

Appendix AA

AA - NEWTON LONGVILLE TRAFFIC
CALMING SCHEME





Notes

- 1) Existing rumble strips approaching gateways to be re-painted.
- 2) The need for existing road markings to be reviewed as part of detailed design.

Key

Please refer to the A3 drawings for a more detailed view:

Location A	-	D028D
Location B	-	D029D
Location C	-	D030D
Location D	-	D031D
Location E	-	D033D
Location F	-	D033D
Location G	-	D034D
Location H	-	D035D
Location I	-	D036D
Location J	-	D037D

At original drawing size (A3) this line measures 50mm							Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs		Drawn JK	Date 21-02-17	Checked MP	Date 21-02-17	Approved MP	Date 21-02-17
<div>Notes</div> <div>Contains OS data © Crown copyright [and database right] (2015)</div> <div>SUBJECT TO CONFIRMATION OF HIGHWAY OWNERSHIP OF LAND</div>							Project		<div>mouchel</div>		Scale 1:5000@A1			
							Title				Job No. 1067760			
							SOUTH WEST MILTON KEYNES		<div>Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010</div>		Client SWMK Consortium			
							PROPOSED TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE				Drawing No. D027			
											Rev. D			
D	Amendments to Individual Drawings	JK	SH	03-03-17	SH									
C	Amendments to Individual Drawings	JK	MP	21-02-17	MP									
B	Additional drawings added and change in bollard size	JK	MP	21-12-16	MP									
A	Bollards added	JK	MP	18-11-16	MP									
Rev.	Amendment	By	Chkd.	Date	Appd.									



View looking North West



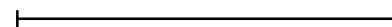
View looking South East



WHADDON ROAD

106.2m

At original drawing size (A3) this line measures 50mm



Notes
Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.
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**DRAWING TO BE READ IN CONJUNCTION WITH D027
TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE**

D
C
B
A
Rev.

Amendments to other drawings in set
Red Hatching added
Additional notation and removal of roundel
Roundels added
Amendment

JK
JK
JK
JK
By

SH
MP
MP
MP
Chkd.

03-03-17
21-02-17
21-12-16
18-11-16
Date

SH
MP
MP
MP
Appd.

Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs

Project
SOUTH WEST MILTON KEYNES

Title
LOCATION A: SPEED LIMIT BOUNDARY TO WHADDON ROAD

Drawn
JK

Date
21-02-17

Checked
SH

Date
21-02-17

Approved
MP

Date
21-02-17

mouchel

Export House
Woking, Surrey. GU21 6QX
Tel: +44 (0)1483 731000
Fax: +44 (0)1483 731010

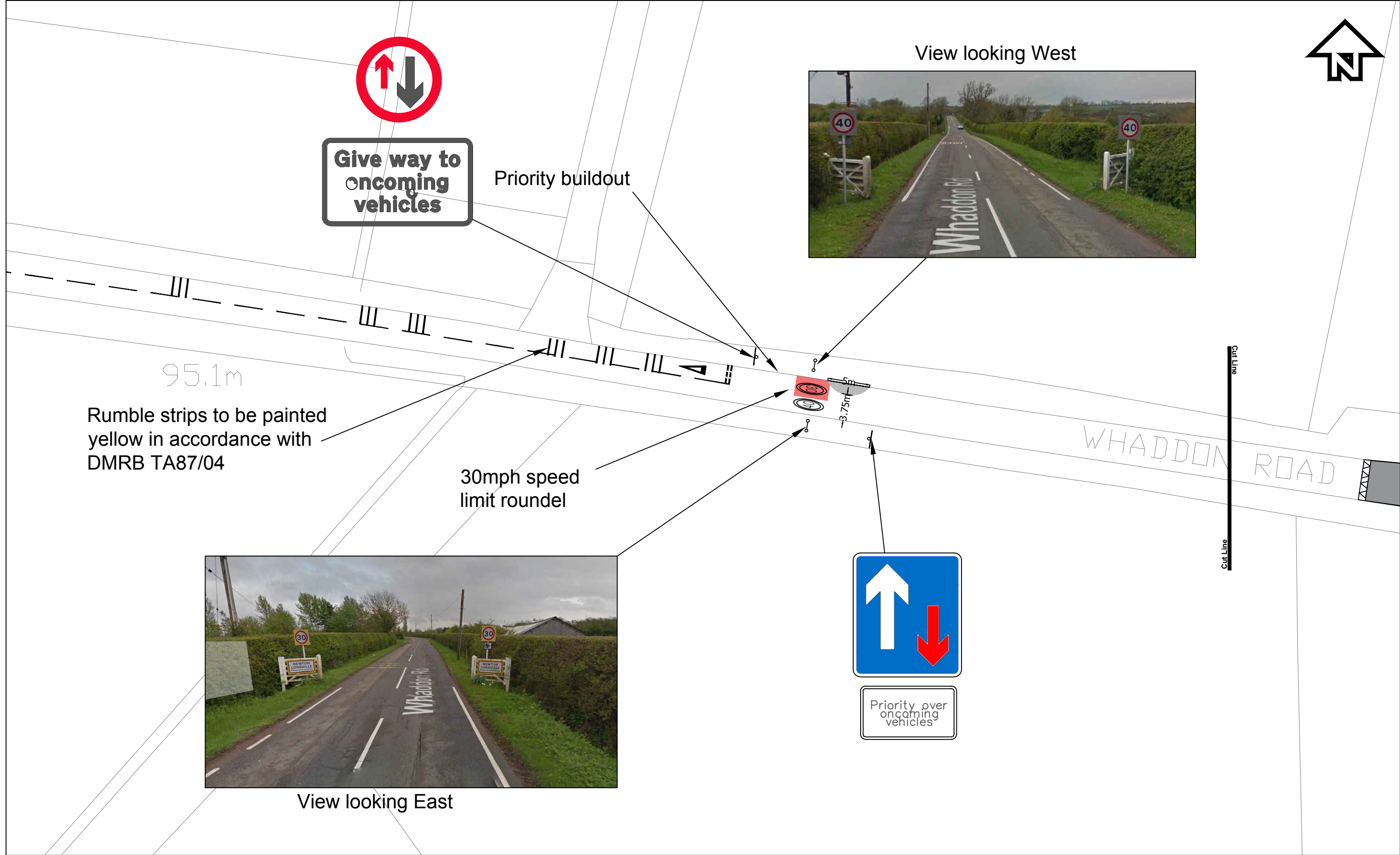
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1:500@A3


Job No.
1067760

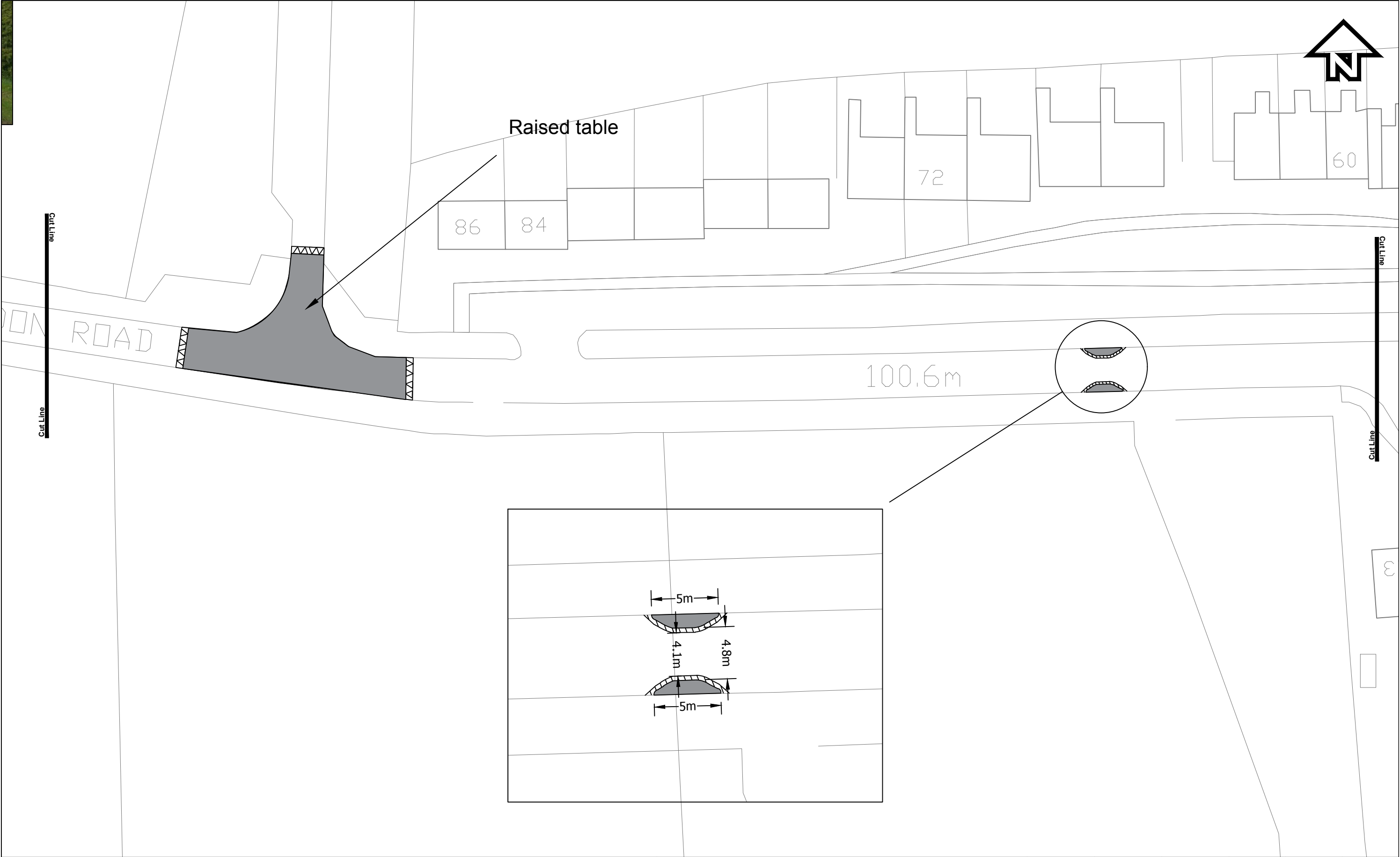
Client
SWMK Consortium

Drawing No.
D028

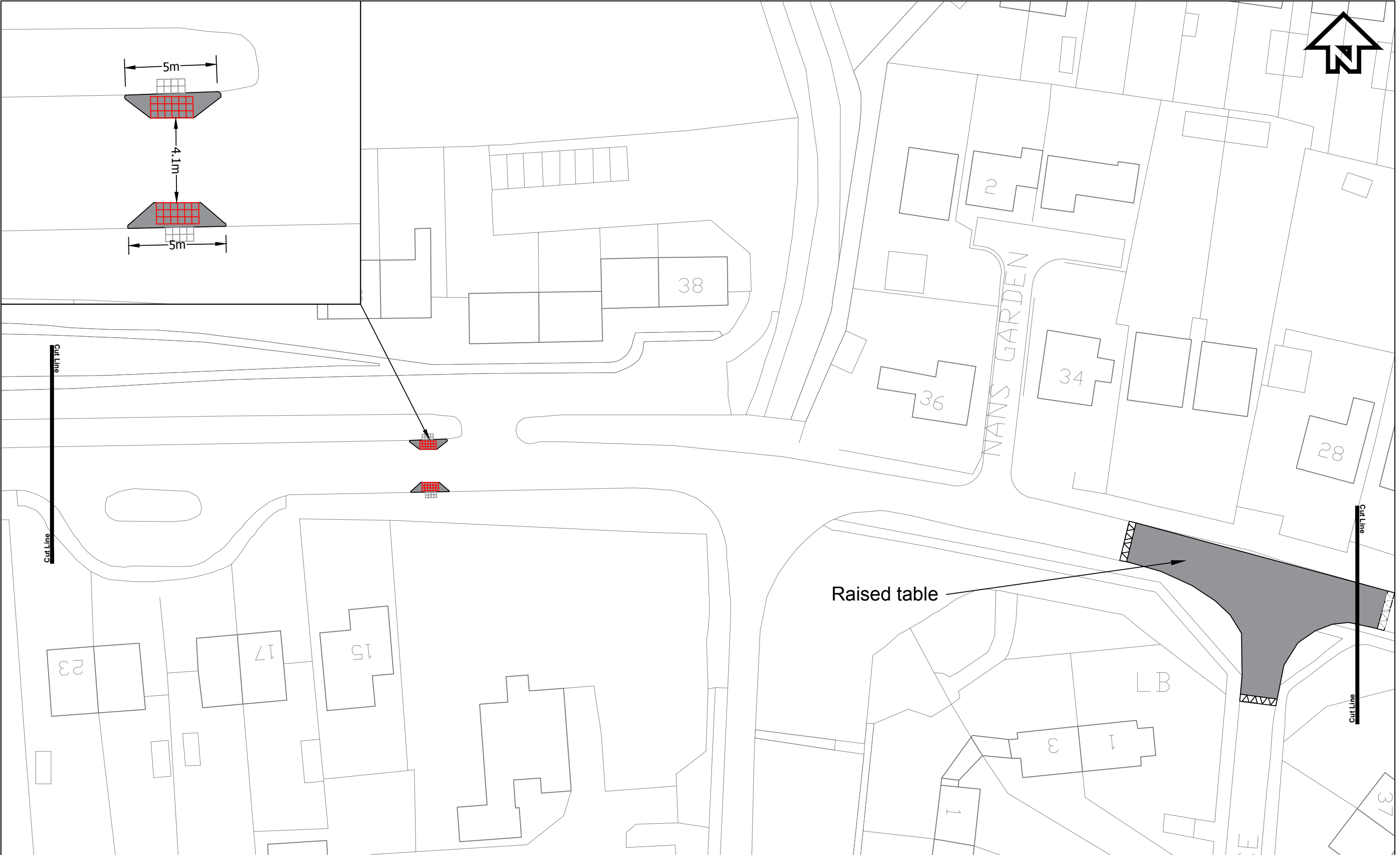
Rev.
D




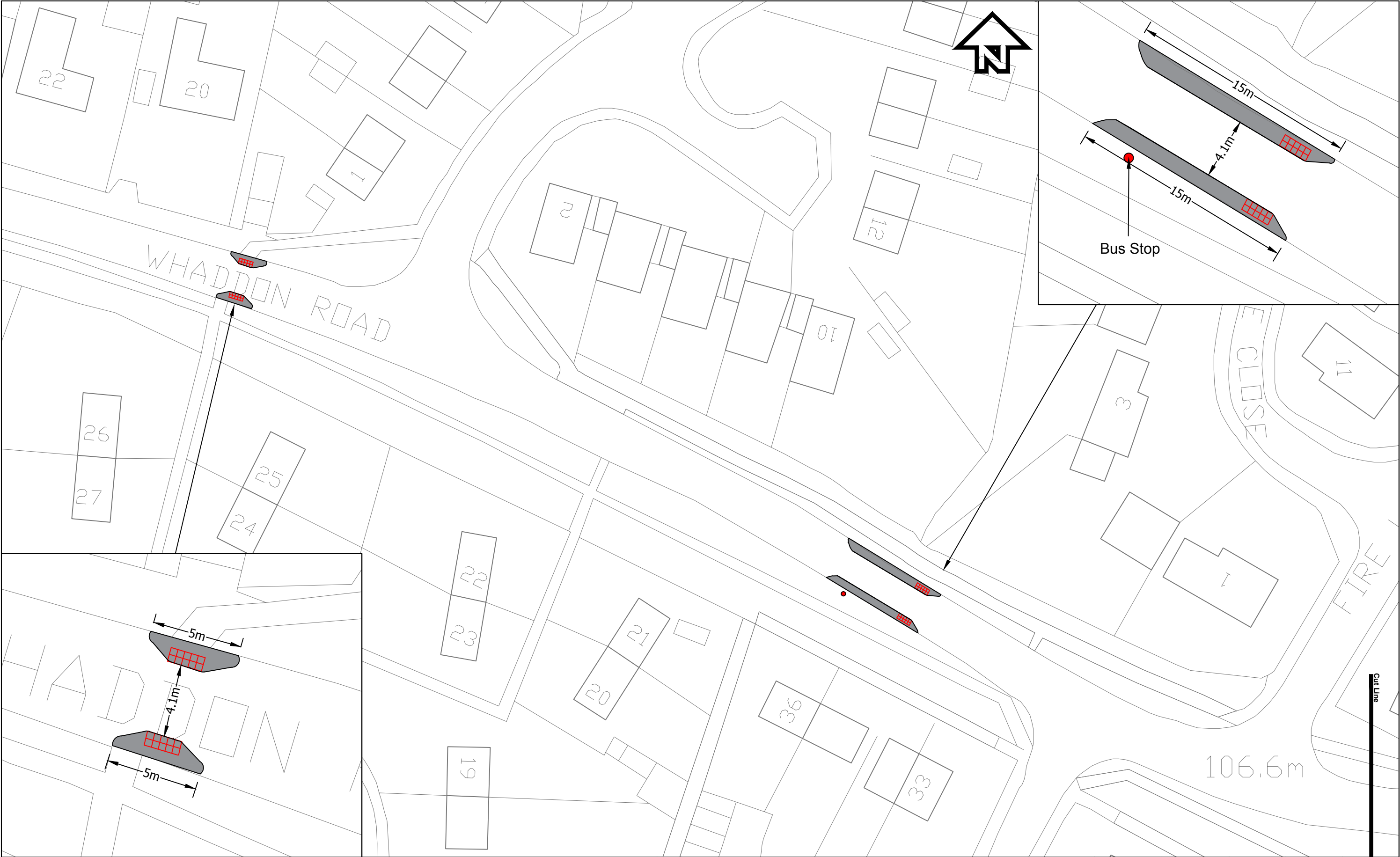
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<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>	D	Additional features added	JK	SH	03-03-17	SH	Project	SOUTH WEST MILTON KEYNES		Scale 1:500@A3					
	C	Cycle Bypass Added	JK	MP	21-02-17	MP	Title			LOCATION B: ENHANCEMENT TO VILLAGE GATEWAY ON WHADDON ROAD	Job No. 1067760				
	B	Additional notation and change in size of bollards	JK	MP	21-12-16	MP		Client SWMK Consortium							
	A	Addition of roundel	JK	MP	18-11-16	MP		Drawing No. D029					Rev. D		
	Rev.	Amendment	By	Chkd.	Date	Appd.									



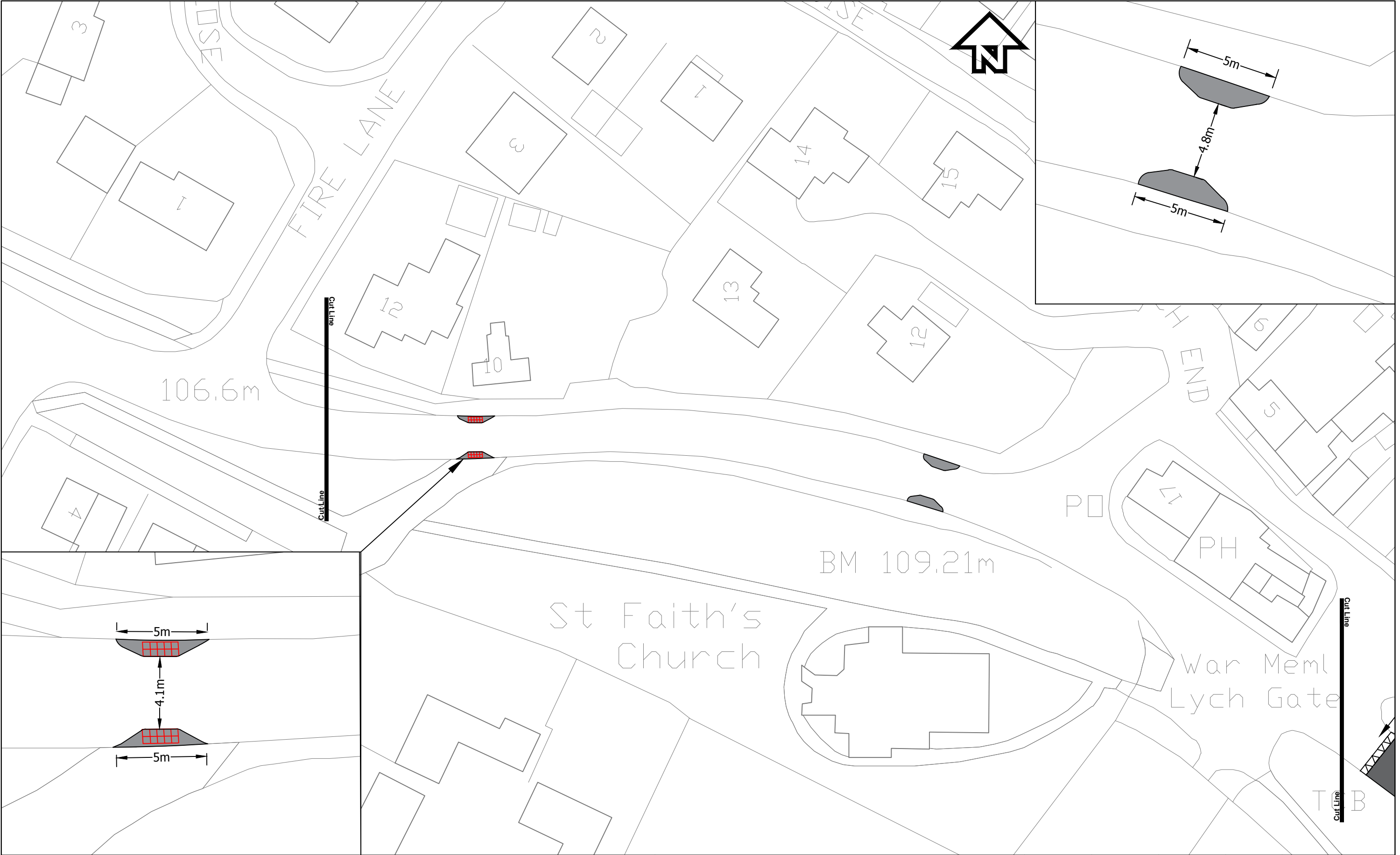
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<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>	D	Additional features added	JK	SH	03-03-17	SH	Project SOUTH WEST MILTON KEYNES						<div>mouchel</div>				Scale 1:500@A3								
	C	Widening and Removal of buildouts	JK	MP	21-02-17	MP	Title LOCATION C: ROAD NARROWING ALONG WHADDON ROAD										Job No. 1067760								
	B	Change of scale	JK	MP	21-12-16	MP							Client SWMK Consortium												
	A	Bollards added	JK	MP	18-11-16	MP											Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010								
	Rev.	Amendment	By	Chkd.	Date	Appd.	Drawing No. D030				Rev. D														



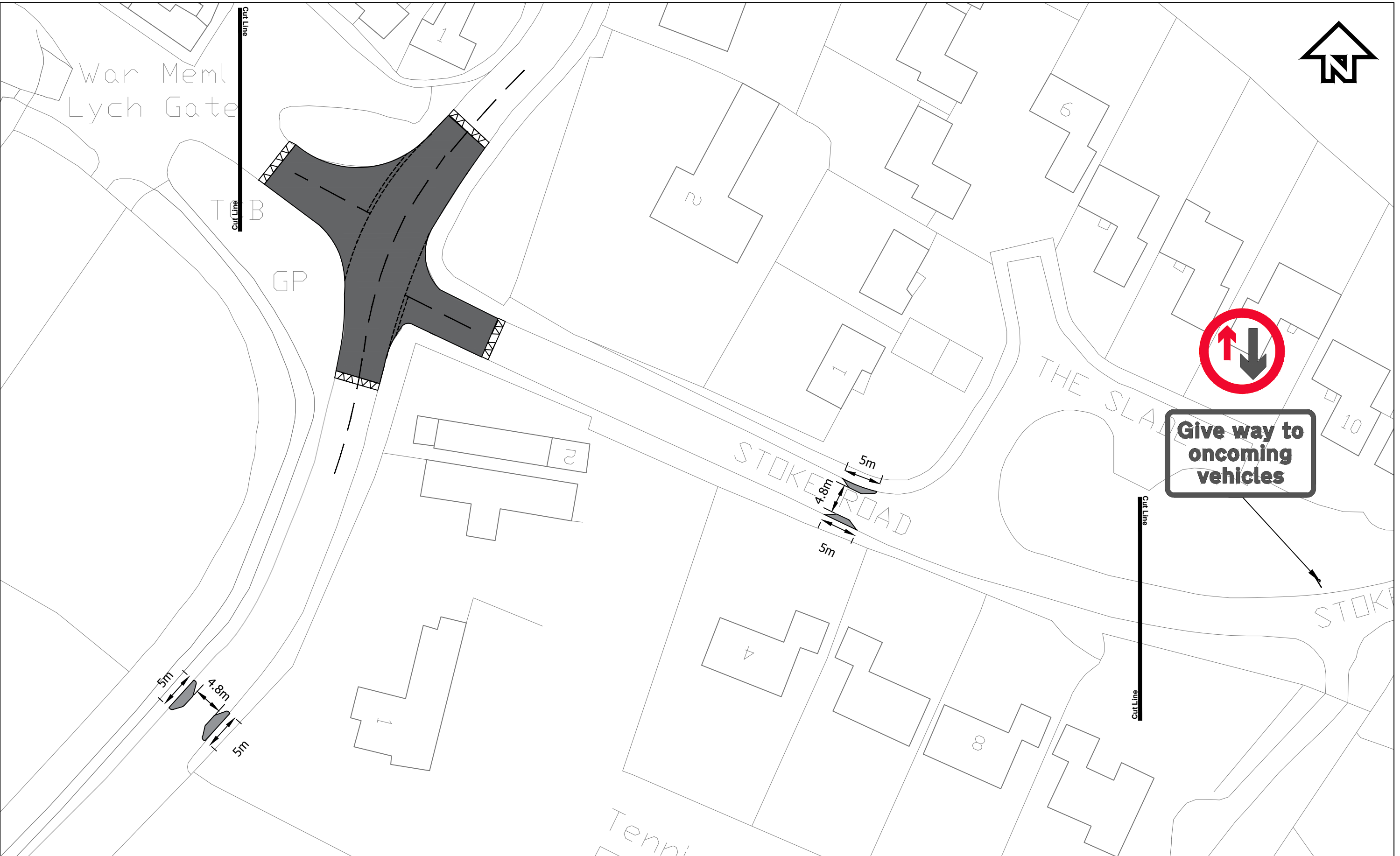
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<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027</div> <div>TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>	D	Additional features added	JK	SH	03-03-17	SH	Project		Scale 1:500@A3					
	C	Build out Relocation	JK	MP	21-02-17	MP	Title		Job No. 1067760					
	B	Change in bollard size and drawings scale	JK	MP	21-12-16	MP		Client SWMK Consortium						
	A	Bollards Added	JK	MP	18-11-16	MP		Drawing No. D031						
	Rev.	Amendment	By	Chkd.	Date	Appd.					Rev. D			



At original drawing size (A3) this line measures 50mm							Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs							Drawn JK		Date 21-02-17		Checked SH		Date 21-02-17		Approved MP		Date 21-02-17	
<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>							D	Additional features added				JK	SH	03-03-17	SH	<div>Project</div> <div>SOUTH WEST MILTON KEYNES</div>									
							C	Rearrangement of bollards				JK	MP	21-02-17	MP										
							B	Change in bollard size and drawings scale				JK	MP	21-12-16	MP	<div>Title</div> <div>LOCATION E: ROAD NARROWING AND CROSSING POINTS ALONG WHADDON ROAD</div>									
							A	Bollards added				JK	MP	18-11-16	MP										
							Rev.	Amendment				By	Chkd.	Date	Appd.	<div>Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010</div>									
										<div>Scale 1:500@A3</div> <div>Job No. 1067760</div> <div>Client SWMK Consortium</div> <div>Drawing No. D032</div> <div>Rev. D</div>															



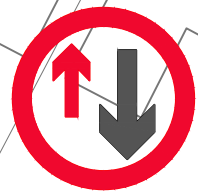
At original drawing size (A3) this line measures 50mm							Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs							Drawn JK		Date 21-02-17		Checked SH		Date 21-02-17		Approved MP		Date 21-02-17	
<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>	D	Additional features added	JK	SH	03-03-17	SH	Project SOUTH WEST MILTON KEYNES						<div>mouchel</div>				Scale 1:500@A3								
	C	Removal and relocation of buildouts	JK	MP	21-02-17	MP											Job No. 1067760								
	B	Change in bollard size and drawings scale	JK	MP	21-12-16	MP	Title LOCATION F: ROAD NARROWING AND CROSSING POINT ALONG WHADDON ROAD						<div>Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010</div>				Client SWMK Consortium								
	A	Bollards added	JK	MP	18-11-16	MP											Drawing No. D033				Rev. D				
	Rev.	Amendment		By	Chkd.	Date	Appd.																		



At original drawing size (A3) this line measures 50mm							Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs							Drawn JK		Date 21-02-17		Checked SH		Date 21-02-17		Approved MP		Date 21-02-17	
<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>	D	Amendments to other drawings in set	JK	SH	03/03/16	SH	Project SOUTH WEST MILTON KEYNES							<div>mouchel</div>						Scale 1:500@A3					
	C	Removal of roundabout and addition of raised table	JK	MP	21/02/17	MP														Job No. 1067760					
	B	Addition of bollards	CEW	SH	13/06/16	MP	Title LOCATION G: NEWTON LONGVILLE CROSSROADS POTENTIAL MITIGATION SCHEME							<div>Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010</div>						Client SWMK Consortium					
	A	Hatching and Granite strips	CEW	SH	13/06/16	MP														Drawing No. D034				Rev. D	
	Rev.		Amendment		By	Chkd.	Date	Appd.																	



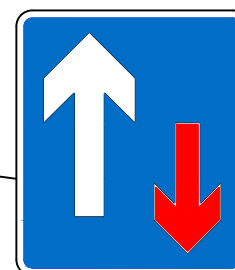
View looking West



**Give way to
oncoming
vehicles**

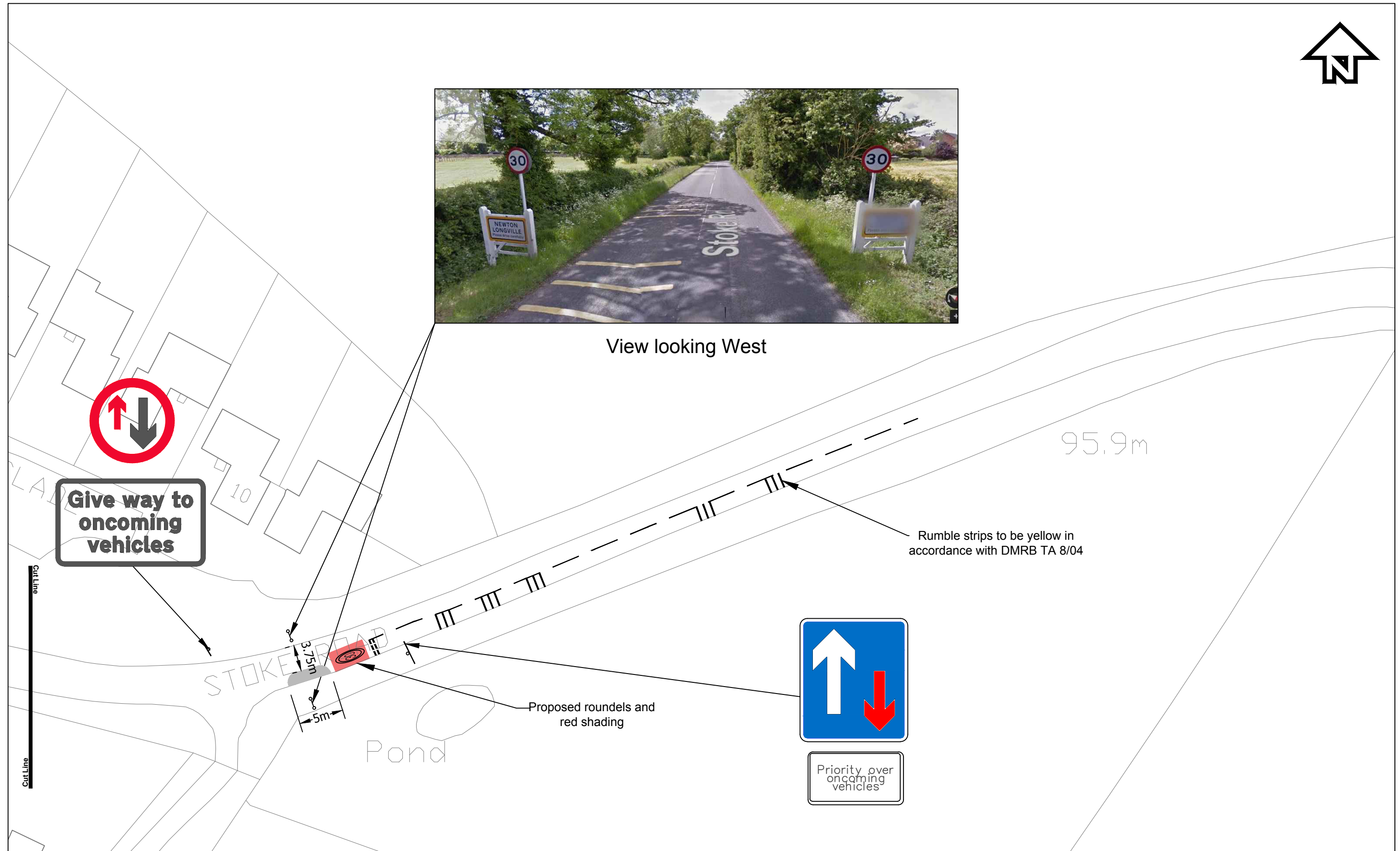
95.9m

Rumble strips to be yellow in
accordance with DMRB TA 8/04



Priority over
oncoming
vehicles

Proposed roundels and
red shading




At original drawing size (A3) this line measures 50mm

Notes
Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.
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**DRAWING TO BE READ IN CONJUNCTION WITH D027
TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE**

D	Amendments to other drawings in set	JK	SH	03-03-17	SH
C	Relocation of Build out and Rumble Strips	JK	MP	21-02-17	MP
B	Change in bollard size and additional notes	JK	MP	21-12-16	MP
A	Addition of bollards	JK	MP	18-11-16	MP
Rev.	Amendment	By	Chkd.	Date	Appd.

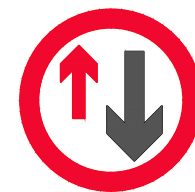
Cad Ref. No.	L:\106xxx\1067760 South West Milton Keynes\12 Dwgs
Project	SOUTH WEST MILTON KEYNES
Title	LOCATION H: ENHANCEMENT TO VILLAGE GATEWAY ON STOKE ROAD

Drawn	JK	Date	21-02-17	Checked	SH	Date	21-02-17	Approved	MP	Date	21-02-17
mouchel 						Scale	1:500@A3				
						Job No.	1067760				
						Client	SWMK Consortium				
						Drawing No.	D035				Rev.
										D	



Proposed gateway 96.6m

Rumble strip to be yellow in accordance with DMRB TA87/04



Give way to oncoming vehicles



Proposed gateway

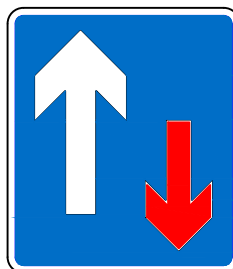


View looking South

30 mph speed limit roundel

Priority buildout

3.75m



Priority over oncoming vehicles



View looking South

SPEED LIMIT TO BE RELOCATED TO GATEWAY IF REQUIRED BY BCC

At original drawing size (A3) this line measures 50mm

Notes
Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.
Contains OS data © Crown copyright [and database right] (2017)
DRAWING TO BE READ IN CONJUNCTION WITH D027
TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE

D	Amendments to other drawings in set	JK	SH	03-03-17	SH
C	Gateway Relocated 50m North	JK	MP	21-02-17	MP
B	Additional notation and removal of roundel	JK	MP	21-12-16	MP
A	Roundels added	JK	MP	18-11-16	MP
Rev.	Amendment	By	Chkd.	Date	Appd.

Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs

Drawn JK

Date 21-02-17

Checked SH

Date 21-02-17

Approved MP

Date 21-02-17

Project
SOUTH WEST MILTON KEYNES

Title
LOCATION I: ENHANCEMENT TO VILLAGE GATEWAY ON BLETCHLEY ROAD

mouchel

Export House
Woking, Surrey. GU21 6QX
Tel: +44 (0)1483 731000
Fax: +44 (0)1483 731010

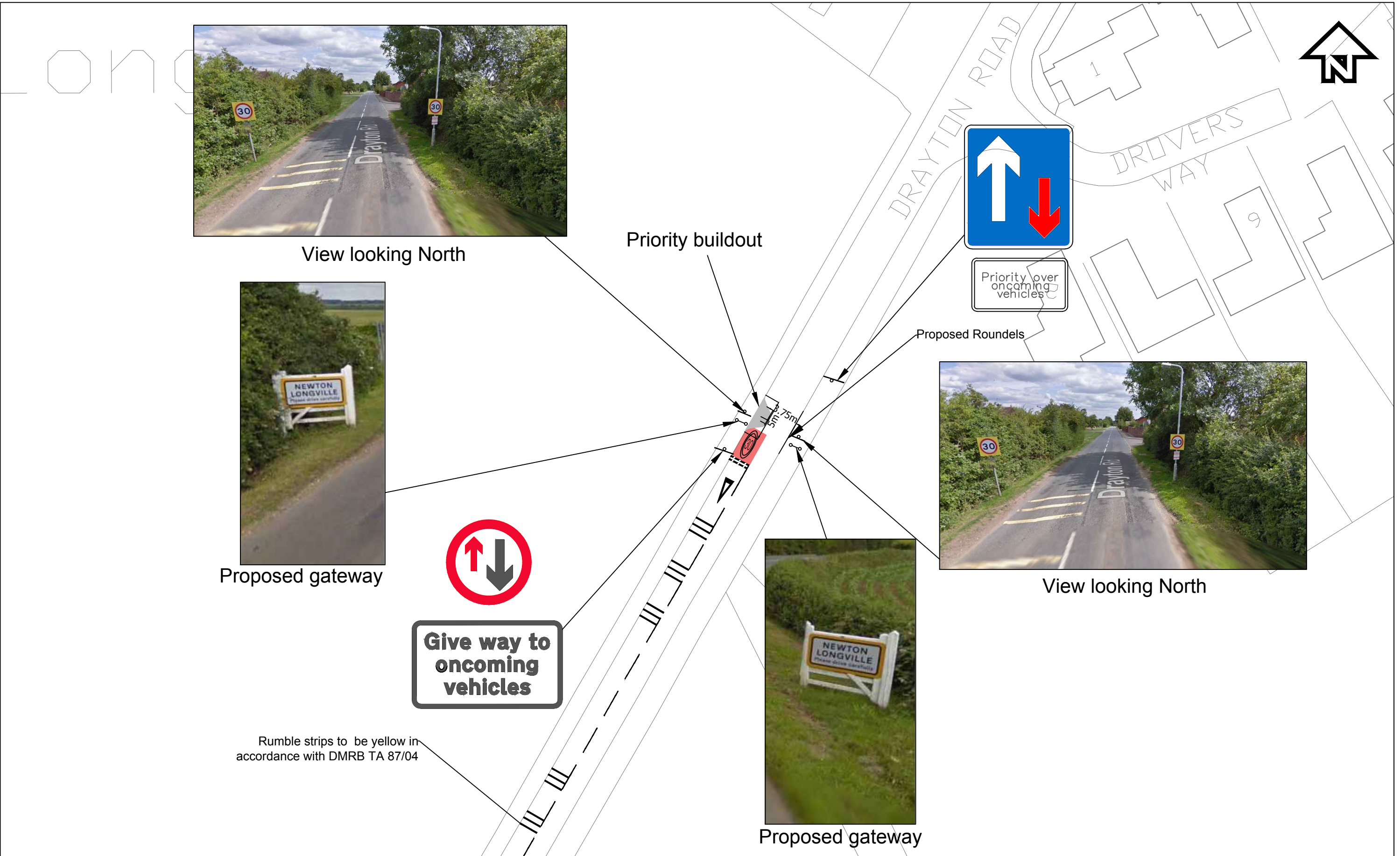
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Job No. 1067760

Client SWMK Consortium

Drawing No. D036

Rev. D



At original drawing size (A3) this line measures 50mm							Cad Ref. No. L:\106xxx\1067760 South West Milton Keynes\12 Dwgs			Drawn JK	Date 21-02-17	Checked SH	Date 21-02-17	Approved MP	Date 21-02-17
<div>Notes</div> <div>Reflective bollards to be included at all buildouts and road narrowings to increase visibility of the features during hours of darkness.</div> <div>Contains OS data © Crown copyright [and database right] (2017)</div> <div>DRAWING TO BE READ IN CONJUNCTION WITH D027 TRAFFIC CALMING STRATEGY FOR NEWTON LONGVILLE</div>							Project SOUTH WEST MILTON KEYNES				Scale 1:500@A3				
							Title LOCATION J: ENHANCEMENT TO VILLAGE GATEWAY ON DRAYTON ROAD				Job No. 1067760				
										Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010		Client SWMK Consortium			
												Drawing No. D037			Rev. D
		Rev.	Amendment		By	Chkd.	Date	Appd.							

Transport for Buckinghamshire



ROAD SAFETY ASSESSMENT REPORT.

**South West Milton Keynes Development,
Proposed Traffic calming scheme,
Newton Longville Village.**

Contents:

1. Introduction.
2. Documents and Methodology.
3. Road Safety Audit.
4. Audit Statement.
5. Plans with problem locations.

Transport for Buckinghamshire



Simon Dando • Contract Director • TfB • County Hall
Walton Street • Aylesbury • Buckinghamshire • HP20 1UY

ROAD SAFETY ASSESSMENT REPORT.

South West Milton Keynes Development, Proposed Traffic calming scheme, Newton Longville Village.

To: Sarah Hearn. Highways Development Management. Buckinghamshire County Council.

From: Peter Chapman - Network Safety Team, Transport for Buckinghamshire.

Date: 25/01/2017

Tel Ext: 01296-382438

ROAD SAFETY ASSESSMENT.

1. INTRODUCTION

- 1.1** This report results from a request from Buckingham County Council, Development Management Team for a Road Safety Assessment of proposed traffic calming measures as a result of the south west Milton Keynes development.
- 1.2** The location is a village environment subject to a 30 mph speed limit but with 40 mph and national speed limits on approach roads. The village is widely used as it is on a route between the northern end of the A4146 Stoke Hammond by-pass and the A421 Milton Keynes to Buckingham route.
- 1.3** The aim of the scheme is apparently to deter development traffic from using Whaddon Road/Stoke Road, by increasing journey times.

1.4 The proposals are;

- Road narrowings on Whaddon Road and Stoke Road.
- New gateway features with build outs and road narrowing / priority working on all approaches to Newton Longville, and;
- A new mini roundabout at the staggered crossroads at Whaddon Road/Stoke Road/Drayton Road and Bletchley Road.

1.5 This assessment should not be seen as an alternative to any requirement for a full Road Safety Audit of each proposal at all relevant stages. It is an initial assessment to identify and highlight safety issues that are likely to be raised as part of future audits of the scheme, which may require changes and funding to achieve the desired benefits and mitigation required by any planning requirements.

1.6 The assessment was carried out by:

Peter Chapman, MCIHT. MSoRSA. (Audit Team Leader)

HE Approved RSA Certificate of Competency.

Collision Investigation & Analysis Officer, Network Safety Team, Transport for Buckinghamshire.

Trevor Bonsor, MIHE. (Audit Team Member).

HE Approved RSA Certificate of Competency.

Scheme Engineer, Schemes Team, Transport for Buckinghamshire.

1.7 The examination has been carried out with the sole purpose of identifying any features of the site that raise road safety concerns. No members of the audit team have been involved in the design of the scheme.

2. Documents and Methodology

2.1 The audit was undertaken with reference to a site visit and the following documents and drawings;

- RSA request form.
- Drawing number D027 Rev. B
- Drawing number D028 Rev. B
- Drawing number D029 Rev. B
- Drawing number D030 Rev. B
- Drawing number D031 Rev. B
- Drawing number D032 Rev. B
- Drawing number D033 Rev. B
- Drawing number D034 Rev. B
- Drawing number D035 Rev. B
- Drawing number D036 Rev. B
- Drawing number D037 Rev. B

2.2 Following a desktop examination of the plans provided, a site visit was carried out on Tuesday 17th January 2017 between 10:30hrs and 12:30hrs. The weather conditions were dry and sunny. Traffic was light.

- 2.3** The audit has been based on the principles contained within the Buckinghamshire County Council Road Safety Audit Policy, The Highway Advice note HD 19/15 (Road Safety Audit) of the Highways Agency's Design Manual for Roads and Bridges (DMRB) and the CIHT Road Safety Audit Guidelines 2008. The scheme has been examined, and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order 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 for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.
- 2.4** The format of this report has potential safety problems identified as **Problem** normally with a **Recommendation** of action. In addition, other pertinent safety matters that the auditor thinks are important will be mentioned by way of **Comment**. The order of concerns does not indicate the degree of safety concern.
- 2.5** 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 which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

2.8 Previous Safety Audits

To our knowledge no previous Road Safety Audits have been undertaken.

3. ROAD SAFETY ASSESSMENT - ITEMS RESULTING FROM THIS INSPECTION.

Location references are those indicated on Drawing No. D027 Rev B.

3.1 PROBLEM

Location A - existing speed limit boundary to Whaddon Road.
Compliance with the change of speed limit.



SUMMARY

The proposal to install a 40 mph speed limit roundel is unnecessary, as it currently exists. However the road

environment doesn't encourage drivers to lower their speed from the national speed limit to the north. Drivers may continue at a higher speed over the bridge with a risk of sudden braking at high speed and loss of control or head on collisions.

RECOMMENDATION

Install red surfacing under the 40 mph roundel, possibly as a lateral gateway across the width of the carriageway. Red surface under the 'slow' marking.

3.2 PROBLEM

Location B. – Village Gateway entrance and priority build-out on Whaddon Road. Reduced visibility and close proximity to a bend.



SUMMARY

A road narrowing and priority working is proposed at the Whaddon Road village gateway. Vehicles travelling north out of the village have priority over southbound vehicles that have to give way. The build out is approximately 80m from a bend. Southbound drivers, having seen no oncoming vehicles, will 'commit' to driving around the build-out, towards the bend with the danger that the time taken to complete this manoeuvre may result in northbound vehicles rounding the bend with oncoming vehicles towards them on the 'wrong' side of the road. This may result in head on collisions; sudden braking and rear shunt collisions.

At 3.5m in width this may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions

RECOMMENDATION

Reposition the gateway and speed limit further north further away from the bend. Provide a cycle by-pass lane.

3.3 PROBLEM

Location C – Road narrowing on Whaddon Road, outside the entrance to Longueville Hall and close proximity to the priority narrowing.

SUMMARY

This narrowing will result in northbound vehicles driving in the centre of the road at the point 50m from the priority narrowing subject of the problem at 3.2. resulting in the risk of the collisions

mentioned at 3.2.

RECOMMENDATION

Reposition the narrowing or use vertical deflection traffic calming measures.

3.4

PROBLEM

Location C – Road narrowing on Whaddon Road, outside No.76.
Lack of priority working.



SUMMARY

The proposed narrowing outside No. 76 replaces a section of central cross hatching. The narrowing is proposed to be 4.1m in width, which is possibly sufficient width for two cars to pass in opposing directions but would require one vehicle to give way if a large vehicle was travelling in either direction. At this location, on a straight section of the road, this may lead to sudden braking with the risk of rear shunt collisions or the opposite effect of vehicles accelerating to beat the on coming vehicle.

RECOMMENDATION

Provide a central island to narrow the carriageway, or alternative vertical deflection traffic calming.

3.5

PROBLEM

Location C – Road narrowing on Whaddon Road, outside No.23.
Close proximity to the access road.



SUMMARY

This location is 7-10m west of the access road to No.23 and 17 / 19 and 21. Vehicles turning out of this access road turning left

towards Milton Keynes will need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

RECOMMENDATION Reposition the narrowing or use alternative traffic calming measures.

3.6 PROBLEM

Location D – Road narrowing on Whaddon Road, outside the Crooked Billet PH. Close proximity to the junction and right turn facility / marking.



SUMMARY

This location is 10m west of the junction of Westbrook End. Vehicles turning out of this road turning left towards Milton Keynes may need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

There is also a marked right turn facility at this junction. Any driver intending to turn right from the west will prevent the through flow of following vehicles, particularly large goods vehicles, due to the narrowing which could lead to rear shunt collisions, or left turning vehicles from Westbrook End turning and braking suddenly as they are unable to pass stationary traffic through the narrowing leading to side impact collisions.

RECOMMENDATION Reposition the proposed location of the narrowing, possibly at the tactile paving and dropped kerb further west, or consider alternative traffic calming.

3.7 PROBLEM

Location D – Road narrowing on Whaddon Road, outside No.32/34. Close proximity to two private accesses.



SUMMARY

The proposed location of the narrowing outside No.32 is between two vehicle accesses for 32/30 and 34. This is likely to cause similar problems as mentioned at 3.5.

RECOMMENDATION

Reposition the narrowing or use alternative traffic calming measures.

3.8

PROBLEM

Location E – Road narrowings on Whaddon Road, outside No.20, 21/22 and 33. Positioning close to junctions, bus stop and parking.





SUMMARY

The proposed location of the build out and narrowing outside of No.20 is currently the position of a bus stop. This will require repositioning further west away from the junction to avoid a problem of buses pulling into the kerbline beyond the build out, resulting in the rear of the bus obstructing the carriageway. Accessibility into and off the bus presents a slip or fall hazard.

This location is also at the junction with Green Way with a marked right turn facility. Vehicles intending to turn right into Green Way

will move to the centre of the road at a point where vehicles are negotiating the narrowing and moving back, resulting in opposing vehicles in the middle of the road. Also following westbound vehicles may mistake a vehicle turning right for one going ahead moving out to negotiate the narrowing. This may result in side impact or rear shunt collisions.

There is one vehicle which appears to regularly park at the end of the footpath between No.21 and 22. The proposed narrowing will displace this parking which may be opposite the junction or adjacent to the build out, obstructing the visibility of pedestrians.

The build out and crossing facility outside No.33 is 5m from the junction with Manor Road. Vehicles turning left out of this road turning left towards Milton Keynes may need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

RECOMMENDATION

Relocate or reduce the number of the proposed narrowings or use alternative vertical deflection traffic calming.

3.9

PROBLEM

Location F - Road narrowings on Whaddon Road, outside No.10.
Visibility of the narrowing, recognition of the right turn.





SUMMARY

The build out and pedestrian facility outside No.10 is to the west of a slight bend outside the church. Visibility for pedestrians to the east will be improved but is still restricted. Pedestrians may be unsighted and step out in front of west bound vehicles resulting in sudden braking, loss of control or pedestrian collisions.

There is a right turn marking currently at this crossing point prior to Fire Lane. This is likely to be removed as part of the scheme and therefore reduces the recognition of the junction and vehicles slowing to turn around a bend.

The likely removal of the current cross hatch markings may lead to increased speed in the absence of opposing traffic.

RECOMMENDATION

Reposition the narrowing or use alternative traffic calming measures.

3.10 PROBLEM

Location G – Whaddon / Stoke / Bletchley / Drayton Roads Crossroads. Lack of deflection and visibility.

SUMMARY

The current priority crossroad junction is proposed to be a mini-roundabout with minor kerb realignment on Drayton Road. All other 3 arms have very little deflection on their approaches to the junction, and the central island is proposed as over-runnable

resulting in little, if any, required steering input. The proposed coloured surfacing and transverse granite sets will highlight the junction but are unlikely to sufficiently slow drivers who are familiar with the junction, particularly the main route through the village on Stoke Road and Whaddon Road. This could lead to drivers failing to give way and side impact collisions.

Visibility between the Whaddon Road approach and to the north on Bletchley road is obscured by the building line of No.1. and vegetation. This could lead to late recognition of an approaching vehicle having priority and sudden unexpected braking with resulting loss of control or rear shunt collisions.

RECOMMENDATION

Provide greater deflection on the approaches and raise the junction to reduce speeds approaching and through the junction.

3.11 PROBLEM

Location H – Village gateway on Stoke Road. Lack of forward visibility and approach speeds.



SUMMARY

The proposed enhanced gateway feature is to the west of a bend on which there is a national speed limit. Forward visibility towards the gateway and requirement to give way by westbound vehicles is restricted by vegetation on the inside of the bend. Drivers could be approaching the gateway, at 60 mph, without clear visibility of oncoming vehicles or stationary vehicles at the give way line,

resulting in braking on a bend leading to loss of control collisions or collisions with queuing or oncoming traffic.

At 3.5m in width this may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions

The narrowing and build outs further west are located on a bend where visibility is restricted and may lead to similar problems.

RECOMMENDATION

Reposition the gateway with better forward visibility. Provide a cycle by-pass lane. Remove the build out close to Stoke Road pond in light of the repositioned gateway and narrowing.

3.12 PROBLEM

Location I - Village gateway on Bletchley Road. Lack of forward visibility.



SUMMARY

The proposed enhanced gateway feature is to the north of a bend at a change to a 40 mph speed limit. Forward visibility towards the gateway and requirement to give way by southbound vehicles is restricted by vegetation on the inside of the bend. Drivers could be approaching the gateway, without clear visibility of oncoming vehicles resulting in them making the decision to drive through the narrowing at the point where a vehicle emerges into view, resulting in braking or accelerating leading to loss of control collisions or head on collisions.

Again the width is proposed as 3.5m which may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions

RECOMMENDATION

Reposition the priority gateway and speed limit further north. Provide a cycle by-pass lane.

3.13 PROBLEM

Location J - Village gateway on Bletchley Road. Proximity to Drovers Way.



SUMMARY

It would appear from the supplied drawing that the gateway and priority narrowing is to be relocated 30m south of the junction with Drovers Way. Vehicles approaching the priority narrowing with no oncoming vehicles are likely to be driving at or around 30 mph through the narrowing and unlikely to be returning to the correct side of the road as they approach the junction. Drivers turning left from Drovers Way towards the narrowing may be faced with oncoming vehicles on their side of the road at a time they are accelerating out of Drovers Way. This may result in head on collisions or braking at speed resulting in loss of control.

RECOMMENDATION

Reposition the gateway, priority narrowing and speed limit further south.

3.14 PROBLEM

General throughout the scheme. Day and night time visibility of the build outs.

No details of street furniture is indicated, which is understandable at this stage of design but the visibility of the build outs at the narrowings both day and night will need to be considered. Suitable and sufficient lighting is required for the traffic calming and reflective bollards should be included in any design.

4. **ASSESSMENT STATEMENT**

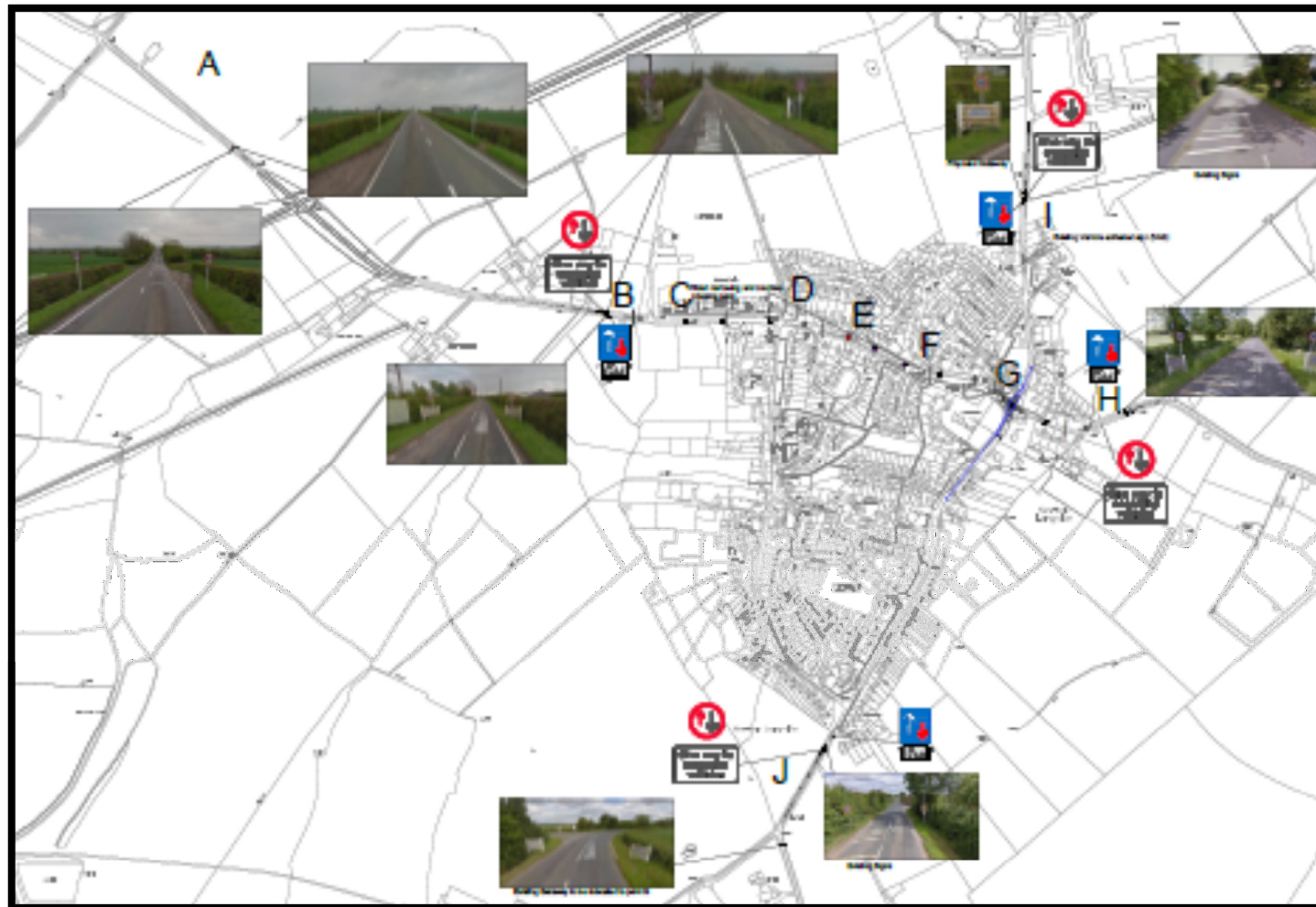
We certify that this assessment has been carried out in accordance with HD 19/15.

Audit Team Leader:
Peter Chapman, MCIHT. MSoRSA.

A handwritten signature in black ink, appearing to read 'P. Chapman', with a long horizontal stroke extending to the right.

Signed: Peter Chapman
Date: 25/01/2017

5. SCHEME AND PROBLEM LOCATIONS.



Land South of A421, South West Milton Keynes

Newton Longville Traffic Calming Scheme

Designer's Response to 'Road Safety
Assessment'

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1 Introduction

- 1.1 This report sets out the design team's response to the following Stage 1 'Road Safety Assessment' which was carried out by Buckinghamshire County Council (BCC) on the proposed Newton Longville Traffic Calming (NLTC) scheme related to the proposed development of 'Land South of the A421, South West Milton Keynes'.
- 1.2 The Stage 1 'Road Safety Assessment' dated 21st January 2017 should be read alongside this report. The documents submitted for the Road Safety Audit comprised 11 as in the Road Safety Assessment Report.
- 1.3 The proposed alterations form mitigation for the proposed development of land at South West Milton Keynes, as detailed within the Transport Assessment for the scheme. The proposed development at South West Milton Keynes is located within Aylesbury Vale District in Buckinghamshire.
- 1.4 It should be remembered that the Applicant of the SWMK development will be providing a financial contribution towards a traffic calming scheme for Newton Longville. The purpose of the concept design of the NLTC scheme is to provide a cost estimate for a traffic calming scheme that would be secured as a Section 106 planning obligation. The exact details of the scheme and its features will be agreed between BCC and local residents prior to implementation.
- 1.5 The items raised from the Safety Audit have been reproduced within this report and are in *italics* and quotation marks. The design team response is also provided for each item raised.

2 Responses to Stage 1 RSA items raised

Item 3.1

“Location: A - Existing speed limit boundary to Whaddon Road. Compliance with the change of speed limit.

Summary: The proposal to install a 40 mph speed limit roundel is unnecessary, as it currently exists. However the road environment doesn't encourage drivers to lower their speed from the national speed limit to the north. Drivers may continue at a higher speed over the bridge with a risk of sudden braking at high speed and loss of control or head on collisions

Recommendation: Install red surfacing under the 40 mph roundel, possibly as a lateral gateway across the width of the carriageway. Red surface under the 'slow' marking.”

Response

- 2.1 There is no proposal to introduce a 40mph roundel at the speed limit boundary – Drawing D028B shows the existing speed limit boundary, not a proposal. However, red surfacing can be installed under the existing 40mph roundel. This can be included in the detailed design stage of the NLTC scheme by BCC. Drawing D028D shows this change.

Item 3.2

“Location: B - Village Gateway entrance and priority build-out on Whaddon Road. Reduced visibility and close proximity to a bend.

Summary: A road narrowing and priority working is proposed at the Whaddon Road village gateway. Vehicles travelling north out of the village have priority over southbound vehicles that have to give way. The build out is approximately 80m from a bend. Southbound drivers, having seen no oncoming vehicles, will 'commit' to driving around the build-out, towards the bend with the danger that the time taken to complete this manoeuvre may result in northbound vehicles rounding the bend with oncoming vehicles towards them on the 'wrong' side of the road. This may result in head on collisions; sudden braking and rear shunt collisions.

At 3.5m in width this may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions

Recommendation: Reposition the gateway and speed limit further north further away from the bend. Provide a cycle by-pass lane.”

Response

- 2.2 Noted. The sight stopping distance for a 30mph speed limit is 43m and for a 40mph speed limit is 102m in accordance with Manual for Streets (MfS) and MfS2. Northbound

vehicles are within the 30mph speed limit and therefore require only 43m to stop. The bend is c. 80m from the buildout, therefore northbound drivers would have more than sufficient stopping time should they see southbound vehicles oncoming around the buildout. Furthermore, there is considerably more than 102m southbound visibility for drivers to see northbound vehicles approaching and then prepare to 'give way'.

- 2.3 The design of the gateway will be positioned further north away from the bend to provide greater sight stopping distance (SSD) when travelling southbound. There is insufficient carriageway width to provide a cycle bypass lane, therefore a width of 3.75m through the gateway will be maintained to allow cyclists to pass vehicles safely, as shown on Drawing D029D.

Item 3.3

"Location: C – Road narrowing on Whaddon Road, outside the entrance to Longueville Hall and close proximity to the priority narrowing.

Summary: This narrowing will result in northbound vehicles driving in the centre of the road at the point 50m from the priority narrowing subject of the problem at 3.2. resulting in the risk of the collisions mentioned at 3.2.

Recommendation: Reposition the narrowing or use vertical deflection traffic calming measures."

Response

- 2.4 Noted. Vertical deflection in the form of a flat top table at the full existing width of the road can be provided at the junction with Longueville Hall as reflected on Drawing D030D.

Item 3.4

"Location: C - Road narrowing on Whaddon Road, outside No.76. Lack of priority working.

Summary: The proposed narrowing outside No. 76 replaces a section of central cross hatching. The narrowing is proposed to be 4.1m in width, which is possibly sufficient width for two cars to pass in opposing directions but would require one vehicle to give way if a large vehicle was travelling in either direction. At this location, on a straight section of the road, this may lead to sudden braking with the risk of rear shunt collisions or the opposite effect of vehicles accelerating to beat the oncoming vehicle.

Recommendation: Provide a central island to narrow the carriageway, or alternative vertical deflection traffic calming."

Response

- 2.5 A road width of 4.1m is sufficient for two cars to pass, as stated in MfS. It is insufficient for a car and a large vehicle to pass, therefore one vehicle would be required to give way, thereby slowing vehicles down. This is the whole concept of the NLTC as agreed with BCC. Furthermore, on this straight section of road within a 30mph speed limit, there is more than sufficient SSD than the 43m required by MfS, therefore vehicles will have sufficient braking time prior to the road narrowing.
- 2.6 The carriageway at this location is only 6.4m wide, and with large vehicles using the route, the lanes would need to be a minimum of 3-3.2m wide, meaning that there is insufficient space to provide a central island in place of the hatch markings. Instead, it is proposed to keep the road narrowing, however with a 4.8m carriageway width remaining which will allow a HGV and car to pass each other as shown on Drawing D030D. Hatching will be provided on both sides of the buildout to effectively reduce the carriageway width to 4.1m.
- 2.7 The location of the buildout has been moved eastwards to outside No. 68/66 to allow a more even separation distance between the adjacent traffic calming features to the east and to the west. The revised location is shown on Drawing D030D.

Item 3.5

"Location: C – Road narrowing on Whaddon Road, outside No.23. Close proximity to the access road.

Summary: This location is 7-10m west of the access road to No.23 and 17 / 19 and 21. Vehicles turning out of this access road turning left towards Milton Keynes will need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

Recommendation: Reposition the narrowing or use alternative traffic calming measures."

Response

- 2.8 A separation of c.70m between buildout features was requested by BCC. Due to the occurrence of private driveways and service road accesses in this location a reduced separation of 50m is required. To allow sufficient manoeuvring space from the access road, this buildout will be removed. Drawing D03DC shows this change.

Item 3.6

"Location: D – Road narrowing on Whaddon Road, outside the Crooked Billet PH. Close proximity to the junction and right turn facility / marking.

Summary: This location is 10m west of the junction of Westbrook End. Vehicles turning out of this road turning left towards Milton Keynes may need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

There is also a marked right turn facility at this junction. Any driver intending to turn right from the west will prevent the through flow of following vehicles, particularly large goods vehicles, due to the narrowing which could lead to rear shunt collisions, or left turning vehicles from Westbrook End turning and braking suddenly as they are unable to pass stationary traffic through the narrowing leading to side impact collisions.

Recommendation: Reposition the proposed location of the narrowing, possibly at the tactile paving and dropped kerb further west, or consider alternative traffic calming."

Response

- 2.9 The narrowing will be relocated to the location of the informal crossing further west, as suggested, and as shown on Drawing D031D.

Item 3.7

"Location: Location D – Road narrowing on Whaddon Road, outside No.32/34. Close proximity to two private accesses.

Summary: The proposed location of the narrowing outside No.32 is between two vehicle accesses for 32/30 and 34. This is likely to cause similar problems as mentioned at 3.5.

Recommendation: Reposition the narrowing or use alternative traffic calming measures."

Response

- 2.10 Noted. A raised table will be provided at the junction of Whaddon Road/ Betty's Close as an alternative to the buildout previously proposed. Drawing D031D shows this change.

Item 3.8

"Location: Location E – Road narrowings on Whaddon Road, outside No.20, 21/22 and 33. Positioning close to junctions, bus stop and parking.

Summary: The proposed location of the build out and narrowing outside of No.20 is currently the position of a bus stop. This will require repositioning further west away from the junction to avoid a problem of buses pulling into the kerbline beyond the build out, resulting in the rear of the bus obstructing the carriageway. Accessibility into and off the bus presents a slip or fall hazard.

This location is also at the junction with Green Way with a marked right turn facility. Vehicles intending to turn right into Green Way will move to the centre of the road at a point where vehicles are negotiating the narrowing and moving back, resulting in opposing vehicles in the middle of the road. Also following westbound vehicles may mistake a vehicle turning right for one going ahead moving out to negotiate the narrowing. This may result in side impact or rear shunt collisions.

There is one vehicle which appears to regularly park at the end of the footpath between No.21 and 22. The proposed narrowing will displace this parking which may be opposite the junction or adjacent to the build out, obstructing the visibility of pedestrians.

The build out and crossing facility outside No.33 is 5m from the junction with Manor Road. Vehicles turning left out of this road turning left towards Milton Keynes may need to swing wide towards the centre of the road in order to pass through the restriction towards eastbound vehicles coming through the restriction. Drivers in both directions may not be aware of each other's presence and/or intended path which may lead to head on collisions.

Recommendation: Relocate or reduce the number of the proposed narrowings or use alternative vertical deflection traffic calming"

Response

- 2.11 BCC requested that where possible the road narrowings coincide with footways/crossing points, as shown on Drawing D032B. Visibility to the left for vehicles exiting Manor Road is more than adequate; drivers would see approaching vehicles within sufficient time to make a decision about when it is safe to exit Manor Road and negotiate the road narrowing.
- 2.12 However, to resolve the points raised above, the narrowing/crossing outside No. 21/22 will be removed and the narrowing/crossing outside No.33 relocated westwards to outside No. 35/36. The footways will be adjusted to guide pedestrians to the new crossing location.
- 2.13 The buildout outside No. 35/36 will be elongated to include the existing bus stop. The elongated buildout will act as the bus stop, with the vehicle blocking the road and acting as a further traffic calming measure. The revised proposals are shown on Drawing D032D.

Item 3.9

“Location: Location F - Road narrowings on Whaddon Road, outside No.10. Visibility of the narrowing, recognition of the right turn.

Summary: The build out and pedestrian facility outside No.10 is to the west of a slight bend outside the church. Visibility for pedestrians to the east will be improved but is still restricted. Pedestrians may be unsighted and step out in front of west bound vehicles resulting in sudden braking, loss of control or pedestrian collisions.

There is a right turn marking currently at this crossing point prior to Fire Lane. This is likely to be removed as part of the scheme and therefore reduces the recognition of the junction and vehicles slowing to turn around a bend.

The likely removal of the current cross hatch markings may lead to increased speed in the absence of opposing traffic.

Recommendation: Reposition the narrowing or use alternative traffic calming measures.”

Response

- 2.14 BCC requested that the road narrowings coincide with pedestrian crossing points where possible. The road narrowing in this location provides a crossing facility towards/from the church where none exists at present. Visibility is increased compared to existing, and meets the SSD of 43m required for a 30mph speed limit area. Pedestrians crossing will be seen by and will be able to see oncoming vehicles.
- 2.15 The right turn marking at the crossing point would be removed, however the marking is an arrow only, not additional lane is provided for right turners. There is good, above standard visibility of the junction from the east (direction of the marking), therefore the recognition of the junction is satisfactory. There are no cross-hatch markings requiring removal. The proposed arrangements are shown on Drawing D033D

Item 3.10

“Location: Location G – Whaddon / Stoke / Bletchley / Drayton Roads Crossroads. Lack of deflection and visibility.

Summary: The current priority crossroad junction is proposed to be a mini-roundabout with minor kerb realignment on Drayton Road. All other 3 arms have very little deflection on their approaches to the junction, and the central island is proposed as over-runnable resulting in little, if any, required steering input. The proposed coloured surfacing and transverse granite sets will highlight the junction but are unlikely to sufficiently slow drivers who are familiar with the junction, particularly the main route through the village on Stoke Road and Whaddon Road. This could lead to drivers failing to give way and side impact collisions.

Visibility between the Whaddon Road approach and to the north on Bletchley road is obscured by the building line of No.1. and vegetation. This could lead to late recognition of an approaching vehicle having priority and sudden unexpected braking with resulting loss of control or rear shunt collisions.

Recommendation: Provide greater deflection on the approaches and raise the junction to reduce speeds approaching and through the junction."

Response

- 2.16 The junction was proposed to be amended to provide a mini-roundabout to provide a small amount of increased capacity. The deflection cannot be increased without providing a larger roundabout, and there is insufficient land available to provide a full sized roundabout with appropriate deflections.
- 2.17 Guidance on the design of mini-roundabouts¹ requires that the central island is over-runable, and without being so, the junction is not compliant with diagrams in TSRGD². The guidance also states that excessive visibility to the right can reduce the effect of speed reduction, and more than 30m visibility can cause vehicles to continue without slowing to give way; the visibility from Bletchley Road to Whaddon Road is around 50m (with vegetation trimmed) and would therefore be satisfactory in a 30mph speed limit. Providing additional visibility as suggested would be contrary to the evidence within the Guidance.
- 2.18 However, as discussed with BCC previously, the proposal to amend the junction to become a mini-roundabout has been removed, and the junction will remain as a priority crossroads as existing. A raised table with coloured surfacing will be provided to encourage slower speeds, as shown on Drawing D034D.

Item 3.11

"Location: Location H – Village gateway on Stoke Road. Lack of forward visibility and approach speeds.

Summary: The proposed enhanced gateway feature is to the west of a bend on which there is a national speed limit. Forward visibility towards the gateway and requirement to give way by westbound vehicles is restricted by vegetation on the inside of the bend. Drivers could be approaching the gateway, at 60 mph, without clear visibility of oncoming vehicles or stationary vehicles at the give way line, resulting in braking on a bend leading to loss of control collisions or collisions with queuing or oncoming traffic.

At 3.5m in width this may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions.

The narrowing and build outs further west are located on a bend where visibility is restricted and may lead to similar problems.

¹ Department for Transport and County Surveyors' Society (CSS) (2006) Mini-roundabouts: Good Practice Guidance. London: CSS.

² Traffic Signs Regulations and General Directions

Recommendation: Reposition the gateway with better forward visibility. Provide a cycle by-pass lane. Remove the build out close to Stoke Road pond in light of the repositioned gateway and narrowing."

Response

2.19 The buildout at the pond will be replaced by the gateway feature, to allow greater visibility as this is further from the bend. There will be at least 160m visibility to the gateway in this location, which is sufficient given that vehicles will be slowing from the national speed limit 60mph to enter a 30mph speed limit area at the gateway. There is insufficient width to provide a cycle by pass lane, therefore the carriageway be 3.75m wide to remove the need for a cycle facility at the gateway, as shown on Drawing D035D.

Item 3.12

"Location: Location I - Village gateway on Bletchley Road. Lack of forward visibility.

Summary: The proposed enhanced gateway feature is to the north of a bend at a change to a 40 mph speed limit. Forward visibility towards the gateway and requirement to give way by southbound vehicles is restricted by vegetation on the inside of the bend. Drivers could be approaching the gateway, without clear visibility of oncoming vehicles resulting in them making the decision to drive through the narrowing at the point where a vehicle emerges into view, resulting in braking or accelerating leading to loss of control collisions or head on collisions.

Again the width is proposed as 3.5m which may cause cyclists to be in danger as they negotiate the narrowing with passing large vehicles. Traffic calming guidance states that a width of 2.75 to 3.5m should be avoided if no cycle facility is provided. The proposed width is at the limit of that guidance and could potentially lead to vehicle versus cyclist collisions or side swipe collisions

Recommendation: Reposition the priority gateway and speed limit further north. Provide a cycle by-pass lane."

Response

2.20 Visibility southbound from the point of the gateway is sufficient for a 40mph speed limit, as required by MfS2. Any vehicle should therefore be able to see oncoming northbound vehicles before deciding to negotiate the gateway build-out. If vegetation is protruding into the highway, it is the responsibility of BCC to ensure the vegetation is trimmed back. However, the gateway can be relocated further north to increase visibility.

2.21 There is insufficient width to provide a cycle by pass lane, therefore the carriageway be 3.75m wide to remove the need for a cycle facility at the gateway, as shown on Drawing D036D.

2.22 The speed limit can be relocated further north to the gateway if this is required by BCC.

Item 3.13

“Location: *Location J - Village gateway on ~~Bletchley Road~~ Drayton Road. Proximity to Drovers Way.*

Summary: *It would appear from the supplied drawing that the gateway and priority narrowing is to be relocated 30m south of the junction with Drovers Way. Vehicles approaching the priority narrowing with no oncoming vehicles are likely to be driving at or around 30 mph through the narrowing and unlikely to be returning to the correct side of the road as they approach the junction. Drivers turning left from Drovers Way towards the narrowing may be faced with oncoming vehicles on their side of the road at a time they are accelerating out of Drovers Way. This may result in head on collisions or braking at speed resulting in loss of control.*

Recommendation: *Reposition the gateway, priority narrowing and speed limit further south.”*

Response

- 2.23 Visibility for vehicles leaving Drovers Way is good and meets standards, therefore a driver would easily see a vehicle negotiating the gateway and would be able to judge when to exit Drovers Way safely. However, the gateway will be relocated further south to provide greater separation from Drovers Way, as shown on Drawing D037D.

Item 3.14

“Location: *General throughout the scheme. Day and night time visibility of the build outs.*

Summary: *No details of street furniture is indicated, which is understandable at this stage of design but the visibility of the build outs at the narrowings both day and night will need to be considered. Suitable and sufficient lighting is required for the traffic calming and reflective bollards should be included in any design.”*

Response

- 2.24 Street furniture and street lighting will be considered by BCC at detailed design stage. Allowance for reflective bollards will be included within the cost estimates which form the basis for agreeing a suitable financial contribution from the SWMK developers.

We have used our reasonable endeavours to provide information that is correct and accurate and have discussed above the reasonable conclusions that can be reached on the basis of the information available. Having issued the range of conclusions it is for the client to decide how to proceed with this project.

Appendices

Revised Drawings:

Drawing number D027 Rev. D
Drawing number D028 Rev. D
Drawing number D029 Rev. D
Drawing number D030 Rev. D
Drawing number D031 Rev. D
Drawing number D032 Rev. D
Drawing number D033 Rev. D
Drawing number D034 Rev. D
Drawing number D035 Rev. D
Drawing number D036 Rev. D
Drawing number D037 Rev. D