



**PERSIMMON HOMES
NORTH LITTLEHAMPTON
PHASE 2 - INTERNAL DISTRIBUTOR
ROAD NORTHERN PRIORITY JUNCTION
WITH MAIN AVENUE (OMISSION OF
RIGHT TURN LANE)
LITTLEHAMPTON, WEST SUSSEX**

**STAGE 1 ROAD SAFETY AUDIT
ADDENDUM BRIEF**

SEPTEMBER 2015

REVISION A

the journey is the reward

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REVISION A

Project Code:	A/PHLITTLE-P2
Prepared by:	PSD
Approved by:	AB
Issue Date:	September 2015
Status:	For Approval

Persimmon Homes
North Littlehampton
Phase 2 - Internal Distributor Road northern priority junction with Main Avenue
(omission of right turn lane)
Littlehampton, West Sussex
Stage 1 Road Safety Audit Addendum Brief

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Authorisation Sheet

Project: North Littlehampton Development – Phase 2 Section 38/278 Works

Report Title: Stage 1 Road Safety Audit Addendum Brief

Prepared By:

Name: Paul Davis

Signed:



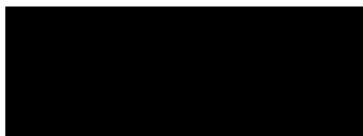
Organisation: Mayer Brown Limited

Date: 03/09/2015

Authorised By:

Name: Adrian Barnley

Signed:



Organisation: Mayer Brown Limited

Date: 03/09/2015

Introduction

- 1.0.1 Mayer Brown Limited has been appointed by Persimmon Homes to design the S38/278 Agreement Highway Improvement Works associated with Planning Application Ref LU/47/11 and LU/63/11.
- 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 Figure 1.1 below shows the site in relation to the local highway network.

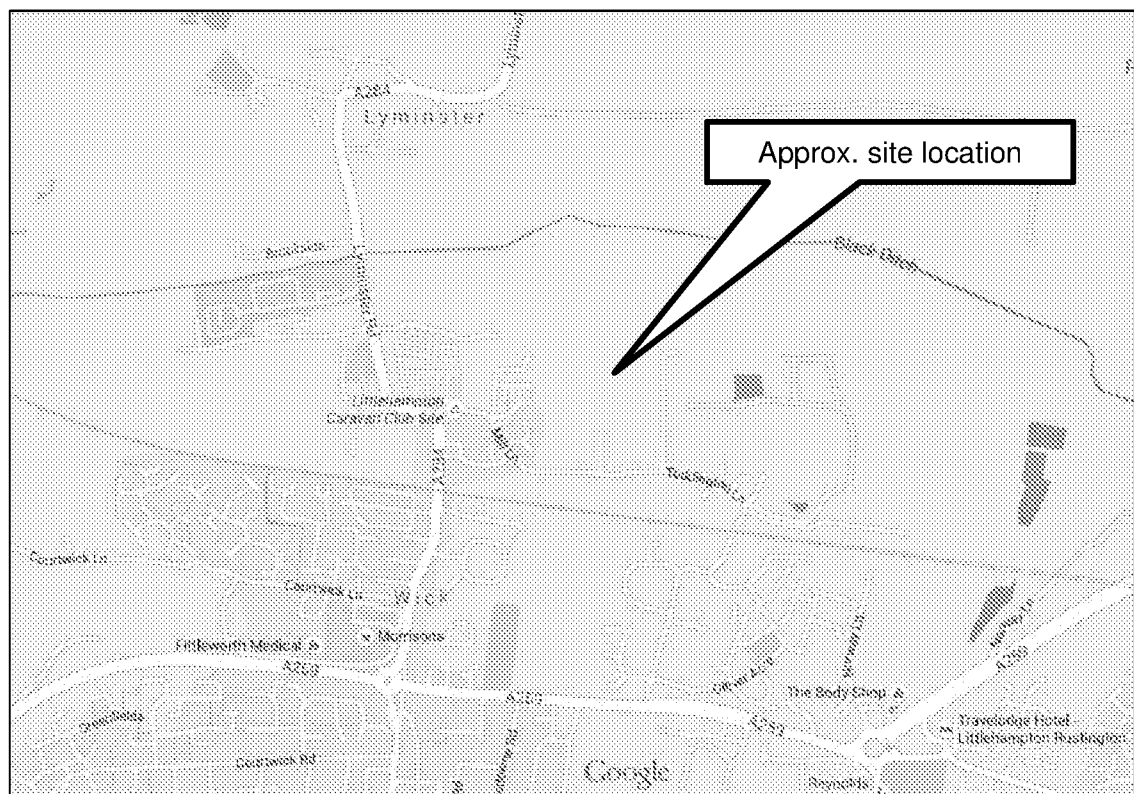


Figure 1.1: Site Location Plan

1.0.4 This Report follows a:

- Stage 1 Road Safety Audit undertaken dated September 2011 undertaken on the overall development highway improvements.
- Stage 1 Road Safety Audit undertaken dated October 2014 and related to the alteration of the horizontal arrangements for the Lyminster Bypass (Southern Section), changing the northern junction from a traffic signal junction to a 4-arm roundabout and the A259 roundabout amended to include 3 lane entries.

1.0.5 The Designer's Responses to these Road Safety Audits are included at Appendix B.

1.0.6 This Stage 1 Road Safety Audit Addendum brief relates specifically to the alteration to curtail the proposed right turn lane at the north end of the internal distributor road (IDR) to reflect the 'planning approved' layout. The Auditors should note that, as set out in the original Stage 1 RSA Brief dated September 2014, the junction between the northern and southern bypass sections has been amended from a traffic signal junction, indicated at the planning stage, to a roundabout junction for capacity reasons.

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

1.0.8 The amendments to the proposed design include the following:

- Curtailment of the right turn lane back to the 'planning approved' layout, reflected on planning drawing numbered **WYGLITTLEHAMPTON.2/23 Rev E** and audited in the Stage 1 Road Safety Audit dated September 2011.

This is illustrated in **Figure 1.2** below.

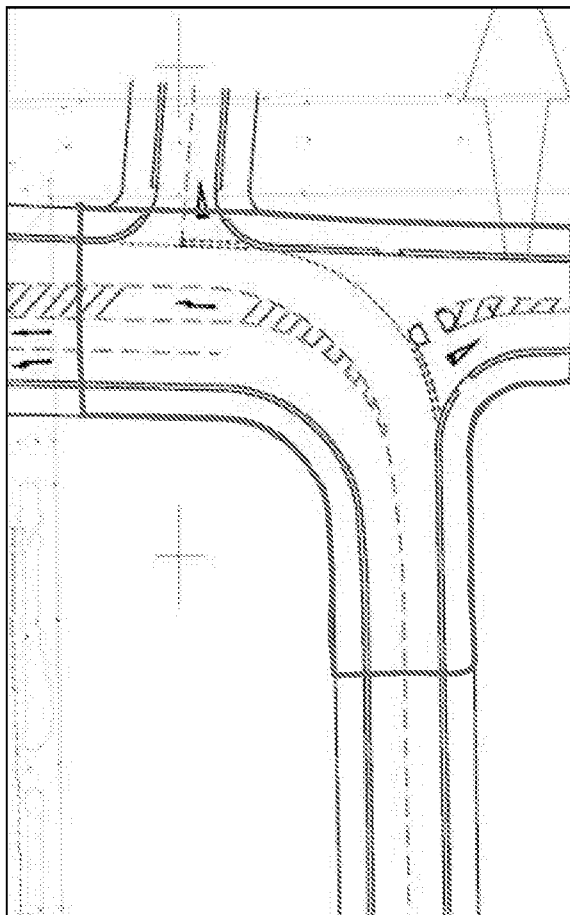


Figure 1.1: Audit area edged red

- 1.0.9 The Stage 1 Road Safety Audit Addendum Report shall be undertaken in accordance with HD19/15 and provided direct to **Paul Davis** at **Mayer Brown Limited**.
- 1.0.10 The Audit Team that undertook the Stage 1 Road Safety Audit (John Reid and Ken Fry) are approved to undertake this Stage 1 Addendum Audit.

1 General Details

1.1 Highway Improvement Scheme Name and Road Number

Phase 2 – Internal Distributor Road northern priority junction with main avenue

1.2 Type of Scheme

New road and junction scheme

1.3 Road Safety Audit Stage (tick as appropriate)

1	1 Addendum	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

E:

1.5 Design Organisation Details

Mayer Brown Ltd
 Lion House
 Oriental Road
 Woking
 Surrey
 GU22 8AR

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

Audit Team Leader

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

Audit Team Member

Ken Fry

Qualifications ---

- Highways England Certificate of Competency

Company Name ---

Mayer Brown Road Safety Team

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 Highway Authority 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 Highway Authority and/or Designer (to be agreed with HA). Contact details as follows:

Paul Davis

Senior Engineer

Mayer Brown Limited

Lion House

Oriental Road

Woking

Surrey

GU22 8AR

[Redacted]

[Redacted]

2 Scheme Description/Objective

2.1 *General*

- 2.1.1 Proposed curtailed of the right turn lane to reflect the 'planning approved' arrangement for the Internal Distributor Road northern priority junction with Main Avenue.

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 Speed for this scheme is 60kph.

2.4 *Speed Limit*

- 2.4.1 30mph.

2.5 *Existing Traffic Flows/Queues*

- 2.5.1 N/A.

2.6 *Forecast Traffic Flows*

- 2.6.1 Appendix D of this report provides a Technical Note that estimates the volume of right turning vehicles from the IDR to the Main Avenue.
- 2.6.2 Appendix E of this report provides the 2026 AM and PM peak traffic flow diagrams extracted from the Planning Approved Transport Assessment and should be read in conjunction with the above Technical Note.

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

- 2.7.1 Shared footway/cycleways are being provided on both sides of the proposed road.

2.8 *Environmental Constraints*

- 2.8.1 N/A.

3 Description of Locality

3.1 General Description

- 3.1.1 The proposed IDR and associated junction are new roads to facilitate development. The IDR will be utilised initially to facilitate access to the initial phases of the development and to provide access to and from the Lyminster Bypass (Southern Section) and Toddington Lane.

3.2 Relevant Factors which may Affect Road Safety

The priority junction shall be located on the outside of a 90 degree bend with visibility to the right restricted to approximately 72m by the proximity of a roundabout. The priority junction shall be located in close proximity to a proposed development plot access located directly to the west on the northern side of the road. The adjacent priority junction will benefit from a ghost island right turn lane.

3.3 Adjacent Land Uses

- 3.3.1 The proposed development land uses within close proximity of the proposed junction are indicated on Figure 3.1.

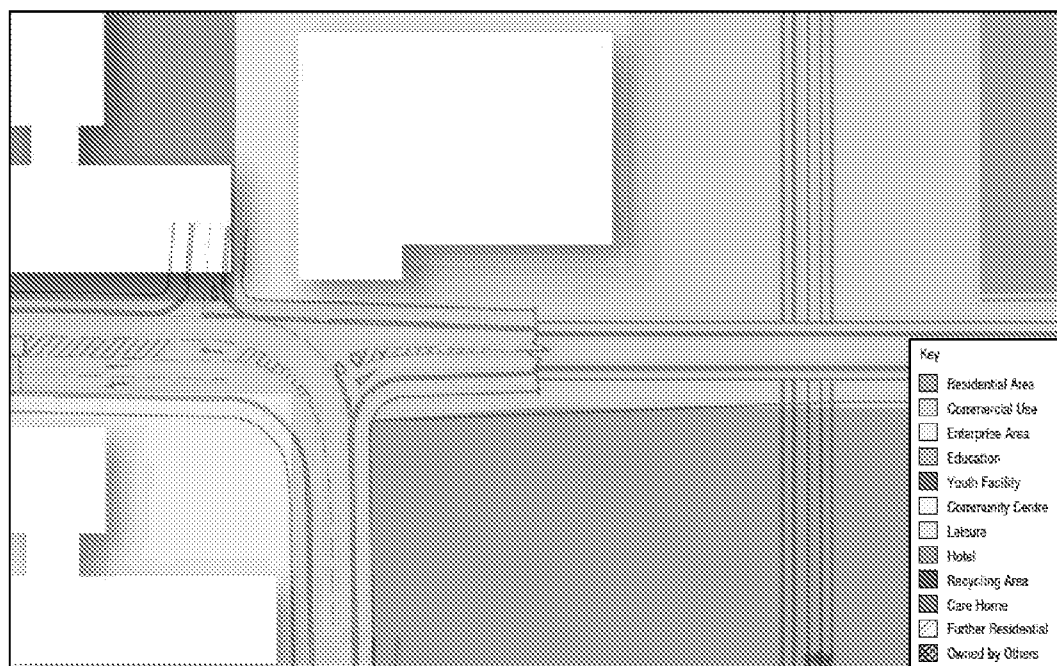


Figure 3.1: Extract of Cooper Baillie Land Use Plan CB_60_012_PL002

4 Personal Injury Collision Analysis

4.0.1 Personal Injury Collision Data is not provided as the proposals are Section 38 works and thus a road does not currently exist.

4.1 *Personal Injury Collision Data*

4.1.1 N/A

4.2 *Personal Injury Collision Details*

4.2.1 N/A

5 Departures and Relaxations from Standards

5.0.1 An extensive Design Check was undertaken and subsequently approved at planning (Ref: **WYGLITTLEHAMPTON.1**) to identify relaxations and departures from standard for the proposed adoptable highway infrastructure. This report is included at Appendix C of this report.

Site Access Junction

5.1 *Previously considered relaxations / departures by the previous Stage 1 Road Safety Audit and agreed with WSCC*

5.1.1 Many of the approved departures relate to the highway arrangement around the vicinity this addendum is considering, these are as follows:

- ✦ Departure 23 – through lane widths on major arm
- ✦ Departure 24 – lane widths on minor arm
- ✦ Departure 25 – provision of a right turn lane
- ✦ Departure 26 – Sharp radius

Full transcripts of the above mentioned departures are included with the Design Check report provided at Appendix C.

5.2 *TD 42/95 – Major/Minor Priority Junctions – Visibility*

5.2.1 The applicable section of the DMRB is TD 42/95. The following table sets out the required relaxations:

Relaxation	
Reference no.	SITE ACCESS RT1
Location	Junction of the IDR and Main Avenue
Description	90m visibility not achievable contrary to paragraph 7.5 (74m is achievable – just above the one step below desirable minimum (70m))
Why Required	Proximity of roundabout to north, horizontal alignment of the historic layout and land available.
Hazards and Risks	Potential for vehicles egressing the main avenue will not see vehicles exiting the roundabout and heading east on the IDR.
Benefits	Disbenefits
Proximity of roundabout and horizontal layout will encourage low vehicle speeds and ample gaps for right turning vehicles	Potential for vehicle conflict due to reduced visibility

- 5.3 Designers' Comment: Due to the proximity of the roundabout and the horizontal alignment of the IDR, speeds on these approaches will be low. In addition, this is an urban situation. MfS stopping site distances therefore considered appropriate, and are fully achievable.

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

6.0 Stage 1

6.0.1 All previous Stage 1 RSA Reports, Designer's Responses are provided at **Appendix B**.

7 Strategic Decisions – Items outside the scope of this Road Safety Audit

7.1 General

- 7.1.1 It should be noted that the arrangement of the priority junction without a right turn lane was agreed previously by WSCC and granted planning permission. However, the adjacent 4-arm traffic signal junction has since been amended to a four-arm roundabout, as requested by WSCC.

8 List of Included Documents and Drawings

8.1 Drawings (Provided at Appendix A)

Drawing Number	Title
A/PHLITTLE.2/110-2 Rev G	General Arrangement Drawing (2 of 2)
A/PHLITTLE.2/P2-4	Proposed IDR and Main Avenue junction design check drawing
MBTK150902-1	Anticipated swept path of a large car passing a Large Refuse Vehicle turning right from IDR to Main Avenue

8.2 Documents (Provided at Appendix B)

Reference	Title	Date
WYGLITTLEHAMPTON.6A	Littlehampton North Development Area - Access Arrangements Stage 1 Road Safety Audit	September 2011
WYGLITTLEHAMPTON.6A	Littlehampton North Development Area - Access Arrangements Stage 1 Road Safety Audit Designer's Response	October 2011
WYGLITTLEHAMPTON.6A	Littlehampton North Development Area - Access Arrangements Supplemental Note on Stage 1 Road Safety Audit	January 2012
S/PHLITTLE-P2.1.6A	North Littlehampton Phase 2 - Lyminster Bypass A259 Worthing Road & Northern Roundabout Junctions - Stage 1 Safety Audit	October 2014
-	North Littlehampton, Phase 2 - Lyminster Bypass A259 Roundabout and Northern Roundabout Designer's Response to Stage 1 RSA	October 2014

9 Checklist

8.3 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	N/A	Departures and Relaxations from Standards	✓
Traffic Signal Staging	N/A	Personal Injury Collision Data	N/A
Personal Injury Collision Drawing	N/A	Traffic Counts	✓
Speed Surveys	N/A	NMU Desire Lines and Volumes	✓
NMU Context and Audit Report	N/A	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