

A38 Derby Junctions

TR010022

Volume 6

6.3 Environmental Statement Appendices

Appendix 3.3: Options Assessment – Little Eaton – Options 2A, 2B, X and X1

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

April 2019

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations 2009**

A38 Derby Junctions
Development Consent Order 202[]

6.3 Environmental Statement Appendices
Appendix 3.3: Options Assessment – Little Eaton –
Options 2A, 2B, X and X1

Regulation Number	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010022
Application Document Reference	6.3
Author	A38 Derby Junctions Project Team, Highways England

Version	Date	Status of Version
1	April 2019	DCO Application

A38 Derby Junctions

Options Assessment: Little Eaton Options 2A, 2B, X and X1

Report No: 47071319-URS-06-RP-RDN-024
July 2016

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1. INTRODUCTION

- 1.1 Several alternative junction options have been received from members of the Little Eaton Stakeholder Reference Group. These have been considered using the same methodology report as used for previous options assessments, as summarised below:
- initial assessment intended as a preliminary examination of each alternative option based on the Transport Appraisal Process proposed in the Department for Transport's web-based Transport Analysis Guidance; and
 - the options passing the Initial Assessment were then subjected to a further assessment against a more detailed set of criteria.
- 1.2 The outcome of the assessment is presented in this report.
- 1.3 The following reports should be referred to for previous options assessments:
- Report on Public Consultation (ref: 47071319-URS-02-PCF-PM-009) contains the initial sift assessment of the alternative options received during public consultation;
 - Options Assessment – Little Eaton (ref: 7071319-URS-06-RP-RD-013) contains the second stage assessment of those options which passed the initial sift assessment.

2. METHODOLOGY

- 2.1 The following options were received for assessment. Copies of the submitted sketch plans are contained in Appendix A:
- Option 2A received from the Breadsall Action Group. This is a development of Option 2 as previously assessed;
 - Option 2B, also received from the Breadsall Action Group, comprising a variation of Option 2A; and
 - Option X received from Little Eaton Parish Council. This comprised an at-grade junction proposal.
- 2.2 An engineering plan was developed for each alternative proposal (see Appendix B). The purpose of the engineering plan was to ensure the layouts complied with design standards as appropriate and land impacts were fully understood. In the event of there being a significant deficiency with the design of an alternative proposal, further refinements were considered while retaining the overall intention of the original proposer. These variants comprise:
- Development of Option 2A with a re-designed southbound entry slip road to address a safety issue;
 - Development of Option 2A using a dumbbell roundabout arrangement such that only a single underbridge is needed to the A38.
- 2.3 The assessment was conducted using the same methodology as used in the previous assessments described in paragraph 1.3, above.
- 2.4 Highways England communicated to the Little Eaton Reference Group the results of the assessment of Options 2A and 2B on 20 May and Option X on 10 June. In response, the Breadsall Action Group submitted a variant of Option X (titled Option X1) for Highways England's consideration on 20 June 2016. The sketch plan and

accompanying notes submitted by the Breadsall Action Group are contained in Appendix A.

- 2.5 Option X1 has been assessed using the same methodology as described above with the exception that no engineering plan has been developed. In lieu of an engineering plan, the design team has annotated the Action Group's sketch to show the modifications needed for the layout to function adequately. The annotated sketch is contained in Appendix B.
- 2.6 This report has been updated to include the assessment of Option X1.

3. CONCLUSIONS

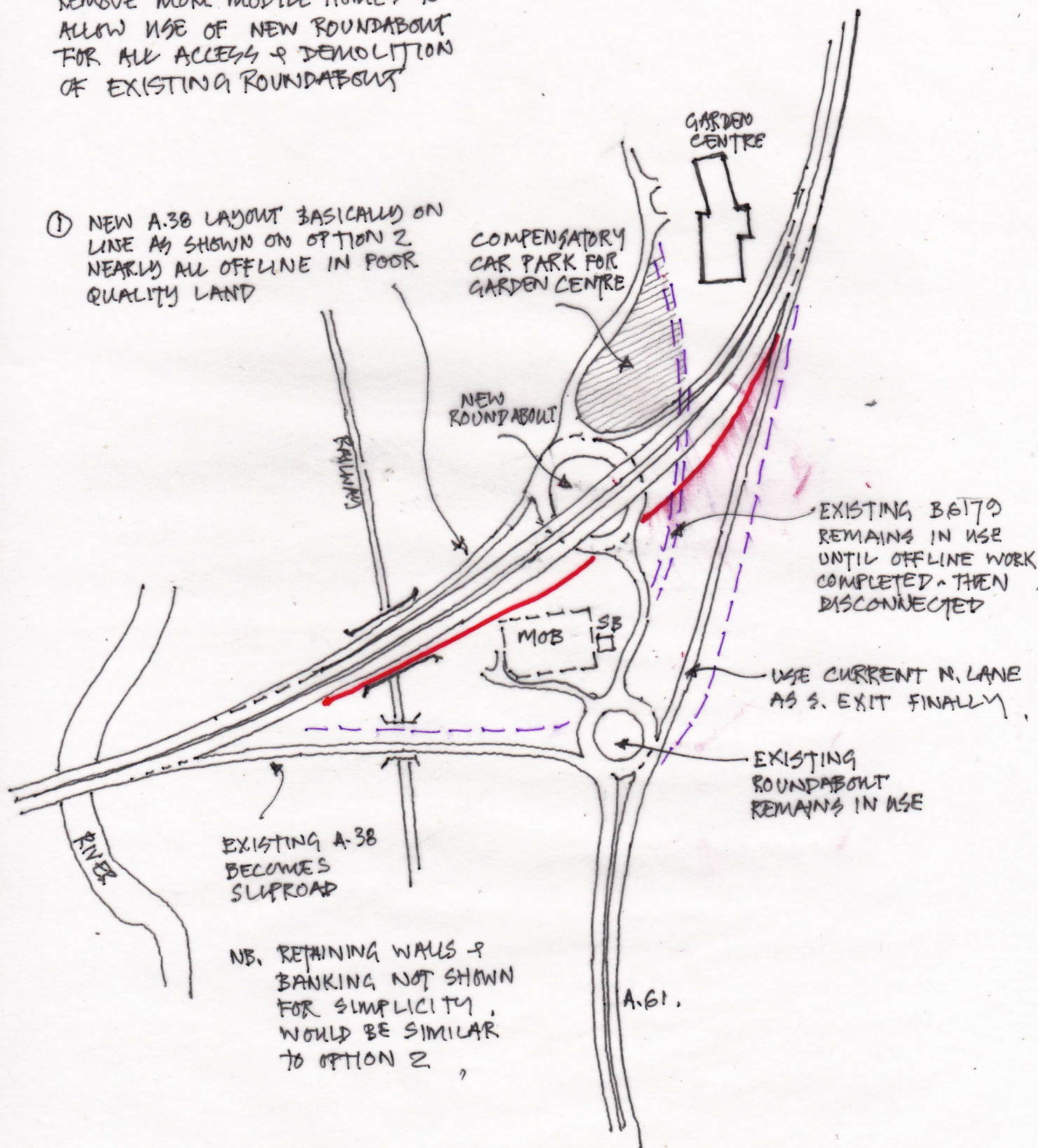
- 3.1 A summary of the assessment outcomes is contained in Appendix C. The details of the assessment of each alternative option are contained in Appendix D.
- 3.2 None of the alternative options passed the initial sift assessment. On this basis, it is recommended that the Presented Option remains the preferred option for grade separation of the Little Eaton junction

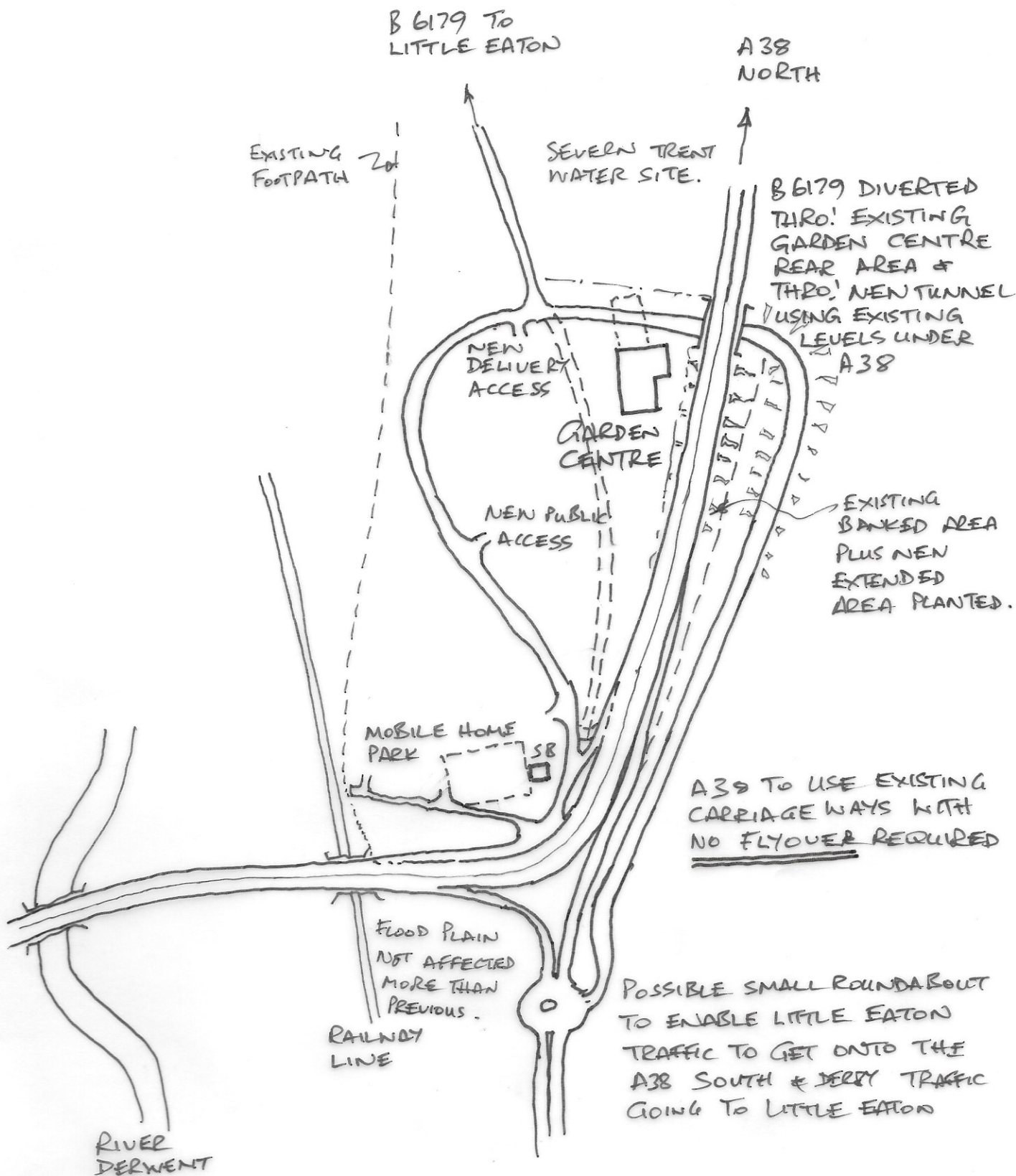
APPENDIX A – ORIGINAL OPTION PROPOSALS

OPTION 2A

OPTION 2B SHOWN IN RED.
REMOVE MORE MOBILE HOMES TO
ALLOW USE OF NEW ROUNDABOUT
FOR ALL ACCESS & DEMOLITION
OF EXISTING ROUNDABOUT

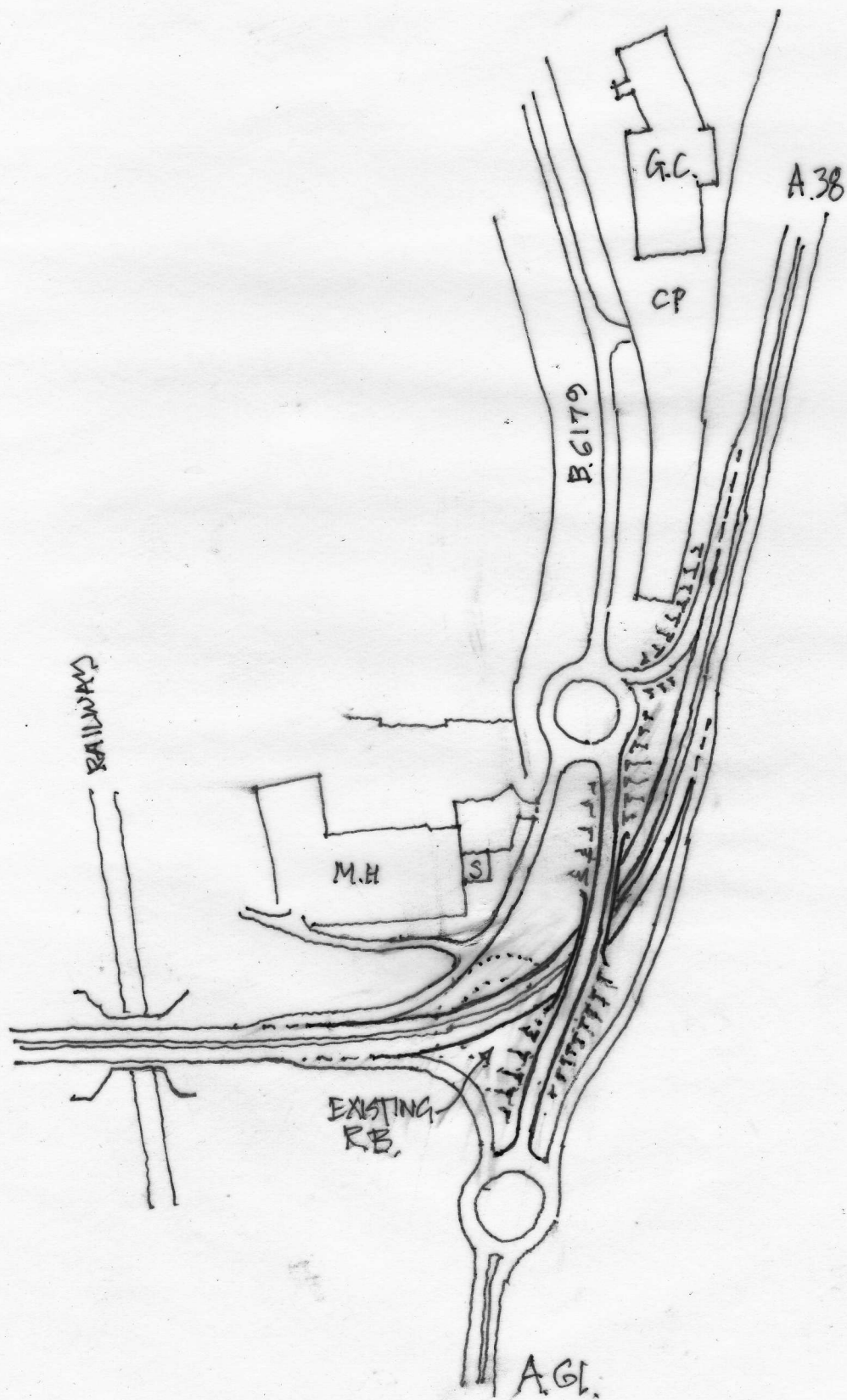
- ① NEW A.38 LAYOUT BASICALLY ON
LINE AS SHOWN ON OPTION 2.
NEARLY ALL OFFLINE IN POOR
QUALITY LAND





Option 'X'

- ALLOWS THE A38 TO REMAIN ON THE EXISTING CARRIAGEWAYS & TO CROSS THE NEWLY FORMED ROUNDABOUT.
- TAKES OUT THE EXPENSIVE FLYOVER & RETAINING WALLS NONE OF WHICH WOULD BE REQUIRED IN THIS OPTION
- ANTICIPATED COST SAVING - HUGE!
- REQUIRES CO-OPERATION OF THE GARDEN CENTRE OPERATOR, BUT IN RETURN HE GETS IMPROVED SERVICE ACCESS & A MUCH BIGGER CAR PARK.
- MOBILE HOME PARK NOT AFFECTED.
- OTHER THAN THE SKIP STORAGE OPERATOR, NONE OF THE OTHER BUSINESSES ARE AFFECTED.
- REDUCED SOUND IMPACT ON RECTORY LAKE, BREADSALL RESIDENTS



OPTION 'XI'

OPTION X1

THIS OPTION AIMS TO CAPITALIZE ON THE EXCELLENT IDEA OF REDUCING THE IMPACT AND COSTS BY RETAINING THE A.38 AT GRADE, WHILE REDUCING THE LENGTHY CIRCULATION ROUTES & LAND NEGOTIATIONS INVOLVED IN OPTION X,

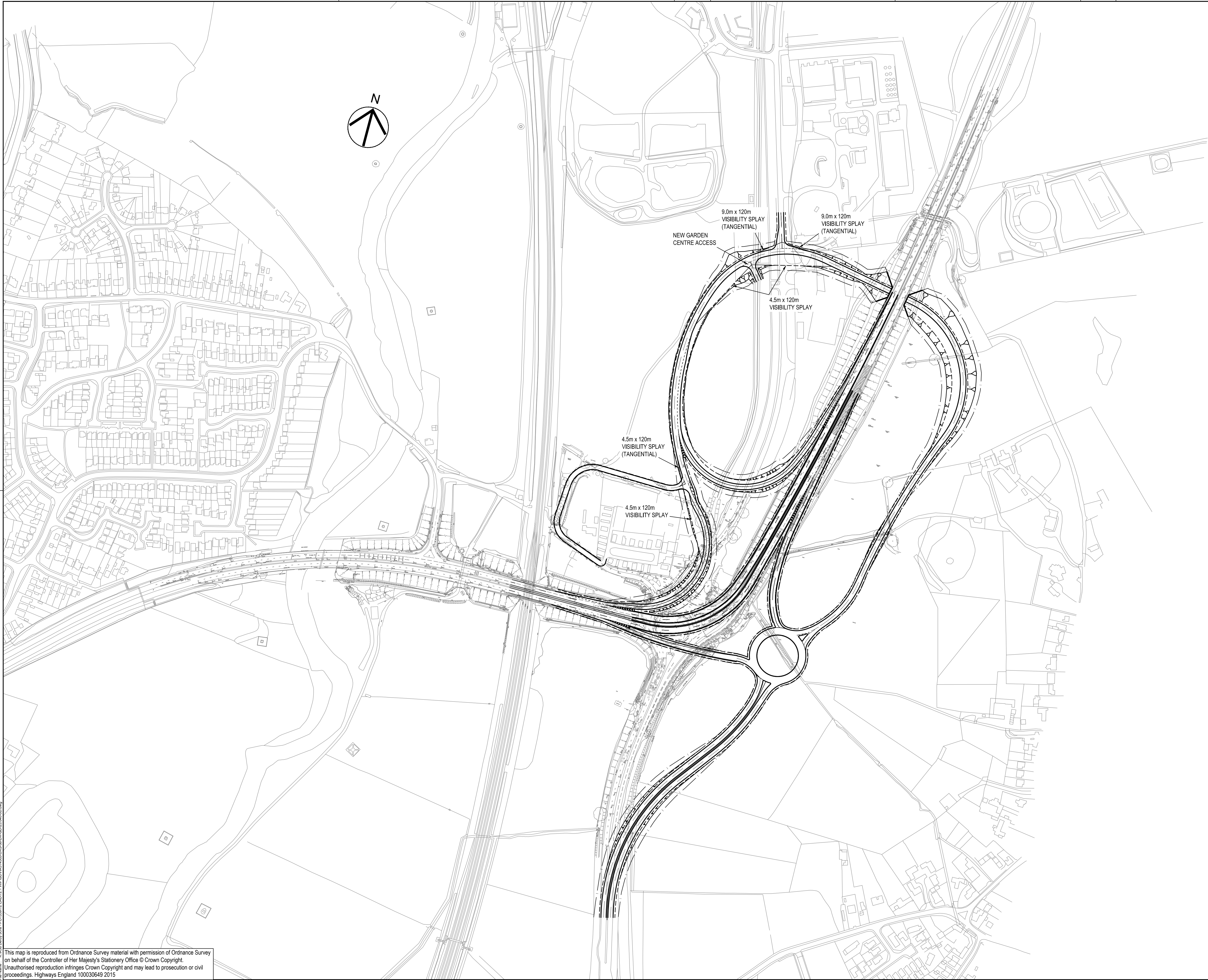
ADVANTAGES

- ① THE A.38 REMAINS AT GRADE AND LARGELY RETAINS ITS EXISTING ROUTE. THUS THE HUGE COST OF A DUAL CARRIAGEWAY FLYOVER, MODIFICATIONS TO THE RAIL BRIDGE AND LAND ACQUISITIONS ARE REMOVED.
- ② A SIMPLE 2 LANE BRIDGE TO CARRY THE A61/B6170 AXIS IS CONSTRUCTED OVER THE A38, A MUCH LOWER COST OPTION THAN AN A38 FLYOVER.
- ③ CONSTRUCTION IS ALMOST ENTIRELY WITHIN THE LAND, THUS MINIMAL ACQUISITIONS ARE REQUIRED.
- ④ NO EFFECT ON GARDEN CENTRE
- ⑤ NO EFFECT ON MOBILE HOME PARK OR STARBUCKS. IN FACT RAKED ROAD IS FURTHER AWAY FROM MOBILE HOMES SO LESS INTRUSIVE.
- ⑥ REDUCED CONSTRUCTION PERIOD HAS LESS EFFECT ON BUSINESSES & TRAFFIC.

DISADVANTAGES

- ① SLIGHTLY LONGER CIRCULATION ROUTES FOR SOME LOCAL TRAFFIC ~~THROUGH~~ VIA SIMPLER ROUNDABOUTS NOT USED BY A38 ~~THROUGH~~ TRAFFIC.
- ② ADVISORY 50 MPH ON A.38 POSSIBLY REQUIRED, THOUGH LOCALS DO NOT CONSIDER THIS TO BE A DISADVANTAGE DUE TO REDUCED NOISE & POLLUTION ASSOCIATED WITH 50 MPH SECTION.
A.38 JOURNEY TIMES STILL IMPROVED ON CURRENT SITUATION.

APPENDIX B – ENGINEERING PLANS



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NOTES

0	DRAFT				
AMCB	31/05/16	AW	31/05/16	AW	31/05/16

0	DRAFT				
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Job Title

**A38
DERBY JUNCTIONS
IMPROVEMENTS**

Drawing Title

**LITTLE EATON
OPTION X**

**GENERAL LAYOUT
PLAN**

AECOM Internal Project Number 47071319		Zone / Mileage	Suitability
Designed AMCB	Drawn AMCB	Stage 1 check AMCB	Stage 2 check AW
Scale at A1 1:2500		Original	Date 31/05/2016

Highways England
Major Projects
Piccadilly Gate
Store Street
Manchester
M1 2WD

**highways
england**

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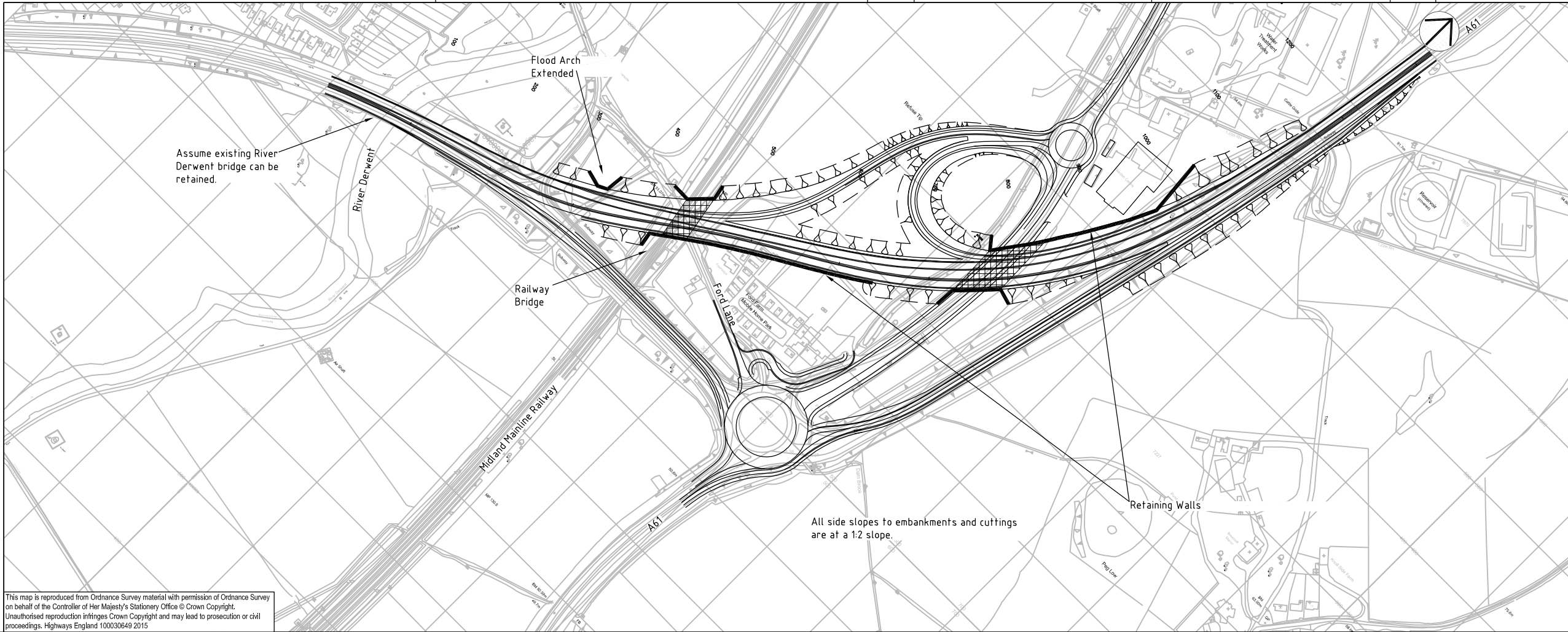
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HA514503-URS-06-DR-GD-25.040-0D

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Attached Xrefs: HA514503-URS-00-XX-M2-TS-00001 CSMainmapTopoLine HA514503-URS-00-ZZ-M2-CE-001-34R_ProposedAlignment Little_Eaton_Topography



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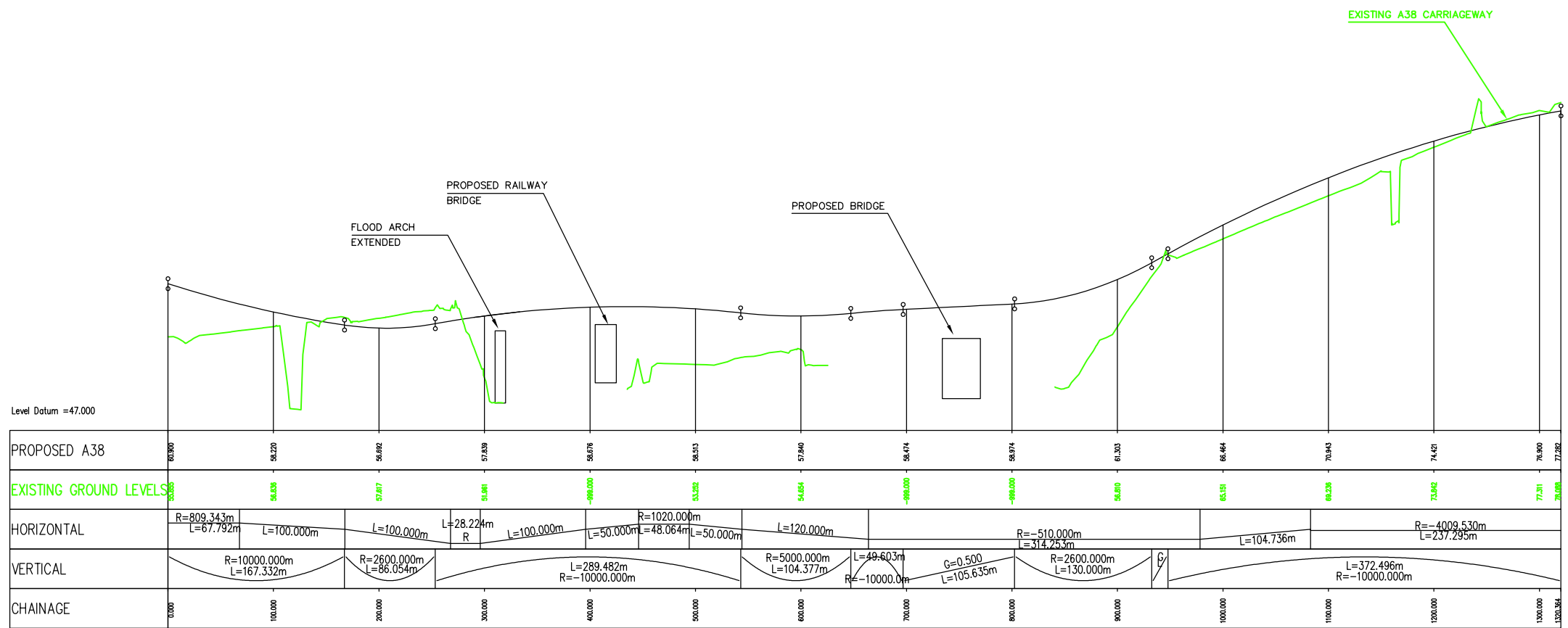
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NOTES
1. Little topographical data available so high risk of variance in earthwork volumes.
2. All side slopes were modeled at 1:2 - it should be noted these are more likely to be 1:2.5 (or 1:3 in flood plain).



Level Datum =47.000

PRELIMINARY

Additional text added, and drawing re-numbered.

1	SB	15/07/15	GJS	15/07/15	AW	16/07/15
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DRAFT ISSUE

0	SB	09/07/15				
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Revision Details

Rev #	Drawn By	Date	Checked By	Date	Approved By	Date
D						

Job Title

**A38
DERBY JUNCTIONS
IMPROVEMENTS**

Drawing Title
**LITTLE EATON JUNCTION
OPTION 2
PLAN AND SECTION**

AECOM Internal Project Number 47071319		Zone / Mileage	Sustainability
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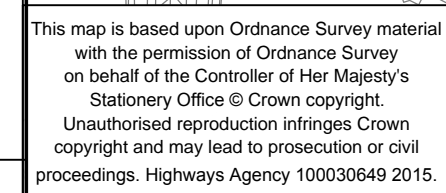
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1:2500

Originated	Date
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NOTES


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4	KINGSWAY PARK CLOSE LINK ADDED, GREENWICH DRIVE SOUTH LINK DELETED						
	JRH	13/05/15	AW	13/05/15	AW	13/05/15	
3	DRAFT NOTE ADDED						
	JRH	18/02/15	SLS	18/02/15	AW	18/02/15	
2	ANNOTATION ADDED TO PLAN						
	JRH	26/01/15	IWM	26/01/15	SLS	27/01/15	
1	SLIP ROAD ALIGNMENTS ADDED TO SECTION						
	JRH	03/12/14	IWM	03/12/14	AW	03/12/14	
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	JRH	11/09/14	AW	12/09/14			
Rev #	Revision Details						
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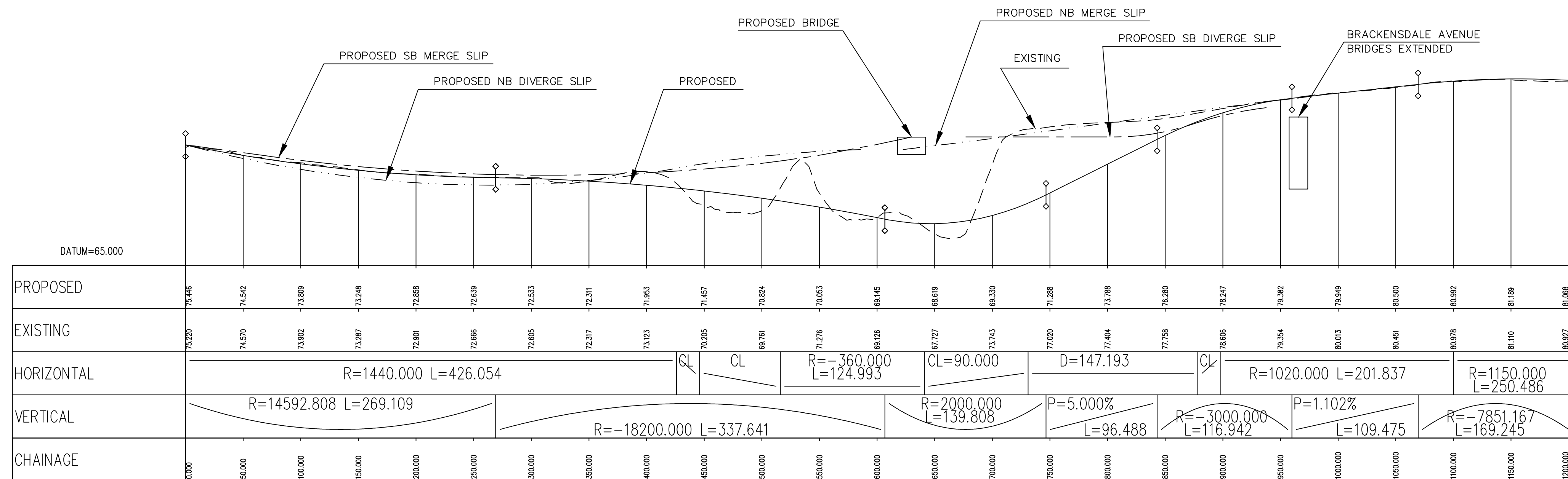
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KINGSWAY JUNCTION
PLAN AND SECTION
K2 OPTION

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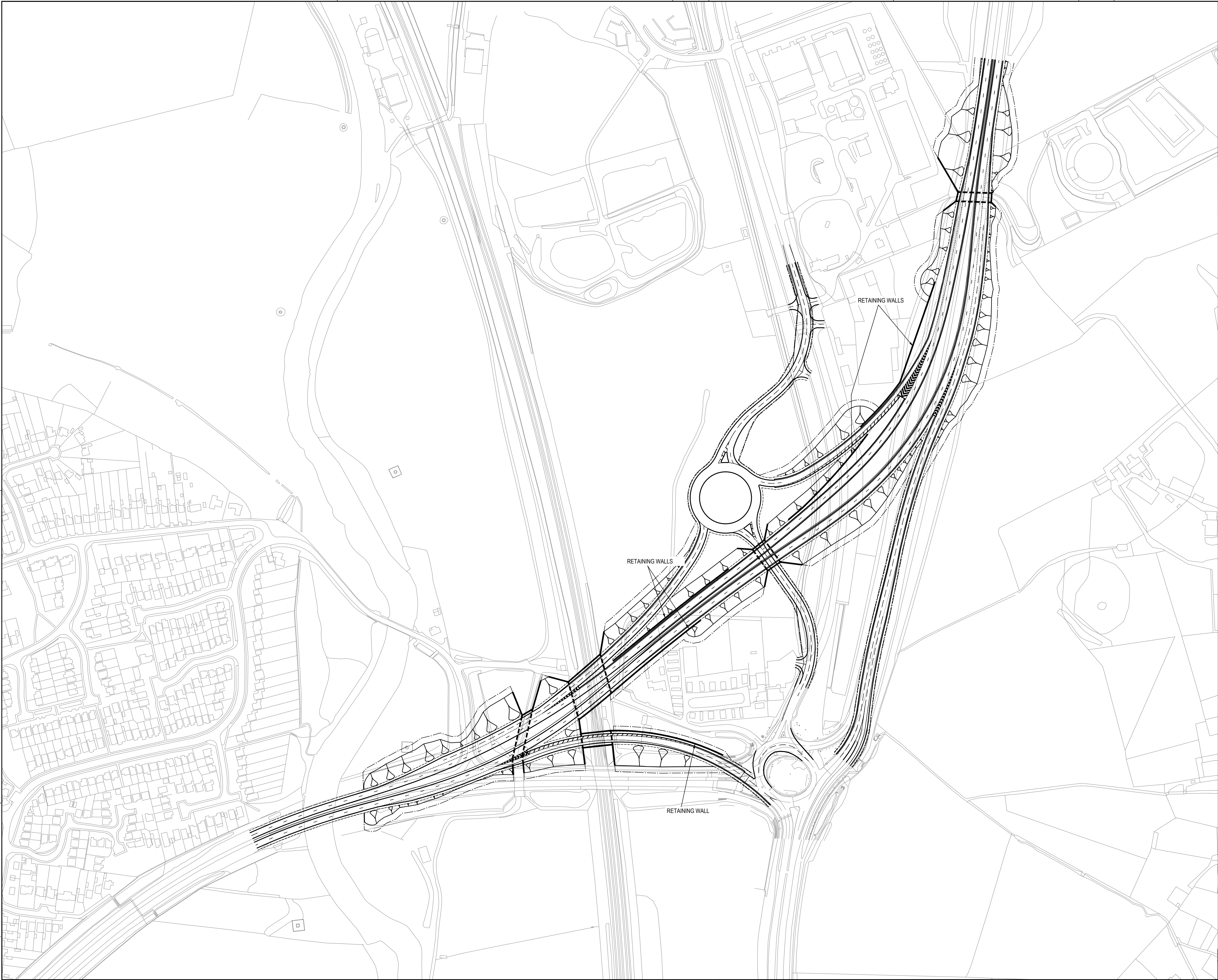
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Attached Xrefs : | A38 BASEMAP | A38 MAINLINE | sections | HA514503-URS-00-ZZ-M2-GD-001-1R_Chainage | A38 OS TEX
DB1Va



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2P	Note 2 added.					
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First Issue						
1P	AMCB	21/4/16	AW	21/4/16	AW	21/4/16
P	PRELIMINARY					

Job Title

**A38
DERBY JUNCTIONS**

Drawing Title

**LITTLE EATON
OPTION 2A
SINGLE BRIDGE OPTION
GENERAL LAYOUT
PLAN**

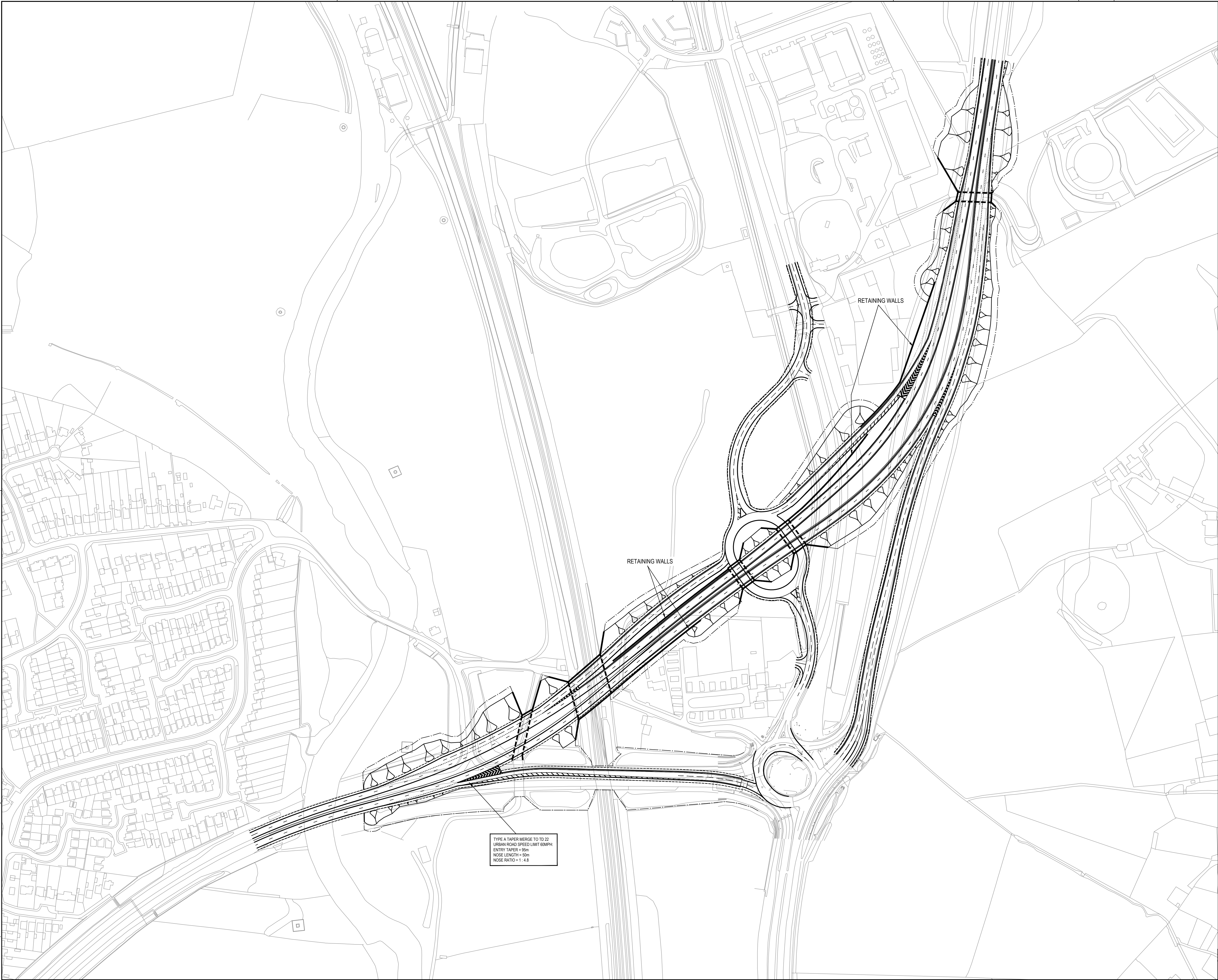
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Designed AMCB	Drawn AW	Stage 1 check AW	Stage 2 check AW	Approved AW
Scale at A1 1:1000		Originated	Date 21/04/16	

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	First Issue					
1P						
	AMCB	21/4/16	AW	21/4/16	AW	21/4/16
P	PRELIMINARY					

Job Title

**A38
DERBY JUNCTIONS**

Drawing Title

**LITTLE EATON
OPTION 2A**

**GENERAL LAYOUT
PLAN**

AECOM Internal Project Number 47071319		Zone / Mileage		Suitability	
Designed AMCB	Drawn AMCB	Stage 1 check AMCB	Stage 2 check AW	Approved AW	
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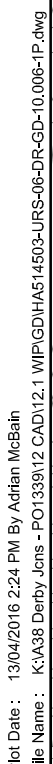
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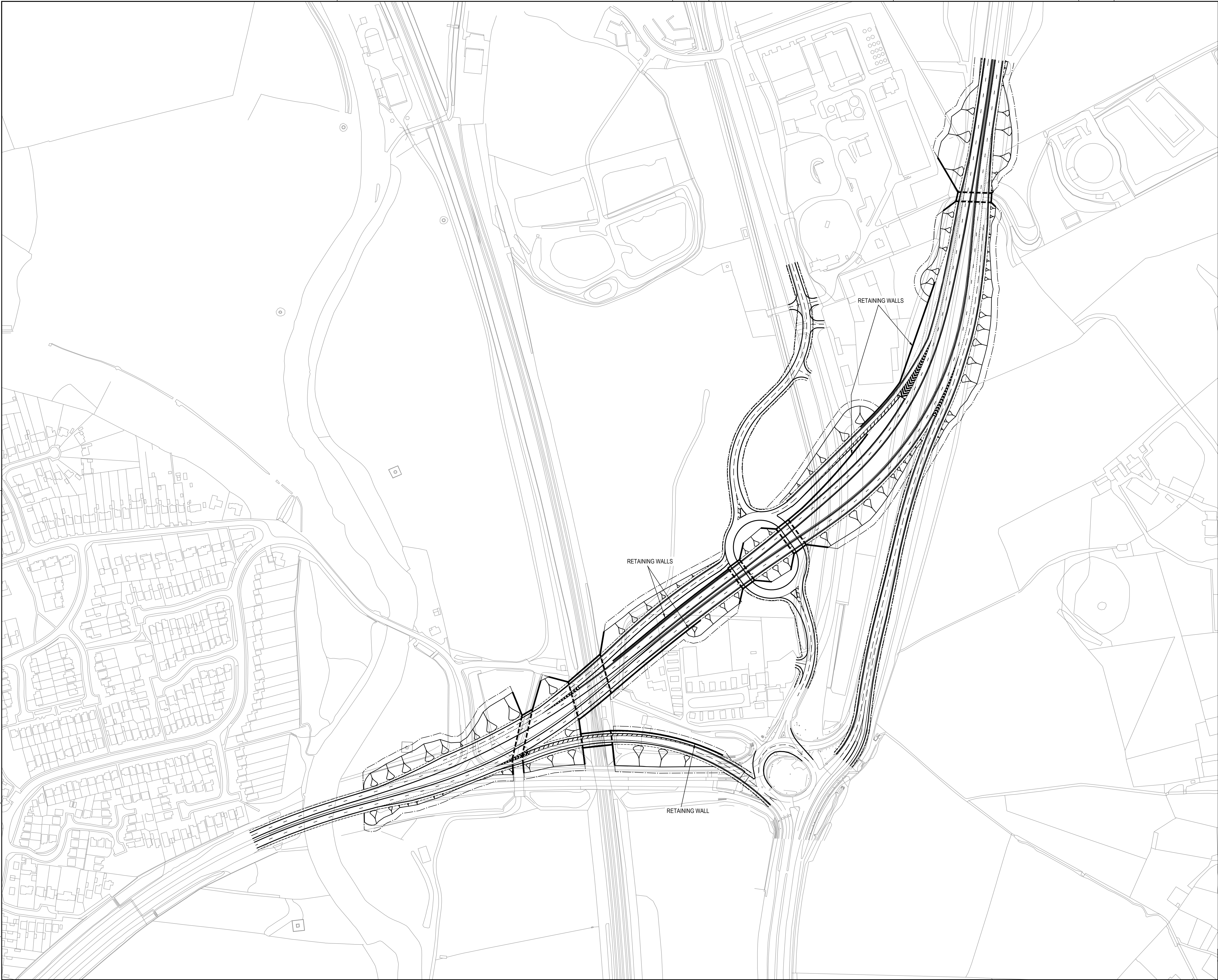
Drawing Title

LITTLE EATON
OPTION 2B
GENERAL LAYOUT
PLAN

Highways England Major Projects Picoadilly Gate Store Street Manchester M1 2WD	
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0D	First Issue					
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D	DRAFT					

Job Title

**A38
DERBY JUNCTIONS**

Drawing Title

**LITTLE EATON
OPTION 2A
SB MERGE SLIP MODIFIED
GENERAL LAYOUT
PLAN**

AECOM Internal Project Number 47071319		Zone / Mileage		Suitability	
Designed AMCB	Drawn AW	Stage 1 check AW	Stage 2 check AW	Approved AW	
Scale at A1 1:1000		Originated		Date 31/03/16	

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Drawing Number

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OPTION 'X1'

ROUNDAABOUT REPOSITIONED
TO ALLOW SUFFICIENT
DISTANCE FOR VERTICAL
CURVES FROM BRIDGE.

DIFFICULT TO GET 3
ARMS ON SAME SIDE
OF ROUNDAABOUT.

ACCESS TO
MOBILE HOMES

CANNOT HAVE
ACCESS OFF
SLIP ROAD

EXISTING
R.B.

DIFFICULT TO GET
3 ARMS ON SAME
SIDE OF ROUNDAABOUT.

B6179 DIVERSION

B.6179

G.C.

CP

A38

CAR PARK
AFFECTED.

RETAINING WALL

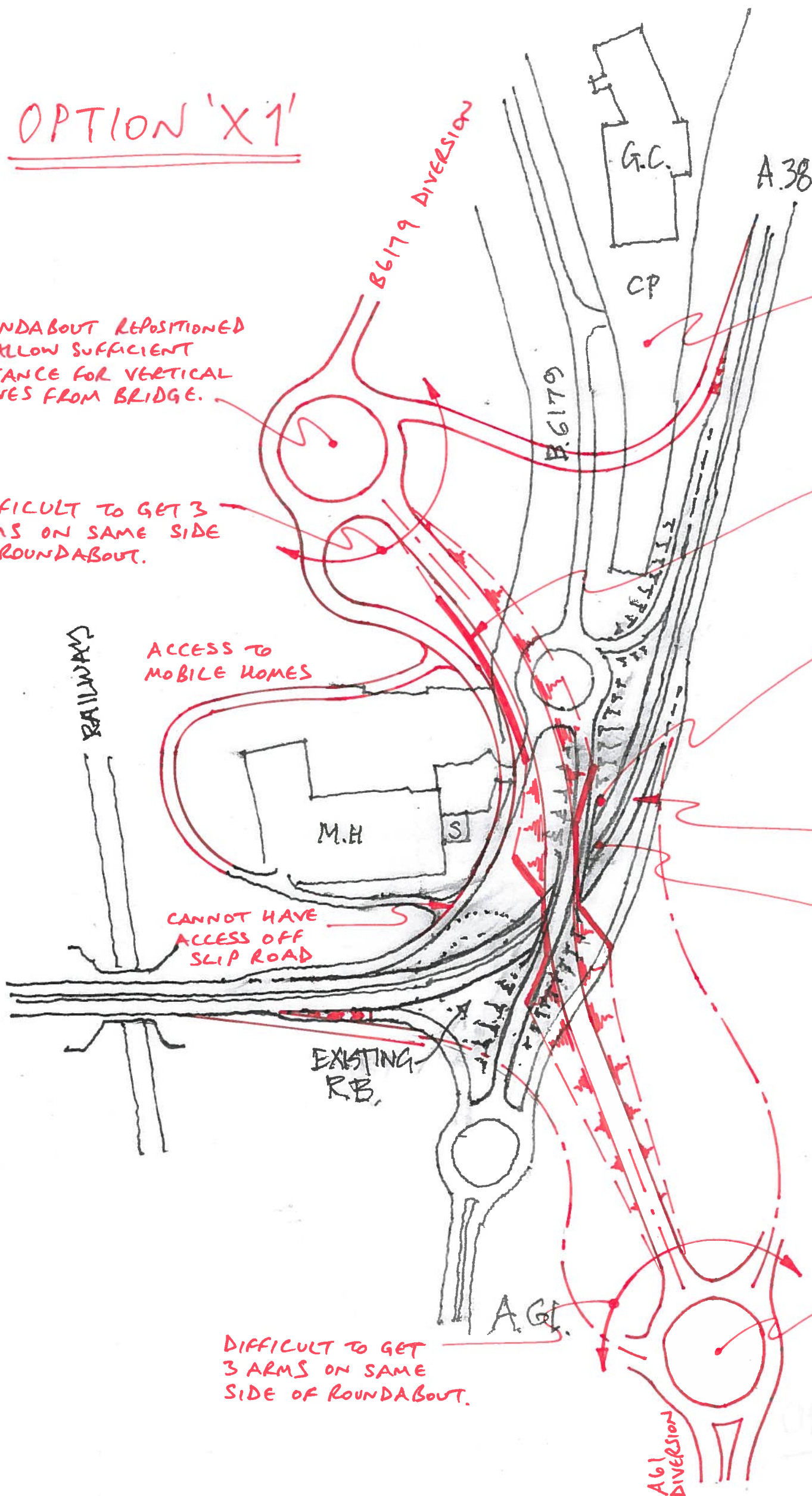
VERGE WIDTH NEEDS
TO BE 7m WIDE
THROUGH BRIDGE.

~ 150m RADIUS
PROBABLY NEEDS 40MPH
MANDATORY SPEED
LIMIT
(70AKPH DESIGN
SPEED).

CENTRAL RESERVE
WIDTH NEEDS TO BE
~ 8m WIDE FOR
VISIBILITY.

ROUNDAABOUT
REPOSITIONED TO
ALLOW SUFFICIENT
LENGTH TO GET UP
TO BRIDGE, AND
PROVIDE SPACE TO
PERMIT AN APPROPRIATE
ALIGNMENT FOR
THE SOUTHBOUND
MERGE SLIP ROAD.

A61 DIVERSION



APPENDIX C – SUMMARY OF INITIAL SIFT RESULTS

Option Details						Assesment against Identified Objectives	Deliverability Assessment				Feasibility Assessment				Summary of Initial Assessment														
Option Ref No	Submitted by	Alternative option for:																		Option Description									
		Kingsway Junction	Markeaton Junction	Little Eaton Junction	Overall project	Comments	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Total	Comments	Assessment		Comments		Assessment		A	B	C	Does the Option warrant further assessment?	Comments		
3	Option published for consultation - referred to as the "Presented Option"			X		Little Eaton (excluding Ford Lane link to B6179)		4	3	4	2	3	4	4	4	3.5		3	Likely to be deliverable, with some challenges			3	Likely to be feasible, with some challenges		✓	✓	✓	✓	Provides baseline for assessment of alternative options
2	N/A – previously consulted option			X		The option was shown on the consultation brochure as rejected Option 2. (In the 2004 Options Report it was named Option 7). The option involves the A38 passing to the west of the current junction between Starbucks and the Derby Garden Centre. The option retains Mobile Home Park. See drawing no. HA514503-URS-06-DR-GD-25.024.		4	4	3	2	3	3	3	3	3.125		3	Likely to be deliverable, with some challenges			3	Likely to be feasible, with some challenges		✓	✓	✓	✓	
2A	Breadsall A38 Action Group			X		This option is a development of Option 2 whereby the northbound slip roads are re-configured and the southbound slip roads reuse the existing A38 carriageway. See drawing no. HA514503-URS-06-DR-GD-10.007.		4	4	3	2	3	3	3	3	3.125		2	Deliverable with major challenges			3	Likely to be feasible, with some challenges		✓	✗	✓	✗	
2A (variant)	n/a - developed from Option 2A by AECOM			X		This option is a development of Option 2A whereby the southbound merge slip road is re-aligned such that it is compliant with design standards. This involves constructing a new bridge over the railway line. See drawing no. HA514503-URS-06-DR-GD-10.005.		4	4	2	2	3	3	3	2	2.875		2	Deliverable with major challenges			3	Likely to be feasible, with some challenges		✗	✗	✓	✗	
2A (single bridge)	n/a - Developed from Option 2A by AECOM			X		This option is a development of Option 2A whereby the northern roundabout is moved northwards such that only a single underbridge is needed to the A38. See drawing no. HA514503-URS-06-DR-GD-10.008.		4	4	3	2	3	3	3	3	3.125		2	Deliverable with major challenges			3	Likely to be feasible, with some challenges		✓	✗	✓	✗	
2B	Breadsall A38 Action Group			X		This option is a development of Option 2A whereby the A38 southbound slip roads are adjacent to the main carriageway to form a conventional two-bridge grade-separated layout with a single roundabout. The existing roundabout and slip roads would be removed and landscaped. See drawing no. HA514503-URS-06-DR-GD-10.006.		4	4	3	2	3	3	3	3	3.125		2	Deliverable with major challenges			3	Likely to be feasible, with some challenges		✓	✗	✓	✗	
X	David Hall (Little Eaton)			X		This Option was developed with the intention of retaining the existing A38 in order to balance the alignment between Little Eaton and Breadsall. The option retains the A38 on its existing horizontal and vertical alignment, diverts the B6179 to the north of the garden centre to pass under the A38 to a new roundabout on the A61. See drawing no. HA514503-URS-06-DR-GD-25.040.		2	3	4	2	3	2	3	2	2.625		3	Likely to be deliverable, with some challenges			1	Unlikely to be feasible		✗	✓	✗	✗	
X1	Breadsall A38 Action Group			X		This Option was developed by Breadsall Action Group in response to Little Eaton's "Option X". It replaces the long looping links of Option X (needed to connect the A61 and B6179 to the A61 via a bridge under the A38 north of the garden centre) with an overbridge for the A61 thereby providing a more direct route. The notes submitted by the Action Group state the design intention as "retaining the A38 at grade, while reducing the lengthy circulation routes". See hand drawn sketch.		2	2	4	2	3	2	3	2	2.5		3	Likely to be deliverable, with some challenges			1	Unlikely to be feasible		✗	✓	✗	✗	

APPENDIX D – INITIAL SIFT ASSESSMENT SHEETS

Reference		Description of the Alternative Option
Option 2 – As published in 2015 consultation.		The option was shown on the consultation brochure as rejected Option 2. (In the 2004 Options Report it was named Option 7). The option involves the A38 passing to the west of the current junction between Starbucks and the Derby Garden Centre. The option retains Mobile Home Park. See drawing no. HA514503-URS-06-DR-GD-25.024.
Submitted by:		
N/A – previously consulted option		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 'To reduce congestion and increase reliability of journey times on the strategic corridor'	4	Overall, the junction will improve journey times compared to the existing arrangement. The alignment would enable the junction to operate at 70mph speed limit improving journey times compared to the Presented Option. However, as a result of the double roundabout junction, non-through traffic will be delayed compared to a single roundabout solution. Note: The link between roundabouts may need to be multiple lanes to accommodate the design year flows. On balance the score is similar to the Presented Option.
Objective 2 'To minimise traffic disruption due to construction works and incidents'	4	The proposed option reduces the amount of works required on the existing A38 (more offline construction) compared to the Presented Option. This enables construction of the earthworks and associated settlement periods without impact to the existing infrastructure, as well as the off-line construction of most bridges / retaining walls. This approach offers extra flexibility in traffic management and minimal disruption to road users during construction.
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	3	The Little Eaton Options Assessment report (January 2016) which examined the alternative options received during consultation showed that Option 2 would cost £99.8m. This is 16.2% (£13.9m) higher than the cost of the Presented Option. The principal reasons for the additional cost are (i) higher land costs than the Presented Option; and (ii) higher VAT charges due to the alignment. This also includes an allowance for either purchase of the garden centre if an alternative car park can not be negotiated; or the cost of an additional bridge span to cross the existing car park. There are no features which would significantly affect maintenance costs compared to other options, other than the potential cost of maintaining a further bridge span over the garden centre car park. However, this is not sufficient to alter the scoring.
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	There will be a reduced visual impact for residents in Breadsall village compared to the Presented Option. However, there will be significant impact to the built environment due to the loss of properties within the mobile home park, loss of land from the property "Fourways" and associated business; and land take from the garden centre car park which would result in its potential closure unless an alternative arrangement could be negotiated. New bridge over the railway would have an adverse effect on the World Heritage Site and cause additional landscape effects, whilst there are potentially additional ecological and flood risk impacts as compared to the Presented Option. Note: In order to maintain the garden centre as a viable business, the Little Eaton Options Assessment report (January 2016) suggested an additional span to the A38 flyover over the car park.
Objective 5 'To seek to mitigate impacts on air quality and noise'	3	Option 2 would reduce air quality effects in some locations and increase them elsewhere as compared to the Presented Option, whilst the overall noise effects of Option 2 are likely to be neutral as compared to the Presented Option.
Objective 6 'To improve the safety for all road users'	3	As a result of the double roundabout junction, the probability of more vehicle related incidences occurring, therefore a score of 3 was given.
Objective 7 'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'	3	The proposed option severs an existing cycle route, which would need to be re-routed. Therefore a score of 3 was given.
Objective 8 'To be affordable and represent High Value for Money according to DfT's appraisal criteria'	3	Scheme is expected to represent good value for money. Compared to the Presented Option, benefits are expected to be similar (see objective 1) but costs are expected to be higher (see objective 3). In addition, there will be additional costs associated with purchasing the mobile homes and potential compensation payments to the garden centre. Overall, this results in a slightly lower score compared to the Presented Option.
Average Score	3.125	

Reference		Description of the Alternative Option
Option 2 – As published in 2015 consultation.		The option was shown on the consultation brochure as rejected Option 2. (In the 2004 Options Report it was named Option 7). The option involves the A38 passing to the west of the current junction between Starbucks and the Derby Garden Centre. The option retains Mobile Home Park. See drawing no. HA514503-URS-06-DR-GD-25.024.
Submitted by:		
N/A – previously consulted option		
Alternative option for		
Little Eaton Junction		
Deliverability Categorisation		
Factors considered	Score	Comments
<p>Is there a risk that will prevent us from progressing this option?</p> <p>What level of stakeholder/public support/challenge is expected for this option?</p> <p>Are there any significant third party issue associated with the option?</p> <p>Are there any political issues associated with this option?</p> <p>Are there any planning/legal issues associated with this option?</p> <p>Does the option impact the overall project deliverability?</p>	3	<p>This option will result in adverse impacts on garden centre as the existing parking area would be reduced in area and part of it would become severed from the main buildings. The construction of the additional bridge span over the car park is likely to require the temporary closure of the car park, and hence garden centre.</p> <p>The scheme is likely to be supported strongly by residents in Breadsall with objections from Little Eaton communities.</p>
Feasibility Categorisation		
Factors considered	Score	Comments
<p>Is the option technically sound?</p> <p>Is the option financially affordable?</p> <p>Is the option buildable?</p> <p>Is the option likely to be practical and effective?</p> <p>Does the option impact the overall project feasibility</p>	3	<p>No additional benefits or drawbacks when compared with Presented Option. The option is technically sound and will be effective but the additional cost presents an affordability challenge.</p>

NOTE:

The assessment of Option 2 has been reviewed from that conducted in 2015 and contained in the Report on Public Consultation to take account of knowledge gained in conducting the Options Assessment reported in document 47071319-URS-06-RP-RD-013-6F

Reference		Description of the Alternative Option
Option 2A		This option is a development of Option 2 whereby the northbound slip roads are re-configured and the southbound slip roads reuse the existing A38 carriageway. See drawing no. HA514503-URS-06-DR-GD-10.007.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 'To reduce congestion and increase reliability of journey times on the strategic corridor'	4	Overall, the junction will improve journey times compared to the existing arrangement by removing the need for all A38 through traffic to negotiate the roundabout. The proposed A38 alignment would enable the junction to operate at 70mph design speed, slightly improving journey times compared to the Presented Option. In this regard it is comparable to Option 2. However, as a result of the double roundabout junction, non-through traffic will be delayed compared to a single roundabout solution. The slip road layouts are simpler and shorter than those required for Option 2 but the roundabouts will need careful design to ensure potential congestion is minimised for traffic moving between the A38 and A61. Note: The link between roundabouts may need to be multiple lanes to accommodate the design year flows. On balance the score is similar to the Presented Option.
Objective 2 'To minimise traffic disruption due to construction works and incidents'	4	The option is comparable to Option 2. Compared to the Presented Option, Option 2A is constructed more offline. Consequently, a reduced amount of works on the existing A38 is required. This will provide extra flexibility in traffic management and less disruption to road users during construction.
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	3	Compared to Option 2, the cost of Option 2A will be slightly reduced due to the re-use of the existing slip roads and the retention of the garden centre reducing land costs. However, these are unlikely to offer a significant enough saving to address the overall cost increase compared to the Presented Option. As such, the cost differences are likely to remain in excess of 10% and the score is comparable to Option 2. There are no features which would significantly affect maintenance costs compared to other options.
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	This layout is comparable to Option 2 in that (i) there will be a reduced visual impact for residents in Breadsall compared to the Presented Option; (ii) there will be a large impact to the mobile homes park and adjacent property "Fourways" due to the proximity of the route and land take; (iii) new bridge over the railway would have adverse effect on World Heritage Site and cause additional landscape effects; (iv) potential additional ecological and flood risk impacts comparable to the Presented Option. Note: Without the proposed amendments to the garden centre car park, the land take would result in its potential closure. Scoring is based upon the garden remaining open at this stage.
Objective 5 'To seek to mitigate impacts on air quality and noise'	3	The score is comparable to Option 2. Option 2A would reduce air quality effects in some locations and increase them elsewhere as compared to the Presented Option, whilst the overall noise effects of Option 2A are likely to be neutral as compared to the Presented Option (although slip road could result in additional noise impacts upon mobile home park).
Objective 6 'To improve the safety for all road users'	3	The slip road layout has been simplified thereby improving safety for road users. The design retains the double-roundabout arrangement which maintains the likelihood of vehicle incidents as the Option 2. Additionally, in order to keep the southbound merge slip road within the footprint of the existing A38, it would be necessary to remove the auxiliary lane from Option 2 and provide a merge nose with a more severe approach angle. While it is expected that a Departure for this would be granted, it would impact safety and capacity to a small degree. Overall, the differences are not sufficient to affect the scoring and the option is considered to be comparable to Option 2 in terms of roads user safety. NOTE: A variant has been developed with a compliant slip road layout (see Option 2A variant).
Objective 7 'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'	3	The score is comparable to Option 2 as there are no significant changes planned which would affect NMUs. No NMU routes will be permanently severed.
Objective 8 'To be affordable and represent High Value for Money according to DfT's appraisal criteria'	3	Scheme is expected to represent good value for money in terms of BCR. Compared to the Presented Option, benefits are expected to be similar (see objective 1) but costs are expected to be higher (see objective 3). In addition, there will be additional costs associated with purchasing the mobile homes. Overall, this results in a lower score compared to the Presented Option.
Average Score	3.125	

Reference		Description of the Alternative Option
Option 2A		This option is a development of Option 2 whereby the northbound slip roads are re-configured and the southbound slip roads reuse the existing A38 carriageway. See drawing no. HA514503-URS-06-DR-GD-10.007.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Deliverability Categorisation		
Factors considered	Score	Comments
<p>Is there a risk that will prevent us from progressing this option?</p> <p>What level of stakeholder/public support/challenge is expected for this option?</p> <p>Are there any significant third party issue associated with the option?</p> <p>Are there any political issues associated with this option?</p> <p>Are there any planning/legal issues associated with this option?</p> <p>Does the option impact the overall project deliverability?</p>	2	<p>The option requires the CPO of land currently occupied by the car park to the Derby Garden Centre. The area of land is sufficiently large to make the garden unviable as an ongoing business. The option proposes purchasing land from the existing landfill site to replace the lost car park area. Examination of the CPO powers, governed under the Planning Act 2008 for Development Consent Order (DCO) applications, has shown that this is not possible under legislation. The powers only relate to purchasing land that is an integral part of the principle proposed development or defined as associated development. The Department for Communities and Local Government guidance on associated development lays out the type of land that can be included. The proposed arrangement is not listed within the guidance and hence, is not covered by the legislation. Pursuing such an arrangement would therefore be beyond the legal powers.</p> <p>As a consequence, the only way this land could be obtained for the purpose of a replacement car park would be by negotiation. As the scheme could not proceed without the land, the landowner could effectively control the price of the land or may not wish to sell the land at all. This is expected to be costly and difficult to secure until later stages in the project when funding is available. This puts the Option at risk and presented a major deliverability challenge.</p> <p>As such, the only remaining option would be to purchase the Derby Garden Centre. This is estimated at £2m and contributes to the higher project cost (see objective 3). Consequently, this presents a major deliverability challenge. In the event that the amended car park could not be provided, the only alternative would be for the car park to be extended south, into the land owned by garden centre, with foot access provided around the junction from the car park to garden centre (approx. 300m walking distance). However, this is unlikely to be either safe or practicable and would be likely to lead to the business becoming unviable.</p>
Feasibility Categorisation		
Factors considered	Score	Comments
<p>Is the option technically sound?</p> <p>Is the option financially affordable?</p> <p>Is the option buildable?</p> <p>Is the option likely to be practical and effective?</p> <p>Does the option impact the overall project feasibility</p>	3	No additional benefits or drawbacks when compared with Presented Option.

Reference		Description of the Alternative Option
Option 2A (variant)		This option is a development of Option 2A whereby the southbound merge slip road is re-aligned such that it is compliant with design standards. This involves constructing a new bridge over the railway line. See drawing no. HA514503-URS-06-DR-GD-10.005.
Submitted by:		
n/a - developed from Option 2A by AECOM		
Alternative option for Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 'To reduce congestion and increase reliability of journey times on the strategic corridor'	4	The option is comparable to Option 2A as the changes are limited to the southbound merge slip road only.
Objective 2 'To minimise traffic disruption due to construction works and incidents'	4	The option is comparable to Option 2A. However, the southbound merge slip road is likely to result in some additional disruption as it both crosses the existing A38 close to the roundabout and complicates the tie in at the southern end of the scheme.
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	2	Compared to Option 2A, this variant will result in additional costs associated with (i) construction of the new railway bridge; (ii) demolition of the existing railway bridge; and (iii) construction of the new southbound merge slip road. Although this variant has not been costed in detail, based on costings assessed for other elements of the scheme, the additional out turn cost is likely to be £3-6m as compared with the Option 2A.
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	The option is comparable to Option 2A as the changes are limited to the southbound merge slip road only.
Objective 5 'To seek to mitigate impacts on air quality and noise'	3	The option is comparable to Option 2A as the changes are limited to the southbound merge slip road only, although the option would reduce potential slip road noise impacts upon the mobile home park.
Objective 6 'To improve the safety for all road users'	3	Compared to Option 2A this variant improves the arrangement of the southbound merge slip road. However, due to the proximity with the River Derwent bridge, a Departure from Standard is still required. Overall, the safety improvement is not significant enough to alter the scoring of this objective when compared to Option 2A.
Objective 7 'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'	3	The option is comparable to Option 2A as the changes are limited to the southbound merge slip road only.
Objective 8 'To be affordable and represent High Value for Money according to DfT's appraisal criteria'	2	Scheme is expected to represent good value for money in terms of BCR. Compared to Option 2A, there will be additional safety benefits expected (see objective 6) but costs are expected to be noticeably higher due to the extra construction work associated with the southbound merge slip road (see objective 3). Overall, this results in a lower score compared to both Option 2 and the Presented Option.
Average Score	2.875	
Deliverability Categorisation		
Factors considered	Score	Comments
Is there a risk that will prevent us from progressing this option? What level of stakeholder/public support/challenge is expected for this option? Are there any significant third party issue associated with the option? Are there any political issues associated with this option? Are there any planning/legal issues associated with this option? Does the option impact the overall project deliverability?	2	The option is comparable to Option 2A as the changes are limited to the southbound merge slip road only.
Feasibility Categorisation		
Factors considered	Score	Comments
Is the option technically sound? Is the option financially affordable? Is the option buildable? Is the option likely to be practical and effective? Does the option impact the overall project feasibility	3	No additional benefits or drawbacks when compared with Presented Option.

Reference		Description of the Alternative Option
Option 2A (single bridge variant)		This option is a development of Option 2A whereby the northern roundabout is moved northwards such that only a single underbridge is needed to the A38. See drawing no. HA514503-URS-06-DR-GD-10.008. Note that the drawing also shows the re-aligned southbound entry slip road. However, for the purpose of the assessment, the slip road alignment has been assumed to be that for Option 2A.
Submitted by:		
n/a - Developed from Option 2A by AECOM		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 'To reduce congestion and increase reliability of journey times on the strategic corridor'	4	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout and minor alterations to the slip road alignments.
Objective 2 'To minimise traffic disruption due to construction works and incidents'	4	The option is comparable to Option 2A. The changes will not have a significant effect on the construction methodology, construction duration or traffic management arrangements.
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	3	Compared to option 2A, this option will result in lower construction and future maintenance costs associated with only a single bridge being required. In all other regards the costs of construction and maintenance will be comparable.
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout, although additional land take associated with northern roundabout would potentially increase impacts associated with ecology and flood risk (as compared to Option 2A).
Objective 5 'To seek to mitigate impacts on air quality and noise'	3	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout.
Objective 6 'To improve the safety for all road users'	3	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout.
Objective 7 'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'	3	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout.
Objective 8 'To be affordable and represent High Value for Money according to DfT's appraisal criteria'	3	The option is comparable to Option 2A as, although the whole life cost will be reduced, the magnitude of the saving is not expected to be large enough to significantly improve the scheme BCR.
Average Score	3.125	
Deliverability Categorisation		
Factors considered	Score	Comments
Is there a risk that will prevent us from progressing this option? What level of stakeholder/public support/challenge is expected for this option? Are there any significant third party issue associated with the option? Are there any political issues associated with this option? Are there any planning/legal issues associated with this option? Does the option impact the overall project deliverability?	2	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout.
Feasibility Categorisation		
Factors considered	Score	Comments
Is the option technically sound? Is the option financially affordable? Is the option buildable? Is the option likely to be practical and effective? Does the option impact the overall project feasibility?	3	The option is comparable to Option 2A as the changes are limited to the location of the northern roundabout.

Reference		Description of the Alternative Option
Option 2B		This option is a development of Option 2A whereby the A38 southbound slip roads are adjacent to the main carriageway to form a conventional two-bridge grade-separated layout with a single roundabout. The existing roundabout and slip roads would be removed and landscaped. See drawing no. HA514503-URS-06-DR-GD-10.006.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 <i>'To reduce congestion and increase reliability of journey times on the strategic corridor'</i>	4	The option is comparable to Option 2A in that the changes are limited to the southbound slip roads only and, in terms of traffic congestion, do not make a significant change.
Objective 2 <i>'To minimise traffic disruption due to construction works and incidents'</i>	4	Compared to the Option 2A there is little change in traffic disruption during construction. The works to construct the new southbound slip roads and remove the existing A38 (which would be re-used under Option 2A) can be mostly completed offline.
Objective 3 <i>'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'</i>	3	Compared to Option 2A, this option differs in cost terms as follows: - lower construction cost and future maintenance cost due to need for a single bridge at the railway; - additional construction cost due to the need to demolish the existing railway bridge and A38 carriageway; - cost to purchase an additional section of the mobile home park; - cost to purchase the property "Fourways" and compensate the associated business On balance, overall whole life cost will be similar to Option 2A.
Objective 4 <i>'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'</i>	2	This layout is comparable to Options 2 and 2A in that (i) there will be a reduced visual impact for residents in Breadsall compared to the Presented Option; (ii) there will be a large impact to the mobile homes park due to the proximity of the route and land take - although the number of mobile homes is increased compared to Option 2A; (iii) new bridge over the railway would have adverse effect on World Heritage Site and cause additional landscape effects; (iv) potential additional ecological and flood risk impacts as compared to Presented Option; and (vi) there will be the need to purchase the property "Fourways" on Ford Lane with likely impacts to the adjacent business. Note: Without the proposed amendments to the garden centre car park, the land take would result in its potential closure .
Objective 5 <i>'To seek to mitigate impacts on air quality and noise'</i>	3	The score is comparable to Options 2 and 2A. Option 2B would reduce air quality effects in some locations and increase them elsewhere as compared to the Presented Option, whilst the overall noise effects of Option 2B are likely to be neutral as compared to the Presented Option.
Objective 6 <i>'To improve the safety for all road users'</i>	3	The score is comparable to Option 2 as there are no significant changes to the overall alignment which would affect road user safety.
Objective 7 <i>'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'</i>	3	The score is comparable to Option 2 as there are no significant changes planned which would affect NMUs. No NMU routes will be permanently severed. Access to adjacent land holdings is severely impacted. Crossing points would be provided where required.
Objective 8 <i>'To be affordable and represent High Value for Money according to DfT's appraisal criteria'</i>	3	Scheme is expected to represent good value for money in terms of BCR. Compared to the Presented Option, benefits are expected to be similar (see objective 1) but costs are expected to be higher (see objective 3). In addition, there will be additional costs associated with purchasing more mobile homes and the currently viable garden centre business. Overall, this results in a lower score compared to the Presented Option.
Average Score	3.125	

Reference		Description of the Alternative Option
Option 2B		This option is a development of Option 2A whereby the A38 southbound slip roads are adjacent to the main carriageway to form a conventional two-bridge grade-separated layout with a single roundabout. The existing roundabout and slip roads would be removed and landscaped. See drawing no. HA514503-URS-06-DR-GD-10.006.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Deliverability Categorisation		
Factors considered	Score	Comments
<p>Is there a risk that will prevent us from progressing this option?</p> <p>What level of stakeholder/public support/challenge is expected for this option?</p> <p>Are there any significant third party issue associated with the option?</p> <p>Are there any political issues associated with this option?</p> <p>Are there any planning/legal issues associated with this option?</p> <p>Does the option impact the overall project deliverability?</p>	2	<p>As for Option 2A, this option requires the CPO of land currently occupied by the car park to the Derby Garden Centre. The area of land is sufficiently large to make the garden unviable as an ongoing business. The option proposes purchasing land from the existing landfill site to replace the lost car park area.</p> <p>Examination of the CPO powers, governed under the Planning Act 2008 for Development Consent Order (DCO) applications, has shown that this is not possible under legislation. The powers only relate to purchasing land that is an integral part of the principle proposed development or defined as associated development. The Department for Communities and Local Government guidance on associated development lays out the type of land that can be included. The proposed arrangement is not listed within the guidance and hence, is not covered by the legislation. Pursuing such an arrangement would therefore be beyond the legal powers.</p> <p>As a consequence, the only way this land could be obtained for the purpose of a replacement car park would be by negotiation. As the scheme could not proceed without the land, this would form a "ransom strip" whereby the landowner could effectively control the price of the land. This is expected to be costly and difficult to secure until later stages in the project when funding is available. This puts the project at risk and presented a major deliverability challenge.</p> <p>As such, the only remaining option would be to purchase the Derby Garden Centre. This is estimated at £2m and contributes to the higher project cost (see objective 3). Consequently, this presents a major deliverability challenge. In the event that the amended car park could not be provided, the only alternative would be for the car park to be extended south, into the land owned by Garden Centre, with foot access provided around the junction from the car park to Garden Centre (approx. 300m walking distance). However, this is unlikely to be either safe or practicable and would be likely to lead to the business becoming unviable.</p>
Feasibility Categorisation		
Factors considered	Score	Comments
<p>Is the option technically sound?</p> <p>Is the option financially affordable?</p> <p>Is the option buildable?</p> <p>Is the option likely to be practical and effective?</p> <p>Does the option impact the overall project feasibility</p>	3	No additional benefits or drawbacks when compared with Presented Option.

Reference		Description of the Alternative Option
Option X		This Option was developed with the intention of retaining the existing A38 in order to balance the alignment between Little Eaton and Breadsall. The option retains the A38 on its existing horizontal and vertical alignment, diverts the B6179 to the north of the garden centre to pass under the A38 to a new roundabout on the A61. See drawing no. HA514503-URS-06-DR-GD-25.040.
Submitted by:		
David Hall (Little Eaton)		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 'To reduce congestion and increase reliability of journey times on the strategic corridor'	2	<p>Compared to option 2, the traffic benefits to A38 would be marginally reduced. This is a result of the sharper bend in the horizontal alignment requiring a lower design speed and speed limit, thereby restricting vehicle speeds and extending journey times. Although the difference would be small for each individual journey, the effect would be multiplied across all A38 through traffic movements.</p> <p>Traffic movements between the northbound A38 and A61 will be significantly disadvantaged by the excessively longer link manoeuvres as follows:</p> <ul style="list-style-type: none">- Trips from A38 northbound heading into A61 Derby (South) would be required to exit the A38 and use the new B6179 link road around the garden centre, under the A38 and then travel south to the A61. This increases journey distance for this manoeuvre compared to the Presented Option from 719m to 2,116m: an increase in trip length of 1.40 km (0.9 mile).- Similarly, trips from A61 heading to the A38 North would be required to use the new B6179 link road to the east of the A38, around the garden centre and then south to join the A38 via the looped slip road. This increases the journey distance compared to the Presented Option from 916m to 1,982m: an trip increase in length of 1.07km (0.67 mile).- The large A61 to A38 North (out of Derby) movement would circulate in front of the large into-Derby traffic movements; the A38 northbound to A61 (via the new link road) and the A38 southbound to A61. This would result in lengthy delays for traffic entering Derby, particularly in the AM peak period. To prevent A61 southbound vehicles blocking back onto the A38, it may be necessary to implement a traffic signal alternative to the roundabout. An alternative layout would provide better control of the vehicle queues, but substantial lane widening would be required on the approaches and departures to a traffic signal controlled junction, requiring greater landtake.- Trips from A38 southbound to the A61 have a free-flow filter lane in the Presented Option. With 'Option X', these trips would have to pass through a new junction (either the roundabout shown or a traffic signalled alternative as noted above). For these movements this arrangement would induce additional delays to all journeys at all times of the day. <p>Overall, the combination of reduced traffic improvements for A38 through-traffic and the difficulties associated with traffic using the slip roads and link road result in Option X performing substantially worse than the Presented Option or Option 2.</p>
Objective 2 'To minimise traffic disruption due to construction works and incidents'	3	<p>The option makes significant use of the existing A38 carriageway and does not propose much online work other than removing the existing Little Eaton roundabout thereby minimising disruption.</p> <p>Options for construction of the new underbridge are:</p> <p>(i) construct the new RC box structure on the adjacent land and slide in using box-jacking techniques. This is a complex and costly option which will require adequate adjacent land (for example to the east of the A38) to be available but no disruption to A38 traffic is expected; (ii) lengthy closure of A38 to enable the new RC structure to be built insitu using the cut and cover method. This will be highly disruptive to traffic although the time period for the closure could be reduced by using precast box units. A long term closure is considered to be unfeasible given the lack of suitable diversion routes. The closure of the A38 is expected to increase traffic flows through Little Eaton and Breadsall regardless of the signed diversion route; (iii) temporary diversion route through adjacent green belt land between the A38 and Breadsall in a similar but shorter manner to the Southern Sweep option; or (iv) construct the new structure on adjacent land and slide in (dependant on availability of land) during a short closure of several days with diversions along the B6179.</p> <p>Due to the significant traffic benefits it is assumed that option (i) - box jacking, would be the final solution. The underbridge would need to be in place before the new A61 junction could be constructed or the existing B6179 closed in order to ensure that as many turning movements as possible could be maintained during construction.</p> <p>Construction of the B6179 link road can be carried out offline with minimal disruption.</p> <p>Constructing the new A61 roundabout could be undertaken off-line but the tie-ins would require online works and hence would disrupt traffic flows. During construction it may not be possible to maintain all turning movements at the junction.</p> <p>On this basis, the objective is scored lower than for Option 2 and comparable to the Presented Option.</p>

Reference		Description of the Alternative Option
Option X		This Option was developed with the intention of retaining the existing A38 in order to balance the alignment between Little Eaton and Breadsall. The option retains the A38 on its existing horizontal and vertical alignment, diverts the B6179 to the north of the garden centre to pass under the A38 to a new roundabout on the A61. See drawing no. HA514503-URS-06-DR-GD-25.040.
Submitted by:		
David Hall (Little Eaton)		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	4	<p>Compared to Option 2 and the Presented Option, considerations for whole life cost in relation to Option X are as follows:</p> <ul style="list-style-type: none">- substantially reduced construction cost by retaining the existing A38 at-grade thereby removing the need for underbridges other than a new bridge for the B6179 link road, retaining walls and embankment construction. However, there will be additional costs incurred for the box-jacking for the new underbridge and construction of the link road over the former landfill to avoid differential settlement and provide separation from possible contamination material;- marginally increased land cost due to the need to (i) purchase land from the landfill site and van hire business to accommodate the new link road; (ii) compensate the Starbucks site for the reduced car park area due to the alignment and visibility requirements of the link road and the reduced passing trade as only traffic on the A38 northbound exit slip road can access the site; (iii) purchase the recycling business to accommodate the new access to the mobile home park and Fourways; and (iv) the purchase of several areas of severed land between the new link road and the A38;- localised ground treatment to prevent settlement of the existing alluvium where the link road and new roundabout are at grade;- potentially reduced impact on the garden centre compared to Option 2 as the plant area taken to accommodate the link road could be offset by releasing the highways land occupied by the current B6179 alignment. The car park and main building remain unaffected. This is likely to lead to compensation payments but it may be possible to avoid the need to purchase the business;- similar maintenance costs as saving associated with reduced number of bridges and reduced lengths of retaining walls will be offset by the increased length of the B6179;- additional costs relating to diverting public utility apparatus from the B6179 to the new link road;- potential additional costs for construction of an accommodation bridge to access the severed land between the east side of the A38 and the new link road if an at-grade access is not workable. <p>Overall, the objective is scored higher than for Option 2 and comparable to the Presented Option.</p>
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	<p>Compared to the Presented Option and Option 2, Option X would (i) reduce landscape and visual impacts as scheme would not be on embankment; (ii) avoid land take impacts upon the mobile home park; (iii) result in impacts upon the garden centre buildings due to the new link road (as compared to the car park), however it is not expected to threaten business viability as the existing highway land could be released to the garden centre; (iv) potentially reduce flood risk impacts due to the avoidance of an embankment in areas susceptible to flooding; (v) require additional construction in an area of known historic landfilling; (vi) result in the loss of recycling business due to proposed location of the access road to the mobile home park; (vii) potentially impact National Cycle Route (NR54) due to the configuration of the junction and the arrangement of the new roundabout to the A61; (viii) impact on the setting of Breadsall Conservation Area due to the new link road moving traffic closer to Breadsall Manor; (ix) impact on non-designated ecology assets plantation near the garden centre (Site Code ER017/3) and Old Derby Canal (Site Code ER003/3) along the A61; (x) reduce works in the Derwent Valley World Heritage Site; (xi) avoid access issues associated with maintaining business viability for Talbot Turf; and (xii) potentially reduce car parking space and passing trade for the existing Starbucks site due to the alignment and visibility requirements for the new link road may threaten business viability.</p> <p>Whilst Option X would reduce some environmental effects as compared to Presented Option and Option 2, the score for this objective would be 2 as there remain some policy conflicts.</p>

Reference		Description of the Alternative Option
Option X		This Option was developed with the intention of retaining the existing A38 in order to balance the alignment between Little Eaton and Breadsall. The option retains the A38 on its existing horizontal and vertical alignment, diverts the B6179 to the north of the garden centre to pass under the A38 to a new roundabout on the A61. See drawing no. HA514503-URS-06-DR-GD-25.040.
Submitted by:		
David Hall (Little Eaton)		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 5 <i>'To seek to mitigate impacts on air quality and noise'</i>	3	Impacts on noise would potentially be marginally reduced as compared to the Presented Option and Option 2 as traffic would not be located on elevated embankment. Air effects are likely to be comparable to the Presented Option. Overall, the differences are unlikely to be substantial and consequently, Option X will be comparable to the Presented Option and Option 2. On this basis, the objective is scored comparable to the Presented Option and Option 2.
Objective 6 <i>'To improve the safety for all road users'</i>	2	Key factors in assessing the safety of the option are (i) the radius of the bend on the A38 would be inadequate for a high speed route and would require either increasing to a similar radius to the Presented Option with consequent land take or a permanent speed limit. The assessment is based on a 40mph permanent speed limit. This is significantly below the speed limit for a rural dual carriageway. Additionally, the existing roundabout and radius has a history of HGV rollovers. For these reasons, it is anticipated that speed enforcement measures would be required. The effects on the other assessment criteria of increasing the radius have not been examined at this time. (ii) the layout of the new A61 roundabout would require some re-designing as traffic heading for the A38 northbound from the A61 cuts across the traffic heading into Derby from the A38. Additionally, there are 3no arms located within a small arc of the circulatory carriageway- in the sketched layout. The engineering drawing shows the roundabout in a modified position in order that the southbound entry slip complies with design standards without the need to widen the railway bridge; (iii) the layout of the northbound slip roads has been modified to ensure compliance with standards and improve road safety. This has led to increased radii on each loop; (iv) traffic leaving the mobile home park and the Starbucks wishing to use the A38 northbound will be required to use the new link road to the A61 roundabout and return. This lengthy manoeuvre is likely to lead to vehicles making an illegal u-turn at the northbound entry slip road nose, just to the north of where the new mobile home access meets the new B6179; (v) traffic using the A61 heading for the mobile home park will be required to use the A38 to the A6 Palm Court junction and return. The increased journey length will have a marginal adverse impact on road user safety; (vi) the submitted sketch plan showed Ford Lane, leading to the mobile home park and adjacent properties, being accessed from the northbound slip roads. This contravenes design standards as it results in a junction on a slip road. The engineering drawing shows an alternative layout with a new access from the B6179; and (vii) Although there is the opportunity to provide segregated NMU facilities along the new B6179 link road, the new roundabout junction at the A61 would be severely detrimental to safety for cyclists leaving Derby along Sustrans cycle route 54. Overall, the option is considered to perform worse than Option 2 or the Presented Option.
Objective 7 <i>'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'</i>	3	The score is comparable to Option 2 as no NMU routes will be permanently severed and crossing points would be provided where required. NMU routes from the A61 towards Little Eaton could follow the new link roads with little impact. However, the direct route from the A61 to Ford Lane would be severed and the alternative would be an extensive detour. Overall, the option is considered to be comparable to Option 2. The safety of non-motorised users is considered in Objective 6.
Objective 8 <i>'To be affordable and represent High Value for Money according to DfT's appraisal criteria'</i>	2	Additional trip-lengths from the A38 northbound to A61 and A61 to A38 northbound will reduce the transport economic efficiency (TEE) of the option. The conflicts at the new A61 roundabout would result in additional delays and are likely to further reduce the TEE. Access to Starbucks and Ford Lane from the A38 southbound is lengthy. Consequently, Option X will perform worse than the Presented Option and Option 2A.
Average Score	2.625	

Reference		Description of the Alternative Option
Option X		This Option was developed with the intention of retaining the existing A38 in order to balance the alignment between Little Eaton and Breadsall. The option retains the A38 on its existing horizontal and vertical alignment, diverts the B6179 to the north of the garden centre to pass under the A38 to a new roundabout on the A61. See drawing no. HA514503-URS-06-DR-GD-25.040.
Submitted by:		
David Hall (Little Eaton)		
Alternative option for Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Deliverability Categorisation		
Factors considered	Score	Comments
Is there a risk that will prevent us from progressing this option? What level of stakeholder/public support/challenge is expected for this option? Are there any significant third party issue associated with the option? Are there any political issues associated with this option? Are there any planning/legal issues associated with this option? Does the option impact the overall project deliverability?	3	The option is likely to have favourable support from local stakeholders as the existing A38 alignment is retained thereby minimising new impacts and impacts on local businesses are lower than for many other options. Support from Breadsall is likely to be higher if the B6179 link road is screened from the village. However, although the link road is in cutting it is only 75m from the Coach House. Additionally, these properties will be impacted by the temporary construction area for the new underbridge. In combination, these factors are expected to result in an objection to the scheme option. All land can be obtained through the CPO powers as the 3rd party land is only required for the new roads. This is on the basis that the land lost by the garden centre is compensated by the release of sufficient area of the existing B6179 highway land. The alignment of the B6179 link road to the west of the A38 takes approx. 30% of the land area from the existing landfill site. this site is currently identified for development by the landowner. The loss of such a large proportion of the site may lead to the development being unviable. The landowner has already indicated that this will result in an objection. NOTE: This assessment excludes the expansion of the garden centre into the new land area inside the loop of the B6179 link road as shown on the submitted sketch plan. This expansion is not required as (i) the garden centre can be compensated by the released B6179 highway land; (ii) use of such 3rd party land would be considered betterment and beyond the scope of the project; (iii) obtaining 3rd party land as compensation for another 3rd party is beyond the scope of the CPO powers as described for Options 2A and 2B. In the event that this area of land is needed to provide facilities for the continued operation of the garden centre (including space for replacement buildings/car park if the northbound slip road alignment was improved from that proposed), then this would fall outside the scope of the CPO powers as detailed in the assessment of Options 2A and 2B thereby resulting in a score of 1. Overall, it is expected that while there are challenges, the option is deliverable.
Feasibility Categorisation		
Factors considered	Score	Comments
Is the option technically sound? Is the option financially affordable? Is the option buildable? Is the option likely to be practical and effective? Does the option impact the overall project feasibility?	1	Although the option is financially affordable, there are a number of challenges to the technical feasibility which would affect the deliverability of the option. These include: - In order to provide a safe alignment for A38 through traffic, the radius will need to be increased to that comparable with the Presented Option and Southern Sweep. This will increase the footprint of the option thereby either resulting in (i) the northbound slip roads requiring landtake from the mobile home park and Starbucks; or (ii) the A38 alignment moving further south-eastwards to provide space for the northbound slip roads while retaining the mobile home park; - There is a large area of severed land between the east side of the A38 and the new link due to need to the necessary alignment /radii and the location of the A61 roundabout. This land would need to be obtained; - In order to obtain a feasible layout for the northbound slip roads, it was necessary to realign both the entry and exit slips. This results in it passing through the garden centre land although the loss of car parking is minimal. Overall, with the land compensation from the released B6179 highway land, subject to compensation for the building loss due to the link road, an objection is not expected from the garden centre, although it is unlikely the option will be fully supported; - The submitted design resulted in the access to Ford Lane (to mobile home park and Fourways) being at the position of the slip road nose. This is not permissible under design standards and would present a significant safety issue. There are no other access options for Ford Lane which do not affect other properties or businesses suggesting it will be challenging to retain the mobile home park and Fourways. The identified solution results in the loss of the recycling business but locates the junction some distance further away from the A38. consequently, there may be an opportunity for its retention (subject to appropriate signage, risk assessment and approval of a Departure from Standards); - There are significant technical challenges to constructing the new underbridge to the A38 near the garden centre while seeking to minimise the disruption to traffic. Although disruption to traffic will be minimised by constructing the precast box structure off line and sliding it under the A38 using box-jacking techniques, this will be complex and costly. Additionally, the additional land for the offline construction may not be available; - The access arrangements for Starbucks lead to business viability being questionable. As there are other design options available which do not impact this local business to the same degree, it is expected they will object; - The engineered plan shows the access to the Severn Trent Water Authority site to be adversely affected. The construction of the new link road results in closure of the existing access and a new access provided further north. It is expected that further refinement of the alignment of the link road would avoid this issue. Therefore, this issue has not been considered as part of the assessment. - The traffic issues described in objective 1 will adversely affect the economic benefit/-cost ratio (BCR). The significant loss of benefits due to the longer journey times around the link road and the reduced design speed through the A38 are expected to significantly outweigh the cost savings achieved. Consequently, the overall BCR is expected to be substantially lower than for the Presented Option, thereby limiting the feasibility of the option. Overall, the technical challenges mean the option is not likely to be feasible without significant re-design and alteration.

Reference		Description of the Alternative Option
Option X1		This Option was developed by Breadsall Action Group in response to Little Eaton's "Option X". It replaces the long looping links of Option X (needed to connect the A61 and B6179 to the A61 via a bridge under the A38 north of the garden centre) with an overbridge for the A61 thereby providing a more direct route. The notes submitted by the Action Group state the design intention as "retaining the A38 at grade, while reducing the lengthy circulation routes". See hand drawn sketch.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 1 <i>'To reduce congestion and increase reliability of journey times on the strategic corridor'</i>	2	<p>Compared to the Presented Option, the traffic benefits to the A38 would be marginally reduced. This is a result of the sharper bend in the horizontal alignment requiring a lower (40mph) speed limit, thereby restricting vehicle speeds and extending journey times. Although the difference would be small for each individual journey, the effect would be multiplied across all A38 through-traffic movements.</p> <p>Traffic movements between the northbound A38 and A61 will be significantly disadvantaged by the excessively longer link manoeuvres as follows:</p> <ul style="list-style-type: none">- Trips from A38 northbound heading into A61 Derby (South) would be required to exit the A38 and use the new roundabout on the north side of the A38 then double-back on itself and head south to cross over the A38 via the new overbridge, and then travel south to the other roundabout before joining join the A61. This increases journey distance for this manoeuvre by 800m (0.5 mile).- At the north roundabout (near Starbucks and the garden centre), the large traffic movement from the A61 heading towards the A38 North would circulate in front of the similarly large into-Derby traffic movements (the A38 northbound to A61 into Derby via the new link road). This is likely to result in lengthy delays for traffic entering Derby, particularly in the AM peak period. To prevent A61 southbound vehicles blocking back onto the A38, it may be necessary to install traffic signals at the roundabout. Alternatively, a signalised junction would also provide better control of the vehicle queues, but require substantial lane widening on the approaches and departures, thereby leading to greater landtake.- Trips from A38 southbound to the A61 have a free-flow filter lane in the Presented Option. With 'Option X1', these trips would have to pass through a new junction (either the roundabout shown or a traffic signalled alternative as noted above). For these movements this arrangement would induce additional delays to all journeys at all times of the day. <p>Overall, the combination of increased journey times for both A38 through-traffic and the large A38 northbound to A61 traffic flow results in Option X1 performing substantially worse than the Presented Option. While the Option does offer benefits compared to Option X, these are likely to be marginal due to the large traffic volumes making the traffic manoeuvres listed above. Hence the score is comparabe to Option X.</p>
Objective 2 <i>'To minimise traffic disruption due to construction works and incidents'</i>	2	<p>As for Option X, Option X1 makes significant use of the existing A38 carriageway. However, compared to Option X, in addition to the online work to the A38 needed to remove the existing Little Eaton roundabout to create the A38 through-route; additional online work will be required to construct the new overbridge, dumbbell roundabout(s) and the link road. This is likely to result in significant disruption to the A61 traffic and restrictions in turning movements at the junction during construction.</p> <p>Options for construction of the new overbridge are:</p> <ul style="list-style-type: none">(i) build a full two lane dual carriageway diversion of the A38 around the bridge site so that traffic can continue relatively uninterrupted;(ii) Closure of alternate carriageways of the A38 using contra-flow to construct the bridge in stages. This would be highly disruptive to traffic. A long term closure is considered to be unfeasible given the lack of suitable diversion routes. The congestion would be expected to increase traffic flows through Little Eaton and Breadsall regardless of the signed diversion route;(iii) construction of the bridge abutments at sufficient setback to enable A38 traffic to remain unaffected, installation of the beams during night time A38 closure so deck construction can continue during day time hours. This arrangement is likely to result in turning restrictions and disruption to traffic on the A61. The bridge would need to be in place before the existing roundabout is taken out of use to enable the A61 to remain operational. This may require localised diversions around the bridge construction area. <p>Overall, option (iii) is most likely but localised adjustment of the bridge position in the final design is expected to enable the A38 to remain operational.</p> <p>Constructing the new roundabouts could be undertaken off-line but the tie-ins would require online works and hence would disrupt traffic flows. During construction it may not be possible to maintain all turning movements at the junction.</p> <p>On this basis, the objective is scored lower than both the Presented Option and Option X.</p>

Reference		Description of the Alternative Option
Option X1		This Option was developed by Breadsall Action Group in response to Little Eaton's "Option X". It replaces the long looping links of Option X (needed to connect the A61 and B6179 to the A61 via a bridge under the A38 north of the garden centre) with an overbridge for the A61 thereby providing a more direct route. The notes submitted by the Action Group state the design intention as "retaining the A38 at grade, while reducing the lengthy circulation routes". See hand drawn sketch.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 3 'To achieve optimum whole life costs taking into account future maintenance and operation, and disruption to users'	4	<p>Compared to Option 2 and the Presented Option, considerations for whole life cost in relation to Option X are as follows:</p> <ul style="list-style-type: none">- substantially reduced construction cost by retaining the existing A38 at-grade thereby removing the need for underbridges other than a new bridge for the B6179/A61 link road (although this bridge would be high cost due to high degree of skew resulting in a long length of bridge). The A61 link road would also require retaining walls and embankment construction between the dumbbell roundabouts and the new overbridge. However, there will be additional costs incurred for the construction of the north roundabout over the former landfill to avoid differential settlement and provide separation from possible contamination material;- marginally increased land cost due to the need to (i) purchase land from the landfill site and van hire business to accommodate the new link roads; (ii) potentially compensate the Starbucks site for reduced car park area due to the alignment and visibility requirements of the link road and the reduced passing trade as only traffic on the A38 northbound exit slip road can access the site; (iii) purchase the recycling business to accommodate the new access to the mobile home park and Fourways; and (iv) the possible purchase of areas of severed land between the new link roads and the A38;- localised ground treatment to prevent settlement of the existing alluvium where the link road and new roundabout are at grade;- impact on the garden centre car park leading to compensation payments. It is expected that land compensation will be available from the B6179, thereby avoiding the need to purchase the business;- in terms of maintenance costs there will be a reduced number of bridges, although lengths of retaining walls will be comparable. Overall, maintenance costs are expected to be comparable;- additional costs relating to diverting public utility apparatus from the B6179 to the new link road; <p>Overall, the objective is scored higher than for Option 2 and comparable to both the Presented Option and Option X.</p>
Objective 4 'To minimise impacts on both the natural and built environment, including designated landscape/biodiversity features'	2	<p>Compared to the Presented Option and Option 2, Option X1 would (i) reduce landscape and visual impacts as the A38 would not be on embankment, although the A61 would be on a similar height embankment over the A38 (also the south roundabout would be close to Breadsall village and would therefore have a visual impact); (ii) avoid land take impacts upon the mobile home park; (iii) impact upon the garden centre car park; (iv) potentially reduce flood risk impacts due to the avoidance of an embankment in areas susceptible to flooding; (v) require additional construction in an area of known historic landfilling (A61 roundabout to the north of the Little Eaton junction); (vi) potentially result in the loss of the recycling business due to the need for an access road to Ford Lane; (vii) impact National Cycle Route (NR54) due to the reconfiguration of the junction and the arrangement of the new roundabouts on the A61; (viii) require a roundabout on the A61 south of Little Eaton junction closer to Breadsall village; (ix) potentially impact on non-designated ecology asset in the Old Derby Canal (Site Code ER003/3) along the A61; (x) reduce works in the Derwent Valley World Heritage Site; (xi) potentially reduce access issues associated with maintaining business viability for Talbot Turf (this would be subject to further investigation); and (xii) potentially reduce car parking space and passing trade for the existing Starbucks site due to the need for new link road to Ford Lane that may threaten business viability.</p> <p>Whilst Option X1 would reduce some environmental effects as compared to the Presented Option and Option 2, the score for this objective would be 2 as there remain some policy conflicts.</p>
Objective 5 'To seek to mitigate impacts on air quality and noise'	3	<p>Impacts on noise would potentially be marginally reduced as compared to the Presented Option and Option 2 as A38 traffic would not be located on elevated embankment - however, traffic using the A61 roundabout to the south of the Little Eaton junction would be on embankment and closer to Breadsall village. Air effects are likely to be comparable to the Presented Option. Overall, the differences are unlikely to be substantial and consequently, Option X1 would be comparable to the Presented Option, Option 2 and Option X.</p> <p>On this basis, the objective is scored comparable to the Presented Option, Option 2 and Option X.</p>

Reference		Description of the Alternative Option
Option X1		This Option was developed by Breadsall Action Group in response to Little Eaton's "Option X". It replaces the long looping links of Option X (needed to connect the A61 and B6179 to the A61 via a bridge under the A38 north of the garden centre) with an overbridge for the A61 thereby providing a more direct route. The notes submitted by the Action Group state the design intention as "retaining the A38 at grade, while reducing the lengthy circulation routes". See hand drawn sketch.
Submitted by:		
Breadsall A38 Action Group		
Alternative option for		
Little Eaton Junction		
Objectives Categorisation		
Objective Description	Score	Comments
Objective 6 'To improve the safety for all road users'	2	<p>Key factors in assessing the safety of the option are:</p> <p>(i) the radius of the bend on the A38 would be inadequate for a high speed route and would require either increasing to a similar radius to the Presented Option with consequential land take or a permanent speed limit. The assessment is based on a 40mph permanent speed limit. This is significantly below the speed limit for a rural dual carriageway. Additionally, the existing roundabout has a history of HGV rollovers in the southbound direction which may not be fully eradicated by this option. For these reasons, it is anticipated that speed enforcement measures would be required. The effects on the other assessment criteria of increasing the radius have not been examined at this time.</p> <p>(ii) the layout of the new north roundabout would require some re-designing as traffic heading for the A38 northbound from the A61 cuts across the traffic heading into Derby from the A38. Additionally, there are 3 arms located within a small arc of the circulatory carriageway in the sketched layout of both roundabouts. Both roundabouts will require significant modification (in terms of both position and geometry) in order that they comply with design standards and to enable the vertical geometry of the link road to be compliant;</p> <p>(iii) the layout of the northbound slip roads would need to be significantly modified to ensure compliance with standards and improve road safety. This would lead to increased radii on each loop;</p> <p>(iv) the submitted sketch plan showed Ford Lane, leading to the mobile home park and adjacent properties, being accessed from the northbound diverge slip road. This contravenes design standards as it results in a junction on a slip road. An alternative layout would be required; and</p> <p>(v) Although there is the opportunity to provide segregated NMU facilities along the new B6179 link road, the new roundabout junction at the A61 would be severely detrimental to safety for cyclists leaving Derby along Sustrans cycle route 54.</p> <p>Overall, the option is considered to perform worse than the Presented Option.</p>
Objective 7 'To seek to reduce severance by maintaining or providing appropriate facilities for crossing, and travelling along the route for non-motorised users'	3	<p>The score is comparable to Option 2 as no NMU routes will be permanently severed and crossing points would be provided where required. NMU routes from the A61 towards Little Eaton could cross the new bridge with little impact. However, the direct route from the A61 to Ford Lane would be severed and the alternative would be an extensive detour.</p> <p>Overall, the option is considered to be comparable to Option 2.</p> <p>The safety of non-motorised users is considered in Objective 6.</p>
Objective 8 'To be affordable and represent High Value for Money according to DfT's appraisal criteria'	2	<p>Additional trip-lengths from the A38 northbound to A61 and A61 to A38 northbound will reduce the transport economic efficiency (TEE) of the option. The conflicts at the new roundabouts would result in additional delays and are likely to further reduce the TEE. Access to Starbucks and Ford Lane from the A38 southbound is lengthy.</p> <p>Consequently, Option X1 will perform worse than the Presented Option and comparable to Option X.</p>
Average Score	2.5	
Deliverability Categorisation		
Factors considered	Score	Comments
<p>Is there a risk that will prevent us from progressing this option?</p> <p>What level of stakeholder/public support/challenge is expected for this option?</p> <p>Are there any significant third party issue associated with the option?</p> <p>Are there any political issues associated with this option?</p> <p>Are there any planning/legal issues associated with this option?</p> <p>Does the option impact the overall project deliverability?</p>	3	<p>The option is likely to initially have favourable support from local stakeholders as the existing A38 alignment is retained thereby minimising new impacts and impacts on local businesses are lower than for many other options. This support is likely to reduce when the roundabouts are re-sized and repositioned (see feasibility section below) as (i) land is required from both the landfill site and the garden centre; (ii) the southern roundabout is moved closer to Breadsall village.</p> <p>All land can be obtained through the CPO powers as the 3rd party land is only required for the new roads. This is on the basis that the land lost by the garden centre is compensated by the release of sufficient area of the existing B6179 highway land (this can only be confirmed if a more detailed assessment is carried out). In the event that compensation land is required from a 3rd party (eg the adjacent landfill area), this would be outside the CPO powers as described in the assessment of Option 2A.</p> <p>The northern roundabout would take a large portion of the land area from the existing landfill site. this site is currently identified for development by the landowner. The loss of such a large proportion of the site would most likely lead to the development being unviable. The landowner has already indicated that this will result in an objection.</p> <p>Overall, it is expected that while there are challenges, the option is likely to be deliverable.</p>

Reference		Description of the Alternative Option	
Option X1		This Option was developed by Breadsall Action Group in response to Little Eaton's "Option X". It replaces the long looping links of Option X (needed to connect the A61 and B6179 to the A61 via a bridge under the A38 north of the garden centre) with an overbridge for the A61 thereby providing a more direct route. The notes submitted by the Action Group state the design intention as "retaining the A38 at grade, while reducing the lengthy circulation routes". See hand drawn sketch.	
Submitted by:			
Breadsall A38 Action Group			
Alternative option for			
Little Eaton Junction			
Objectives Categorisation			
Objective Description		Score	Comments
Feasibility Categorisation			
Factors considered		Score	Comments
Is the option technically sound?		1	<p>Although the option is financially affordable, there are a number of challenges to the technical feasibility which would affect the deliverability of the option. These include:</p> <ul style="list-style-type: none">- In order to provide a safe alignment for A38 through traffic, the radius will need to be increased to that comparable with the Presented Option and Southern Sweep. This would increase the footprint of the scheme, thereby either resulting in (i) the northbound slip roads requiring landtake from the mobile home park and Starbucks; or (ii) the A38 alignment moving further south-eastwards to provide space for the northbound slip roads while retaining the mobile home park;- The northbound merge slip road would need to be realigned in order to obtain a feasible layout. This would result in the slip road passing through the garden centre car park leading to the need for land compensation. It is expected that this could be provided from land released from the B6179 highway, although the areas would need to be confirmed in a more detailed design.- Both new roundabouts present significant challenges; they need to be sufficiently far away from the new bridge to permit an acceptable vertical alignment. This would be either 200 to 250m if the roundabouts are to be at-grade, although this distance could be reduced if the roundabouts were elevated above the existing ground level. This would require additional works to vertically realign the B6179 and A61. Additionally, the environmental impacts and effect on scheme cost would need to be considered.- The design of both of the dumbbell roundabouts results in 3 arms being very closely spaced. This would require further engineering assessment but it could result in:<ul style="list-style-type: none">- larger roundabout being required to accommodate appropriate entry and exit radii;- roundabout moving even further away from A38 to provide space for the arms to be realigned;- encroachment of south roundabout on Breadsall village; and- areas of severed land caused by realignment of slip roads to repositioned roundabouts.- The submitted sketch design resulted in the access to Ford Lane (to mobile home park and Fourways) being from the slip road. This is not permitted by the design standards and would present a significant safety issue. There are no other access options for Ford Lane which do not affect other properties or businesses suggesting it will be challenging to retain the mobile home park and Fourways. The identified solution results in the loss of the recycling business but locates the junction some distance further away from the A38. Consequently, there may be an opportunity for its retention (subject to appropriate signage, risk assessment and approval of a Departure from Standards);- There are challenges to constructing the new overbridge while seeking to minimise the disruption to traffic. It may be necessary to restrict turning movements at the junction and/or construct a temporary alignment for the A38, while the new alignment and new bridge are constructed away from traffic.- The access arrangements for Starbucks lead to business viability being questionable. As there are other design options available which do not impact this local business to the same degree, it is expected they will object;- The traffic issues described in Objective 1 would adversely affect the economic benefit/cost ratio (BCR). The significant loss of benefits due to the longer journey times around the link road and the reduced design speed through the A38 are expected to significantly outweigh the cost savings achieved. Consequently, the overall BCR is expected to be substantially lower than for the Presented Option, thereby limiting the feasibility of the option. <p>Overall, the technical challenges mean the option is not likely to be feasible without significant re-design and alteration.</p>
Is the option financially affordable?			
Is the option buildable?			
Is the option likely to be practical and effective?			
Does the option impact the overall project feasibility			