



PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
FITZALAN LINK S278 WORKS
LITTLEHAMPTON, WEST SUSSEX

STAGE 1 - ROAD SAFETY AUDIT
ADDENDUM

AUGUST 2017



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
FITZALAN LINK S278 WORKS
LITTLEHAMPTON, WEST SUSSEX**

**STAGE 1 - ROAD SAFETY AUDIT
ADDENDUM**

AUGUST 2017

Project Code:	S/PHFITZ.1.1AD.6a
Prepared by:	Martyn Parr
Approved by:	John Reid
Issue Date:	August 2017
Status:	FINAL



**Persimmon Homes Thames Valley
North Littlehampton
Fitzalan Link S278 Works
Littlehampton, West Sussex
Stage 1 - Road Safety Audit Addendum**

List of Contents

Sections

1	Introduction	1
2	Items Raised at the Stage 1 Road Safety Audit.....	3
3	Audit Team Statement.....	5

Appendices

APPENDIX A: Site Location Plan
APPENDIX B: Reference Plans
APPENDIX C: Audit Brief

1 Introduction

- 1.1 A Stage 1 Road Safety Audit undertaken dated September 2011 related to the overall development highway improvements.
- 1.2 The Audit Team has been provided with a detailed Audit Brief explaining the reason for alterations to the original layout.
- 1.3 This Addendum report results from a Stage 1 Road Safety Audit carried out on the amended Fitzalan Link Road proposals following discussions with West Sussex County Council (WSCC), at the request of WSCC the Highways Authority Project Sponsor. The Road Safety Audit Addendum was carried out during July & August 2017.
- 1.4 The Road Safety Audit Team membership was as follows:

Martyn Parr	MSoRSA, RegRSA (IHE), MCIHT, HECoc Road Safety Manager – Mayer Brown Limited (Certificate of Competency in Road Safety Audit gained in February 2015)
John Reid	MSc, DipHTE, MCIHT, FSoRSA, MITAI, HECoc Technical Director (Safety) – Mayer Brown Limited (Certificate of Competency in Road Safety Audit gained in April 2012)
- 1.5 The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided by Mr Adrian Barnley, included as Appendix C.
- 1.1 A site visit was conducted by both Road Safety Audit Team Members on 10th July 2017 from 13:00 hrs onwards, during which the weather was fine and the existing road surface was dry. Traffic conditions on Worthing Road were moderate to high and free flowing, Highdown Road they were low and free flowing.
- 1.2 The terms of reference of the Road Safety Audit are as described in HD 19/15. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

- 1.3 The audit is concerned only with the new works and their interface with the surrounding highway network.
- 1.4 A comprehensive description of the proposed development and highways improvements has been provided by means of an Audit Brief (see Appendix C).
- 1.5 The works which form the subject of this Audit report are as shown on Mayer Brown drawings;

PHF-MB-S278-GF-DR-D-208-02 Rev P2 - Topographical Survey Drawing (1 of 2)

PHF-MB-S278-GF-DR-D-208-02 Rev P2 - Topographical Survey Drawing (2 of 2)

PHF-MB-S278-GF-DR-D-209-01 Rev P3 - Site Clearance Drawing (1 of 2)

PHF-MB-S278-GF-DR-D-209-02 Rev P3 - Site Clearance Drawing (2 of 2)

PHF-MB-S278-GF-DR-D-210-01 Rev P7 - General Arrangement Drawing (1 of 2)

PHF-MB-S278-GF-DR-D-210-02 Rev P7 - General Arrangement Drawing (2 of 2)

PHF-MB-S278-GF-DR-D-211-01 Rev P4 - Construction Treatments Drawing (1 of 2)

PHF-MB-S278-GF-DR-D-211-02 Rev P4 - Construction Treatments Drawing (2 of 2)

PHF-MB-S278-GF-DR-D-212-01 Rev P4 - Drainage Drawing (1 of 2)

PHF-MB-S278-GF-DR-D-212-02 Rev P4 - Drainage Drawing (2 of 2)

For ease of reference, reduced scale copies of **PHF-MB-S278-GF-DR-D-210-01 Rev P7** and **PHF-MB-S278-GF-DR-D-210-02 Rev P7** (listed above) are given as Appendix B to this report.

- 1.6 Whilst recommendations have been made within this report, there may be equally satisfactory alternatives. The Audit Team will be pleased to consider alternatives if required.

2 Items Raised at the Stage 1 Road Safety Audit

Matters Arising From This Audit

Departures from Standards

- 2.1 The Audit Team are advised that there are no departures from standards.

General

2.2 **Problem**

Location: General.

Summary: Proposed signage

It will be important that the new highway network is clearly signed throughout.

Recommendation

- i) Provide map-type signing on each approach to the new roundabout junction.
- ii) Ensure adequate forward visibility to signs, and ensure adequate clearance between sign face and carriageway.
- iii) Where appropriate ensure adequate clearance for pedestrians and cyclists beneath sign face.

2.3 **Problem**

Location: Proposed roundabout junction

Summary: Junction 'see through'

Details of chevron signing on the roundabout central island have not been submitted at this stage. It will be important that a "see through" effect is not created which could result in drivers overshooting the circulatory carriageway and central island.

Recommendation

Ensure "see through" is prevented by suitable provision and location of chevron signs and / or other features.

2.4 Problem

Location: Southbound approach to proposed roundabout

Summary: Approach speeds – Pedestrian & vehicle collisions

Details of anti-skid surfacing treatment have not been provided, providing anti-skid surface treatment would help prevent loss of control, side on or rear end collisions or collisions with pedestrians / cyclists using the toucan crossing who may enter the carriageway in front of a moving vehicle.

For southbound drivers, the roundabout junction is located at the end of a straight section of road that is subject to a 40-mph speed limit. Whilst the change in speed restriction is located some distance from the roundabout, there is concern that drivers will not identify the junction early enough and approach too fast to permit controlled braking, resulting in the risk of junction overshoots or tail-end collisions.

Recommendation

Provide anti-skid surface treatment in accordance with design standards on the southbound approach to the roundabout and both approaches to the toucan crossing.

2.5 Problem

Location: Fitzalan Link Road (please refer to reference point 2.5 in Appendix B)

Summary: Incorrect roundels provided on traffic island

The traffic bollards to be provided on the proposed traffic island will have plain face roundels, indicating that vehicles can pass either side of the island. This could result in vehicles passing the island on the offside resulting in a head on type collision with an oncoming vehicle.

Recommendation

Ensure 'keep left' roundels are provided on the proposed traffic bollards.

3 Audit Team Statement

3.0 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out as described in HD 19/15

ROAD SAFETY AUDIT TEAM LEADER

Martyn Parr – MSoRSA, RegRSA (IHE), MCIHT, HECOC
Road Safety Manager
Mayer Brown Limited
Lion House
Oriental Road
Woking
Surrey
GU22 8AR

Signed

Date 0

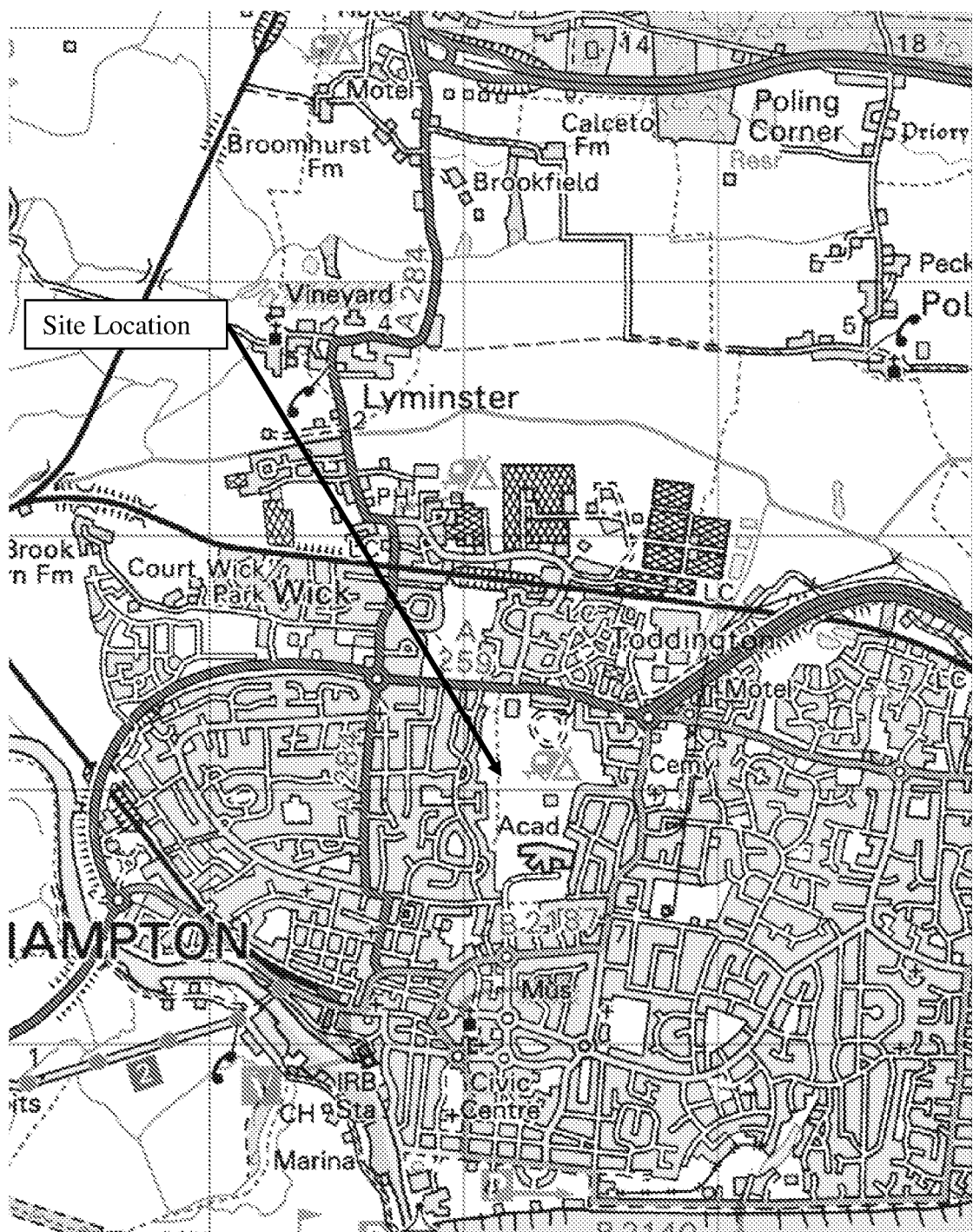
ROAD SAFETY AUDIT TEAM MEMBER

John Reid - MSc, DipHTE, MCIHT, FSoRSA, MITAI, HECOC
Technical Director (Safety)
Mayer Brown Limited
Lion House
Oriental Road
Woking
Surrey
GU22 8AR

Signed

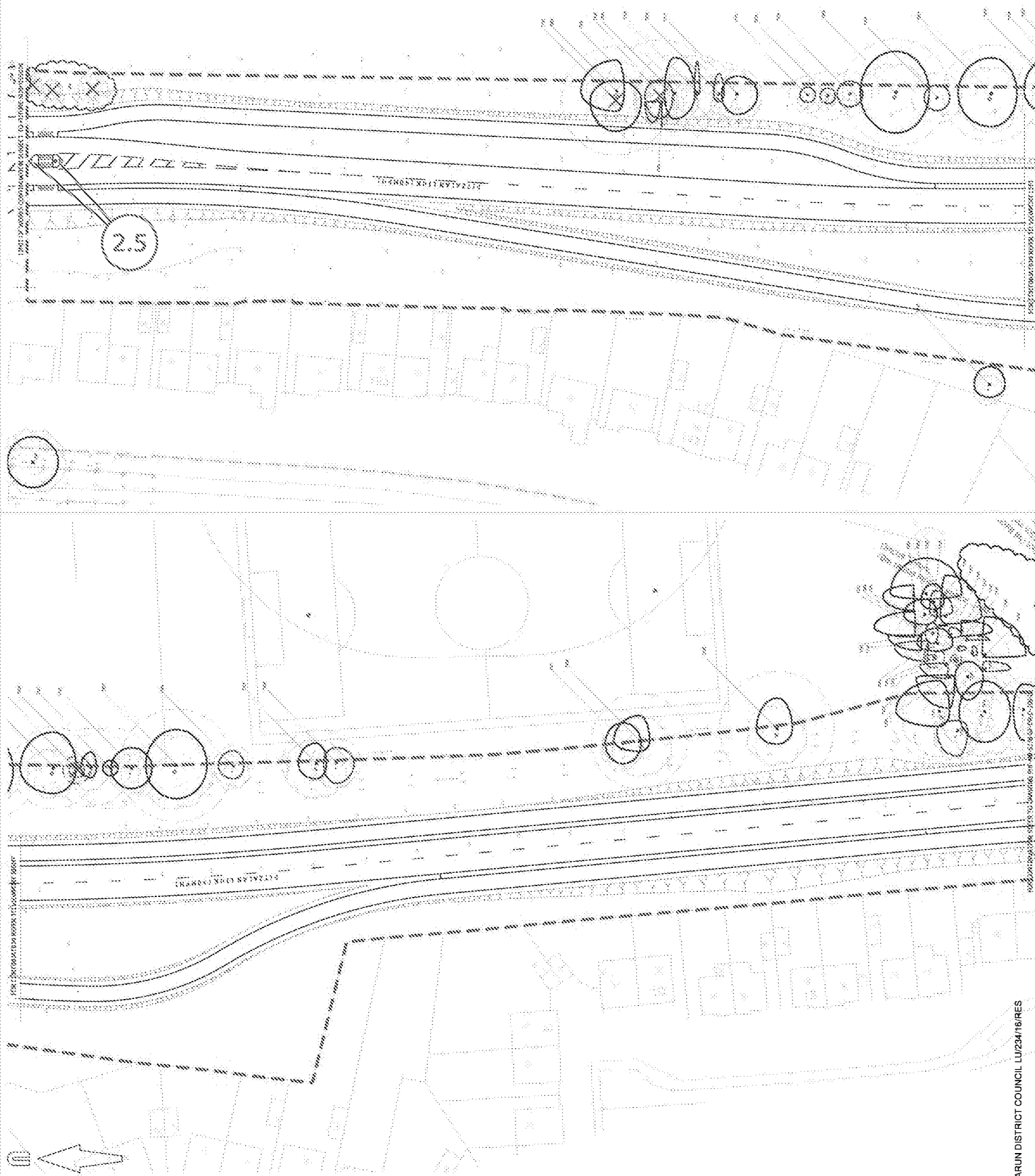
Date 07/08/17

APPENDIX A: Site Location Plan



APPENDIX B: Reference Plans





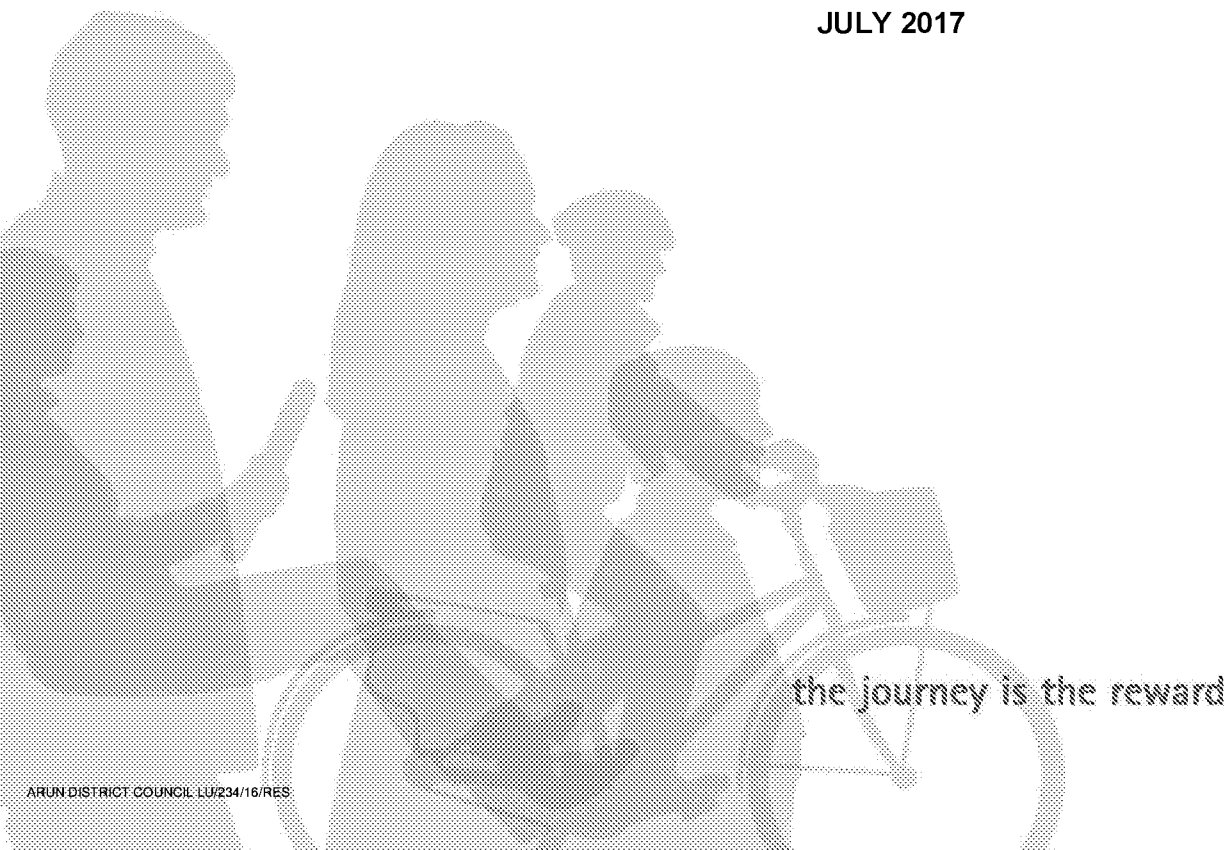
APPENDIX C: Audit Brief



PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
FITZALAN LINK S278 WORKS
LITTLEHAMPTON, WEST SUSSEX

STAGE 1 ROAD SAFETY AUDIT
ADDENDUM BRIEF

JULY 2017



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
FITZALAN LINK S278 WORKS
LITTLEHAMPTON, WEST SUSSEX**

**STAGE 1 ROAD SAFETY AUDIT
ADDENDUM BRIEF**

JULY 2017

Project Code:	A/PHFITZ.1
Prepared by:	OJN
Approved by:	AB
Issue Date:	July 2017
Status:	Final

**Persimmon Homes Thames Valley
North Littlehampton
Fitzalan Link S278 Works
Littlehampton, West Sussex
Stage 1 Road Safety Audit Addendum Brief**

List of Contents

Sections

Authorisation Sheet.....	1
Introduction	2
1 General Details	5
2 Scheme Description/Objective.....	7
3 Description of Locality.....	1
4 Personal Injury Collision Analysis	2
5 Departures and Relaxations from Standards.....	3
6 Previous Road Safety Audit Reports, Designer's Responses and Exception Reports	4
7 Strategic Decisions – Items Outside the Scope of this Road Safety Audit	5
8 List of Included Documents and Drawings.....	6
9 Checklist	7

Figures

Figure 1.1: Site Location Plan.....	2
Figure 1.2: Fitzalan Link Scheme Proposals.....	4
Figure 2.1: Public Rights of Way Plan.....	8
Figure 4.1: Crashmap Accident Data	2

Appendices

APPENDIX A: Drawings

APPENDIX B: Previous Road Safety Audit Designer's Responses

Authorisation Sheet

Project: North Littlehampton, Fitzalan Link S278 Works

Report Title: Stage 1 Road Safety Audit Addendum Brief

Prepared By:

Name: Oliver Nevett

Signed:



Organisation: Mayer Brown Ltd

Date: 07/07/2017

Introduction

1.0.1 Mayer Brown Limited has been appointed by Persimmon Homes Thames Valley in respect of the design of the Southern Bypass works associated with Planning Application Ref LU/63/11.

1.0.2 Application LU/63/11 includes the following:

Outline Application for the construction of the 'Fitzalan Link Road' between the A259 Worthing Road & the East Street/Fitzalan Road Roundabout.

1.0.3 Figure 1.1 below shows the site in relation to the local network

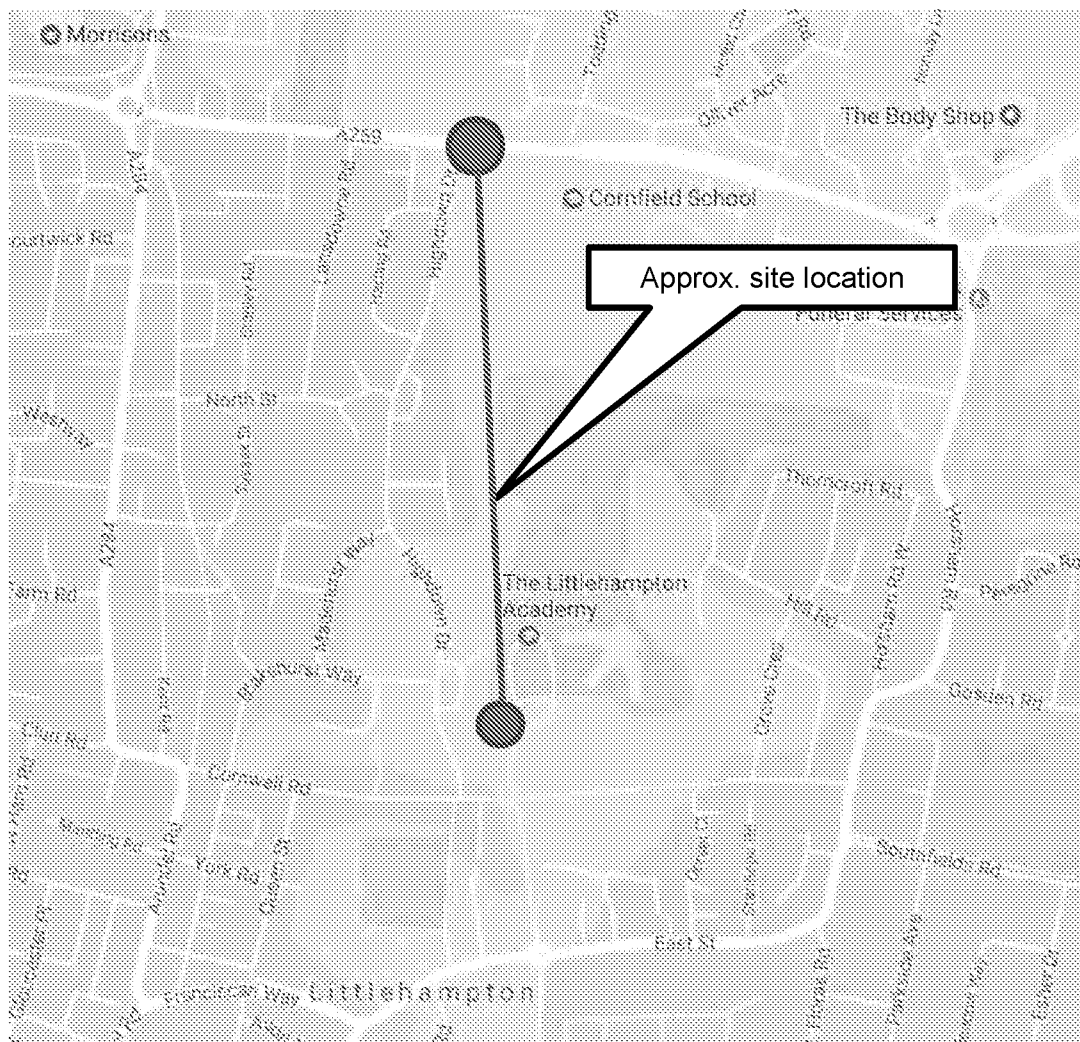


Figure 1.1: Site Location Plan

1.0.4 This Report follows a Stage 1 Road Safety Audit undertaken dated September 2011 undertaken on the overall development highway improvements. The Designer's Response to the Road Safety Audit is included at **Appendix B**.

1.0.5 This Stage 1 Road Safety Audit Addendum brief relates specifically to the below listed alterations to the original Road Safety Audited Scheme and associated Designer's Responses (Oct 2011 and Nov 2016).

1.0.6 The following amendments to the scheme have been agreed in principle with WSCC:

Fitzalan Link

- ✦ Speed limit increased over the northern section of Fitzalan Link from 30mph to 40mph between the northern limit of the scheme and a point 120m north of a new signalised Toucan Crossing;
- ✦ Link Road narrowed from 7.3m to 6.75m in width to encourage slower speeds;
- ✦ General Roundabout geometry amendments to tie-in with as-constructed Littlehampton Academy access arrangements;
- ✦ Bus stop added on the northbound carriageway north of Littlehampton Academy Roundabout;
- ✦ Signalised Toucan Crossing added north of Academy Roundabout;
- ✦ Infiltration basin and noise barrier shown;
- ✦ Uncontrolled pedestrian crossing point between Toucan crossing and Highdown Drive junction removed.

1.0.7 As described above, the general layout of the road network has been subjected to a Stage 1 Road Safety Audit. This Road Safety Audit history is further elaborated in Section 6 of this report.

1.0.8 **Figure 1.2** provides an overview of the scheme proposals.

1.0.9 The Stage 1 Road Safety Audit Addendum Report shall be undertaken in accordance with HD19/15 and provided direct to **Adrian Barnley** at **Mayer Brown Limited**.

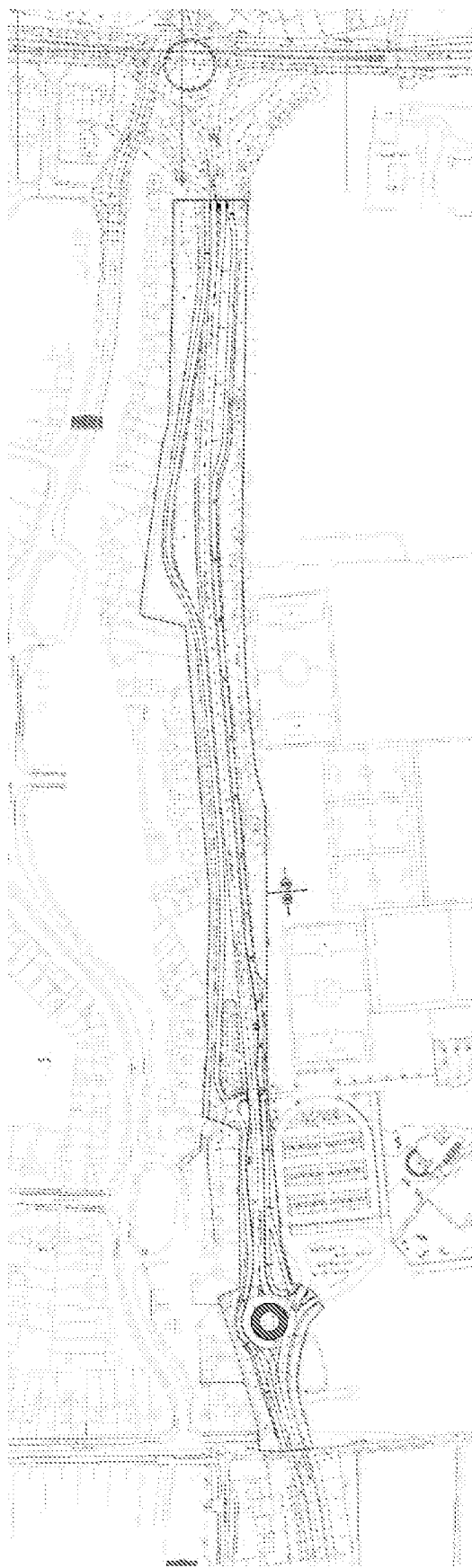


Figure 1.2: Fitzalan Link Scheme Proposals

1 General Details

1.1 Highway Improvement Scheme Name and Road Number

Fitzalan Link

1.2 Type of Scheme

New road and junction scheme

1.3 Road Safety Audit Stage (tick as appropriate)

1	2	1&2	3	Interim	4 (12 months)	4 (36 months)
✓						

1.4 Highway Authority

West Sussex County Council
 Ground Floor Northleigh
 County Hall
 Chichester
 PO19 1RH

1.5 Design Organisation Details

Mayer Brown Ltd
 Lion House
 Oriental Road
 Woking
 Surrey

1.6 Police Contact Details

(Required for Stage 3 only)
 N/A

1.7 Maintaining Agent (where applicable)

N/A

1.8 Road Safety Audit Team will comprise a minimum of two of the following auditors

Ken Fry

Qualifications ---

- I Eng FIHE, RegRSA (IHE),
- Highways England Certificate of Competency

Company Name ---

Mayer Brown Road Safety Team

John Reid

Qualifications -

- Fellow of the Society of Road Safety Auditors
- Member of the Institute of Traffic Accident Investigators
- Highways England Certificate of Competency

Company Name --

Mayer Brown Road Safety Team

Martyn Parr

Qualifications --

- MCIHT Member of the Chartered Institution of Highways and Transportation
- MSoRSA Member of the Society of Road Safety Auditors
- RoSPA Road Safety Engineering Accreditation
- HECOC Highways England Certificate of Competence
- RegRSA (IHE) Registered Road Safety Auditor

1.8.1 The Audit Team are requested to invite the following to the Audit:

N/A

1.8.2 Any changes in the Audit Team personnel shall be referred to the Designer for approval in advance of undertaking the Audit.

1.9 Terms of Reference

1.9.1 This Safety Audit is to be undertaken fully in accordance with the DMRB Standard HD 19/15, as well as the contents of this Road Safety Audit Addendum Brief and provided direct to the Designer. Contact details as follows:

Adrian Barnley

Director

Mayer Brown Limited

Lion House

Oriental Road

Woking

Surrey

GU22 8AR



2 Scheme Description/Objective

2.1 *General*

- 2.1.1 The works are required to accommodate North Littlehampton Residential Development. The works are shown on the drawings included at **Appendix A**.

2.2 *Design Standards Applied to the Scheme Design*

- 2.2.1 The North Littlehampton Phase 2 Section 38/278 proposals have been designed with reference to the Design Manual for Roads and Bridges (DMRB), and any relevant Overseeing Organisation Interim Advice Notes (IAN) and Manual for Streets.

2.3 *Design Speeds*

- 2.3.1 The Design Speeds for this scheme are 60kph (30mph) and 70kph (40mph).

2.4 *Speed Limit*

- 2.4.1 A speed limit of 40mph is proposed between the northern limit of the scheme and a point 120m north of a new signalised Toucan Crossing. South of this speed limit change the speed limit is 30mph to match the southern section of the existing link road previously constructed.

2.5 *Existing Traffic Flows/Queues*

- 2.5.1 The Fitzalan Link will be a new road.

2.6 *Forecast Traffic Flows*

- 2.6.1 Forecast traffic flows taken from WSCC's 2032 flows (do something core scenario, option with level crossing closed) provided in July 2015 are indicated Table 2.1.

2.7 *Non-Motorised User (NMU) Desire Lines*

- 2.7.1 A shared footway / cycleway will be provided on both sides of Fitzalan Link connecting to the existing shared footway / cycleway to the south, to the existing Public Rights of Way through Highdown drive and to the proposed A259 Worthing Road Roundabout.
- 2.7.2 The proposals affect two existing Public Rights of Way 3101 and 3654 which will need to be amended as part of the proposals. Figure 2.1 indicates the routes.

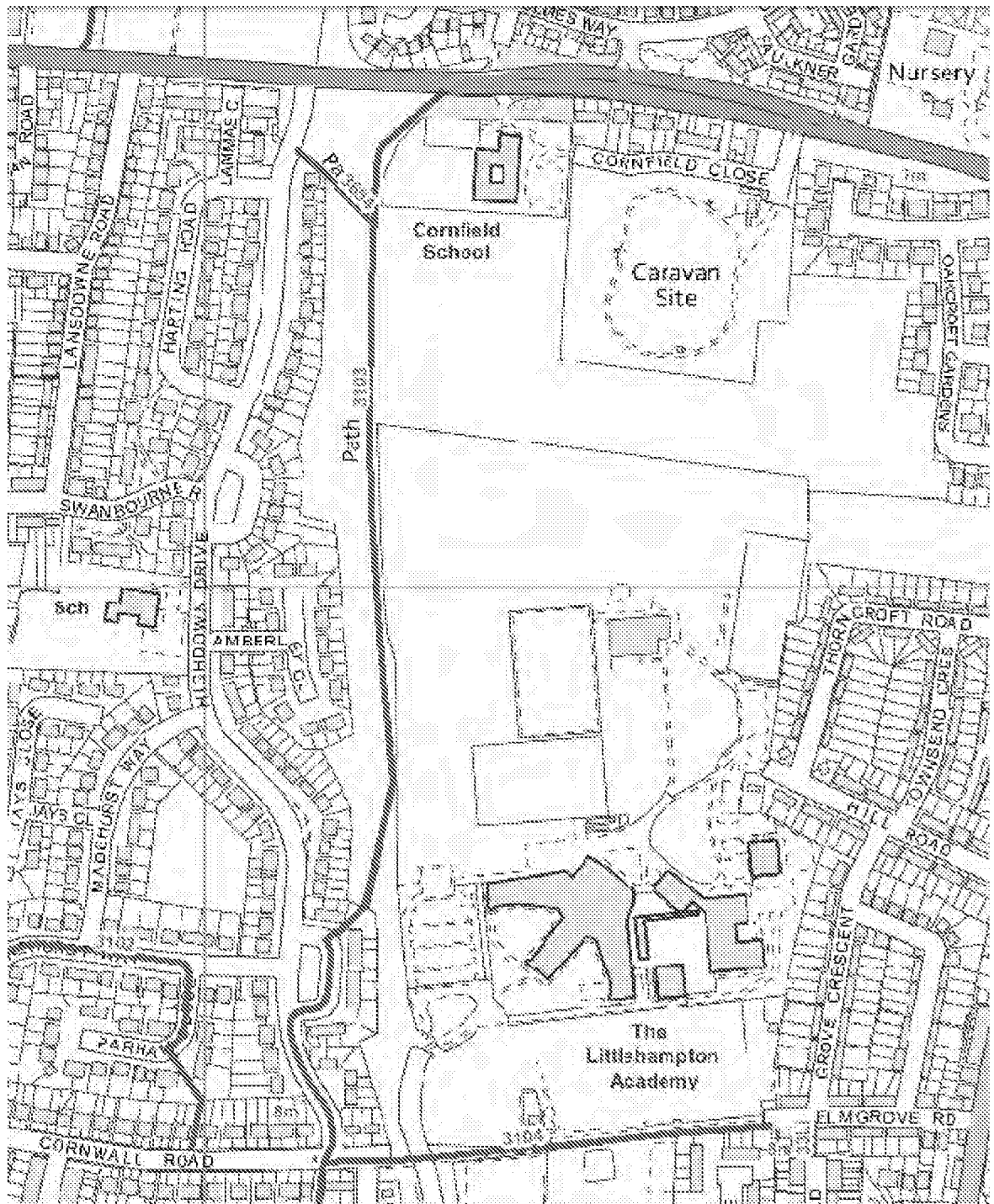


Figure 2.1: Public Rights of Way Plan



Fitzalan Link Road

2032 DS Option1		AM		PM		AADT 24 hr	
		Northbound	Southbound	Northbound	Southbound	Northbound	Southbound
User Class							
UC1	Car commute	139.4	217.2	114.1	194.5	782.4	1095.1
UC2	Car business	17.3	13.1	42.5	55.9	337.7	297.8
UC3	Car other	103.2	158.1	216.7	353.1	2415.2	2769.3
UC4	LGV	24.1	37.0	49.3	30.5	303.6	362.4
UC5	OGV1	0.8	5.5	0.1	0.3	23.7	22.5
UC6	OGV2	0.0	0.4	0.0	0.0	2.2	5.2
Fixed Flow	PSV	0.0	0.0	0.0	0.0	0.0	0.0
Car flows	UC1,2,3	259.9	388.4	373.2	603.5	3535.3	4162.1
Total Flows		284.8	431.2	422.7	634.3	3864.8	4552.2

Table 2.1 - Forecast traffic flows taken from WSCC's 2031 flows (do something core scenario, option with level crossing closed)

3 Description of Locality

3.1 General Description

- 3.1.1 The Fitzalan Link is required to link the North Littlehampton Development to Littlehampton Town Centre and the Littlehampton Academy.

3.2 Relevant Factors which may Affect Road Safety

- 3.2.1 The proposed speed limit of Fitzalan link has been increased from 30mph to 40mph, at the request of WSCC

3.3 Adjacent Land Uses

- 3.3.1 Below is a list of the sites neighbouring land uses:

Address/Location	Land Use
Southern Side	Continuation of the Fitzalan Link
Western Side	Existing Residential
Northern Side	Proposed A259 Roundabout Junction
East Side	Existing Littlehampton Academy

4 Personal Injury Collision Analysis

- 4.1 Accident data has been reviewed on Crashmap.co.uk which indicates that 3 slight accidents have been recorded within the vicinity of the Highdown Drive / A259 Junction within the last 3 recorded years indicted (2013, to 2016).
- 4.2 Accident data in the form of a Crashmap.co.uk screen print is provided below.

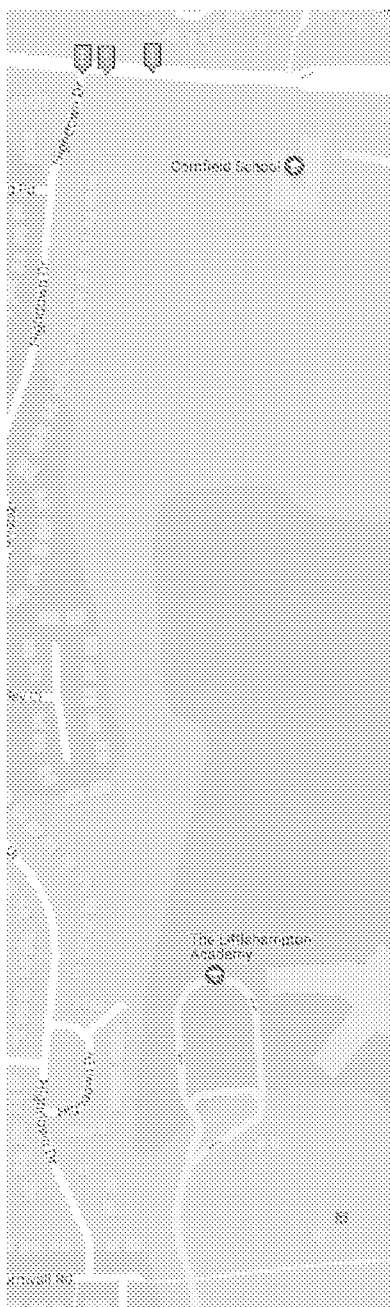


Figure 4.1: Crashmap Accident Data

5 Departures and Relaxations from Standards

- 5.1 The Littlehampton Academy Roundabout Junction has been checked against the DMRB Standard **TD 9/93 and TD 16/07 Geometric Design of Roundabouts** and has not highlighted any Departures or Relaxations from Standards.

6 Previous Road Safety Audit Reports, Designer's Responses and Exception Reports

- 6.1 This report follows a Stage 1 Road Safety Audit undertaken dated September 2011 related to the overall development highway improvements.
- 6.2 Two Designer's Responses were prepared dated Oct 2011 and Nov 2016 to the Road Safety Audit and are included at **Appendix B**.

7 Strategic Decisions – Items Outside the Scope of this Road Safety Audit

7.1 General

- 7.1.1 The principle of the roundabout design and alignment / geometry of Fitzalan link has been developed since granting of outline planning permission over many months liaison with WSCC

8 List of Included Documents and Drawings

8.1 Drawings (Provided at Appendix A)

<u>Drawing Number</u>	<u>Title</u>
PHF-MB-S278-GF-DR-D-208-02 Rev P2	Topographical Survey Drawing (1 of 2)
PHF-MB-S278-GF-DR-D-208-02 Rev P2	Topographical Survey Drawing (2 of 2)
PHF-MB-S278-GF-DR-D-209-01 Rev P3	Site Clearance Drawing (1 of 2)
PHF-MB-S278-GF-DR-D-209-02 Rev P3	Site Clearance Drawing (2 of 2)
PHF-MB-S278-GF-DR-D-210-01 Rev P7	General Arrangement Drawing (1 of 2)
PHF-MB-S278-GF-DR-D-210-02 Rev P7	General Arrangement Drawing (2 of 2)
PHF-MB-S278-GF-DR-D-211-01 Rev P4	Construction Treatments Drawing (1 of 2)
PHF-MB-S278-GF-DR-D-211-02 Rev P4	Construction Treatments Drawing (2 of 2)
PHF-MB-S278-GF-DR-D-212-01 Rev P4	Drainage Drawing (1 of 2)
PHF-MB-S278-GF-DR-D-212-02 Rev P4	Drainage Drawing (2 of 2)

8.2 Documents (Provided at Appendix B)

<u>Reference</u>	<u>Title</u>	<u>Date</u>
-	Stage 1 RSA Designers Response to RSA 1 dated Sept 2011	Oct 2011
	A Stage 1 Designer's Response Clarification	Nov 2016

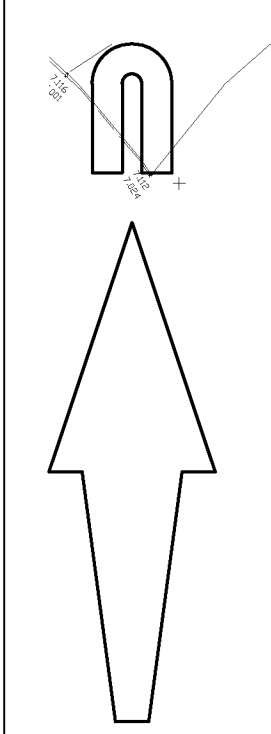
9 Checklist

9.1 Documents

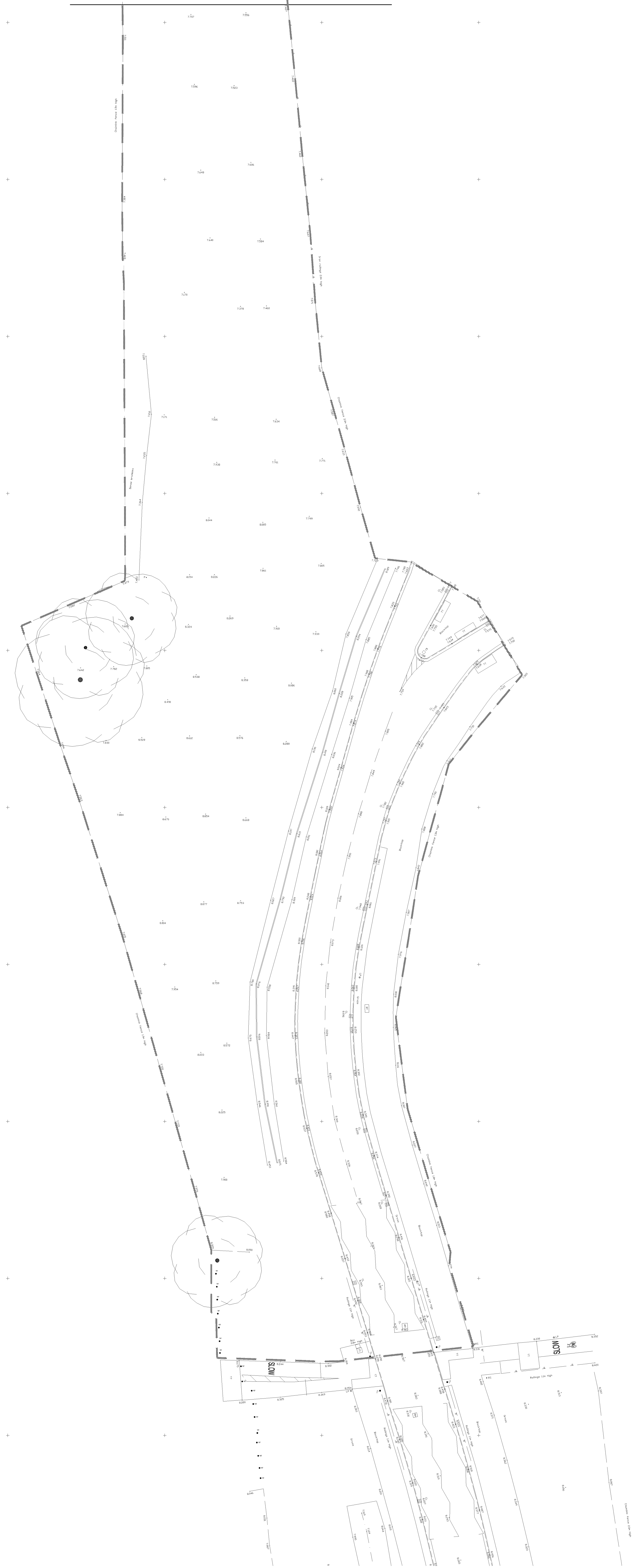
RSA Brief	✓	Site Location Plan	✓
Scale Layout Plans	✓	Construction/Typical Details	N/A
Previous RSA Reports	✓	Previous RSA Designer's Response Reports	✓
Road Safety Audit Exception Reports	✓	Departures and Relaxations from Standards	✓
Traffic Signal Staging Refer to drawing ??	N/A	Personal Injury Collision Data	✓
Personal Injury Collision Drawing	✓	Traffic Counts	N/A
Speed Surveys	N/A	NMU Desire Lines and Volumes	✓
NMU Context and Audit Report	✓	Items Outside the Scope of the RSA/Strategic Decisions	✓
Other Factors that may Impact on Road Safety	✓	Design Speeds/Speed Limits	✓
Design Standards Used	✓	Adjacent Land Uses	✓

Grey = Not Mandatory for Stage 1 RSA

APPENDIX A: Drawings

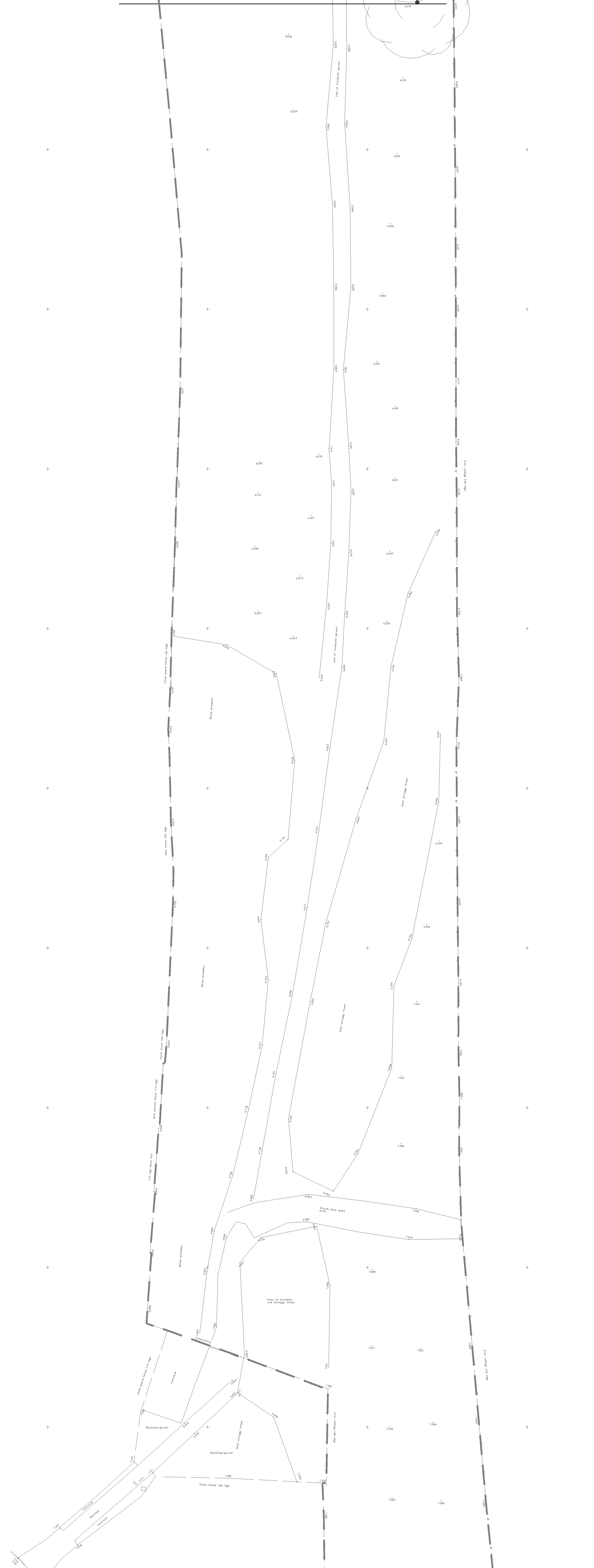


FOR CONTINUATION REFER TO VIEWPORT RIGHT



102720
102700
102680
102660
102640
102620
102600
102580
102560
102540

FOR CONTINUATION REFER TO DRAWING PHF-MB-S278-GF-DR-D-208-02



FOR CONTINUATION REFER TO VIEWPORT LEFT

102720
102700
102680
102660
102640
102620
102600
102580
102560
102540
102720
102700
102680
102660
102640
102620
102600
102580
102560
102540

© Mayer Brown Limited Copyright. The drawings, information and data included in this document ("The Information") is the property of Mayer Brown. The drawings and the information are made for the use of the authorized recipient and the recipient must not be used, copied or reproduced in whole or part for any purpose other than that which is stated on the drawings. Mayer Brown makes no representation, undertaking or warranty and accepts no responsibility for any third party who may use or rely upon the drawings or the information.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number 100003303.

NOTES

1. Topo survey has been taken from MB drawing IR.PH.LITTLE.2.21 Rev Received 23/01/15.

FOR APPROVAL
NOT FOR CONSTRUCTION

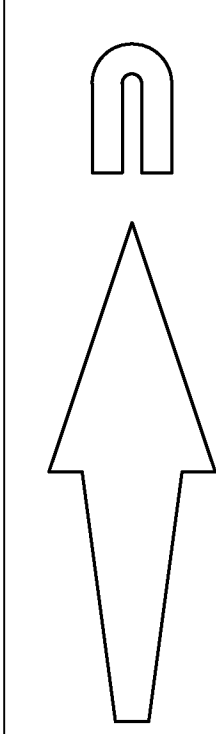
P2	Scheme amended following NSC/Reserve pattern comments dated 23/10/16. (199)	AB	05/11/2016
----	---	----	------------

rev	amendment	checked	date
-----	-----------	---------	------

mB
mayer brown

Mayer Brown Limited
Lime House, Orchard Road, Woking, Surrey GU24 4AB
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client	PERSIMMON HOMES
project	NORTH LITTLEHAMPTON PHASE 2 FITZALAN LINK S278 WORKS
scale	1:250 @ A0 drawn by PB checked by AB
date	MARCH 2016 cad file 208-01 P2 & 02 P2.DWG
title	PROPOSED S278 HIGHWAY WORKS TOPOGRAPHICAL SURVEY DRAWING (1 OF 2)
drawing number	PHF-MB-S278-GF-DR-D-208-01
rev.	P2



FOR CONTINUATION REFER TO VIEWPORT RIGHT



FOR CONTINUATION REFER TO DRAWING PHF-MB-S278-GF-DR-D-208-01

LIMIT OF WORKS CONTINUATION SUBJECT TO FUTURE SUBMISSION



FOR CONTINUATION REFER TO VIEWPORT LEFT

© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. The drawings and the information are subject to the terms of the information license and the information may not be used, copied or reproduced in whole or part for any purpose other than that which is set out in the information license. Mayer Brown makes no representation, warranty or guarantee as to the accuracy or completeness of the information and does not accept any responsibility for any third party who may use or rely upon the information in this document.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number 100003303.

NOTES

1. Topo survey has been taken from MB drawing IR.PH.LITTLE.2.21 Rev Received 23/01/15.

FOR APPROVAL
NOT FOR CONSTRUCTION

P2 Scheme amended following NSC/revise pattern comments dated 21/10/16. 1998

rev	amendment	checked	date

mb
mayer brown
Mayer Brown Limited
Lime House, Orchard Road, Woking, Surrey GU24 8AB
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

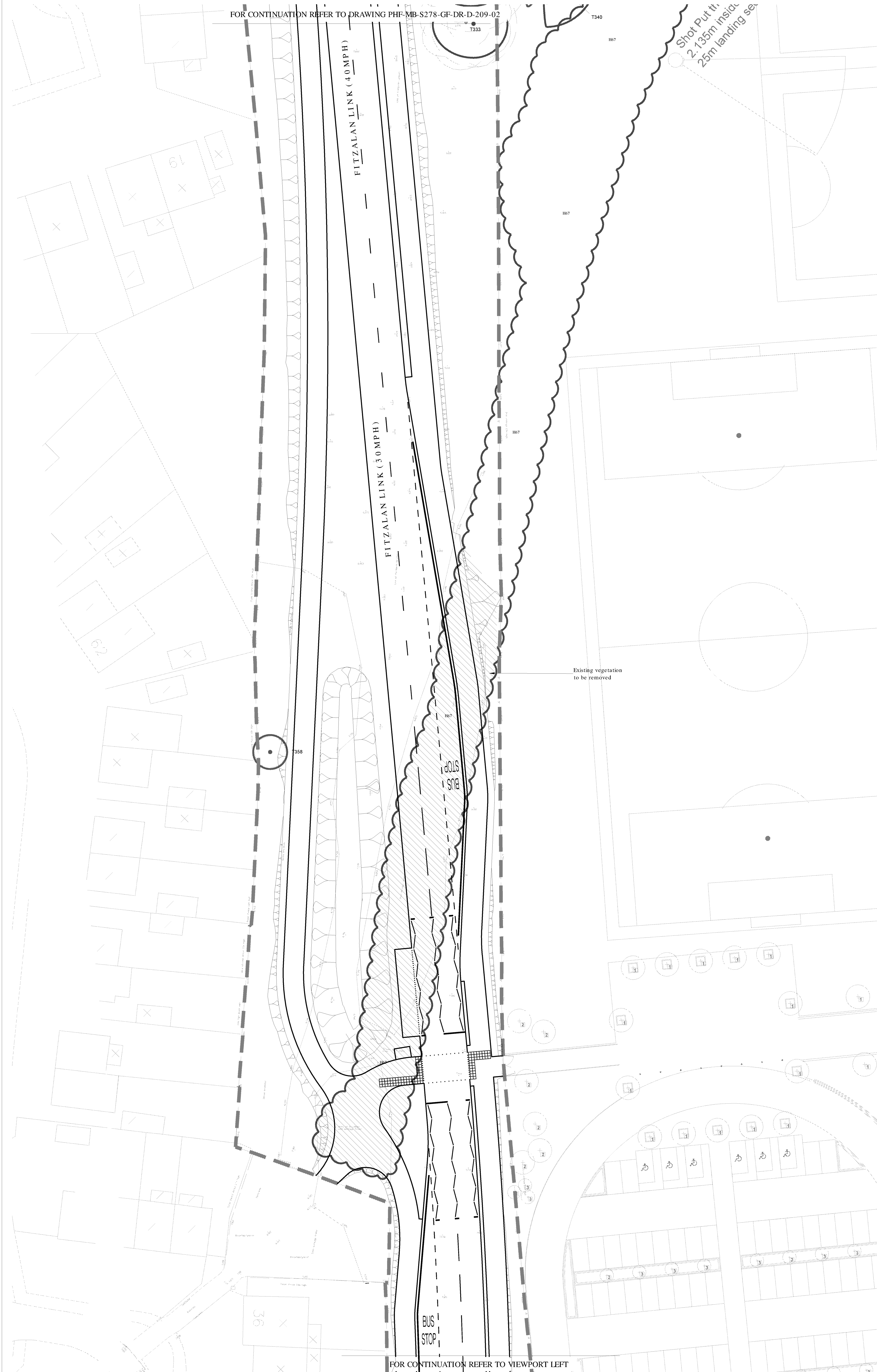
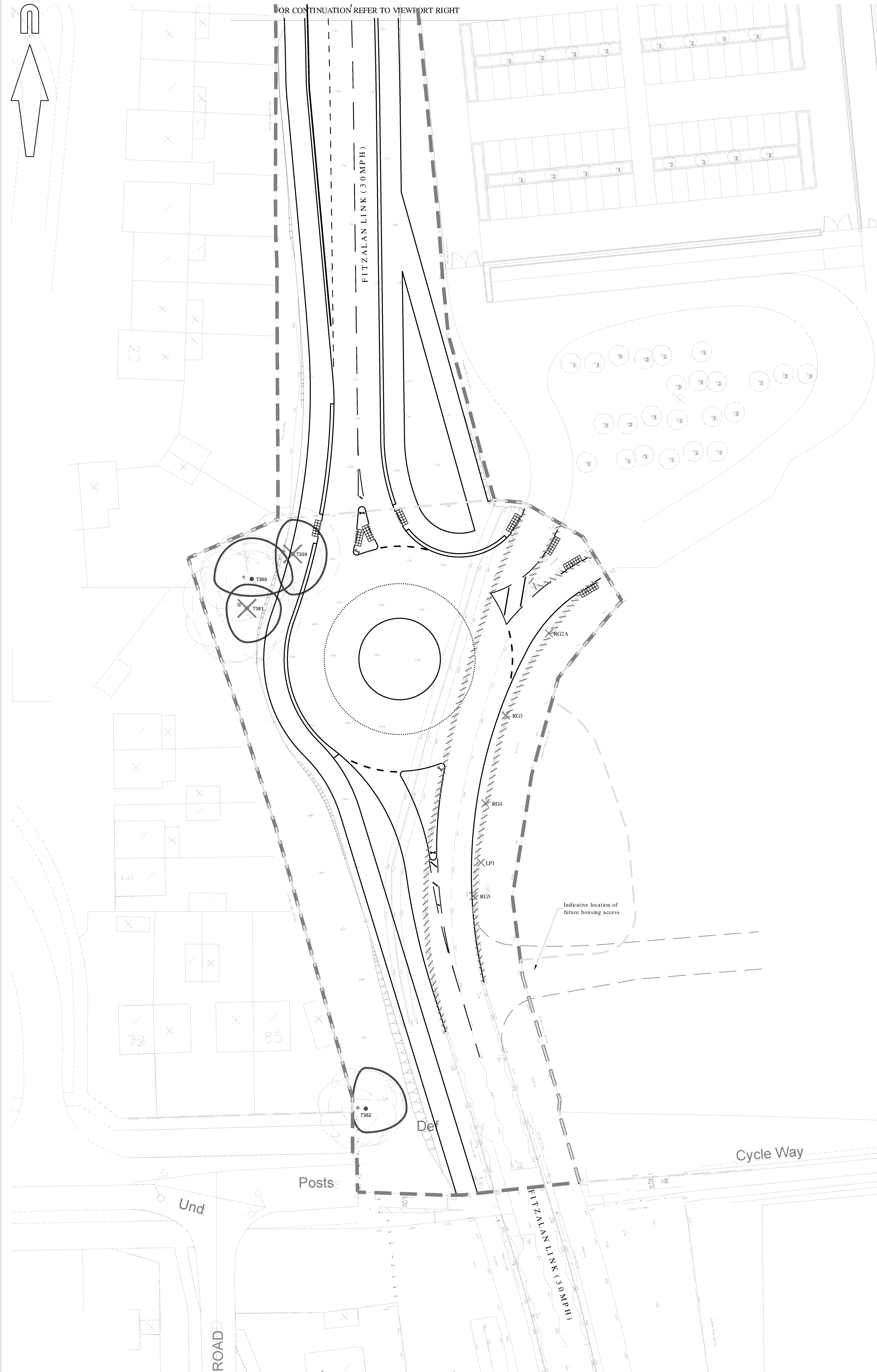
client
PERSIMMON HOMES

project
NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

scale	1:250 @ A0	drawn by	PB	checked by	AB
date	MARCH 2016	cad file	208-01 P2 & 02	P2.DWG	

title
PROPOSED S278 HIGHWAY WORKS
TOPOGRAPHICAL SURVEY DRAWING (2 OF 2)

drawing number	rev
PHF-MB-S278-GF-DR-D-208-02	P2



© HarperCollins Limited Copyright. The drawings, information and details in this document ("the information") is the property of HarperCollins Limited and is sold under the terms of the standard copyright and the disclaimer will be read, applied or interpreted in accordance with any and all provisions other than which it was supplied by HarperCollins. Where there are discrepancies, variations or errors and omissions in respectability to any field which may be found within this document the document is void.

A0 ORIGINAL

© Crown Copyright, all rights reserved. 2002. Licence number: 100002038

KEY

EXISTING KERB LINE

PROPOSED KERB/EDGE LINE

PROPOSED DROPPED KERB

EXISTING KERB TO BE REMOVED

EXISTING TIE TO BE REMOVED

EXISTING LIGHTING COLUMNS TO BE REMOVED

EXISTING GULLY TO BE REMOVED

CATEGORY A TREES AND SHRUBS (HIGH QUALITY AND VALUE)

CATEGORY B TREES AND SHRUBS (MODERATE QUALITY AND VALUE)

CATEGORY C TREES AND SHRUBS (LOW QUALITY AND VALUE)

CATEGORY U TREES AND SHRUBS (REQUIRE FELLING DUE TO CONDITION)

GROUPS OF TREES AND SHRUBS (QUALITY AND VALUE: CATEGORY AS COLOUR, ROOT PROTECTION AREA AS CANOPY SPREAD)

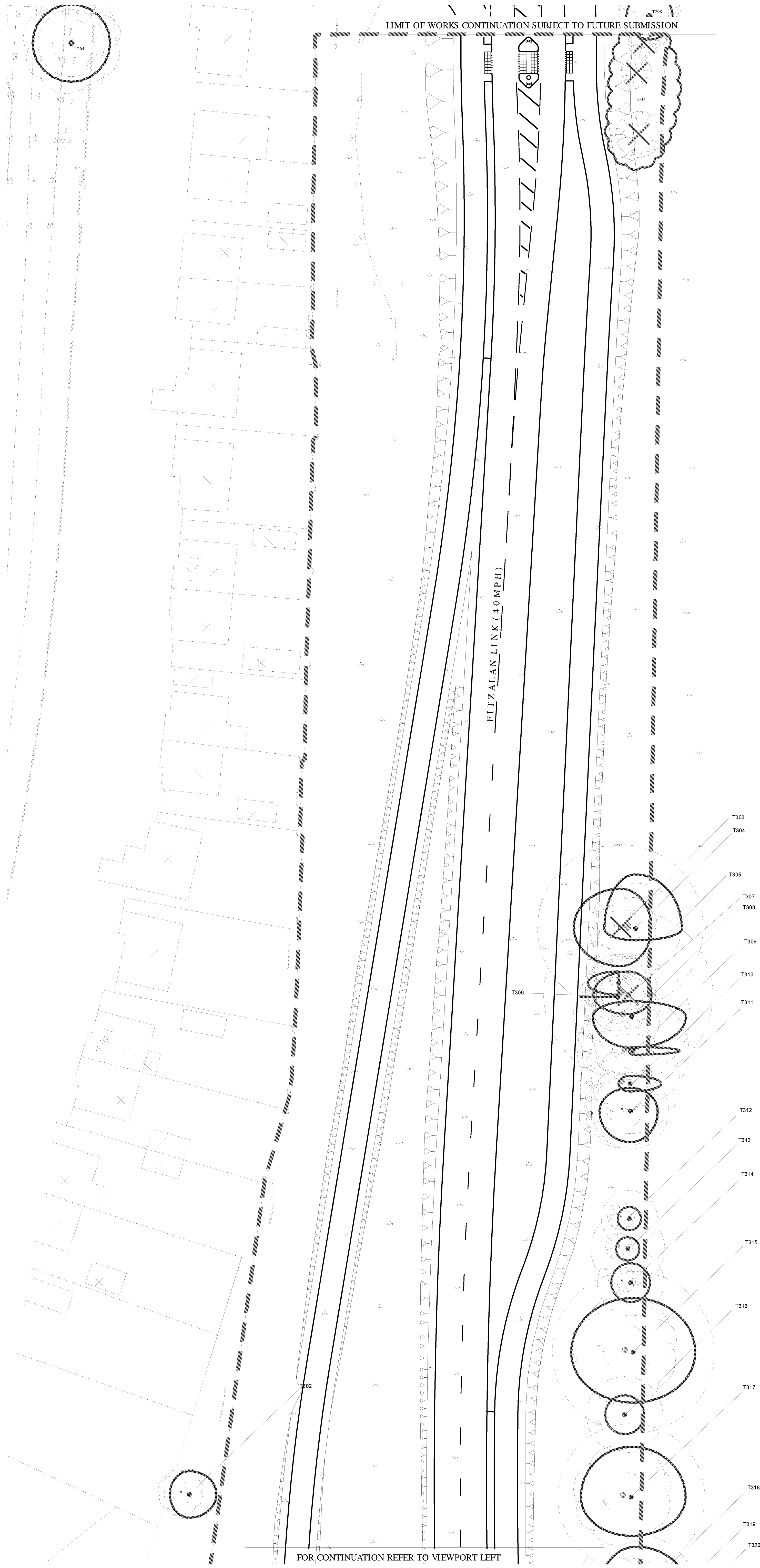
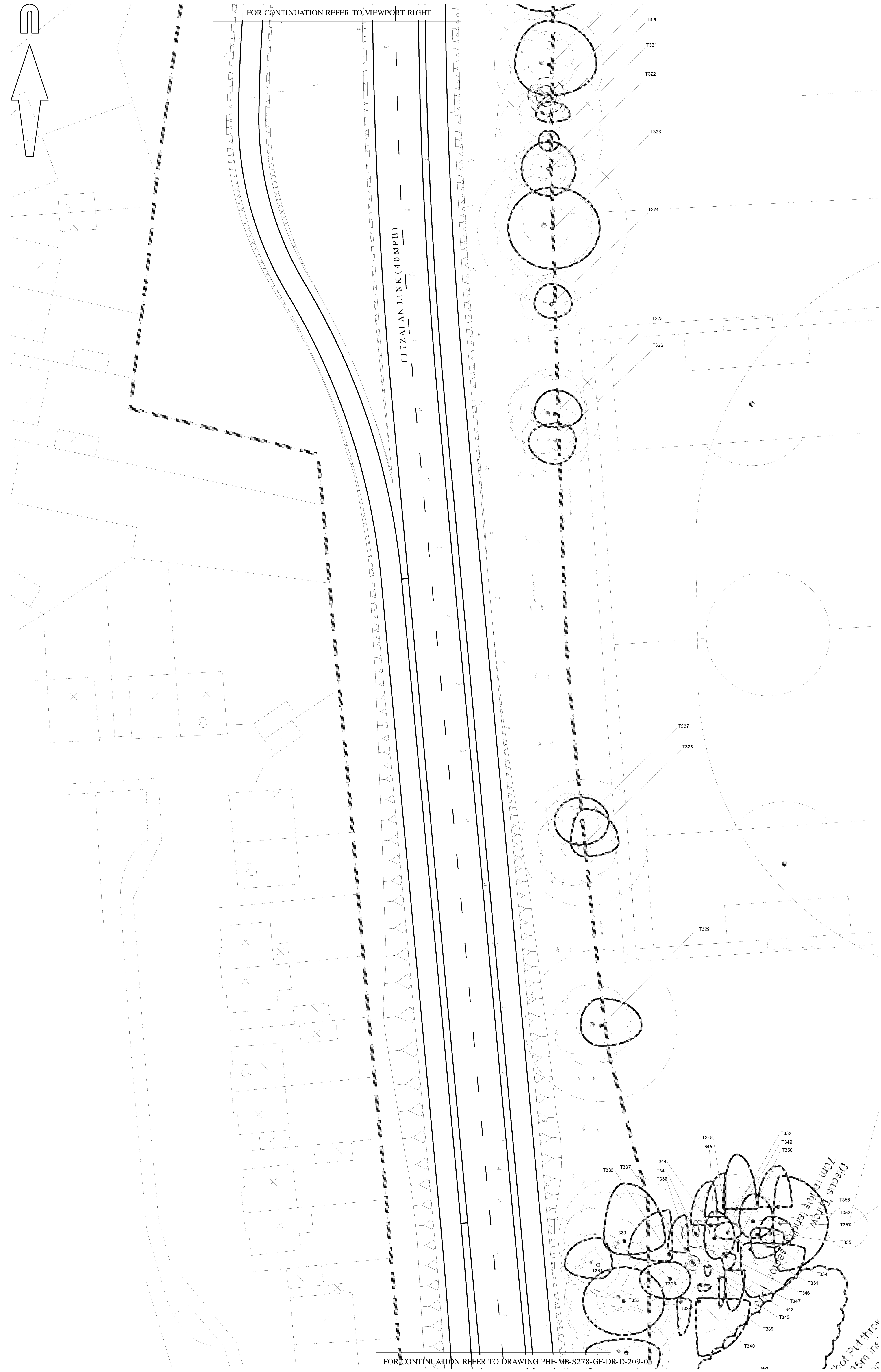
ROOT PROTECTION AREA (CATEGORIES A-C ONLY)

TREE LABELS

NOTES

1. School site layout has been taken from WSSC drawing 5077442_101 received November 2010.
2. Tree information has been taken from WNG drawing 5030047_101 - N:TCIP 01-16 Rev A (Tree Constraints Plan) received 26/06/15.
3. Tree survey has been taken from MB drawing 1R.PHLETTLE 2.21 Rev A received 23/01/15.

FOR APPROVAL				
NOT FOR CONSTRUCTION				
P3	Cartwayway reduced to 6.75m wide northbound bus only added accident crossing amended to a signalled intersection	AB	27/07/2017	
P2	Scheme amended following WSCC reserve matters comments dated 27/10/18. (PB)	AB	03/11/2016	
rev.	amendment	checked	date	
 Mayer Brown Limited One House Oriental Road Woking Surrey GU24 8AR Telephone 01483 750 508 Fax 01483 750 437 wslongfield1@mayerbrown.co.uk www.mayerbrown.co.uk				
client PERSIMMON HOMES				
project NORTH LITTLEHAMPTON PHASE 2 FITZALAN LINK S278 WORKS				
scale	1:250 @ A0	drawn by	PB	checked by AB
date	MARCH 2016	and file	MASTER - FITZ.DWG	
title				
PROPOSED S278 HIGHWAY WORKS SITE CLEARANCE DRAWING (1 OF 2)				
drawing number			rev.	
PHF-MB-S278-GF-DR-D-209-01			P3	



© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. The Information and the information contained therein are not to be used for any purpose other than that which it was supplied to Mayer Brown. Mayer Brown makes no representation, warranty or acceptance, undertake no duty and accept no responsibility for any third party who may use or rely upon the Information in this document.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number 10000340.

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- EXISTING KERB TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- EXISTING LIGHTING COLUMN TO BE REMOVED
- EXISTING GULLY TO BE REMOVED
- CATEGORY A TREES AND SHRUBS (HIGH QUALITY AND VALUE)
- CATEGORY B TREES AND SHRUBS (MODERATE QUALITY AND VALUE)
- CATEGORY C TREES AND SHRUBS (LOW QUALITY AND VALUE)
- CATEGORY U TREES AND SHRUBS (REQUIRE FELLING DUE TO CONDITION)
- GROUPS OF TREES AND SHRUBS (QUALITY AND VALUE CATEGORY AS COLOUR, ROOT PROTECTION AREA AS CANOPY SPREAD)
- ROOT PROTECTION AREA (CATEGORIES A-C ONLY)
- TREE LABELS

NOTES

- School site layout has been taken from WSCC drawing 507344_101 received November 2010.
- Tree information has been taken from WYG drawing A68072-LEJ-N-TCP-01-16 Rev A (Tree Constraints Plan) received 26/06/15.
- Topo survey has been taken from MB drawing IR.PH.LITTLE.2.21 Rev A received 23/01/15.

FOR APPROVAL
NOT FOR CONSTRUCTION

P1	Carriageway reduced to 6.75m wide, northbound bus layby added, uncontrolled crossing amended to a signalised roundabout, speed limit limit signs added. (OIS)	AB	27/07/2017
P2	Scheme amended following WSCC reviewer's comments dated 21/10/16. (19P)	AB	03/11/2016

rev.	amendment	checked	date

mb
mayer brown

Mayer Brown Limited
Leam House, Central Road, Woking, Surrey GU24 6AB
Telephone 01483 750 508 Fax 01483 740 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
PERSIMMON HOMES

project
NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

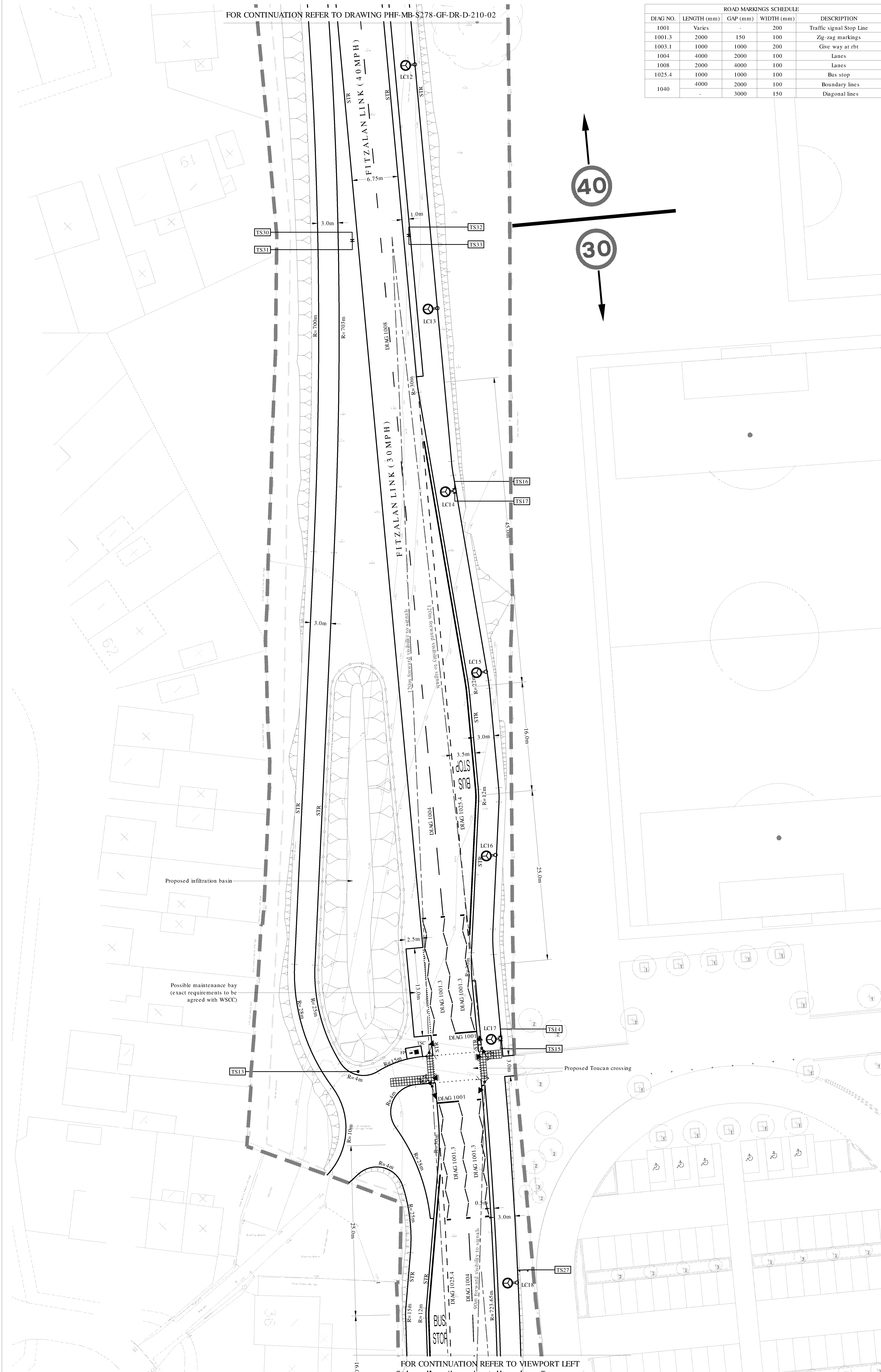
scale
1:250 @ A0 drawn by PB checked by AB

date
MARCH 2016 cad file MASTER - FITZ.DWG

title
PROPOSED S278 HIGHWAY WORKS
SITE CLEARANCE DRAWING (2 OF 2)

drawing number
PHF-MB-S278-GF-DR-D-209-02_P3

rev.



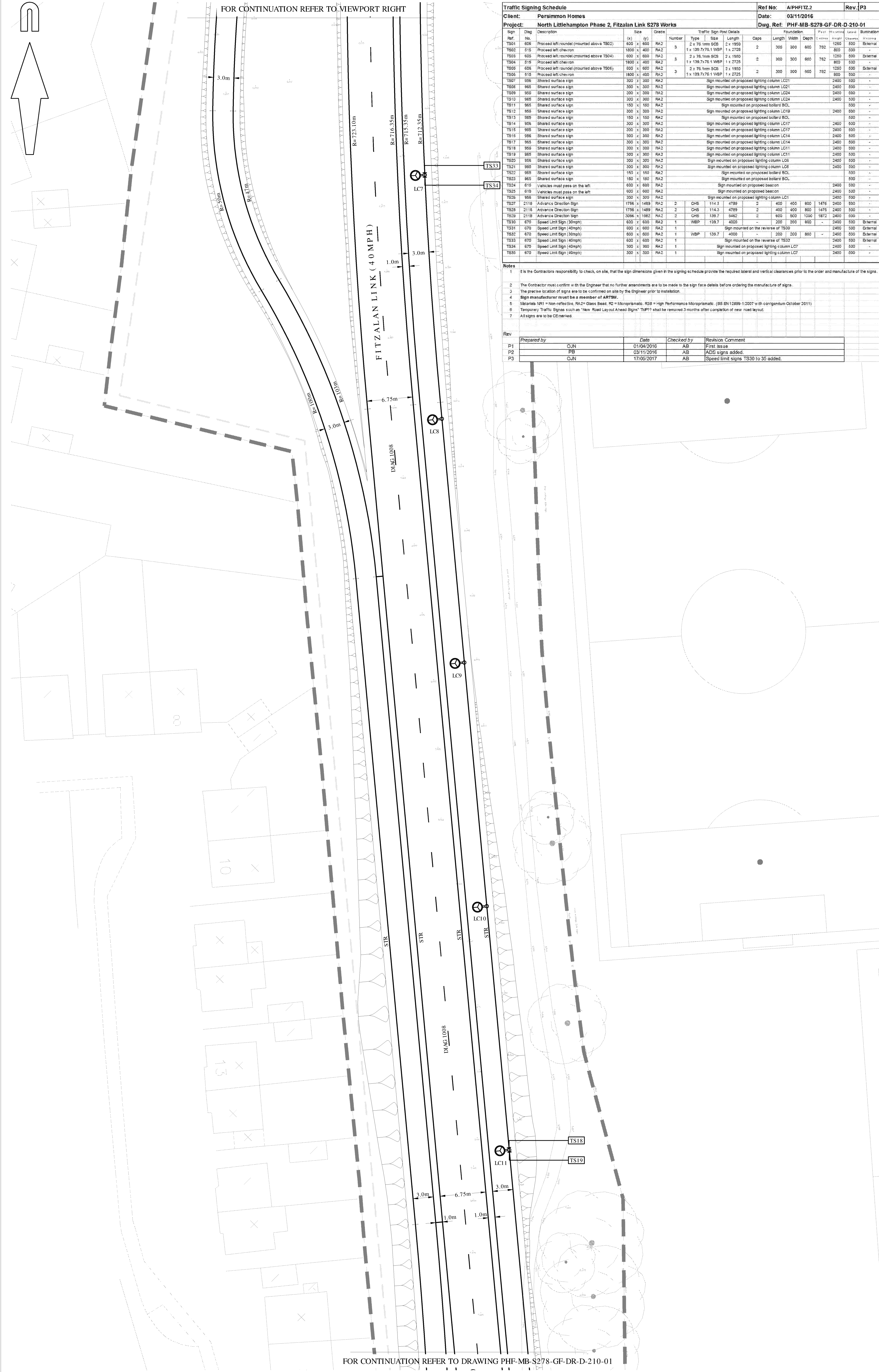
© Crown Copyright. All rights reserved. 2012. Licence number 100000385.	
A0 ORIGINAL	
KEY	
PROPOSED KERB EDGE LINE	
PROPOSED KERB/EDGE LINE	
PROPOSED DROPPED KERB	
DIAG 1234	PROPOSED ROAD MARKING
	PROPOSED BUFF COLOURED TACTILE PAAVING
	TMP SOLARITE KEEP LEFT REFLECTIVE BOLLARD (REFER TO DETAIL 558022-0000002001)
	TMP SOLARITE PLAIN FAECED REFLECTIVE BOLLARD (REFER TO DETAIL 558022-0000002001)
BOLD I	PROPOSED BOLLARD REFERENCE
	PROPOSED WSCC 5278/38/17 - TYPE 2 BOLLARD
	PROPOSED EARTHWORKS
	PROPOSED SIGN
TS001	PROPOSED SIGN REFERENCE
	LIGHTING COLUMN AND REFERENCE - REFER TO SEE DRAWINGS 597526/262 SL DR 001 A AND 002 A FOR DETAILS
LC1	
	PROPOSED 3.5m High Noise BARRIER (EXACT ALIGNMENT TO BE DETERMINED)
	PROPOSED KNEE HIGH TIMBER FENCE
	PROPOSED VISIBILITY SLAY
	PROPOSED RUNOVER AREA
	PROPOSED LIMIT OF WORKS
	ASSUMED LIMIT OF HIGHWAY TAKEN FROM WSCC RECORDS PLANS

- NOTES
1. School site layout has been taken from WSSC drawing 507344_101 received November 2010.
 2. Tree information has been taken from WYG drawing A089072-LEI-N-TCP-01-16 Rev A (Tree Constraints Plan) received 26/06/15.
 3. Topo survey has been taken from MB drawing IR.PHLITTLE.2.21 Rev A received 23/01/15.

FOR APPROVAL			
CITY OF CHICAGO COUNCIL			
P7	Western freeway and link to Public Right of Way updated and railroads amended following comments from WSCC dated 05/07/2017. (OIN)	AB	2/20/2017
P8	Carriageway reduced to 6.75m wide, northbound bus turnp added, uncontrolled crossing amended to a signalized intersection, speed limit limit signs added. (OIN)	AB	1/10/2017
P5	Fourpath ramp amended (OIN)	AB	30/11/2016
P4	Footways amended following comments from WSCC 23/11/2016. (OIN)	AB	25/11/2016
P3	Scheme amended following WSCC reserve matters comments dated 21/10/16. (PB)	AB	09/11/2016
P2	Nose barrier height and location updated.	AB	22/07/2016

rev.	amendment	checked	date
------	-----------	---------	------

 mayer brown			
Mayer Brown Limited Law House, Oriental Road, Woking, Surrey GU24 8AR Telephone: 01483 750 508 Fax: 01483 750 437 enquiryoffice@mayerbrown.co.uk www.mayerbrown.co.uk			
client			
PERSIMMON HOMES			
project			
NORTH LITTLEHAMPTON PHASE 2 FITZALAN LINK S278 WORKS			
scale	1:250 @ A0	drawn by	PB checked by AB
date	MARCH 2016	cad file	MASTER - FITZ DWG
note			
PROPOSED S278 HIGHWAY WORKS GENERAL ARRANGEMENT DRAWING (1 OF 2)			
drawing number			rev.
PBF-MB-S278-GF-DR-D-210-01			P7



© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. The Information and the information on which it is based are not to be used or reproduced in whole or in part for any purpose other than that which is specifically intended by Mayer Brown. Mayer Brown makes no representation, warranty or claim and accepts no responsibility for any third party who may rely on or be affected by the Information or the Information.

A0 ORIGINAL

KEY

EXISTING KERB LINE

PROPOSED KERB/EDGING LINE

PROPOSED DROPPED KERB

PROPOSED ROAD MARKING

PROPOSED BUFF COLOURED TACTILE PAVING

TMP SOLALITE KEEP LEFT REFLECTIVE BOLLARD (REFER TO DETAIL 558022-000002001)

TMP SOLALITE PLAIN FACED REFLECTIVE BOLLARD (REFER TO DETAIL 558022-000002001)

PROPOSED BOLLARD REFERENCE

PROPOSED WSCC S278/38/17 - TYPE 2 BOLLARD

PROPOSED EARTHWORKS

PROPOSED SIGN

PROPOSED SIGN REFERENCE

LIGHTING COLUMN AND REFERENCE - REFER TO SSE DRAWINGS SSE-976262-SL-DR-001-A AND 002-A FOR DETAILS

PROPOSED 3.5m HIGH NOISE BARRIER (EXACT ALIGNMENT TO BE DETERMINED)

PROPOSED VISIBILITY SPLAY

PROPOSED LIMIT OF WORKS

ASSUMED LIMIT OF HIGHWAY TAKEN FROM WSCC RECORD PLANS

NOTES

- School site layout has been taken from WSCC drawing 507344_101 received November 2010.
- Tree information has been taken from WYG drawing A880972-LEI-N-TCP-01-16 Rev A (Tree Constraints Plan) received 26/06/15.
- Topo survey has been taken from MB drawing JR.PHILLIPS.2.21 Rev A received 23/01/15.

FOR APPROVAL
NOT FOR CONSTRUCTION

rev.	amendment	checked	date
P7	Earthworks amended following comments from WSCC dated 05/07/2017. (JDN)	AB	27/07/2017
P8	Curbside reduced to 6.75m wide, northbound bus layby added, uncontrolled crossing amended to a signalised roundabout, speed limit signs added. (JDN)	AB	17/08/2017
P9	Footway and pedestrian island amended following comments from WSCC dated 21/11/2016. (JDN)	AB	25/11/2016
P4	Earthworks updated after raising levels at the northern end of Traxley Lane. (JDN)	AB	09/11/2016
P1	Scheme amended following WSCC reserve matters comments dated 21/10/16. (PB)	AB	09/11/2016
P2	Noise barrier height and location updated. (JDN)	AB	22/07/2016

client
PERSIMMON HOMES

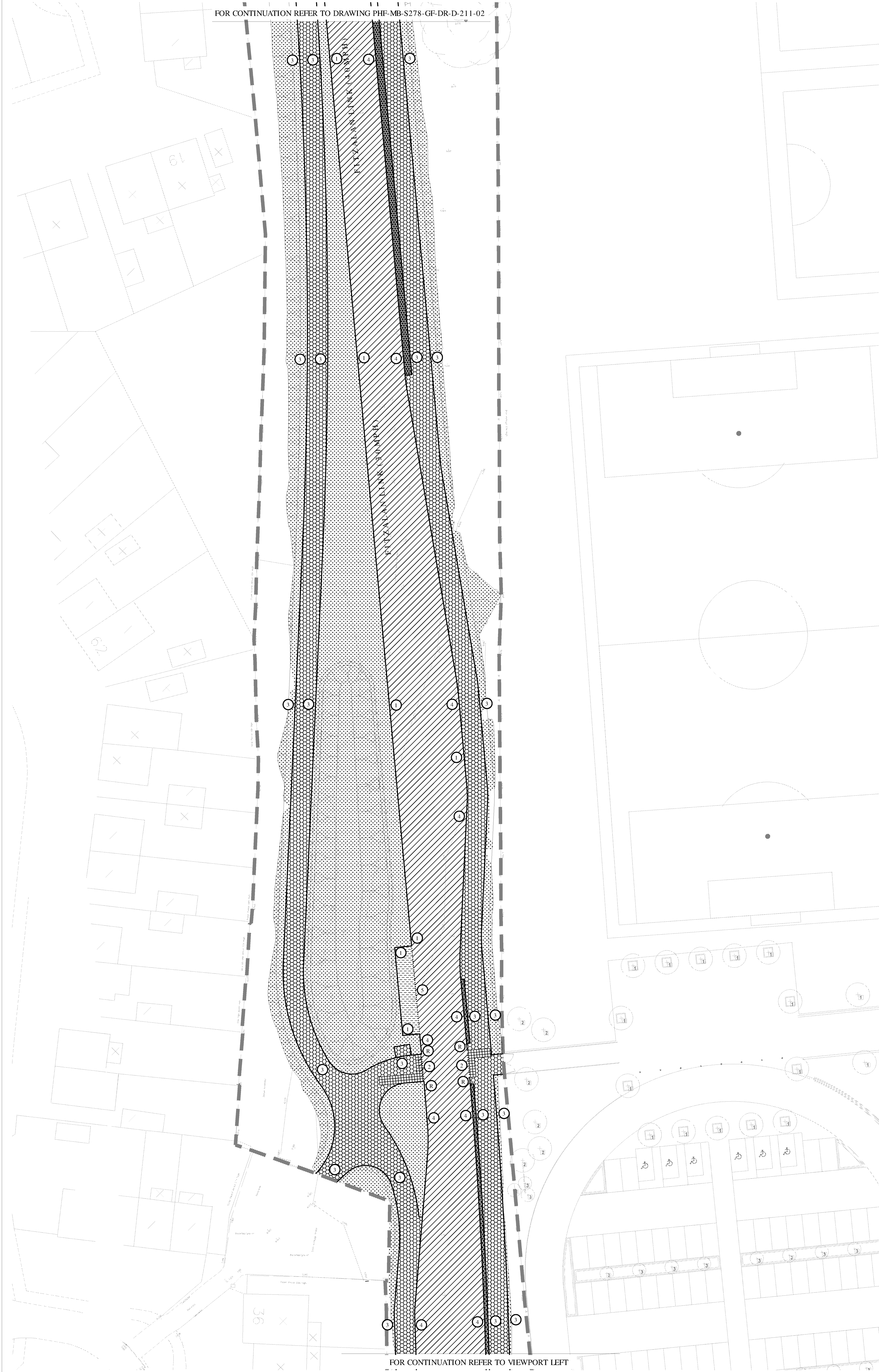
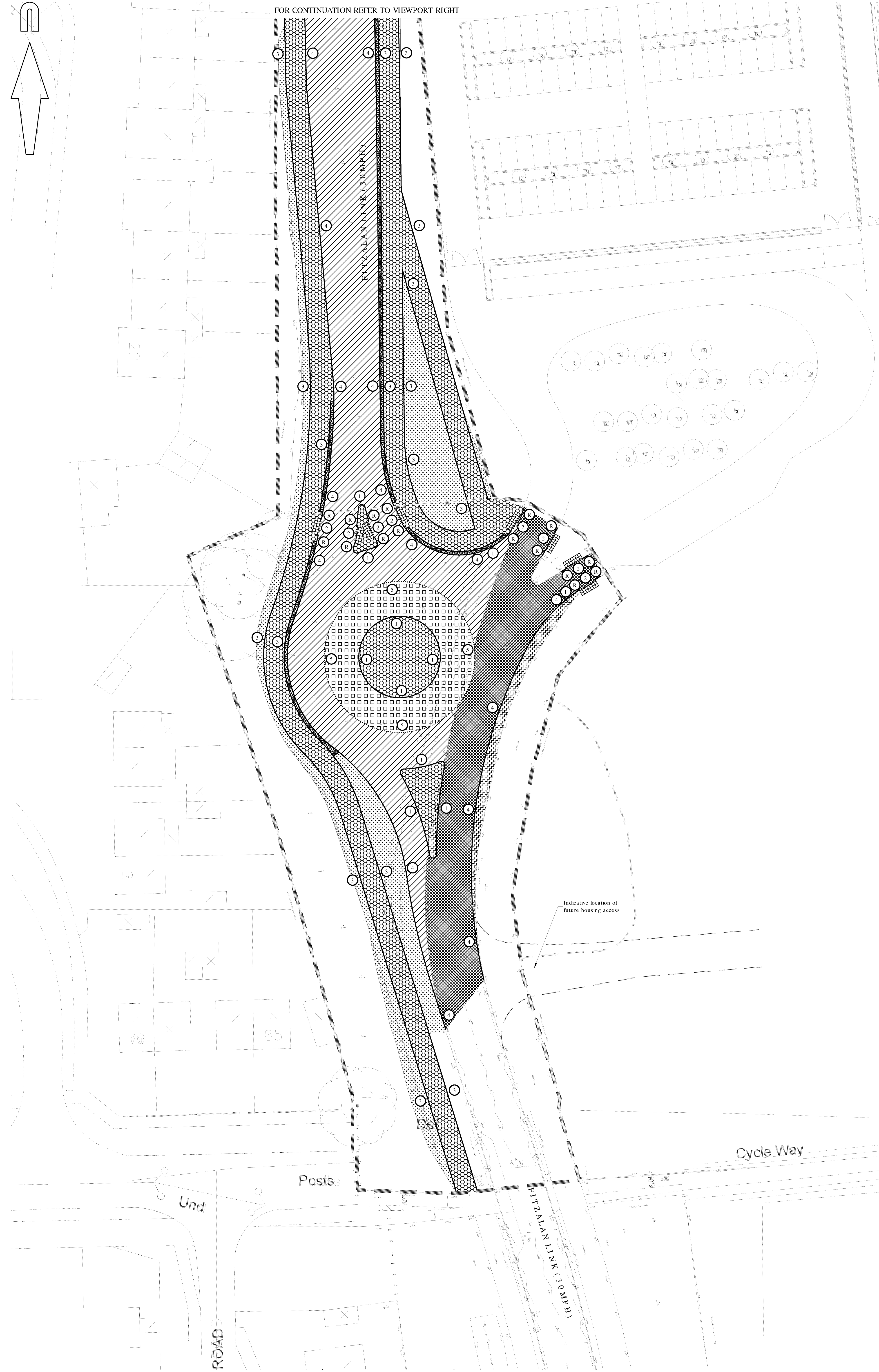
project
**NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS**

scale
1:250 @ A0
drawn by
PB
checked by
AB

date
MARCH 2016
cad file
MASTER - FITZ.DWG

title
**PROPOSED S278 HIGHWAY WORKS
GENERAL ARRANGEMENT DRAWING (2 OF 2)**

drawing number
PHF-MB-S278-GF-DR-D-210-02
rev.
P7



© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. The company and its information are used for the use of the information recipient and the recipient may not be used, copied or reproduced in whole or part for any purpose other than that stated in the Information. Mayer Brown makes no representation, warranty or any other statement as to the accuracy or completeness of the Information.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number: 100003385.

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED BUFF COLOURED TACTILE PAVING IN ACCORDANCE WITH WSCC DETAIL S278/38/18
- EXISTING CARRIAGEWAY TO BE PLANNED, REGULATED AS NECESSARY AND RESURFACED TO SUIT NEW LEVELS IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/20
- PROPOSED FULL DEPTH LOCAL DISTRIBUTOR CARRIAGEWAY CONSTRUCTION IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/21
- PROPOSED FULL DEPTH SERVICE MARGIN IN ACCORDANCE WITH WSCC DETAIL S278/38/09
- PROPOSED FULL DEPTH FOOTWAY CONSTRUCTION TYPE 1 IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/04
- PROPOSED ISLAND FOOTWAY CONSTRUCTION OVER EXISTING CARRIAGEWAY IN ACCORDANCE WITH APPENDIX 11/1 AND MB-C01
- PROPOSED VERGE TO BE TOP SOILED AND SEEDED IN ACCORDANCE WITH APPENDIX 30/5
- PROPOSED RUNOVER CONSTRUCTION IN ACCORDANCE WITH APPENDIX 11/1
- PROPOSED GRASSCRETE MAINTENANCE BAY CONSTRUCTION
- PROPOSED LIMIT OF WORKS
- ASSUMED LIMIT OF HIGHWAY TAKEN FROM WSCC RECORD PLANS

KERB TYPES

- 1 KERB TYPE 1 - 125x255mm type HB2 precast concrete kerb to BS EN 1340:2003 Figure NA.1(d) laid with 125mm upstand with ST1 concrete bed and backing.
- 2 KERB TYPE 2 - 125x150mm type BN precast concrete kerb laid flush (0 to 6mm) to Figure NA.1(a) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- 3 KERB TYPE 3 - 50x150mm type EF precast concrete flat top edging to Figure NA.3(b) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- 4 KERB TYPE 4 - Linear Kerb Drainage System refer to drawings PHF-MB-S278-GF-DR-D-212-01 & 02.
- 5 KERB TYPE 5 - 125x150mm type BN precast concrete kerb laid with 25mm upstand to Figure NA.1(a) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- 6 KERB TYPE R - Proposed raker kerb.

NOTES

- School site layout has been taken from WSCC drawing 507344_101 received November 2010.
- Tree information has been taken from WYG drawing A880072-LE-N-TCF-01-16 Rev A (Tree Constraints Plan) received 26/06/15.
- Topo survey has been taken from MB drawing IR-PHILITTLE.2.21 Rev A received 23/01/15.

FOR APPROVAL
NOT FOR CONSTRUCTION

P4	Carrageway reduced to 6.75m wide, northbound bus layby added, uncontrolled crossing amended to a signalised roundabout, speed limit limit signs added. (OIN)	AB	07/07/2017
P2	Scheme amended following WSCC reserve matters comments dated 23/10/16. (PB)	AB	03/11/2016
P3	Noise barrier location updated. (OIN)	AB	22/07/2016

rev.	amendment	checked	date

m3
mayer brown

Mayer Brown Limited
Law House, Orchard Road, Woking, Surrey GU24 0AB
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
PERSIMMON HOMES

project
NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

scale
1:250 @ A0

drawn by
PB

checked by
AB

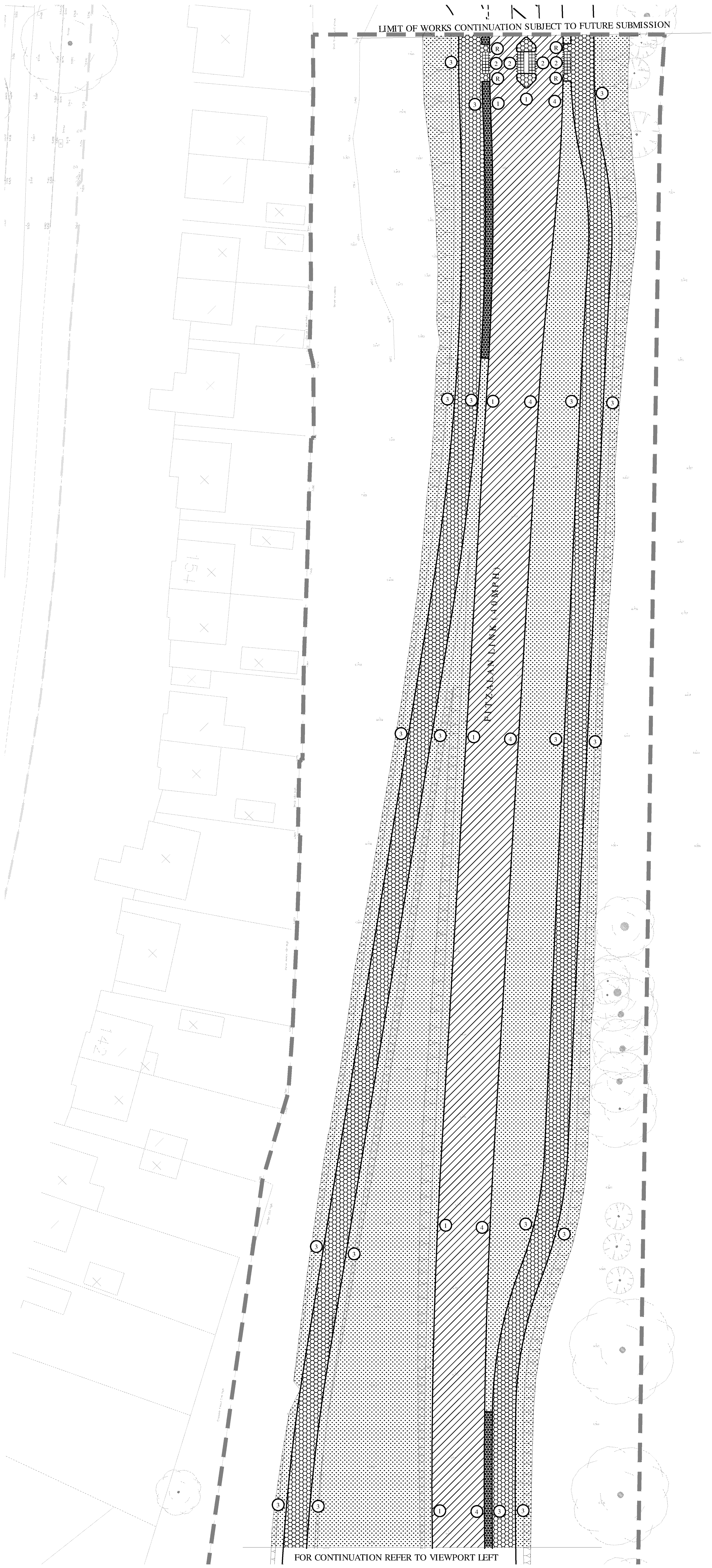
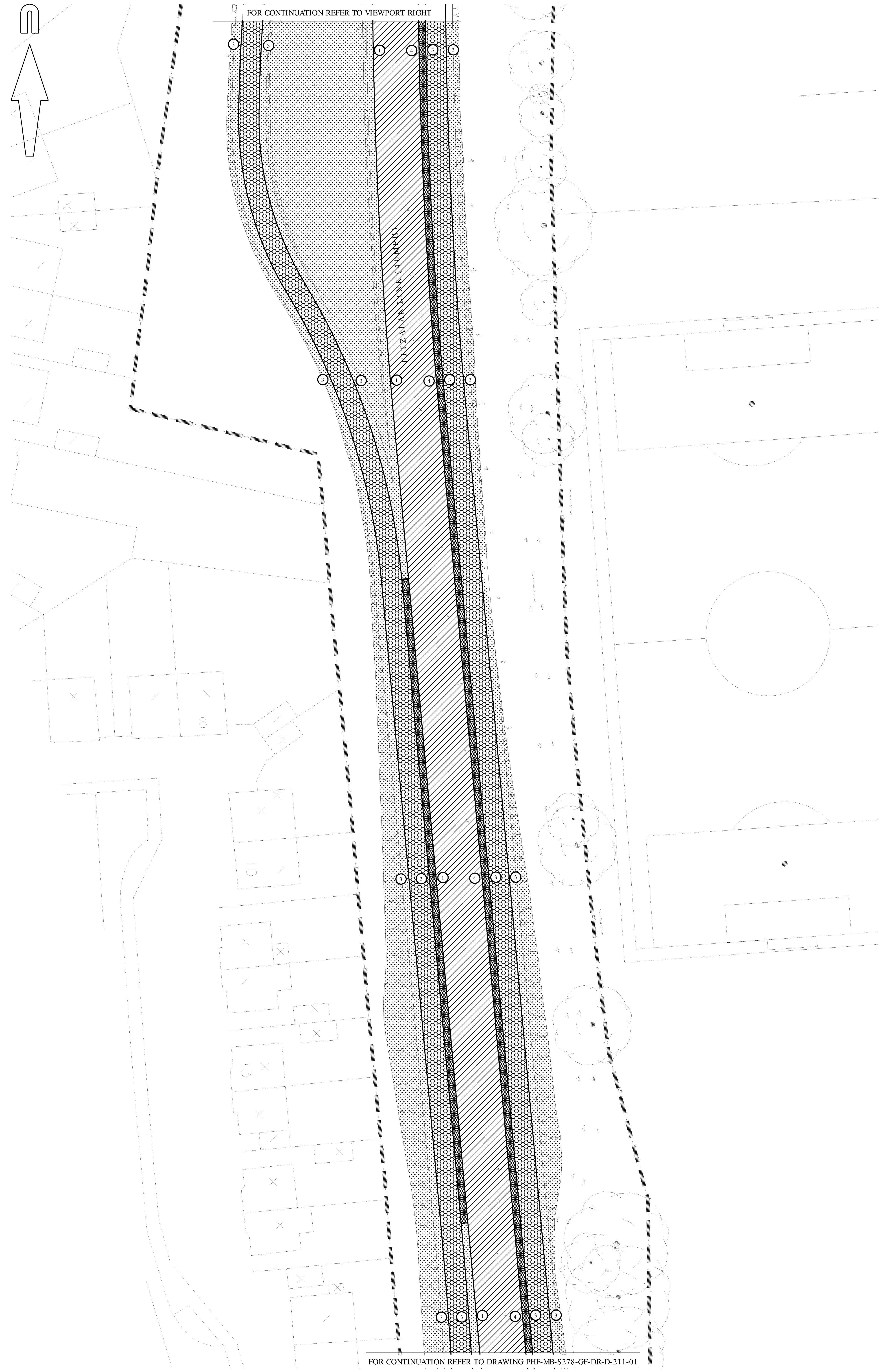
date
MARCH 2016

cad file
MASTER - FITZ.DWG

title
PROPOSED S278 HIGHWAY WORKS
CONSTRUCTION TREATMENTS DRAWING (1 OF 2)

drawing number
PHF-MB-S278-GF-DR-D-211-01

rev.
P4



© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. This document and the information contained herein are for the use of the addressee only and the addressee must not be used, copied or reproduced in whole or part for any purpose other than that which was supplied by Mayer Brown. Mayer Brown makes no representation, warranty or acceptance as to any and accepts no responsibility for any third party who may rely on or be affected by the information in this document.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number 100003493.

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED BUFF COLOURED TACTILE PAVING IN ACCORDANCE WITH WSCC DETAIL S278/38/18
- EXISTING CARRIAGEWAY TO BE PLANNED, REGULATED AS NECESSARY AND RESURFACED TO SUIT NEW LEVELS IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/20
- PROPOSED FULL DEPTH LOCAL DISTRIBUTOR CARRIAGEWAY CONSTRUCTION IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/21
- PROPOSED FULL DEPTH SERVICE MARGIN IN ACCORDANCE WITH WSCC DETAIL S278/38/09
- PROPOSED FULL DEPTH FOOTWAY CONSTRUCTION TYPE 1 IN ACCORDANCE WITH APPENDIX 11/1 AND WSCC DETAIL S278/38/04
- PROPOSED ISLAND FOOTWAY CONSTRUCTION OVER EXISTING CARRIAGEWAY IN ACCORDANCE WITH APPENDIX 11/1 AND MB-C/01
- PROPOSED VERGE TO BE TOP SOILED AND SEEDED IN ACCORDANCE WITH APPENDIX 30/5
- PROPOSED RUNOVER CONSTRUCTION IN ACCORDANCE WITH APPENDIX 11/1

- PROPOSED LIMIT OF WORKS
- ASSUMED LIMIT OF HIGHWAY TAKEN FROM WSCC RECORD PLANS

KERB TYPES

- 1** KERB TYPE 1 - 125x255mm type HB2 precast concrete kerb to BS EN 1340:2003 Figure NA.1(d) laid with 125mm upstand with ST1 concrete bed and backing.
- 2** KERB TYPE 2 - 125x150mm type BN precast concrete kerb laid flush (0 to 6mm) to Figure NA.1(a) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- 3** KERB TYPE 3 - 50x150mm type EF precast concrete flat top edging to Figure NA.3(b) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- 4** KERB TYPE 4 - Linear Kerb Drainage System refer to drawings PHF-MB-S278-GF-DR-D-212-01 & 02.
- 5** KERB TYPE 5 - 125x150mm type BN precast concrete kerb laid with 25mm upstand to Figure NA.1(a) of BS EN 1340:2003 with mix ST1 concrete bed and backing.
- R** KERB TYPE R - Proposed raker kerb

NOTES

- School site layout has been taken from WSCC drawing 507344_101 received November 2010.
- Tree information has been taken from WYG drawing AB09072-LEI-N-TCP-01-16 Rev A (Tree Constraints Plan) received 26/06/15.
- Topo survey has been taken from MB drawing IR.PHILITTLE.2.21 Rev A received 23/01/15.

FOR APPROVAL NOT FOR CONSTRUCTION

P4	Carrageway reduced to 6.75m wide, northbound bus layby added, uncontrolled crossing amended to a signalised roundabout, speed limit signs added. (OIN)	AB	27/07/2017
P3	Scheme amended following WSCC reserve matters comments dated 23/10/16. (PB)	AB	03/11/2016
P2	Noise barrier location updated. (OIN)	AB	22/07/2016

rev.	amendment	checked	date
------	-----------	---------	------

MB
mayer brown

Mayer Brown Limited
Law House, Orchard Road, Woking, Surrey GU24 0AB
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client
PERSIMMON HOMES

project
NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

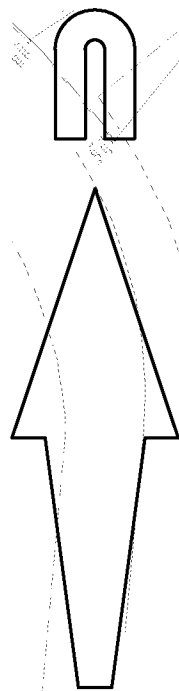
scale
1:250 @ A0 drawn by PB checked by AB

date
MARCH 2016 cad file MASTER - FITZ.DWG

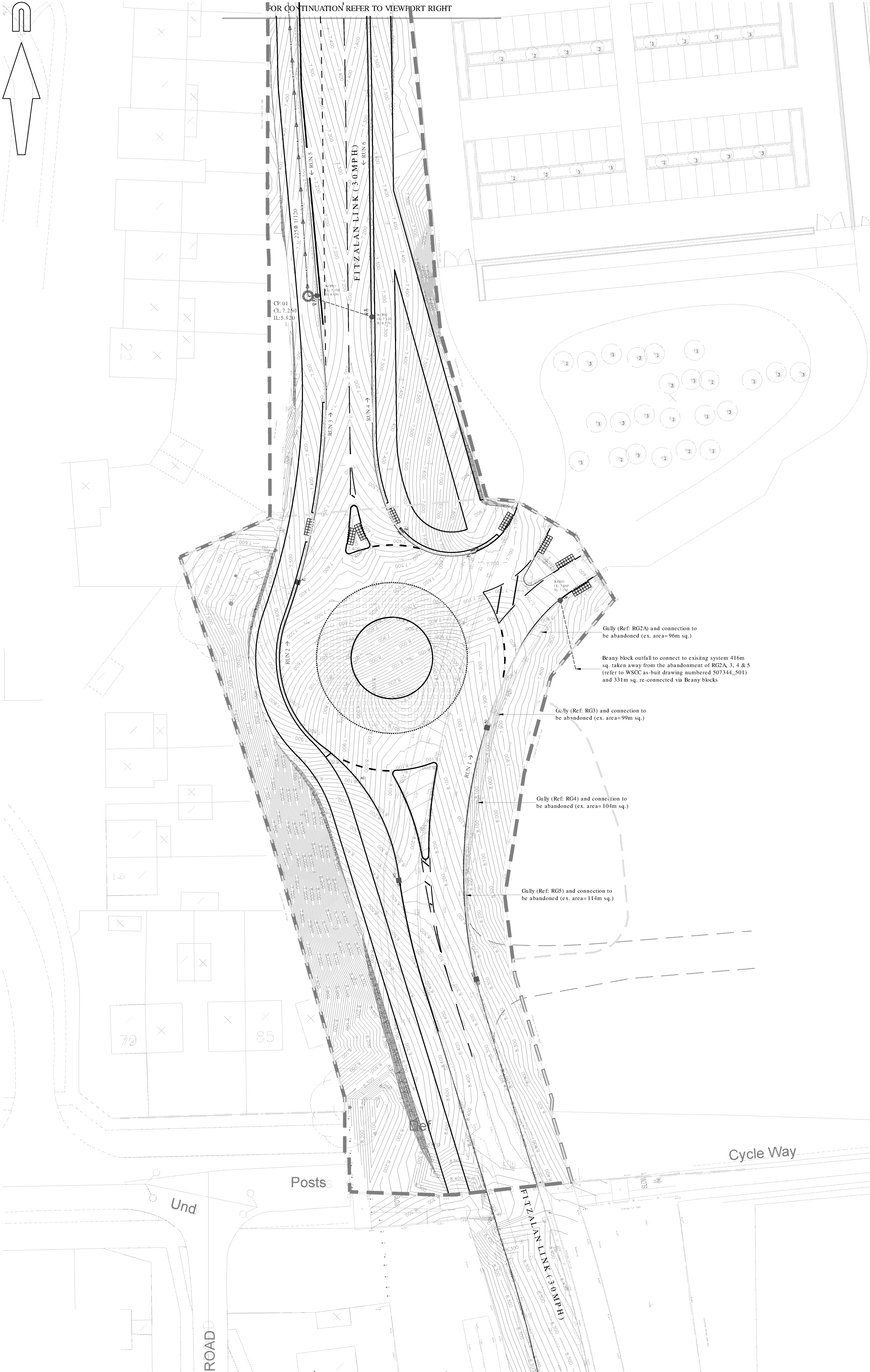
title
PROPOSED S278 HIGHWAY WORKS
CONSTRUCTION TREATMENTS DRAWING (2 OF 2)

drawing number
PHF-MB-S278-GF-DR-D-211-02 P4

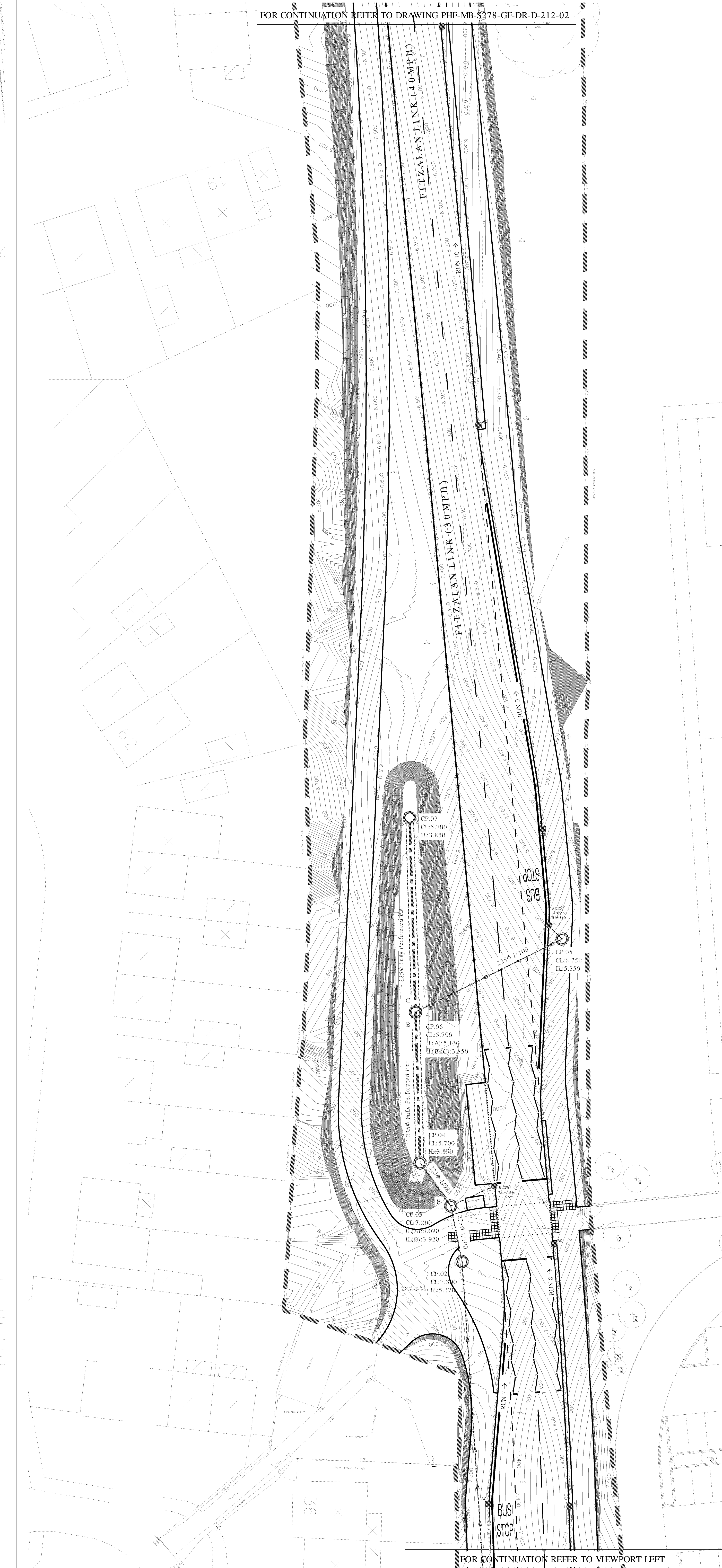
rev.



FOR CONTINUATION REFER TO VIEWPORT RIGHT



FOR CONTINUATION REFER TO DRAWING PHF-MB-S278-GF-DR-D-212-02



FOR CONTINUATION REFER TO VIEWPORT LEFT

NOTES

1. This drawing is not to be scaled.
2. This drawing is to be read in conjunction with all other relevant specifications and standards. The following specifications are to be reported to the Engineer immediately for clarification.
3. All drainage installations, materials and workmanship shall be in accordance with the following specifications of the Specification 7th Edition and Appendix S/VI, S/1, S/3, S/4 and S/5 of the Adoption Document.
4. The contractor shall be responsible to undertake pressure tests on the completion of every drainage run between manholes on pipes up to 750mm diameter and witnessed by the Highway Authority Inspector.
5. Contractor to undertake CCTV survey of issued Part 2 completion certificate being signed off and passed. The sewerage shall be thoroughly cleaned before the inspection.
6. The combined kerb & drainage system shall be Marshall Beany Block, manufactured in pre-cast concrete, with the exception of the kerms which shall be Marshall Beany Slabs. All materials supplied by Marshall Mono Ltd, Halifax HS9 5HT in accordance with Standard Detail Sheets.
7. The combined kerb & drainage system shall consist of two part system consisting of top blocks with a straight batted half battered profile together with constant depth base units that are 295, 310, 360, 400 and 450mm in depth. The overall width of the system shall be not less than 250mm.
8. All components of the Beany system, shall comply with the British Agency Manual of Road Construction for Highways Works and the British Standard BS EN12433, Load classification D400 and the following:
- 8.1. The water inlet aperture shall increase in size towards the inside of the unit with a minimum divergence angle of 5.2° .
- 8.2. The angle of incline of the water inlet aperture shall be at least 30° to the horizontal.
- 8.3. Water inlet apertures shall be wholly within individual units and not within the joints at the end of each unit.
- 8.4. When installed, the depth of construction from the top of the base units to the drained area surface shall be not less than 100mm.
- 8.5. The Top Block shall have an Unpolished Slak Resistance Value (USRV) in excess of 70 when tested in accordance with BS 7263 Part 2.
- 8.6. The system shall have a minimum of 13,500mm²/m water inlet aperture area.
9. The combined kerb & drainage system shall be installed with sealant applied to all joints providing a water tight system to the manufacturers recommendations and to the satisfaction of the Highway Authority and the Engineer. Sealant shall be Marshall M Flex sealant or similar approved.
10. Drawing to be read in conjunction with Construction Details Booklet.
11. Cover level of all existing chambers within the works to be adjusted to suit new ground and footway levels.
12. Where necessary, chambers are to be recessed infill in areas of slab / block paving.
13. Street furniture to have 450mm min. clearance to face of kerb.
14. Levels are subject to detailed design and tie in with the Lymington Bypass / A259 Roundabout.

This plan from United Capital City. The drawings, illustrations, and notes recorded in this document ("the information") are the property of United Capital City. All rights reserved. No other information may solely for the use of, without express or implied permission from United Capital City. This information is provided as a guide only. It is not intended to be used as a basis for construction. Any use of this information without the express or implied permission of United Capital City is prohibited. The user assumes all responsibility for any errors or omissions in this plan. The user agrees to indemnify and hold United Capital City harmless from any claims, damages, losses, costs, expenses, fees, and attorney's fees arising out of or from the use of this plan.	
A0	ORIGINAL
© Crown copyright, all rights reserved. 2022 Licence number: 100000381	
KEY	
EXISTING KERB LINE	
PROPOSED KERB/EDGE/LINE	
PROPOSED DROPPED KERB	
PROPOSED ROAD MARKING	
PROPOSED EARTHWORK EMBANKMENT	
PROPOSED GULLY CONNECTION	
PROPOSED HIGHWAY DRAIN	
PROPOSED TRENCH SOAKAWAY - REFER TO BE DETAIL MB/FW/01	
■ G	
PROPOSED GULLY - REFER TO WSCC DETAIL S27R38/31/4	
TO WSCC DETAIL S27R38/31/3	
PROPOSED HIGHWAY DRAINAGE CATCHPIPE - REFER TO WSCC DETAIL S27R38/31/3	
PROPOSED HIGHWAY DRAINAGE VORTICE FLOW CONTROL CHAMBER - REFER TO WSCC DETAIL S27R38/31/4	
PROPOSED MARSHALLS MINI BEANY 310 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED	
MINI →	
PROPOSED MARSHALLS BEANY 205 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
MINI →	
PROPOSED MARSHALLS BEANY 295 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
MINI →	
PROPOSED MARSHALLS BEANY 365 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
MINI →	
PROPOSED MARSHALLS BEANY 630 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
MINI →	
PROPOSED MARSHALLS BEANY DROPPED CROSSIN UNIT AND BN TOP BLOCK, OR SIMILAR APPROVED REFER TO MB DETAIL MB/FW/03	
MC	
PROPOSED MARSHALLS BEANY CAST IRON ACCESS COVER, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
G DS	
PROPOSED MARSHALLS BEANY CAST IRON ACCESS COVER WITH END CAP, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
○	
PROPOSED MARSHALLS BEANY CATCHPIP OUTFALL OR SIMILAR APPROVED - REFER TO MB DETAIL MB/FW/03	
△	
PROPOSED MARSHALLS SILT TRAP AND BEANY CAST IRON ACCESS COVER, OR SIMILAR APPROVED	
DB	
PROPOSED SITE BUILT OUTFALL WITH ACCESS COVER	
PROPOSED ANTICIPATED TASK - REFER TO MB DETAIL MB/FW/02	

FOR APPROVAL
NOT FOR CONSTRUCTION

P4	Western footway and link to Public Right of Way updated and earthworks amended following comments from WSSC dated 05/07/2017. (OJN)	AB	27/07/2017
P3	Pipe run amended to accommodate noise barrier. (PB)	AB	21/07/2016
P2	Updated in accordance with Marshall's comments. (SL)	AB	26/05/2016

rev.	amendment	checked	date
------	-----------	---------	------



Mayer Brown Limited
Lion House Oriental Road Woking Surrey GU22 8AR
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

PERSIMMON HOMES

NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

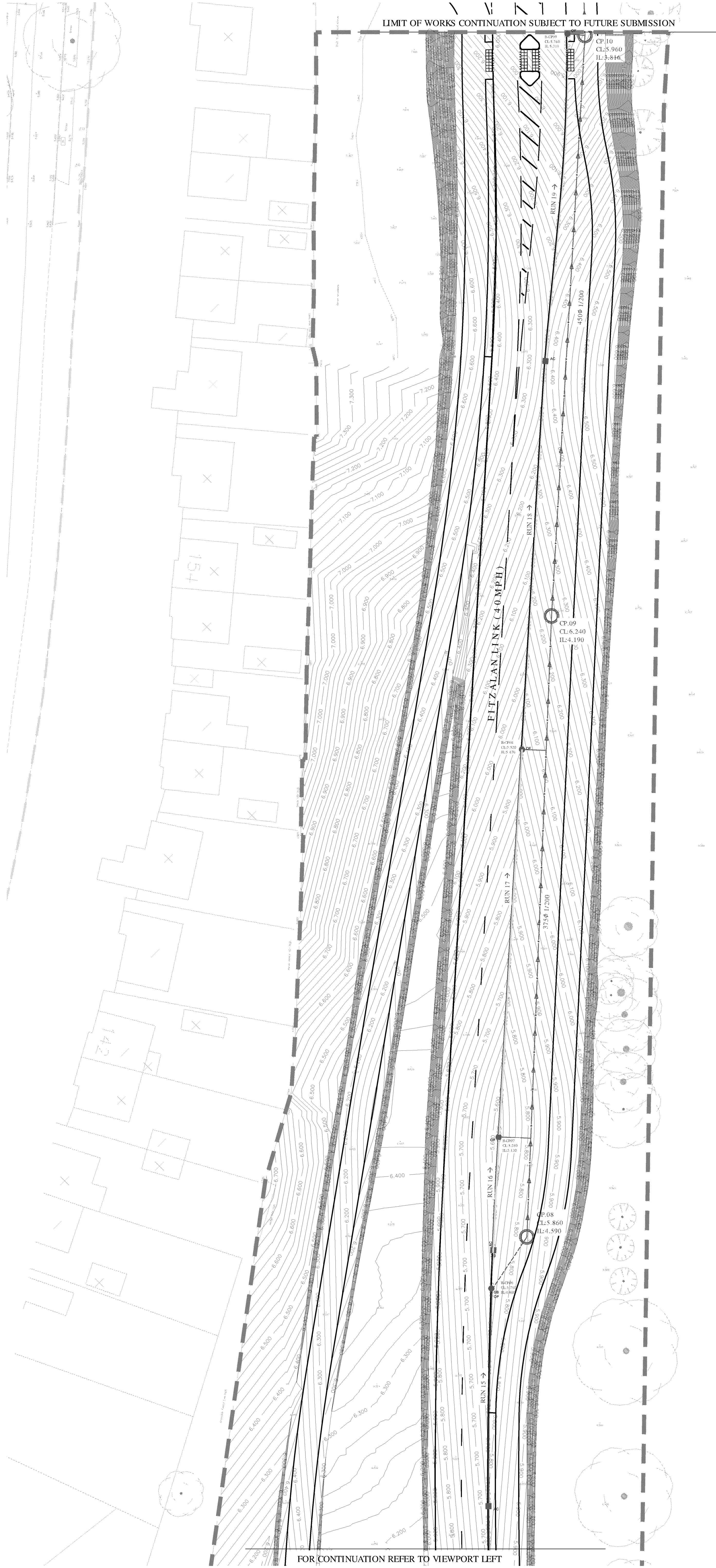
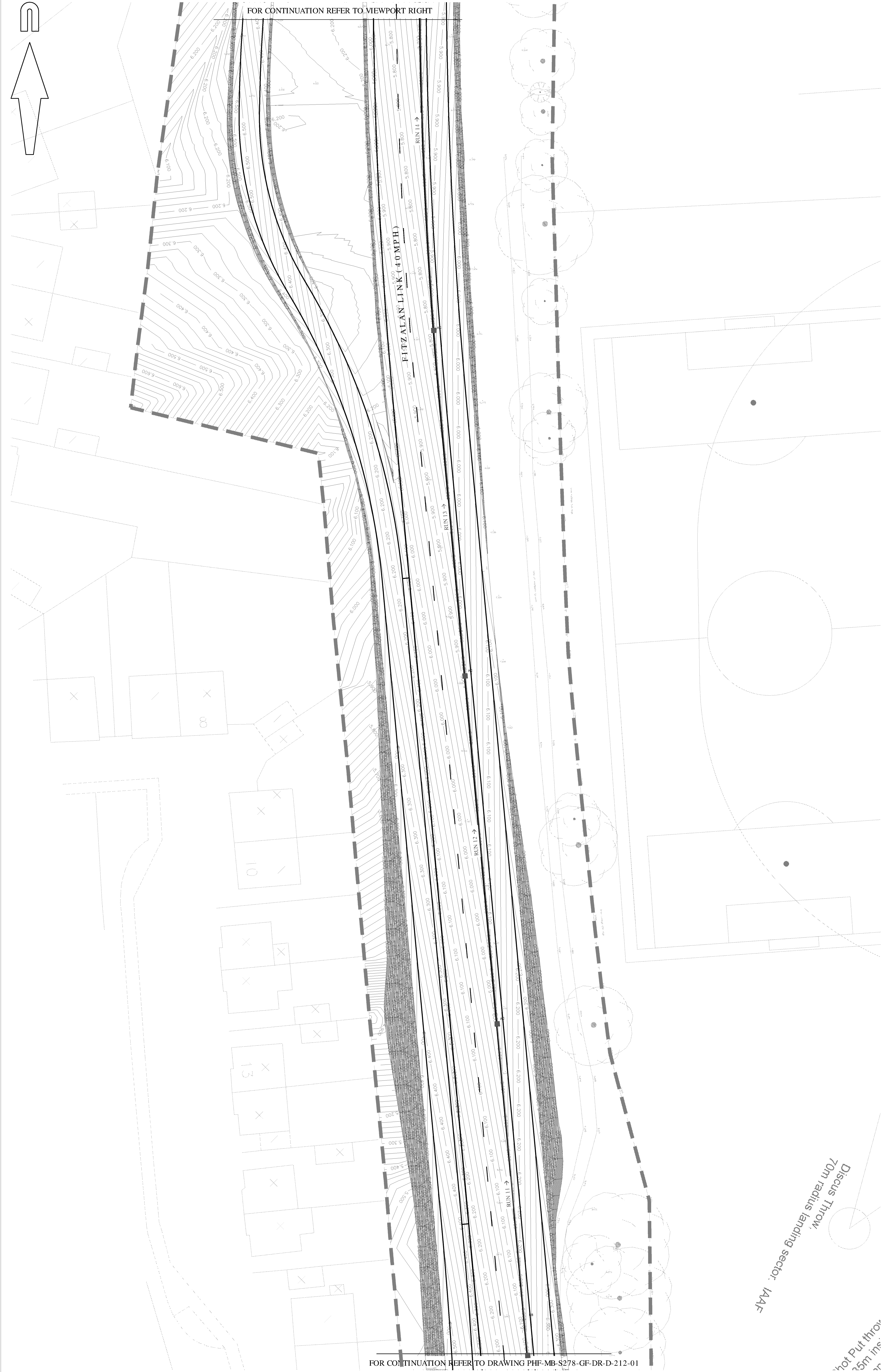
scale	1:250 @ A0	drawn by	PB	checked by	AB
-------	------------	----------	----	------------	----

date	MARCH 2016	cad file	212-01 P4 & 02 P4.DWG
------	------------	----------	-----------------------

title

PROPOSED S278 HIGHWAY WORKS
DRAINAGE DRAWING (1 OF 3)

drawing number	rev.
PHF-MB-S278-GF-DR-D-212-01	P4



NOTES

- This drawing is not to be scaled.
- This drawing is to be read in conjunction with all other relevant engineering and landscaping drawings. Any discrepancies are to be reported to the Engineer immediately for clarification.
- All drainage installations, materials and workmanship specification to be undertaken in accordance with Sewers for Adoption 7th Edition and Appendix 5/1, 5/2, 5/4 and 5/5 of the Specification Document.
- It is the contractor's responsibility to undertake pressure tests on the completion of every drainage run between manholes on pipes up to 750mm diameter and witnessed by the Highway Authority inspector.
- Contractor to undertake CCTV survey prior to Part 2 completion certificate being signed off and issued. The sewerage shall be mechanically cleaned as directed by the Engineer.
- The combined kerb & drainage system shall be Marshalls Beany Block, manufactured in pre-cast concrete, with the exception of certain elements which are manufactured in cast iron as supplied by Marshalls Wawa Ltd, Halifax HX5 9HT in accordance with Standard Detail Sheets.
- The combined kerb & drainage shall consist of a two part system consisting of top blocks with a straight backed half battered profile together with constant depth base units that are 205, 295, 310, 360, 365 and 630mm deep. The overall width of the system shall be not less than 250mm.
- All components of the Beany system, shall comply with the Highways Agency Manual of Contract Documents for Highway Works and the British Standard BS EN1433, Load classification D400 and the following:
 - The water inlet aperture shall increase in size towards the inside of the unit with a minimum divergence angle of 5°.
 - The angle of incline of the water inlet aperture shall be at least 30° to the horizontal.
 - Water inlet apertures shall be wholly within individual units and not within 100mm of the end of each unit.
 - When installed, the depth of construction from the top of the base units to the drained area surface shall be not less than 100mm.
 - The Top Block shall have an Unpolished Skid Resistance Value (USRV) in excess of 70 when tested in accordance with BS 7263:Part 3.
 - The system shall have a minimum of 13,500mm²/m water inlet aperture area.
- The combined kerb & drainage system shall be installed with sealant applied to all joints providing a water tight system to the manufacturers recommendations and to the satisfaction of the Highway Authority and Engineer. Sealant shall be Marshalls MPK's sealant or similar approved.
- Drawing to be read in conjunction with Construction Details Booklet.
- Cover level of all existing chambers within the works to be adjusted to suit new road and footway levels.
- Where necessary chamber covers are to be recessed infill type in areas of slab / block paving.
- All street furniture to have 450mm min. clearance to face of kerb.
- Levels are subject to detailed design and tie in with the Lymington Bypass / A259 Roundabout.

© Mayer Brown Limited Copyright. The drawings, information and data recorded in this document (The Information) is the property of Mayer Brown. The drawings and the information are not to be used for any other purpose other than that for which they were prepared and the drawings and the information are not to be used for any other purpose other than that for which they were prepared and the drawings and the information are not to be used for any other purpose other than that for which they were prepared.

A0 ORIGINAL

© Crown copyright, all rights reserved. 2012. Licence number 10000393.

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED ROAD MARKING
- PROPOSED EARTHWORK EMBANKMENT
- PROPOSED GULLY CONNECTION
- PROPOSED HIGHWAY DRAIN
- PROPOSED TRENCH SOAKAWAY - REFER TO BE DETAIL MB/F01
- PROPOSED GULLY - REFER TO WSCC DETAIL S278/38/11
- PROPOSED HIGHWAY DRAINAGE CATCHPIT - REFER TO WSCC DETAIL S278/38/13
- PROPOSED HIGHWAY DRAINAGE VORTEX FLOW CONTROL CHAMBER - REFER TO WSCC DETAIL S278/38/14
- PROPOSED MARSHALLS MINI BEANY 310 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED
- PROPOSED MARSHALLS BEANY 205 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY 295 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY 365 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY 630 BASE UNIT AND HB2 TOP BLOCK LINEAR KERB DRAIN, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY DROPPED CROSSING UNIT AND HB2 TOP BLOCK, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY CAST IRON ACCESS COVER, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY CAST IRON ACCESS COVER WITH END CAP, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS BEANY CATCHPIT OUTFALL, OR SIMILAR APPROVED - REFER TO MB DETAIL MB/F03
- PROPOSED MARSHALLS SILT TRAP AND BEANY CAST IRON ACCESS COVER, OR SIMILAR APPROVED
- PROPOSED SITE BUILT OUTFALL WITH ACCESS COVER
- PROPOSED ATTENUATION TANK - REFER TO MB DETAIL MB/F02

FOR APPROVAL

P4	Earthworks amended following comments from WSCC dated 05/07/2017. (ONS)	AB	27/07/2017
P3	Outcrops updated. (ONS)	AB	22/07/2016
P2	Updated in accordance with Marshalls comments. (SA)	AB	26/05/2016

rev.	amendment	checked	date
------	-----------	---------	------

m3 mayer brown

Mayer Brown Limited
Lime House, Great Road, Woking, Surrey GU24 8AB
Telephone 01483 750 508 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk www.mayerbrown.co.uk

client PERSIMMON HOMES

project NORTH LITTLEHAMPTON PHASE 2
FITZALAN LINK S278 WORKS

scale 1:250 @ A0 drawn by PB checked by AB

date MARCH 2016 cad file 212-01 P4 & 02 P4.DWG

title PROPOSED S278 HIGHWAY WORKS
DRAINAGE DRAWING (2 OF 3)

drawing number PHF-MB-S278-GF-DR-D-212-02 P4 rev.

APPENDIX B: Previous Road Safety Audit Designer's Responses

**LITTLEHAMPTON NORTH DEVELOPMENT
AREA**

ACCESS ARRANGEMENTS

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

October 2011

**LITTLEHAMPTON NORTH DEVELOPMENT
AREA**

ACCESS ARRANGEMENTS

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

October 2011

Project Code:	WYGLITTLEHAMPTON.6A
Prepared by:	BEN SMITH-LAING
Position:	Principal Consultant
Approved by:	PS
Issue Date:	6 th October 2011
Status:	FINAL

**Littlehampton North Development Area
Access Arrangements
Stage 1 Road Safety Audit
Designer's Response**

Contents

1.0	Introduction
2.0	Response to Stage 1 Road Safety Audit

**Littlehampton North Development Area
Access Arrangements
Stage 1 Road Safety Audit
Designer's Response**

List of Appendices

Appendix A Revised Scheme Drawings

1.0 INTRODUCTION

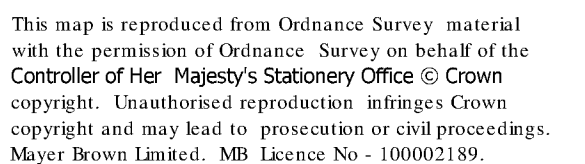
- 1.1** This Designer's Response results from a Stage 1 Road Safety Audit of the highway works associated with the North Littlehampton development carried out on the 28th September 2011.
- 1.2** The Designer's Responses to the issues raised are presented with reference to the numbering used within the Safety Audit report.
- 1.3** Where recommendations have been adopted, they are shown in the relevant drawings provided as Appendix A.

2.0 RESPONSE TO STAGE 1 ROAD SAFETY AUDIT

- 2.1** [Item 3.2] Signage: Noted – full signage proposals to be provided at detailed design stage.
- 2.2** [Item 3.3] Dropped kerbs and tactile paving: Noted – full crossing details to be provided at detailed design stage.
- 2.3** [Item 3.4] Vehicle and pedestrian restraint over bridge: Noted – full restraint details to be provided at detailed design stage.
- 2.4** [Item 3.5] Bollard provision: Noted – full details of bollards and illumination to be provided at detailed design stage.
- 2.5** [Item 3.6] East Street roundabout vehicular access: This area was designed by West Sussex County Council (WSCC) and is currently under construction. It is assumed that it was the subject of a separate Safety Audit / Designer's Response process. No changes are proposed to the WSCC design.
- 2.6** [Item 3.7] East Street roundabout deflection: This area was designed WSCC and is currently under construction. It is assumed that it was the subject of a separate Safety Audit / Designer's Response process. No changes are proposed to the WSCC design.
- 2.7** [Item 3.8] Highdown Drive screening / bunding: Noted – full details of screening / bunding to be provided at detailed design stage.
- 2.8** [Item 3.9] Fitzalan Link crossings: Drawing WYGLITTLEHAMPTON.1/15M shows that a toucan crossing is proposed at the Paterson Wilson Road crossing. An informal crossing will be provided at the footpath adjacent to number 36 Highdown Drive.
- 2.9** [Item 3.10] Pedestrian access to Academy: The proposed roundabout provides continuity of access to the school site. From here it ties into the school proposals. These are currently under construction and it is assumed that they were subject to a separate Safety Audit / Designer's Response process.
- 2.10** [Item 3.11] Two lane approaches to A259 / Fitzalan Link roundabout: It is considered that the addition of designation markings may prove confusing and cluttered. Lane markings have therefore been added to the circulatory carriageway instead, as these will act to improve lane discipline and reduce the risk of conflict.

- 2.11** [Item 3.12] Fitzalan Link crossing to rear of 138 Highdown Drive: Whilst it is accepted that there is not obvious pedestrian desire line in this location, the footway / cycleway on the eastern side of the road does deviate away from being adjacent to the road at this point. It is likely that people heading northbound up the Fitzalan Link, who wish then to turn west along the A259 would regard this as inconvenient and will wish to cross to the western side of the road at this point. The crossing will therefore be maintained. There is excellent intervisibility at this point, so Auditors' consideration that this would lead to a medium-high accident risk is considered to be unwarranted.
- 2.12** [Item 3.13] Fitzalan Link kerb buildout: This area was designed by WSCC and is currently under construction. It is assumed that it was the subject of a separate Safety Audit / Designer's Response process. No changes are proposed to the WSCC design.
- 2.13** [Item 3.14] Lyminster bypass northern signal junction proximity to priority junctions: This area has been the subject of extensive modelling, including microsimulation. The modelling indicates that the area functions well, with no excessive queuing. As set out in the design check report, all visibilities meet trunk road standards. The area has been designs so that it can revert to a more "conventional" street pattern as and when the full Lyminster bypass connection to the north is implemented.
- 2.14** [Item 3.15] Lyminster bypass northern signal junction "see through": Accepted – details of screening or landscaping to be provided at detailed design stage.
- 2.15** [Item 3.16] Mill Lane / Toddington Lane junction visibilities: On-site observations indicate that the existing visibilities to these junctions are reasonable, but could in places be improved by maintenance work to existing vegetation. Local accident records are good, indicating that there are no specific highway design issues. Whilst the intensity of use of the major arms or all of the junctions will increase, any increased accident risk is more than offset by the highways improvements proposed. Where relevant vegetation will be trimmed during construction. In terms of capacity, the existing side roads all serve relatively limited number of dwellings, so no capacity issues are anticipated. It should be noted that the roads will be subject to a 30mph speed limit.
- 2.16** [Item 3.17] Bodyshop roundabout westbound merge on A259: As set out in the design check report, the merge has a taper of 1:15, which is within the recommendations of the Design Manual for Roads and Bridges. It is therefore anticipated to be adequate to allow safe merging.

APPENDIX A
Revised Scheme Drawings



rev.	amendment	checked	date
------	-----------	---------	------



LITTLEHAMPTON

scale	1:2000 @ A0	drawn by	MP	checked by	PS
-------	-------------	----------	----	------------	----

te	FEBRUARY 2009	cad file	MASTER.DWG
----	---------------	----------	------------

PROPOSED HIGHWAY IMPROVEMENTS (FULL EXTENTS)

drawing number	rev.
NYGLITTLEHAMPTON.1/15	N

Stage 1 RSA - Road Safety Audit Designer's Response Report

1.1 This report results from a request from WSCC to clarify the position in relation to the Stage 1 RSA Designer's Response associated with the Fitzalan Link Road scheme proposals in respect to the Stage 1 RSA undertaken dated September 2011.

1.2 The Designer's Response to the 'Problems' highlighted are indicated in the table below:

Item	Problem	Recommendation	Designer's Response
3.2	Location: General. Summary: It will be important that the new highway network is clearly signed throughout. Risk: Low – subject to recommendation.	i) Provide signing on each approach to new and modified junctions. ii) Map-type signs will be required at roundabout junctions. iii) Ensure adequate forward visibility to signs, and ensure adequate clearance between sign face and carriageway. iv) Where appropriate ensure adequate clearance for pedestrians and cyclists beneath sign face.	i) Accepted. Signing shall be provided on each junction approach as recommended and as indicated on the general arrangement drawings (exact destination text to be agreed with WSCC) ii) Accepted. Signing shall be provided on each junction approach as recommended and as indicated on the general arrangement drawings (exact destination text to be agreed with WSCC) iii) Accepted. Adequate clearance and visibility to signs shall be provided as recommended and as indicated on the general arrangement drawings. iv) Accepted. All traffic signs mounted over footways and cycleways shall have 2.4m clearance as recommended and as indicated on the general arrangement drawings.
3.3	Location: General. Summary: This problem may be addressed at the detail design stage. It will be necessary to provide dropped kerbs and tactile paving in relation to all pedestrian and off-road cycle routes. Risk: Low Subject to recommendation.	Provide dropped kerbs and tactile paving as required throughout.	Accepted. Dropped kerbs and tactile paving included as recommended as indicated on the general arrangement drawings.

Item	Problem	Recommendation	Designer's Response
3.5	Location: General. Summary: Numerous solid refuge islands throughout the proposals will require the provision of reflective or internally illuminated bollards. Direction signing may also be required. Risk: Low Subject to recommendation.	Ensure that islands are of sufficient size to accommodate such signing as may be required at a specific location.	Accepted. Traffic signing accommodated within traffic islands with adequate clearance as recommended and as indicated on the general arrangement drawings.
3.9	Location: Fitzalan Link (North of Roundabout access to school site) Summary: The Fitzalan Link will sever two footpath links. In addition it will run between schools and recreation / sports facilities on the east of the Fitzalan Link and an existing residential area to the west of the Link. In particular the pedestrian and pedal cycle link from Paterson Wilson Road was noted to be well used at the time of our inspection. Risk: Medium – high	Provide formal crossing facility on the desire line of this existing facility. Depending on the anticipated use, a formal crossing facility may be required in association with the footpath adjacent to number 36 Highdown Drive.	Accepted. Uncontrolled crossing point provided as recommended.
3.10	Location: Fitzalan Link (Roundabout access to school site) Summary: It is acknowledged that this may relate to part of the overall works which will not be the subject of future adoption. However it is not clear how vehicular or pedestrian access is to be provided from the roundabout into the school site Risk: Medium - high	Ensure continuity of route from public highway into school site.	Accepted. Vehicular access to the school is via the main access arm. A footway/ cycleway link exists on the eastern side of the access arm. A further footway link is proposed to the north of the roundabout via a crossing adjacent to No. 36 Highdown Drive.

Item	Problem	Recommendation	Designer's Response
3.12	Location: Fitzalan Link (To rear of 138 Highdown Drive) Summary: Links from the footway / cycleways on either side of the Link Road lead to the Link Road carriageway at this point, apparently intended as a crossing point location for pedestrians and cyclists. There is no apparent pedestrian / cycle desire line which would require users to cross the Link Road at this point. It is unlikely that drivers on the Link Road would generally anticipate pedestrian crossing movements at this location. Risk: Medium - high	Do not provide a pedestrian / pedal cycle crossing facility, or links to the carriageway at this location.	Rejected. Whilst it is accepted that there is not obvious pedestrian desire line in this location, the footway / cycleway on the eastern side of the road does deviate away from being adjacent to the road at this point. It is likely that people heading northbound up the Fitzalan Link, who wish then to turn west along the A259 may regard this as inconvenient and will wish to cross to the western side of the road at this point. There is good intervisibility at this point, so Auditors' consideration that this would lead to a medium-high accident risk is considered to be unwarranted. It is proposed to retain this crossing point.

