

Section 3 of this report lists 'Problems' identified from the drawings and as a result of the Auditors' site visits relating to the proposed changes to the highway layout and continues with 'Comments', if there are any, that are directly, or indirectly, related to the area (e.g. features/matters within the proposed works or immediate surrounds which the Auditors feel should be brought to the attention of the Designer or other organisations even though they might not pose an immediate risk associated with the proposed works) and which are considered by the Audit Team to warrant attention under the subject proposals, generally by the maintaining authority. On occasions there might be more sensitive issues or issues that fall outside the audit brief but which are of such a nature that Auditors feel should be specifically brought to the attention of the authorities - such issues, if they arise, are usually dealt with in detail in separate correspondence.

- 2.3.10 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised - they are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with HD19/15, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem that would be equally acceptable in achieving the desired elimination or mitigation and these should be considered in any responses to this report.
- 2.3.11 The supplied preliminary layout drawing of the proposed works is reproduced as the base for the 'Problems' locations Figure at the rear of this report. The audit is, basically, limited to the extent of works shown on the drawing but, additionally, considers selected matters on tie-ins with the immediate connecting roads that the Auditors view as relevant to operation of the overall development.

3 PROBLEMS AND RECOMMENDATIONS

‘Problems’ are reported in the first part of the following section and , if included, ‘Comments’ on matters of lesser importance are dealt with after that. It should be noted that ‘Comment’ reference numbers simply continue the number sequence from the preceding ‘Problems’.

3.1 **Problem 1 : Inadequate deflection on vehicle paths**

Location: Eastern and northern arms approaches to the roundabout.

Summary: The design layout of the roundabout is such that there is potential for failure to give way on entry resulting in straight-ahead collisions with roadside furniture or side-impact or shunt type collisions.

- 3.1.1 For the roundabout entry from the east (Chalkstone Way) the entry path curvature is in the region of 140m and for the roundabout entry from the north the entry path curvature is in the region of 100m, both using the over-run area edge as the vehicle path guide. Such potential approach paths give inadequate entry path curvature to fully-prevent traffic from entering the roundabout at too high a speed or having to resort to late-braking (DMRB standard TD16 also refers).
- 3.1.2 The drawings do not show any traffic calming measures on the development Access Road.
- 3.1.3 Whilst the Auditors do acknowledge that Chalkstone Way is a traffic-calmed road the situation could be hazardous to cyclists, particularly in view of the wide overall circulatory carriageway width as associated with all compact roundabout layouts that are designed to accommodate specific large/long vehicle types, not all of which type might use the subject roundabout and approach roads.
- 3.1.4 The recommendations are that :
- The roundabout should be re-designed to ensure that vehicle entry paths have radii tighter than 70m radius (such re-design might involve the provision of a larger roundabout) ; and
 - Traffic calming should be applied to the development Access Road.

3.2 **Problem 2 : NMUs**

Location: NMU paths to/from the development.

Summary: Inadequate provision of NMU facilities could lead to NMU conflicts and/or NMUs using non-designated routes or making crossings of roads at inadvisable locations with risks of slips, trips and falls injuries.

- 3.2.1 The footway from the development ends at the northwestern quadrant with pedestrians having to cross Chalkstone Way to gain access to the existing footway along the southern side of Chalkstone Way. Not far west of the proposed roundabout is the Westfield Primary Academy school so the Auditors would expect some NMU demand between the development (the Access Road roundabout) and the school which is not catered for in the current proposals unless such trips cross and re-cross Chalkstone Way.
- 3.2.2 The Auditors note that the project Transport Assessment is ‘strong’ on sustainable travel although the Auditors acknowledge that the scheme is at an early stage of preparation.
- 3.2.3 The recommendation is that :
- The footway along the western side of the development Access Road should be continued on to the school entrance not far west of the proposed roundabout with, perhaps, enhancement to shared cyclist/pedestrian status.

3.3 **Problem 3 : Bus stop location**

Location: Chalkstone Way west of the roundabout.

Summary: Stationary buses blocking entry to the roundabout could cause risks of frustrated following vehicle drivers overtaking when unsighted and colliding with traffic exiting the roundabout or even driving the wrong way around the roundabout.

3.3.1 The existing bus stop west of the roundabout is located only approx. 25m ahead of the roundabout 'Give Way' line and the drawing has no indications of bus stop relocation.

3.3.2 The recommendation is that :

- The bus stop should be relocated further west, sufficiently away from the roundabout.

3.4 **Problem 4 : Speed cushion feature**

Location: Chalkstone Way immediately west of the roundabout.

Summary: Proximity of feature to roundabout entry/exit would be a potential frustration to drivers causing potential rash decision-making or encourage pedestrians to cross the road where no formal crossings is intended and which could surprise drivers and lead to vehicle/pedestrian conflicts.

3.4.1 There is an existing speed cushion arrangement immediately west of the roundabout located only approx. 15m ahead of the roundabout 'Give Way' line and the drawing has no indications of its removal. With a roundabout so close the speed cushion arrangement would appear superfluous and could safely be removed – however, 'Problem 1' relates in respect of speed control on the roundabout approaches.

3.4.2 The recommendation is that :

- The speed cushion arrangement should be relocated a short distance further west.

AUDIT TEAM STATEMENT

We certify that this audit has been carried out in conformity with HD 19/15.

Audit Team Leader

T. R. Head BSc(Hons), CEng, MICE, FCIHT, MSoRSA
Director,
Head Murray Associates Limited
Waterloo Place
Leamington Spa
Warwickshire
CV32 5LA


Sig 

Date... 13 April 2017

and

Audit Team Member

Nevil Calder BSc(Hons), CEng, MICE, MCIHT, MSoRSA
Highway Safety Consultant
CJ Safety Audit
10a Greenways
Norwich
Norfolk
NR4 6PE

Signed 

Date... 13 April 2017

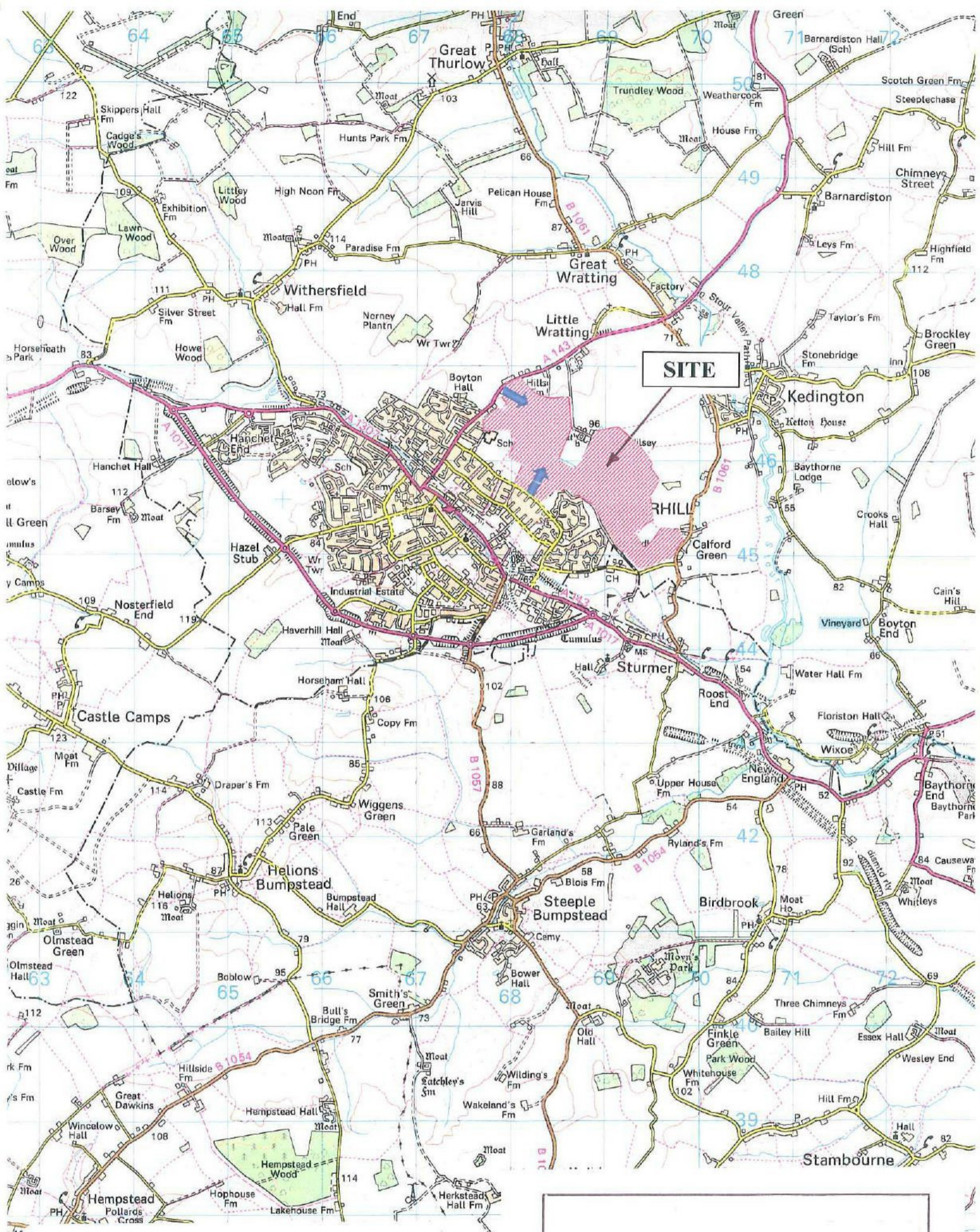
FIGURES

462/3/1 – SITE LOCATION PLAN

462/3/2 – INITIATING DEVELOPMENT MASTERPLAN

462/3/3 – ILLUSTRATIVE CHALKSTONE WAY CURRENT LAYOUT

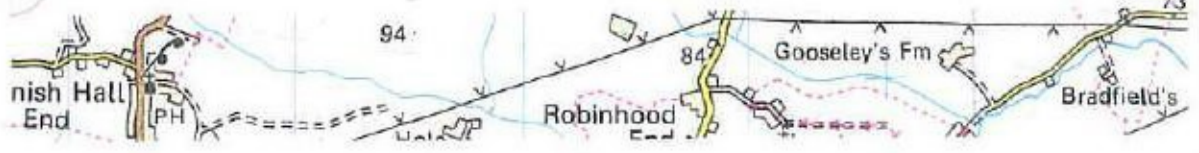
462/3/4 – PROBLEMS SHEET DRAWING

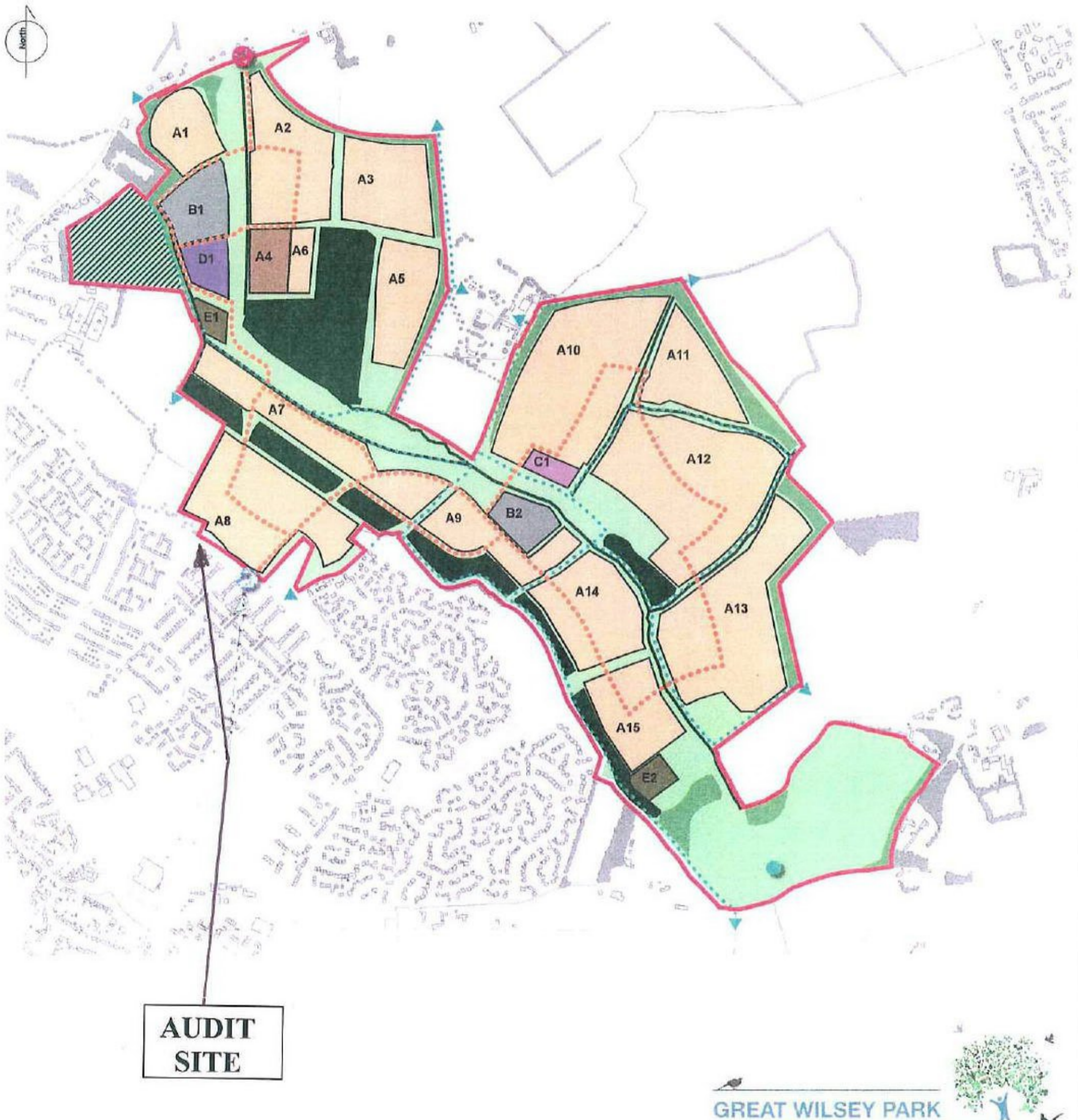


SITE

FIGURE 462/3/1

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Ordinance Sun LEGEND

- Appl
- Resi - Tot
- Prop - Tot
- Total dens
- Prop of a 1.5H
- Mixe comp i.
- Mixe comp i.
- Mixe comp i.
- Prop - Tot 0.5H

PARAMETER:

Zone	Zone Area
A1	2.4ha
A2	5.0ha
A3	4.8ha
A4	1.5ha
A5	3.2ha
A6	6.75ha
A7	4.8ha
A8	7.0ha
A9	2.7ha
A10	16.2ha
A11	3.8ha
A12	11.2ha
A13	16.4ha
A14	4.3ha
A15	4.0ha
B1	2.2ha
B2	1.8ha
C1	0.8ha
D1	0.7ha

Notes 1. oph = Out 2. ha = Hect

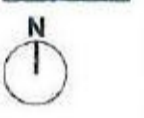


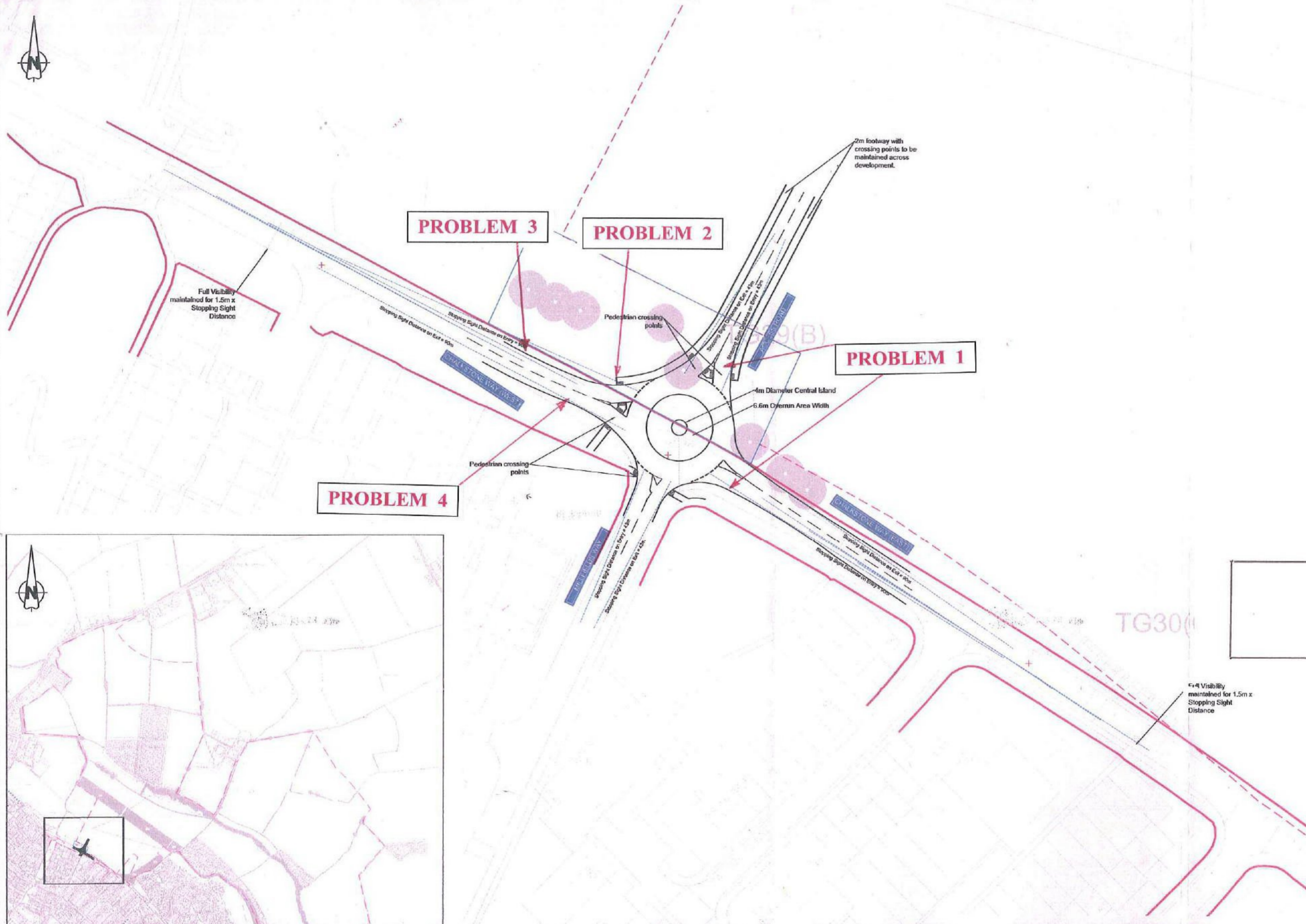
FIGURE 462/3/2



Google Earth



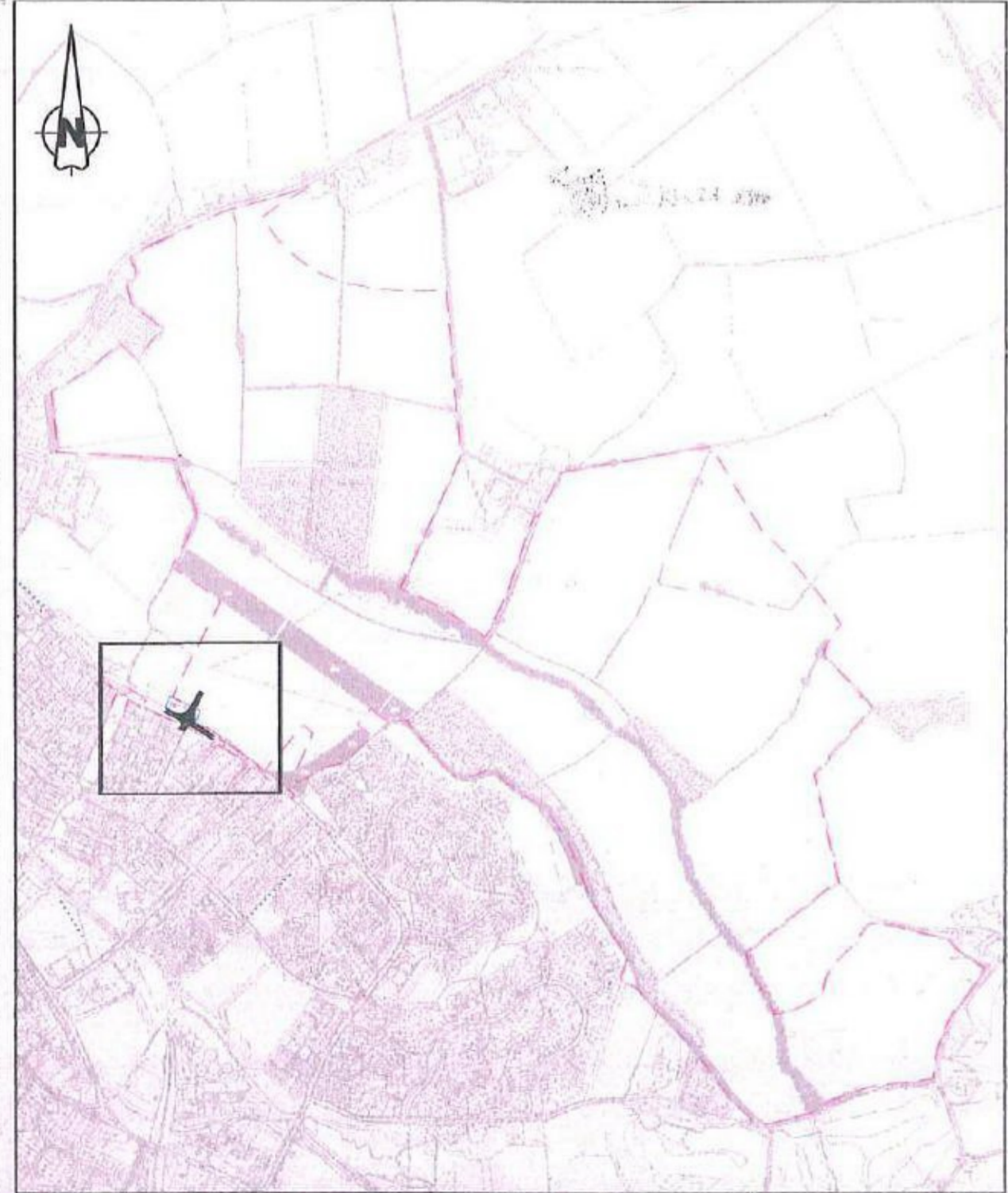
FIGURE 462/3/3



Construction Design and Management (CDM)
Key Residual Risks
 Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.
 1) Overhead and underground services
 2) Street Lighting Cables
 3) Working adjacent to water courses and flood plain
 4) Soft ground conditions
 5) Working adjacent to live highways and railway line
 6) Unchartered services
 7) Existing buildings with potential asbestos hazards

- NOTES:**
- Do not scale from this drawing
 - All dimensions are in metres unless otherwise stated.
 - Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
 - No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting.
 - The junctions, roundabouts and links have been designed in accordance with the following DMRB standards:
 - TA 23/81: Junctions and Accesses - Determination of Size of Roundabouts and Major-Minor Junctions
 - TD 9/93: Highway Link Design
 - TD 16/07: The Geometric Design of Roundabouts

- KEY:**
- Highway Boundary (under control of Suffolk County Council)
 - Land under control of St. Edmundsbury Borough Council
 - Site Boundary
 - Visibility on approach to Junction
 - Visibility on departure from Junction
 - Tactile Paving



Context Plan
Scale: 1:10000

General Arrangement
Scale: 1:300

FIGURE 462/3/4

A Check of DMRB Parameters. MDM LW PAB 29.03.17
 - First Issue - - - 23.11.16

Brookbanks
 6159 Knights Court, Suffolk Parkway, Birmingham, B37 7BY
 Tel: (0121) 325 4330 Fax: (0121) 325 4331
 www.brookbanks.com

Hallam Land Management
 and Mrs. Pelly
 Great Wilsey Park
 Haverhill, Suffolk

**Proposed Access Strategy
 Roundabout off Chalkstone Way**

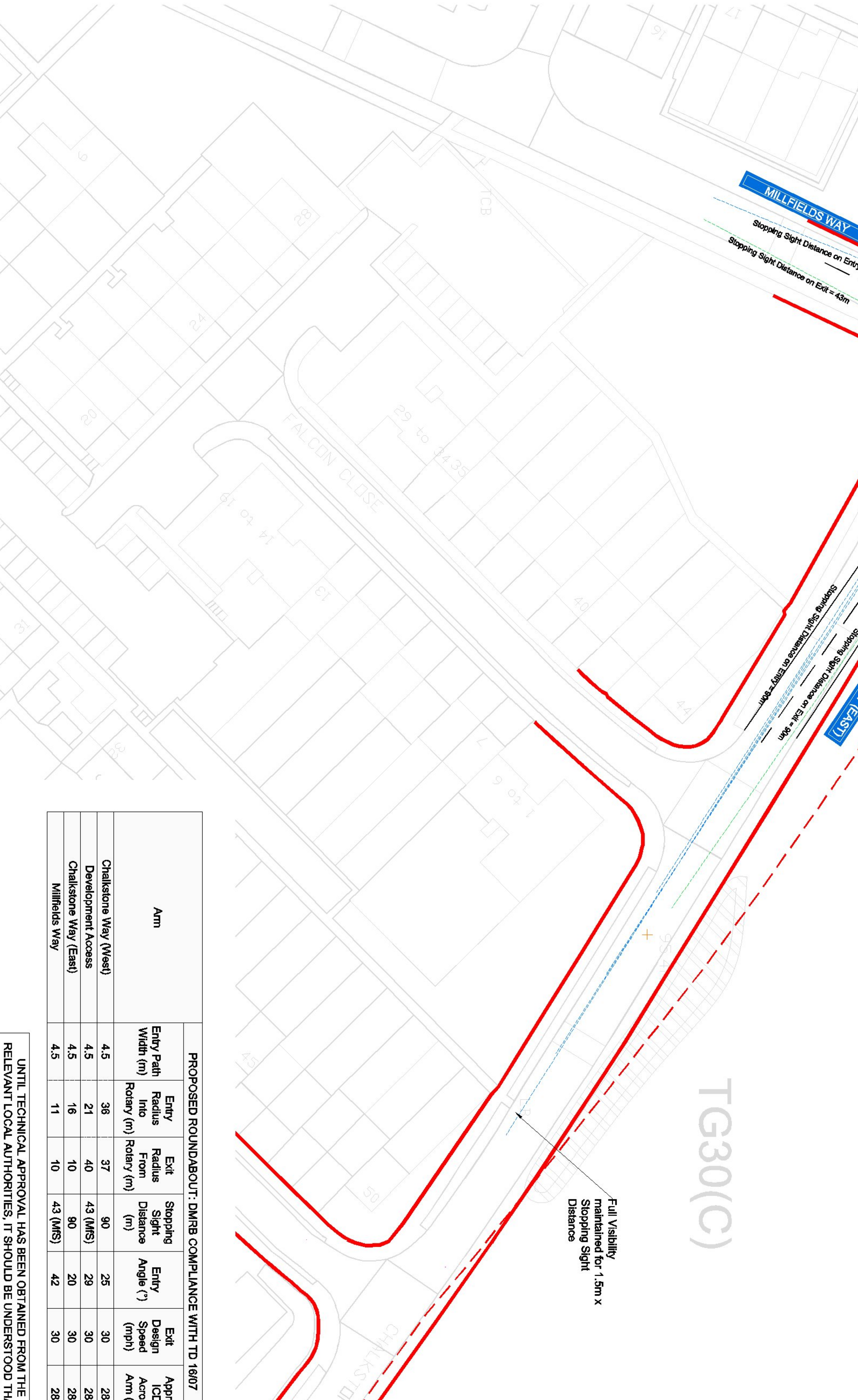
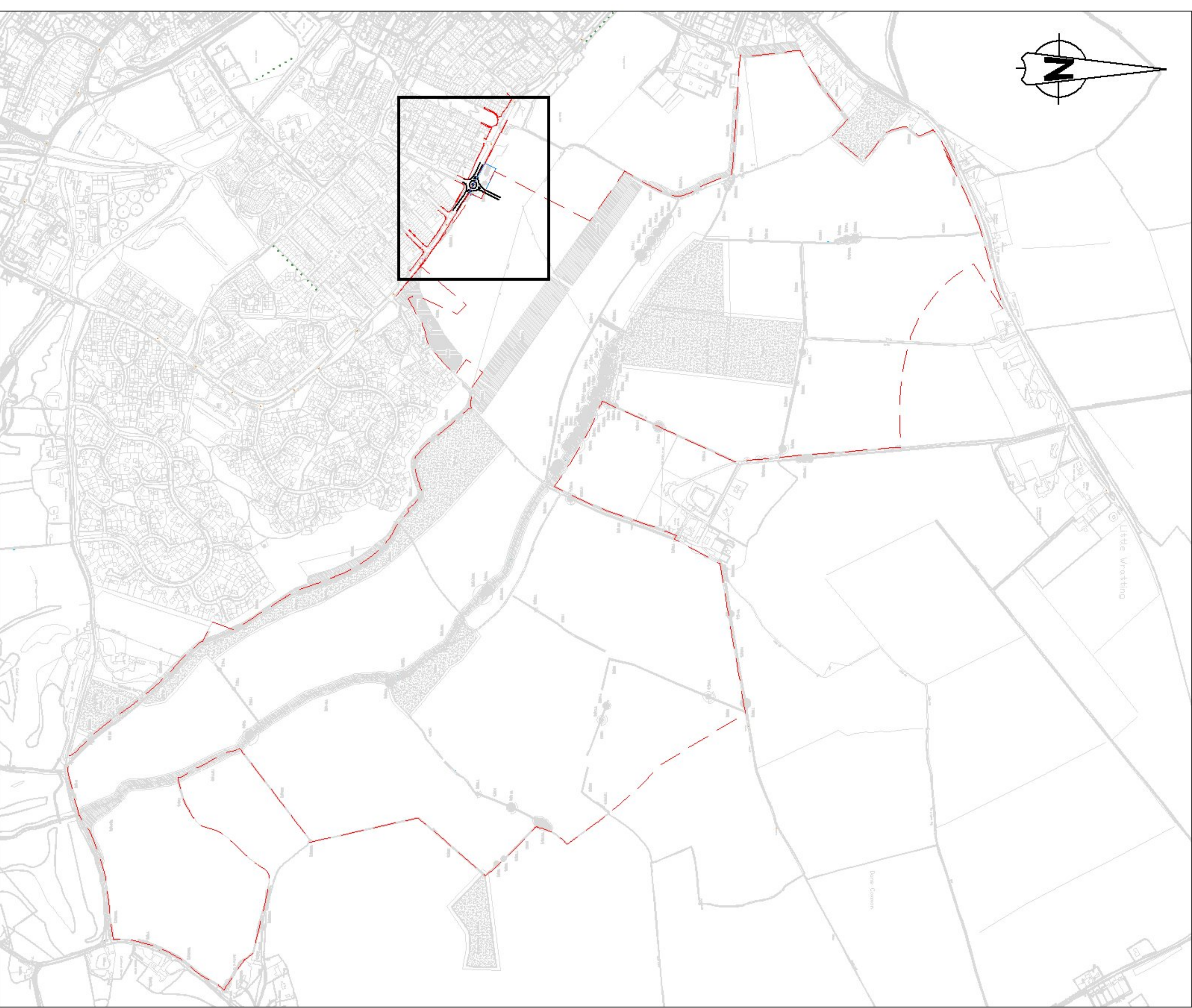
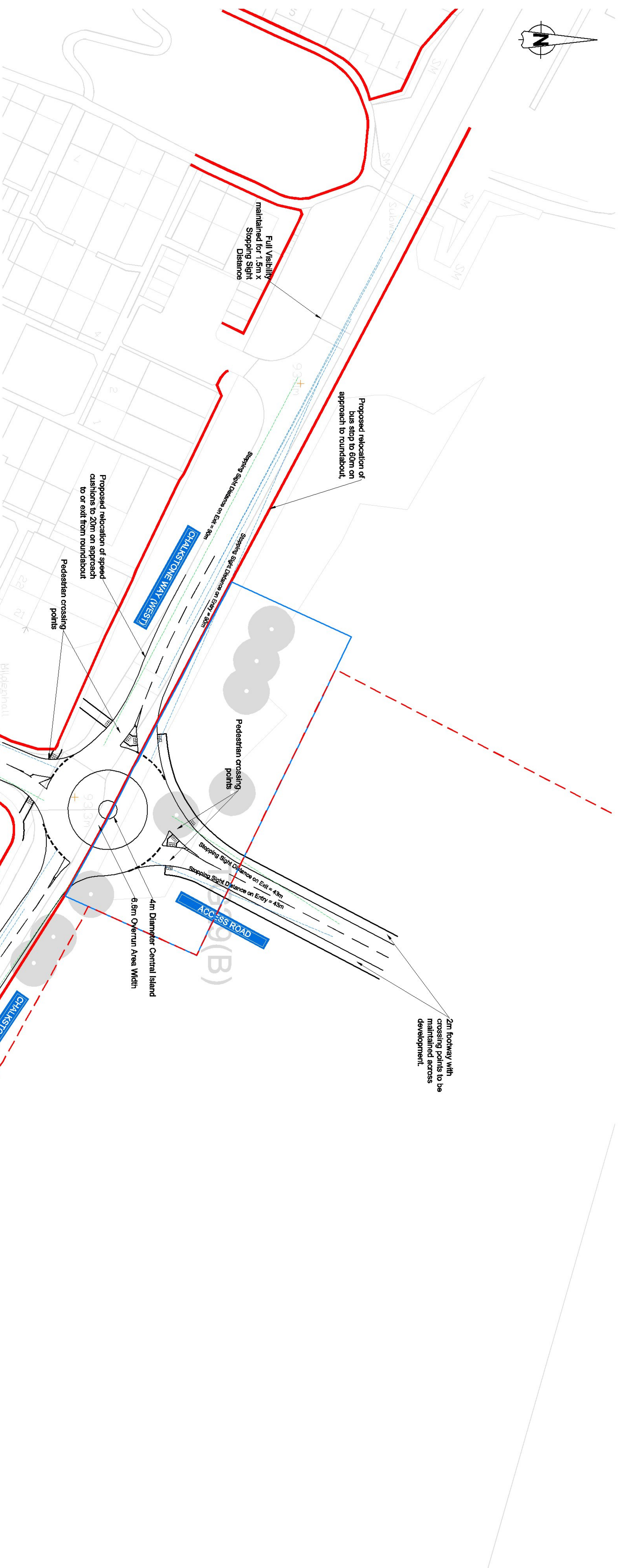
Status	Approval	Checked	MDM	LW	Date	November 2016
Drawn	MDM	Checked	LW	Date	23.11.2016	

Scale	As Shown	Number	10173-HL-19	Rev	A
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Arm	PROPOSED ROUNDABOUT: DMRB COMPLIANCE WITH TD 16/07						
	Entry Path Width (m)	Entry Radius Into Rotary (m)	Exit Radius From Rotary (m)	Stopping Sight Distance (m)	Entry Angle (°)	Exit Design Speed (mph)	Approx. ICD Across Arm (m)
Chalkstone Way (West)	4.5	40	40	90	26	30	28
Development Access	4.5	40	40	43 (MIS)	31	30	28
Chalkstone Way (East)	4.5	17	16	90	25	30	28
Millfields Way	4.5	10	10	43 (MIS)	42	30	28

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

Appendix B – Amended Design Drawing for Access



Construction Design and Management (CDM)
Key Residual Risks
 Contractors entering the site should gain permission from the relevant land owners and/or project contractor working on site at the time of entry. Contractors shall be responsible for ensuring that they have the necessary permissions and consents from the relevant services companies and authorities. Labeled below are Site Specific key risks associated with the project.
 1) Overhead and underground services
 2) Street Lighting Columns
 3) Street Lighting Column curbs and foot stein
 4) Spot ground conditions
 5) Working adjacent to live highways and railway line
 6) Unattended services
 7) Existing buildings with potential substance hazards

NOTES:

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5. The junctions, roundabouts and links have been designed in accordance with the following DMRB standards:
 - TA 23/81: Junctions and Accesses - Determination of Size of Roundabouts and Major-Minor Junctions
 - TD 9/83: Highway Link Design
 - TD 18/07: The Geometric Design of Roundabouts

KEY:

- Highway Boundary (under control of Suffolk County Council)
- Land under control of St. Edmundsbury Borough Council
- Site Boundary
- Visibility on approach to Junction
- Visibility on departure from Junction
- Tactile Paving

PROPOSED ROUNDABOUT: DMRB COMPLIANCE WITH TD 16/07

Arm	Entry Path Width (m)	Radius Into Roundy (m)	Radius From Roundy (m)	Stopping Sight Distance (m)	Entry Angle (°)	Exit Design Speed (mph)	Approx ICD Across Arm (m)
Chalkstone Way (West)	4.5	38	37	90	25	30	28
Development Access	4.5	21	40	43 (MSS)	29	30	28
Chalkstone Way (East)	4.5	16	10	80	23	30	28
Millfields Way	4.5	11	10	43 (MSS)	42	30	28

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

6150 Knights Court, Solihull Parkway, Birmingham B37 7WY
 Tel: (0121) 329 4330 Fax: (0121) 329 4331
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Hallam Land Management
 and Mrs. Pelly
 Great Wilsey Park
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Proposed Access Strategy
 Roundabout off Chalkstone Way

Scale: AS SHOWN 1:10173-HL-19 Rev: B

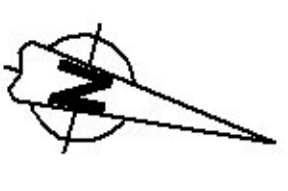
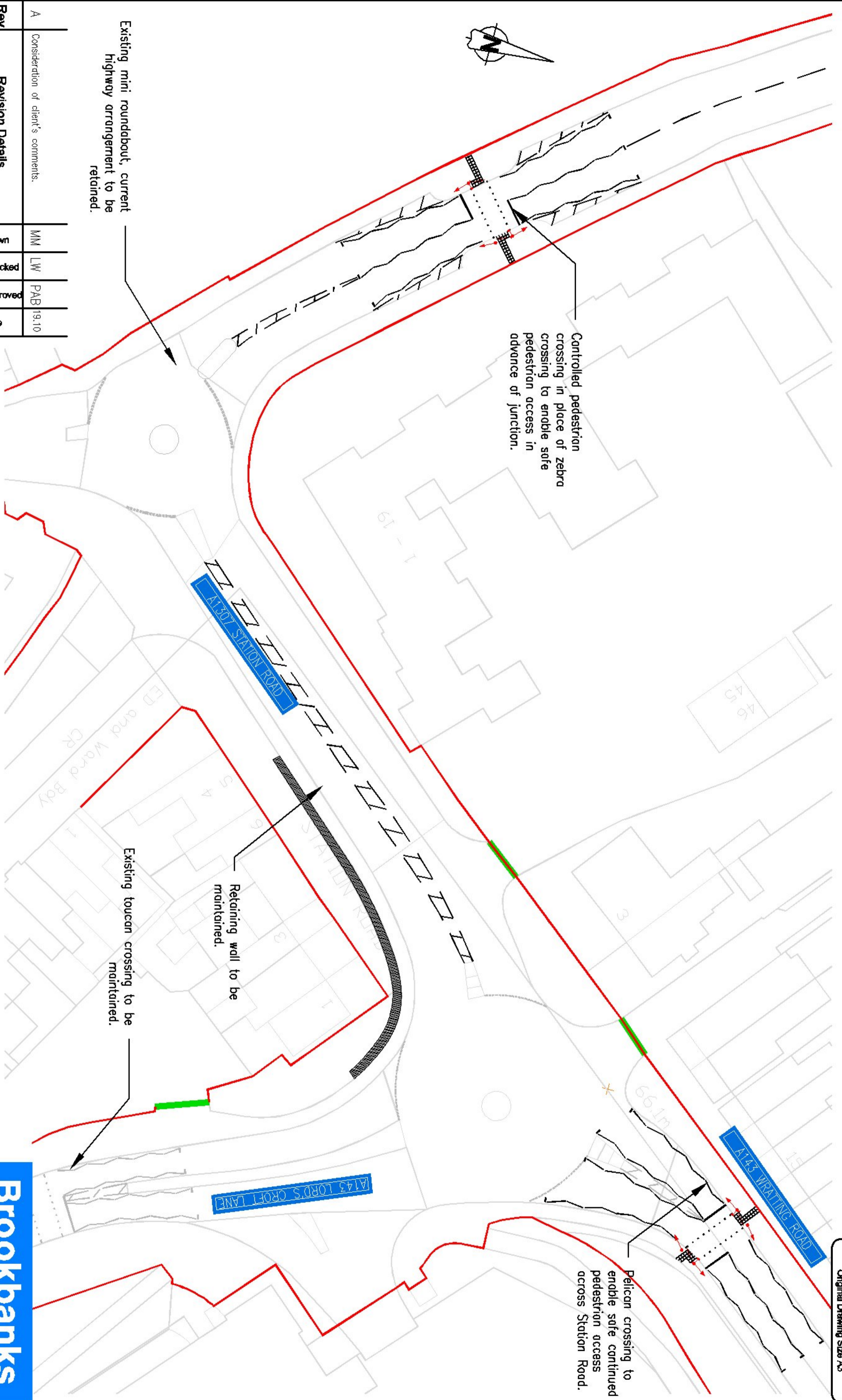
Drawn: MDM
 Checked: LW
 Date: 23.11.2016

Scale Date: November 2016

0 10 20 30 40 50 METRES

APPENDIX 5

REVISED A143 WRATTING ROAD JUNCTION WITH LORDS CROFT LANE



Rev	Revision Details	Drawn	MM	Checked	LW	Approved	PAB	Date	19.10
A	Consideration of client's comments.								

PRELIMINARY		Issue Status	Approved	Date	13/10/16
Drawn	MM	Checked	LW	Date	Oct 2016

Hallam Land Management Ltd
and Mrs Pelly

GREAT WILSEY PARK
HAVERHILL

OFF-SITE IMPROVEMENTS
A143 / Lord's Croft Lane
and Gangle Junction

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Scale at A3
1:500
Drawing No. 10173-HL-18
Rev. A

APPENDIX 6

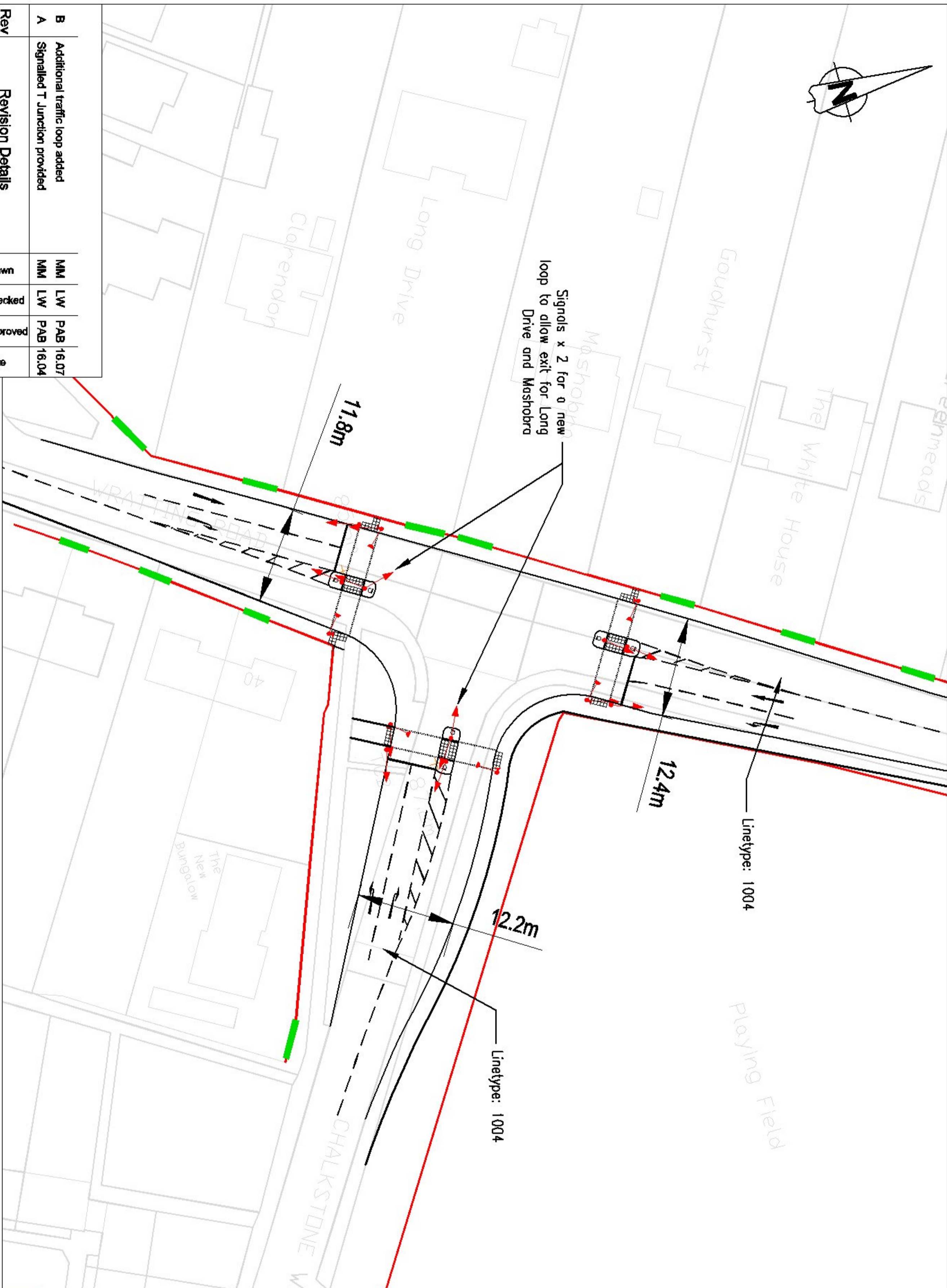
PROPOSED WORKS TO A143 WRATTING ROAD AND CHALKSTONE WAY JUNCTION

Notes:

1. Do not scale from this drawing.
2. This drawing has been based on survey data provided by a third party. Brookbanks Consulting Ltd cannot be held responsible for the accuracy of this information.
3. The junction and links have been designed in accordance with the relevant DMRB standards TD 9/93 and TD 16/07.
4. The markings have been designed in accordance with the Traffic Signs Manual Chapter 5.
5. All proposed road signs have been designed and positioned in accordance with the Traffic Signs Manual Chapters 3 and 7.

KEY

- Highway Boundary
- Existing Private Driveway



Rev	Revision Details	Drawn	Checked	Approved	Date
B	Additional traffic loop added	MM	LW	PAB	16/07
A	Signalled T Junction provided	MM	LW	PAB	16/04

PRELIMINARY		Approved	Date
Issue Status	MM	16/04/15	
Drawn	MM	Checked	PAB
		Date	16/04/15

Hallam Land Management Ltd
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GREAT WILSEY PARK
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OFF-SITE IMPROVEMENTS
Chalkstone Way Signals

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Scale at A3: 1:1000
Drawing No.: 10173-HL-11
Rev.: B



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