Abley Letchford

Loddon Garden Village - South

DESIGN RESPONSE

University of Reading

08 July 2025

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Quality Management:

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Authorised by:	Leigh Abley
Date:	08 July 2025
Document Reference:	A392 – R067 LGV Observer Way RSA 2 Designers Response

Contents

Appendices

1 Introduction

1.1 Commission

1.1.1 This report has been compiled by Abley Letchford as a Designer's Response to the Non-Motorised Audit undertaken by Avon Traffic & Safety Services Ltd.

1.1.2 This report has been compiled by the Designer, Abley Letchford, on behalf of University of Reading.

1.1.3 Audit recommendations have been taken directly from the original Audit for ease of reference.

1.1.4 Where a safety audit recommendation is accepted, this report details the actions proposed to comply with the recommendations. Where a safety audit recommendation is rejected, this report details the justification for rejection.

1.1.5 This Designer's Response is to be regarded as the formal Safety Audit Exception Response if required and where applicable.

2 Safety Issues Raised in this Stage 2 Road Safety Audit

2.1 PROBLEM

Location

2.1.1 Cycle slip on to carriageway, west of roundabout on A327

Summary

2.1.2 Risk of cycle destabilisation, There is no dropped kerb indicated where cyclists are required to rejoin the carriageway. Cyclists making this manoeuvre may become destabilised and fall, resulting in injury.

Recommendation

2.1.3 Provide a dropped kerb at this location.

Designers Response

2.1.4 Dropped kerb to be provided and materials plan updated to reflect this.

2.2 PROBLEM

Location

2.2.1 Cycle slip on to shared use path, west of roundabout on A327.

Summary

2.2.2 Risk of cycle destabilisation, It is not clear from drawing 0701 whether a dropped kerb is being provided where cyclists are required to mount the shared use path. If no dropped kerb is provided, cyclists making this manoeuvre may become destabilised and fall, resulting in injury.

Recommendation

2.2.3 Provide a dropped kerb at this location.

Designers Response

2.2.4 Dropped kerb to be provided and materials plan updated to reflect this.

2.3 PROBLEM

Location

2.3.1 New splitter islands around roundabout.

Summary

2.3.2 Risk of vehicles colliding with splitter islands, No reflective bollards have been indicated on the noses of the new splitter islands around the roundabout. These may constitute a collision hazard in darkness or inclement weather.

Recommendation

2.3.3 Provide reflective bollards on the noses of the new splitter islands.

Designers Response

2.3.4 Bollards to be provided

2.4 PROBLEM

Location

2.4.1 Verge area to the west of the new roundabout arm.

Summary

2.4.2 Risk of junction collisions, Some saplings have been planted in this area. As they grow and mature they will restrict visibility to the right for drivers emerging from the new road, increasing the risk of an emerging vehicle being struck by a vehicle entering the roundabout from the north-west.

Recommendation

2.4.3 Remove the saplings.

Designers Response

2.4.4 Saplings to be removed / relocated.

2.5 PROBLEM

Location

2.5.1 Cycle slip on to shared use path, east of roundabout on Reading Road.

Summary

2.5.2 Risk of cycle destabilisation, There is no dropped kerb indicated where cyclists are required to mount the shared use path. Cyclists making this manoeuvre may become destabilised and fall, resulting in injury.

Recommendation

2.5.3 Provide a dropped kerb at this location

Designers Response

2.5.4 Dropped kerb to be provided and materials plan updated to reflect this.

2.6 PROBLEM

Location

2.6.1 Traffic signal controlled crossing, Reading Road east of roundabout.

Summary

2.6.2 Risk of signal controller cabinet obstructing the shared use path, The location of the controller cabinet has not been indicated on the drawings. If poorly located, the cabinet and/or an engineer accessing it could obstruct the shared use path, increasing the risk of cycles colliding with the cabinet and/or an engineer accessing it.

Recommendation

2.6.3 Ensure that the controller cabinet is positioned such that neither the cabinet, nor the engineer, will obstruct the footway.

Designers Response

2.6.4 Noted, will be addressed during detail design as part of detailed traffic signals design.

2.7 PROBLEM

Location

2.7.1 Traffic signal controlled crossing, Reading Road east of roundabout.

Summary

2.7.2 Risk of passing vehicles colliding with a parked vehicle, and risk of sightlines at the crossing being obstructed by a parked vehicle, No maintenance bay has been indicated for a signal maintenance engineer to park. A vehicle parked on the verge adjacent to the crossing would constitute a collision hazard, and would likely obstruct sightlines at the crossing.

Recommendation

2.7.3 Provide a maintenance bay where a maintenance engineer can safely park a vehicle off-carriageway.

Designers Response

2.7.4 Noted, will be addressed during detail design as part of detailed traffic signals design.

2.8 PROBLEM

Location

2.8.1 Bifurcation arrow, Reading Road east of signalled crossing.

Summary

2.8.2 Risk of driver distraction, It is not recommended to include other carriageway markings within crossing zig-zags, to avoid driver distraction where they should be concentrating fully on the crossing ahead.

Recommendation

2.8.3 Relocate the bifurcation arrow to the east of the zig-zags.

Designers Response

2.8.4 Road markings to be relocated.

2.9 PROBLEM

Location

2.9.1 Traffic signal controlled crossing, north of roundabout.

Summary

2.9.2 Risk of signal controller cabinet obstructing the shared use path, The location of the controller cabinet has not been indicated on the drawings. If poorly located, the cabinet and/or an engineer accessing it could obstruct the shared use path, increasing the risk of cycles colliding with the cabinet and/or an engineer accessing it.

Recommendation

2.9.3 Ensure that the controller cabinet is positioned such that neither the cabinet, nor the engineer, will obstruct the footway.

Designers Response

2.9.4 Noted, will be addressed during detail design as part of detailed traffic signals design.

2.10 PROBLEM

Location

2.10.1 Traffic signal controlled crossing, north of roundabout

Summary

2.10.2 Risk of passing vehicles colliding with a parked vehicle, and risk of sightlines at the crossing being obstructed by a parked vehicle, No maintenance bay has been indicated for a signal maintenance engineer to park. A vehicle parked on the verge adjacent to the crossing would constitute a collision hazard, and would likely obstruct sightlines at the crossing.

Recommendation

2.10.3 Provide a maintenance bay where a maintenance engineer can safely park a vehicle off-carriageway.

Designers Response

2.10.4 Noted, will be addressed during detail design as part of detailed traffic signals design.

2.11 PROBLEM

Location

2.11.1 Traffic signal controlled crossing, north of roundabout.

Summary

2.11.2 Risk of user confusion and vehicle/pedestrian or vehicle/cycle collisions, The crossing indicated on the drawings includes a striped zebra-style crossing, however the crossing is signal controlled, therefore the zebra stripes are not appropriate. Pedestrians or cyclists crossing may interpret the markings as a crossing where they have priority, and try to cross when the signals are at green for motorists, increasing the risk of being struck by a passing vehicle.

Recommendation

2.11.3 Remove the zebra markings from the crossing.

Designers Response

2.11.4 Traffic signals to be removed to provide a tiger crossing rather than a signalised crossing.

2.12 PROBLEM

Location

2.12.1 Central refuge islands on new road.

Summary

2.12.2 Risk of vehicles colliding with refuge islands, No reflective bollards have been indicated on the noses of the refuge islands on the new road. These may constitute a collision hazard in darkness or inclement weather. Furthermore, the length of tapered hatching on the approaches to the islands appears to be significantly shorter than that recommended in Traffic Signs Manual Chapter 5, which may increase the risk of vehicles colliding with the islands.

Recommendation

2.12.3 Provide reflective bollards on the noses of the refuge islands. Check that the hatching taper lengths comply with local highway authority policy (refer also to table 2.7, Traffic Signs Manual Chapter 5.

Designers Response

2.12.4 Bollards to be provided and tapers to be reviewed and amended accordingly.

2.13 PROBLEM

Location

2.13.1 Paths crossing side roads (general) – tactile paving

Summary

2.13.2 Risk of vehicle/pedestrian collisions, The tactile paving indicated does not stretch for the full width of the paths where they cross the side roads. There is a risk that pedestrians with a sight impairment may miss the tactiles and walk into the carriageway without realising they are doing so.

Recommendation

2.13.3 Ensure the tactile paving covers the full width of the paths.

Designers Response

2.13.4 Tactile paving to be extended.

2.14 PROBLEM

Location

2.14.1 Paths crossing side roads (general) – transverse lines.

Summary

2.14.2 Risk of driver confusion, The locations where paths cross the side roads feature two solid lines across the side road carriageway. It was not clear to the auditors if these indicate carriageway markings, however if they are, they would indicate a stop line, which is inappropriate and may confuse drivers.

Recommendation

2.14.3 Remove the transverse lines.

Designers Response

2.14.4 Drawing will be amended to avoid confusion and transverse kerbs will be included in appropriate materials plans.

2.15 PROBLEM

Location

2.15.1 Both traffic signal controlled crossings.

Summary

2.15.2 Risk of driver confusion, The zig-zag layouts of both crossings appear incorrect. They should be opposing on the approach, and parallel on the exit.

Recommendation

2.15.3 Ensure zig-zag markings are correct.

Designers Response

2.15.4 Road markings to be amended

2.16 PROBLEM

Location

2.16.1 Whole scheme, location of drainage gullies.

Summary

2.16.2 Risk of pedestrian trips, The locations of drainage gullies has not been indicated on the drawings. Gullies adjacent to pedestrian dropped kerbs can be hazardous for wearers of thin heels, which may become trapped in the gully leading to trips.

Recommendation

2.16.3 Ensure drainage gullies are not located adjacent to pedestrian dropped kerbs.

Designers Response

2.16.4 2.12.4 Noted, various SUDS features are to be explored to avoid the use of conventional gully systems where applicable. Where gullies are to be introduced this will be considered as part of detailed design.

Appendices

Appendix 1 - Stage 2 Road Safety Audit

Road Safety Audit – Loddon Garden Village - Observer Way Roundabout

Stage:	**2**
Location:	**A327 Reading Road/Observer Way roundabout**
Site:	**Proposed addition of a fifth arm to an existing roundabout**
ATSS Ref:	**250606A**
Client Ref:	**A392 – Loddon Garden Village**
Date:	**7 July 2025**

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Tel 07486 584592
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Project Details

Report Title:	**Stage 2 road safety audit, Loddon Garden Village Observer Way Roundabout**
Date:	**7 July 2025**
Document reference and revision:	**250606A V1**
Prepared by:	**Avon Traffic & Safety Services Ltd**
On behalf of:	**Abley Letchford**

Report Control Sheet

	Name	Position	Date
Audit requested by	Chris Shaw	Abley Letchford	30 June 2025
Team leader	Nick Jeanes	Team Leader	
Team Member	Darren Cox	Team Member	
Observer			
Draft report issued by	Nick Jeanes	Team Leader	7 July 2025
Final report issued by	Nick Jeanes	Team Leader	7 July 2025
Designer's response issued by			

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1. Introduction

1.1 Avon Traffic & Safety Services Ltd has been commissioned by Abley Letchford, to undertake a Stage 2 Road Safety Audit (RSA), with regard to the proposals to introduce a fifth arm to an existing four arm roundabout, to provide access to a proposed major residential development known as Loddon Garden Village. The proposals include a 5.0 metre wide cycleway + footway on the east side of the new road, connecting to a proposed Toucan crossing over the Reading Road unclassified arm, to reach the existing shared use path on the south side of Reading Road. Also included are a 3.0 metre wide shared use path on the west side of the new road, a parallel crossing of the new road a short distance north of the roundabout, and a central pedestrian refuge with informal crossing approximately 150 metres north of the roundabout.

1.2 The RSA Brief was supplied by Abley Letchford and accepted by the Audit Team. The Brief and Audit Team were approved by Chris Shaw, Abley Letchford. The site was subject of a stage 1 road safety audit in March 2025 (ATSS ref. 250218). The current audit is one of 3 audits being carried out for the Loddon Garden development, the others being 250606B (southern block) and 250606C (northern block).No details of drainage gully locations, traffic signs or street lighting have been supplied to the auditors.

1.3 The A327 links Shinfield to the north with Arborfield Green to the south, and joins an unclassified road to the east at a large roundabout. A fourth arm is to the south west of the roundabout, leading to a gated road to a private property. The audit site is level with broad, open approaches on the three main arms. The character of the road is generally semi-rural, with no frontagers and roads lined by verges and trees. There is a shared use path to the east side of the A327 to the south of the roundabout, which continues into the unclassified road for a short distance before becoming a footway. There are also short lengths of shared use path to the west and north of the roundabout, allowing cyclists to avoid the circulatory carriageway, however there are no paths of any kind on the A327 to the west of the roundabout. There is a full system of street lighting, with a 50 mph speed limit on the A327, and 30 mph on the unclassified road.

1.4 The audit team members are:

Nick Jeanes	–	Team Leader
Darren Cox	–	Team Member

1.5 The audit took place during July 2025 and comprised of an examination of the documents/plans listed in Appendix A. The auditors visited site together between 15.45 and 16.15 on Friday 4 July when the weather conditions were dry and sunny with a dry road. Vehicle flows were moderate and speeds appeared commensurate with the speed limit. No pedestrians or cyclists were observed.

1.6 Data from Crashmap.org show that there have been two reported collisions involving injury, in the 5 years 2019-2023 inclusive, in the vicinity of the proposals. Both occurred on the unclassified Reading Road. The first, in June 2021, involved a car and cycle, resulting in a slight injury. The second, in July 2021, appeared to involve two cars colliding head on, and resulted in one fatal and one serious injury.

1.7 No existing/predicted vehicle flows or speed data have been supplied.

1.8 The audit team have not been made aware of any departures from standards or relaxations in relation to the proposed scheme.

1.9 The audit was carried out under the terms and conditions of DMRB GG 119. The team examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design with any other criteria. However, reference may be made to National/Local Guidance in order to verify a point.

1.10 Documents and drawings examined in this safety audit are listed at Appendix A.

1.11 General views of site

Looking south-east on the A327. In the lower photo, the unclassified road continues ahead, and the proposed new road will join from the left, beyond the lamp column

Views to left and right for a driver emerging from the new roundabout arm

Views from west (top) and east of the proposed Toucan site on the unclassified section of Reading Road

2. Safety Issues Raised in this Stage 2 Road Safety Audit. (see Appendix B for locations)

2.1 Problem

Location – Cycle slip on to carriageway, west of roundabout on A327

Summary – Risk of cycle destabilisation

There is no dropped kerb indicated where cyclists are required to rejoin the carriageway. Cyclists making this manoeuvre may become destabilised and fall, resulting in injury

Recommendation – Provide a dropped kerb at this location

2.2 Problem

Location – Cycle slip on to shared use path, west of roundabout on A327

Summary – Risk of cycle destabilisation

It is not clear from drawing 0701 whether a dropped kerb is being provided where cyclists are required to mount the shared use path. If no dropped kerb is provided, cyclists making this manoeuvre may become destabilised and fall, resulting in injury

Recommendation – Provide a dropped kerb at this location

2.3 Problem

Location – New splitter islands around roundabout

Summary – Risk of vehicles colliding with splitter islands

No reflective bollards have been indicated on the noses of the new splitter islands around the roundabout. These may constitute a collision hazard in darkness or inclement weather

Recommendation – Provide reflective bollards on the noses of the new splitter islands

2.4 Problem

Location – Verge area to the west of the new roundabout arm

Summary – Risk of junction collisions

Some saplings have been planted in this area. As they grow and mature they will restrict visibility to the right for drivers emerging from the new road, increasing the risk of an emerging vehicle being struck by a vehicle entering the roundabout from the north-west

Mature trees here will restrict visibility to the right

Recommendation – Remove the saplings

2.5 Problem

Location – Cycle slip on to shared use path, east of roundabout on Reading Road

Summary – Risk of cycle destabilisation

There is no dropped kerb indicated where cyclists are required to mount the shared use path. Cyclists making this manoeuvre may become destabilised and fall, resulting in injury

Recommendation – Provide a dropped kerb at this location

2.6 Problem

Location – Traffic signal controlled crossing, Reading Road east of roundabout

Summary – Risk of signal controller cabinet obstructing the shared use path

The location of the controller cabinet has not been indicated on the drawings. If poorly located, the cabinet and/or an engineer accessing it could obstruct the shared use path, increasing the risk of cycles colliding with the cabinet and/or an engineer accessing it

Recommendation – Ensure that the controller cabinet is positioned such that neither the cabinet, nor the engineer, will obstruct the footway

2.7 Problem

Location – Traffic signal controlled crossing, Reading Road east of roundabout

Summary – Risk of passing vehicles colliding with a parked vehicle, and risk of sightlines at the crossing being obstructed by a parked vehicle

No maintenance bay has been indicated for a signal maintenance engineer to park. A vehicle parked on the verge adjacent to the crossing would constitute a collision hazard, and would likely obstruct sightlines at the crossing

Recommendation – Provide a maintenance bay where a maintenance engineer can safely park a vehicle off-carriageway

2.8 Problem

Location – Bifurcation arrow, Reading Road east of signalled crossing

Summary – Risk of driver distraction

It is not recommended to include other carriageway markings within crossing zig-zags, to avoid driver distraction where they should be concentrating fully on the crossing ahead

Recommendation – Relocate the bifurcation arrow to the east of the zig-zags

2.9 Problem

Location – Traffic signal controlled crossing, north of roundabout

Summary – Risk of signal controller cabinet obstructing the shared use path

The location of the controller cabinet has not been indicated on the drawings. If poorly located, the cabinet and/or an engineer accessing it could obstruct the shared use path, increasing the risk of cycles colliding with the cabinet and/or an engineer accessing it

Recommendation – Ensure that the controller cabinet is positioned such that neither the cabinet, nor the engineer, will obstruct the footway

2.10 Problem

Location – Traffic signal controlled crossing, north of roundabout

Summary – Risk of passing vehicles colliding with a parked vehicle, and risk of sightlines at the crossing being obstructed by a parked vehicle

No maintenance bay has been indicated for a signal maintenance engineer to park. A vehicle parked on the verge adjacent to the crossing would constitute a collision hazard, and would likely obstruct sightlines at the crossing

Recommendation – Provide a maintenance bay where a maintenance engineer can safely park a vehicle off-carriageway

2.11 Problem

Location – Traffic signal controlled crossing, north of roundabout

Summary – Risk of user confusion and vehicle/pedestrian or vehicle/cycle collisions

The crossing indicated on the drawings includes a striped zebra-style crossing, however the crossing is signal controlled, therefore the zebra stripes are not appropriate. Pedestrians or cyclists crossing may interpret the markings as a crossing where they have priority, and try to cross when the signals are at green for motorists, increasing the risk of being struck by a passing vehicle

Recommendation – Remove the zebra markings from the crossing

2.12 Problem

Location – Central refuge islands on new road

Summary – Risk of vehicles colliding with refuge islands

No reflective bollards have been indicated on the noses of the refuge islands on the new road. These may constitute a collision hazard in darkness or inclement weather. Furthermore, the length of tapered hatching on the approaches to the islands appears to be significantly shorter than that recommended in Traffic Signs Manual Chapter 5, which may increase the risk of vehicles colliding with the islands

Recommendation – Provide reflective bollards on the noses of the refuge islands. Check that the hatching taper lengths comply with local highway authority policy (refer also to table 2.7, Traffic Signs Manual Chapter 5

2.13 Problem

Location – Paths crossing side roads (general) – tactile paving

Summary – Risk of vehicle/pedestrian collisions

The tactile paving indicated does not stretch for the full width of the paths where they cross the side roads. There is a risk that pedestrians with a sight impairment may miss the tactiles and walk into the carriageway without realising they are doing so

Recommendation – Ensure the tactile paving covers the full width of the paths

2.14 Problem

Location – Paths crossing side roads (general) – transverse lines

Summary – Risk of driver confusion

The locations where paths cross the side roads feature two solid lines across the side road carriageway. It was not clear to the auditors if these indicate carriageway markings, however if they are, they would indicate a stop line, which is inappropriate and may confuse drivers

Recommendation – Remove the transverse lines

2.15 Problem

Location – Both traffic signal controlled crossings

Summary – Risk of driver confusion

The zig-zag layouts of both crossings appear incorrect. They should be opposing on the approach, and parallel on the exit

Recommendation – Ensure zig-zag markings are correct

2.16 Problem

Location – Whole scheme, location of drainage gullies

Summary – Risk of pedestrian trips

The locations of drainage gullies has not been indicated on the drawings. Gullies adjacent to pedestrian dropped kerbs can be hazardous for wearers of thin heels, which may become trapped in the gully leading to trips

Recommendation – Ensure drainage gullies are not located adjacent to pedestrian dropped kerbs

3. Audit Team Statement

We certify that this audit has been carried out in accordance with DMRB GG 119

Audit Team Leader:

Name: Nick Jeanes MCIHT; MSoRSA; NH Cert. Comp.
Director

Signed:  Date: 7/7/2025

Audit Team Member:

Name: Darren Cox FIHE; MSoRSA; NH Cert. Comp.
Senior Auditor

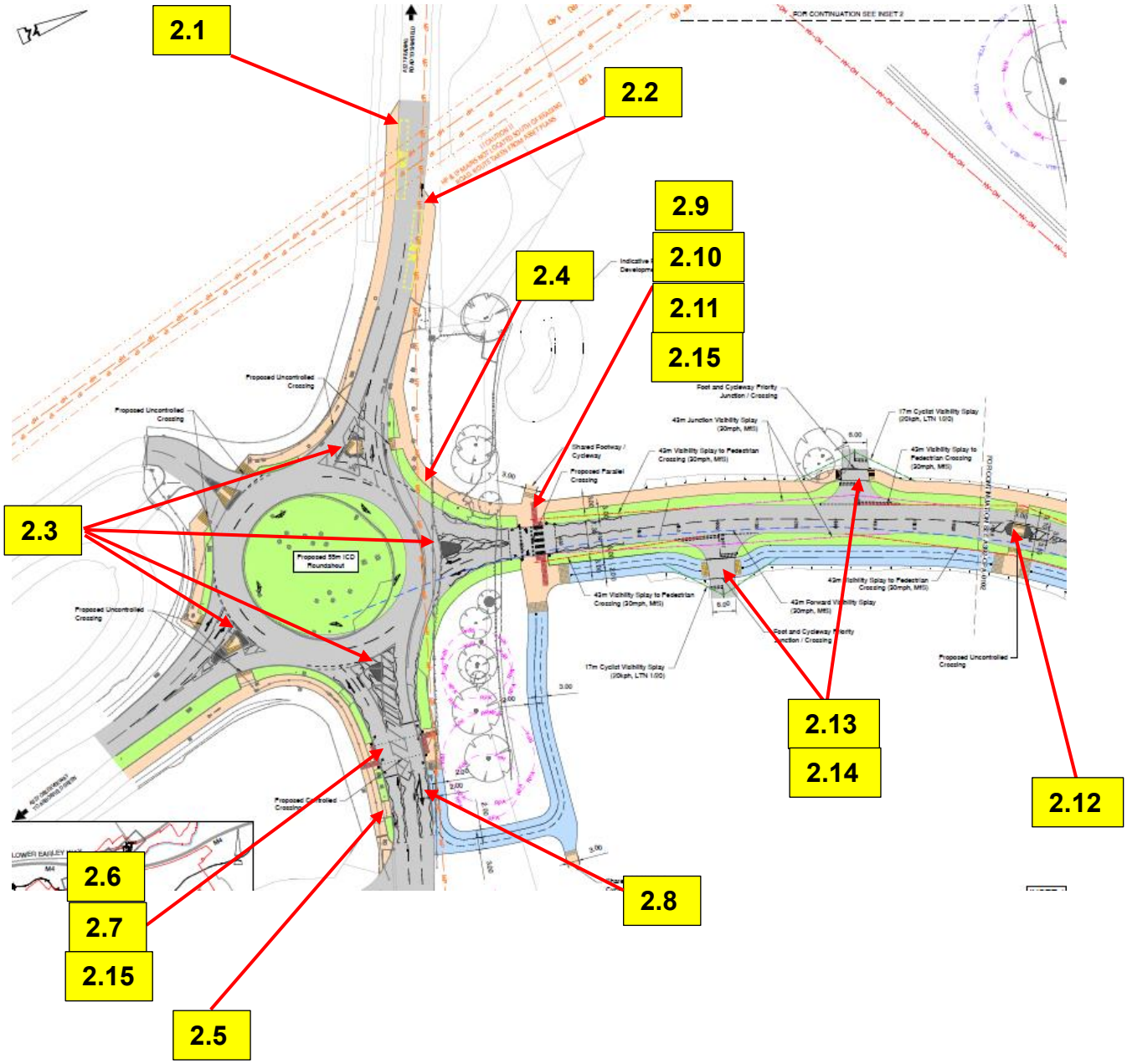
Signed:  Date: 7/7/2025

Appendix A: Information Utilised in this Stage 2 Road Safety Audit

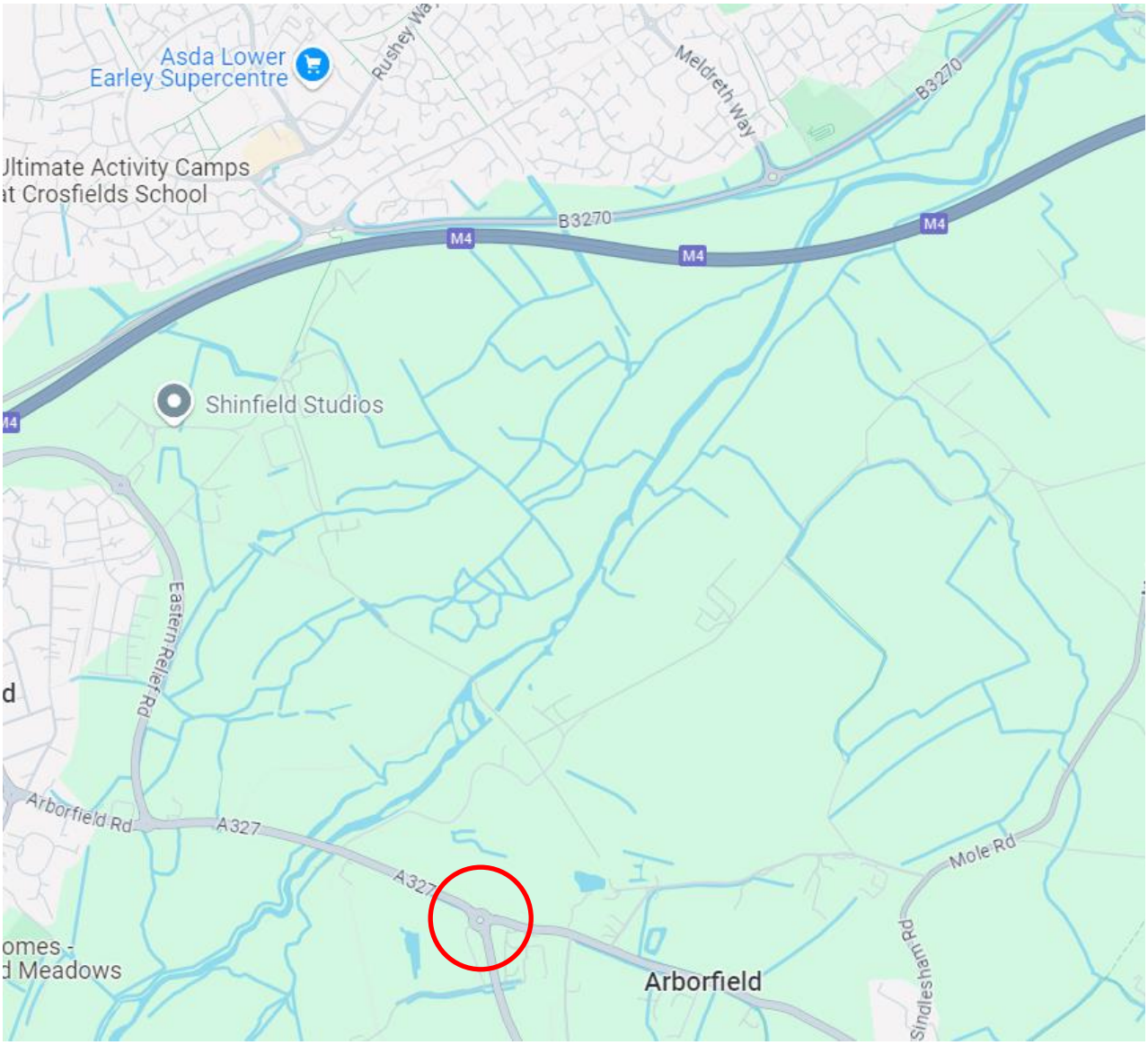
Drawings:

A392-OPA-0720 Highways Standard Details
A392-OPA-0701 Materials Plan Sheet 1 A
A392-OPA-0550 Typical Foul Pump Station General Arrangement A
A392-OPA-0540 Basin Sections Basin 1,2,3&4 A
A392-OPA-0530 Drainage Details Sheet 1 A
A392-OPA-0520 Storm Water Catchment Plan Sheet 1 A
A392-OPA-0501 Drainage & Levels Layout Sheet 1 A
A392-OPA-0146 Tracking Bus Swept Paths Sheet 1 A
A392-OPA-0140 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 1 A
A392-OPA-0130 Longitudinal Section Sheet 1 A
A392-OPA-0121 River Loddon Crossing Plan and Profile A
A392-OPA-0120 M4 Motorway Crossing Plan and Profile A
A392-OPA-0101 General Arrangement Sheet 1 B
A392-1048 P1 - Observer Way Compliance Drawing
498048 - OPA 2025 - LGV Land Use PP + areas 290525

Appendix B: Key Plan showing Audit Problems



Appendix C – Site location plan



Appendix 2 - Drawings Submitted for Safety Audit

GENERAL NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

KEY:

General:

- Uncontrolled Blister Tactile Paving at Dropped Crossing
- Controlled Blister Tactile Paving at Signalised Crossing
- Segregated Footway / Cycleway Corduroy Tactiles
- Indicative Traffic Signal
- Proposed Bollard Diag. 956 & 957
- Proposed 5m Segregated Footway / Cycleway
- Proposed 3m Shared Footway / Cycleway
- Proposed 2m Footway
- Proposed Verge
- Proposed Carriageway
- Proposed Hard Standing
- Proposed Mown Path Route
- Proposed Hoggin Route
- Proposed Batter Slope 1in5
- Proposed Batter Slope 1in3
- Proposed Headwall
- Proposed Culvert

Ecology Survey - Received by EPR on 16/05/25:

- Veteran Tree Buffer

Arboricultural Survey - Received by FLAC on 15/05/25:

- RPA — Root Protection Area
- VTB — Veteran Tree Protection Area

Existing Utilities

- 33KV — Existing 33KV Overhead HV Cable
- 132KV — Existing 132KV Overhead HV Cable
- HV–OH — Unspecified Overhead HV Cable
- Overhead HV 15m Clearance
- Pylon 20m Clearance
- HP — Existing High Pressure Gas
- MP — Existing Medium Pressure Gas
- IP — Existing Low Pressure Gas
- Existing Gas 3m Clearance

Refer to Drawing A392-OPA-0101 for Typical Footway Cycleway Junction Details.

Scale 1:500 (0 5 10 15 20 25m)

Rev	Date	Description	Drawn	Checked
B	07.25	OBSERVER WAY ROUNDABOUT ALIGNMENT UPDATED	RG	CS
A	06.25	FIRST ISSUE	RG	CS

Abley Letchford
www.ableyletchford.co.uk

Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

Title: GENERAL ARRANGEMENT SHEET 1 OF 9

Status:

Scale	Date	Drawn	Checked
1:500 @ A1	JUN 2025	RG	CS

Drawing No: A392-OPA-0101
Revision: B

A327 READING ROAD TO SHINFIELD

!! CAUTION !!
HP & IP MAINS NOT LOCATED SOUTH OF READING ROAD. ROUTE TAKEN FROM ASSET PLANS

FOR CONTINUATION SEE INSET 2

Indicative Future Development SuDS Feature

Proposed Uncontrolled Crossing

Proposed Uncontrolled Crossing

Proposed 55m ICD Roundabout

Proposed Uncontrolled Crossing

Foot and Cycleway Priority Junction / Crossing

43m Junction Visibility Splay (30mph, MfS)

17m Cyclist Visibility Splay (20kph, LTN 1/20)

Shared Footway / Cycleway

43m Visibility Splay to Pedestrian Crossing (30mph, MfS)

Proposed Parallel Crossing

43m Visibility Splay to Pedestrian Crossing (30mph, MfS)

FOR CONTINUATION SEE A392-OPA-0102

43m Visibility Splay to Pedestrian Crossing (30mph, MfS)

43m Forward Visibility Splay (30mph, MfS)

Foot and Cycleway Priority Junction / Crossing

17m Cyclist Visibility Splay (20kph, LTN 1/20)

Proposed Uncontrolled Crossing

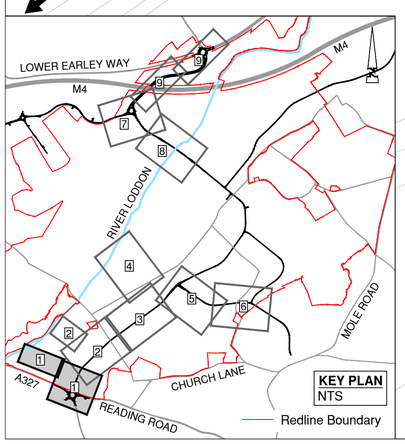
Proposed Controlled Crossing

A327 OBSERVERWAY TO ABBOTSFIELD GREEN

READING ROAD TO ABBOTSFIELD

Shared Footway / Cycleway

INSET 1



DETAIL 1 — Typical Shared Footway Cycleway Priority Junction

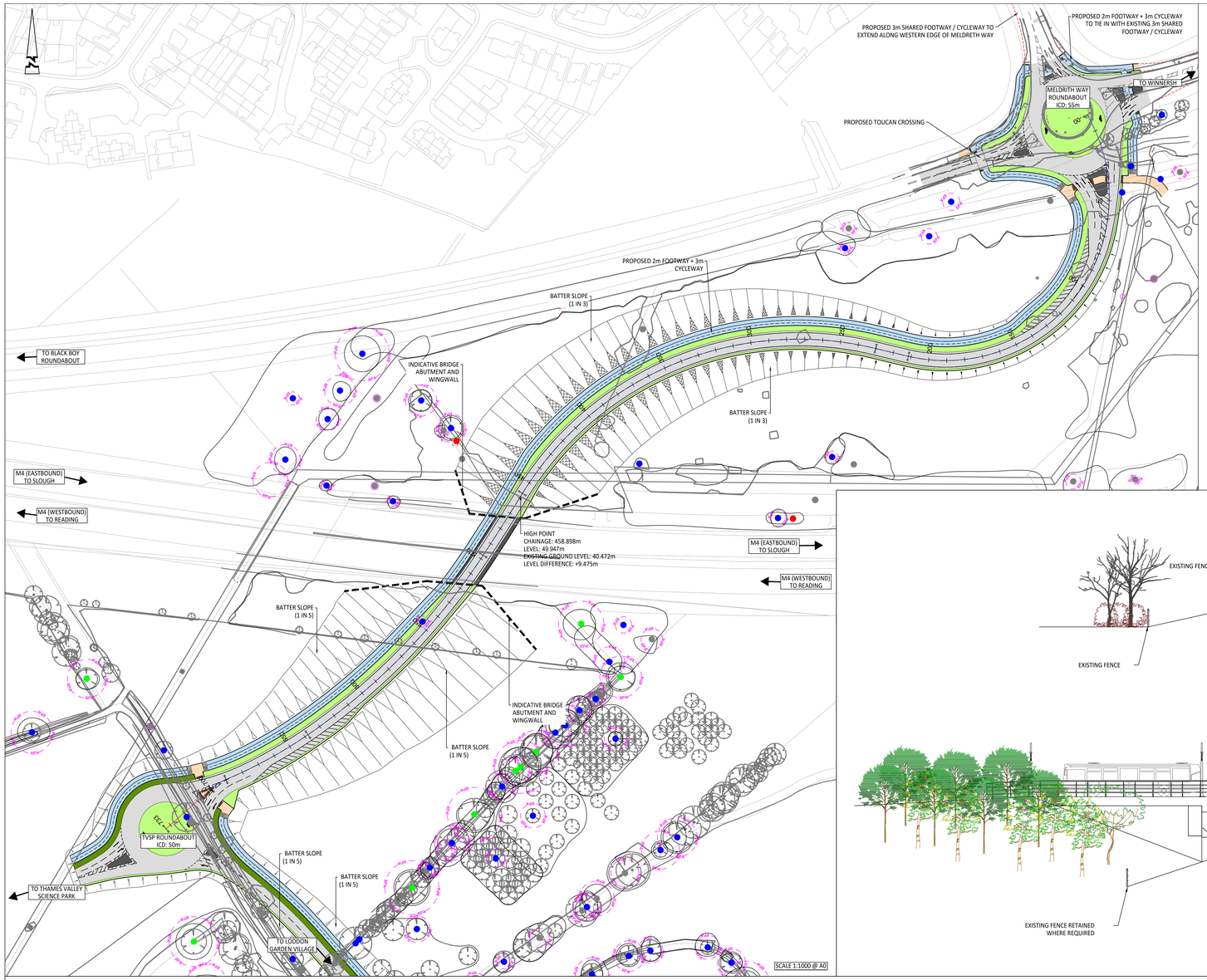
DETAIL 2 — Typical Segregated Footway Cycleway Priority Junction

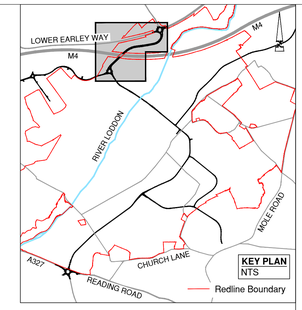
Attenuation Basin 1
Maximum Depth: 1.5m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 2000m³

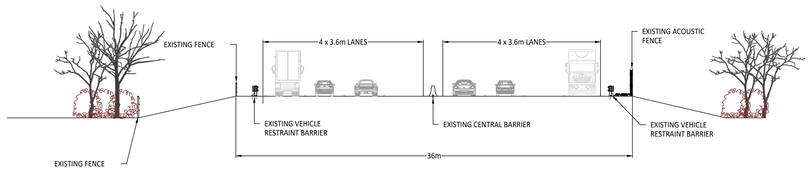
6m BUILDING PROXIMITY EXCLUSION ZONE

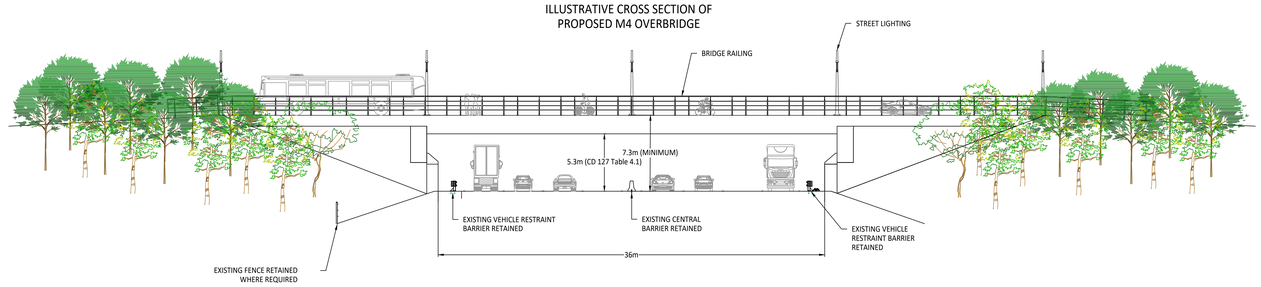
FOR CONTINUATION SEE INSET 1

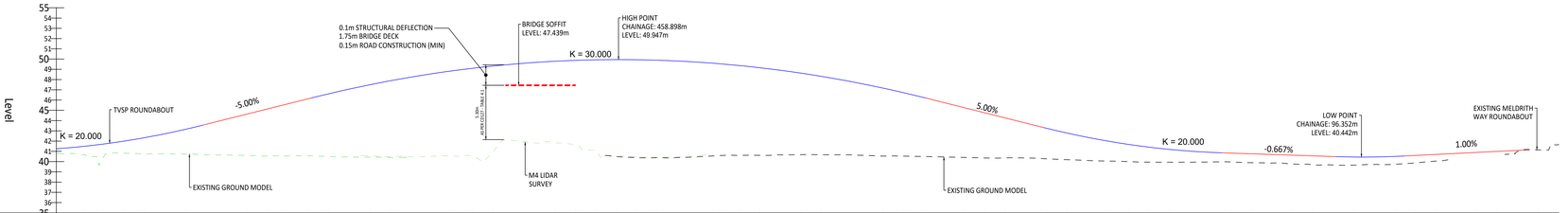
INSET 2











GENERAL NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

KEY:

General:

- ▦ Uncontrolled Blister Tactile Paving at Dropped Crossing
- ▦ Controlled Blister Tactile Paving at Signalised Crossing
- ▦ Segregated Footway / Cycleway Corduroy Tactiles
- 🟦 Proposed 5m Segregated Footway / Cycleway
- 🟧 Proposed 3m Shared Footway / Cycleway
- ■ Proposed 2m Footway
- 🟩 Proposed Verge
- □ Proposed Carriageway
- ■ Proposed Hard Standing
- ▷ Proposed Batter Slope 1in5
- ▶ Proposed Batter Slope 1in3

Ecology Survey - Based on information received from EPR dated 16/05/25:

- — Veteran Tree Buffer

Arboricultural Survey - Based on information received from FLAC dated 15/05/25:

- – – RPA– Root Protection Area

Chainage	733.220	730.000	720.000	710.000	700.000	690.000	680.000	670.000	660.000	650.000	640.000	630.000	620.000	610.000
Existing Levels	40.776	40.762	40.678	40.507	40.819	40.772	40.759	40.742	40.678	40.634	40.605	40.554	40.552	40.561
Proposed Levels	41.251	41.300	41.485	41.719	42.004	42.338	42.723	43.157	43.641	44.141	44.641	45.141	45.641	46.141
Level Difference	0.475	0.537	0.807	1.212	1.185	1.566	1.964	2.415	2.963	3.507	4.037	4.587	5.089	5.580

Chainage	600.000	590.000	580.000	570.000	560.000	550.000	540.000	530.000	520.000	510.000	500.000	490.000	480.000	470.000	460.000
Existing Levels	40.496	40.452	40.437	40.399	40.481	40.525	40.555	40.517	40.985	42.076	41.825	41.870	41.681	41.081	40.493
Proposed Levels	46.628	47.082	47.502	47.889	48.243	48.563	48.850	49.104	49.324	49.511	49.665	49.785	49.872	49.926	49.946
Level Difference	6.132	6.629	7.065	7.490	7.762	8.038	8.296	8.587	8.340	7.436	7.840	7.915	8.192	8.845	9.454

Chainage	450.000	440.000	430.000	420.000	410.000	400.000	390.000	380.000	370.000	360.000	350.000	340.000	330.000	320.000	310.000
Existing Levels	40.384	40.378	40.392	40.471	40.583	40.601	40.613	40.657	40.675	40.660	40.662	40.614	40.537	40.533	40.496
Proposed Levels	49.934	49.887	49.808	49.695	49.548	49.369	49.156	48.909	48.630	48.317	47.970	47.591	47.178	46.731	46.252
Level Difference	9.549	9.509	9.415	9.224	8.965	8.768	8.542	8.252	7.954	7.656	7.308	6.977	6.641	6.199	5.756

Chainage	300.000	290.000	280.000	270.000	260.000	250.000	240.000	230.000	220.000	210.000	200.000	190.000	180.000	170.000	160.000
Existing Levels	40.455	40.405	40.353	40.363	40.351	40.273	40.186	40.108	40.053	39.996	39.946	39.939	39.942	39.962	39.962
Proposed Levels	45.752	45.252	44.752	44.252	43.752	43.252	42.784	42.365	41.996	41.677	41.408	41.189	41.021	40.902	40.828
Level Difference	5.297	4.847	4.399	3.889	3.401	2.980	2.598	2.256	1.943	1.681	1.462	1.250	1.079	0.939	0.865

Chainage	150.000	140.000	130.000	120.000	110.000	100.000	90.000	80.000	70.000	60.000	50.000	40.000	30.000	20.000	10.000	0.000
Existing Levels	39.893	39.861	39.773	39.651	39.672	39.658	39.715	39.738	39.868	40.050				40.992	41.141	41.652
Proposed Levels	40.761	40.694	40.628	40.561	40.494	40.447	40.450	40.502	40.597	40.697	40.797	40.897	40.997	41.097		
Level Difference	0.868	0.834	0.854	0.910	0.822	0.790	0.734	0.764	0.729	0.647				0.105		

Vertical Geometry
R =2000.000 K =20.000 L =71.311
G =-5.000% L =53.006
R =3000.000 K =30.000 L =300.011
G =5.000% L =57.662
R =2000.000 K =20.000 L =86.667
G =0.667% L =55.712
R =2000.000 K =20.000 L =33.333
G =-1.000% L =61.138

Horizontal Geometry
L =33.541
R: 30.000 L: 9.754
R: 255.000 L: 51.959
R: 360.000 L: 140.288
R: 1500.000 L: 40.703
R: 180.000 L: 226.820
R: 1501.000 L: 18.697
R: 91.000 L: 211.458

LGV - M4 CROSSING - LONGSECTION
SCALE: H 1:1000,V 1:200. DATUM: 35.000

Rev	Date	Description	Drawn	Checked
A	06/25	FIRST ISSUE	CS	LPA

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Client
UNIVERSITY OF READING

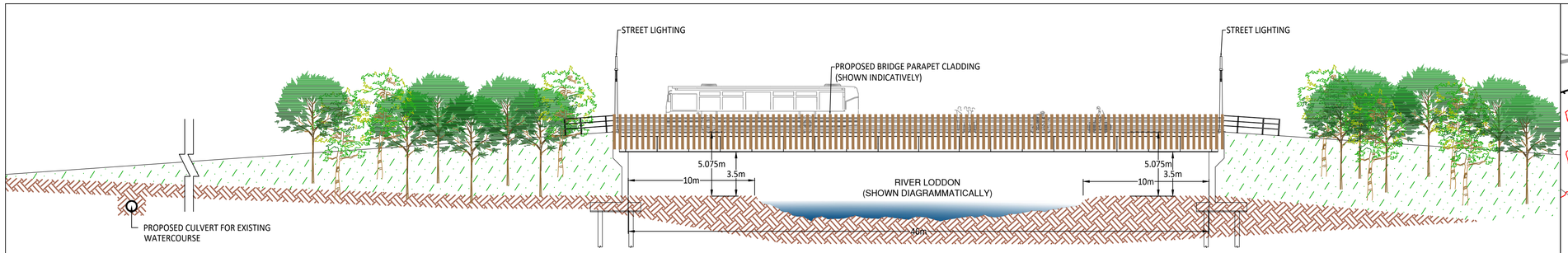
Project
LODDON GARDEN VILLAGE

Title
M4 MOTORWAY CROSSING
PLAN AND PROFILE

Status

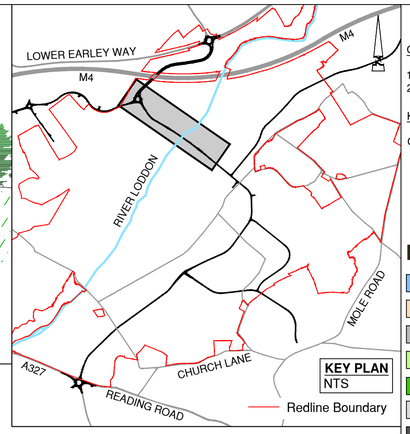
Scale	Date	Drawn	Checked
AS SHOWN @ A0	JUNE 2025	CS	LPA

Drawing No A392-OPA-0120
Revision A



ILLUSTRATIVE CROSS SECTION OF PROPOSED
BRIDGE OVER RIVER LODDON

SCALE: 1:200



KEY PLAN
NTS

Redline Boundary

GENERAL NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

KEY:

General:

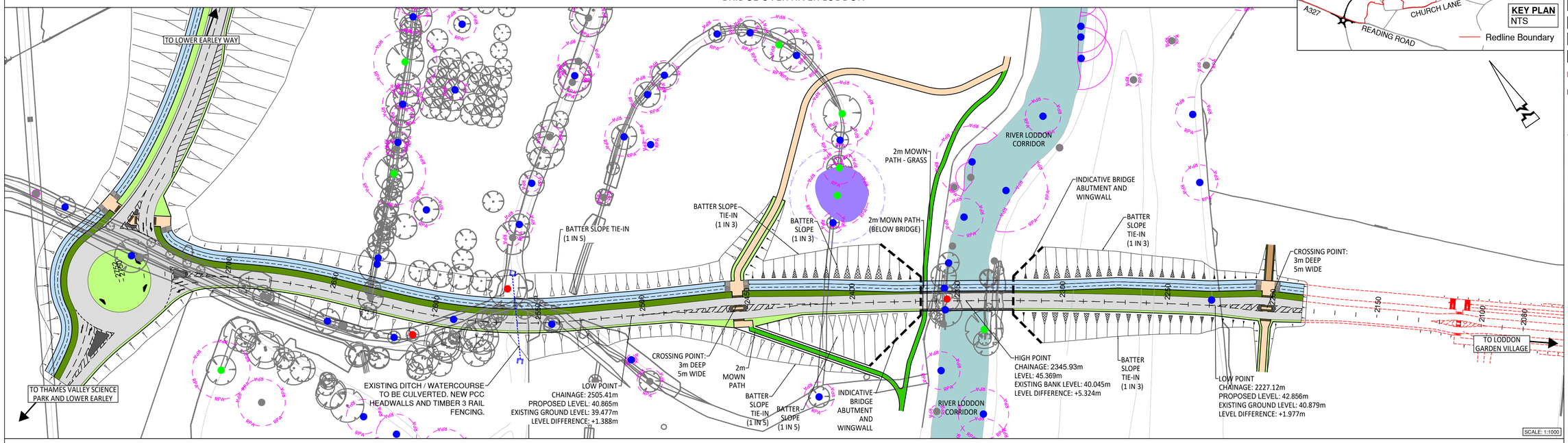
▨	Uncontrolled Blister Tactile Paving at Dropped Crossing
▨	Controlled Blister Tactile Paving at Signalised Crossing
■	Segregated Footway / Cycleway Corduroy Tactiles
🟦	Proposed 5m Segregated Footway / Cycleway
🟧	Proposed 3m Shared Footway / Cycleway
■	Proposed 2m Footway
🟩	Proposed Verge
🟩	Proposed Mown Path
■	Proposed Carriageway
■	Proposed Hard Standing
▷	Proposed Batter Slope 1in5
▷	Proposed Batter Slope 1in3

Ecology Survey - Based on information received from EPR dated 16/05/25:

—	Veteran Tree Buffer

Arboricultural Survey - Based on information received from FLAC dated 15/05/25:

--	Root Protection Area



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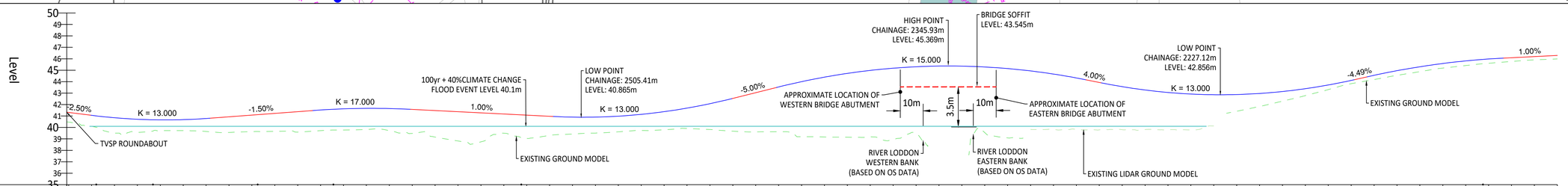

Chainage	Existing Levels	Proposed Levels	Level Difference
2730.000	40.472	41.308	0.836
2720.000	40.077	41.058	0.980
2710.000	39.500	40.848	1.348
2700.000	39.560	40.716	1.155
2690.000	39.707	40.660	0.953
2680.000	39.720	40.682	0.962
2670.000	39.649	40.780	1.131
2660.000	39.565	40.929	1.364
2650.000	39.629	41.079	1.450
2640.000	39.658	41.229	1.571
2630.000	39.590	41.379	1.789
2620.000	39.720	41.526	1.806
2610.000	39.777	41.627	1.850
2600.000	39.821	41.668	1.847
2590.000	39.723	41.651	1.929
2580.000	39.478	41.576	2.098
2570.000	39.159	41.476	2.317
2560.000	38.818	41.376	2.558
2550.000	38.741	41.276	2.535
2540.000	39.495	41.176	1.681
2530.000	39.038	41.076	2.038
2520.000	39.305	40.976	1.671
2510.000	39.420	40.903	1.484
2500.000	39.507	40.906	1.399
2490.000	39.620	40.986	1.366
2480.000	39.731	41.143	1.412
2470.000	39.801	41.377	1.576
2460.000	39.907	41.688	1.781
2450.000	39.818	42.076	2.258
2440.000	39.676	42.541	2.865
2430.000	39.611	43.041	3.429
2420.000	39.629	43.540	3.911
2410.000	39.188	44.001	4.813
2400.000	39.169	44.395	5.226
2390.000	39.142	44.722	5.580
2380.000	39.190	44.982	5.792
2370.000	38.951	45.176	6.225
2360.000	39.549	45.303	5.754
2350.000		45.363	
2340.000		45.357	
2330.000	39.546	45.284	5.738
2320.000	39.139	45.145	6.057
2310.000	39.821	44.939	5.118
2300.000	39.832	44.666	4.834
2290.000	39.849	44.326	4.477
2280.000	39.786	43.932	4.145
2270.000	39.806	43.564	3.758
2260.000	39.817	43.272	3.455
2250.000	39.799	43.058	3.258
2240.000	39.778	42.920	3.142
2230.000	40.130	42.860	2.729
2220.000	41.413	42.876	1.463
2210.000	41.833	42.969	1.136
2200.000	42.297	43.139	0.843
2190.000	42.783	43.386	0.604
2180.000	43.310	43.710	0.400
2170.000	43.823	44.111	0.288
2160.000	44.187	44.557	0.370
2150.000	44.549	44.960	0.411
2140.000	44.880	45.303	0.423
2130.000	45.186	45.588	0.402
2120.000	45.411	45.814	0.403
2110.000	45.609	45.981	0.373
2100.000	45.762	46.093	0.331
2090.000	45.904	46.193	0.290
2080.000	45.990	46.293	0.303

Vertical Geometry											
G =2.500% L =10.538	R =1300.000 K =13.000 L =52.000	G =-1.500% L =44.908	R =1700.000 K =17.000 L =42.500	G =1.000% L =62.470	R =1300.000 K =13.000 L =78.000	G =-5.000% L =19.479	R =1500.000 K =15.000 L =135.000	G =4.000% L =6.814	R =1300.000 K =13.000 L =110.434	G =-4.495% L =5.681	R =1700.000 K =17.000 L =59.414

Vertical Geometry (continued): G =-1.000%
L =23.590

Horizontal Geometry							
R: 104.571 L: 12.855	L =24.791	R: 255.000 L: 45.697	R: 1500.000 L: 33.076	R: 255.000 L: 82.053	R: 2147.039 L: 419.921	L =32.434	

LGV - RIVER LODDON CROSSING - LONGSECTION
SCALE: H 1:1000,V 1:200. DATUM: 35.000

Rev	Date	Description	Drawn	Checked
A	06/25	FIRST ISSUE	CS	LPA

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Project
LODDON GARDEN VILLAGE

Title
RIVER LODDON CROSSING
PLAN AND PROFILE

Status

Scale	Date	Drawn	Checked
AS SHOWN @ A1	JUN 2025	CS	LPA

Drawing No	Revision
A392-OPA-0121	A

Manhole Schedule/Longsection:

1. Do not scale.
2. This drawing is to be read in conjunction with and checked against all other drawings, Engineering details, Specification and any structural, Geotechnical or other specialist document provided.
3. Site layout shown for context only, refer to other project drawings for details.
4. All adoptable drainage works to be constructed as detailed in design and construction guidance or as stipulated in the water authorities addendum.
5. All public sewers are to be the subject of a section 104 agreement of the water industry act 1991.
6. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
7. The contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
8. All drainage ironworks to comply with bs en124, and be stamped with bsi kitemark. covers to suit loading as below;
   - -carriageways and roads - d400
   - -driveways and verges - c250
   - -footways and pedestrian areas - b125
   - -gardens/landscaping - a15
9. All sewer pipes, up to, and including 225mm are to be vitrified clay to BS EN295. All sewer pipes 300mm diameter and above to be concrete pipes to BS EN1916. Where agreed with adopting authority pipes up to and including 600mm diameter can be PVC-U to BS EN1404.
10. All drainage shall be installed and tested strictly in accordance with the manufacturers' printed instructions, bs en 752, bs en 1601, ixcal water authority requirements and the building regulations.
11. All bedding shall be class s unless noted otherwise.
12. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted type 1 granular sub-base material.
13. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
14. Chambers with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety devices.
15. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
16. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the engineer.
17. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with document h of the building regulations, together with mbc standards chapter 5.3 and bs8301.
18. Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.
19. Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with table 11 of document h of the building regulations (<0.6m to invert min dn300, >0.6m to invert min dn475).
20. Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.
21. Construction details subject to refinement through detailed design/technical approval process.

ALL PIPE BEDDING TO BE CLASS 'S' GRANULAR SURROUND UNLESS NOTED OTHERWISE ON THE DRAWING

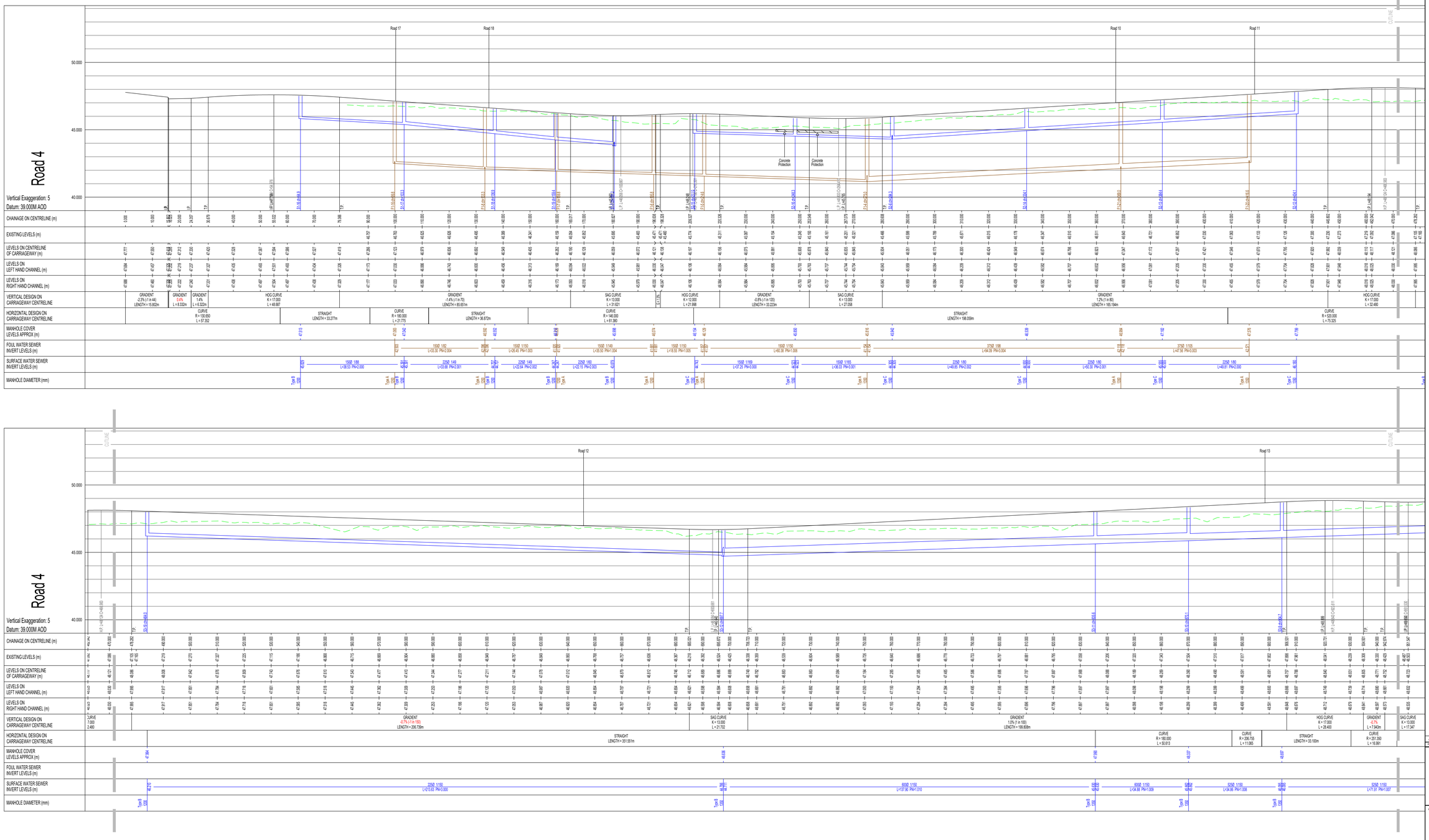
Manhole diagrams are indicative and do not show every incoming sewer/gully connection. Refer to Engineering Layouts for additional information.

Manhole cover levels are derived from a 3D digital terrain model, final cover levels to suit finished surfaces onsite.

Manhole covers to be located wholly within one surface i.e grass or hard standing/road. Manhole covers are to be fully accessible to users.

KEY:

- EXISTING GROUND PROFILE
- PROPOSED CENTRELINE PROFILE
- PROPOSED FOUL SEWER
- PROPOSED STORM SEWER



Scale 1:500 (0 5 10 15 20 25m)

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	JJS	CS

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Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

Title: LONGITUDINAL SECTIONS SHEET 1 OF 6

Status:

Scale	Date	Drawn	Checked
1:500 H @ A0 1:100 V	JUNE 2025	JJS	CS

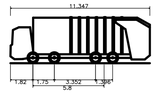
Drawing No: A392-OPA-0130

Revision: A

GENERAL NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

VEHICLE DIMENSIONS AND SPECIFICATIONS:



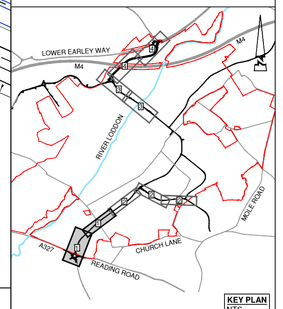
Large Refuse Vehicle (4 axle)	
Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.721m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Standard Design Vehicle (SDV)	
Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m

KEY:

- Approach Sightlines to Junction
- 120m Roundabout Visibility Splay (40mph, DMRB CD109)
- 43m Roundabout Visibility Splay (30mph, MfS)

0 5 10 15 20 25m
Scale 1:500



KEY PLAN
NTS
Redline Boundary

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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Project
LODDON GARDEN VILLAGE

Title
REFUSE VEHICLE AND FIRE TENDER SWEPT PATHS SHEET 1 OF 6

Status

Scale	Date	Drawn	Checked
1:500 @ A1	JUN 2025	RG	CS

Drawing No	Revision
A392-OPA-0140	A

GENERAL NOTES:

1. Do not scale.
2. Refer to all other Project Drawings and supporting notes.

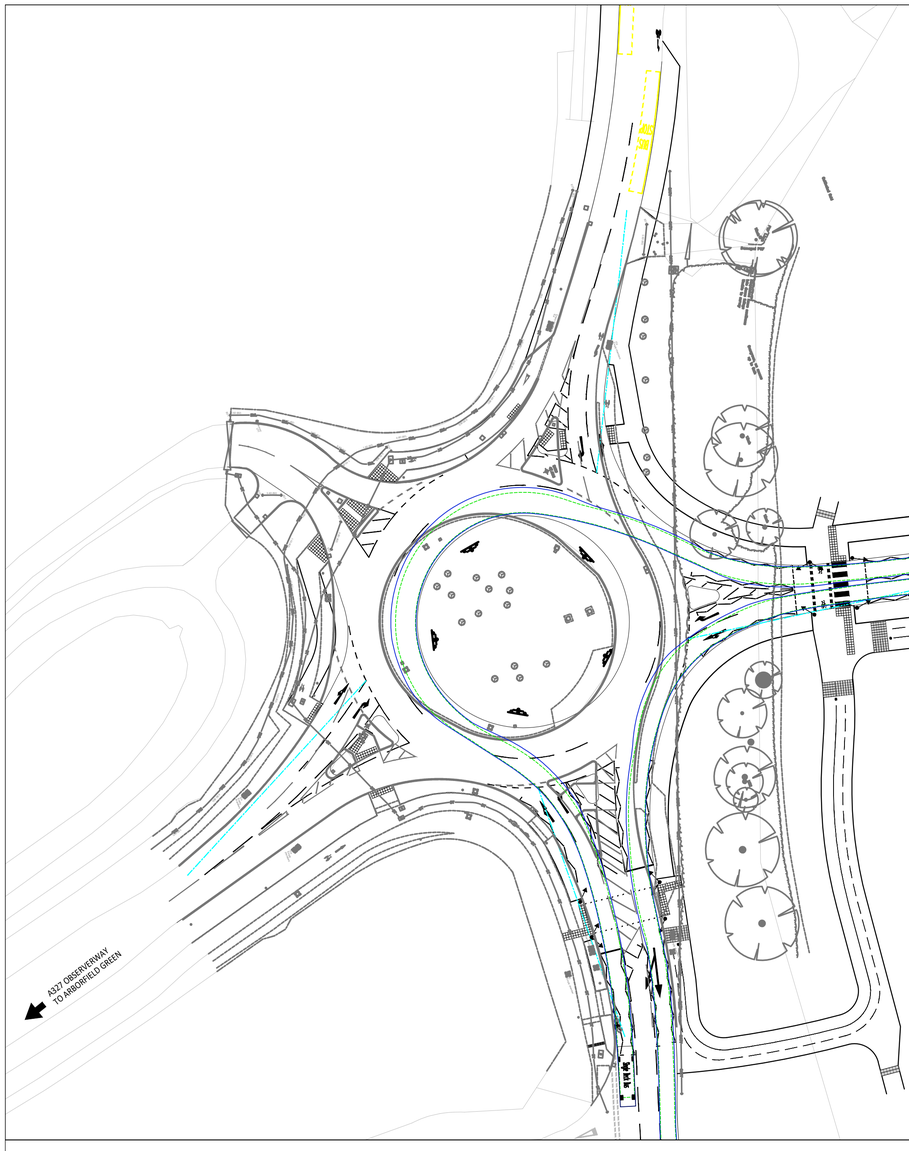
VEHICLE DIMENSIONS AND SPECIFICATIONS:

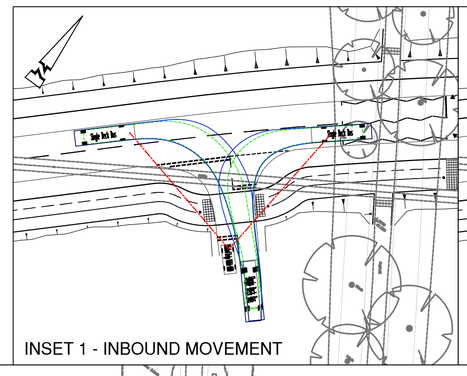
Single Deck Bus	
Overall Length	9.795m
Overall Width	4.500m
Overall Body Height	3.707m
Min Body Ground Clearance	0.306m
Track Width	2.322m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	10.111m

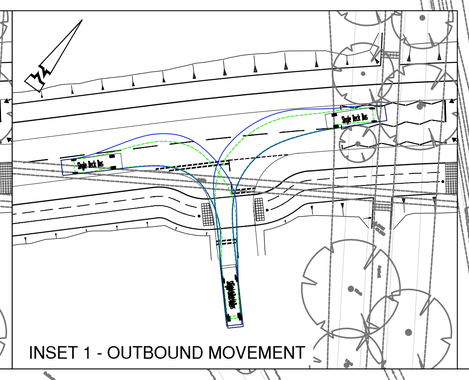
Standard Design Vehicle (SDV)	
Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m

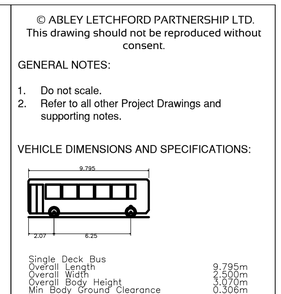
KEY:

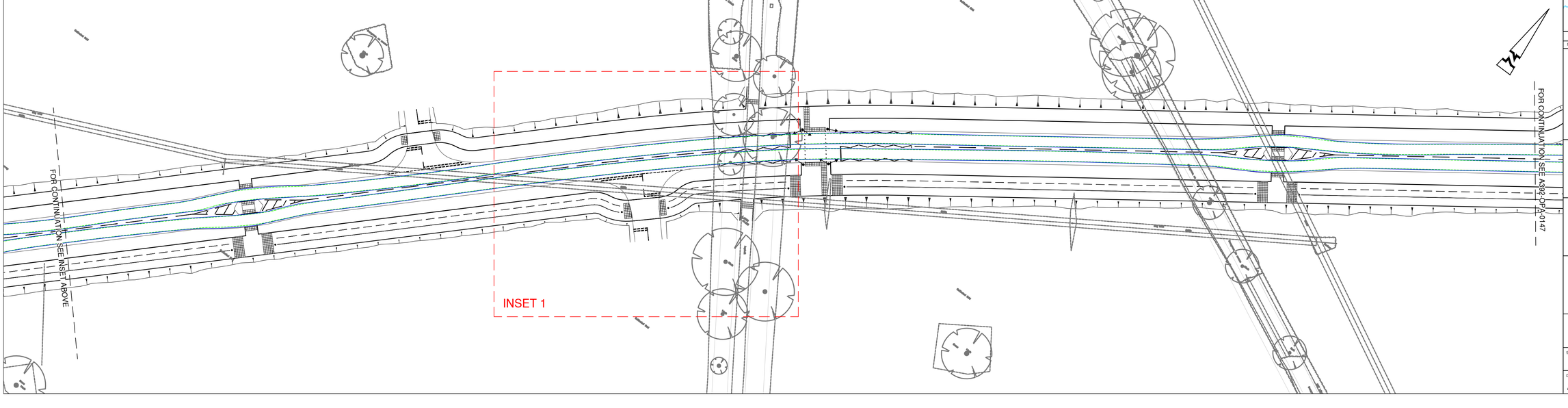
- Approach Sightlines to Junction
- 120m Roundabout Visibility Splay (40mph, DMRB CD109)
- 43m Roundabout Visibility Splay (30mph, MfS)











Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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Project
LODDON GARDEN VILLAGE

Title
BUS SWEPT PATHS
SHEET 1 OF 4

Status

Scale	Date	Drawn	Checked
1:500 @ A1	JUN 2025	RG	CS

Drawing No	Revision
A392-OPA-0146	A