

Technical Note

Land north and west of Stonepound Junction, Hassocks

April 2019



Reeves Transport Planning

PRODUCED for GLOBE HOMES

PRODUCED by REEVES TRANSPORT PLANNING LTD

SGR/SJH/270319/V2

www.reevestransportplanning.co.uk

1. Introduction

- 1.1 Reeves Transport Planning is commissioned to provide a Technical Note in support of the resubmission of refused Mid Sussex District Council planning application (DM/18/0010).
- 1.2 The original application was refused for a number of reasons. Reason 4 notes that *'it is considered that it has not been satisfactorily demonstrated due to lack of information in regard to right turn movements in and out of the proposed junction that the application from a highway safety perspective would comply with Policy DP21 of the District Plan. In the absence of sufficient information regarding the operation of the new access the proposal is therefore contrary to Policy DP21 of the District Plan'*. A copy of the Decision Notice is attached at Appendix 1.
- 1.3 The Local Highway Authority requested additional information in support of the original planning application. A copy of their comments, dated 7th February 2018, are attached at Appendix 2. The comments concluded that there was no material highway safety or capacity issues associated with this proposal. They did request additional plans showing that a refuse vehicle and car can use the access without blocking traffic on London Road and detailed plans of the proposed highway works, including lining. These plans were submitted and registered on the 12th June 2018 and there appears to be no further comment from the Local Highway Authority.
- 1.4 There are public objections that raise concern about the risk of vehicles turning right into, and out, of the site blocking traffic on London Road.
- 1.5 The Officer's Delegated Report notes that the Local Highway Authority comments were that *'the accompanying Road Safety Audit has highlighted a need for off-site highway improvements relating to this development. However, the current drawings do not show these incorporated in the design. As such, further information is required from the applicant to demonstrate the access and*

associated infrastructure meets design and safety requirements'. There is no reference to the plans that were submitted to address these concerns. The Report continues that 'while some additional information has been submitted following WSCC Highways concerns, the swept paths only show left turn in and left turn out and therefore right turn movements in and out of the junction are also still required. WSCC highways have stated that once right turn movements are submitted, they will be able to finalise their comments. Although the additional information has been requested from the applicant to date it has not been received'.

- 1.6 This Technical Note will address the concerns relating to right turn vehicles and the likely effects on traffic flows, and it will establish that the traffic impacts of this proposal can not be defined as severe.

2. Impact of Right Turn Movements

- 2.1 The data contained in Appendix 9 and Table 2 of the original Transport Statement demonstrates that there is around a 50:50 split in traffic using London Road, and that the proposal will generate a maximum of thirteen vehicle movements in the AM and PM peak hours. The data shows that there are four arrivals and nine departures in the AM peak hour and nine arrivals and four departures in the PM peak hour. During the busiest hours there will be a maximum of seven right turning vehicles. There will be two arrivals and five departures in the AM peak hour and five arrivals and two departures in the PM peak hour. This proves that, on average, there will be one right turn movement every eight minutes in the busiest hour.

- 2.2 Additional swept path analysis have been undertaken, which illustrate that a typical large refuse vehicle can wait in the right turn lane without impeding either the north bound, or south bound, traffic flows on London Road. The earlier swept path analysis, as noted, showed that a refuse vehicle and car can use the access without blocking London Road. The outbound swept path analysis also shows that

a refuse vehicle can leave the site and turn right without impeding the free flow of traffic on London Road. The additional swept path analyses highlighting the right turn movements are attached, as Appendix 3.

- 2.3 As noted in the Transport Statement, the visibility splay at the new access accords with the required design standards.
- 2.4 Data collected for the original Transport Statement, attached at Appendix 4, demonstrates that that, in the AM peak hour, there was a total of 1034 vehicles passing the site and a total of 1090 vehicles during the PM peak hour.
- 2.5 To give these values some context, Design Manual for Roads and Bridges Volume 5 Part 3 TA 46/97 Traffic Flow Ranges for use in the Assessment of New Rural Roads notes that the maximum throughput for the existing road is approximately 1380 vehicles per hour per lane. Therefore, this suggests that the traffic using London Road passed the site equates to 37% of the maximum throughput in the AM peak hour and 39% in the PM peak hour. Typically, a traffic flow of above 80% of the maximum throughput starts to have effects on the operational performance of the road and nearby junctions. Clearly, this section of London Road is operating well within the typical capacity that such a road is able to accommodate. Accordingly, a small number of vehicles turning right will not materially affect the road performance.

3. Summary and Conclusion

- 3.1 Reeves Transport Planning is commissioned to provide additional information in support of the resubmission of a planning application for 25 houses on land north and west of Stonepound Junction, Hassocks. The original application was refused for a number of reasons, one of which related to right turning traffic.

- 3.2 There is no evidence to suggest that the operational performance of London Road will be adversely affected by the introduction of the new junction or by the impacts of right turning vehicles. In the busiest hour, on average, there will only be one right turning vehicle using the junction every eight minutes. This is when there is over 60% spare capacity in traffic using London Road. There may be a short term disruption to the smooth operation of the new junction that could be caused by the peak hour queues from the London Road/Keymer Road traffic signal junction. However, there is a clear imperative placed on drivers to use roads in an appropriate manner and such short term disruption cannot be defined as severe.
- 3.3 Some objectors raised concerns that right turn vehicles may block the free flow of traffic. This Technical Note has shown that the impacts of right turning vehicles cannot be considered as severe, and therefore this is not a reasonable ground to object to the application. It is also important to note that there is a clear legal duty for drivers to use a road in an appropriate fashion for the prevailing conditions. The Highway Code states in paragraph 180, under the *Turning Right* heading, that drivers should *'take great care when turning into a main road; you will need to watch for traffic in both directions and wait for a safe gap'*.
- 3.4 Whilst there is a possibility that there could be some minimal delay in the busiest hours, the data presented and swept path analyses demonstrate that the operational performance of junctions, and the road network, will not be affected to a degree that can be considered as **severe**. Accordingly, and as concluded in the original Transport Statement, this application fully complies with the relevant local and national policies so should not be refused on transport grounds. The applicant welcomes conditions to control the access construction and provision of car and cycle parking.

APPENDIX 1:

DM/18/0010 DECISION NOTICE

Globe Homes
Mr Ian Coomber
Absolute Town Planning Ltd
Gemini House
136-140 Old Shoreham Road
Brighton And Hove
BN3 7BD

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE
ENGLAND) ORDER 2015

REFUSAL

REFERENCE: DM/18/0010

DESCRIPTION: OUTLINE PLANNING PERMISSION FOR RESIDENTIAL DEVELOPMENT (25 HOUSES) WITH DETAILS REGARDING ACCESS SUBMITTED AND ALL OTHER MATTERS RESERVED.

LOCATION: LAND AT GRID REFERENCE 529886 115629, HURST ROAD, HASSOCKS, WEST SUSSEX

DECISION DATE: 10 JUL 2018

CASE OFFICER: SUSAN DUBBERLEY - SUSAN.DUBBERLEY@MIDSUSSEX.GOV.UK

The Council hereby notify you that they **REFUSE** to permit the above development as shown in the submitted application and plans.

The reasons for the Council's decision are:-

1. Whilst the dwellings will make a positive contribution to additional housing in the district the proposed development is located within the countryside outside of the built up area of Hassocks, and thus would be contrary to policies DP12 and DP15 of the District Plan as there is no identified need for these units in this location and the proposals are not necessary for the purposes of agriculture and are not supported by other policies in the Plan.
2. There is the potential for unknown heritage assets of archaeological interest (i.e. below-ground archaeological remains) to be present within the site. Due to lack of information in regard to the assessment of the impact of the development on heritage

assets, it has not been demonstrated that the application would comply with Policy DP34 of the District Plan.

3. The proposal does not satisfy the requirements of Policies DP20 and DP31 of the District Plan in respect of infrastructure requirements, including affordable housing provision, to service the development as supplemented by the Council's Supplementary Planning Document 'Development and Infrastructure' dated February 2006.
4. It is considered that it has not been satisfactorily demonstrated due to lack of information in regard to right turn movements in and out of the proposed junction that the application from a highway safety perspective would comply with Policy DP21 of the District Plan. In the absence of sufficient information regarding the operation of the new access the proposal is therefore contrary to Policy DP21 of the District Plan.

INFORMATIVES

1. In accordance with Article 35 of the Town and Country Planning (Development Management Procedure) (England) Order 2015, the Local Planning Authority has acted positively and proactively in determining this application by identifying matters of concern with the proposal and discussing those with the Applicant. However, the issues are so fundamental to the proposal that it has not been possible to negotiate a satisfactory way forward and due to the harm which has been clearly identified within the reason(s) for the refusal, approval has not been possible.

Human Rights Implications

The planning application has been considered in light of statute and case law and any interference with an individual's human rights is considered to be proportionate to the aims sought to be realised.

Plans Referred to in Consideration of this Application

The following plans and documents were considered when making the above decision:

Plan Type	Reference	Version	Submitted Date
Location and Block Plan	TA 1092/01		03.01.2018
Location and Block Plan	TA 1092/02		03.01.2018
Site Plan	TA 1092/03		03.01.2018



Divisional Leader for Planning and Economy

REOUTZ

APPEALS TO THE SECRETARY OF STATE

Notes for Applicants

If you are aggrieved by the decision of your Local Planning Authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State for the Environment under Section 78 of the Town and Country Planning Act 1990.

If you want to appeal against your local planning authority's decision then you must do so within 6 months of the date of this notice;

However, if

- (i) this is a decision on a planning application relating to the same or substantially the same land and development as is already the subject of an enforcement notice, and you want to appeal against your local planning authority's decision on your application, then you must do so within 28 days of the date of this notice; or
- (ii) an enforcement notice is subsequently served relating to the same or substantially the same land and development as in your application and if you want to appeal against your local planning authority's decision on your application, then you must do so within:
 - 28 days of the date of service of the enforcement notice, or
 - within 6 months (12 weeks in the case of a householder appeal) of the date of this notice, whichever period expires earlier.

Appeals can be made online at: <https://www.gov.uk/planning-inspectorate>.

If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

APPENDIX 2:

DM/18/0010 LOCAL HIGHWAY AUTHORITY COMMENTS

FROM: Alison Meeus TO: Mid-Sussex District Council
FAO: Susan Dubberley

SUBJECT: DM-10-18

Land at Hurst Road, Hassocks, West Sussex

Outline planning permission for residential development of 25 houses with details regarding access submitted and all other matters reserved.

RECOMMENDATION:

Advice	<input checked="" type="checkbox"/>	Modification	<input checked="" type="checkbox"/>	More Information	<input checked="" type="checkbox"/>
Objection	<input type="checkbox"/>	No Objection	<input type="checkbox"/>	Refusal	<input type="checkbox"/>

Summary

The proposed site is a parcel of vacant land north of the Stone pound Crossroads on the A273 London Road. The proposal is to provide a mixture of 2,3 and 4 bedroomed dwellings of both private and social housing stock. Committed development in the area includes a recently approved planning application for 130 homes to the rear of the site (DM/17/4307). Access to this development lies 75m to the north of the site.

The accompanying Road Safety Audit has highlighted a need for off-site highway improvements relating to this development. However, the current drawings do not show these incorporated in the design. As such, further information is required from the applicant to demonstrate the access and associated infrastructure meets design and safety requirements.

Access

A new access with 6m kerb radii, access road of 5.5m, and a t-shaped turning head will allow vehicles to enter, turn and exit the site in forward gear. Visibility is set back 2.4m and splays are appropriate for the speed of the road however; the plans do not show sufficient detail and more information is required. Comments below are not exhaustive but include the following:-

- 1) The 'x' distance for the access should be increased to 3m, as the narrow through lanes mean there is no extra width available for vehicles on the main road to avoid the protruding bonnets of cars waiting at the side road. (Note WSCC has covered this matter in departures from standards applications before (ref DfS1-2 attached).
- 2) The visibility splay to the south should be shown tangential to the edge of the road.
- 3) The traffic island is shown in different positions on drawing SR/SH/103A, and the swept path drawings SR/SH/201A and SR/SH/202A. It would appear that 103A shows the proposed position; and the swept paths show the existing. The designer should be mindful of other access points either side of Hurst Road

when re-positioning the island. If necessary, further swept-path diagrams should be provide for neighbouring access points (on both sides of the road, if required) to demonstrate that any new location does not prejudice access for others.

- 4) WSCC would expect to see some additional widening in the throat of the junction to allow two way car manoeuvres at the junction itself. This is necessary to prevent unnecessary blocking of the A273, and reduce the likelihood of rear end shunts for left turners and side-on collisions for right turns in.
- 5) Swept path diagrams for cars and refuse/fire appliances using the proposed scheme are required including:-
 - Right turn out/in
 - Vehicles entering and exiting the site simultaneously
 - Neighbouring access points which may be affected

Road Safety Audit Review

The audit was undertaken in line with HD19/15 requirements, and signed; with a designers response attached.

The audit recommends the following off-site highway improvements.

- 1) Tactile Paving
- 2) Footpaths
- 3) Dropped Kerbs
- 4) Re-location of central bollards to south of access
- 5) Widen footway outside the development
- 6) Re-location of existing bus stop and provision of a new bus stop shelter

These should be shown on an amended drawing to be submitted to the LPA and CHA. All changes should then be referred back to the original audit team for further comments. A revised designer's response should also be considered depending on what any further auditor comments say.

Once received, the CHA will consider these and respond further. If approved, works will need to be secured either by planning condition or S106 Agreement and undertaken as part of a S38/278 agreement.

Refuge Island/Ghost Island Junction/Footways

- 1) If the refuge island is to be relocated then an assessment of pedestrian visibility and the effect on turning vehicles will be required for the new position.
- 2) Dropped kerbs with tactile paving will need to be provided all-round.
- 3) Proposed road markings to be shown.

The design implies that the scheme will have an impact on the right turn lane for Stanford Avenue, but markings are not shown on the drawing to understand what is intended. This needs to be clarified and a fully dimensioned drawing provided. The deceleration length and stacking space will need to be labelled on the drawing and commented on by the designer. Any reduction in capacity will need to be supported by a Picady assessment.

The layout should be in designed accordance with DMRB TD42/95 standards, with any non-compliance with standards highlighted and approval sought.

Consideration will need to be given about how vehicles will turn right into the access, and shown in the plans. Swept-path diagrams to be provided alongside any changes.

Bus facilities

The design suggests the bus stop and layby is being relocated but the applicant has not provided plans of existing nor proposed. Therefore, the CHA cannot compare them. As such, a plan should be provided with amendments shown in a different colour or line thickness superimposed upon the existing OS plan so the CHA can determine all the changes proposed.

The CHA need to see existing; and proposed road markings and dimensions.

As the bus shelter is not suitable for relocation and will need to be replaced, the owner of the bus shelter needs to be consulted as to the specification of the replacement.

Environmental Impact

The bus lay-by seems to require significant cutting into the bank in an area that is likely to have lots of tree roots, resulting in the possible loss of a number of mature trees. The full impact on trees needs to be identified and agreed at this planning stage, with cross sections produced.

It is recommended that the applicant employs an arboriculturalist to cover this part of the design. It is currently the view of the CHA that a retaining wall will be required to the rear of the bus layby.

The LPA needs to assess the visual impact of these proposals.

Rights of Way

The CHA has not been provided with the extent of the site so it is currently not possible to tell if Footpath 10C is affected.

Trip Impact

The residual cumulative impact of these additional 25 dwellings is not considered to create significant impact to the existing situation in terms of overall traffic flows in the locality. The most recent committed development for 130 houses (DM/17/4307) was approved at appeal with the inspector quoted as saying:-

"There is no robust counter-evidence to undermine the common ground technical conclusion on the acceptability of the development. Its residual cumulative impact would fall well short of the 'severe' test of paragraph 32 of the NPPF."

Therefore on this point the CHA concludes the additional 13 vehicle movements in the peak hours, equating to 1 movement every 5 minutes is satisfactory.

Conclusion and summary of additional information required.

WSCC requires the applicant to re-submit the following information to ensure all aspects of the proposal have been considered at this planning stage. These are:-

- 1) Revised 'Proposed' site plan to include:-

- Visibility splays drawn with a 3m set back and both splay and tangential lines
- All proposed road markings to be shown
- Tactile Paving locations
- Footpath locations
- Dropped Kerbs
- Re-location of central bollards to south of access
- Widening of footway outside the development
- Widening of throat of junction to allow two way access for vehicles
- Re-location of existing bus stop and provision of a new bus stop shelter
- Swept path diagrams for cars and refuse/fire appliances using the proposed scheme are required including:-
 - Right turn out/in
 - Vehicles entering and exiting the site simultaneously
 - Neighbouring access points which may be affected (if any)

**Alison Meeus
Planner**

POSSIBLE CONDITIONS

ACCESS WORKS

Access (details required, access provided prior to commencement)

No development shall commence until the vehicular access serving the development has been constructed in accordance with plans and details submitted to and approved in writing by the Local Planning Authority.

Reason: In the interests of road safety.

Prevention of Surface Water Draining onto Public Highway

No part of the development shall be first occupied until provision has been made within the site in accordance with plans and details to be submitted to and approved by the Local Planning Authority to prevent surface water draining onto the public highway.

Reason: In the interests of road safety.

Temporary Construction Access

No development shall commence until such time as temporary arrangements for access for construction traffic has been provided in accordance with plans and details submitted to and approved in writing by the Local Planning Authority.

Reason: To secure safe and satisfactory means of vehicular access to the site during construction.

VISIBILITY SPLAYS

Visibility (details required)

No part of the development shall be first occupied until visibility splays of ___ metres by ___ metres have been provided at the proposed site vehicular access onto _____ in accordance with plans and details submitted to and approved in writing by the Local Planning Authority. Once provided the splays shall thereafter be maintained and kept free of all obstructions over a height of 0.6 metre above adjoining carriageway level or as otherwise agreed.

Reason: In the interests of road safety.

Pedestrian Visibility (details required)

No part of the development shall be first occupied until pedestrian visibility splays of 2 metres by 2 metres have been provided either side of the proposed site vehicular access onto _____ in accordance with plans and details submitted to and approved in writing by the

Local Planning Authority. These visibility splays shall thereafter be kept free of all obstructions over a height of 0.6 metre above adjoining carriageway level or as otherwise agreed.

Reason: In the interests of road safety.

PARKING

Car parking space (details required)

No part of the development shall be first occupied until the car parking spaces have been constructed in accordance with plans and details submitted to and approved in writing by the Local Planning Authority. These spaces shall thereafter be retained at all times for their designated use.

Reason: To provide car-parking space for the use.

Garages

The garage building(s) shall be used only as private domestic garages for the parking of vehicles incidental to the use of the properties as dwellings and for no other purposes.

Reason: To ensure adequate off-street provision of parking in the interests of amenity and highway safety.

Cycle parking

No part of the development shall be first occupied until covered and secure cycle parking spaces have been provided in accordance with plans and details submitted to and approved by the Local Planning Authority.

Reason: To provide alternative travel options to the use of the car in accordance with current sustainable transport policies.

INTERNAL ARRANGEMENTS

Access Road

No part of the development shall be first occupied until the road(s), footways, and casual parking areas serving the development have been constructed, surfaced and drained in accordance with plans and details to be submitted to and approved by the Local Planning Authority.

Reason: To secure satisfactory standards of access for the proposed development.

Vehicle parking and turning

No part of the development shall be first occupied until the vehicle parking and turning spaces have been constructed in accordance with the approved plan. These spaces shall thereafter be retained for their designated use.

Reason: To provide adequate on-site car parking and turning space for the development.

CONSTRUCTION

Construction Management Plan

No development shall take place, including any works of demolition, until a Construction Management Plan has been submitted to and approved in writing by the Local Planning Authority. Thereafter the approved Plan shall be implemented and adhered to throughout the entire construction period. The Plan shall provide details as appropriate but not necessarily be restricted to the following matters,

- the anticipated number, frequency and types of vehicles used during construction,
- the method of access and routing of vehicles during construction,
- the parking of vehicles by site operatives and visitors,
- the loading and unloading of plant, materials and waste,
- the storage of plant and materials used in construction of the development,
- the erection and maintenance of security hoarding,
- the provision of wheel washing facilities and other works required to mitigate the impact of construction upon the public highway (including the provision of temporary Traffic Regulation Orders),
- details of public engagement both prior to and during construction works.

Reason: In the interests of highway safety and the amenities of the area.

TRAFFIC REGULATION ORDERS

Provision or Extension of Waiting Restrictions

No development shall be commenced until such time as a Traffic Regulation Order, or revision to an existing order, securing the provision of no waiting at anytime restrictions in accordance with details to be submitted has been approved by the Highway Authority and written confirmation of this approval has been made available to the Local Planning Authority.

Reason: In the interests of road safety.

Safety Audit Recommendations

No development shall commence until such time as revised plans and details incorporating the recommendations given in the Stage 1 Road Safety Audit and accepted in the Designers Response have been submitted to and approved in writing by the Local Planning Authority in consultation with the Highway Authority.

Reason: In the interests of road safety.

INFORMATIVES

Section 278 Agreement of the 1980 Highways Act - Works within the Highway

The applicant is advised to enter into a legal agreement with West Sussex County Council, as Highway Authority, to cover the off-site highway works. The applicant is requested to contact The Implementation Team Leader (01243 642105) to commence this process. The applicant is advised that it is an offence to undertake any works within the highway prior to the agreement being in place.

Section 38 Agreement of the 1980 Highways Act – Provision of Adoptable Highway

The applicant is advised to enter into a legal agreement with West Sussex County Council, as Highway Authority, to cover the proposed adoptable on-site highway works. The applicant is requested to contact The Implementation Team Leader (01243 642105) to commence this process. The applicant is advised that any works commenced prior to the S38 agreement being in place are undertaken at their own risk.

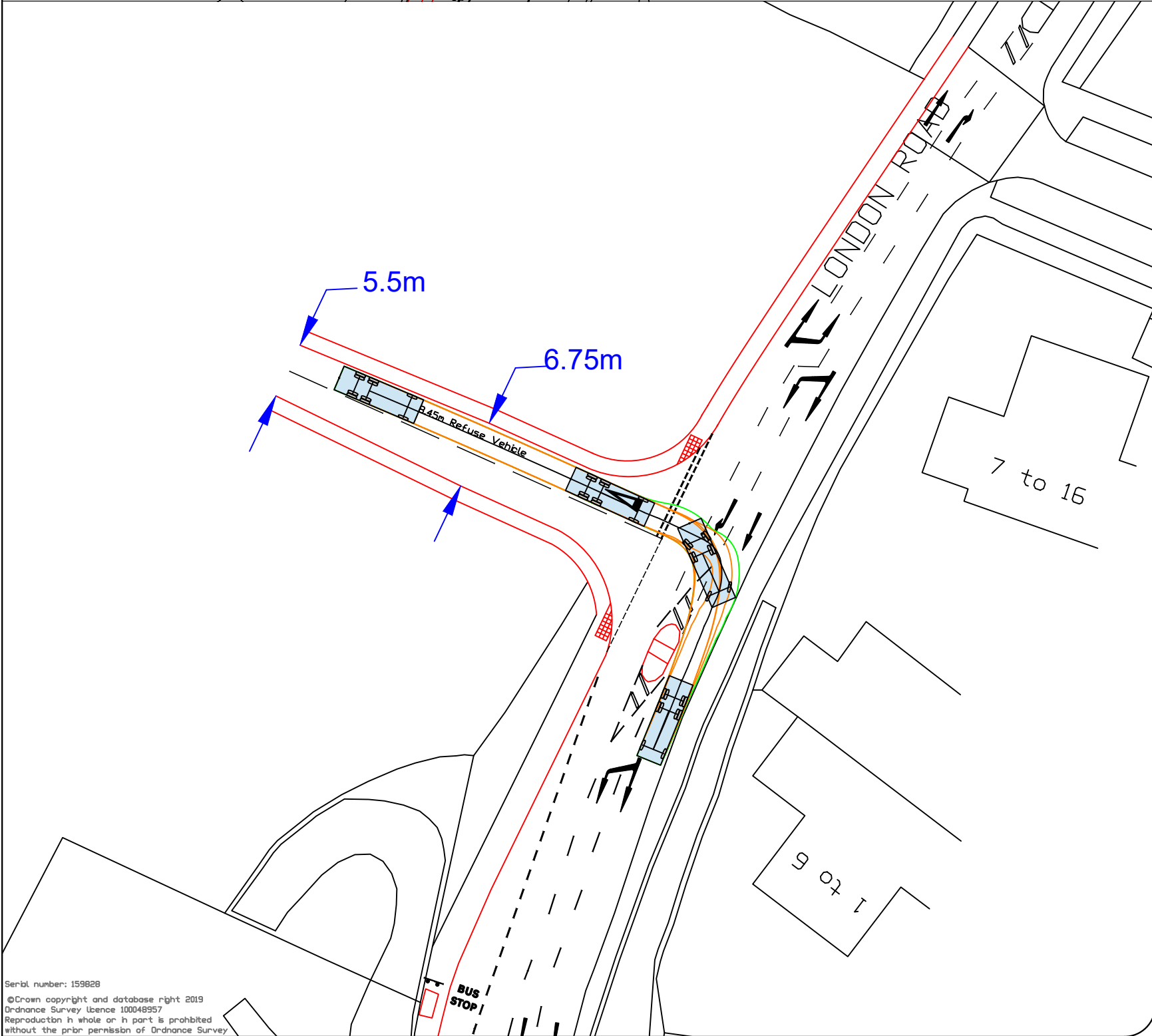
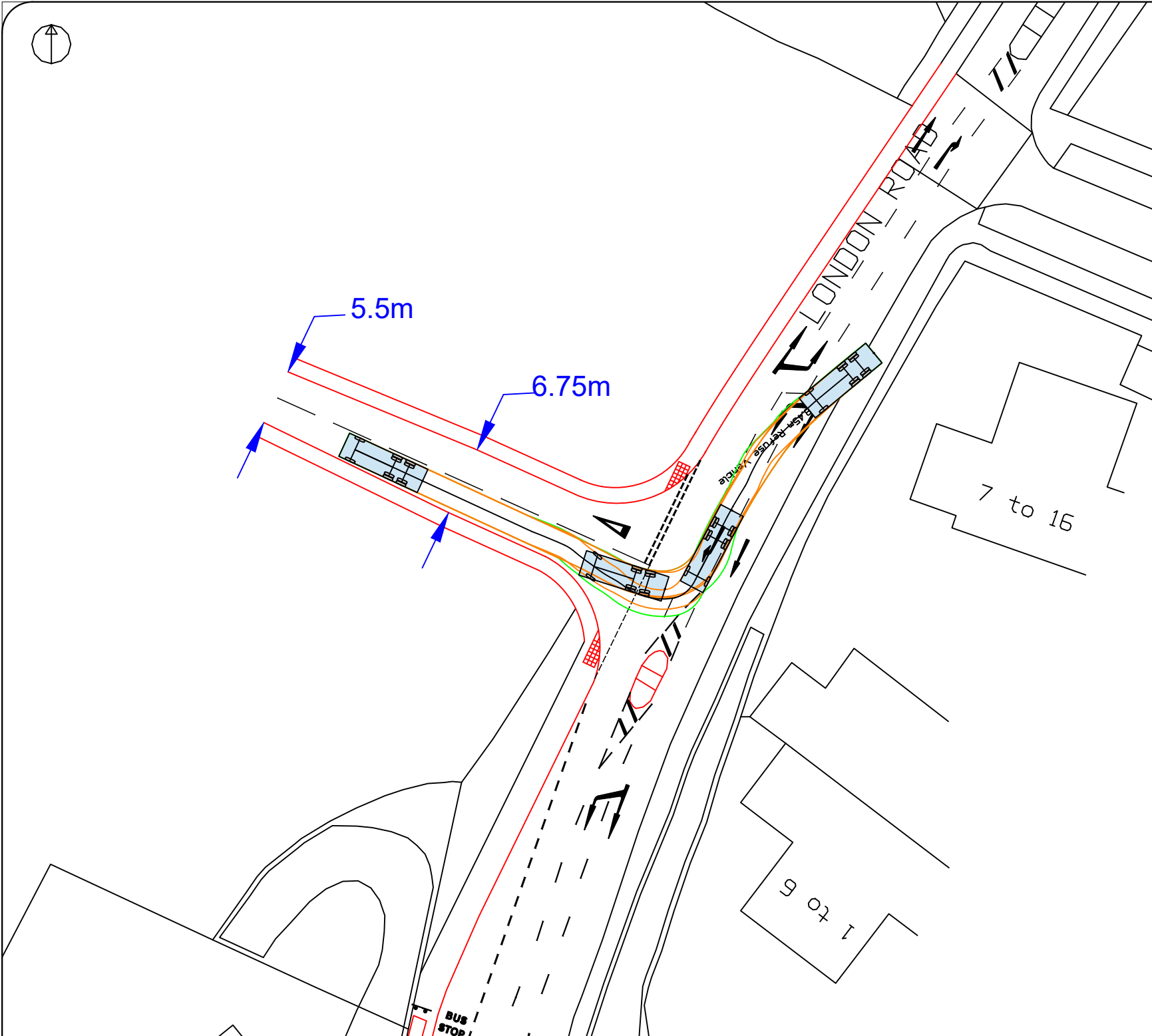
Temporary Developer Signage

The applicant is advised that the erection of temporary directional signage should be agreed with the Local Traffic Engineer prior to any signage being installed. The applicant should be aware that a charge will be applied for this service.

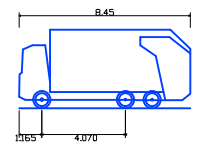
Traffic Regulation Order

The applicant is advised to contact the WSCC Traffic Regulation Order team (01243 642105) to obtain the necessary paperwork and commence the process associated with the proposed **FILL IN AS NECESSARY** (waiting restrictions, removal of parking bays, provision of loading bay, etc). The applicant would be responsible for meeting all costs associated with this process. The applicant should note that the outcome of this process cannot be guaranteed.

APPENDIX 3:
RIGHT TURN SWEPT PATH ANALYSES



VEHICLE DETAILS (N.T.S)



Green line shows body
Orange line shows axle/wheels

LARGE REFUSE 3 AXLE

Overall Length	8.450m
Overall Width	2.500m
Overall Body Height	4.040m
Min Body Ground Clearance	0.415m
Track Width	2.500m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	8.000m

Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

Rev	Date	Details Of Issue



This document and all information herein is confidential and the intellectual property of BrightonTraffic Management Ltd. It is disclosed in confidence on terms that it will not be disclosed to any third party, used, sold, loaned, licensed, or reproduced in whole or in any part in any manner or form for manufacturing, tendering or for any other purpose without the written permission of Brighton Traffic Management Ltd. The copyright is retained by Brighton Traffic Management Ltd.
© Brighton Traffic Management Ltd



Project: **STONEPOUND HASSOCKS**

Title: **PROPOSED NEW ACCESS SPA Refuse Right Turns**

Drawn	Date	Scale (at A3)
TE	06/04/2019	1:500
Dwg no.	Revision No.	
SR/SH/220	B	

APPENDIX 4:

TURNING COUNT DATA

Turning Movement Data

Start Time	A273 London Rd Southbound					B2116 Keymer Rd Westbound					A273 Brighton Rd Northbound					B2116 Hurst Rd Eastbound					
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
7:00 AM	6	50	10	0	66	15	19	20	0	54	15	88	6	0	109	7	46	5	0	58	287
7:15 AM	7	50	11	0	68	27	23	24	0	74	16	94	10	0	120	14	31	9	0	54	316
7:30 AM	13	90	20	0	123	34	21	23	0	78	12	99	8	0	119	14	43	14	0	71	391
7:45 AM	17	116	25	0	158	42	48	14	0	104	10	115	16	0	141	15	50	13	0	78	481
Hourly Total	43	306	66	0	415	118	111	81	0	310	53	396	40	0	489	50	170	41	0	261	1475
8:00 AM	13	90	31	0	134	44	38	18	0	100	12	109	20	0	141	18	60	25	0	103	478
8:15 AM	15	93	49	0	157	44	46	15	0	105	16	116	14	0	146	9	52	20	0	81	489
8:30 AM	19	80	58	0	157	35	40	21	0	96	14	107	10	0	131	14	73	19	0	106	490
8:45 AM	13	60	43	0	116	52	32	22	0	106	8	138	7	0	153	13	52	19	0	84	459
Hourly Total	60	323	181	0	564	175	156	76	0	407	50	470	51	0	571	54	237	83	0	374	1916
9:00 AM	12	49	26	0	87	58	34	25	0	117	23	114	10	0	147	8	40	21	0	69	420
9:15 AM	13	63	41	0	117	42	29	29	0	100	22	102	17	0	141	13	37	19	0	69	427
9:30 AM	20	76	18	0	114	39	40	16	0	95	17	80	4	0	101	22	37	25	0	84	394
9:45 AM	17	91	30	0	138	38	26	25	0	89	16	79	9	0	104	7	29	17	0	53	384
Hourly Total	62	279	115	0	456	177	129	95	0	401	78	375	40	0	493	50	143	82	0	275	1625
BREAK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	21	120	47	0	188	29	40	23	0	92	25	91	21	0	137	10	44	12	0	66	483
4:15 PM	28	97	46	0	171	35	39	18	0	92	21	84	11	0	116	12	56	27	0	95	474
4:30 PM	18	106	40	0	164	36	41	22	0	99	17	92	13	0	122	13	50	16	0	79	464
4:45 PM	21	103	36	0	160	34	43	19	0	96	19	98	19	0	136	13	54	14	0	81	473
Hourly Total	88	426	169	0	683	134	163	82	0	379	82	365	64	0	511	48	204	69	0	321	1894
5:00 PM	10	131	42	0	183	24	38	16	0	78	21	89	17	0	127	15	49	21	0	85	473
5:15 PM	24	131	45	0	200	22	55	10	0	87	20	85	13	0	118	16	38	18	0	72	477
5:30 PM	11	129	34	0	174	37	46	19	0	102	19	92	17	0	128	13	40	15	0	68	472
5:45 PM	17	135	38	0	190	34	44	15	0	93	23	77	19	0	119	5	51	17	0	73	475
Hourly Total	62	526	159	0	747	117	183	60	0	360	83	343	66	0	492	49	178	71	0	298	1897
6:00 PM	21	137	39	0	197	29	39	11	0	79	18	69	11	0	98	7	37	27	0	71	445
6:15 PM	25	108	45	0	178	27	33	13	0	73	21	90	17	0	128	11	27	10	0	48	427
6:30 PM	18	88	38	0	144	23	37	17	0	77	23	55	12	0	90	17	29	20	0	66	377
6:45 PM	24	69	39	0	132	33	48	14	0	95	22	54	10	0	86	6	42	18	0	66	379
Hourly Total	88	402	161	0	651	112	157	55	0	324	84	268	50	0	402	41	135	75	0	251	1628
Grand Total	403	2262	851	0	3516	833	899	449	0	2181	430	2217	311	0	2958	292	1067	421	0	1780	10435
Approach %	11.5	64.3	24.2	0.0	-	38.2	41.2	20.6	0.0	-	14.5	74.9	10.5	0.0	-	16.4	59.9	23.7	0.0	-	-
Total %	3.9	21.7	8.2	0.0	33.7	8.0	8.6	4.3	0.0	20.9	4.1	21.2	3.0	0.0	28.3	2.8	10.2	4.0	0.0	17.1	-
Motorcycles	0	11	2	0	13	3	1	3	0	7	2	13	0	0	15	0	3	0	0	3	38
% Motorcycles	0.0	0.5	0.2	-	0.4	0.4	0.1	0.7	-	0.3	0.5	0.6	0.0	-	0.5	0.0	0.3	0.0	-	0.2	0.4
Cars	372	1977	768	0	3117	750	796	381	0	1927	352	1880	264	0	2496	263	934	382	0	1579	9119
% Cars	92.3	87.4	90.2	-	88.7	90.0	88.5	84.9	-	88.4	81.9	84.8	84.9	-	84.4	90.1	87.5	90.7	-	88.7	87.4
Light Goods Vehicles	24	196	72	0	292	61	77	51	0	189	51	236	40	0	327	24	94	32	0	150	958
% Light Goods Vehicles	6.0	8.7	8.5	-	8.3	7.3	8.6	11.4	-	8.7	11.9	10.6	12.9	-	11.1	8.2	8.8	7.6	-	8.4	9.2

Buses	0	15	1	0	16	3	7	2	0	12	2	17	3	0	22	3	10	0	13	63
% Buses	0.0	0.7	0.1	-	0.5	0.4	0.8	0.4	-	0.6	0.5	0.8	1.0	-	0.7	1.0	0.9	0.0	-	0.6
Single-Unit Trucks	7	53	8	0	68	16	6	10	0	32	20	57	3	0	80	2	8	6	0	196
% Single-Unit Trucks	1.7	2.3	0.9	-	1.9	1.9	0.7	2.2	-	1.5	4.7	2.6	1.0	-	2.7	0.7	0.7	1.4	-	1.9
Articulated Trucks	0	10	0	0	10	0	0	2	0	2	2	11	0	0	13	0	0	1	0	26
% Articulated Trucks	0.0	0.4	0.0	-	0.3	0.0	0.0	0.4	-	0.1	0.5	0.5	0.0	-	0.4	0.0	0.0	0.2	-	0.2
Bicycles on Road	0	0	0	0	0	0	12	0	0	12	1	3	1	0	5	0	18	0	0	18
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	1.3	0.0	-	0.6	0.2	0.1	0.3	-	0.2	0.0	1.7	0.0	-	0.3

