

TECHNICAL NOTE

Project Name : Land South of B2233 Main Road and West of B2132 Bilsham Road

Job No. : 14-111

Note Title : Sensitivity Assessment of Development Impact on A27 / Yapton Lane

Author : TDM

Approved : RJH

Date : February 2018

1.0 INTRODUCTION

- 1.1 Odyssey have been commissioned by Landlink Estates and Gleeson Strategic Land to provide highways and transport advice for two proposed residential developments of up to 300 and 250 dwellings respectively.
- 1.2 Highways England (HE) have provided comments for both applications and raised the need for an assessment of the cumulative impact upon the A27 / Yapton Lane Junction because of these two developments and other committed or potentially committed development sites within Yapton. As such HE has asked for more information to be submitted before a decision can be made. A copy of HE comments can be found in **Appendix A**, for ease of reference.
- 1.3 This Technical Note (TN) sets out sensitivity tests of the A27 / Yapton Lane junction to allow HE to make an informed decision with respects the development impact upon the strategic highway network.

2.0 COMMITTED DEVELOPMENT

- 2.1 HE has indicated that the assessment should take account of five planning applications in Yapton, totalling 441 dwellings, these being:
- Y/80/16/OUT – Land South of Ford Lane and East of North End Road, Yapton – 100 Dwellings
 - WA/44/17/OUT – Land East of Tye Lane, Walberton – 175 Dwellings



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- Y/5/17/OUT Cinders Nursery & Land R/O Cinders Lane, Yapton – 51 Dwellings
- Y/44/17/OUT – Land at Stakers Farm, North End Road, Yapton – 70 Dwellings
- Y/49/17/OUT – Land at Street Buildings, North End Road, Yapton – 45 Dwellings

2.2 It should be noted that at the time of writing this report only the Y/80/16/OUT – 100 dwellings application had been granted planning consent, however to ensure a robust assessment both Landlink Estates and Gleeson Strategic have agreed to include all proposed development applications within the assessment.

3.0 TRAFFIC FLOWS

3.1 For the sensitivity tests to be undertaken, traffic flow information has been taken from the recently submitted Land East of Tye Lane application (WA/44/17/OUT).

3.2 To undertake a future year sensitivity test traffic data from the “2031 Local Plan with Mitigation scenario + Development” were examined. The end of Local Plan scenario included TEMPro growth rates from 2017 – 2031 equating to growth of c.350 dwellings. Also included were all strategic housing sites in Arun, while the proposed development sites for Landlink and Gleeson only considered as a total development of 400 units (as opposed to 550 which are now being proposed).

3.3 In order to bring the traffic flows up to date to include all ‘committed’ development requested by HE, traffic for an additional 416 dwellings has been added to the highway network. The traffic flows; as illustrated in **Appendix B**, therefore included:

- 2031 End of Local Plan + Development scenario flows;
- Traffic for additional 150 dwellings for Landlink and Gleeson development sites; and
- Traffic for the balance of 266 dwellings (441 – 175) as set out in **Section 2**.

3.4 Traffic for the development at Walberton (175 units) was not added to the traffic flows, as these are already included in the 2031 End of Local Plan + Development scenario base.



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Distribution and Assignment

- 3.5 Where development traffic has not been distributed and assigned to the local highway network within each respective application due to TA requirements, we have allocated the traffic using a gravity model approach, 'based' upon the distribution model utilised in the Walberton TA. **Appendix B** contains flow diagrams of the traffics flows used for this sensitivity test.

4.0 SENSITIVITY ASSESSMENT

- 4.1 The A27 / Yapton Lane junction has been assessed using PICADY. To ensure a robust assessment the sensitivity test models the 2031 end of Local Plan conditions including the additional 'committed' development requested by HE and the additional 150 dwellings representing the increase in development on the allocated site in Yapton.
- 4.2 To enable a comparison, the results submitted in the Walberton TA for the A27 / Yapton Lane junction are shown in **Table 4.1** along with the results for the sensitivity test. **Appendix C** contained the full PICADY assessment.

Table 4.1 – A27 / Yapton Lane Sensitivity Assessment

Arm	AM		PM	
	RFC	Queue (PCU)	RFC	Queue (PCU)
	2031 Base (From Walberton TA)			
A27	0.22	0	0.57	1
Yapton Lane	0.35	1	0.23	0
	2031 Base + Committed + Proposed Development			
A27	0.32	0	0.77	3
Yapton Lane	0.61	2	0.38	1

- 4.3 As can be seen while there will be a minor increase in queuing at the junction. This is very minimal, and the junction will continue to operate within capacity. It is therefore considered that the proposed development in Yapton, along with the cumulative impact of other developments will not represent a significant or 'severe impact' as prescribed by the National Planning Policy Framework (NPPF).



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- 4.4 This view is further supported when the findings of the Walberton TA are considered. The existing junction features a 110m right turn lane, with observed queueing spikes of up to 20-21 vehicles during the AM and PM peak periods. The results show that the cumulative impact of development in Yapton will increase this queueing by c.2 vehicles. **Appendix D** contains extracts from the Walberton TA that demonstrate the existing queueing conditions.
- 4.5 HE has conditioned improvements to the A27 / Yapton Lane junction as part of the Land South of Ford Lane and Land East of Tye Lane applications. Both developers show schemes to increase the right turn lane by c.80m in length allowing for 33 vehicles to wait clear of the main carriageway. The drawings submitted as part of these applications are included in **Appendix E**.
- 4.6 Given the junction is shown to operate within capacity without any improvements and that as the queue lengths will not exceed 25 vehicles it is considered that the improvements to be implemented by the above 'committed development' sites will negate the impact of all the proposed developments in Yapton.

5.0 SUMMARY AND CONCLUSION

- 5.1 This Technical Note has been prepared to provide HE with additional information with respects the potential impact upon the strategic highway network, namely the A27 / Yapton Lane junction.
- 5.2 HE has requested that additional committed or potentially committed developments in Yapton be considered as part of the impact assessment, totalling an additional 441 dwellings.
- 5.3 The capacity assessment shows that even when these 'committed' sites are considered the junction will continue to operate within capacity, and experience only a very minor increase in queue lengths.
- 5.4 It is therefore considered that no additional mitigation measures or contributions to works at the junction will be required as part of any planning permission that may be granted for the proposed development on land south of the B2233 Main Road and West of the B2132 Bilsham Road.

APPENDIX A

Highways England Comments

Bronte Welham

From: Amanda Scholes on behalf of Planning.Responses
Sent: 30 January 2018 08:33
To: Planning Scanning
Subject: FW: #4364 Planning Consultation on: Y/91/17/OUT

Sent: 29 January 2018 16:33
To: Planning.Responses
Cc: Planning SE; Bowie, David; Cleaver, Elizabeth
Subject: RE: #4364 Planning Consultation on: Y/91/17/OUT

For the attention of: Mr D Easton

Application No: Y/91/17/OUT

Site: Land at Bilsham Road, Yapton.

Proposal: Outline application for the development of up to 250 residential dwellings (Class C3), vehicular access, public open space, ancillary works and associated infrastructure. Departure from the Development Plan.

Highways England reference: 80287

Dear Mr Easton,

Thank you for your email of 17 January 2018 regarding the above application.

Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). The SRN is a critical national asset and as such Highways England works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Highways England will be concerned with proposals that have the potential to impact on the safe and efficient operation of the SRN, in this case the A27.

The strategic modelling undertaken to support the emerging Local Plan (the Arun Transport Study prepared by Systra) considered an allocation of 400 dwellings on this site. However, as an outline application for 300 dwellings has already been submitted on the same strategic site, the maximum permissible combined total for both applications can only be 400 dwellings without the provision of a robust Transport Assessment of the impacts on the A27 / Yapton Lane junction of the additional dwellings above that already assessed. In addition, a number of ad-hoc developments have been brought forward and are either committed or consented or now have every reasonable opportunity of being delivered in the current housing climate, which will also need to be included in the further modelling.

Therefore, at this time, there is insufficient information provided by the applicant on which to base an informed decision in relation to the potential impacts of the proposals on the SRN, and the following comments should be passed onto the applicant's transportation consultants:

Pre-Application Scoping

We note that a TA Scoping report was prepared and a meeting held with West Sussex county Council as the Local Highway Authority, who recommended that Highways England should be engaged regarding the A27. However, Highways England has not been consulted and require the development's cumulative impact on the A27 / Yapton Lane junction to be assessed for the end of Local Plan 2031 scenario (further details below).

Baseline Traffic Growth

We note that the baseline traffic growth methodology is outlined for the 2022 scenario but not for the 2031 scenario and thus details of this are requested.

Committed Development

We note the committed developments outlined. However, as indicated above, a number of ad-hoc developments have been brought forward and are either committed or consented or now have every reasonable opportunity of being delivered in the current housing climate, which will also need to be included in the cumulative assessment of the development's impact on the A27 / Yapton Lane junction for the end of Local Plan 2031 scenario. In addition to those included in the assessment, the following sites should be included for the 2031 modelling of the A27/Yapton Lane junction:

- Y/80/16/OUT - Land South of Ford Lane and East of North End Road, Yapton – 100 dwellings
- WA/44/17/OUT - Land East of Tye Lane, Walberton – 175 dwellings
- Y/5/17/OUT - Cinders Nursery & Land R/O Cinders Lane, Yapton, BN18 0JJ – 51 dwellings
- Y/44/17/OUT - Land at Stakers Farm, North End Road, Yapton BN18 0DU – 70 dwellings
- Y/49/17/OUT - Land at Street Buildings, North End Road, Yapton BN18 0DT – 45 dwellings

Distribution and Assignment

We note that there is no traffic flow diagram for development flows only in Appendix I and request that such a traffic flow diagram is provided to demonstrate the assignment of development traffic flows.

Traffic Impact Assessment

We note that a traffic impact assessment of the local junctions has been undertaken. However, no assessment of the A27 / Yapton Lane junction has been undertaken, and Highways England requests that a test is undertaken that assesses the development's cumulative impact on the A27 / Yapton Lane junction for the end of Local Plan 2031 scenario - this should include the cumulative development outlined above as well as a sensitivity test of the potential 600 dwellings at the strategic site, as it was considered that the site could support up to 600 dwellings by the inspectorate at Examination in Public in September 2017.

This advice is given in accordance with Planning Practice Guidance to the NPPF Paragraph: 013 Reference ID: 42-013-20140306. Therefore, our initial substantive response is that the Transport Assessment provided needs to demonstrate that the development will not result in a severe impact on the A27 / Yapton Lane junction (which should consider safety as well as capacity in accordance with the tests set out in DfT C2/13 para 10 and DCLG NPPF para 32), or recommend appropriate mitigations to achieve nil detriment in this regard. As such, Highways England's advice is to recommend that the application should not be determined until such time as the required information is provided and Highways England given opportunity to consider and make its final substantive response.

Regards,

Richard Franklin

Highways England Company Limited | Registered Office: Bridge House, 1 Walnut Tree Close,
Guildford GU1 4LZ | Registered in England and Wales No. 9346363

Web: www.highwaysengland.co.uk

Sent: 17 January 2018 10:48

To: Planning SE

Subject: #4364 Planning Consultation on: Y/91/17/OUT

To: Highways England

NOTIFICATION FROM ARUN DISTRICT COUNCIL

Town & Country Planning Act 1990 (as amended)

Town & country Planning (Development Management Procedure)

**(England) Order 2015 - Article 5 - Articles 16 & 18 Consultation before
the grant of permission**

Outline Consent

APPLICATION NO: Y/91/17/OUT

Registered: 14th December
2017

Site Address: Land at Bilsham Road Yapton

Grid Reference: 497590 102839

Description of Works: Outline application for the development of up to
250 residential dwellings (Class C3), vehicular
access, public open space, ancillary works and
associated infrastructure. Departure from the
Development Plan

The Council have received the above application. I shall be pleased to
receive any observations you may wish to make.

[Click here to view the application details](#)

**Should you have any comments to make, these should be sent by
replying to this email
by 01-FEB-18.**

You can also monitor the progress of this application through the Council
web site:

www.arun.gov.uk/planning

**Please be aware that any comments you may make will be available
on our website so please do not insert personal details or
signatures on your reply.**

In the absence of a reply within the period stated, I shall assume that you
have no observations to make.

The officer dealing with this application is Mr D Easton who can be

contacted on telephone number [REDACTED]

Regards
Planning Officer

consultee_email

<http://www.arun.gov.uk>

NLPG UPRN 100062237016

DX 57406 Littlehampton

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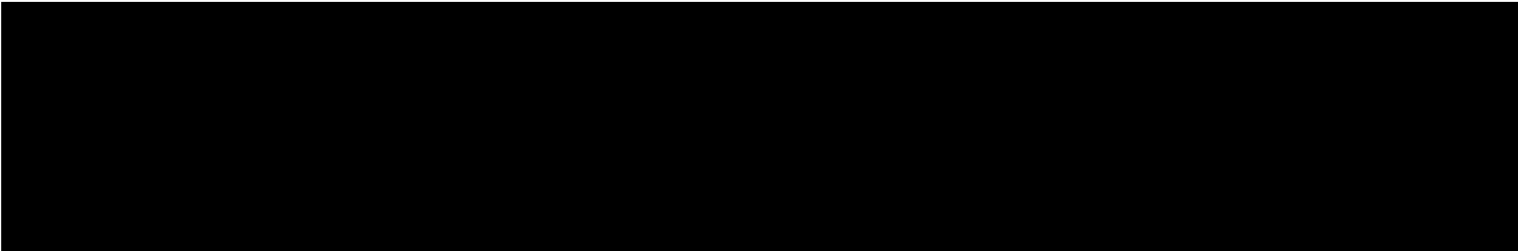
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Highways England Company Limited | General enquiries: 0300 123 5000 | National Traffic Operations Centre, 3 Ridgeway, Quinton Business Park, Birmingham B32 1AF |

<https://www.gov.uk/government/organisations/highways-england> | [REDACTED]

Registered in England and Wales no 9346363 | Registered Office: Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU1 4LZ

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From: Franklin, Richard [REDACTED]
Sent: 08 January 2018 16:00
To: Planning.Responses
Cc: Planning SE; Bown, Kevin; Bowie, David; Cleaver, Elizabeth
Subject: RE: Draft: RE: #4269 Planning Consultation on: Y/92/17/OUT

For the attention of: Mr D Easton

Application No: Y/92/17/OUT

Site: Land east of Drove Lane, Yapton, BN18 0EB.

Proposal: Outline application with all matters reserved save access, for up to 300 dwellings, link road, surface drainage, open space and landscaping. Departure from the Development Plan and Access route is within the Yapton (Main Road) Conservation Area.

Highways England reference: 80079

Dear Mr Easton,

Thank you for your email of 22 December 2017 regarding the above application.

Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). The SRN is a critical national asset and as such Highways England works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Highways England will be concerned with proposals that have the potential to impact on the safe and efficient operation of the SRN, in this case the A27.

The strategic modelling undertaken to support the emerging Local Plan (the Arun Transport Study prepared by Systra) considered an allocation of 400 dwellings on this site, and in that regard, HE are content with the initial 300 dwellings. However, since consideration by the inspectorate at Examination in Public in September 2017, it was established that this site could support up to 600 dwellings, and therefore such an allocation would need to be further tested on top of that already considered. In addition, a number of ad-hoc developments have been brought forward and are either committed or consented or now have every reasonable opportunity of being delivered in the current housing climate, which will also need to be included in the further modelling.

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is provided and Highways England given opportunity to consider and make its final substantive response.

Regards,

Sent on behalf of Kevin Bown, Spatial Planning Manager Area 4

Richard Franklin

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Web: www.highwaysengland.co.uk

From: planning.responses@arun.gov.uk [<mailto:planning.responses@arun.gov.uk>]

Sent: 22 December 2017 13:03

To: Planning SE

Subject: #4269 Planning Consultation on: Y/92/17/OUT

To: **Highways England**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

Town & Country Planning Act 1990 (as amended)

**Town & country Planning (Development Management Procedure) (England) Order 2015 -
Article 5 - Articles 16 & 18 Consultation before the grant of permission**

Outline Consent

APPLICATION NO: Y/92/17/OUT

Registered: 20th December
2017

Site Address: Land east of Drove Lane Yapton BN18 0EB

Grid Reference: 497380 103194

Description of Works: Outline application with all matters reserved save access, for up to 300 dwellings, link road, surface drainage, open space and landscaping. Departure from the Development Plan and Access route is within the Yapton (Main Road) Conservation Area.

The Council have received the above application. I shall be pleased to receive any observations you may wish to make.

[Click here to view the application details](#)

**Should you have any comments to make, these should be sent by replying to this email
by 01-FEB-18.**

You can also monitor the progress of this application through the Council web site:

www.arun.gov.uk/planning

Please be aware that any comments you may make will be available on our

website so please do not insert personal details or signatures on your reply.

In the absence of a reply within the period stated, I shall assume that you have no observations to make.

The officer dealing with this application is Mr D Easton who can be contacted on telephone number 01903 737619.

Regards
Planning Officer

consultee_email

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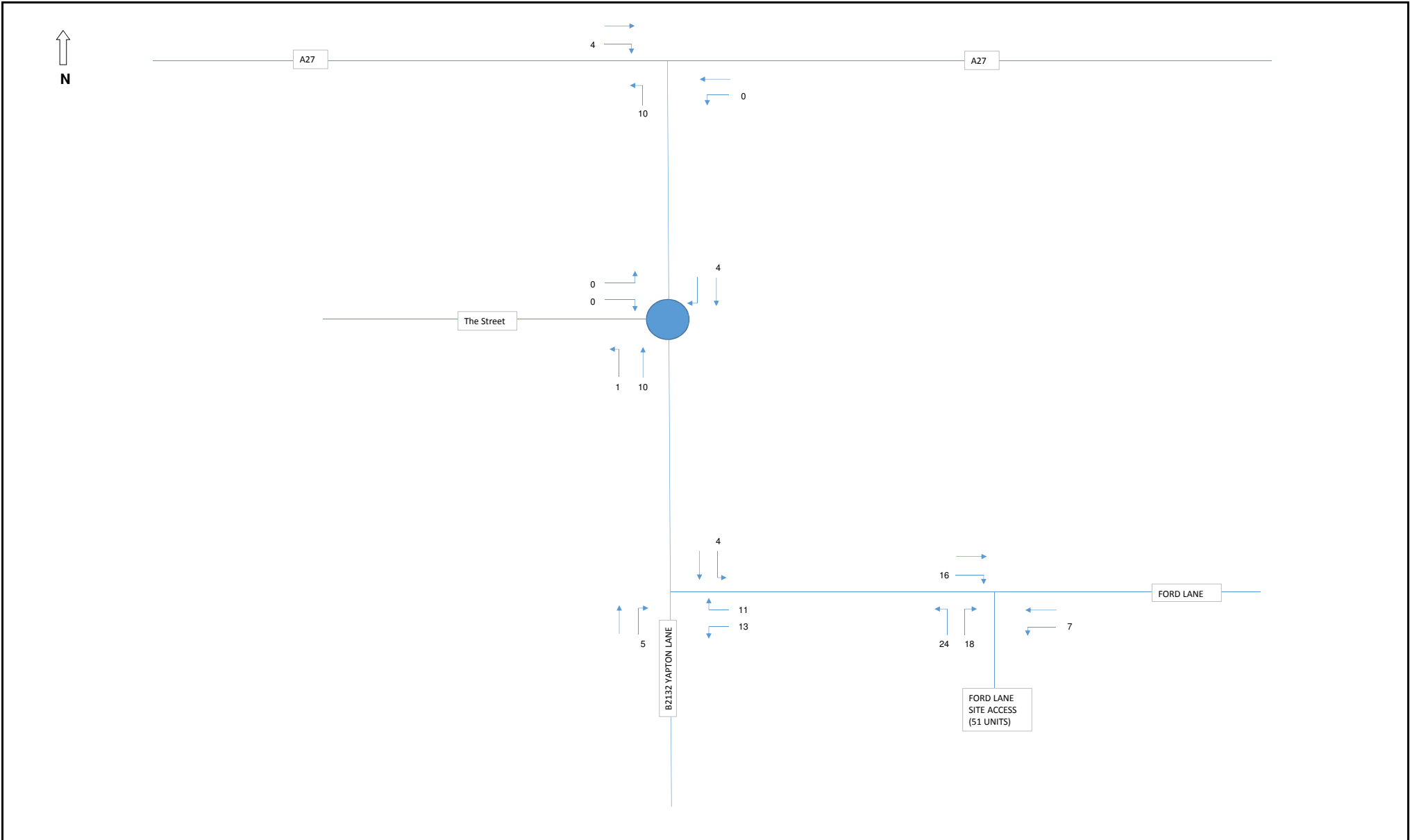
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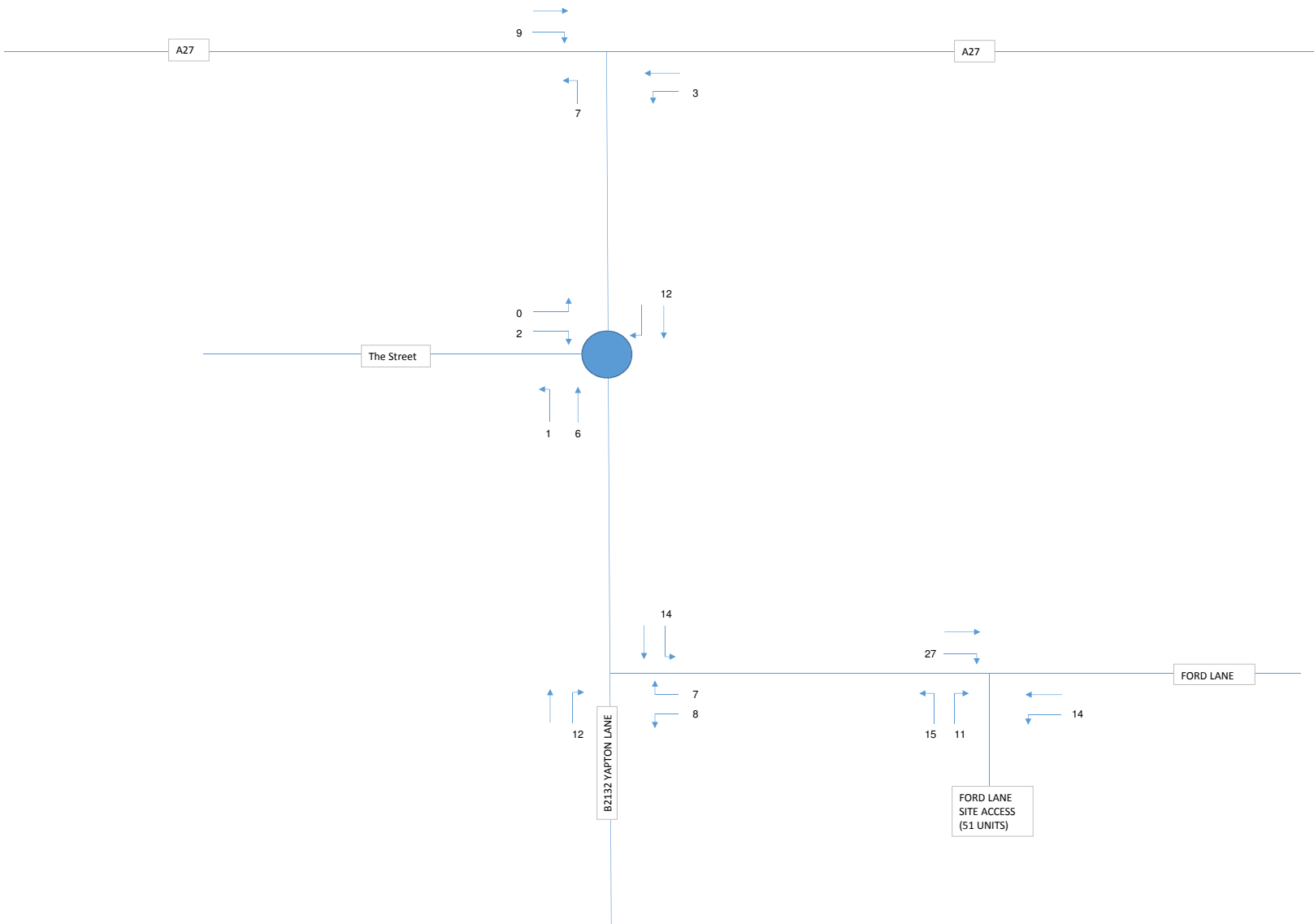
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APPENDIX B

Traffic Flow Diagrams



	LANDLINK ESTATES / GLEESON STRATEGIC	
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	Drawing Title: LAND SOUTH OF FORD LANE COMMITTED DEVELOPMENT - AM	Date: Feb-18
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Job Title:

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Drawing Title:

LAND SOUTH OF FORD LANE COMMITTED DEVELOPMENT - PM

Job No:

14-111

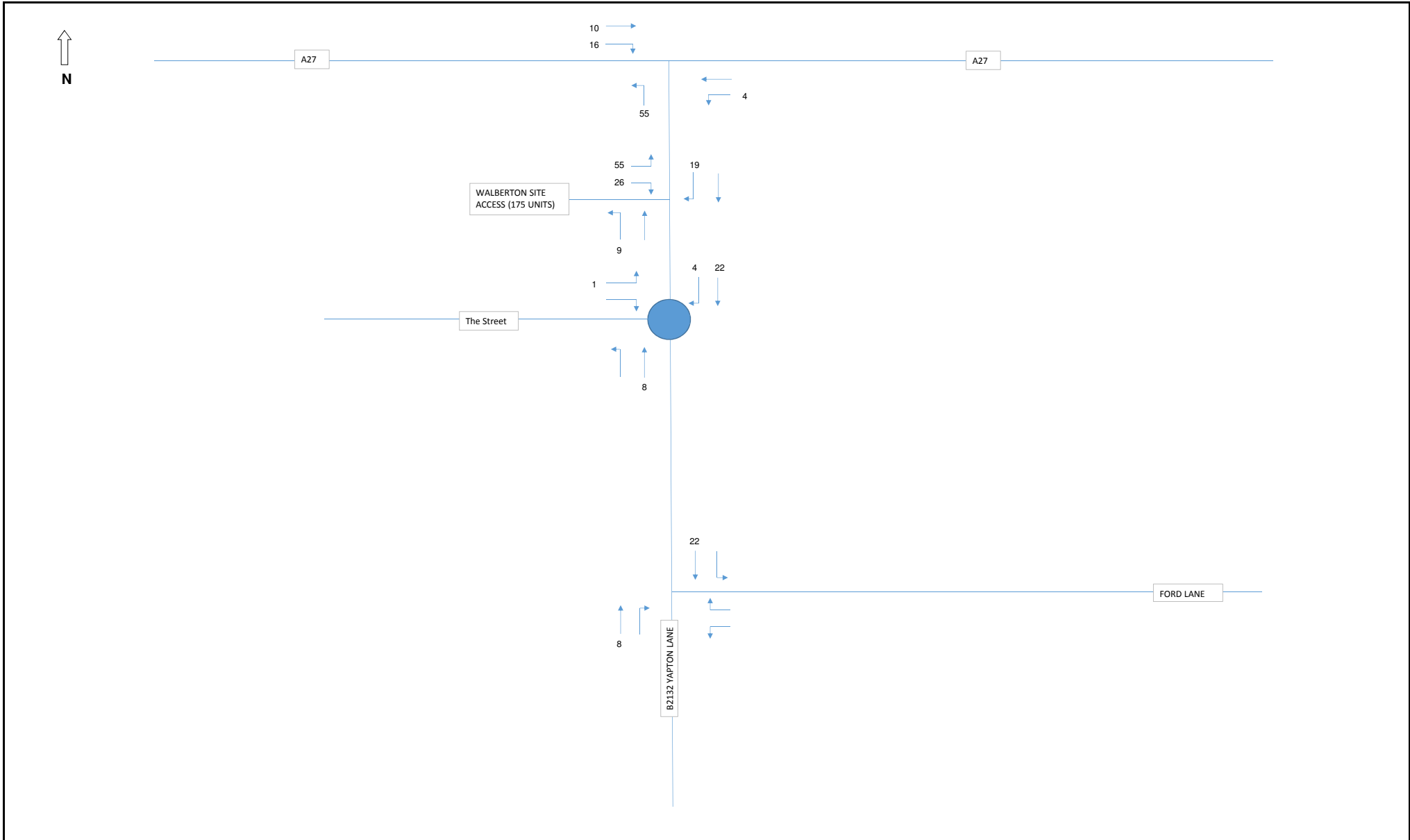
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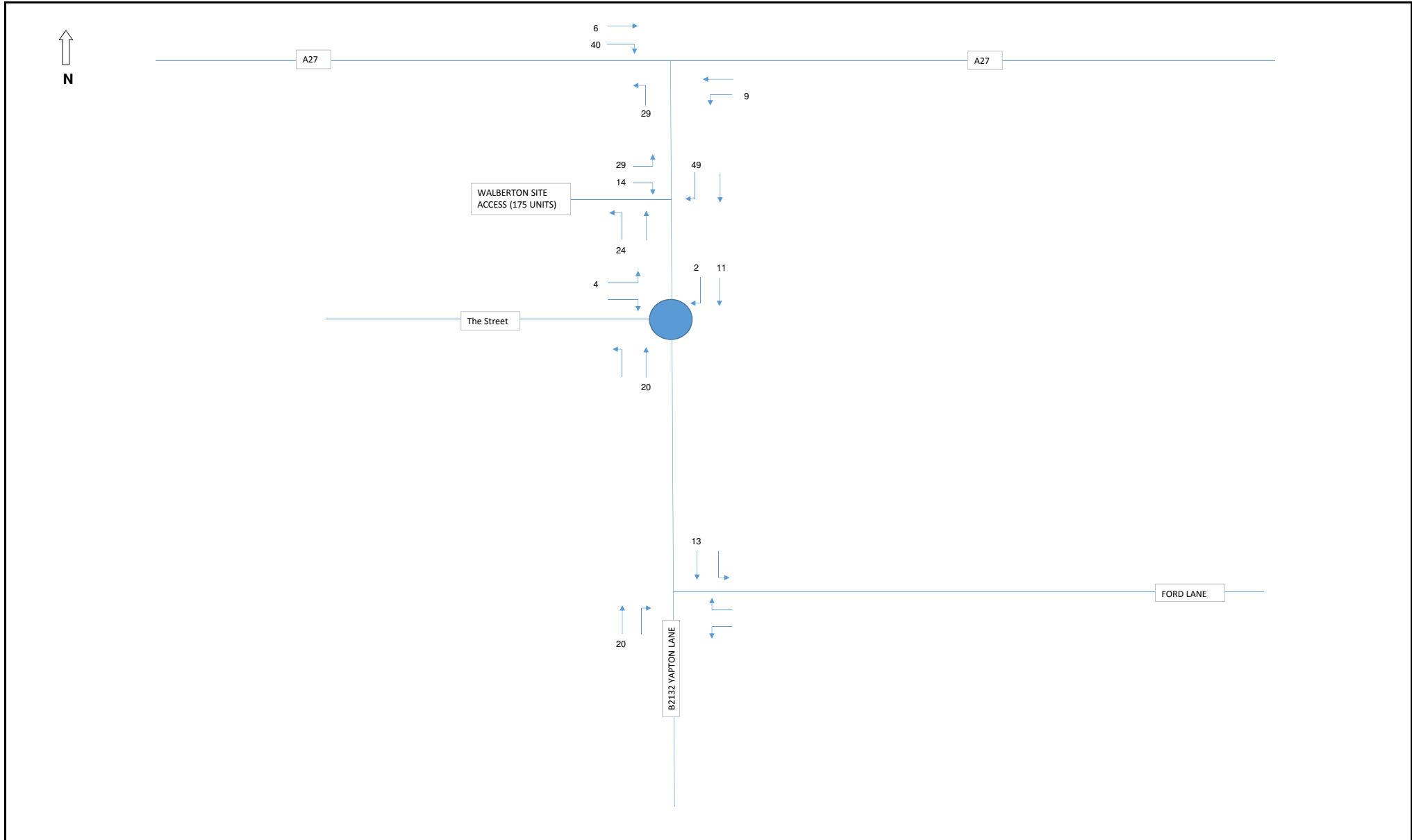


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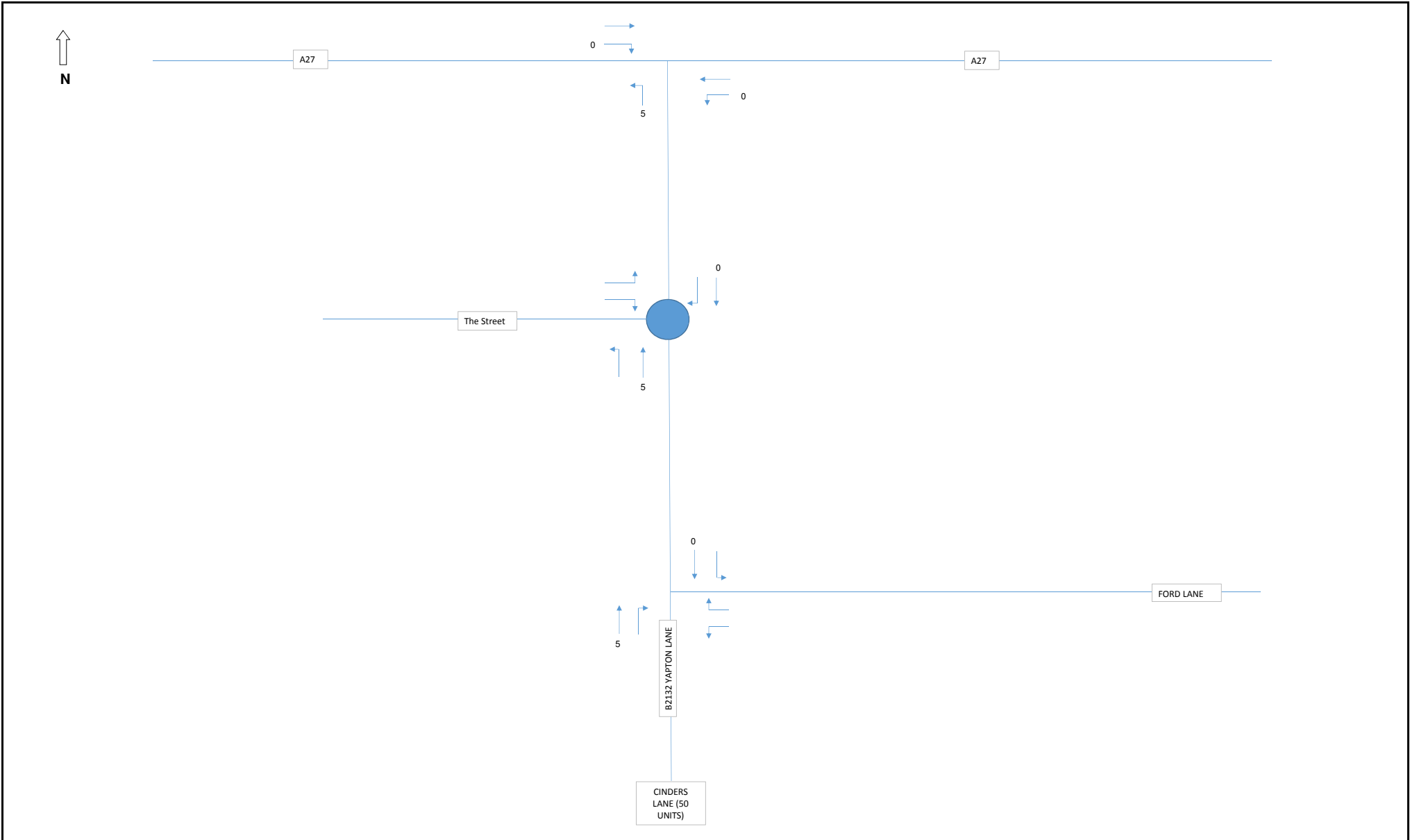
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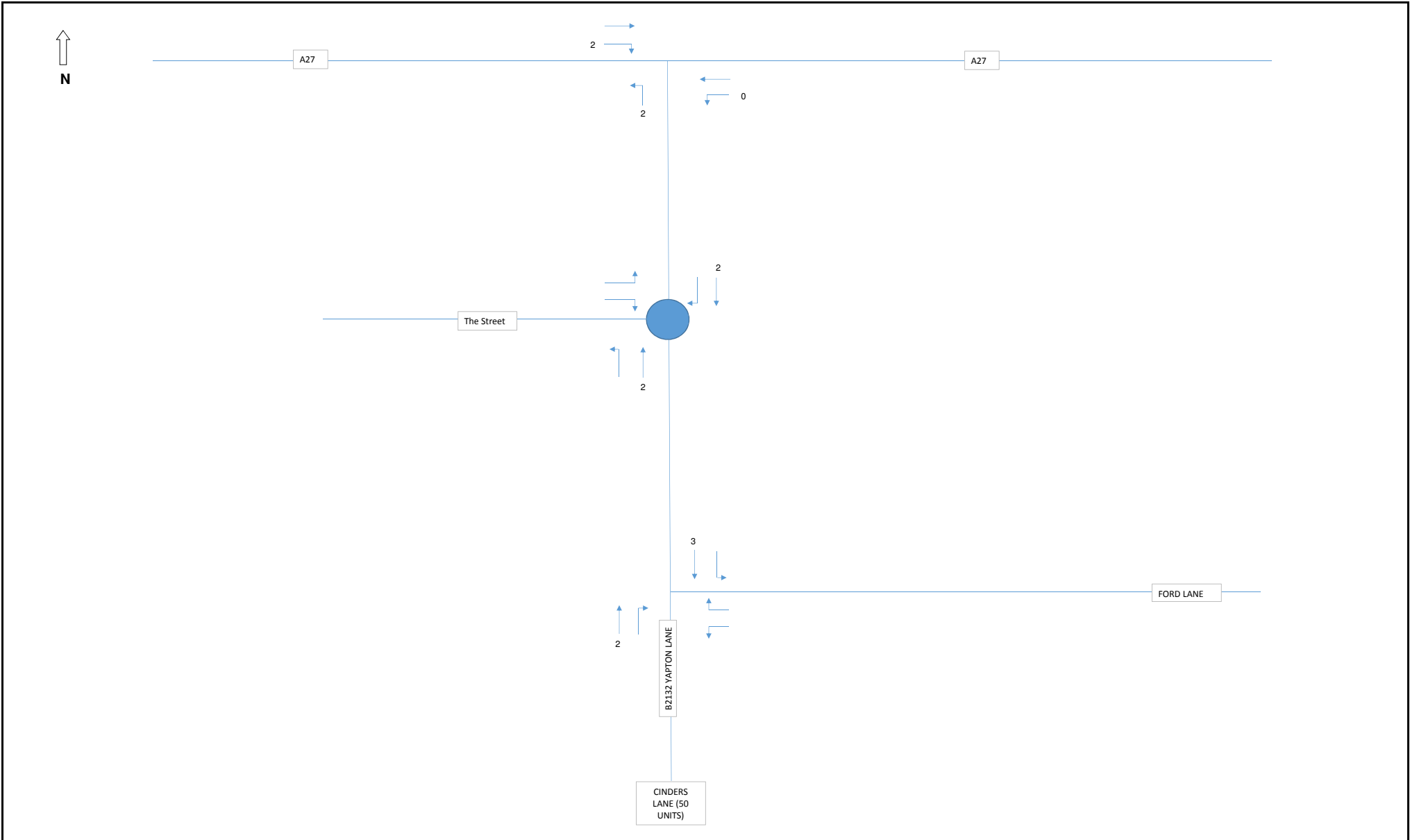
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	Drawing Title: LAND EAST OF TYE LANE COMMITTED DEVELOPMENT - AM	Date: Feb-18
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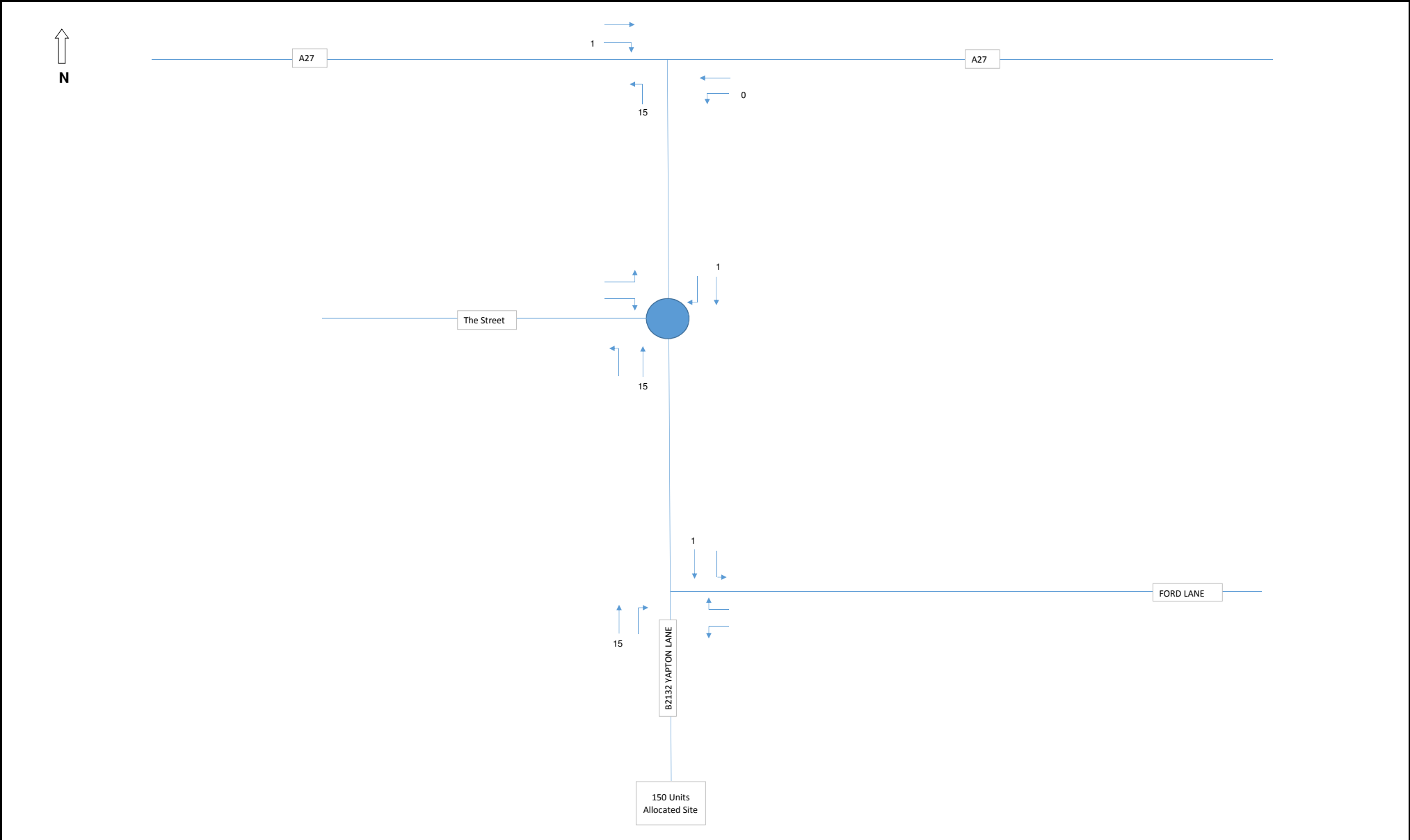
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	Job Title: LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	Job No: 14-111	
	Drawing Title: LAND EAST OF TYE LANE COMMITTED DEVELOPMENT - PM	Date: Feb-18	



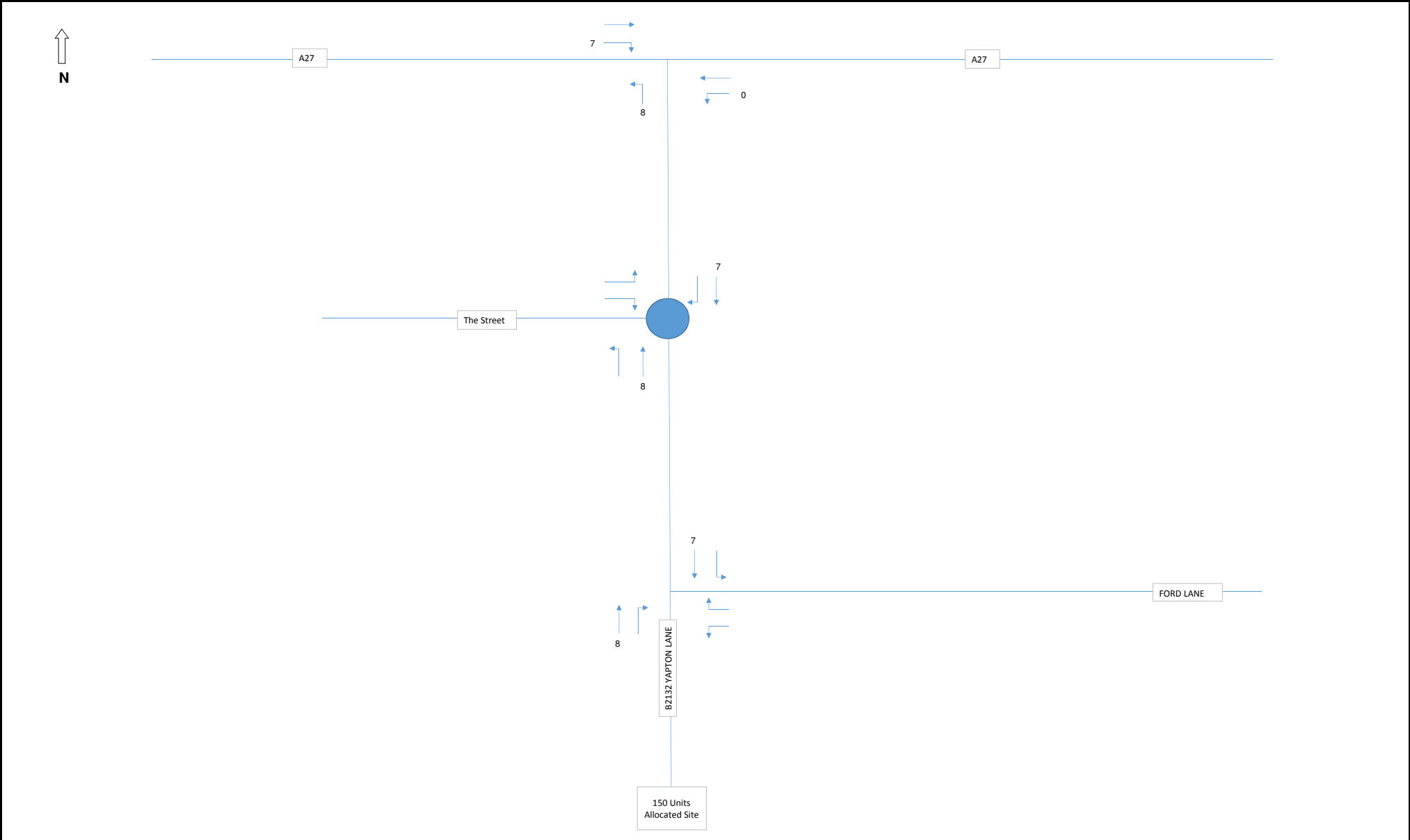
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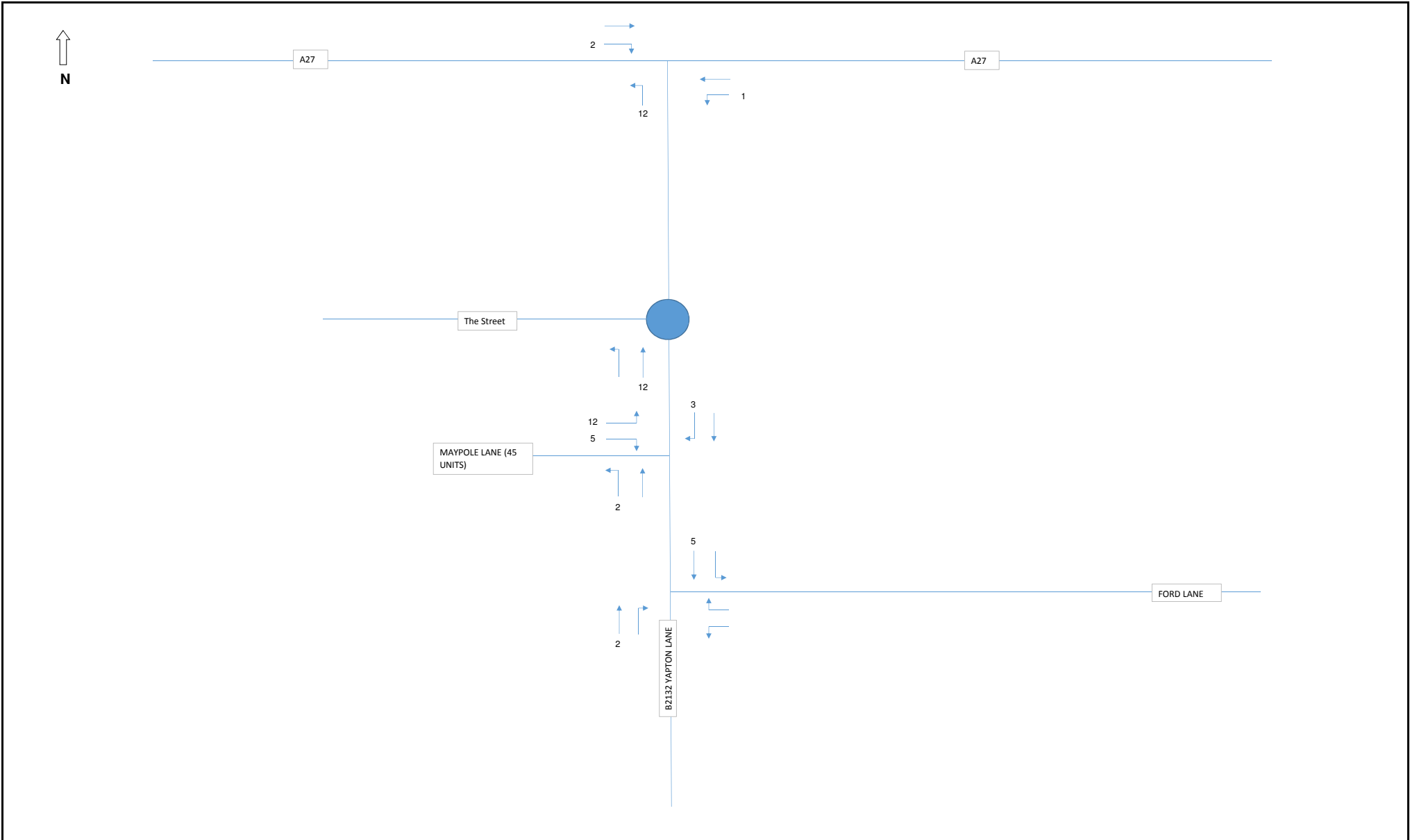
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	LAND AT CINDERS LANE COMMITTED DEVELOPMENT - PM	Feb-18	



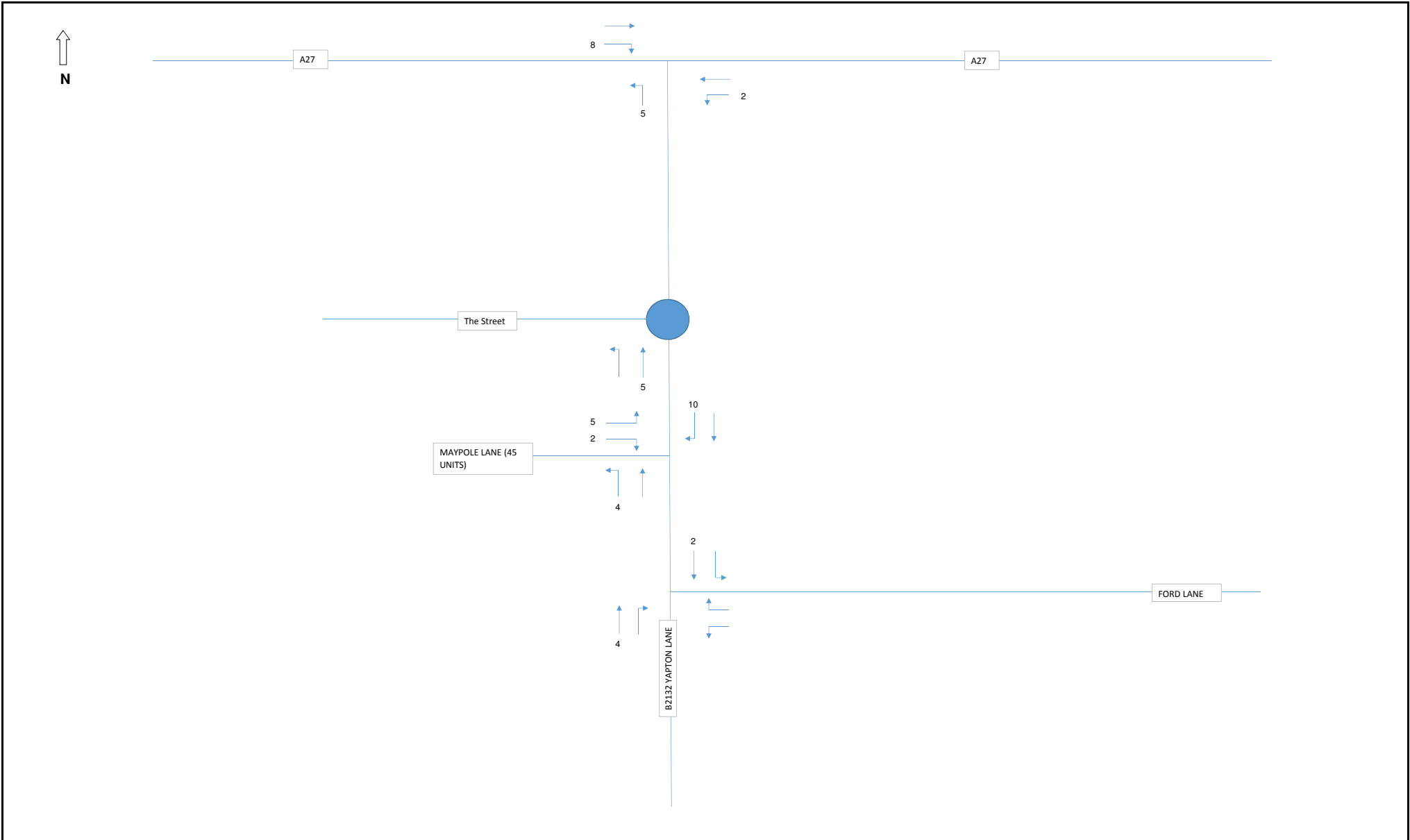
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	LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	14-111	
	Drawing Title:	Date:	
	LAND SOUTH OF MAIN ROAD, EAST OF BILSHAM ROAD PROPOSED DEVELOPMENT - AM	Feb-18	



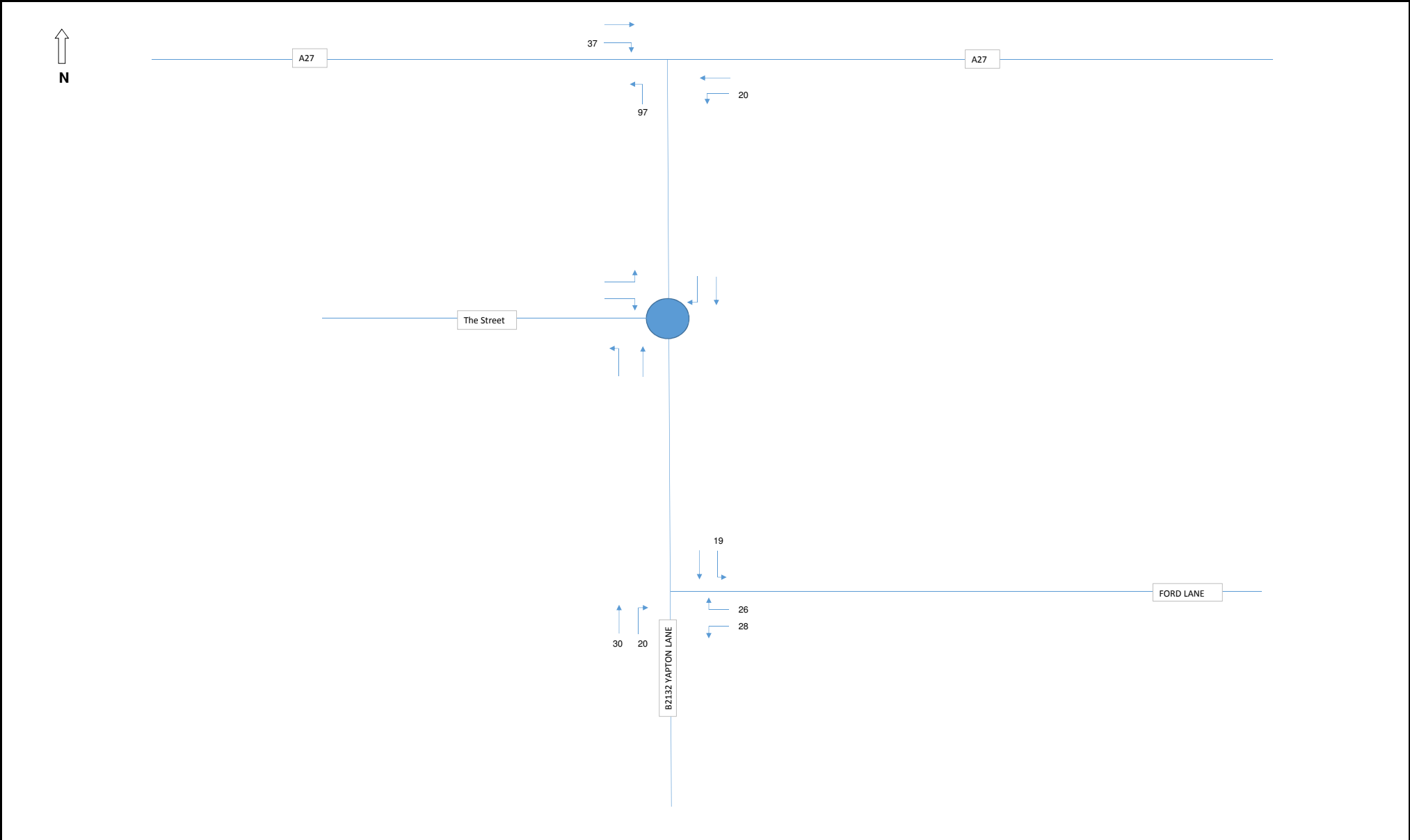
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	Job Title:	Job No:	
	LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	14-111	
	Drawing Title:	Date:	
	LAND SOUTH OF MAIN ROAD, EAST OF BILSHAM ROAD PROPOSED DEVELOPMENT - PM	Feb-18	



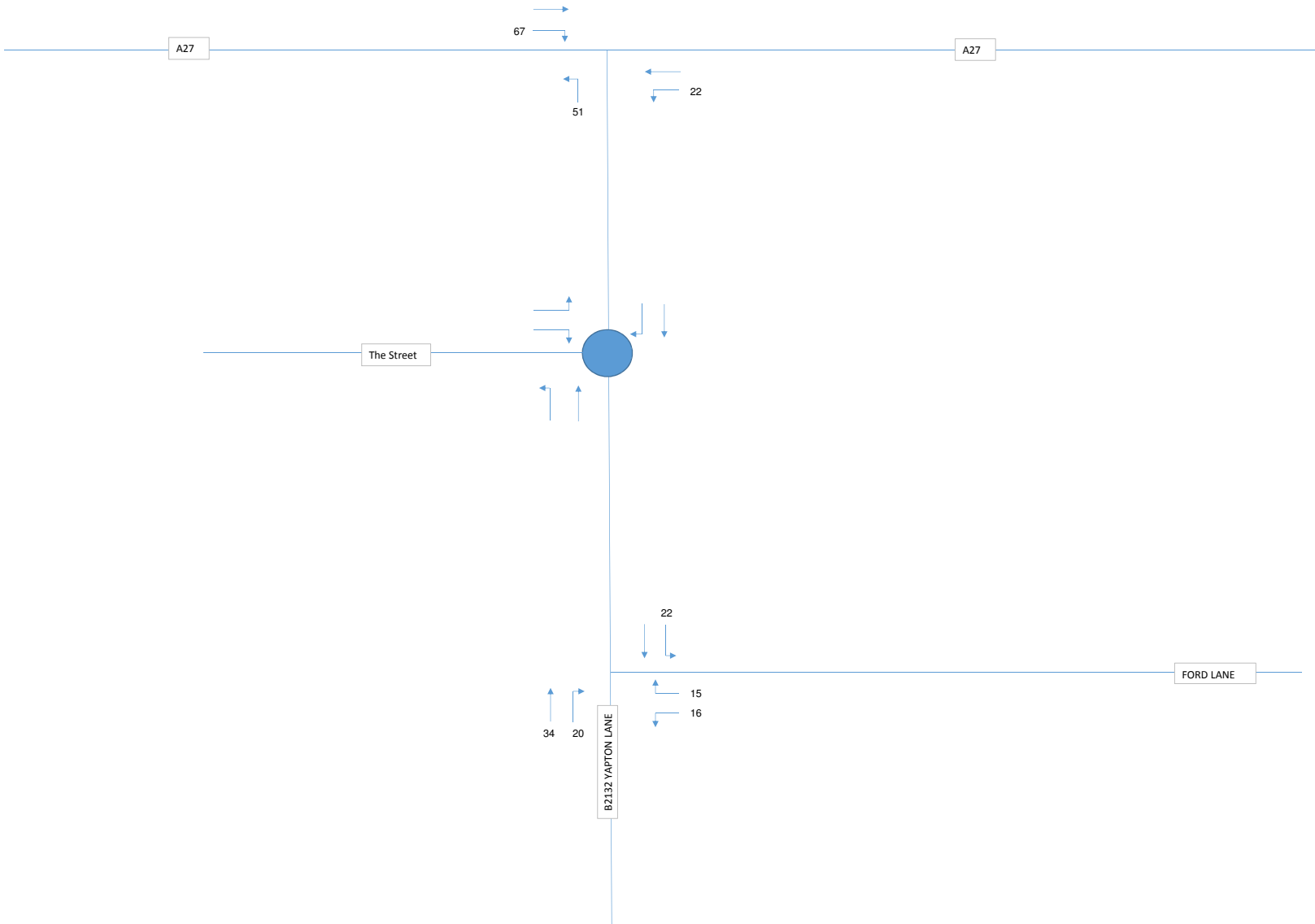
	LANDLINK ESTATES / GLEESON STRATEGIC		 Tuscany House - White Hart Lane T:01256 331144 Basingstoke - Hampshire - RG214AF F:01256 331134 Einfo@odysseyconsult.co.uk W:www.odysseyconsult.co.uk
	Job Title: LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	Job No: 14-111	
	Drawing Title: LAND SOUTH OF MAYPOLE LANE COMMITTED DEVELOPMENT - AM	Date: Feb-18	



	LANDLINK ESTATES / GLEESON STRATEGIC	
	Job Title: LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	Job No: 14-111
	Drawing Title: LAND SOUTH OF MAYPOLE LANE COMMITTED DEVELOPMENT - PM	Date: Feb-18
 Tuscany House - White Hart Lane T:01256 331144 Basingstoke - Hampshire - RG214AF F:01256 331134 Einfo@odysseyconsult.co.uk W:www.odysseyconsult.co.uk		



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	Job Title: LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	Job No: 14-111
	Drawing Title: COMMITTED DEVELOPMENT - AM	Date: Feb-18
 Tuscany House - White Hart Lane T:01256 331144 Basingstoke - Hampshire - RG214AF F:01256 331134 Einfo@odysseyconsult.co.uk W:www.odysseyconsult.co.uk		



LANDLINK ESTATES / GLEESON STRATEGIC

Job Title:

LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD

Drawing Title:

COMMITTED DEVELOPMENT - PM

Job No:

14-111

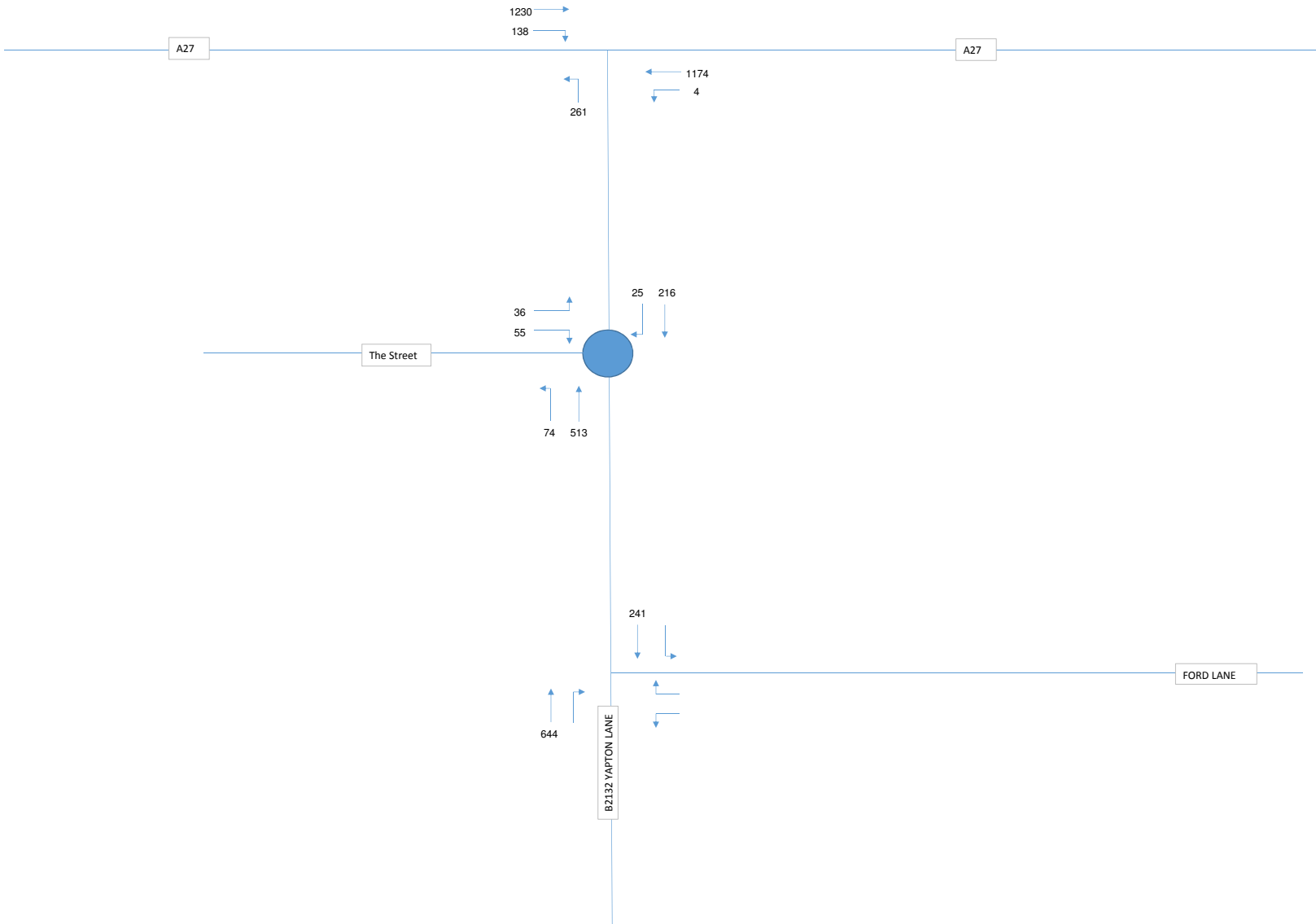
Date:

Feb-18



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Job Title:

LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD

Drawing Title:

2031 BASE - AM

Job No:

14-111

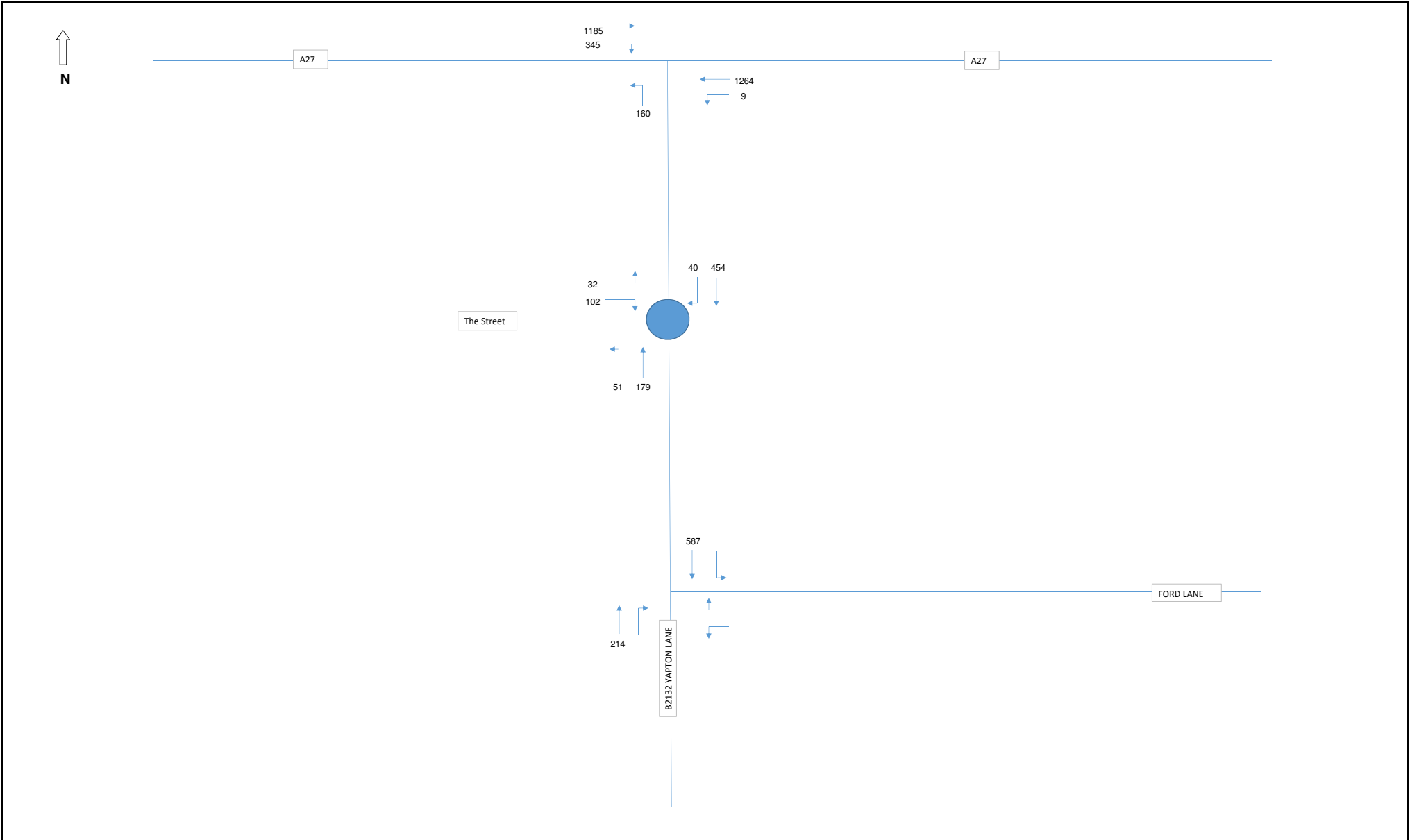
Date:

Feb-18

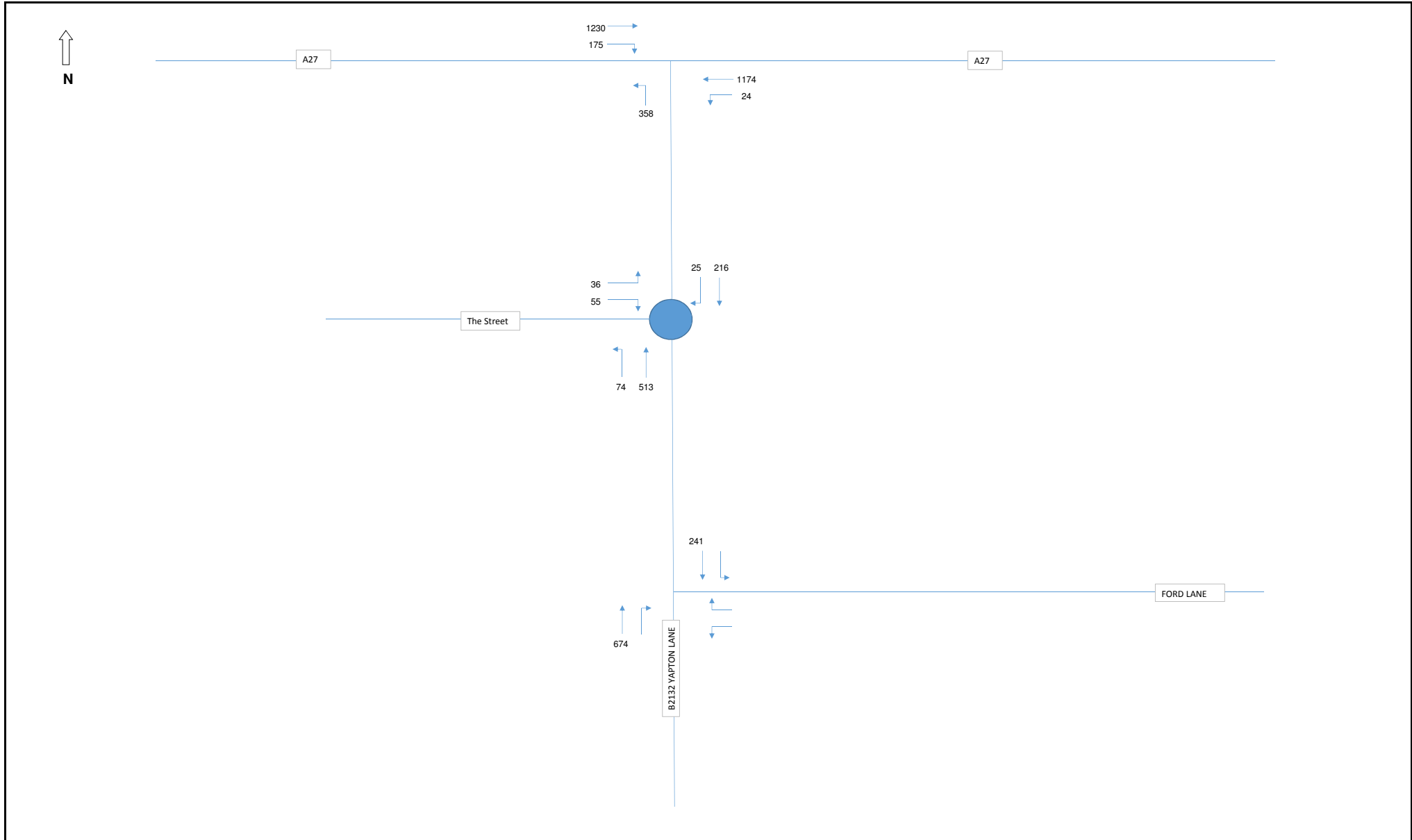


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Basingstoke - Hampshire - RG214AF F:01256 331134

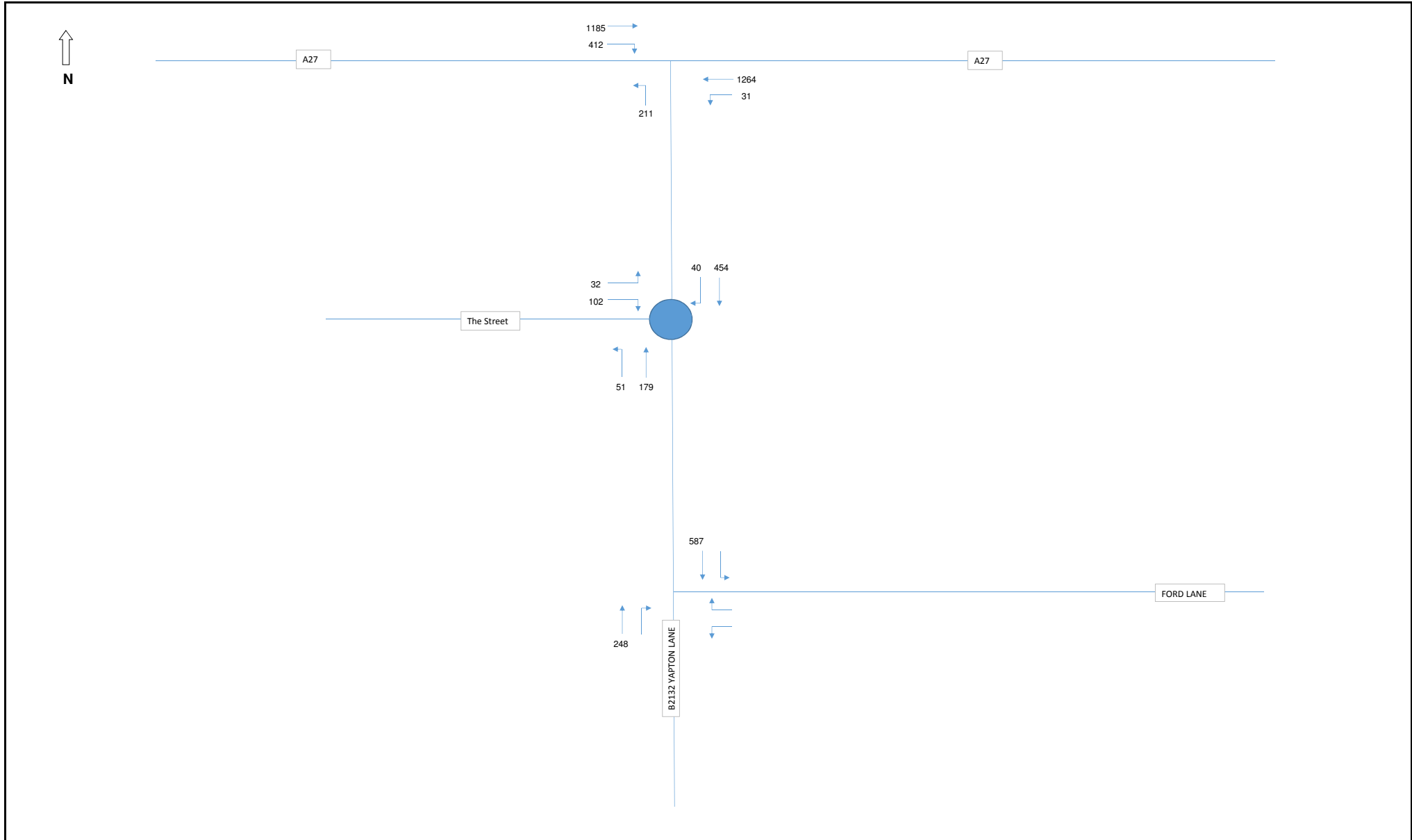
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	Job Title: LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	Job No: 14-111	
	Drawing Title: 2031 BASE - PM	Date: Feb-18	



	LANDLINK ESTATES / GLEESON STRATEGIC	
	Job Title:	Job No:
	LAND EAST OF BILSHAM ROAD AND SOUTH OF MAIN ROAD	14-111
	Drawing Title:	Date:
	2031 BASE + COMMITTED - AM	01/02/2018
 Tuscany House - White Hart Lane T:01256 331144 E:info@odysseyconsult.co.uk Basingstoke - Hampshire - RG214AF F:01256 331134 W:www.odysseyconsult.co.uk		



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	Job Title:	Job No:	
	2031 BASE + COMMITTED - PM	14-111	
	Drawing Title:	Date:	
		01/02/2018	

APPENDIX C

PICADY Assessment Output

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

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E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	\\O..\Picady\A27 - Yapton Lane Sensitivity Test.vpi
Date Run	07 February 2018
Time Run	13:11:58
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	A27 WB	100
Arm B	Yapton Lane	100
Arm C	A27 EB	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	A27 / Yapton Lane, Arun
Location	Arun
Date	07 February 2018
Enumerator	-

Job Number	14-111
Status	Preliminary
Client	Landlink / Gleesons
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

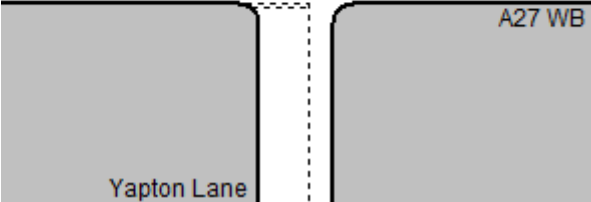
Parameter	Minor Arm B
Major Road Carriageway Width (m)	14.60
Major Road Kerbed Central Reserve Width (m)	7.00
Major Road Right Turning Lane Width (m)	4.50
Minor Road First Lane Width (m)	5.00
Minor Road Visibility To Right (m)	250
Minor Road Visibility To Left (m)	250
Major Road Right Turn Visibility (m)	250
Major Road Right Turn Blocks Traffic	Yes (if over 20 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	967.347	0.095	0.241	0.152	0.344
B-C	937.767	0.090	0.227	-	-
C-B	898.655	0.218	0.218	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	08:00-09:30	90	15
Second Modelling Period	17:00-18:30	90	15

ODTAB Turning Counts

Demand Set: 2031 AM Base + Com + Dev

Modelling Period: 08:00-09:30

From/To	Arm A	Arm B	Arm C
Arm A	0.0	24.0	1174.0
Arm B	0.0	0.0	358.0
Arm C	1230.0	175.0	0.0

Demand Set: 2031 PM Base + Com + Dev

Modelling Period: 17:00-18:30

From/To	Arm A	Arm B	Arm C
Arm A	0.0	31.0	1264.0
Arm B	0.0	0.0	211.0
Arm C	1185.0	412.0	0.0

ODTAB Synthesised Flows

Demand Set: 2031 AM Base + Com + Dev
Modelling Period: 08:00-09:30

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	08:15	14.975	08:45	22.463	09:15	14.975
Arm B	08:15	4.475	08:45	6.712	09:15	4.475
Arm C	08:15	17.563	08:45	26.344	09:15	17.563

Heavy Vehicles Percentages

Demand Set: 2031 AM Base + Com + Dev
Modelling Period: 08:00-09:30

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Demand Set: 2031 PM Base + Com + Dev
Modelling Period: 17:00-18:30

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Queues & Delays

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:30
Modelling Period: 08:00-09:30

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-AC	4.49	12.25	0.367	-	0.00	0.57	-	8.2	0.13
	C-AB	2.20	11.70	0.188	-	0.00	0.23	-	3.4	0.10
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.30	-	-	-	-	-	-	-	-
	A-C	14.73	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
---------	--------	---------------------	-----------------------	-----	---------------------------	----------------------	--------------------	--	--------------------------------	---

08:15-08:30	B-AC	5.36	11.60	0.463	-	0.57	0.84	-	12.2	0.16
	C-AB	2.62	11.07	0.237	-	0.23	0.31	-	4.6	0.12
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.36	-	-	-	-	-	-	-	-
	A-C	17.59	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-AC	6.57	10.69	0.614	-	0.84	1.53	-	21.5	0.24
	C-AB	3.21	10.19	0.315	-	0.31	0.45	-	6.8	0.14
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.44	-	-	-	-	-	-	-	-
	A-C	21.54	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-AC	6.57	10.69	0.614	-	1.53	1.56	-	23.3	0.24
	C-AB	3.21	10.19	0.315	-	0.45	0.46	-	6.9	0.14
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.44	-	-	-	-	-	-	-	-
	A-C	21.54	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
09:00-09:15	B-AC	5.36	11.60	0.463	-	1.56	0.88	-	13.8	0.16
	C-AB	2.62	11.07	0.237	-	0.46	0.31	-	4.7	0.12
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.36	-	-	-	-	-	-	-	-
	A-C	17.59	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
09:15-09:30	B-AC	4.49	12.25	0.367	-	0.88	0.59	-	9.1	0.13
	C-AB	2.20	11.70	0.188	-	0.31	0.23	-	3.5	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.30	-	-	-	-	-	-	-	-
	A-C	14.73	-	-	-	-	-	-	-	-

[illegible]

	A-B	0.46	-	-	-	-	-	-	-	-
	A-C	18.94	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
18:15-18:30	B-AC	2.65	11.99	0.221	-	0.39	0.29	-	4.4	0.11
	C-AB	5.17	11.44	0.452	-	1.39	0.84	-	12.8	0.16
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.39	-	-	-	-	-	-	-	-
	A-C	15.86	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.

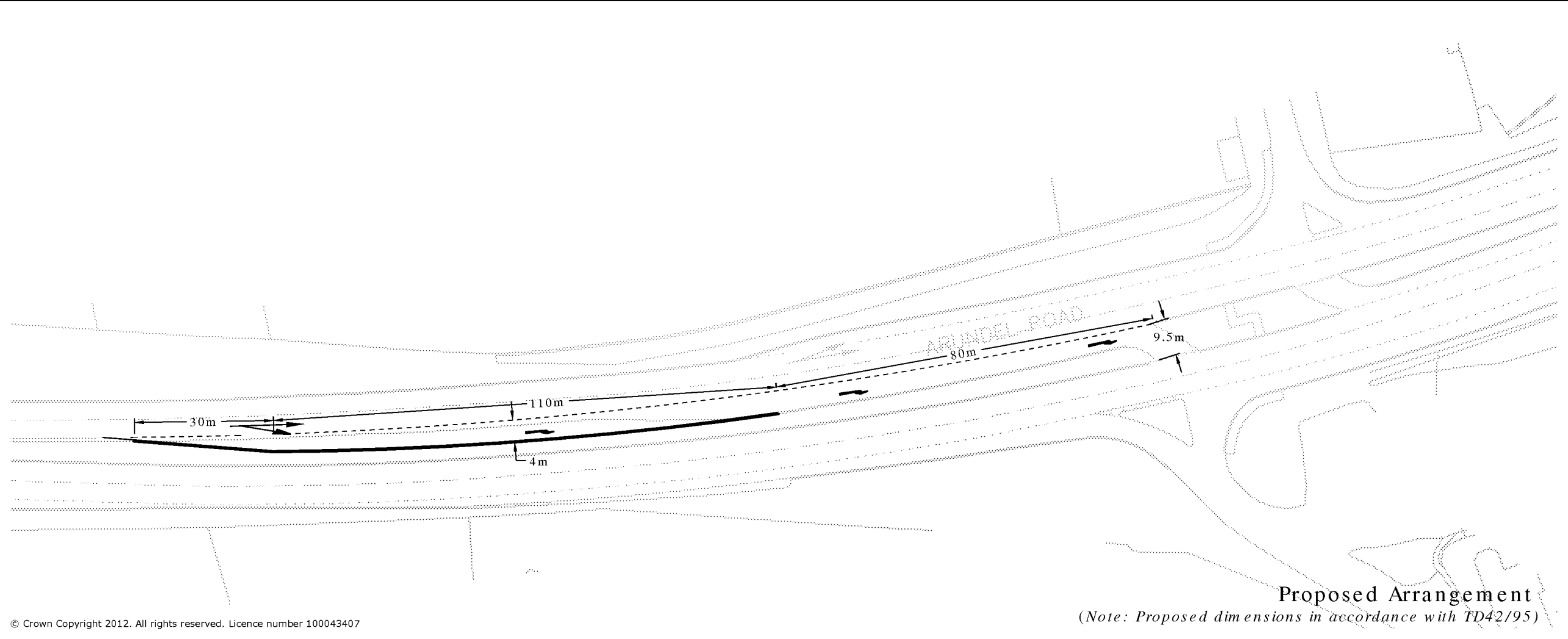
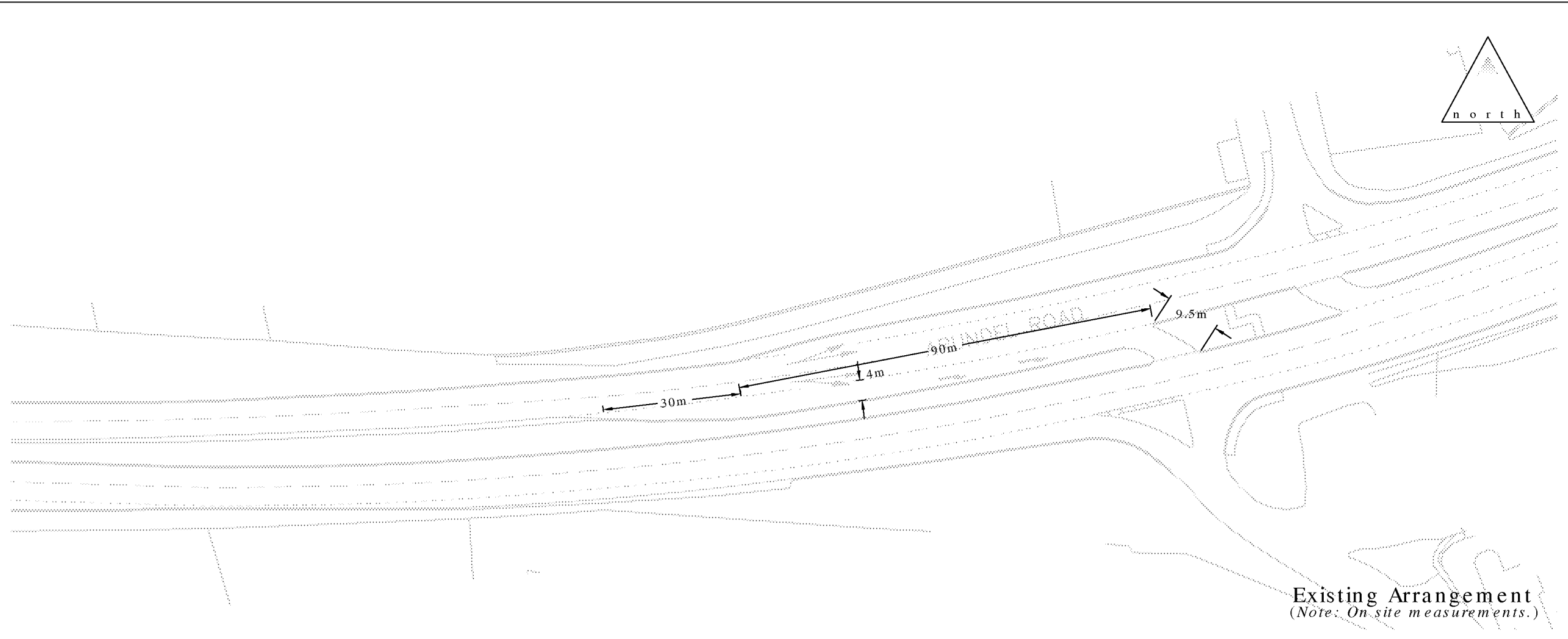
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.

Delays marked with '##' could not be calculated.

PICADY 5 Run Successful

APPENDIX D

A27 Mitigation Scheme



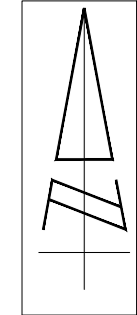
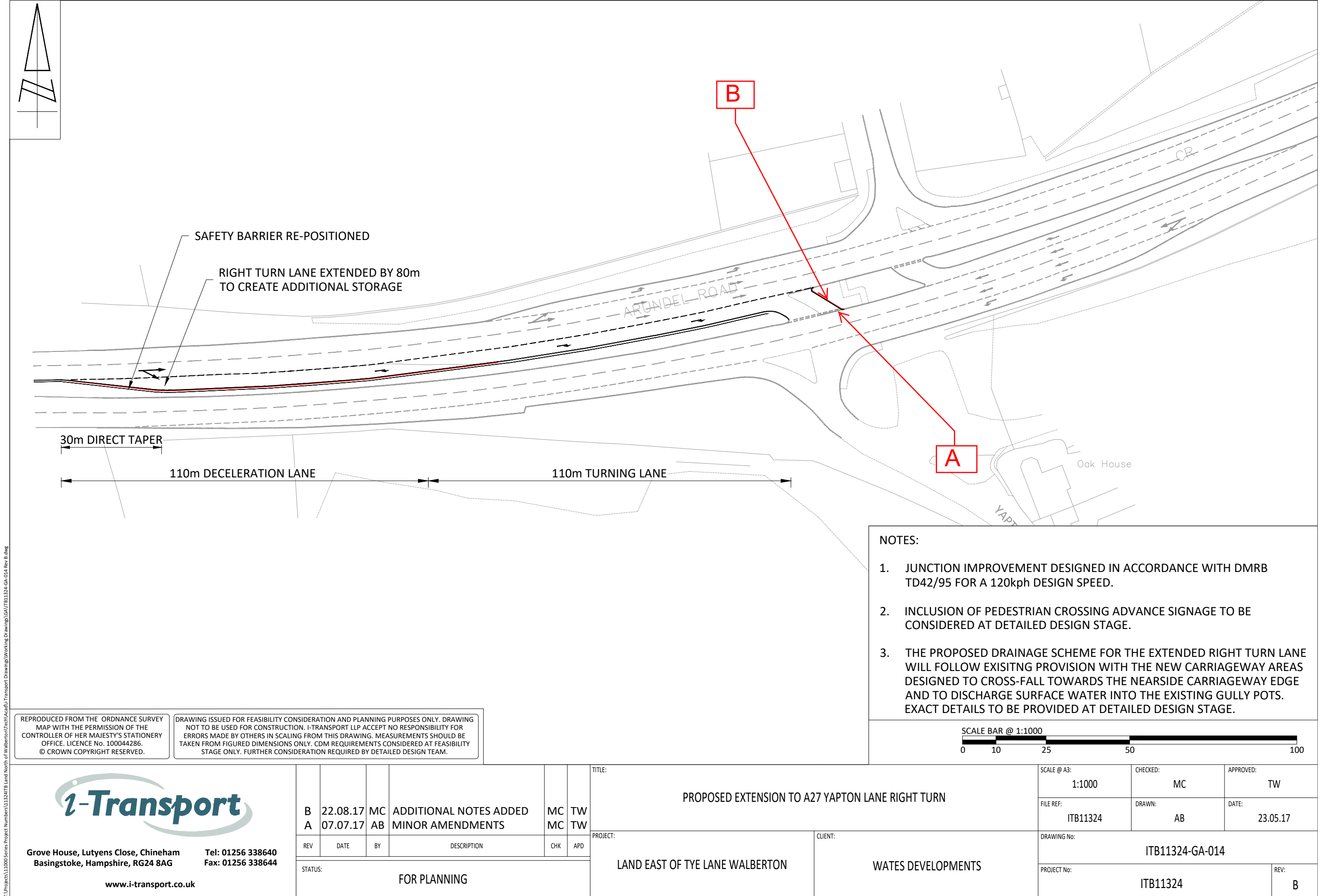
motion

232 High Street
Guildford
Surrey
GU1 3JF
T: 01483 531 300

25 Floral Street
Covent Garden
London
WC2E 9DS
T: 020 7031 8141

www.motion-uk.co.uk

Project: St. Mary's Park, Yapton	
Title: Proposed Extension to A27 Right Turn Lane	
Scale: 1:1000 (@ A3)	
Drawing: 130431-06	Re vision: B



SAFETY BARRIER RE-POSITIONED

RIGHT TURN LANE EXTENDED BY 80m
TO CREATE ADDITIONAL STORAGE

30m DIRECT TAPER

110m DECELERATION LANE

110m TURNING LANE

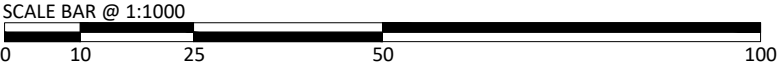
ARUNDEL ROAD

CR

Oak House

YAPTON

- NOTES:
1. JUNCTION IMPROVEMENT DESIGNED IN ACCORDANCE WITH DMRB TD42/95 FOR A 120kph DESIGN SPEED.
 2. INCLUSION OF PEDESTRIAN CROSSING ADVANCE SIGNAGE TO BE CONSIDERED AT DETAILED DESIGN STAGE.
 3. THE PROPOSED DRAINAGE SCHEME FOR THE EXTENDED RIGHT TURN LANE WILL FOLLOW EXISTING PROVISION WITH THE NEW CARRIAGEWAY AREAS DESIGNED TO CROSS-FALL TOWARDS THE NEAR SIDE CARRIAGEWAY EDGE AND TO DISCHARGE SURFACE WATER INTO THE EXISTING GULLY POTS. EXACT DETAILS TO BE PROVIDED AT DETAILED DESIGN STAGE.



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 Grove House, Lutyens Close, Chineham Basingstoke, Hampshire, RG24 8AG www.i-transport.co.uk								TITLE: PROPOSED EXTENSION TO A27 YAPTON LANE RIGHT TURN		SCALE @ A3: 1:1000		CHECKED: MC	APPROVED: TW
										FILE REF: ITB11324	DRAWN: AB	DATE: 23.05.17	
										DRAWING No: ITB11324-GA-014			
										PROJECT No: ITB11324			REV: B
		REV	DATE	BY	DESCRIPTION	CHK	APD	PROJECT: LAND EAST OF TYE LANE WALBERTON		CLIENT: WATES DEVELOPMENTS			
		STATUS: FOR PLANNING											
		B	22.08.17	MC	ADDITIONAL NOTES ADDED	MC	TW						
		A	07.07.17	AB	MINOR AMENDMENTS	MC	TW						