

FOR
PLANNING



B	OPERATED WITH NEW ACCLINE BOUNDARY	HP	ADS	MNR	12.12.2024
A	IMPROVING SCALE & SCALE BAR ACCESS: ENHANCING DRAINAGE DRAINAGE APPLICABLE TO SUIT LANDSCAPE ARCHITECTS EMAIL REQUEST DATED 14-08-2024	HP	ADS	MNR	15.08.2024
Rev	Description	Dwn	Chr	App	Date



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Client	
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VISTRY

Project Title: THE LANDING, LAND AT FORD AIRFIELD, FORD

Drawing Title: **INFRASTRUCTURE RM
LOCATION PLAN**

AD Scale 1:2500	Date 09.08.24	Designed by AF
Drawn by ADS	Checked by AD	Approved by MR
Drawing Number 2205771-D060		Rev B

Appendix A

VISTRY HOMES LIMITED

THE LANDINGS, LAND AT FORD AIRFIELD, FORD

**IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S
RESPONSE**

**REPORT REF.
2205771-R27**

December 2024

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Appendix A – RSA 1 (prepared by M + S Traffic)

Document Control Sheet

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft	BS/ AD	DH	DRAFT	21/11/2024

Distribution

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1. INTRODUCTION

- 1.1. Ardent Consulting Engineers has been appointed by Vistry Homes Limited to advise on the transport aspects of the proposed residential-led mixed-use development on Land at Ford Airfield, Ford.
- 1.2. This report addresses matters raised in the Stage 1 Road Safety Audit (RSA) undertaken by M & S Traffic (M&S), dated 4th November 2024.
- 1.3. The audit was undertaken on the proposed spine road that connects Yapton Road and Ford Road and serves the entire site.
- 1.4. The following drawings have been prepared to incorporate the findings of the RSA1:

- 2205771-010C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (1 OF 7)
- 2205771-011C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (2 OF 7)
- 2205771-012C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (3 OF 7)
- 2205771-013C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (4 OF 7)
- 2205771-014C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (5 OF 7)
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- 2205771-016C IRM – VEHICLE TRACKING AND VISIBILITY PLAN (7 OF 7)
- 2205771-D100P12 – ENABLING INFRASTRUCTURE GENERAL ARRANGEMENT

2. DESIGNERS RESPONSE TO STAGE 1 ROAD SAFETY AUDIT

Table 2.1 Project Details

Report title:	Stage 1 Designers Response - IRM
Date:	November 2024
Document reference and revision:	2205771-R27
Prepared by:	Ardent Consulting Engineers
On behalf of:	Vistry Homes Limited

Table 2.2 Authorisation Sheet

Project:	Ford Airfield
Report title:	Designers Response to Stage 1 Road Safety Audit
Prepared by	
Name:	Bill Springett
Position:	Principal Transport Planner
Signed:	
Organisation:	Ardent Consulting Engineers
Date:	14/11/2024
Approved by	

THE LANDINGS, LAND AT FORD AIRFIELD, FORD
IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S RESPONSE

2205771-R27
December 2024

Name:	Andrew Dennis
Position:	Associate
Signed:	
Organisation:	Ardent Consulting Engineers
Date:	14/11/2024

Table 2.3 Key Personnel

Overseeing Organisation:	Mr S. Gee
RSA team:	Mr B. Shawyer & Mr M Morris
Design organisation:	Mr B Springett & Mr A. Dennis

Table 2.4 Road Safety Audit Decision Log

RSA problem	RSA recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA action
<p>3.1.1 – Proposed sections of new carriageway</p> <p>Ponding of surface water could lead to loss of control accidents.</p> <p>The carriageway is being amended with new sections of carriageway, and new kerblines are being introduced. No details</p>	<p>It is recommended that drainage details should be provided at Safety Audit Stage 2, or that the carriageway should be shaped so that the highway drains.</p>	<p>Agreed - drainage details will be provided at Safety Audit Stage 2</p>		

of carriageway drainage or carriageway vertical profiles and horizontal profiles have been provided for assessment. Ponding on the carriageway or water moving across the carriageway at junctions could lead to loss of control accidents.				
<p>3.1.2 – The Scheme</p> <p>Insufficient construction details could compromise road safety.</p> <p>No construction details were provided for assessment, in particular, details of tie-ins and new road construction and carriageway width. Inappropriate tie-ins or inadequate Polished Stone Values could lead to differential braking, particularly under severe braking conditions.</p>	It is recommended that that tie-ins and carriageway construction, including road widths, should be provided for assessment at Stage 2 Safety Audit.	Agreed – Tie in and carriageway construction will be provided at Stage 2 Audit.		
<p>3.1.3 – Proposed Scheme</p> <p>Insufficient construction detail on raised tables could lead to loss of control collisions.</p> <p>Raised tables are proposed; however, no details of the ramp profiles or height of the humps have been provided for assessment. There is concern that if the height is outside normal ranges, this could lead to loss of control collisions.</p>	It is recommended that ramp profiles should be within normal accepted ranges, and ramps should be perpendicular to traffic flow.	Agreed – Ramp profiles will be designed within normal accepted range, perpendicular to traffic flow in accordance with West Sussex Highway Design Specification and will be presented for Stage 2 Audit.		

IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S RESPONSE

December 2024

<p>3.1.4 – Proposed raised tables</p> <p>Insufficient construction details could lead to vehicle to pedestrian / cyclist collisions.</p> <p>No construction details were provided for assessment; however, these did not include details of the Polished Paver Test Value (PPTV) of the concrete block paving for the raised tables. Inappropriate carriageway construction with low PPTV values could lead to vehicle to pedestrian / cyclist collisions.</p>	<p>It is recommended that PPTV details should be checked to ensure they provide adequate grip resistance for the speed of road.</p>	<p>PPTV will be designed to provide adequate grip resistance for speed of road in accordance with West Sussex Highway Design Specification and presented for stage 2 audit.</p>		
<p>3.1.5 – Spine Road</p> <p>Ironwork covers could lead to loss of control collisions.</p> <p>There are ironwork covers proposed on the bends of the spine road, which could lead to loss of control collisions for cyclists or powered two wheeled vehicles that may be banked over, particularly in wet or icy conditions.</p>	<p>It is recommended that chambers and associated covers should be relocated out of the bend or that the covers should have an anti-skid surfacing, matching the polished stone value of the surrounding surface.</p>	<p>Chambers and associated covers will be relocated outside of bend, or where not possible, covers will be designed with anti-skid surfacing, matching PSV of surrounding surface and presented for stage 2 audit</p>		
<p>3.1.6 – Proposed shared use footway / cycleway link</p> <p>Insufficient construction details could lead to overshoot at junctions or cyclist loss of control collisions.</p> <p>The Polished Stone Value (PSV) of the shared route surface was not supplied.</p>	<p>It is recommended that the PSV of the footway / cycleway link surface material should be a minimum of 50PSV.</p>	<p>PSV of footway / Cycleway designed to minimum of 50PSV and will be specified at detailed design stage and presented for stage 2 audit</p>		

Surfacing with an insufficient Polished Stone Value (PSV) could lead to overshoot at junctions or cyclist loss of control collisions in the event of sudden braking manoeuvres.				
<p>3.1.7 - Spine road proposed shared use footways at junctions</p> <p>Inconsistent surfacing could increase the risk of vehicle to pedestrian / cyclist collisions.</p> <p>Crossings are proposed on raised tables that give priority to pedestrians and cyclists using the shared path. However, it is unknown whether a different surface type will be used to distinguish the continuous footway crossing from the raised table. A lack of distinction could lead to drivers being unaware that they should give priority to pedestrian / cyclists increasing the risk of vehicle to pedestrian collisions. However, as the continuous footways are on regularly spaced raised tables it is recognised that vehicle speeds are likely to be low.</p>	It is recommended that a different surface material should be applied to the continuous footways at the raised tables to enhance the footway conspicuity.	Different surface material applied to continuous footways at raised tables to be specified at detailed design stage and presented for stage 2 audit		

<p>3.1.8 – Proposed Chicane</p> <p>Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.</p> <p>There is a chicane proposed at the southern bend, where the buildouts and therefore give way markings will also need to be some distance apart. This could lead to traffic not giving way to opposing flows, and traffic could accelerate to beat the opposing traffic through the single buildout arrangement. Further, there is a bus stop proposed very close to the southernmost buildout. This could lead to sudden braking and rear end shunt collisions or head on collisions.</p>	<p>It is recommended that either:</p> <ul style="list-style-type: none"> Chicanes are replaced with other traffic calming features. Chicanes should be double chicanes spaced closer together. The southern bus stop is relocated. 	<p>Single chicane with bollards to highlight and move the give way lines closer to it to avoid 'beating' opposition traffic.</p> <p>The southern bus stop will be maintained as priority will be to northbound traffic and there is suitable visibility from southbound traffic to stop if a vehicle pulls around the bus</p>		
<p>3.1.9 – Proposed Tables</p> <p>Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.</p> <p>There are tables proposed as annotated in Appendix B, where the length of the tables could lead to vehicle speeds increasing on the tables, negating the traffic calming features effectiveness. This could also lead to vehicle suspension bottoming out when exiting the table which could cause injury to bus passengers.</p>	<p>It is recommended that tables should be of a shorter length.</p>	<p>These longer table locations are in isolated areas where two crossings are in close proximity and as such would cause safety issues with the multiple level changes in close proximity</p>		

IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S RESPONSE

December 2024

<p>3.1.10 - Proposed chicane/traffic calming feature</p> <p>Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.</p> <p>There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.</p>	<p>It is recommended that details of the traffic calming feature should be supplied for assessment.</p>	<p>Details of traffic calming feature will be provided at Safety Audit Stage 2</p>		
<p>3.1.11 - Proposed chicane/traffic calming feature</p> <p>Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.</p> <p>There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.</p>	<p>It is recommended that details of the traffic calming feature should be supplied for assessment.</p>	<p>Details of traffic calming feature will be provided at Safety Audit Stage 2</p>		

<p>3.1.12 - Proposed chicane/traffic calming feature</p> <p>Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.</p> <p>There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.</p>	<p>It is recommended that details of the traffic calming feature should be supplied for assessment.</p>	<p>Details of traffic calming feature will be provided at Safety Audit Stage 2</p>		
<p>3.2.1 – Bend on the Spine Road</p> <p>Lack of visibility could lead to side impact collisions or rear end shunts.</p> <p>No forward visibility splays have been provided; planting is proposed within the forward visibility splay. There is concern that landscaping exceeding 600mm in height within the visibility splays could adversely affect visibility, which could lead to side impact collisions or rear end shunts.</p>	<p>It is recommended that the associated landscaping within the visibility splays should not exceed 600mm in height and that a regular maintenance programme should be employed.</p>	<p>Landscaping within visibility splay designed to not exceed 600mm, with regular maintenance programme instigated</p>		

<p>3.2.2 – Double bend on the spine road</p> <p>Inadequate bend radii could lead to loss of control collisions or vehicles entering the opposing carriageway leading to head on collisions.</p> <p>There is a double bend on the spine road where no bend radii information is provided. Bends with inadequate radii could lead to loss of control collisions or vehicles entering the opposing carriageway leading to head on collisions.</p>	<p>It is recommended that bend radii and carriageway widths are provided for assessment.</p>	<p>Carriageway widths and bend radii suitable for grade of road. Tracking provided in updated drawings demonstrates that two buses can pass on spine road.</p>		
<p>3.2.3 – Proposed Spine Road</p> <p>Insufficient carriageway space may lead to side swipe collisions.</p> <p>Vehicle swept paths have not been provided for assessment for two-way HGV flow on bends on the main Spine Road. This may lead to conflict and sudden braking leading to rear end shunt or swipe collisions.</p>	<p>It is recommended that the carriageway should be sufficiently wide to accommodate all expected movements, further that swept paths should be provided for assessment.</p>	<p>Carriageway will be designed to accommodate expected movements. SPA will be provided at Safety Audit Stage 2</p>		

IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S RESPONSE

December 2024

<p>3.3.1 – Proposed junctions as annotated in Appendix B</p> <p>Restricted visibility could lead to side impact collisions or sudden braking and rear end shunt collisions.</p> <p>At junctions the proposed bus stops could be positioned in the visibility splay of the junctions. A bus servicing the stops could be stationary and within the visibility splay of the access road, thereby restricting visibility for egressing vehicles. Restricted visibility for egressing vehicles could lead to side impact collisions or sudden braking and rear end shunt collisions</p>	<p>It is recommended that the bus stop should be relocated so that buses servicing the stop do not obstruct visibility for egressing vehicles from the adjacent junction.</p>	<p>As set out in MfS2, parked vehicles in vis splay do not appear to create significant problems in practice.</p>		
<p>3.3.2 – Proposed accesses with the spine road</p> <p>Lack of visibility could lead to side impact collisions or rear end shunts.</p> <p>Visibility splay at the accesses have been provided; however, planting is proposed within visibility splay. There is concern that landscaping exceeding 600mm in height within the visibility splay could adversely affect visibility, which could lead to side impact collisions or rear end shunts.</p>	<p>It is recommended that the associated landscaping within the visibility splay should not exceed 600mm in height and that a regular maintenance programme should be employed.</p>	<p>Landscaping within visibility splay designed to not exceed 600mm, with regular maintenance programme instigated</p>		

IRM STAGE 1 ROAD SAFETY AUDIT DESIGNER'S RESPONSE

December 2024

<p>3.5.1 – Proposed development:</p> <p>No signage or road markings could compromise road safety.</p> <p>No details of the speed limit of the estate have been provided, where visibility splays for 20mph and 30mph have been provided. Whilst it is not possible for the Audit Team to ascertain if any specific safety issues will arise, there is concern that a lack of, signage of raised features and an inappropriate speed limit could compromise road safety and lead to possible collisions.</p>	<p>It is recommended that the development should have appropriate road signage that signage details should be provided for assessment at Stage 2 safety Audit.</p>	<p>Agreed - Road signage will be provided at Safety Audit Stage 2</p>		
<p>3.5.2 – The scheme</p> <p>Insufficient street lighting could lead to vehicle to pedestrian / cyclist collisions or side impact collisions.</p> <p>No details of street lighting have been provided for assessment. Insufficient street lighting could compromise road safety and may reduce the visibility of pedestrians and cyclists during the hours of darkness, particularly at junctions. This could lead to vehicle to pedestrian / cyclist collisions or side impact collisions.</p>	<p>It is recommended that a plan showing the light distribution should be provided for assessment at Stage 2 Safety Audit.</p>	<p>Agreed - Light distribution will be provided at Safety Audit Stage 2</p>		

Table 2.6 Design Organisation Statement

On behalf of the design organisation I certify that:	
1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.	
Name:	Bill Springett
Signed	
Position:	Principal Transport Planner
Organisation:	Ardent Consulting Engineers
Date:	18/11/2024

Table 2.6 Overseeing Organisation Statement

On behalf of the Overseeing Organisation I certify that:	
1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and	
2) the agreed RSA actions will be progressed.	
Name:	
Signed:	
Position:	
Organisation:	
Date:	

Response to designers response Ford Airfield Spine Road RSA 1

3.1.1 Noted and accepted.

3.1.2 Noted and accepted.

3.1.3 Noted and accepted.

3.1.4 Noted and accepted.

3.1.5 Noted and accepted.

3.1.6 Noted and accepted.

3.1.7 Noted and accepted.

3.1.8 Noted, however, this item still remains a cause for concern.

3.1.9 Noted, however, this item still remains a cause for concern.

3.1.0 Noted and accepted.

3.1.1 Noted and accepted.

3.1.2 Noted and accepted.

3.2.1 Noted and accepted.

3.2.2 Noted, however the swept paths and carriageway widths show a lack of clearance between opposing traffic movements, and often swept path tracking does not take into account mirrors on large vehicles. It is suggested that this is assessed further at RSA 2.

3.2.3 Noted, however the swept paths and carriageway widths show a lack of clearance between opposing traffic movements, and often swept path tracking does not take into account mirrors on large vehicles. It is suggested that this is assessed further at RSA 2.

3.3.1 Noted, however, this item still remains a cause for concern.

3.3.2 Noted and accepted.

3.5.1 Noted and accepted.

3.5.2 Noted and accepted.

Kind regards

Martin

Martin Morris
Managing Director
M&S Traffic Ltd
Aeolus House, 32 Hamelin Road, Gillingham, Kent ME7 3EX



Appendix A



Road Safety Audit Stage 1

Spine Road

Ford Airfield

West Sussex

Date: 4th November 2024

Report produced for: Ardent Consulting Engineers


Report produced by: M & S Traffic

Registered Office: 32 Hamelin Road, Gillingham, Kent ME7 3EX Registered in Cardiff No:06730905

DOCUMENT CONTROL SHEET

M&S Traffic has prepared this report in accordance with the instructions from Ardent Consulting Engineers. M&S Traffic shall not be liable for the use of any information contained herein for any purpose other than the sole and specific use for which it was prepared.

Report Title:	Ford Airfield, Arun (Spine Road) Road Safety Audit Stage 1
Document reference:	ARD/24/03/2205771/1/MM
Prepared by:	M & S Traffic
On behalf of:	West Sussex County Council

Revision Status	Prepared by: (Name)	Checked by: (Name)	Approved by (Signature)	Date Approved
Final	Martin Morris	Bryan Shawyer		4 th November 2024

Distribution

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Ardent Consulting Engineers	Bill Springett	-

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Appendix A..... List of drawings

Appendix B..... Comment Location Drawing

1 INTRODUCTION

- 1.1 This report describes a Stage 1 Road Safety Audit carried out on a proposed Section 38 Spine Road, associated with a mixed-use development of the Ford Airfield to provide circa 1,500 dwellings, a 60-bed care home, up to 9,000sq.m of employment floorspace, a local centre and a primary school as well as amenities and facilities.

The Audit was requested by the design organisation, Ardent Consulting Engineers, Suffolk Enterprise Centre, Felaw Maltings, 44 Felaw Street, Ipswich IP2 8SJPO16 8UT on behalf of West Sussex County Council, as the Overseeing Organisation.

- 1.2 The Audit Team membership was as follows:

Martin Morris, PGD, MCIHT, MSoRSA – Audit Team Leader
National Highways Approved RSA Certificate of Competency

Bryan Shawyer B.Eng. (Hons), MSc, MCIHT, MSoRSA – Audit Team Member
National Highways Approved RSA Certificate of Competency

- 1.3 The audit was undertaken following the principles of GG 119, The Design Manual for Roads and Bridges. The documents available at the time the report was compiled are detailed in Appendix A.
- 1.4 The Audit took place at the Gillingham offices of M&S Traffic during October 2024 and comprised an examination of the documents provided as listed in Appendix A. A joint site visit and inspection was undertaken on the 22nd October 2024 between 08:00 and 15:00 hours. Weather conditions at the time varied between fine overcast with occasional precipitation, and the road surfaces varied between dry and was damp, where the site was closed off to traffic.
- 1.5 The report has been compiled, only with regards to the safety implications for road users of the layout presented in the supplied drawings. It has not been examined or verified for compliance with any other standards or criteria. This safety audit does not perform any “Technical Check” function on these proposals. It is assumed that the Project Sponsor is satisfied that such a “Technical Check” has been successfully completed prior to requesting this safety audit.
- 1.6 Auditors have not been informed of any Departures from Standards in this scheme construction.
- 1.7 All comments and recommendations are referenced to the detailed drawings and the locations have been detailed relating to the plans supplied with the audit brief, Appendix B.

2 SAFETY ISSUES RAISED AT PREVIOUS AUDITS

2.1 No previous Audits were supplied for assessment.

3 ITEMS RAISED AT THE STAGE 1 AUDIT

3.1 General

3.1.1 PROBLEM

Location: Proposed sections of new carriageway.

Summary: Ponding of surface water could lead to loss of control accidents.

The carriageway is being amended with new sections of carriageway, and new kerblines are being introduced. No details of carriageway drainage or carriageway vertical profiles and horizontal profiles have been provided for assessment. Ponding on the carriageway or water moving across the carriageway at junctions could lead to loss of control accidents.

RECOMMENDATION

It is recommended that drainage details should be provided at Safety Audit Stage 2, or that the carriageway should be shaped so that the highway drains.

3.1.2 PROBLEM

Location: The scheme.

Summary: Insufficient construction details could compromise road safety.

No construction details were provided for assessment, in particular, details of tie-ins and new road construction and carriageway width. Inappropriate tie-ins or inadequate Polished Stone Values could lead to differential braking, particularly under severe braking conditions.

RECOMMENDATION

It is recommended that that tie-ins and carriageway construction, including road widths, should be provided for assessment at Stage 2 Safety Audit.

3.1.3 PROBLEM

Location: Proposed scheme.

Summary: Insufficient construction detail on raised tables could lead to loss of control collisions.

Raised tables are proposed; however, no details of the ramp profiles or height of the humps have been provided for assessment. There is concern that if the height is outside normal ranges, this could lead to loss of control collisions.

RECOMMENDATION

It is recommended that ramp profiles should be within normal accepted ranges, and ramps should be perpendicular to traffic flow.

3.1.4 PROBLEM

Location: Proposed raised tables.

Summary: Insufficient construction details could lead to vehicle to pedestrian / cyclist collisions.

No construction details were provided for assessment; however, these did not include details of the Polished Paver Test Value (PPTV) of the concrete block paving for the raised tables. Inappropriate carriageway construction with low PPTV values could lead to vehicle to pedestrian / cyclist collisions.

RECOMMENDATION

It is recommended that PPTV details should be checked to ensure they provide adequate grip resistance for the speed of road.

3.1.5 PROBLEM

Location: Spine Road.

Summary: Ironwork covers could lead to loss of control collisions.

There are ironwork covers proposed on the bends of the spine road, which could lead to loss of control collisions for cyclists or powered two wheeled vehicles that may be banked over, particularly in wet or icy conditions.

RECOMMENDATION

It is recommended that chambers and associated covers should be relocated out of the bend or that the covers should have an anti-skid surfacing, matching the polished stone value of the surrounding surface.

3.1.6 PROBLEM

Location: Proposed shared use footway / cycleway link.

Summary: Insufficient construction details could lead to overshoot at junctions or cyclist loss of control collisions.

The Polished Stone Value (PSV) of the shared route surface was not supplied. Surfacing with an insufficient Polished Stone Value (PSV) could lead to overshoot at junctions or cyclist loss of control collisions in the event of sudden braking manoeuvres.

RECOMMENDATION

It is recommended that the PSV of the footway / cycleway link surface material should be a minimum of 50PSV.

3.1.7 PROBLEM

Location: Spine road proposed shared use footways at junctions.

Summary: Inconsistent surfacing could increase the risk of vehicle to pedestrian / cyclist collisions.

Crossings are proposed on raised tables that give priority to pedestrians and cyclists using the shared path. However, it is unknown whether a different surface type will be used to distinguish the continuous footway crossing from the raised table. A lack of distinction could lead to drivers being unaware that they should give priority to pedestrian / cyclists increasing the risk of vehicle to pedestrian collisions. However, as the continuous footways are on regularly spaced raised tables it is recognised that vehicle speeds are likely to be low.

RECOMMENDATION

It is recommended that a different surface material should be applied to the continuous footways at the raised tables to enhance the footway conspicuity.

3.1.8 PROBLEM

Location: Proposed chicane.

Summary: Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.

There is a chicane proposed at the southern bend, where the buildouts and therefore give way markings will also need to be some distance apart. This could lead to traffic not giving way to opposing flows, and traffic could accelerate to beat the opposing traffic through the single buildout arrangement. Further, there is a bus stop proposed very close to the southernmost buildout. This could lead to sudden braking and rear end shunt collisions or head on collisions.

RECOMMENDATION

It is recommended that either:

- Chicanes are replaced with other traffic calming features.
- Chicanes should be double chicanes spaced closer together.
- The southern bus stop is relocated.

3.1.9 PROBLEM

Location: Proposed tables.

Summary: Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.

There are tables proposed as annotated in Appendix B, where the length of the tables could lead to vehicle speeds increasing on the tables, negating the traffic calming features effectiveness. This could also lead to vehicle suspension bottoming out when exiting the table which could cause injury to bus passengers.

RECOMMENDATION

It is recommended that tables should be of a shorter length.

3.1.10 PROBLEM

Location: Proposed chicane/traffic calming feature.

Summary: Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.

There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.

RECOMMENDATION

It is recommended that details of the traffic calming feature should be supplied for assessment.

3.1.11 PROBLEM

Location: Proposed chicane/traffic calming feature.

Summary: Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.

There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.

RECOMMENDATION

It is recommended that details of the traffic calming feature should be supplied for assessment.

3.1.12 PROBLEM

Location: Proposed chicane/traffic calming feature.

Summary: Ineffective traffic calming could lead sudden braking and rear end shunt collisions or head on collisions.

There is a chicane/traffic calming feature proposed with no details provided. Auditors are unable to comment further on this without further details on the traffic calming feature, which could compromise road safety.

RECOMMENDATION

It is recommended that details of the traffic calming feature should be supplied for assessment.

3.2 Local Alignment

3.2.1 PROBLEM

Location: Bend on the Spine Road.

Summary: Lack of visibility could lead to side impact collisions or rear end shunts.

No forward visibility splays have been provided; planting is proposed within the forward visibility splay. There is concern that landscaping exceeding 600mm in height within the visibility splays could adversely affect visibility, which could lead to side impact collisions or rear end shunts.

RECOMMENDATION

It is recommended that the associated landscaping within the visibility splays should not exceed 600mm in height and that a regular maintenance programme should be employed.

3.2.2 PROBLEM

Location: Double bend on the Spine Road.

Summary: Inadequate bend radii could lead to loss of control collisions or vehicles entering the opposing carriageway leading to head on collisions.

There is a double bend on the spine road where no bend radii information is provided. Bends with inadequate radii could lead to loss of control collisions or vehicles entering the opposing carriageway leading to head on collisions.

RECOMMENDATION

It is recommended that bend radii and carriageway widths are provided for assessment.

3.2.3 PROBLEM

Location: Proposed Spine Road.

Summary: Insufficient carriageway space may lead to side swipe collisions.

Vehicle swept paths have not been provided for assessment for two-way HGV flow on bends on the main Spine Road. This may lead to conflict and sudden braking leading to rear end shunt or swipe collisions.

RECOMMENDATION

It is recommended that the carriageway should be sufficiently wide to accommodate all expected movements, further that swept paths should be provided for assessment.

3.3 Junctions

3.3.1 PROBLEM

Location: Proposed junctions as annotated in Appendix B:

Summary: Restricted visibility could lead to side impact collisions or sudden braking and rear end shunt collisions.

At junctions the proposed bus stops could be positioned in the visibility splays of the junctions. A bus servicing the stops could be stationary and within the visibility splay of the access road, thereby restricting visibility for egressing vehicles. Restricted visibility for egressing vehicles could lead to side impact collisions or sudden braking and rear end shunt collisions.

RECOMMENDATION

It is recommended that the bus stop should be relocated so that buses servicing the stop do not obstruct visibility for egressing vehicles from the adjacent junction.

3.3.2 PROBLEM

Location: Proposed accesses with the Spine Road.:

Summary: Lack of visibility could lead to side impact collisions or rear end shunts.

Visibility splays at the accesses have been provided; however, planting is proposed within visibility splays. There is concern that landscaping exceeding 600mm in height within the visibility splays could adversely affect visibility, which could lead to side impact collisions or rear end shunts.

RECOMMENDATION

It is recommended that the associated landscaping within the visibility splays should not exceed 600mm in height and that a regular maintenance programme should be employed.

3.4 Non-Motorised User (NMU) Provision

3.4.1 No comments were raised in this section.

3.5 Road Signs, Carriageway Markings and Lighting

3.5.1 PROBLEM

Location: Proposed development.

Summary: No signage or road markings could compromise road safety.

No details of the speed limit of the estate have been provided, where visibility splays for 20mph and 30mph have been provided. Whilst it is not possible for the Audit Team to ascertain if any specific safety issues will arise, there is concern that a lack of, signage of raised features and an inappropriate speed limit could compromise road safety and lead to possible collisions.

RECOMMENDATION

It is recommended that the development should have appropriate road signage that signage details should be provided for assessment at Stage 2 safety Audit.

3.5.2 PROBLEM

Location: The scheme.

Summary: Insufficient street lighting could lead to vehicle to pedestrian / cyclist collisions or side impact collisions.

No details of street lighting have been provided for assessment. Insufficient street lighting could compromise road safety and may reduce the visibility of pedestrians and cyclists during the hours of darkness, particularly at junctions. This could lead to vehicle to pedestrian / cyclist collisions or side impact collisions.

RECOMMENDATION

It is recommended that a plan showing the light distribution should be provided for assessment at Stage 2 Safety Audit.

4 ISSUES IDENTIFIED DURING THE ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

4.1 Safety issues identified during the audit and site inspection that are outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrant that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.


4.2 The Audit Team had no issues to raise within this section.

5 AUDITOR TEAM STATEMENT

5.1 We certify that this audit has been carried out following the principles of GG 119.


Audit Team Leader

Martin Morris
PGD, MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency

Signed:  Date: 04/11/2024

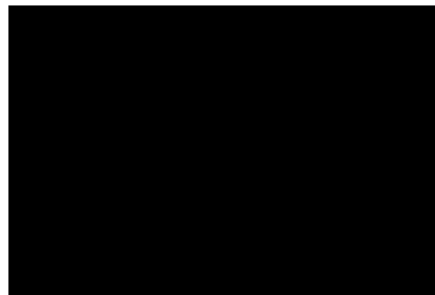
Audit Team Member

Bryan Shawyer
BEng (Hons), MSc, MCIHT, MSoRSA
National Highways Approved RSA Certificate of Competency

Signed:  Date: 04/11/2024

M & S Traffic

Aeolus House
32 Hamelin Road
Gillingham
Kent ME7 3EX



APPENDIX A

List of Drawings and other information submitted for auditing:

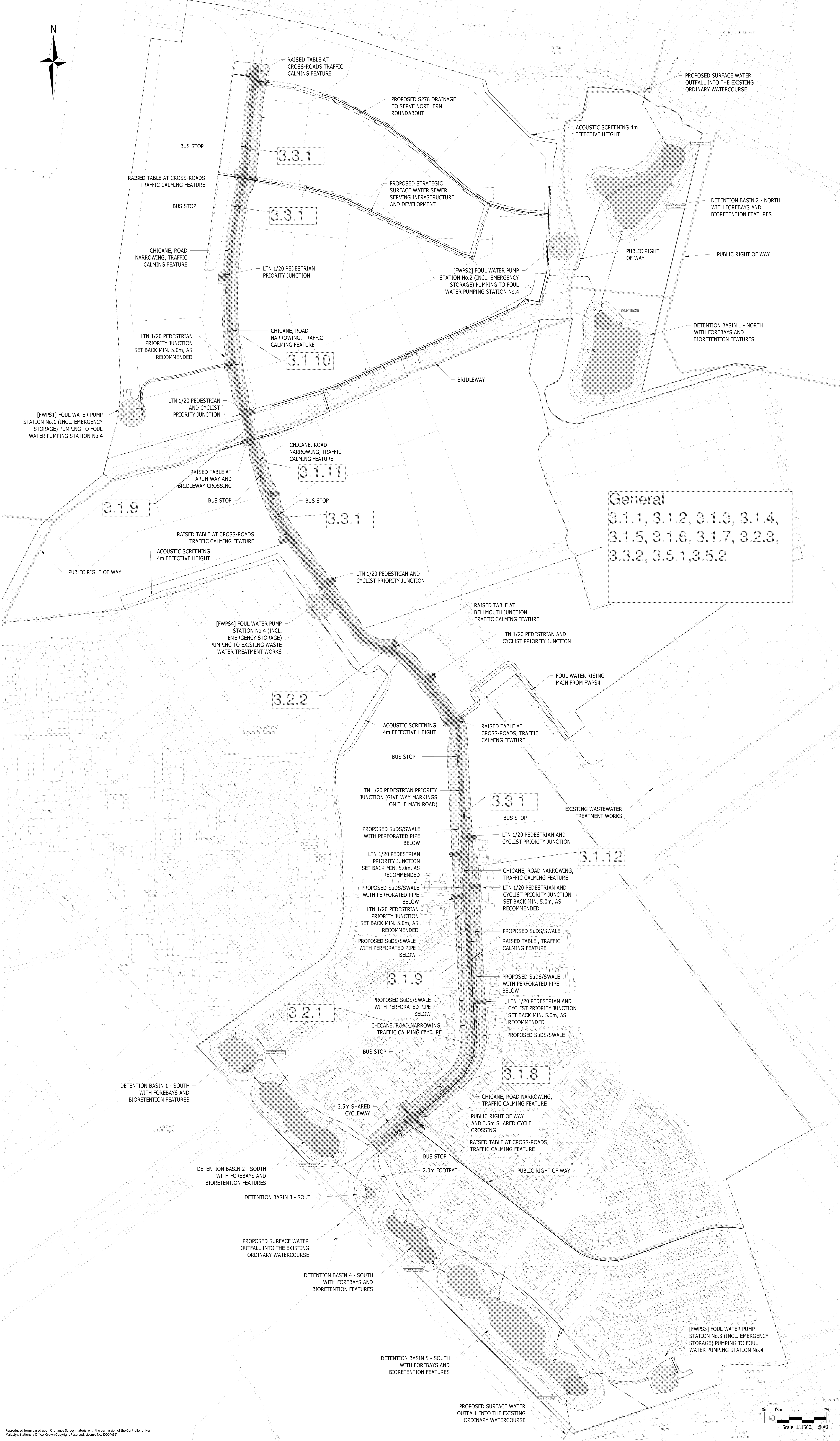
Drawing Number	Title
2205771-100 P12	Enabling Infrastructure GA
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 1 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 2 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 3 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 4 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 5 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 6 of 7)
2205771-010B	IRM-Vehicle Tracking and Visibility Plan (Sheet 7 of 7)

Supporting documentation:

- None supplied





APPENDIX B

Plan attached showing the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).



1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
2. DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.

SURFACE FINISH LEGEND

	ENABLING INFRASTRUCTURE BOUNDARY
	CARRIAGEWAY IN ASPHALT CONSTRUCTION
	FOOTWAY / 3.5m SHARED CYCLEWAY IN ASPHALT CONSTRUCTION. SHARED CYCLEWAY TO BE IN COLOURED ASPHALT CONSTRUCTION
	RAISED TABLE AND RAMPS TO BE IN BLOCK PAVING CONSTRUCTION (EXCEPT 3.5m SHARED CYCLEWAY, WHICH IS TO BE IN COLOURED ASPHALT)

[illegible]

Drawn by IK	Checked by IK	Approved by MR
Drawing Number 2205771-D100		Rev P12