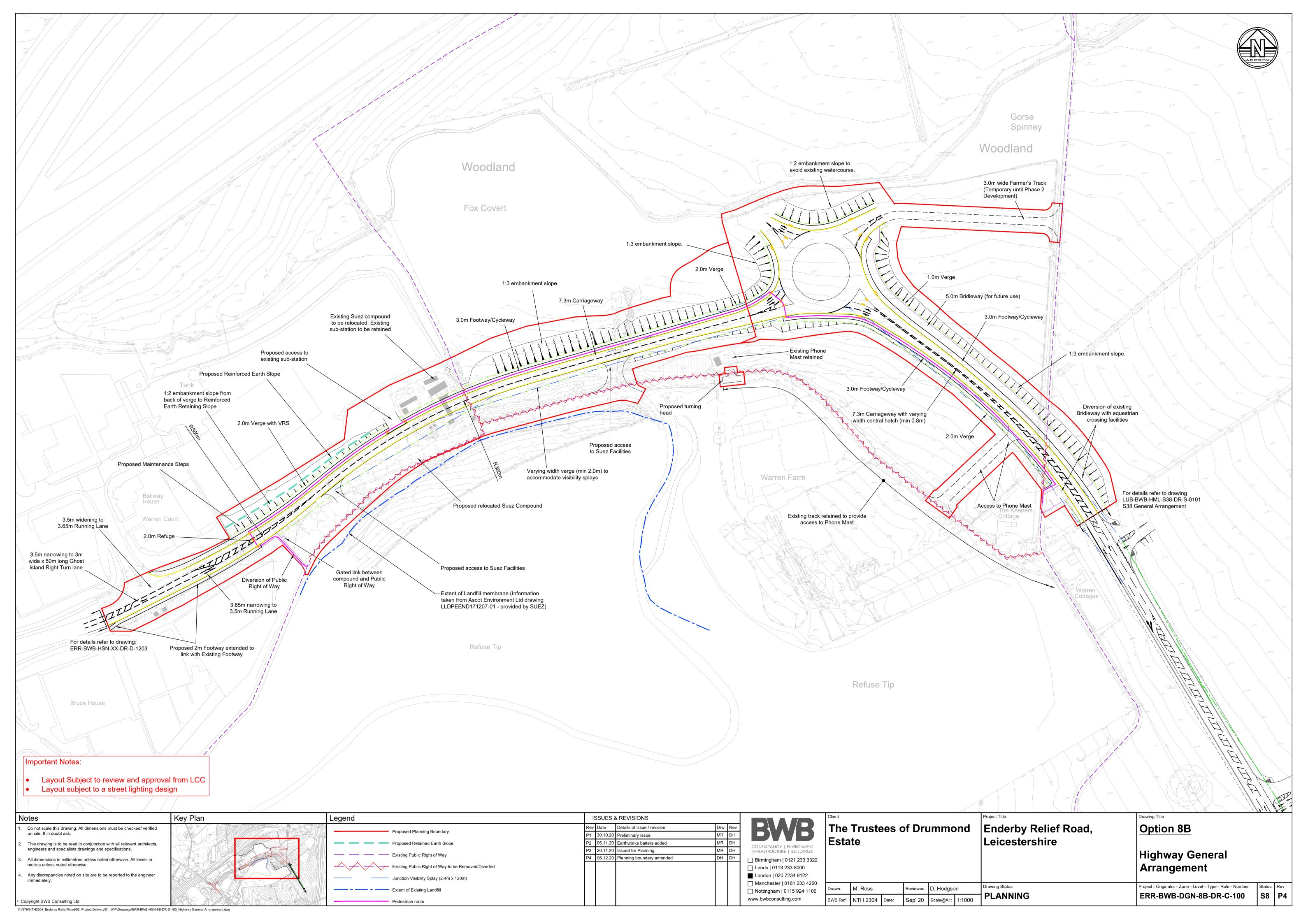
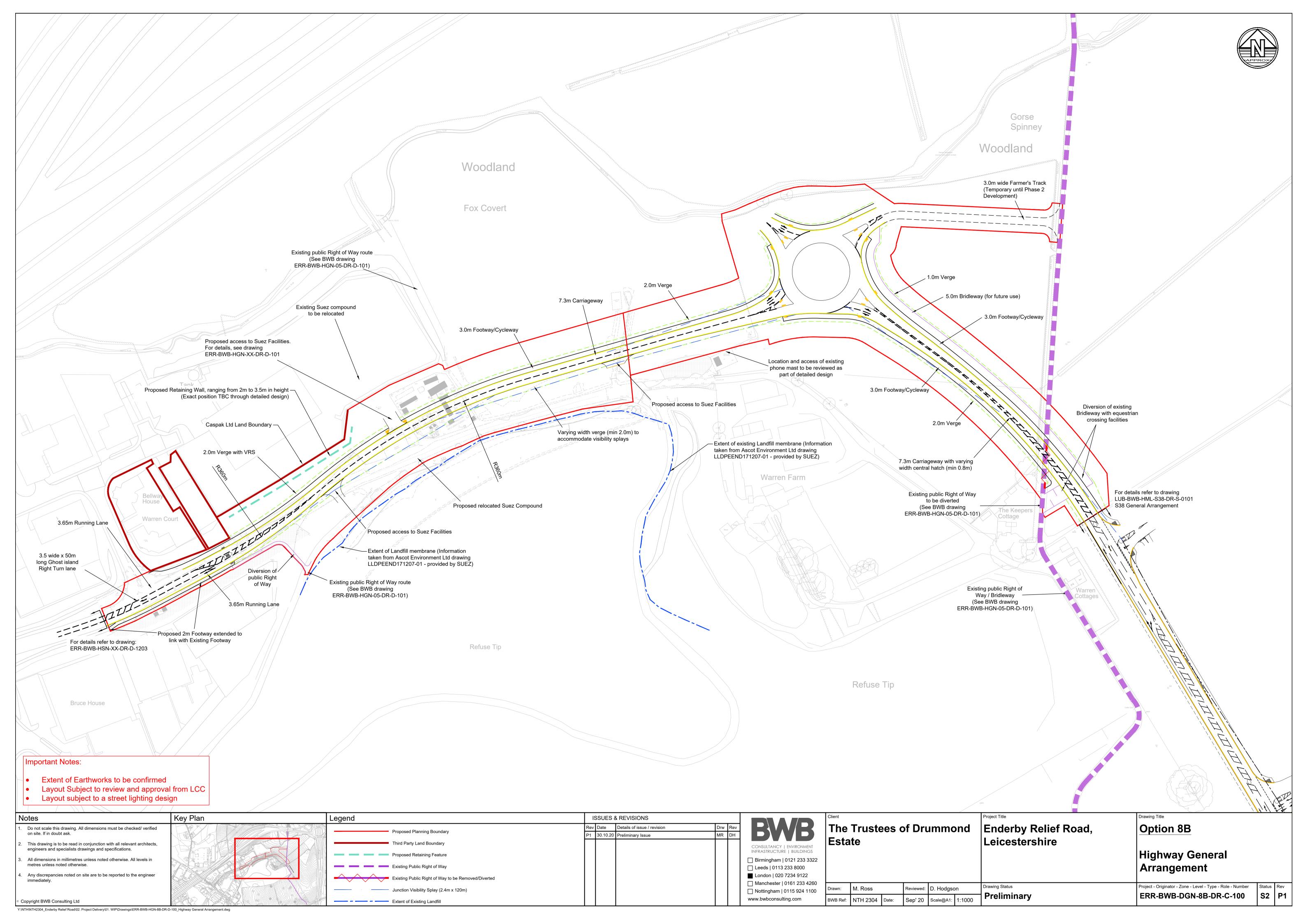


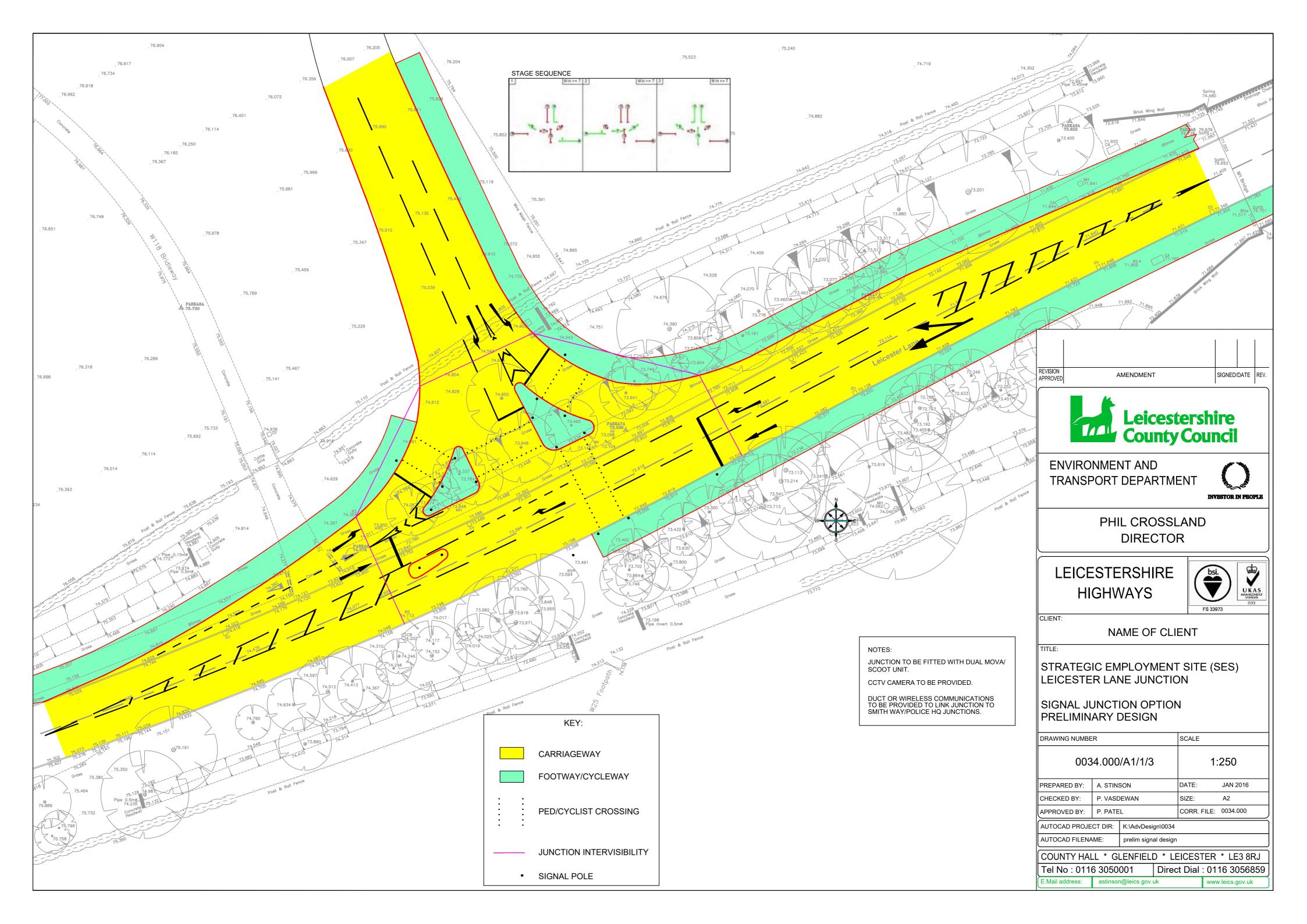
## Appendix D – Potential Parking Measures on Warren Park Way





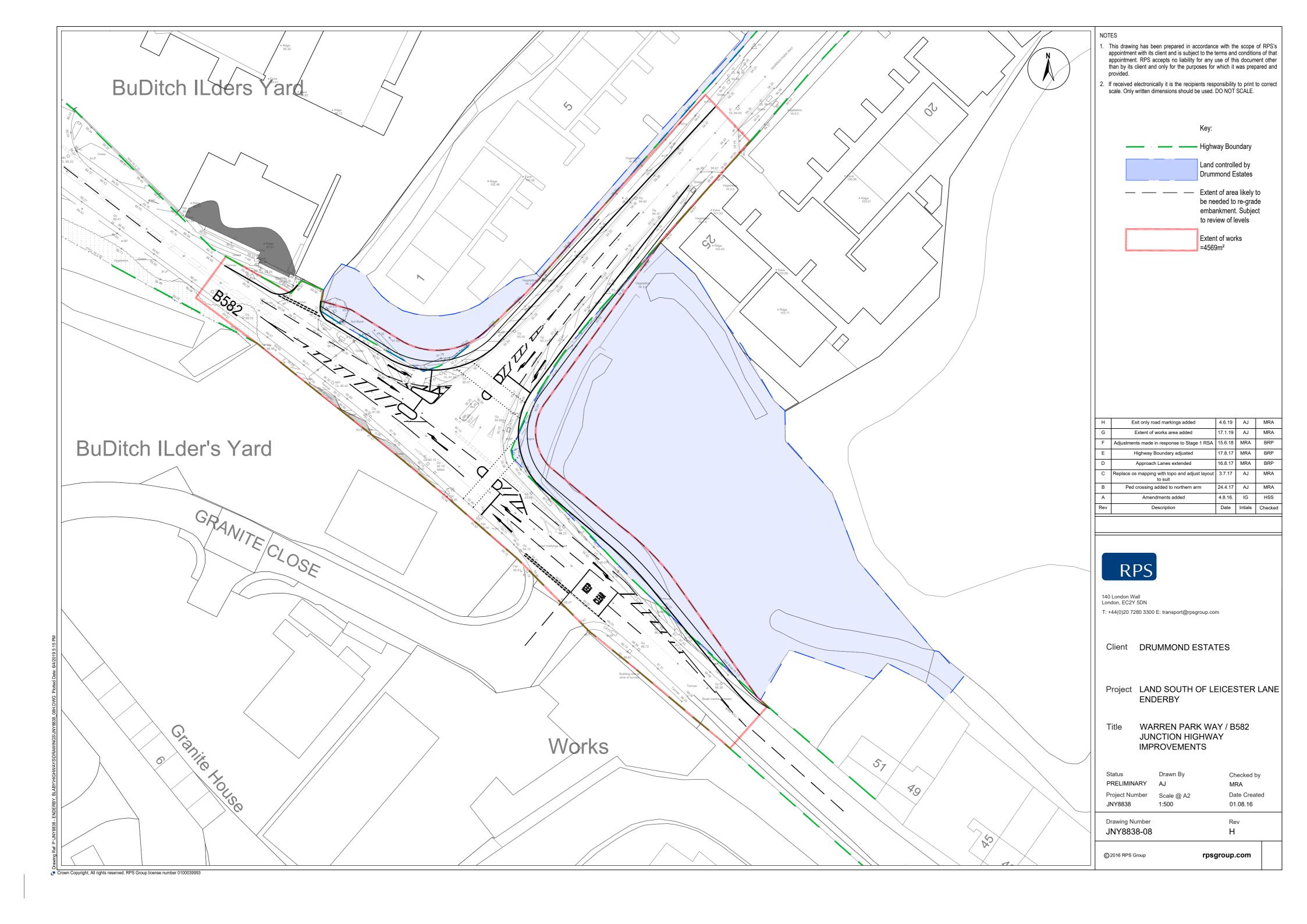
### **Appendix E – Proposed Relief Road Layout**

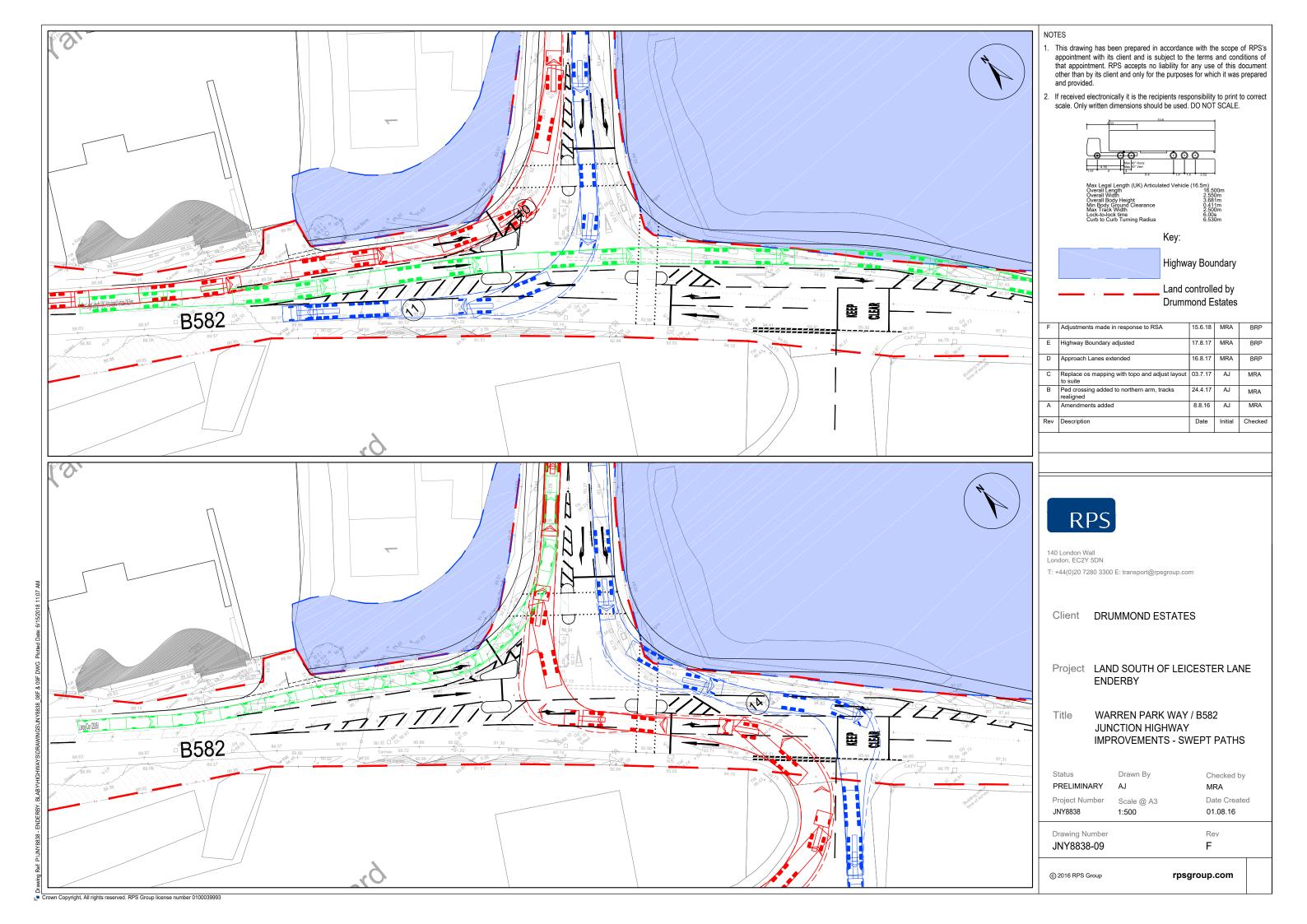






## Appendix F – Proposed Warren Park Way Junction Improvements







## Appendix G – Stage 1 Road Safety Audit and Designer's Response



# Enderby, Blaby – Warren Park Way/ Mill Hill Junction – Stage 1 Road Safety Audit – Designers Response

Audit Ref	Problem Summary and Recommendation	Designers Response
2.1.1	<b>Summary</b> : Insufficient right turn width at the Granite Close junction. <b>Detail</b> : The drawings do not show the proposed lane widths, however the right turn lane appears to narrow the closer it reaches the Granite Close junction. This junction is used by Heavy Goods Vehicles and a reduction in width of the ghost island may not accommodate large vehicles at this location. This may result in large vehicles straddling the ghost island with the risk that vehicles travelling ahead in an eastbound direction may collide with the rear of vehicles waiting to turn right	Recommendation accepted. The width of the right turn lane has been increased to 3m. There is sufficent overall lane widh to widen this further if required.
2.1.2	into Granite Close.  **Recommendation:** The Audit Team recommends that the right turn lane ghost island is of sufficient width to safely accommodate Heavy Goods Vehicles.  **Summary:** Insufficient skidding resistance of carriageway surfacing for approaches.	Recommendation accepted. This will be reviewed at the
22	to traffic signals. <b>Detail:</b> The drawings do not show what type of surface material is to be laid at this stage of audit. A lack of adequate skidding resistance to the carriageway surfacing may increase the risk of vehicles failing to stop when red lights are present, especially during wet conditions. This may increase the risk of vehicles to non-motorised users type collisions.	Detail Design Stage.
	<b>Recommendation:</b> the Audit Team recommends that for the next stage of audit, The Design Team specifies sufficient carriageway surface skidding resistance for the approaches to the signalised junction such that it meets the current guidance for a 'stress' site.	



2.1.3	Summary: Proposed traffic signal junction phasing and layout.  Detail: The proposed phasing of the signalised junction has not been supplied as part of this stage of this stage 1 Road Safety Audit. It will be important to ensure that sufficient checks are made to establish that potential movement conflicts are minimised to reduce the risk of collision by opposing traffic movements.  Recommendation: The Audit Team recommends that traffic signal information should be provided at the detailed design stage to enable an analysis of potential conflicts to be identified.	Recommendation accepted. Detailed analysis has been carried out as part of the Transport Assessment.
2.1.4	Summary: Insufficient forward visibility to the offside signal head.  Detail: The westbound approach to the Warren Park Way junction is along a very steep downhill gradient. If large vehicles are waiting within the right turn lane for Granite Close, the driver visibility to the offside traffic signal head may be obscured. This may increase the risk of vehicle to vehicle rear end shunt type collisions if they brake hard at the stop line.  Recommendation: The Audit Team recommends that additional traffic signal heads are provided together with speed discrimination loops for the westbound approach to the signal controlled junction.	Recommendation accepted. This will be reviewed at the deatail design stage.
2.2.1	Summary: Abrupt nearside kerb alignment forces vehicles to cross median hatch markings into opposing traffic.  Detail: The proposed eastbound kerbside kerb alignment at the Granite Close junction appears to introduce an abrupt change of direction for vehicles travelling along the B582. This alignment may force vehicles to cross the existing hatch markings into opposing traffic and may increase the risk of vehicle to vehicle head on type collisions.  Recommendation: The Audit Team recommends that the tight radius is eased to enable a smooth alignment through the junction.	Recommendation agreed. The alignment has been adjusted to provide a smoother radii.



	_	
2.2.2	Summary: Insufficient width to accommodate Heavy Goods Vehicles (HGV's) Right Turning movements into B582  Detail: The Vehicle Swept Paths for HGV's turning right from Warren Park Way into the B582 appear to be estremely tight confirming that the vehicle body path touches the splitter island to the west of Warren Park Way. This may increase the risk of vehicle to street furniture type-collisions.  Recommendation: The Audit Team recommends that the turning movements of HGV's can be safely accommodated without hitting street furniture on the splitter islands on the B582.	Recommendation Accepted.  The tracking shows that a max legal can safely manourvere through the junction without affecting the traffic islands, however to allow more room for large vehicle turning right from Warren Park Way, the island width has been reduced from 2m to 1.8m, this is a traffic island and will not accommodate pedestrian movements therefore this is considered acceptable. This ensures that there is 0.5m between the body of the vehicle and the island.
2.5.1	Summary: Failure to stop at Traffic Signals  Detail: The proposed stop line for vehicles turning left into Warren Park Way from the B582 does not extend between kerbs. This may encourage motorized two wheeled vehicles to ignore the stop line and continue into the side road with a risk of vehicle to vehicle type collisions with vehicles turning right into Warren Park Way.  Recommendation: The Audit Team recommends that the stop line at the traffic signals along the B582 extends between the kerbs.	Recommendation accepted. The stop line has been extended to the kerb line.
2.5.2	Summary: Wide westbound lane encourages vehicle overtaking.  Detail: The proposed right turn lane into Warren Park Way is slightly offset to the north. This leaves a wide area of carriageway that would allow two vehicles to travel ahead in a westbound direction before the lane widths narrow over a short distance. This may increase the risk of vehicle to vehicle side swipe type collisions beyond the Warren Park Way junction.  Recommendation: The Audit Team recommends that the right turn lane should not give the appearance of being offset and the lane markings for the ghost right turn lane should be adjusted accordingly.	Recommendation accepted. The road markings have been corrected.



2.5.3 **Summary:** Existing street lighting columns within the existing footways are likely to be located in the carriageway where they may be vulnerable to vehicle strikes.

**Detail:** The proposed works indicate that the B582 is to be widened along the northern side. There are existing street lighting columns along the B582. Street lighting proposals have not been provided for this stage 1 Road Safety Audit and it is unclear where the lighting columns will be finally located.

The Audit team is concerned that after carriageway widening if the columns are not carefully located that they may restrict the proposed footway width and form an obstruction to pedestrians that may affect the safe passage of pedestrians along the route with the risk of forcing pedestrians to walk in the carriageway where they would be at risk of being hit by vehicles.

**Recommendation:** The Audit Team recommends that at the Detailed Design stage of the project, the street lighting columns should be located towards the rear of the footway.

Recommendation accepted. The lighting at this junction will be reviewed at the Detail Design Stage.

Project Ref: JNY8838

Reviewed By: Melanie A'Lee

Date: 15/06/2018

# LAND SOUTH OF LEICESTER LANE, ENDERBY, LEICESTER

Warren Park Way/B582 Junction Highway Improvements

Road Safety Audit - Stage 1

**Final Report** 

**June 2018** 





#### REPORT APPROVAL

#### **Document Location**

Ensure that this document is current. Printed documents and locally copied files may become obsolete due to changes to the master document.

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SB:TAYLOR BOWIE LTD:CLIENTS:RPS:LandSouthofLeicesterLaneEnderby:WarrenParkWay:RSAStage 1.docx

#### **Revision History**

This document has the following history:

Version No.	Version Date	Summary of Changes	Changes marked
1.0	25/05/2018	N/A	N/A

#### **Approvals**

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Mario Gatti	Audit Team Member

#### **Distribution**

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate - RPS Planning & Development

1

#### 1 INTRODUCTION

#### 1.1 Commission & Terms of Reference

This report has been prepared in response to an e-mail commission dated 13<sup>th</sup> May 2018 from Melanie A'Lee, RPS Planning & Development, requiring a Stage 1 Road Safety Audit on a scheme to provide a proposed highway improvements at Warren Park Way junction with B582 associated with a proposed development off Leicester Lane, Enderby, Leicester.

The Terms of Reference are as described in the Highways Agency's Design Manual for Roads and Bridges document HD 19/15 'Road Safety Audit'.

#### 1.2 The Scheme and its Purpose

The highway improvements at Warren Park Way junction with B582 are associated with a proposed development site located on land to the south of Leicester Lane, Enderby, Leicester. The development proposal is for 123,138 sqm (1,325,500 sqft) of B8 / B2 development with the B2 element of the development representing no more that 10% of the overall floor area. The development is primarily for distribution warehousing together with ancillary offices, gatehouses, service areas, access road and landscaping. In addition the development provides 1,311 car parking spaces in addition to lorry parking spaces for the operation purposes of the development.

#### 1.3 The Audit & Audit Report

The audit comprised an examination of documents forming the Audit Brief and an examination of the site during daylight hours. The documents were made available to the Audit Team by Melanie A'Lee who was available to respond to queries from the auditors to clarify detailed issues, to provide additional details and to achieve an Audit Brief acceptable to the Audit Team. The total documents forming the Audit Brief are listed in **Appendix A**. Generally, the Brief comprised:

- Proposed site access
- Vehicular swept paths

This information was considered sufficient as the Audit Brief for the purpose of undertaking the road safety audit requested.

The Audit Team membership approved for this audit was:

Sarah Bowie IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp

(Audit Team Leader) Director, Taylor Bowie Ltd

Mario Gatti BSc Civ Eng, MCIHT, MSoRSA, HE RSA Cert Comp

(Audit Team Member) Associate Consultant, Taylor Bowie Ltd

The audit took place at Taylor Bowie Ltd Letchworth office during May and June 2018, and both Audit Team Members examined the site together in daylight hours on the afternoon of Wednesday 23<sup>rd</sup> May 2018. The weather during the site visit was fine and cloudy. The carriageway was dry. Traffic flows at all times were very light. Seven pedestrians and two cyclists were observed during the site visit.

The scheme has been examined, and this report compiled, only with regard to the safety implications to road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a Design Standard without touching on technical audit.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B**.

#### 1.4 Audit Administration

This Audit Report has been submitted to the Design Organisation as a draft for checking, consideration and approval. The Design Organisation is responsible for agreeing with the Audit Team Leader the form of the final version of the report and for instructing that the report is presented in its final form.

It is the responsibility of the Audit Project Sponsor, i.e. the local highway authority, Leicestershire County Council, to advise the Audit Team Leader if any Problem or Recommendation is not adopted. A copy of every signed Exception Report is required by the Audit Team Leader from the Audit Project Sponsor for attachment to the master copy of the Final Audit Report.

Safety issues identified during the audit and site inspection which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the Audit Project Sponsor, will be set out in a separate letter. These issues could include maintenance items and operational issues. The Audit Team has not identified any issues during this Stage 1 Road Safety Audit and site inspection that are considered to be outside the Terms of Reference.

# 2 ITEMS RAISED IN THIS STAGE 1 ROAD SAFETY AUDIT

#### 2.1 General

#### 2.1.1 PROBLEM

Location 1 - B582 east of Warren Park Way (Drawing No. JNY 8838/08).

Summary - Insufficient right turn width at the Granite Close junction.

Detail - The drawings do not show the proposed lane widths ,however the right turn lane appears to narrow the closer it reaches the Granite Close junction. This junction is used by Heavy Goods Vehicles and a reduction in width of the ghost island may not accommodate large vehicles at this location. This may result in large vehicles straddling the ghost island with the risk that vehicles travelling ahead in an eastbound direction may collide with the rear of vehicles waiting to turn right into Granite Close.

#### **RECOMMENDATION**

The Audit Team recommends that the right turn lane ghost island is of sufficient width to safely accommodate Heavy Goods Vehicles.

#### 2.1.2 PROBLEM

Location 2 - The Warren Park Way Traffic signal controlled junction (Drawing No. JNY 8838/08).

Summary - Insufficient skidding resistance of carriageway surfacing for approaches to traffic signals.

Detail - The drawings do not show what type of surface material is to be laid at this stage of audit. A lack of adequate skidding resistance to the carriageway surfacing may increase the risk of vehicles failing to stop when red lights are present, especially during wet surface conditions. This may increase the risk of vehicles to non-motorised users type collisions.

#### **RECOMMENDATION**

The Audit Team recommends that the for the next stage of audit, the Design Team specifies sufficient carriageway surface skidding resistance for the approaches to the signalised junction such that it meets the current guidance for a "stress" site.

#### 2.1.3 PROBLEM

Location 3 - The Warren Park Way Traffic signal controlled junction (Drawing No. JNY 8838/08).

Summary - Proposed traffic signal junction phasing and layout.

Detail - The proposed phasing of the signalised junction has not been supplied as part of this stage of this stage 1 Road safety Audit. It will be important to ensure that sufficient checks are made to establish that potential movement conflicts are minimised to reduce the risk of collision by opposing traffic movements.

#### RECOMMENDATION

The Audit Team recommends that traffic signal information should be provided at the detailed design stage to enable an analysis of potential conflicts to be identified.

#### 2.1.4 PROBLEM

Location 4 - The Warren Park Way Traffic signal controlled junction (Drawing No. JNY 8838/08).

Summary - Insufficient forward visibility to the offside signal head.

Detail - The westbound approach to the Warren Park Way junction is along a very steep downhill gradient. If large vehicles are waiting within the right turn lane for Granite Close, the driver visibility to the offside traffic signal head may be obscured. This may increase the risk of vehicle to vehicle rear end shunt type collisions if they brake hard at the stop line.

#### RECOMMENDATION

The Audit Team recommends that additional traffic signal heads are provided together with speed discrimination loops for the westbound approach to the signal controlled junction.

#### 2.2 Local Alignment

#### 2.2.1 PROBLEM

Location 5 - B582 east of Warren Park Way (Drawing No. JNY 8838/08).

Summary - Abrupt nearside kerb alignment forces vehicles to cross median hatch markings into opposing traffic.

Detail - The proposed eastbound nearside kerb alignment at the Granite Close junction appears to introduce an abrupt change of direction for vehicles travelling along the B582. This alignment may force vehicles to cross the existing hatch markings into opposing traffic and may increase the risk of vehicle to vehicle head on type collisions.

#### **RECOMMENDATION**

The Audit Team recommends that the tight radius is eased to enable a smooth alignment through the junction.

#### 2.2.2 PROBLEM

Location 6 - B582 j/w Warren Park Way (Drawing No. JNY 8838/08).

Summary - Insufficient width to accommodate Heavy Goods Vehicles (HGV's) Right Turning movements into B582.

Detail - The Vehicle Swept Paths for HGV's turning right from Warren Park Way into the B582 appear to be extremely tight confirming that the vehicle body path touches the splitter island to the west of Warren Park Way. This may increase the risk of vehicle to street furniture type collisions.

#### **RECOMMENDATION**

The Audit Team recommends that the turning movements of HGV's can be safely accommodated without hitting street furniture on the splitter islands on the B582.

#### 2.3 Junctions

No Problems identified in this category at this Stage 1 Road Safety Audit.

#### 2.4 Non-Motorised User Provision

No Problems identified in this category at this Stage 1 Road Safety Audit.

#### 2.5 Road Signs, Carriageway Markings & Street Lighting

#### 2.5.1 PROBLEM

Location 7 - Left turn from B582 to Warren Park Way (Drawing No. JNY 8838/08).

Summary - Failure to stop at Traffic signals.

Detail - The proposed stop line for vehicles turning left into Warren Park Way from the B582 does not extend between kerbs. This may encourage motorised two wheeled vehicles to ignore the stop line and continue into the side road with a risk of vehicle to vehicle type collisions with vehicles turning right into Warren park Way.

#### RECOMMENDATION

The Audit Team recommends that the stop line at the traffic signals along the B582 extends between kerbs.

#### 2.5.2 PROBLEM

Location 8 - Right turn from B582 to Warren Park Way (Drawing No. JNY 8838/08).

Summary - Wide westbound lane encourages vehicle overtaking.

Detail - The proposed right turn lane into Warren Park Way is slightly offset to the north. This leaves a wide area of carriageway that would allow two vehicles to travel ahead in a westbound direction before the lane widths narrow over a short distance. This may increase the risk of vehicle to vehicle side swipe type collisions beyond the Warren park way junction.

#### **RECOMMENDATION**

The Audit Team recommends that the right turn lane should not give the appearance of being offset and the lane markings for the ghost right turn lane should be adjusted accordingly.

#### 2.5.3 PROBLEM

Location General - Throughout the length of proposed highway works (Drawing No. JNY 8838/08).

Summary - Existing street lighting columns within the existing footways are likely to be located in the carriageway where they may be vulnerable to vehicle strikes.

Detail - The proposed works indicate that the B582 is to be widened along the northern side. There are existing street lighting columns along the B582. Street lighting proposals have not been provided for this stage 1 Road Safety Audit and it is unclear where the lighting columns will be finally located.

The audit team is concerned that after carriageway widening if the columns are not carefully located that they may restrict the proposed footway width and form an obstruction to pedestrians that may affect the safe passage of pedestrians along the route with the risk of forcing pedestrians to walk in the carriageway where they would be at risk of being hit by vehicles.

#### **RECOMMENDATION**

The Audit Team recommends that at the Detailed Design stage of the project, the street lighting columns should be located towards the rear of the footway.

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

#### 3 AUDIT TEAM STATEMENT

We certify that this Audit has been carried out in accordance with HD 19/15.

#### **AUDIT TEAM LEADER**

Sarah Bowie IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp

Director

Taylor Bowie Ltd

Road Safety & Transportation Consultants

5 Curlew Close

Letchworth Garden City

Hertfordshire

SG6 4TG

Signed: Source

Date: 18<sup>th</sup> June 2018

#### **AUDIT TEAM MEMBER**

Mario Gatti BSc Civ Eng, MCIHT, MSoRSA, HE RSA Cert Comp

Associate Consultant

Taylor Bowie Ltd

Road Safety & Transportation Consultants

5 Curlew Close

Letchworth Garden City

Hertfordshire

SG6 4TG

Signed: Nath Galli

Date: 18<sup>th</sup> June 2018

### **APPENDIX A**

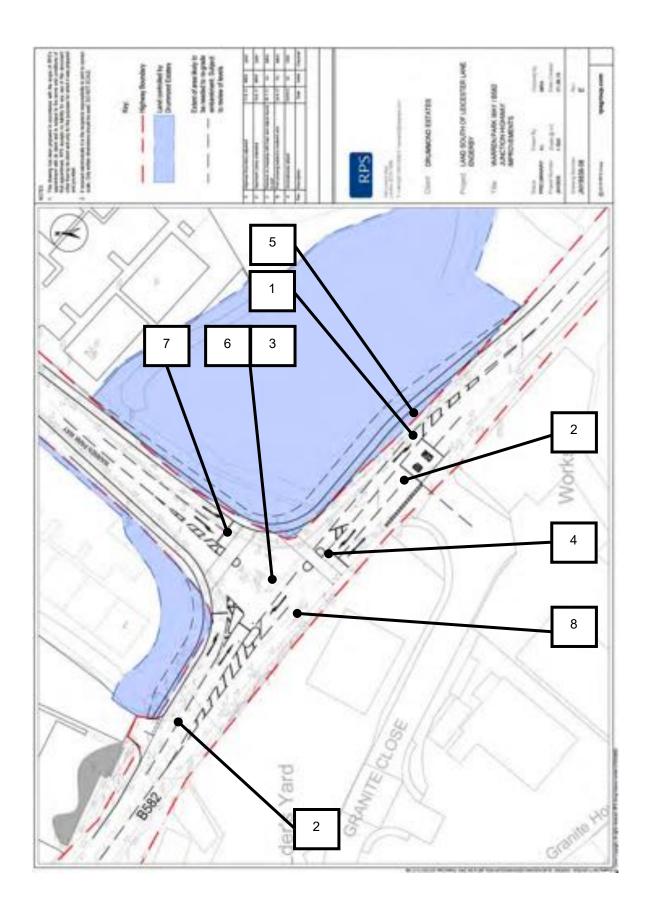
Documents Forming the Audit Brief

#### Drawings:

DRAWING NO.	TITLE
JNY8838-08 Rev E	Warren Park Way/B582 Junction Highway Improvements
JNY8838-09 Rev E	Swept Paths

## **APPENDIX B**

**Problem Location Plan** 



# Taylor Bowie Ltd

ROAD SAFETY & TRANSPORTATION CONSULTANCY

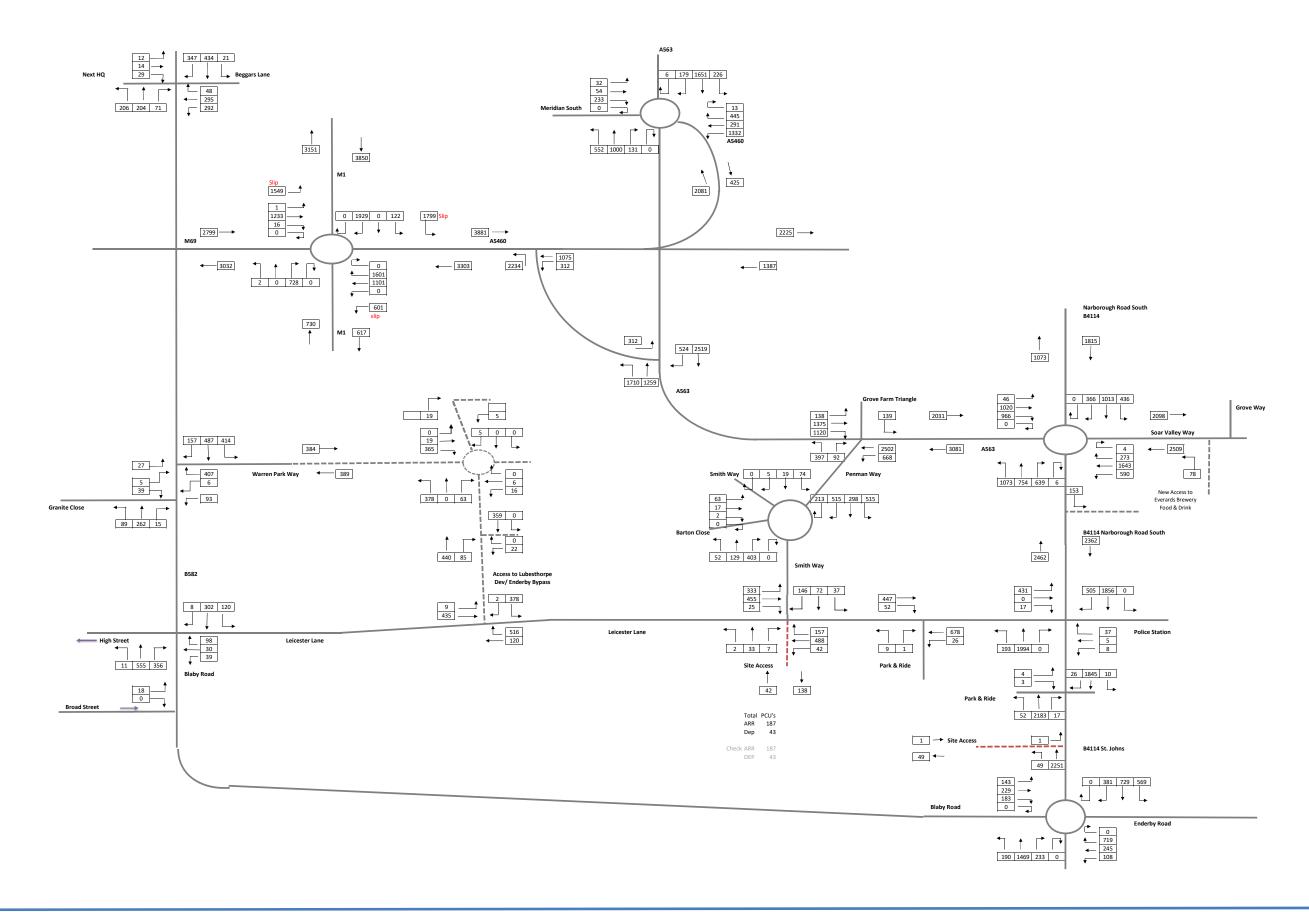
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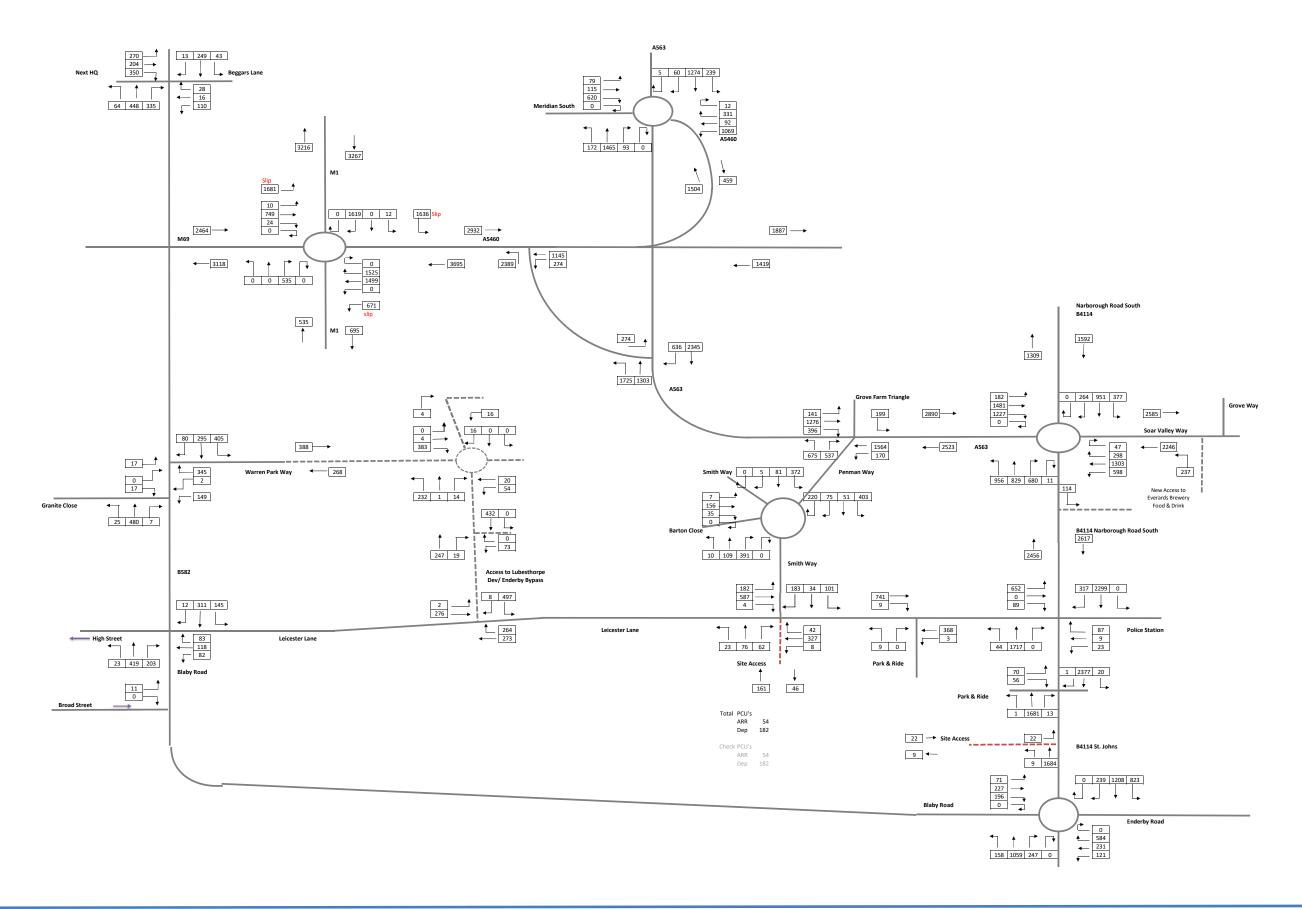
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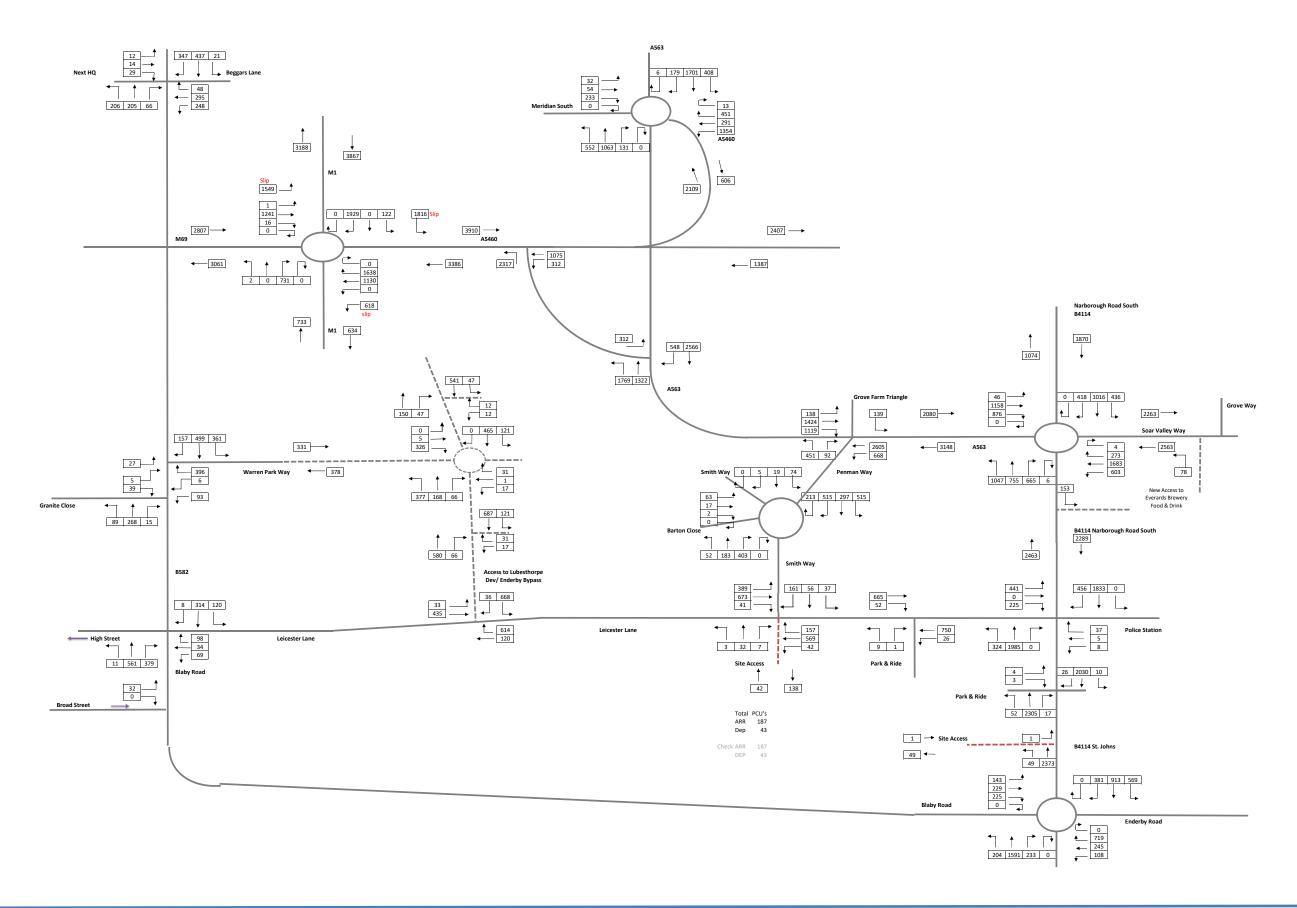
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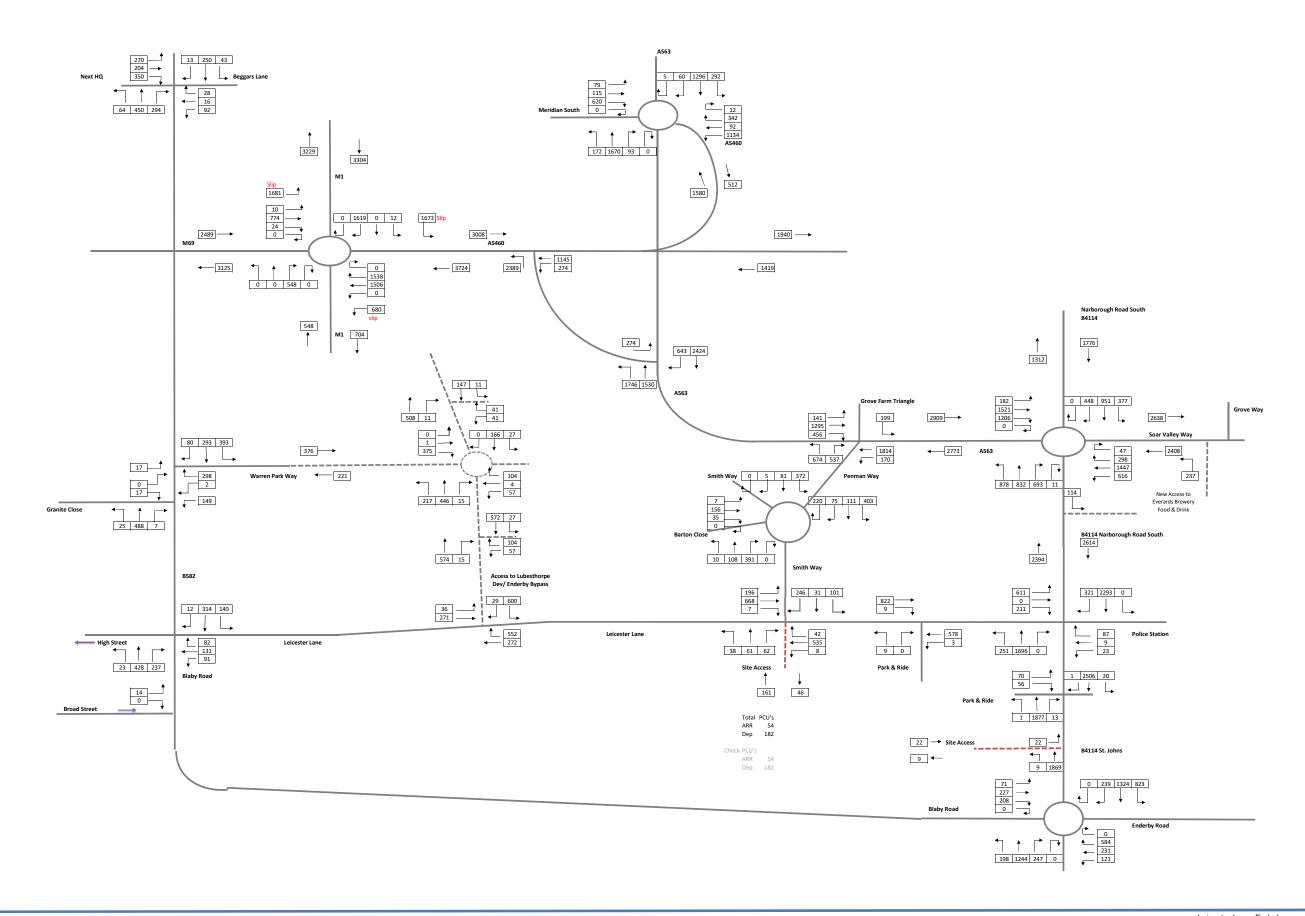


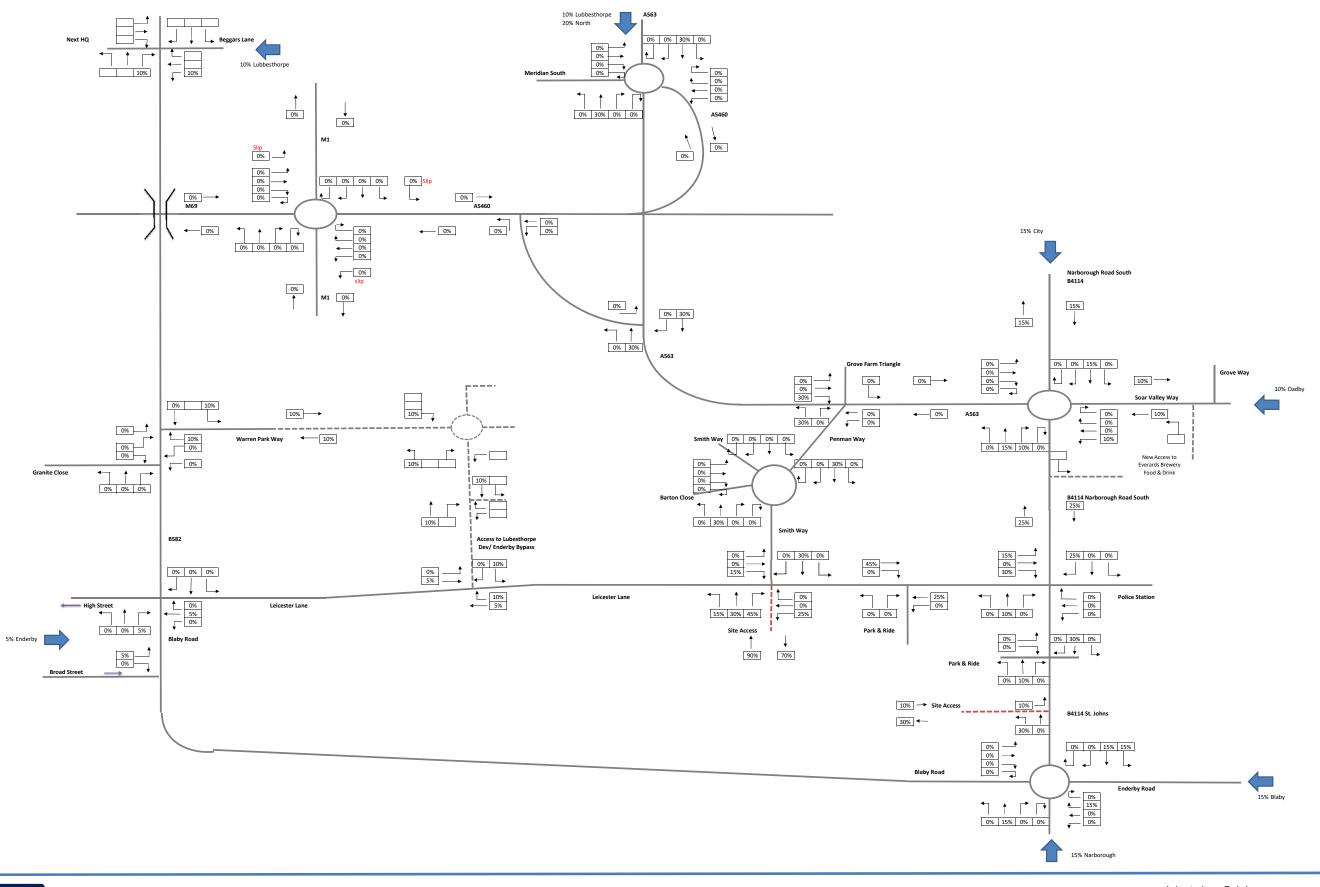
### **Appendix H – Proposed Traffic Flows**

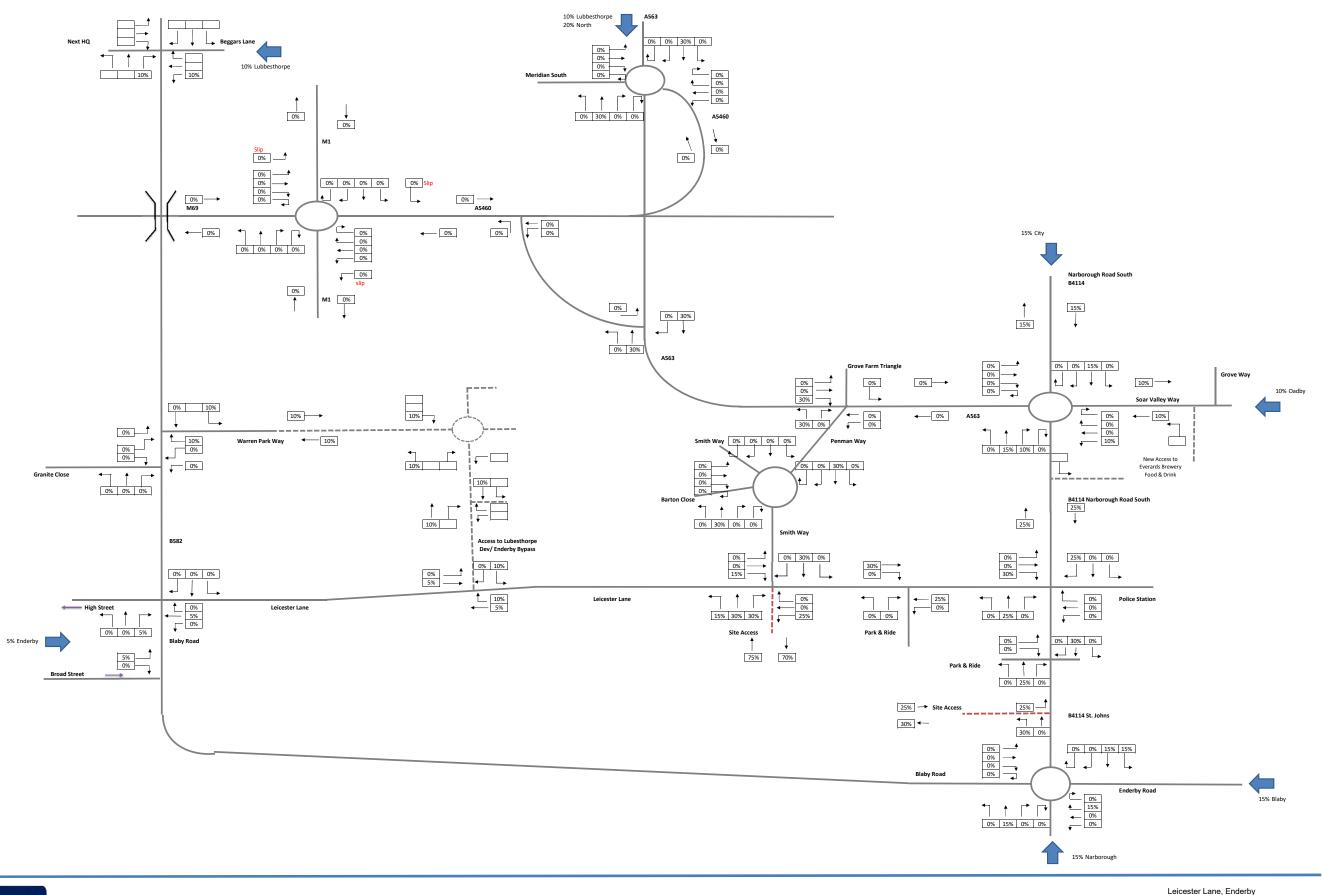


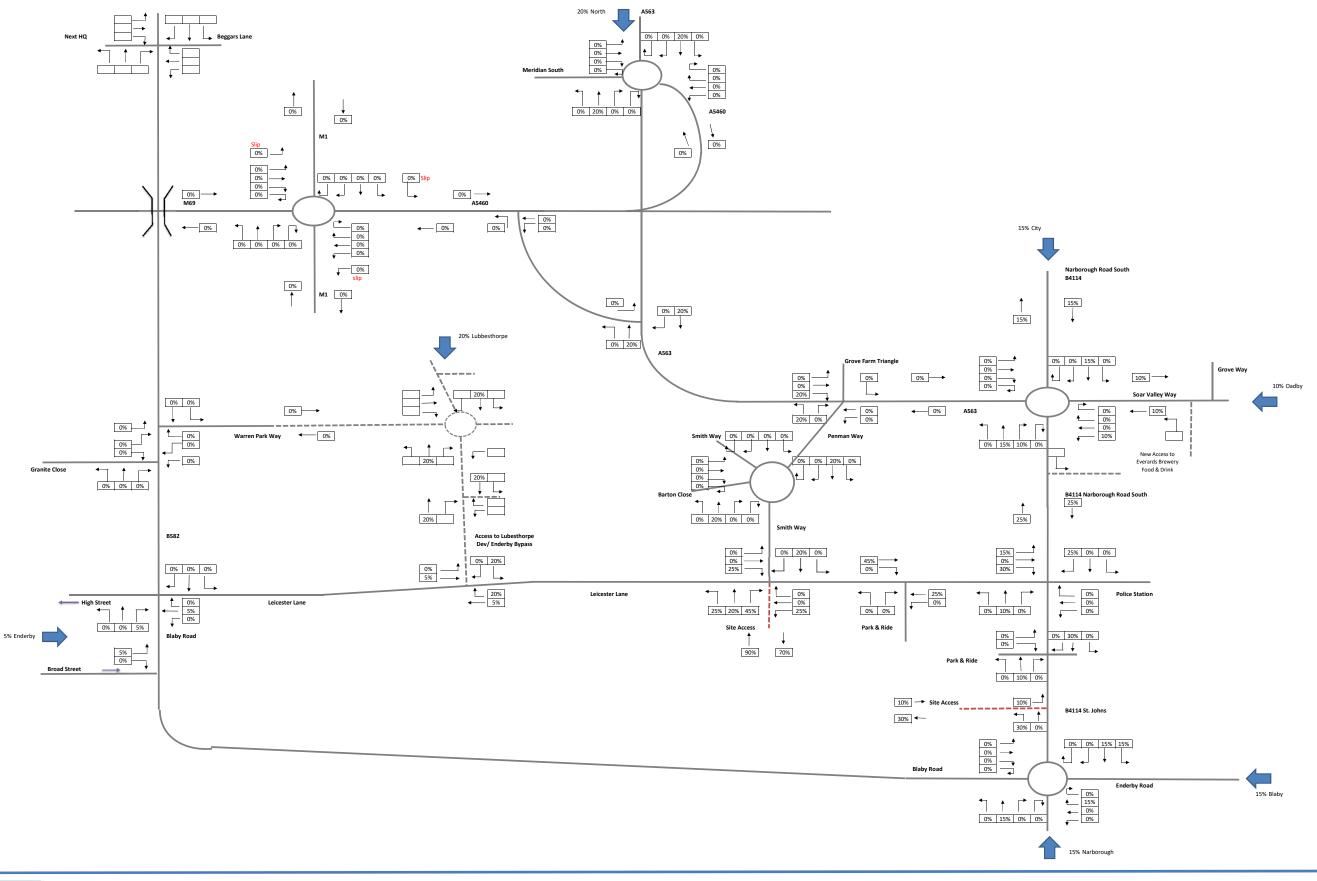






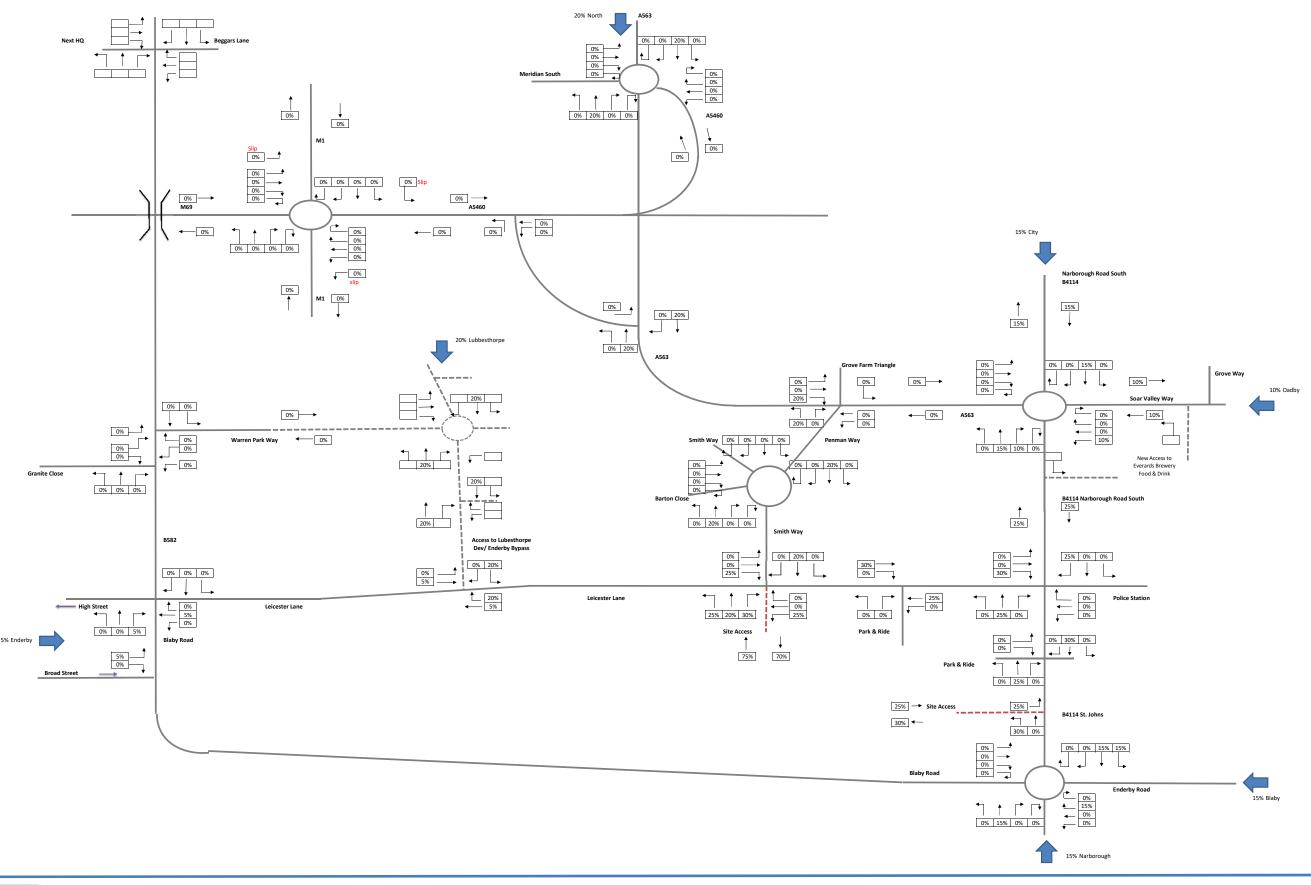




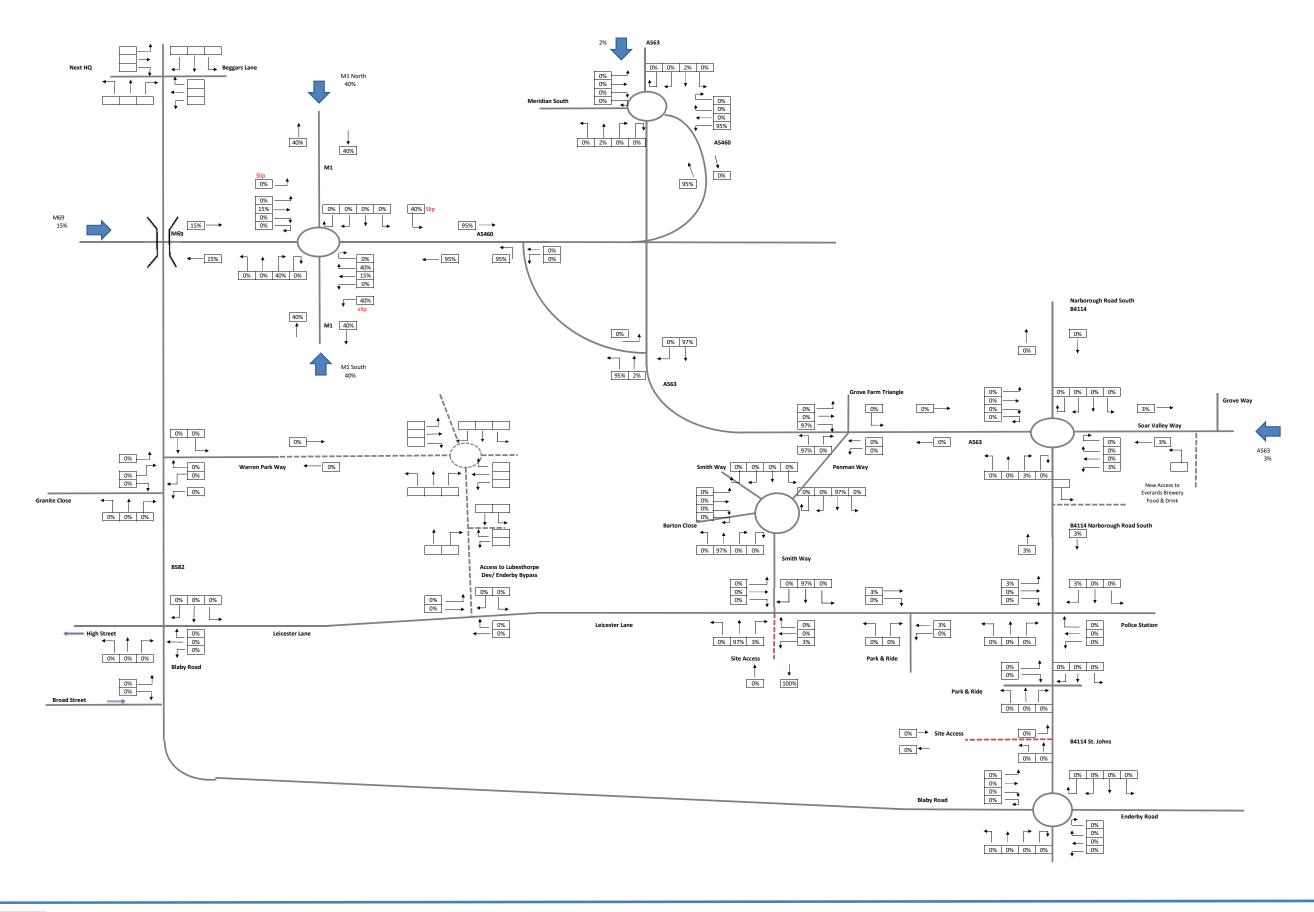


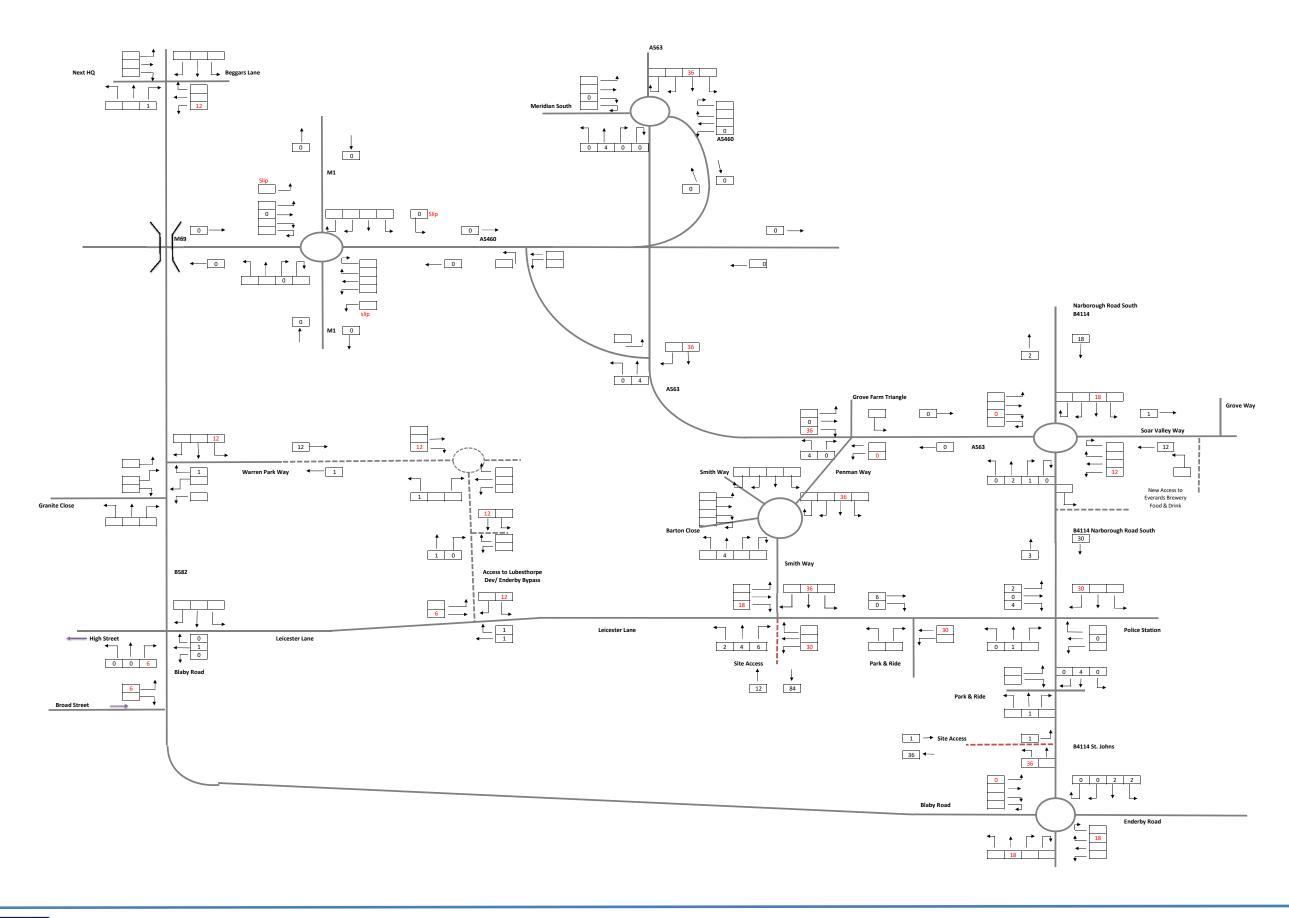
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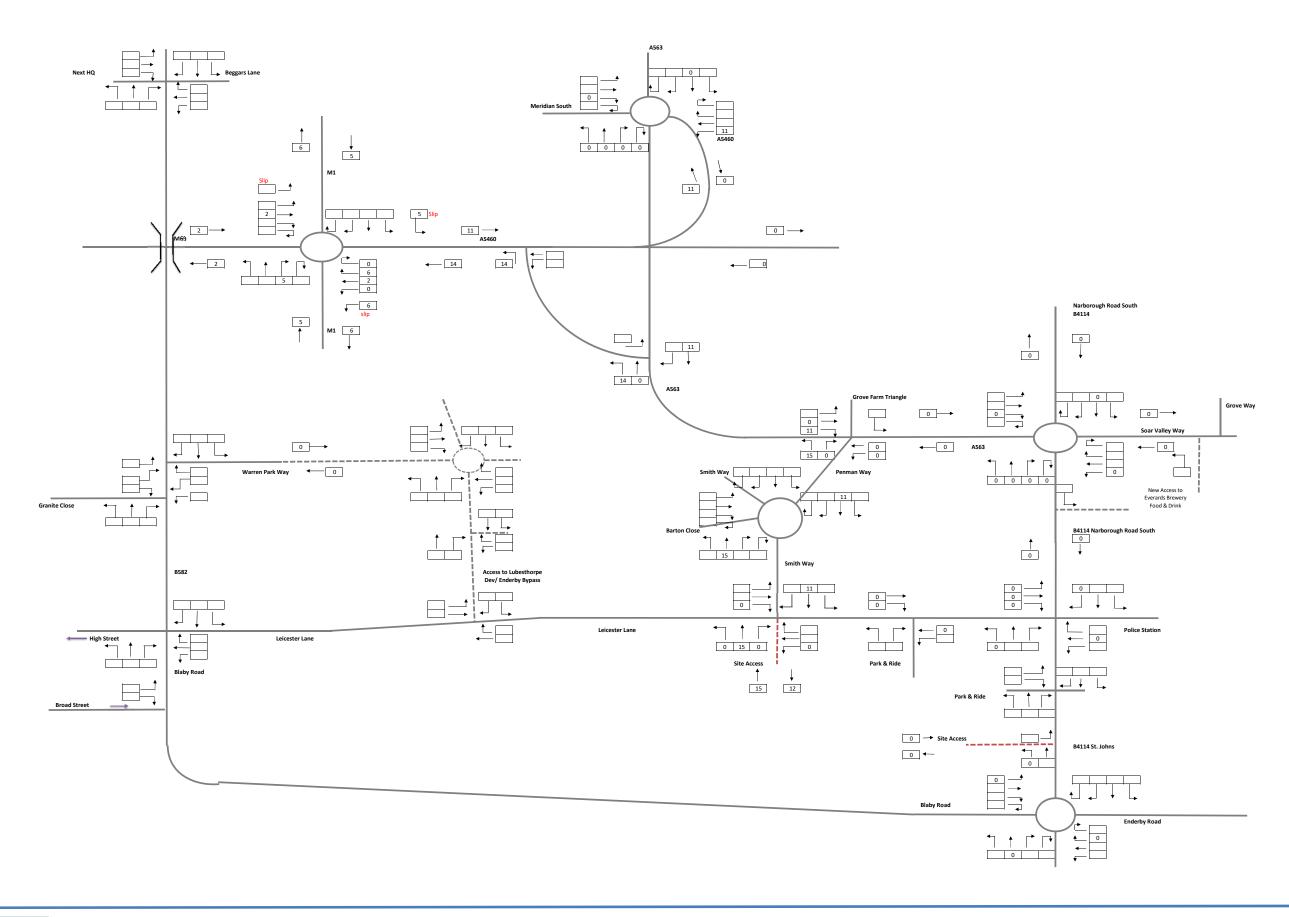
WITH M69 Bridge WITH Enderby Bypass

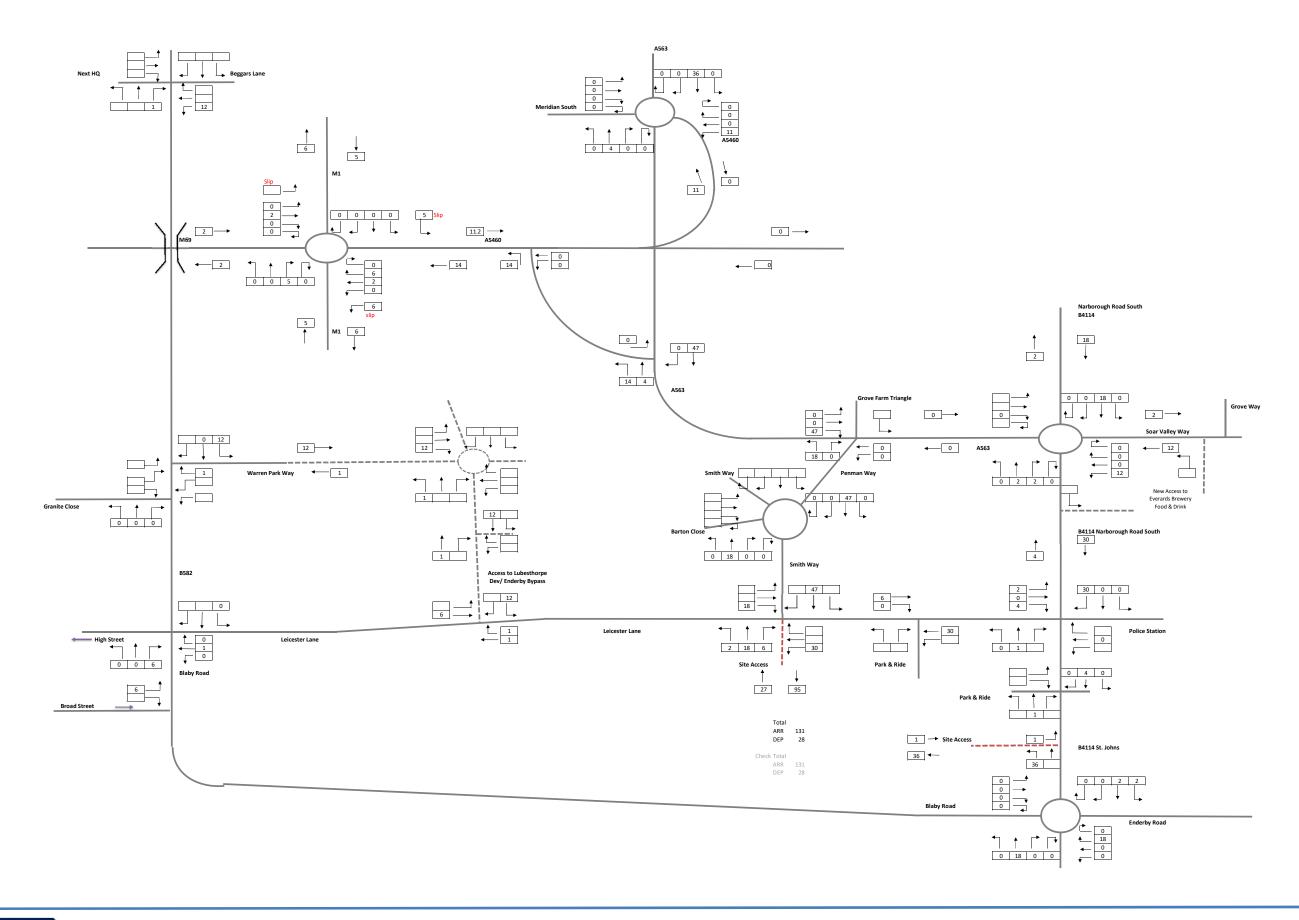


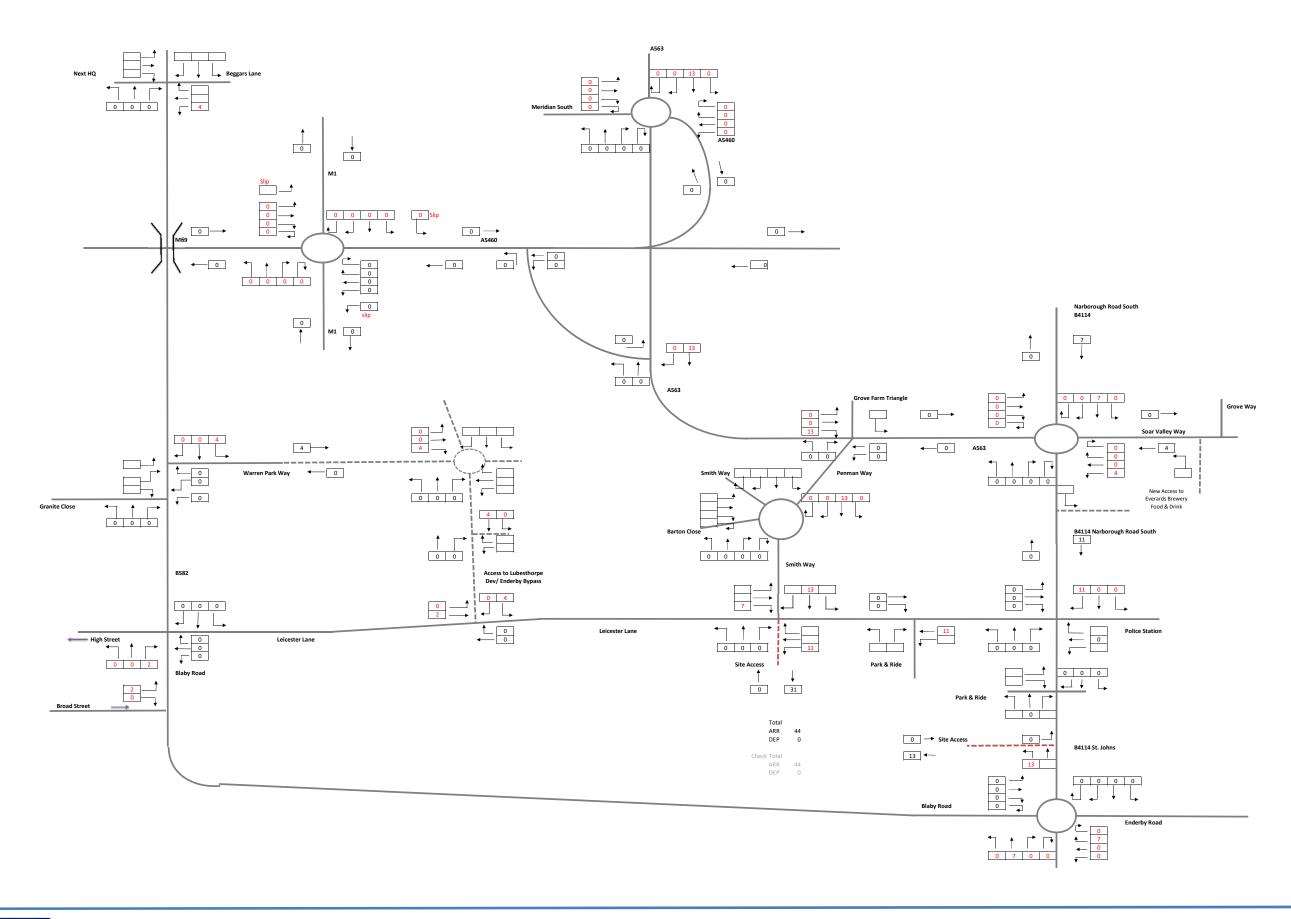
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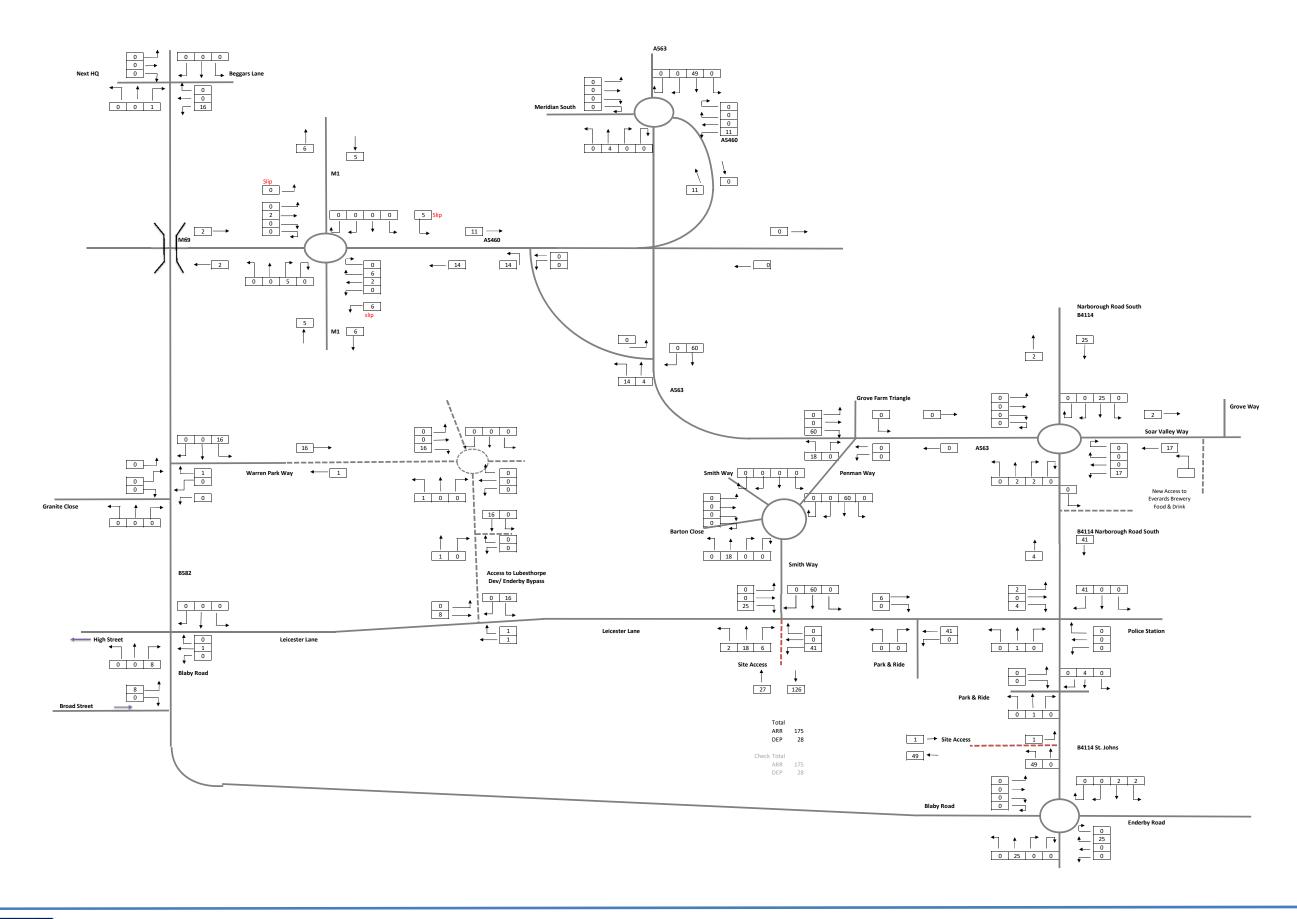


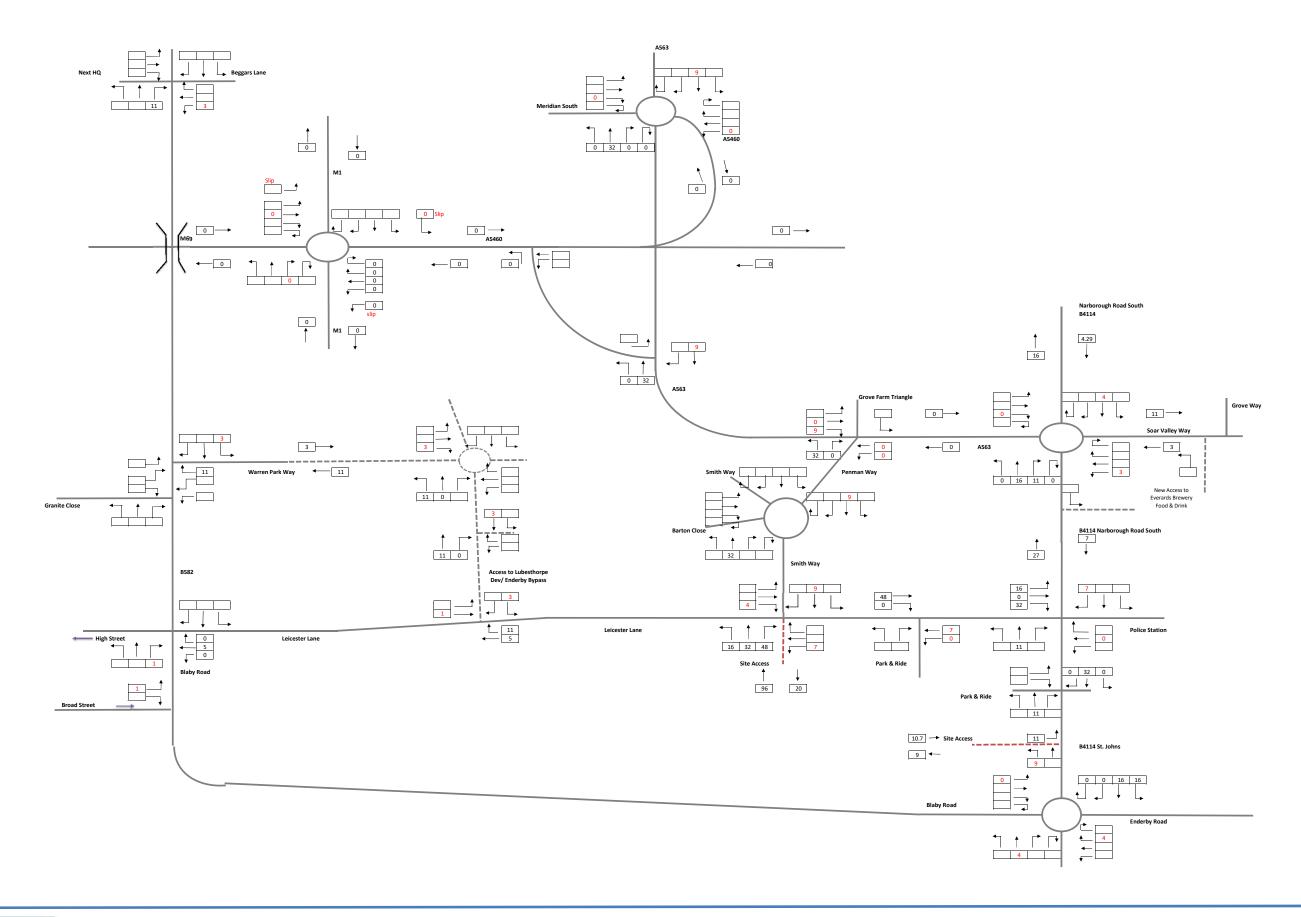


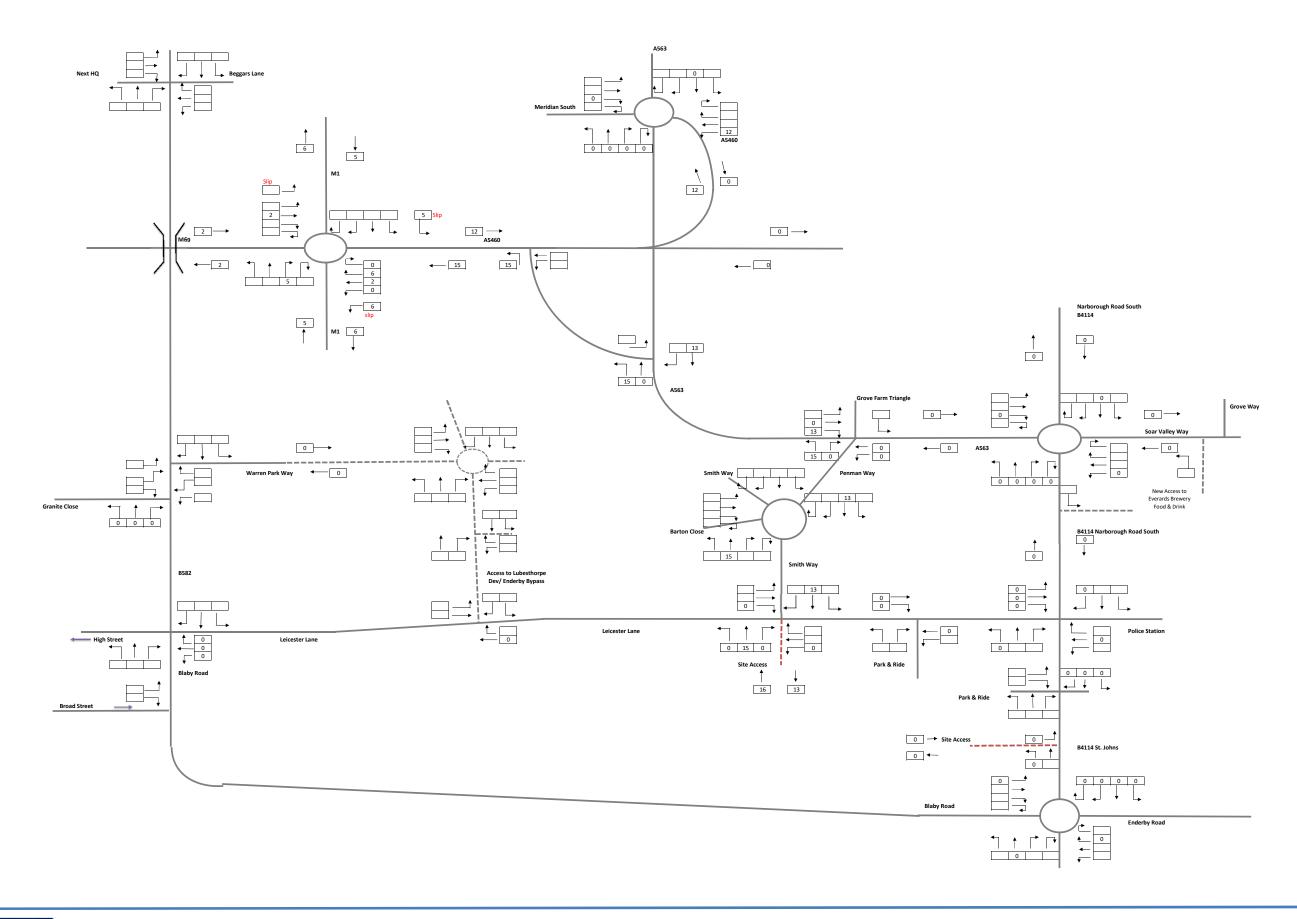


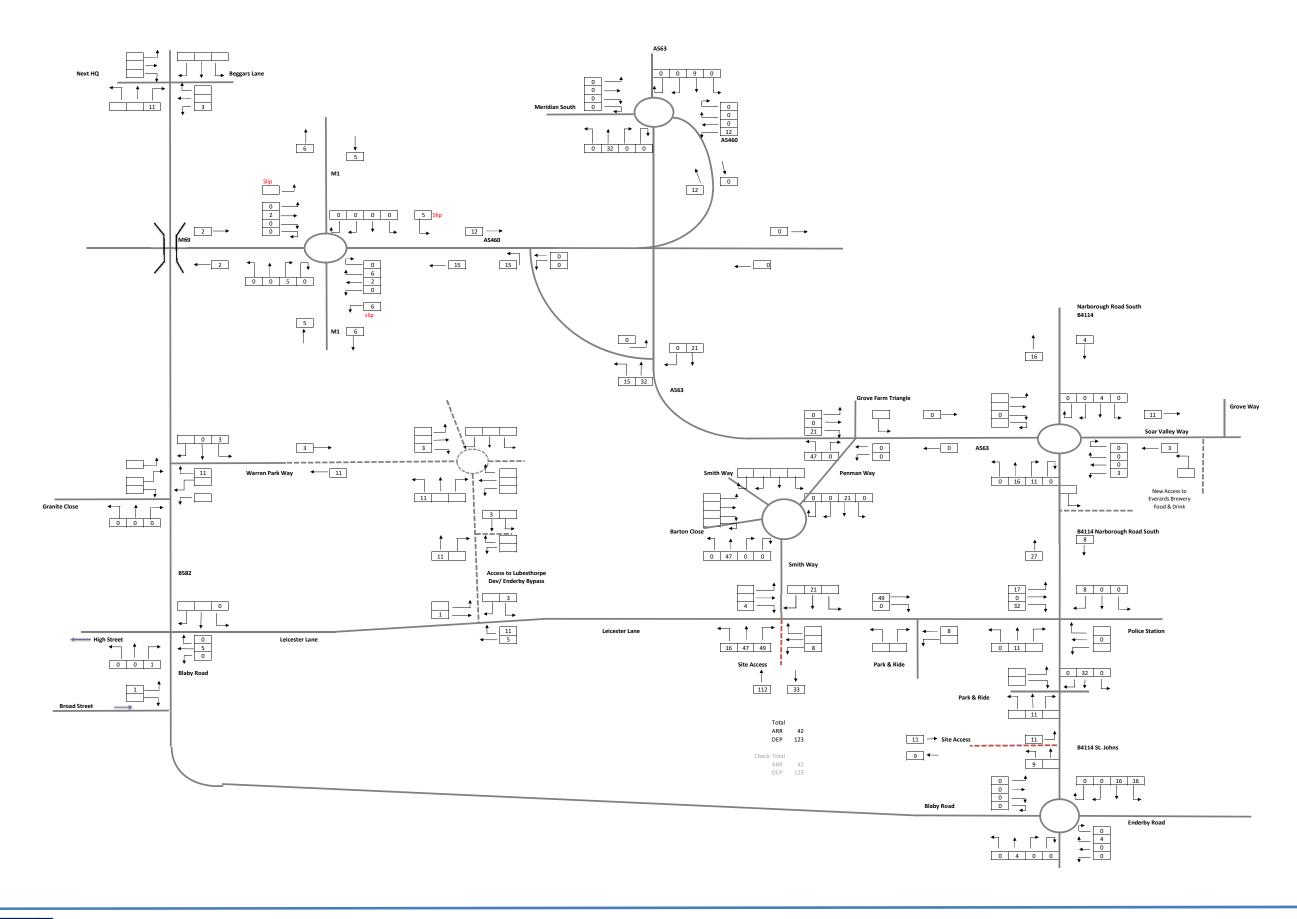


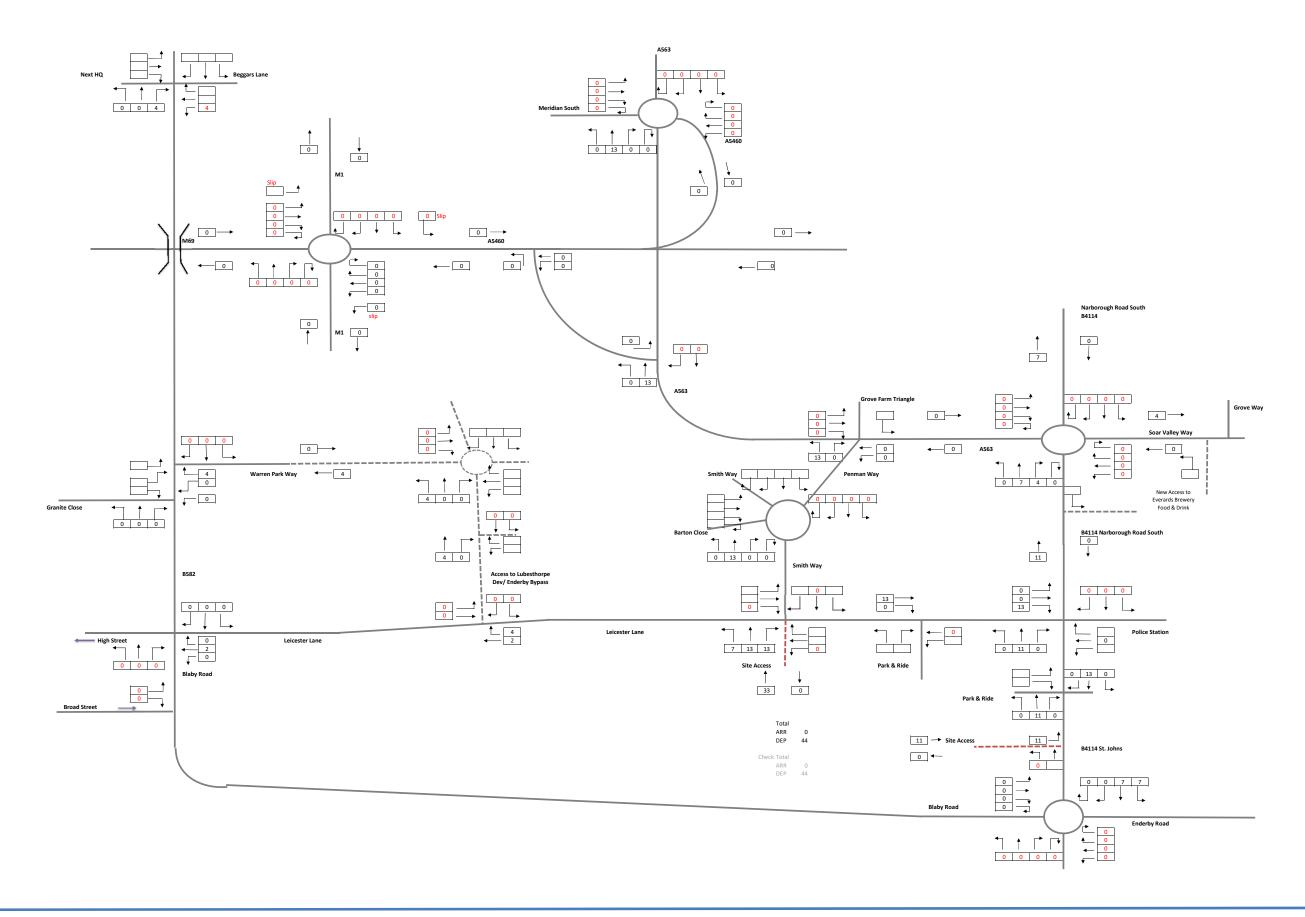


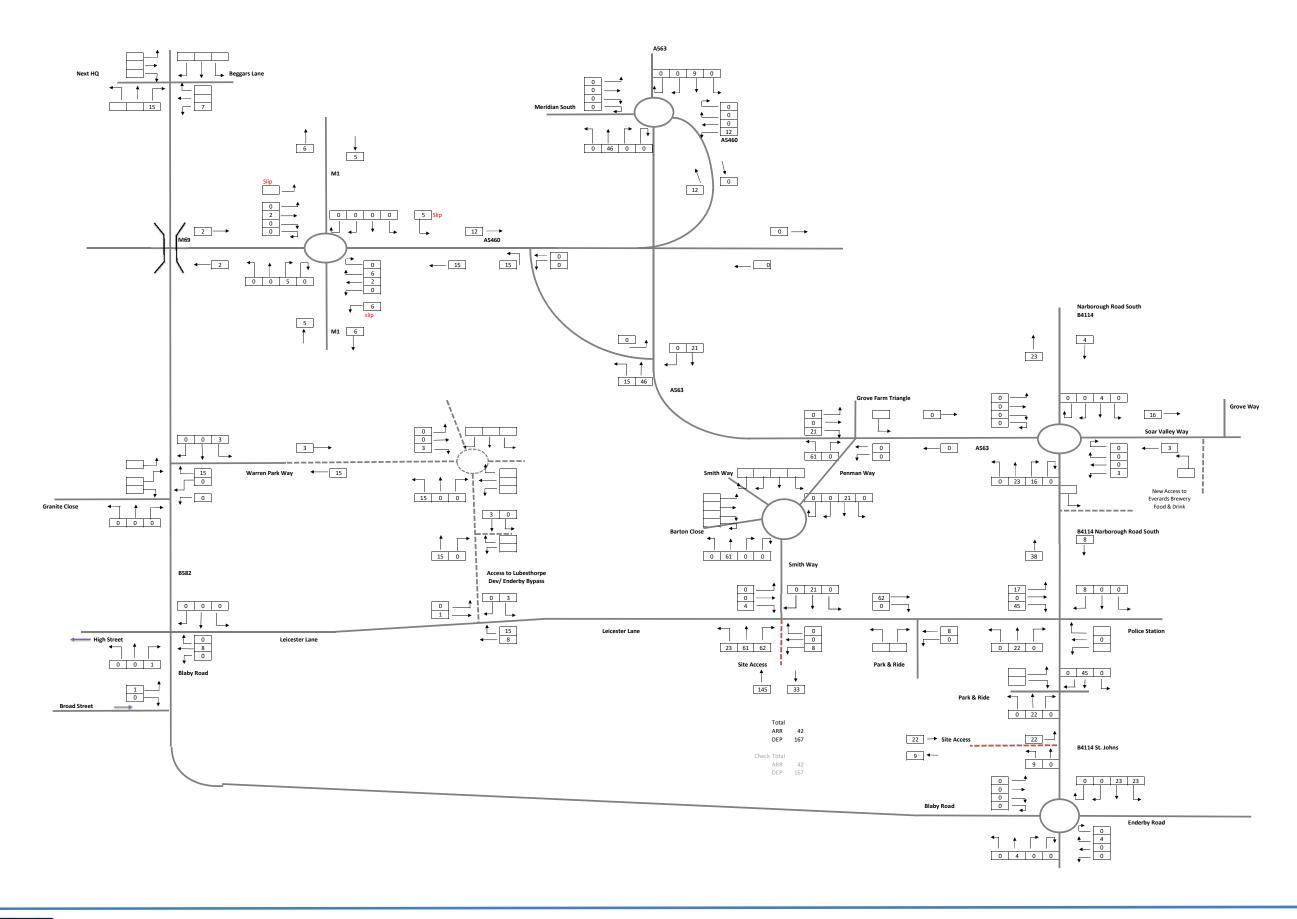


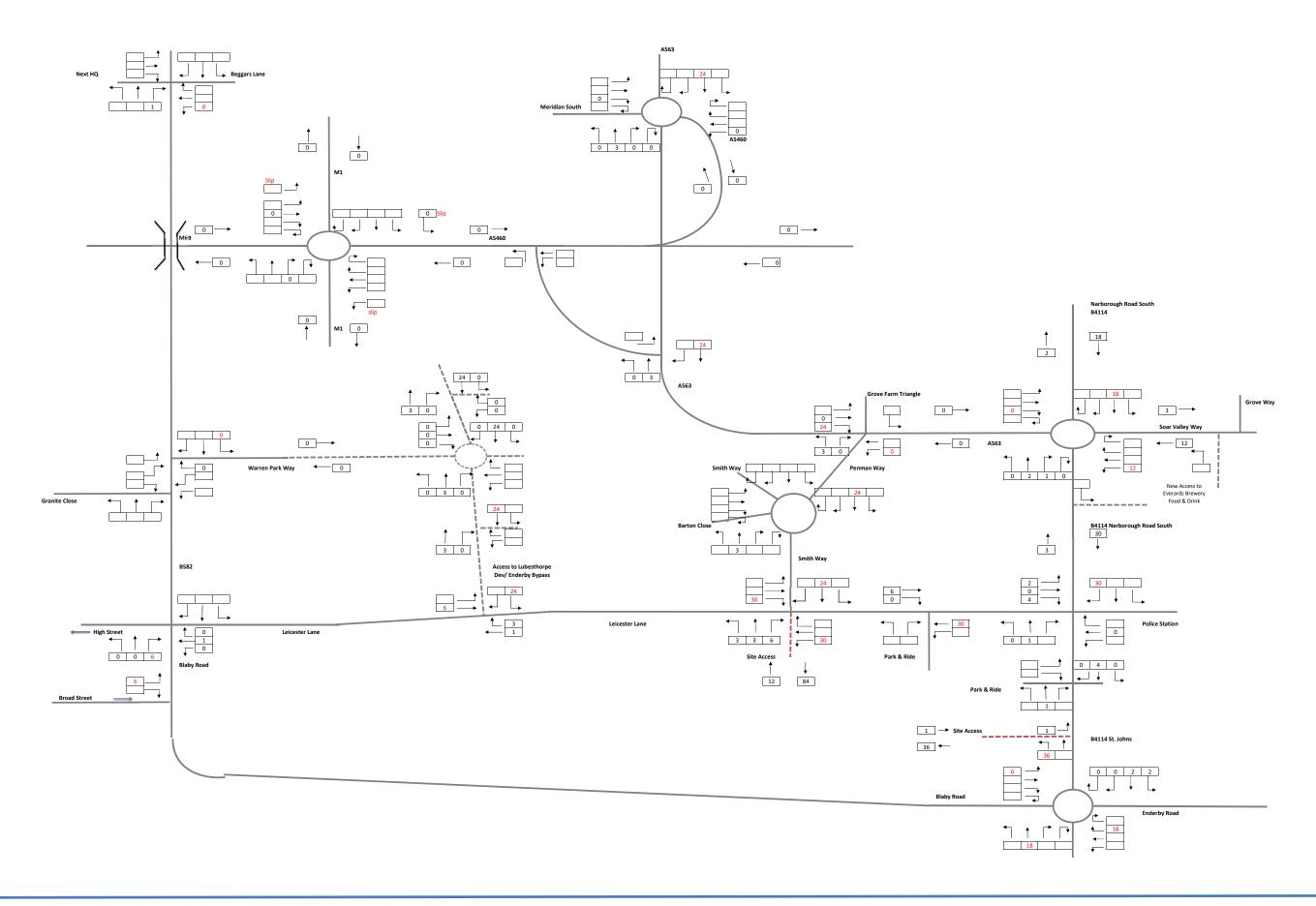




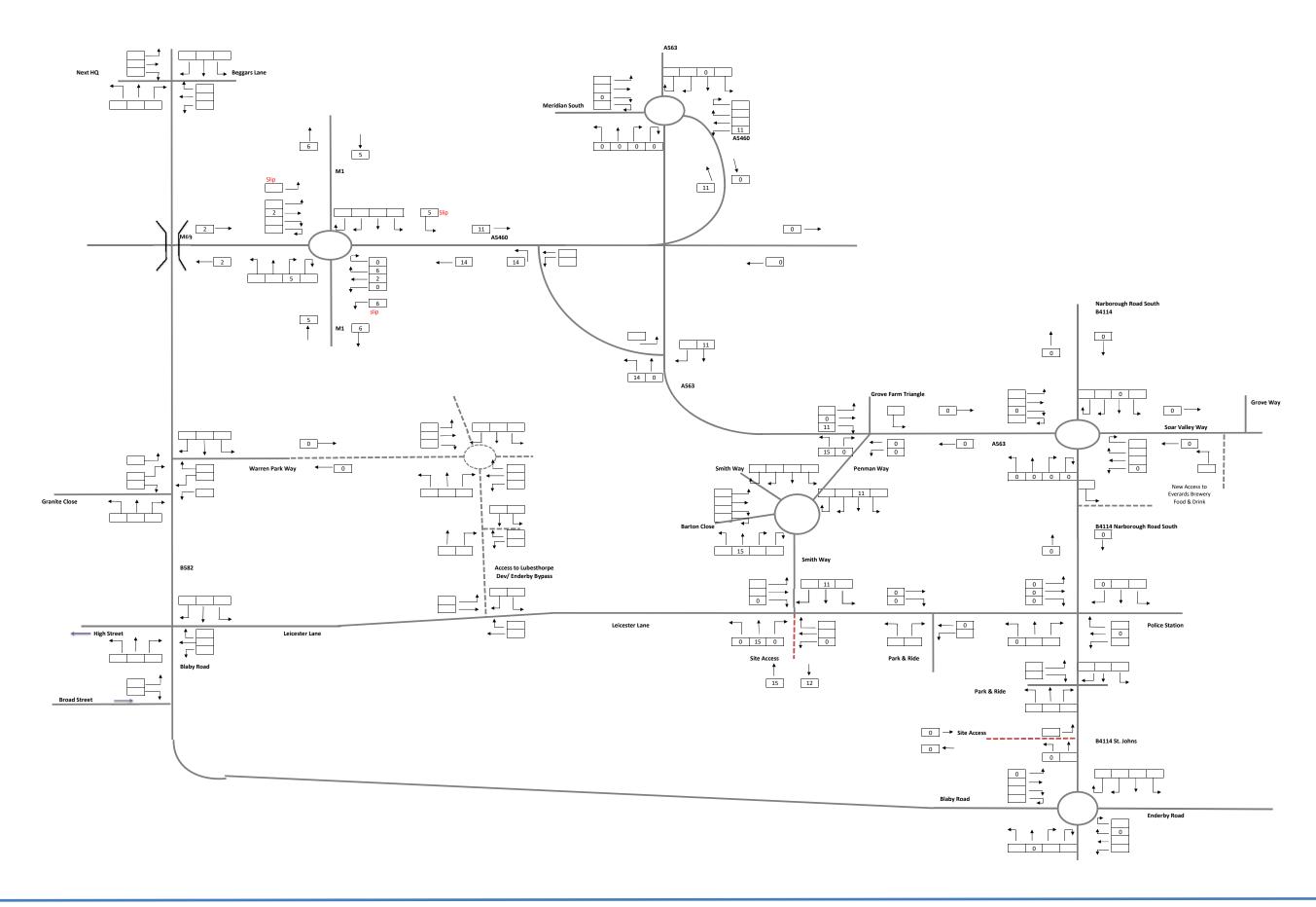




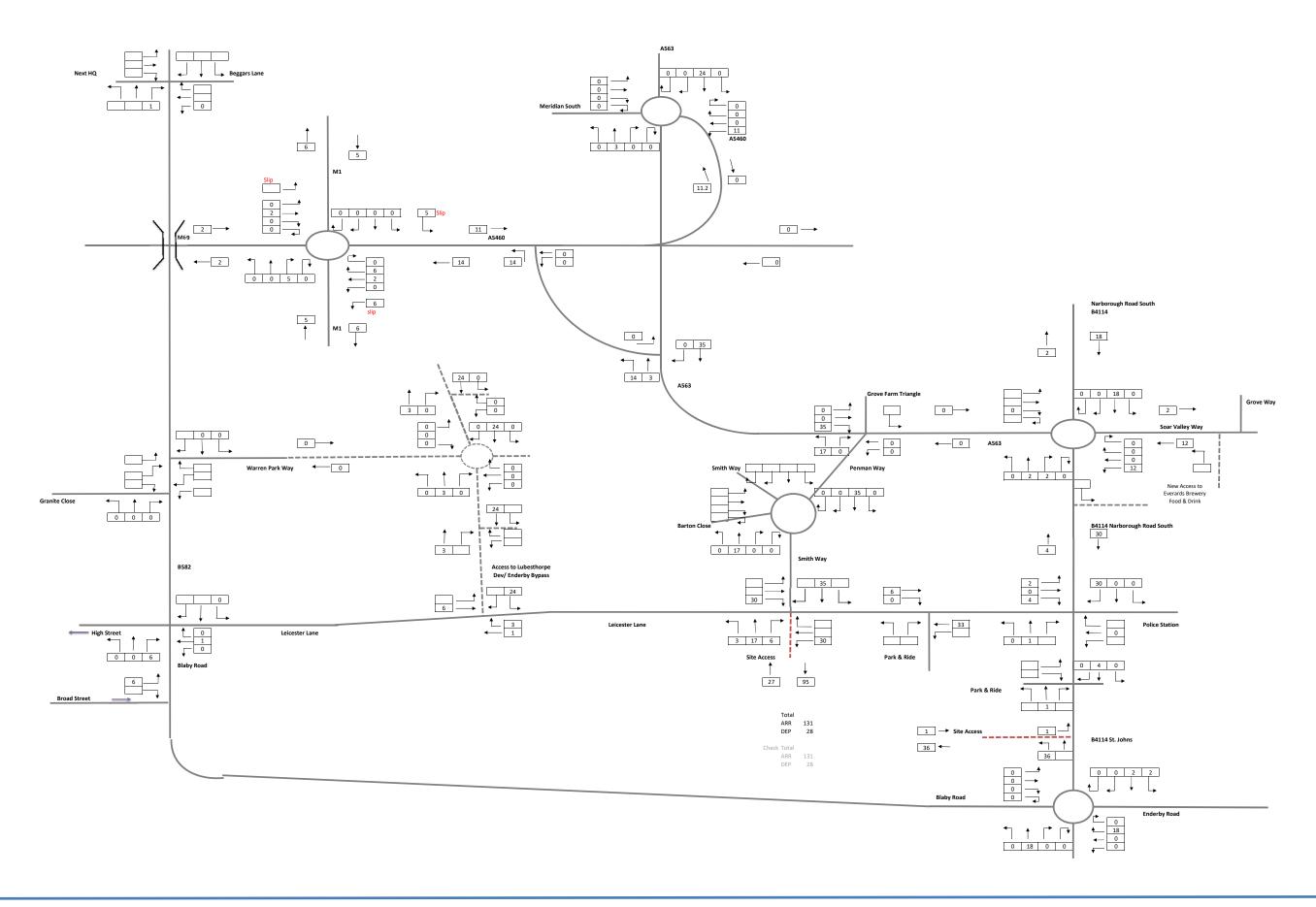




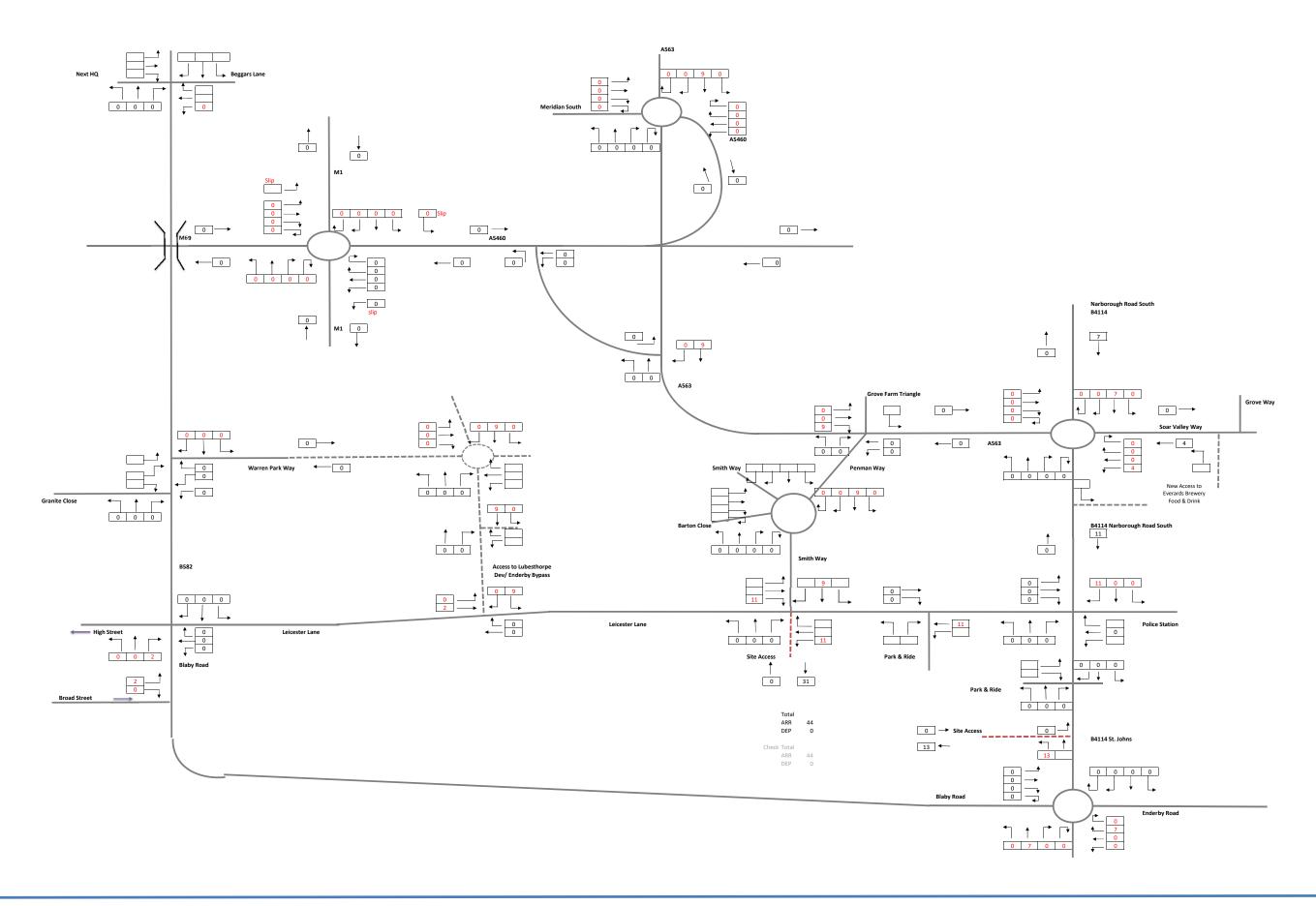




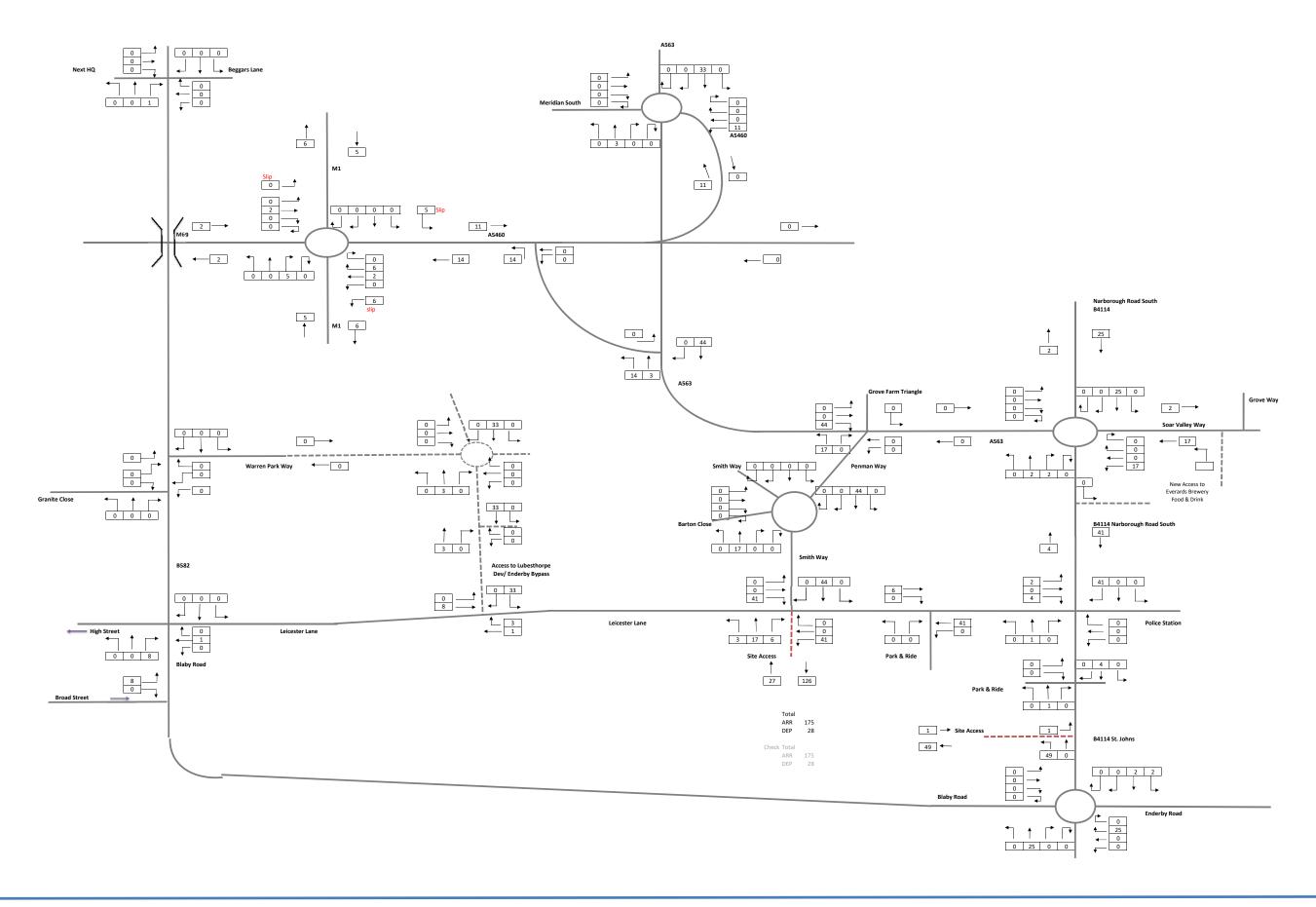




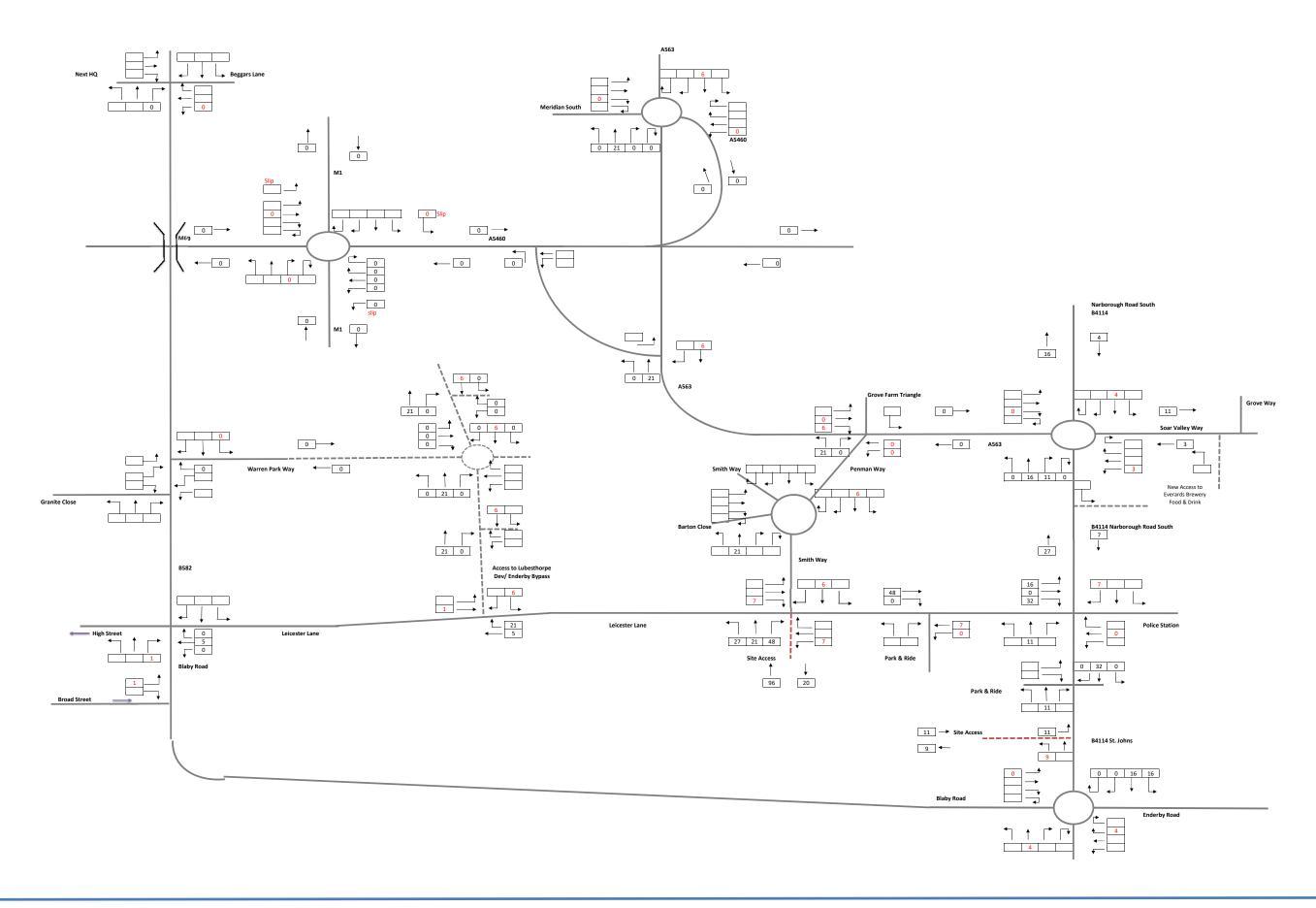




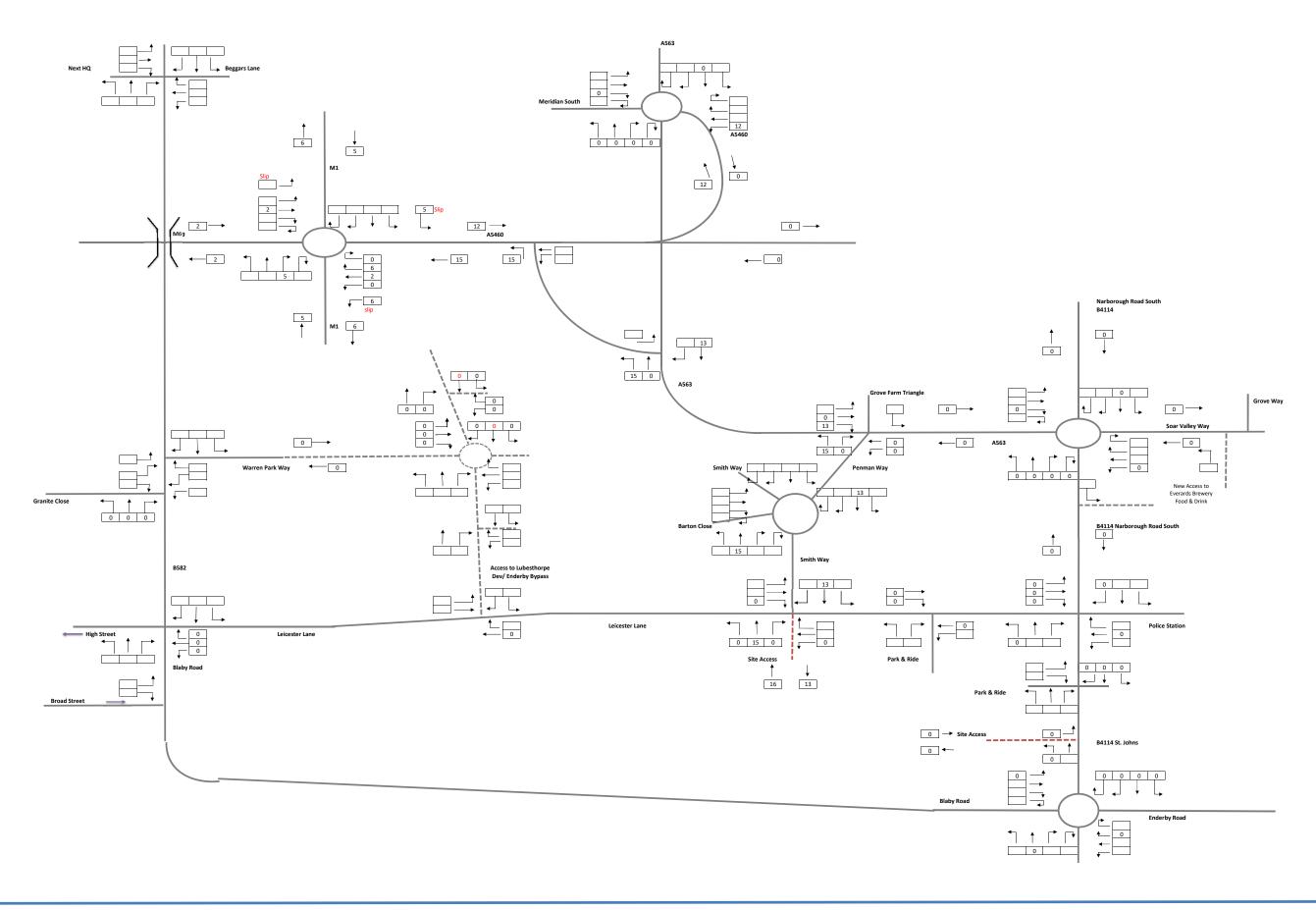




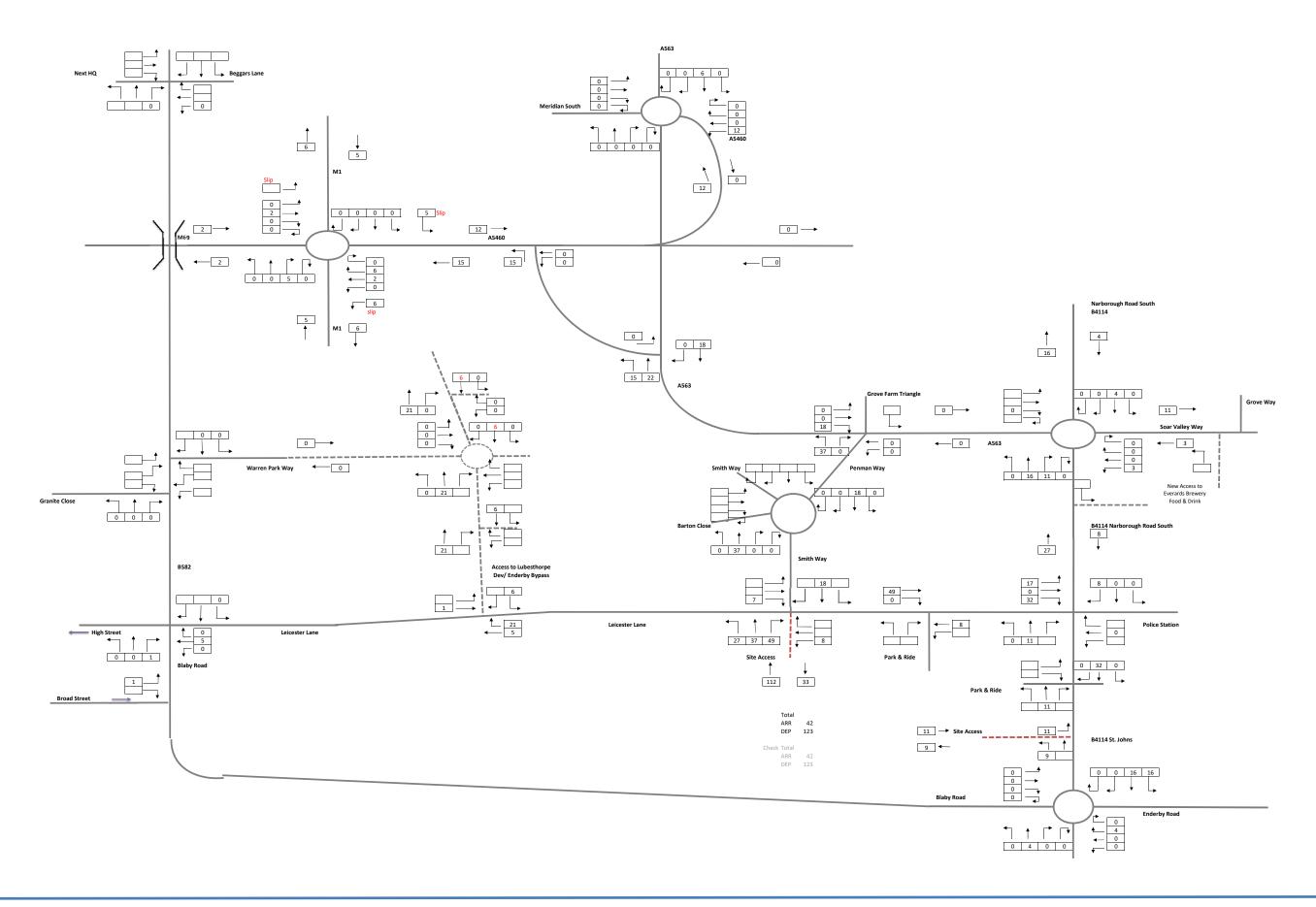




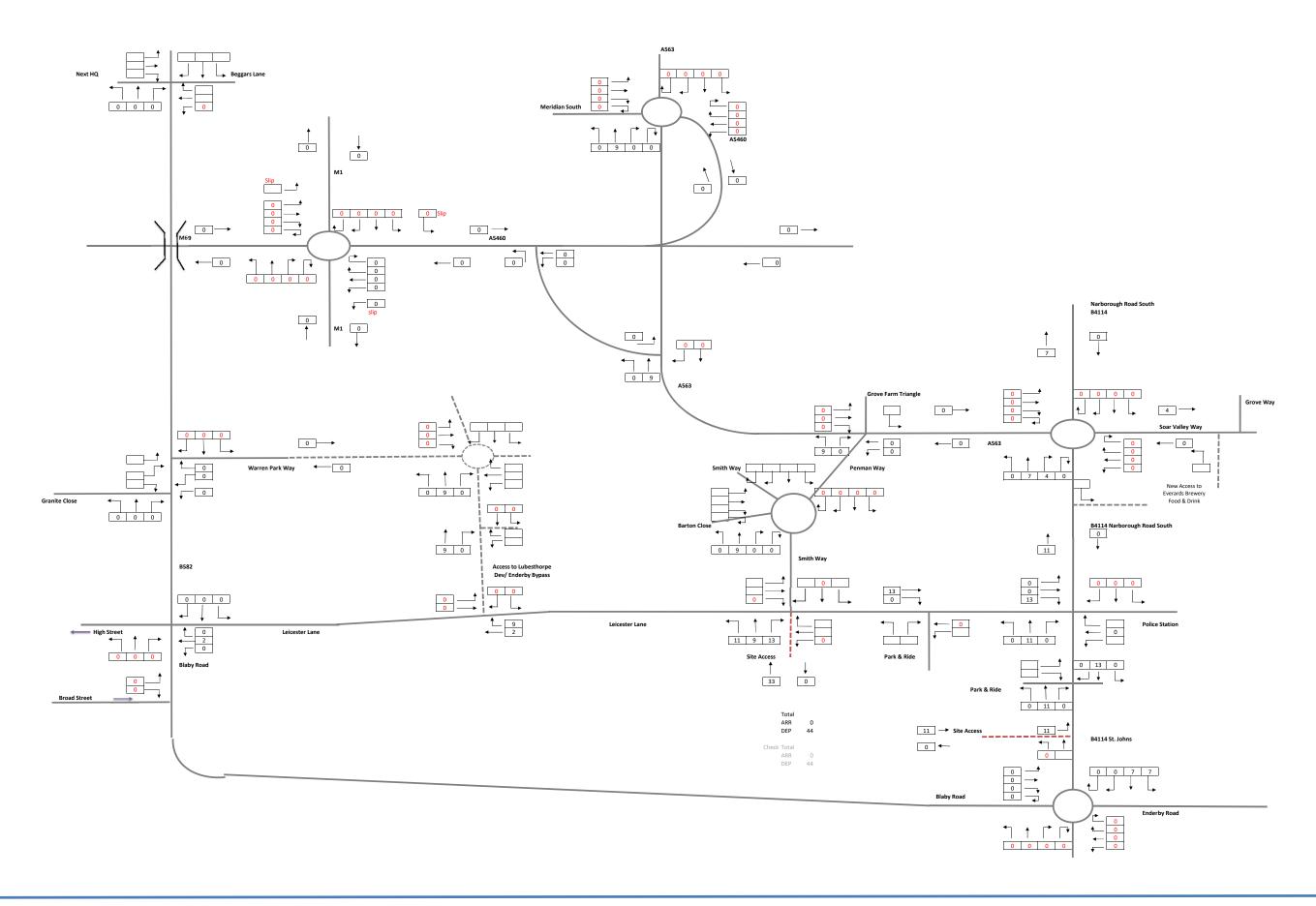




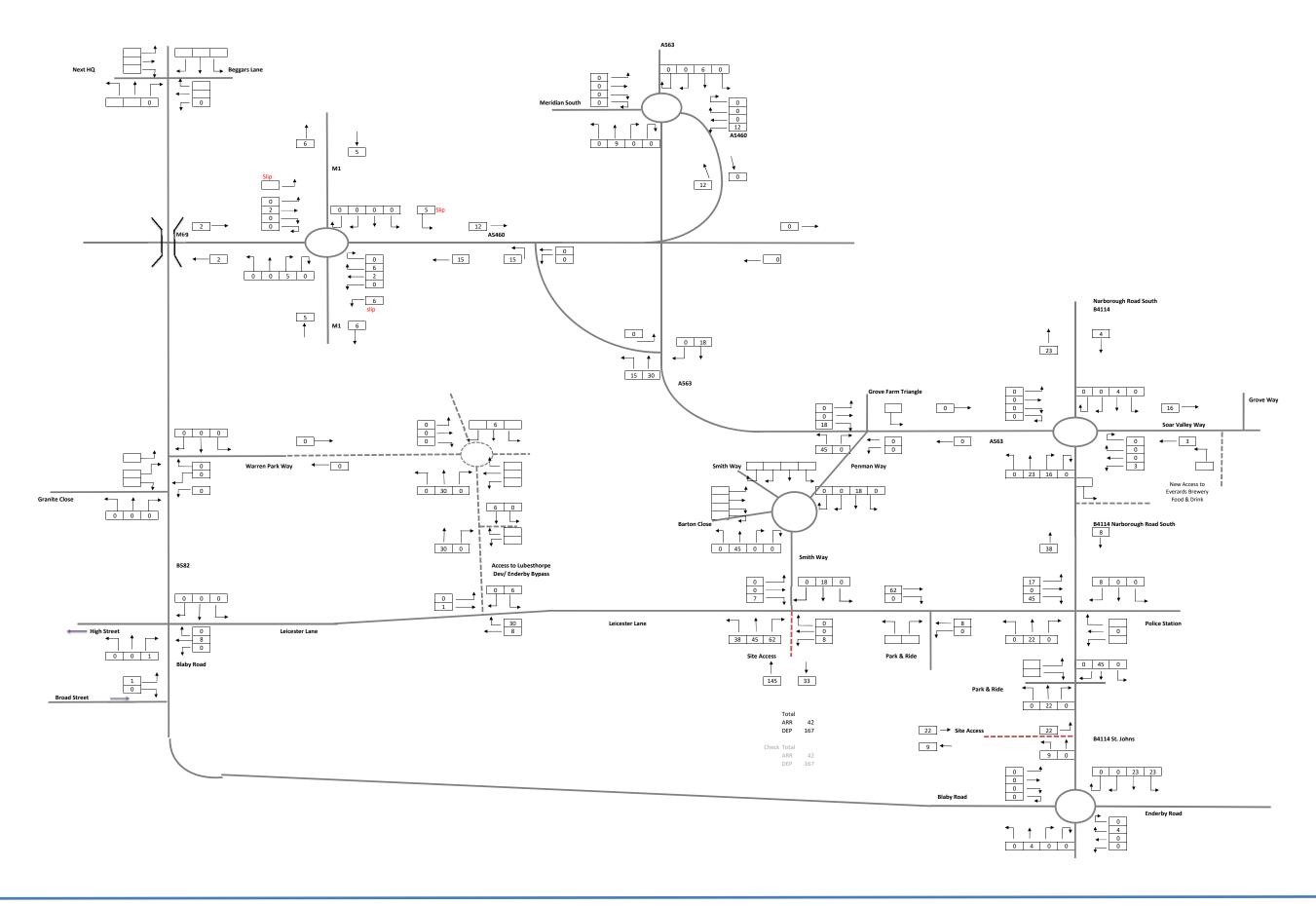
















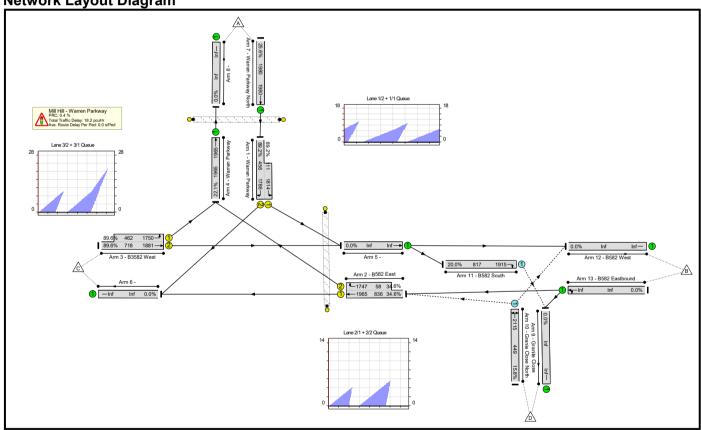
### **Appendix I – Junction Analysis Output**

### **Basic Results Summary**

**User and Project Details** 

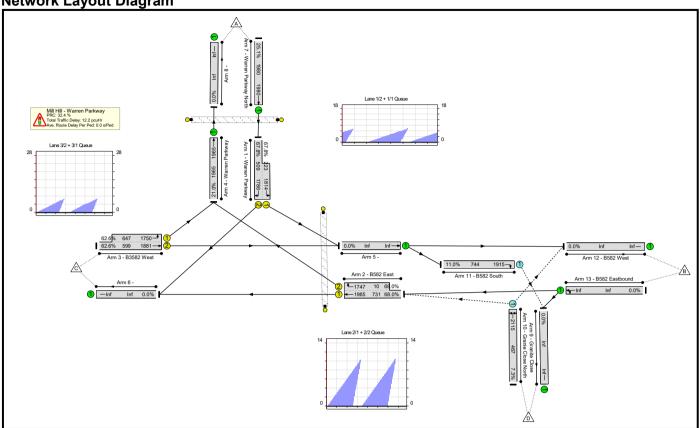
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Location:	Mill Hill Leicestershire
Additional detail:	
File name:	Mill Hill - Warren Parkway Proposed Highway Imp New - All Red Stage_150817.lsg3x
Author:	АЈМ
Company:	RPS Group
Address:	

Scenario 1: '2021 AM Peak with Enderby Bypass Part Com with Dev Ped Every Other Cycle' (FG1: '2021 AM Peak with Enderby Bypass Part Com with Dev', Plan 1: 'Filter C')



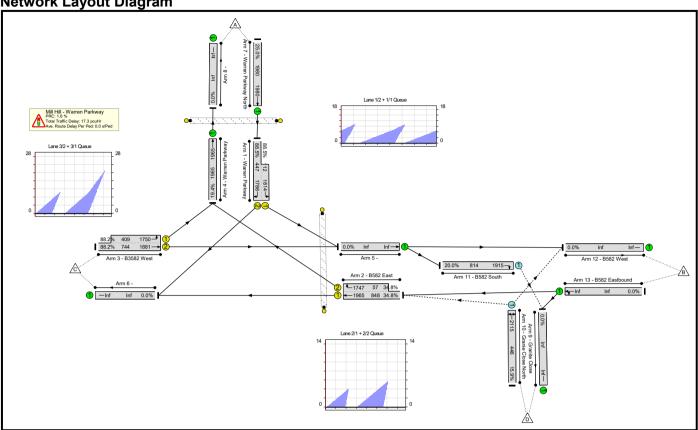
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill - Warren Parkway Proposed Highway Improvwements	-	-	-		-	-	-	-	-	-	89.6%	234	0	0	18.2	-	-
Mill Hill - Warren Parkway	-	-	-		-	-	-	-	-	-	89.6%	234	0	0	18.2	-	-
1/2+1/1	Warren Parkway Left Right	U	А	G	2	48	0	506	1786:1814	456+111	89.2 : 89.2%	-	-	-	7.9	56.1	14.4
2/1+2/2	B582 East Right Ahead	U	В		2	76	-	309	1965:1747	836+58	34.6 : 34.6%	-	-	-	1.7	20.3	5.8
3/2+3/1	B3582 West Left Ahead	U	D	С	2	86:144	58	1058	1881:1750	718+462	89.6 : 89.6%	-	-	-	8.0	27.3	25.2
4/1	Warren Parkway Ahead	U	-		-	-	-	434	1965	1965	22.1%	-	-	-	0.1	1.2	0.1
7/1	Warren Parkway North Ahead	U	-		-	-	-	506	1980	1980	25.6%	-	-	-	0.2	1.2	0.2
10/1	Granie Close North Left Right	0	-		-	-	-	71	2115	449	15.8%	71	0	0	0.1	4.8	0.1
11/1	B582 South Right	0	-		-	-	-	163	1915	817	20.0%	163	0	0	0.1	2.8	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	9	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
	C	C1	PF	RC for Sign PRC Over	alled Lanes All Lanes (	(%): %):	0.4 0.4	Total Del Tota	lay for Signalled al Delay Over A	Lanes (pcuH Il Lanes(pcuH	lr): 17 lr): 18	7.64 C 3.18	ycle Time (s): 180	)	L	<u> </u>	-

Scenario 2: '2021 PM Peak with Enderby Bypass Part Com with Dev Ped Every Other cycle' (FG2: '2021 PM Peak with Enderby Bypass Part Com With Dev', Plan 1: 'Filter C')



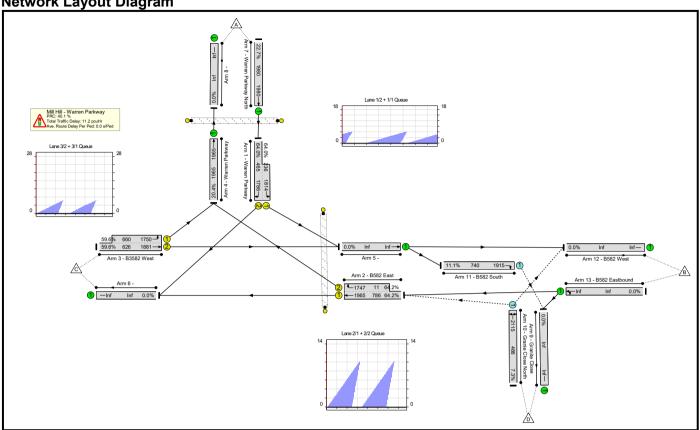
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill - Warren Parkway Proposed Highway Improvwements	-	-	-		-	-	-	-	-	-	68.0%	116	0	0	12.2	-	-
Mill Hill - Warren Parkway	-	-	-		-	-	-	-	-	-	68.0%	116	0	0	12.2	-	-
1/2+1/1	Warren Parkway Left Right	U	А	G	2	59	0	496	1786:1814	509+223	67.8 : 67.8%	-	-	-	4.3	31.1	8.3
2/1+2/2	B582 East Right Ahead	U	В		2	65	-	504	1965:1747	731+10	68.0 : 68.0%	-	-	-	4.4	31.2	11.5
3/2+3/1	B3582 West Left Ahead	U	D	С	2	75:144	69	780	1881:1750	599+647	62.6 : 62.6%	-	-	-	3.1	14.4	7.5
4/1	Warren Parkway Ahead	U	-		-	-	-	412	1965	1965	21.0%	-	-	-	0.1	1.2	0.1
7/1	Warren Parkway North Ahead	U	-		-	-	-	496	1980	1980	25.1%	-	-	-	0.2	1.2	0.2
10/1	Granie Close North Left Right	0	-		-	-	-	34	2115	467	7.3%	34	0	0	0.0	4.2	0.0
11/1	B582 South Right	0	-		-	-	-	82	1915	744	11.0%	82	0	0	0.1	2.7	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	9	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
	C	C1	PF	RC for Sign PRC Over	alled Lanes All Lanes (	(%): 3 %): 3	32.4 32.4	Total Del Tota	lay for Signalled al Delay Over A	Lanes (pcuH Il Lanes(pcuH	lr): 11 lr): 12	.77 C	ycle Time (s): 180	)	L.	•	

Scenario 3: '2026 AM Peak with Enderby Bypass Full Com with Dev Ped Every Other Cycle' (FG3: '2026 AM Peak with Enderby Bypass Part Com with Dev', Plan 1: 'Filter C')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill - Warren Parkway Proposed Highway Improvwements	-	-	-		-	-	-	-	-	-	88.5%	234	0	0	17.3	-	-
Mill Hill - Warren Parkway	-	-	-		-	-	-	-	-	-	88.5%	234	0	0	17.3	-	-
1/2+1/1	Warren Parkway Left Right	U	А	G	2	47	0	495	1786:1814	447+112	88.5 : 88.5%	-	-	-	7.6	55.4	13.6
2/1+2/2	B582 East Right Ahead	U	В		2	77	-	315	1965:1747	848+57	34.8 : 34.8%	-	-	-	1.8	20.0	5.9
3/2+3/1	B3582 West Left Ahead	U	D	С	2	87:144	57	1017	1881:1750	744+409	88.2 : 88.2%	-	-	-	7.5	26.4	24.6
4/1	Warren Parkway Ahead	U	-		-	-	-	381	1965	1965	19.4%	-	-	-	0.1	1.1	0.1
7/1	Warren Parkway North Ahead	U	-		-	-	-	495	1980	1980	25.0%	-	-	-	0.2	1.2	0.2
10/1	Granie Close North Left Right	0	-		-	-	-	71	2115	446	15.9%	71	0	0	0.1	4.8	0.1
11/1	B582 South Right	0	-		-	-	-	163	1915	814	20.0%	163	0	0	0.1	2.8	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	9	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
	C	C1	PF	RC for Sign PRC Over	alled Lanes All Lanes (	(%): %):	1.6 1.6		ay for Signalled al Delay Over A			5.82 C	ycle Time (s): 180	)	<del>!</del>	<del>!</del>	•

Scenario 4: '2026 PM Peak with Enderby Bypass Full Com with Dev Ped Every Other cycle' (FG4: '2026 PM Peak with Enderby Bypass Part Com With Dev', Plan 1: 'Filter C')



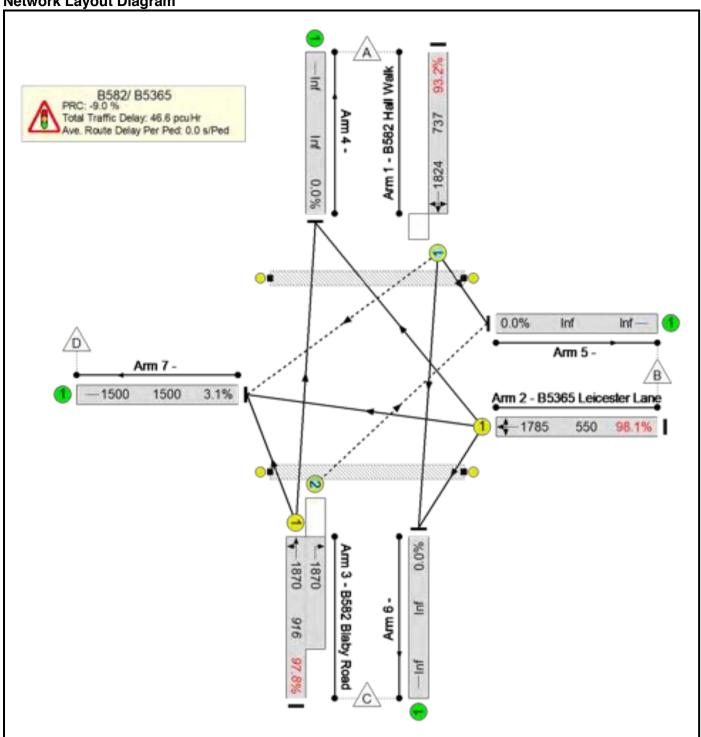
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Mill Hill - Warren Parkway Proposed Highway Improvwements	-	-	-		-	-	-	-	-	-	64.2%	116	0	0	11.2	-	-
Mill Hill - Warren Parkway	-	-	-		-	-	-	-	-	-	64.2%	116	0	0	11.2	-	-
1/2+1/1	Warren Parkway Left Right	U	А	G	2	54	0	449	1786:1814	465+236	64.0 : 64.0%	-	-	-	4.0	31.9	7.0
2/1+2/2	B582 East Right Ahead	U	В		2	70	-	512	1965:1747	786+11	64.2 : 64.2%	-	-	-	4.0	28.0	11.0
3/2+3/1	B3582 West Left Ahead	U	D	С	2	80:144	64	766	1881:1750	626+660	59.6 : 59.6%	-	-	-	2.8	13.2	7.1
4/1	Warren Parkway Ahead	U	-		-	-	-	400	1965	1965	20.4%	-	-	-	0.1	1.1	0.1
7/1	Warren Parkway North Ahead	U	-		-	-	-	449	1980	1980	22.7%	-	-	-	0.1	1.2	0.1
10/1	Granie Close North Left Right	0	-		-	-	-	34	2115	466	7.3%	34	0	0	0.0	4.2	0.0
11/1	B582 South Right	0	-		-	-	-	82	1915	740	11.1%	82	0	0	0.1	2.7	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	9	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
	(	C1	PF		alled Lanes All Lanes (		0.1 0.1		ay for Signalled al Delay Over A			).79 C	ycle Time (s): 180	)	<del>!</del>	<del>!</del>	

# Basic Results Summary Basic Results Summary

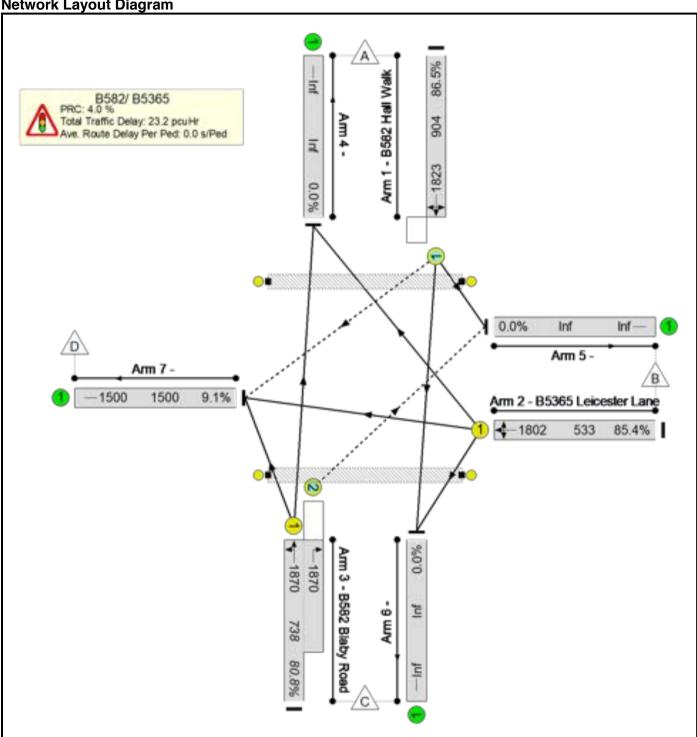
**User and Project Details** 

Project:	New Lubbesthorpe, Leicestershire
Title:	B582/ Leicester Lane Junction
Location:	Enderby, nr Leicester
File name:	B582-Leicester Ln (RPS DTM 230816)_220317.lsg3x
Author:	DMG
Company:	WSP
Address:	Unit 9 The Chase, Foxholes Business Park, Hertford, SG13 7NN
Notes:	

Scenario 1: '2015 AM Peak Base' (FG1: '2015 AM Peak Base', Plan 1: 'Network Control Plan 1')

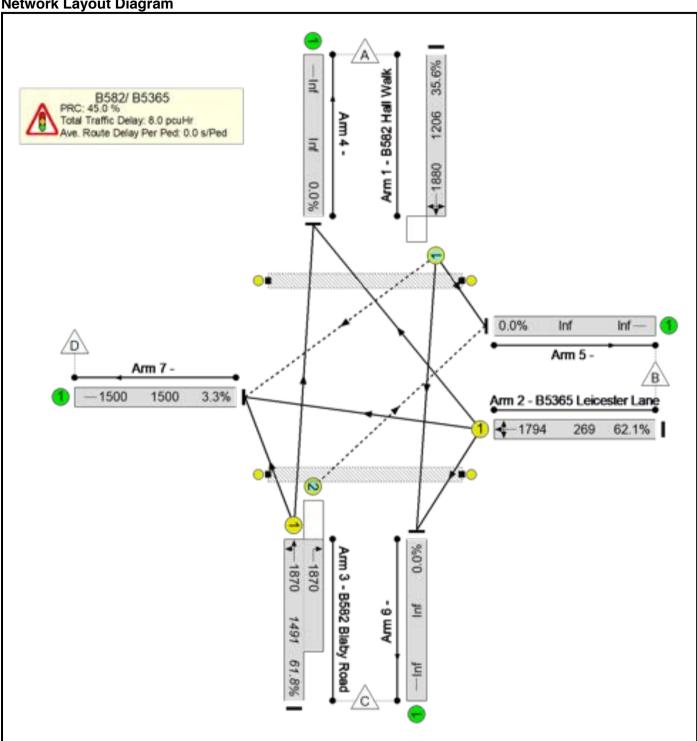


Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	98.1%	38	226	82	46.6	-	
B582/ B5365	-	-	-		-	-	-	-	-	-	98.1%	38	226	82	46.6	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	95	-	687	1824	737	93.2%	8	0	0	12.2	63.7	28.7
2/1	Leicester Lane Right Left Ahead	U	D		2	72	-	540	1785	550	98.1%	-	-	-	15.6	103.8	29.3
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	128	27	896	1870:1870	916	97.8%	30	226	82	18.8	75.6	27.6
7/1		U	-		-	-	-	46	1500	1500	3.1%	-	-	-	0.0	1.2	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalled RC Over All		-9.0 -9.0		otal Delay for Sig Total Delay C			46.55 46.56	Cycle Time (s):	240		_	



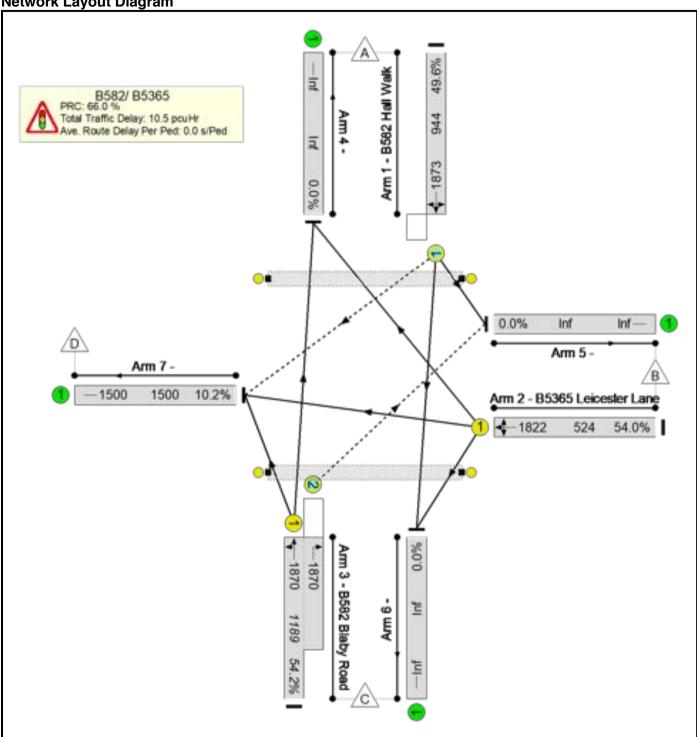
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	86.5%	82	78	44	23.2	-	-
B582/ B5365	-	-	-		-	-	-	-	-	-	86.5%	82	78	44	23.2	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	117	-	782	1823	904	86.5%	12	0	0	8.9	40.8	26.1
2/1	Leicester Lane Right Left Ahead	U	D		2	69	-	455	1802	533	85.4%	-	-	-	7.8	61.4	17.3
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	131	8	596	1870:1870	738	80.8%	70	78	44	6.5	39.3	9.7
7/1		U	-		-	-	-	136	1500	1500	9.1%	-	-	-	0.0	1.3	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	1	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalle RC Over All		4.0 4.0		tal Delay for Sig Total Delay C			23.13 23.18	Cycle Time (s):	240			

Scenario 3: '2021 AM Peak With Enderby Bypass Part com With dev' (FG3: '2021 AM Peak With Enderby Bypass Plus Part Com With Dev', Plan 1: 'Network Control Plan 1')



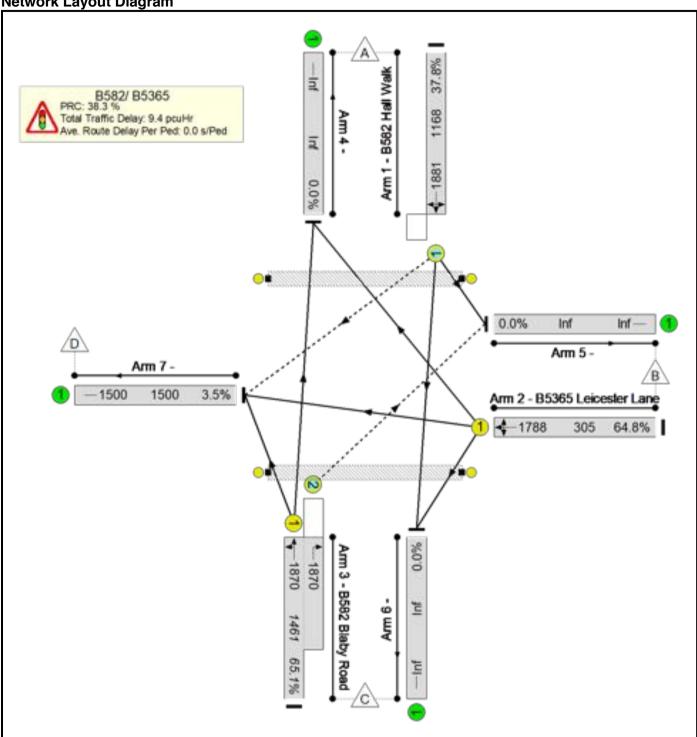
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	62.1%	340	15	9	8.0	-	-
B582/ B5365	-	-	-		-	-	-	-	-	-	62.1%	340	15	9	8.0	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	152	-	430	1880	1206	35.6%	8	0	0	1.5	12.4	7.1
2/1	Leicester Lane Right Left Ahead	U	D		2	34	-	167	1794	269	62.1%	-	-	-	3.0	65.2	6.0
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	166	8	922	1870:1870	1491	61.8%	332	15	9	3.5	13.7	9.1
7/1		U	-		-	-	-	49	1500	1500	3.3%	-	-	-	0.0	1.2	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	D1		for Signalled RC Over All		): 45.0 45.0		otal Delay for Sig Total Delay C			8.02 8.03	Cycle Time (s):	240	-	-	

Scenario 4: '2021 PM Peak With Enderby Bypass Part com with dev' (FG4: '2021 PM Peak With Enderby Bypass Plus Part Com With Dev', Plan 1: 'Network Control Plan 1')



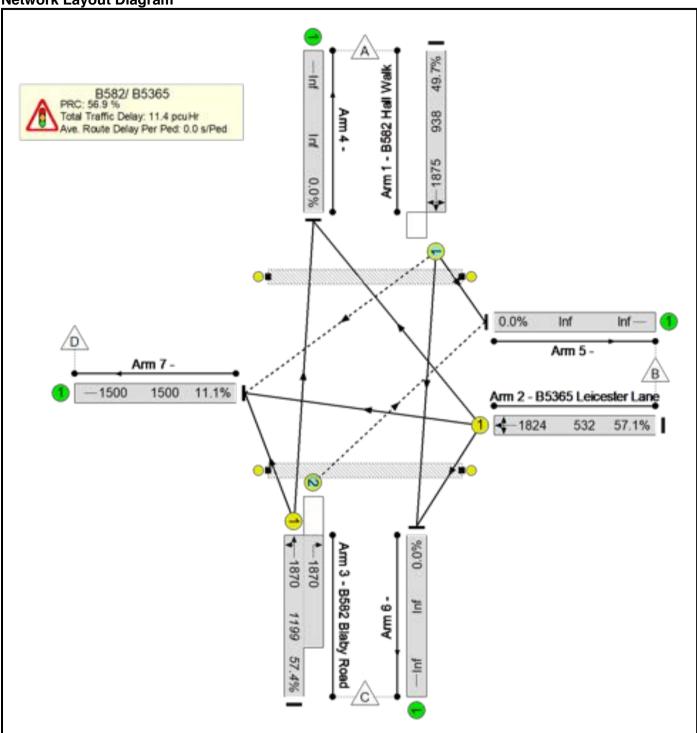
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	54.2%	201	8	5	10.5	-	-
B582/ B5365	-	-	-		-	-	-	-	-	-	54.2%	201	8	5	10.5	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	119	-	468	1873	944	49.6%	12	0	0	3.1	23.6	10.8
2/1	Leicester Lane Right Left Ahead	U	D		2	67	-	283	1822	524	54.0%	-	-	-	3.4	43.5	8.5
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	133	8	645	1870:1870	1189	54.2%	189	8	5	4.0	22.2	9.1
7/1		U	-		-	-	-	153	1500	1500	10.2%	-	-	-	0.1	1.3	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalle RC Over All		): 66.0 66.0		otal Delay for Sig Total Delay C	nalled Lanes Over All Lanes		10.45 10.51	Cycle Time (s):	240			

Scenario 5: '2026 AM Peak with Enderby Bypass Full com With Dev' (FG5: '2026 AM Peak With Enderby Bypass Part Com with Dev', Plan 1: 'Network Control Plan 1')



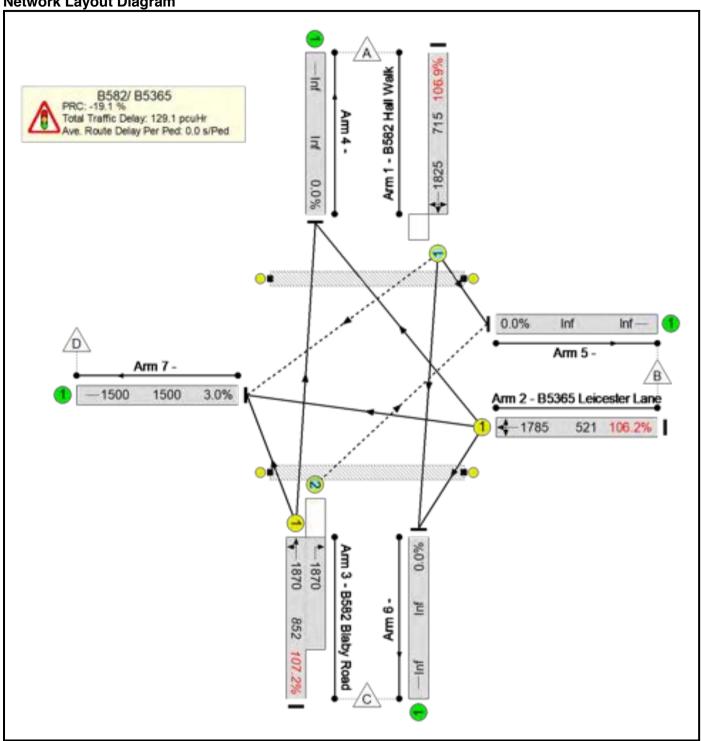
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	65.1%	362	16	9	9.4	-	-
B582/ B5365	-	-	-		-	-	-	-	-	-	65.1%	362	16	9	9.4	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	147	-	442	1881	1168	37.8%	8	0	0	1.7	13.9	7.7
2/1	Leicester Lane Right Left Ahead	U	D		2	39	-	198	1788	305	64.8%	-	-	-	3.5	62.9	7.2
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	161	8	951	1870:1870	1461	65.1%	354	16	9	4.3	16.1	9.8
7/1		U	-		-	-	-	53	1500	1500	3.5%	-	-	-	0.0	1.2	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	1	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	 C1		for Signalle RC Over All		38.3 38.3	To	tal Delay for Sig Total Delay C			9.43 9.44	Cycle Time (s):	240			

Scenario 6: '2026 PM Peak with Enderby Bypass Full com with dev' (FG6: '2026 PM Peak With Enderby Bypass Part Com with Dev', Plan 1: 'Network Control Plan 1')



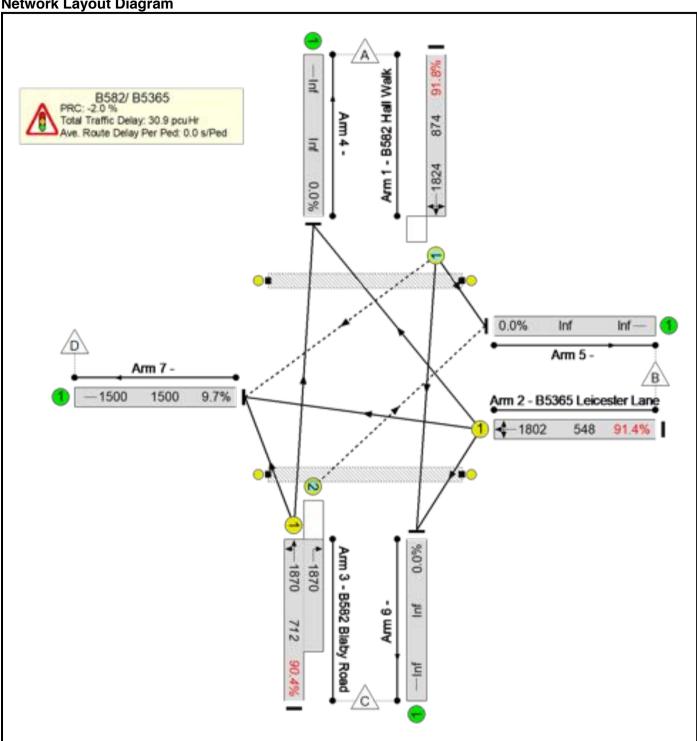
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	57.4%	233	10	6	11.4	-	,
B582/ B5365	-	-	-		-	-	-	-	-	-	57.4%	233	10	6	11.4	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	118	-	466	1875	938	49.7%	12	0	0	3.1	23.9	10.7
2/1	Leicester Lane Right Left Ahead	U	D		2	68	-	304	1824	532	57.1%	-	-	-	3.7	44.0	9.2
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	132	8	688	1870:1870	1199	57.4%	221	10	6	4.5	23.6	9.3
7/1		U	-		-	-	-	166	1500	1500	11.1%	-	-	-	0.1	1.3	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	E		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalled RC Over All		56.9 56.9		otal Delay for Sig Total Delay C			11.31 11.37	Cycle Time (s):	240	-	-	

Scenario 7: '2021 AM Peak Without Enderby Bypass Part com No Dev' (FG7: '2021 AM Peak Without Enderby Bypass Plus Part Com No Dev', Plan 1: 'Network Control Plan 1')



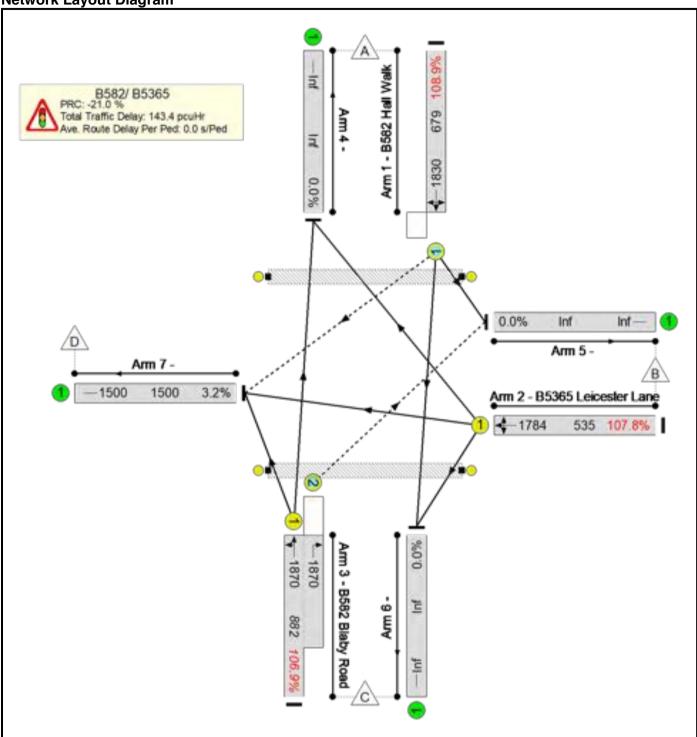
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-		-		-	-	-	-	-	-	107.2%	7	277	47	129.1	-	-
B582/ B5365	-	•	-		-	-	-	-	-	-	107.2%	7	277	47	129.1	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	92	-	764	1825	715	106.9%	7	0	0	44.8	211.0	62.8
2/1	Leicester Lane Right Left Ahead	U	D		2	68	-	553	1785	521	106.2%	-	-	-	34.8	226.4	50.2
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	132	34	913	1870:1870	852	107.2%	0	277	47	49.5	195.3	67.7
7/1		U	-		-	-	-	48	1500	1500	3.0%	-	-	-	0.0	1.2	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	1	E		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		(	C1		for Signalle RC Over All				otal Delay for Siç Total Delay (	gnalled Lanes Over All Lanes		129.09 129.10	Cycle Time (s):	240			

Scenario 8: '2021 PM Peak Without Enderby Bypass Part com No Dev' (FG8: '2021 PM Peak Without Enderby Bypass Plus Part Com No Dev', Plan 1: 'Network Control Plan 1')



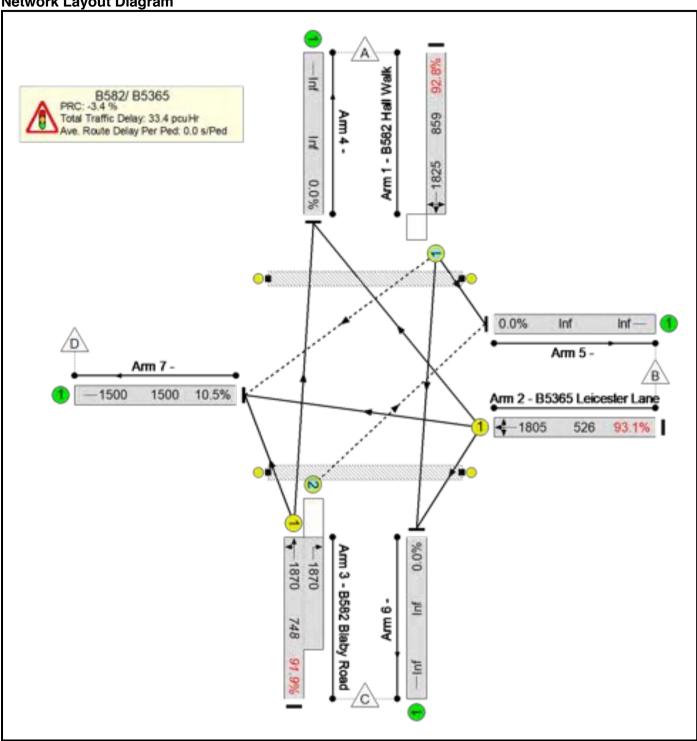
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	91.8%	52	93	69	30.9	-	
B582/ B5365	-	-	-		-	-	-	-	-	-	91.8%	52	93	69	30.9	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	113	-	802	1824	874	91.8%	12	0	0	11.4	51.1	30.3
2/1	Leicester Lane Right Left Ahead	U	D		2	71	-	501	1802	548	91.4%	-	-	-	10.2	73.1	22.6
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	129	10	644	1870:1870	712	90.4%	40	93	69	9.3	51.9	13.0
7/1		U	-		-	-	-	146	1500	1500	9.7%	-	-	-	0.1	1.3	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalled RC Over All		: -2.0 -2.0		otal Delay for Sig Total Delay C			30.85 30.91	Cycle Time (s):	240		_	

Scenario 9: '2026 AM Peak without Enderby Bypass Full com no Dev' (FG9: '2026 AM Peak Without Enderby Bypass Full Com No Dev', Plan 1: 'Network Control Plan 1')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	108.9%	7	300	47	143.4	-	-
B582/ B5365	-	-	-		-	-	-	-	-	-	108.9%	7	300	47	143.4	-	-
1/1	B582 Hall Walk Left Ahead Right	0	В		2	87	-	739	1830	679	108.9%	7	0	0	50.8	247.3	68.9
2/1	Leicester Lane Right Left Ahead	U	D		2	70	-	577	1784	535	107.8%	-	-	-	40.3	251.6	56.5
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	130	37	943	1870:1870	882	106.9%	0	300	47	52.3	199.6	72.5
7/1		U	-		-	-	-	52	1500	1500	3.2%	-	-	-	0.0	1.2	0.0
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	Е		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		(	C1		for Signalle RC Over All				otal Delay for Siç Total Delay (	gnalled Lanes Over All Lanes		143.39 143.41	Cycle Time (s):	240	-	-	

Scenario 10: '2026 PM Peak without Enderby Bypass Full com no dev' (FG10: '2026 PM Peak Without Enderby Bypass Full Com No dev', Plan 1: 'Network Control Plan 1')

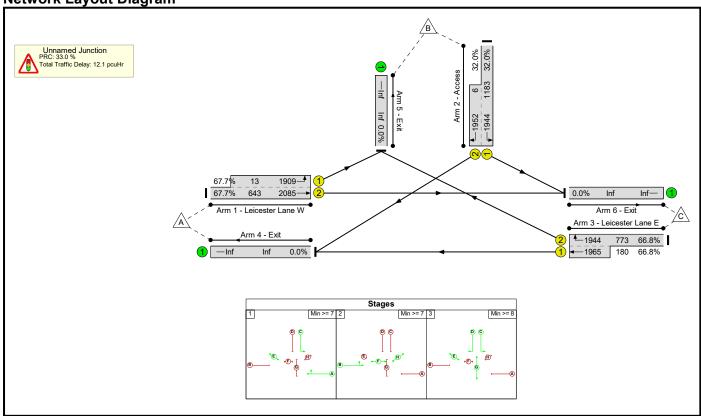


Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: B582/ B5365 Junction	-	-	-		-	-	-	-	-	-	93.1%	46	132	69	33.4	-	-
B582/ B5365		-	-		-	-	-	-	-	-	93.1%	46	132	69	33.4	-	
1/1	B582 Hall Walk Left Ahead Right	0	В		2	111	-	797	1825	859	92.8%	12	0	0	12.1	54.5	30.9
2/1	Leicester Lane Right Left Ahead	U	D		2	68	-	490	1805	526	93.1%	-	-	-	10.9	80.2	22.8
3/1+3/2	B582 Blaby Road Ahead Right Left	U+O	А	С	2	132	15	687	1870:1870	748	91.9%	34	132	69	10.3	54.1	14.5
7/1		U	-		-	-	-	158	1500	1500	10.5%	-	-	-	0.1	1.3	0.1
Ped Link: P1	Unnamed Ped Link	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	E		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
		C	21		for Signalled RC Over All		: -3.4 -3.4	To	otal Delay for Sig Total Delay C			33.30 33.36	Cycle Time (s):	240	-	_	-

**User and Project Details** 

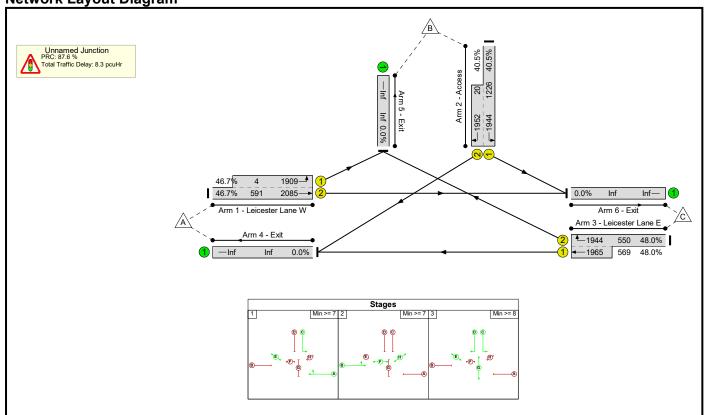
Project:	Junction 21 Stategic Employment Site Access
Title:	LCC Design
Location:	
File name:	Leicester Road Enderby Access Arrangement Final Scheme 220317.lsg3x
Author:	Andy Stinson
Company:	Leicestershire County Council
Address:	
Notes:	

Scenario 1: '2021 AM Peak With Enderby Bypass Part Com With Dev' (FG1: '2021 AM Peak With Enderby Bypass Part Com With Dev', Plan 1: 'Network Control Plan 1')



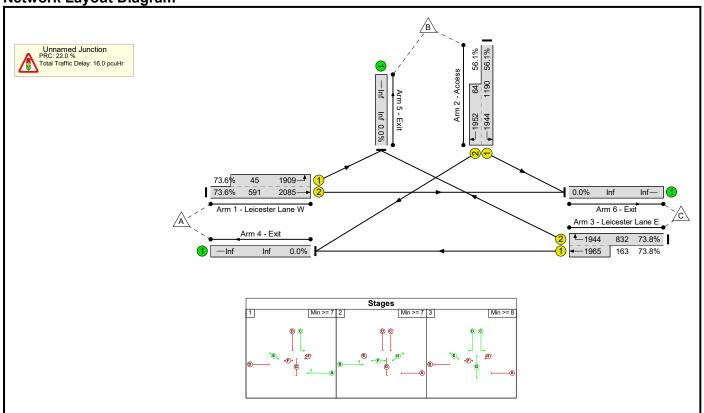
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	67.7%	0	0	0	12.1	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	67.7%	0	0	0	12.1	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	36	-	444	2085:1909	643+13	67.7 : 67.7%	-	-	-	5.5	44.5	13.6
2/1+2/2	Access Right Left	U	C D		1	72:12	-	380	1944:1952	1183+6	32.0 : 32.0%	-	-	-	1.5	13.8	6.3
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	55	-	636	1944:1965	773+180	66.8 : 66.8%	-	-	-	5.2	29.2	15.9
			C1		C for Signalle PRC Over Al				otal Delay for Si Total Delay	gnalled Lanes Over All Lanes		12.11 12.11	Cycle Time (s):	120			

Scenario 2: '2021 PM Peak With Enderby Bypass Part Com With Dev' (FG2: '2021 PM Peak With Enderby Bypass Part Com With Dev', Plan 1: 'Network Control Plan 1')



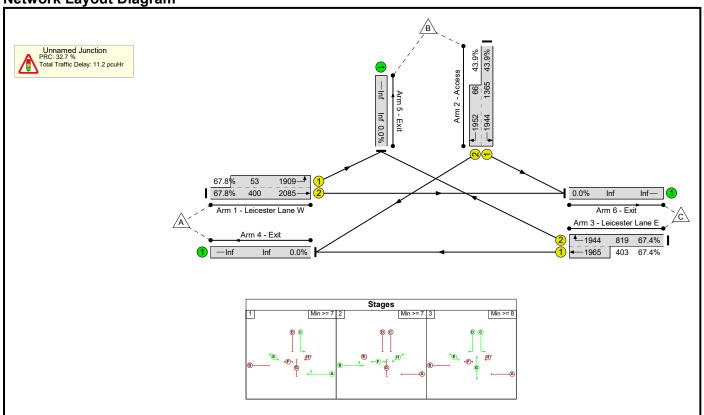
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Green	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	48.0%	0	0	0	8.3	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	48.0%	0	0	0	8.3	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	33	-	278	2085:1909	591+4	46.7 : 46.7%	-	-	-	3.2	41.2	8.0
2/1+2/2	Access Right Left	U	C D		1	75:12	-	505	1944:1952	1226+20	40.5 : 40.5%	-	-	-	1.9	13.9	8.5
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	58	-	537	1944:1965	550+569	48.0 : 48.0%	-	-	-	3.1	21.1	6.0
			C1		C for Signalle PRC Over Al				otal Delay for Si Total Delay	gnalled Lanes Over All Lanes		8.26 8.26	Cycle Time (s):	120			

Scenario 3: '2026 AM Peak With Enderby Bypass Full Com With Dev' (FG3: '2026 AM Peak With Enderby Bypass Full Com With Dev', Plan 1: 'Network Control Plan 1')



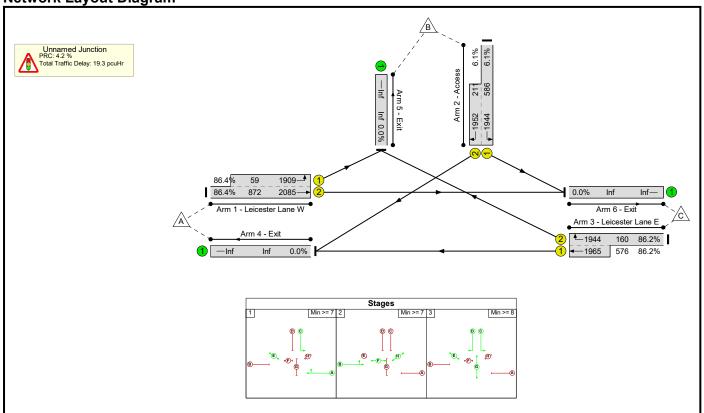
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-		-	-	-	73.8%	0	0	0	16.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	73.8%	0	0	0	16.0	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	33	-	468	2085:1909	591+45	73.6 : 73.6%	-	-	-	6.4	49.0	14.4
2/1+2/2	Access Right Left	U	CD		1	75:12	-	704	1944:1952	1190+64	56.1 : 56.1%	-	-	-	3.5	18.2	13.1
3/2+3/1	Leicester Lane E Ahead Right	U	Α		1	58	-	734	1944:1965	832+163	73.8 : 73.8%	-	-	-	6.1	30.1	19.5
			C1		C for Signalle PRC Over Al				otal Delay for Si Total Delay	gnalled Lanes Over All Lanes		16.04 16.04	Cycle Time (s):	120			

Scenario 4: '2026 PM Peak With Enderby Bypass Full Com With Dev' (FG4: '2026 PM Peak With Enderby Bypass Full Com With Dev', Plan 1: 'Network Control Plan 1')



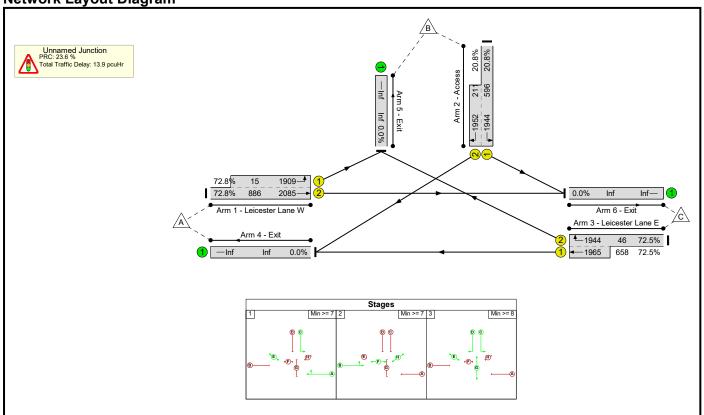
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	67.8%	0	0	0	11.2	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	67.8%	0	0	0	11.2	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	22	-	307	2085:1909	400+53	67.8 : 67.8%	-	-	-	4.8	56.7	9.4
2/1+2/2	Access Right Left	U	C D		1	86:12		629	1944:1952	1365+66	43.9 : 43.9%	-	-	-	1.9	10.7	8.2
3/2+3/1	Leicester Lane E Ahead Right	U	Α		1	69	-	824	1944:1965	819+403	67.4 : 67.4%	-	-	-	4.5	19.6	16.1
C1 PRC for Signalled Lanes (%): 32.7 Total Delay for Signalled Lanes (pcuHr): PRC Over All Lanes (%): 32.7 Total Delay Over All Lanes(pcuHr):												11.19 11.19	Cycle Time (s):	120			

Scenario 5: '2021 AM Peak Without Enderby Bypass Part Com No Dev' (FG5: '2021 AM Peak Without Enderby Bypass Part Com No Dev', Plan 1: 'Network Control Plan 1')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Green	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	86.4%	0	0	0	19.3	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	86.4%	0	0	0	19.3	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	50	-	804	2085:1909	872+59	86.4 : 86.4%	-	-	-	9.8	44.0	26.0
2/1+2/2	Access Right Left	U	C D		1	58:12	-	49	1944:1952	586+211	6.1 : 6.1%	-	-	-	0.4	26.8	0.7
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	41	-	634	1944:1965	160+576	86.2 : 86.2%	-	-	-	9.1	51.6	20.9
C1 PRC for Signalled Lanes (%): 4.2 Total Delay for Signalled Lanes (pcuHr): PRC Over All Lanes (%): 4.2 Total Delay Over All Lanes(pcuHr):										19.29 19.29	Cycle Time (s):	120					

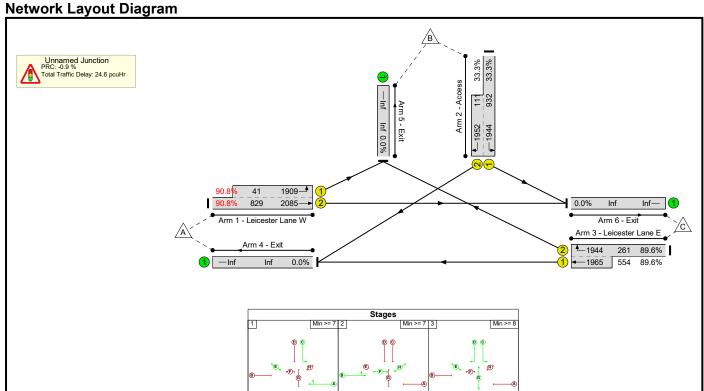
Scenario 6: '2021 PM Peak Without Enderby Bypass Part Com No Dev' (FG7: '2021 PM Peak Without Enderby Bypass Part Com No Dev', Plan 1: 'Network Control Plan 1')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-		-	-	-	72.8%	0	0	0	13.9	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	72.8%	0	0	0	13.9	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	50		656	2085:1909	886+15	72.8 : 72.8%	-	-	-	6.5	35.8	19.1
2/1+2/2	Access Right Left	U	C D		1	58:12		168	1944:1952	596+211	20.8 : 20.8%	-	-	-	1.3	27.8	2.4
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	41	1	510	1944:1965	46+658	72.5 : 72.5%	-	-	-	6.0	42.7	15.7
C1 PRC for Signalled Lanes (%): 23.6 Total Delay for Signalled Lanes (pcuHr): PRC Over All Lanes (%): 23.6 Total Delay Over All Lanes(pcuHr):										13.88 13.88	Cycle Time (s):	120					

Scenario 7: 'AM Peak 2026 Base + Full Committed (Future Year) + No Enderby Bypass' (FG6: 'AM Peak 2026

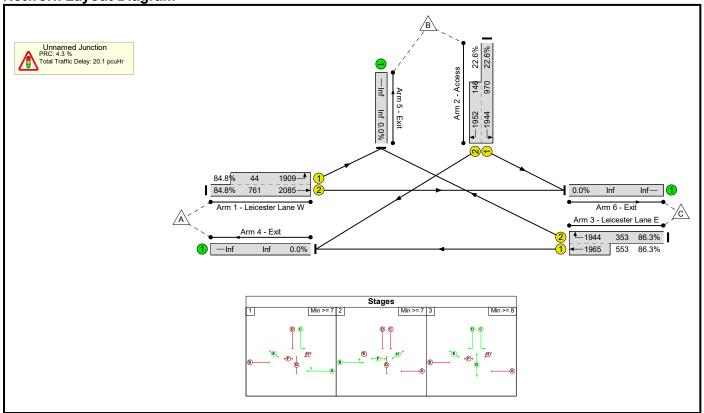
Base + Full Committed (Future Year) + No Enderby Bypass', Plan 1: 'Network Control Plan 1')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	90.8%	0	0	0	24.6	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	90.8%	0	0	0	24.6	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	47	-	790	2085:1909	829+41	90.8 : 90.8%	-	-	-	11.8	53.7	28.2
2/1+2/2	Access Right Left	U	CD		1	61:12	-	347	1944:1952	932+111	33.3 : 33.3%	-	-	-	2.2	22.7	6.2
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	44	-	730	1944:1965	261+554	89.6 : 89.6%	-	-	-	10.7	52.7	24.0
			C1	PRC for Signalled Lanes (%): -0.9 Total Delay for Signalled Lanes (pct PRC Over All Lanes (%): -0.9 Total Delay Over All Lanes(pct								24.64 24.64	Cycle Time (s):	120			

Scenario 8: 'PM Peak 2026 Base + Full Committed (Future Year) + No Enderby Bypass' (FG8: 'PM Peak 2026

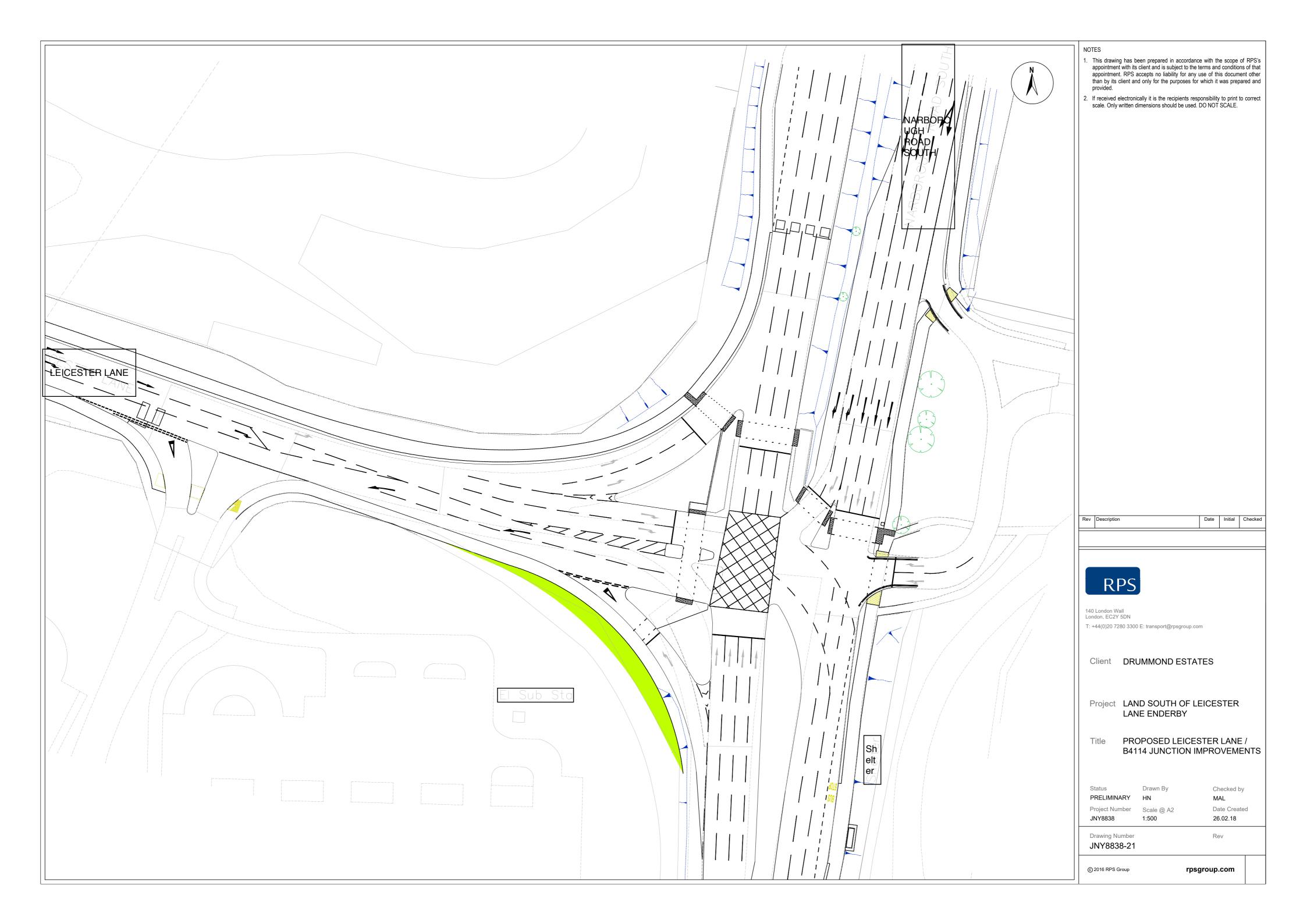
Base + Full Committed (Future Year) + No Enderby Bypass', Plan 1: 'Network Control Plan 1')



Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: LCC Design	-	-	-		-	-	-	-	-	-	86.3%	0	0	0	20.1	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	86.3%	0	0	0	20.1	-	-
1/2+1/1	Leicester Lane W Left Ahead	U	В		1	43	-	682	2085:1909	761+44	84.8 : 84.8%	-	-	-	9.2	48.4	22.4
2/1+2/2	Access Right Left	U	CD		1	65:12	-	252	1944:1952	970+146	22.6 : 22.6%	-	-	-	1.4	20.3	3.8
3/2+3/1	Leicester Lane E Ahead Right	U	А		1	48	-	782	1944:1965	353+553	86.3 : 86.3%	-	-	-	9.5	43.6	22.9
			C1		C for Signalle PRC Over Al				Fotal Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			20.06 20.06	Cycle Time (s):	120			



## **Appendix J – Potential Mitigation Measures**







## **Contact**

RPS Consulting Services Ltd 20 Farringdon Street London EC4A 4AB T: +44(0) 20 3691 0500 transport@rpsgroup.com

