.9 The schedule of communication that LCC has currently prepared is outlined below and a further communication plan for the scheme delivery will be further updated and delivered following the outcomes of the investment decision for the scheme.

9.7.10 Public exhibitions were previously held between 2nd September and 15th October 2017 at various locations.

9.7.11 The communication schedule for the further events until the submission of the OBC and beyond is provided in Table 9-6 below.

Table 9-6 Schedule of Communication

Timing	What and Why	Who	How
October / November 17 Consultation Feedback	- Site meeting with DfT - Strategic Coordination Group (17/10/2017) - Bulletin with executive summary of findings and response / next steps	All	Various - press release, email bulletin and update on LCC and MMDC website
December 17	- Overview & Scrutiny Committee (08/12/17) - Report to Cabinet (12/12/17) - Submission of OBC to DfT 15/12/17	All	Press release of the Cabinet decision and next steps
Jan – June 18	Continued engagement with landowners and stakeholders regarding the design process.	All	Face to face meetings Email/phone E-Bulletin
July 18 – Oct 19	Public Inquiry	Public & Stakeholders Internal staff and members Melton BC	Members briefings Various – email; formal press release via LCC Press Officer etc.
June 20	- Construction programme start date - Reactive and planned public communications on traffic and disruption	Public & Stakeholders Internal staff and members Melton BC	LCC web and social media Various – email; formal press release via LCC Press Officer etc.
Oct 22	Road opens	Public & Stakeholders Internal staff and members Melton BC	LCC web and social media Various – email; formal press release via LCC Press Officer etc. Opening ceremony

ENGAGEMENT CHANNELS

- 9.7.12 The communication strategy for this scheme will encourage an open and honest approach to engender trust in LCC from the local resident and business community as well as key statutory and non-statutory stakeholders. A wide variety of channels for communication will be employed to ensure equality of opportunity to make views known and to afford the appropriate weight to the consideration of the views from all individuals and groups.
- 9.7.13 These channels will include:
- Public exhibition- (Recently public exhibitions were undertaken between 2nd September to 15th October 2017);
 - Web-based opportunities to engage;
 - Email and social media channels;
 - Paper and online questionnaire surveys;
 - Opportunities for 'free-style' written responses; and
 - Individual face to face meetings for those directly affected by the proposed scheme.
- 9.7.14 The engagement channels will ensure that:
- All stakeholders are informed of the project objectives, current progress and key issues.
 - Communications are reviewed to ensure the right messages are communicated through the correct channels in a timely way.
 - Feedback is captured, recorded and appropriate responses given in a timely manner.
 - Any design changes made in response to comments are captured i.e. "you said, we did" manner to demonstrate how consultation feedback has influenced modifications to the scheme.

KEY MESSAGES ABOUT THE SCHEME

- 9.7.15 The proposed scheme's transport benefits of the MMDR are to reduce congestion, remove through-traffic and rat-running through the town, significantly reduce HGV movements in the town centre, and improve air quality, noise, road safety and provide a more pleasant town centre environment.
- 9.7.16 Through delivering these transport objectives it will enable, accelerate and sustain housing delivery in Melton to deliver the Local Plan, as well as enhance accessibility to/from Melton for existing residents, businesses and visitors to the town to promote economic growth. The opportunities afforded to the town centre by the scheme are also vital, and in providing enhanced walking and cycling, public transport and town centre regeneration opportunities having removed significant through traffic.
- 9.7.17 The key messages for the communication strategy follow these benefits, and are:
- 1. The MMDR will reduce traffic congestion through Melton Mowbray**
The MMDR will reduce congestion, and improve local noise and air quality impacts on residents by removing through traffic from the town for both car and LGV/ HGV traffic.
 - 2. Support the delivery and acceleration of housing and employment to the north and south of Melton Mowbray town centre**
The MMDR scheme is designed to support the delivery of up to 5,000 homes and 31 hectares of employment land.
The MMDR will reduce traffic in the town centre and offer an opportunity to improve the general environment for pedestrians and cyclists.

The reduced traffic through the centre of Melton Mowbray will provide future opportunities for public realm improvements in the town centre to support local businesses and complementary improvements for pedestrians and cyclists.

3. Environmental impacts will be minimised

Environmental surveys have been conducted to inform the development of the route alignment options. A full assessment of the environmental impact and the design of environmental mitigation measures will be undertaken as the detailed design of the scheme is progressed. The findings from these assessments will inform and shape the detailed design of the scheme. These assessments will also consider the short term traffic and environmental impacts that may arise during the construction of the route which will, in turn, influence the construction methodology.

The impacts and potential mitigation measures will be discussed with stakeholders, in particular the Statutory Environmental Bodies and the local resident and business community to develop a scheme that minimises the impact on the environment. These will be reviewed and monitored through future detailed design stages to ensure continued relevance and that facts are kept up-to-date through the communications planning.

STAKEHOLDERS

9.7.18 Stakeholder analysis has been undertaken by LCC and will be owned by the LCC PM, Andy Jackson. This has been undertaken to:

- Identify and map stakeholders, both individuals and groups to understand their interests and influence in the scheme to inform the communications approach;
- Enable the project team to plan on-going stakeholder engagement through the development of the MMDR scheme; and,
- Enable effective management of relationships and ensure comments and views received are properly captured, recorded, and used appropriately to inform the refinement of the scheme.

9.7.19 The stakeholders, their interest and influence were categorised into four tiers:

1. Strong buy-in (high interest/high influence)
2. Need to consult (high interest/low influence)
3. Maintain interest (low interest/low influence)
4. Keep informed (low interest/low influence)

9.7.20 Table 9-7 lists these key external stakeholders by tier and demonstrates how and when LCC will communicate with them and the information they require. The tracker is a live document that will be updated and maintained by the stakeholder lead and project manager for the scheme throughout the consultation and scheme programme.

Table 9-7 Stakeholder Categories, requirements and channels of communication

Group	Organisations	Key Requirements	Communication and engagement channels	Frequency/ Times
Tier 1 Strong buy-in	- Political – Ward and parish councils affected by recommended route - Leicestershire CC and MBC- Members and respective Executives - Statutory consultees – directly influenced, Environment Agency,	Need to understand the scheme, key stage dates during design and construction, so that a response can be given to enquiries e.g. members of the public/constituents/senior leadership team	- Written communication - Individual meetings - Invitations to public consultation - Invitation to complete	Initial meeting, regular monthly written updates

	Natural England, Canal and River Trust, Highways England, Historic England Emergency Services		questionnaire	
Tier 2 Need to consult	- Political – Ward and parish councils not directly affected by the recommended route, neighbourhood development team - Community – schools, charities, societies, associations and voluntary groups - Transport - buses - Statutory Bodies – Network Rail, DVSA - Specialist including woodland trust, forestry commissions, ramblers association, cycling UK. - Businesses directly affected	To be knowledgeable at key stages of the scheme development and able to provide timely and relevant information to the project as necessary.	- Written communication - Request to complete questionnaire	Ad-hoc as and when required to meet overall scheme timeline and objectives
Tier 3 Maintain interest	- Adjacent Local Authorities not directly involved - Influencers – Transport (national), Chambers of Commerce, - Voluntary groups, sports societies - Specialist including Sport England, Federations of businesses etc.	To be informed about the scheme at key stages of design and construction	Written communication	Ad hoc - as and when required to meet overall scheme timeline and objectives
Tier 4 Keep informed	Media	To be informed about the scheme at key stages	- Press notices - Social media	At key stages (e.g. start of consultations, start of works, opening to traffic)

9.7.21 Stakeholders for the project include Leicestershire County Council, Melton Borough Council, adjacent Leicestershire district councils, the Leicester and Leicestershire LEP, Leicester City Council, the Federation of Small Businesses, the Southern Developers (led by Davidsons), the Northern Developers (as a consortium of developers), the Melton Transport Stakeholder Reference Group, Midlands Connect, Highways England, the DfT, ORR, Transport Focus, Homes and Communities Agency and the Crown Estate.

9.7.22 This is alongside key businesses in the town, bus operators, schools, ward members, parish councils, small landowners and local residents themselves.

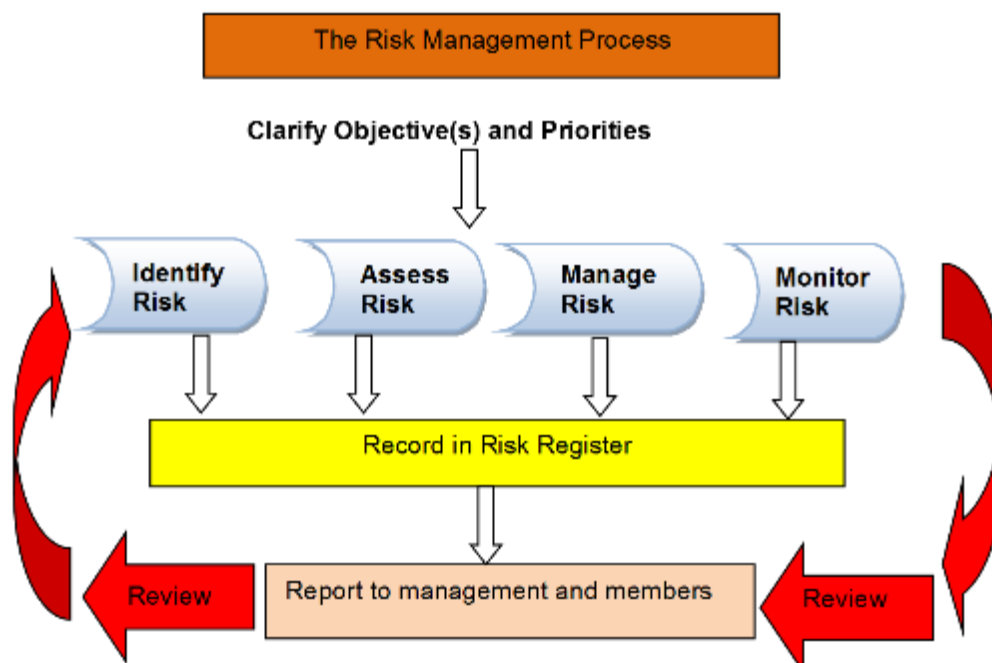
9.8 RISK MANAGEMENT

9.8.1 The Treasury Green Book states that “effective risk management helps the achievement of wider aims, such as effective change management, the efficient use of resources, better project management, minimising waste and fraud, and supporting innovation”.

9.8.2 LCC recognises that in order to successfully achieve its own fundamental transformation, effective risk management is vital. The Council has a dedicated Risk Management Policy where managers are encouraged and supported to be innovative whilst understanding the risk and implications so they might make informed decisions in order to achieve objectives and deliver results. By being risk aware, reviewing its risk appetite and tolerance, the Council will be better placed to both take advantage of opportunities and manage threats.

9.8.3 LCC’s risk management is based on the Association of Local Authority Risk Managers (ALARM) has developed and published a National Performance Model for Risk Management in Public Services to illustrate what good risk management looks like in a public service organisation. There are five levels which are summarised in Figure 9-4.

Figure 9-4: Project Risk Management Process



- 9.8.4 Risk management is a continual process involving the identification and assessment of risks, prioritisation of them and the implementation of actions to mitigate the likelihood of them occurring and impact if they did.
- 9.8.5 The MMDR Project Board's approach to risk management will be proportionate to the decision being made or the impact of the risk, to enable the Council to manage risks in a consistent manner, at all levels.

IDENTIFYING RISKS

- 9.8.6 A Risk and Opportunity register was initially developed May 2017 and is kept up-to-date on a minimum monthly basis to consider risks associated with the preferred scheme, and to provide up-to-date input to the above process.
- 9.8.7 Risks are a specific item on the monthly Project Board agenda, with further and dedicated risk management workshops held between these.
- 9.8.8 Risks have been identified by specialists in highways and structural engineering, geotechnics, transport planning, quantity surveying and the environmental disciplines and entered into the risk register. These include individuals with detailed understanding of requirements for planning, EIA, consents and orders in order to effectively identify risk upfront, as well as early requirements to mitigate and/or manage supporting activities required.
- 9.8.9 A summarised version of the both the Design Risk Register and the Construction Risk Register are provided within Tables 9-8 and 9.9.
- 9.8.10 These highlight the mitigation practices and actions currently being deployed by LCC to eliminate, mitigate or significantly reduce the probability or impact of the risk occurring, with particular attention paid within these actions to the most important risks- whether from a timescale or cost perspective (or both).
- 9.8.11 The Full Risk Register for the MMDR scheme is included in Appendix D.

Table 9-8 Summarised Design Risk Register

ID	Risk	Risk Mitigation
1	Staff Resources	
1.1	Key individuals leave employment of LCC and / or AECOM, and this affects progress.	Allow sufficient lead in time to mobilise the works. Succession planning. Collate calendars to assess leave issues.
2	Highways	
2.2	Significant buildability constraints in the vicinity of the River Eye crossing. Two sets of powerlines, SSSI and river, combined with proposed bridge construction and new roundabout. Potential increase in River Eye bridge span due to EA / NE requirements for voles.	Close collaboration with EA and NE continuing. Potential solutions include a possible diversion of the river. Scheme progressing on assumption that river will not be realigned.
2.3	Design of northern section of alignment in the vicinity of Roundabout 3 is still to be confirmed due to the uncertainty of developer requirements.	Continue to develop proposals in collaboration with developers to reach suitable agreement.
3	Structures	

3.1	Potential for increased structure sizes to meet EA/NE requirements (including potential increase due to voles)	Work with EA/ NE to confirm structure sizes.
4	Drainage	
4.1	Delays to drainage design resulting from late receipt of pollution control / attenuation requirements information from EA.	Hold regular meetings with EA. Progress prelim design on basis of conservative pollution control / attenuation assumptions.
5	Geotechnics	
5.1	Little ground Investigation information currently available. Embankments constructed of won cut material may require faces to be flatter than gradients of 1:2.5 currently assumed.	Early analysis of GI data to identify suitability of material.
5.5	Potential for basal reinforcement on approach to River Eye Bridge. Allow for potential 250m length of heavy grade geogrid with 450mm thick class 6 material.	Decision made as to ground treatment requirements on receipt of GI details.
6	Environmental	
6.1	Encountering tar bound materials on site.	Complete pavement investigations. Design pavement construction overlay rather than inlay where possible.
6.2	Results of environmental survey work and assessments require potential route realignment.	Early analysis of environmental survey information to identify potential issues.
7	Operations	
7.2	Poor existing carriageway construction leading to more extensive reconstruction.	Pavement investigation to confirm condition at tie-ins with existing pavement construction.
8	Statutory Undertakers	
8.1	The clearance to overhead high voltage power lines may be insufficient adjacent to the River Eye overbridge.	Continue discussions with Western Power to confirm clearance requirements and consider potential diversion of powerlines. Subject to more recent positive engagement with EA and Natural England regarding potential river diversion issue, a feasibility study will be instructed prior to any time critical issues.
9	Planning	
9.2	Legal process delays. Potential for Public Inquiry.	Ensure contingency plans prepared to programme in public enquiry

Table 9-9 Summarised Construction Risk Register

No.	CATEGORY	RISK	IMPACT	MITIGATION
1	Statutory Undertakers	Discovery of uncharted statutory undertakers plant	Significant delays to planned completion and disruption to works activities	Close liaison with Stats bodies. Trial holes to be undertaken in advance of works, where new carriageway crosses existing highway network and undertake ground radar survey. Aecom provide composite drawing of stats and review with contractor to identify areas of highest risk for further investigation.
4	Statutory Undertakers	National Grid - Lead in periods for 132kv overhead cable diversion may exceed programme and/or works take longer The crossing of the River Eye has a number of constraints but most significantly the presence of overhead powerlines. In essence it is difficult to gain the necessary clearance beneath the powerlines. This lead to previous options presented to EA of either realigning the River Eye further south or moving the powerlines.	Significant delay to programme	Programme reviewed for criticality. Mitigation on programme where possible. Early meetings and continued liaison with NG will be undertaken. Ensure senior management buy-in to criticality; that has been secured at Project Board. Cost and timescales of worst case- from enagement with NG has been incorporated into the scheme costs and programmer submitted as part of the OBC. Early Assessment work will continue immediately after OBC submission in Dec 2017 to ensure no programme time lost. A feasibility study has been instructed prior to this becoming time critical (March 2018). Confirm requirements, and costs with NG based on study outcomes. NB. Based on more recent positive engagement with EA and Natural England, it is feasible that diversion may not be required, although this needs to be balanced against greater SSSI impacts; with further assesment work here also required for any potential Constent, Mitigation Planning and Assents.
7	Network Rail	Cancellation of programmed Network Rail possessions at the Railway Bridge	Cost of cancelled possession and remobilisation of works in future possession. Delay to programme	Advanced discussions with Network Rail outside parties' team and support from contractor with significant rail experience. Continued liaison and meetings to confirm requirements. Book contingency possessions
11	Weather	Severe weather up to 1 in 10 event affects the project e.g. High winds during beam lifts means cranes cannot work, unseasonably wet weather, snow etc.	Additional costs to complete works. Additional NR possessions required. Standing costs. Programme delay	Check weather reports, weather contingency plan, plan to protect the works. Adjust programme durations to allow for seasonal weather (already undertaken).

12	Design	Design changes the Works Information.	Delays and increased costs to the project	Proactive mitigation of the effects of the change, through detailed planning and supply chain discussions. VE solutions to offset the increases in project scope and impacts on LCC budget. Refer to VE/Opportunity schedule. Close collaboration Contractor/Aecom/LCC to mitigate any impact early
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QUANTIFIED RISK

9.8.12 TAG Unit A1.2 requires that all project related risks that may impact on the scheme costs should be identified and quantified in a Quantified Risk Assessment (QRA), in order to produce a risk-adjusted cost estimate.

9.8.13 The methodology used to quantify and monetise risk is described in the Financial Case.

MANAGEMENT OF RISK

9.8.14 At a project level, risks will be managed by the Project Board however the Commercial Case describes how the procurement strategy, will seek to place risk with the party best placed to manage or mitigate that risk, or manage the consequences should they transpire.

9.8.15 A strategic aim and objective of the MHA is the sharing of risk and that risk is appropriately proportioned through the careful management of relationships within, and throughout the project.

9.8.16 Early involvement with the contractor will include an assessment of the appropriate balance of risk. Design risk could be retained by the council or transferred to the contractor. Delivery and programme risk will substantially rest with the contractor, and detailed through the pain/gain mechanism embedded into the MHA framework contracts.

PROJECT TOLERANCES

9.8.17 The proposed tolerance thresholds for the MMDR scheme are set out in Table 9-10 below,

9.8.18 For clarity, the latest approved version of the overall project programme will form the baseline against which the tolerances set out below will be assessed, until such time as an updated or replacement programme is approved via exception reporting procedures.

Table 9-10 Project Risk Tolerances

Variation type	Tolerance
Budget	Deviations of more than 10% from Project Budgets (on a task basis) will be raised immediately with the Project Board except the main Target Cost contract where additionally deviations of more than 5% will be immediately reported to the Project Manager.
Timescale	- Slippage of 1 week with respect to the key milestones will be reported to the Project Manager to consider action - Slippage of 2 weeks or more will be reported to the SRO via the Project Manager.
Resource demand	If the requirement for additional staff resources cannot be negotiated and resolved by the Project Manager and the individual/team manager involved, the issues will be escalated to the Project Board.
Scope	All variations in project scope will be reported to the Project Board.
Benefits	All variation in estimated benefits will be reported to the Project Board.

9.9 BENEFIT REALISATION PLAN

- 9.9.1** The purpose of the Benefits Realisation Plan (BRP) for the MMDR scheme is to demonstrate how the objectives will be achieved by the proposed scheme. It enables the benefits that are expected to be derived from the scheme to be planned for, tracked and realised. It demonstrates whether the scheme objectives identified in the Strategic Case are achievable and measurable.
- 9.9.2** While evaluation may consider different/additional questions around the importance of the delivery model for project effectiveness (process evaluation) and the value for money of a project (economic evaluation), benefits management is related specifically to project delivery and ensuring that benefits are on-track to be delivered, managed and reporting their realisation.
- 9.9.3** The desired outputs are those tangible effects that are funded and produced directly as a result of the scheme. The desired outcomes are the final impacts brought about by the scheme in the short, medium and long term.
- 9.9.4** The schemes strategic objectives, together with the desired outputs and outcomes for the MMDR scheme are summarised in Table 9-11.

Table 9-11 Strategic Objectives, Outputs and Outcomes

Strategic Objectives	Desired outputs	Desired Outcomes
Reduce congestion and remove through traffic	A new road that reduces congestion on the local network, in particular key pinch points in and around Melton Mowbray town centre. Ensure a focus on HGV traffic and local rat-run routes, as well as on through traffic.	Reduced congestion and improved safety on the local town road network. Improved operation of key junctions and routes within Melton. A more integrated town and community. Improved vitality and viability of the town centre.
Support and accelerate economic and housing growth in key development areas	A scheme which helps to enable, accelerate and sustain housing growth in Melton and the wider Borough, and provide access to important development sites which would bring more opportunities for affordable housing for local residents and help to attract new businesses to the area through enhanced accessibility to and from Melton	Identified new housing development (including new affordable housing) coming forward Identified new employment development in Melton coming forward. Improved access to existing and new development areas. Improved employment opportunities and wider labour market catchment
Improve the vitality of the town centre to achieve its full potential- for all users, residents, businesses and visitors	A scheme that helps to improve the overall air quality and reduce noise impacts of traffic in the town centre as well as the existing roads; by diverting the strategic through traffic to the new route thereby reducing congestion and emissions caused by traffic in the town.	Improved health and well-being. Increases in walking/cycling and public transport usage Improved local air quality and noise levels on existing routes in the town centre.

- 9.9.5 The Benefits Realisation Plan will be linked to the monitoring and Evaluation Plan described below and will be owned by the project manager, **Andy Jackson** who will use it to guide decision making about the scheme and to demonstrate completed delivery.
- 9.9.6 The objectives and desired outcomes of the scheme are the starting point for the Benefits Realisation Plan. As the scheme is developed the mechanism for delivering these is designed in and reviewed by the Project Manager and the Project Board on a number of occasions to ensure it still fits with the objectives.
- 9.9.7 The method for determining the success of the MMDR scheme will be by monitoring the delivery of the outputs to ensure they are delivered in such a way that meets the objectives and by finding a suitable measure for the direct and in-direct outcomes.
- 9.9.8 In a number of instances the measurement of benefits is time critical, particularly where a scheme supports housing development economic development. In relation to the MMDR this is a significant element of the schemes objective and justification, as such these desired benefits will be realised over a significant period of time after project completion.
- 9.9.9 This in turn helps drive the projects monitoring and evaluation strategy, and how often data needs to be collected (with much of the economic data proposed to be collected on an annual basis, in addition to typical transport monitoring before, 1 year after and 5 year after scheme opening).
- 9.9.10 It is also fundamental to scheme delivery that the risks around achieving the objectives are understood and mitigated where possible; the Benefits Realisation Plan therefore provides an indication of the key risks to achieving each objective.
- 9.9.11 The project specific metrics considered to have a measurable change as a result of the outcomes is shown in Table 9-12, alongside the strategic outcomes / metrics:

Table 9-12 Strategic Outcomes / Metrics versus project metrics

Outcomes	Strategic Metrics	Project Specific Metrics
Identified housing development in Melton Mowbray coming forward	- Housing unit starts; and - Housing units completed	N/A
Identified employment development in Melton Mowbray coming forward	- Jobs connected to the intervention; and - Commercial / employment floor space constructed	N/A
Reduced congestion and improved safety on the local road network	N/A	- Average daily traffic by peak / non peak periods; - Average AM and PM peak journey times on key routes; and - Day to day travel time variability; - Accident and casualty rates.
Improved access to town centre, existing and proposed development sites	N/A	Average daily traffic by peak / non peak periods

Improved public transport, walking and cycling facilities in Melton	N/A	- Annual average daily and peak hour passenger data; - Cycle / pedestrian counts on new / existing routes.
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9.9.12 In summary, Table 9-13 summarises the Benefits Realisation Plan as follows.

Table 9-13: Benefits Realisation Plan

Outcomes	Strategic Metrics	Project Specific Metrics	Realisation	Risks to achieving Outcome
Identified housing development in Melton Mowbray coming forward	- Housing unit starts; and - Housing units completed	N/A	On completion of scheme, on a geographical basis as the scheme proceeds Measurement from completion of the scheme – using quantitative indicators	General economic slow down
Identified employment development in Melton Mowbray coming forward	- Jobs connected to the intervention; and - Commercial / employment floor space constructed	N/A		General economic slow down
Reduced congestion and improved safety on the local road network	N/A	- Average daily traffic by peak / non peak periods; - Average AM and PM peak journey times on key routes; and - Day to day travel time variability; - Accident and casualty rates.		Forecast numbers may not use the MMDR and continued use of existing routes
Improved access to town centre, existing and proposed development sites	N/A	Average daily traffic by peak / non peak periods		Forecast numbers may not use the MMDR and continued use of existing routes
Improved public transport, walking and cycling facilities in Melton	N/A	- Annual average daily and peak hour passenger data; - Cycle / pedestrian counts on new / existing routes.		Forecast numbers may not use the MMDR and continued use of existing routes

9.10 MONITORING AND EVALUATION

MONITORING AND EVALUATION PLAN

- 9.10.1 This section outlines the approach that is to be taken in the preparation of a Monitoring and Evaluation Plan. The full plan will form part of the Full Business Case.
- 9.10.2 Whilst the Monitoring and Evaluation plan for the scheme has not been developed fully yet, it will follow the DfT guidelines set out in the Monitoring and Evaluation Framework for Local Authority Major Schemes (Sept 2012).
- 9.10.3 Leicestershire County Council has successfully procured and delivered schemes of various sizes and complexity for which they have prepared the detailed Monitoring and Evaluation Plan, based on the DfT guidelines, submitted with the Full Business Case. Some of the schemes similar to the MMDR include Loughborough Inner Relief Road & Town Centre Improvements, Earl Shilton Bypass and M1 Bridge to Growth. Similar principles would be followed to develop the Monitoring and Evaluation Plan for the MMDR.
- 9.10.4 Importantly, LCC is already routinely collecting comprehensive data in and around Melton Mowbray, and that forms an important starting point for the Monitoring & Evaluation Plan.
- 9.10.5 Monitoring involves checking progress against the targets set for the scheme. Evidence of expenditure and the delivery of outputs is formally reported.
- 9.10.6 Evaluation involves assessing the effectiveness and efficiency of the scheme both during and after implementation. It seeks to measure the success of the scheme in delivering the planned outcomes. It assesses whether, and how, the anticipated benefits have been achieved, or if any benefits have not been achieved, the reasons why.
- 9.10.7 Evaluation and monitoring of the desired project outcomes takes into consideration both the strategic objectives shown within Table 9-11 and the Regional, Operational and Scheme specific objectives shown within Table 9.14 which lay under these

Table 9-14 Regional Operational and Scheme Specific Objectives

Sub-Regional Objectives	Desired outputs	Desired Outcomes
To improve access to the areas of potential development enabling full growth potential	A scheme that directly facilitates and accelerates the delivery of over 4,500 dwellings and 6,000 jobs located to the North and South Melton Mowbray	Increase in local economic growth Better employment opportunities to residents of the town and the county
Opportunity to improve active travel in Melton Mowbray	The distributor road that is designed to include new routes for pedestrians and cyclists. A scheme that removes traffic from the town centre it would make walking and cycling in Melton much more attractive and allow buses to run more efficiently and with fewer delays.	Reduced congestion in and around Melton Mowbray Improved sustainable transport routes Better public transport
Improvements to noise and air quality	As the new road that allows large HGVs to travel around the town thereby reducing the amount of noise and vibration caused by these vehicles in the residential areas.	Reduction in noise and vibration levels at key sites within Melton Mowbray
Improved bus access to bus services	A scheme that reduces congestion and improves bus journey times and	Improved bus journey times and journey time reliability.

	reliability of the PT services.	Increased bus patronage with Melton Mowbray
To reduce traffic in historic areas	A scheme that provide alternative routes to divert trips from historical town centre	Protection and enhancement of historic environment
Improve highway safety for all road users within the Study Area.	A scheme which reduces the volume of traffic reducing the opportunity for vehicular conflict	Reduction in the number of road accident casualties.
Reducing travel time through Melton Mowbray	The new road that diverts traffic passing through Melton town centre onto other destinations around Melton; this also helps to reduce the delays and congestion experienced in the town centre.	Less traffic and reduced journey times on town centre roads. A more attractive town centre, and a more efficient road network
Operational Objectives	Desired outputs	Desired Outcomes
To provide improved access for vehicles, cyclists and pedestrians.	The reduction of through trips and rerouting of strategic routes through Melton improving the environment for all commuters and the community as a whole.	Improved access to and through Melton Mowbray for all modes of transport.
To reduce overall journey times and vehicle kilometres in Melton Mowbray	A removal of trips from Melton Mowbray on to the new Distributor Road.	Reduced vehicle kilometres and hours within Melton Mowbray.
To minimise environmental impact of through traffic in Melton	Reduced trips through the town reducing the environmental impacts.	Reduced emissions and noise.
Scheme Specific Objectives	Desired outputs	Desired Outcomes
To improve access to Melton Mowbray town centre	A scheme that provides improved access to the town centre with reduced congestion and journey time uncertainties, thereby enabling it to operate at the full potential.	Improved accessibility to jobs and retail centre Reduced congestion and journey time unreliability in the peaks. Improvement in the noise and air quality for residents and businesses in Melton Mowbray
To reduce congestion on the local network, in particular key pinch points in and around Melton Mowbray town centre	A scheme that diverts the through traffic away from the local road network, in particular key pinch point in and around the Melton Mowbray town centre onto more suitable roads thereby reduces the congestion and hazards caused by the through traffic from the Melton Mowbray town centre.	Reduced congestion and delays in traffic on the local road network Improved the vitality and viability of the town centre Improvement in the noise and air quality for residents and businesses in Melton Mowbray
To reduce impact on rat run routes on the local road network	A scheme that improves North South connectivity and provides a more attractive route for the through traffic thereby reducing the rat running traffic the local road network	Lesser traffic on the local road network Better noise and air quality and lesser risk of accidents for the local residents and businesses.
To remove HGV and LGV through traffic in Melton	A scheme that diverts through HGV and LGV traffic away from the town centre	Reduction of the proportion of HGV and LGV traffic from the town centre and local

Mowbray town centre	and surrounding local road network that currently experiences a high proportion of the HGV traffic. A new link road that provides an alternative route for delivery and commercial vehicles	road network. Improved efficiency, air quality and safety on the local road network Improvement in journey time and reduced delays for the strategic through traffic and goods vehicles Reduction in environmental emissions due to reduction in stop start movements of the goods vehicles.
To promote a quality road space in the town centre suitable for non-transport uses and attractive to inward investment	A scheme that helps in reducing the traffic and heavy goods vehicles from the town centre there by freeing up the road capacity for the provision for the non-transport users.	A more attractive town centre and a more efficient road network.
To increase levels of public transport, walking and cycling use within the Study Area	A scheme that makes local road network safer and congestion free thereby making it attractive for walking and cycling and for PT users by improving the journey time reliability	Change in travel behaviour of the local residents and increase in the percentage of the users of active modes and Public Transport Health benefit to the local community
To improve highway safety for all road users within the Study Area	A scheme which reduces traffic volumes and proportion of heavy vehicles from the local road network (and hence the risk of collisions) on routes with high accident rates. A scheme which has been designed to minimise the risk of road accidents.	Reduction in the number of road accident casualties. Safer road network for all users. Fewer deaths and injuries due to road accidents.

9.10.8 Department for Transport guidance sets out three levels of monitoring and evaluation:

- Standard monitoring
- Enhanced monitoring
- Fuller evaluation

9.10.9 The standard monitoring is required for all schemes, and schemes costing over £50 million are expected to be subject to “enhanced” monitoring. Only selected schemes, identified by the DfT are expected to conduct ‘fuller’ evaluation.

9.10.10 As the Melton Mowbray Distributor Road scheme will cost more than £50 million, the DfT’s enhanced monitoring guidance will be followed in addition to the standard measures.

9.10.11 The measures that fall into the ‘enhanced monitoring’ category are summarised in Table 9-15.

Table 9-15 Enhanced Monitoring Measures

Item	Stage	Collection Timing	Rationale	Information Required
Noise	Impact	Pre or during delivery / post opening (up to 5 years)	Accountability / Knowledge	Effect of the scheme on noise levels at important receptor locations and analysis of the difference between outturn results and scheme forecasts
Local Air Quality	Impact	Pre or during delivery / post opening (up to 5 years)	Accountability / Knowledge	Effect of the scheme on local air quality levels at important receptor locations and analysis of the difference between outturn results and scheme

				forecasts
Accidents	Impact	Pre or during delivery / post opening (up to 5 years)	Accountability / Knowledge	Comparison of local accident rates before and after the completion of the MMDR.
Development	Impact	Post scheme completion	Delivery	Effect of the scheme in relation to the proposed growth plans set out within LCC development plan

9.10.12 The scheme will be subject to an outcome evaluation. This will compare the existing situation (before construction of the Distributor Road) against the situation with the scheme in place. Any observed changes in the measurements outlined below are assumed to be attributable to the scheme.

DATA REQUIREMENTS

9.10.13 The proposed measurements, data required and frequency of data collection are set out in Table 9-16. These measurements will provide an objective view in relation to the outcomes of the scheme.

Table 9-16 Data Requirements (outline)

Metric	Frequency	Data
Inputs		
Expenditure	Post opening	Financial monitoring of project
Funding Breakdown	Post opening	Financial monitoring of project
In kind resource provided	During Delivery	Monitoring of resources delivering the project (use of project diary)
Outputs		
Delivered scheme	Post Opening	Full description of implemented scheme outputs including design changes post funding approval with reasons for such changes, post scheme as built drawings of works completed
Outcomes		
Air quality	Pre and post construction, Annual up to 5 years post opening	Data from Melton Borough Councils review and assessment of Local Air Quality (statutory duty)
Average daily traffic and by peak / non-peak periods	Pre and post construction, Years 1 and 5 post opening	Annual ATCs and turning counts, collected at junctions where interventions are and wider ATCs across the network
Average AM and PM peak journey time on key routes (journey time measurement)	Pre and post construction, Years 1 and 5 post opening	Journey time surveys and DfT Congestions Statistics on LA Roads
Cycling and walking usage	Pre and post construction, Years 1 and 5 post opening	Motor traffic, cyclist and pedestrian counts on the new bridge.
Accident and casualty rates	Pre and post construction, Years 1 and 5 post opening	Annual monitoring of collisions (STATS 19)
Average annual CO2 emissions	Pre and post construction, Years	DfT's Local Authority Carbon Toolkit

	1 and 5 post opening	
Housing Development	Post construction, 5 yearly periods over 20 years	Data from Melton Borough Councils Annual Monitoring & Development Department – number of new units
Commercial development	Post construction, 5 yearly periods over 20 years	Data from Melton Borough Councils Development Department – GFA of new employment sites

9.10.14 The Monitoring and Evaluation Plan, including associated funding requirements for evaluation will be developed further and included with the Full Business Case.

DATA SOURCES

9.10.15 The monitoring and evaluation for the Melton Mowbray Distributor Road project will be undertaken by Leicestershire County Council, and supported by MBC.

9.10.16 Melton Borough Council (MBC) will in particular, be responsible for the provision of housing deliver, jobs and employment take up rates of new development areas; achieved through quarterly and annual monitoring already undertaken.

9.10.17 The following additional surveys will be undertaken by the LCC team:

- Journey times;
- Automatic Traffic Counts;
- O-D data in relation to traffic movements (in particular through traffic); and,
- Turning counts.

9.10.18 Manual traffic count data will be collected by the Council on an annual basis including accidents (STATS19), financial and planning data (from MBC), retail sales and Melton footfall figures.

9.10.19 The survey costs will be calculated at Full Business Case stage and will be funded through the County Council's monitoring budget. The monitoring and evaluation plan will be included within the financial case and are also considered within the scheme costs.

TIMESCALE FOR EVALUATION

- 9.10.20 Prior to starting on site, any gaps in the required baseline evidence will be collected. A baseline evidence report will be completed prior to construction of the Distributor Road. Quarterly reports on progress against programme, costs and risks will be provided to the Project Board during construction of the scheme, and an annual monitoring summary will be produced. Principles of monitoring and evaluation will be in line with Highway England Post Opening Project Evaluation (POPE) requirements.
- 9.10.21 Data will be collected one year and five years after opening and will be compared against the baseline. Evaluation reports at these stages, containing an analysis of all scheme evaluations carried out to date, highlighting any interesting and emerging trends. It is, however, anticipated that wider economic benefits may take longer time frames to manifest. The wider economic benefits are also linked to growth in employment and housing which are impacted by externalities in the wider economy, this would invariably have a bearing on the timing of surveys and subsequent, however, monitoring against delivery of the local plan on an annual basis will help evaluate the success of the delivery in relation to the more strategic goals for the project.

SETTING TARGETS

- 9.10.22 The Council recognises the importance of setting specific indicators and targets. These will be set at the Full Business Case stage and included in the Plan. It may be possible to involve stakeholders to take ownership of some parts of the monitoring and evaluation.

SUMMARY OF ANALYSIS

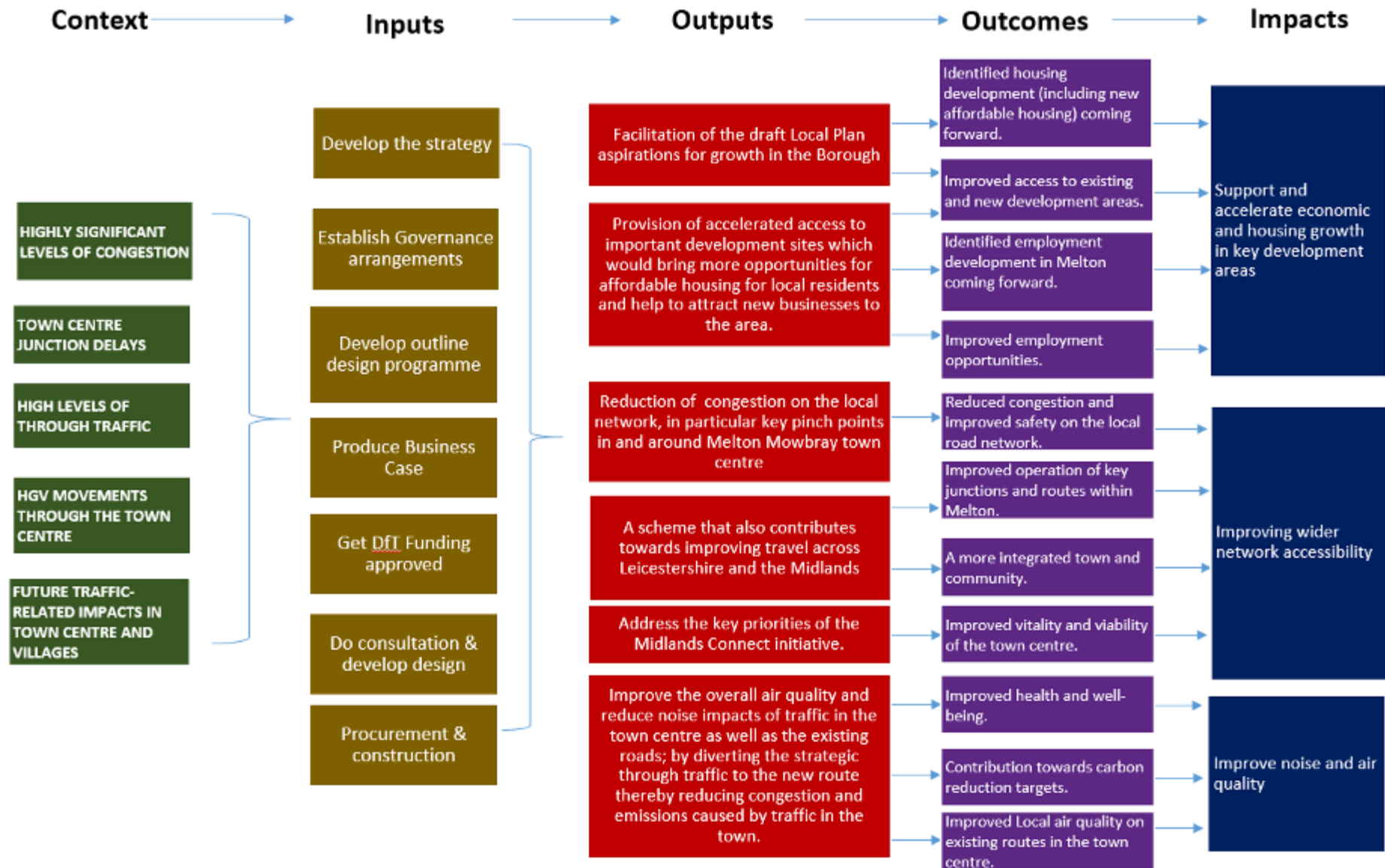
- 9.10.23 The monitoring and evaluation will be used to answer the following key questions:
- Have the anticipated outcomes and impacts been achieved?
 - To what extent are the observed changes additional to what would have happened in the absence of the intervention?
 - Were there any unanticipated impacts / displacement effects?
 - Which elements of the scheme were particularly influential in achieving the overall goals?
 - What lessons can be learnt for future scheme / policy development?
 - What is the contribution of the policy to the LEPs strategic goals?
 - To what extent did the anticipated costs and benefits match the actual outcome?
 - Has the scheme been successful? If not, why not?
- 9.10.24 Monitoring of the scheme will:
- Measure the level of traffic congestion on the existing network;
 - Measure the level of traffic congestion on the improved network; and
 - Measure the levels of accidents on the existing and improved network.

- 9.10.25 The initial one year impact assessment will be used to understand the impact mainly on journey times and travel patterns. There may be some evidence at this stage of the scheme impact in terms of further planning approvals based on the scheme's delivery and approval.
- 9.10.26 The 5 year assessment will look at longer term benefits including accidents, travel patterns and jobs / additional investment.

LINKING INDICATORS TO OUTCOMES

- 9.10.27 It is important to demonstrate how the proposed indicators relate to the desired outcomes.
- 9.10.28 The Causal Chain Diagram presented Figure 9-5 is a Logic Map which shows the expected relationship between the outputs of the scheme, the achievement of objectives, and the delivery of the strategic outcomes, including the delivery of Local Plan housing / jobs growth.
- 9.10.29 In general it is easier to measure achievement of the objectives (e.g. changes in traffic volume or journey time) than the strategic outcomes (e.g. economic growth) because the latter often take time to achieve and can be influenced by factors other than the new distributor road.
- 9.10.30 In most cases, achievement of the specific objectives will be measured directly by means of:
- Traffic counts and O-D data in relation to through traffic;
 - Journey time surveys;
 - Accident statistics; and
 - Review of housing completions and employment development.
- 9.10.31 Greenhouse gas emissions and improved reliability are difficult to measure directly but are predictable consequences of reduced traffic, congestion and delay and the availability of shorter routes.
- 9.10.32 Strategic outcomes are more challenging to measure directly, but can be seen to be logical consequences of achieving the specific objectives. However longer term monitoring of local development, business growth and relocations, employment, air quality and economic growth/ development will continue to take place, and will contribute to an understanding of the success of the scheme. Anecdotal information, especially in relation to perceptions of congestion and resilience also has a supporting role in evidencing the success of the scheme.
- 9.10.33 A full Monitoring and Evaluation plan will be developed and updated in the Full Business Case. It will consider attribution of outcomes to the intervention and whether a clear link between the delivery of the scheme and the wider economic benefits can be achieved.
- 9.10.34 As such, Leicestershire County Council's partners will work with the LEP and DfT to consider any additional longer term evaluation work to undertake case studies or meta-analysis in order to further understand the economic benefits arising from the Melton Mowbray Distributor Road project, subject to availability of resources. As stated in Figure 9-4 Monitoring and Evaluation is considered a separate work stream and plan will be developed and controlled by Alex Taylor.

Figure 9-5 Logic Map for Melton Mowbray Distributor Road



9.11 CONCLUSIONS

- 9.11.1 The Management Case of the Melton Mowbray Distributor Road (MMDR) demonstrates that the scheme is capable of being delivered successfully in line with the recognised best practice and existing guidance. It sets out the processes that are being put in place to ensure that the project is effectively delivered.
- 9.11.2 Leicestershire County Council has successfully procured and delivered a number of projects of varying sizes and complexity and has worked to successfully deliver these projects with the MHA and a range of suppliers.
- 9.11.3 The knowledge gained and the strategic procedures developed/adopted during the delivery of these schemes will be used for the delivery of the MMDR.
- 9.11.4 Opportunities will be taken, wherever possible, to improve delivery processes by acting upon the lessons learnt from recent schemes; and that has already included ECI involvement for the MMDR and a thorough and early understanding of key risks, and future actions to eliminate/ mitigate consequential impacts of these risk on budgets, programme, or both.
- 9.11.5 The Melton Mowbray Distributor Road is a “stand-alone” scheme, which can be delivered independently of any other of other highway infrastructure schemes or development. However it does form part of the wider Melton Mowbray Transport Strategy which will follow delivery of the MMDR with schemes that support access to the town centre etc. The MMDR will be delivered first and the other schemes would follow
- 9.11.6 From the legislative perspective, the MMDR is dependent on the following:
- Adoption of the Melton Local Plan (fundamentally as submitted);
 - Planning permission being granted; and
 - Completion of other statutory duties such as Compulsory Purchase Orders where necessary.
- 9.11.7 To ensure successful the successful delivery of major schemes LCC has established a governance structure which will be applicable to the MMDR .The Project Governance Structure consists of a three tier structure which includes the MMTS Programme Board, the MMDR Project Board and Delivery Teams responsible for scheme delivery.
- 9.11.8 Dedicated SRO, Project Manager, Senior User and Senior Supplier Roles, alongside Internal Project Audit and a commitment to further Independent gateway reviews are also presented, with confirmed resource availability and suitable levels of experience established for each role.
- 9.11.9 The scheme delivery team will take a collaborative approach led by the Local Highway Authority (Leicestershire County Council) to maximise expertise, and follow on from the recent successful delivery of the M1 Bridge to Growth and the Lubbethorpe Strategic Employment Site.
- 9.11.10 A robust Communications Strategy has been developed to define and set out the principles, objectives and approach for the engagement with stakeholders and consultation throughout the delivery process.
- 9.11.11 LCC’s risk management is based on the Association of Local Authority Risk Managers (ALARM) specific to public service organisations. Risk management has been developed as a continual process involving the identification and assessment of risks, their prioritisation, and the implementation of actions to mitigate the likelihood of their occurrence and impact. The project boards approach to risk management will be proportionate to the decision being made or the impact of the risk, to enable the Council to manage risks in a consistent manner, at all levels.
- 9.11.12 The Outline Benefits Realisation Plan prepared for the MMDR allows benefits and dis-benefits that are expected to derive from the project to be planned, tracked, managed, and realised. It will help

demonstrate whether the scheme objectives identified in the Strategic Case are being achieved in terms of the desired “measures for success”.

- 9.11.13 The Monitoring and Evaluation Plan for the scheme will be developed as a part of the Full Business Case. When prepared, this will follow the DfT guidelines set out in the Monitoring and Evaluation Framework for Local Authority Major Schemes (Sept 2012).
- 9.11.14 In summary, LCC has a strong track record of successfully procuring and delivering a number of projects of varied size and complexity and have the appropriate systems in place and resources available to successfully deliver the Melton Mowbray Distributor Road.