



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 & C1
LITTLEHAMPTON, WEST SUSSEX**

**STAGE 1 - ROAD SAFETY AUDIT
ADDENDUM**

SEPTEMBER 2017



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 & C1
LITTLEHAMPTON, WEST SUSSEX**

**STAGE 1 - ROAD SAFETY AUDIT
ADDENDUM**

SEPTEMBER 2017

Project Code:	S/PHLITTLE-INT.1.1Ad.6a
Prepared by:	Martyn Parr
Approved by:	Ken Fry
Issue Date:	September 2017
Status:	FINAL

**Persimmon Homes Thames Valley
North Littlehampton
Internal Works, Parcels B2, B4 & C1
Littlehampton, West Sussex
Stage 1 - Road Safety Audit Addendum**

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1 Introduction

- 1.1 A Stage 1 Road Safety Audit undertaken dated 17th March 2017 related to the internal development site highways arrangement.
- 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 in September 2017.
- 1.4 The Road Safety Audit Team membership was as follows:
- | | |
|-------------|---|
| Ken Fry | I Eng, FIHE, RegRSA (IHE), HECoc
Principal Consultant - Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in April 2015) |
| Martyn Parr | MSoRSA, RegRSA (IHE), MCIHT, HECoc
Road Safety Manager – Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in February 2015) |
- 1.5 The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided by Mr Oliver Nevett, included as Appendix C. The Audit Team has not been made aware of any departures from standard.
- 1.6 The Design Organization have advised that a site inspection is not required at this stage. It is understood that the works subject to this Road Safety Audit Report will not be subject to a Section 38 agreement. In addition, the works comprise a highway layout entirely within a development site, not an improvement scheme affected by existing traffic conditions, so this is considered to make no difference to the audit findings.
- 1.7 The terms of reference of the Road Safety Audit are as described in HD 19/15, although in this case the members of the Audit Team have not carried out a site inspection. 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.

- 1.8 Reduced-scale copies of plans 'A/PHLITTLE-INT.1/10-1 P7' and 'A/PHLITTLE-INT.1/10-2 P7' supplied with the Road Safety Audit Brief, are given as **Appendix B** to this report.
- 1.9 The proposals comprise the demolition of existing buildings and structures, and redevelopment to provide residential, business, neighbourhood centre and community uses, green infrastructure, new highway infrastructure and improvements to existing local highway network.
- 1.10 The Main Avenue through the scheme is proposed to be a tree lined avenue with visibility splays kept clear of landscaping. Generally the scheme is intended to be subject to a 20mph speed limit with regular traffic calming features and off street parking. However, the speed limit in part of Main Avenue is now to be raised to 30mph.
- 1.11 A bus route is proposed through parts of the works subject to this Audit Report.

2 Items Raised at the Previous Stage 1 Road Safety Audit

- 2.1 The road safety aspects of the internal site layout were the subject of comment in a Stage 1 Road Safety Audit Report undertaken in March 2017 (see **Appendix D**).
- 2.2 **Item 2.1*** raised during the Stage 1 Road Safety Audit remains a problem and is referred to again in this Road Safety Audit Report.
- * **Item 2.1** has only been partly addressed and is therefore referred to again in this Stage 2 Audit but with an amended 'summary' as appropriate.
- 2.3 The authors of this report are satisfied that all other issues raised in the previous Stage 1 Road Safety Audit have been resolved.
- 2.4 One further issue has been identified in the Stage 2 Audit Report, these are detailed in Section 3 of this report.
- 2.5 To avoid any confusion, please note that the numbering contained within this Stage 1 Audit Addendum does not relate in any way to the numbering format used in the previous Stage 1 Audit. Therefore, the item numbers above only relate to the previous Stage 1 Road Safety Audit that is provided in **Appendix D**.

3 Items Raised at the Stage 1 Road Safety Audit Addendum

General

3.1 Problem

Location: General

Summary: Visibility splays

Whilst some visibility splays have been formally identified on the drawings submitted, it will be important that all visibility splays remain free from obstruction. It is noted that some visibility splays extend across / through 3rd party land, cycle storage areas or parking bays (on 3rd party land).

It will also be important to ensure that appropriate visibility splays are provided. It is noted that the visibility splays indicated on parts of Main Avenue are not suitable for a 30mph speed limit.

Recommendation

Provide visibility splays in accordance with relevant design standards and ensure that the splays will be kept free from obstruction. Any vegetation within the splays should be maintained to ensure that it does not extend beyond a vertical height of 0.6m. If planters are to be provided then these, together with any foliage which they contain, should also not extend beyond a vertical height of 0.6m.

3.2 Problem

Location: General

Summary: Potential obstruction to service vehicle manoeuvres

The swept path analysis provided to the Audit Team indicates that a large refuse vehicle is able to service the site without excessive reversing manoeuvres or encroachment on the footway.

However, many of these manoeuvres will be obstructed if on-street parking were to occur within the development. This could result in excessive reversing manoeuvres or encroachment on to the footway(s).

Persimmon Homes Thames Valley
North Littlehampton, Internal Works, Parcels B2, B4 & C1
Littlehampton, West Sussex
Stage 1 - Road Safety Audit Addendum

Recommendation

If on-street parking does occur within the extent of the swept paths then West Sussex County Council should consider implementing a traffic management order prohibiting vehicles from waiting “at any time” within the extents of the swept paths.

4 Audit Team Statement

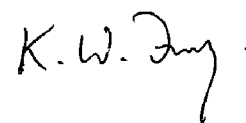
4.0 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out as described in HD 19/15, with the exception that no site visit was carried out because this is a new development site containing no existing roads.

ROAD SAFETY AUDIT TEAM LEADER

Ken Fry - I Eng, FIHE, RegRSA (IHE), HECoc
Principal Engineer
Mayer Brown Limited
B15 Whitecross Business Centre
Whitecross Lane
Shanklin
Isle of Wight
PO37 7EJ

Signed

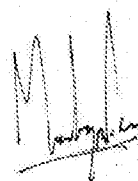


Date 01/09/17

ROAD SAFETY AUDIT TEAM MEMBER

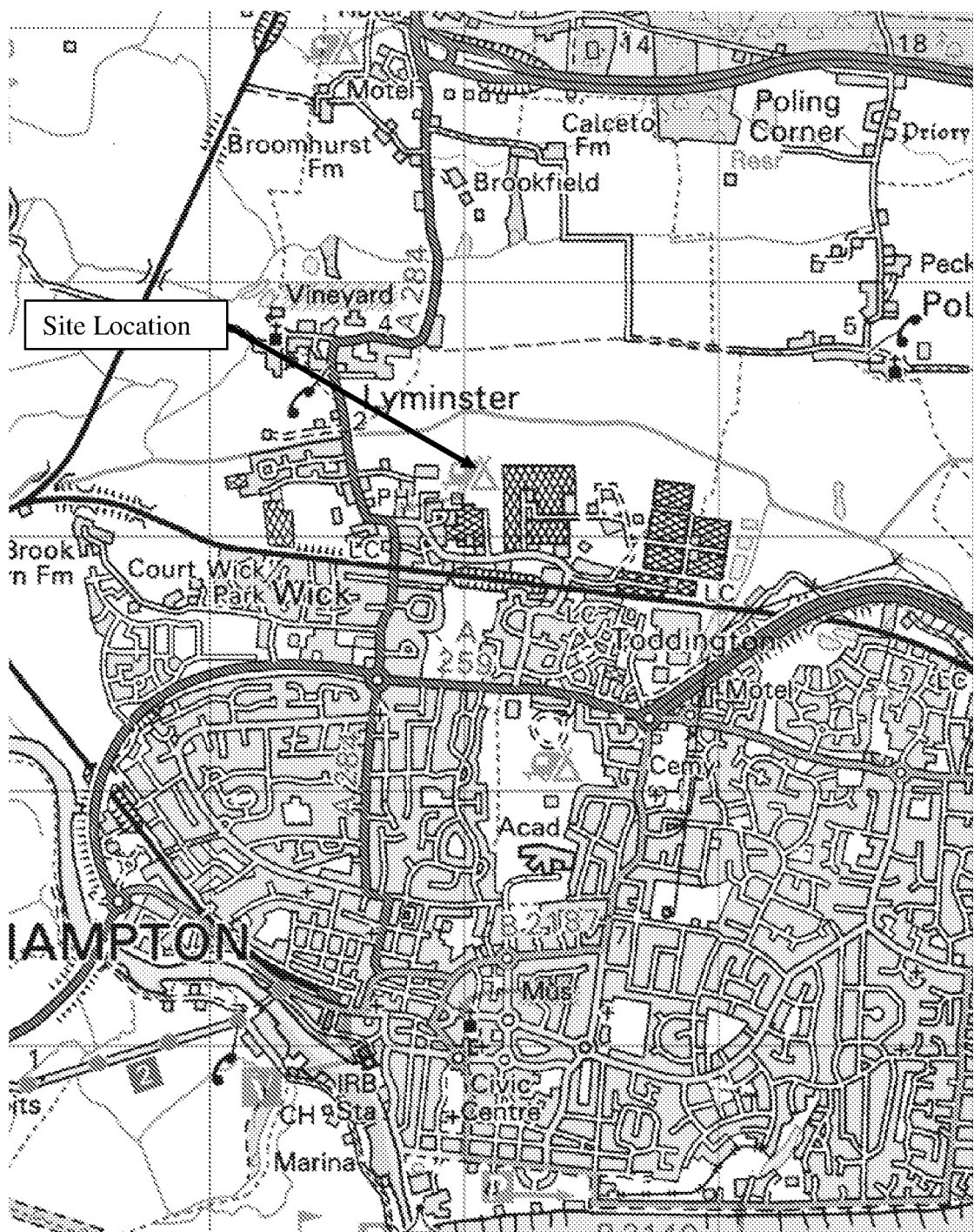
Martyn Parr - MSoRSA, RegRSA (IHE), MCIHT, HECoc
Road Safety Manager
Mayer Brown Limited
Lion House
Oriental Road
Woking
Surrey
GU22 8AR

Signed



Date 01/09/17

APPENDIX A: Site Location Plan



APPENDIX B: Reference Plans



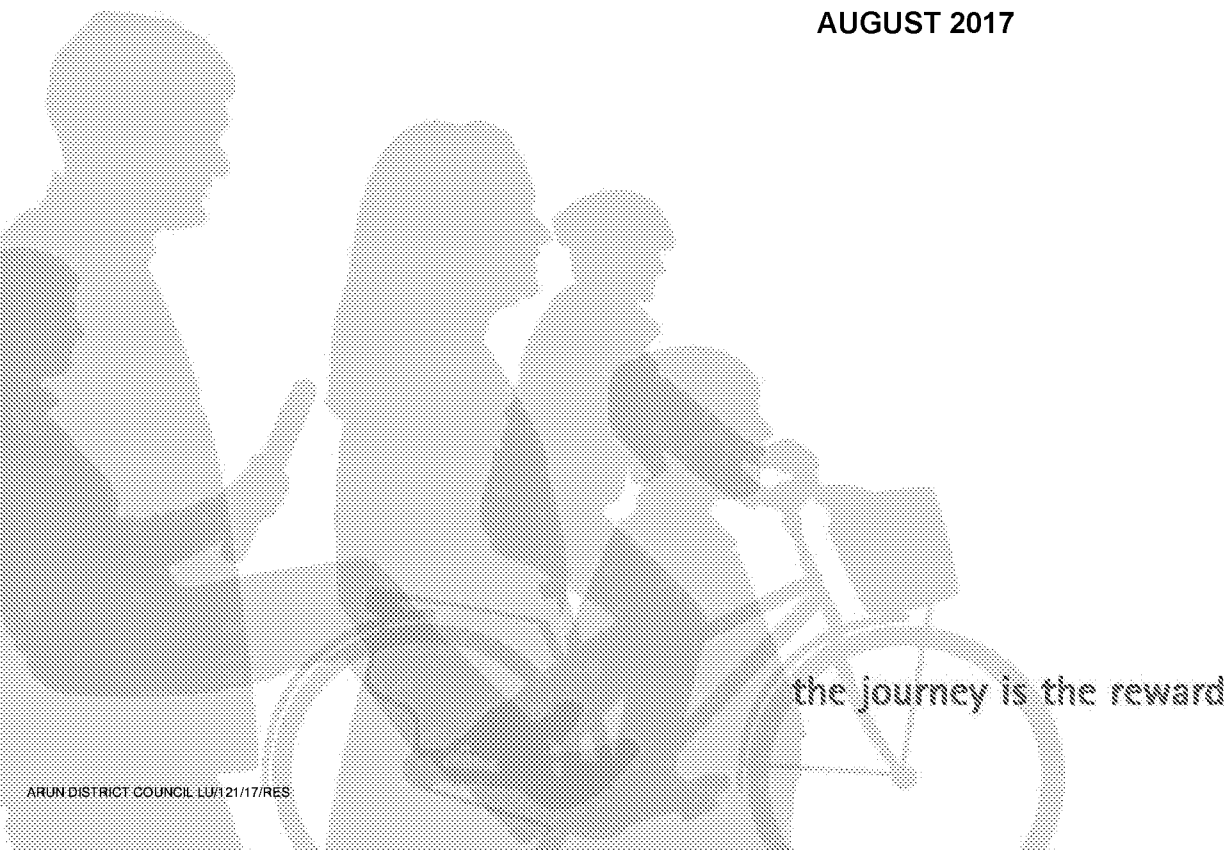
APPENDIX C: Audit Brief



PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 &
C1
LITTLEHAMPTON, WEST SUSSEX

STAGE 1 ROAD SAFETY AUDIT BRIEF

AUGUST 2017



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 &
C1
LITTLEHAMPTON, WEST SUSSEX**

STAGE 1 ROAD SAFETY AUDIT BRIEF

AUGUST 2017

Project Code:	A/PHLITTLE-INT.1
Prepared by:	OJN
Approved by:	AB
Issue Date:	August 2017
Status:	FINAL

**Persimmon Homes Thames Valley
North Littlehampton
Internal Works, Parcels B2, B4 & C1
Littlehampton, West Sussex
Stage 1 Road Safety Audit Brief**

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Authorisation Sheet

Project: North Littlehampton, Internal Works, Parcels B2, B4 & C1

Report Title: Stage 1 Road Safety Audit Brief

Prepared By:

Name: Oliver Nevett

Signed:

A handwritten signature in black ink, appearing to read 'O. Nevett', written over a dotted line.

Organisation: Mayer Brown Ltd

Date: 30/08/2017

Introduction

- 1.0.1 Mayer Brown Limited has been appointed by Persimmon Homes Thames Valley in respect of the design of the internal highway works associated with Planning Application Ref LU/47/11.
- 1.0.2 The site is known as “North Littlehampton” and lies to the north of Toddington Lane in Littlehampton, West Sussex. The site is currently largely glasshouses and would be developed to create an urban extension
- 1.0.3 The proposals comprise the demolition of existing buildings and structures, and redevelopment to provide residential, business, neighbourhood centre and community uses, green infrastructure, new highway infrastructure and improvements to existing local highway network.

Application LU/47/11 includes the following:

- 1.0.4 *Outline application with some matters reserved for mixed use development comprising: demolition of existing buildings and structures, up to 1,260 residential dwellings (out of a potential 1,460 dwelling masterplan), up to 13,000 sqm of B1 employment floorspace (including 3,000 sqm Enterprise Centre), up to 3,500 sqm of Class A local facilities, a 100 bed hotel, 60 bed care home, a new 2 Form Entry primary school, community centre, youth and leisure facilities, combined heat & power plant, extension to existing household recycling centre, landscaping, replacement and additional allotments, multi-functional green infrastructure including sports pitches (& associated changing facilities), informal open space, children's play areas, primary vehicular access from a new access from the A259 bridging over the railway line with additional access from Mill Lane & Toddington Lane. This application is the subject of an Environmental Impact Assessment & a departure from the development plan. This application affects a public right of way*
- 1.0.5 **Figure 1.1** below shows the approximate site location in relation to the local highway network.

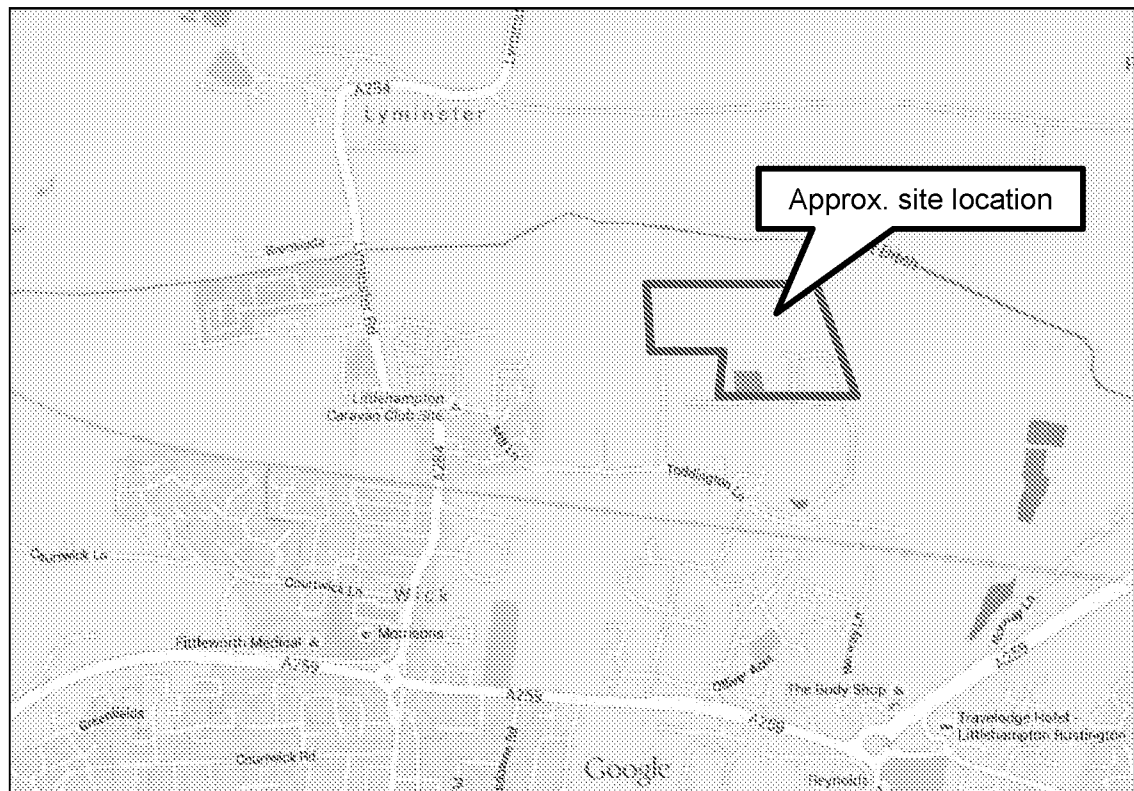


Figure 1.1: Approximate Site Location Plan

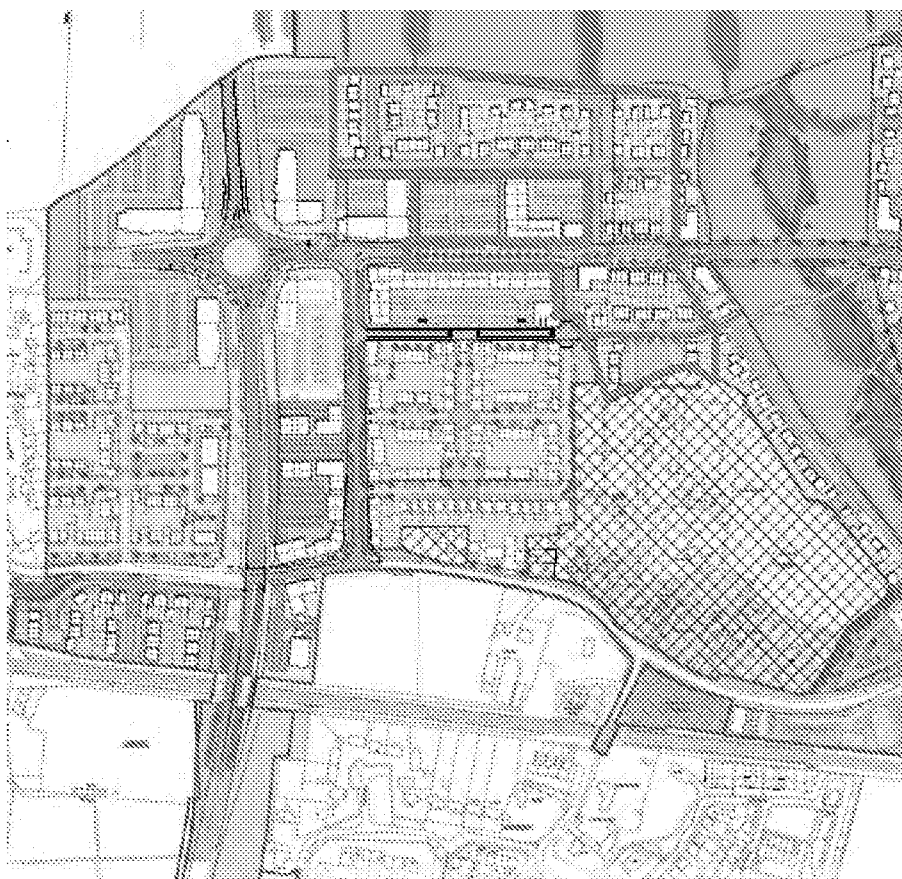


Figure 1.2: Extract from Illustrative Masterplan (Appendix A) Site Edged in Blue

1 General Details

1.1 Highway Improvement Scheme Name and Road Number

N/A – All New Roads

1.2 Type of Scheme

Residential Development

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
 GU22 8AR
 T: 01483 750508
 E:

1.6 Police Contact Details

(Required for Stage 3 only)
 N/A

1.7 Maintaining Agent (where applicable)

TBC

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 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

Tel: 01483 750508

E: abarnley@mayerbrown.co.uk

2 Scheme Description/Objective

2.1 *General (provide a brief description of the scheme and its objectives)*

- 2.1.1 The works are required as part of the Residential Development to provide parcels B2, B4 and C1. The works are shown on the drawings included at **Appendix A**.

2.2 *Design Standards Applied to the Scheme Design*

- 2.2.1 The scheme has been designed in accordance with the following design standards

- DfT's Manual for Streets
- CIHT's Manual for Streets 2
- Local Transport Note 1/07 – Traffic Calming
- Traffic Advisory Leaflet 9/99 – 20mph speed limits and zones.
- The Traffic Signs Regulations and General Directions 2016
- Department for Transport – LTN 2/08 Cycle Infrastructure Design October 2008
- Traffic Signs Manuals
- DfT's Inclusive Mobility
- DETR Guidance on the use of Tactile Paving Surfaces
- WSCC's Standard Details, Approved dated June 2016
- WSCC's Lighting of Developer Promoted Highway Schemes in West Sussex, Rev 11 Feb 2016

2.3 *Design Speeds*

- 2.3.1 The Design Speed for this scheme is 32kph (20mph)

2.4 *Speed Limit*

- 2.4.1 Un-adopted Road, posted speed limit 20mph, subject to WSCC & ADC Approval.

2.5 *Existing Traffic Flows/Queues*

- 2.5.1 N/A, All new roads.

2.6 *Forecast Traffic Flows*

- 2.5.2 Forecast traffic flows are included in the Transport Statement at **Appendix B**.

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

A shared footway / cycleway will be provided on the southern side of the Main Avenue which continues through the site as a future Phase. All other roads are proposed to have 2m footpaths on either side and will benefit from raised junctions, dropped kerbs and tactile paved crossing points as indicated on the scheme drawings. Small cul-de-sacs will be provided as shared surfaces.

3 Description of Locality

3.1 General Description

3.1.1 Parcels B2, B4 and C1 are an extension to the new residential development in North Littlehampton, the development is located to the north of Toddington Lane and will be the next Phase of residential development and will link to the previous B3/B5 phase of housing, situated to the south.

3.1.2 Access to the scheme will be through the existing privately maintained access road located along the northern boundary of the B3/B5 developments which links to the wider adopted public highway network via the IDR and Toddington Lane.

3.2 Relevant Factors which may Affect Road Safety

3.2.1 The Main Avenue through the scheme is proposed to be a tree lined avenue with visibility splays kept clear of landscaping. The entire scheme is intended to be subject to a 20mph speed limit with regular traffic calming features and off street parking.

3.3 Adjacent Land Uses

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

Address/Location	Land Use
Southern Side	Residential
Western Side	Proposed Commercial Centre
Northern Side	Existing open green space between development and the Black Ditch
East Side	Proposed Residential Development

3.3.2 For further details refer to the Land Use Parameter Plan provided at **Appendix A**.

4 Personal Injury Collision Analysis

- 4.0.1 This is a new development and therefore, there are no recorded personal injury collisions.

5 Departures and Relaxations from Standards

5.1.1 No Departures and Relaxations from the MfS standards have been identified.

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

- 6.0.1 It is confirmed that no previous Road Safety Audit Reports have been carried out for this Phase of the Development.

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

7.1 General

- 7.1.1 The access points into the development from the south and west are fixed due to their connection with other residential developments that have been constructed or are linked with other future highway schemes agreed in principle via the Planning Consent referred to in Section 1.

8 List of Included Documents and Drawings

8.1 Drawings (Provided at Appendix A)

Drawing Number	Title
519-GR.L_002	Illustrative Master Plan
A/PHLITTLE-INT.1/10-1 & 10-2	General Arrangement Drawing (1 of 2) and (2 of 2)
A/PHLITTLE-INT.1/11-1 & 11-2	Surface Treatment Drawings (1 of 2) and (2 of 2)
A/PHLITTLE-INT.1/TK-1 & TK-2	Anticipated Swept Path of a Large Refuse Vehicle and Large Car Accessing the Site (1 of 2) and (2 of 2)
519-GR.L_006	Parameter Plan – Land Use
LA101	Proposed Planting

8.2 Documents (Provided at Appendix B)

Reference	Title	Date
N/A	Transport Statement	August 2017

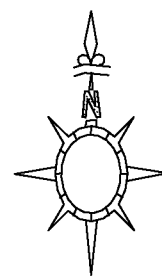
9 Checklist

9.1 Documents

RSA Brief	✓	Site Location Plan	✓
Scale Layout Plans	✓	Construction/Typical Details	N/A
Previous RSA Reports	N/A	Previous RSA Designer's Response Reports	N/A
Road Safety Audit Exception Reports	N/A	Departures and Relaxations from Standards	N/A
Traffic Signal Staging Refer to drawing ??	N/A	Personal Injury Collision Data	N/A
Personal Injury Collision Drawing	N/A	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	✓

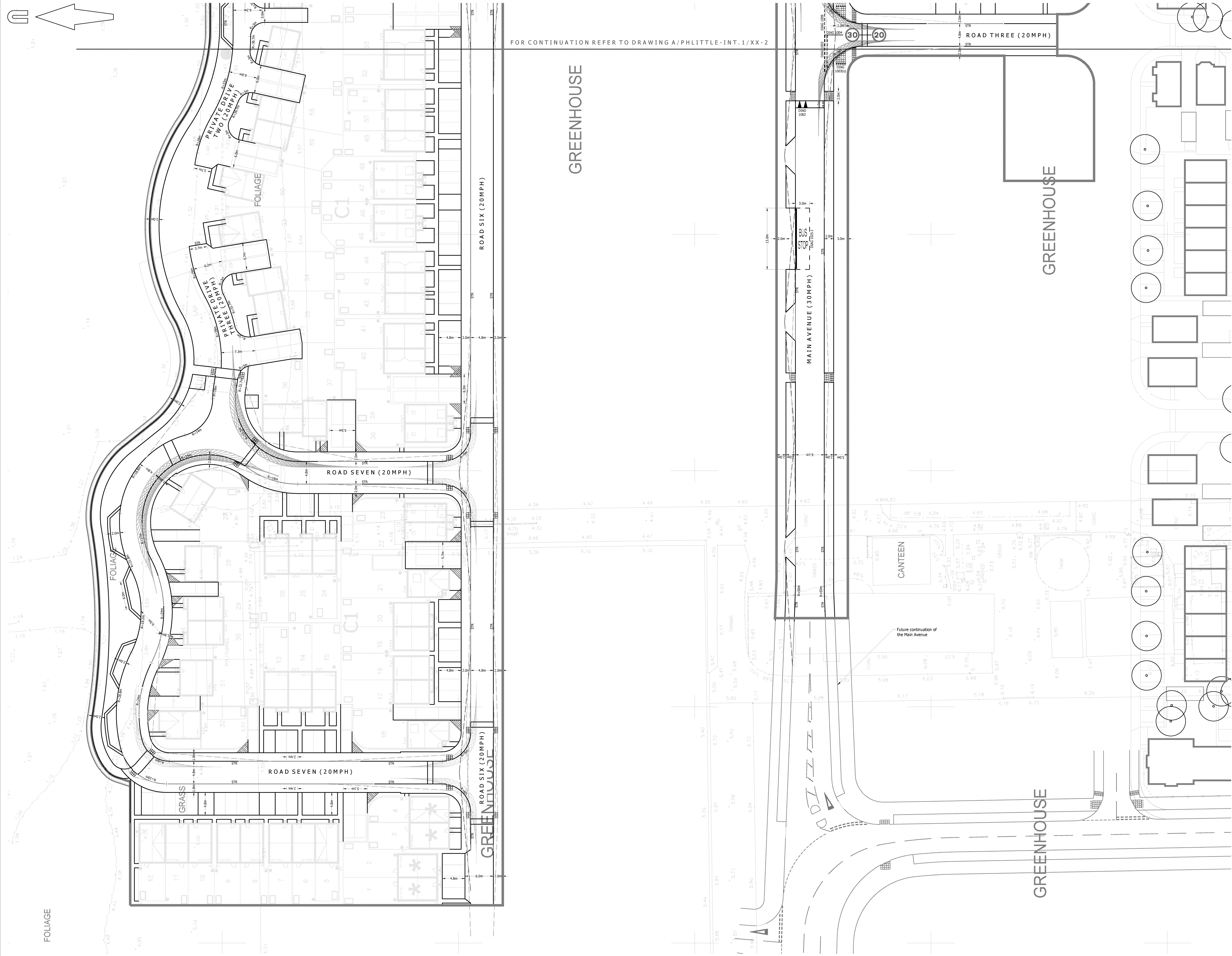
Grey = Not Mandatory for Stage 1 RSA

APPENDIX A: Drawings



Site:	Date:
Toddington Lane	27.06.16
Littlehampton	Scale:
	1:2500 @ A1
	Orig No:
	519-GR.L_002
Drawing Title:	
Illustrative Masterplan	
Drawing Status:	
PRELIMINARY	
Drawn:	
KJ	
Rev:	
-	

PERSIMMON
Together, we make a home
Persimmon Homes Thames Valley
Persimmon House, Knoll Road,
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Tel: 01276 808080



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A0 ORIGINAL

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KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- DIAG 1234 PROPOSED ROAD MARKING
- PROPOSED BUFF COLOURED TACTILE PAVING
- PROPOSED CORDUROY HAZARD WARNING PAVING
- JUNCTION VISIBILITY SPLAY 2.4m x 25m
- 25m PEDESTRIAN VISIBILITY SPLAYS
- 25m CYCLE VISIBILITY SPLAYS
- 11m FORWARD VISIBILITY AROUND BEND
- 14m FORWARD VISIBILITY AROUND BEND
- 17m FORWARD VISIBILITY AROUND BEND
- PEDESTRIAN INTERVISIBILITY SPLAY 2.4m x 2.4m
- SITE BOUNDARY

- NOTES:
- Based on topographic survey by WYG drawing numbered GGL/ADH029/LAY/01.
 - Site layout taken from PHTV drawing numbered 543_PL_SITE LAYOUT_REV 8.

PRELIMINARY
NOT FOR CONSTRUCTION

P7	Speed limit signs added and layout amended following updated site layout received from PHTV dated 22/08/2017. (CON)	AB	30/08/2017
P6	Layout amended following updated site layout received from PHTV dated 28/08/2017. (CON)	OJN	17/08/2017
P5	Layout updated following comments from WSCC dated 15/05/2017. (CON)	AB	07/07/2017
P4	Three locations added and drawing updated. (CON)	SF	24/03/2017
P3	Pedestrian/cycle visibility splays and signs added, bus stop relocated and road markings amended following comments from Stage 1 Road Safety Audit dated 17/03/2017. (CON)	AB	20/03/2017
P2	Drawing updated following new site layout received from PHTV dated 13/03/2017. (CON)	AB	17/03/2017
P1	Initial issue. (CON)	AB	28/02/2017

rev.	amendment	checked	date
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m3
mayer brown

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Telephone 01483 750 558 Fax 01483 750 437
wokingoffice@mayerbrown.co.uk

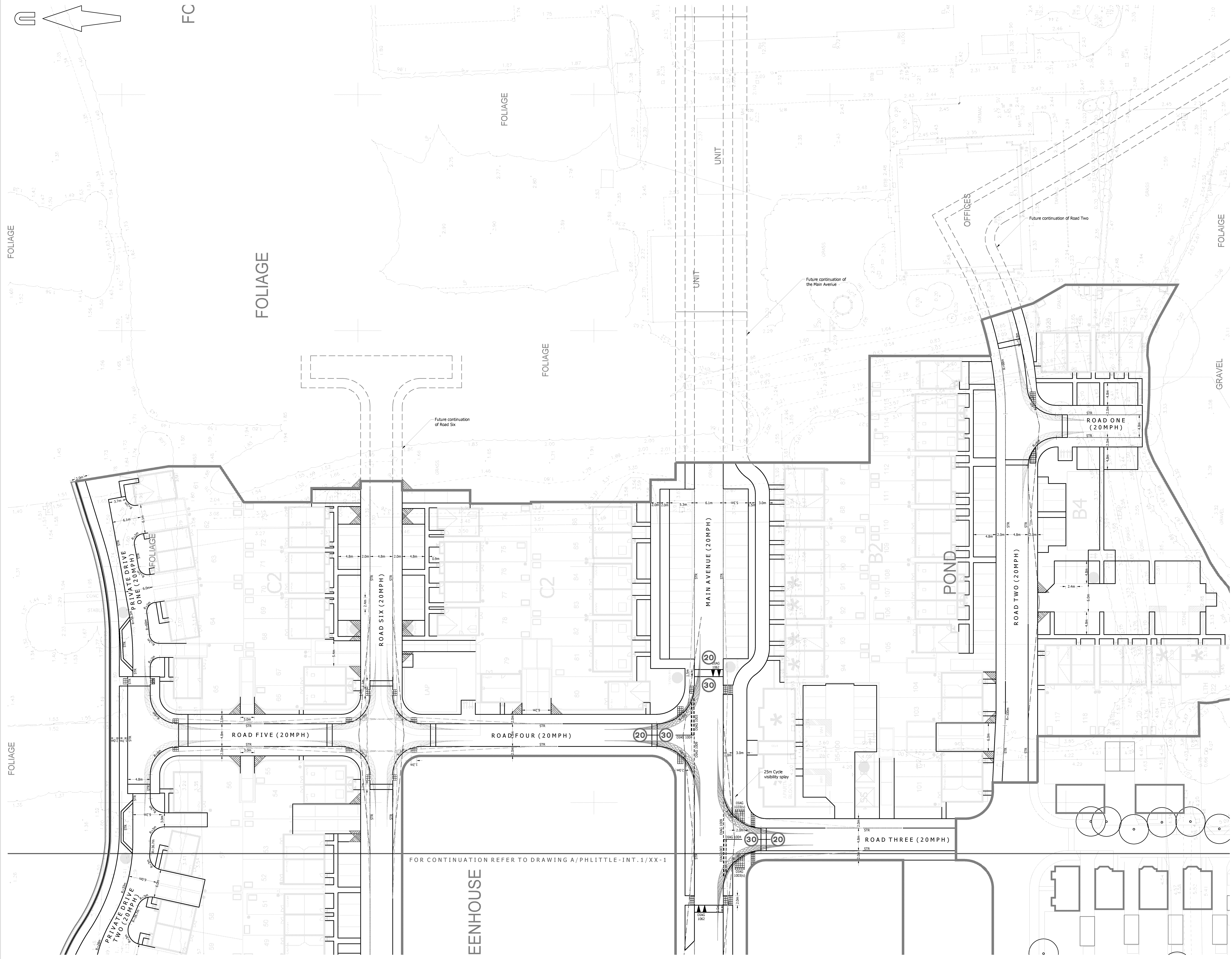
client
PERSIMMON HOMES THAMES VALLEY

project
NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

scale
1:250 drawn by OJN checked by AB

date
FEBRUARY 2017 cad file MASTER.DWG

title
GENERAL ARRANGMENT DRAWING (1 OF 2)



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A0 ORIGINAL

KEY

EXISTING KERB LINE

- PROPOSED KERB/EDGING LINE

PROPOSED DROPPED KERE

DIAG 1234 PROPOSED ROAD MARKING

 PROPOSED BUFF COLOURED TACTILE PAVING

PROPOSED CORDUROY HAZARD WARNING PAVING

- JUNCTION VISIBILITY SPLAY 2.4m x 25m

25m PEDESTRIAN VISIBILITY SPLAYS

25M CYCLE VISIBILITY SPLAYS

11M FORWARD VISIBILITY AROUND BEND

NOTES:

- Based on topographic survey by WYG drawing numbered GGL/A044029/LAY/01.
Site layout taken from PHTV drawing numbered 543_PL_SITE LAYOUT_REV B.

PRELIMINARY
NOT FOR CONSTRUCTION

P7	Speed limit signs added and layout amended following updated site layout received from PwT dated 22/08/2017. (CON)	AB	30/08/2017
P6	Layout amended following updated site layout received from PwT dated 17/08/2017. (CON)	CON	17/08/2017
P5	Layout updated following comments from WSCC dated 15/05/2017. (CON)	AB	07/07/2017
P4	Tree locations added and drawing updated.	SF	24/03/2017
P3	Pedestrian/cycle visibility salfers and signs added, but stop indicated and road markings amended following comments from Stage 1 Road Safety Audit dated 17/03/2017. (CON)	AB	20/03/2017
P2	Drawing updated following new site layout received from PwT dated 13/05/2017. (CON)	AB	19/03/2017
P1	Initial issue. (CON)	AB	28/02/2017

rev.	amendment	checked	date
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client
PERSIMMON HOMES THAMES VALLEY

project

NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

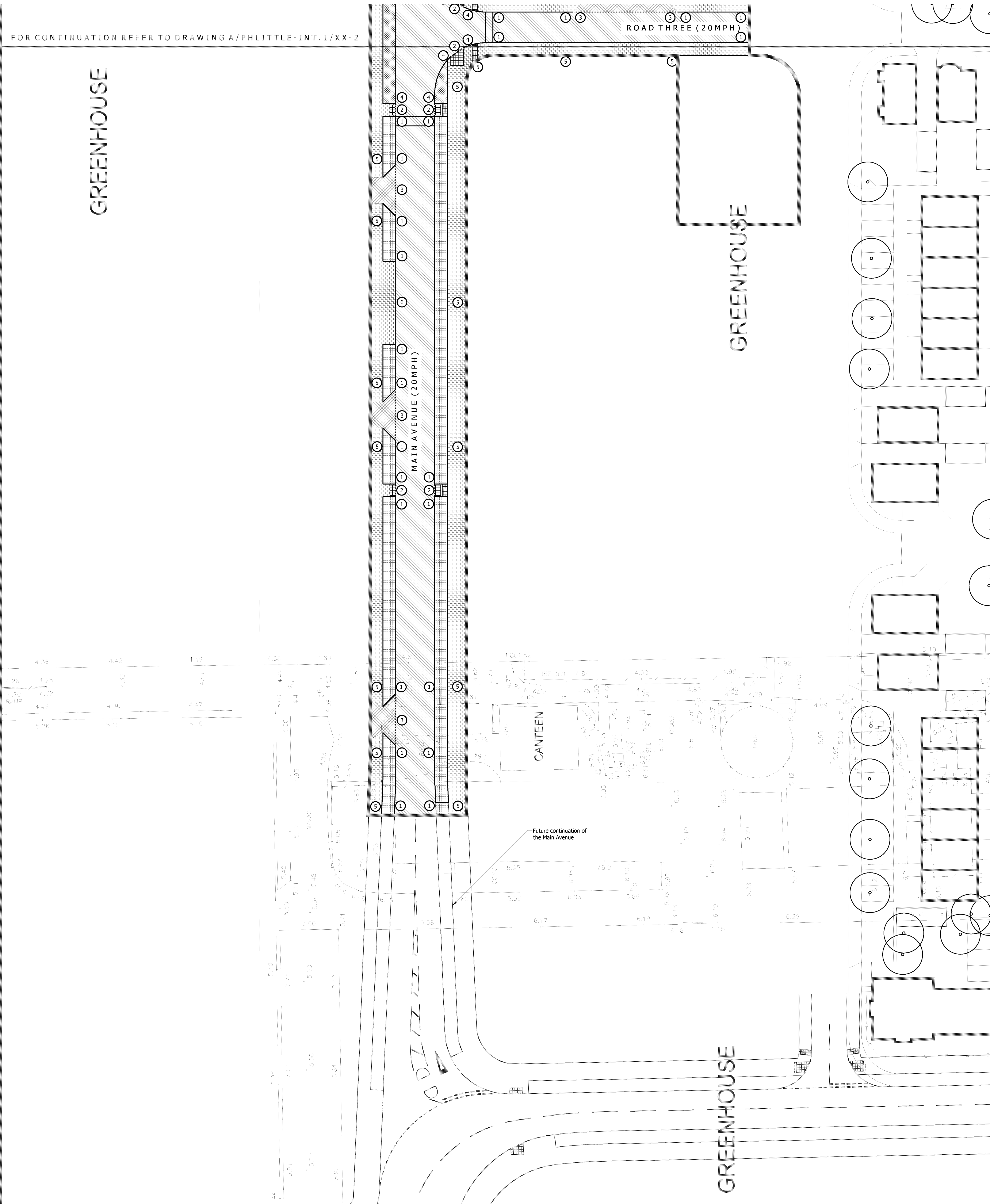
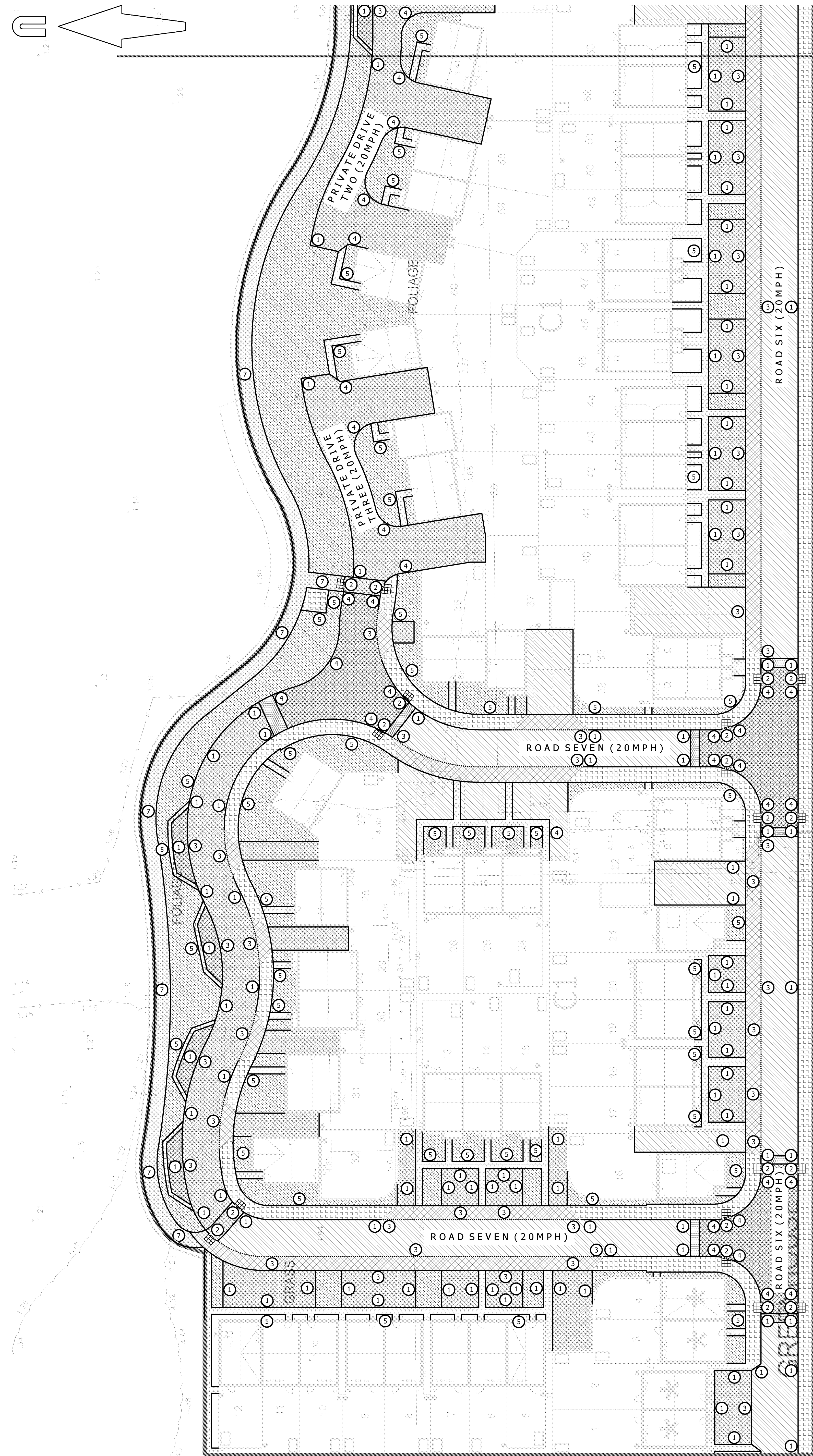
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date	FEBRUARY 2017	cad file	MASTER.DWG
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title

GENERAL ARRANGMENT DRAWING (2 OF 2)

drawing number	rev.
A/PHLITTLE-INT.1/10-2	P7



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A0 ORIGINAL

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED BITUMEN MACADAM CARRIAGEWAY SURFACING (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BLOCK PAVED CARRIAGEWAY SURFACING (BRINDLE) LAID IN HERRINGBONE PATTERN (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BLOCK PAVED RAMP (BRINDLE) CONSTRUCTION TYPE 5 (WSCC DETAIL S278/38/16)
- PROPOSED MARSHALLS BLOCK PAVED SHARED / PRIVATE DRIVE SURFACING (BRAKEN) LAID IN HERRINGBONE PATTERN (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BUFF COLOURED SLAB PRIVATE FOOTWAY CONSTRUCTION
- PROPOSED BITUMEN MACADAM FOOTWAY CONSTRUCTION (WSCC DETAIL S278/38/04)
- PROPOSED BITUMEN MACADAM FOOTWAY CROSSOVER TYPE 1 (WSCC DETAIL S278/38/07)
- PROPOSED RURAL FOOTPATH CONSTRUCTION (WSCC DETAIL S278/38/06)
- PROPOSED GRANITE SETT CONSTRUCTION WITH TREE FITS (REFER TO LANDSCAPE ARCHITECT DRAWINGS)
- PROPOSED SOFT LANDSCAPING (REFER TO LANDSCAPE ARCHITECT DRAWINGS)
- PROPOSED BUFF COLOURED TACTILE PAVING
- PROPOSED CORDUROY HAZARD WARNING PAVING
- SITE BOUNDARY
- KERB TYPES**
- TYPE 1 - H&2 - 125mm UPSTAND
- TYPE 2 - BN - 0 - 6mm UPSTAND (DROPPED CROSSING)
- TYPE 3 - BN - 25mm UPSTAND (VEHICULAR CROSSOVER)
- TYPE 4 - BN - 50mm UPSTAND (UPSTAND ON RAISED TABLE)
- TYPE 5 - EF - FLUSH
- TYPE 6 - BUS KERB - 160mm UPSTAND
- TYPE 7 - 40mm x 150mm TIMBER EDGING (WSCC DETAIL S278/38/06)

NOTES:

- Based on topographic survey by WYG drawing numbered GGL/A044029/LAY/01.
- Site layout taken from PHTV drawing numbered 543_PL_SITE LAYOUT_REV B received 23/08/2017.

PRELIMINARY

rev.	amendment	checked	date
P8	Areas of cycle/motorcycle parking and landscaping updated. (CIN)	CIN	23/08/2017
P7	Layout amended following updated site layout and comments received from PHTV dated 22/08/2017. (CIN)	AB	22/08/2017
P6	Layout amended following updated site layout received from PHTV dated 08/08/2017. (CIN)	CIN	17/08/2017
P5	Layout updated following comments from WSCC dated 15/05/2017. (CIN)	AB	07/07/2017
P4	Tree locations added and parking surfaces updated. (CIN)	SF	24/03/2017
P3	Kerb types added and surface treatments updated. (CIN)	AB	21/03/2017
P2	Drawing updated following new site layout received from PHTV dated 13/03/2017. (CIN)	AB	17/03/2017
P1	Initial issue. (CIN)	AB	28/02/2017

client
PERSIMMON HOMES THAMES VALLEY

project
NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

scale
1:250

drawn by
CIN

checked by
AB

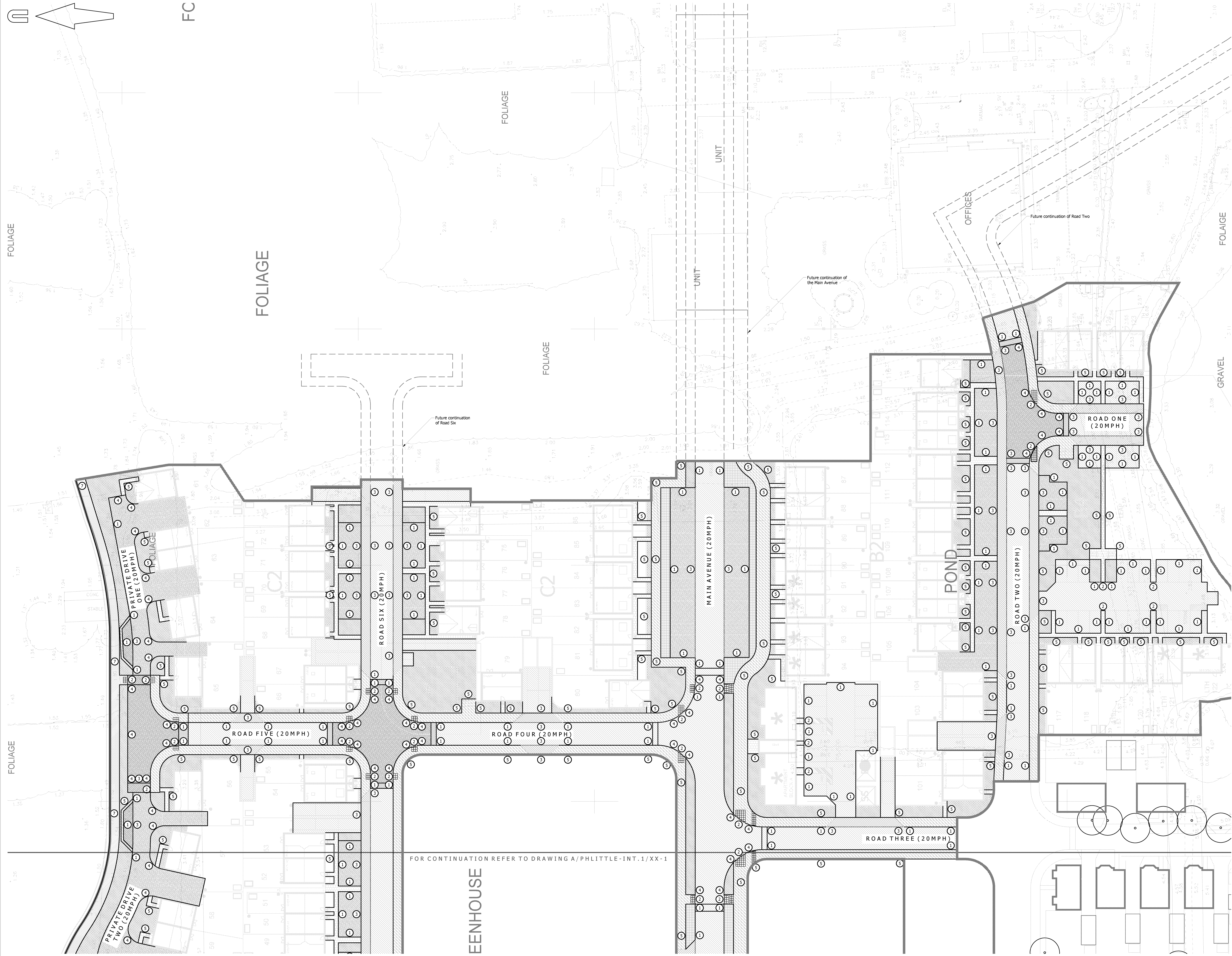
date
FEBRUARY 2017

cad file
MASTER.DWG

title
SURFACE TREATMENTS DRAWING (1 OF 2)

drawing number
A/PHLITTLE-INT.1/11-1

rev.
P8



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A0 ORIGINAL

KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED BITUMEN MACADAM CARRIAGEWAY SURFACING (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BLOCK PAVED CARRIAGEWAY SURFACING (BRINDLE) LAID IN HERRINGBONE PATTERN (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BLOCK PAVED RAMP (BRINDLE) CONSTRUCTION TYPE 5 (WSCC DETAIL S278/38/16)
- PROPOSED MARSHALLS BLOCK PAVED SHARED / PRIVATE DRIVE SURFACING (BRAKEN) LAID IN HERRINGBONE PATTERN (WSCC DETAIL S278/38/21)
- PROPOSED MARSHALLS BUFF COLOURED SLAB PRIVATE FOOTWAY CONSTRUCTION
- PROPOSED BITUMEN MACADAM FOOTWAY CONSTRUCTION (WSCC DETAIL S278/38/04)
- PROPOSED BITUMEN MACADAM FOOTWAY CROSSOVER TYPE 1 (WSCC DETAIL S278/38/07)
- PROPOSED RURAL FOOTPATH CONSTRUCTION (WSCC DETAIL S278/38/06)
- PROPOSED GRANITE SETT CONSTRUCTION WITH TREE FITS (REFER TO LANDSCAPE ARCHITECT DRAWINGS)
- PROPOSED SOFT LANDSCAPING (REFER TO LANDSCAPE ARCHITECT DRAWINGS)
- PROPOSED BUFF COLOURED TACTILE PAVING
- PROPOSED CORDUROY HAZARD WARNING PAVING

SITE BOUNDARY

- TYPE 1 - H&E - 125mm UPSTAND
- TYPE 2 - BN - 0 - 6mm UPSTAND (DROPPED CROSSING)
- TYPE 3 - BN - 25mm UPSTAND (VEHICULAR CROSSOVER)
- TYPE 4 - BN - 50mm UPSTAND (UPSTAND ON RAISED TABLE)
- TYPE 5 - EF - FLUSH
- TYPE 6 - BUS KERB - 160mm UPSTAND
- TYPE 7 - 40mm x 150mm TIMBER EDGING (WSCC DETAIL S278/38/06)

NOTES:

- Based on topographic survey by WYG drawing numbered GGL/A044029/LAY/01.
- Site layout taken from PHTV drawing numbered 543_PL_SITE LAYOUT_REV B received 23/08/2017.

PRELIMINARY

P8	Areas of cycle/motorcycle parking and landscaping updated. (CON)	QJN	23/08/2017
P7	Layout amended following updated site layout and comments received from PHTV dated 22/08/2017. (CON)	AB	22/08/2017
P6	Layout amended following updated site layout received from PHTV dated 08/08/2017. (CON)	QJN	17/08/2017
P5	Layout updated following comments from WSCC dated 15/05/2017. (CON)	AB	07/07/2017
P4	Tree locations added and parking surfaces updated. (CON)	SF	24/03/2017
P3	Kerb types added and surfaces treatments updated. (CON)	AB	21/03/2017
P2	Drawing updated following new site layout received from PHTV dated 13/03/2017. (CON)	AB	17/03/2017
P1	Initial issue. (CON)	AB	28/02/2017

rev.	amendment	checked	date
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client
PERSIMMON HOMES THAMES VALLEY

project
NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

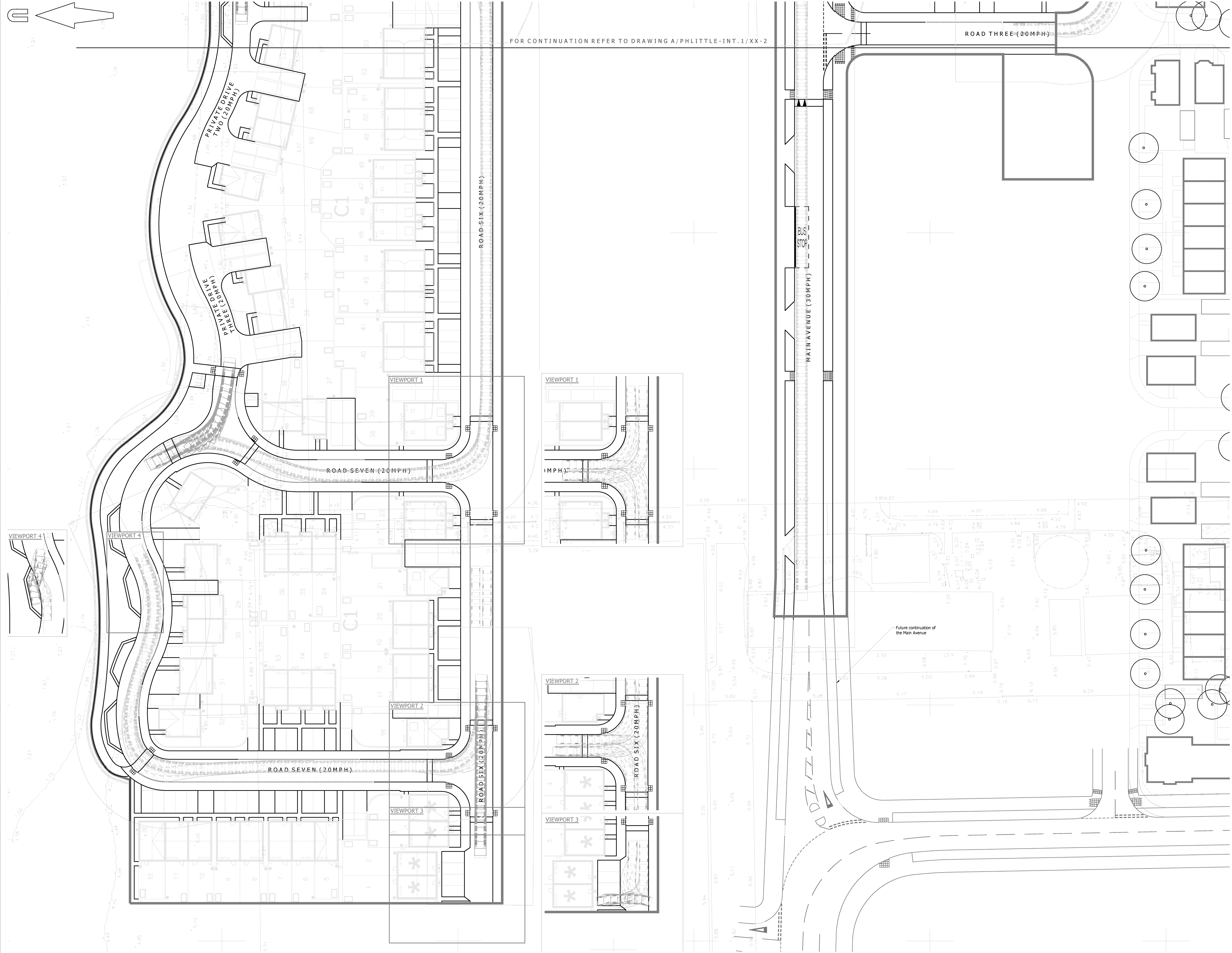
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date FEBRUARY 2017 cad file MASTER.DWG

title

SURFACE TREATMENTS DRAWING (2 OF 2)

drawing number A/PHLITTLE-INT.1/11-2 rev. P8



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KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- PROPOSED ROAD MARKING
- PROPOSED BUFF COLOURED TACTILE PAVING
- PROPOSED CORDUROY HAZARD WARNING PAVING
- 10m REFUSE DRAG DISTANCE OFFSET
- REFUSE COLLECTION POINT
- SITE BOUNDARY

5.07m
1.82m
1.32m
0.31m
1.81m
4.06m
5.50m

5.07m
1.82m
1.32m
0.31m
1.81m
4.06m
5.50m

9.96m
2.45m
2.45m
0.36m
2.50m
4.06m
5.50m

NOTES:

- Based on topographic survey by WYG drawing numbered GGL/A044029/LAY/01.
- Site layout taken from PHTV drawing numbered 543_PL SITE LAYOUT_REV 8.

PRELIMINARY
NOT FOR CONSTRUCTION

P4	Drawing amended and swept paths updated following updated layout received from PHTV dated 23/08/2017. (CON)	AB	31/08/2017
P3	Drawing updated following Stage 3 Road Safety Audit received 17/03/2017. (CON)	SF	24/03/2017
P2	Drawing updated following new site layout received from PHTV dated 13/03/2017. (CON)	AB	17/03/2017
P1	Initial issue. (CON)	AB	28/02/2017

rev.	amendment	checked	date

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project
NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

scale
1:250

drawn by
QJN

checked by
AB

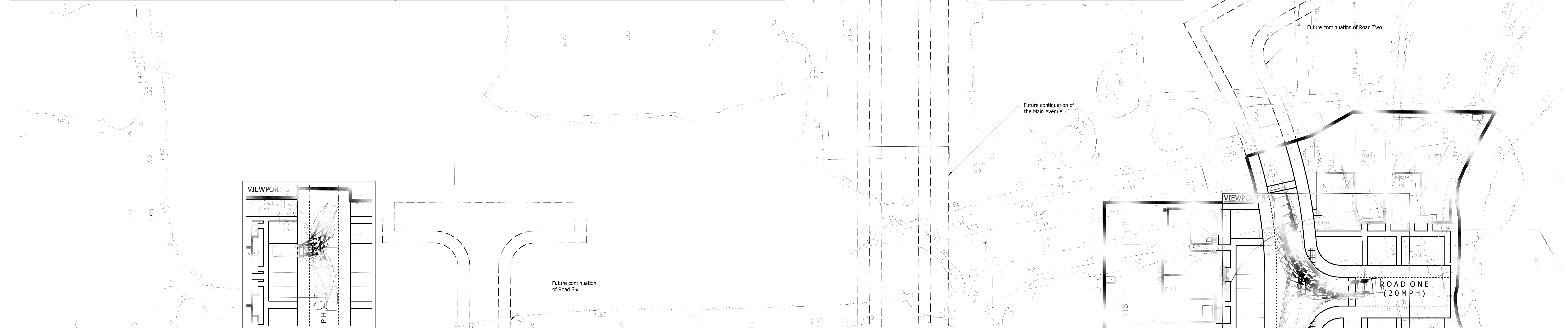
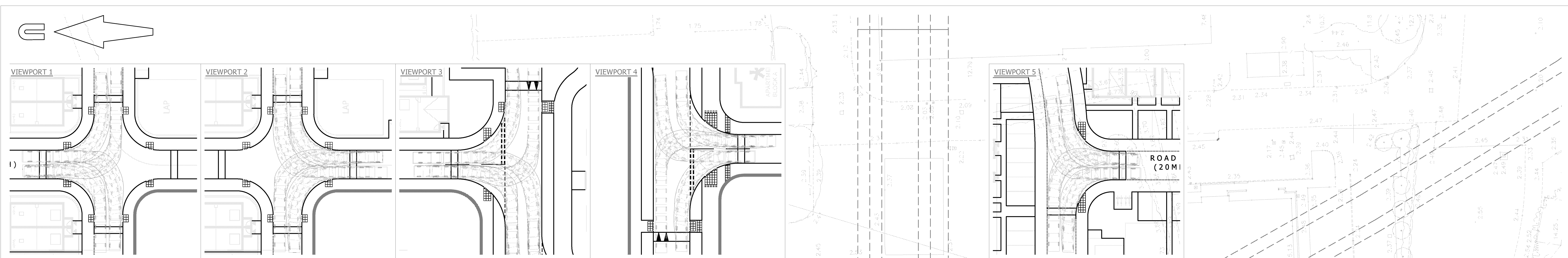
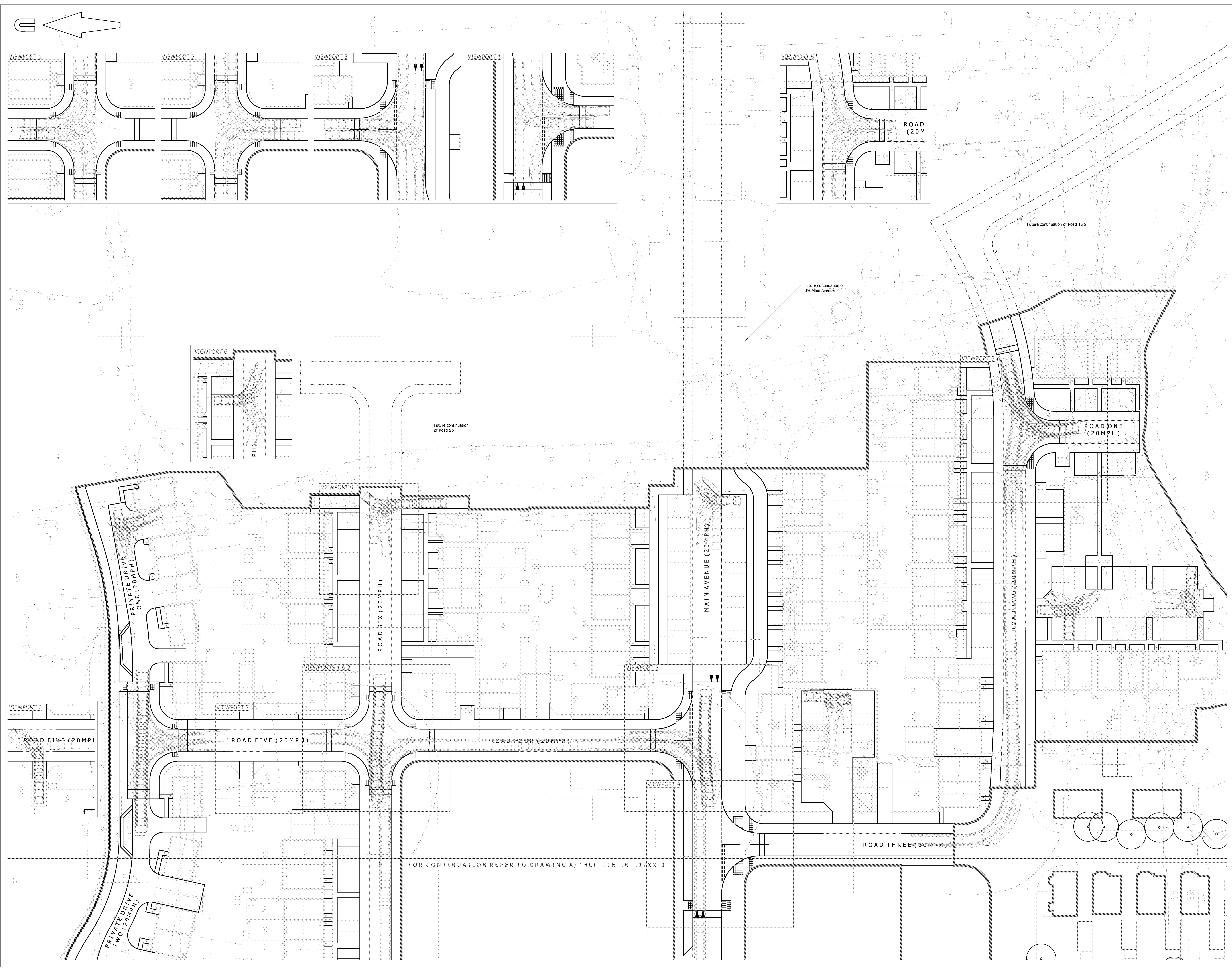
date
FEBRUARY 2017

cad file
MASTER.DWG

title
ANTICIPATED SWEEP PATH OF A LARGE REFUSE VEHICLE & LARGE CAR ACCESSING THE SITE (1 of 2)

drawing number
A/PHLITTLE-INT.1/TK-1

rev.
P4



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KEY

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- PROPOSED ROAD MARKING
- PROPOSED BUFF COLOURED TACTILE PAVING
- PROPOSED CORDUROY HAZARD WARNING PAVING
- 10m REFUSE DRAG DISTANCE OFFSET
- REFUSE COLLECTION POINT
- LIMIT OF WORKS

Large Car (2006)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

5.079m
1.822m
1.525m
0.310m
1.831m
4.006
5.500m

Large Refuse Vehicle (3 axle)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to lock time
Kerb to Kerb Turning Radius

9.960m
2.450m
3.414m
0.366m
2.500m
4.006
5.500m

NOTES:

- Based on topographic survey by WYG drawing numbered GGL/ADH4029/LAY/01.
- Site layout taken from PHTV drawing numbered 543_PL SITE LAYOUT_REV 8.

PRELIMINARY
NOT FOR CONSTRUCTION

P4	Drawing amended and swept paths updated following updated layout received from PHTV dated 12/08/2017. (CON)	AB	31/08/2017
P3	Drawing updated following Stage 1 Road Safety Audit received 17/03/2017. (CON)	SF	24/03/2017
P2	Drawing updated following new site layout received from PHTV dated 13/03/2017. (CON)	AB	17/03/2017
P1	Initial issue. (CON)	AB	28/02/2017

rev.	amendment	checked	date

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client
PERSIMMON HOMES THAMES VALLEY

project
NORTH LITTLEHAMPTON PHASE 2
PARCEL C1 AND PART PARCELS, B2, B4 & C2

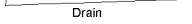
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date
FEBRUARY 2017 cad file MASTER.DWG

title
ANTICIPATED SWEEP PATH OF A LARGE REFUSE VEHICLE & LARGE CAR ACCESSING THE SITE (2 of 2)

drawing number
A/PHLITTLE-INT.1/TK-2

rev.
P4



-	-	-
-	-	-
A	Non-Residential land area (blue hatch) amended.	12.09.16



Drawing Title:
Parameter Plan - Land use

Drawing Status:	Drawn:
SUBMITTED	KJ
	Rev:
	A

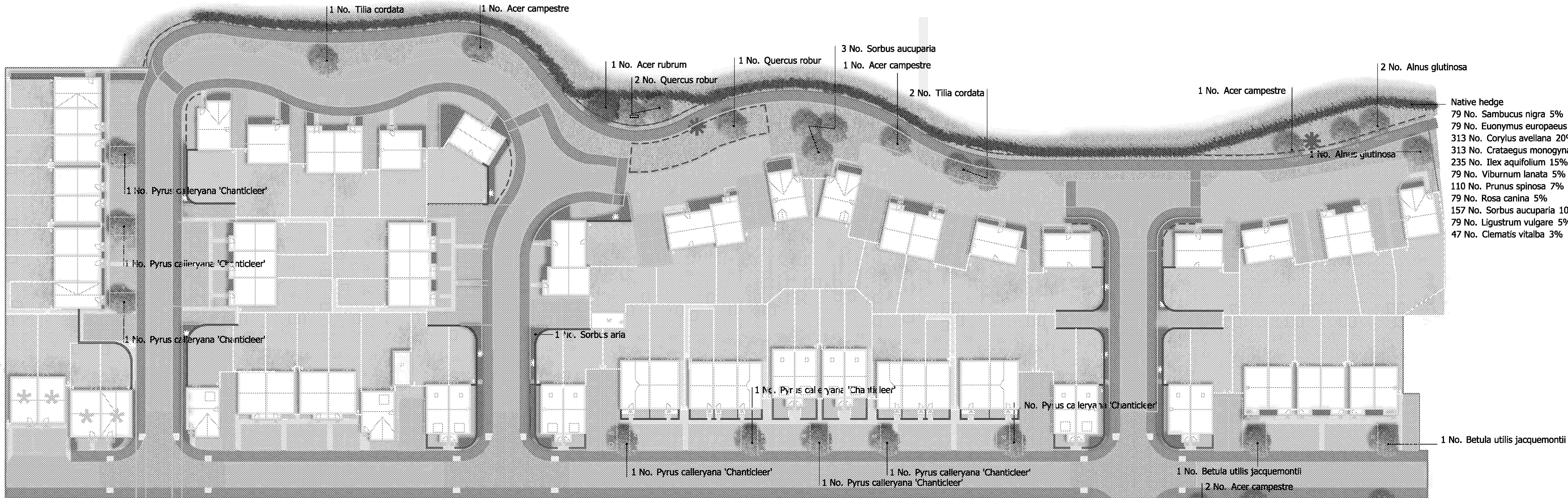


creative minds safe hands

Persimmon Homes

North Littlehampton: Parcel C1 and part Parcels B2, B4 and C2

Proposed planting: LA101 1 of 5



Native hedge
79 No. Sambucus nigra 5%
79 No. Euonymus europaeus 5%
313 No. Corylus avellana 20%
313 No. Crataegus monogyna 20%
235 No. Ilex aquifolium 15%
79 No. Viburnum lanata 5%
110 No. Prunus spinosa 7%
79 No. Rosa canina 5%
157 No. Sorbus aucuparia 10%
79 No. Ligustrum vulgare 5%
47 No. Clematis vitalba 3%

Outline specification

Ground Preparation:
Protection of existing woodland, trees and hedges against damage to be in accordance with the BS 5837:2012 - Trees in relation to design, demolition and construction - Recommendations. Protective fence to be approved.

Excavations to B.S. 8000 part 1:1989. Excavated material removed off-site; good quality subsoil/topsoil stored on-site for re-use.

Landscape planting areas to have a minimum depth of soil of 500mm and grass areas will have 300mm.

Loosen formation level with single tine ripper, driven 450mm deep at 1m centres, when ground conditions are dry.

Supply approved imported subsoil to B.S. 3601:2013 Specification for subsoil and requirements for use - Multipurpose subsoil to make up any deficiency in on-site subsoil.
Spread and level to depth of: 200mm for planting areas
200mm for grass areas

Supply approved imported topsoil to B.S. 3882:2015

Specification for topsoil - Multipurpose topsoil to make up for any deficiency in on-site topsoil.
Spread and level to depth of: 300mm for planting areas
100mm for grass areas

Excavate planting pits to the following dimensions:
Feathered Trees: 500 x 500 x 500mm depth
Standard/Selected Standard Trees: 1000 x 1000 x 500mm depth
Heavy/Extra Heavy Standard Trees: 1200 x 1200 x 700mm depth
Shrubs: 300 x 300 x 300mm depth

Backfill tree pits with 100/300mm depth subsoil and 400mm topsoil including Melcourt Topgrov peat free planting compost or similar approved at a rate of 0.125m³/plt.

Cultivate all landscape areas to a loose and friable tilth suitable for grass seeding or planting.

Collect and remove from site all stones, builders' rubble and other deleterious material over 50mm in any dimension.

Grass Areas:
Supply and spread pre-seeding N:P:K fertiliser (10:15:10) at a rate of 30g/m²

Grass areas to be sown at a rate of 35g/m² with a suitable grass seed mix such as Germinal A19. Initial grass cutting and edge trimming down to 50mm

Species Rich Turf:
Do not spread fertiliser onto the turf. Supply and lay Wildflower Turf Species Rich Lawn, or similar, containing native wildflowers.

Planting Areas:
Tree planting pits to be in accordance with BS 8545 2014: Trees from nursery to independence in the landscape - recommendations.

Plant specification to be in accordance with the HTA National Plant Specification: 03/02

Supply and plant, incorporating slow release fertiliser N:P:K -

4:19:10 ENMAG or similar approved at the following rates:
Feathered Trees: 100g / tree pit
Standard/Selected Standard Trees: 100g / tree pit
Heavy/Extra Heavy Standard Trees: 130g / tree pit
Shrubs: 70g / m²

Provide and fix tree stakes and ties to the following dimensions:
Feathered Trees: overall length 1250mm; height above ground: 600mm
Standard/Selected Standard Trees: overall length 1500; height above ground: 750mm
Heavy/Extra Heavy Standard Trees: overall length 1500; height above ground: 750mm

Provide and spread evenly over all planting areas an organic graded bark flakes or similar approved bark mulch to a depth of 50mm.

Hedge planting
Planting to be carried out on a random mix basis subject to the following conditions:
• Tree species: max. 5 no. plants & min. 3 no. plants per block

• Shrub species: max. 7 no. plants & min. 3 no. plants per block.

Maintenance:
All landscape areas to be maintained in accordance with B.S. 7370 Part 3:1991 and Part 4:1993; including weed control, and adjustment to tree stakes and ties.

General Notes:

Substitutions, if made, should be similar in size, form and water demand.

Plants shall be arranged to avoid straight lines and geometric patterns.

Ecology:
Refer to ECOSA ecological management plan.

Log piles: two log piles for reptile habitat shall be installed within the greenspace areas along the northern edge of the site, to be constructed by an ecologist.

Plant schedule Trees and hedges

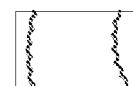
Trees				
Number	Species	Specification	Height	Density
7 No.	Acer campestre	Standard :3 brks :2x :B	250-300cm	Counted
2 No.	Acer rubrum	Semi-Mature :Clear Stem min. 200 :3x/4x :RB	500-550cm	Counted
3 No.	Alnus glutinosa	Semi-Mature :3x/4x :RB	500-550cm	Counted
15 No.	Betula utilis Jacquemontii	Extra Heavy Standard :5 brks :3x	425-600cm	Counted
224 No.	Carpinus betulus	Feather :3 brks :2x :B	150-175cm 0.3Ctr Double Staggered at 0.25m offset	Counted
18 No.	Carpinus betulus 'Fastigiata'	Semi-Mature :Clear Stem min. 200 :3x/4x :RB	500-550cm	Counted
12 No.	Pyrus calleryana 'Chanticleer'	Heavy Standard :5 brks :3x :RB	350-425cm	Counted
3 No.	Quercus robur	Semi-Mature :Clear Stem min. 200 :3x/4x :RB	500-550cm	Counted
5 No.	Sorbus aria	Selected Standard :4x :B	300-350cm	Counted
3 No.	Sorbus aucuparia	Extra Heavy Standard :5 brks :3x :RB	400-450cm	Counted
3 No.	Tilia cordata	Semi-Mature :Clear Stem min. 200 :3x/4x :RB	500-550cm	Counted

Native hedge				
Number	Species	Specification	Height	Density
62 No.	Clematis vitalba	Several Shoots :2 brks :C	60-80cm	0.3Ctr Double Staggered at 0.25m offset
407 No.	Corylus avellana	1+1 or 1/1 :Branched : :2 brks :B	40-60cm	0.3Ctr Double Staggered at 0.25m offset
407 No.	Crataegus monogyna	1+1 or 1/1 :Transplant - seed raised :B	40-60cm	0.3Ctr Double Staggered at 0.25m offset
103 No.	Euonymus europaeus	1+2 :Branched :5 brks :B	60-80cm	0.3Ctr Double Staggered at 0.25m offset
306 No.	Ilex aquifolium	C: Leader and laterals	40-60cm	0.3Ctr Double Staggered at 0.25m offset
103 No.	Ligustrum vulgare	1+1 or 1/1 :Branched :3 brks :B	60-80cm	0.3Ctr Double Staggered at 0.25m offset
143 No.	Prunus spinosa	1+1 or 1/1 :Branched : :2 brks :B	40-60cm	0.3Ctr Double Staggered at 0.25m offset
103 No.	Rosa canina	1+1 or 1/1 :Branched : :3 brks :B	60-80cm	0.3Ctr Double Staggered at 0.25m offset
103 No.	Sambucus nigra	1+1 or 1/1 :Branched :3 brks :B	60-80cm	0.3Ctr Double Staggered at 0.25m offset

Key



Site boundary



Existing vegetation retained

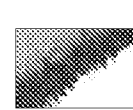
Soft landscape proposals



Tree planting: refer drawing LA101 for details and tree and hedge plant schedule



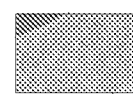
Shrub planting: refer to drawing LA104 for plant schedule



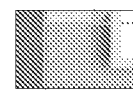
Native hedge planting: refer to drawing LA101 for details and the plant schedule



Climbing plants: refer to LA104 for plant schedule

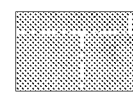


Species rich turf: refer to LA101 for specification

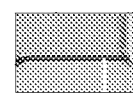


Amenity grass: refer to LA101 for specification

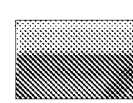
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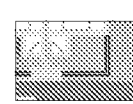
Timber fence 1.8m high: refer drawing LA107 for details



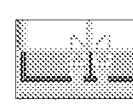
1.8m wall: refer drawing LA107 for details



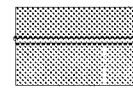
Low level wall: refer drawing LA107 for details



Low level railing with brick piers: refer drawing LA107 for details



Metal railing: refer drawing LA107 for details



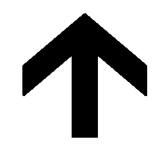
High level wall allowing overlooking of carparking spaces: refer drawing LA107 for details



Estate railing: refer drawing LA107 for details

0 5 10 15 20 25 50 metres

Scale 1:500 @ A1



North

A088461 LA100-107 Rev [B].dwg

24 August 2017

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APPENDIX B: Transport Statement

APPENDIX D: Previous Stage 1 Road Safety Audit



PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 & C1
LITTLEHAMPTON, WEST SUSSEX

STAGE 1 - ROAD SAFETY AUDIT

MARCH 2017



**PERSIMMON HOMES THAMES VALLEY
NORTH LITTLEHAMPTON
INTERNAL WORKS, PARCELS B2, B4 & C1
LITTLEHAMPTON, WEST SUSSEX**

STAGE 1 - ROAD SAFETY AUDIT

MARCH 2017

Project Code:	S/PHLITTLE-INT.1.1.6a
Prepared by:	Martyn Parr
Approved by:	Ken Fry
Issue Date:	March 2017
Status:	FINAL

Mayer Brown Limited, Lion House, Oriental Road, Woking, Surrey GU22 8AR



**Persimmon Homes Thames Valley
North Littlehampton
Internal Works, Parcels B2, B4 & C1
Littlehampton, West Sussex
Stage 1 - Road Safety Audit**

List of Contents

Sections

1	Introduction	1
2	Items Raised at the Stage 1 Road Safety Audit.....	3
3	Audit Team Statement.....	6

Appendices

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

1 Introduction

- 1.1 This report results from a Stage 1 Road Safety Audit carried out following instructions from Mayer Brown Limited's Design Team based in Woking. The Road Safety Audit was carried out on 17th March 2017.
- 1.2 The Road Safety Audit Team membership was as follows:
- | | |
|-------------|---|
| Ken Fry | I Eng, FIHE, RegRSA (IHE), HE CoC
Principal Consultant - Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in April 2015) |
| Martyn Parr | MSoRSA, RegRSA (IHE), MCIHT, HECOC
Road Safety Manager – Mayer Brown Limited
(Certificate of Competency in Road Safety Audit gained in February 2015) |
- 1.3 The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided by Mr Oliver Nevett, included as Appendix C. The Audit Team has not been made aware of any departures from standard.
- 1.4 The Design Organization have advised that a site inspection is not required at this stage. It is understood that the works subject to this Road Safety Audit Report will not be subject to a Section 38 agreement. In addition, the works comprise a highway layout entirely within a development site, not an improvement scheme affected by existing traffic conditions, so this is considered to make no difference to the audit findings
- 1.5 The terms of reference of the Road Safety Audit are as described in HD 19/15, although in this case the members of the Audit Team have not carried out a site inspection. 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.
- 1.6 All comments and recommendations are referenced on a reduced-scale copy of plans 'A/PHLITTLE-INT.1/10-1 P2' and 'A/PHLITTLE-INT.1/10-2 P2' supplied with the Road Safety Audit Brief, given as Appendix B to this report.

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- 1.7 The proposals comprise the demolition of existing buildings and structures, and redevelopment to provide residential, business, neighbourhood centre and community uses, green infrastructure, new highway infrastructure and improvements to existing local highway network.
- 1.8 The Main Avenue through the scheme is proposed to be a tree lined avenue with visibility splays kept clear of landscaping. The entire scheme is intended to be subject to a 20mph speed limit with regular traffic calming features and off street parking. A bus route is proposed through parts of the works subject to this Audit Report.

2 Items Raised at the Stage 1 Road Safety Audit

General

2.1 Problem

Location: General

Summary: Visibility splays

Junction visibility splays have not been detailed consistently on the drawings submitted at this stage. A number of splays are shown to the channel line and others are shown to the centre line / offside lane. Forward visibility splays have not been detailed. Pedestrian inter-visibility splays have not been detailed on all of the general arrangement drawings provided.

It will be important that adequate splays are provided, this should include junction, pedestrian inter-visibility and forward visibility splays.

Recommendation

Provide visibility splays in accordance with relevant design standards and ensure that the splays will be kept free from obstruction. Any vegetation within the splays should be maintained to ensure that it does not extend beyond a vertical height of 0.6m. If planters are to be provided then these, together with any foliage which they contain, should also not extend beyond a vertical height of 0.6m.

2.2 Problem

Location: Main Avenue (Please refer to reference point 2.2 in Appendix B)

Summary: Possible injury to bus passengers as a result of vertical deflection

A raised table at this location is likely to be detrimental to bus passenger safety as vertical deflections will occur as passengers rise from seats and / or use the stairs within the bus, on approach to the bus stop.

Recommendation

Either:

1. Relocate bus stop away from raised table
2. Relocate raised table away from bus stop

2.3 Problem

Location: Uncontrolled crossing point east of bus stop (Please refer to reference point 2.3 in Appendix B)

Summary: Crossing pedestrians masked by stationary bus

If a bus is stationary within the bus stop then the crossing point sited to the east of it will be masked from drivers approaching from the west. This could result in pedestrians stepping out front of a moving vehicle, potentially resulting in injury.

The Audit Team have considered the same issue with the crossing located to the west of the bus stop. However, it was agreed that this did not provide a safety risk as westbound drivers will already be slowing significantly for the raised table prior to the crossing point.

Recommendation

Relocate eastern crossing point away from the bus stop, ensure appropriate forward visibility splays to the pedestrian landing points can be achieved.

Road Markings

2.4 Problem

Location: General

Summary: Junction markings within the internal residential development

The priorities indicated are unnatural and would probably quickly be disregarded by residents and frequent users. The change in surface and raised junction tables would add an element of uncertainty that might reduce speeds and increase concentration to those unfamiliar with the development.

Recommendation

Omit junction markings on raised tables / block paving within the internal road network of the development site.

2.5 Problem

Location: General

Summary: Ramp warning triangles

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There are a number of ramps / raised tables provided within the internal residential layout. It will be important that approaching drivers / riders are able to identify these ramps on approach so that they can adjust the speed / riding position as appropriate to reduce the risk of losing control.

Recommendation

Provide white warning triangles (Diag 1062) on all speed reducing ramps.

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3 Audit Team Statement

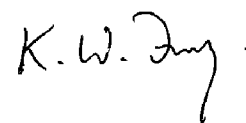
3.0 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out as described in HD 19/15, with the exception that no site visit was carried out because this is a new development site containing no existing roads.

ROAD SAFETY AUDIT TEAM LEADER

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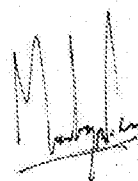


Date 17/03/17

ROAD SAFETY AUDIT TEAM MEMBER

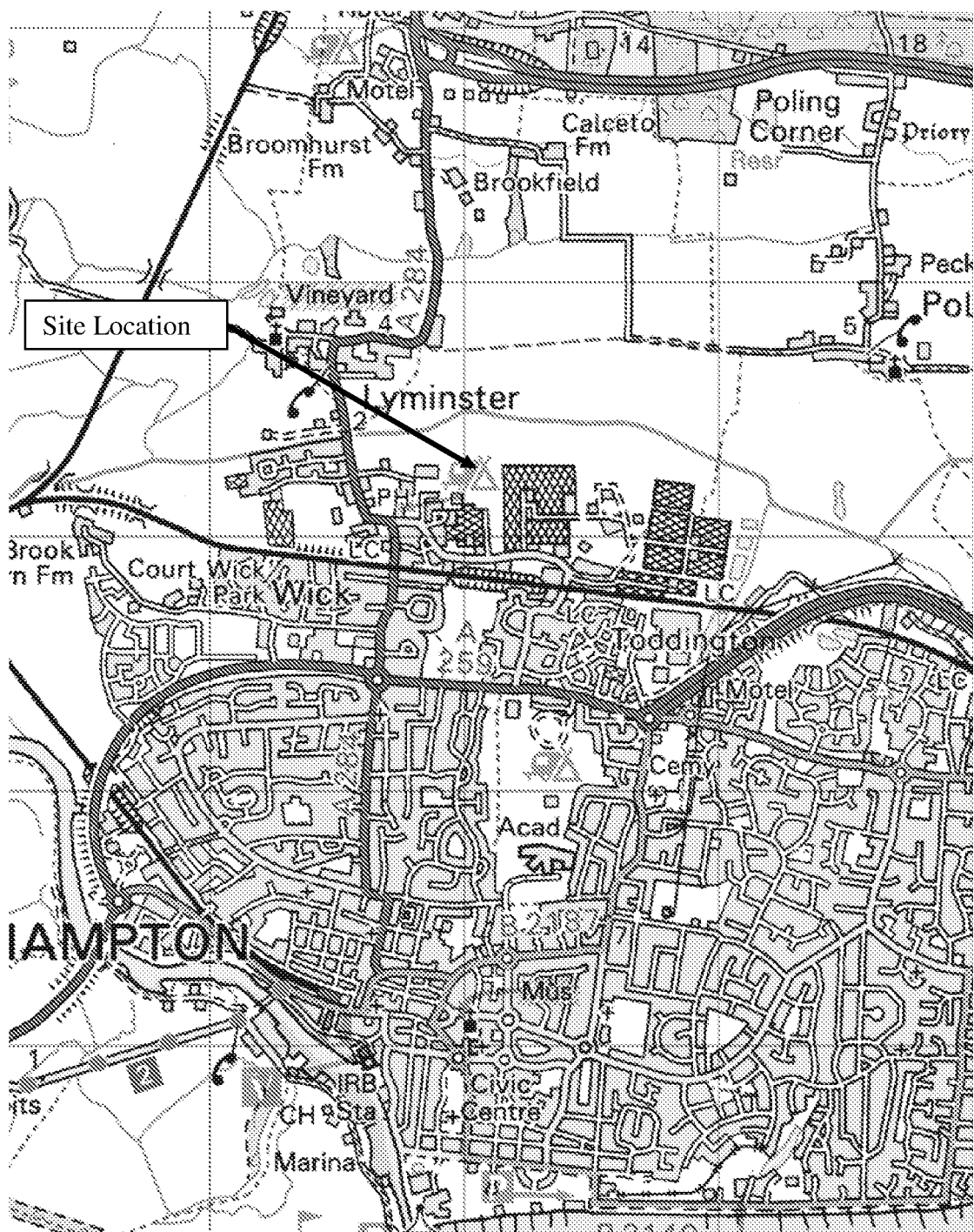
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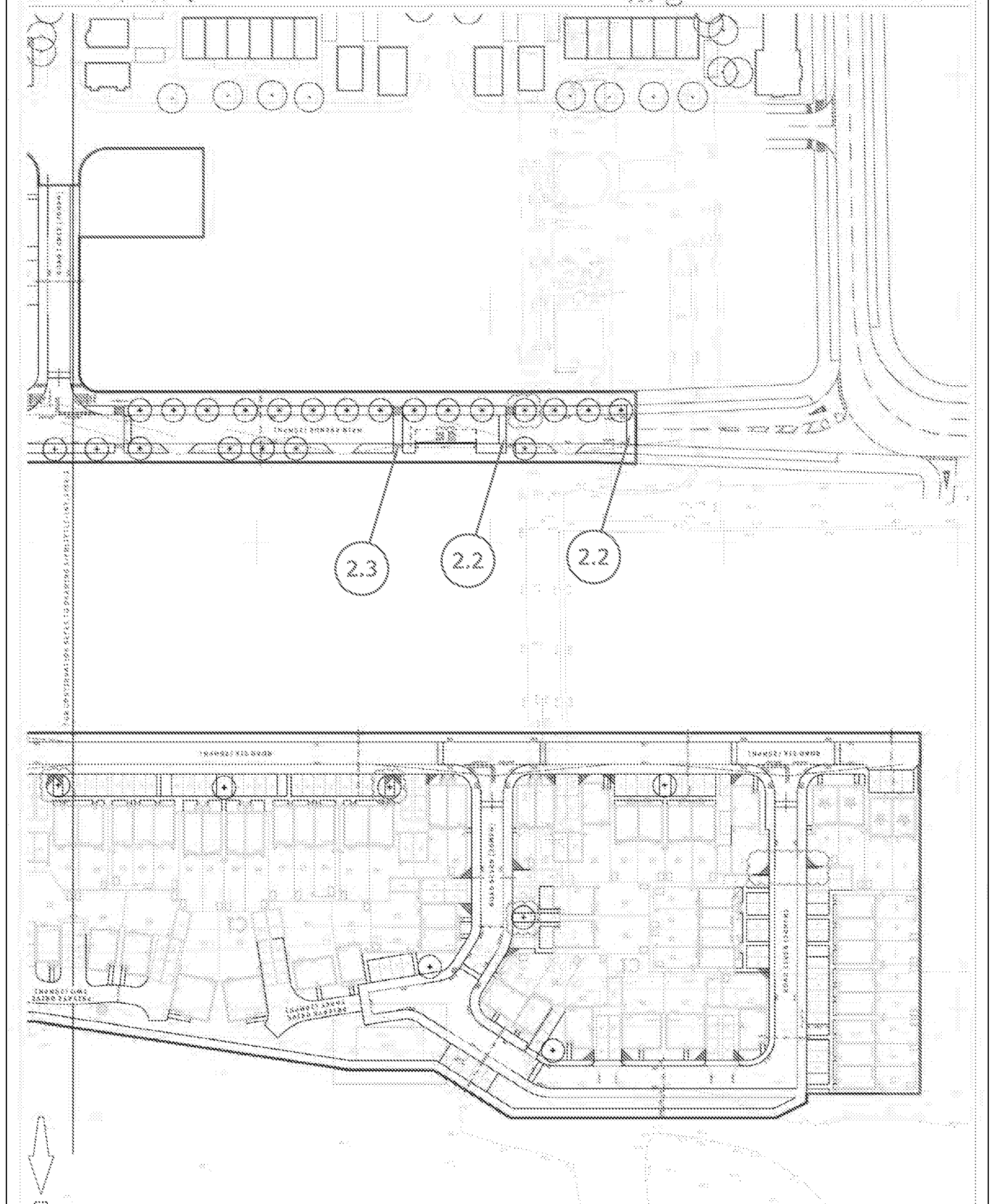


Date 17/03/17

APPENDIX A: Site Location Plan



APPENDIX B: Reference Plans





APPENDIX C: Audit Brief

