

# RESTORING YOUR RAILWAY

## Maid Marian Line Reopening – Strategic Outline Business Case



### PROJECT DETAILS

<b>Project Name:</b>	YR 126 Ashfield – Reconnecting Ashfield Communities through the Maid Marian Line
<b>Project Location:</b>	Reconnecting the Robin Hood Line in Nottinghamshire and the Erewash Valley Line in Derbyshire.
<b>Project Sponsor</b>	Lee Anderson MP
<b>Scheme Promoter</b>	Ashfield District Council
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## EXECUTIVE SUMMARY

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This SOBC represents an opportunity to accelerate investment in the Midlands Engine as part of a wider plan for Levelling-up. The SOBC builds on the recent success of Ashfield District Council in securing Towns Deal Funding in Ashfield and Long Eaton and is supported by a wide body of work which has been undertaken over the past 10 years to examine and support the case for passenger services on the Maid Marian Line.

The SOBC examines a number of options which could provide benefits to the communities of Nottinghamshire and Derbyshire. The emerging preferred option represents the start of a phased programme, initially seeing the return of a passenger service, opening new stations and integrating with wider connectivity opportunities. This Maid Marian Line SOBC is an opportunity to re-open passenger services with a small capital investment. The proposed approach will see new services in the short-term and deliver a wider aspiration for new stations and wider connections in the medium term.

The strategy and policy reviewed detailed priorities to level-up the communities and improve connectivity to support the Midlands Engine by maximising access to employment and education to enhance quality of life, improve the environment and strengthen the economy. There is a clear 'golden thread' from National Policy, through regional strategies and local plans. This strategic fit is further supported by the significant public and stakeholder support for the scheme.

There has been excellent engagement in the proposal to re-open the line. This strong stakeholder support is evidenced in the letters of support which come from a range of external partners, including the Train Operating Company. As the scheme progresses this support will continue to grow.

The business case is not without its challenges. The challenges are clearly identified with a plan in place to resolve them. Many of the challenges come from external factors which could delay decision making. This business case calls for an early intervention to secure benefits now, while planning and integration with projects such as HS2 continues to be developed.

The uncertainty and timescale for HS2 Eastern Leg and Toton East Midlands Hub is unlikely to give sufficient comfort to businesses or investors, nor start to address the current transport deficit in the East Midlands. There is an opportunity to focus on measures that can be delivered over the next 10 years which will have local economic and community benefits, and which will also prepare the way for HS2. The technical work undertaken to date provides a strong evidential basis for such an approach.

The project team has worked closely with Network Rail to examine the constraints and opportunities for the project. Further work is needed, and while capacity is constrained, there are no rail network showstoppers to stop the continued development of the scheme. Dialogue with East Midlands Railway (EMR) has examined potential resourcing solutions for early introduction of an hourly train service. The next stage will need to include detailed discussions on depot and stabling issues for the Maid Marian Line service and other service enhancements to be delivered by EMR.

There is a clear plan to address the risks and a strong team behind the scheme. The business case identifies the immediate activities which need to be undertaken to reduce and manage the risks and uncertainties identified.

This investment decision comes down to a question of timing. There is an opportunity for an oven-ready scheme to be opened within three years and the opportunity to realise benefits now and widen those benefits in the future. The alternative would be to wait for the perfect moment when HS2, the Integrated Rail Plan and Midlands Engine Rail are complete; Acting now will mean the integration of the network can be maximised, with the Maid Marian Line widening the benefits of nationally significant investment to follow.

With the support of Government, Network Rail and local partners we are targeting the first services to be operating as soon as December 2023, with new stations opening in 2025 and 2026.

# 1 STRATEGIC DIMENSION

## 1.1 Problem Statement: The Case for Change

Whilst economic scenarios will continue to emerge to consider the potential impacts of Covid-19, the significant uncertainty underlines the need for investment to be flexible to respond rapidly to locally relevant risk factors and outcomes, for instance local lockdowns, or the under-performance of key industrial clusters.

Ashfield Economic Recovery Plan 2020

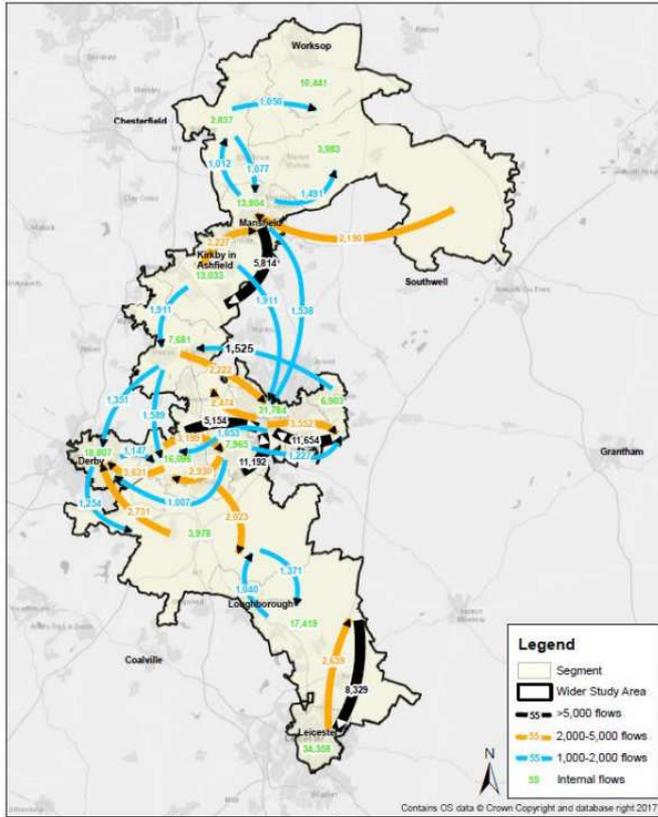
Economic recovery represents the over-riding short term focus, identifying initial priorities to guide business resilience and economic restoration over the next few years. At the same time partners have not lost sight of longer term economic growth aspirations as short term recovery responses are prepared and implemented. Whilst some existing strategic commitments will inevitably need to be re-prioritised in light of Covid-19 to reflect short term challenges, others will still remain relevant, albeit they may need to be adjusted to reflect a 'new normal'. This business case reflects this balanced view of the short and medium term to fast track a 'shovel ready' project.<sup>i</sup>

The headline issues which this business case focuses on are:

<p><b>Levelling Up</b></p> <p>Following the sharp fall in jobs expected for 2020 and the 2-3 year recovery, <b>longer term economic prospects in North Nottinghamshire and Derbyshire remain positive</b>, but growth is expected to be weaker than before. For example in Ashfield, a Combined Average Growth Rate of 0.65% between 2020 and 2040, and a net job growth of 8,100 seems positive, driven by health (+3,000) and Residential Care (+2,100).<sup>ii</sup></p> <p>Spend per capita in the South East has been ~900 per head, whereas the East Midlands has seen the <b>lowest level of investment across the regions at ~£270 per head</b>. This shows how important investment in the East Midlands region is to achieve levelling-up</p>	<p><b>Access to opportunities</b></p> <p>An assessment of the public transport accessibility<sup>iii</sup> highlights that the <b>travel horizons are limited</b> for the residents of Bolsover, Mansfield, Kirkby in Ashfield and in to Selston and Pinxton. The Robin Hood Line does provide good access to Nottingham, but connections by public transport to Derby, Loughborough and Leicester are poor.</p> <p>This is a critical gap as the travel opportunities in the wider network offer significant access to work, training and leisure. The ability to access this wider network is a limiting constraint for the communities in the area.</p>
<p><b>Reducing Carbon</b></p> <p>The reliance on car travel is contributing to the rising levels of carbon. Local and regional authorities each have a part to play in achieving net zero. High dependency on private car for commute journeys with <b>almost three-quarters of journeys to (71%) and from (70%) the study area by car</b>, motorcycle or taxi. Without new, enhanced and integrated public transport provision, access for existing and future residents and employees is likely to remain reliant on the private car.</p>	<p><b>Congestion and Air Quality</b></p> <p>Analysis of Trafficmaster data<sup>iv</sup> highlights <b>significant congestion between Mansfield, Ashfield and Derby</b> resulting in slower speeds, particularly during the AM and PM peak periods.</p> <p>As a consequence of rising NO<sub>2</sub> levels, Ashfield and Bolsover District Councils have <b>recently been the subject of a direction by the Secretary of State to take measures to improve Air Quality</b>.</p>
<p><b>Preparing for the future</b></p> <p>The scale of potential change in the East Midlands is transformational. The alignment of investment in transport and the wider economy will continue to be intrinsically linked. Each <b>investment will need to be considered as part of the bigger picture</b> for the region.</p> <p>The plans for HS2 are not yet confirmed, therefore this business case needs to reflect this uncertainty. There are also wider opportunities for supporting the Freeport in the region particularly at the Ratcliffe on Soar and East Midland Airport and Gateway sites. Phased delivery starting with an hourly train service and progressing over time to the full vision is considered to be feasible and desirable, to deliver benefits as soon as possible.</p>	<p><b>Areas of Deprivation</b></p> <p>Pockets of Bolsover, Ilkeston, Mansfield and Ashfield are <b>amongst the 10% most deprived nationally</b><sup>v</sup>, enhanced connectivity would support access to healthcare and employment, economic growth as well as reducing feelings of social isolation.</p> <p>A key barrier to re-entering the workplace and returning to normality is the ability of commuters to use public transport to travel into work. Google mobility data suggests Public Transport travel in Nottinghamshire is 26% below the baseline, and workplace trips 46% lower<sup>vi</sup>. The Maid Marian Line service will help to address this level of <b>"Transport Poverty"</b>.</p>

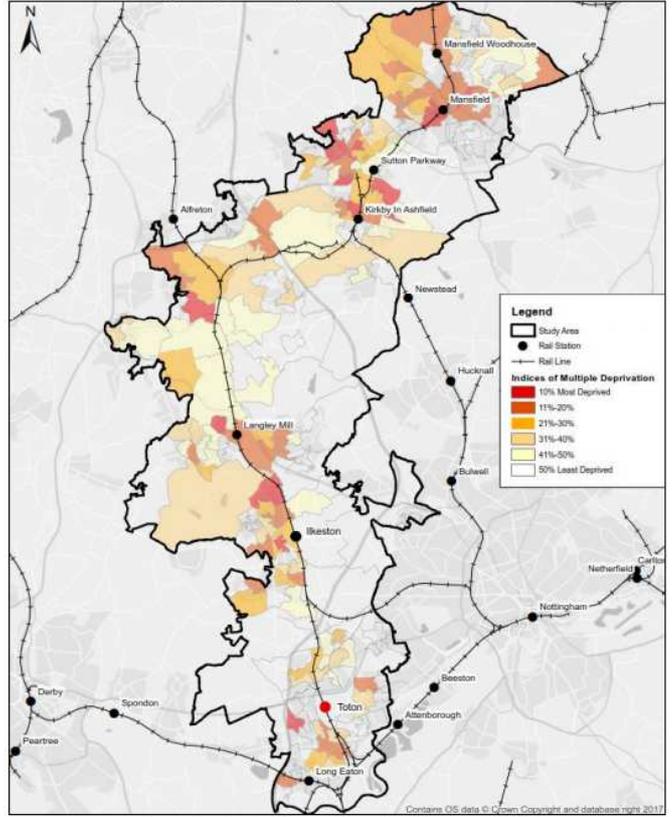
## 1.2 Key maps

### Census 2011 Travel to Work Flows



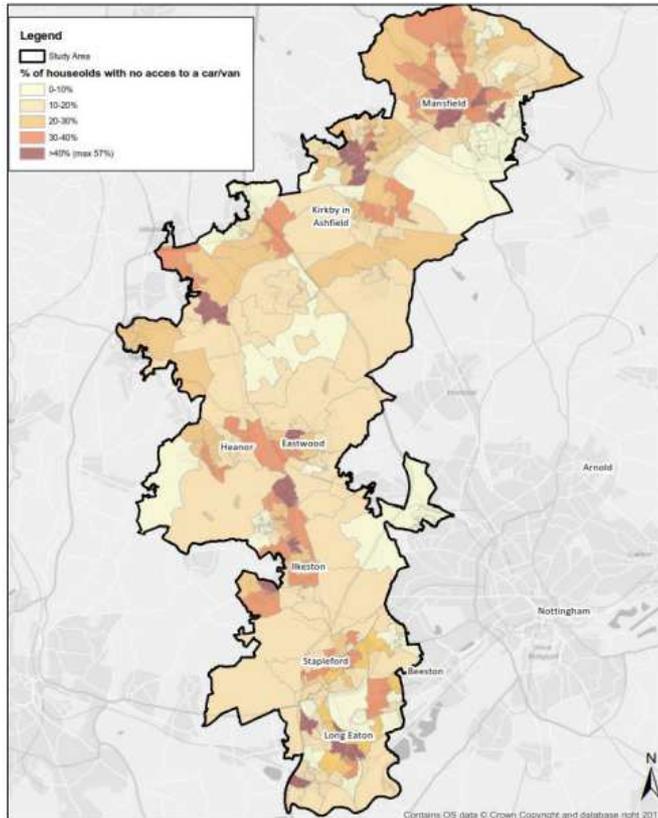
Source: Census, 2011.

### Areas of Deprivation



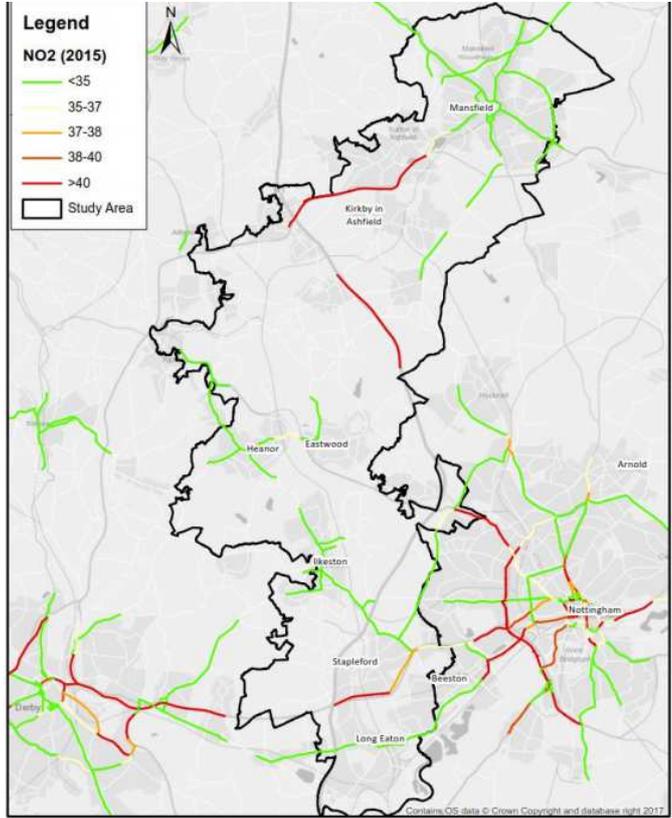
Source: Department of Communities and Local Government, 2015.

### Households without access to a Car



Source: 2011 Census.

### Air Quality – Nitrogen Oxide (NOx)



Source: Defra, 2017.

### 1.3 Strategic Alignment

“Bringing forward our £3.5bn rail improvement plan to revolutionise rail connectivity in the Midlands. At the moment, just 20% of journeys between the East and West Midlands are made by rail, compared to 50% of similar journeys elsewhere in the UK. Midlands Engine Rail will create faster, more frequent services across important routes in our region.” Midlands Connect

The D2N2 Green Growth Strategy sets out an ambitious drive for improvement through Low Carbon Growth, Productivity and Connectivity and Inclusion. The legacy of the industrial revolution has served the area well, but the challenge of climate change means we must now realign our social, environmental and economic goals for a Green Industrial Revolution. The D2N2 Local Enterprise Partnership has within its Local Industrial Strategy identified as key challenges poor regional rail connectivity, 28% higher than average emissions per capita and the majority of its local authority areas being classed as social mobility coldspots. Air quality is also a rising concern, with a recent emission control order placed in the area. Connectivity-driven growth forms one of the guiding principles of the strategy which states that "Transformed road and rail connections, both within and across our region's borders, is essential in unlocking the full potential of our communities – both socially and economically".

Midlands Connect has demonstrated the benefits of providing local connectivity in order to maximise the benefits that can flow from future investment in HS2, Northern Powerhouse Rail (NPR) and the Midlands Rail Hub. Its strategy highlights the untapped economic potential within the region that can be released through improvements to transport connectivity. This business case reflects priorities to improve connectivity to support the Midlands Engine by maximising access to employment, healthcare and education to enhance quality of life, improve the environment and strengthen the economy. This business case has been developed to be independent of Midlands Engine Rail and Northern Powerhouse Rail. The decoupling of the interventions will enable benefits for the communities in the immediate term, then secure further benefits as other nationally significant projects are delivered.

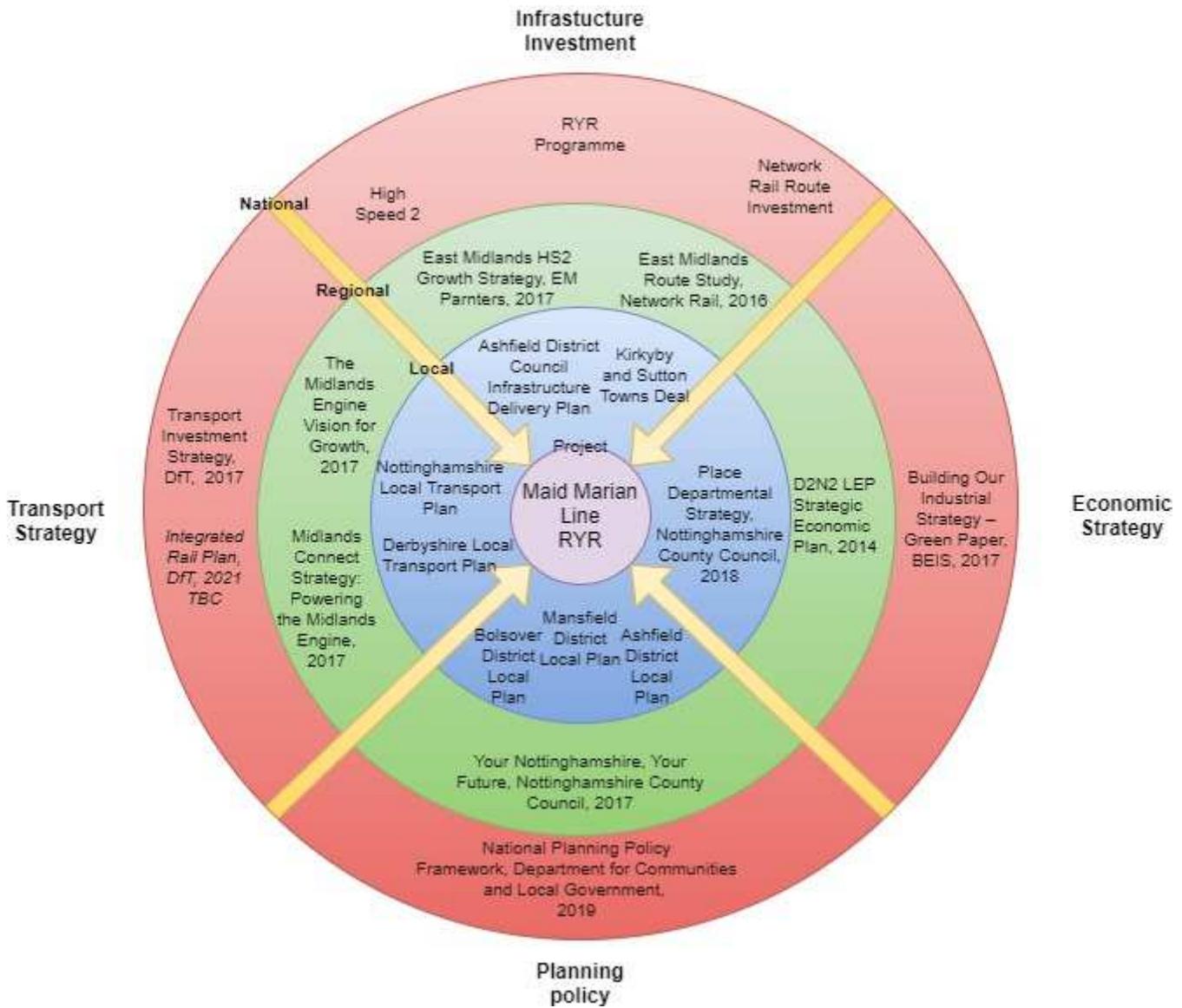
In the decade leading up to the outbreak of COVID-19, rail usage rose faster in the Midlands, than anywhere else in the UK<sup>vii</sup>. However, despite this growth, the majority of trips between the region's cities were made by car. Improving the speed, reliability and frequency of rail services is essential if we're to encourage more travellers to take the train and leave their cars at home.<sup>viii</sup>

The investment from Restoring Your Railway will align and benefit from Ashfield District Council's significant Towns Deal Funding which has been recently secured. The Towns Deal will deliver jobs and further education opportunities, long-term economic and productivity growth, new homes, improved transport infrastructure, reduced carbon and new cultural and visitor facilities.

The Towns Deal investment plan focuses on Business and education, Health and wellbeing, Boost visitor economy and Make Ashfield Greener. Each of these four investment areas will complement and support investment in rail as part of a wider plan to level-up the communities in the East Midlands<sup>ix</sup>.

There is a clear 'Golden Thread' for the Maid Marian project. Figure 1-1 summarises the line of sight from National Policy, though to regional and local plans which support the need for investment.

Figure 1-1 Strategic Alignment



## 1.5 Strategic Objectives

The Strategic Objectives have been developed to reflect both the short-term response to COVID recovery and the medium-term aspiration to renew the economy. Much of the previous work on Maid Marian Line has assumed it to follow completion of HS2 Eastern Leg and the Toton East Midlands Hub. This SOBC addresses the possibility of earlier, phased implementation that is not dependent on these outcomes, but would complement them once completed. The objectives for this SOBC also reflect some of the uncertainty of external influences on the final scheme, therefore have been developed to test options which are adaptable to future changes.

**Stable recovery** - support adjustment to the 'new normal'. This will not only help to protect the productive capacity of the East Midlands during what is likely to be a period of national financial downturn, but also ensure that the communities are better placed to respond to potential future disruptions.

**Good Growth** - this will seek to ensure that the East Midlands has the strongest platform possible for recovery by accelerating progress to meet the long-term ambitions for transformation, productivity and prosperity, aligned to the vision set out in the D2N2 Strategic Economic Plan. This includes maximising the opportunities for growth arising from the pandemic in a way that helps build a more resilient and innovative area and supports the 'levelling up' agenda within the wider region to the rest of the UK.

**Resilient to change** – the scheme will be developed to move people around in the face of a number of external uncertainties. This means the scheme is being created to accommodate future growth and possible changes to future usage or access patterns as a consequence of factors including the COVID recovery, the implementation of HS2 and the wider Integrated Rail Plan.

Strategic objective	Scheme Objective	Metric
<b>Stable recovery</b>	Improve connectivity for communities for employment, education, healthcare and leisure opportunities	Travel time from communities to key employment, education, healthcare and leisure destinations; 60 minute journey time with a single change
	Support planned regeneration.	Quantum of development within 2km of the scheme which would benefit
<b>Good Growth</b>	Level Up access to opportunities for communities	Number of people in deprived communities (IMD definition) served
	Have a positive contribution to Net Zero Carbon	Carbon intensity (CO <sub>2</sub> /trip) attributed to existing and new trips
	Have a positive contribution to improve Air Quality	Levels of NO <sub>x</sub> attributed to existing and new trips
<b>Resilient to change</b>	Adaptable to wider policy changes	Risk assessment of policy dependency
	Potential to widen benefits of complimentary investment	Rating of the potential contribution to known complimentary investments

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## 1.6 Strategic Option Assessment

The following long-list options were identified by stakeholders and have been evaluated against Multi-Assessment Criteria based on the Strategic Objectives for the scheme. Full details of the options identified and evaluated can be found in Appendix A.

- Do minimum
- Highway Improvements (A38)
- Hourly train service Mansfield Woodhouse to Derby via Maid Marian Line
- Half hourly train service Mansfield Woodhouse to Derby via Maid Marian Line
- Second service to serve East Midlands Parkway/Loughborough/Leicester via Maid Marian Line
- Improvements to existing bus services
- Demand responsive bus service
- Joint Maid Marian Line /Ollerton Rail Service
- Half hourly train service Mansfield Woodhouse to East Midlands Hub via Maid Marian Line
- Tram train extension of existing NET network

Options were assessed qualitatively and quantitatively using the following system:

Strong positive Alignment	Slight positive alignment	Neutral Alignment	Slight adverse alignment	Strong adverse alignment

The approach that has been undertaken is proportionate to the stage in the business case process and is a robust starting point to focus further options assessment in later stages of the business case process. Figure 1-2 provides an overview of the approach which has been undertaken. Figure 1-3 then sets out the outcome of the long list stage.

Figure 1-2 Options assessment approach

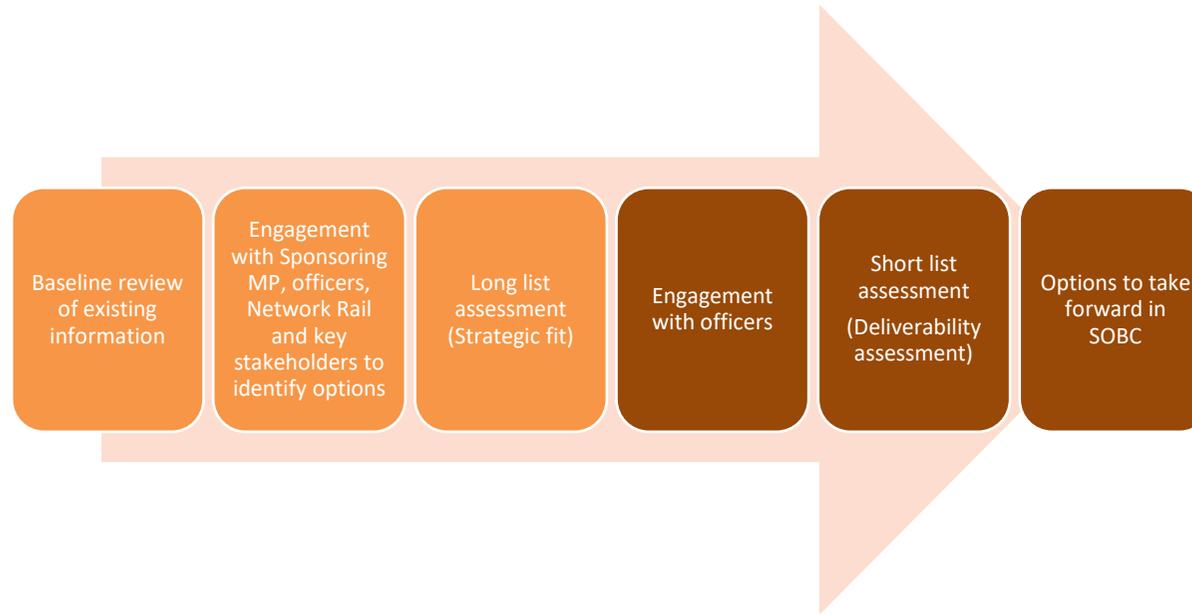


Figure 1-3 Long list options

Strategic Objective	Do minimum	Highway Improvements (A38)	Partial rail service	Full rail service	Extended rail service	Bus enhancement	Demand responsive bus service	MaML / Robin Hood extension	HS2 Hub service
Improve connectivity	Green	Green	Green	Green	Green	Blue	Green	Green	Green
Support planned regeneration	Blue	Green	Green	Green	Green	Blue	Blue	Green	Green
Level Up access	Blue	Orange	Green	Green	Green	Green	Green	Green	Green
Net Zero Carbon	Blue	Red	Green	Green	Green	Green	Green	Green	Green
Air Quality	Blue	Blue	Green	Green	Green	Green	Green	Green	Green
Adaptable to wider policy changes	Blue	Blue	Green	Green	Green	Green	Green	Red	Red
Widen benefits	Blue	Blue	Green	Green	Green	Blue	Blue	Green	Green
<b>Progress option to short list</b>	✓	✗	✓	✓	✓	✗	✗	✓	✓

The short-list of options was further assessed for Deliverability and Affordability, as summarised in Figure 1-4:

Figure 1-4 Shortlist options

	Do minimum	Partial rail service	Full rail service	Extended rail service	MaML / Robin Hood extension	HS2 Hub service
<b>Strategic Objective</b>						
Improve connectivity	Blue	Light Green	Light Green	Green	Green	Green
Support planned regeneration	Blue	Light Green	Green	Green	Green	Green
Level Up access	Blue	Light Green	Light Green	Green	Green	Green
Net Zero Carbon	Blue	Light Green	Green	Green	Green	Green
Air Quality	Blue	Light Green	Green	Green	Green	Green
Adaptable to wider policy changes	Blue	Green	Green	Light Green	Red	Red
Widen benefits	Blue	Light Green	Green	Green	Green	Green
<b>Deliverability</b>						
Makes use of existing assets.	Blue	Green	Green	Light Green	Green	Light Green
Can be accommodated with the existing freight and passenger operations	Blue	Orange	Red	Red	Orange	Light Green
Overall affordability	Blue	Green	Light Green	Blue	Blue	Blue
Has potential to attract local contributions	Blue	Light Green	Green	Green	Green	Green
<b>Scheme rank</b>	<b>N/A</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>5</b>
<b>Progress to OBC</b>	✓	✓	✓	✓	✓	✓

The further assessment of the scope of the project and the phasing will be a key outcome of the Outline Business Case to define a single preferred scheme and phasing plan.

## 1.7 Strategic benefits

The options assessment process has identified that there are a number of alternatives which can meet the Strategic Objectives. It will be important for the further development of the scheme to continue to examine the options before reaching a preferred scheme at the OBC. The strategic objective, defined from the strategic context, can be logically followed through to deliver the following strategic benefits. At a future stage of the business case process these strategic benefits can be monetised and form the economic case for the scheme.

<p><b>Levelling Up</b></p> <p>Mansfield District Council and Ashfield District Council have identified opportunities for new residential and employment areas within the respective Local Plans covering the period up to 2032/33. The combined impact of this is approximately <b>15,000 new homes</b> across the districts and it will be important to ensure there is sufficient transport capacity to facilitate this significant residential growth. Ambitious employment developments, particularly in Ashfield, make this accessibility more pertinent.</p> <p>The study area includes three authorities in the Government’s Levelling up priority two category and two in the priority one category.</p> <p>The scheme will complement and benefit from significant investment which will be delivered by the Towns Deal for Kirby and Sutton and Long Eaton and the Future High Street Fund. Including co-funding, the area will benefit from £100 million of investment on regeneration into the District over the next five years.</p>	<p><b>Access to opportunities</b></p> <p>The reopening of the freight line with additional stations would improve the connectivity and attractiveness of the area for investment and better accessibility for potential employees. It is important to establish the potential for new travel patterns before increased employment space is developed. The population of the study corridor includes <b>~350,000 people</b> from Mansfield to Long Eaton. This is a significant catchment in what is a mixed, urban and rural corridor.</p> <p>The proposed service would <b>service key employment and education destinations</b>, including King’s Mill Hospital and a large Amazon Distribution centre. New connectivity to employment opportunities in Derby, Chesterfield, Ilkeston, Leicester, Sheffield would be created.</p> <p>Connections with a single change at Langley Mill, Ilkeston, Derby or EM Parkway will contribute to much needed Levelling Up for the Ashfield, Bolsover and Mansfield Districts.</p>
<p><b>Reducing Carbon</b></p> <p>The contribution of transport to achieve Net zero Carbon is significant. Investment in improved public transport options which provide an <b>attractive alternative to the car is essential to create modal shift</b>. With car travel dominating mode choice there is a <b>significant market of potential customers</b> who could be attracted to use public transport and reduce Carbon emitted as a result of car travel.</p>	<p><b>Congestion</b></p> <p>The destination of commuting trips highlights<sup>x</sup> demand for travel to Nottingham, Leicester and Derby particularly. Greater public transport accessibility to these destinations would support modal shift from the car which eases congestion on the highway network. The results highlight the need to consider the <b>connectivity between Mansfield and Ashfield as well as onwards to the south, towards Derby and Leicester</b>.</p>
<p><b>Preparing for the future</b></p> <p>There are <b>highly sought-after areas for further growth</b> post Covid for warehousing and distribution. Improved rail connectivity will support the planned growth and enable opportunities such as the East Midlands Freeport</p> <p>Alongside the potential for economic growth is the opportunity to <b>realise and widen the benefits of HS2 and other national infrastructure investments</b>. An on-going assessment of the potential investment options is needed to maximise the significant economic impact for the area.</p>	<p><b>Areas of Deprivation</b></p> <p>Enhancing rail passenger connectivity within the study area would help to facilitate access to employment, healthcare and education opportunities. This improved accessibility would support economic growth as well as reducing feelings of social isolation. There is a concentrated area of deprivation around Mansfield and Ashfield so the conversion of a freight-only line to accommodate passengers would <b>support the improved quality of life for residents in this area</b>.</p>

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## DfT Priority outcomes for rail

In addition to the above regional objectives, the scheme has been assessed against the DfT objectives set out in the Rail Network Enhancements Pipeline. This shows a strong alignment between the pipeline and the Maid Marian Scheme.

<b>Keeping people and goods moving smoothly and safely</b> Delivering schemes which maximise the use of existing assets with minimum investment. Serve both passengers and freight.	<b>Delivering benefits from committed programme and projects already underway</b> Support the HS2 Growth Strategy and potential wider connectivity opportunities.
<b>Offering more: new and better journeys and opportunities for the future</b> The Maid Marian Line is part of a wider network opportunity to deliver intra-regional connections to the wider national network.	<b>Changing the way the rail sector works for the better</b> A 'one team' approach between the local/regional authorities, DfT and Network Rail to deliver a better, faster and cheaper project. Achieving this while supporting local ambitions to maximise the benefit of rail station assets.

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## 1.8 Scope

### Interventions

The full Vision for the Maid Marian Line is a service of 2 trains per hour operating post HS2 Eastern Leg completion. Once the HS2 East Midlands Hub is delivered, it is likely that these services would be part of the set of shuttle services linking Nottingham, Derby, Leicester and Mansfield to the EM Hub at Toton. The full Vision also includes the opening of a new station at Selston/Pinxton and at Kings Mill, once business cases, sponsors and funding can be identified for the two stations.

Phasing of interventions has been considered and will be developed in more detail at OBC stage, assuming that the SOBC submission is approved to progress to the next stage of development. The following sets out the proposed phasing strategy. The scope of the SOBC submission for the Restoring Your Railway programme has been focused down to the Minimum Viable Project, which would deliver Phase 1 of the wider Vision.

#### **Phase 1 – Hourly train service from Mansfield Woodhouse to Derby or East Midlands Parkway/Leicester**

– New station at Selston/Pinxton

– New Station at Kings Mill

**Phase 2 – Other Rail Schemes** including Robin Hood Line Extension to Ollerton, Ivanhoe Line, Melton Mowbray new service and Maid Marian Line half hourly train service

**Phase 3 – Longer term strategic investments** including HS2 Eastern Leg and EM Hub completion, half hourly shuttles Mansfield Parkway to EM Hub with possible extension to Derby or Leicester, CP7 and CP8 enhancement programmes

Network Rail has identified a possible requirement for signalling adjustments to allow for new stations to be opened. A new hourly passenger service is not believed, of itself, to require any changes to the existing track and signalling, however, a significant improvement in linespeed will improve journey times and attract higher levels of demand. The same is expected to apply for a two train per hour passenger service calling at existing stations. Again, these assumptions will be tested in more detail at the OBC stage.

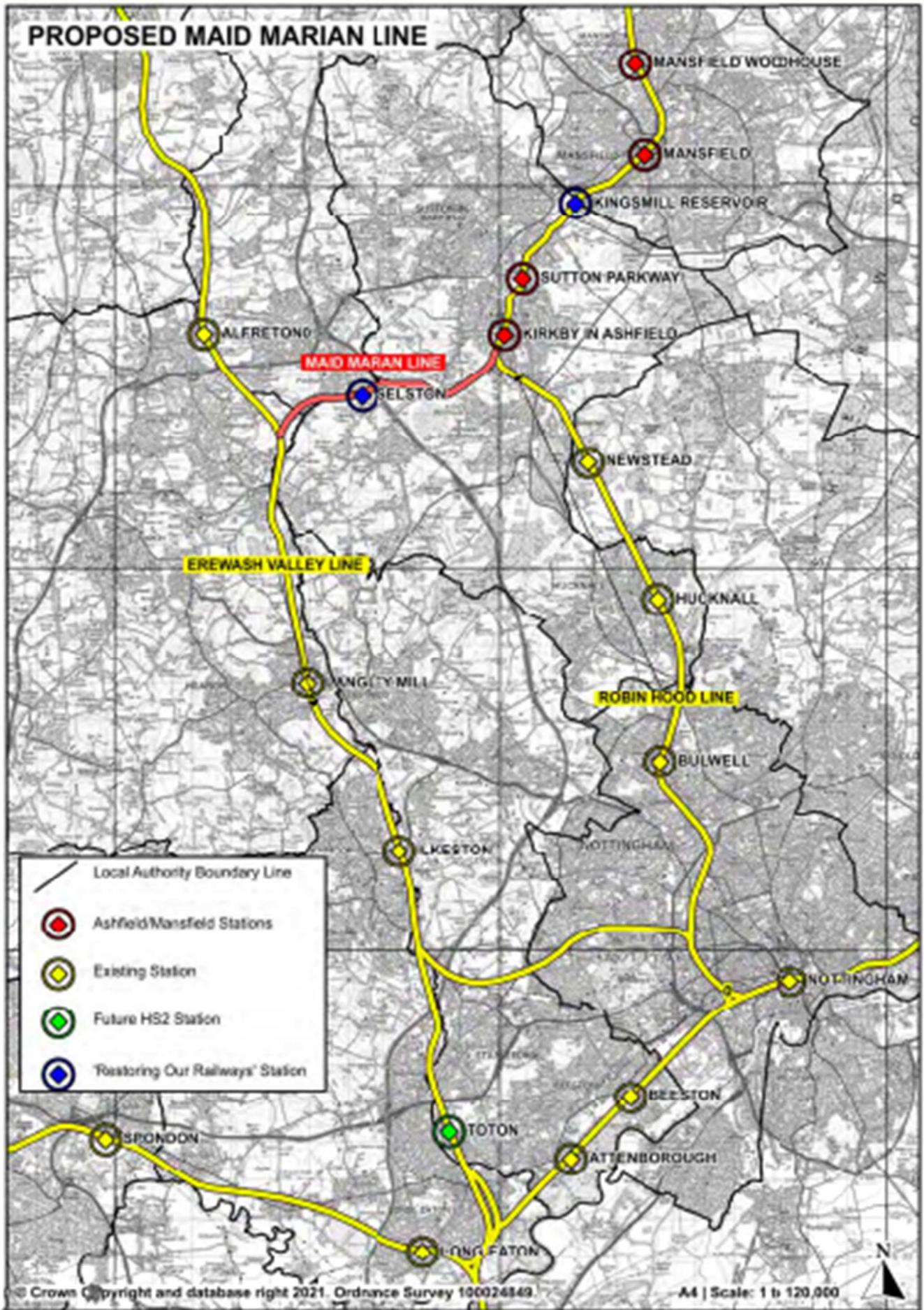
### Station Locations

New stations are proposed as follows:

**Selston/Pinxton - Station Road, next to the Station Hotel:** The Selston/Pinxton station location is adjacent to a level crossing, on Station Road. The platforms may have to be staggered such that trains calling at the new station stop after passing over the crossing. The most appropriate, safe form of operation will be confirmed with Network Rail and East Midlands Railway at OBC stage.

The rationale for providing a station at this location is to enable people living in the Selston and Pinxton areas to access opportunities for employment, education, healthcare and leisure by public transport, within a journey time of 60 minutes, including by making a single change at regional stations. This will provide significantly enhanced opportunities from Ashfield and Bolsover Districts to locations including Leicester, Loughborough, East Midlands Parkway, Long Eaton, Derby, Chesterfield and Sheffield. In addition, the station could become a valuable local community hub.

**Kings Mill** – Two potential locations have been considered, adjacent to Kings Mill Reservoir. The key drivers for locating a station here are the Kings Mill Hospital as a major healthcare facility and as a centre of employment, further employment opportunities in the vicinity, including a large Amazon warehouse and access from Ashfield District to opportunities in centres of employment that are currently not well served by public transport. In addition, the amenity value of the Kings Mill Reservoir is believed to provide potential for leisure travel to the new station.



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## 1.9 Future Compatibility

### Future Compatibility and alignment with other schemes & programmes

*At the time of writing, the Integrated Rail Plan for the Midlands and the North had not been published.*

An assessment of known and anticipated network enhancement schemes has identified potential impacts on and interactions with the Maid Marian Line proposals. Some uncertainty remains, regarding precise scope and timing for delivery of schemes expected to be included within the IRP. Prior to IRP, Network Rail has developed Project SPEED to optimise investments that are ready for implementation and that will contribute to recovery from the impacts of the Covid 19 pandemic on rail travel.

Previous assessments of the case for investing in the Maid Marian Line have been very much dependent on delivery of HS2 Eastern Leg and a Toton East Midlands Hub. This SOBC assumes that the Maid Marian Line need not be dependent on HS2 and that benefits can be delivered earlier by taking a phased approach, beginning with a new hourly train service at existing stations as soon as it can be timetabled, resourced and funded.

#### Project SPEED

The aim of Project Speed is to articulate and demonstrate how enhancements can be delivered more quickly and effectively using real-time live projects at varying states of the early delivery cycle, and to change the culture, processes and risk appetite in delivering projects. ‘Speed’ stands for Swift, Pragmatic and Efficient Enhancement Delivery. The Network Rail shortlist for implementation includes completion of Midland Main Line electrification to Nottingham, Derby and Sheffield – an extension northwards from Corby/Market Harborough following on from current and planned programmes.

#### Toton EM Hub

The EM Hub at Toton is expected to be delivered as part of HS2 Eastern Leg. While recent Ministerial announcements suggest that this scheme will be delivered, the scope and timing remain uncertain. This SOBC identifies a phased approach to delivering the Maid Marian Line proposals that is not dependent upon HS2 or the EM Hub. Importantly, the phasing takes full account of HS2 and ensures complementarity of Maid Marian Line delivery with HS2 and EM Hub.

#### Line speed improvements

In the event that NR brings forward a programme of line speed improvements, there may be opportunities to address the current speed restrictions on the Maid Marian Line. No track works have been included in the initial phases. This will be reviewed at OBC stage, in dialogue with Network Rail and its asset management teams.

#### NR Level Crossings programme

Future dialogue with Network Rail will include assessment of level crossings, including highway, footpath and occupation crossings on the line. At this stage, no detailed level crossing risk assessments have been undertaken. This will be necessary as part of the service planning workstream at OBC stage. It will also feature in developing options for the proposed new stations at Selston/Pinxton and Kings Mill.

#### Weather Resilience

The OBC stage will include discussion with Network Rail and East Midlands Railway regarding any measures that may be required to mitigate the impacts of bad weather on train service reliability. No weather resilience measures have been included at this SOBC stage.

## Rolling Stock options

The assumed rolling stock for purposes of this SOBC is a 2 car class 170 diesel unit as these are already part of the EMR fleet. As part of the Rail Decarbonisation agenda, the rail industry is committed to eliminating diesel traction from the network by 2040. Alternative technologies are already available, with further development under way to ensure that the decarbonisation objective can be met. While it is expected that Government will commit to a rolling programme of rail electrification, there is no certainty that the Robin Hood Line and Maid Marian Line will be fully electrified in the short to medium term. EMR currently operates electric services between London St Pancras and Corby, using class 360 electric multiple units. The current diesel trains operating Midland Main Line services from St Pancras are due to be replaced by class 810 Aurora bimode trains, built by Hitachi. These trains can operate with 25kv overhead electrification or diesel power.

Alternative traction solutions will be reviewed at the OBC stage, including the applicability of Hydrogen powered trains and battery powered trains.

The reopening of the Maid Marian Line offers a wider strategic opportunity and is part of the Strategic Transport Manifesto for the Midlands<sup>xi</sup> to transform local rail connectivity. The scheme presented in this business case is stand-alone and can be the catalyst for a phased programme of improvements.

The only confirmed schemes for CP6 (2019 to 2024) are MML Electrification and Tpton Junction crossovers; IRP is still yet to be published and the 5 yearly Regulatory Review PR23 process is just commencing for CP7 (2024 to 2029).



▲ Tpton Junction

▲ Trent Junctions

— Midland Mainline Electrification

● Maid Marian Line

## Conclusion

This SOBC and the emerging preferred option has been developed to be adaptable to the known uncertainties and opportunities. The scheme proposed to be progressed to OBC can be delivered independently of the external projects and policy decisions. The scheme and business case has however been developed to remain flexible as decisions outside of the scope of the scheme may provide opportunities to deliver greater benefits and better value. The project team has identified these external opportunities and will continue to evaluate the options as the business case and scheme mature.

As part of this flexible approach, recognition is also given to the progression of other proposals for the area, some of which require careful consideration to ensure integration and compatibility, and in particular to avoid abortive costs imparted by one project onto another. The following projects have been identified, along with key points of integration considerations required.

Interfacing Project	Key Considerations
<b>Predecessors to Maid Marian</b>	
High Speed 2 Eastern Leg decision	The confirmation of the plan to deliver the eastern leg of HS2 in full is pending. The MaML scheme should be progressed to be standalone and opportunities to widen the benefits of HS2 examined when a firm decision has been made.
Midland Main Line Electrification decision	DfT is expected to decide on completion of Midland Main Line Electrification to Sheffield in following publication of the IRP. There are likely to be a number of synergies with Maid Marian Line, including potential remodelling of the complex Trent Junctions and improved journey times on the Midland Main Line.
<b>Successors to Maid Marian</b>	
High Speed 2 East Midlands Hub	Potential to widen the benefits and travel opportunities with connectivity to HS2. The timescales for the delivery of HS2 are uncertain as the Integrated Rail Plan is developed
Robin Hood Line extension; Ivanhoe Line; Melton Mowbray	Potential to align the MaML scheme with a wider aspiration to extend services onto the Ollerton Line. Also need to consider potential for resourcing synergies with new services on the Ivanhoe Line from Burton to Leicester and to Melton Mowbray
Future role of tram-train	Longer-term aspirations include the extension of the Nottingham Tram. The opening of the MaML could create more network opportunities in the future.
Future Rolling Stock: Non-Diesel by 2040	Ensure availability of options through careful design choices. Compatibility with electrification would enable use of Electric Multiple Unit (EMU), which is dual electrified for 750V DC or 25kV systems. Also potential use of Hydrogen trains following a successful trial in Teeside by Northern and trials of alternative hydrogen fuelled rolling stock solutions by a number of train manufacturers.
Trent Junctions investment	As part of the railway industry's Continuous Modular Strategic Planning (CMSP) approach, Network Rail has examined the Strategic opportunities at Trent Junctions. While there was not a solution developed, the investment linked to HS2 will provide an opportunity to unlock a series of opportunities at this constrained location. Midland Main Line Electrification may also provide opportunities.

## 2 ECONOMIC DIMENSION

### 2.1 Costs

#### Capital Costs

The July 2018 Aecom Study<sup>xii</sup> identified a set of infrastructure investments that would be necessary on the Maid Marian Line to increase the linespeed from 20mph to 40mph. The Aecom analysis identified the following:

Both rail options require capital investment to upgrade the section of line between Kirkby Lane End and Ironville Junctions to regular passenger standards. The levels of investment required to deliver the timetables modelled (assuming line speeds are upgraded to 40mph) will vary based upon the underlying quality of assets and associated interventions required. As such, a range of potential values have been produced reflecting the minimum level of infrastructure investment required to operate scheme services, through to a more pessimistic value inclusive of additional investment in infrastructure.

Indicative total costs for the preferred options in 2017 prices are shown in Table 4.1. Note no capital investment is assumed to be required for the express bus option.

**Table 4.1: Indicative Capital Costs**

	Option A1: Half-Hourly Rail	Option A2: Hourly Rail	Option A3: Half-Hourly Express Bus
Capital Costs	Construction works	£4.3m - £6.8m	
	Preliminaries, overheads, profit and project development	£3.0m - £4.8m	
	<b>Total Base Costs</b>	<b>£7.3m - £11.6m</b>	<b>£0.0m</b>
	<b>Optimism Bias*</b>	<b>64%</b>	<b>n/a</b>
	<b>Total Costs</b>	<b>£12.0m - £19.0m</b>	<b>£0.0m</b>

2017 prices

\* Reflects early stage of development.

#### Capex Build-up

All chainages refer to the Pinxton Branch, Engineer's Line Reference PBS1. 40mph is permitted except:

- There is a short 30mph restriction between 134 miles 18 chains and 134 miles 20 chains on both tracks. This is probably due to the condition of one or more of several structures beneath the track in this area.
- There is a 20mph restriction between Pinxton level crossing at 135 miles 46 chains and Kirkby Lane End Junction at 138 miles 32 chains on both tracks, a total of 9.1km of track. The reason for this is unknown.

The following capital works are assumed:

Item	Cost Allowed £m		
	Level Crossing Upgrade Only	25% track renewal	50% track renewal
Re-building of two under-track culverts of 4ft diameter within the 30mph restriction.	-	0.1	0.1
Track upgrade equivalent to renewal of 25% or 50% (4.55km) of track on the 20mph section	-	2.8	5.4
Upgrade of Upper Portland level crossing from automatic (AHB) to manual with obstacle detection (MCB-OD) due to increased risk from faster and more frequent trains. It may be possible to delete this work after detailed risk assessment.	0.4	0.4	0.4
Provision of four signals and associated train detection to provide required signalling protection for MCB-OD. This work is not required if the level crossing upgrade is not needed.	0.8	0.8	0.8
Re-location of signals PK4770, PK4772 and KS101R on the 20mph section to give adequate signal spacing for 40mph, and of associated train detection equipment. Re-signalling is likely to replace KS101R within a few years, and if the replacement is suitably positioned this part of the work might be avoided.	-	0.5	0.5
Preliminaries, overheads, profit, project development	0.9	3.0	4.8
Total excluding contingency or optimism bias	2.1	7.3	11.6

Source: AECOM Estimate

The assumed infrastructure investment has been calculated by Aecom to result in a journey time saving over the section of line between Kirkby in Ashfield and Ironville Junction of 4.5 minutes. Journey times between Toton and Kirkby have been calculated using AECOM’s ARTEM journey time model. Existing times have been used between Kirkby and Mansfield Woodhouse. Timings are shown as minutes from origin station. They include dwell times at stations, and margins added to the raw running time as required by Network Rail’s planning rules. Speeds are assumed to be as existing, except that the “improved speeds” option assumes upgrades to 50mph between Ironville and Kirkby.

Station		Down, Existing speeds	Down, Improved speeds		Up, Existing Speeds (read upwards)	Up, Improved Speeds (read upwards)
Toton	Depart	0	0	Arrive	42½	38
Ilkeston	Arrive	6½	6½	Depart	36	31½
	Depart	7½	7½	Arrive	35	30½
Langley Mill	Arrive	12	12	Depart	30½	26
	Depart	13	13	Arrive	29½	25
Kirkby-in-Ashfield	Arrive	29	24½	Depart	12	12
	Depart	29½	25	Arrive	11½	11½
Sutton Parkway	Arrive	32	27½	Depart	9	9
	Depart	32½	28	Arrive	8½	8½
Mansfield	Arrive	37½	33	Depart	3½	3½
	Depart	38	33½	Arrive	3	3
Mansfield Woodhouse	Arrive	42	37½	Depart	0	0

Source: ARTEM, Working Timetables, Timetable Planning Rules

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The Network Rail Asset Management Plans for the route sections to be used by the proposed service will be reviewed at OBC stage to establish any opportunities that may arise from planned maintenance and renewal of assets on the line.

### **New Stations**

The two new stations (Selston/Pinxton and Kings Mill) have not been designed at this stage as single option development forms part of the OBC. Two potential locations have been identified for each station and included within the scope of the scheme. These locations will be evaluated for engineering and operational feasibility in detail within the OBC.

Broad ranges of costs to provide new stations can be identified but will be very much indicative and dependent on a number of factors:

- Track alignment and gradient
- Signalling
- Platform length
- Equipment relocation
- Flood risk & drainage
- Highway access
- Land acquisition
- Station facilities including ramps and lifts
- Staffed or unstaffed
- Car parking

A range of recent station schemes have been reviewed. For the most basic, compliant two platform stations, a capital cost range of £9million to £12million is believed to be deliverable, depending on site conditions, access and engineering possessions to enable construction.

Recent new station capital costs are listed below:

Warrington West, Cheshire	£20.5m
Hordern, County Durham	£10.55m
Bow Street, Ceredigion	£8m Single Platform
Reading Green Park, Berkshire	£18m
Low Moor, Bradford	£10.8m
White Rose, Leeds	£21m

### **Operating Costs**

A high level analysis of the potential operating costs for each option was undertaken by Aecom in 2018 in order to identify the broad quantum of ongoing incremental costs that can then be compared to the emerging ongoing incremental revenue. Both options were assumed to operate for 18 hours a day. Saturday and Sunday service levels were modelled as per weekdays. Average values were used relating to the use of modern diesel powered multiple units (2-car) that might still be expected to be operating by 2037. Other geographic specific costs (e.g. Network Rail's capacity charge) have been taken as averages from the area in which the rail service would be operating. It is assumed that two new trains would be required to operate the hourly service and four new trains would be required to operate the half-hourly service.

Operating costs have been broken down into fixed (e.g. lease, depreciation), variable (e.g. fuel, maintenance) and staff costs. These costs have been calculated based on 2018 prices and it should therefore be noted that no real cost inflation that may occur through to 2037 across any of the cost variables has been assumed.

Whilst the operational cost assessment has been produced based upon the latest data available in terms of information for each mode, there is a modicum of significant potential changes that may affect costs going forward to 2037 and beyond. These include (but are not limited to) staffing levels and the potential for automation, vehicle energy sources and electrification and changes to the organisational structure of the rail industry.

Annual Operating Costs were calculated to be as follows:

	<u>Half Hourly Rail</u>	<u>Hourly Rail</u>
Annual Operating Costs	£6.3m	£3.1m

2018 prices

### Operating Revenues

It is proposed that passenger demand modelling will be undertaken during Step 1 of the next Develop stage to allow the production of a comprehensive economic appraisal and cost benefit analysis. Analysis carried out by Aecom, for Nottinghamshire County Council in 2018, demonstrated that, by 2037, a Mansfield to EM Hub (Toton) service could attract between 0.9 million and 1.4 million new passenger journeys per year, equating to fare revenue in the range of £1.9 million to £2.4 million. This, it must be stressed, is a combined forecast using both standard growth forecasts and an overlaid HS2 growth assessment. If a service is introduced before HS2 and the EM Hub are delivered, taking into account the build up from the much earlier date of introduction, there is a likelihood that the 2037 demand and revenue figures would be greater than the Aecom forecast.

**Table 3.6: Existing Local Rail Connectivity Model – Journeys and Revenue for Valid Movements**

Option	2017 Journeys	2037 Journeys	2037 Journeys, including New Service	2037 Incremental Journeys	2037 Incremental Revenue
<b>Option A1: Half-Hourly Rail</b>	66,100	106,150	155,300	49,200	£92
<b>Option A2: Hourly Rail</b>			131,800	25,650	£48

2018 prices, £000

Enhancing the service frequency on parts of the network already served by rail services, essentially on the Robin Hood Line between Kirkby-in-Ashfield and Mansfield Woodhouse and also between Ilkeston and Langley Mill on the Midland Main Line, results in a noticeable increase in both demand and revenue.

### Station Patronage

Demand at the existing stations that would be served by the new Maid Marian Line service has increased significantly in the six years prior to the Covid 19 pandemic. The sole exception is Langley Mill, which experienced a reduction due to the opening of Ilkeston new station in 2017. Ilkeston saw an increase of 3.31% in its first full year of operation. The figures for Ilkeston and Langley Mill will inform detailed demand analysis at OBC stage for the proposed new stations at Selston/Pinxton and Kings Mill.

STATION PATRONAGE								
Station	Entries/Exits						Increase	% Change
	13-14	14-15	15-16	16-17	17-18	18-19		
Mansfield Woodhouse	139,852	158,692	169,506	179,602	185,806	189,524	49,672	35.52
Mansfield	313,826	366,858	394,640	399,360	409,136	401,826	88,000	28.04
Sutton Parkway	132,250	169,058	180,510	182,208	196,334	197,540	65,290	49.37
Kirkby in Ashfield	147,444	170,916	177,474	178,808	185,220	181,416	33,972	23.04
Langley Mill	93,554	106,542	115,686	121,442	101,824	93,078	-476	-0.51
Ilkeston					126,226	130,398	4,172	3.31

*Source: Office of Rail & Road (ORR)*

The introduction of a new rail service between Mansfield and the EMH via Langley Mill/Ilkeston has the potential to generate between 0.9m and 1.4m journeys per annum in 2037, depending on the option selected. Whilst there is a small element of new demand generated across existing rail flows (e.g. Langley Mill to Ilkeston or Sutton Parkway to Mansfield Woodhouse), the majority of the new demand is estimated to be sourced from new local direct journey opportunities by rail (e.g. Ilkeston to Mansfield or EMH to Kirkby-in-Ashfield) or from providing direct connectivity into longer distance travel (e.g. Mansfield to London). The analysis suggests that a half-hourly rail service would generate circa 20% to 30% more demand than an hourly service – with most of this additional growth being sourced from local movements.

Should the scheme be progressed, then it is recommended that a demand forecasting toolkit is developed to specifically represent the core markets likely to be served by the proposed scheme. This toolkit will need to be able to distinguish between the different market segments that would be served by the new rail service, including:

- Local movements in the study corridor not currently served by rail;
- The demand associated with new development;
- Impacts on demand across existing rail movements, both locally within the study area and longer distance
- HS2 impacts

## 2.2 Benefits

Consistent with DfT guidance for this SOBC submission, estimates have yet to be made for the economic benefits of the scheme. Instead, this section identifies the factors which are expected to deliver the majority of the economic benefits. The next phase of work for the scheme would be to expand on each of these factors to establish the monetised benefit.

### Journey Time Comparison

Journey time is a key factor informing modal choice and the comparative journey times between public transport and private car have been analysed. This seeks to identify those routes with comparatively longer public transport journey times compared with the private car and therefore likely to have a higher car dependency. Figure 1-45 summarises the existing public transport services from Mansfield and Kirkby-in-Ashfield to key destinations of Nottingham, Derby, Worksop, Chesterfield and Ollerton compared with car journey times. The results show the public transport journey time is slightly quicker than the quickest car journey time to Nottingham from both Mansfield and Ashfield - the comparative journey time to the other destinations was quicker by car compared with public transport. The journey time to Chesterfield and Ollerton by public transport was double that by car and reflects the reliance on bus or the need to interchange.

Figure 2-1 Journey time analysis undertaken in the Mansfield to East Midlands Hub SOBC

**Table 2.3: Public Transport Summary** (Arrive by 09:00, weekday)

	Nottingham	Derby	Worksop	Chesterfield	Ollerton
<b>Mansfield</b>	Rail: 00:35	Rail (x2): 01:04	Rail: 00:38	Bus: 00:52	Bus: 00:38
	Car: 00:40	Car: 00:35	Car: 00:28	Car: 00:20	Car: 00:18
	88%	183%	136%	260%	211%
<b>Kirkby-in-Ashfield</b>	Rail: 00:27	Rail (x2): 00:55	Rail: 00:47	Rail (x2): 01:17	Bus (x2): 01:18
	Car: 00:30	Car: 00:26	Car: 00:35	Car: 00:20	Car: 00:30
	90%	212%	134%	385%	260%

Source: Google (October 2017).

<b>Key: Public transport journey time as percentage of car journey time</b>	
<100%	Public transport quicker than car for the journey
100-149%	Public transport slightly longer than car for the journey
150-200%	Public transport considerably longer than car for the journey
>200%	Public transport extremely longer than car for the journey

### Journey Time Improvement

The comparison of uncongested road journey times versus rail journey times presented in

Figure 2-2 demonstrates that Leicester would be a preferable destination for a new hourly service, compared to Derby. Journey times between stations in Ashfield and Mansfield to Leicester are between 10 and 14 minutes faster by rail, assuming no road congestion.

The uncongested road journey times to Derby are generally 7 to 10 minutes faster than the rail journey time. This disparity is removed at peak times, as Derby suffers badly from road congestion between 0730 and 0930 and 1600 to 1800. Addressing the 20mph line speed on the section between Ironville Junction and Kirkby in Ashfield would reduce the rail journey time further, providing benefits to services travelling to Derby or Leicester. Further analysis would be needed, with input from Network Rail, to establish robust journey time improvements as a consequence of line speed improvements at OBC.

Figure 2-2 Initial comparison of potential journey time improvement car vs rail

	Leicester		Derby	
	Car	Rail	Car	Rail
Mansfield Woodhouse	72	59	46	53
Mansfield	68	56	43	50
Sutton Parkway	60	50	34	44
Kirkby in Ashfield	61	47	32	41

### Congestion Improvement

The scheme would provide the option to adopt sustainable choices for travel, reducing reliance on cars and so reducing road congestion. This shift will also have a positive impact on local air quality and carbon reduction.

### Connectivity: Access to Education & Employment

New journey opportunities would be available for residents to gain access to education and training in Derby, Leicester, Chesterfield and Sheffield. The service would also improve access to education and training opportunities in Ashfield, Bolsover and Mansfield which are due to be enhanced by Ashfield’s recent Towns Fund award, which includes plans for a new regional Automated Distribution and Manufacturing Centre (ADMC) to be in Kirkby, creating a regional centre of excellence.

In addition to the ADMC, there will also be construction and civil engineering education centres working with and Nottingham Trent University (NTU); library innovation centres; MakerSpace, business hubs and industrial start-up units , along with a focus for STEM subjects at the nearby Planetarium and Science Discovery Centre. Bolsover District does not have any higher education or further education facilities therefore reopening the line and a station in Pinxton/Selston will provide more opportunity to access education including facilities in Derby and Nottingham and Ashfield and Mansfield. It also opens up opportunities for work including better access to the proposed Freeport and the Amazon Distribution Centre.

The Ilkeston campus of Derby College, which is within walking distance of Ilkeston station, has also seen significant investment in recent times and has become the centre for tertiary education in northern Erewash and eastern Amber Valley drawing pupils from a wide large area to a variety of academic and careers focused practical training courses. Projects being developed in Long Eaton as part of the recently announced £24.8m Town Deal will see new employment sites being developed in areas adjacent to the rail station as part of a wider regeneration of the town centre breathing new life into the area.

Access to employment is an important factor, both to encourage business to invest in the East Midlands but also to facilitate access to more productive jobs in the adjacent major centres of employment. Ashfield is well positioned to attract inward investment and to support businesses both locally and in the cities of Derby, Nottingham, and Sheffield. With the support of VWNC and NTU, who have recently opened a campus in Mansfield, a Research & Innovation, and Teaching & Learning “platform” is already under development on which to base the ADMC, allowing the development of a proposition unlikely to have been imagined in the area previously. It will also align with the Enterprising Ashfield business and skills support programme.

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### Connectivity: Access to leisure and tourism

The new journey opportunities provided by a Maid Marian Line service would enable residents of Ashfield, Mansfield and Bolsover much improved access to leisure and tourism opportunities by interchanging with longer distance services. The future opening of a new station at Kings Mill would provide opportunities to access the amenities around the reservoir which are currently being enhanced by a £1.45 million Heritage Lottery funded project.

Enhanced rail links to Langley Mill station will also support the wider regeneration there and in Heanor which has recently been awarded £8.5m in Future High Street funding. This includes the Heart of Heanor project around the market square and the Hub on the old Grammar School site. Both schemes seek to secure improved connectivity through public transport enhancement and pedestrian routes into the heart of the town linking a variety of community developments and new leisure facilities, which will include a cinema and food and beverage outlets to encourage greater use of the town centre in the evenings.

## 2.3 Social and distributional impacts

A Distributional Impact Screening should be undertaken at the next stage of development for the Maid Marian Line scheme. An initial assessment has been presented in the table which follows to indicate where the screening is expected to identify further analysis to be undertaken.

<b>ENVIRONMENTAL &amp; SOCIAL IMPACT</b>		
<b>Aspect</b>	<b>7-Point Scale</b>	<b>Rationale</b>
1. Noise	-1	Some intensification of rail use will increase noise for people and businesses adjacent to the line. This is both incremental and there are very few sensitive locations.
2. Local Air Quality	+2	The promotion of public transport is intended to result on a net reduction of car trips. The area has recently been placed under a Direction for Air Quality
3. Greenhouse Gases	+1	The promotion of public transport is intended to result on a net reduction of car trips. Further benefits might be accrued from implementing zero carbon rolling stock
4. Landscape	+1	The reinstatement of the line will have a local benefit to the surrounding landscape.
5. Townscape	+1	The reinstatement of the line will have a local benefit to the surrounding townscape. Further benefits will arise as the new stations are opened in future phases.
6. Heritage of historic resources	+1	The reinstatement of the line will bring back into use historic resources.
7. Biodiversity	0	No impact identified.
8. Water environment	0	No impact identified.
<b>DISTRIBUTIONAL IMPACT APPRAISAL</b>		
<b>Summarise the expected impact of your scheme on relevant groups:</b>		
<b>Item</b>	<b>Impact</b>	<b>Relevant Groups</b>
1. User Benefits	+2	Areas of deprivation are identified along the route.
2. Noise	-1	Areas of deprivation are identified along the route. The impact on sensitive locations and young and old people would need to be established.
3. Local Air Quality	+2	Areas of deprivation are identified along the route. The impact on sensitive locations particularly considering young and old people would need to be established. The study area also impacts on an AQMA.
4. Accidents	0	The scheme objectives are not intended to impact on accidents
5. Security	+1	Station design impact is expected to be positive for vulnerable groups and should be considered at the next stage.
6. Severance	0	The scheme objectives are not intended to impact on severance
7. Accessibility	+1	Accessibility for vulnerable groups should be considered at the next stage.
8. Personal Affordability	+1	Areas of deprivation are identified along the route.

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## 2.4 Disbenefits & Risk to the current network

Network Rail has supported this SOBC by undertaking capacity analysis for a new hourly passenger service between Mansfield Woodhouse and Derby. A further option of a half hourly service has also been assessed, through a timetable planning exercise. Network Rail has undertaken further assessment to establish whether the second train per hour could operate to East Midlands Parkway, Loughborough and/or Leicester.

The aim of the Network Rail analysis was to test the feasibility of restoring passenger services to the Maid Marian Line by performing the below tests to establish whether the services can be accommodated from a capacity perspective:

1) 1tph Mansfield to Derby (current plus committed train service baseline)

2) As (1) above plus 1tph Mansfield to Leicester (current plus committed train service baseline)

HS2 sensitivity:

3) 1tph Mansfield to Derby (considering additional HS2-connectivity services)

4) As (3) above plus 1tph Mansfield to Leicester (considering additional HS2-connectivity services)

The Network Rail report identifies the key considerations which will need to be examined further in the Develop stage. The following highlights the executive summary, with the full report provided in Appendix C:

- Junctions around Toton Centre are low in available capacity, these include:
  - Ironville Junction, Trent Junctions and Trowell Junction.
- Where conflicts at the aforementioned junctions were resolved, the passenger service would then find conflict with freight headways.
- Conflicting margins out of Derby; particularly around Derby Way Works in the Up direction.
- No hourly pattern to services in this area, therefore unable to replicate the paths identified throughout the day.
- Freight services causing most conflicts, as well as Long-Distance High-Speed services

What are the risks?

- The Indicative Running Times have been calculated using a speed/distance/time calculation – further detailed review of these timings would be needed once the exact planning locations and stopping patterns have been established. It should be noted that the NR assessment identified faster journey times for a service on the existing network infrastructure than the timings assumed in the July 2018 Aecom study. The next Develop stage of work will include more detailed analysis to confirm the impact on improved journey times that can be achieved by implementing the £12million to £19million investment in infrastructure improvements on the Maid Marian Line.
- No performance analysis has taken place. Should this scheme be progressed this would be required to establish the impact on the current timetabled services.
- This exercise has looked at available paths, but project timescales meant that options such as retiming other services (including freight) has not been tested and further work would be required to do so.

## 2.5 Impacts on competition

There is good local bus coverage in the study area with connections to Nottingham and Derby as well as the local area. There is frequent bus service provision to Nottingham with the Pronto service<sup>xiii</sup> operating every ten minutes and one of the Threes also operating every ten minutes. The Nines service from Mansfield to Derby also runs every fifteen minutes. Journey time is a key factor informing modal choice and the comparative journey time between public transport and private car will be an important area of benefit for the new rail service. As part of the preparation of Nottinghamshire's Bus Service Improvement Plan (BSIP) the importance of integrated bus and rail connections for the new stations has also been highlighted as a strategic priority for a more integrated public transport network<sup>xiv</sup>.

The potential to connect the communities to the East Midlands Parkway and wider rail network is likely to result in a highly complementary new service, providing connectivity to locations which are currently poorly served by bus. The proposed rail service will provide different travel opportunities to many of the bus based trips and therefore it is expected there would be limited abstraction between bus and rail. The main area of competition will be between services that connect communities to Derby.

As the rail service would provide completely new journey opportunities by rail, it is expected to add to net rail revenue, rather than abstracting revenue from existing services, including Robin Hood Line and services between Nottingham and Sheffield via Ilkeston and Langley Mill.

There has been a recent development in Ashfield by a major warehousing distributor with an additional 1800 jobs with further developments associated in Mansfield. Businesses in this location have been lobbying for an improvement to the bus services in the locality. The recently approved development opened in October 2020 and is providing its own bus links initially to service the warehouse but there are concerns in relation to the impact on the road network of staff shifts. Bus connections linked to a new rail service would be a more sustainable approach and limit impact on air quality whilst providing quick and efficient means of transport to and from work and leisure destinations.

## 2.6 Initial Value for Money Statement

It is not possible to calculate a preliminary BCR at this SOBC stage due to a number of benefits not yet being quantified financially. However, it is anticipated that the scheme will yield a BCR that is Low to Medium Value for Money.

The high-level comparator exercise indicated total passenger new to rail revenues for the project of between £0.48m and £0.92m per annum, compared to an estimated operational cost of c. £3.1m to £6.3m per annum. The estimated operational costs are believed to be at the high end of a range and will be thoroughly tested in detail at the OBC stage.

The following opportunities have been identified to improve the BCR and will be further investigated at OBC:

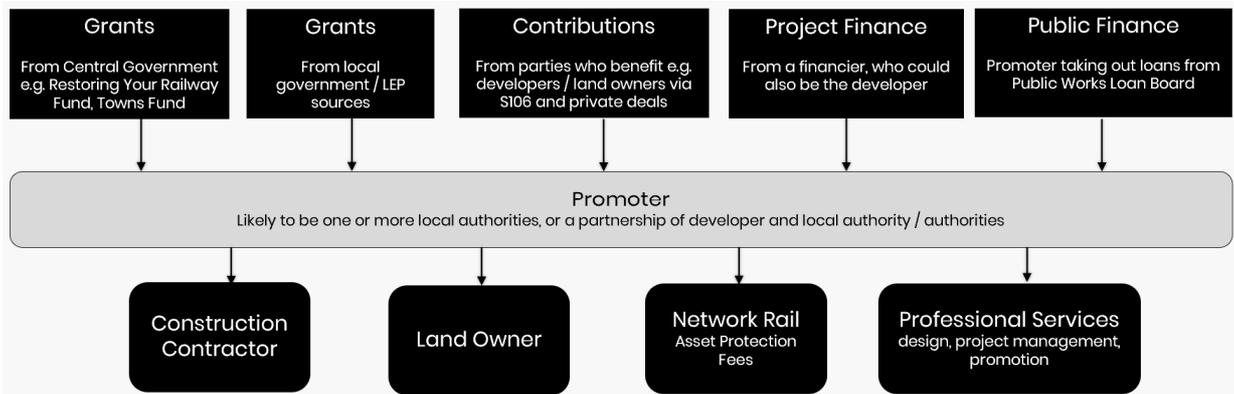
Increase in Benefits	Reduction in Costs
Half hourly train service to drive up demand and revenue, reducing potential subsidy requirement	Lower specification rolling stock. Potential for lower lease costs, fuel and maintenance costs
Connection to future HS2 Hub	Separating out delivery of scheme elements off the rail network to remove Network Rail standards where appropriate.
Connection to Leicester, Loughborough and East Midlands Parkway	Significant increase in connectivity and demand, reducing subsidy requirement
Extension of one hourly London St Pancras service from Leicester to Mansfield Woodhouse via Erewash Valley	Direct service to London and key interchanges on Midland Main Line drives substantial new fare income, reducing and potentially eliminating subsidy requirement
Integration with other RYR schemes	Potential synergies from more efficient resourcing of a package of new services

### 3 FINANCIAL DIMENSION

#### 3.1 Funding Models

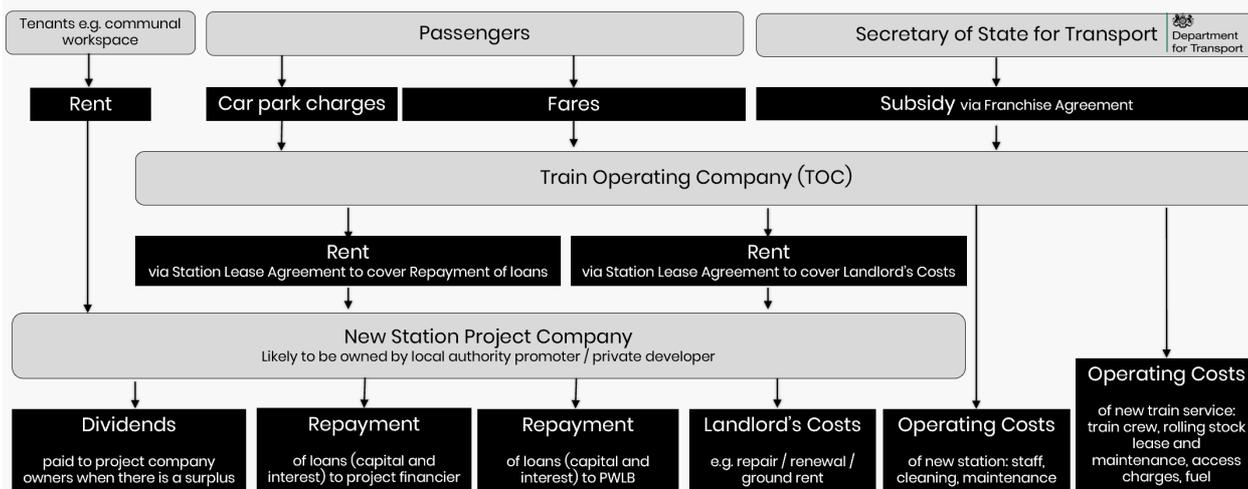
New station promoters can raise funding and finance from a number of sources, each of which has advantages and disadvantages. It should be noted that details may vary from station to station along the line and will be further developed during the Develop phase. [Note: arrows denote money flows]

##### Construction Phase



##### Operational Phase

Grey boxes denote parties; black boxes and arrows denote money flows



## 3.2 Cashflow and Funding Profile

The cashflow profile has been estimated from the indicative project development programme and scheme cost estimates. The table below provides a forecast of the anticipated expenditure required to develop the scheme through each of the DfT Rail Network Enhancements Pipeline (RNEP) stages.

Table 1 Capital Costs Profiling - £39million 2023 – 2026

<u>Infrastructure Upgrade to improve 20mph linespeed to 50mph</u>			<u>New Stations, proposed at Pinxton/Selston and Kingsmill</u>		
2023	15%	£2.25m	2023	20%	£4.8m
2024	20%	£3.0m	2024	30%	£7.2m
2025	35%	£5.25m	2025	30%	£7.2m
2026	30%	£4.5m	2026	20%	£4.8m
<b>Total</b>	<b>100%</b>	<b>£15m</b>	<b>Total</b>	<b>100%</b>	<b>£24m</b>
<u>Total Capital Investment profile</u>					
2023	18%	£7.05m			
2024	26%	£10.20m			
2025	32%	£12.45m			
2026	24%	£9.30m			
<b>Total</b>	<b>100%</b>	<b>£39m</b>			

## 3.3 Funding Sources

The following Funding Sources have been identified to potentially contribute to the cost of the scheme. The extent and confirmation of contribution would be identified at the Develop stage and use the Restoring Your Railways funding to lever in contributions from a range of contributors. Securing funding from these sources could enable the proposed stations and associated investment on the network to be brought forward.

- The Levelling-up fund
- Towns Deal fund
- D2N2 LEP
- Midlands Connect
- Developer Contributions (e.g. S106)
- Local Authorities
- Local businesses
- New Stations Fund applications for Selston/Pinxton and Kings Mill stations

## 3.4 Impact on other policies or projects

In section 1.8 of the Strategic Dimension this SOBC sets out the Future Compatibility with a number of external projects and programmes which interface with the Maid Marian Line Scheme. The work undertaken, supported by engagement with key stakeholders, has identified the following impacts on other policies or programmes:

- Midland Main Line (MML) Electrification  
Scope and timing of MML electrification may provide opportunities to facilitate introduction of more reliable paths and improved journey times for an hourly Maid Marian Line service. It may result in improvements to the complex series of flat junctions at Trent. This will be assessed in detail at OBC stage, in collaboration with Network Rail and train operators.
- HS2 and Toton station  
Maid Marian Line new service at existing stations is compatible and likely to enhance the business case for Toton EM Hub, if delivered prior to HS2. Service provision during HS2 works and impacts on the Erewash Valley Line will need to be considered at OBC stage and in light of HS2 delivery programme.

### 3.5 Costing the next phases of work

It is proposed to undertake the Develop stage in two steps. The first step will address some key risks that have been identified to enable the BCR to be maximised. This includes train timetabling and resource assessment, level crossing risk assessments, maximising demand and therefore revenue, agreeing requirements and establishing land acquisition requirements and external funding contributions to minimise the cost to the taxpayer. It is recommended that the Develop stage includes dialogue with sponsors of other schemes with potential synergies in terms of operational planning and resourcing, including the Robin Hood Line Extension, Ivanhoe Line and Melton Mowbray new service. Table 2 identifies the proposed activities to be undertaken in Step 1 and Step 2 of the Develop stage to complete the Outline Business Case.

Following **Step 1**, the project will progress into **Step 2**, at the discretion of the Project Board.

Table 2 Develop stage costing

Item	Activity	Organisation	Cost £	Timescale (Subject to funding)
<b>Step 1</b>				
1.	Network Capacity Modelling inc. Leicester, Trent Junction	Network Rail	c. 160k	6 months, post award of funding
2.	Integration and options study	Notts CC		
3.	Refine Requirements (inc. future integration & interfacing projects)	Ashfield		
4.	Station Location Option Assessment	Ashfield/Bolsover		
5.	Key Risk Management/Mitigation Activities	Ashfield		
6.	Passenger demand modelling to verify BCR, Affordability & Deliverability	Ashfield		
7.	Review of Track and Signalling opportunities and requirements	Network Rail		
<b>Step 2</b>				
8.	Basic Asset Protection Agreement (BAPA)	Network Rail	c. 1.8m	12 months, post award of funding
9.	Design Development & Option Selection	Ashfield		
10.	Surveys	Ashfield		
11.	Design development and option selection	Ashfield		
12.	Confirm External Funding Options	Ashfield		
13.	Assurance: CSM/RiR (System Definition, System Safety Plan and Project Authorisation Strategy)	Network Rail		
14.	Train Service Concept Agreement	EMR		
15.	Operational Cost & Economic Benefits Review	Ashfield		
16.	Develop Outline Business Case	Ashfield		

### 3.6 Funding requested to move to RNEP Develop stage

The RNEP Develop stage has been divided into two steps and is estimated to cost c. £1.96m in total based upon benchmarks for new railway enhancement projects.

Ashfield District Council as the accountable body is seeking approval of investment up to c. £1.96m to manage the proposed work and develop the OBC. This approval will be used to resolve the key points of uncertainty in the SOBC, prior to making a more substantial investment to develop the full OBC.

Ashfield District Council and partners are prepared to mobilise and undertake Step 1 activities from September 2021, which would require funding from the DfT, alongside a local contribution. Ashfield District Council and the project partners would also seek to reach agreement with DfT on the longer-term sponsorship and resourcing of the scheme design and development.

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## 4 COMMERCIAL CASE

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### 4.1 Delivery and Ownership Models

The Commercial Case provides evidence on the commercial viability of the proposed option and the procurement strategy that will be used; this concentrates on the rail options at this stage. Understanding the commercial viability of a scheme is the first step in ensuring due diligence for any project. This section has been developed by providing a summary of the output specification and the outcomes that would be supported by these requirements, the procurement objectives, outcomes and constraints and identification of potential procurement / purchasing options.

#### 4.1.1 Output Based Specification

Multiple outputs and outcomes must be considered with regards to procurement options. These are:

- Delivery of the scheme within the available funding;
- Delivery of the scheme to the specified timescale of the programme;
- Ensuring full commitment to the scheme;
- Ensuring 'Best Value' is delivered;
- Offer of an affordable 'whole life' cost;
- Reduction of risks to a level that is as low as practically possible – notwithstanding this, it is also important to ensure any transfer of risk to a third party does not impact on scheme quality, affordability or the ability to deliver best value; and
- Establish contractor and stakeholder engagement throughout the whole process from early planning to scheme delivery.

#### Specification

A proposed scheme specification has been developed following completion of the option assessment and VfM assessment. This presents the key outputs that are required to support the scheme objectives:

Introduction of a new rail passenger service between Mansfield Woodhouse and Derby with a minimum of one tph;

The new service will call at a number of intermediate stations. These include Mansfield, Sutton Parkway, Kirkby-in-Ashfield, Langley Mill and Ilkeston. The service will operate throughout the day Monday to Sunday;

Further development to establish the feasibility of operating a two trains per hour service, with the second hourly train operating between Mansfield Woodhouse and Leicester;

A new station at Selston/Pinxton to serve the local communities of Selston and Pinxton;

A new station at Kings Mill to serve local employment, Kings Mill Hospital and the amenity value of Kings Mill Reservoir;

Integration with East Midlands Hub at Toton and the proposed network of shuttle services to interchange with HS2 services.

#### 4.1.2 Procurement Strategy

Previous analysis of Maid Marian Line proposals has assumed that the scheme follows delivery of the HS2 Eastern Leg and East Midlands Hub at Toton. Increased uncertainty regarding scope and timing of HS2 means that this SOBC considers Maid Marian Line as an early intervention, in advance of any HS2 works in the study area.

Procurement issues therefore primarily relate to the work required to enable passenger services to operate on the network (including rolling stock and infrastructure requirements) – this is discussed below:

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## New Passenger Service

At this stage, procurement of the passenger service is assumed to be via a future East Midlands Railway concession, noting the revised approach to the former rail franchises that was announced in the Williams Review in May 2021 and that ongoing local funding to support the rail service operation would not be required. Through the business case process, an assessment of existing and future rolling stock provision is required to understand whether rolling stock availability is considered a constraint. It is assumed that rolling stock requirements would be dealt with under future service specification. Previous work identified that two rolling stock diagrams would be required to operate an hourly service between Mansfield Woodhouse and the HS2 East Midlands Hub at Toton. To operate an hourly service to Derby or Leicester would require one additional unit diagram.

## Infrastructure

Given that Network Rail is the organisation which owns and is accountable for the operation, maintenance and renewal of railway assets, it is recognised that there will be a requirement for Network Rail's involvement in some form. Network Rail's involvement is critical due to their role as 'Infrastructure Manager' and 'System Operator' of the national rail network. Irrespective of the procurement route, it will therefore be Network Rail's role to verify that the scheme is completed and integrated within the existing rail operations.

As Infrastructure Manager, Network Rail possesses a considerable interest in any proposed improvements to the rail network, and as such, there are certain services that only Network Rail can supply, these are described as 'non-contestable' services. Non-contestable services include:

- Protecting the railway network and its operations;
- Information provision;
- Safety management; and
- Consents and access to the network.

## New Stations Procurement

Different options exist for funding, financing and ownership of the new stations, each of which brings varying advantages and disadvantages for the Local Authority Promotor in terms of level of control, risk and potential future revenue. Further work will be undertaken during the Develop phase to determine the optimum model to deliver maximum benefits from the scheme.

- Third party promoted, Network Rail delivered and owned
- Third party promoted and delivered, then handed to Network Rail to own
- Third party promoted, delivered and owned

## Network Rail

In this scenario, Nottinghamshire County Council (NCC) in partnership with ADC could act as a third party sponsor for the delivery of any infrastructure works required, with Network Rail engaged to undertake the delivery on NCC's behalf. Network Rail would be responsible for negotiating and appointing the contractor via their frameworks. This model was utilised on the Borders Railway project in which Transport Scotland commissioned Network Rail to deliver the scheme on their behalf. The initial stages of Governance for Railway Investment Projects (GRIP), up to option identification could still be led by the Council(s), before transitioning to Network Rail for Stages 4 to 8 (further details on the GRIP process is provided in the Management Case). Network Rail would have access to a traditional contract with separate detailed design and tender at GRIP Stage 5 or Design and Build with tender at GRIP Stage 4. It would normally be expected that GRIP related costs would be funded by the scheme promoter (NCC in this instance). This procurement route is the most common procurement route for rail projects promoted by third parties.

## NCC

NCC and ADC as third party investors could look to take forward any infrastructure requirements required on the network to introduce new passenger services. Given the high value and complexity of such work, there is potential to take such work to the market as a Design and Build (D&B) contract. The disadvantages relate to the limited relevant experience of NCC in managing a delivery contract for works on the rail network.

### Strategic Construction Partner

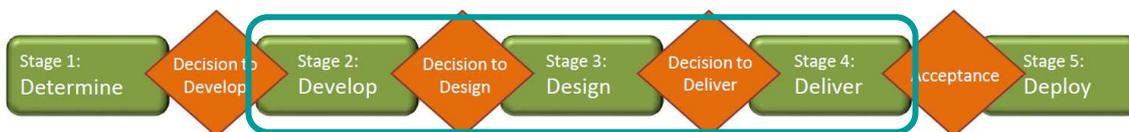
There are a number of frameworks available to local authorities such as the Scape National Civil Engineering and Infrastructure Framework. If NCC signed up to this, it could appoint a qualified pre-approved contractor. For instance, in the case of Scape, Balfour Beatty is the current appointee to the Civil Engineering Framework Lot and can provide assistance at the feasibility, pre-construction and construction stage. A recent example of this is the procurement of the Warrington West Railway Station, led by Warrington Borough Council as the scheme promoter, with Balfour Beatty engaged via the framework to deliver high value engineering work on the rail network.

### Private Finance Initiative (PFI)

In this scenario, private firm(s) provide the capital for the major infrastructure project. The firm is contracted to complete and manage the projects. Rather than the Government, the private firm is responsible for the up-front capital costs to construct the project. The infrastructure is then leased, and the government makes annual payments to the private firm. Whilst there is no large upfront capital cost outlay required to construct the scheme, PFI contracts are typically greater than 25 years with annual repayments plus interest placing a long term future liability/burden on the scheme promoter. PFI arrangements typically include a complex procurement arrangement. Experience of PFI from recent years across the public sector has raised issues regarding whether the contracts have achieved good value for money. On the assumption that substantial works are not required to deliver passenger services, it is not envisaged that this option would be taken forward.

## 4.2 Contractual Relationships

### Project Delivery



The Project Team will be progressively developed during the Develop, Design and Delivery phases, as required to support the project. ADC will be the accountable body for contractual agreements for the Develop stage and this will be reviewed at the end of this stage to prepare for the Design Stage.

It is anticipated that Network Rail will be engaged formally to undertake an Asset Protection (ASPRO) role and that the specialist signalling resource will be engaged to undertake any additional alterations required to support the project.

## Operational Delivery



### Train Service Procurement

It is expected that the new service would be operated by East Midlands Railway. The potential mechanisms for service delivery are as follows:

- DfT negotiates a contract change and provides subsidy to support implementation by EMR
- Third Party sponsorship and initial financial support to EMR as an experimental service for up to 6 years
- EMR implements as a commercial opportunity at no cost to DfT or third parties
- Another operator sees a commercial opportunity and delivers the service (possibly Open Access)

Under each scenario, commitment would be sought from DfT to include the new service in the current and any future contract specification.

### Professional Services

#### Design and Scheme Development

Procurement of further scheme development and design services will depend on the contracting strategy adopted by ADC as scheme promoters. As previously identified, at this early stage, the level of design required has not been confirmed. In the initial GRIP stages (1 to 3), any design work and business case development (e.g. Outline Business Case) requirements could use existing frameworks such as the Midlands Highways Alliance (MHA) Professional Services Partnership or Via (though understood to be more highway related).

#### Project and Programme Management

Procurement of Project and Programme Management services will also depend on the contracting strategy adopted by the promoters. At this early stage of the project, project management will be led via internal ADC resources and work in partnership with the wider East Midlands HS2 Strategic Board.

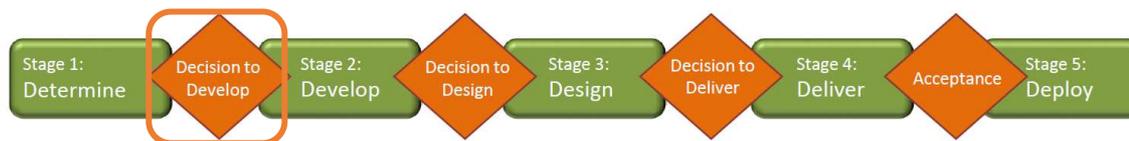
### Summary

This section has presented a number of potential procurement options, which primarily relate to the work required to enable passenger services to operate on the network (including rolling stock and infrastructure requirements). Potential options have been identified for the purposes of the SOBC – whilst Option 1 (Network Rail) would be the most commonly selected procurement route for this type of scheme, it is recommended that the four options identified are explored and assessed in further detail at the Outline Business Case stage.

## 5 MANAGEMENT DIMENSION

### 5.1 Delivery Strategy

#### Governance



The Management Case assesses whether a proposed scheme is deliverable, with regards to both implementation and ongoing management during operation. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefit realisation and assurance. Therefore, the Management Case sets out a plan to ensure the benefits specified in the Economic Case are realised and will include measures to assess and evaluate this. The Project Sponsor for the delivery phase has not been confirmed yet so the Management Case provides an indicative approach with specific detail about Network Rail's experience and approach to managing projects.

At SOBC stage, the appropriate commercial arrangements including delivery mechanism have not been confirmed – the chosen approach will have a significant impact on the management arrangements for delivery of the scheme. This SOBC presents evidence of similar projects in the context of the experience of Network Rail, who as the Infrastructure Manager will have a significant role in the potential scheme, together with the delivery experience of NCC who are likely to have a considerable role in the delivery phase (both the Government and Network Rail are committed to facilitating greater opportunities for third party investment in the network).

#### Network Rail

Network Rail has considerable experience delivering improvements on the rail network. Network Rail's current investment is seeing over 300km of the rail network electrified, improving connections between towns and cities.

Network Rail has recently delivered the biggest programme of improvements to the Midland Mainline since its completion in 1870. The Midland Mainline has been electrified from Bedford to Kettering and Corby. To prepare for electrification, Network Rail implemented the following changes:

- upgrade bridges and tunnels;
- carry out enhancement works to bridge parapets;
- strengthen railway embankments;
- assess footpaths/level crossings;
- clear overgrown vegetation;
- undertake piling work to install the foundations for structures that will carry overhead lines; and
- install overhead line equipment.

These types of upgrades, together with substantial delivery experience across the network provide evidence of the capabilities of Network Rail and similar projects in terms of deliverability/feasibility.

A key example of relevant experience is the Borders Railway in Scotland. The scheme is the longest new domestic railway to be built in the UK for over 100 years. It connects the city of Edinburgh with Galashiels and Tweedbank in the Scottish Borders. The project saw over 40 miles of single-line track over a distance of 31 miles, together with the introduction of 42 new bridges, 95 refurbished bridges, two refurbished tunnels and seven stations. Whilst the project initially was put to market via an OJEU notice, this route was cancelled following the withdrawal of multiple consortiums. In the end, Network Rail was chosen by Transport Scotland to undertake the project. Network Rail appointed BAM Nuttall as its main contractor and oversaw the successful delivery of the project with rail services commencing in September 2015.

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## East Midlands Railway (EMR)

EMR took over operation of services under a Franchise Agreement awarded to Abellio that commenced operations in 2019. Since the start of the Covid 19 pandemic, the contracting arrangements have been revised and operations are currently provided under an Emergency Recovery Measures Agreement, effectively transferring risk to the Department for Transport. While DfT is implementing a programme of Directly Awarded National Rail Contracts, the Williams – Shapps Review<sup>xv</sup> outcomes and setting up of Great British Railways are likely to herald further changes to how train services are developed, implemented, funded and managed.

The project team has engaged constructively with EMR to establish potential resourcing and operational solutions for Maid Marian Line services. EMR is also engaging with promoters of other Restoring Your Railway propositions across the East Midlands.

## Nottinghamshire County Council

NCC has significant experience in delivering publicly funded projects and has a centralised procurement function overseeing compliance with public procurement requirements. The local authority has project managed and delivered a number of transport projects including the planning and delivery of the NET over two phases (Phase 1 delivered with Nottingham City Council as joint promoter opening in 2004 and Phase 2 delivered by Nottingham City Council opening in 2015). It is however acknowledged the type of project differs from the scheme identified in this business case. The most closely related scheme is the Midland Mainline Market Harborough rail speed improvements completed in 2020 for which NCC was a funding contributor.

## Governance, Organisational Structure and Roles

The project will be delivered under the Rail Network Enhancement Pipeline (RNEP) framework and is currently seeking a Decision to Develop. Ashfield District Council will remain the accountable body for the Develop Stage, working closely with the Sponsoring MP, DfT and Network Rail. At the Develop stage the existing project structure will be further enhanced with a formalised project board. The current arrangements for the SOBC are summarised in

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Figure 5-1, identifying the key political leaders, Senior Responsible Officer and Project team. The roles and governance arrangements with regard to delivery will be revisited should the project progress to OBC and FBC.

### **Project Development**

A Project Board will be established to oversee the development of the project. The Project Board will include all relevant partners, including Ashfield District Council, Network Rail, Midlands Connect, D2N2, Nottingham County Council and Derbyshire County Council. Board members will review and advise on the development of the project through established regular reporting mechanisms. Project Board meetings will be held monthly and be chaired by the Senior Responsible Officer (SRO), who will take executive responsibility for decisions relating to the project. The Network Rail Project Manager will submit a highlight report identifying key issues affecting the project and key decisions to be made. A development team organogram is included below:

Figure 5-1 SOBC Project governance

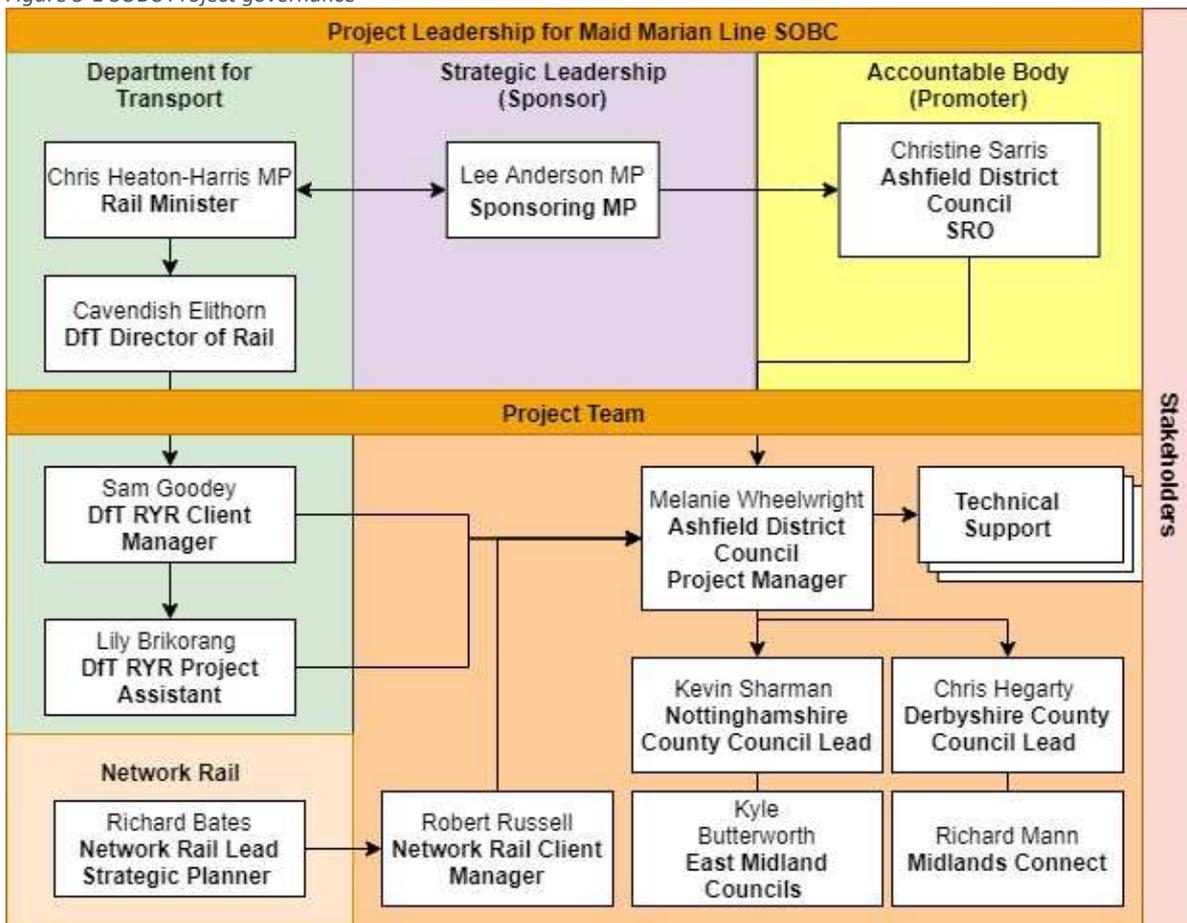
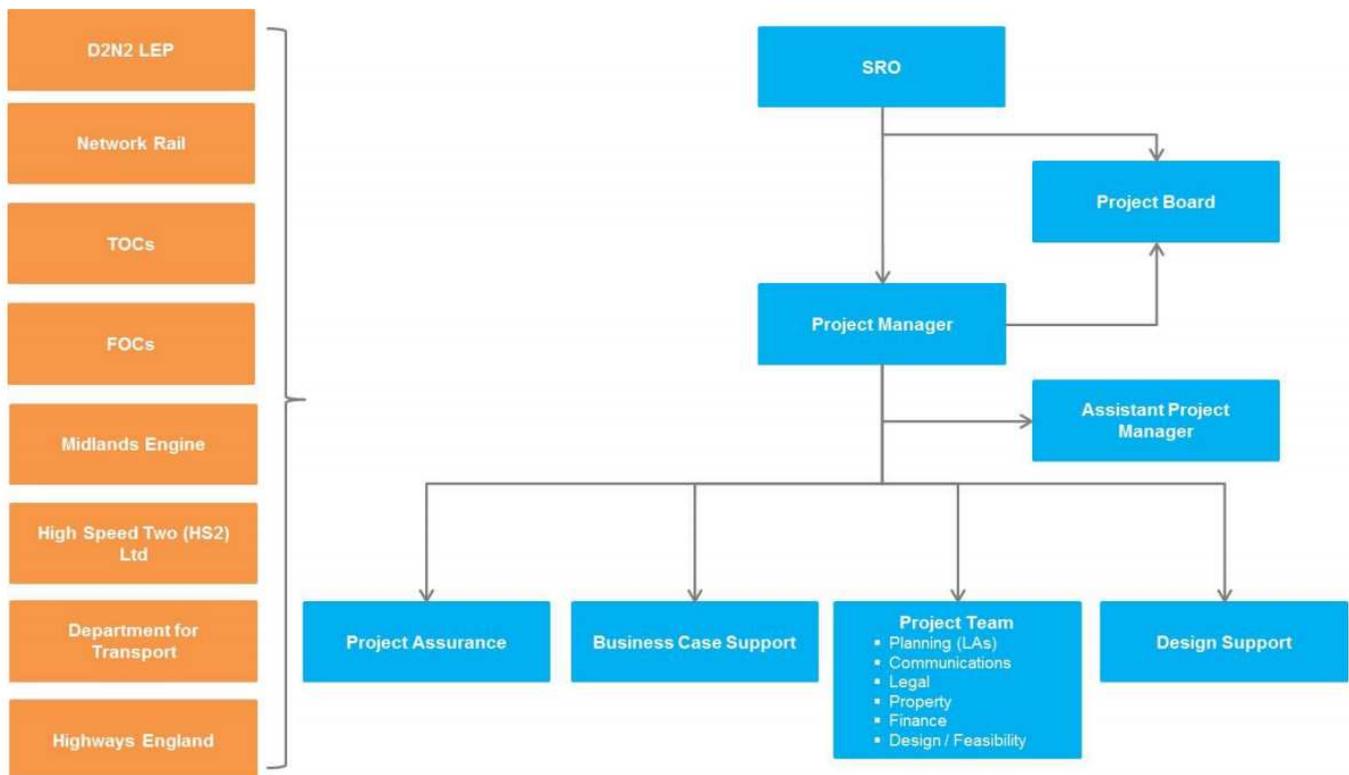


Figure 5-2 OBC Project Governance



### Integrated Rail Plan (IRP)

The Integrated Rail Plan for Network Rail infrastructure enhancement programmes is due to be published in the near future. The IRP is expected to identify Midland Main Line electrification as a priority, as this scheme forms part of the Project SPEED shortlist that Network Rail will submit for DfT approval in July 2021. While no details of the potential scheme have been published, this scheme could have some benefits for the Maid Marian Line proposal, especially in respect of any proposed changes at the complex Trent Junctions.

### HS2

HS2 offers the potential to transform the connectivity and economic benefits for the study area. As the proposed scheme seeks to ensure these benefits are realised as well as facilitating improved rail Mansfield to East Midlands Hub. Consequently, the scheme is inextricably connected to the ongoing HS2 development work. Once the full alignment of the scheme is known, interfaces with other projects (in addition to HS2) will be identified and considered within the delivery programme, should the scheme progress to OBC.

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## 5.2 Communications and Stakeholder Management

The Stakeholder Plan (Appendix E) sets out the internal and external stakeholders to the project. The scheme has received significant support from stakeholders, which demonstrates that the scheme is likely to be successful and that progress could be accelerated as early engagement has removed some potential showstoppers from key stakeholders. Stakeholder support has been gained from all key stakeholders including:

- Local Authorities, including Bolsover District Council, Erewash Borough Council, Mansfield Council, Derby City Council and Nottinghamshire and Derbyshire County Councils
- D2N2 LEP
- Network Rail
- TOC's: East Midland Railway
- Sub National Transport Bodies (Midlands Connect)

Letters of support are included in Appendix D. The project team will continue to proactively engage the stakeholders as the project develops.

Extensive public and stakeholder consultation would be required throughout scheme development and delivery. This is necessary to ensure that the various aims and aspirations of the general public and key stakeholders are taken into account, as well as managing the communication of information relating to the project. Stakeholder consultation and engagement is key to the success of the project and a Communication and Stakeholder Management Plan will be developed for the project. This plan will detail an approach that ensures the benefits of the scheme are effectively communicated and understood by specifying the level and type of communications required at different stages of the project to ensure stakeholder involvement and input is included at appropriate times. Key stakeholders will be identified in the plan with the level of engagement required for each stakeholder cited. The plan will also set out the systems and processes for managing the communications strategy, including a time-based plan for responding to communications and media enquiries.

## 5.3 Programme / Project Plan

An outline delivery programme has been developed for the scheme. This identifies the key stages of project development and implementation including anticipated timescales. Confirmation of an agreed funding mechanism for the delivery of the scheme is a key factor to construct the programme. Section 5.5 presents indicative key milestones identified for the scheme following the completion of detailed design and forecast durations for the core activities. Should the scheme progress to OBC stage, further development of the programme will be undertaken. This will also need to be developed in line with guidance on 'Rail Network Enhancements Pipeline', which details the Government's new approach for rail enhancements.

### Programme and Project Reporting

Project reporting is essential to keep all key stakeholders fully informed of the project progression, as well as highlighting any key issues, tasks and decision points. Regular reporting forms part of the project assurance and governance of the project. Should the scheme progress to OBC, clarity on the governance structure will be sought and this will include confirmation of the reporting requirements of the scheme promoter. However, it is likely that the reporting will include:

- Project Board: Regular reports to the Project Board will provide an update on progress and approval at key decision milestones.
- East Midlands Council's HS2 Strategic Board: Keeping the EMC HS2 Strategic Board advised on progress throughout scheme development.
- Scheme Promoter: It is likely the organisation driving the scheme development will have reporting requirements to manage the cost, time and resources allocated to development. Monitoring and Evaluation Monitoring and Evaluation of benefits is required to ensure the scheme fulfils the objectives developed in section 2.

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The scheme will be monitored in accordance with the requirements of the funding body, e.g. DN2N, DfT etc. DfT guidance advises a proportionate and targeted approach to the assessment that can demonstrate the scheme has achieved its objectives and funding has been wisely invested. Schemes of this scale will require enhanced monitoring in accordance with DfT guidance on Monitoring and Evaluation Framework for Local Authority Major Schemes (DfT, 2012).

At this stage, it is proposed that reporting would take place both at 12 months after opening and 3-5 years after opening. The Monitoring and Evaluation programme would seek to assess the impact of the scheme with a focus on understanding the impact of the scheme on the indicators identified above. Consideration would also be given to wider contextual factors that are not related to the scheme but necessary to consider.

The reports would be concise and cover the following:

- Summary of the approach and the methodology;
- Detail of the scheme;
- An assessment of progress against success indicators;
- An assessment of contribution to the wider objectives; and
- Final conclusions and lessons learnt.

### **Assurance and Approvals Plan**

Project assurance provides the basic framework of controls that assure the project is being well managed and controlled and basic standards are being followed. The high level assurance principles and the necessary approvals will need to follow Network Rail's processes as a minimum, but also likely to comply with the scheme promoters and possibly D2N2's Assurance Framework, subject to how the scheme is funded. As the scheme progresses, it is likely assurance parameters aligned to DfT and HS2 will also need to be met.

### **Network Rail GRIP Process**

Network Rail has its own procedures for undertaking the development and construction of new infrastructure projects. These follow the Governance for Railway Investment Projects (GRIP) process. This is the project management tool which governs the process to secure various gateways and milestones which are required throughout the development of the scheme. There are eight GRIP stages, which can influence the procurement strategy adopted to deliver a scheme at each stage. The scheme is at an early stage in development and has not commenced the formal GRIP process. Early engagement with Network Rail will be required.

### **Peer Reviews**

Peer Reviews will be undertaken during the scheme development process - these are key checkpoints in projects that provide an early indication of potential risks to delivery. Peer Reviews will be used to establish readiness for Stage Gate Reviews. They will be conducted upon request from the Regional, Functional or Major Project Director, or as specified in local GRIP procedure. If performed, they shall take place at least four weeks prior to the relevant Stage Gate Review to allow sufficient time for action based on the peer review findings. The Project Manager is required to record all Peer Reviews as milestones in the project schedule. A Stage Gate Checklist and a recommendation on whether or not a project should delay its planned Stage Gate Review shall be provided by the Peer Review Facilitator to the Regional / Functional / Major Project Director.

## 5.4 Management of Risk

The project team has maintained a risk register throughout the development of the SOBC with input from a number of stakeholders. The project team have run one risk workshop to develop the SOBC, which build on the risk assessments undertaken to previous business cases.

In addition to the risk workshop, regular engagement and reporting with DfT and Network Rail has identified a number of further risks. Finally, for this SOBC stage, the relevant Train Operating Company have been engaged, with the risks highlighted through these meetings captured in the risk register.

The highest risks from the risk register are shown in Table 33. These represent the risks with the highest scores post mitigation and remain actively managed. The full risk register is presented in Appendix F and provides further detail on the impacts, mitigations and owners of all of the risks.

Table 3 Summary of key risks

Risk Description	Initial Risk			Residual Risk		
	Likelihood [1-5]	Impact [1-5]	Risk score	Likelihood [1-5]	Impact [1-5]	Risk score
CAPACITY: Insufficient paths to provide connectivity to Leicester	5	5	25	4	5	20
CAPACITY: Insufficient paths to provide connectivity to EM Parkway	5	5	25	4	5	20
CAPACITY: Unable to identify paths across the Trent junctions	5	5	25	4	4	16
CAPACITY: Services not even clock-face timings	4	5	20	4	4	16
FUNDING: Capital Cost of scheme not funded	4	5	20	3	5	15
CAPACITY: Timetable Change adds new services that prevent Maid Marian Line service from operating, eg a 5th EMR train per hour from St Pancras	4	5	20	3	5	15

The Risk Register will remain a live document to track, manage and resolve risks through the life of the project. Through the SOBC stage the most significant risks for this stage have been identified and mitigated. There is a total of 34 risks recorded on the register, with the corresponding owners and mitigation identified. To date, 5 of these have been closed out in preparing the SOBC, leaving 29 active risks.

Throughout the delivery of the project, this risk register will need to be continually reviewed and updated on an ongoing basis. Furthermore, the high level risk register will need to be disaggregated into a longer list of more specific risks. Risk identification would take place through the holding of risk workshops, meetings, risk interviews and structured questionnaires. Operational risks identified and managed throughout the project / programme lifecycle may also be transferred to the appropriate operational risk register(s) at handover.

## 5.5 Delivery Plan

### Management Approach

To maximise the value of the scheme, the project will adopt a Requirements Management approach to the development and delivery of the project. This will ensure that all scope is fully aligned to the objectives of the scheme and with wider strategic goals for local authorities and government.



### Innovation in Delivery

Improvements to the quality or efficiency of delivery and timescales for delivery may be achieved by adopting a different approach to the procurement of the design and build supply chain. For example, by developing a collaborative Working Group consisting of Principal Contractors and Supply Chain based in the local area, it may be possible to deliver a Social Return on Investment, working on Social Value principles, boosting the economic returns, local employment, apprenticeships and skills that the scheme can deliver locally.

### Roles & Responsibilities

Ashfield District Council will adopt the following key roles to ensure the momentum of the project is retained:

- Promoter and also Client under the CDM Regulations 2015.
- Responsible for appointing a Principal Designer for the pre-construction phase
- Responsible for appointing a Principal Contractor as the scheme enters the construction phase.
- Appoint Network Rail to undertake an Asset Protection role.

The SRO will work with project partners to discharge the responsibilities and review role of each organisation to ensure the appropriate skills and expertise are available. Further details of Roles & Responsibilities will be documented during the Develop phase.

### Programme



The Outline Programme is included in Appendix G. The programme is aligned to the RNEP process and identified the following key target dates:

- Decision to Develop August 2021
- Decision to Design February 2023
- Decision to Deliver October 2023
- **First service operational December 2023**
- **First new station open December 2025**
- **Second new station open August 2026**

## 6 List of Appendices

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Appendix	Title
<b>A</b>	Options Assessment Report
<b>B</b>	Mansfield to East Midlands Hub SOBC
<b>C</b>	Network Rail Capacity Modelling
<b>D</b>	Maid Marian Line SOBC Stakeholder Plan
<b>E</b>	Letters of Support
<b>F</b>	Risk Register
<b>G</b>	Outline Programme

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## References

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- <sup>i</sup> Ashfield Economic Recovery Plan Responding to Covid-19 (2020)
- <sup>ii</sup> Ashfield Economic Recovery Plan Responding to Covid-19 (2020)
- <sup>iii</sup> TRACC, 2017
- <sup>iv</sup> Trafficmaster GPS Data
- <sup>v</sup> Department of Communities and Local Government, 2015
- <sup>vi</sup> Ashfield Economic Recovery Plan Responding to Covid-19 (2020)
- <sup>vii</sup> Midlands Connect: Midlands Engine Rail Summary Document
- <sup>viii</sup> Building Back Greener (2021) <https://www.midlandsconnect.uk/media/1777/coventry-leicester-nottingham-summary-report.pdf>
- <sup>ix</sup> <https://www.ashfield.gov.uk/business-licensing/support-into-work/towns-fund/>
- <sup>x</sup> Census, 2011.
- <sup>xi</sup> A strategic transport manifesto for the Midlands (2020) <https://www.midlandsconnect.uk/media/1722/a-strategic-transport-manifesto-for-the-midlands.pdf>
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- <sup>xiii</sup> <https://www.trentbarton.co.uk/>
- <sup>xiv</sup> <https://consult.nottinghamshire.gov.uk/transport/busserviceimprovementplansurvey>
- <sup>xv</sup> <https://www.gov.uk/government/publications/great-british-railways-williams-shapps-plan-for-rail>
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