

**KINGS LYNN
HARDINGS WAY ACCESSES**

STAGE 2 SAFETY AUDIT

**REPORT REF: U23679/001
July 2017**

Report Prepared for:

Highway Group
Norfolk County Council

Report Author: Julian Fonseca EngTech MCIHT MSoRSA

Report Status:

Issue	Status	Purpose	Name/Signature	Date
1	Stage 2 Safety Audit Report	Client Issue	Julian Fonseca 	18/07/2017
2	Designer's Response	Designer response to Safety Issues raised	Alisa Magar 	04/09/2017
3	NM Decision	Implementation of Safety Audit recommendations	Julian Fonseca 	07/09/2017

INTRODUCTION

This report contains the results of a Stage 2 Safety Audit carried out on the above scheme. The Audit was carried out at the request of Norfolk County Council Highways Group .

The Audit Team membership was as follows:-

Julian Fonseka EngTech, MCIHT, MSoRSA (Audit Team Leader)	Project Technician Network Analysis + Safety Norfolk County Council
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Kevin Allen BEng(Hons), I Eng, MCIHT, MSoRSA (Audit Team Member)	Project Engineer Network Analysis + Safety Norfolk County Council
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Specialist Advisors:-

Robert Daynes	Area Casualty Reduction Officer Norfolk County Council
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The Audit took place at County Hall on 12 July 2017. The audit comprised an examination of the supplied documentation (see Apendix A) and a site inspection by the Audit Team on the same day at 12:00 which lasted around 20 minutes. During the site visit the weather was sunny and the road surface dry. Traffic flows and observed speeds were low, in keeping with the environment. Several cyclists were observed using both the existing shared use path, and the carriageway. The Audit submission provided all necessary supporting information.

The terms of reference are as described in Community and Environmental Services Highways Service Manual Procedure SP03-07-P01. The Auditors have examined and reported only on the road safety implications of the scheme within the main report.

The auditors have reviewed the three year (to end April 2017) accident record for the location. There has been one personal injury accident recorded in this time. This involved a cyclist on

the pavement, cycling across the junction with Wisbech Road when the signals were green for traffic.

The audited scheme involves the provision of three new accesses and the necessary relocation of an existing bus gate.

A comments section has been included in Appendix B. The issues noted are not necessarily safety issues. They relate either to wider network implications, safety issues identified outside the scope of the audited scheme or suitability of a particular design choice.

ITEMS RAISED AT PREVIOUS AUDIT

No previous audit carried out.

ITEMS RAISED AT THIS STAGE 2 AUDIT

1.0 General

1.1 Problem – illegal usage

Location – relocated bus gate

The bus gate is currently bounded by bollards on the west side, and a fence on the east. The scheme proposes to relocate the bollards but not the fence. Vehicles may therefore attempt to pass by the east side of the bus gate, with an increased risk of conflict, particularly with vulnerable users.



Recommendation – provide measures to stop vehicles passing by the east side of the bus gate.

Designer's Response:

Agree - The fence will be provided on the east side of the relocated bus-gate to stop vehicles passing by.

Network Management Decision: Accepted, no further comment.

2.0 Alignment

2.1 No comment

3.0 Junctions

3.1 No comment

4.0 Non-motorised Users

4.1 Problem – vulnerable users disadvantaged

Location – proposed access on west side of Hardings Way

The scheme comprises three accesses on Hardings Way, the west of which cuts through an existing shared use facility. This disadvantages vulnerable users.

Recommendation – given the low levels of anticipated usage here, the shared use facility should be given priority, continuing unbroken across the access, with the associated give way lines for the vehicular access set back.

Designer's Response:

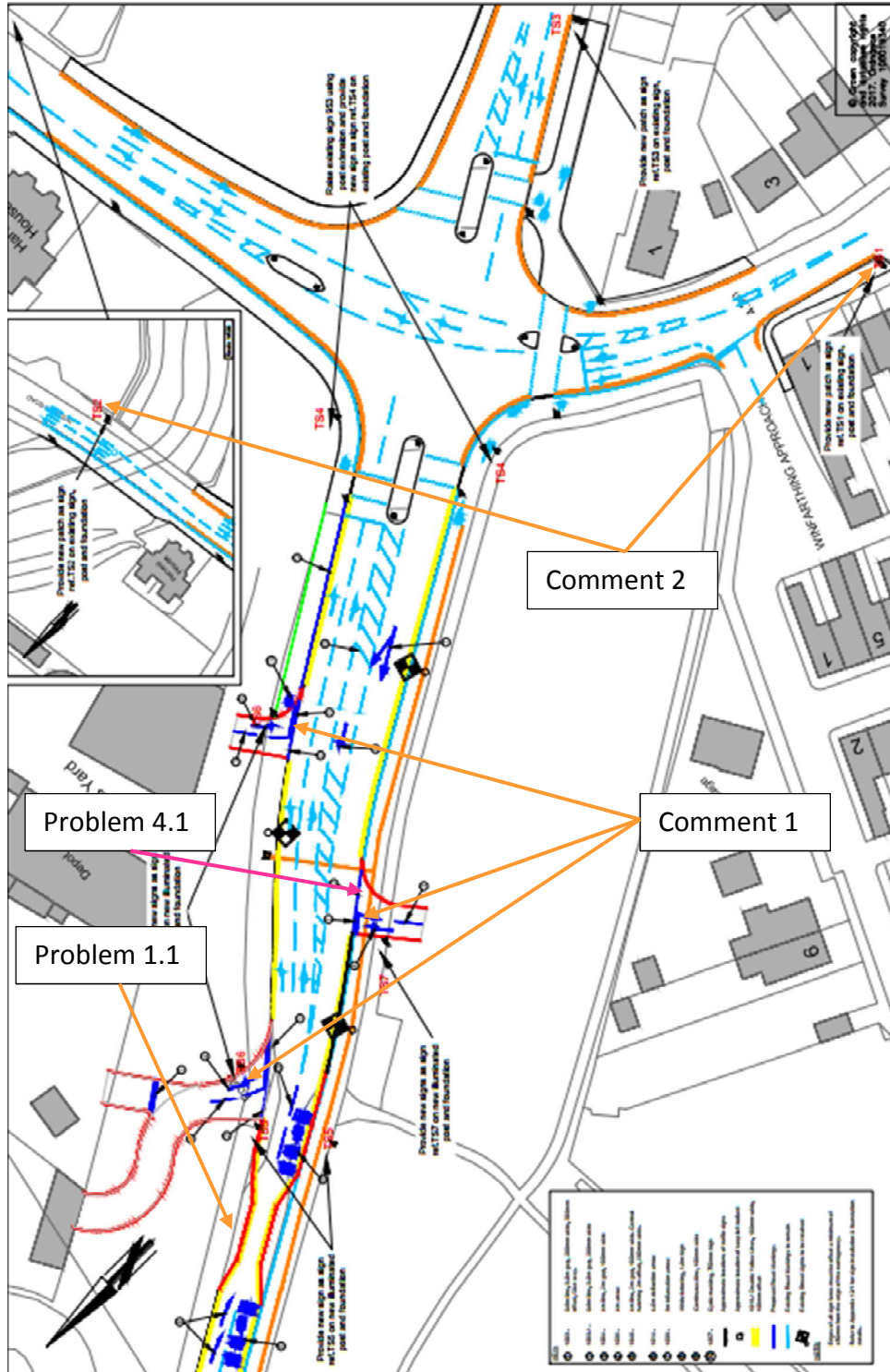
Agreed - The associated give way lines on the western proposed access will be moved further behind the shared-use facility allowing the facility to continue unbroken across the access. Similar facility will be provided on remaining two accesses on eastern side as well given proposed shared use facility on that side.

Network Management Decision: Accepted, no further comment.

5.0 Signs, Lighting and Markings

5.1 No comment

6.0 Problem Location Plan



Template Version #11 09/14
 KJA

AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with Norfolk County Council
Community and Environmental Procedure SP03-07-P01

Signed (ATL)  Julian Fonseca
Dated 17/07/2017

Signed  Kevin Allen
Dated 17 July 2017

APPENDIX A: Audit Brief

The following documents were submitted for this Road Safety Audit:

Document Ref.	Scale (if applicable)	Title
N/HP1/PK6061/AM	N/A	Stage 2 Audit Submission
PK6061-HP1-001	NTS	Site Location Plan
PK6061-HP1-002A	1:500 @ A3	Basic Design Plan
PK6061-HP1-003	1:200 @ A3	Site Clearance Plan
PK6061-HP1-004	1:250 @ A1	Engineering Layout
PK6061-HP1-007	1:250 @ A1	Signing & Lining
PK6061-HP1-011	1:500 @ A3	Track Run Plan
Appendix 12/1s	N/A	TS1 – TS7 - Sign Details

APPENDIX B: Comments

C.1 The scheme proposes right and left turn bans to deter vehicles from heading in the direction of the bus gate. A side effect of these bans would be to constrain the order in which a driver may use multiple accesses. The bus gate physically stops illegal usage and the scheme would not suffer if these bans, and associated signing, were omitted.

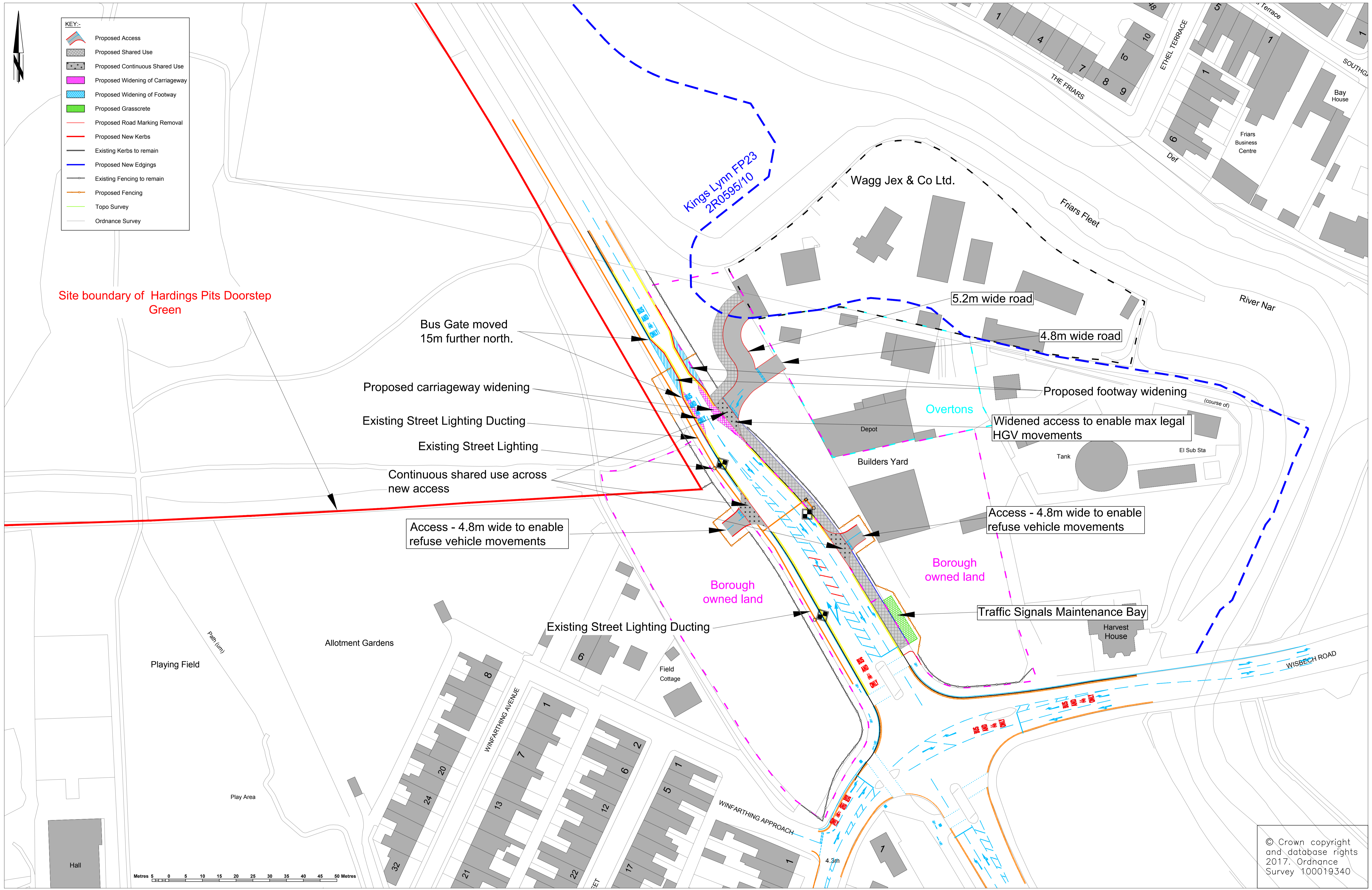
Designer's Response:

Noted - The right and left bans to deter vehicles from heading in the direction of the bus gate will be removed and adjacent corner radii increased.

C.2 The scheme proposes to patch direction signs in advance of the junction. Sign reference numbers: TS1, TS2 & TS3. The proposed 'Ahead' patch for TS1 and TS2 is potentially misleading as drivers unfamiliar with the area may think that the road ahead is for buses and cyclists only. It is suggested that the distance to the relocated bus gate, or a blank patch would be more appropriate.

Designer's Response:

Noted - A blank patch instead of proposed 'Ahead' patch will be used for TS1 and TS2 to avoid confusion.



KEY:-

- Proposed Access
- Proposed Shared Use
- Proposed Continuous Shared Use
- Proposed Widening of Carriageway
- Proposed Widening of Footway
- Proposed Grasscrete
- Proposed Road Marking Removal
- Proposed New Kerbs
- Existing Kerbs to remain
- Proposed New Edgings
- Existing Fencing to remain
- Proposed Fencing
- Topo Survey
- Ordnance Survey

Site boundary of Hardings Pits Doorstep Green

Bus Gate moved 15m further north.

Proposed carriageway widening

Existing Street Lighting Ducting

Existing Street Lighting

Continuous shared use across new access

Access - 4.8m wide to enable refuse vehicle movements

Borough owned land

Existing Street Lighting Ducting

Allotment Gardens

Playing Field

Path (un)

Play Area

Hall

Metres 5 0 5 10 15 20 25 30 35 40 45 50 Metres

Wagg Jex & Co Ltd.

5.2m wide road

4.8m wide road

Proposed footway widening

Widened access to enable max legal HGV movements

Access - 4.8m wide to enable refuse vehicle movements

Borough owned land

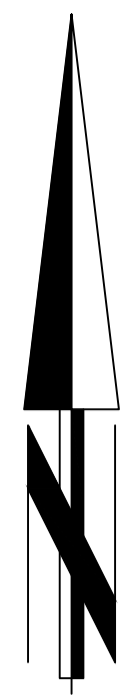
Traffic Signals Maintenance Bay

Harvest House

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REV.	DESCRIPTION	DRAWN BY	CHECKED	DATE
A	New OS, Topo-Survey, Bus Gate moved 5m further north, proposed carriageway/footway widening added.	AM	DW	04/17
B	Stump added to proposed accesses and shared use facility extended along the north-eastern side of Hardings Way.	AM	DW	07/17
C	Fence added on eastside of bus gate, right/left ban removed from two accesses, continuous shared use on westside access.	AM	MJL	08/17

SURVEYED BY	INITIALS	DATE	DRAWING No.
OS	OS	2017	PK6062-HP1-002C
DESIGNED BY	MJL	07/17	PROJECT TITLE
DRAWN BY	AM	07/17	Kings Lynn, Hardings Way Accesses Improvement Scheme
CHECKED BY	DW	06/16	SCALE 1:500 @ A1 FILE No. PK6062



KEY:

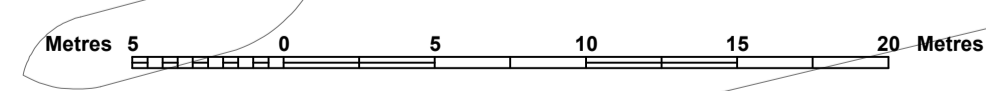
- Proposed Surfacing Area (362m²)
- Proposed Footway Widening (45m²)
- Proposed Carriageway Widening (50m²)
- Proposed Shared Use Facility (93m²)
- Proposed Grass Crete - Traffic Signals Maintenance Bay
- Proposed kerbing
- Proposed Footway Edgings (33m)
- Proposed Raising Bollards
- Existing kerbing to remain
- Existing Street Lighting Ducting to remain
- Existing Street Lights to remain
- Topographical Survey Data
- Ordnance Survey Data

NOTE:

Kerb Radii are measured at the channel line.
 HB2 = Half Battered Kerb
 HB2 (D) = HB2 combined drainage kerbs
 BN = Bullnose kerbs

Site Risks:

- 1. Refer to the scheme Pre-construction information for the details of identified risks.
- 2. Prior to any excavation works, the contractor shall verify, if necessary, by trial holes the exact locations of all known services.



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REV.	DESCRIPTION	DRAWN BY	CHECKED	DATE

SURVEYED BY	INITIALS	DATE	DRAWING No.
OS	OS	2017	PK6061-HP1-004
DESIGNED BY	MJL	10/15	PROJECT TITLE
DRAWN BY	AM	05/17	Kings Lynn, Hardings Way Accesses Improvement Scheme
CHECKED BY			SCALE 1:250 @ A1
			FILE No. PK6061