Melton Borough Council, Charnwood Borough Council

RESTORING YOUR RAILWAYS MELTON TO NOTTINGHAM

Strategic Outline Business Case

AUGUST 2021

CONFIDENTIAL

Melton Borough Council, Charnwood Borough Council

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TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70081106

DATE: AUGUST 2021

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QUALITY CONTROL

Issue/revision	First issue	Second issue	Third Issue
Remarks	Draft Issue	Final Issue	Commercially sensitive information removed
Date	July 2021	August 2021	November 2021
Prepared by	LA, SH	LA, SH, MT, SJ	LG
Checked by	JC	JC	JC
Authorised by	CW	CW	JC
Project number	70081106		

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EXECUTIVE SUMMARY

Poor connectivity between Melton Mowbray and Nottingham has the potential to constrain the necessary economic growth of Melton, In the neighbouring borough of Charnwood traffic congestion on the A6, which runs parallel to the Midland Mainline presents a constraint to future growth.

The East Midlands has the lowest transport spend per head out of all the regions in the United Kingdom. Better public transport connectivity would enable the sustainable development of sites allocated for housing in the Melton and Charnwood local plans (a c.40% and 26% increase in housing stock respectively). Improved connectivity would also increase access to workers in a number of growth sectors including food and drink in Melton, and the Loughborough Enterprise Zone. Increasing rail services between Melton and Nottingham via the Syston chord will best meet the strategic need of improved connectivity and provide benefits to both Melton and Charnwood Boroughs. At this stage of development, it appears that introducing this service could be feasible and deliverable.

The preferred option is a service between Nottingham, Loughborough, Melton Mowbray and through to Peterborough. By extending the service beyond Melton Mowbray to Peterborough no additional infrastructure is required at Melton to enable terminating trains to reverse and enables a more efficient use of train capacity on this important east-west rail freight route.

A fourth platform on the Up Slow line at Loughborough would be required to enable trains to stop here, and it has been assumed that the known strategic capacity constraints at Nottingham station would be progressed by others, as detailed in the Integrated Rail Plan developed by Midlands Connect. If trains terminated at Melton, a new platform signal would also be required to enable the necessary movements. The capital costs of the interventions for the different options ranged between £6.4m and £9.6m at Q2 2021 prices.

Direct services between Melton Mowbray and Nottingham via the Syston chord could deliver a Benefit: Cost Ratio of up to 0.8:1, assuming strong local housing growth and strong post-COVID recovery. To enhance the business case further the promoters will work with local stakeholders to further understand options to increase potential demand, and to identify further opportunities to reduce capital and operating costs.

1 STRATEGIC CASE

1.1 INTRODUCTION

This Strategic Outline Business Case (SOBC) has been jointly funded by Melton Borough Council and Charnwood Borough Council in support of RYR121 *Melton to Nottingham Connectivity*. A number of longlisted modes and sub-options have been considered, with a new direct connection between Nottingham and Peterborough, serving Melton, Loughborough and the Syston North Curve best meeting the strategic need to deliver enhanced public transport connectivity between these locations.

Charnwood Borough's geographical location; bordering both Melton Borough and the Rushcliffe district of Nottinghamshire County Council means it is well placed to benefit socio-economically and environmentally from enhanced connectivity between the two areas.

1.2 BACKGROUND

MELTON AND CHARNWOOD BOROUGHS

Located in north east Leicestershire, Melton Borough is a predominantly rural area, spanning 480 km^2. Melton Borough sits within the Midlands Connect area and within the Leicester and Leicestershire Local Enterprise Partnership (LLEP) area.

The nearest city to the Borough is Leicester to the south west, to which there are strong road and rail connections. The second nearest city is Nottingham, located to the north west of Melton Borough. In comparison to Leicester, public transport connections to Nottingham are significantly weaker.

Melton Borough has a population of 50,376 (Census 2011) and Melton Mowbray is the principal town. Around half of the borough's 21,490 households (2011) are located in Melton Mowbray and it serves as a central point for employment, retail, leisure and services. Charnwood Borough has a population of 166,100 (Census 2011) and Loughborough is the principal town being home to just under a third of the Borough's population.

The Borough of Charnwood is situated in the north of the county, adjoining the city of Leicester to the south. The Borough is centrally located between the three cities of Leicester, Nottingham and Derby and is connected to the M1 motorway, the Midland Mainline railway and East Midlands Airport.

The city of Leicester is the key destination for work and leisure for residents in the south Charnwood whilst in the north of the Borough the university and market town of Loughborough provides the economic, cultural and social focus. Loughborough is the main town in Charnwood and is the largest settlement in Leicestershire outside of Leicester City. To the west of Loughborough is the town of Shepshed and to the south are a string of larger villages along the Soar Valley and A6 corridor. Analysis undertaken in support of the OAR identified that the primary movements to Loughborough for work originate in this area, supporting the case for improved rail services on the corridor to reduce congestion on the parallel A6.

From Melton, Nottingham is the second nearest city, however public transport connectivity is poor. There is no regular direct passenger train connection to Nottingham or other regional destinations. The current situation in regard to rail services is set out in **Table 1-1**, below.

Destination	Journey Times, Rail	Car AM	Car IP	Car PM	Distance (Miles)
Leicester	17 minutes on train/at station 60 minute frequency	28-55	30-55	28-55	16.9
Loughborough	55 minutes on train/at station 60 minute frequency	26-40	26-40	26-35	15.3
Nottingham	76-78 minutes on train/at station 60 minute frequency	35-60	35-55	30-50	20.1

Table 1-1 - Rail journey times between Melton and key locations in the study area

As can be observed, the rail journey times are slower than car journey times to most destinations, due to a combination of low line speeds off of the Midland Mainline, hourly services through Melton Mowbray and the need to interchange to reach destinations beyond Leicester or Peterborough.

In regard to bus services, the following issues were identified regarding bus operations in Melton

- Low service frequency
- Slow journey time compared to the private car
- Lack of services past 18:00, making the services less viable for flexible working or afternoon/evening leisure trips.
- Particularly poor connection with Nottingham by bus.

Due to this lack of public transport options by rail or bus, the private car is the most feasible option for commuters and other users travelling between Melton and Nottingham, as well as other regional destinations. By providing a more frequent rail service to several local towns, as well as a direct connection to Nottingham, the proposed scheme will provide a step-change in public transport access.

Private vehicles used by commuters and other road users add to the already congested road network, with Melton Mowbray suffering from serious road congestion during peak periods. At present, roads in Melton Mowbray are at capacity, resulting in increased travel time and cost for the public and businesses, together with rising pollution levels. The forthcoming Melton Mowbray Distributor Road (MMDR), for which planning permission has been granted, will serve to alleviate some of this congestion, particularly around the town centre. However, this scheme doesn't reduce traffic in the wider region (i.e. Charnwood Borough) and, based on experience with similar road projects, is liable to produce diminishing benefits in the long term due to induced demand replacing those trips diverted onto the MMDR. Additionally, whilst the MMDR will reduce traffic in Melton Town

Centre, data analysed in support of the OAR identified rising numbers of Pedestrian Injury Collisions (PICs) on the key corridors approaching the town, particularly on the A46 and A606, where traffic will *not* be reduced by the MMDR.

In addition to the challenges presented by increasing road traffic, the borough also has an ageing population, resulting in a widening gap between the skills available in the borough and the demand for labour. If not addressed, poor connectivity can become an obstacle to economic growth and productivity levels and can impact on investment decisions in terms of business location.

As such, improved public transport connectivity would be the best method to support the ambitious growth strategy set out in the Melton Local Plan. The proposed rail service would support the sustainable delivery of this growth, by providing residents with greater accessibility to both Nottingham and Loughborough for employment, education, leisure and other opportunities, particularly for those disinclined or unable to use cars. Conversely, the scheme would encourage investment in Melton by making the town's vibrant attractions and food offerings more accessible to those in the larger regional centres. Again, this is particularly beneficial to those without car access, who are presently more likely to live in the denser developments where better public transport is available, a situation reflected in the demographic data presented in the supporting OAR document.

EXISTING PROPOSALS

The preceding sections of this report set out the current situation in Melton and Charnwood Boroughs. This section provides a brief overview of Rail, Highway and Bus proposals which are forthcoming for delivery in the area.

- Increased capacity on trains between Birmingham and Stanstead via Leicester and Melton Mowbray).
- Electrification of the Midland Mainline south of Market Harborough and Corby, with possible extension to Nottingham and Sheffield. This will enable the operation of faster, less polluting trains and/or improved service reliability.
- Construction of HS2's Eastern Leg, releasing capacity on the Midland Mainline for more local services such as those serving north Leicestershire.
- Delivery of the Melton Mowbray Distributor Road, reducing congestion in the town centre and increasing private vehicle access to the town's outer industrial estates. The reduction in town centre congestion may, in turn, benefit bus service reliability and journey times.

These schemes will go some way to increasing the competitiveness of public transport in Melton and Charnwood, by reducing journey times and potentially allowing for new services on the rail network. However, none of the proposals explicitly provide new links such as that considered in this SOBC, which will provide a direct connection from Melton to Charnwood, Loughborough and Nottingham, the latter for the first time since the closure of the direct line (now Old Dalby Test Track) in 1968.

BUSINESS STRATEGY

Based on a review of relevant policies and strategies there is clear evidence that enhanced public transport connectivity between Melton Mowbray and Nottingham presents a strong strategic case as well as potential wider benefits for Charnwood and its residents. The aims of the scheme are closely aligned to the objectives from several strategies including the Melton Local Plan, Charnwood draft

Local Plan, Leicester & Leicestershire Strategic Economic Plan, Leicester & Leicestershire Strategic Growth Plan and Leicestershire Local Transport Plan.

Using the Leicester and Leicestershire Integrated Transport Model (LLITM), a direct rail connection via Syston was assessed alongside highway and bus priority enhancements, and an extension to the Nottingham Express Transit (NET) tram system. Noting that the strategic requirement was to support housing growth and employment the comparative benefits of these options were compared using a Wider Impacts in Transport Appraisal (WITA). This established that the greatest benefits would be achieved through a direct rail connection via Syston, and that many of these benefits were derived as the route passed through Charnwood, increasing the number of transport users who would benefit.

The highways interventions and bus priority measures would have no impact on transport users in Charnwood, as it would not be logical to take a bus via Loughborough due to the extended journey times when compared to a direct bus between Melton and Nottingham. A NET extension had an increased journey time, poor connections and an increased fare.

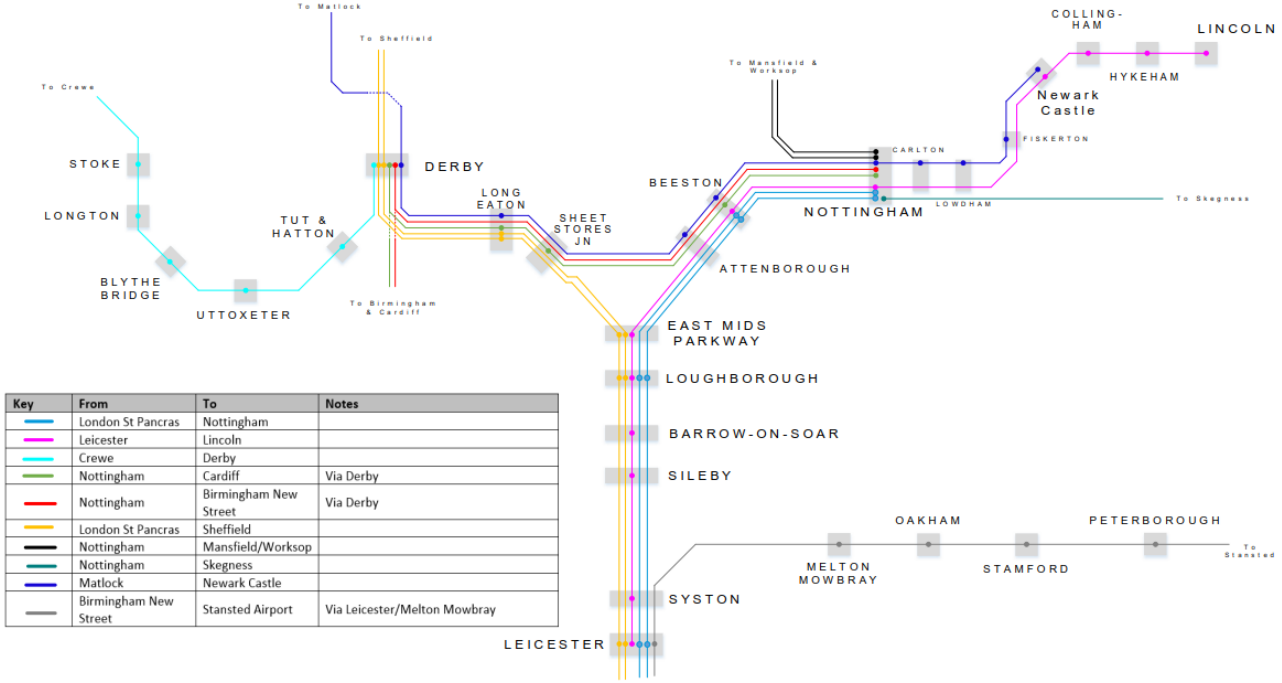
For Charnwood, enhanced connectivity will support the sustainable development of housing in line with the local plan, enabling access to high quality, skilled jobs across a wider area and improved access to education. For businesses located in Charnwood, including the Loughborough Science and Enterprise Park, increased labour mobility can assist recruitment of the right workers, attracting further inwards investment. Public transport connectivity has the potential to relieve pressure on the road network across the study area, enabling modal shift as residents would have access to a more sustainable transport option.

1.3 PROBLEM IDENTIFICATION

An overview of the current situation has identified constraints and opportunities of the transport network in the Borough of Melton. Alongside this, future housing and employment growth has been analysed, together with current employment flows.

Analysis of the rail network indicates good connectivity from Melton Mowbray to Leicester with an hourly service. However, connections to other nearby towns and cities have low service frequency and are slow relative to distance, with long interchange times. The current baseline train service specification is shown in Figure 1-1. Each line represents a service operating in a reference hour:

BASELINE



Key	From	To	Notes
	London St Pancras	Nottingham	
	Leicester	Lincoln	
	Crewe	Derby	
	Nottingham	Cardiff	Via Derby
	Nottingham	Birmingham New Street	Via Derby
	London St Pancras	Sheffield	
	Nottingham	Mansfield/Worksop	
	Nottingham	Skegness	
	Matlock	Newark Castle	
	Birmingham New Street	Stansted Airport	Via Leicester/Melton Mowbray

Figure 1-1 - Baseline Train Service Specification within the study area

An assessment of the road network highlighted high levels of congestion at numerous points in Melton Mowbray town centre and along key approach routes to the town centre. On a delay per mile basis the town has one of the highest levels of delay of any area in Leicestershire, including the City of Leicester. Despite this, road journey times are still significantly quicker than rail to all nearby destinations apart from Leicester. For this reason, unless a direct rail service via the Syston Chord is implemented to enhance connectivity, private car would consistently remain the more attractive choice. It can already be seen that the existing poor rail service, coupled with future housing and employment growth is likely to have a detrimental effect on congestion, journey time and environmental factors such as pollution.

For someone wishing to access employment opportunities in Melton Mowbray from Nottingham via bus there is a limited service frequency with no departures to Melton before 09:00. The earliest possible start time at work would be circa 10:30, while the latest departure returning to Nottingham is 16:45 which would not allow for a 7.5 hour working day; further influencing commuters to use road options. Poor bus services coupled with infrequent services (once every two hours) and poor journey time reliability will further affect the congestion, journey time and environmental impact of surrounding areas between Melton and Nottingham.

To deliver a more reliable bus journey time, 14 interventions would be required; with nine junctions being signalled to provide bus priority, the construction of a new bridge over the Old Dalby Test Track, the construction of a new roundabout at the A52 (Wheatcroft Island, Edwalton), and the

remaining interventions requiring land take at junctions, and co-ordination of delivery across a number of local authorities in Leicestershire and Nottinghamshire. While the cost, deliverability and impacts on existing traffic have not been assessed in detail, the total bus journey time saving would only be 3.9 minutes. In overall terms, the WITA identified that the disbenefits to existing road users would outweigh the benefits obtained by bus users. In addition to these difficulties the deregulated bus market also provides few mechanisms to ensure the delivery of an enhanced bus service following the introduction of the priority measures. An enhanced bus service would not benefit Charnwood at all, and for Melton there would be significantly less certainty and permanence for bus-based options which would not meet the identified long-term strategic need.

1.4 IMPACT OF NO CHANGE

The Melton Local Plan outlines significant housing development (a c.40% increase) with 6,125 new houses proposed before 2036, together with employment growth. Enhanced public transport connectivity would support the delivery of new housing, increasing the appeal of the Borough to young families and first-time buyers who could access employment in Nottingham. This would support the delivery of the Council's target to grow the Borough's population but only with enhanced public transport. Furthermore, for businesses in the Borough, additional connectivity would increase their access to a wider labour pool, which is critical for economic productivity and business growth.

Significant growth is also proposed in Charnwood and existing congestion on the A6, which runs parallel to the railway, would worsen without an enhanced rail service. The introduction of a new service would also increase labour mobility, providing better access to jobs for workers, and workers for businesses.

As highlighted, there is a large opportunity for the region to grow both socially and economically however the current poor connectivity between Melton and Nottingham constrains this. While well connected to Leicester, better connections with Nottingham, Loughborough and Melton are required to deliver these strategic requirements.

1.5 OBJECTIVES

HIGH LEVEL OR STRATEGIC OUTCOMES

These are as follows:

Improved access to local and regional centres; Improve Accessibility; Reduced environmental impact; Supporting growth; and Improve health and wellbeing

SPECIFIC OBJECTIVES

This section elaborates upon the preceding overarching goals, providing more specific, locally targeted objectives that will support the delivery of the wider objectives.

- Improve Accessibility
  - Reduce journey times between Melton, Loughborough and Nottingham and other key local / regional sites;
  - Connect to the Midland Rail Hub corridors and to HS2;
  - Form part of the Nottingham – Melton Mowbray – Peterborough / Cambridge Strategic Link
  - Improved accessibility to employment, education, leisure and retail opportunities
- Reduced congestion;

- Improve public transport mode share, reducing car traffic

- Reduced environmental impact;
  - Use existing infrastructure or brownfield land where possible;
  - Reduce CO_2 emissions;
  - Reduce NO_x emissions.
- Supporting growth;
  - Support the delivery of housing and economic sites in Melton Mowbray;
  - Reverse the trend towards an aging population in the Borough; Support Melton Mowbray as a "Place to Visit";
  - Increase access to Melton Mowbray, opening the town to a wider workforce
  - Capture wider benefits which can help to support growth in Charnwood.
- Improve health and wellbeing
  - Increased walking and cycling mode shares; Reduced emissions; Increased accessibility to activity venues; Reduce accident clusters and along principal Melton Mowbray – Nottingham roads.

1.6 MEASURES OF SUCCESS

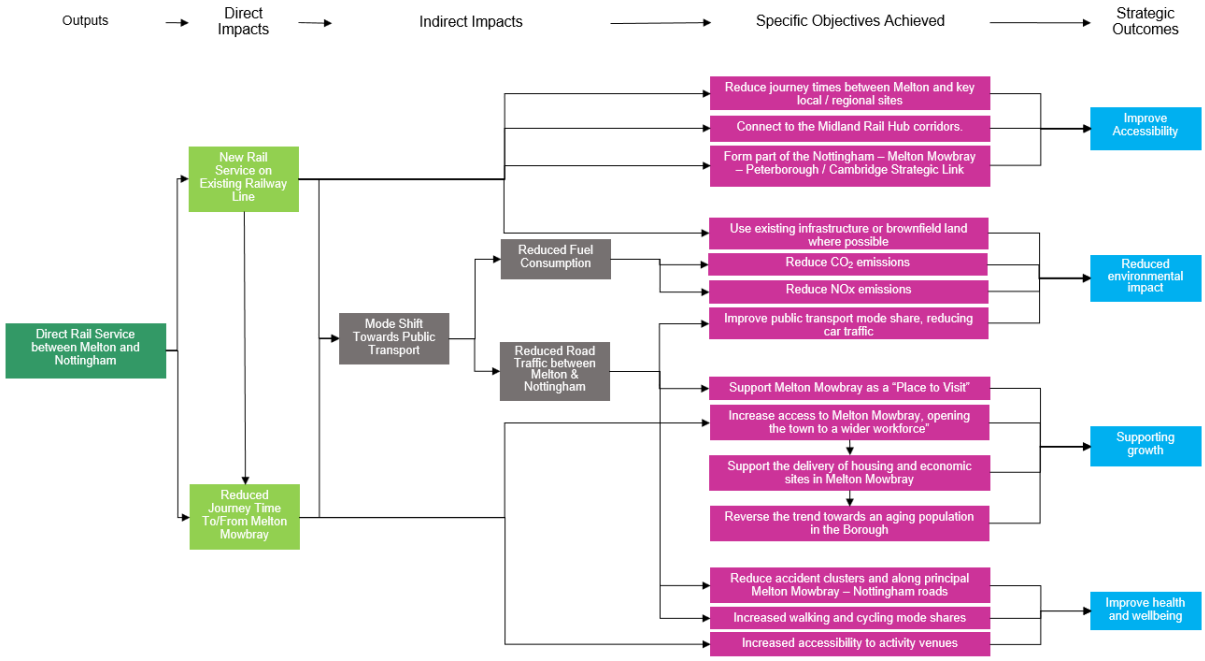


Figure 1-2 - Logic Diagram

1.7 SCOPE

The scope of the scheme consists of improving transport links between Melton Borough and Nottingham. An Options Appraisal study was undertaken, from which the Long List of options identified in **Table 1-2**, below, were identified.

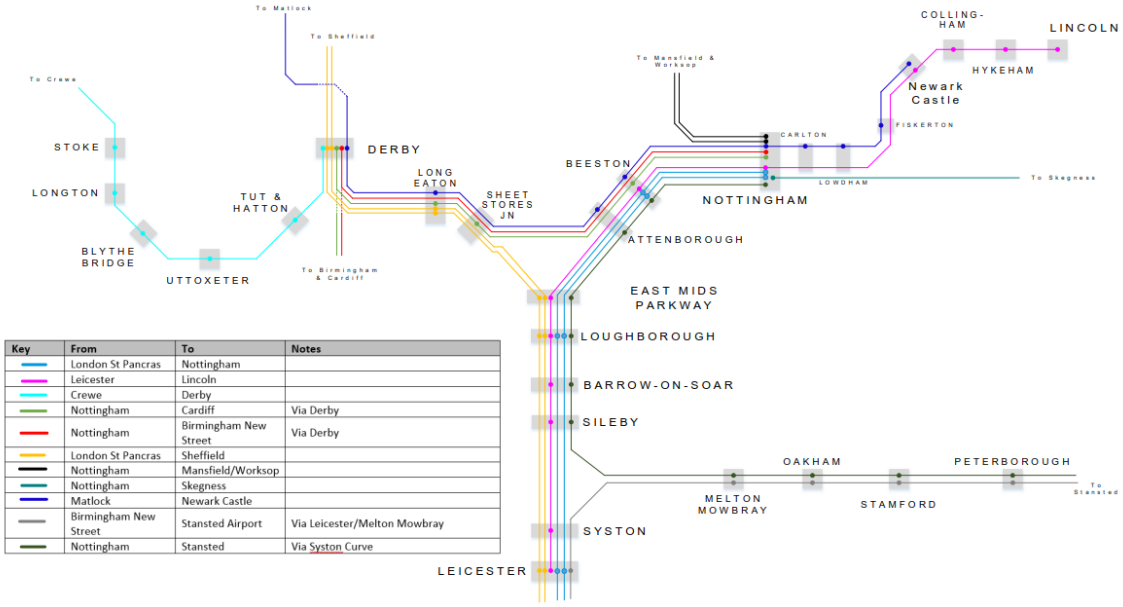
1. Baseline – existing services, plus EMR extension of the Crewe-Stoke-Derby through to Newark.
2. Baseline plus a second tph between Leicester and Melton only
3. Baseline plus a second tph between Birmingham, Leicester and Peterborough
4. Baseline plus 1tph between Nottingham and Melton (via Syston Curve, not Leicester), calling at all stations
5. Baseline plus 1tph between Nottingham and Melton (via Syston curve) calling only at Melton, Loughborough, East Midlands Parkway and Nottingham
6. Baseline and extension of Lincoln – Nottingham – Leicester service through to Melton
7. Either (4) or (5) but instead of going into Nottingham, it continues past Toton through Ilkeston, Langley Mill and onto Mansfield and Worksop
8. Either (4) or (5) but instead of going into Nottingham, it turns left at Trent Junction and goes to Long Eaton, Derby then onto Stoke (as a 2nd tph on the North Staffs Line)
9. Either (4) or (5) but instead of terminating at Melton, it continues through to Oakham, Stamford, Peterborough, and on to Cambridge / Stansted.
10. Variation of 4/5. Extension past Melton through to Peterborough. Calling at Stamford, Oakham, Melton, Loughborough & Beeston

Table 1-2 - Long List of Options Considered in OAR.

As set out in the supporting Options Appraisal Report, it was identified that, of these options, provision of a direct rail service between Melton Mowbray and Nottingham on existing infrastructure, specifically Syston North Chord, would deliver the best results against the Objectives discussed previously[1]. The prospective service might also include stops at some or all of Sileby, Barrow-upon-Soar, Loughborough, East Midlands Parkway or Beeston stations on the Midland Mainline to Nottingham., as well as extending east to increase the frequency of existing services to destinations in the east including Peterborough. A schematic of the train service specification which best meets the strategic need is shown in Figure 1-3:

[1] The scoring of the schemes against the Objectives are shown in Appendix A. Additional detail can be found in the attendant Options Appraisal Report.

OPTION 9 – VARIATION OF OPTION 4. EXTENDING EXTRA SERVICE ONTO PETERBOROUGH/STANSTED



Key	From	To	Notes
	London St Pancras	Nottingham	
	Leicester	Lincoln	
	Crewe	Derby	
	Nottingham	Cardiff	Via Derby
	Nottingham	Birmingham New Street	Via Derby
	London St Pancras	Sheffield	
	Nottingham	Mansfield/Worksop	
	Nottingham	Skegness	
	Matlock	Newark Castle	
	Birmingham New Street	Stansted Airport	Via Leicester/Melton Mowbray
	Nottingham	Stansted	Via Syston Curve

Figure 1-3 - Train service specification showing direct service via Syston North Curve. This option best meets the strategic requirements.

1.8 CONSTRAINTS AND INTERDEPENDENCIES

During the development of the Options Appraisal Report and, subsequently, the preferred option detailed here, several potential constraints were identified, with potential solutions.

Only the new platform at Loughborough and additional platform capacity at Nottingham would be required for the preferred scheme. The other infrastructure interventions may solve wider capacity and infrastructure issues which already exist today and are included for completeness. How these costs should be attributed fairly will be considered further at the next stage of work.

Potential intervention	Rationale
Fourth platform at Loughborough station	To allow southbound slow line trains to stop at Loughborough[2]
New signal at Melton Mowbray to make platform 1 bi-directional	Allows trains to arrive in, turn around in and depart from platform 1

[2] The land to deliver this scheme is currently occupied by Brush Traction, however it was announced in April 2021 that the works is scheduled to close, potentially providing an opportunity for the capacity enhancement to proceed.

Potential intervention	Rationale
New crossover within Melton Mowbray station to the East of the platforms, allowing a train to exit Melton Mowbray up loop and run into platform two	Trains with long scheduled turnarounds at Melton could use the loop to get off the main line whilst other trains pass through. A crossover between Melton Mowbray station and the loop would allow the train to come out of the loop and run straight into platform 2
Introduction of new signals between Syston East Junction and Melton	Reduced headway
Eighth platform at Nottingham station	To offer extra capacity and flexibility within the station
Fourth track between Leicester and Syston	To offer extra capacity and flexibility for train movements in the congested section north of Leicester

Further capacity might be released in the future following the opening of HS2's eastern leg, which would provide an alternative route for the long-distance services from Sheffield, Nottingham and Leeds which form a substantial portion of the Midland Mainline's traffic.

In addition to infrastructure capacity, further constraints include the availability of rolling stock, train crew and depot capacity. Changes announced as part of the Williams-Shapps Review present an opportunity to manage these constraints as the East Midlands franchise develops under the new arrangements.

1.9 STAKEHOLDERS

Stakeholder engagement commenced with the drafting of the Melton Connectivity Study in 2019, with stakeholders invited to workshops to scope and define the strategic issues with connectivity between Melton and Nottingham. The final version of the study, produced in June 2020 established that a rail-based solution was likely to deliver the most favourable do-something option when compared to the alternatives of highway improvements to the A606 corridor, an enhanced bus frequency or a rail service via the Old Dalby test track and linked with a walk or bus journey to the Nottingham Express Transit (NET) tram system.

Further stakeholder consultation took place throughout the option development process (detailed in section 1.12), with the stakeholder group which included local authorities and enterprise partnerships, transport bodies, train operators and the DfT. A list can be seen in Table 1-3. Importantly, Network Rail, CrossCountry and East Midlands Trains did not object to further development of the scheme and have stated an interest to remain involved in the development of the project.

Local & National Authorities		*Sub-national transport bodies and Local Enterprise Partnerships*	*Industry stakeholders*
Office of Alicia Kearns – MP for Rutland and Melton - Supports	Office of Jane Hunt – MP for Loughborough - Supports	East Midlands Councils - Supports	Network Rail – Does not object, subject to further development
Office of Edward Argar MP for Charnwood - Supports	Department for Transport – *Not applicable – acting in an advisory capacity to the promoters*	Leicester and Leicestershire Enterprise Partnership - Supports	CrossCountry – Does not object, subject to further development
Melton Borough Council - Supports	Leicestershire County Council – Supports subject to integration with HS2	D2N2 LEP – Does not object	East Midlands Trains – Does not object, subject to further development
Charnwood Borough Council - Supports	Nottinghamshire County Council – Does not object	Midlands Connect – This project is not within MC priority list, but organisation is generally supportive of better rail connections	
Nottingham City Council – Does not object			

Table 1-3 – Stakeholders consulted on the scheme and their support

1.10 OPTION DEVELOPMENT

As detailed in section 1.2, rail was identified as the mode which best met the strategic need when compared to highway improvements or an extension to the NET, a workshop was held with rail industry and local authority stakeholders to produce a longlist of potential rail options. Located in the centre of the town, Melton Mowbray station is well connected by a north-south cycle route and bus services to the key housing centres and employment areas identified in the local plan, with an attractive end to end journey time.

An Indicative Train Service Specification (ITSS), shows potential train services which could operate on a section of the rail network in the future. A longlist of ITSS proposals for this project was identified at a stakeholder workshop on 19th February 2021 and a sift approach was used to shortlist the options under consideration. The sift process incorporated a desktop review of constraints within the study area and considered the ability of each option to:

- meet the project's stated strategic objective to improve connectivity between Melton Mowbray and Nottingham. The project also considered connections across the wider region where these could be delivered in a complimentary way;
- deliver improved journey times, and/or a direct journey between the two locations;
- be affordable in terms of likely capital costs;
- be commercially attractive for a train operator to run;
- be operationally deliverable, and not impart undue train performance risks considering known infrastructure capability and capacity.

A simplified Multi-Criteria Decision Analysis (MCDA) assessment was used to score and rank the options. The outcomes of the assessment were validated with the stakeholder group on 19th March and used as a tool for shortlisting the ITSS options. The outcome of this assessment is shown in Table 1-4.

Option	Rank
1. Baseline – existing services, plus EMR extension of the Crewe-Stoke-Derby through to Newark.	Baseline - do nothing option including only committed franchise changes
2. Baseline plus a second tph between Leicester and Melton only	Discounted – scored poorly on operational deliverability and likely revenue income
3. Baseline plus a second tph between Birmingham, Leicester and Peterborough	Taken forward for further investigation as minimum viable product. Did not score highly on meeting strategic objective
4. Baseline plus 1tph between Nottingham and Melton (via Syston Curve, not Leicester), calling at all stations	Taken forward for further investigation
5. Baseline plus 1tph between Nottingham and Melton (via Syston curve) calling only at Melton, Loughborough, East Midlands Parkway and Nottingham	Considered as a timetable iteration of option #4
6. Baseline and extension of Lincoln – Nottingham – Leicester service through to Melton	Discounted – scored poorly on journey time and operational deliverability
7. Either (4) or (5) but instead of going into Nottingham, continues past Toton through Ilkeston, Langley Mill and onto Mansfield and Worksop	Discounted – did not meet strategic objective
8. Either (4) or (5) but instead of going into Nottingham, turns west at Trent Junction and goes to Long Eaton, Derby then onto Stoke (as a 2nd tph on the North Staffs Line)	Discounted – did not meet strategic objective

9. Either (4) or (5) but instead of terminating at Melton, it continues through to Oakham, Stamford, Peterborough, and on to Cambridge / Stansted.	Variation of option #4 – core option
10. Variation of 4/5. Extension past Melton through to P'Boro. Calling at Stamford, Oakham, Melton, Loughborough & Beeston	Considered as timetable iteration of option #9

Table 1-4 – Longlist of options, and scoring outputs of MCDA

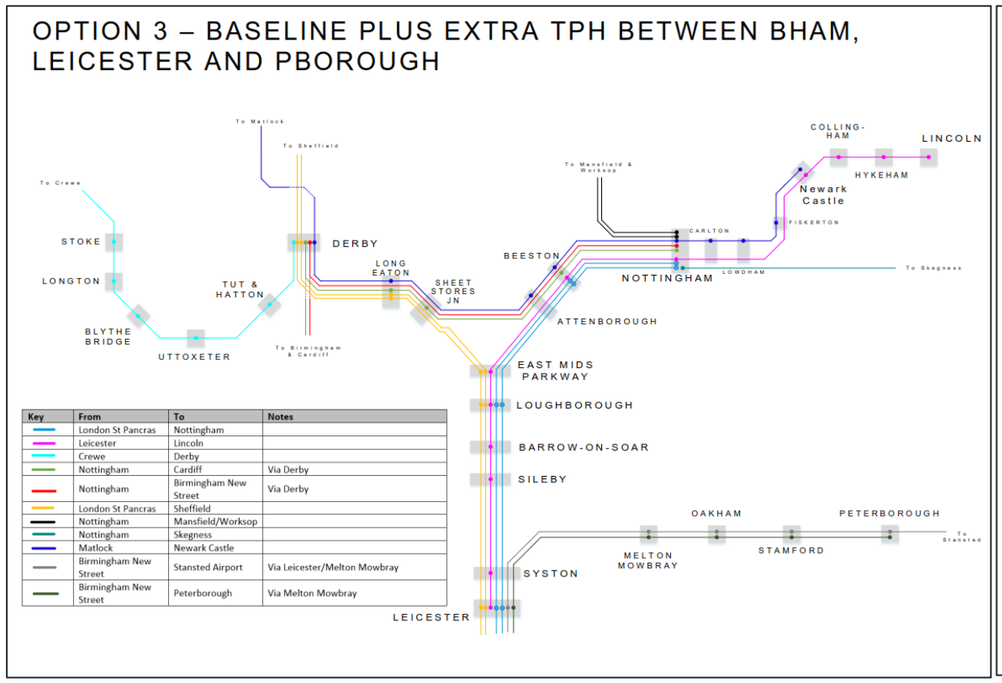
Four options validated by stakeholders were identified as suitable for further investigation. The options were assessed using ATTune timetabling software, with train graphs used to identify conflicts with existing train services. Minor modifications to train times were made, and where the new services could not be pathed using the existing infrastructure, potential solutions were identified.

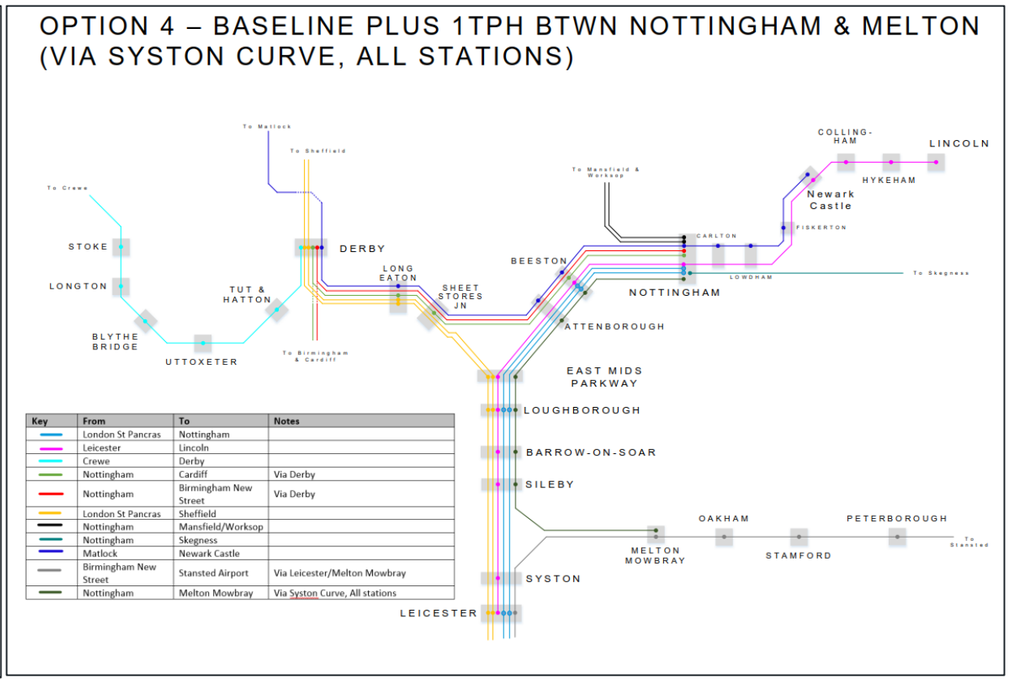
Following the identification of constraints and potential solutions to deliver the shortlisted options, the affordability and deliverability of each option was further investigated. The options taken forward to this stage were:

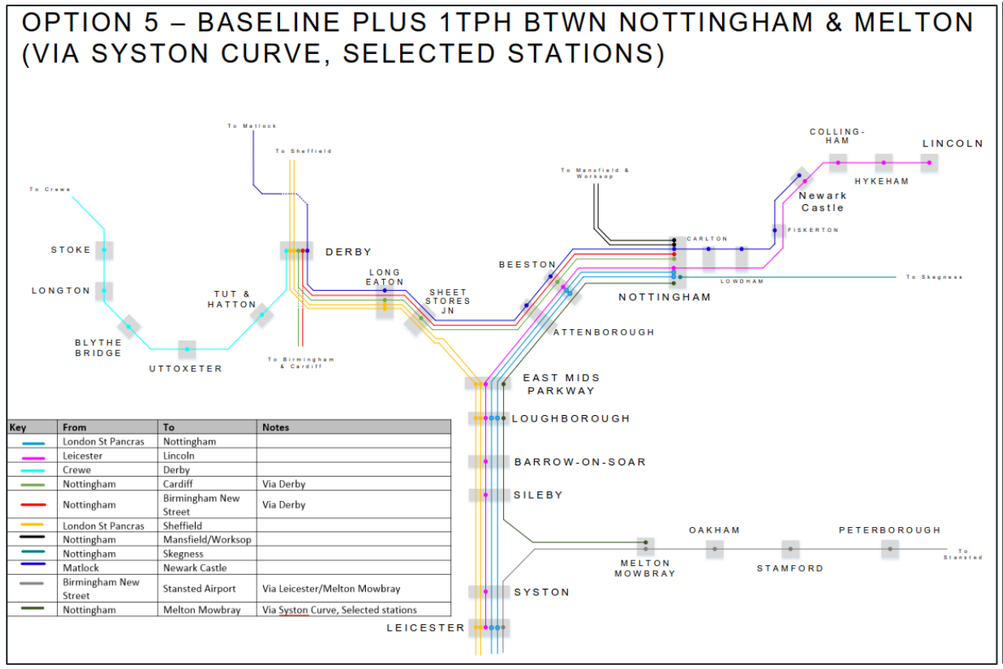
- Option 3 – an additional train via Leicester;
- Option 4 – the “core” option which met the project’s strategic need through introducing a direct train service between Melton and Nottingham via Syston and Loughborough. To enhance connectivity it was modelled to stop at all intermediate stations;
- Option 5 – a variation of the core option which stopped only at Loughborough and Beeston. This delivered a faster journey time but fewer connectivity benefits;
- Option 9 – a variation of option 4 – stopping at all intermediate stations, but calling further to Peterborough.

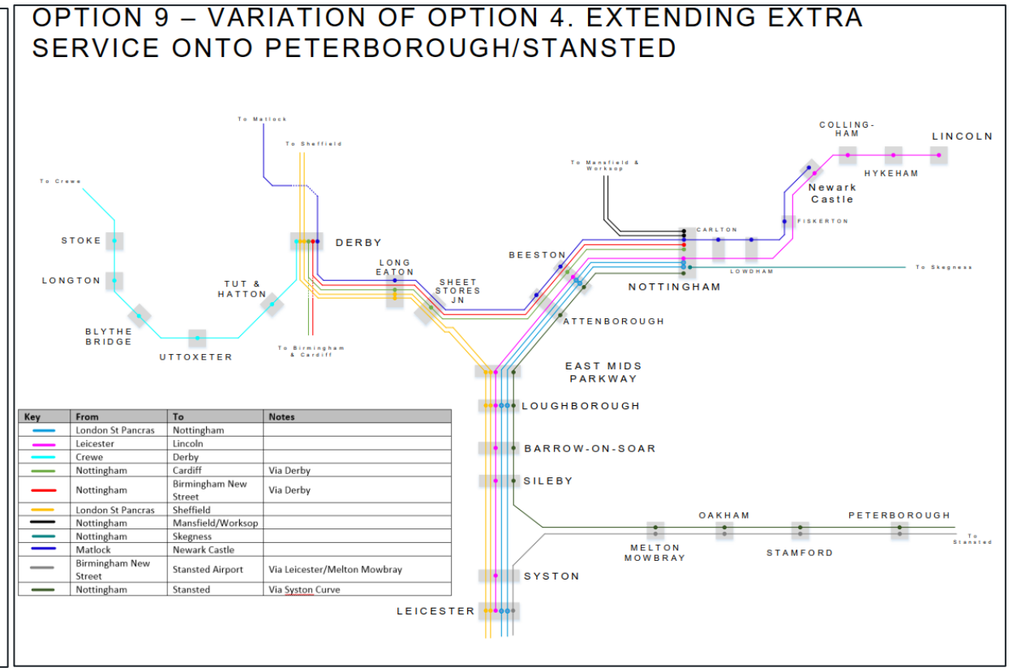
Schematics of each ITSS are shown in Figure 1-4.

Figure 1-4: ITSS Schematics for each shortlisted option









2 ECONOMIC CASE

2.1 INTRODUCTION

This chapter provides a high-level summary of the Economic Case. Further details of the economic appraisal are provided in the Melton Connectivity Study Economic Appraisal Report.

Option 9 was identified by the Economic Appraisal Report as the preferred option. Option 9 produced the best economic performance of three options offering a direct connection between Melton and Nottingham. Given the strong performance of this option in meeting the Scheme strategic objectives, as reported in the Option Assessment Report, it was selected as the preferred option to take forward, with the economic appraisal initially indicating a BCR of 0.3:1.

With respect to the economic appraisal outcome, an additional stage of the economic evaluation was undertaken to enhance Option 9. An opportunity arose to consider an enhancement of the Option 9 level of service and a potential reduction in the capital cost requirement through the apportionment of some infrastructure works to other projects, where these are already being planned (e.g. Nottingham Station capacity enhancements). The timetable was enhanced from a 6-hour operating period to a 12-hour operating period. A capital cost reduction was also identified as the cost of an eighth platform at Nottingham was considered a strategic rail investment benefitting a range of rail interventions in the area and not only the Melton to Nottingham connectivity enhancement. The Economic Case presents the value for money assessment for Option 9 Enhanced compared to Option 9.

When the longer operating day (therefore higher revenue), and lower capital costs were assessed, Option 9 Enhanced delivered a maximum BCR of 0.8:1.

2.2 METHODOLOGIES

The economic appraisal for the Melton rail corridor options was completed in line with SOBC requirements.

Generalised Journey Time and Revenue Benefits

Generalised journey time (GJT) improvements result from improved network connectivity between Melton and Nottingham and other journeys served by the route. Option 9 offers direct network connectivity between Melton and Nottingham via the Syston Chord and provides improved regional connectivity for other stations served by the new train service.

The demand and revenue assessment carried out using MOIRA assumed the following:

- Existing rolling stock types;
- Existing line speeds; and
- May 2021 base timetable.

The May 2021 timetable increased the number of services in the baseline which results in a conservative estimate of the GJT benefits from the Scheme. It should be noted that the revenue and journeys data used for the assessment was for 2019 demand due to the impact of the Covid19 pandemic on more recent travel demand.

Background Growth

General growth in economic activity, population and employment increases are drivers of exogenous growth in rail demand. Passenger Demand Forecasting Handbook(PDFH) 6 growth elasticities were applied to forecasts of Gross Value Add (GVA per capita, population and employment to calculate year-on-year growth in rail usage. GVA per capita and population were sourced from the Transport Analysis Guidance (TAG) Databook.

Decarbonisation and Environmental benefits

The Scheme is expected to encourage a modal shift to rail and some of these travellers will have previously travelled by car. Using TAG diversion factors, and outputs from MOIRA for the change in train miles travelled and the number of car kilometres removed from the road network, the transport benefits of decongestion, accidents, local air quality, greenhouse gases and indirect taxation were calculated and monetised using values in the TAG Databook.

Wider Economic Impacts

A principal objective of enhancing rail connectivity for Melton is to support housing and employment growth in the region which will improve accessibility to the Nottingham labour market for Melton residents. The current poor accessibility to Nottingham by public transport and congested travelling conditions on the road network results in poor access to the Nottingham and Melton employment markets and constrains the scope for agglomeration benefits of pooling of labour markets and knowledge-sharing.

Significant housing growth is planned in the Melton and Charnwood Boroughs by 2036. Enhanced rail transport connectivity could support the delivery of this new housing by making the Nottingham employment market more accessible for Melton residents allowing a move to more productive jobs, and labour market benefits for Nottingham businesses with better access to Melton as a source of labour. The improved local rail connectivity using the Syston Chord will also support the delivery of planned housing in Loughborough and other settlements in Charnwood Borough. New journey opportunities will be offered for residents and workers travelling between Melton and Loughborough. The new train service using the Syston Chord will also increase service frequency adding further connectivity benefits between Loughborough and Nottingham which could translate into productivity and labour market benefits.

TAG assumes that the impact of wider economic benefits is equivalent to 10% of the business user benefits for this stage of the scheme development.

2.3 APPRAISAL PARAMETERS AND ASSUMPTIONS

The standard parameters provided in TAG and the scheme assumptions are presented in the Economic Appraisal Report.

MOIRA FORECASTS

Existing passengers on the rail network will experience a service enhancement as a result of the implementation of the Scheme. An overall assessment of the top 5 revenue flows for Option 9 and Option 9 Enhanced are presented in this section. These changes reflect the impact of GJT changes from the extension of the timetable operational period from 6 hours to 12 hours. Table 2-1 shows the Option 9 top revenue flows whilst Table 2-2 shows the top revenue flows for Option 9 Enhanced.

Option 9 MOIRA revenue and journey forecasts show that all five of the top revenue flows represent increases in rail demand between Oakham, Stamford and Peterborough and from Oakham and Stamford to London. Although not in the top five flows impacted by the improved connectivity for this service, Melton also benefits from the improved connectivity to Nottingham and the improved regional connectivity to the east towards Peterborough. Being on the East Coast Main Line, Peterborough will offer potential onward journeys to Cambridge and Stansted, although there are potential capacity challenges as noted elsewhere.

Option 9 Enhanced MOIRA revenue and journey forecasts are shown in Table 2-2. As can be seen the top revenue flows reflect improved regional connectivity between Peterborough, Stamford, Oakham and Peterborough. It should be highlighted that a significant change in journeys is shown for the Beeston to Nottingham flow of 23,000 journeys, although as a low yield flow it is only the eleventh highest revenue flow (£32,000). This demonstrates the service's potential contribution to improved local connectivity.

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Table 2-1 – Option 9 Top 5 Flows: Increased Revenue & Journeys

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Table 2-2 – Option 9 Enhanced Top 5 Flows: Increased Revenue & Journeys

RAIL USERS JOURNEY TIME BENEFITS

The change in Generalised Journey Time (GJT) as a result of the connectivity enhancements for key Melton bidirectional flows is shown in Table 2-3. Option 9 Enhanced results in an increase in GJT savings ranging between 17 and 58 minutes. As the Option 9 Enhanced timetable is for a 12-hour operating period the time saving benefits of the direct connection are extended to a greater number of passengers. The average time savings are very significant. The Melton to Nottingham and Melton to Loughborough flows shows a GJT reduction of over 40% compared to the Do-Minimum.

Bidirectional Flow	Do-Min GJT (mins)	Run GJT (mins)	Difference (mins)	% change
Option 9				
Melton - Nottingham	142	120	22	(15.25%)
Melton – Loughborough	110	89	11	(18.44%)
Melton – Peterborough	84	79	5	(6.68%)
Option 9 Enhanced				
Melton - Nottingham	142	84	58	(41.01%)
Melton – Loughborough	110	57	52	(47.65%)

Melton – Peterborough	84	67	17	(20.01%)

Table 2-3 Change in Generalised Journey Times

Table 2-4 details the annual demand impact and the change in annual total value of time impact by ticket type for Option 9 and Option 9 Enhanced. The enhance timetable results in a significant increase in numbers of annual passenger journeys from 58,000 to 204,000.

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Table 2-4: Changes in Annual Demand Compared with the Do-Minimum

Using steady state demand from MOIRA and rail demand forecasting principles presented in TAG Unit A5.4, the total value of time is calculated and appraised across a 60-year period and discounted and deflated and presented in Table 2-5 in 2010 values and prices for all options. Existing passengers benefit from the full value of time saving (Rail Mode), whilst the rule of a half is applied to the new users as outlined in TAG Unit A1.3. Option 9 Enhanced provides over three times more journey time savings. The 12-hour period of operation provides an improved train service to a greater number of passengers.

*CONFIDENTIAL AND/OR COMMERCIALLY SENSITIVE INFORMATION BELONGING TO ONE OR MORE TRAIN COMPANIES – NOT DISCLOSABLE UNDER FOIA***Table 2-5 - Journey time benefits for new and existing rail users (£000s)**

DECONGESTION AND ENVIRONMENTAL BENEFIT

The journey time savings and service connectivity for stations between Melton and Nottingham would result in a modal shift to rail, which has been calculated using outputs from MOIRA. These calculations show that the Melton-Nottingham rail corridor network and service enhancements will reduce car-kilometres by 58 million for Option 9. Option 9 Enhanced will result in a greater reduction in car-kilometres of 184.3 million over the 60-year appraisal period. This reflects more modal switch to rail as a result of the enhanced level of service.

The decongestion benefits are monetised using a marginal external cost (MEC) approach, using values provided in TAG.

The MEC results provide significant decongestion and environmental benefits to society compared to the Do-Minimum are broken down in Table 2-6.

	Change Compared to Do-Minimum	
	Option 9	Option 9 Enhanced
Car-kms removed during appraisal period	58,504,046	184,248,346
Congestion	4,305,892	13,560,659
Accident	809,702	2,550,015
Local Air Quality	87,300	274,937
Noise	53,980	170,001

Greenhouse Gases	174,588	549,833
Indirect Taxation	(233,934)	(736,734)
TOTAL	5,224,518	16,453,712

Table 2-6 - Decarbonisation and environmental benefits in 2010 Prices and Values (£s)

2.4 REVENUE IMPACTS

This section sets out the revenue impacts for each of the options. Table 2-7 shows incremental change in annual revenue compared with the Do Minimum.

The total revenue impact is reported as a negative cost of the scheme given it will return to the public accounts as a result of the rail franchise. Revenues were converted to 2010 prices and values across the lifespan of the scheme (60-year period).

The greater the extent of regional connectivity enhancement the larger the increase in revenues compared to the baseline. Option 9 shows a revenue impact of an additional [Redacted] in the base year, whilst Option 9 Enhanced shows a revenue impact of an additional [Redacted] in the base year. Option 9 Enhanced revenue impact is greater due to the 12-hour timetable.

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Table 2-7 - Annual Revenue Impact

2.5 COSTS

A Costs Report was produced in support of the Strategic Outline Business Case (SOBC) supporting investment in transport improvements between Melton Mowbray, Loughborough and Nottingham. This report provides the Option 9 cost estimates used in this appraisal. The Costs Report sets out the potential infrastructure interventions to deliver the indicative train service specification (ITSS) for the short-listed options. An assessment was also made of the operating costs for Option 9 and Option 9 Enhanced.

CAPITAL COST ESTIMATE

Capital costs are construction costs, land costs, preparation costs (planning and designing the scheme) and supervision costs during the scheme construction.

The approach to capital costs was to use existing estimates where available to build-up costs. If this data was unavailable other schemes have been used as a benchmark. Given the early stage of work, a high-level lower and upper cost range was produced for each intervention and a median value produced for input into the appraisal.

Table 2-8 shows costs in pounds sterling in Q2, 2021 prices with rates derived from in-house data from previous schemes and industry recognised sources. The indirect costs have been assessed on a percentage basis of the direct costs in accordance with the GRIP level of detail. Client costs have also been assessed on a percentage basis of the direct costs in accordance with the GRIP level of detail. Risk is included at 30% and Optimism Bias is included at 60%.

	Rationale	Lower (£m)	Upper (£m)
Loughborough 4th Platform	Enables southbound slow line trains to stop at Loughborough	4.20	6.30
Nottingham 8th Platform	To offer extra capacity and flexibility within the station	4.20	6.30
Total		8.40	12.60

Table 2-8 – Capital Cost Estimates, Q2 2021 prices

The capital cost totals for Option 9 Enhanced excluding the eighth platform at Nottingham are shown in Table 2-9.

Option	Lower Capex Estimate (£m)	Upper Capex Estimate (£m)	Median Capex Estimate (£m)
Option 9	8.40	12.60	10.50
Option 9 Enhanced	4.20	6.30	5.25

Table 2-9 – Capital Cost Totals by Option (£m, Q2 2021 prices)

It is important to note that while combinations of the infrastructure interventions may be required for the connectivity enhancement, they may also address existing wider capacity and infrastructure issues for the rail network in the region. The attribution of these costs to separate schemes will be considered at the next stage.

An indicative spend profile applied in the appraisal is shown in Table 2-10. The spend profile assumption is 2% spend in Year 1, 8% spend in Year 2, 8% spend in Year 3 and 82% spend in Year 4. The opening year is assumed to be 2026.

		GRIP 1-2	GRIP 3-4	GRIP 5	GRIP 6-7
Option	Median Capex Estimate £m	Year 1	Year 2	Year 3	Year 4
Option 9	10.50	0.210	0.840	0.840	8.610
Option 9 Enhanced	5.25	0.105	0.420	0.420	4.305

Table 2-10 – Indicative Spend Profile (£m, 2Q 2021)

OPERATING COSTS

Operating costs and maintenance costs are the cost of people, machinery and materials required to maintain the rail infrastructure and the new rail services.

A unit operating cost of £10 per vehicle-mile has been assumed for operating costs and is based on costs which have previously been used when considering franchising. This cost is a notional figure for a diesel multiple unit of the type which currently operates on these routes. This unit cost rate covers the approximate cost of leasing, track access, fuel, staff costs and maintenance and is a reasonable assumption, considering the early stage of scheme development. The mileage for each option was extracted from MOIRA. The indicative operating costs for Option 9 and Option 9 Enhanced are shown in Table 2-11. The additional train-kms operated in Option 9 Enhanced has increased indicative daily operating costs.

Option	Indicative new mileage/day	Indicative operating cost/day £
Option 9	1,391	13,910
Option 9 Enhanced	2,450	24,500

Table 2-11 – Daily Operating Costs (£s)

With regard to the government's traction decarbonisation strategy, if the costs of electrification are not attributed to the operating cost, and it became possible to operate electric multiple units on the route it is considered that the cost per mile would decrease to approximately £7-£8 per vehicle mile.

2.6 VALUE FOR MONEY

The Value for Money assessment is summarised in Table 2-5. The appraisal results are shown in 2010 prices and are shown as Present Values (PV).

Option 9 was identified as the option which was best aligned with the strategic objectives set for the Scheme in the Option Assessment stage. The initial BCR for Option 9 was 0.3:1.

Subsequently, an opportunity to reduce Option 9 capital costs was identified. Additionally, the Option 9 timetable was extended to cover a 12-hour period offering a potentially more attractive service for commuters. Given the importance of direct connectivity and alignment with the Scheme strategic objectives, a further economic appraisal of an Option 9 Enhanced option was undertaken.

Option 9 Enhanced further improves regional connectivity between Peterborough, Stamford, Oakham and Peterborough resulting in additional user and non-user benefit as shown in Table 2-7. The enhanced Option 9 improves the BCR to 0.5:1.

Given that Option 9 best meets the Scheme objectives set out in the Strategic Case for supporting economic growth, and that there is potential scope to realise more benefits, Option 9 Enhanced is the preferred option to be taken forward to the next stage of the business case.

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£k 2010 prices and values, market prices	Option 9	Option 9 Enhanced

Benefit:Cost Ratio	0.3:1	0.5:1

Table 2-12 – Economic Appraisal Results (£000s, 2010 PV)

2.7 SENSITIVITY TESTING

Sensitivity testing was undertaken to assess changes to key variables within the economic appraisal as follows:

- Lower capital costs to include only those considered essential for implementation of the option;
- DfT Covid-19 sensitivities (Low, Medium and High demand scenarios);
- Higher local demand growth derived from local plan/housing allocation plans up to 2035/36; and
- Switching Values test to gauge the extent to which Present Value of Benefits (PVB) would need to be increased to achieve a BCR of 1.5:1.

With the sensitivity test assumption of higher local demand growth, as detailed in the local plan Option 9 Enhanced has an improved BCR of 0.8:1 demonstrating the Scheme is approaching a value for money score where the benefits out-weigh the costs.

Details of the sensitivity tests are presented in the Economic Appraisal Report and Economic Appraisal Addendum.

2.8 CONCLUSION

Option 9 Enhanced represents a progression of the preferred option development based on a timetable enhancement and reduced capital costs. Option 9 Enhanced produces an improved BCR of 0.5:1.

Moreover, the Option 9 Enhanced sensitivity test using higher local demand growth shows a further improved BCR of 0.8:1, demonstrating the Scheme is approaching a positive BCR where the benefits out-weigh the costs.

Given that Option 9 is aligned with the Scheme objectives set out in the Strategic Case for supporting economic growth, and that there is potential scope to realise more benefits, Option 9 Enhanced is the preferred option to be taken forward to the next stage of the business case.

3 FINANCIAL CASE

3.1 FORECAST SCHEME COST

Initial forecast Scheme costs have been produced for this SOBC. Potential infrastructure interventions were costed to deliver the indicative train service specification (ITSS) for the short-listed options. The costs presented are illustrative and proportionate for this stage of scheme development and assessment. Further work will be required to produce a full capital cost estimate for the options. Capital costs include construction costs, preparation costs (planning and designing the scheme) and supervision costs during the scheme construction. Costs in this section are presented for the preferred Option 9 with and without the cost of an eighth platform at Nottingham.

The approach to estimating the capital costs was to use existing estimates where available to build-up costs. If this data was unavailable other schemes have been used as a benchmark. Rates were derived from in-house data from previous schemes and industry recognised sources. The indirect costs and client costs have been assessed on a percentage basis of the direct costs and consolidated estimated cost is shown in Table 3-1. In consideration of the early stage of work, a high-level lower and upper cost range was produced for each intervention. Risk is included at 30%. It should be noted that for the Financial Case Optimism Bias is excluded from the capital costs.

	Rationale	Lower £m	Upper £m
Loughborough 4th Platform	Enables southbound slow line trains to stop at Loughborough	£2.63	£3.94
Nottingham 8th Platform	To offer extra capacity and flexibility within the station	£2.63	£3.94

Table 3-1 – Capital Cost Estimates, £millions, 2Q2021 prices

The provisional capital cost totals by option for lower and upper cost estimates are shown in Table 3-2. Option 9 Enhanced has a lower cost than Option 9 as the cost of an eighth platform at Nottingham is considered a strategic cost attributable across a range of strategic rail enhancements. It is understood that the eighth platform at Nottingham will be delivered by others. Midlands Connect are funding a study to understand what feasible options may look like at this location.

Option	Lower Capex Estimate (£m)	Upper Capex Estimate (£m)
Option 9	£5.25	£7.88
Option 9 Enhanced	£2.63	£3.94

Table 3-2 – Capital Cost Totals by Option (£m, 2Q 2021 prices)

It is important to note that while the infrastructure interventions are required for this scheme, they may also address existing wider capacity and infrastructure issues. In particular Midlands Connect are funding a study to assess feasible options for Nottingham in a wider context. The attribution of these costs to the separate schemes will be considered at the next stage.

3.2 FUNDING STRATEGY

The Funding Strategy will be developed with DfT. Initial consideration of funding channels indicates that the Rail Network Enhancements Pipeline is assumed to be the main source of funding as the infrastructure enhancements would be beneficial to the strategic rail network. The Levelling-Up Fund is also a potential source of funding as enhanced rail connectivity will provide sustainable transport access to employment opportunities in Nottingham for residents of new housing developments in Melton and Charnwood and reduce carbon emissions and strengthen communities along the rail corridor. There are also work in kind opportunities for Melton and Charnwood Borough Councils. Funding opportunities may also result from Section 106 contributions from developers of new housing. A further potential source of funding is through the Housing Infrastructure Fund.

The promoters are in the process of identifying funding both from within their budgets and from external sources to undertake further development work prior to commissioning production of the Outline Business Case. In the short term this work will focus on further demand side work to understand if the passenger base or revenues can deliver an enhanced BCR. It will also include funding of additional timetable analysis in line with Network Rail's recommendations.

3.3 FUNDING/SPEND PROFILE

An indicative spend profile is shown in Table 3-3. This is based on the high-level programme set out in the Management Case.

		GRIP 1-2	GRIP 3-4	GRIP 5	GRIP 6-7
Option	**Median Capex Estimate £m**	**Year 2**	**Year 2**	**Year 3**	**Year 4**
Option 9	6.6	0.1	0.5	0.5	5.4
Option 9 Enhanced	3.3	0.1	0.3	0.3	2.7

Table 3-3 – Indicative Funding/Spend Profile (£m, 2Q 2021)

4 COMMERCIAL CASE

As much of the infrastructure to deliver Option 9 is already in place, key to delivery of the benefits of the new rail link will be the specification of the train service at the next appropriate opportunity in the franchise/concession lifecycle. The current contract between East Midlands Railway and the DfT is planned to end on 31st March 2022.

A high-level output specification for the delivery of an additional train per hour includes:

- An additional platform at Loughborough; and
- Enhanced platform capacity at Nottingham.

4.1 PROCUREMENT STRATEGY

There is currently an extremely limited direct service between Melton Mowbray and Nottingham, and it is necessary to change at Leicester for most of the day. Services are operated by East Midlands Railway (EMR) and CrossCountry. EMR lease their rolling stock, which is maintained at depots in Derby and Nottingham. All mainline infrastructure is owned, operated and maintained by Network Rail.

In September 2020 the mechanism for specifying train service enhancements has changed, with transitional arrangements in place to account for the uncertainties caused by COVID-19 on passenger demand. It is expected that future train service contracts will be concessions, based on a specification from the DfT.

Timetable modelling has demonstrated that a number of infrastructure constraints exist within the study area. To resolve these, the following interventions may be required; an additional platform at Loughborough station; enhanced platform capacity at Nottingham; other enhancements to improve headways, reduce junction margins and turnaround times have also been identified which would deliver train performance benefits, and may make the service more attractive to passengers and operators.

The most likely route for delivery of any infrastructure enhancement required under this Option 9 would be through Network Rail; although other options may be available. In any case Network Rail would need to remain involved as asset owner and the additional complexity in alternative arrangements for a project of this scale would be relatively unlikely to offer significant commercial or other advantages.

Options to phase the delivery of Option 9 include initially operating at a lower frequency (e.g. two hourly) or deferring construction of the fourth platform at Loughborough station until further dwellings and workplaces have been constructed. While this would not meet the strategic need to the same extent as the full scheme, it would defer capital expenditure to later in the project lifecycle, delivering some benefits at a lower cost.

It is likely at the outset that any new service would be operated by a diesel train, and additional rolling stock would need to be cascaded into whichever franchise would operate the service. In due course, with the development of new technology, rolling stock could be battery or hydrogen-operated, and following electrification, with an electric train.

PROCUREMENT STRATEGY CONCLUSIONS

For any new service to operate, it will need to be specified in either the EMR or CrossCountry concession at the next appropriate point in the procurement lifecycle. The promoters will continue to engage with the long term industry planning process to ensure the requirements for the new service are considered as part of a future franchise specification. Separately the requirements for any infrastructure will be validated further with Network Rail, initially through commissioning further timetable work. It is assumed that as asset owner, Network Rail would be best placed to deliver any works.

Having identified the key issues for procuring the potential infrastructure and services, further work will be required to understand in more detail the legal requirements, resource implications (cost and programme) and appetite of stakeholders for pursuing the scheme to the next stage of development.

4.2 SOURCING OPTIONS/COMMERCIAL VIABILITY

CURRENT ARRANGEMENTS

The commercial viability of the scheme will be critical to its feasibility and its capacity to realise the objectives for the proposed scheme. The rail fare set needs to be attractive against competing alternative options, otherwise the commercial viability of the scheme will be lost.

East Midlands Railway set the fare for journeys between Melton Mowbray and Nottingham, with the revenue split between East Midlands Railway and CrossCountry based on the journey time and frequency. Rail fares are regulated, and so generally rise by RPI+1% each year.

COMMERCIAL VIABILITY CONCLUSIONS

Demand modelling has demonstrated that a direct Melton-Nottingham service as part of an extended service to Peterborough may deliver a commercially viable service, and it is recommended that further opportunities to enhance demand, and reduce construction and operating costs are considered in more detail at the next stage of the project.

Previous work by Network Rail has identified that infrastructure around Leicester is congested, and a number of other projects, for example at Ely, and elsewhere on the Felixstowe to Midlands/north corridor are being progressed to identify opportunities to increase capacity. Potential synergies between projects should be investigated as the project progresses.

As modelled the cost of operating the Melton to Nottingham service in isolation is slightly higher than the revenue it would generate, however the strategic case demonstrates that there may be opportunities to further increase the demand and therefore revenue. Long term strategy, including traction decarbonisation would also reduce the operating costs, further improving the BCR.

COMMERCIAL RISKS

At this stage of scheme development, the following commercial risks have been identified:

- Timescale to deliver the necessary infrastructure;
- Anticipated passenger demand may not align with forecasts;
- The timetable may change from the modelled baseline, with the identified capacity used for other passenger or freight services;
- Long-term changes in travel demand in a post-COVID scenario;

- Availability of appropriate rolling stock; and
- Implications of the Williams-Shapps Review on rail franchising, and other regulatory reform.

To support decisions on the commercial approach for the scheme, further work will be required to address these risks as the scheme proposals are developed for the heavy rail enhancement option.

5 MANAGEMENT CASE

This chapter sets out an overview of the currently proposed approach for delivering the scheme as an enhancement to the existing heavy rail service between Melton Mowbray and Nottingham. At this stage, prior to further work and greater certainty over the preferred option and associated dependencies, delivery partners and risks, there is considerable uncertainty over the timescales for delivery.

5.1 GOVERNANCE, ORGANISATIONAL STRUCTURE AND ROLES

To date, the Project Steering Group, with representatives from DfT, Melton and Charnwood Borough Councils, Nottingham City Council, Nottinghamshire County Council, Leicestershire County Council, Network Rail, East Midlands Railway, CrossCountry Trains, East Midlands Councils and Midlands Connect has overseen the development of this SOBC. Following its submission, it will be reviewed by DfT and Network Rail prior to a decision on next steps being made by the Restoring Your Railway (RYR) Panel comprising representatives from DfT, HM Treasury and MHCLG.

Subject to approval to progress the scheme development being provided by the RYR Panel and the ability to make the case for further development funding, it is proposed that the Project Steering Group will continue to guide the project, with the individual representatives following the reporting and governance requirements of their respective organisations.

Midlands Connect have advised that the project aligns with broader aspirations to enhance connectivity between Birmingham and Leicester, and also that capacity enhancement at Nottingham station is a strategic requirement at a regional level, not only for the delivery of this scheme.

In parallel, Melton and Charnwood Borough Councils are working on projects which have the potential to support the adopted and draft local plan allocations for housing and employment including the MMDR, Food Enterprise Centre and further investment in the Loughborough University Science and Enterprise Park. This is balanced with the assessment as part of the strategic case that a heavy-rail option via Syston is likely to best meet the identified strategic need.

All organisations represented on the Project Steering Group will have key roles in the delivery of the scheme, though the nature of the role will be determined by the preferred option chosen following further work proposed for the next stage in advance of commencing the development of an Outline Business Case (OBC) for the scheme.

5.2 KEY DEPENDENCIES AND ISSUES

Subject to approval to proceed with the development of the scheme, the key dependencies and issues to be addressed in the next stage include:

- Development of an affordable design for the identified infrastructure required at Loughborough station, and a strategy to obtain the required land;
- Delivery of additional platform capacity required at Nottingham station;
- Identification of available rolling stock and associated required infrastructure, e.g. stabling and maintenance facilities; and
- Further engagement with stakeholders to progress delivery of Option 9 Enhanced, including implications of post-ERMA arrangements for rail contracting and provision of any operating subsidy required.

5.3 PROJECT PLAN

The work to date has identified that enhancing rail connectivity between Melton Mowbray and Nottingham via the Syston Chord has the potential to deliver significant improvements in connectivity, meeting the requirements of the Strategic Case.

During OBC development, it is recommended that stakeholders select a single preferred ITSS option which balances the competing needs for the congested rail infrastructure within the study area, while also maximising the revenue potential for an operator. Melton and Charnwood Borough Councils should continue to work closely with DfT and train operators to ensure delivering this service enhancement is included in future passenger service specifications. The promoters are in the process of identifying funding both from within their budgets and from external sources to undertake further development work prior to commissioning production of the OBC. This work will focus on further demand side work to understand if the passenger base or revenues can deliver an enhanced BCR. It will also include funding of additional timetable analysis for assurance by Network Rail.

Where infrastructure works are proposed, including an additional platform at Loughborough and Nottingham, these could be delivered as a discrete package, or could be phased in line with other proposed enhancements to provide additional capacity in the area. Offsite and modular construction presents an opportunity to deliver the platform works in a quicker and safer way than traditional approaches, should this methodology be appropriate. With the closure of Brush's Falcon Works, adjacent to Loughborough station, this may offer an opportunity to procure the land required to enable the construction of the additional platform.

The post-COVID rail environment of potentially suppressed passenger demand, and the change from a franchise system to a concession arrangement aligned with the SPEED[3] and PACE[4] programmes to deliver infrastructure more quickly and at less capital cost also present opportunities for this project.

Subject to acceptance of this SOBC by the RYR Panel, this project would request further development funding to develop and refine the economic modelling which supports the introduction of a new service between Melton and Nottingham. Alternative potential funding sources include developer contributions, or government funds including the Housing Infrastructure Fund, Towns Fund or Levelling Up Fund.

Given the current uncertainty over the future development of the scheme, the timelines presented below are indicative.

[3] Swift, Pragmatic and Efficient Enhancement Delivery – a project introduced in February 2021 and jointly developed by DfT and Network Rail to deliver rail projects more efficiently.

[4] Project Acceleration in a Controlled Environment – recently introduced by Network Rail as a project management methodology which challenges the rail industry to deliver rail infrastructure more efficiently.

Milestone	Target date
RYR SOBC submission	End of August 2021
RYR Panel decision	End of September 2021
Subject to the identification of further funding	
Identification of preferred option	Spring 2022
Outline Business Case (Single Option selected)	Winter 2022
Full Business Case (Detailed Design completed)	End of 2024
Services operational	2025 - 2026

5.4 PROJECT RISKS

At the next stage of development, it is recommended that a quantified risk register is developed which would be reviewed regularly by the Project Steering Group, with the management of risks allocated to the party best able to manage them, subject to value for money considerations.

Currently identified risks related to potential railway infrastructure include:

- Platform constraints at Loughborough and Nottingham;
- Requirements to interface with other interfacing projects being developed in the same geographic area, including HS2;
- As part of the timetable change risk assessment process, consideration of wider train service and public and passenger safety performance concerns, including level crossings.

As identified in the Financial Case, each of these presents a risk to funding, along with risks associated with operational costs and availability of rolling stock, train crew etc.

Further risks to the project include:

- Approach to the procurement, operation and maintenance of additional rolling stock;
- DfT approval and funding to proceed with development of the scheme post-SOBC;
- Competing capacity requirements from cross-country freight and other potential passenger services; and
- Development of a value for money solution.

ANNEXES

Annex A – Option Assessment Report

Annex B1 – Economic Appraisal Report

Annex B2 – Economic Appraisal Report Addendum

Annex C – Appraisal Specification Report

Annex D – Capacity Analysis

Annex E – Cost Report

Appendix A

OPTION SCORING

		Baseline		Discounted – operationally challenging		Discounted – unattractive journey opportunity		Core option – meets strategic objectives		Variation of #4 – progress to timetable		Discounted - operationally challenging		Discounted		Discounted		Variation of #4 – progress to timetable		Variation of #4 – progress to timetable	
	Option #	1		2		3		4		5		6		7		8		9		10	
Criteria	Weighting	Score	Weighted Score	Score	Weighted Score	Score	Weighted score	Score	Weighted score	Score	Weighted score	Score	Weighted score	Score	Weighted score	Score	Weighted score	Score	Weighted score	Score	Weighted score
Capital Cost	13.3%	5	0.67	3	0.40	3	0.40	2	0.27	2	0.27	3	0.40	3	0.40	3	0.40	4	0.53	4	0.53
Operational/Commercial deliverability	18.3%	5	0.92	1	0.18	4	0.73	3	0.55	3	0.55	1	0.18	4	0.73	1	0.18	3	0.55	3	0.55
Faster Journey Time	18.3%	1	0.18	1	0.18	2	0.37	3	0.55	5	0.92	2	0.37	2	0.37	1	0.18	5	0.92	5	0.92
Direct Journey	21.7%	1	0.22	1	0.22	1	0.22	5	1.08	5	1.08	4	0.87	1	0.22	1	0.22	5	1.08	5	1.08
Meets strategic objectives	28.3%	1	0.28	3	0.85	3	0.85	5	1.42	5	1.42	4	1.13	2	0.57	3	0.85	5	1.42	5	1.42
	100%		2.27		1.83		2.57		3.87		4.23		2.95		2.28		1.83		4.50		4.50
	Ranking	5		10 Discounted on Operational Grounds		7 Discounted on Attractiveness Grounds		4		3		6 Discounted on Operational Grounds		8 Discounted on Feasibility Grounds		Discounted on Feasibility Grounds		=1		=1	

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