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GREENHEYS, MANCHESTER SCIENCE PARK (MSP)

STAGE 1 ROAD SAFETY AUDIT RESPONSE REPORT

Curtins Ref:	**81888-CUR-XX-XX-T-TP-00008**
Revision:	P01
Issue Date:	30 August 2023
Client Name:	Bruntwood Limited
Client Address:	Union, 2-10 Albert Square, Manchester M2 6LW
Site Address:	Greenheys, Manchester Science Park, Pentcroft Way, Manchester M15 6JJ

30 August 2023

Control Sheet

Rev	Description	Checked	Issued	Date
P01	First issue	AV	LL	30 August 2023

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Authorised	Signature	Date
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Table of Contents

1.0 Introduction 1
1.1 Background 1
1.2 Structure of the Report 1
2.0 Design Team Response 2

Tables

Table 2.1 – Design Team Response 2

Drawings

Drawing 81888-CUR-XX-00-D-TP-05004-P02 – (Swept Path Analysis) Signalised Crossing (Option 2) Two-Way Traffic and Forward Visibility

Appendices

Appendix A – Stage 1 Road Safety Audit Report

1.0 Introduction

1.1 Background

1.1.1 Curtins has been appointed on behalf of Bruntwood Sci-Tech Ltd to provide traffic and transportation advice in relation to the redevelopment of the existing Greenheys Building within Manchester Science Park (MSP). The site is within the jurisdiction of Manchester City Council (MCC).

1.1.2 A Transport Statement (TS, Document Reference: **81888-CUR-XX-XX-T-TP-00001**) and Framework Travel Plan (FTP, Document Reference: **81888-CUR-XX-XX-T-TP-00002**) has been submitted to accompany the planning application (MCC Planning Ref: 136934/FO/2023).

1.1.3 The proposals seek to deliver purpose-built laboratory and office workspace to accommodate specialist life science and healthcare businesses, such as those working in diagnostics, genomics, biotech and digital health.

1.1.4 As requested by local councillors and as previously suggested as part of the neighbouring BASE building consultation, there will be a new pedestrian crossing located to the south of the east-west route between Greenheys and BASE, which ties in with the pedestrian desire line.

1.1.5 The proposed crossing is to be signalised, and would require the relocation of the existing bus stop on the western side of the carriageway c. 16m to the north of its existing location.

1.1.6 The existing bus stop, which is c. 9m-long, would be relocated and extended to 12.5m long, which would be sufficient to accommodate a standard 12m bus, which serves as an improvement on the existing situation. The existing disabled bay to the north of the existing bus stop would also be relocated further south to accommodate the pedestrian crossing. The existing bus infrastructure (flag and pole, notice board on pole) would also be made available at the relocated bus stop.

1.1.7 A Stage 1 Road Safety Audit of the proposed pedestrian crossing facility has been requested by MCC as the local highway authority. This has been undertaken by independent auditors at six:TEN Highways & Traffic. The report is included in **Appendix A**. The Design Team Response to the Audit is set out in this report.

1.2 Structure of the Report

1.2.1 Following this introduction, **Section 2** sets out the Design Team Response.

2.0 Design Team Response

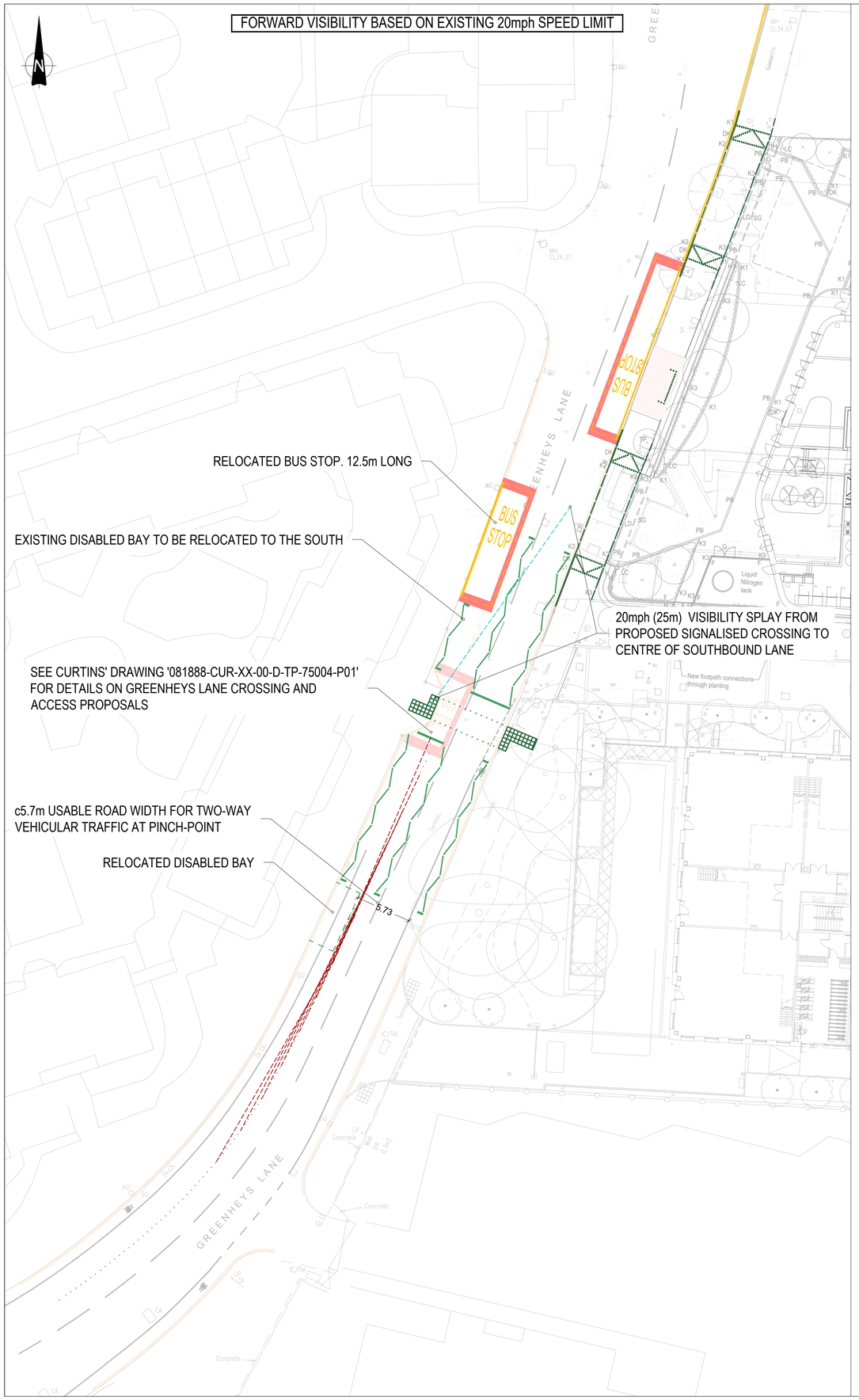
Problem Ref.	Location	Summary	Recommendation	Design Team Response
2.4.1	Proposed Signalised Crossing	Stationary buses in the northbound bus stop may obscure southbound drivers' visibility to the offside signal head and may obscure pedestrian/driver intervisibility increasing the risk of pedestrian/vehicular collisions. There is a risk that stationary buses in the northbound bus stop may obscure southbound drivers' visibility to the offside signal head which may increase the risk of failure to comply with a red signal or late braking type collisions. Additionally, the intervisibility between pedestrians on the western footway and southbound drivers may also be obscured by a stationary bus in the northbound bus stop which may increase the risk of pedestrian/vehicular collisions as crossing pedestrians fail to sufficiently appreciate approaching traffic and vice versa.	It is recommended that the forward visibility to the southbound offside signal head and pedestrian (western footway)/driver (southbound) intervisibility is investigated to ensure a stationary bus in the northbound bus stop does not obscure intervisibility and amendments made to the design if necessary.	Controlled pedestrian crossings typically include two sets of signal heads (one on each side of the carriageway, facing opposite directions). On this basis, should the offside signal head from a southbound driver's perspective be temporarily obscured by a stationary bus, the nearside signal head would remain in full view, which eliminates the risk of failure to comply with a red signal. Regarding intervisibility between pedestrians on the western footway and southbound drivers, **Drawing 81888-CUR-XX-00-D-TP-05004** has been updated (appended to the rear of this response) to include this visibility splay. Further to this, the northbound bus stop has been narrowed to 3.25m to further enhance visibility. The above drawing demonstrates that a 25m visibility splay (commensurate with Manual for Streets guidance for 20mph roads) can be achieved from the proposed signalised crossing to the centre of the southbound lane along Greenheys Lane. This visibility envelope does not conflict with the proposed bus stop. On this basis, it can be concluded that a stationary bus in the northbound bus stop does not obscure intervisibility, therefore no further amendments to the proposed signalised crossing are necessary.

Table 2.1 – Design Team Response

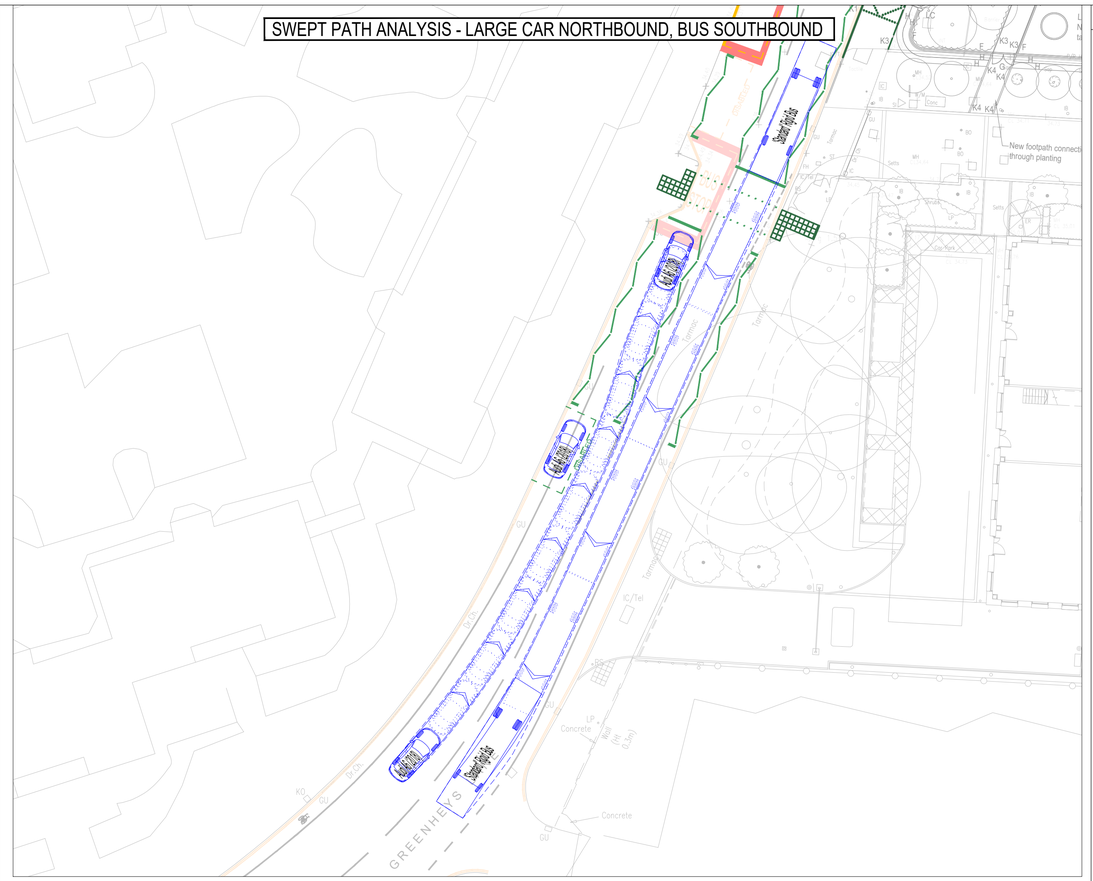
Drawings

Drawing 81888-CUR-XX-00-D-TP-05004-P02 – (Swept Path Analysis) Signalised Crossing (Option 2) Two-Way Traffic and Forward Visibility

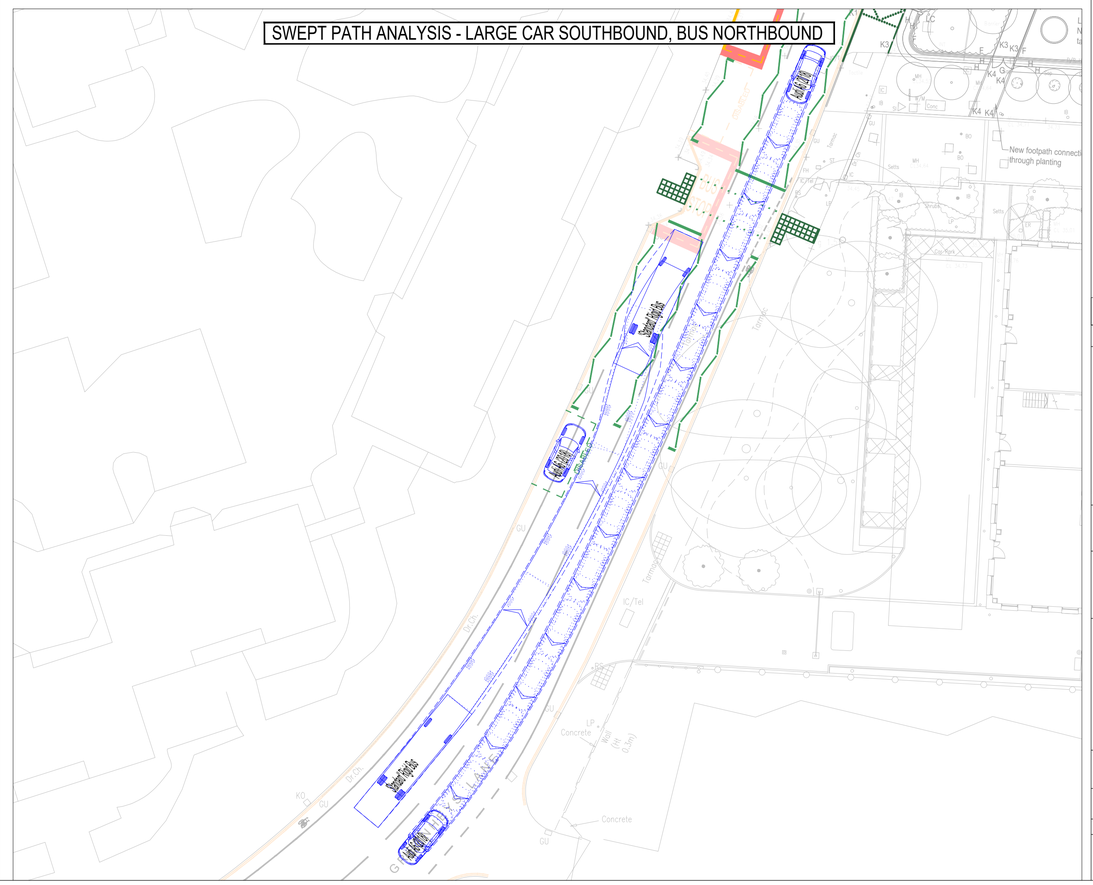
FORWARD VISIBILITY BASED ON EXISTING 20mph SPEED LIMIT



SWEPT PATH ANALYSIS - LARGE CAR NORTHBOUND, BUS SOUTHBOUND



SWEPT PATH ANALYSIS - LARGE CAR SOUTHBOUND, BUS NORTHBOUND



GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. THE CONTENT OF THIS DRAWING IS FOR INDICATIVE INFORMATION ONLY AND NOT SUITABLE FOR CONSTRUCTION PURPOSES
6. BASED ON BDP'S LAYOUT: 'GRE-BDP-ZZ-XX-DR-L-00-101-P03'
7. BASED ON LAND SURVEY WHERE AVAILABLE

KEY:
- PROPOSED RAISED KERB
- PROPOSED FLUSH KERB / BACK OF FOOTWAY
- PROPOSED ROAD MARKINGS
- INDICATIVE CENTRE LINE OF INNERMOST LANE
- 25.00m — FORWARD VISIBILITY TO QUEUING TRAFFIC AT SIGNALISED JUNCTION (BASED ON 20mph SPEED LIMIT)
- 0.5m x 25.00m — PEDESTRIAN VISIBILITY FOR SOUTHBOUND TRAFFIC (BASED ON 20mph SPEED LIMIT)

VEHICLE PROFILE:



Rev:	Description:	Date:	By:	Chkd:
P02	Visibility splay added from proposed signalised crossing point (for southbound traffic)	29/08/23	JM	LL

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Status: PRELIMINARY

Project: GREENHEYS - MANCHESTER SCIENCE PARK

Drg Title: SIGNALISED CROSSING OPTION 2 SWEPT PATH ANALYSIS TWO-WAY TRAFFIC FORWARD VISIBILITY

Drawn By	Designed By	Checked By
JM	JM	DD
	Date: 03/07/23	Scales @ A1: 1:250

Project No - Originator - Function - Spatial - Form - Discipline - Number: 81888 - CUR - XX - 00 - D - TP - 05004

Revision: P02

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Appendix A – Stage 1 Road Safety Audit Report

GREENHEYS BUILDING, MANCHESTER SCIENCE PARK PROPOSED SIGNALISED CROSSING

STAGE 1 ROAD SAFETY AUDIT

610/2023/149/01 Rev 1

24 August 2023

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Rev:	Issue Status:	Prepared by/Date:	Checked by/Date:	Approved by/Date:
0	DRAFT	Jon Preston 23 August 2023	Tristan Brooks 23 August 2023	
1	FINAL	Jon Preston 24 August 2023	Tristan Brooks 24 August 2023	Jon Preston 24 August 2023

Report Title:	Greenheys Building, Manchester Science Park Proposed Signalised Crossing Stage 1 Road Safety Audit
Date:	24 August 2023
Document Reference & Revision:	610/2023/149/01 Rev 1
Prepared by:	Six Ten Highways & Traffic Ltd
On behalf of:	Curtins

Disclaimer note

The client has confirmed that it is entering into the agreement under which this report is being prepared on its own behalf and not on behalf of, or for the benefit of any other party and has agreed that in any event of any claim arising out of or in connection with that agreement and/or the report itself it shall be entitled to recover from six:TEN Highways & Traffic Limited only the losses, if any, it has itself suffered.

This report therefore is for the private and confidential use of the client for whom it was prepared solely for the purposes requested by the client. It should not be reproduced in whole or in part or relied upon by any third party for any use whatsoever without the express written authority of six:TEN Highways & Traffic Limited.

CONTENTS

1.0 INTRODUCTION 2

2.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFEFY AUDIT 4

3.0 ROAD SAFETY AUDIT TEAM STATEMENT 5

APPENDICES

APPENDIX ONE

4.0 LIST OF DRAWINGS AND DOCUMENTS SUPPLIED BY THE DESIGN ORGANISATION 6

APPENDIX TWO

5.0 PROBLEM LOCATION PLAN 7

APPENDIX THREE

6.0 PHOTOGRAPHS 8

APPENDIX FOUR

7.0 PERSONAL INJURY COLLISION LOCATION PLAN 9

1.0 INTRODUCTION

1.1 This report results from a preliminary design Stage 1 Road Safety Audit (RSA) carried out on the proposed signalised crossing at the Greenheys Building, Manchester Science Park, at the request of Curtins, the designer of the scheme who provided the audit brief which has been accepted by the audit team. The audit team has been approved by the Overseeing Organisation Manchester City Council to carry out Road Safety Audits on their highway network.

1.2 The Road Safety Audit Team was as follows:

Jon Preston MCIHT MSoRSA
Audit Team Leader

Tristan Brooks* Bsc (Hons), MBA, CMILT, MCIHT, MSoRSA, HE RSA Cert of Comp
Audit Team Member

1.3 Audit Team members marked with an asterisk above hold a Highways England approved Certificate of Competency (CoC) in Road Safety Audit, in accordance with Article (1–3) of EC Directive 2008/96/EC.

1.4 The audit took place at the St Helens office of six:TEN Highways and Traffic between 14 August 2023 and 24 August 2023. The Road Safety Audit was undertaken in accordance with the Road Safety Audit information provided. The audit comprised an examination of the documents provided as detailed in Appendix One.

1.5 The Audit Team visited the site together during the morning of Monday 21 August 2023 between 10:00hrs and 10:30hrs. During the site visit the weather was partially cloudy and the carriageway surface was dry. During the site visit traffic movements in the vicinity of the proposed highway works were low with some pedestrian and cyclist movements observed.

1.6 Greenheys Lane in the vicinity of the proposed highway works is currently subject to a 20mph speed limit and is street lit.

1.7 The terms of reference of the audit are as described in GG 119 Rev.2. The 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 been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits.

1.8 The proposed highway works are associated with the redevelopment of the existing Greenheys Building to provide a laboratory and in summary includes:

- Provision of traffic signal-controlled crossing on Greenheys Lane; and
- Relocation of two existing bus stops on Greenheys Lane to facilitate the new crossing.

1.9 The Audit Team have not been informed of any Departures from Standard for the proposed scheme.

1.10 The S278 highway works relating to vehicle access to the proposed development were subject to a Stage 1 RSA carried out by Six Ten Highways & Traffic in March 2023.

1.11 Personal injury collision data has been obtained from the online crashmap.co.uk database which shows there has been five personal injury collisions in the vicinity of the proposed highway works during the five-year period 2017 – 2021. All five collisions were classed as slight in severity and resulted in five casualties. The personal injury collision location plan is shown in Appendix Four.

1.12 The scheme has been examined and this report compiled only regarding the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

1.13 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG 119 Rev 2, and in no way, imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

2.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

2.1 General

2.1.1 No road safety issues identified at this stage.

2.2 Local Alignment

2.2.1 No road safety issues identified at this stage.

2.3 Junctions

2.3.1 No road safety issues identified at this stage.

2.4 Walking, Cycling and Horse Riding

2.4.1 Location: Proposed signalised crossing

Problem

Summary: Stationary buses in the northbound bus stop may obscure southbound drivers' visibility to the offside signal head and may obscure pedestrian/driver intervisibility increasing the risk of pedestrian/vehicular collisions

There is a risk that stationary buses in the northbound bus stop may obscure southbound drivers' visibility to the offside signal head which may increase the risk of failure to comply with a red signal or late braking type collisions. Additionally, the intervisibility between pedestrians on the western footway and southbound drivers may also be obscured by a stationary bus in the northbound bus stop which may increase the risk of pedestrian/vehicular collisions as crossing pedestrians fail to sufficiently appreciate approaching traffic and vice versa.

Recommendation

It is recommended that the forward visibility to the southbound offside signal head and pedestrian (western footway)/driver (southbound) intervisibility is investigated to ensure a stationary bus in the northbound bus stop does not obscure intervisibility and amendments made to the design if necessary.

2.5 Traffic Signs, Carriageway Markings and Lighting

2.5.1 No road safety issues identified at this stage.

3.0 ROAD SAFETY AUDIT TEAM STATEMENT

We certify that the audit has been carried out in accordance with DMRB GG119 Rev 2.

AUDIT TEAM LEADER

Jon Preston MCIHT MSoRSA

Director Signed: [redacted]

six:TEN Highways & Traffic Ltd Date: 24 August 2023

AUDIT TEAM MEMBER

Tristan Brooks Bsc (Hons), MBA, CMILT, MCIHT, MSoRSA, HE RSA Cert of Comp

Traffic & Road Safety Engineer Signed: [redacted]

six:TEN Highways & Traffic Ltd Date: 24 August 2023

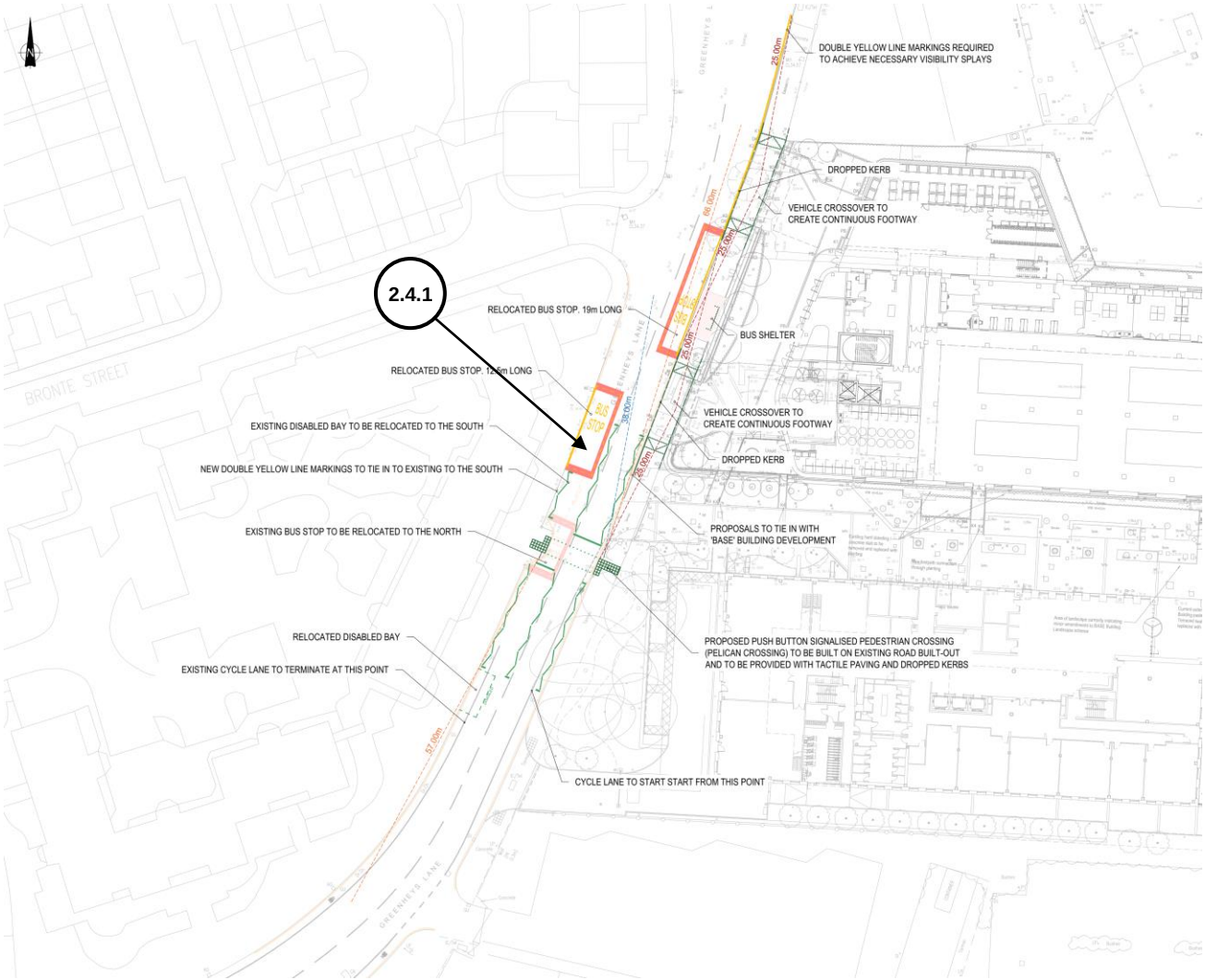
APPENDIX ONE

4.0 LIST OF DRAWINGS AND DOCUMENTS SUPPLIED BY THE DESIGN ORGANISATION

- 081888-CUR-XX-00-D-TP-75004-P01 Signalised Crossing Option 2
- 081888-CUR-XX-00-D-TP-05004-P01 Swept Path Analysis Two-way Traffic
- 081888-CUR-XX-XX-T-TP-00007-P01 Stage 1 RSA Brief (Signalised Crossing)
- 5 year (up to December 2021) Personal Collision Data from crashmap.co.uk

APPENDIX TWO

5.0 PROBLEM LOCATION PLAN



APPENDIX THREE

6.0 PHOTOGRAPHS



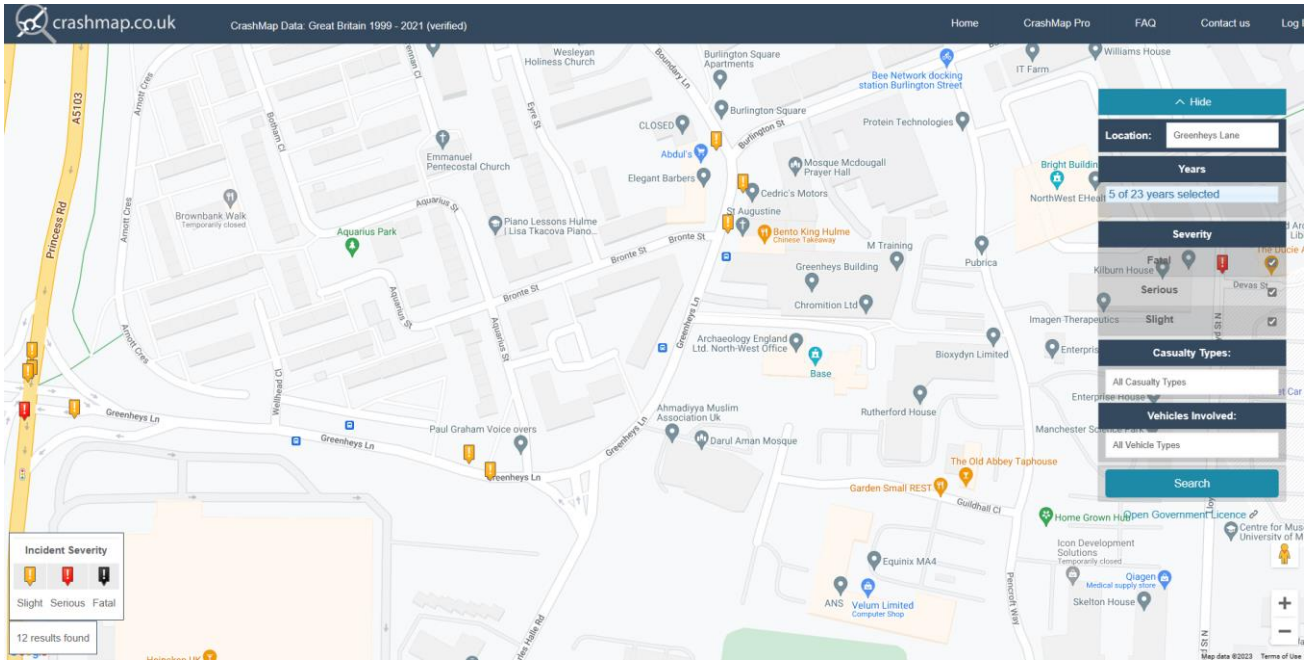
6.1 General View looking north towards proposed signalised crossing.



6.2 General view looking south towards proposed signalised crossing.

APPENDIX FOUR

7.0 PERSONAL INJURY COLLISION LOCATION PLAN



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