

**Road Safety Audit Stage 1** 

**Proposed access to BioPark Site** 

**Broadwater Road** 

**Welwyn Garden City** 

Hertfordshire

Date: 28th January 2021

Report produced for: i-Transport

Report produced by: M & S Traffic

# DOCUMENT CONTROL SHEET

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Report Title:	Broadwater Gardens Road Safety Audit Stage 1
Date:	28 <sup>th</sup> January 2021
Document reference and revision:	i-T/21/ ITL16195/1/BS
Prepared by:	M & S Traffic
On behalf of:	Hertfordshire County Council

## Distribution

Organisation	Contact	Copies
i-Transport	Melanie Dobson	-

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#### 1 INTRODUCTION

- 1.1 This report describes a Stage 1 Road Safety Audit carried out on the proposed redevelopment of the BioPark site in Welwyn Garden City for 289 dwellings, located off Broadwater Road, Welwyn Garden City, as detailed below:
  - Priority access on the western side of the carriageway at an existing access, with a pedestrian crossing point.

The Audit was requested by the design organisation, i-Transport, 85 Gresham Street, London, EC2V 7NQ on behalf of Hertfordshire County Council, as the Highway Authority.

1.2 The Audit Team membership were as follows:

Bryan Shawyer B.Eng. (Hons), MSc, MCIHT, MSoRSA, Audit Team Leader Highways England Approved RSA Certificate of Competency

Martin Morris, PGD, MCIHT, MSoRSA, Audit Team Member Highways England Approved RSA Certificate of Competency

- 1.3 The audit was undertaken in accordance with GG 119, The Design Manual for Roads and Bridges.
- 1.4 The Audit took place at the Gillingham offices of M&S Traffic in January 2021 and comprised an examination of the documents provided. A joint site visit was undertaken on the 25<sup>th</sup> January between 11:30 and 12:00. Weather conditions at the time were fine and the road surface was subject to snow and ice. Traffic flows were low and free flow speeds were low. There were low-level pedestrian movements and no cyclist movements. However, the audit was undertaken in the Covid-19 period.
- 1.5 The report has been compiled, only with regards to the safety implications for road users of the layout presented in the supplied drawings. It has not been examined or verified for compliance with any other standards or criteria. 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.
- 1.6 No Departures from Standard were provided to the Audit Team. The net impact of vehicular flows at the junction were provided, considering the site's previous use as an office. It is predicted that there will be a reduction of over 30 vehicles during the morning peak hour and circa 10 fewer vehicles during the evening peak hour, and no significant change in overall vehicle trips across a 12-hour day. Personal Injury Collision (PIC) data was been obtained for the most recent available five-year period, where there have been no recorded collisions at the existing access. However, there were four collisions at junctions on this section of Broadwater Road in this 5-year period, 2 serious and 2 slights, where three of the collisions involved right turn manoeuvres.

1.7 All comments and recommendations are referenced to the detailed drawings and the locations have been detailed relating to the plans supplied with the audit brief, Appendix B.

# 2 SAFETY ISSUES RAISED AT PREVIOUS AUDITS

2.1 No previous audits were supplied for assessment.

#### 3 ITEMS RAISED AT THE STAGE 1 AUDIT

#### 3.1 General

#### 3.1.1 PROBLEM

**Location**: Proposed junction with Broadwater Road.

**Summary:** Insufficient construction details could lead to overshoot collisions or vehicle to pedestrian collisions.

No construction details were provided for assessment, in particular, details of carriageway construction, where it appears that paviours are to be used on the access road off the junction. Inappropriate Polished Paver Test Values (PPTV) could lead to overshoot collisions or vehicle to pedestrian collisions at the crossing point.

#### RECOMMENDATION

It is recommended that PPTV details should be checked to ensure they provide adequate grip resistance for the speed of road. Further, that construction details should be supplied for assessment at Stage 2 Safety Audit.

#### 3.2 Local Alignment

#### 3.2.1 No comment.

#### 3.3 Junctions

#### 3.3.1 **PROBLEM**

**Location**: Proposed junction with Broadwater Road.

Summary: Lack of visibility could lead to rear end shunt collisions or side impact collisions.

Visibility splays were provided for assessment, where a bus stop is located within the northern splay, see figure 1 overleaf. There have been four collisions at junctions on this section of Broadwater Road in the 5-year period of available collision data, where three of the collisions involved right turn manoeuvres. One of these collisions involved a parked good vehicle at the junction, which obscured visibility. There is concern that a stationary bus may restrict visibility at the access, which could lead to side impact collisions or rear end shunts.



Figure 1: Bus stop in northern visibility splay.

#### RECOMMENDATION

It is recommended that bus stop should be located out of the visibility splay.

#### 3.3.2 **PROBLEM**

**Location**: Proposed junction with Broadwater Road.

**Summary:** Insufficient carriageway space may lead to head on collisions or side swipe collisions.

Vehicle swept paths have been provided for assessment, where the refuse vehicle tracking shows incursion into the opposing carriageway when starting the left turn manoeuvre. This could cause conflict with vehicles travelling in the opposing direction leading to possible head on collisions or side swipe collisions.

#### **RECOMMENDATION**

It is recommended that the junction radius should be eased to provide increased carriageway space for all expected vehicle movements.

### 3.4 Non-Motorised User Provision

#### 3.4.1 **PROBLEM**

Location: Proposed junction with Broadwater Road

**Summary:** Existing gullies may lead to pedestrian trips and falls or cyclist loss of control collisions.

There are existing gullies, at the proposed pedestrian crossing points at the junction, see figure 2 below. These may lead to pedestrian trips and falls, or cyclist loss of control collisions.



Figure 2: Existing gullies at proposed crossing.

#### **RECOMMENDATION**

It is recommended that the gullies should be relocated away from the crossing or that pedestrian / cyclist friendly gully covers should be installed.

## 3.5 Road Signs, Carriageway Markings and Lighting

#### 3.5.1 No comment.

# 4 ISSUES IDENTIFIED DURING THE STAGE 1 AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

- 4.1 Safety issues identified during the audit and site inspection that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrant that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.
- 4.2 No issues were identified by the audit team.

#### **5 AUDITOR TEAM STATEMENT**

5.1 We certify that this audit has been carried out in accordance with GG 119.

#### **Audit Team Leader**

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Highways England Approved RSA Certificate of Competency
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32 Hamelin Road
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Kent ME7 3EX



Date: 28/01/2021

#### **Audit Team Member**

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32 Hamelin Road
Gillingham



Date: 28/01/2021

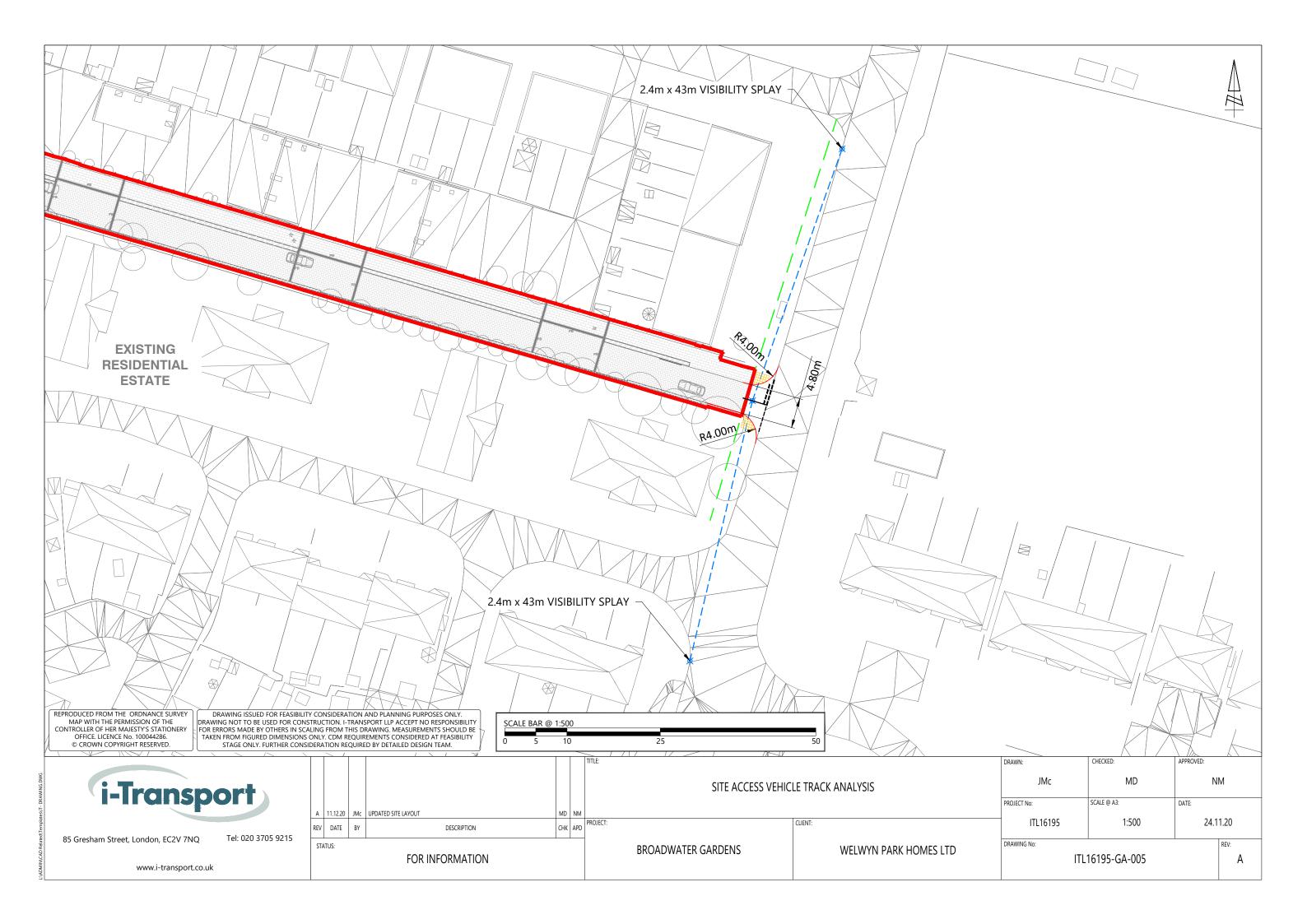
## **APPENDIX A**

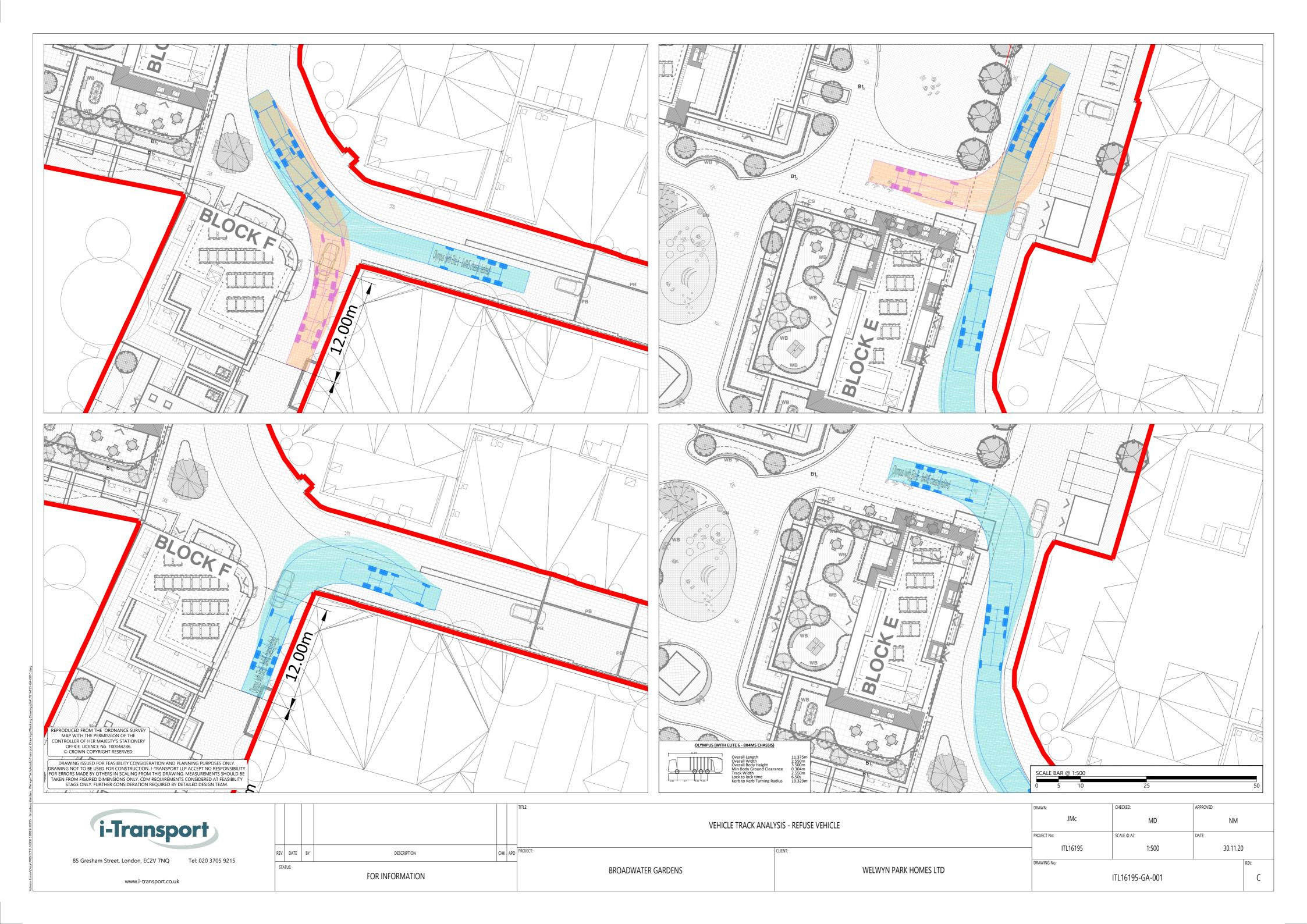
List of drawings and documentation submitted for auditing:

Drawing Number	Title
ITL16195-GA-001 C	Vehicle Track Analysis - Refuse Vehicle
ITL16195-GA-004 A	Proposed Site Layout - Swept Path Analysis - Fire Tender
ITL16195-GA-006 A	Vehicle Track Analysis - 7.5t Box Van
ITL16195-GA-010	Site Access Vehicle Track Analysis – Refuse Vehicle
BMD.20.044.DR.P002	Colour Rendered Landscape Masterplan

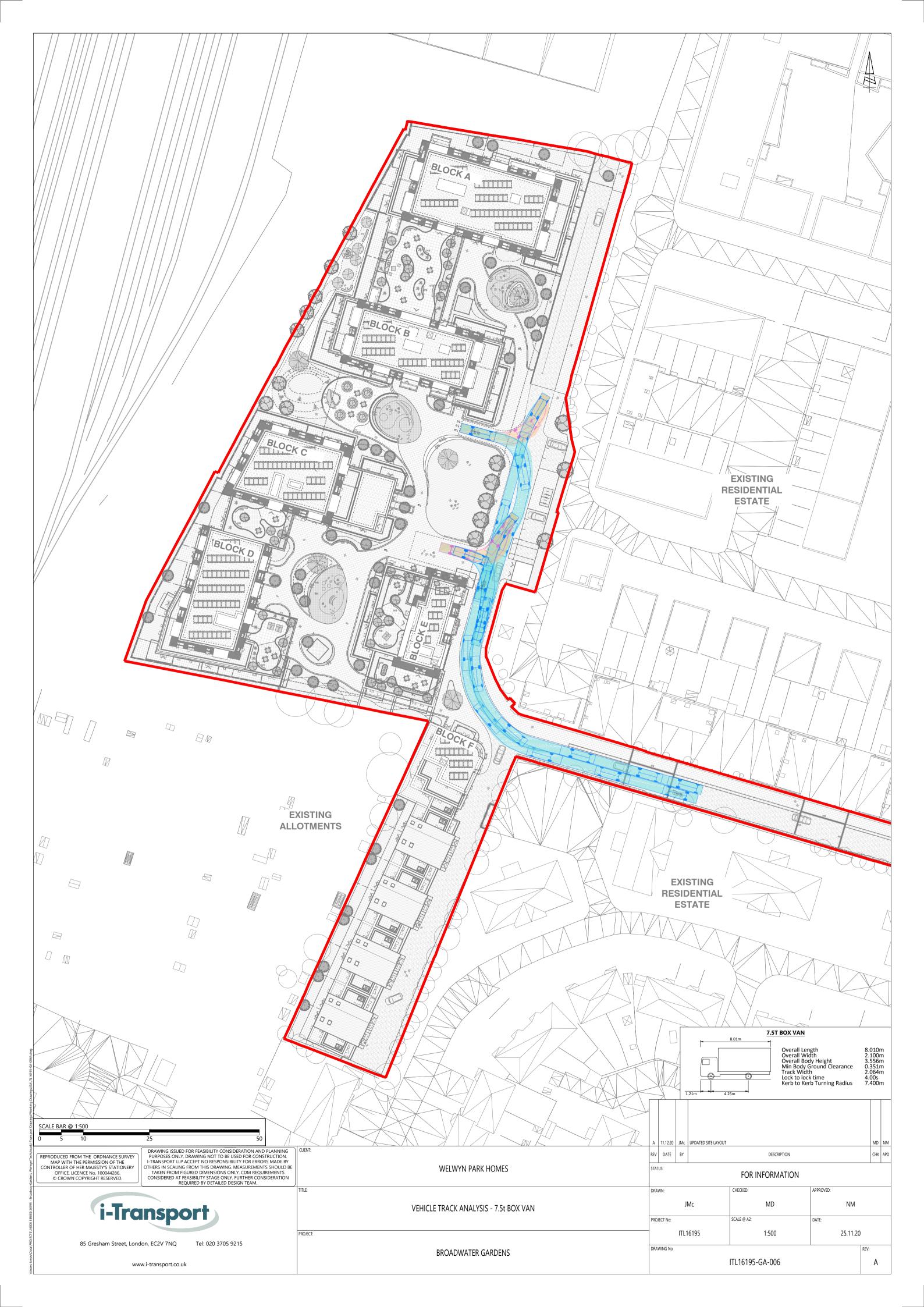
# **Supporting Documentation:**

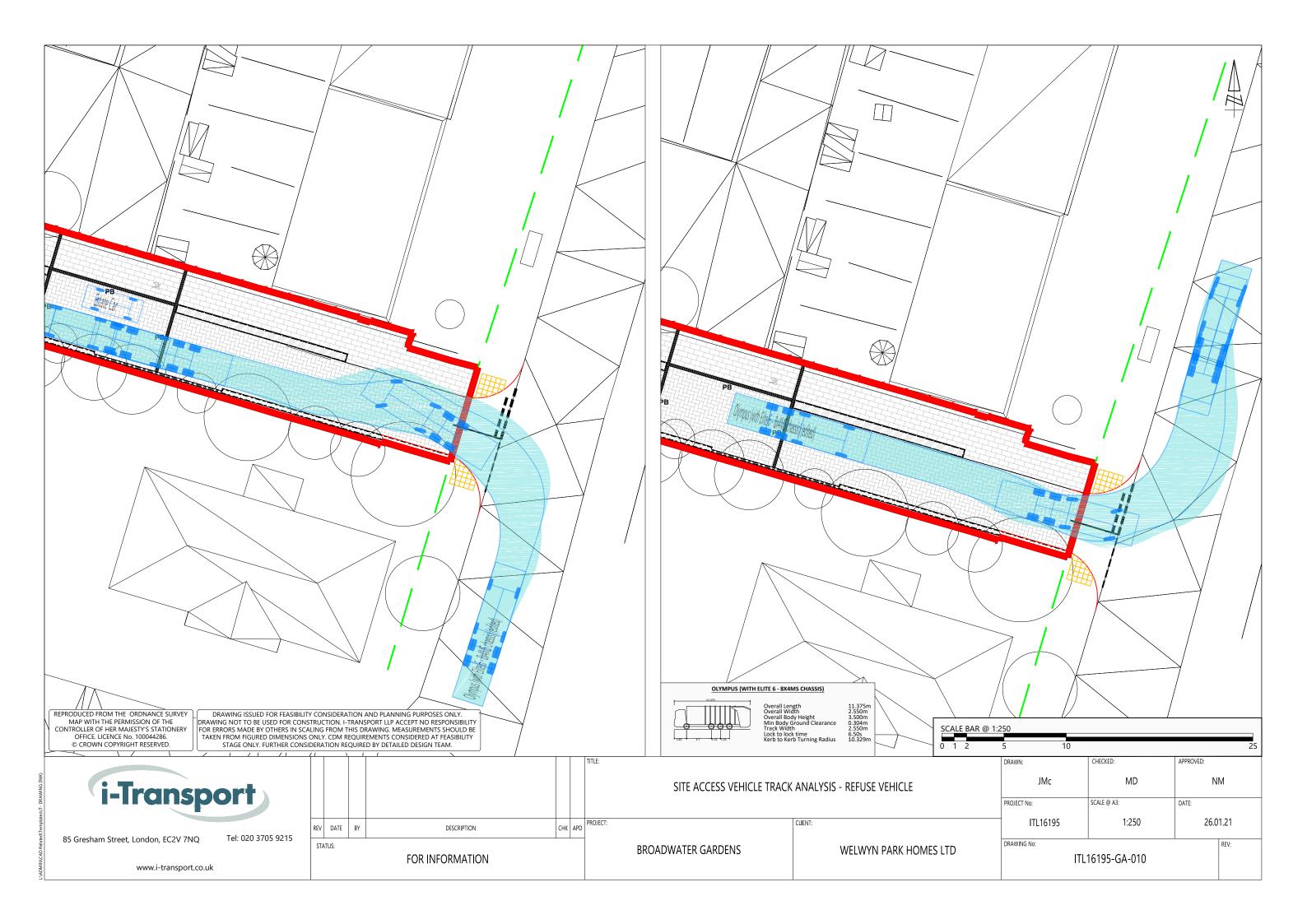
- Road Safety Audit Information, i-Transport, January 2021.
- 5-year collision data for the period 01/07/15 to 30/06/20.
  Automatic Traffic Count, Intelligent Data Collection, November 2020.













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NOTES:

1. THIS DRAWING IS BASE ON: BMD.20.044.DR.P001 - OVERAL GENERAL ARRANMGENT PLAN

2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER LANDSCAPE DRAWINGS AND DOCUMENTS

3. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION

4. DO NOT SCALE FROM THIS DRAWING

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Rev Description Purpose of Issue
PLANNING

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# **HG GROUP**

BROADWATER GARDENS, WELWN GARDEN CITY

Drawing Title
COLOUR RENDERED LANDSCAPE MASTERPLAN

Checked MP Job No. 20.44 Sheet Size 1:500 A1 Drawing Number BMD.20.044.DR.P002



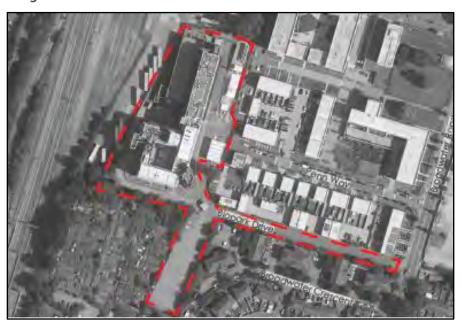
## **Stage 1 Road Safety Audit Information**

## **Development Proposal**

Redevelopment of the BioPark site in Welwyn Garden City for 289 dwellings. The proposal includes a mix of townhouses and flats.

#### **Site Location**

**Image 1: Site Location Plan** 



#### **Traffic Conditions**

An Automatic Traffic Counter (ATC) was installed to record traffic speeds, classifications, and volumes on Broadwater Road for a period of seven days (8 November 2020 to 14 November 2020).

#### **Vehicle Speeds**

A summary of the 85<sup>th</sup> percentile (85<sup>th</sup>%ile) design speeds recorded along Broadwater Road is summarised in Table 1.

**Table 1: Summary of Traffic Speeds – Broadwater Road** 

Direction	85 <sup>th</sup> %tile Design Speeds (mph)
Northbound	28.8 mph
Southbound	28.5 mph

#### **Vehicle Counts**

A summary of the peak hour, and daily, vehicle volumes along Broadwater Road is presented in Table 2.

**Table 2: Summary of Broadwater Road Traffic Flows** 

		al Vehicle Observed		Total Ve	hicles – Fa 33%*	ctored by
	North- bound	South- bound	Two- Way	North- bound	South- bound	Two-Way
Morning Peak Hour (0800-0900)	454	360	814	604	478	1,083
Evening Peak Hour (1700-1800)	366	423	789	487	563	1,050
Daily (0700-1900)	4,553	4,399	8,952	6,055	5,851	11,906

<sup>\*</sup>Flows factored by 33% to reflect November 2019 levels as the ATC was placed during November 2020 and therefore impacted by Covid-19 travel pattern changes

#### Road Safety - PIA Data

The most recently available (at the time of request) Personal Injury Accident (PIA) data has been obtained from HCC from 1 July 2015 to 30 June 2020. The study area includes the length of Broadwater Road from its junction with Bridge Road to the north to the A6129 in the south as agreed with HCC.

The PIA data details there were a total of 21 PIAs recorded. This included eight PIAs resulting in serious injuries and 13 PIAs resulting in slight injuries. There were no fatal PIAs recorded and no accidents recorded at the site access.

#### **Proposed Vehicular Trip Generation**

The proposed vehicular trip generation of the development is summarised in Table 3.

**Table 3: Proposed Residential Trip Rates and Trip Generation – Private Flats** 

		ing Pea 0800-09	k Hour 00)		ig Peal 00-18		12 Hour (0700-1900)		
	Arr	Dep	Two- Way	Arr	Dep	Two- Way	Arr	Dep	Two- Way
	,		Vehicles						
Trip Rates (per dwelling)	0.06	0.18	0.24	0.18	0.10	0.28	1.18	1.22	2.40
Trip Generation (300 Units)	17	54	71	54	29	83	355	365	721

#### **Net Impact**

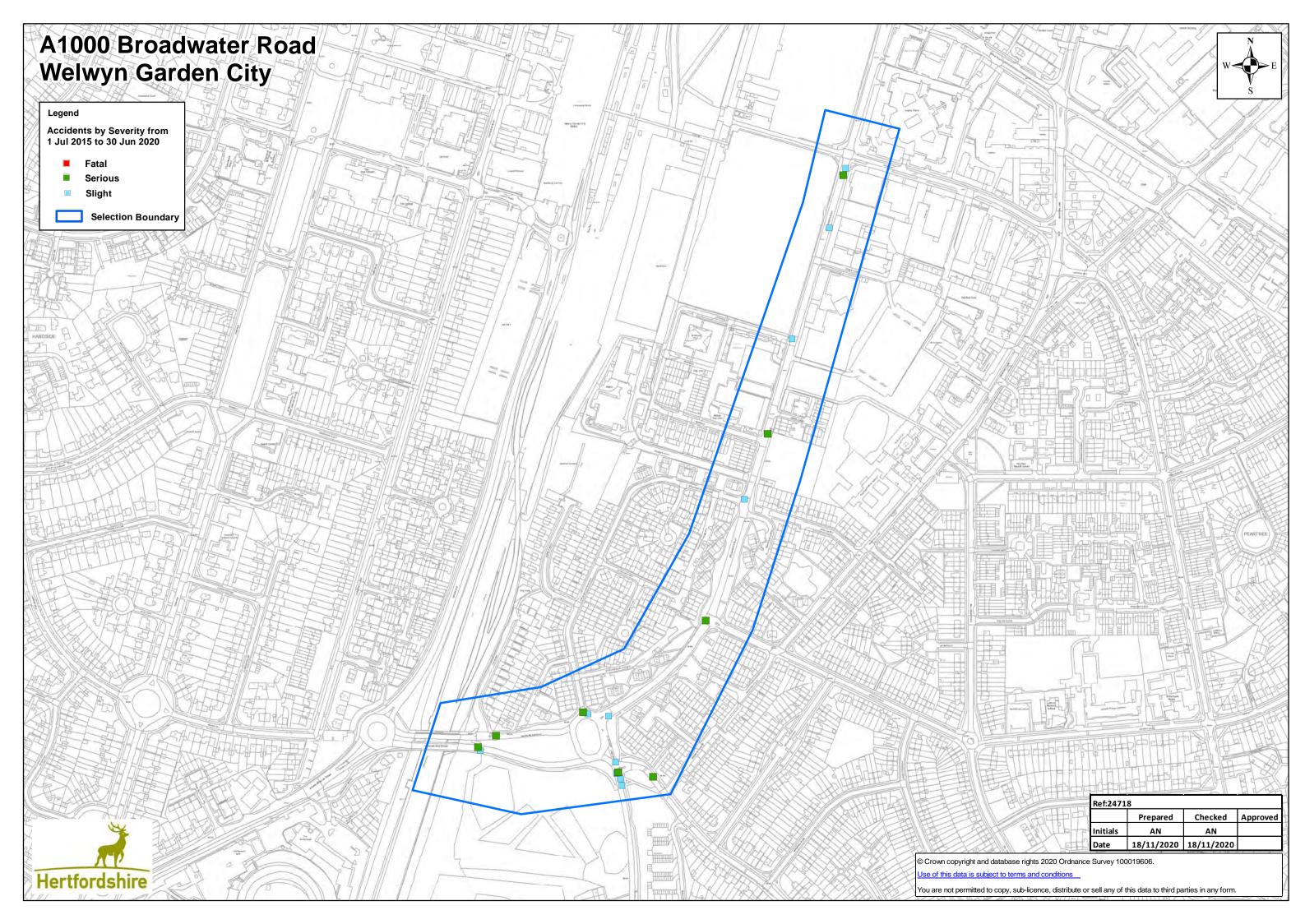
The net impact of vehicular flows at the junction, taking into account the site's previous use as an office, is presented in Table 4.

**Table 4: Net Impact** 

		ng Peak 800-0900			ng Peak 700-180		12 Hour (0700-1900)			
	Arr	Dep	Two- Way	Arr	Dep	Two- Way	Arr	Dep	Two- Way	
				Vehicle	es					
Existing	122	15	137	13	106	119	469	458	928	
Proposed	17	85	103	74	35	109	453	466	919	
Difference	-105	+70	-34	+61	-71	-10	-16	+8	-9	

## The results demonstrate:

- an overall reduction in two-way vehicle trips across the day and during the network peak hours, including:
  - o a reduction of over 30 vehicles during the morning peak hour;
  - o circa 10 fewer vehicles during the evening peak hour; and
  - o no significant change in overall vehicle trips across a 12 hour day.



Full Non Confidential Accident Report

**Date Produced:** 18-Nov-20

24718 Set Name (if saved):

Set Total:

21

**Accident Details:** 

**Acc Ref:** 2019-410916076

1st / 2nd Rd: A1000/8 0U1346/ Jun Detail:

T

Weather:

Other

Num Cas:

1 0

2

Day of Week: Fri

Parish:

Jun Control:

Light: Giveway

Day

Num Peds:

**Date:** 18/10/2019 17:30:00

District:

**Speed Limit:** 

Spec Conditions: None

Road Surface: Dry

Num Vehicles:

Acc Severity: Slight

WelHat 30mph

C/way Hazard: None

C/way Type: Single

**Ped Xing:** 

Npernox

A1000 Broadwater Road Welwyn Garden City J/w U1346 Broadwater Crescent

524122 Easting: **Northing:**  212397

On Site: Yes

Casualty Details

Acc Ref: 2019-410916076

Cas Class: Passenge Car Passenger:

Frontsea

Cas Severity:

Slight

**Ped Movement:** 

Notped

Veh Ref: 2

Cas Age:

49

**PSV Passenger:** 

No

**Road User Class:** 

Car Users

**Ped Location:** Notped

Driver Age: 57

Driver Age: 59

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Cas Ref: 1

Cas Gender: Female

**Seat Belt:** 

Unknown

**School Pupil:** 

Ped Work on Rd: Notped

Vehicle Details

Acc Ref: Veh Ref: 1

154236 Maneouvre: Starting **Location:** 

Goodsuk

Carw

Emain

None

Skiding:

None Object in Cway: None

Impact Point: Front From:

J Purpose:

To:

Nw Se

Hit and Run: **Driver Gender:** 

**Driver Severity:** 

Hit and Run:

**Driver Breath Test:** 

Notreq Nothtrun

Male

None

Foreign Veh:

Veh Type:

Acc Ref:

Veh Ref:

Towing; Maneouvre:

Location:

Towing;

Junction:

Ahead

Skiding:

Object off Cway None

None Object in Cway: None

No

Work Impact Point: Nearside

Sw

**Driver Breath Test:** 

Notreq

Nothtrun Male

Veh Type:

Car Foreign Veh:

2

Junction:

Middle

Carw Object off Cway None None velcwy

velcwy

No

To: J Purpose:

From:

Ne Other

**Driver Gender: Driver Severity:** 

None

Hectaciti Detatis.								
<b>Acc Ref:</b> 2019-410886126	1st / 2nd Rd:	A1000/8 NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	1
Day of Week: Tue	Parish:		Jun Control:	Notjunct	Light:	Day	Num Peds:	0
<b>Date:</b> 08/10/2019 08:20:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1000 Broadwater Road Welwyn G	arden City Appro	x 45m North J/w U15	596 Broad Court				On Site:	No

**Easting:** 524231 **Northing:** 212746

# Casualty Details

Acc Ref:	2019-410886126	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	50	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	2	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Acc Ref:	153455	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	Driver Breath Test:	Notcon	Driver Age:	41
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Hit&run		
Veh Type:	Car	Junction:	Notjunct	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	None		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Offside	Driver Breath Test:	Notap	Driver Age:	50
Acc Ref: Veh Ref:	2	Maneouvre:	Ahead Carw	Skiding: Object in Cway:		Impact Point:	Offside N	Driver Breath Test: Hit and Run:	Notap Nothtrun		50
	2 Bicycle			8	None	•			•		50

House Details.								
Acc Ref: 2019-410895358	1st / 2nd Rd:	A1000/1 0U752/1	Jun Detail:	T	Weather:	Rain	Num Cas:	1
Day of Week: Thu	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
<b>Date:</b> 03/10/2019 07:21:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Wet	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1000 Chequers Welwyn Garden C	ity J/w U752 Woo	odhall Lane					On Site:	Yes

**Easting:** 523959 **Northing:** 212045

# Casualty Details

Acc Ref:	2019-410895358	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	41	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

# Vehicle Details

Acc Ref:	153594	Maneouvre:	Turnrigh	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	49
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun	ı	
Veh Type:	Car	Junction:	Emain	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh		Towing;	None	velcwy	No	J Purpose:	Tofrowrk	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	<b>Driver Breath Test:</b>	Notap	Driver Age:	41
Acc Ref: Veh Ref:	2	Maneouvre: Location:	Ahead Carw	Skiding: Object in Cway:		Impact Point: From:	Nearside N	Driver Breath Test: Hit and Run:	Notap Nothtrum	Ü	41
	2 Bicycle			Ö	None	•			1	Ü	41

Set Name (if saved): 24718

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Ticciaciti Detaits.								
<b>Acc Ref:</b> 2018-410322933	1st / 2nd Rd:	A6129/1 NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	1
Day of Week: Tue	Parish:		Jun Control:	Notjunct	Light:	Day	Num Peds:	0
<b>Date:</b> 26/06/2018 20:01:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	40mph	C/way Hazard:	None	C/way Type:	Dual	Ped Xing:	Nperpelx
A6129 Broadwater Road Welwyn G	Garden City Appro	ox 145m West J/w A1	000 Chequers Rbt				On Site:	Yes

**Easting:** 523782 **Northing:** 212074

# Casualty Details

Acc Ref:	2018-410322933	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	56	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Acc Ref:	151309	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Back	Driver Breath Test:	Notap	Driver Age:	56
Veh Ref:	1	<b>Location:</b>	Carw	Object in Cway:	None	From:	S	Hit and Run:	Nothtrun		
Veh Type:	Bicycle	Junction:	Notjunct	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	Driver Severity:	Slight		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	31
Acc Ref: Veh Ref:	2	Maneouvre: Location:	Ahead Carw	Skiding: Object in Cway:		Impact Point: From:	Front E	Driver Breath Test: Hit and Run:	Notreq Nothtrun	Ö	31
	2 Gdltwght			Ö	None	•			•	Ö	31

11ctuciii Detaits.								
<b>Acc Ref:</b> 2018-410323122	1st / 2nd Rd:	A1000/8 0U1778/	Jun Detail:	T	Weather:	Fine	Num Cas:	2
Day of Week: Wed	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
<b>Date:</b> 13/06/2018 14:00:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	3
Acc Severity: Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Nperpelx
A1000 Broadwater Road Welwyn G	Garden City J/w U	1778 Otto Road					On Site:	Yes

**Easting:** 524183 **Northing:** 212603

# Casualty Details

1	Acc Ref:	2018-410323122	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
,	Veh Ref:	2	Cas Age:	26	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
•	Cas Ref:	2	Cas Gender:	Female	Seat Belt:	Unknown	School Pupil:		Ped Work on Rd:	Notped
1	Acc Ref:	2018-410323122	Cas Class:	Passenge	Car Passenger:	Frontsea	Cas Severity:	Slight	Ped Movement:	Notped
,	Veh Ref:	1	Cas Age:	68	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
•	Cas Ref:	3	Cas Gender:	Female	Seat Belt:	Unknown	School Pupil:		Ped Work on Rd:	Notped

Acc Ref:	151307	Maneouvre:	Otakesta	Skiding:	None	Impact Point:	Nearside	Driver Breath Test:	Notreq	Driver Age:	70
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	S	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Middle	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Turnrigh	Skiding:	None	Impact Point:	Front	<b>Driver Breath Test:</b>	Notreq	Driver Age:	26
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Emain	Object off Cway	None	To:	S	Driver Gender:	Female		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	Slight		
Acc Ref:		Maneouvre:	Parked	Skiding:	None	Impact Point:	None	Driver Breath Test:	Notcon	Driver Age:	46
Veh Ref:	3	Location:	Carw	Object in Cway:	None	From:	P	Hit and Run:	Nothtrun		
Veh Type:	Goodsuk	Junction:	Approach	Object off Cway	None	To:	P	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		

Trectaent Details								
Acc Ref: 2018-410292729	1st / 2nd Rd:	A1000/8 NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	2
Day of Week: Tue	Parish:		Jun Control:	Notjunct	Light:	Day	Num Peds:	0
<b>Date:</b> 27/03/2018 11:15:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	3
Acc Severity: Serious	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Nperpelx
A1000 Broadwater Road Welwyn G	arden City Appro	x 30m South Xrds J/v	w U389 Hydeway				On Site:	Yes

**Easting:** 524249 **Northing:** 212814

# Casualty Details

Acc Ref:	2018-410292729	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	67	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Female	Seat Belt:	Wornind	School Pupil:		Ped Work on Rd:	Notped
-									
Acc Ref:	2018-410292729	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Acc Ref: Veh Ref:		Cas Class: Cas Age:	Driver 62	Car Passenger: PSV Passenger:	No No	Cas Severity: Road User Class:	Serious Goods Vehicles	Ped Movement: Ped Location:	Notped Notped

Acc Ref:	150876	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	67
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	S	Hit and Run:	Nothtrun	1	
Veh Type:	Car	Junction:	Notjunct	Object off Cway	None	To:	N	Driver Gender:	Female		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	Serious		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Offside	<b>Driver Breath Test:</b>	Negati	Driver Age:	39
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun	ı	
Veh Type:	Gdltwght	Junction:	Notjunct	Object off Cway	None	To:	S	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Work	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	62
Veh Ref:	3	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun	1	
Veh Type:	Gdltwght	Junction:	Notjunct	Object off Cway	None	To:	S	Driver Gender:	Female		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Work	<b>Driver Severity:</b>	Serious		

**Acc Ref:** 2018-410287618 A6129/1 0U1616/ Jun Detail: T Weather: Fine Num Cas: 1 1st / 2nd Rd: Light: Day of Week: Fri Parish: Jun Control: Ats Day Num Peds: 0 **Date:** 09/03/2018 15:23:00 WelHat Spec Conditions: None Road Surface: Dry 2 District: Num Vehicles: 30mph Acc Severity: Serious Speed Limit: C/way Hazard: None C/way Type: Single Ped Xing: Nperpelx A6129 Broadwater Road Welwyn Garden City J/w U1616 The Reeds Yes On Site:

**Easting:** 523802 **Northing:** 212093

# Casualty Details

Acc Ref:	2018-410287618	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	13	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

#### Vehicle Details

Acc Ref:	150463	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	<b>Driver Breath Test:</b>	Negati	Driver Age:	26
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	W	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Exit	Object off Cway	None	To:	E	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Tofrowrk	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notap	Driver Age:	12
			Tirous	bidding.	None	impact i onit.	FIOIIL	Differ Breath Test.	Notap	Dilvei Age.	13
Veh Ref:	2	Location:	Carw	Object in Cway:		From:	E	Hit and Run:	Nothtrun		13
Veh Ref: Veh Type:	2 Bicycle	Location: Junction:		8	None	•			•		13

Set Name (if saved): 24718

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Ticciaciti Detaits.								
Acc Ref: 2018-410262046	1st / 2nd Rd:	A1000/1 0U752/1	Jun Detail:	T	Weather:	Fine	Num Cas:	3
Day of Week: Tue	Parish:		Jun Control:	Giveway	Light:	Darklit	Num Peds:	0
<b>Date:</b> 16/01/2018 20:44:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npercntr
A1000 Chequers Welwyn Garden C	ity J/w U752 Woo	odhall Lane					On Site:	Yes

**Easting:** 523960 **Northing:** 212046

# Casualty Details

2018-410262046	Cas Class:							
	Cas Ciass:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
1	Cas Age:	42	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
1	Cas Gender:	Male	Seat Belt:	Wornnot	School Pupil:		Ped Work on Rd:	Notped
2018-410262046	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
2	Cas Age:	24	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
2	Cas Gender:	Male	Seat Belt:	Wornnot	School Pupil:		Ped Work on Rd:	Notped
2018-410262046	Cas Class:	Passenge	Car Passenger:	Frontsea	Cas Severity:	Slight	Ped Movement:	Notped
1	Cas Age:	13	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
3	Cas Gender:	Female	Seat Belt:	Wornnot	School Pupil:		Ped Work on Rd:	Notped
1 2 2 2 1	2018-410262046 2 2 2 2018-410262046	Cas Gender:  Cas Gender:  Cas Class:  Cas Age:  Cas Gender:  Cas Age:  Cas Gender:  Cas Gender:	Cas Gender: Male  Cas Class: Driver  Cas Age: 24  Cas Gender: Male  Cas Class: Passenge  Cas Age: 13	Cas Gender: Male Seat Belt:  Colle-410262046 Cas Class: Driver Car Passenger:  Cas Age: 24 PSV Passenger:  Cas Gender: Male Seat Belt:  Colle-410262046 Cas Class: Passenge Car Passenger:  Cas Age: 13 PSV Passenger:	Cas Gender: Male Seat Belt: Wornnot  Cas Class: Driver Car Passenger: No  Cas Age: 24 PSV Passenger: No  Cas Gender: Male Seat Belt: Wornnot  Cas Gender: Male Seat Belt: Wornnot  Cas Class: Passenge Car Passenger: Frontsea  Cas Age: 13 PSV Passenger: No	Cas Gender: Male Seat Belt: Wornnot School Pupil:  Cas Gender: Male Seat Belt: Wornnot School Pupil:  Cas Age: 24 PSV Passenger: No Road User Class:  Cas Gender: Male Seat Belt: Wornnot School Pupil:  Cas Class: Passenge Car Passenger: Frontsea Cas Severity:  Cas Age: 13 PSV Passenger: No Road User Class:	Cas Gender: Male  Cas Gender: Male  Car Passenger: No  Cas Severity: Slight  Cas Age: 24  PSV Passenger: No  Road User Class: Car Users  Cas Gender: Male  Seat Belt: Wornnot  Cas Severity: Slight  Cas Gender: Male  Cas Gender: Male  Cas Gender: Male  Seat Belt: Wornnot  School Pupil:  Cas Age: 13  PSV Passenger: Frontsea  Cas Severity: Slight  Cas Age: 13  PSV Passenger: No  Road User Class: Car Users	Cas Gender: Male Seat Belt: Wornnot School Pupil: Ped Work on Rd:  Cas Gender: Driver Car Passenger: No Cas Severity: Slight Ped Movement:  Cas Age: 24 PSV Passenger: No Road User Class: Car Users Ped Location:  Cas Gender: Male Seat Belt: Wornnot School Pupil: Ped Work on Rd:  Cas Gender: Male Seat Belt: Wornnot School Pupil: Ped Work on Rd:  Cas Class: Passenge Car Passenger: Frontsea Cas Severity: Slight Ped Movement:  Cas Age: 13 PSV Passenger: No Road User Class: Car Users Ped Location:

Acc Ref:	150332	Maneouvre:	Turnrigh	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	42
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Emain	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh		Towing;	None	velcwy	No	J Purpose:	Work	<b>Driver Severity:</b>	Slight		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	<b>Driver Breath Test:</b>	Negati	Driver Age:	24
Acc Ref: Veh Ref:	2	Maneouvre: Location:	Ahead Carw	Skiding: Object in Cway:		Impact Point: From:	Nearside N	Driver Breath Test: Hit and Run:	Negati Nothtrun	· ·	24
	2 Car			8	None	•			Ü	· ·	24

Ticciaciti Detatis.								
<b>Acc Ref:</b> 2017-410251463	1st / 2nd Rd:	A1000/1 0U752/1	Jun Detail:	T	Weather:	Fine	Num Cas:	1
Day of Week: Fri	Parish:		Jun Control:	Giveway	Light:	Darklit	Num Peds:	0
<b>Date:</b> 10/11/2017 20:40:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Serious	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
A1000 Chequers Welwyn Garden C	ity J/w U752 Woo	odhall Lane					On Site:	Yes

**Northing:** 

212046

523959

Casualt	y Details								
Acc Ref:	2017-410251463	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	39	PSV Passenger:	No	Road User Class:	Motorcyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

# Vehicle Details

**Easting:** 

Acc Ref:	150129	Maneouvre:	Turnrigh	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Negati	Driver Age:	47
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun	ı	
Veh Type:	Car	Junction:	Emain	Object off Cway	None	To:	N	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Work	<b>Driver Severity:</b>	None		
Acc Ref:											
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	Driver Breath Test:	Notreq	Driver Age:	39
Acc Ref: Veh Ref:	2	Maneouvre:	Ahead Carw	Skiding: Object in Cway:		Impact Point:	Nearside N	Driver Breath Test: Hit and Run:	Notreq Nothtrum	· ·	39
	2 Mc<=125			8	None	•			1	· ·	39

neciaciii Deians.								
<b>Acc Ref:</b> 2017-410237397	1st / 2nd Rd:	A1000/9 0U1346/	Jun Detail:	R/bout	Weather:	Fine	Num Cas:	1
Day of Week: Sun	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
<b>Date:</b> 24/09/2017 10:40:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	R/bout	Ped Xing:	Npernox
A1000 Broadwater Road Hatfield R	abt J/w U1346 Bro	oadwater Crescent, Br	oadwater Road & C	Chequers			On Site:	Yes

**Easting:** 523920 **Northing:** 212121

# Casualty Details

Acc Ref:	2017-410237397	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	37	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Female	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

Acc Ref:	150039	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	Driver Breath Test:	Notreq	Driver Age:	30
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Er/about	Object off Cway	None	To:	S	Driver Gender:	Female		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Nearside	Driver Breath Test:	Notap	Driver Age:	37
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Sw	Hit and Run:	Nothtrun		
				011		To:	NI-	Driver Gender:	F1-		
Veh Type:	Bicycle	Junction:	Middle	Object off Cway	None	10;	Ne	Driver Gender:	Female		

**Acc Ref:** 2017-410169018 T Weather: Fine Num Cas: 1 1st / 2nd Rd: A1000/1 0U752/1 **Jun Detail:** 

Day of Week: Tue Parish: Light: Jun Control: Giveway Day Num Peds: 1

**Date:** 21/03/2017 09:06:00 District: WelHat Road Surface: Dry Num Vehicles: **Spec Conditions:** None

Single Acc Severity: Slight **Speed Limit:** 40mph C/way Hazard: None C/way Type: **Ped Xing:** Nperpelx On Site: Yes

A1000 Chequers Welwyn Garden City On Zig Zag Lines For Crossing Approx 15m South J/w U752 Woodhall Lane

**Easting:** 523962 **Northing:** 212037

Casualty Details

**Acc Ref:** 2017-410169018 Cas Class: Pedestri Car Passenger: No Cas Severity: Slight **Ped Movement:** Xnrside

37 Veh Ref: 1 Cas Age: **PSV Passenger:** No **Road User Class:** Pedestrians **Ped Location:** Zigzagex

Cas Ref: 1 Cas Gender: Female **Seat Belt:** Notapp **School Pupil:** Ped Work on Rd: Notapp

Vehicle Details

Acc Ref: 148434 Maneouvre: Ahead Skiding: Impact Point: Front **Driver Breath Test:** Negati Driver Age: 53 None N Veh Ref: Location: Carw Object in Cway: None From: Hit and Run: Nothtrun Veh Type: Goodsuk Junction: Exit Object off Cway None To: S **Driver Gender:** Male

Foreign Veh: Towing; None velcwy No J Purpose: Tofrowrk **Driver Severity:** None

24718

### Agaidant Datails

Towing;

None

Foreign Veh:

Acciden	ıt Details:											
Acc Ref:	2016-410125378	1st / 2nd R	<b>Ad:</b> A1000/1 0U752	/1 Jun Detail:		T	Weather:	Fine	Num Ca	is:	2	
Day of We	eek: Sat	Parish:		Jun Contro	l:	Giveway	Light:	Darklit	Num Pe	ds:	0	
<b>Date:</b> 29/	/10/2016 18:45:00	District:	WelHat	Spec Condi	tions:	Signdefe	Road Surface:	Dry	Num Ve	hicles:	2	
Acc Sever	ity: Slight	Speed Lim	it: 30mph	C/way Haz	ard:	None	C/way Type:	Single	Ped Xin	g:	Nperpelx	
A1000 Ch	equers Welwyn C	Garden City J/w U752	2 Woodhall Lane						On Site:		Yes	
Easting:	523957	Northing:	212045									
Casuali	ty Details											
Acc Ref:	2016-41012537	78 Cas Class:	Driver	Car Passens	ger:	No	Cas Severity:	Slight	Ped Mo	vement:	Notped	
Veh Ref:	1	Cas Age:	22	PSV Passen	ger:	No	Road User Clas	s: Car Users	Ped Loc	cation:	Notped	
Cas Ref:	1	Cas Gende	r: Female	Seat Belt:		Wornnot	School Pupil:		Ped Wo	rk on Rd:	Notped	
Acc Ref:	2016-41012537	78 Cas Class:	Driver	Car Passen	ger:	No	Cas Severity:	Slight	Ped Mo	vement:	Notped	
Veh Ref:	2	Cas Age:	29	PSV Passen	ger:	No	Road User Clas	s: Car Users	Ped Loc	cation:	Notped	
Cas Ref:	2	Cas Gende	r: Male	Seat Belt:		Wornnot	School Pupil:		Ped Wo	rk on Rd:	Notped	
Vehicle	Details											
Acc Ref:	147254	Maneouvre: T	Turnrigh <b>Skid</b>	ing:	None	Impact Poir	nt: Offside	Driver B	reath Test:	Negati	Driver Age:	22
Veh Ref:	1	Location:	Carw Obje	ect in Cway:	None	From:	Se	Hit and l	Run:	Nothtrun		
Veh Type	e: Car	Junction: E	Emain Obje	ect off Cway	None	To:	N	Driver G	ender:	Female		
Foreign \	Veh:	Towing; N	None velc	wy :	No	J Purpose:	Other	Driver So	everity:	Slight		
Acc Ref:		Maneouvre: A	Ahead Skid	ing:	None	Impact Poir	nt: Front	Driver B	reath Test:	Negati	Driver Age:	29
Veh Ref:	2	Location:	Carw <b>Obje</b>	ect in Cway:	None	From:	N	Hit and l	Run:	Nothtrun		
Veh Type	e: Car	Junction: N	Middle Obje	ect off Cway	None	To:	S	Driver G	ender:	Male		

J Purpose:

Other

**Driver Severity:** 

No

velcwy

Slight

**Acc Ref:** 2016-410118325 A1000/8 0U1777/ Jun Detail: T Weather: Fine Num Cas: 1 1st / 2nd Rd: Light: Day of Week: Tue Parish: Jun Control: Giveway Darklit Num Peds: 0 **Date:** 27/09/2016 20:20:00 WelHat Spec Conditions: None Road Surface: Dry 2 District: Num Vehicles: 30mph Acc Severity: Serious Speed Limit: C/way Hazard: None C/way Type: Single Ped Xing: Npernox A1000 Broadwater Road Welwyn Garden City J/w U1777 Penn Way Yes On Site:

**Easting:** 524152 **Northing:** 212481

## Casualty Details

Acc Ref:	2016-410118325	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	21	PSV Passenger:	No	Road User Class:	Motorcyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

#### Vehicle Details

Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	Serious		
Veh Type:	Mc>500	Junction:	Middle	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From:	Ne	Hit and Run:	Nothtrun	ı	
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	21
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		
Veh Type:	Car	Junction:	Emain	Object off Cway	None	To:	Sw	Driver Gender:	Male		
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Nw	Hit and Run:	Nothtrun	ı	
Acc Ref:	147099	Maneouvre:	Turnrigh	Skiding:	None	Impact Point:	Nearside	<b>Driver Breath Test:</b>	Notreq	Driver Age:	43

Set Name (if saved): 24718 Page 13 of 22

**Acc Ref:** 2016-410088920 0U1346/ A1000/9 Jun Detail: R/bout Weather: Fine Num Cas: 1 1st / 2nd Rd: Light: Day of Week: Sat Parish: Jun Control: Giveway Day Num Peds: 0 **Date:** 23/07/2016 14:04:00 WelHat Road Surface: Dry 3 District: Spec Conditions: None Num Vehicles: 30mph Acc Severity: Serious Speed Limit: C/way Hazard: None C/way Type: Single Ped Xing: Npernox

**Easting:** 523914 **Northing:** 212123

U1346 Broadwater Crescent Welwyn Garden City J/s A1000 Broadwater Road Rbt

## Casualty Details

Acc Ref:	2016-410088920	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	31	PSV Passenger:	No	Road User Class:	Goods Vehicles	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Wornnot	School Pupil:		Ped Work on Rd:	Notped

## Vehicle Details

Acc Ref:	147483	Maneouvre:	Turnleft	Skiding:	ing: None Impact P		Front	Driver Breath Test:	Ntprov	Driver Age:	31
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	W	Hit and Run:	Nothtrun		
Veh Type:	Goodsuk	Junction:	Lr/about	Object off Cway	Otherobj	To:	N	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	Nearside	J Purpose:	Unknown	<b>Driver Severity:</b>	Serious		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	None	Driver Breath Test:	Negati	Driver Age:	17
Veh Ref:	2	Location:	Carw	Object in Cway:	None	From: W		Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Lr/about	Object off Cway	None	To:	E	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	Driver Severity:	None		
Acc Ref:		Maneouvre:	Parked	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notcon	Driver Age:	
Veh Ref:	3	Location:	Fway	Object in Cway:	None	From:	P	Hit and Run:	Nothtrun		
Veh Type: Car Junction:		Junction:	Exit	Object off Cway	None	To:	P	Driver Gender:	Unknow	n	
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		

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Yes

On Site:

**Acc Ref:** 2016-410101712 A1000/8 A1000/9 Jun Detail: R/bout Weather: Fine Num Cas: 1 1st / 2nd Rd: Light: Day of Week: Sat Parish: Jun Control: Giveway Day Num Peds: 0 **Date:** 18/06/2016 17:15:00 WelHat Road Surface: Dry 2 District: Spec Conditions: None Num Vehicles: Acc Severity: Slight Speed Limit: 30mph C/way Hazard: None C/way Type: Single Ped Xing: Nperpelx A1000 Broadwater Road Welwyn Garden City J/w A1000 Broadwater Road Rbt Yes On Site:

**Easting:** 523947 **Northing:** 212118

# Casualty Details

Acc Ref:	2016-410101712	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	30	PSV Passenger:	No	Road User Class:	Car Users	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Wornnot	School Pupil:		Ped Work on Rd:	Notped

## Vehicle Details

Acc Ref:	146597	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Back	<b>Driver Breath Test:</b>	Notreq	Driver Age:	30
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Approach	Object off Cway	None	To:	W	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	Slight		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notcon	Driver Age:	
				omanig.	Tione	impact i omit	Tiont		11010011	Dilver rige.	
Veh Ref:	2	Location:	Carw	Object in Cway:		From:	E	Hit and Run:	Hit&run	Dilver Age.	
Veh Ref: Veh Type:	2 Car	Location: Junction:		8	None	•		Hit and Run: Driver Gender:		Driver rige.	

Set Name (if saved): 24718

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120000000000000000000000000000000000000								
Acc Ref: 2016-410073127	1st / 2nd Rd:	0U752/1 NONE	Jun Detail:	Notjunct	Weather:	Fine	Num Cas:	1
Day of Week: Fri	Parish:		Jun Control:	Notjunct	Light:	Day	Num Peds:	1
<b>Date:</b> 13/05/2016 08:01:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	3
Acc Severity: Serious	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Npernox
U752 Woodhall Lane Welwyn Gard	en City O/s No 27	7 & Approx 30m Nw	J/w U753 Woodhall	l Court			On Site:	Yes

**Easting:** 524004 **Northing:** 212040

# Casualty Details

Acc Ref:	2016-410073127	Cas Class:	Pedestri	Car Passenger:	No	Cas Severity:	Serious	Ped Movement:	Cwaystil
Veh Ref:	1	Cas Age:	27	PSV Passenger:	No	Road User Class:	Pedestrians	Ped Location:	Incway
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Yes

# Vehicle Details

Acc Ref:	146284	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	<b>Driver Breath Test:</b>	Negati	Driver Age:	34
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	Se	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Notjunct	Object off Cway	None	To:	Nw	Driver Gender:	Female		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Parked	Skiding:	None	Impact Point:	None	Driver Breath Test:	Negati	Driver Age:	52
Veh Ref:	2	<b>Location:</b>	Carw	Object in Cway:	None	From:	P	Hit and Run:	Nothtrur		
Veh Type:	Goodsuk	Junction:	Notjunct	Object off Cway	None	To:	P	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Parked	Skiding:	None	Impact Point:	None	Driver Breath Test:	Negati	Driver Age:	27
Veh Ref:	3	<b>Location:</b>	Carw	Object in Cway:	None	From:	P	Hit and Run:	Nothtrur		
Veh Type:	Goodsuk	Junction:	Notjunct	Object off Cway	None	To:	P	Driver Gender:	Male		
Foreign Veh:	:	Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		

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Hectaetti Betatis.								
Acc Ref: 2016-410076259	1st / 2nd Rd:	A1000/1 0U752/1	Jun Detail:	T	Weather:	Fine	Num Cas:	1
Day of Week: Thu	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
<b>Date:</b> 12/05/2016 12:10:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity: Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Nperpelx
A1000 Chequers Welwyn Garden C	City J/w U752 Woo	odhall Lane					On Site:	Yes

**Easting:** 523956 **Northing:** 212059

# Casualty Details

Acc Ref:	2016-410076259	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	1	Cas Age:	57	PSV Passenger:	No	Road User Class:	Motorcyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

# Vehicle Details

Acc Ref:	146061	Maneouvre:	Turnleft	Skiding:	None	Impact Point:	Back	<b>Driver Breath Test:</b>	Notreq	Driver Age:	57
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun	ı	
Veh Type:	Mc>500	Junction:	Lmain	Object off Cway	None	To:	E	Driver Gender:	Male		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Other	<b>Driver Severity:</b>	Slight		
Acc Ref:		Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notreq	Driver Age:	74
Acc Ref: Veh Ref:	2	Maneouvre:	Ahead Carw	Skiding: Object in Cway:		Impact Point:	Front N	Driver Breath Test: Hit and Run:	Notreq Nothtrun	· ·	74
	2 Car			· ·	None	•			•	· ·	74

Set Name (if saved): 24718

**Acc Ref:** 2016-4100B0072 A6129/1 NONE Jun Detail: Notjunct Weather: Fine Num Cas: 1 1st / 2nd Rd: Light: Day of Week: Mon Parish: Jun Control: Notjunct Day Num Peds: 1 **Date:** 01/02/2016 08:45:00 WelHat Spec Conditions: None Road Surface: Wet District: Num Vehicles: 30mph Ped Xing: Acc Severity: Serious Speed Limit: C/way Hazard: None C/way Type: Dual Nperpelx

A6129 Broadwater Way Welwyn Garden City On Toucan Crossing & Approx 120m East J/w A6129 Stanborough Road Rbt Yes On Site:

**Easting:** 523779 **Northing:** 212078

# Casualty Details

Acc Ref:	2016-4100B0072	Cas Class:	Pedestri	Car Passenger:	No	Cas Severity:	Serious	<b>Ped Movement:</b>	Xnrmask
Veh Ref:	1	Cas Age:	7	PSV Passenger:	No	Road User Class:	Pedestrians	Ped Location:	Pedcross
Cas Ref:	1	Cas Gender:	Female	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notapp

## Vehicle Details

Acc Ref:	145472	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Front	<b>Driver Breath Test:</b>	Negati	Driver Age:	27
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	E	Hit and Run:	Nothtrun	ı	
Veh Type:	Car	Junction:	Notjunct	Object off Cway	None	To:	W	Driver Gender:	Male		
Foreign Veh:	i	Towing;	None	velcwy	No	J Purpose:	Tofrowrk	<b>Driver Severity:</b>	None		

Set Name (if saved): 24718

ment be	iuis.								
Acc Ref: 2015	-4100B0807	1st / 2nd Rd:	A1000/1 0U752/1	Jun Detail:	T	Weather:	Fine	Num Cas:	1
Day of Week:	Wed	Parish:		Jun Control:	Giveway	Light:	Day	Num Peds:	0
<b>Date:</b> 09/12/20	15 15:20:00	District:	WelHat	Spec Conditions:	None	Road Surface:	Dry	Num Vehicles:	2
Acc Severity:	Slight	Speed Limit:	30mph	C/way Hazard:	None	C/way Type:	Single	Ped Xing:	Nperpelx
A1000 Chequers	At Toucan Crossing	g Welwyn Garden	City Approx 20m So	outh J/w U752 Woo	dhall Lane			On Site:	Yes
T	5020C4 N		212020						

**Easting:** 523964 **Northing:** 212029

# Casualty Details

Acc Ref:	2015-4100B0807	Cas Class:	Driver	Car Passenger:	No	Cas Severity:	Slight	Ped Movement:	Notped
Veh Ref:	2	Cas Age:	15	PSV Passenger:	No	Road User Class:	Cyclists	Ped Location:	Notped
Cas Ref:	1	Cas Gender:	Male	Seat Belt:	Notapp	School Pupil:		Ped Work on Rd:	Notped

# Vehicle Details

Acc Ref:	144968	Maneouvre:	Ahead	Skiding:	None	Impact Point:	Offside	Driver Breath Test:	Notreq	Driver Age:	32
Veh Ref:	1	Location:	Carw	Object in Cway:	None	From:	N	Hit and Run:	Nothtrun		
Veh Type:	Car	Junction:	Exit	Object off Cway	None	To:	S	Driver Gender:	Female		
Foreign Veh:		Towing;	None	velcwy	No	J Purpose:	Unknown	<b>Driver Severity:</b>	None		
Acc Ref:		Maneouvre:	Starting	Skiding:	None	Impact Point:	Front	Driver Breath Test:	Notap	Driver Age:	15
Acc Ref: Veh Ref:	2	Maneouvre:	Starting Carw	Skiding: Object in Cway:		Impact Point:	Front W	Driver Breath Test: Hit and Run:	Notap Nothtrum	· ·	15
	2 Bicycle		C	Ö	None	•				· ·	15

Set Name (if saved): 24718

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 Acc Ref:
 2015-4100B0801
 1st / 2nd Rd:
 A1000/8
 0U374/1
 Jun Detail:
 T
 Weather:
 Rainwind
 Num Cas:
 1

Day of Week:SunParish:Jun Control:GivewayLight:DarklitNum Peds:1

Date: 29/11/2015 17:21:00 District: WelHat Spec Conditions: None Road Surface: Wet Num Vehicles: 1

Acc Severity: Serious Speed Limit: 30mph C/way Hazard: None C/way Type: Single Ped Xing: Nperpelx

A1000 Broadwater Road Welwyn Garden City J/w U374 Holwell Road

On Site: Yes

Allow Bloadward Road welly in Garden City 5/W 65/4 Holwell Road

212241

Casualty Details

524072

**Northing:** 

**Easting:** 

Acc Ref: 2015-4100B0801 Cas Class: Pedestri Car Passenger: No Cas Severity: Serious Ped Movement: Xoffside

Veh Ref: 1 Cas Age: 31 PSV Passenger: No Road User Class: Pedestrians Ped Location: Within 50

Cas Ref: 1 Cas Gender: Female Seat Belt: Notapp School Pupil: Ped Work on Rd: Notapp

Vehicle Details

Acc Ref: 144897 Maneouvre: Ahead Skiding: Impact Point: Front **Driver Breath Test:** Notreq Driver Age: None Veh Ref: 1 Location: Carw Object in Cway: None From: SwHit and Run: Nothtrun Veh Type: Car Junction: Approach Object off Cway None To: Ne **Driver Gender:** Male

Foreign Veh: Towing; None velcwy No J Purpose: Other Driver Severity: None

24718

 Acc Ref:
 2015-4100B0756
 1st / 2nd Rd:
 A1000/8
 0U389/1
 Jun Detail:
 Crossrd
 Weather:
 Other
 Num Cas:
 1

Day of Week:TueParish:Jun Control:GivewayLight:DarklitNum Peds:1

Date: 24/11/2015 17:10:00 District: WelHat Spec Conditions: None Road Surface: Wet Num Vehicles: 1

Acc Severity: Slight Speed Limit: 30mph C/way Hazard: None C/way Type: Single Ped Xing: Nperpelx

A1000 Broadwater Road Welwyn Garden City On Pelican Crossing Approx 18m South J/w U389 Hyde Way

On Site: No

**Easting:** 524252 **Northing:** 212823

Casualty Details

Acc Ref: 2015-4100B0756 Cas Class: Pedestri Car Passenger: No Cas Severity: Slight Ped Movement: Xnrside

Veh Ref: 1 Cas Age: 26 PSV Passenger: No Road User Class: Pedestrians Ped Location: Pedcross

Cas Ref: 1 Cas Gender: Female Seat Belt: Notapp School Pupil: Ped Work on Rd: Notapp

Vehicle Details

Acc Ref: 144725 Maneouvre: Ahead Skiding: Impact Point: Front **Driver Breath Test:** Notcon Driver Age: 55 None N Veh Ref: 1 Location: Carw Object in Cway: None From: Hit and Run: Hit&run Veh Type: Car Junction: Exit Object off Cway None To: S **Driver Gender:** Female

Foreign Veh: Towing; None velcwy No J Purpose: Unknown Driver Severity: None

Set Name (if saved): 24718

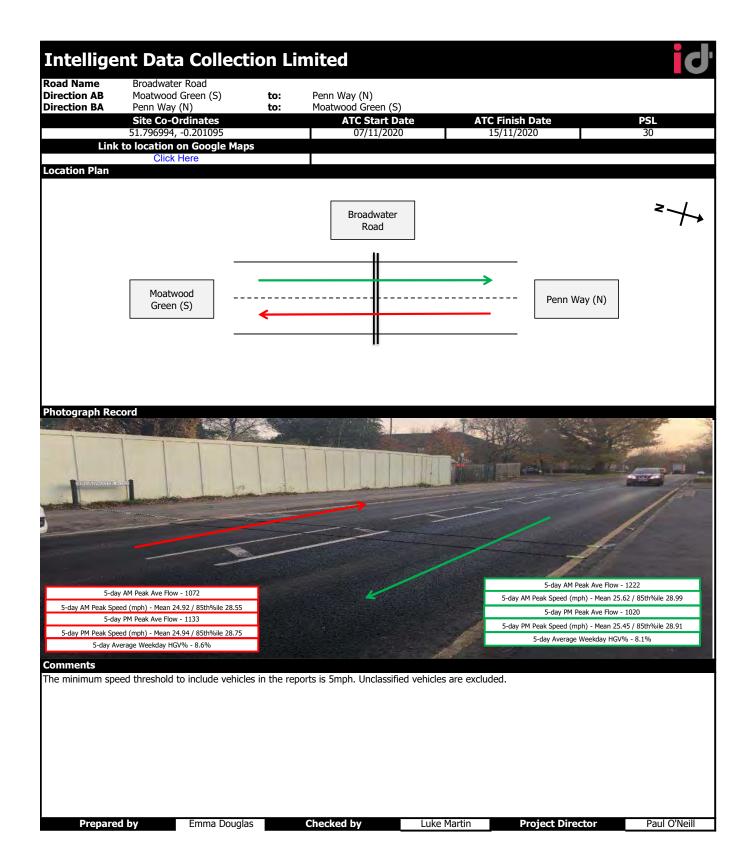


# Intelligent Data Collection Limited Broadwater Gardens

Client: i-Transport
Project Number: ID05540
Site Number: Site 1
Week Commencing: 02/11/2020
Road Name: Broadwater Road

Survey Type: ATC

Direction ABFlow from Direction BAFlow from Flow from Flow from Penn Way (N)Moatwood Green (S)to Penn Way (N)b To Penn Way (N)to Moatwood Green (S)



#### **Intelligent Data Collection Limited** i-Transport **Broadwater Gardens Flow Reporting** 7-day Averag (Mon-Sun) 3-day Average (Tue-Thur) 5-day Average (Mon-Fri) 3-day Average (Tue-Thur) 7-day Average (Mon-Sun) Time Interval Time Interval Time Interval 00:00 01:00 02:00 03:00 05:00 05:00 07:00 08:00 09:00 11:00 12:00 13:00 14:00 15:00 17:00 18:00 19:00 20:00 21:00 22:00 A-B - Average Flows B-A - Average Flows 00:00 01:00 03:00 04:00 04:00 06:00 00:00 01:00 03:00 04:00 06:00 ■3-day Average (Tue-Thur) ■ 5-day Average (Mon-Fri) ■3-day Average (Tue-Thur) ■5-day Average (Mon-Fri) ■ 3-day Average (Tue-Thur) ■ 5-day Average (Mon-Fri) ■7-day Average (Mon-Sun) ■7-day Average (Mon-Sun) ■ 7-day Average (Mon-Sun) **Mean Speed Distributions** A-B - Mean Speed Distribution (in relaton to interpeak free-flow speeds) B-A - Mean Speed Distribution (in relaton to interpeak free-flow speeds) 96 88 80 56 64 56 48 40 32 24 07/11 06/11 07/11 14/11 ■>90% ■>80% ■>70% ■>60% ■<60% HGV% B-A - HGV % A-B - HGV % 9.0% 8.0% 7.0% 6.0% 5.0% 4.0% 3.0% 2.0% 1.0% 9.0% 8.0% 7.0% 6.0% 5.0% 4.0% 3.0% 2.0% 1.0% 0.0% 05/11 08/11 10/11 08/11 **Speed Bin Distributions** A-B - 5-Day Speed Bin Distributions (mph) B-A - 5-Day Speed Bin Distributions (mph) Mean Speed (mph) - 25.82 Mean Speed (mph) - 25.32 14000 14000 12000 12000 8000 8000 6000 6000

Period Commencing: 02/11/2020
Road Name: Broadwater Road
Flow from: Moatwood Green (S)
Vehicle Classification: All Vehicles

0700-1000

1600-1900

07:00-10:00 16:00-19:00 to: Penn Way (N)

Prepared by: Emma Douglas Checked by: Luke Martin

261

475

Peak Hour Analysis

638

1190

1021

1195

999

1243

980

1263 1062

1220

1040

568 641

1234

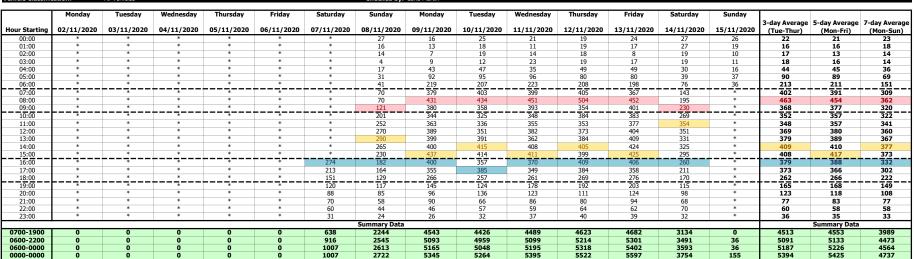
1014

1222

1020

Peak Hour Analysis

991 857



Note: Peak Hour Analysis calculates and then highlights the highest flow within the period listed

Period Commencing: 02/11/2020 Road Name: Broadwater Road Flow from: Penn Way (N) Vehicle Classification: All Vehicles

to: Moatwood Green (S)

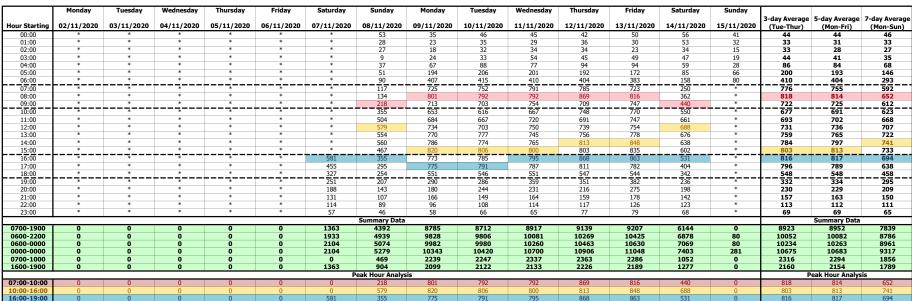
Prepared by: Emma Douglas Checked by: Luke Martin



. ,	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday			
. ,																	7-day Average
Hour Starting	02/11/2020	03/11/2020	04/11/2020	05/11/2020	06/11/2020	07/11/2020	08/11/2020	09/11/2020	10/11/2020	11/11/2020	12/11/2020	13/11/2020	14/11/2020	15/11/2020	(Tue-Thur)	(Mon-Fri)	(Mon-Sun)
00:00	*	*	*	*	*	*	26	19	21	24	23	26	29	15	23	23	23
01:00	*	*	*	*	*	*	12	10	17	18	17	13	26	13	17	15	16
02:00	*	*	*	*	*	*	13	11	13	20	16	15	15	5	16	15	14
03:00	*	*	*	*	*	*	5	15	21	31	26	32	28	8	26	25	21
04:00	*	*	*	*	*	*	20	24	41	42	45	45	29	12	43	39	32
05:00	*	*	*	*	*	*	20	102	111	105	112	92	46	29	109	104	77
06:00	*	*	*	*	*	*	49	188	208	187	196	185	82	44	197	193	142
07:00	*	*	*	*	*	*	47	346	349	392	380	356	107	*	374	365	282
08:00	*	*	*	*	*	*	64	370	358	341	365	364	167	*	355	360	290
09:00	*	*	*	*	*	*	97	333	345	361	355	346	210	*	354	348	292
10:00							154	309	291	319	364	387	281		325	334	301
11:00	*	*	*	*	*	*	252	321	331	365	338	370	307	*	345	345	326
12:00	*	*	*	*	*	*	309	345	352	368	366	350	337	*	362	356	347
13:00	*	*	*	*	*	*	264	371	386	383	372	369	345	*	380	376	356
14:00	*	*	*	*	*	*	295	386	359	357	408	424	313	*	375	387	363
15:00	*	*	*	*	*	*	237	383	392	389	404	410	307	*	395	396	360
16:00	*	*			*	307	173	373	428	425	459	457	271	*	437	428	362
17:00	*	*	*	*	*	242	131	420	406	438	427	424	193	*	424	423	335
18:00	*	*	*	*	*	176	125	285	289	290	278	268	172	*	286	282	235
19:00					*	131	90	145	162	181	159	179	121		167	165	146
20:00	*	*	*	*	*	100	58	84	108	108	105	151	100	*	107	111	102
21:00	*	*	*	*	*	61	49	76	83	78	79	84	74	*	80	80	73
22:00	*	*	*	*	*	54	45	50	51	55	53	64	53	*	53	55	53
23:00	*	*	*	*	*	26	22	32	34	28	37	40	36	*	33	34	32
							Summary Data									Summary Data	
0700-1900	0	0	0	0	0	725	2148	4242	4286	4428	4516	4525	3010	0	4410	4399	3850
0600-2200	0	0	0	0	0	1017	2394	4735	4847	4982	5055	5124	3387	44	4961	4949	4313
0600-0000	0	0	0	0	0	1097	2461	4817	4932	5065	5145	5228	3476	44	5047	5037	4398
0000-0000	0	0	0	0	0	1097	2557	4998	5156	5305	5384	5451	3649	126	5282	5259	4580
0700-1000	0	0	0	0	0	0	208	1049	1052	1094	1100	1066	484	0	1082	1072	865
1600-1900	0	0	0	0	0	725	429	1078	1123	1153	1164	1149	636	0	1147	1133	932
						P	eak Hour Analys	is							P	eak Hour Analys	sis
07:00-10:00	0	0	0	0	0	0	97	370	358	392	380	364	210	0	374	365	292
10:00-16:00	0	0	0	0	0	0	309	386	392	389	408	424	345	0	395	396	363
16:00-19:00	n	0	0	0	0	307	173	420	428	438	459	457	271	0	437	428	362

Period Commencing:
Road Name: Broadwater Road
Flow from: Two-way Total
Vehicle Classification:

Prepared by: Emma Douglas Checked by: Luke Martin



Note: Peak Hour Analysis calculates and then highlights the highest flow within the period listed

client: i-Transp Project Number: ID05540

Flow from: Moatwood Green (S) to: Pe



										9	peeds (Mph	1)									
Time	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	Mean	85th %
00:00	0	1	0	10	58	24	3	4	4	0	1	0	0	0	0	0	0	0	0	29.02	32.60
01:00	0	0	0	11	36	15	12	3	0	1	0	0	0	0	0	0	0	0	0	29.47	
02:00	0	0	1	8	42	8	6	1	0	0	0	0	0	0	0	0	0	0	0	29.46	
03:00	0	0	1	10	39	22	3	2	1	0	1	1	0	0	0	0	0	0	0	29.36	
04:00	0	0	1	30	120	47	12	9	4	0	0	0	0	0	0	0	0	0	0	28.92	35.54
05:00	0	5	9	65	215	110	28	7	3	1	0	0	0	0	0	0	0	0	0	28.42	33.43
06:00	0	4	26	262	537	177	36	9	3	1	0	0	0	0	0	0	0	0	0	27.69	31.57
07:00	5	12	73	681	953	187	33	8	0	1	0	0	0	0	0	0	0	0	0	25.97	29.3
08:00	4	32	131	882	1048	156	13	4	1	1	0	0	0	0	0	0	0	0	0	25.20	28.62
09:00	2	25	85	618	979	154	18	5	0	0	0	0	0	0	0	0	0	0	0	25.70	28.9
10:00	7	28	78	561	929	157	21	3	0	0	0	0	0	0	0	0	0	0	0	25.79	29.2
11:00	2	24	105	600	876	150	22	4	1	0	0	0	0	0	0	0	0	0	0	25.63	28.9
12:00	4	22	85	595	993	174	24	1	1	0	0	0	0	0	0	0	0	0	0	25.77	29.1
13:00	1	26	110	595	1014	175	21	2	1	0	0	0	0	0	0	0	0	0	0	25.70	29.0
14:00	1	12	98	695	1071	152	20	1	2	0	0	0	0	0	0	0	0	0	0	25.66	28.8
15:00	4	71	116	919	813	144	13	2	3	0	0	1	0	0	0	0	0	0	0	24.71	28.2
16:00	2	30	115	766	885	126	16	2	0	0	0	0	0	0	0	0	0	0	0	25.14	28.5
17:00	1	34	94	644	887	146	21	1	1	0	2	0	0	0	0	0	0	0	0	25.56	28.85
18:00	0	32	89	401	655	124	25	3	0	0	0	0	0	0	0	0	0	0	0	25.66	29.3
19:00	1	13	41	179	472	107	23	3	2	1	0	0	0	0	0	0	0	0	0	26.78	30.6
20:00	2	11	27	124	324	78	16	7	1	0	0	0	0	0	0	0	0	0	0	26.78	30.9
21:00	0	7	13	89	211	79	14	1	1	0	0	1	0	0	0	0	0	0	0	27.29	31.2
22:00	1	3	8	59	147	46	17	5	1	0	0	1	0	0	0	0	0	0	0	27.99	33.3
23:00	0	1	3	23	107	32	7	0	0	1	0	0	0	0	0	0	0	0	0	27.87	32.2
07:00 - 19:00	33	348	1179	7957	11103	1845	247	36	10	2	2	1	0	0	0	0	0	0	0	25.48	28.9
06:00 - 22:00	36	383	1286	8611	12647	2286	336	56	17	4	2	2	0	0	0	0	0	0	0	25.68	29.0
06:00 - 00:00	37	387	1297	8693	12901	2364	360	61	18	5	2	3	0	0	0	0	0	0	0	25.72	29.1
00:00 - 00:00	37	393	1309	8827	13411	2590	424	87	30	7	4	4	0	0	0	0	0	0	0	25.82	29,30

7-day Summary																					
											peeds (Mpl										
Time	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	Mean	85th %ile
00:00	0	3	2	25	92	42	9	5	4	1	2	0	0	0	0	0	0	0	0	29.01	31.35
01:00	0	0	1	20	71	27	17	3	0	1	0	0	0	0	0	0	0	0	0	28.98	
02:00	0	0	1	10	62	26	8	2	0	0	0	0	0	0	0	0	0	0	0	29.39	· ·
03:00	0	1	2	16	53	32	4	2	1	1	1	1	0	0	0	0	0	0	0	29.07	· ·
04:00	0	0	1	41	152	62	15	11	4	0	0	0	0	0	0	0	0	0	0	28.91	35.71
05:00	0	6	12	84	264	133	34	11	5	1	0	0	0	0	0	0	0	0	0	28.55	33.95
06:00	0	4	29	289	602	214	51	11	5	3	0	0	0	0	0	0	0	0	0	28.54	32.04
07:00	5	13	75	710	1085	234	53	10	2	1	0	0	0	0	0	0	0	0	0	26.89	30.90
08:00	4	33	144	942	1173	206	25	7	2	1	0	0	0	0	0	0	0	0	0	25.88	29.86
09:00	2	29	96	683	1170	219	29	- 8	0	0	0	1	0	0	0	0	0	0	0	26.20	29.67
10:00	7	31	92	690	1174	223	34	3	0	0	0	0	0	0	0	0	0	0	0	26.12	29.57
11:00	2	27	133	736	1219	235	32	5	1	0	0	0	0	0	0	0	0	0	0	25.93	29.34
12:00	6	24	116	766	1324	249	33	1	1	0	0	0	0	0	0	0	0	0	0	25.89	29.38
13:00	1	39	134	745	1359	251	34	2	1	0	0	0	0	0	0	0	0	0	0	25.87	29.35
14:00	5	21	115	876	1360	230	30	3	2	0	0	0	0	0	0	0	0	0	0	25.85	29.13
15:00	5	86	143	1087	1101	218	17	4	3	0	0	1	0	0	0	0	0	0	0	25.02	28.80
16:00	2	42	156	998	1229	203	23	5	0	0	0	0	0	0	0	0	0	0	0	25.37	28.99
17:00	2	46	112	796	1204	216	36	1	3	0	2	1	0	0	0	0	0	0	0	25.91	29.38
18:00	0	45	113	503	883	190	36	7	2	0	0	0	0	0	0	0	0	0	0	26.05	30.14
19:00	1	27	56	266	635	160	38	7	3	1	0	0	0	0	0	0	0	0	0	26.78	31.13
20:00	2	15	35	190	455	126	28	8	2	0	0	0	0	0	0	0	0	0	0	26.95	31.33
21:00	0	9	21	124	308	123	22	3	1	0	0	1	0	0	0	0	0	0	0	27.47	31.65
22:00	1	6	12	93	233	82	26	7	1	0	0	1	0	0	0	0	0	0	0	27.93	33.37
23:00	0	2	4	46	146	48	12	1	0	2	0	0	0	0	0	0	0	0	0	28.07	32.36
07:00 - 19:00	41	436	1429	9532	14281	2674	382	56	17	2	2	3	0	0	0	0	0	0	0	26.19	29.88
06:00 - 22:00	44	491	1570	10401	16281	3297	521	85	28	6	2	4	0	0	0	0	0	0	0	26.40	30.08
06:00 - 00:00	45	499	1586	10540	16660	3427	559	93	29	- 8	2	5	0	0	0	0	0	0	0	26.44	30.16
00:00 - 00:00	45	509	1605	10736	17354	3749	646	127	43	12	5	6	0	0	0	0	0	0	0	26.47	30.26

Client: i-Transpo Project Number: ID05540

Flow from: Penn Way (N) to: Moatwood Green (S)



ay Summary											Speeds (Mpl	1)									
Time	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	Mean	85th
00:00	0	1	2	33	41	23	8	1	3	0	0	1	0	0	0	0	0	0	0	28.20	1
01:00	0	1	4	31	24	8	5	2	0	0	0	0	0	0	0	0	0	0	0	26.74	1
02:00	0	0	5	33	24	11	2	0	0	0	0	0	0	0	0	0	0	0	0	26.27	1
03:00	0	4	4	29	48	23	10	7	0	0	0	0	0	0	0	0	0	0	0	28.11	37
04:00	0	12	5	45	68	47	16	2	2	0	0	0	0	0	0	0	0	0	0	27.07	33
05:00	0	15	12	101	228	130	24	9	0	2	0	1	0	0	0	0	0	0	0	28.08	33
06:00	0	17	18	249	421	189	50	17	3	0	0	0	0	0	0	0	0	0	0	27.65	32
07:00	4	58	128	659	780	152	38	3	1	0	0	0	0	0	0	0	0	0	0	25.21	2
08:00	1	57	145	781	664	124	21	2	0	1	1	1	0	0	0	0	0	0	0	24.61	2
09:00	3	17	100	810	676	113	20	0	1	0	0	0	0	0	0	0	0	0	0	24.94	2
10:00	2	22	85	726	689	120	23	3	0	0	0	0	0	0	0	0	0	0	0	25.16	2
11:00	0	25	65	738	722	142	27	4	1	1	0	0	0	0	0	0	0	0	0	25.43	2
12:00	4	33	91	779	724	133	14	3	0	0	0	0	0	0	0	0	0	0	0	24.99	2
13:00	8	31	132	756	776	153	23	2	0	0	0	0	0	0	0	0	0	0	0	25.13	2
14:00	2	29	84	804	821	168	21	3	1	0	0	0	1	0	0	0	0	0	0	25.37	2
15:00	4	35	163	935	678	145	15	2	0	0	1	0	0	0	0	0	0	0	0	24.47	2
16:00	7	58	184	934	809	123	22	3	2	0	0	0	0	0	0	0	0	0	0	24.47	2
17:00	1	38	161	948	769	166	26	4	1	1	0	0	0	0	0	0	0	0	0	24.80	2
18:00	3	26	64	556	606	130	19	5	0	1	0	0	0	0	0	0	0	0	0	25.56	2
19:00	1	17	45	263	366	105	26	3	0	0	0	0	0	0	0	0	0	0	0	26.13	3
20:00	2	13	25	153	249	89	21	1	3	0	0	0	0	0	0	0	0	0	0	26.66	3
21:00	1	16	8	90	174	75	28	6	2	0	0	0	0	0	0	0	0	0	0	27.73	3
22:00	3	1	10	70	117	47	17	5	2	1	0	0	0	0	0	0	0	0	0	27.45	3
23:00	0	1	2	42	77	35	- 8	5	0	1	0	0	0	0	0	0	0	0	0	28.37	3
07:00 - 19:00	39	429	1402	9426	8714	1669	269	34	7	4	2	1	1	0	0	0	0	0	0	24.96	2
06:00 - 22:00	43	492	1498	10181	9924	2127	394	61	15	4	2	1	1	0	0	0	0	0	0	25.16	2
06:00 - 00:00	46	494	1510	10293	10118	2209	419	71	17	6	2	1	1	0	0	0	0	0	0	25.20	2
00:00 - 00:00	46	527	1542	10565	10551	2451	484	92	22	8	2	3	1 1	0	0	0	0	0	0	25.32	1 2

7-day Summary																					
-	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	peeds (Mph 55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100		85th %ile
Time 00:00	5-10		15-20	57							0 55-60	60-65	05-70							Mean	
		2	3	42	62	38	12	4	4	0		1		0	0	0	0	0	0	27.77	
01:00	0	1	/		43	21			1	1	0	0	0	0	0	0	0	0	0	27.43	· ·
02:00 03:00	0	5	6	41	36 63	18 28	6	0 7	0	0	0	0	0	0	0	0	0	0	0	26.50 27.13	37.78
			5				23	5													
04:00	0	12	6	56	94	57			5	0	0	0	0	0	0	0	0	0	0	27.91	33.97
05:00		17	16	126	267	144	31	9	2	4	0	1	0	0	0	0	0	0	0	28.14	33.03
06:00	0	17	20	291	506	218	60	21	5	1	0	0	0	0	0	0	0	0	0	27.89	32.71
07:00	4	62	132	696	860	189	48	5	2	0	0	0	0	0	0	0	0	0	0	25.71	30.02
08:00	1 5	60	152	836	764	176	29	8	0	1	1	1	0	0	0	0	0	0	0	25.42	29.79
09:00		25	105	883	831	161	32	1	4	0	0	0	0	0	0	0	0	0	0	25.55	29.27
10:00	3	28	97	863	893	183	33	5	0	0	0	0	0	0	0	0	0	0	0	25.54	29.21
11:00	1	31	80	945	985	199	35	5	2	1	0	0	0	0	0	0	0	0	0	25.60	28.98
12:00	5	53	106	1047	997	195	19	4	0	0	1	0	0	0	0	0	0	0	0	25.10	28.73
13:00	10	47	161	1005	1027	197	36	6	1	0	0	0	0	0	0	0	0	0	0	25.16	28.75
14:00	3	45	100	1046	1094	221	26	5	1	0	0	0	1	0	0	0	0	0	0	25.41	28.85
15:00	5	50	180	1164	938	205	34	3	1	0	1	0	0	0	0	0	0	0	0	24.85	28.71
16:00	8	74	219	1218	1124	204	37	5	3	1	0	0	0	0	0	0	0	0	0	24.90	28.71
17:00	1	47	185	1161	1011	230	35	8	2	1	0	0	0	0	0	0	0	0	0	25.17	29.17
18:00	4	43	74	704	810	201	36	7	1	1	0	2	0	0	0	0	0	0	0	25.88	30.13
19:00	2	24	60	358	509	174	33	6	1	1	0	0	0	0	0	0	0	0	0	26.35	31.19
20:00	3	19	28	227	377	126	29	1	4	0	0	0	0	0	0	0	0	0	0	26.69	31.31
21:00	2	21	12	140	256	102	40	9	2	0	0	0	0	0	0	0	0	0	0	27.62	33.30
22:00	3	3	16	110	183	74	23	10	2	1	0	0	0	0	0	0	0	0	0	27.55	33.67
23:00	0	1	3	66	113	49	16	5	0	1	1	0	0	0	0	0	0	0	0	28.12	34.13
07:00 - 19:00	50	565	1591	11568	11334	2361	400	62	17	5	3	3	1	0	0	0	0	0	0	25.62	29.47
06:00 - 22:00	57	646	1711	12584	12982	2981	562	99	29	7	3	3	1	0	0	0	0	0	0	25.72	29.80
06:00 - 00:00	60	650	1730	12760	13278	3104	601	114	31	9	4	3	1	0	0	0	0	0	0	25.77	29.86
00:00 - 00:00	60	688	1773	13129	13843	3410	691	142	43	14	4	5	11	0	0	0	0	0	0	25.87	30.01

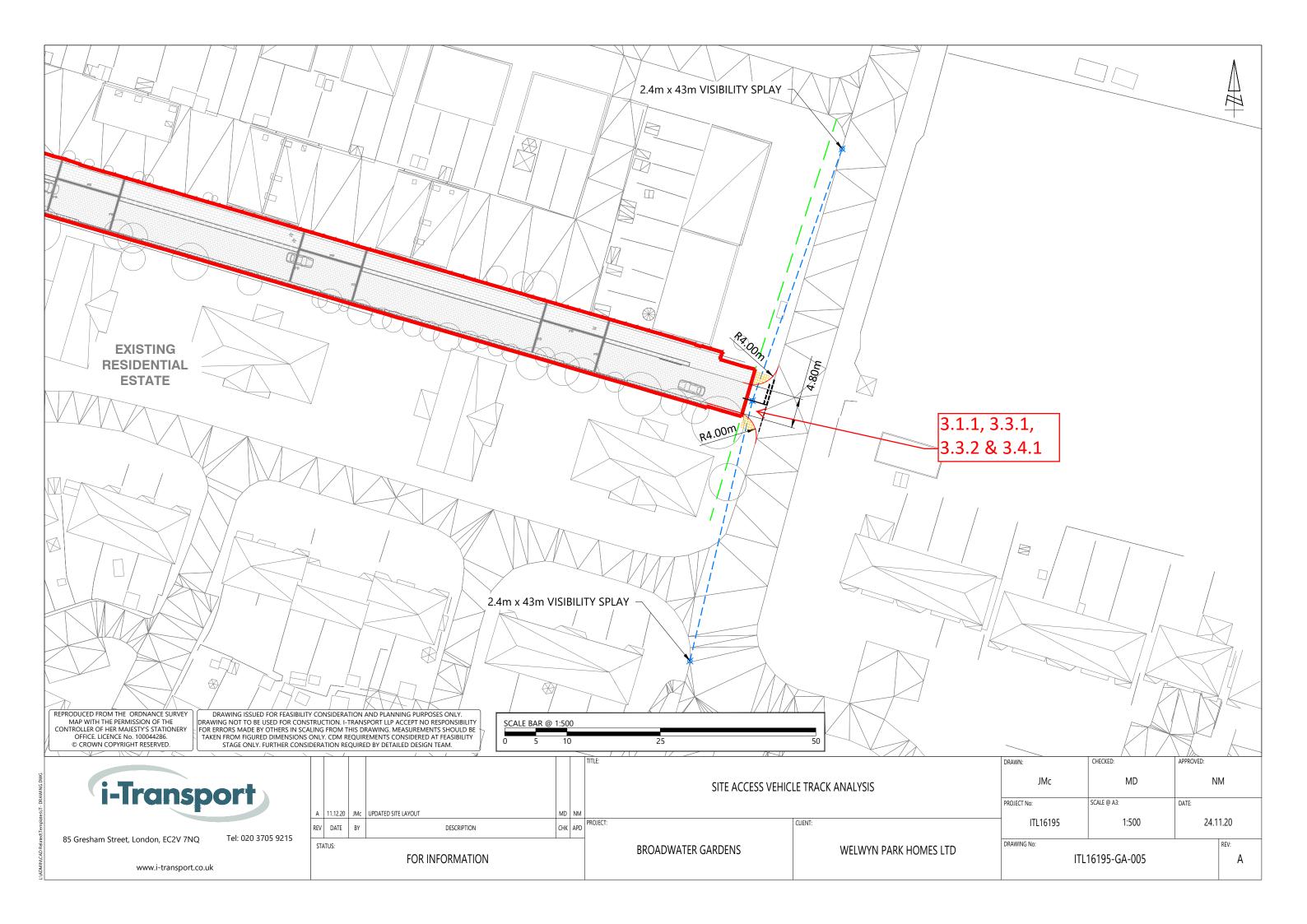


- auy summary											peeds (Mpl	1)									_
Time	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	Mean	85th %ile
00:00	0	2	2	43	99	47	11	5	7	0	1	1	0	0	0	0	0	0	0	28.61	32.60
01:00	0	1	4	42	60	23	17	5	0	1	0	0	0	0	0	0	0	0	0	28.10	
02:00	0	0	6	41	66	19	8	1	0	0	0	0	0	0	0	0	0	0	0	27.79	
03:00	0	4	5	39	87	45	13	9	1	0	1	1	0	0	0	0	0	0	0	28.73	37.78
04:00	0	12	6	75	188	94	28	11	6	0	0	0	0	0	0	0	0	0	0	27.99	35.20
05:00	0	20	21	166	443	240	52	16	3	3	0	1	0	0	0	0	0	0	0	28.25	33.21
06:00	0	21	44	511	958	366	86	26	6	1	0	0	0	0	0	0	0	0	0	27.67	31.99
07:00	9	70	201	1340	1733	339	71	11	1	1	0	0	0	0	0	0	0	0	0	25.59	29.21
08:00	5	89	276	1663	1712	280	34	6	1	2	1	1	0	0	0	0	0	0	0	24.90	28.49
09:00	5	42	185	1428	1655	267	38	5	1	0	0	0	0	0	0	0	0	0	0	25.32	28.60
10:00	9	50	163	1287	1618	277	44	6	0	0	0	0	0	0	0	0	0	0	0	25.48	28.85
11:00	2	49	170	1338	1598	292	49	8	2	1	0	0	0	0	0	0	0	0	0	25.53	28.86
12:00	8	55	176	1374	1717	307	38	4	1	0	0	0	0	0	0	0	0	0	0	25.38	28.88
13:00	9	57	242	1351	1790	328	44	4	1	0	0	0	0	0	0	0	0	0	0	25.41	28.88
14:00	3	41	182	1499	1892	320	41	4	3	0	0	0	1	0	0	0	0	0	0	25.52	28.75
15:00	8	106	279	1854	1491	289	28	4	3	0	1	1	0	0	0	0	0	0	0	24.59	28.27
16:00	9	88	299	1700	1694	249	38	5	2	0	0	0	0	0	0	0	0	0	0	24.81	28.37
17:00	2	72	255	1592	1656	312	47	5	2	1	2	0	0	0	0	0	0	0	0	25.18	28.70
18:00	3	58	153	957	1261	254	44	8	0	1	0	0	0	0	0	0	0	0	0	25.61	29.43
19:00	2	30	86	442	838	212	49	6	2	1	0	0	0	0	0	0	0	0	0	26.45	30.69
20:00	4	24	52	277	573	167	37	8	4	0	0	0	0	0	0	0	0	0	0	26.72	31.19
21:00	1	23	21	179	385	154	42	7	3	0	0	1	0	0	0	0	0	0	0	27.51	32.12
22:00	4	4	18	129	264	93	34	10	3	1	0	1	0	0	0	0	0	0	0	27.72	33.85
23:00	0	2	5	65	184	67	15	5	0	2	0	0	0	0	0	0	0	0	0	28.12	32.28
07:00 - 19:00	72	777	2581	17383	19817	3514	516	70	17	6	4	2	1	0	0	0	0	0	0	25.22	28.72
06:00 - 22:00	79	875	2784	18792	22571	4413	730	117	32	8	4	3	1	0	0	0	0	0	0	25.42	29.00
06:00 - 00:00	83	881	2807	18986	23019	4573	779	132	35	11	4	4	1	0	0	0	0	0	0	25.46	29.08
00:00 - 00:00	83	920	2851	19392	23962	5041	908	179	52	15	6	7	11	0	0	0	0	0	0	25.57	29.25

7-day Summary																					
											peeds (Mpl										
Time	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	Mean	85th %ile
00:00	0	5	5	82	154	80	21	9	8	1	2	1	0	0	0	0	0	0	0	28.39	31.35
01:00	0	1	8	62	114	48	24	6	1	2	0	0	0	0	0	0	0	0	0	28.22	
02:00	0	1	7	51	98	44	14	2	0	0	0	0	0	0	0	0	0	0	0	27.90	
03:00	0	6	7	63	116	60	15	9	1	1	1	1	0	0	0	0	0	0	0	28.08	37.78
04:00	0	12	7	97	246	119	38	16	9	0	0	0	0	0	0	0	0	0	0	28.41	35.29
05:00	0	23	28	210	531	277	65	20	7	5	0	1	0	0	0	0	0	0	0	28.34	33.43
06:00	0	21	49	580	1108	432	111	32	10	4	0	0	0	0	0	0	0	0	0	28.21	32.42
07:00	9	75	207	1406	1945	423	101	15	4	1	0	0	0	0	0	0	0	0	0	26.30	30.46
08:00	5	93	296	1778	1937	382	54	15	2	2	1	1	0	0	0	0	0	0	0	25.65	29.83
09:00	7	54	201	1566	2001	380	61	9	4	0	0	1	0	0	0	0	0	0	0	25.87	29.47
10:00	10	59	189	1553	2067	406	67	8	0	0	0	0	0	0	0	0	0	0	0	25.83	29.39
11:00	3	58	213	1681	2204	434	67	10	3	1	0	0	0	0	0	0	0	0	0	25.76	29.16
12:00	11	77	222	1813	2321	444	52	5	1	0	1	0	0	0	0	0	0	0	0	25.50	29.06
13:00	11	86	295	1750	2386	448	70	8	2	0	0	0	0	0	0	0	0	0	0	25.51	29.05
14:00	8	66	215	1922	2454	451	56	8	3	0	0	0	1	0	0	0	0	0	0	25.63	28.99
15:00	10	136	323	2251	2039	423	51	7	4	0	1	1	0	0	0	0	0	0	0	24.93	28.76
16:00	10	116	375	2216	2353	407	60	10	3	1	0	0	0	0	0	0	0	0	0	25.14	28.85
17:00	3	93	297	1957	2215	446	71	9	5	1	2	1	0	0	0	0	0	0	0	25.54	29.28
18:00	4	88	187	1207	1693	391	72	14	3	1	0	2	0	0	0	0	0	0	0	25.96	30.14
19:00	3	51	116	624	1144	334	71	13	4	2	0	0	0	0	0	0	0	0	0	26.56	31.16
20:00	5	34	63	417	832	252	57	9	6	0	0	0	0	0	0	0	0	0	0	26.82	31.32
21:00	2	30	33	264	564	225	62	12	3	0	0	1	0	0	0	0	0	0	0	27.55	32.46
22:00	4	9	28	203	416	156	49	17	3	1	0	1	0	0	0	0	0	0	0	27.74	33.55
23:00	0	3	7	112	259	97	28	6	0	3	1	0	0	0	0	0	0	0	0	28.10	32.67
07:00 - 19:00	91	1001	3020	21100	25615	5035	782	118	34	7	5	6	1	0	0	0	0	0	0	25.91	29.67
06:00 - 22:00	101	1137	3281	22985	29263	6278	1083	184	57	13	5	7	1	0	0	0	0	0	0	26.06	29.94
06:00 - 00:00	105	1149	3316	23300	29938	6531	1160	207	60	17	6	8	1	0	0	0	0	0	0	26.11	30.01
00:00 - 00:00	105	1197	3378	23865	31197	7159	1337	269	86	26	9	11	1	0	0	0	0	0	0	26.17	30.13

# **APPENDIX B**

Plan attached showing the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).



#### **APPENDIX C: DESIGNERS RESPONSE**

Auditors: Bryan Shawyer (Team Leader) and Martin Morris (Team Member).

Scheme: Broadwater Gardens, Broadwater Road, Welwyn Garden City

Date Audit Completed: 28th January 2021

This response is to a Stage 1 Road Safety Audit to the design standard detailed within GG 119 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

Problem no. in safety audit report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measure (detail description)
3.1.1	Yes	Yes	To be provided as part of the detailed design stage.
3.3.1	Yes	No	The bus at the bus stop will be a temporary obstruction as a result of passengers alighting and boarding the bus.  A review of the accident data reveals no accidents were recorded at the existing access junction, despite it being in use for much of the study period.  Further, as set out the Transport Assessment, the proposal development will result in a net decrease in vehicular trips during the network peak hours.  As such, it is considered that the potential temporary obstruction, as a result of the bus, is considered acceptable.
3.3.2	Yes	No	The access has been designed in accordance with HCC Design Guidance, suitable for the proposed development, and in line with HCC's refuse vehicle type.  The refuse vehicle trip attraction will occur up to twice per week (for refuse and recycling). Such movements are therefore infrequent.

			Manual for Streets states that local roads should be designed to accommodate service vehicles, without allowing their requirements to dominate the layout. It notes that on streets with low traffic flows and speeds, it may be assumed that vehicles will be able to use the full width of the carriageway to manoeuvre.
			Refuse vehicles will be able to see any departing vehicles from the site and conversely any departing vehicles will be able to wait, back from the give way, if they see an oncoming refuse vehicle turning.
			The most frequent movement at the site access junction will be a car passing another car. This movement is shown in drawing ITL16195-GA-011 which demonstrates a car is able to wait at the give way, whilst another passes, with sufficient width.
3.4.1	Yes	Yes	To be provided as part of the detailed design stage.

