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traffic engineering and transport planning

Arcadis LLP


**Proposed School Expansion
Warrender Primary School
Old Hatch Manor, Hillingdon
Stage 1 / 2 Road Safety Audit**

November 2016

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Client Commission			
Client:	Arcadis LLP	Order No:	-
Commissioned By:	Zoe Palphramand	Date Commissioned:	July 2016

LTP Quality Control					
Job No:	LTP/16/2486		File Ref:	Warrender Primary School RSA1_2 Working Draft V2	
Issue	Revision	Description	Originated	Checked	Date
1	-	Report	PS	RP/TK	11/11/16
Authorised for Issue:					

LTP PROJECT TEAM

As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CV's are available upon request to demonstrate our experience and credentials.

Team Member	LTP Designation	Qualifications
Tony Kirby	Director (Project Manager)	IEng MSc FIHE MCIHT RegRSA
Peter Shepherd	Senior Engineer	BSc (Hons) CEng MICE MCIHT
Ryan Penn	Senior Engineer	BA(Hons) MCIHT MIHE Eng Tech

PROPOSED SCHOOL EXPANSION WARRENDER PRIMARY SCHOOL, HILLINGDON STAGE 1/2 ROAD SAFETY AUDIT

CONTENTS

1.0	INTRODUCTION	3
2.0	ITEMS RAISED BY THIS SAFETY AUDIT	5
3.0	AUDIT TEAM STATEMENT	10

1.0 INTRODUCTION

- 1.1 Arcadis LLP commissioned Local Transport Projects (LTP) Ltd. to carry out a Stage 1/2 Road Safety Audit on proposals to provide an extension to Warrender Primary School, located to the north of Old Hatch Manor, Ruslip, in the London Borough of Hillingdon. The proposed works are described in Table 1.

Table 1: Details of the Proposed Works

Site Location	Scheme Description
Warrender Primary School	<ul style="list-style-type: none"> The provision of a two-storey extension to the east of the school to accommodate pupils within year groups 3 – 6; A new community/parents room to the south; An extension to the south-west to accommodate a new nursery; New hard and soft play areas with associated landscaping within the northern part of the site; An increase in size of internal car park from 12 to 20 spaces, including 2 disabled spaces; A delivery bay within the main car park to accommodate parking off the public highway; Appropriate turning heads within the parking area to allow vehicles to enter, manoeuvre and exit in a forward gear; Pupil drop-offs/pick-ups are to continue on the adjacent local highway network; There will continue to be no access from Eastcote Road to the north of the site.

- 1.2 The audit was carried out between 24th October and 11th November 2016, and was based on an examination of the drawings supplied as summarised within Table 2.

Table 2: Drawings Considered by the Road Safety Audit

Drawing N ^o	Revision	Drawing Title	Issued By
35311100/WAR/PL06	0	Warrender Primary School Proposed Site Layout	Arcadis

- 1.3 Personal Injury Collision (PIC) data for the 5-year period 01/01/2011 to 31/12/2015 was obtained from a search of the Department for Transport's road safety data (DfT, 2016). It revealed a total of 52 collisions occurred within the study area, which includes an area within a 500m distance of the site. A casualty study undertaken as part of the Transport Assessment (Proposed School Expansion, Warrender Primary School, Old Hatch Manor, Hillingdon. Transport Assessment, LTP, September 2016) revealed the following:
- 3 of the 71 casualties involved in the 52 collisions over 5 years involved school age children (0 to 15 years), although these did not appear to be associated with children travelling to/from school;
 - No collisions were recorded in the vicinity of the school access on Old Hatch Manor or along Old Hatch Manor and at its junctions with Windmill Hill and The Ridgeway.

- 1.4 The development is projected to increase the number of pupils from 237 to 467 and staff from 20 to 40 with school opening hours remaining as at present. Pupil drop-offs/pick-ups are to continue on the adjacent local highway network (Proposed School Expansion, Warrender Primary School, Old Hatch Manor, Hillingdon. Transport Assessment. LTP, September 2016).
- 1.5 A site inspection was carried out on Wednesday 26th October 2016, 07:20-08:20 hours. The weather was fine and the road surface dry.
- 1.6 The Audit Team comprised the following people:
 - Tony Kirby, IEng MSc FIHE MCIHT RegRSA (Audit Team Leader);
 - Peter Shepherd, BSc(Hons) CEng MICE MCIHT (Audit Team Member);
 - Ryan Penn, BA(Hons) MCIHT MIHE Eng Tech (Audit Team Member).
- 1.7 The Audit Team was not made aware of any specific departures or relaxations from standard.
- 1.8 No details of any Stage 1 Road Safety Audit were made known to the Audit Team and therefore this Audit was undertaken as a Stage 1/2 Road Safety Audit.
- 1.9 No detailed traffic sign, highway drainage, highway construction, bus stop, tactile paving, guard railing, street lighting details or vehicle swept path assessments were made known to the Audit Team and so it has not been possible to comment on these aspects of the design.
- 1.10 The Audit was carried out with reference to HD 19/15 'Road Safety Audit' (The Highways Agency, 2015), and the 'IHT Road Safety Audit Guidelines' (IHT, 2008).
- 1.11 The Audit Team has examined and reported only on the road safety implications of the proposals using the information provided and has not examined or verified the compliance of the design to any other criteria.
- 1.12 The problems identified in this report are considered by the audit team to require action in order to improve safety and reduce the risk of collisions occurring.

2.0 ITEMS RAISED BY THIS SAFETY AUDIT

2.1 Problem

Location: Windmill Hill southbound carriageway at zebra crossing north of Old Hatch Manor, approximately 90m west of school access

Summary: Risk of collisions between vehicles and eastbound pedestrians

There are trees and cabinets restricting visibility between eastbound pedestrians and southbound drivers approaching the existing Zebra Crossing. The risk of conflict between vehicles and pedestrians (particularly more mobile young pedestrians) as a result of forward visibility constraints is likely to increase as flows increase.



Recommendation

The trees should be cut back and cabinets relocated outside the visibility splay between pedestrians and drivers.

2.2 Problem

Location: School Car Park

Summary: Risk of collisions between vehicles and pedestrians

The proposed pedestrian access is adjacent to the west side of the car park and no segregation between them is indicated on the drawings (the existing arrangements have full segregation between the footway and car park). The pedestrian desire line from access road to buildings is across the car park – increasing the risk of pedestrian/reversing vehicle conflicts.



Recommendation

The existing segregation between pedestrians and the car park should be continued to serve the proposed layout.

2.3 Problem

Location: School access at Old Hatch Manor

Summary: Risk of pedestrian trips/falls

The width of the existing dropped kerbs is substandard and there is evidence of pedestrians using the verge along the east side of the access road – thereby increasing the risk of pedestrians slipping and tripping as pedestrian usage increases.



Recommendation

The width of dropped kerbs should be increased to at least 2.0m and the adjacent verge hardened to accommodate the increase in pedestrian usage.

2.4 Problem

Location: School Access at Old Hatch Manor

Summary: Risk of collisions involving vehicles and pedestrians

There is existing vegetation on the eastern side of the access road which restricts visibility between pedestrians walking west along the northern footway of Old Hatch Manor and drivers emerging from the school access – thereby increasing the risk of conflict between these user groups.



Recommendation

The vegetation should be removed from the visibility splay between westbound pedestrians and any southbound drivers exiting the access.

2.5 Problem

Location: Northern footway along Old Hatch Manor at the school access

Summary: Risk of pedestrian trips

There are numerous uneven paving flags along the existing footway – increasing the risk of pedestrians tripping as usage increases due to the school expansion.



Recommendation

The existing footway surface condition should be reviewed and improved within the immediate vicinity of the site.

3.0 AUDIT TEAM STATEMENT

- 3.1 We certify that we have examined the site taking into account the documents provided by the Project Manager (set out in Table 2) and carried out a Road Safety Audit with the sole purpose of identifying any feature of the design which could be removed or modified to improve the safety of the highway environment within the extents of the scheme. The problems that we have identified have been noted in this report together with suggestions for improvement, which we recommend should be studied for implementation.
- 3.2 No-one on the audit team has been involved with the design of the proposals.

AUDIT TEAM LEADER:

Signed	T. Kirby	Tony Kirby IEng MSc FIHE MCIHT RegRSA Director Local Transport Projects Armstrong House, The Flemingate Centre, Armstrong Way, Beverley. HU17 0NZ Andy.Mayo@local-transport-projects.co.uk 01482 679911
	Dated	

AUDIT TEAM MEMBER:

Signed	P. Shepherd	Peter Shepherd BSc (Hons) CEng MICE MCIHT Senior Engineer Local Transport Projects Armstrong House, The Flemingate Centre, Armstrong Way, Beverley. HU17 0NZ Peter.Shepherd@local-transport-projects.co.uk 01482 679911
	Dated	

AUDIT TEAM MEMBER:

Signed	R. Penn	Ryan Penn BA(Hons) MIHE MCIHT Eng Tech Senior Engineer Local Transport Projects 22 Trinity Lane Beverley, East Riding of Yorkshire, HU17 0DY Ryan.Penn@local-transport-projects.co.uk 01482 679911
	Dated	