

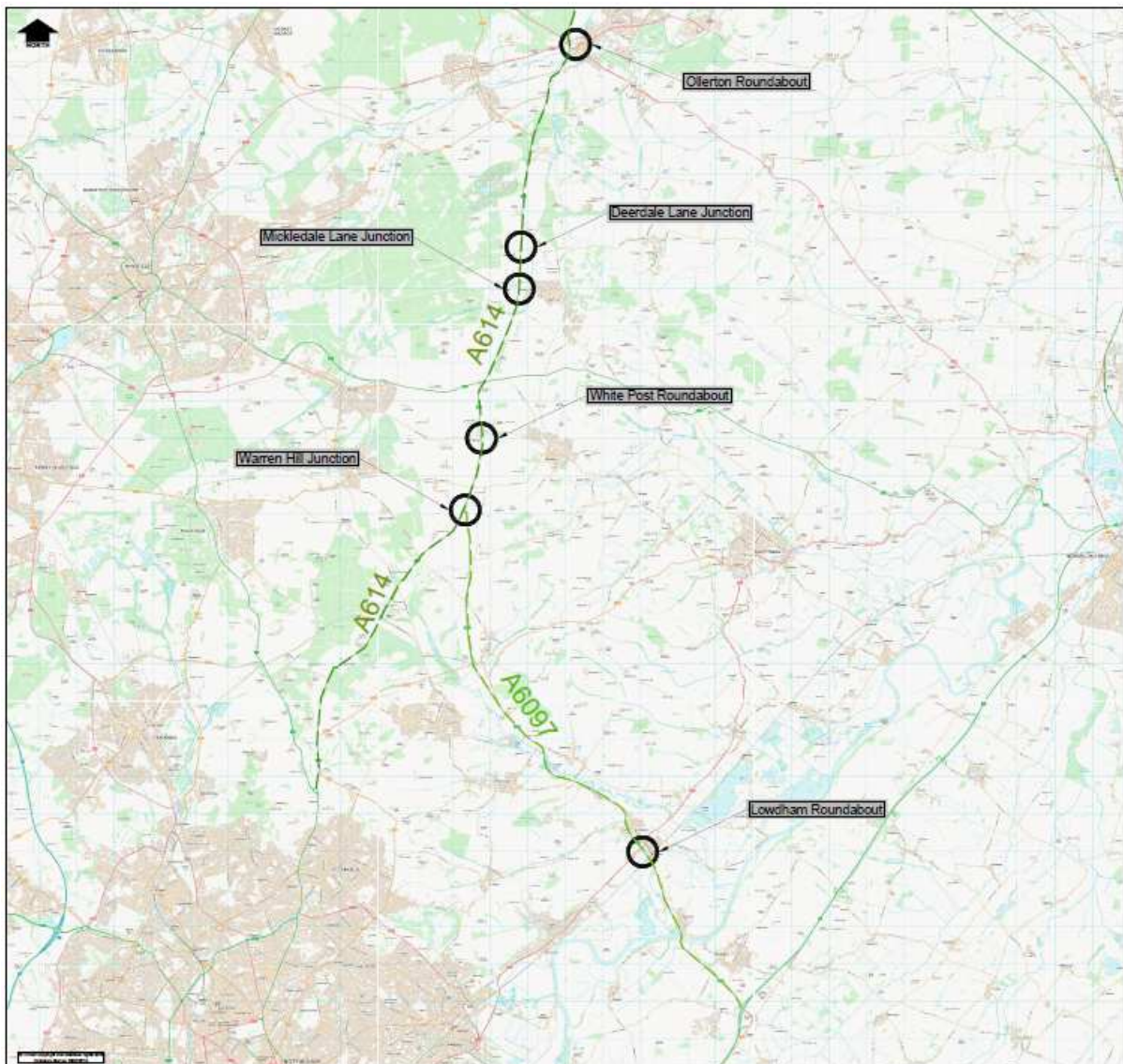
Outline Business Case for Conditional Approval

Scheme Name

**A614 / A6097 Major Road Network
Junction Improvement Package.**

Local Authority

Nottinghamshire County Council



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Supporting Documents.

Copies available on request & supplied separately to DfT

- 1) Options Appraisal Report (OAR) - 29th May 2019, AECOM and Via East Midlands.
- 2) Traffic and Economic Assessment Report (TEAR) 16th May 2019, AECOM.
- 3) Project Governance and Procurement report, May 2019, Via East Midlands.
- 4) Departures from Standard- NCC Departures Board papers, 21st May 2019.
- 5) NCC Policy Committee Report. 22nd May 2019.
- 6) Environmental constraint plans for each proposed A614 - A6097 junction improvement, May 2019.
- 7) A614 / A6097 Communications Plan.

1. INTRODUCTION

1.1. This Outline Business Case (OBC) has been prepared to support the proposal to improve 6 junctions on the A614 / A6097 Major Road Network (MRN) corridor in Nottinghamshire. It has been prepared by Nottinghamshire County Council in conjunction with transport consultants AECOM and the Council's design and delivery partner Via East Midlands. This OBC is to be submitted to the Department for Transport (DfT) for Conditional Approval. It is proposed that a Full Business Case will be submitted for Full Approval in early 2021.

1.2. This OBC report is structured in accordance with the Department of Transport's business case guidance and the DfT 'five case' transport scheme evaluation process.

Following this introduction, the remainder of the document is arranged as follows;

- Chapter 2 presents the strategic case for the scheme. This includes identifying the problems that the scheme is attempting to resolve, the core objectives of the scheme and the options considered;
- Chapter 3 presents the economic case, demonstrating the impact of the scheme on the economy, environment and society,
- Chapter 4 presents the financial case, including an assessment of affordability, overall scheme costs and funding certainty;
- Chapter 5 presents the commercial case, including a summary of the procurement strategy, pricing and payment mechanisms and risk allocations; and
- Chapter 6 presents the management case, with clear proposals for governance, project planning, risk management, stakeholder management and evaluation.
- Chapter 7 presents the conclusions of this OBC assessment and seeks OBC conditional approval and DfT programme entry status.

1.3. This OBC needs to be read in conjunction with a number of supporting reports and technical documents. The documents are listed in the contents page above.

2. STRATEGIC CASE

Introduction

2.1. At a national level it is recognised by Government that the primary function of the principal road network is to fulfil the safe and efficient movement of goods and people. An efficient network supports the national and regional economies by providing the certainty, improving access to markets, enabling competition, improving labour markets, enabling economies of scale and helping attract inward investment. It is within this context that improvement to the A614 / A6097 Major Road Network is considered appropriate.

Study Area and understanding the current situation

2.2. The A614 is an important north-south route from Nottingham in the south towards Worksop and Retford and beyond in the north. The A6097 provides a spur from the A614 to the A46 (which is a trunk road linking Leicester with Newark and Lincoln). Between the study area junctions, the A614 is a two-way single carriageway. The A6097 is a two-way single carriageway which has a short length of dual carriageway through Lowdham. A number of junctions along the corridor are heavily congested whilst others pose difficulties and dangers for drivers trying to access the A614 from adjoining settlements. The existing problems and traffic delays are set to worsen considerably with planned and forecast traffic growth.

2.3. The A614/A6097 route was designated part of the Major Road Network in October 2018, a middle tier of the country's busiest and most economically important local authority 'A' roads, sitting between the Strategic Road Network (SRN) and the rest of the local road network. Geographically, the A614 / A6097 route sits between the A1 to the east and M1 to the west and forms a north-south spine through the centre of Nottinghamshire. The A614 / A6097 route regularly acts as a diversion or alternative route during major works or incidents on the SRN.

2.4. At its northern end, the A614 serves a number of tourist attractions, some of which are nationally important including: Clumber Park (National Trust), Rufford Abbey, Center Parcs Sherwood Forest, Sherwood Pines Forest Park, Go Ape, Sherwood Forest Country Park and Visitor Centre, The Major Oak, White Post Farm and Robin Hood's Wheelgate Family Theme Park. Indeed, within Nottinghamshire County Council's (NCC) recently approved Visitor Economy Strategy (2018 – 2029), the A614 is identified as being a Key Development Project to:

1. strengthen the sense of place for visitors along A614 – take advantage of investment along this growth corridor to:
2. use latest technology to create high quality, well-signed visitor route that welcomes you to the County and to Sherwood Forest;
3. create visitor friendly bus route from Nottingham City to Sherwood Forest using existing services and Sherwood livery buses.

2.5. The A614 serves a dual-economic function: facilitating regular commuter/business trips and longer distance traffic movements, and also being an important corridor for the tourist economy which is forecast to grow in the future. In keeping with

this and recognising the need to maximise the visitor economy, Nottinghamshire County Council has improved other junctions on the A614 route in recent years. As follows:

- the A614 / B6034 (Rose Cottage) junction was upgraded from a priority T-junction to a signalised junction with works complete in February 2013.
- the A614 / A617 Lockwell Hill roundabout junction was enlarged in September 2013.

2.6. Nottinghamshire County Council's proposed scheme seeks to continue the strategic development of the A614 / A6097 corridor to both accommodate and facilitate economic growth. NCC is promoting junction improvements at six key locations on the A614 / A6097 corridor as a single scheme package. The junctions proposed for improvement are:

1. Ollerton Roundabout – the intersection of the A614 / A616 / A6075 roundabout.
2. Deerdale Lane junction – the A614 / Eakring Road / Deerdale Lane crossroads.
3. Mickledale Lane junction – the A614 / Mickledale Lane crossroads.
4. White Post roundabout – the A614 / Mansfield Road roundabout.
5. Warren Hill junction – the A614 / A6097 priority junction, and
6. Lowdham Roundabout – the A6097 / A612 Nottingham Road / Southwell Road roundabout.

2.7. The locations of the junctions are shown in Figure 1.

Figure 1 – A614/A6097 Junction Location Plan



Business Strategy and Scheme objectives

2.8. This section outlines the strategic aims of the promoting organisation as relevant to the scheme and includes an over view of the key policy documents that are driving change which the A614 / A6097 MRN junction improvement scheme supports and contributes to.

Nottinghamshire LTP 2011-2026

2.9. The Nottinghamshire Local Transport Plan 2011 to 2026 is the third Local Transport Plan (LTP) for the County of Nottinghamshire and came into effect on 1 April 2011. The document details the County Council's transport strategy for the whole of the county of Nottinghamshire for the fifteen-year period 2011-2026.

2.10. The LTP document comprises

- The Local Transport Plan Strategy which sets out how NCC aims to make transport improvements in Nottinghamshire during the plan period. Including a review at least every five years to make sure that it considers any changes in transport conditions and priorities; and to make sure that it is effective; and
- The Implementation Plan that runs for the same period as Central Government's capital funding allocations to ensure it takes account of realistic funding levels. The first implementation plan covered the four-year period 1 April 2011 to 31 March 2015. NCC are currently within the third implementation plan that covers the period 1 April 2018 to 31st March 2019. The current LTP Implementation Plan includes reference to pursuing "Integrated programmes to address existing and forecast journey time delays along the A614 / A6097 corridor including Ollerton Roundabout improvements".

2.11. The Nottinghamshire LTP Implementation Plan seeks to deliver proposals and measures that will help to achieve the County Council's overarching strategic objectives for transport which are to:

1. Provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel;
2. Improve access to key services, particularly enabling employment and training opportunities and
3. Minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

2.12. The A614 / A6097 improvements accord closely with the LTP strategic objectives in terms of supporting growth along the corridor, through the regeneration of the former Thoresby colliery site, delivering traffic relief to adjacent roads within Ollerton Village, all of which will help to support a thriving local economy and minimise the impacts of transport on people's lives, as well as improving access to and enabling new employment opportunities.

Council Plan and Departmental Place Strategy 2018.

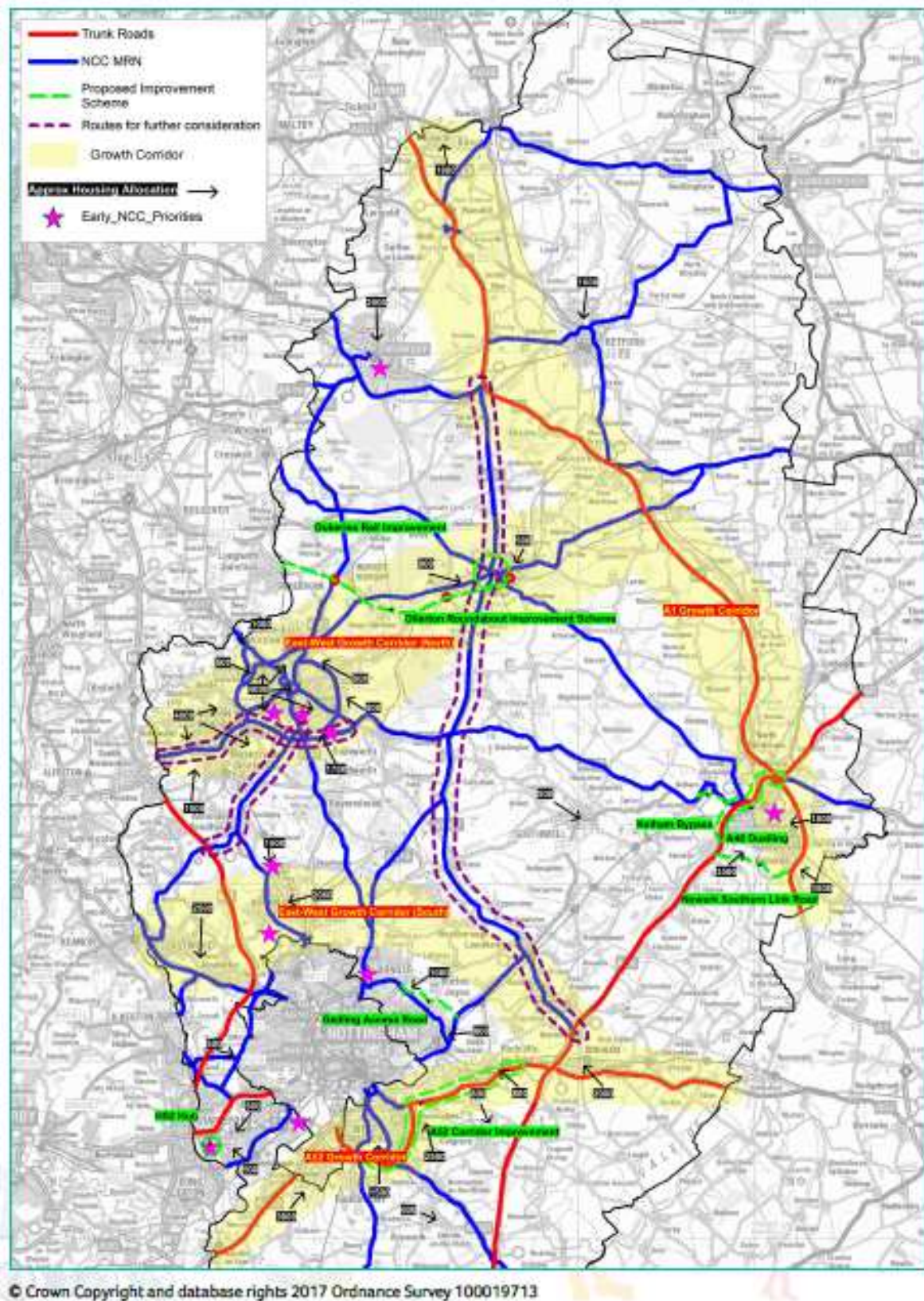
2.13. In January 2018 Nottinghamshire County Council adopted a new Council Plan "Your Nottinghamshire Your Future" which set out an ambitious future of Nottinghamshire in which the county is at the forefront of modern Britain. As part of this the Place Departmental Strategy was devised to support and deliver the Council

Plan. This strategy was agreed by the Council's Policy Committee as part of its responsibility for approving, monitoring and implementing the Council Plan.

2.14. The Council Plan supports the Midlands Engine 'Vision for Growth' and believes that a strong Midlands economy will grow the national economy, attract more investment and help to redress the North – South divide. Investment in infrastructure to improve transport is seen as critical to creating the best conditions for unlocking housing and business growth. There are marked disparities in economic fortunes across Nottinghamshire. The south and east of Nottinghamshire are generally performing at or around the national average, but the north is below the national average. Improvements to the A614 / A6097 corridor will assist in building the business base for the areas lagging behind and improve productivity.

2.15. The Council's Departmental Place Strategy 2018 recognises that the economic impact of connecting places like Worksop, Retford, Mansfield, Newark to other parts of the Midlands cannot be underestimated. The MRN outlined in Figure 2 (taken from the Departmental Place Strategy) demonstrates that connectivity. Working with Midlands Connect and its partners in Transport for East Midlands, the County Council will continue to press Government to not only invest in the SRN but also in key routes in the MRN linked to growth and opportunity areas. The Departmental Place Strategy includes the A614/A6097 corridor as a priority for highway investment.

Figure 2 – MRN and growth corridors in Nottinghamshire.



Major Road Network

2.16. As part of the Transport Investment Strategy, the Government has committed to creating a Major Road Network (MRN), which identified important national routes below the level of Strategic Road Network (managed by Highways England). The

current MRN includes both the A614 and A6097 as shown on Figure 2. As such, improvement of this corridor is consistent with current Government thinking on the improvement of important national 'A' roads which will;

- reduce congestion;
- support economic growth and rebalancing;
- support housing delivery;
- support all road users; and
- support the Strategic Road Network

Newark and Sherwood Local Plan: Adopted Core Strategy 2011-2026.

2.17. The A614 / A6097 improvement scheme lies within the Newark and Sherwood District Council (NSDC) administrative area. A key policy document used by NSDC is the Adopted Core Strategy (March 2011). This document sets out the big issues that the district council and the public and private sector partners need to address over the next twenty years in the district. It sets a vision and objectives and a number of policies to help deliver the development and change identified. Para 4.48 of the NSDC Adopted Core Strategy states that:

“in order to gain a clear and up to date assessment of Transport issues within the District, the Council commissioned a study by WYG in 2009. This showed that: improvements to the A614 / A6075 / A616 Ollerton Roundabout junction will be required to accommodate any additional growth in the north west of the District or significant growth elsewhere; and Strategic highway infrastructure improvements will be required at various locations on the rural highway network within the District. Information from this study, including the need and potential for highway and public transport infrastructure has been incorporated into the District Council’s Infrastructure Delivery Plan.

Of the proposed scheme junctions, the Ollerton, Lowdham, White Post, Deerdale Lane and Mickledale Lane junctions are all listed in the Strategic Highway Infrastructure requirements of the NSDC Adopted Core Strategy.

National Planning Policy Framework, 2019.

2.18. The NPPF outlines a focus on building a strong and competitive economy, acknowledges the role of transport in facilitating development and contributing to wider economic growth, sustainability and health objectives. Additionally, the NPPF has a focus on the support of sustainable travel, enabling a reduction in congestion.

2.19. The NPPF document confirms that the purpose of the planning system is to contribute to the achievement of sustainable development. It explains at paragraph 7 that there are three overarching objectives to achieving sustainable development which are interdependent and need to be pursued in mutually supportive ways:

- Economic - to help build a strong, responsive and competitive economy;
- Social - to support strong, healthy and vibrant communities; and
- Environmental - contributing to protecting and enhancing the natural, built and historic environment

It is considered that the proposed A614 / A6097 MRN improvements are entirely consistent with and would contribute towards achieving the objectives of the NPPF 2019.

Scheme objectives and planning policy summary.

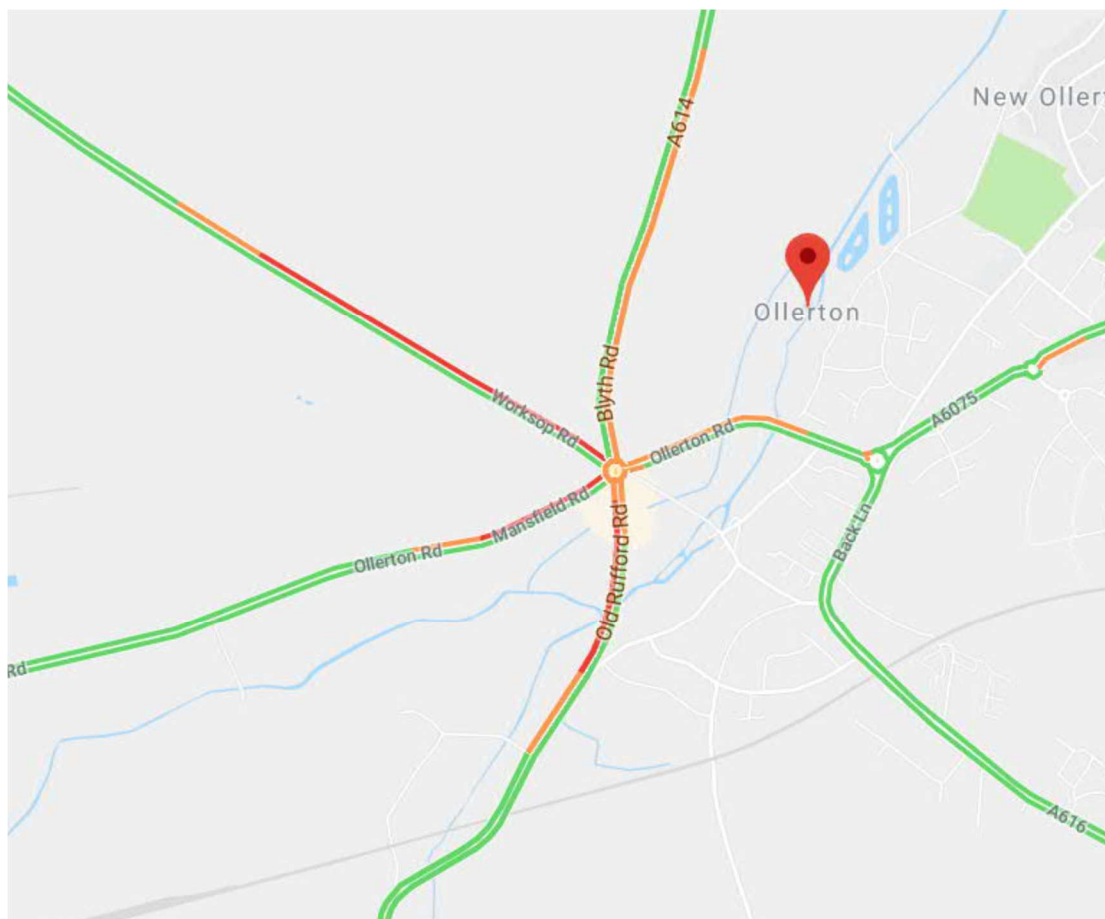
2.20. The A614 and A6075 are included on the Government's newly designated Major Road Network. Both the Newark and Sherwood District Council Adopted Local Plan and Nottinghamshire third Local Transport Plan specifically reference the A614/A6097 corridor as requiring improvement, and such improvements would support both national (NPPF), regional (Midlands Connect) and local aspirations (Nottinghamshire Place Plan).

Problem Identification

2.21. Traffic congestion at the junctions along the A614 / A6097 is not a new phenomenon and has been the subject of considerable concern for many years. A number of local campaign groups have been seeking improvements for many decades. In order to quantify the extent of the existing congestion a number of baseline traffic surveys including manual classified traffic counts, automatic traffic counts and queue length surveys were undertaken. The baseline surveys and existing congestion problems are detailed in the Traffic and Economic Appraisal Report.

2.22. The OAR report includes screen shots from Google Traffic from the present day. Google collects traffic data from each mobile phone running Android for which location is enabled. As such, it constitutes a data set with a very large sample. Figure 3 below is an example of the detail provided in the OAR (section 3.2) and shows as an example that the Ollerton roundabout is subject to regular journey time delays during typical conditions in both the AM and PM peak hours.

Figure 3: Typical Traffic am peak hour (0830 Am) – Ollerton roundabout



2.22. Traffic models have been prepared by VIA East Midlands to model the performance of each of the six junctions proposed for improvement. The performance of the existing junctions has been calculated and this shows that Ollerton roundabout is noted to be well overcapacity (with a Ratio to Flow Capacity (RFC) value of over 1.0) in the AM and PM Peak periods in the baseline scenario, whilst Lowdham is overcapacity in the PM Peak period. Warren Hill and White Post are noted to be approaching capacity (RFC value of over 0.85) in the baseline. For existing junctions, RFC values above 0.85 are likely to produce queues which increase slowly. Above an RFC value of 1.0, a junction is more than likely to be at capacity (with resulting larger increases in queue length). Tables 2.16 to 2.21 inclusive in the TEAR summarise the modelling performance at each scheme junction in the baseline.

Impact of Do Nothing

2.23. In considering whether to progress with any proposed scheme, it is important to consider what would happen if the status quo was allowed to continue and the promoting organisation did not intervene. The key issues that will continue or be exacerbated by no intervention include:

- a. **Increasing traffic volumes:** Traffic congestion at the key intersections on the A614 / A6097 corridor will continue to increase without investment. The TEAR has demonstrated the scale of queues and delays that would arise with queues of many hundreds of vehicles being forecast at some of the junctions. Increasing congestion will have a negative detrimental impact on local economic activity and productivity.
- b. **lack of housing and employment delivery:** Failure to deliver the highway improvements will restrict the ability of Newark and Sherwood District Council to release housing and employment development. There are already development limits imposed on some planning permissions (eg Thoresby colliery redevelopment) until such time as junction capacities have been improved to accommodate existing and development generated traffic.
- c. **Complaints;** There are a number of lobby groups from residents in settlements adjoining the A614 -A6097 demanding action. The campaign groups have the support of locally elected politicians and the MP Mark Spencer. The demands for action will be heightened without intervention.

Options Assessment.

2.24. Following the examination of the baseline conditions at each junction, the potential improvement options that exist at each of the junctions has been identified. A number of workshop events have taken place with representatives from the County Council, AECOM and Via East Midlands. DfT guidance describes how a broad range of potential options should be considered in order to ensure that the most appropriate solution to an identified problem is pursued. The method is detailed in the Options Appraisal Report. A matrix of potential options to improve junction performance is provided in Figure 4 and provides a useful guide to ensure the full range of options is considered.

Figure 4: Junction improvement option matrix

	Existing Control			Link Options
	Priority	Signals	Roundabout	
Options Considered	Widen minor arm	Review signal timings	Increase entry widths	Provide additional lanes
	Provide right-turn harbourage	Review stage arrangement	Increase circulating carriageway	Accept congestion & prioritise users (i.e. public transport priority)
	Ban Movements	Stagger pedestrian provision / Consider on-crossing detection	Provide segregated traffic lanes	Improve pedestrian / cyclist provision
	Change priority	Ban Movements	Signalise roundabout	Provide Bypass
	Convert to signals	Extend flares ¹	Replace with signalled junction	Review speed limit
	Convert to roundabout / mini-roundabout	Provide additional lanes	Accept congestion & prioritise users (i.e. public transport priority)	Road Closures (with diversions)
	Improve pedestrian / cyclist provision	Accept congestion & prioritise users (i.e. public transport priority)		Grade Separation
	Accept congestion & prioritise users (i.e. public transport priority)	Convert to roundabout / mini-roundabout		
		Provide segregated traffic lanes		
	A "flare" is a short additional lane on the approach to a junction.			

2.25. From the above and following the initial workshop a long list of potential options was prepared, see Appendix B, of which some were immediately dismissed for a variety of reasons. The final list of options was then reviewed in a second workshop. The purpose of the option sifting is to develop and refine the options and identify those options not appropriate for future consideration. The sift focused on the following criteria:

- Contribution to identified problems and issues, i.e. the identified scheme should provide an overall positive contribution to the identified problems and issues.
- Contribution to defined Scheme Objectives, i.e. the proposal should provide an overall positive contribution to the objectives.
- Deliverability, i.e. the intervention should be deliverable e.g. political, planning, timescales etc.
- Feasibility, i.e. the proposal should be feasible in theory e.g. physical constraints, land availability and design standards

2.26. The early assessment and sifting tool (EAST) has been used to assess each option at the six different scheme locations. EAST is a decision support tool provided by the DfT which can quickly summarise and present evidence on options in a clear and consistent format. EAST is based around the five business case model approach advocated by the DfT which includes Strategic, Economic, Managerial, Financial and Commercial. A total of 16 different scheme options were assessed at this stage. Eleven options were taken forward which met the initial screening criteria with Via East Midlands preparing preliminary designs for each option whilst considering whether the options were also feasible and deliverable. The details can be examined further in sections 9 and 10 of the OAR.

2.27. The preferred options arising from the option selection process are as follows;

Ollerton Roundabout – enlarged conventional roundabout, see plan in Appendix C
 Deerdale Lane- traffic signal-controlled junction, see plan in Appendix D

Mickledale Lane- traffic signal-controlled junction, see plan in Appendix E
White Post – traffic management scheme, no plan currently available
Warren Hill- convert gyratory to conventional roundabout see plan in Appendix F
Lowdham Roundabout- enlarged conventional roundabout. see plan in Appendix G.

3. ECONOMIC CASE

Introduction

3.1. This section presents the economic case for the A614 – A6097 scheme. It calculates both the value of benefits and value of costs of the scheme and presents an overall Benefit to Cost Ratio (BCR). The DfT's guidance document 'The Transport Business Case: Economic Case' has been used to inform the economic information covered as part of this outline business case. A separate Traffic and Economic Case Assessment Report (TEAR – May 2019) has been produced by Aecom and this gives further details of the method employed to derive the economic forecasts and provides outputs from the traffic modelling and TUBA / COBALT assessment. The TEAR has been provided separately to DfT as part of the suite of information supporting the business case.

Economic case methodology

3.2. There are a number of approaches that could be taken to determine the economic case for the scheme and these were discussed, and a method agreed, with the DfT as part of a modelling scoping exercise. As no suitable existing macro or microscopic traffic models are available for the study area and the development and costs of developing these is considered disproportionate to the size of the scheme (in accordance with TAG unit M1 sections 2.3 to 2.4) the economic assessment of the scheme has been derived from the outputs of isolated junction models.

3.3. The approach to economic appraisal is set out in further detail in section 2.11 of the TEAR and in summary uses isolated junction models (ie ARCADY, PICADY and LINSIG) to identify;

- Baseline traffic delays
- Future Years Do Minimum delays (i.e. without scheme)
- Future Years Do Something (i.e. with preferred options package of junction improvements)
- Monetise the delays from the isolated junction models using the values of time in the WebTAG databook, and expand over a 60-year assessment period using the DfT's latest TUBA software (version 1.9.12, October 2018)
- Use existing personal injury accident records to inform a COBALT accident appraisal at each junction
- The Present Value of Benefits (PVB) and Present Value of Costs (PVC) (assuming a 2010 base year) has been calculated to identify the scheme BCR.

3.4. Whilst each junction has been assessed separately, so that the relative merits of each junction (in terms of likely economic performance) can be considered individually, the PVB and PVC from each junction have been combined to present an overall economic appraisal of the A614 / A6097 improvements.

3.5. The economic assessment has considered the issue of dependant development in line with TAG unit A2.2 'Induced Investment' (May 2018). As noted elsewhere in this report the development sites at the former Thoresby Colliery, Ollerton and Teal Close, Gedling have planning conditions as part of the planning approvals limiting the amount of development that can be delivered prior to improvements at both Ollerton and Lowdham roundabouts respectively. As such these two development sites have a proportion of the development that is considered to be dependent on the A614-A6097 improvement scheme. The assessment of the transport user benefits of the scheme excludes the impacts of this dependant development.

Scheme costs

3.6. Via East Midlands has estimated the cost of delivering the six junctions improvements within the scheme. These costs have been reviewed and endorsed by a contractor selected from the County Council's Midlands Highway Alliance framework. The scheme cost estimates at 2019 prices are as follows;

Table 1: Scheme cost estimates at 2019 prices.

	Construction	Risk	Land	Fees	Total
Ollerton Roundabout	£5,617,680	£150,000	£850,000	£812,000	£7,429,680
Lowdham Roundabout	£3,925,000	£100,000	£162,000	£230,969	£4,417,969
Warren Hill	£3,519,474		£50,000	£250,000	£3,819,474
Mickledale Lane	£2,324,682		£125,000	£200,000	£2,649,682
Deerdale Lane	£3,254,490		£125,000	£200,000	£3,579,490
White Post Roundabout	£80,000		£0	£20,000	£100,000
Total	£18,721,326	£250,000	£1,312,000	£1,712,969	£21,996,295

A more detailed breakdown of the forecast expenditure profile at each junction on a year by year basis can be found in the TEAR (Section 3). The funding for the scheme is comprised of various financial contributions, including the DfT and NCC as the main contributors. More details are set out in the Financial Case section of this report.

3.7. The Present Value of Costs in 2010 market prices and discounted to a 2010 present value year has been calculated as £14,696,000 for all scheme junctions combined.

Public Accounts

3.8. The costs associated with the scheme are presented and discussed in Chapter 4 Financial Case. The generation of the Present Value of Costs (PVC) applies the appropriate DfT Web TAG guidance to treatment of costs in appraisal in order to generate the PVC in the Public Accounts. The following table summarises the Public Accounts values feeding into the scheme appraisal;

Table 2: Public Accounts table.

Funding	All modes	Road
Local Government		
Revenue	0	0
Operating Costs	0	0
Investment Costs	2,204.4	2,204.4
Developer Contributions	0	0
Grant/Subsidy Payments	0	0
NET IMPACT	2,204.4	2,204.4
Central Government Funding: Transport		
Revenue	0	0
Operating Costs	0	0
Investment Costs	12,491.6	12,491.6
Developer Contributions	0	0
Grant/Subsidy Payments	0	0
NET IMPACT	12,491.6	12,491.6
Central Government Funding: <u>Non Transport</u>		
Indirect Tax	Not Assessed	
Totals		
Broad Transport Budget	14,696.00	14,696.00
Wider Public Finances	0	0

Note: Costs appear as positive numbers. All entries are discounted to 2010 present values, in 2010 market prices.

Scheme benefits - TUBA Assessment

3.9. Computer models of both the existing junction layouts and proposed improved junction layouts have been prepared and this software produces outputs in terms of overall vehicle delay. This is the main output than has been used in the Transport Economic Efficiency (TEE) calculations contained in this report.

3.10. The economic appraisal has been calculated for 60 years, as required by the DfT (TAG Unit 3.5.4). The appraisal period is from 2023 to 2082. As the opening years of the proposed six junction improvement schemes do not occur in a single year (Table 3.1 of the TEAR gives details of the proposed opening of each junction improvement) for the purposes of the TUBA assessment a common Open Year of 2023 has been used. The performance of each of the junctions in an assumed Design Year of 2037 has also been calculated. The TUBA assessment uses both modelled years, 2023 and 2037, benefits accrued in the years between the two modelled years are interpolated whilst benefits accrued after 2037 are capped at the same level as 2037. Benefits/disbenefits are discounted at a rate of 3.5% for the first 30 years of appraisal and 3.0% thereafter. The full TUBA output data is available in the appendices of the TEAR.

3.11. In monetary terms the change in travel times due to the Do Something schemes relative to the Do Minimum scenario has been computed and summed across all six junctions. The results are given in the following Transport Economic Efficiency Table (TEE) in 2010 market prices and discounted to a 2010 present value year.

Table 3: Transport Economic Efficiency Table (All Junctions).

TEE Table (£ thousands) – ALL JUNCTIONS

Impact	Total	Personal	Freight
Consumer- Commuting – Travel Time	13,567		
Consumer - Commuting – VOC	Not Assessed		
Consumer - Commuting – During Construction	Not Assessed		
NET CONSUMER IMPACT - COMMUTING	13,567		
Consumer - Other – Travel Time	16,520		
Consumer - Other – VOC	Not Assessed		
Consumer - Other – During Construction	Not Assessed		
NET CONSUMER IMPACT - OTHER	16,520		
Business – Travel Time	10,057	1,805	8,253
Business - VOC	Not Assessed		
Business – During Construction	Not Assessed		
Operating Costs	0		
Other Business – Developer contributions	0		
NET BUSINESS IMPACT	10,057		
PRESENT VALUE OF TRANSPORT ECONOMIC EFFICIENCY BENEFITS	40,144		

Note: All entries are discounted to a 2010 present value year, in 2010 market prices, in £ thousands.

The TEE table shows a Present Value of the Transport Economic Efficiency, annualised and discounted benefits for the 60-year appraisal period, of £40.1m showing that as a combined package the scheme delivers significant positive TEE benefits. The TEAR includes, in tables 4.1 to 4.6, the forecast TEE benefits at each of the individual junctions.

3.12. Given the proportionate modelling approach adopted, the assessment of Greenhouse Gases, Vehicle Operating Costs (VOC) and Indirect Taxes have been excluded from the economic analysis (further details in section 3 of the TEAR). As the scheme is predicted to improve journey times, and therefore make vehicle operating costs more efficient, it is considered that excluding the VOC costs will only underestimate the economic benefits of the scheme and this approach is considered robust.

Road Safety

3.13. The purpose of the road safety assessment is to calculate the monetary benefits of the scheme arising from the change in road accident collision costs between the Do Minimum and the Do Something. This has been undertaken using the software COBALT (Cost and Benefit to Accidents -Light Touch) appraisal programme (version 2013.02). Observed reported personal injury accident data was obtained for the period January 2015 to December 2017. This data was used to calculate the observed collision rate for each junction for the Do Minimum. For the Do Something accident

assessment default COBALT rates were applied (except for the Deerdale Lane and Mickledale Lane junctions where an alternative approach was adopted -see TEAR section 5.7 for further details).

3.14. The following table presents the collision risk and valuation of collisions from COBALT for a 60-year appraisal period for all junctions.

Table 4: COBALT forecast accident changes over 60 years - **all junctions combined.**

	Accidents	Casualties			Accident Costs (£, 000's)
		Fatal	Serious	Slight	
Without-Scheme (DM)	361.1	3.9	39.5	505.6	14,877.7
With-Scheme (DS)	501.5	1.4	31.6	678.7	16,111.5
Difference	-140.3	2.5	7.9	-172.9	-1,233.8

This data shows that the overall scheme is expected to lead to fewer 'fatal' and 'serious' collisions but an increase in the number of collisions classified as involving 'slight' injuries. The COBALT assessment shows that the value of the predicted change in total accidents over a 60-year period (valued in 2010 market prices and discounted to the 2010 present value year) is -£1.23m i.e. a disbenefit.

3.15. Upon closer inspection of the results on a junction by junction basis, see Table 5 below, it is clear that the largest predicted accident disbenefits are associated with the proposed improvements at Ollerton and Lowdham roundabouts. This is principally because the observed accident rates used in the Do Minimum at these two junctions are much lower than the COBALT default accident rate values used in the Do Something calculations. As such any comparison against a national default rate will result in a disbenefit. Whilst both junctions will be enlarged to provide additional capacity the geometry and layout of the proposed junctions are not considered a large change from the existing and as such it is unlikely that the scheme will lead to a large increase in accidents at these two roundabouts i.e. to the level predicted by COBALT.

Table 5: Total accident costs / savings appraised by individual junction

Junction	Do Minimum (DM) cost (£millions)	Do Something (DS) cost (£millions)	Change in cost (£millions)
Ollerton	3,502.3	5,146.2	+1,643.9
Deerdale Lane	1,082.5	1,483.9	+401.4
Mickledale Lane	4,341.2	1,532.3	-2,808.9
White Post	0	0	0
Warren Hill	2,321.8	2,285.7	-36.1
Lowdham	3,629.8	5,663.5	+2,033.7
Total	14,877.6	16,111.6	+1,234

3.16. There are alternate assessment approaches that could be used to assess the safety impacts at Ollerton and Lowdham, however for the purpose of a robust assessment default Do Something accident rates at Ollerton, Lowdham (and Warren Hill) roundabouts have been retained in this economic appraisal. As such this is considered to represent a ‘worst case’ road safety assessment.

Economic Appraisal Summary Results

3.17. The summary economic appraisal for the scheme presented here has been undertaken in line with conventional WebTAG appraisal guidance. A summary of the total economic costs and benefits is tabulated below;

Table 6: Analysis of Monetised Costs and Benefits (AMCB)

Impact	With Scheme
Greenhouse Gases	Not Assessed
Travel Time Savings - Business	10.057
Travel Time Savings – Commuting & Other	30.087
Collisions	-1.233
Vehicle Operating Costs	Not Assessed
Indirect tax Revenue	Not Assessed
PVB	38.911
PVC	14.696
NPV	24.215
BCR	2.648

Notes: Note: Costs appear as positive numbers. All entries are discounted to 2010 present values, in 2010 market prices; except for the BCR figures. Summary does not include monetised journey time reliability benefits.

3.18. The preferred scheme generates a PVB of £38.911m and a PVC of £14.696m which generates a Net Present Value of £24.215m (ie PVB minus PVC). The scheme generates an expected Benefit to Cost Ratio (PVB divided by PVC) of 2.648. A more detailed breakdown of the costs and benefits on a junction by junction basis is given in section 4 of the TEAR.

3.19. The Department for Transport’s ‘Value for Money Guidance’ (2017, www.dft.gov.uk) describes how value for money can be categorised in six classes as follows;

Figure 5: DfT Value for Money Guidance Categories.

Box 5.1 Standard Categories
(Transport cost outlays exceed revenues or cost savings)

VfM Category	Implied by...*
Very High	BCR greater than or equal to 4
High	BCR between 2 and 4
Medium	BCR between 1.5 and 2
Low	BCR between 1 and 1.5
Poor	BCR between 0 and 1
Very Poor	BCR less than or equal to 0

**Relevant indicative monetised and/or non-monetised impacts must also be considered and may result in a final value for money category different to that which is implied solely by the BCR. This chapter provides guidance on how to select the final value for money category.*

3.20. The BCR summarised in the AMCB table in 3.18 above shows that the improvements should deliver a positive economic case and that this represents ‘High Value’ for money, i.e. a BCR between 2 and 4. Other appraisal objectives which have not been monetised should be taken into account during the decision-making process. The following impacts will likely provide additional unquantified benefits and increase the PVB, and in turn the BCR, of the scheme.

- Journey-Time Reliability benefits (Expected to be Moderate beneficial impact)
- Tourism benefits (Expected to be Moderate beneficial impact)
- Planning Gain (Land Value Uplift) associated with unlocking the dependant development (Expected to be a Large beneficial impact)
- Inclusion of Vehicle Operating Costs. (Expected to be Moderate beneficial impact).

Economic Assessment Risk and Sensitivity Testing

3.21. This section gives an indication of the change in benefits or change in costs that would be required to switch the Value for Money category up or down (i.e. from the High category currently forecast), together with the likelihood of this change in benefit or cost occurring. The following table identifies the scale of an increase or decrease in each of the PVB and PVC required to switch the VfM category.

Table 7: Sensitivity of change in PVC or PVB benefit to VfM category.

Change in Benefit or Cost required to change Value for Money category	Change in Benefit or Cost	New Value for Money Category	Likelihood of New Value for Money Category
£10.99m Decrease (28% reduction in PVB)	Benefit	Medium	Slight
£21.34m Increase (55% Increase in PVB)	Benefit	Very High	Moderate
£5.78m Increase (15% Increase in PVC)	Cost	Medium	Moderate
£5.21 Decrease (13% Decrease in PVC)	Cost	Very High	Slight

3.22. The economic assessment assumes that the planned development in and adjacent to the A614 / A6097 corridor comes forward at the expected rate i.e. within the 15-year Local Plan period. Additional development could mean that the proposed junction improvements have insufficient traffic capacity in the Design Year, but this would likely increase the transport economic efficiency benefits. If there was less development in the planned period than assumed this would reduce the TEE benefits of the scheme.

3.23. The cost to road users of delays caused by the scheme during construction has not been assessed at this stage. Should an assessment be undertaken at a later stage this assessment will see a reduction in the Present Value of Benefits (PVB). The likely scale of impact is expected however to be a slight disbenefit and would likely be more than offset if the currently unquantified benefits as listed in section 3.20 were included.

Appraisal Summary Table

3.24. A standard approach to the assessment of costs and benefits relating to the scheme has been adopted, informed by DfT guidance and requirements. The Appraisal Summary Table (AST) is designed to provide decision takers with a concise overview of impacts of the scheme against three objectives defined in WebTAG:

- Environment
- Society and
- Economy

3.25. For each of these factors, benefits are ranked on a seven-point scale depending on their level of impact and benefit. The ranking system is as follows:

- Strong beneficial;
- Moderate beneficial;
- Slight beneficial;
- Neutral;
- Slight adverse;
- Moderate adverse; and
- Strong adverse.

3.26. The AST is included in Appendix H.

4. FINANCIAL CASE

Introduction

4.1. This section sets out the likely costs of the scheme along with the funding that is in place at the time of writing.

Costs

4.2. The latest scheme cost estimates for the package of measures is currently £21.997 million and can be broken down on a junction by junction basis as follows;

Junction	Civils (£m)	Land (£m)	Fees (£m)
Ollerton Roundabout	5.768	1.312	1.713
Lowdham Roundabout	4.025		
Warren Hill	3.519		
Mickeldale Lane	2.325		
Deerdale Lane	3.255		
White Post Roundabout	0.080		
Sub Total	18.972	1.312	1.713
Scheme Total	21.997		

4.3. These scheme cost estimates are provided at 2019 (Quarter 1) prices and have been produced by Via East Midlands and independently reviewed by a contractor selected from the Council's Midlands Highway Alliance framework. Section 3 of the TEAR contains a detailed breakdown of costs for each junction and the expected expenditure profile for each. Table 1 in section 3.6 above includes a more detailed information of the costs at each junction.

Cost Expenditure Profile (all junctions)

4.4. The total project cost by year is shown in Table 8. This table also identifies the relative proportions by year to be spent on preparation, construction, supervision and land.

Table 8. A614/A6075 Total project cost – Expenditure Profile

A614 / A6097 MRN Improvement scheme - Expenditure profile									
	19/20	20/21	21/22	22/23	23/24	24/25			
Nottinghamshire County Council	£200,000	£350,000	£274,000	£71,000	£1,155,000	£748,000	£2,798,000		
Third party contributions	£0	£0	£599,000	£599,000	£0	£0	£1,198,000		
DfT	£0	£0	£4,806,000	£3,555,000	£5,949,000	£3,690,000	£18,000,000		
Totals	£200,000	£350,000	£5,679,000	£4,225,000	£7,104,000	£4,438,000	£21,996,000		

Budget / Funding Cover

4.4. The latest cost estimate for the package of measures is currently just under £22 million. The DfT has provisionally allocated a maximum contribution of £18 million with the remainder being funded by S106 contributions / Community Infrastructure Levy contributions / County Council capital contributions. Section 106 contributions from developers including the promoter of the Thoresby Colliery redevelopment site at Edwinstowe (Harworth Group Plc) has identified a S106 contribution of £1.198 million. The County Council has agreed to commit up to £2.8 m towards the total project cost.

4.5. The County Council's Policy Committee on 22nd May 2019 approved the submission of the Outline Business Case to DfT and the County Council's Section 151 officer (Financial Director) has agreed to meet the County capital funds towards this project. The County Council has also agreed to allocate a working budget towards advanced design work, undertaking economic assessments, commence land valuations and progress the planning and Orders preparation. All costs incurred prior to OBC approval are done so at the County Council' expense and risk.

4.4. Utilising the MSF3 procurement methods provides an opportunity for the project team to engage and work collaboratively with a preferred contractor to carry out value engineering and fix a target price (Early Contractor Involvement (ECI)). If the target price is less than current estimates, then it reduces the risk of costs being incurred above the current contributions. In the case of the target cost being above current scheme estimates then through robust project governance arrangements this information would be taken to partners to seek additional contributions and a subsequent report brought to the appropriate County Council finance committee to advise on the next steps required to deliver the project.

Accounting Implications

4.5. The DfT require Nottinghamshire County Council to confirm that NCC accept responsibility for meeting any costs over and above the DfT contribution this amount currently stands at £3.997 million, however S106 contributions already committed reduce the local authority contribution to £2.8m. The County Council's Policy Committee on 22nd May 2019 authorised the County Council's Section 151 to meet the project costs over and above the DfT contribution. The County Council has made the appropriate allowance to contribute to the A614-A6097 project in the County Council's financial budget.

Financial risk

4.6. In view of the County Council's undertaking to meet any shortfall in project funding all the is vested the scheme . There is no financial risk to the Department for Transport. Equally th

5. COMMERCIAL CASE

Introduction

5.1. This section presents the commercial case for the A614 / A6097 MRN improvement scheme and it demonstrates the commercial viability of the project. Further details can be found in a separate report on project governance and procurement that has been prepared by Via East Midlands (Governance Note -May 2019). This Governance Note has been supplied separately to the DfT as part of the suite of documents comprising the Outline Business Case submission.

Procurement Strategy and Contract Management

5.2. Procurement is an integral part of the project management process. The County Council's procurement strategy is designed to ensure;

- Value for money; NCC is duty bound to secure best value. NCC's Financial Regulations and Standing Orders govern arrangements for the procurement of goods and services by the authority.
- Compliance with legislation; a wide range of UK and European Union statutes and regulations apply to procurement and these have been adhered to
- Avoidance of fraud and corruption; procurement must be visible and tightly controlled to limit the potential for fraud and avoid any suggestion of corruption.

5.3. The main construction works for the A614 / A6097 Major Road Network Improvement Scheme will be procured using the Medium Schemes Framework (MSF) which is provided through the Midlands Highway Alliance (MHA) of which NCC is a lead member. The Medium Schemes Framework is now in its 12th year and its key and over-riding objective is to develop an effective procurement option for the delivery of highway schemes.

5.4. Using the MSF helps to reduce procurement costs and gives greater flexibility over the timings of construction compared to a traditional Tender route. However, the major benefit of the MSF is that it enables a significant period of Early Contractor Involvement (ECI) with the appointed contractor. This is a collaborative approach and key benefits include involving the contractor in the design process with key suppliers and sub-contractors also being involved in decisions at a much earlier stage. The appointed contractor can also carry out value engineering and assist in the management of risk whilst also fixing a target price for the overall package of works.

5.5. On the successful completion of ECI, savings and innovation for the project are recorded and returned to the MHA. Savings are continuously reviewed by the Framework Community Board to ensure that lessons learnt are shared as widely as possible. ECI had generated savings of over £16 million through MSF2 up to March

2017 across all member projects (MHA website). Case studies demonstrating these benefits are available on the MHA website. Typically contractors are now being selected six months prior to the start of the project and it is anticipated that the A614 / A6097 MRN Improvement project would have a contractor on board closer to 12 months before the start of works to maximise potential savings over the construction period.

5.6. In addition to the advantages outlined above, the Medium Schemes Framework also allows for:

- High levels of participation in the regular Framework Community Board
- The ability to measure performance through the Framework Community Board that is well attended by all member partners.
- Benchmarking MSF projects against projects delivered by other methods.
- Performance management – reporting of performance shows high levels of client satisfaction and numerous regional awards.
- Investment in skills – every project has an Employment and Skills Plan in place to maximise and monitor job creation, learning and skill development for the construction industry. This is part of the MHA Skills Community, Construction Industry Training board (CITB) and recognised by the Institution of Civil Engineers (ICE) to address the skills gap in the construction industry as the number of infrastructure projects increase.
- Collaboration and shared learning- meetings are held regularly, usually every two months and providing an opportunity to share information about:
 - Target price
 - Outturn costs
 - Time predictability
 - Key Performance Indicators information
 - Innovations
 - Near misses
 - Lessons learnt

5.7. MSF1 and MSF2 had already shown an increase in the amount of savings achieved since the frameworks were developed. Savings in time and money (as reported above) have been made by removing the need for each authority to separately conduct EU compliant procurement procedures. Time savings will be realised by not having to carry out protracted Official Journal of the European Union (OJEU) procurements for each individual project. However, MSF3 has improved the framework further by incorporating the following proposals:

- **Safety** – Ensure that Construction Skill Certification Scheme (CSCS) cards are held by all local highway authority staff working on framework projects.
- **Dependable** – Simplify contractor selection process and abandons the Lot 1 and Lot 2 split to widen the procurement pool.
- **No delay, no surprise** – Makes further improvements to Early Contractor Involvement by including an option so that payments can be made to the contractor during ECJ process.

- **Good value** – Increase the use of the local supply chain to achieve additional value when possible.
- **Customer focused** – Use the Social Value Act to quantify community benefits.
- **Collaboration** – Improve information sharing within projects and audit the provisions of fair payment charter and link to performance measures.

5.8. The use of the Medium Schemes Framework also ensures long term relationship building, particularly in terms of well-known, recognised and understood processes, protocols and contractual terms between contractor and authority of how they work and what their processes under MHA awarded projects are. This is particularly important in terms of risk and risk allocation/transfer between parties. The MHA has established contractual terms for these and it is anticipated that the division of risk will be applied to maximise local input to the process, whilst also achieving and incentivising on-time, on-budget and the most efficient delivery mechanisms.

5.9. The County Council employs locally based, skilled and experienced resources in design, project planning, management, and works delivery within its highways design company Via East Midlands. These activities are frequently tested for value for money through external benchmarking and market testing and each element of the service has a proven track record of delivery, on internal and externally funded projects and on projects delivered for external clients.

5.10. The Council / Via East Midlands A614-A6097 project team has extensive working experience on major transport projects of this nature, including recent work funded and assessed / audited by the DfT, on the Hucknall Town Centre Improvement Scheme, A612 Gedling Transport Improvement Scheme and Mansfield Public Transport Interchange.

Pricing Framework and Charging Mechanisms

5.11. The latest iteration of the framework, MSF3, utilises Option C (target cost) from New Engineering Contract 4 (NEC4) Engineering and Construction Contract (EEC). The EEC form of contract has become public sector contracts of choice, being used for nearly all projects procured by national and local government bodies and agencies. Via EM, on behalf of NCC, have successfully used the previous framework, MSF2, to deliver other major highway projects including the Hucknall Town Centre Improvement Scheme which was funded by the DfT and assessed by the DfT major project team (contract value £8.5 million) and Hucknall Rolls Royce (contract value £3.1 million). Delivery of these projects has provided recent experience and knowledge of working with EEC contracts and target cost options. The same teams are working on the A614/A6097 MRN Improvement project and will be using this experience to prepare the works information and contract documentation.

5.12. An open book accounting approach would be in operation, with the contractor providing a monthly breakdown of costs with a set of Key Performance Indicators (KPIs) used to assess service delivery. Payments would be made on the basis of actual out-turn costs as set out in the contract documents. Incentive mechanisms will be explored for the contractor to minimise costs.

5.13. Throughout the development of the scheme to date, risks have been identified and actively managed and a risk register has been produced to record this. Where appropriate, risk owners have been allocated and tasked with eliminating risks where feasible or identifying mitigation measures for residual risks. The same ethos will be taken right through to the delivery stages of the works package. The adopted risk strategy is designed to deliver the A614 - A6097 project and meet the scheme objectives in full to cost, quality and time.

5.14. The risk register is a ‘live’ document and will be constantly updated throughout the project lifecycle. The current risk register has been prepared in partnership with Via East Midlands and is appended to this document. During the delivery of the scheme and once the contractor is appointed the project risks will be reviewed with a view to avoiding, mitigating, managing, offsetting or transferring risk. It is too early to consider potential items which could be transferred as part of the contracting process. Note there is no financial risk to the DfT as any Departmental financial contributions are capped and all project overspends will be underwritten by NCC as the promoting authority. At this stage in the appraisal process an appropriate contingency level and optimism bias factor has been applied.

5.15. A project risk register will be prepared by the contractor and design team as part of the procurement process to collate the risk for the project. Throughout the construction period risk will continue to be reviewed by the same project team through regular monthly project meetings, allowing risks to be ‘closed down’ where appropriate. Collaborative workshops with the contractor and client will also be held at the ECI design process to help develop innovative ways of working and identify efficiency savings. Progress meetings will also be utilised to raise opportunities to make further cost savings on the Target Cost or to identify new risks.

5.16. Design risk will be retained by Via East Midlands / NCC but the delivery and programme risk will be shared and incentivised with the appointed contractor, through the MHA pain/gain mechanism. The contractor is incentivised to beat the initial target cost as they will benefit from the savings as follows:

Table 9: MSF3 Contract Incentives.

Share range	Contractors share %
Less than 80%	30%
From 80% to 110%	50%
Greater than 110%	100%

5.17. Conversely if costs do go over budget the contractor will have to bear their share of that increased cost. Via EM / NCC will use the MHA Performance Management Toolkit to assess scheme progress and contractor performance against KPIs. Scores against the indicators will be reviewed regularly throughout the life of the scheme.

Contract Length

5.18. The contract for the construction of the scheme is expected to be awarded in 2021 and will cover the delivery of all six A614-A6097 junction improvements. The first junction improvement is expected to commence construction in April 2021 and the

completion of the last improvement is expected in August 2024. This would give a total contract length of 41 months.

Human Resource Issues

5.19. There are no TUPE or other Human Resource issues resulting from the A614 - A6097 project as no public sector staff will be transferring to a different organisation during delivery.

6. MANAGEMENT CASE

Introduction

6.1. This section describes how the A614 - A6097 Junction Improvements scheme will be managed and delivered in accordance with DfT requirements, it presents details of project planning, governance structure, risk management, communications and stakeholder management, benefits realisation, and assurance.

Project planning and dependencies

6.2. The delivery of this project is to be staggered across a three-year period as it would not be practical or feasible to deliver improvements at 6 junctions in the same corridor all at the same time. The traffic management would be unworkable and delays to the travelling public would not be politically acceptable. In which case it is proposed to construct the scheme in discrete phases, commencing at the northern most junction, Ollerton roundabout, and working towards and finishing with Lowdham roundabout, the most southerly.

6.3. As part of future network management and road space planning the County Council (and appointed contractor when awarded) will need to carefully consider the interdependencies relating to other planned infrastructure projects on the A614 and adjacent corridors, including the Strategic Road Network (A46, A52, A1 and M1 in particular).

6.4. The planned £41m Gedling Access Road (GAR) scheme is due to be on site in January 2020 and be under construction until Summer 2021, and possibly beyond. The A614-A6097 project construction programme will need to consider the relationship and interface with the GAR project i.e. so that wider network performance is not compromised. The Gedling Access Road impacts directly on the A612 about 3 miles to the west of the A612 / A6097 Lowdham roundabout.

Governance, organisational structures and roles

6.5. The scheme is being project managed by Via East Midlands on behalf of Nottinghamshire County Council (NCC) and is run using Prince 2 based controls. The Via East Midlands project delivery team has a proven track record of procuring and delivering major transport schemes with the most recent example being the Hucknall Town Centre Improvement Scheme which was completed in June 2016 and funded by DfT. A number of significant transport schemes have more recently been undertaken in conjunction with both the D2N2 and SCR Local Enterprise Partnerships. Recent examples of these are improvements to the A57/A60 roundabout in Worksop, A614 / A1 junction in Blyth and the A611/ Rolls Royce business park access roundabout in Hucknall.

6.6. An A614-A6097 scheme Project Board is in the process of being set up and this once convened will meet at least 3 times a year. The Board meetings will be focussed on key milestones / decision points rather than sticking to routine meeting dates. Additional meetings can be called to consider exceptional items or events as deemed necessary.

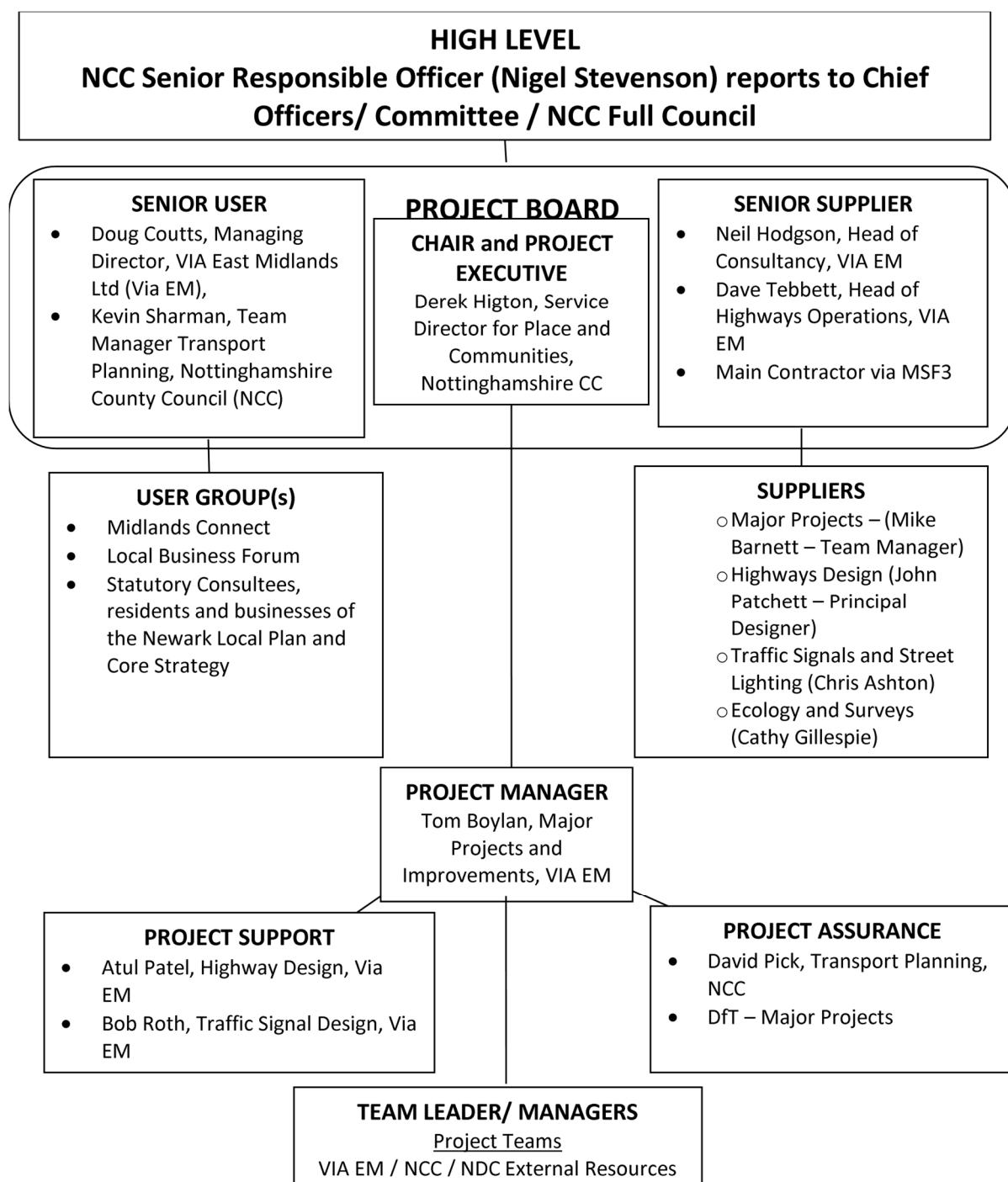
6.7. The proposed governance structure for the A614-A6097 project is shown on the organogram in Figure 1 below. The governance structure which is in place for the A614/A6097 MRN improvement project follows an established structure that has been used by NCC and Via East Midlands for the successful delivery of other major and significant transport schemes.

6.8. The Project Board will be chaired by Derek Highton the Service Director for Place and Communities at Nottinghamshire County Council. Other members will include Neil Hodgson, Via East Midlands, Head of Consultancy, Tom Boylan, Via East Midlands who is the project manager (PM) for the scheme and David Pick who is the principal officer for Transport Planning at Nottinghamshire County Council (as client). Atul Patel the lead highway designer for Via East Midlands will also attend the Project Board. A representative from the principal contractor will also be invited to attend once a contractor for the project has been formally appointed.

6.9. Neil Hodgson is one of the Senior Suppliers of the project and is Head of Consultancy at Via East Midlands. The Design Consultancy group consists of the following teams:

- **The Major Projects Team** (Tom Boylan) who will project manage the scheme. This team write reports to Full Council and Place Committee, deal with Statutory processes including planning applications, Compulsory Purchase Orders, Traffic Regulation Orders and provide all financial quarterly monitoring reports to the DfT. The PM will also manage the project team which includes: Highway Design, Environmental Services (landscaping etc), legal and property services. The major projects team manage all public consultation events, attend public meetings and are effectively the Council's face of the scheme to the wider public.
- **Highway Design Team** this is the team that will be project lead on the construction designs for all 6 schemes,
- **Traffic Signals and Lighting** which provides all traffic signal engineering expertise and this team will also produce the lighting designs for each junction.
- **Environmental Services** this team covers landscaping design, biodiversity, noise assessments and all site survey works including topography and material testing.

Figure 6. A614/A6097 MRN Improvement Governance Structure – Organogram.



6.10. The Head of Consultancy at Via East Midlands (Neil Hodgson) is authorised to make decisions regarding resource allocation within Via East Midlands Design Consultancy. Scheme issues and risks are highlighted directly to Neil Hodgson on a two-weekly basis and dependent on severity are then raised with the Director of Via East Midlands (Doug Coutts). Monthly Progress Reports are also sent to Nottinghamshire County Council (the client) providing an update on design issues, fee estimates, the scheme budget and project risk.

6.11. The Via East Midlands PM also reports to the Project Board via Highlight Reports which inform on the progress of the scheme. The information within the Highlight Reports is drawn from the Progress Reports and the more frequent Project Team

meetings held between the PM, highway designers, landscape architects and the traffic signal engineers. The PM is authorised to make decisions on a day to day basis. Design changes or issues/risks above a value of £50,000 are reported to the Project Executive and then to the Project Board. The Project Board are empowered to make decisions on questions raised by the PM and also direct internal reporting procedures.

6.12. The Project Board will inform senior personnel within NCC including the SRO in all correspondence with the DfT on the scheme. The Project Board will agree progression to the next agreed work stage and also take key decisions that affect the programme, quality or cost of the scheme. Nottinghamshire County Council has now set up a Highways Major Project Board which also meets on a monthly basis and attendees include senior officers of the County Council and Via East Midlands.

6.13. The PM holds Project Team meetings overseeing delivery, risk, programming and budget control. The Major Projects and Improvements Team at Via East Midlands will lead the project on behalf of NCC and will liaise with the DfT throughout the life of the scheme, including submitting Quarterly Monitoring Reviews, Full Approval Submission, Evaluation and Monitoring Reports and Financial Audits.

Assurance and Approvals Plan

6.14. The responsibility for assurance and approval of the Outline and Full Business Case rests initially with the DfT. At the Full Business Case stage NCC / Via EM will develop and agree the Assurance and Approvals Plan with the DfT. Gateways likely to include: post public consultation, pre-planning, planning application submission, Award of Planning Consent, Award of Contract and on completion of the scheme.

Programme and Project Plan

6.15. A full Project Plan is included in Appendix I. This identifies the key milestones in developing and delivering this project. The key dates to note are as follows;

Table 10: Project Programme Key Activities

Activity	Start Date	End Date	Comments
Submission of Options Assessment Report and Outline Business Case to the DfT	Nov 2018	May 2019	Dependant on approval
Preliminary Design work	Jan 2019	Dec 2019	Ongoing
Land negotiations	April 2019	Until end of project life	Ongoing
Detailed Design and ECI	Summer 2019	April 2021	
Consultation Events	Summer 2019	April 2021	
Submission of Planning Application to LPA	August 2019	December 2019	Ecology and Design work - ongoing
CPO & SRO / Public Inquiry	Nov 2019	Jan 2021	
Full Approval Submission to the DfT	Dec 2019	March 2020	
Start of Construction Works	April 2021		

Key Management and Risk Management Strategy

6.16. Throughout the development of the scheme to date, risks have been identified and actively managed and a risk register has been produced to record this. The risk register is included at Appendix J. The risk register is a live document and will be continually updated through the project lifecycle. Where appropriate, risk owners have been allocated and tasked with eliminating risks where feasible or identifying mitigation measures for residual risks.

6.17. The risk register includes information relating to the category and type of risk involved, the consequence and likely probability that each risk could arise. A four point rating is applied to the 'probability', (1 for very unlikely to 4 for extremely likely) and a similar 4 point rating to the 'consequence' (with 1 as low impact in terms of time and cost impacts to 4 for very high impact) and this produces an overall risk rating. The 'high risk' items currently showing on the register include,

- Failure to agree traffic management proposals
- Difficulty in securing Environment Agency approvals to hydraulic modelling.
- Objection to CPO triggering a Public Inquiry.
- Statutory Undertakers fail to meet the construction programme.

6.18. The risk register will be updated on a monthly basis and actively managed by Via East Midlands. Via East Midlands have successfully demonstrated their ability of managing risks on numerous transport projects. The management of risk and uncertainty will be key to successful delivery of the A614 – A6097 improvements. The first risk on the register relates to the need to secure Departures from Standard at each of the proposed roundabout improvements. This risk has now been 'closed' as the County Council's Departures Board has signed off the proposed departures. Details of the scheme departures and the decision of the County Council's Departures Board has been separately supplied to DfT as part of the Outline Business Case submission.

Communications and Stakeholder Management Plan

6.19. Public and stakeholder consultation is essential to ensure that the various aspirations of the general public and key stakeholders are taken into account throughout development and delivery of the A614-A6097 project and to manage the communication and flow of information relating to the scheme.

6.20. Consultation enables the project team to understand key issues and mitigate potential objections, to optimise the technical solutions and maximise the scheme benefits. A managed approach is currently being undertaken to stakeholder engagement ensuring the focus is the customer. Most of the landowners/ property owners along the length of the scheme likely to be directly affected by the junction improvement schemes have already been notified by Via East Midlands of the Council's proposals and a number of face to face meetings have already taken place.

6.21. A series of six public consultation and information exhibitions is currently being planned to take place in July / August 2019. A number of separate venues along the

A614 - A6097 corridor are proposed, targeted to capture views and opinions from as wide an audience as possible, including road users that do not reside locally. This will ensure the benefits of the scheme are clearly communicated and understood, it will also allow the project team the opportunity to consider modifying and improving the schemes where possible.

6.22. In addition to public information exhibitions a comprehensive public consultation strategy will be pursued comprising of dedicated public events, social media, a project specific website, and printed press. A schedule of communications activities is set out in a scheme specific Communications Plan, supplied separately to the DfT. The Communications Plan will also guide the level and type of communications required at different stages in the project's life cycle and to ensure stakeholder involvement and input is included at appropriate times.

6.23. The Communication Plan objectives are;

- To raise awareness of the A614-A6097 Major Road Network with local residents and businesses alike,
- To inform and empower stakeholders and local residents such that they are positively involved and aware of the benefits of scheme,
- Communicate the benefits of the improvement scheme at every opportunity to ensure the scheme is widely welcomed,
- Secure a succession of positive media coverage with lead stories in Nottingham Post, other print titles, and interviews with broadcast media,
- Generate views and feedback on the A614-A6097 scheme web page
- Effectively utilise all relevant available NCC communication channels to support the project.

6.24. In terms of the media, all enquires will be directed to the County Council's dedicated press office. Proactive press releases are scheduled for key communication points in the project including the public consultation events. The press office will take a proactive approach to releasing timely, accurate and comprehensive project information. The A614-A617 project website will be used to provide supporting and additional information, such as 'How To' guides with respect to compensation, and a regularly updated FAQ section. A dedicated email address will be established and will be regularly monitored by the Via East Midlands project team. Any press enquires submitted via either the project website or email account will be forwarded to the press office for response.

6.25. With respect to further engagement, a Statement of Community Involvement will be produced following the public consultation events, summarising key points, identifying any issues, and proposed changes to the schemes if deemed appropriate. The Statement of Community Involvement will accompany any subsequent planning application(s). The planning application process will allow the public and stakeholders a further opportunity to comment on the scheme proposals.

6.26. The Communications Plan recognises the importance of timely communications and this will be particularly important immediately before the start and during construction works on site, so that all road users are aware of likely disruption to traffic and travel conditions, are notified of signed diversion routes and have details of who to contact in the project team so that issues can be dealt with as quickly as possible.

Monitoring and Evaluation

6.27. Monitoring and evaluation is required by the DfT to demonstrate that funding provided for the A614-A6097 scheme in Nottinghamshire represents value for money to the taxpayer. Additionally, to ensure the scheme meets its core strategic and economic objectives of its business case. In so doing this will allow the DfT and County Council to understand what has worked well and what hasn't and why this might be the case, so that good practice can be replicated across the country and mistakes and poor outcomes avoided in the future.

6.28. Initially the A614 -A6097 junction improvements will deliver immediate transport user benefits to commuters, business travellers and drivers on other journey purposes, as quantified in section 3 above. These journey time and reliability benefits will translate into encouraging inward investment and the build out of housing and employment sites alongside and adjacent to the A614-A6097 corridor. It is only when these sites are developed that the second wave of benefits on the local economy will be fully realised.

6.29. The County Council and Via East Midlands will prepare and submit to the DfT a Monitoring and Evaluation Plan following the DfT Guidance for 'standard monitoring'. This will focus on both the scheme's construction and scheme objectives. For the former issues around build quality and out turn costs are relevant and for the latter traffic demand, journey time and reliability changes, roads safety impacts, carbon emissions and impacts on the delivery of houses and employment sites in the corridor. Consideration would also be given to background effects that are not directly related to the scheme.

6.30. It is usual practice for the reporting of impacts in the Monitoring and Evaluation Plan to take place both 12 months after opening and 5 years after opening, however as the project involves a phased implementation of 6 junction improvements over a 3 -year period the monitoring and reporting programme will need to be carefully considered and agreed with the DfT. It may be necessary to identify and agree an interim monitoring programme as well as the normal post completion project evaluation exercise.

6.31. The County Council and Via East Midlands have considerable experience in undertaking monitoring and evaluation of major transport projects, including those funded by the DfT. Most recently a '1 year after' Post Opening Project Evaluation report was submitted to the Department for Transport for the Hucknall Town Centre Improvement Scheme. The DfT response was that " this was a high-quality, well-drafted and well-evidenced report in line with our expectations for Standard Monitoring reports".

6.32. NCC has identified a provisional budget of £30,000 to undertake the monitoring and evaluation work for the scheme. There is a requirement to estimate the specific costs of the activities proposed in this plan and review the provisional budget. This will need to be finalised in advance of the Full Business Case submission for Full Approval.

Project reporting

6.33. The project governance structure and responsibilities for reporting are detailed in section 6.5. The Via East Midlands Project Manager is required to update the client as part of a monthly project reporting process. This report updates the client and wider project team on the spend to date and highlights any early warning of changes in cost / scope that might impact budget. The monthly update also includes monitoring of key risks and reports progress towards meeting the programme timetable. The SRO is responsible for ensuring that the Executive Board is provided appropriate information in order that they can provide guidance on project decisions.

6.34. The Project Manager will be responsible for submitting quarterly monitoring reports to the DfT once Outline Business Case approvals have been given and throughout the lifetime of the project.

6.35. With regard to monitoring and evaluation, it is proposed that reporting will be made to the DfT by Via East Midlands 12 months after the scheme has been fully open to traffic and 5 years after opening too. Interim reporting requirements are to be discussed and agreed with the DfT at the Full Approval stage.

Contract Management

6.36. Via East Midlands will manage the contract with the appointed contractor on behalf of Nottinghamshire County Council.

Benefits Realisation Plan

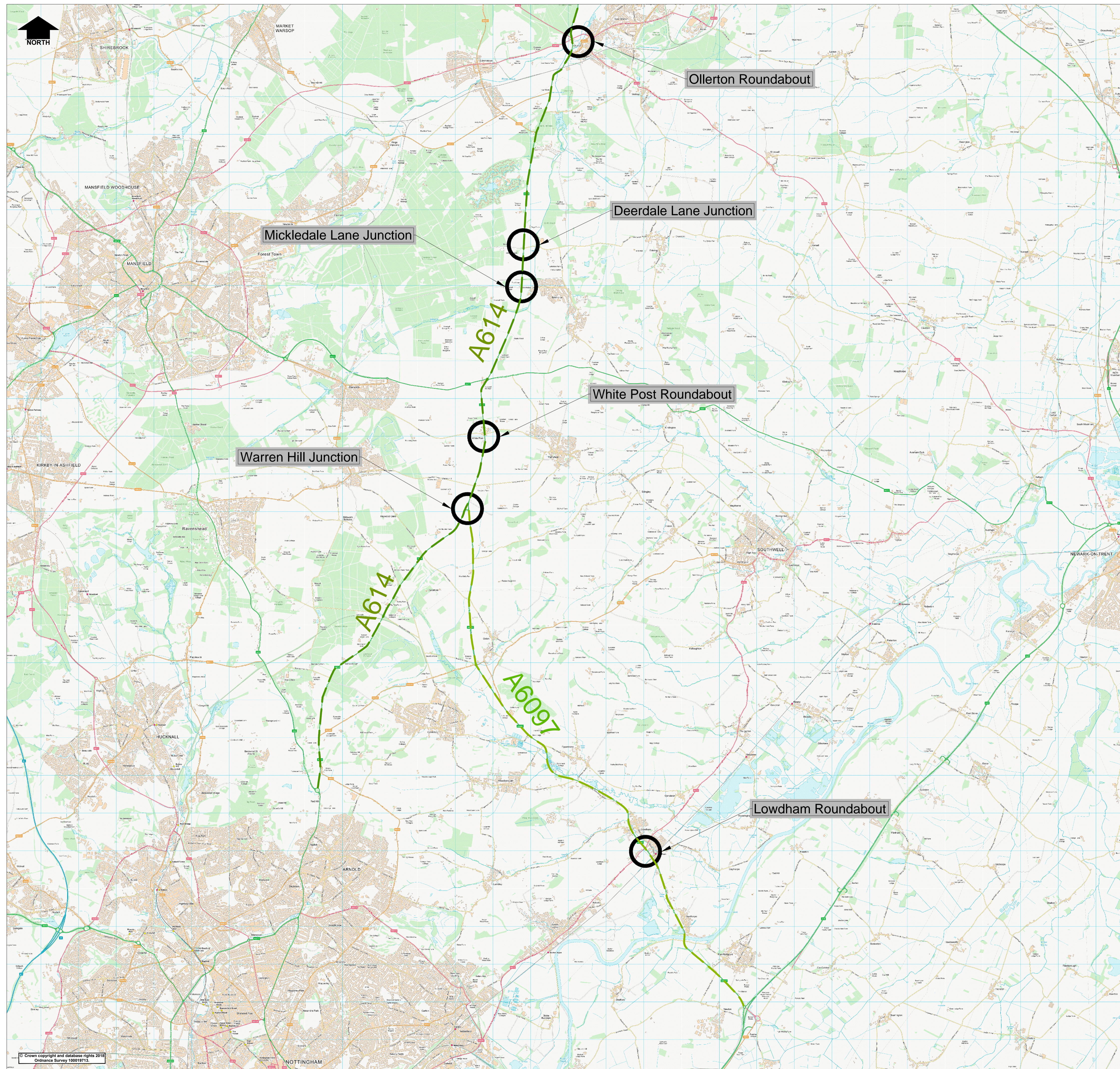
6.37. The Benefits Realisation Plan identifies the potential benefits of the scheme including the measures and reporting requirements to be considered through scheme delivery. It will set out the overall approach and framework that will be used to manage the realisation and delivery of the benefits. This work will be completed for the Monitoring and Evaluation Plan which will be completed in due course.

7. CONCLUSION

7.1. In summary this OBC indicates that the scheme has been assessed against and meets the requirements of the 'five-case' model required by the DfT, as follows;

1. **Strategic Case** – the scheme meets strategic objectives both locally (Notts LTP / Place Plan), regionally (Midlands Connect) and nationally, in that the scheme will improve journey times and reliability, improve network resilience encouraging productivity and reducing costs to business. Commercially the package of improvements will drive economic growth by facilitating and enabling planned housing and creating jobs (improvements at these junctions would enable 1,330 dwellings and over 24,000 m² of employment growth). The proposed A614/A6097 improvements support The Midlands Connect Strategy outcome 'Regionally Connected: Powering the East Midlands Engine' by improving access to markets, supply chains and labour markets. The Midlands Connect Strategy identifies that in order to achieve ambitions of high-quality end-to-end journeys, further intervention is required on the local and sub-regional networks too, i.e. the Major Road Network of which the A614 / A6097 is an integral part.
2. **Economic Case** – the project represents 'High' value for money in economic terms as defined in DfT investment guidance notes. The combined package of junction improvements delivers a Present Value of Benefits (PVB) of £38.9 million, a Present Value of Costs (PVC) of £14.7 million, a Net Present Value (NPV) of £24.2 million and a Benefit Cost Ratio (BCR) of 2.6 which is expected to increase if unquantified benefits were considered.
3. **Financial Case** - the financial cost of the scheme is £22m and the County Council and Newark and Sherwood District Council (CIL receipts) are committed to meeting all costs over the DfT indicative contribution of a maximum of £18m. The County Council (S151 Officer) has given an undertaking that the County Council would underwrite any project overspend, should this arise.
4. **Commercial Case** - In terms of procurement strategy, pricing and payment mechanisms and risk allocation, the County Council and its transport consultancy and design partners Via East Midlands are well placed and experienced in successfully delivering schemes of this nature, including those funded by both the D2N2 and SCR LEPs and the DfT.
5. **Management Case** – With clear proposals for governance, project planning, risk management, stakeholder management and project evaluation it is considered that there is sufficient project direction and assurance that Nottinghamshire County Council can deliver the A614 / A6097 MRN package of junction improvements to the DfT specified deadline, and that these improvements will deliver wide ranging economic benefits in accordance with the DfT MRN funding requirements.

Appendices



NOTES

1. This drawing is to be read in conjunction with all other relevant drawings, details and specifications.
2. Do not scale from this drawing.
3. All measurements are given in metres unless otherwise stated.
4. This drawing shows the 6 junctions along the A614/A6097 corridor promoted for improvements.

Rev.	Description	Drawn	Ch'kd	Auth	Date
Project					
A614/A6097 CORRIDOR IMPROVEMENTS					
Status		Project No.			
FOR INFO		HW20949			
Drawing Title					
APPENDIX A - LOCATION PLAN 6 JUNCTIONS					
Scale		Drawn	AP	Date JAN 19	
NTS		Ch'kd	JJP	Date JAN 19	
		Auth	AP	Traced	AP
		Drawing No.		HW20949/01	

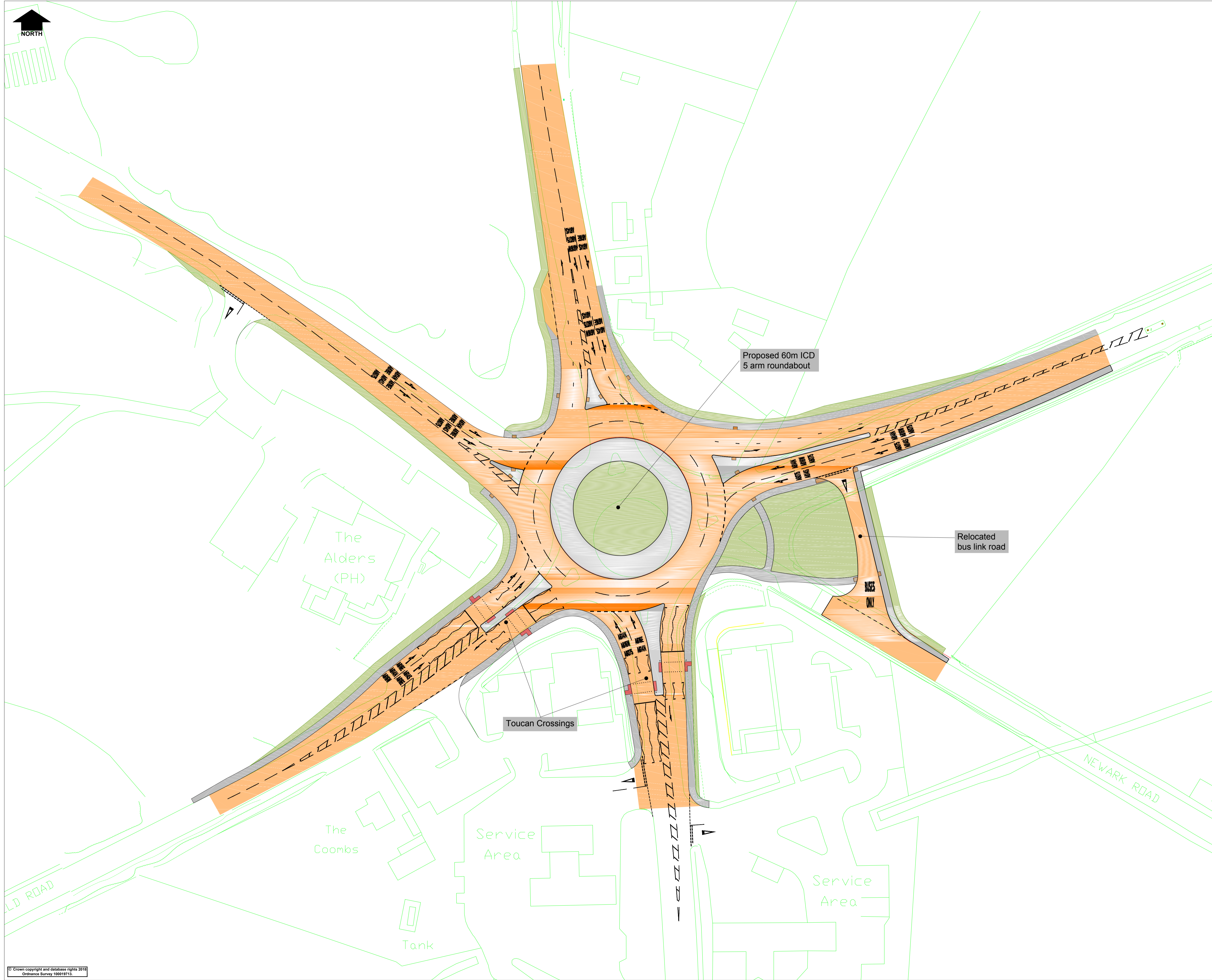


A614/A6097 CORRIDOR IMPROVEMENTS

APPENDIX B - SCHEME OPTIONS LONG LIST

Potential Options Longlist

No.	Name	Description	Comments	Verdict
1a	Ollerton - grade separated junction	Grade Separation to segregate conflicting movements	Expensive and large adverse impact on environment	DISMISS
1b	Ollerton Bypass	New route corridor to bypass Ollerton and remove trips from Ollerton Junction	Large Adverse impact on Environment and too much third party land	DISMISS
1c	Enlarged conventional Roundabout	Enlargement - previously assessed in 2007	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
1d	Ollerton - Signals	Signalise junction - considered in 2007	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
2a	Deerdale Lane - Signals	2+1 option, smaller scheme footprint	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
2b	Deerdale Lane - Signals	2+2 option	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
2c	Deerdale Lane - Roundabout	4 arm roundabout.	Feasible to engineer with some land take , expected increase in capacity.	Proceed to EAST
2d	Reduce speed limit on A614	Reduction in Speed Limit	Speed limit along route reduced to 50mph in 2012	DISMISS
2e	Close Deerdale Lane	Close Deerdale Lane junction with A614. Traffic to reassign to alternative routes.	Large detours. Unlikely to be accepted by Stakeholders - closure of Deerdale Lane will see increase of HGVs through Bilsthorpe residential areas.	DISMISS
2g	Single lane dualling	Increase capacity of A614 mainline	Unfeasible without significant land take.	DISMISS
2h	Electronic Warning System	Advance warning of turning traffic	No capacity improvement	DISMISS
3a	Mickledale Lane - Signals	2+1 option, smaller scheme footprint	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
3b	Mickledale Lane - Signals	2+2 option	Feasible to engineer within site constraints within available budget, expected increase in capacity.	Proceed to EAST
3c	Mickledale Lane - Roundabout	4 arm roundabout.	Feasible to engineer within site constraints with some land take including residential property, expected increase in capacity.	Proceed to EAST
3d	Physical islands	Right turn harbourage bays in A614	Old style engineering - dismissed on road safety grounds.	DISMISS
3e	Staggered junctions	Realign Mickledale Lane and Inkersall Lane to staggered configuration	Large expense with minimal benefit to side roads	DISMISS
3f	Reduce speed limit on A614	Reduction in Speed Limit	Speed limit along route reduced to 50mph in 2012	DISMISS
3g	Close Mickledale Lane	Close Deerdale Lane junction with A614. Traffic to reassign to alternative routes.	Large detours. Unlikely to be accepted by Stakeholders	DISMISS
3h	Single lane dualling	Increase capacity of A614 mainline	Unfeasible without significant land take.	DISMISS
3i	Electronic Warning System	Advance warning of turning traffic	No capacity improvement	DISMISS
4a	White Post - capacity improvements	Widen entry lanes	Feasible to engineer with some land take, expected increase in capacity.	Proceed to EAST
4b	White Post - Signals	Signalise all arms	Feasible to engineer with some land take.	Proceed to EAST
4c	White Post - access only, 3 arm	Close entry to junction from Mansfield Road (west).	Large detours. Unlikely to be accepted by Stakeholders. Need to maintain access to businesses.	Proceed to EAST
4d	White Post - road safety	Anti-skid surfacing and maintenance	Current road anti-skid surface in poor condition.	Proceed to EAST
5a	Warren Hill - signals	A614 priority -3 arm traffic signal controlled priority junction	Feasible to engineer with minimal land take, removes unusual geometry of existing layout.	Proceed to EAST
5b	Warren Hill - roundabout	Conventional 3 arm roundabout	Feasible to engineer with minimal land take, removes unusual geometry of existing layout.	Proceed to EAST
5c	Warren Hill - signalise existing layout	Add traffic signals to existing layout	Low cost option, existing geometry unsuitable for traffic signals	DISMISS
5d	Warren Hill - T junction	Major realignment to convert to a traditional priority junction	Major works for no/limited capacity increase. Large journey time disbenefits expected.	DISMISS
6a	Lowdham - enlarged roundabout	Enlarged conventional roundabout with widen approaches	Feasible to engineer with some land take, expected increase in capacity.	Proceed to EAST
6b	Lowdham - Signals	Signalisation of all 4 arms. Increased pedestrian provision.	Feasible to engineer with some land take, expected increase in capacity.	Proceed to EAST
6c	Lowdham - grade separated junction	Grade Separation to segregate conflicting movements	Expensive and large adverse impact on environment. Requires third party land.	DISMISS



- NOTES**
1. This drawing shows the updated revised layout of the enlarged 60m ICD roundabout improvements.
 2. The lane arrangements are configured to suit the current and future traffic forecast (2033) requirements.
 3. The proposed lane destination markings are provided to suit the current and future peak flow and are suggested to compliment the road signage to reduce the potential conflict associated with vehicles crossing over lanes.
 4. The layouts are subject to further road safety audits which will be commissioned following the detailed design stage.
 5. The revised layout has been produced using updated topographical survey information obtained June 2018.
 6. The precise extents of private land are subject to change which may be required as a result of the the detailed design process. The extents of embankments/ earth slopes are shown for indicative purposes and are based on the assumption that adjoining land does not significantly fluctuate in level. Where private land interfaces are restricted in respect of widths available retaining features may be required at these locations. Further verification for the embankment interface will be determined once updated private land topographical survey information and detailed design information is available.
 7. A preliminary analysis has been undertaken to verify vertical design requirements, this has determined that the proposals could meet this design criteria if the speed limits on the approaches were altered to 30mph. Further verification in to the affect of the vertical design on to adjoining land is to be determined during the detailed design process. Refer to feasibility report produced August 2018 by Via EM Ltd. for further information on the proposals and the departures from standards required.
 - 8.

KEY

	Proposed carriageway areas
	Proposed landscaped areas
	Proposed embankment/verge areas
	Proposed footway areas, areas of red and buff contained within footways are tactile paving at crossing location
	Proposed traffic islands and hardstanding area on roundabout island

Rev.	Description	Drawn	Ch/kd	Auth	Date
Project					
A614/A6097 CORRIDOR IMPROVEMENTS					
Status		Project No.			
FOR INFO		HW20949			
Drawing Title					
APPENDIX C - OLLERTON RBT PLAN					
Scale		Drawn	AP	Date	
1:500 @A1		Chkd	AP	20.02.2019	
		Auth	JJP	Traced	AP
Drawing No.		Rev.			
PLAN 1 (HW 20949 001/03)					0

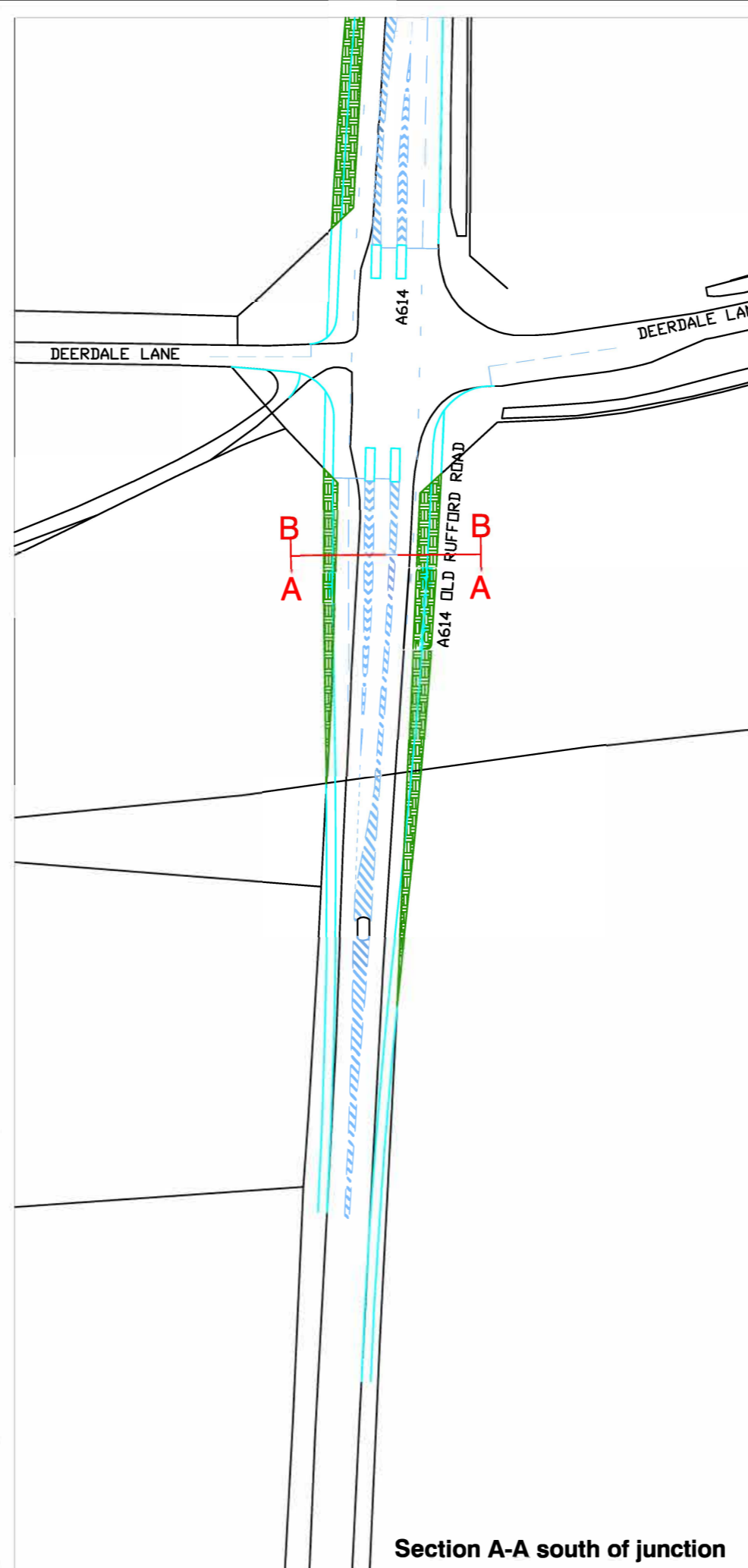
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Nottinghamshire, NG22 8ST



Section B-B north of junction



Section A-A south of junction

KEY:

- Existing kerblines
- Proposed kerblines
- Proposed lining
- Land required beyond Highway Boundary (approx. 823 sq.m)

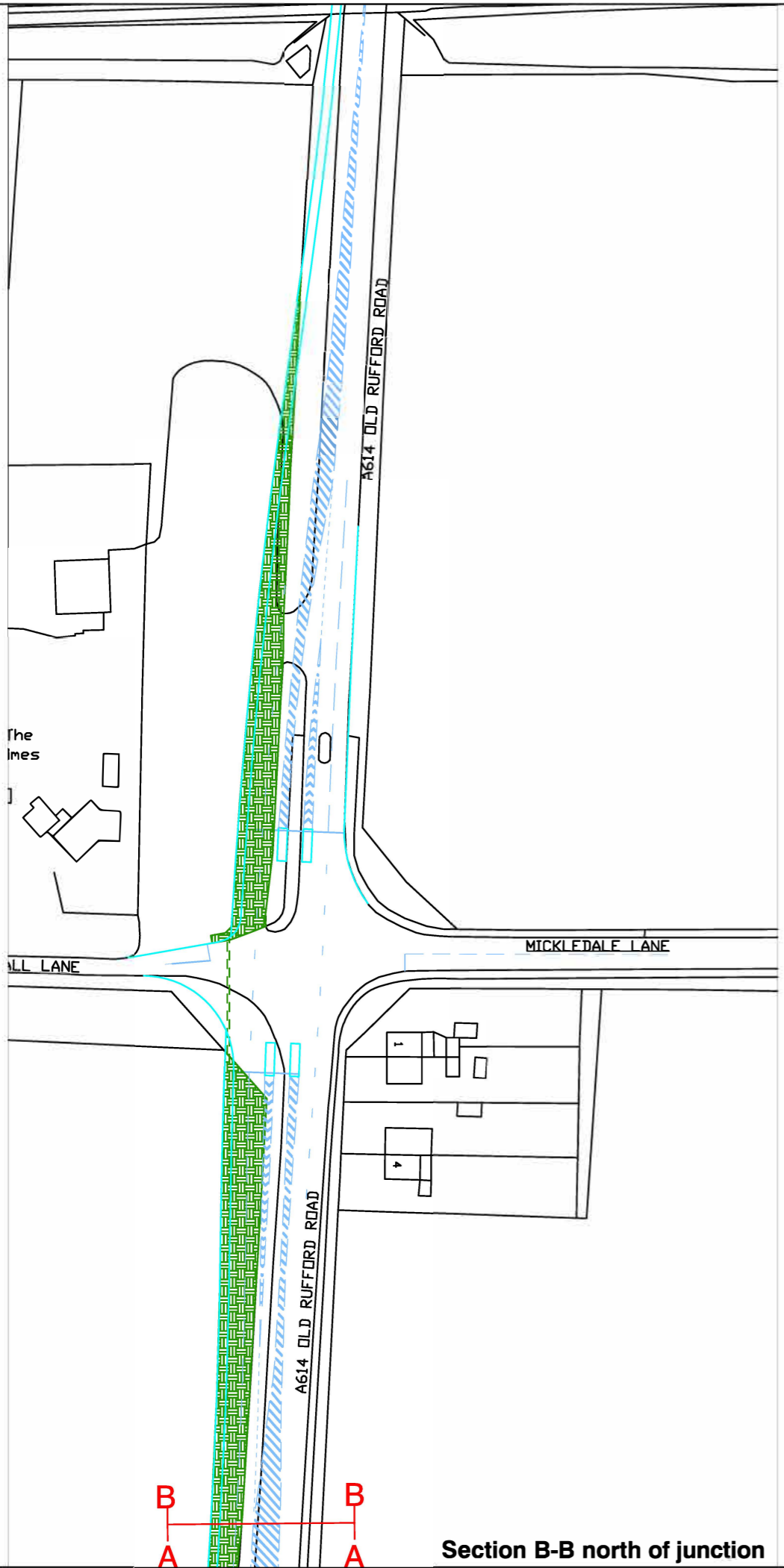
Rev Status	Description	Drawn	Chkd	Auth	Date
Project					
A614/ A6097 CORRIDOR IMPROVEMENTS					
Property No.	Project No				
	HW20949/CN1800922				
APPENDIX D - A614/ DEERDALE LANE JUNCTION PLAN					
Scale	Drawn	rr		Date	Dec 2017
1/1250 @A3	Chkd			Date	Jan 2018
	Auth			Traced	
Drawing No.			Rev		
PLAN 2 (HW20949/2/TS102)					

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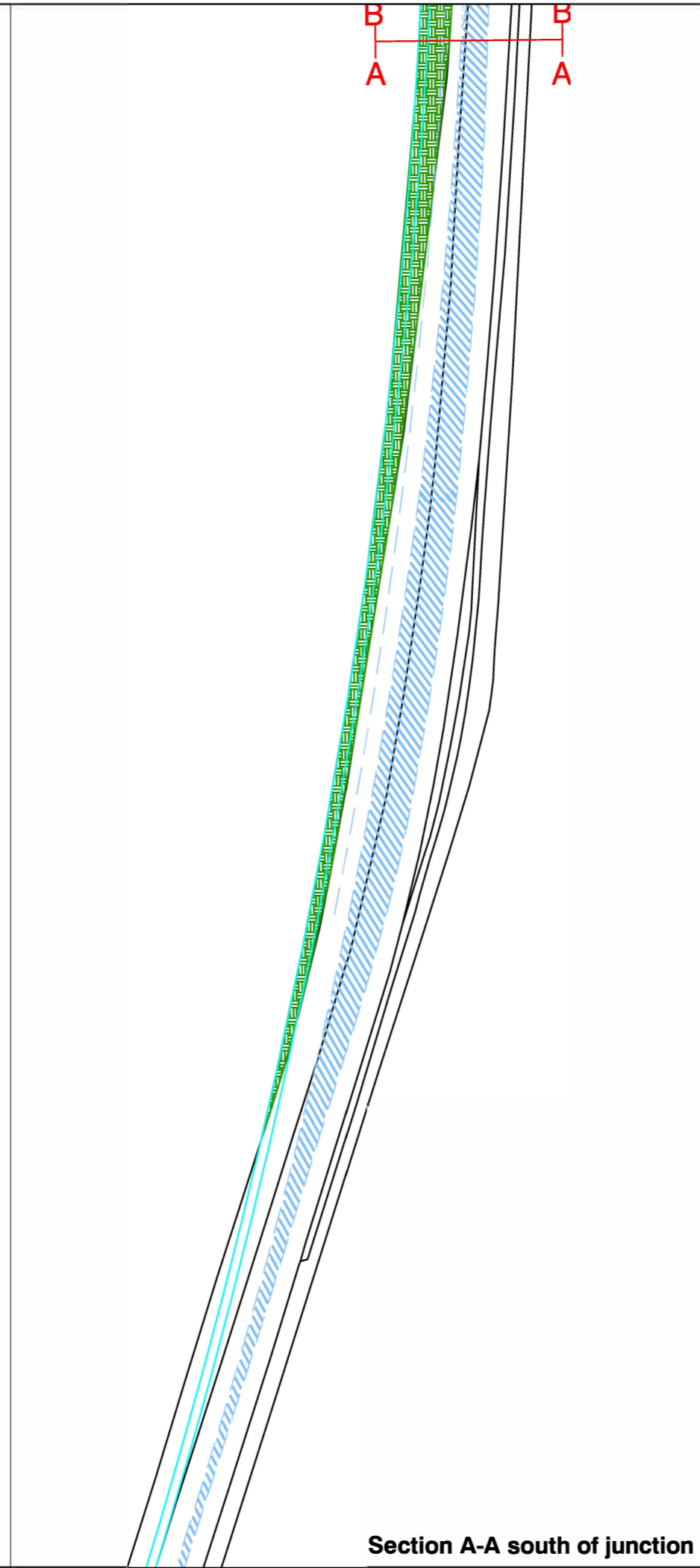
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Section B-B north of junction



Section A-A south of junction



KEY:

- Existing kerblines
- Proposed kerblines
- Proposed lining
- Land required beyond Highway Boundary (approx. 2445 sq.m)

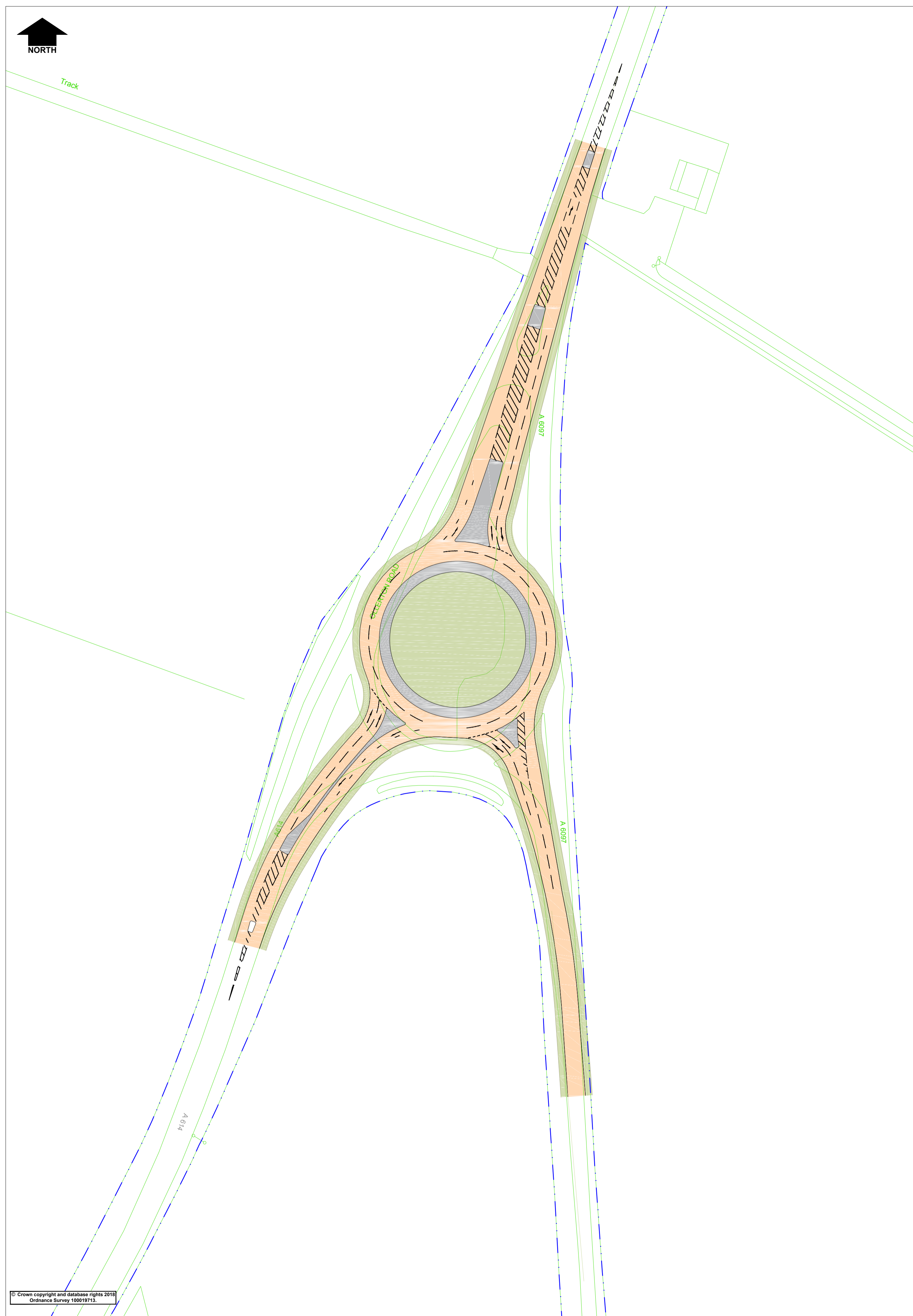
Rev Status	Description	Drawn	Chkd	Auth	Date
Project	A614/A6097 CORRIDOR IMPROVEMENTS				
Property No.	Project No. HW20949/CN1800924				
Title APPENDIX E - A614/ MICKLEDALE LANE JUNCTION PLAN					
Scale	Drawn	rr	Date	Dec 2017	
1/1250 @A3	Chkd	cfa	Date	Jan 2018	
	Auth		Traced		
Drawing No.			Rev		
PLAN 3 (HW20949/4/TS101)					

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NOTES

1. This drawing shows the replacement of the existing junction form with a new 85m ICD roundabout.
2. The lane arrangements are configured to suit the current and future traffic forecast (2033) requirements.
3. The proposed lane destination markings are provided to suit the current and future peak flow and are suggested to compliment the road signage to reduce the potential conflict associated with vehicles crossing over lanes.
4. The layouts are subject to road safety audits which will be commissioned following the detailed design stage.
5. The layout has been produced using OS and old topographical survey information, the layout is to be updated following new topographical survey information.
6. The precise extents of private land are subject to change which may be required as a result of the the detailed design process. The extents of embankments/ earth slopes are shown for indicative purposes and are based on the assumption that adjoining land does not significantly fluctuate in level. Where private land interfaces are restricted in respect of widths available retaining features may be required at these locations. Further verification for the embankment interface will be determined once updated private land topographical survey information and detailed design information is available.
7. The vertical visibility design criteria is to be determined against the new topographical survey information.

KEY

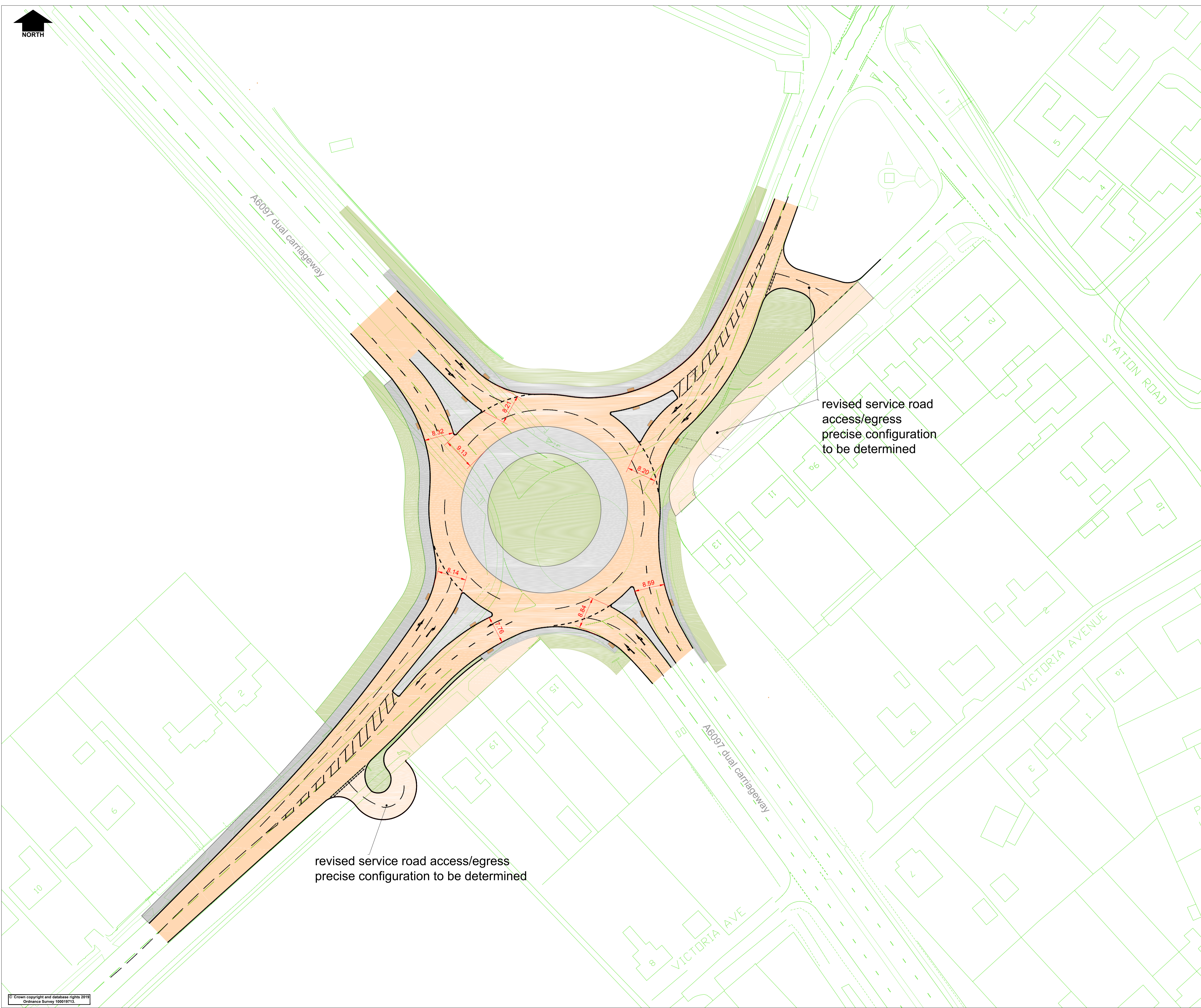
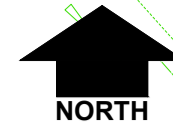
	Proposed carriageway areas
	Proposed traffic island and proposed roundabout (hardstanding) visibility area
	Proposed embankment/verge areas
	Proposed landscaped areas
	Highway boundary

Rev.	Description	Drawn	Ch'kd	Auth	Date
Project A614/A6097 CORRIDOR IMPROVEMENTS					
Status FOR INFO.		Project No. HW20949			
Drawing Title APPENDIX F - WARREN HILL RBT PLAN					
Scale 1:1000@A1		Drawn AP	Date 12.03.2019		
		Ch'kd AP	Date 12.03.2019		
		Auth JJP	Traced	AP	
Drawing No. PLAN 4 (HW 20949.005/04)					Rev. A

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NOTES

1. This drawing shows the updated revised layout of the enlarged 65m ICD roundabout improvements.
2. The lane arrangements are configured to suit the current and future traffic forecast (2033) requirements.
3. The proposed lane destination markings are provided to suit the current and future peak flow and are suggested to compliment the road signage to reduce the potential conflict associated with vehicles crossing over lanes.
4. The revised layout has been produced using OS information, the layout is to be updated against topographical survey information. The topographical survey (part survey) is shown on the layout for reference.
5. The precise extents of private land are subject to change which may be required as a result of the the detailed design process.

KEY

- Carriageway
- Service road carriageway
- Footway
- Traffic islands
- Verge/embankment
- Landscaped areas. No planting in visibility splays

Rev.	Description	Drawn	Ch'kd	Auth	Date
Project					
A614/A6097 CORRIDOR IMPROVEMENTS					
Status		Project No.			
INFO		HW20949			
Drawing Title					
APPENDIX G - LOWDHAM RBT PLAN					
Scale		Drawn	AP	Date	
1:500 @A1		Ch'kd	JJP	Date	
		Auth	JJP	Traced	AP
Drawing No.					Rev.
PLAN 5 (HW20949.006/04)					0

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**A614/A6097 CORRIDOR IMPROVEMENTS
APPENDIX H - APPRAISAL SUMMARY TABLE**

Appraisal Summary Table		Date produced:	2nd May 2019			Contact:	
Name of scheme:		A614 / A6097 Major Road Network Improvement Scheme				Name	David Pick
Description of scheme:		Junction Improvements at 6 key locations along the A614/A6097 corridor, promoted as a single package aimed at supporting economic growth, supporting the SRN, reducing journey time delays and supporting all road users.				Organisation	NCC
						Role	Promoter/Official
Impacts	Summary of key impacts	Assessment					
		Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	The PVB is based on monetised savings in delay at each junction (calculated from outputs from ARCADY, PICADY and LINSIG and monetised using values in WebTAG). Vehicle Operating Cost impacts excluded from the analysis.			Value of journey time changes(£)	£10.06M	-
					Net journey time changes (£)	£10.06M	
		0 to 2min	2 to 5min	> 5min	-		
		£0.61M	£5.86M	£3.59M			
	Reliability impact on Business users	The scheme would reduce the variability of journey times at the scheme junctions, thereby making journey times more predictable (reliable) and the route more resilient to incidents.			-	Moderate Beneficial	-
	Regeneration	Not Assessed			-	-	-
	Wider Impacts	The scheme will support economic growth and housing delivery by facilitating major developments along the A614, including sites which currently have conditional planning limiting the quantum of development that can be delivering prior to improvements of Lowdham and Ollerton Junctions (Thoresby Colliery - 650 dwellings & 24,281m ² of employment development. Teal Close - 680 dwellings).			-	Large Beneficial	-
Environmental	Air Quality	None of the six locations fall within an Air Quality Management Area (AQMA). It is anticipated that removing the majority of slow moving and stationary traffic by enlarging capacity at the Ollerton and Lowdham junctions will improve air quality.			-	Slight Beneficial	-
	Greenhouse gases	Greenhouse Gases not assessed. The method of economic appraisal would likely overestimate VOC benefits. Given the scheme delivers journey time benefits, vehicle operating costs will be more efficient leading to a reduction in Greenhouse Gases and the analysis underestimates the benefits of the scheme.			Change in non-traded carbon over 60y (CO2e)	-	Slight Beneficial
					Change in traded carbon over 60y (CO2e)	-	
	Landscape	There will be impacts on landscape features such as trees, shrubs and hedgerows across the corridor landscape design will need to replace tree removal and also strengthen tree cover along hedge lines.			-	Slight Adverse	-
	Townscape	Not Applicable			-	Neutral	-
	Historic Environment	There will be no direct impact on any designated sites. Replacement tree planting and hedge reinstatement will be incorporated into the design proposals where feasible to restore the historic field boundaries.			-	Neutral	-
	Biodiversity	Enlargement of the Ollerton junction may impact on the SSSI at Ollerton with habitat loss of small areas of woodland, hedge and acid-neutral grass verges. Consultation with Natural England will be required.			-	Slight Adverse	-
	Water Environment	The Project Team will work closely with the Environment Agency on the two major schemes (Lowdham and Ollerton) and ensure that flood risk is not increased. Early discussions indicate that the EA will allow highway runoff to discharge into the new EA system at Lowdham.			-	Neutral	-
Social	Commuting and Other users	The PVB is based on monetised savings in delay at each junction (calculated from outputs from ARCADY, PICADY and LINSIG and monetised using values in WebTAG). Vehicle Operating Cost impacts excluded from the analysis.			Value of journey time changes(£)	£30.09M	-
					Net journey time changes (£)	£30.09M	
		0 to 2min	2 to 5min	> 5min	-		
		£3.52M	£15.58M	£10.99M			
	Reliability impact on Commuting and Other users	The scheme would reduce the variability of journey times at the scheme junctions, thereby making journey times more predictable (reliable) and the route more resilient to incidents.			-	Moderate Beneficial	-
	Physical activity	No change in the numbers of NMU is forecast as a result of the scheme, although severance at the improved junctions will be reduced.			-	Neutral	Not applicable
	Journey quality	Traveller Care (Cleanliness, Facilities, Information, Environment), Travellers' Views and Traveller Stress (Route uncertainty) all Neutral with the scheme. Traveller Stress (Frustration, Fear of potential accidents) would be better with the option.			-	Moderate Beneficial	Not applicable
	Accidents	Observed accident rates at the scheme junctions are found to be similar to, or lower than default rates. Accident assessment carried out using COBALT and default accident rates for the Do Something junctions, indicates that the option would deliver accident disbenefits.			-	-	-£1.2m
	Security	It is expected that the option would not have any material impact on personal security in the area.			-	Neutral	Not applicable
	Access to services	It is expected that junction improvements would not have any impact on accessibility.			-	Neutral	Distributional Impacts not assessed
Affordability	Not applicable			-	Neutral	Not applicable	
Severance	The option would decrease the moderate flow based severance at the scheme junctions to slight through the inclusion of defined crossing facilities.			-	Slight Beneficial	Not applicable	
Option and non-use values	Not applicable			-	Neutral	-	
Public Accounts	Cost to Broad Transport Budget	The funding of the scheme is split 85% from central government and 15% from local government. There are no developer contributions to the scheme.			-	Adverse	-£14.7m
	Indirect Tax Revenues	The methodology used to assess the change in journey times would overestimate ITR, and it has therefore been excluded from the assessment, representing a robust assessment.			-	Neutral	Not applicable

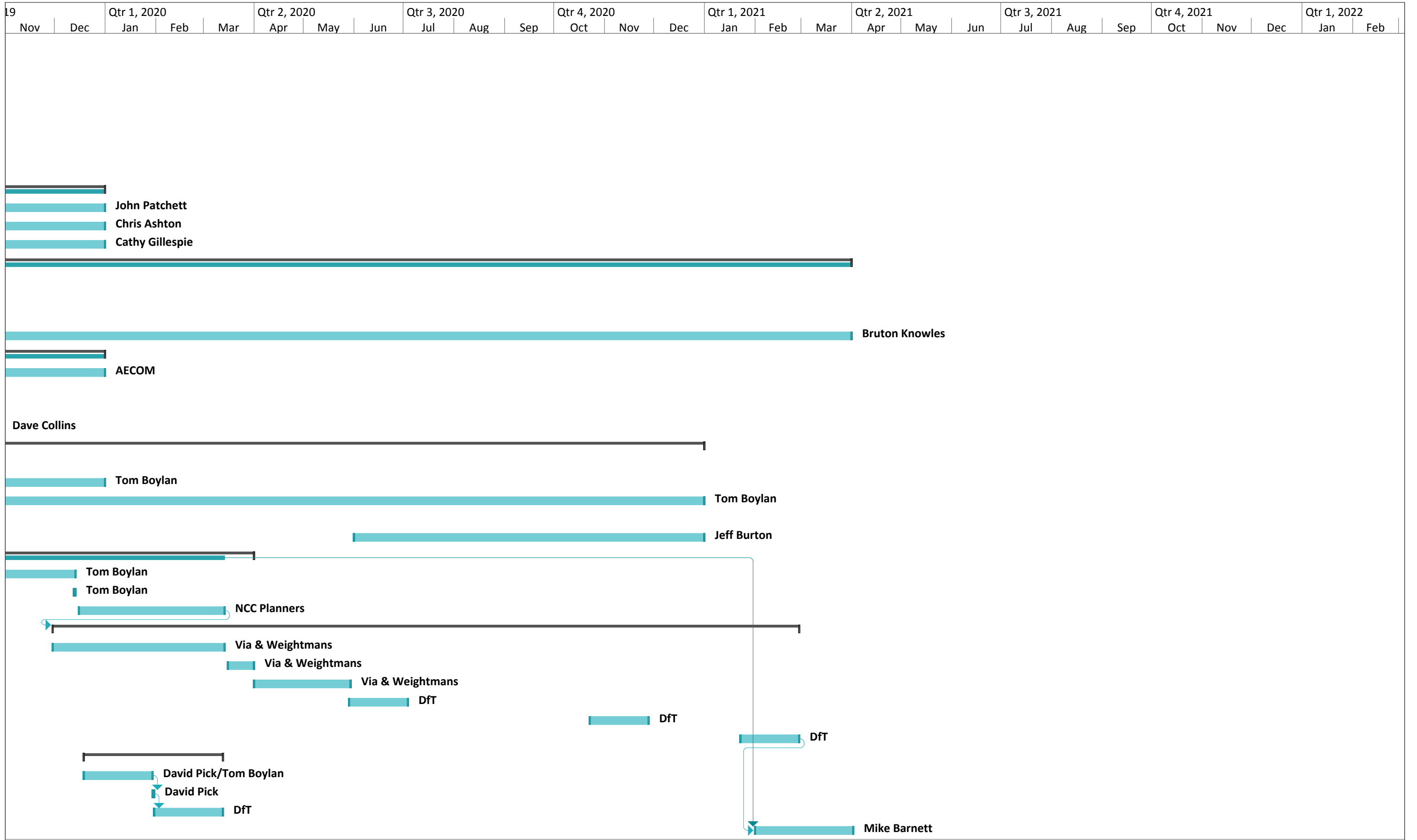
ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Qtr 4, 2018		Qtr 1, 2019			Qtr 2, 2019		Qtr 3, 2019			Qtr 4, 2019	
							Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.1. Project set up & Assessment	11 days	Fri 23/11/18	Fri 07/12/18														
2	1.1 PM & ISO systems set up	11 days	Fri 23/11/18	Fri 07/12/18		Tom Boylan												
3	1.2 Economic Assessment	136 days	Mon 26/11/18	Mon 03/06/19														
4	1.2.1 Selection of preferred package	36 days	Mon 26/11/18	Mon 14/01/19														
5	1.2.2 junction modelling	50 days	Mon 26/11/18	Fri 01/02/19		Bob Roth												
6	1.2.3 TUBA analysis & Economic Report	40 days	Mon 04/02/19	Fri 29/03/19	5	AECOM												
7	1.2.4 Business Case submitted to DfT	45 days	Mon 01/04/19	Fri 31/05/19	6	AECOM												
8	1.2.5 DfT approve outline Business Case	43 days	Mon 03/06/19	Wed 31/07/19	7	DfT												
9	2 Detailed Design	257 days	Mon 07/01/19	Tue 31/12/19														
10	2.1 Highway Design	257 days	Mon 07/01/19	Tue 31/12/19		John Patchett												
11	2.2 Signals	87 days	Mon 02/09/19	Tue 31/12/19		Chris Ashton												
12	2.3 Landscaping	109 days	Thu 01/08/19	Tue 31/12/19		Cathy Gillespie												
13	3 Land & Legal	613 days	Mon 26/11/18	Wed 31/03/21														
14	3.1 Appoint Weighmans (Legal)	10 days	Mon 03/12/18	Fri 14/12/18		Tom Boylan												
15	3.2 Appoint Bruton Knowles (Property)	10 days	Mon 03/12/18	Fri 14/12/18		Tom Boylan												
16	3.3 Land Registry and valuations	60 days	Mon 17/12/18	Fri 08/03/19	15	Bruton Knowles												
17	3.4 Commence negotiations (3rd party lan	539 days	Fri 08/03/19	Wed 31/03/21	16	Bruton Knowles												
18	4 Environmental Assessments	261 days	Tue 01/01/19	Tue 31/12/19														
19	4.1 Hydrology Assessment	261 days	Tue 01/01/19	Tue 31/12/19		AECOM												
20	4.2 Ecology	86 days	Tue 01/01/19	Tue 30/04/19		Baker Consultants												
21	4.3 Ground Investigation	88 days	Mon 01/04/19	Wed 31/07/19		Cathy Gillespie												
22	4.4 Noise assessments	152 days	Mon 01/04/19	Tue 29/10/19	6	Dave Collins												
23	5 Consultation	544 days	Mon 03/12/18	Thu 31/12/20														
24	5.1 Public Consultation	43 days	Mon 03/06/19	Wed 31/07/19		David Pick & Tom												
25	5.2 Engage with EA	282 days	Mon 03/12/18	Tue 31/12/19		Tom Boylan												
26	5.3 District, Town & Parish Councils	414 days	Mon 03/06/19	Thu 31/12/20		Tom Boylan												
27	5.4 Engage with Natural England	85 days	Mon 03/12/18	Fri 29/03/19		Tom Boylan												
28	5.5 TRO consultation	154 days	Mon 01/06/20	Thu 31/12/20		Jeff Burton												
29	6 Planning	174 days	Thu 01/08/19	Tue 31/03/20														
30	6.1 Writing of planning application	97 days	Thu 01/08/19	Fri 13/12/19		Tom Boylan												
31	6.2 Submission of application	1 day	Fri 13/12/19	Fri 13/12/19		Tom Boylan												
32	6.3 Planning determined	65 days	Mon 16/12/19	Fri 13/03/20		NCC Planners												
33	7 CPO & SRO	325 days	Sat 30/11/19	Sat 27/02/21	32													
34	7.1 Writing of Orders (inc. NCC approvals)	76 days	Sat 30/11/19	Fri 13/03/20		Via & Weightmans												
35	7.2 Making of Orders	12 days	Mon 16/03/20	Tue 31/03/20		Via & Weightmans												
36	7.3 Notification & Publication	43 days	Wed 01/04/20	Fri 29/05/20		Via & Weightmans												
37	7.4 Relevant Date	26 days	Fri 29/05/20	Fri 03/07/20		DfT												
38	7.5 Public Inquiry	26 days	Fri 23/10/20	Fri 27/11/20		DfT												
39	7.6 Decision	27 days	Sat 23/01/21	Sat 27/02/21		DfT												
40	8 DfT Full Approval	61 days	Thu 19/12/19	Thu 12/03/20														
41	8.1 Writing of Full Approval document	30 days	Thu 19/12/19	Wed 29/01/20		David Pick/Tom Bc												
42	8.2 Full Approval Submission	1 day	Thu 30/01/20	Thu 30/01/20	41	David Pick												
43	8.3 DfT sign off	30 days	Fri 31/01/20	Thu 12/03/20	42	DfT												
44	9 Procurement	44 days	Mon 01/02/21	Thu 01/04/21	29,39	Mike Barnett												

Project: A614v2may19.mpp
Date: Thu 30/05/19

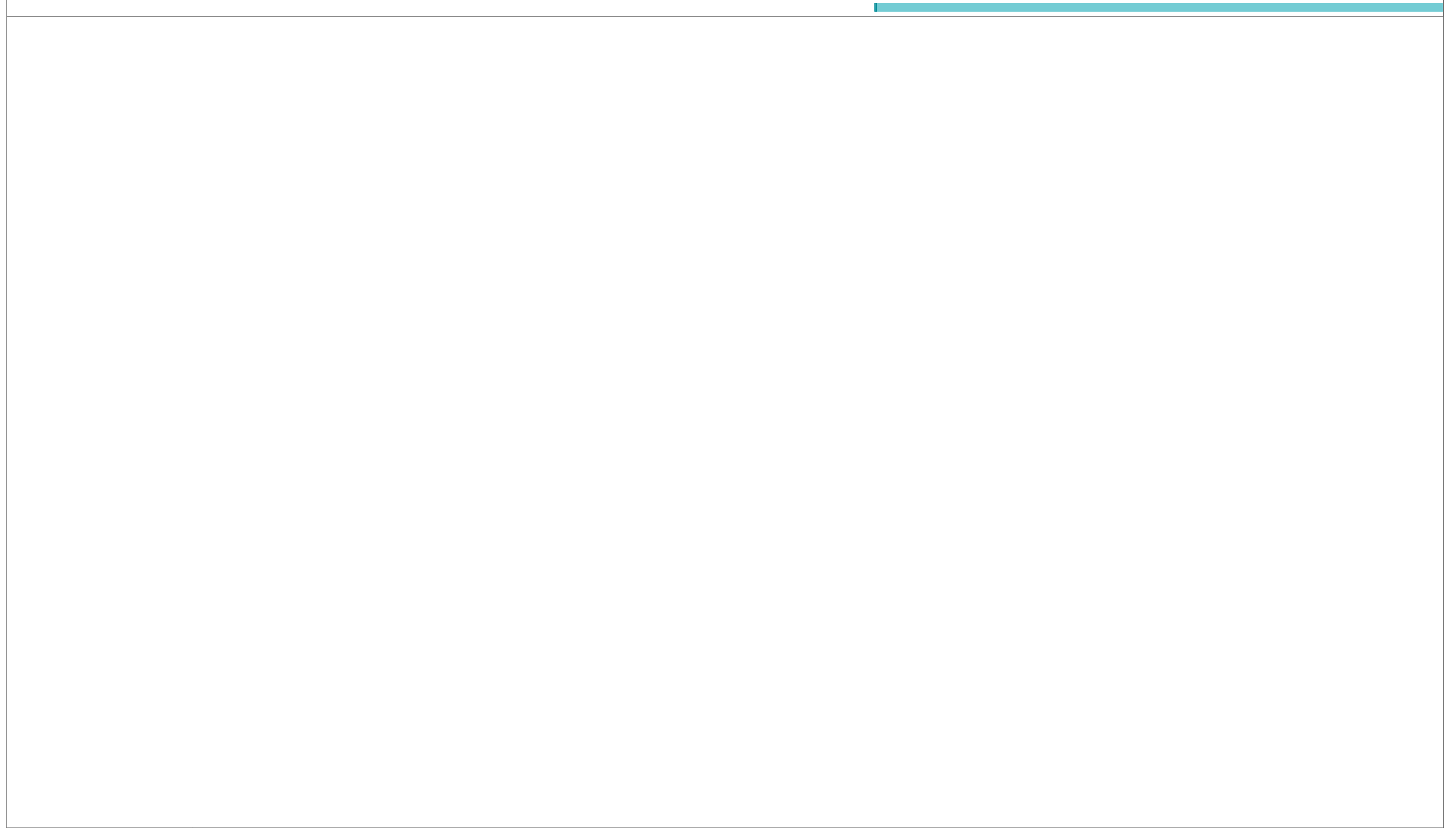
Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Mo	Task Name	Duration	Start	Finish	Predeces	Resource Names	Qtr 4, 2018			Qtr 1, 2019			Qtr 2, 2019			Qtr 3, 2019			Qtr 4, 2019	
								Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
45	★	10 Construction	847 days	Thu 01/04/21	Fri 28/06/24		TBC														

Project: A614v2may19.mpp Date: Thu 30/05/19	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
	Summary		Inactive Task		Duration-only		Finish-only			



Project: A614v2may19.mpp Date: Thu 30/05/19	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
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Project: A614v2may19.mpp
Date: Thu 30/05/19

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
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Mar	Qtr 2, 2022				Qtr 3, 2022			Qtr 4, 2022			Qtr 1, 2023			Qtr 2, 2023			Qtr 3, 2023			Qtr 4, 2023			Qtr 1, 2024			Qtr 2, 2024		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	



Project: A614v2may19.mpp Date: Thu 30/05/19	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
	Summary		Inactive Task		Duration-only		Finish-only			

A614/A6097 CORRIDOR IMPROVEMENTS
APPENDIX J - RISK REGISTER

RISK OWNERSHIP
NCC = Nottinghamshire County Council
VIA = Via EM

RISK SEVERITY MATRIX					REVISIONS			
Probability	Consequence - Cost/Time		Risk Rating				Rev / Date	By / Details
			4	8	12	16		
4 = Very high or extremely likely	4 = Very High : > £200K and/or > 1 month lost time	4	4	8	12	16	Rev 1	Jan 2019 - TB
3 = High or likely	3 = High : £50K - £200K or 2 - 4 weeks lost time	3	3	6	9	12	Rev 2	May 2019 - TB
2 = Medium or unlikely	2 = Medium : £10K - £50K and/or >1 week lost time	2	2	4	6	8		
1 = Low or very unlikely	1 = Low : < £10K or < 1 week lost time	1	1	2	3	4		

A614 Major Road Network
RISK REGISTER

No.	Category	Risk Event	Consequence	Probability	Consequence	Rating	Status	Mitigation Measures	Manager of risk	Ownership	Residual Probability	Residual Consequence	Residual Rating	Likely Cost (VIA Risks Only) £	NCC Risk
1	Design	Designs are not signed off by NCC with respect to design departure.	Uncertainty with designs moving forward.	1	4	4	Live	Departure Board has now signed off the design. This risk can now be removed from the Risk Register.	VIA	VIA	0	0	0	0	No longer applies
2	Design	The risk that there is insufficient design resource	Delay in production of contract drawings and clarifications	2	4	8	Live	Consider bringing in additional design resource via professional services contracts Capital Projects Delivery Manager now appointed by Via who will be crucial in identifying potential future resource pressures within Via.	VIA	VIA					
3	Design	Failure to agree traffic management proposals for construction period.	Delays progress, complicates the TM proposals and adds to cost.	2	4	8	Live	Via to continue dialogue with Traffic Management Team. Long term - Once contractor appointed they will appoint TM specialist. Trunk Road diversions for the A1 and A46 a key consideration.	VIA	VIA					
4	Design	McDonalds reject design proposal for Ollerton Roundabout and unwilling to sell land.	This would trigger a CPO.	2	4	8	Live	Bruton Knowles will engage with McDonalds at earliest opportunity. As a fall back option we could reduce this arm down to one lane with minimal impact to traffic capacity.	VIA	VIA					
5	Design	Road Safety Audits	Additional cost due to previously unidentified works being identified as part of the audits	1	3	3	Live	Undertake Stage 1 audits for outstanding schemes. Awaiting Safety Audit feedback	VIA	VIA					
6	Technical	Environment Agency do not sign off on hydraulic modelling for the works package.	Delays to programme and additional modelling costs	2	4	8	Live	Productive meetings already taken place with the EA and next steps agreed with them.	VIA	VIA					
7	Technical	The risk that the schemes will encounter contaminated land/adverse ground conditions.	Cost and time impacts	2	4	8	Live	AP has commissioned a Geotech desktop assessment and trial holes will be undertaken in due course.	VIA	VIA					
8	Technical	Tree Preservation Order for one or more tree.	Cost and time impacts	2	3	6	Live	Engage with District Council at earliest opportunity once design finalised.	VIA	VIA					
9	Technical	Ecological discoveries at one of the 6 sites.	Cost and time impacts - particularly at Ollerton Roundabout (SSSI)	2	4	8	Live	Appoint ecologist and undertake an EIA for all 6 sites. Ecologist appointed and 1st draft completed. Meeting with Natural England in place.	VIA	VIA					
10	Land	Via EM unable to purchase all land plots by negotiation	Potentially triggers a Public Inquiry	3	3	9	Live	Progress CPO at same point as negotiations to minimise delays. Weightmans providing specialist legal advice on CPO	VIA	VIA					
11	Land	Objection to any CPO	Additional cost and potential changes to works package.	3	3	9	Live	Ensure CPO is published as per current programme so that any public inquiry does not delay an April 2021 start date on site.	VIA	VIA					
12	Stats	Unexpected services and any necessary alterations	Delays follow on activities and adds to cost.	2	4	8	Live	Site surveys and advance trial holes to be undertaken. C3 Stats enquiries has generated replies from utility services. Negotiations ongoing.	VIA	VIA					
13	Stats	Statutory Undertakers - Failure to meet the Accepted Programme	Delays and disrupts the works	2	4	8	Live	AP will continue to engage with utility companies throughout the design process.	VIA	VIA					
14	Stats	Statutory Undertakers - Increases in their allowable costs	Increased cost.	2	3	6	Live	AP will continue to engage with utility companies throughout the design process and to share all trial hole information once available.	VIA	VIA					
15	Stats	Statutory undertakers - claims, demands, actions and proceedings arising from: - Loss or damage to property - Increased cost of working - Business interruption	Delay and disruption to the works and increased costs	2	3	6	Live	Ongoing dialogue	VIA	VIA					
16	Construction	Overrun on Gedling Access Road project which has a knock on impact on the Lowdham works programme.	Delays and disrupts the works programme for Lowdham and potentially the other schemes.	1	4	4	Live	Continue to engage with the Project Team working on GAR.	VIA	VIA					
17	Construction	Unauthorised occupation during construction phase	Delays and disrupts the works	1	4	4	Live	Contractor will need to look at security of each site in due course.	VIA	VIA					
18	Construction	Inclement weather within the 1 in 10 year event (e.g. heavy rain and snow, high winds)	Delays and disrupts the works and incurs clean up costs	3	3	9	Live	Works to be planned for the appropriate seasons if possible. Weather forecasts to be observed and careful planning will reduce risk.	VIA/NCC	VIA					
19	Construction	Inclement weather more onerous than the 1in 10 year event (e.g. heavy rain and snow, high winds)	Delays and disrupts the works and incurs clean up costs	3	3	9	Live	Works to be planned for the appropriate seasons if possible. Weather forecasts to be observed and careful planning will reduce risk.	VIA/NCC	VIA					
20	Construction	Archaeological artefacts found during construction activities	Delays and increase work costs.	2	4	8	Live	Discussions have commenced with Ursilla Spence at NCC (archaeology). Archaeologist surveys to be commissioned if required.	VIA	VIA					
21	Construction	Failure to remove vegetation outside bird nesting season etc.	Delays and increase work costs.	2	4	8	Live	Work with the ecologist and then undertake tree removal as early as possible once land has been purchased.	VIA	VIA					

**A614 Major Road Network
RISK REGISTER**

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22	Construction	Access conflicts / restrictions to existing premises.	Disrupts adjacent businesses, residents and the travelling public leading to complaints, claims for loss of business and damages relationships.	3	3	9	Live	Early consultation with effected businesses and residents to understand their requirements. TM schemes to be designed and implemented using specialist company. An agreed emergency response plan to be put in place in case of major unexpected disruption. Discussions ongoing with all landowners/affected parties.	VIA	VIA					
23	Public/Political Support	Loss of political support for the scheme	Funding is withdrawn	1	3	3	Live	TB to meet NCC Cllrs. TB has met with local MP and NCC Cllrs. All supportive of the project.	NCC	NCC					
24	Planning	The scheme is refused planning permission	Time and cost implication	1	4	4	Live	Engage with planners at the earliest opportunity to understand requirements. Engage with EA to ensure that hydrology issues addressed. Meeting being arranged with planner.	VIA/NCC	VIA/NCC					
25	Financial	The risk that the target price exceeds budget	Impact on scheme cost	3	3	9	Live	Early Contractor Involvement. Project governance arrangements to be put in place to monitor.	VIA	VIA					
													RISK TOTAL £	0	-