

**Little Reeds Farm
London Road
Hickstead
Haywards Heath
RH17 5LY**

PROPOSED ACCESS AMENDMENTS

STAGE 1 ROAD SAFETY AUDIT

Report No. EC/2024/09/GTA3

September 2024



Prepared by:

EC ROAD SAFETY LIMITED

Tall Trees
Downe Road, Keston, Kent
BR2 6AD
United Kingdom

Tel: 07508 76 76 96

Email: audits@ecroadsafety.co.uk

Web: www.ecroadsafety.co.uk

AUTHORISATION SHEET

Client: Lawrence Stringer (GTA Civils & Transport Limited)

**Overseeing
Organistaion:** Kevin Bown, Spatial Planner, Southeast Region, (National Highways)

Project: Proposed Access Amendments

Address: Access from London Road
Hickstead
Haywards Heath

PREPARED BY

Name: Vinny Rey
Position: Consultant Road Safety Auditor to EC Road Safety Limited
Date: 18 September 2024

AGREED BY

Name: Paul Nevard
Position: Director – EC Road Safety Limited
Date: 19 September 2024

AUTHORISED FOR ISSUE

Name: Paul Nevard
Position: Director – EC Road Safety Limited
Date: 21 September 2024

DISTRIBUTION

Issue No.	Issued To	Date Issued	Rev
1.	Kevin Bown – National Highways – Spatial Planning Team	13/10/2024	A
2.	Lawrence Stringer - GTA Civils & Transport Ltd – FINAL	TBA	
3.	Office Copy – FINAL	TBA	

CONTENTS

	Page
1. INTRODUCTION	4 - 6
2. PROBLEMS IDENTIFIED IN PREVIOUS ROAD SAFETY AUDITS	7
3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT	8 - 9
3.1 General	8
3.2 Local Alignment	8
3.3 Junctions	8 - 9
3.4 Non-Motorised User Provision	9
3.5 Road Signs, Carriageway Markings & Street Lighting	9
4. AUDIT TEAM STATEMENT	10

APPENDICES

- A. List of documents and plans considered during this Stage 1 Road Safety Audit
- B. Location of problems identified from this Stage 1 Road Safety Audit
- C. Road Safety Audit Response Log

1. INTRODUCTION

1.1 General

1.1.1 EC Road Safety Limited has been commissioned by GTA Civils & Transport Ltd to undertake a Stage 1 Road Safety Audit on the proposed site access amendments to Reeds Farm on London Road, that forms part of the A23 on behalf of National Highways (Overseeing Organisation). Kevin Brown from the Spatial Planning Team at National Highways instructed EC Road Safety Ltd to carry out the audit.

1.1.2 The proposed development is to provide an Acoustic Bund around the site to reduce associated noise levels for the recently constructed dwelling located within the site. To do so, improvements would be required to the existing site access to accommodate two-way flows of tipper trucks (10.2m in length). The site access is proposed to be widened to provide a radii to 15m and an improved access width of 7.5m to allow for two way vehicle access. Alterations to the existing site boundary fencing will be made to accommodate the changes, with proposed revisions to the existing road markings at the site access to reflect the new access arrangements

1.1.3 The following design standards were used for this design:

- DMRB CD123 Geometric design of at grade priority and signal-controlled junctions.
- DMRB CD226 Design for new pavement construction

1.1.4 The scope of the audit relates to the existing access from Reeds Farm onto London Road (A23) and the proposed access improvements.

1.1.5 Little Reeds Farm comprises of a detached two storey dwelling with associated outbuildings located to the eastern side of the A23 from which it gains access. The dwelling is surrounded by open countryside to the north, south and east and is fairly isolated other than its proximity to the A23. The proposed development site access adjoins London Road, part of the A23 subject to the national speed limit. The A23 forms part of the Strategic Road Network within West Sussex, connecting the proposed site to the M23 which leads to Brighton and London via the M25.

1.1.6 The existing site observed during the site investigation comprises of various farm buildings and temporary porta cabins, with larger areas of paving and/or type 1 material that allows parking and turning of larger vehicles. A number of plant and machinery were observed within the site, presumably forming part of the plant and machine hire available as part of MRL Grab and Tip Hire company operating from within the site. A grab truck was observed on site during the time of the site visit. An existing farm dwelling is also located within the site that has been extensively refurbished / rebuilt, belonging to the site owners.

1.1.7 The Road Safety Audit Team (approved by National Highways, Spatial Planning, Kevin Bown) consisted of:

Vinny Rey
BEng (Hons) MCIHT, MSoRSA
HE RSA Cert. Competency

Principal Engineer
Road Safety Audit Team Leader

Paul Nevard
MSc, BA (Hons) CMILT, MCIHT, MSoRSA
HE RSA Cert. Competency

Director – EC Road Safety Ltd
Principal Traffic Engineer
Road Safety Audit Team Member

- 1.1.8 The Road Safety Audit Brief was issued by the Overseeing Organisation – Kevin Bown from National Highways to the Audit Team on the 21st August 2024 and subsequently accepted on 16th September, once all documents have been assessed by the Audit Team together. This consisted of the following:
- RSA Brief – 11789E Little Reeds Farm, National Highways RSA Brief
 - 11789/2100 – Site Plan
 - 11789_2101 – Site Access Design, Visibility Splays and Swept Path
 - 20240821 – 11789E – Road Safety Brief - Signed
- 1.1.9 The Road Safety Audit comprised of an examination of the documents listed in Appendix A and included the road safety audit brief and drawings supplied by Lawrence Stringer of GTA Civils & Transportation Limited and approved by Kevin Bown of National Highways. The site was visited by Paul Nevard and Vinny Rey together on Wednesday 18th September 2024 between 07.05 and 07:40 hours. The weather during the daytime site visit was fine and dry. The carriageway was dry at the time of the Road Safety Audit. Traffic flows were moderate to high and vehicle speeds were observed as being high. Street lighting is present along the A23, but no footways are present on London Road.
- An adjacent lay-by is located approximately 85m north of the site access and the slip road for vehicles exiting the A23 towards Burgess Hill / Hickstead and the services runs adjacent to the existing access arrangement. As a result, the current site access has a diverge lane of 52m and merge lane of 60m. This falls short of the DMRB requirement of 110m for any diverge/merge lanes on roads with a design speed of 120kph (CD123 Section 5 Geometric design of at grade priority and signal-controlled junctions).
- The proposed site access amendments result in no changes to either the merge or diverge lane lengths due to the available highway land, and thus a departure from standards is required in relation to this aspect of the design based on the proposed intensification of use of the access.
- 1.1.10 The proposed development will require over 30,000 cubed meters of soil to be delivered to the site over a 12-month period. This equates to approximately 11 HGV deliveries per day (or 22-day trips). The delivery period of 12 months could be reduced but would result in an increased number of daily deliveries and movements to and from the site.
- 1.1.11 No details of drainage, signing or lighting have been provided. These issues are not, therefore, considered further in this report unless these existing facilities are likely to engender a safety problem with the new proposals.
- 1.1.12 The location of any problems raised can be found within the report, photographed for reference and/or referenced in Appendix B of this report. If no problems are identified, only a location plan will be provided for reference in Appendix B. A Road Safety Audit Response log has been provided in Appendix C; this may assist the designer in appropriately documenting all subsequent decisions with regard to Road Safety Audit comments raised within this report.
- 1.1.13 The Audit was undertaken in accordance with Road safety Audit Brief and the report has been prepared with reference to the Design Manual for Roads and Bridges (DMRB) GG 119 (revision 2). 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. This Road Safety Audit has not considered structural safety or checked for compliance to standards. This safety audit does not perform any “Technical Check” function on these proposals. It is assumed that the Project Sponsor is satisfied that such a “Technical Check” has been successfully completed prior to requesting this safety audit.

- 1.1.14 This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Accident Investigation, Road Safety Engineering and Road Safety Audits. No member of the Road Safety Audit Team has had any previous input to the design of the scheme. The Road Safety Audit Team is independent from the highway scheme conception, design, construction and operation. The audit has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme. The problems identified have been noted in this report together with suggestions for safety improvements, which we recommend should be studied for implementation.

1.2 Purpose of Scheme

The purpose of the scheme is to provide an Acoustic Bund around the for the purpose of noise reduction within the site, and therefore will result in an intensification of the site access to provide the necessary deliveries by large vehicle.

1.3 Departures from Standards (Design)

One departure from standards relating to the length of the merge and diverge lane has been identified. It is unclear whether this is being progressed through National Highway's DAS system, and whether agreement to this departure has been given by National Highways. The departure from standard is:

1. The length of the merge and diverge lanes are 60m and 52m respectively. The prevailing guidance set out in Section 5 CD123 states that for roads with a design speed of 120kph, a minimum length of 110m diverge and merge lanes should be provided.

2. PROBLEMS IDENTIFIED IN PREVIOUS ROAD SAFETY AUDITS

No previous audits have been supplied to the Audit Team regarding this site and the Audit Team believe that none have been produced.

3. PROBLEMS IDENTIFIED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 General

3.1.1 PROBLEM

Location: Proposed Access at Little Reeds Farm

Summary: Loose material and debris on A23 carriageway increase the risk of vehicle collisions.

Detail: There is currently no detail provided to indicate the provision of suitable wheel washing facilities within the site for vehicle use before exiting onto the A23. The lack of provision of adequate facilities increases the risk of loose material such as stone and gravel from the within the existing site, or earth being transported to the site, being dragged onto the A23 by the wheels of tipper trucks exiting the site. This could result in reduced skid resistance for vehicles on the slip road exiting the A23, decelerating on the approach to the roundabout, increasing the risk of shunt or overshoot type collisions. This also increases the risk of loss of control type collisions to powered two-wheel (P2W) users, who may be unseated by such loose material or take evasive action to avoid it.

Recommendation

It is recommended that wheel washing facilities are provided within the site, with a requirement for use by delivery vehicles exiting the site into the A23.

3.2 Local Alignment

No problems identified in this category at this stage.

3.3 Junctions

3.3.1 PROBLEM

Location: Proposed Access at Little Reeds Farm

Summary: Risk of shunt type collisions between vehicles exiting the layby and tipper trucks accessing the development site.

Detail: The existing diverge lane is currently 52m, well short of the DMRB standard of 110m for roads with a design speed of 120kph. The intensified use of the access for large tipper trucks, which will be decelerating to enter the site access, increases the risk of shunt type collisions between vehicles that will be accelerating to rejoin the main traffic lanes from the lay-by located approximately 85m north of the site access.

Recommendation

It is recommended that the lay-by be temporary closed for use by general traffic for the duration of the works access.

3.3.2

PROBLEM

Location: Proposed Access at Little Reeds Farm

Summary: Risk of shunt type collisions between vehicles exiting the A23 and tipper trucks accessing the development site.

Detail: The existing diverge lane is currently 52m, well short of the DMRB standard of 110m for roads with a design speed of 120kph. The intensified use of the access for large tipper trucks increases the risk of shunt type collisions between vehicles travelling along the A23 slip looking to exit and tipper trucks accessing the development site. Early indication from tipper trucks when accessing the site may result in drivers following behind believing tipper trucks are accessing the layby, unaware of the site access just beyond the layby. When the tipper trucks do not enter the layby, following motorists may be caught unaware of the tipper truck slowing to enter the site access, resulting in hard and late breaking. Hard and late braking by following vehicles increases the risk of shunt collisions from any subsequently following vehicles who may not expect such hard and late breaking manoeuvres.

Recommendation

It is recommended that a suitable traffic management plan is provided and enforced to mitigate the abovementioned risk. Any such plan could include, but is not limited to, (in conjunction with the recommendation in Problem 3.3.1 above) use of the lay-by as a pit stop for tipper truck to pull into and wait for a suitable gap in the traffic to pull out and travel 85m into the site access safely.

3.3.3

PROBLEM

Location: Proposed Access at Little Reeds Farm

Summary: Risk of lane change type collisions between tipper trucks exiting the development site and vehicles travelling on the A23.

Detail: The existing merge lane is currently 60m well short of the DMRB standard of 110m for roads with a design speed of 120kph. The intensified use of the access for large tipper trucks increases the risk of lane change type collisions between slow moving tipper trucks exiting the site attempting to rejoin the A23 and traffic exiting the A23.

Recommendation

It is recommended that a suitable traffic management plan is provided and enforced to mitigate the abovementioned risk. Any such plan should include a mandatory route for

tipper truck vehicles exiting the site, requiring any such vehicles to exit the A23 via the slip road upon leaving the site before rejoining the A23.

3.4 Non-Motorised User Provision

No problems identified in this category at this stage.

3.5 Road Signs, Carriageway Markings & Street Lighting

No problems identified in this category at this stage.

End of list of Problems identified and Recommendations offered in this Stage 1 Audit

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with GG 119 (revision 2).

Audit Team Leader

Vinny Rey
BEng (Hons), MCIHT, MSoRSA
HE RSA Cert Comp.
Road Safety Engineer



Signed:

Date: 18th September 2024

Audit Team Member

Paul Nevard
MSc, BA (Hons), CMILT, MCIHT, MSoRSA
HE RSA Cert Comp.
Road Safety Engineer
Director EC Road Safety



Signed:

Date: 21st September 2024

EC Road Safety Limited

Tall Trees
Downe Road,
Keston,
Kent
BR2 6AD
United Kingdom

Tel: 07508 76 76 96

APPENDIX A
INFORMATION PROVIDED

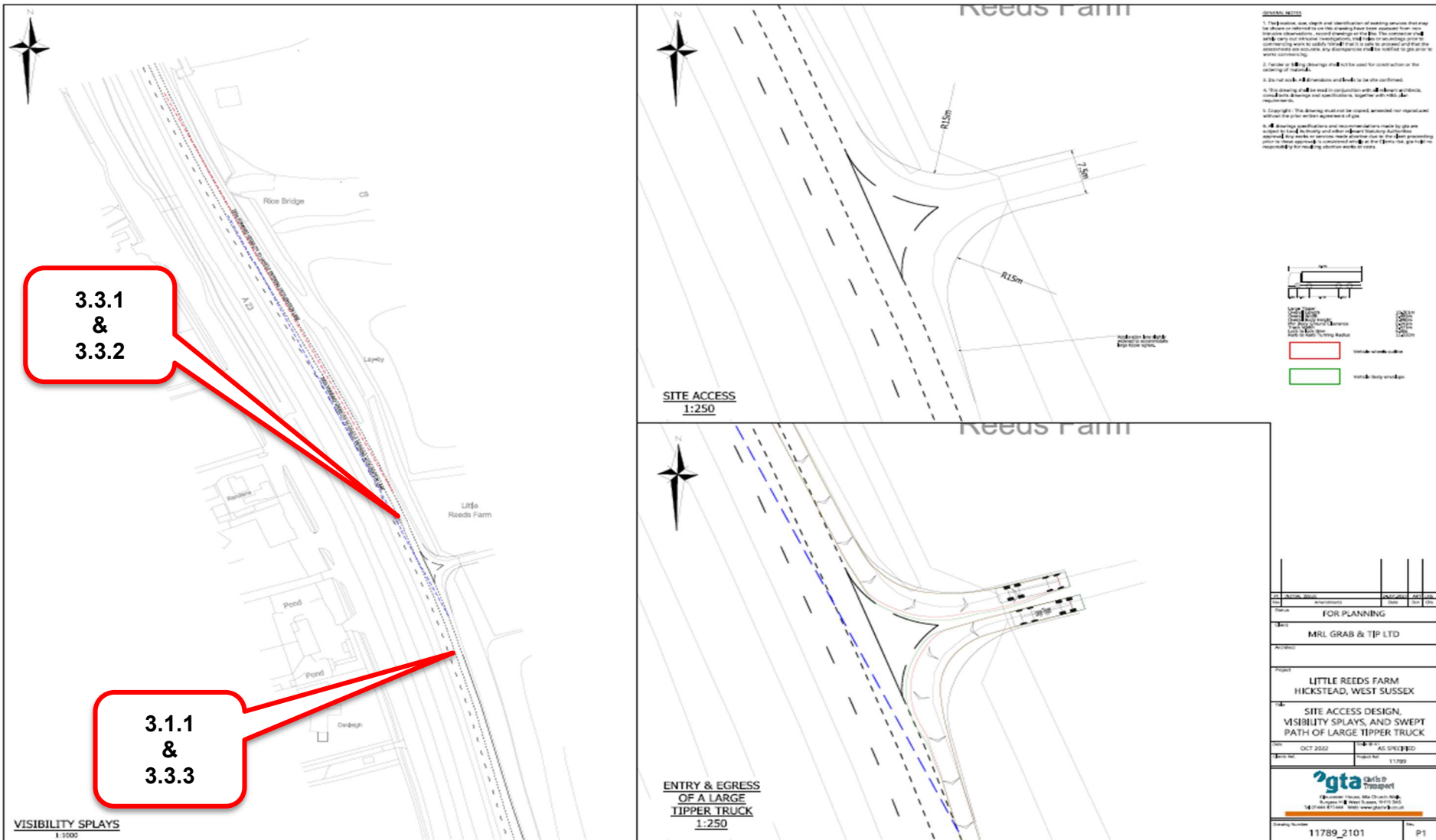
List of information provided:

Document Reference Number	Revision	Title
11789E Little Reeds Farm, National Highways RSA Brief	-	RSA Brief
20240821	-	11789E – Road Safety Brief - Signed

Drawing Reference Number	Revision	Title
11789/2100	-	Site Plan
11789_2101 – Site Access Design, Visibility Splays and Swept Path	-	Site Access Design, Visibility Splays and Swept Path

APPENDIX B

LOCATION OF PROBLEMS PLAN



APPENDIX C: ROAD SAFETY AUDIT RESPONSE LOG

Report Title:	RSA Stage:
Location:	Date:
Prepared by:	Document Reference:
On Behalf of:	

Original RSA Report Ref:	Date:
Compiled by: Paul Nevard and Vinny Rey	
On behalf of: EC Road Safety Limited	

Key Personnel

Overseeing Organisation: National Highways
RSA Team: EC Road Safety Limited – Paul Nevard and Vinny Rey
Design Organisation: GTA Civils & Transport Ltd

Road Safety Audit Decision Log

Prob No:	Location / Summary	Recommendation (summary)	Design Organisation Response	Overseeing Organisation Response	Agreed Action in Response to RSA
	Location: Summary:				
	Location: Summary:				
	Location: Summary:				
	Location: Summary:				