Abley Letchford

Loddon Garden Village - South

DESIGN RESPONSE

University of Reading

08 July 2025

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Quality Management:

Prepared by:	Chris Shaw
Authorised by:	Leigh Abley
Date:	08 July 2025
Document Reference:	A392 – R066 LGV South 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 Central refuge islands on new roads

Summary

2.1.2 Risk of vehicles colliding with refuge islands, No reflective bollards have been indicated on the noses of the refuge islands on the new roads. 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

2.1.3 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

2.1.4 Bollards to be included, tapers to length to be reviewed and adjusted as required.

2.2 PROBLEM

Location

2.2.1 Paths crossing side roads (general) – tactile paving

Summary

2.2.2 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

2.2.3 Ensure the tactile paving covers the full width of the paths

Designers Response

2.2.4 Tactiles to be amended to suit

2.3 PROBLEM

Location

2.3.1 Paths crossing side roads (general) – transverse lines

Summary

2.3.2 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

2.3.3 Remove the transverse lines

Designers Response

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

2.4 PROBLEM

Location

2.4.1 Traffic signal controlled crossings and junctions, various locations

Summary

2.4.2 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

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

Designers Response

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

2.5 PROBLEM

Location

2.5.1 Traffic signal controlled crossings and junctions, various locations.

Summary

2.5.2 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

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

Designers Response

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

2.6 PROBLEM

Location

2.6.1 SUDS feature immediately south of road at chainage 600m

Summary

2.6.2 Risk of pedestrians and/or cyclists falling into the SUDS pond, There is a drop from the shared use path to the SUDS pond. There is a risk that pedestrians and/or cyclists may fall into the pond, causing injury.

Recommendation

2.6.3 Assess the risk of path users falling into the SUDS pond, and provide protective fencing if considered necessary.

Designers Response

2.6.4 Noted, localised fencing to be provided.

2.7 PROBLEM

Location

2.7.1 Proposed crossing at chainage 860m.

Summary

2.7.2 Risk of vehicle/cycle and vehicle/pedestrian collisions, This crossing is not signal controlled, however eastbound drivers will have passed through 4 signal-controlled crossings since leaving the A327 roundabout, so may be surprised to be faced with a non signal-controlled crossing on a road with a consistent environment. Furthermore, there is a risk that cyclists approaching from the Hoggin path on the west side of the crossing may ride straight out on to the crossing as they have priority, surprising a driver who has just passed through several signal-controlled crossings, and increasing the risk of a collision.

Recommendation

2.7.3 Redesign the crossing as signal-controlled

Designers Response

2.7.4 Noted, upon receipt of anticipated traffic flows the crossing arrangement will be reassessed. Hoggin path to be relocated to provide stagger to crossing facility regardless of final arrangement.

2.8 PROBLEM

Location

2.8.1 Proposed crossing at chainage 860m

Summary

2.8.2 Risk of driver confusion, The zig-zag layouts at this crossing appear incorrect. They should be opposing on the approach, and parallel on the exit.

Recommendation

2.8.3 Ensure zig-zag markings are correct

Designers Response

2.8.4 Zig-zag markings to be amended

2.9 PROBLEM

Location

2.9.1 North-east bound approach to traffic signal controlled junction, chainage 1030m

Summary

2.9.2 Risk of vehicle/vehicle collisions due to late or unexpected lane changes, No bifurcation arrow has been indicated on this approach, where the single lane develops into two. Drivers unfamiliar with the location may not realise there is a separate right turn lane, leading to late lane changes and possible conflicts.

Recommendation

2.9.3 Introduce a bifurcation arrow on this approach.

Designers Response

2.9.4 Road marking to be added.

2.10 PROBLEM

Location

2.10.1 Traffic signal controlled junction, chainage 1030m, central island on south-eastern arm.

Summary

2.10.2 Risk of pedestrian trips and cycle destabilisation, The central island is on the path of a shared use crossing, however according to drawing 0704A it features full height kerbs throughout. These will constitute an obstacle/trip hazard for pedestrians and cyclists crossing the road.

Recommendation

2.10.3 Provide flush kerbs on the crossing route.

Designers Response

2.10.4 Flush kerbs to be provided and relevant drawings update to suit.

2.11 PROBLEM

Location

2.11.1 Traffic signal controlled junction, chainage 1030m.

Summary

2.11.2 Risk of vehicle/cycle and vehicle/pedestrian collisions, Signalled crossing facilities for pedestrians and cyclists are only indicated on one arm of the junction. If there are pedestrian and/or cyclist desire lines over the two uncontrolled arms, those crossing will be at risk of being struck by passing vehicles.

Recommendation

2.11.3 Establish whether the uncontrolled arms require a controlled pedestrian/cycle crossing and install as necessary.

Designers Response

2.11.4 Additional crossing facility to be provided.

2.12 PROBLEM

Location

2.12.1 Whole scheme, location of drainage gullies

Summary

2.12.2 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

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

Designers Response

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 South

Stage:	**2**
Location:	**Proposed roads north-east of A327 Reading Road/Observer Way roundabout**
ATSS Ref:	**250606B**
Client Ref:	**A392 – Loddon Garden Village**
Date:	**7 July 2025**

atss
Avon Traffic & Safety Services
36 Cotswold Road
BRISTOL BS3 4NT
Tel 07486 584592
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Project Details

Report Title:	**Stage 2 road safety audit, Loddon Garden Village South**
Date:	**7 July 2025**
Document reference and revision:	**250606B 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			

Contents **Page**

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 for a new site road network in the southern area of the major Loddon Garden Village development. These proposals connect with the existing highway network at the A327 Reading Road/Observer Way roundabout, which is subject of another road safety audit (see below).

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. 250219). The current audit is one of 3 audits being carried out for the Loddon Garden development, the others being 250606A (Observer Way roundabout) and 250606C (northern block). No details of drainage gully locations, traffic signs or street lighting have been supplied to the auditors.

1.3 The proposals include a 7.3 metre wide road which strikes north-east from the A327 for approximately 1.0 kilometre, and a second road of the same width, which joins the first road near its northern end, at a traffic signal controlled junction. Both roads include a 3.0 metre shared use path on one side, with a 5.0 metre wide path on the opposite side featuring a 3.0 metre wide 2-way cycle path, and a 2.0 metre wide footway. Both roads also include several central pedestrian refuges with informal crossings including dropped kerbs and appropriate tactile paving. The first road also includes a traffic signal controlled crossing and a 'Tiger' parallel crossing approximately 100 metres apart.

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 proposals are currently within a green field site so not accessible. The auditors visited the adjacent site (A327/Observer Way roundabout) 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.

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

2.1 Problem

Location – Central refuge islands on new roads

Summary – Risk of vehicles colliding with refuge islands

No reflective bollards have been indicated on the noses of the refuge islands on the new roads. 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

2.2 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

2.3 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

2.4 Problem

Location – Traffic signal controlled crossings and junctions, various locations

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 shared use path

2.5 Problem

Location – Traffic signal controlled crossings and junctions, various locations

Summary – Risk of passing vehicles colliding with a parked vehicle, and risk of sightlines 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

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

2.6 Problem

Location – SUDS feature immediately south of road at chainage 600m

Summary – Risk of pedestrians and/or cyclists falling into the SUDS pond

There is a drop from the shared use path to the SUDS pond. There is a risk that pedestrians and/or cyclists may fall into the pond, causing injury

Recommendation – Assess the risk of path users falling into the SUDS pond, and provide protective fencing if considered necessary

2.7 Problem

Location – Proposed crossing at chainage 860m

Summary – Risk of vehicle/cycle and vehicle/pedestrian collisions

This crossing is not signal controlled, however eastbound drivers will have passed through 4 signal-controlled crossings since leaving the A327 roundabout, so may be surprised to be faced with a non signal-controlled crossing on a road with a consistent environment. Furthermore, there is a risk that cyclists approaching from the Hoggin path on the west side of the crossing may ride straight out on to the crossing as they have priority, surprising a driver who has just passed through several signal-controlled crossings, and increasing the risk of a collision

Recommendation – Redesign the crossing as signal-controlled

2.8 Problem

Location – Proposed crossing at chainage 860m

Summary – Risk of driver confusion

The zig-zag layouts at this crossing appear incorrect. They should be opposing on the approach, and parallel on the exit

Recommendation – Ensure zig-zag markings are correct

2.9 Problem

Location – North-east bound approach to traffic signal controlled junction, chainage 1030m

Summary – Risk of vehicle/vehicle collisions due to late or unexpected lane changes

No bifurcation arrow has been indicated on this approach, where the single lane develops into two. Drivers unfamiliar with the location may not realise there is a separate right turn lane, leading to late lane changes and possible conflicts

Recommendation – Introduce a bifurcation arrow on this approach

2.10 Problem

Location – Traffic signal controlled junction, chainage 1030m, central island on south-eastern arm

Summary – Risk of pedestrian trips and cycle destabilisation

The central island is on the path of a shared use crossing, however according to drawing 0704A it features full height kerbs throughout. These will constitute an obstacle/trip hazard for pedestrians and cyclists crossing the road

Recommendation – Provide flush kerbs on the crossing route

2.11 Problem

Location – Traffic signal controlled junction, chainage 1030m

Summary – Risk of vehicle/cycle and vehicle/pedestrian collisions

Signalled crossing facilities for pedestrians and cyclists are only indicated on one arm of the junction. If there are pedestrian and/or cyclist desire lines over the two uncontrolled arms, those crossing will be at risk of being struck by passing vehicles

Recommendation – Establish whether the uncontrolled arms require a controlled pedestrian/cycle crossing and install as necessary

2.12 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

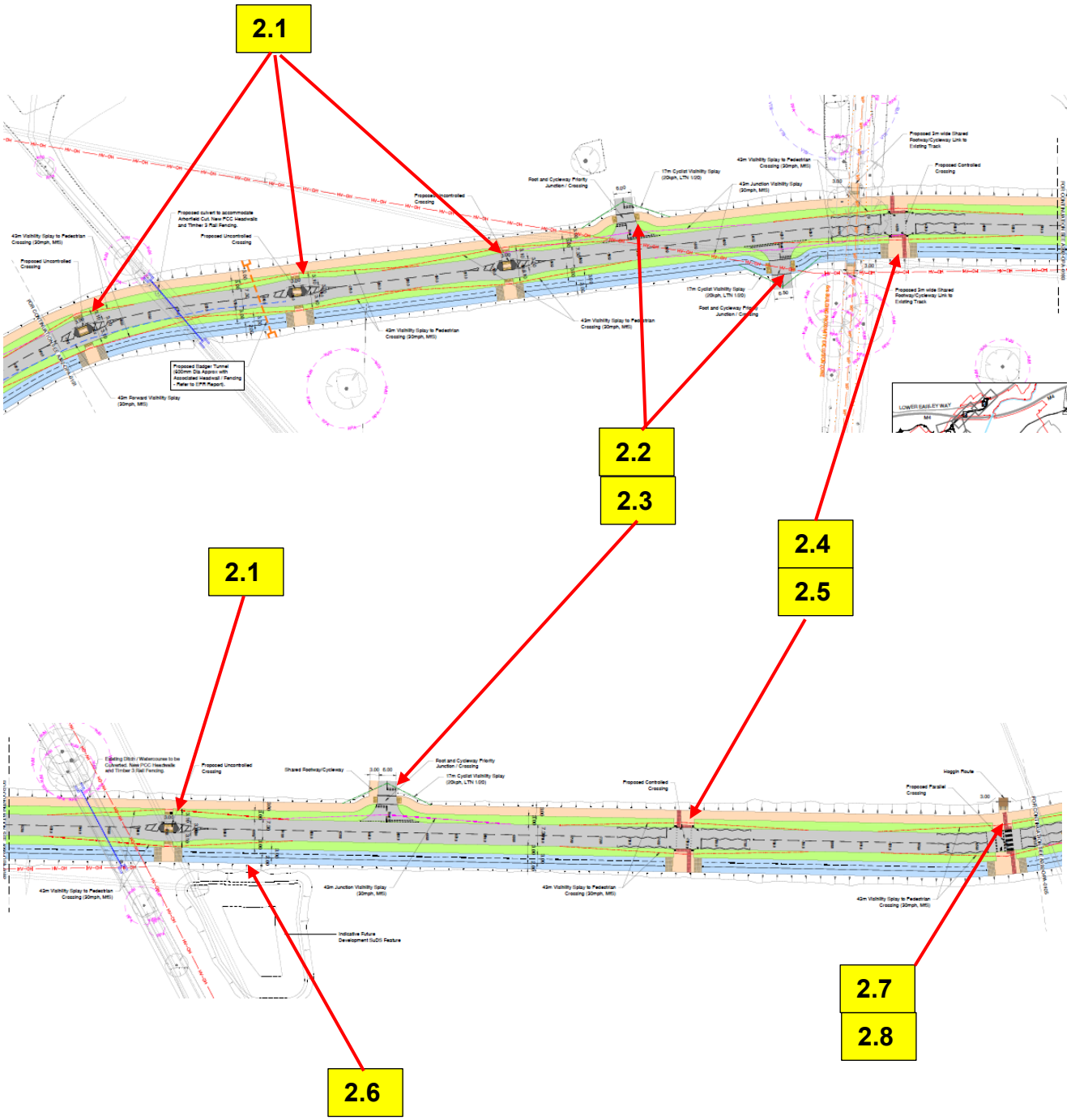
Signed:  Date: 7/7/2025

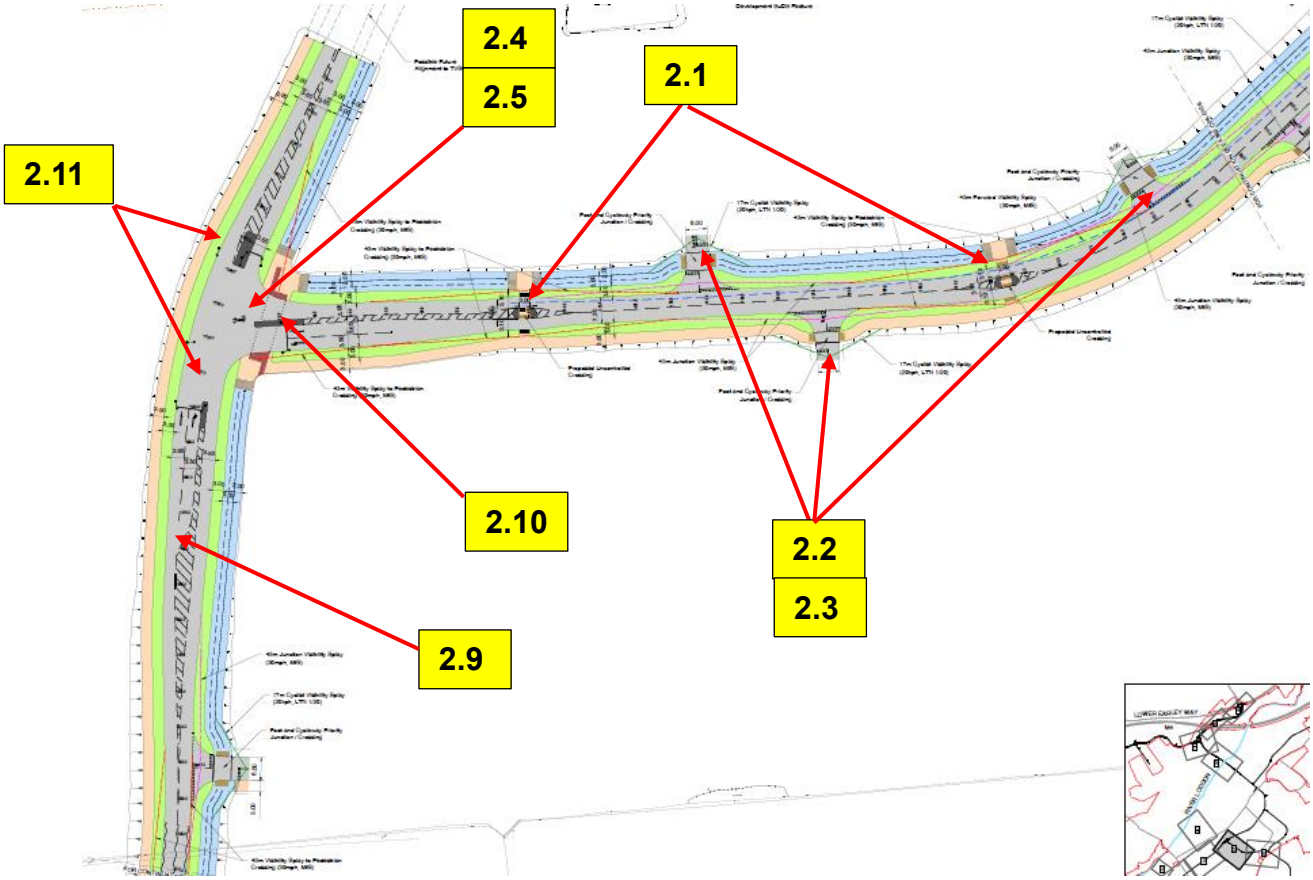
Appendix A: Information Utilised in this Stage 2 Road Safety Audit

Drawings:

498048 - OPA 2025 - LGV Land Use PP + areas 290525
A392-OPA-0102 General Arrangement Sheet 2 A
A392-OPA-0103 General Arrangement Sheet 3 A
A392-OPA-0104 General Arrangement Sheet 4 A
A392-OPA-0105 General Arrangement Sheet 5 A
A392-OPA-0106 General Arrangement Sheet 6 A
A392-OPA-0131 Longitudinal Section Sheet 2 A
A392-OPA-0132 Longitudinal Section Sheet 3 A
A392-OPA-0133 Longitudinal Section Sheet 4 A
A392-OPA-0134 Longitudinal Section Sheet 5 A
A392-OPA-0135 Longitudinal Section Sheet 6 A
A392-OPA-0141 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 2 A
A392-OPA-0142 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 3 A
A392-OPA-0143 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 4 A
A392-OPA-0144 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 5 A
A392-OPA-0145 Tracking Refuse Vehicle and Fire Tender Swept Path Sheet 6 A
A392-OPA-0147 Tracking Bus Swept Paths Sheet 2 A
A392-OPA-0148 Tracking Bus Swept Paths Sheet 3 A
A392-OPA-0149 Tracking Bus Swept Paths Sheet 4 A
A392-OPA-0502 Drainage & Levels Layout Sheet 2 A
A392-OPA-0503 Drainage & Levels Layout Sheet 3 A
A392-OPA-0504 Drainage & Levels Layout Sheet 4 A
A392-OPA-0505 Drainage & Levels Layout Sheet 5 A
A392-OPA-0506 Drainage & Levels Layout Sheet 6 A
A392-OPA-0520 Storm Water Catchment Plan Sheet 1 A
A392-OPA-0521 Storm Water Catchment Plan Sheet 2 A
A392-OPA-0522 Storm Water Catchment Plan Sheet 3 A
A392-OPA-0523 Storm Water Catchment Plan Sheet 4 A
A392-OPA-0530 Drainage Details Sheet 1 A
A392-OPA-0531 Drainage Details Sheet 2 A
A392-OPA-0540 Basin Sections Basin 1,2,3&4 A
A392-OPA-0541 Basin Sections Basin 5,6&7 A
A392-OPA-0702 Materials Plan Sheet 2 A
A392-OPA-0703 Materials Plan Sheet 3 A
A392-OPA-0704 Materials Plan Sheet 4 A
A392-OPA-0705 Materials Plan Sheet 5 A
A392-OPA-0706 Materials Plan Sheet 6 A
A392-OPA-0720 Highways Standard Details

Appendix B: Key Plans showing Audit Problems

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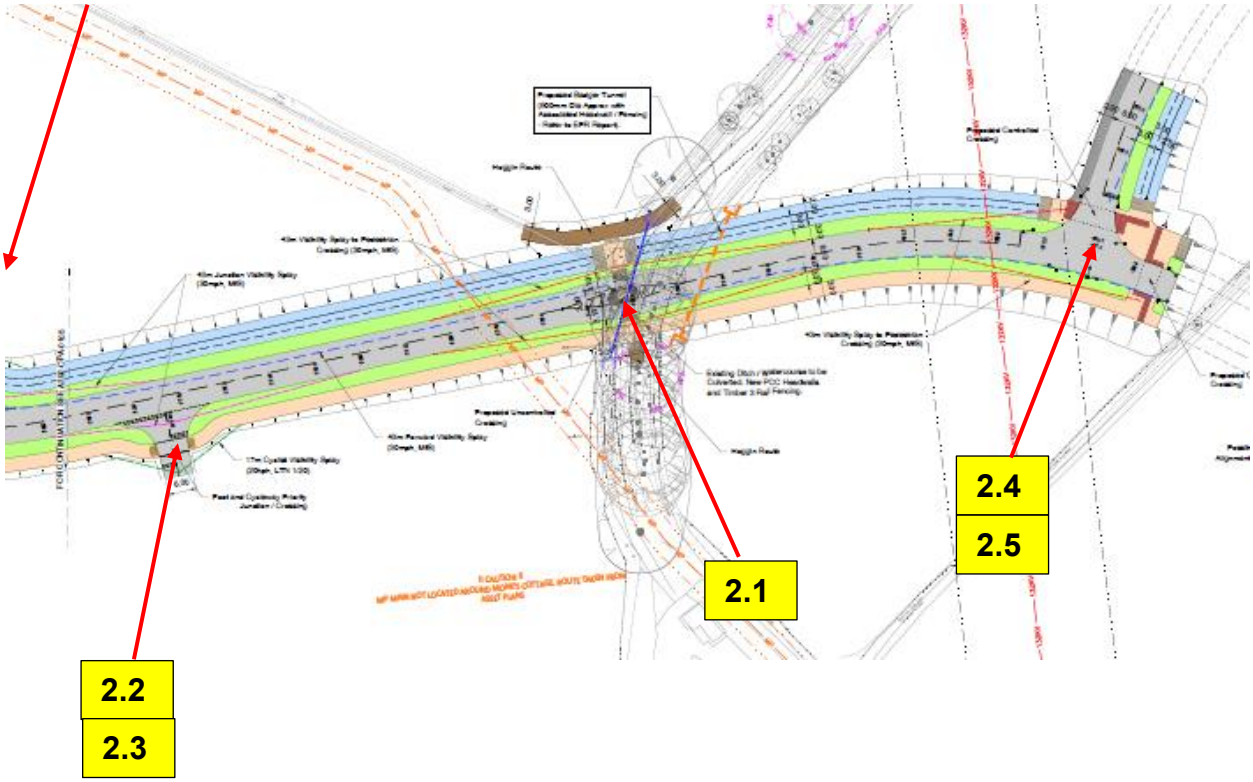
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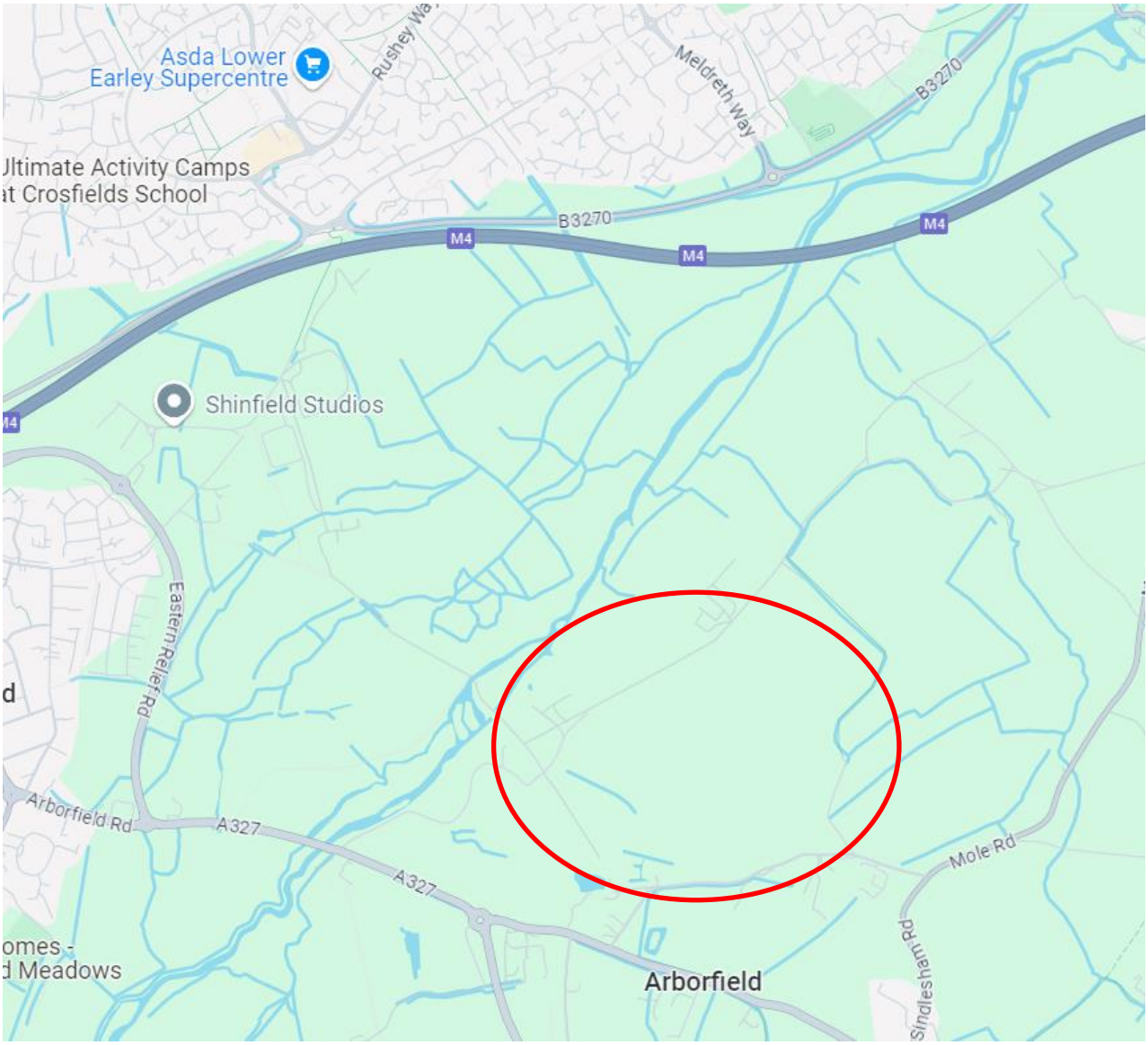
Appendix C – Site location plan



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
A	06.25	FIRST ISSUE	RG	CS

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Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

Title: GENERAL ARRANGEMENT SHEET 2 OF 9

Status:

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

Drawing No.: A392-OPA-0102
Revision: A

FOR CONTINUATION SEE INSET 2

FOR CONTINUATION SEE INSET 1

FOR CONTINUATION SEE A392-OPA-0101

FOR CONTINUATION SEE A392-OPA-0103

Attenuation Basin 2
Maximum Depth: 1.5m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 1800m³

Foot and Cycleway Priority Junction / Crossing

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

43m Junction Visibility Splay (30mph, MfS)

Proposed Uncontrolled Crossing

Proposed culvert to accommodate Arborfield Cut. New PCC Headwalls and Timber 3 Rail Fencing.

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

Proposed Uncontrolled Crossing

Proposed Uncontrolled Crossing

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

43m Forward Visibility Splay (30mph, MfS)

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

Proposed 3m wide Shared Footway/Cycleway Link to Existing Track

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

Proposed Controlled Crossing

Proposed 3m wide Shared Footway/Cycleway Link to Existing Track

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

Foot and Cycleway Priority Junction / Crossing

6m BUILDING PROXIMITY EXCLUSION ZONE

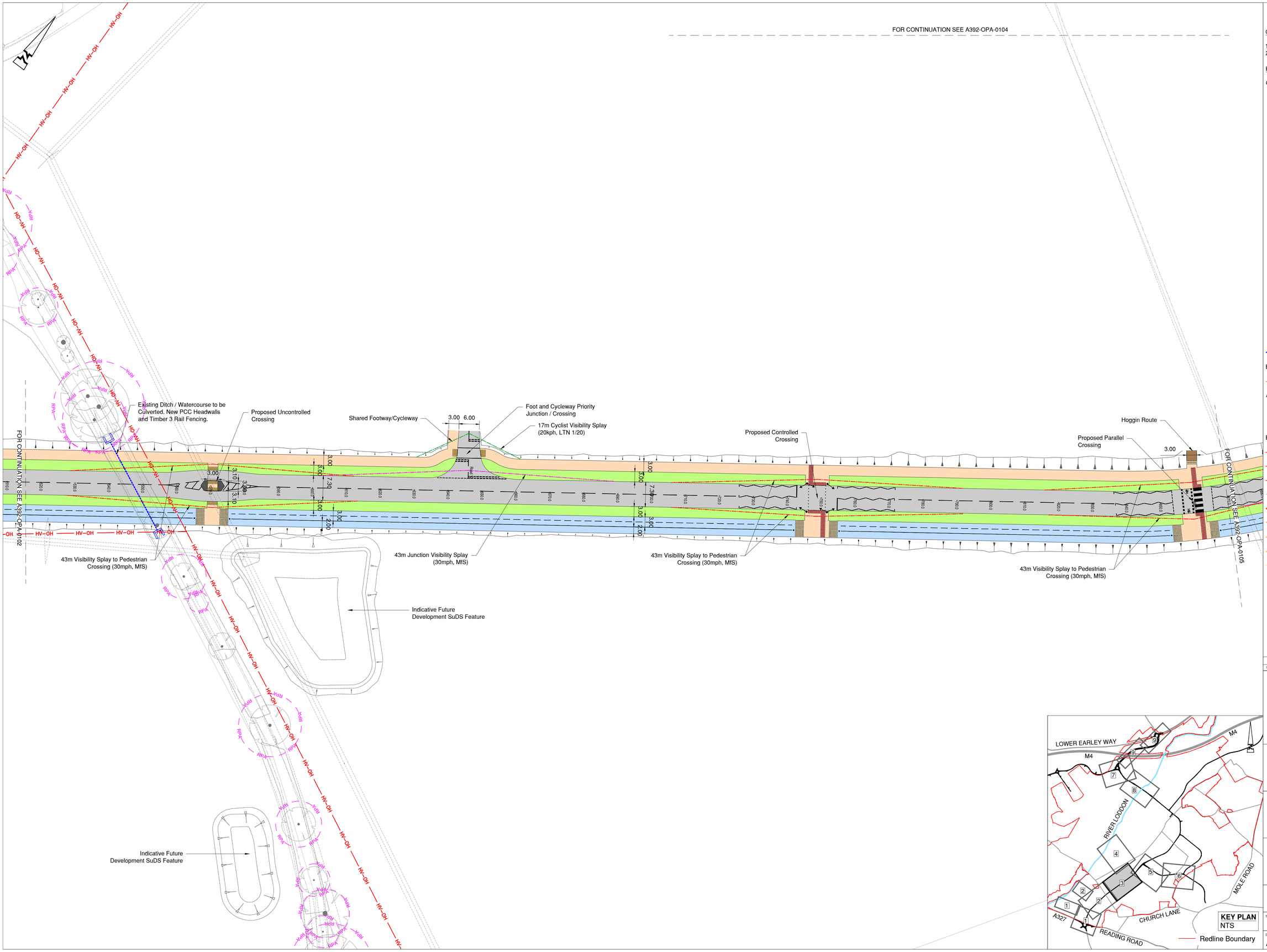
INSET 1

INSET 2

KEY PLAN NTS

Redline Boundary

LOWER EARLEY WAY
M4
RIVER LODDON
MOLE ROAD
CHURCH LANE
READING ROAD
A327



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

0 5 10 15 20 25m
Scale 1:500

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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Client
UNIVERSITY OF READING

Project
LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT SHEET 3 OF 9

Status

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

Drawing No: A392-OPA-0103
Revision: A

GENERAL NOTES:

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- Veteran Tree Buffer

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

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

Existing Utilities

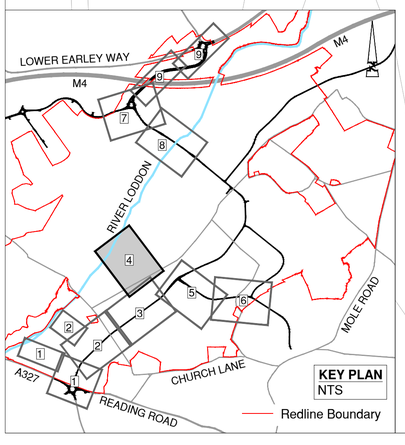
- 33KV — Existing 33KV Overhead HV Cable
- 132KV — Existing 132KV Overhead HV Cable
- HV–OH — Unspecified Overhead HV Cable
- Overhead HV 15m Clearance
- Pylon 20m Clearance
- HP — Existing High Pressure Gas
- MP — Existing Medium Pressure Gas
- IP — Existing Low Pressure Gas
- Existing Gas 3m Clearance

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

Attenuation Basin 3
Maximum Depth: 1.5m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 12000m³

Indicative Future Development SuDS Feature

FOR CONTINUATION SEE A392-OPA-0103



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Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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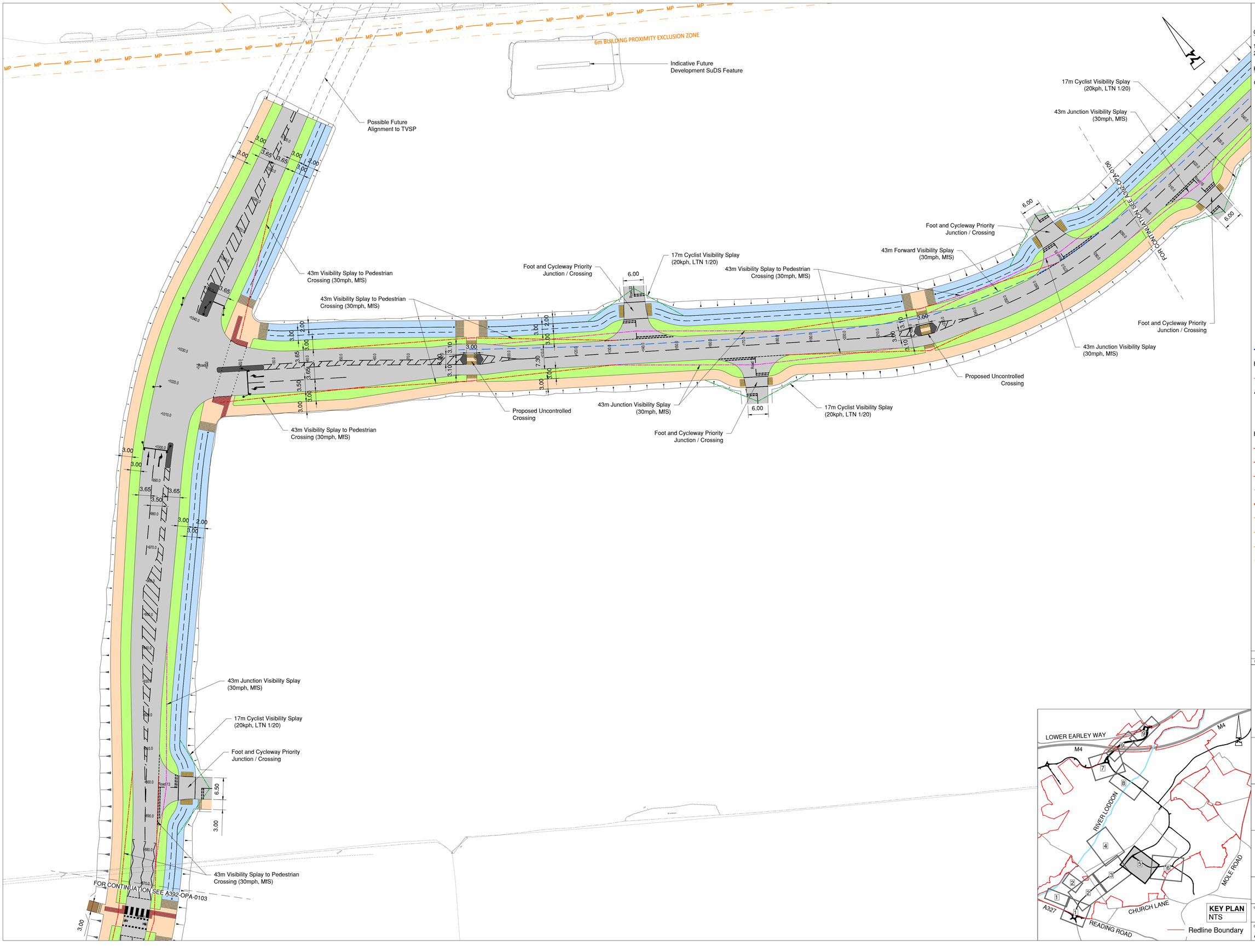
Project
LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT SHEET 4 OF 9

Status

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

Drawing No	Revision
A392-OPA-0104	A



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:

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Existing Utilities

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- 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.

0 5 10 15 20 25m
Scale 1:500

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

KEY PLAN
NTS

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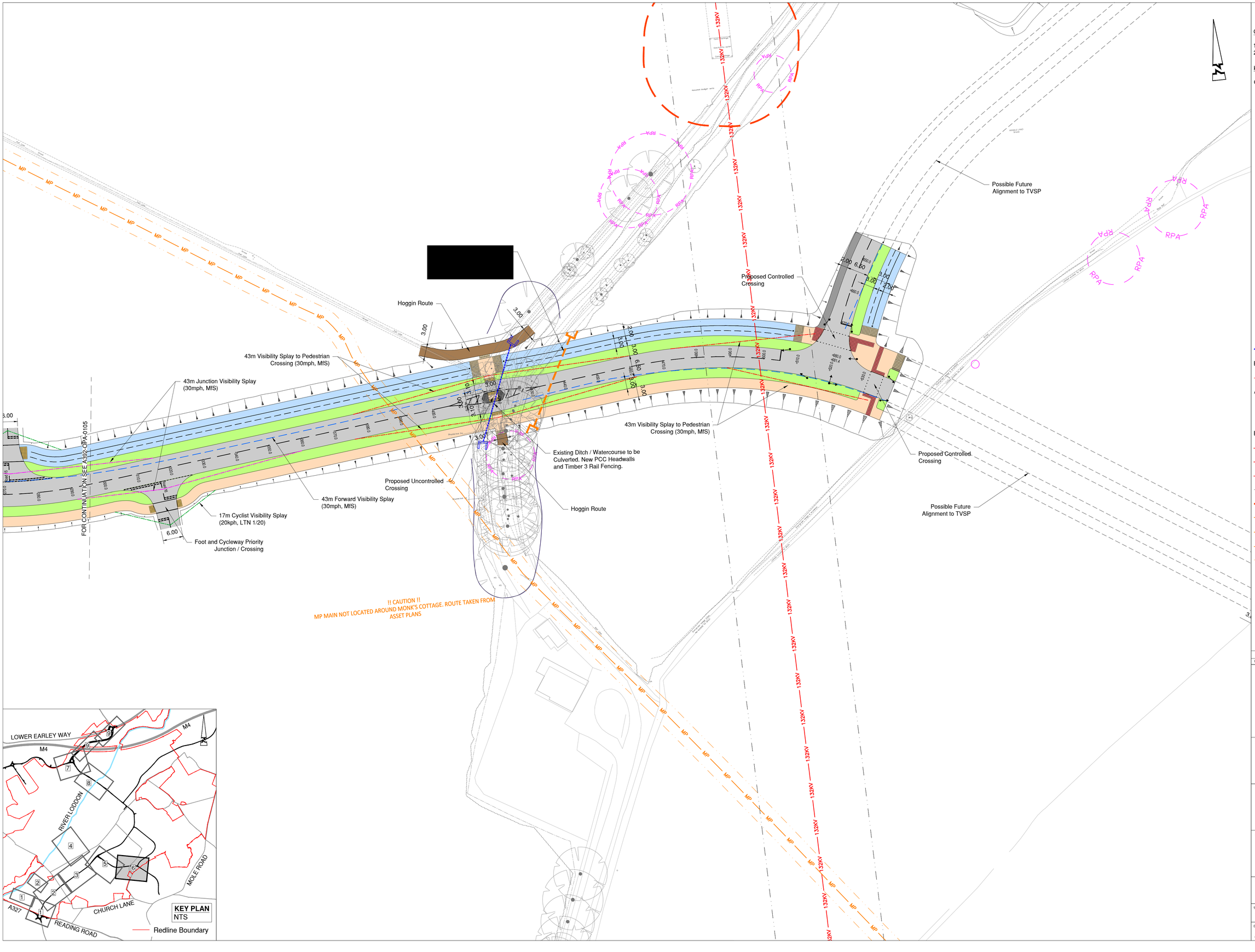
Project
LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT SHEET 5 OF 9

Status

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

Drawing No: A392-OPA-0105
Revision: A



GENERAL NOTES:

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

KEY:

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- Uncontrolled Blister Tactile Paving at Dropped Crossing
- Controlled Blister Tactile Paving at Signalised Crossing
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- Proposed Batter Slope 1in3
- Proposed Headwall
- Proposed Culvert

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

- Veteran Tree Buffer

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- IP — Existing Low Pressure Gas
- Existing Gas 3m Clearance

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

0 5 10 15 20 25m
Scale 1:500

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT SHEET 6 OF 9

Status

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

Drawing No	Revision
A392-OPA-0106	A

GENERAL NOTES:

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

KEY:

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- Proposed Hard Standing
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- Proposed Hoggin Route
- Proposed Batter Slope 1in5
- Proposed Batter Slope 1in3
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- Proposed Culvert

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- Veteran Tree Buffer

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- HP — Existing High Pressure Gas
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- Existing Gas 3m Clearance

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

0 5 10 15 20 25m
Scale 1:500

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	RG	CS

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LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT
SHEET 7 OF 9

Status

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

Drawing No: A392-OPA-0107
Revision: A

Attenuation Basin 5
Maximum Depth: 1.5m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 1000m³

Attenuation Basin 6
Maximum Depth: 1.0m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 200m³

Attenuation Basin 4
Maximum Depth: 1.0m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 800m³

Proposed 50m ICD Roundabout

Possible Future Alignment to TVSP

120m Forward Visibility Splay (40mph, DMRB CD109)

120m Visibility Splay to Pedestrian Crossing (40mph, DMRB CD109)

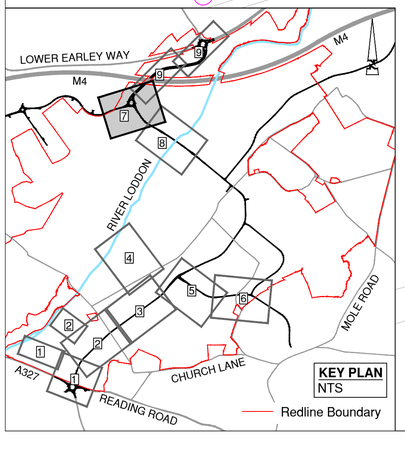
FOR CONTINUATION SEE A392-OPA-0109

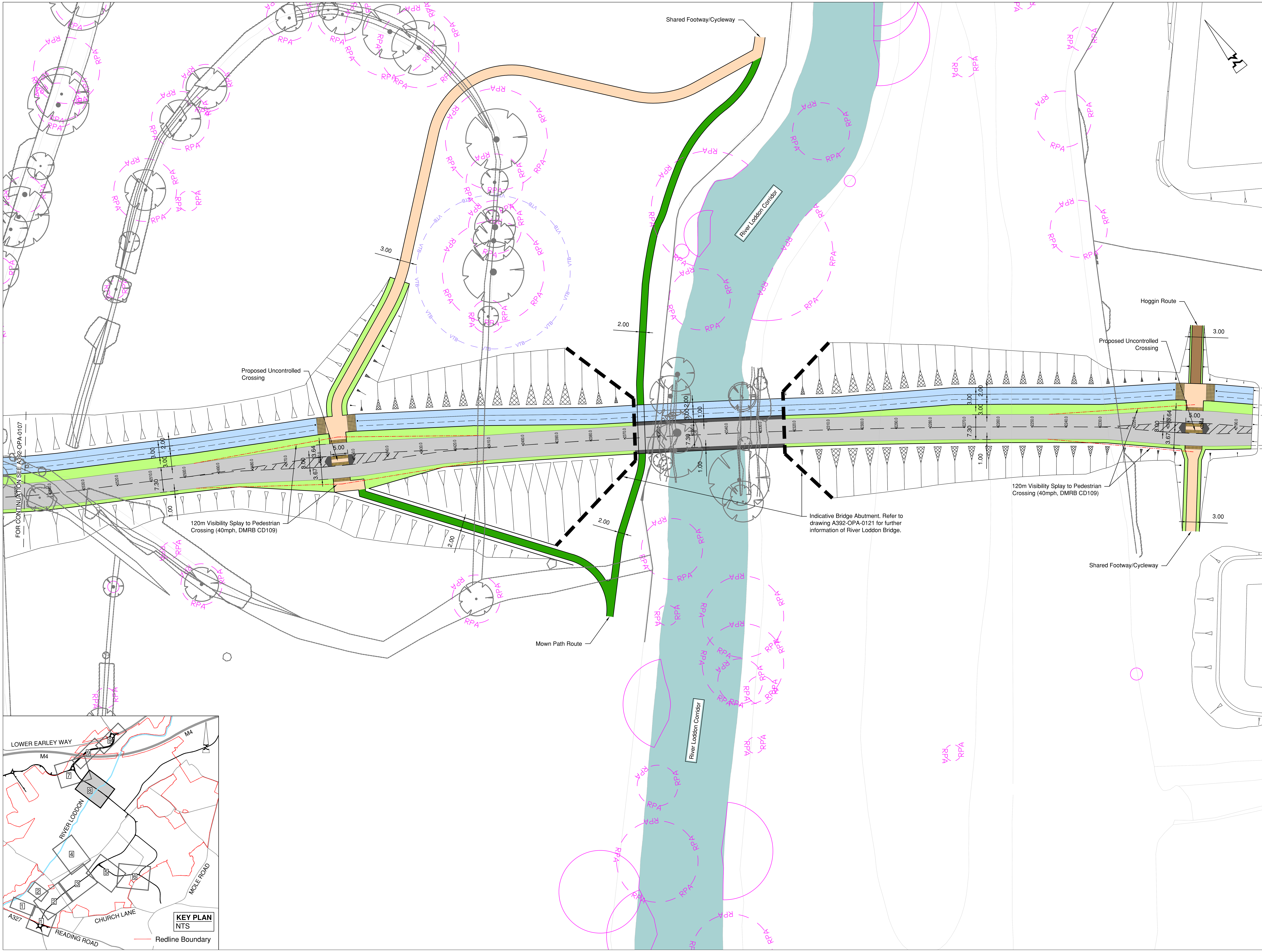
FOR CONTINUATION SEE A392-OPA-0108

M4 (WESTBOUND) TO J11 READING

[redacted]

Existing Ditch / Watercourse to be Culverted. New PCC Headwalls and Timber 3 Rail Fencing.





GENERAL NOTES:

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- Proposed Batter Slope 1in3
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- Proposed Culvert

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

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- 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.

0 5 10 15 20 25m
Scale 1:500

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Project
LODDON GARDEN VILLAGE

Title
GENERAL ARRANGEMENT
SHEET 8 OF 9

Status

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

Drawing No	Revision
A392-OPA-0108	A

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
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- 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
A	06.25	FIRST ISSUE	RG	CS

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Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

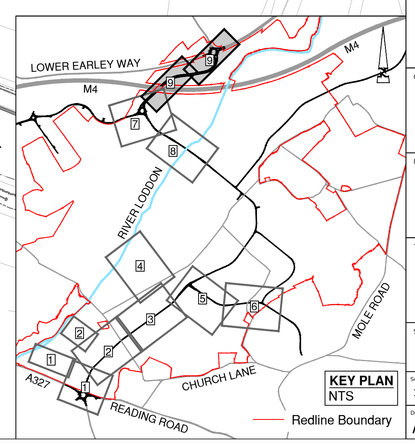
Title: GENERAL ARRANGEMENT SHEET 9 OF 9

Status:

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

Drawing No: A392-OPA-0109 — Revision: A

KEY PLAN NTS



Redline Boundary

M4 (WESTBOUND) TO J10 READING

M4 (EASTBOUND) TO J11 WARGRAVE

M4 (EASTBOUND) TO J10 WINNERSH

M4 (WESTBOUND) TO J11 READING

Indicative Bridge Abutment. Refer to drawing A392-OPA-0120 for further information of M4 Motorway Bridge.

120m Forward Visibility Splay (40mph, DMRB CD109)

120m Visibility Splay to Pedestrian Crossing (40mph, DMRB CD109)

FOR CONTINUATION SEE A392-OPA-0107

FOR CONTINUATION SEE INSET BELOW

FOR CONTINUATION SEE INSET ABOVE

LOWER EARLEY WAY (B3270) TO READING

LOWER EARLEY WAY (B3270) TO WINNERSH

MELOMYN WAY TO LOWER EARLEY

Proposed 55m ICD Roundabout

Attenuation Basin 8
Maximum Depth: 1.5m
Freeboard Level: 300mm
Side Slopes: 1in5
Storage Volume: 1900m³

Possible Future Alignment to Lower Early Way

Shared Footway/Cycleway

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 - e15
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 dn675).
20. Where required 1m deep root barrier of an approved type to be installed vertically along the back of kerbing 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

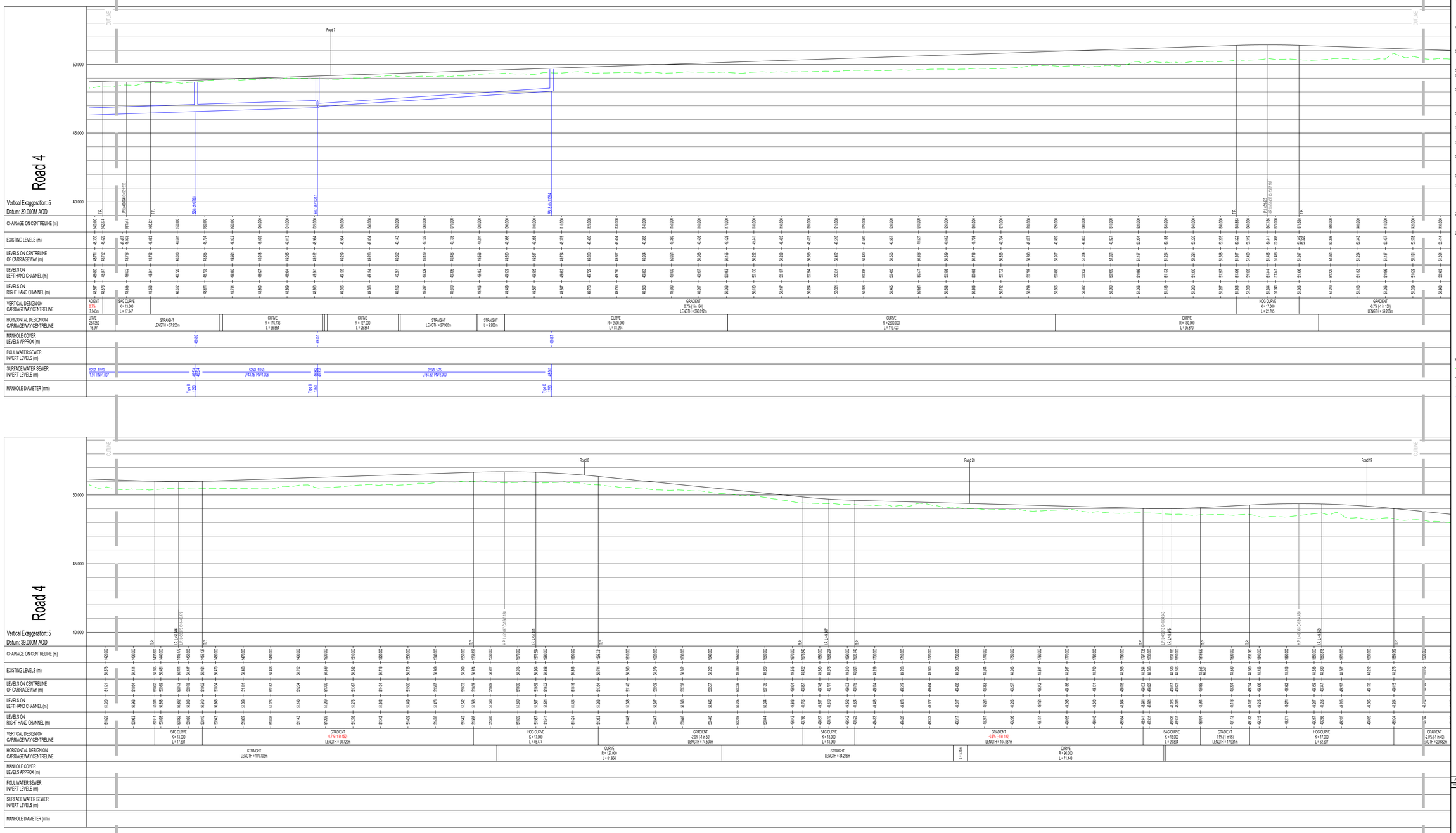
Manhole diagrams are indicative and do not show every incoming sewer/gully connection. Refer to Engineering Layouts for additional information.

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



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Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

Title: LONGITUDINAL SECTIONS SHEET 2 OF 6

Status:

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

Drawing No: A392-OPA-0131

Revision: 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.
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8. All drainage ironworks to comply with bs en124, and be stamped with bsi kitemark. covers to suit loading as below;
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   - -driveways and verges - c250
   - -footways and pedestrian areas - b125
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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.
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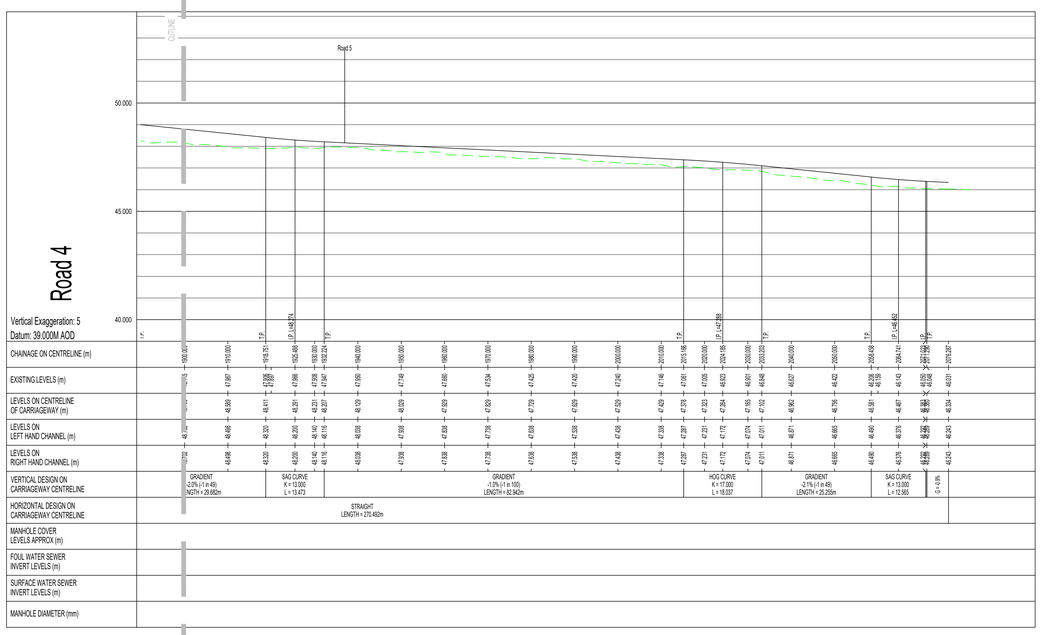
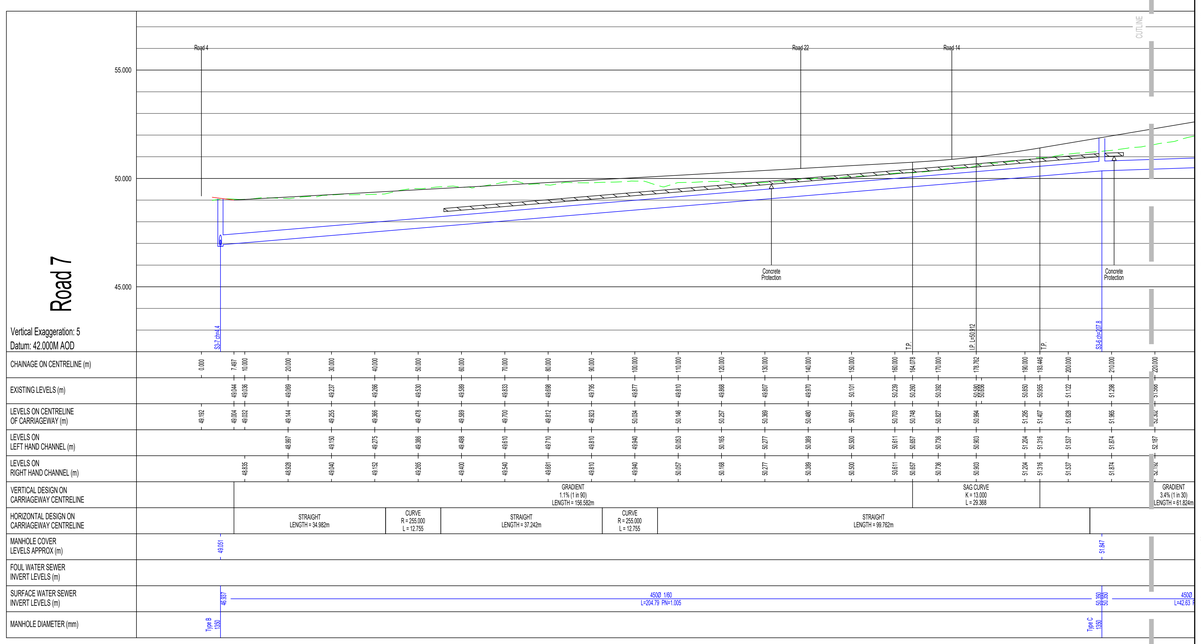
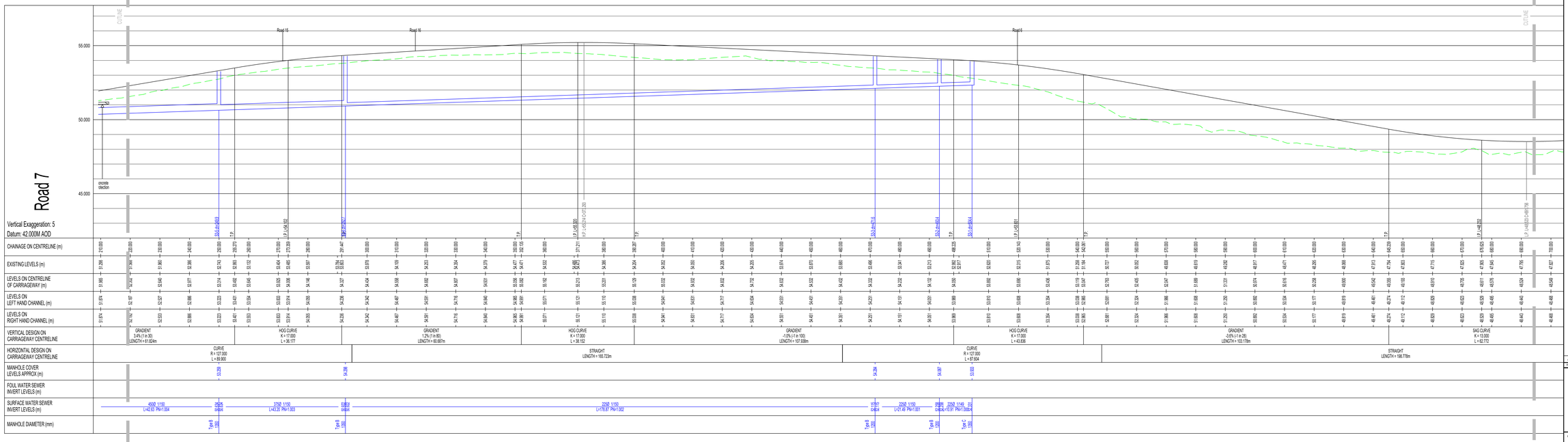
- PROPOSED CENTRELINE PROFILE
- PROPOSED FOUL SEWER
- PROPOSED STORM SEWER







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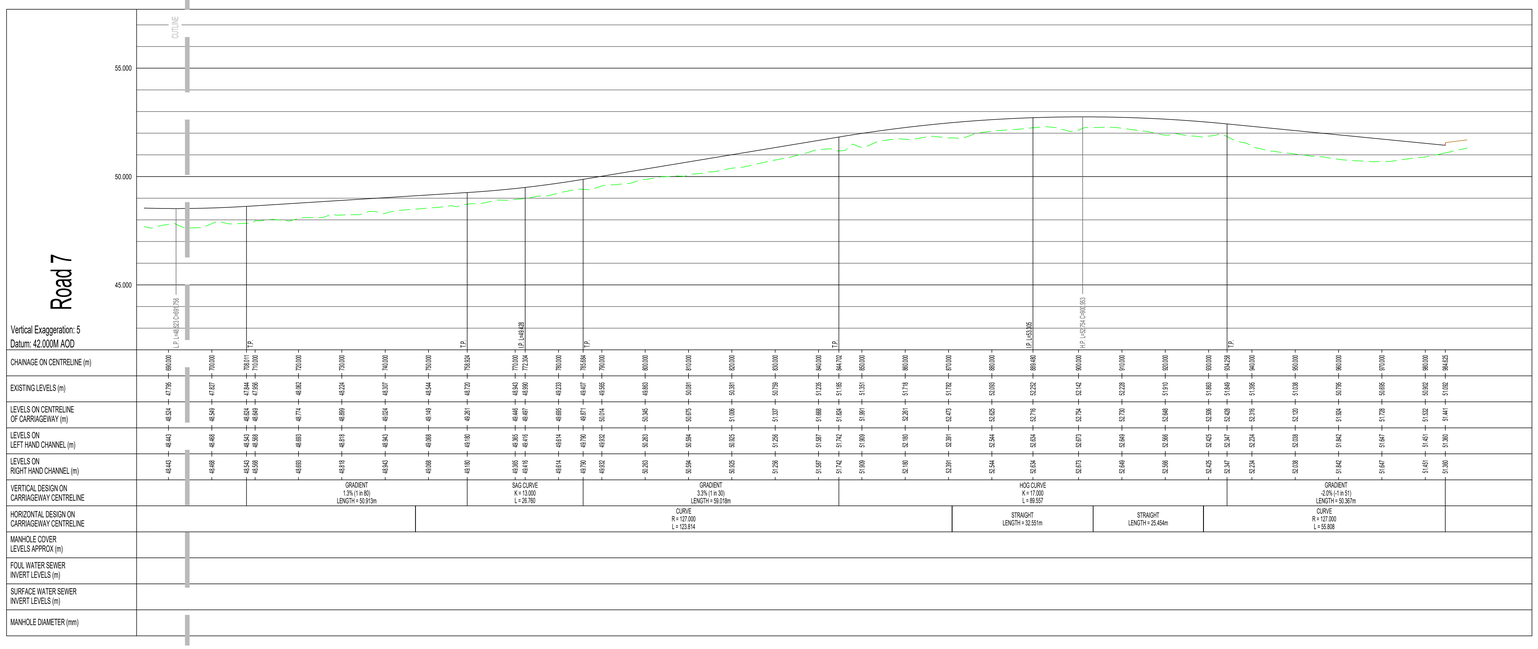
Project
LODDON GARDEN VILLAGE

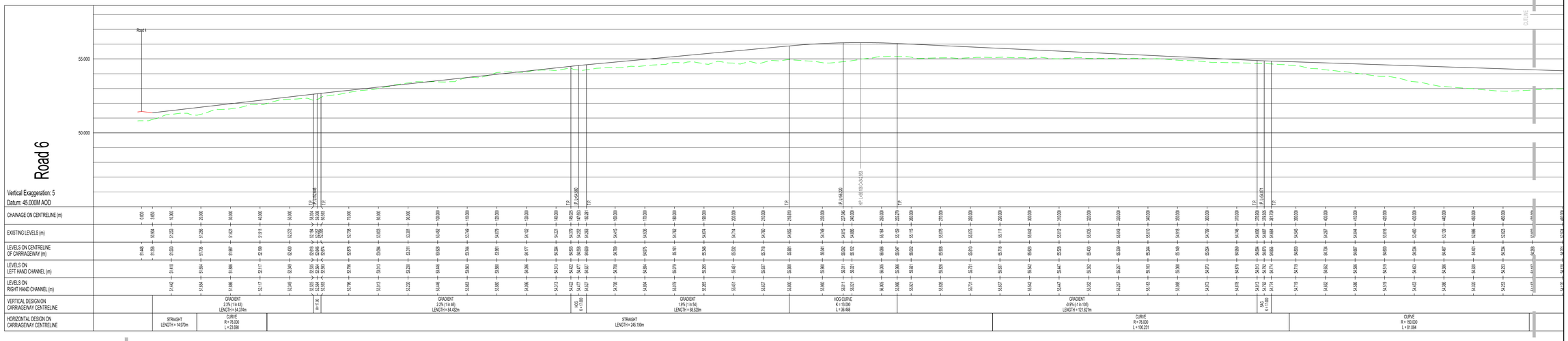
Title
LONGITUDINAL SECTIONS SHEET 3 OF 6

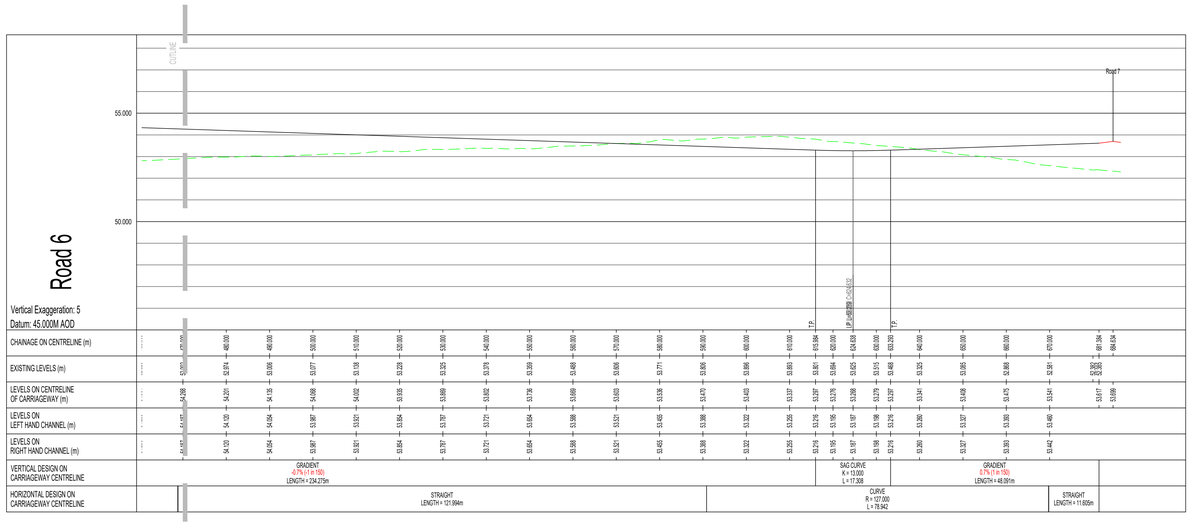
Status

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

Drawing No. A392-OPA-01302 | Revision A







Manhole Schedule/Longsection:

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   - -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, local 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 1i 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

Rev	Date	Description	Drawn	Checked
A	06.25	FIRST ISSUE	JJS	CS

Abley Letchford
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Client: UNIVERSITY OF READING

Project: LODDON GARDEN VILLAGE

Title: LONGITUDINAL SECTIONS SHEET 4 OF 6

Status:

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

Drawing No: A392-OPA-0133

Revision: 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.
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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

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KEY:
- EXISTING GROUND PROFILE
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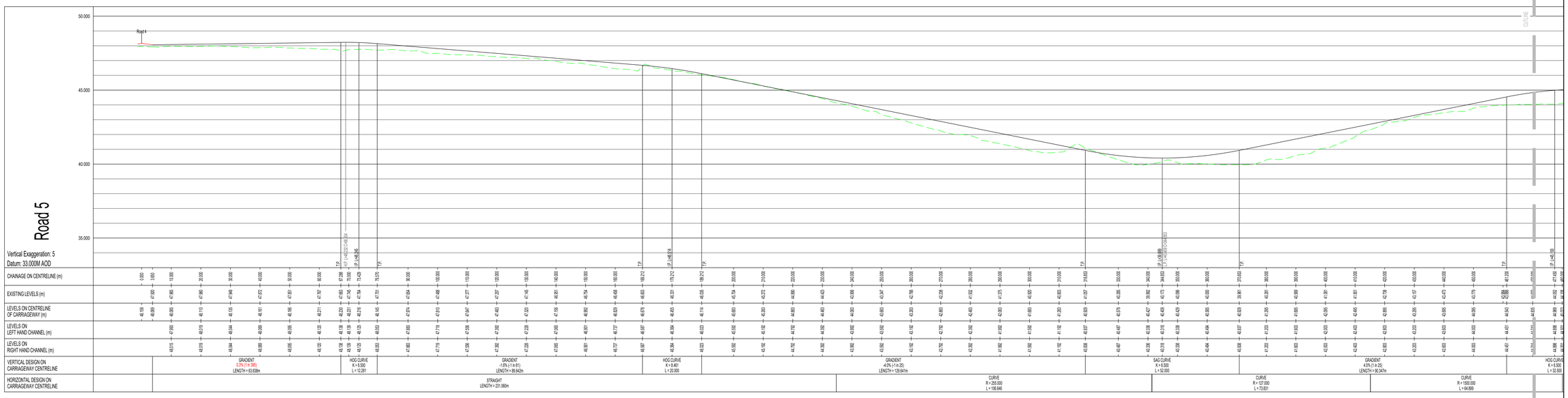
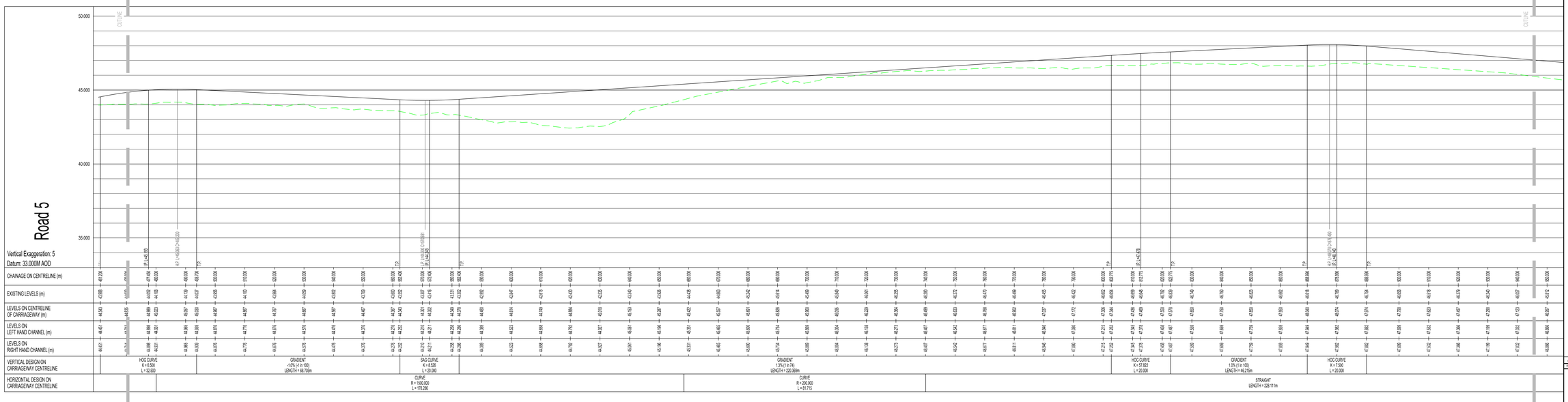
- PROPOSED FOUL SEWER
- PROPOSED STORM SEWER





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Scale 1:500

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 5 OF 6

Status:

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

Drawing No: A392-OPA-0134

Revision: A