



schedule

private

- TYPE C + D - 2 bed units (semi detached/terraced - 2 storey)
= 82 sqm g.i.a (882 sqft g.i.a)
= 26 no. total
- TYPE F - 3 bed units (semi-detached/end terraced - 2 storey)
= 108 sqm g.i.a (1157 sqft g.i.a)
= 30 no. total
- TYPE H - 4 bed units (semi-detached - 3 storey)
= 154 sqm g.i.a (1653 sqft g.i.a)
= 6 no. total

affordable

- TYPE A + B - 2 bed units (semi detached/terraced - 2 storey)
= 72 sqm g.i.a (774 sqft g.i.a)
= 14 no. total
- TYPE E - 3 bed units (semi-detached/terraced - 2 storey)
= 86 sqm g.i.a (927 sqft g.i.a)
= 12 no. total
- = 88 total no. dwellings

key

- affordable housing
- artificial football pitch + clubhouse boundary fence
- root protection zone
- residential parking (garages not counted as parking)
= 115 no. total + garages
- visitor car & van parking
= 24 no. total
- football parking
= 50 no. total
- cycle parking at 1 space per bedroom

Freemen's Way



Freemen's Way, Deal
proposed site plan

number: 3987/p100g | date: nov 2019 | scale: 1:500@A1 / 1:1000@A3 | dm: lh chkd: ge appd: ge

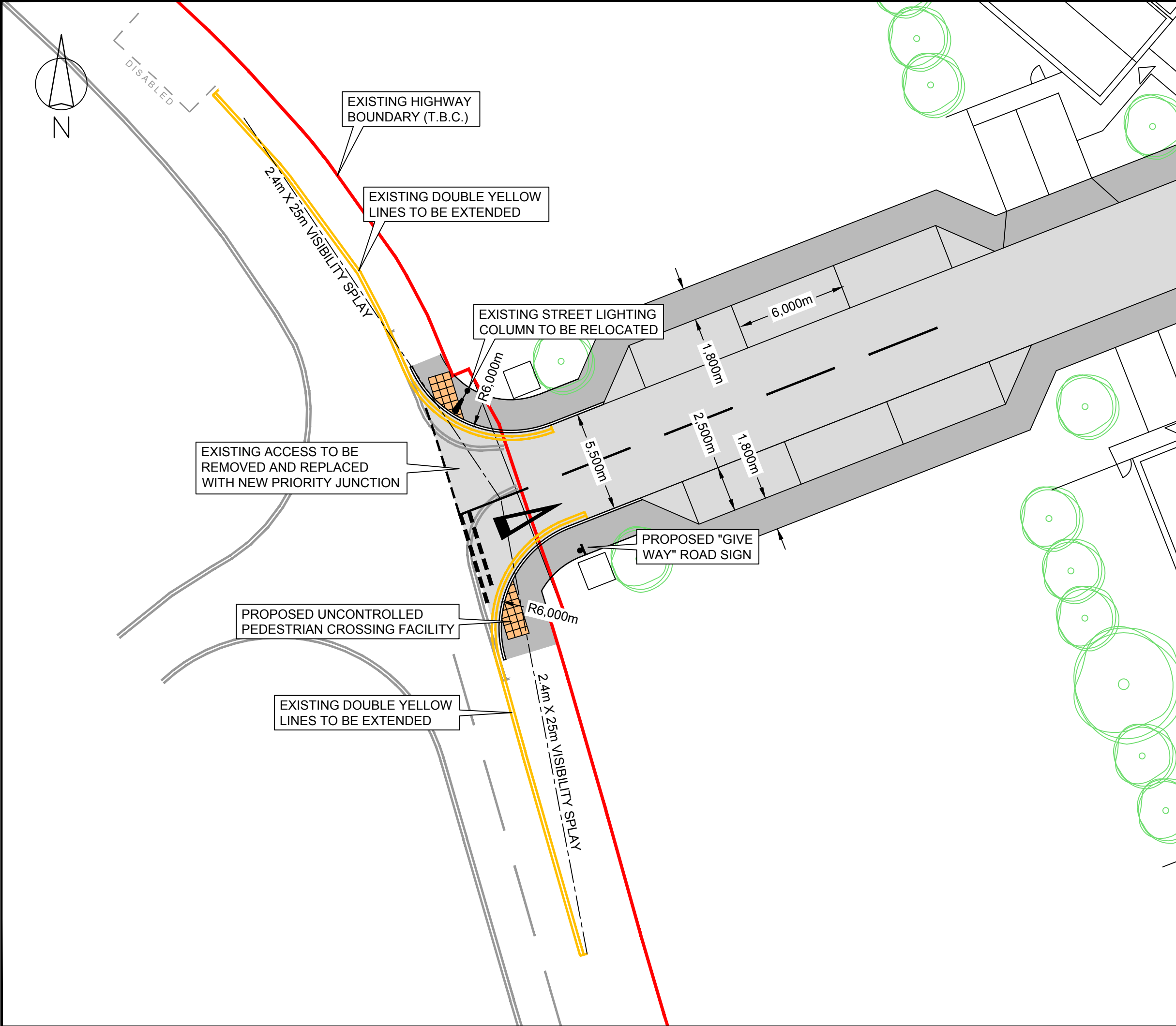
THIS DRAWING IS FOR THE PURPOSE OF
PLANNING APPLICATION ONLY AND SHOULD
NOT BE USED FOR ANY OTHER PURPOSE.

subject to site survey and I.A. approvals
client: Sunningdale House Developments

gdm architects
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www.gdmarchitects.co.uk
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Appendix D

(Proposed Access Drawing)



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	05.11.2019
B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
1. Do not scale from this drawing.
 2. This drawing to be read & printed in colour.
 3. This drawing is for illustrative purposes only, and not for construction.
 4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

Client
...

Project
Freemen's Way, Deal

Drawing Title
Proposed Site Access

Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



111 - 113 Great Portland Street
London
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Tel. No. 0207 1000 753

Drawing Number	2019-3502-004	Rev	C
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2019-3502-004_C - PROPOSED SITE ACCESS.DWG

Appendix E

(Road Safety Audit)

FREEMENS WAY, DEAL

Proposed Site Access

Stage 1 Road Safety Audit
Requested by TTP Consulting

October 2019



Road Safety Engineering

Project: Freemens Way, Deal
Proposed Site Access

Client: TTP Consulting

Project Sponsor: Dover District Council

Document: Stage 1 Road Safety Audit

Gateway TSP ref: WP/JS/1910064 RSA1 v1.0

Issue date: 31st October 2019

Status: v1.0

Authorised by: WP

© Copyright Gateway TSP 2019



Road Safety Engineering

84 North Street
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www.gateway-tsp.co.uk

CONTENTS

1	Introduction	1
2	Items Considered by this Road Safety Audit	2
3	Collision Data.....	3
4	Previous Road Safety Audit.....	4
5	Problems Identified by this Road Safety Audit	5
6	Audit Team Statement	7

Appendices

- Appendix A: Location Plan(s)
Appendix B: RSA Decision Log

1 INTRODUCTION

- 1.1** This report describes a Stage 1 Road Safety Audit (RSA) of a proposed site access onto Freemens Way, Deal in Kent.
- 1.2** The highway works considered by this Audit comprises an amended access for 88 new residential units and a new sports field facility on land to the rear of Freemens Way.
- 1.3** Freemens Way is a two-way carriageway with a speed limit of 20mph, and rubber speed cushions at regular intervals. The carriageway is lit and there are footways on both sides. There are double yellow lines on the western side of Freemens Way and at the existing gated access. Vehicles were also observed parking on the grassed area opposite the proposed access.
- 1.4** This Road Safety Audit was carried out by Wendy Palmer and Julian Smith, and consisted of a desktop study and a site visit, which was carried out on Wednesday 30th October 2019, when the weather was fine and the road surface dry. Traffic flows were light during the site visit.
- 1.5** The terms of reference for this RSA are as described in the Design Manual for Roads and Bridges (DMRB) document GG119. The Audit Team is independent of the project design team and has not been involved in the design process in any other capacity. The audit considers only the potential road safety implications of the scheme and has not verified compliance of the design with any other criteria.
- 1.6** The Audit Team has not been made aware of any Departures from Standard. Whilst reference may be made to design standards, this report is not intended to provide a design check.
- 1.7** Recommendations are aimed at addressing the identified potential road safety problems. However, there may be other acceptable ways to overcome a problem, considering wider constraints and opportunities; the Auditors would be pleased to discuss such alternative solutions as appropriate. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

2 ITEMS CONSIDERED BY THIS ROAD SAFETY AUDIT

Document ref.	Rev.	Originator	Title
2019-3502-004	-	TTP Consulting	Proposed Site Access

Additional/background information provided to the Audit Team

- Traffic survey results

3 COLLISION DATA

3.1 Personal injury collision (PIC) data was obtained from Crashmap (www.crashmap.co.uk) which found that one PIC occurred to the north-west of the proposed access during the latest five-year period.

3.2 The PIC occurred on 7/12/16 in light and dry conditions and involved two left turning cars and a pedestrian crossing Freemens Way, resulting in slight injuries to the pedestrian.

4 PREVIOUS ROAD SAFETY AUDIT

4.1 The Audit Team is unaware of any previous road safety audits on this proposal.

5 PROBLEMS IDENTIFIED BY THIS ROAD SAFETY AUDIT

General Matters.

5.1 Problem

Increased traffic movements and reduced parking may lead to t-bone and side swipe collisions

Location: proposed access

The proposed development access would be opposite one of the accesses to the informal 'loop' of Freemens Way. The increased traffic movements on Freemens Way (south-east to north-west) using the proposed access may lead to t-bone and side swipe collisions.

Additionally, extending the double yellow lines may lead to increased parking on the grassed areas or on the footways which may restrict visibility around the junction.

Recommendation

Physical measures should be proposed to deter injudicious parking on footways and verges, and carriageway markings should be provided for drivers at the Freemens Way 'loop' access opposite the proposed junction.

Local Alignment

5.2 The Audit Team raises no concerns at this Stage 1 RSA in respect of local alignment.

Junctions

5.3 The Audit Team raises no concerns at this Stage 1 RSA in respect of junctions.

Walking Cycling and Horse Riding

5.4 The Audit Team raises no concerns at this Stage 1 RSA in respect of walking, cycling and horse riding.

Traffic Signs, Carriageway Markings and Lighting

- 5.5** The Audit Team raises no concerns at this Stage 1 RSA in respect of traffic signs, carriageway markings and lighting.

6 AUDIT TEAM STATEMENT

6.1 We certify that this Road Safety Audit has been carried out in accordance with DMRB document GG119.

Audit Team Leader

Wendy Palmer
MCIHT, MSoRSA, HE Cert Comp
Road Safety Engineer

Signed:



Date: 31st October 2019

Audit Team Member(s)

Julian Smith
BEng MCIHT
Road Safety Engineer

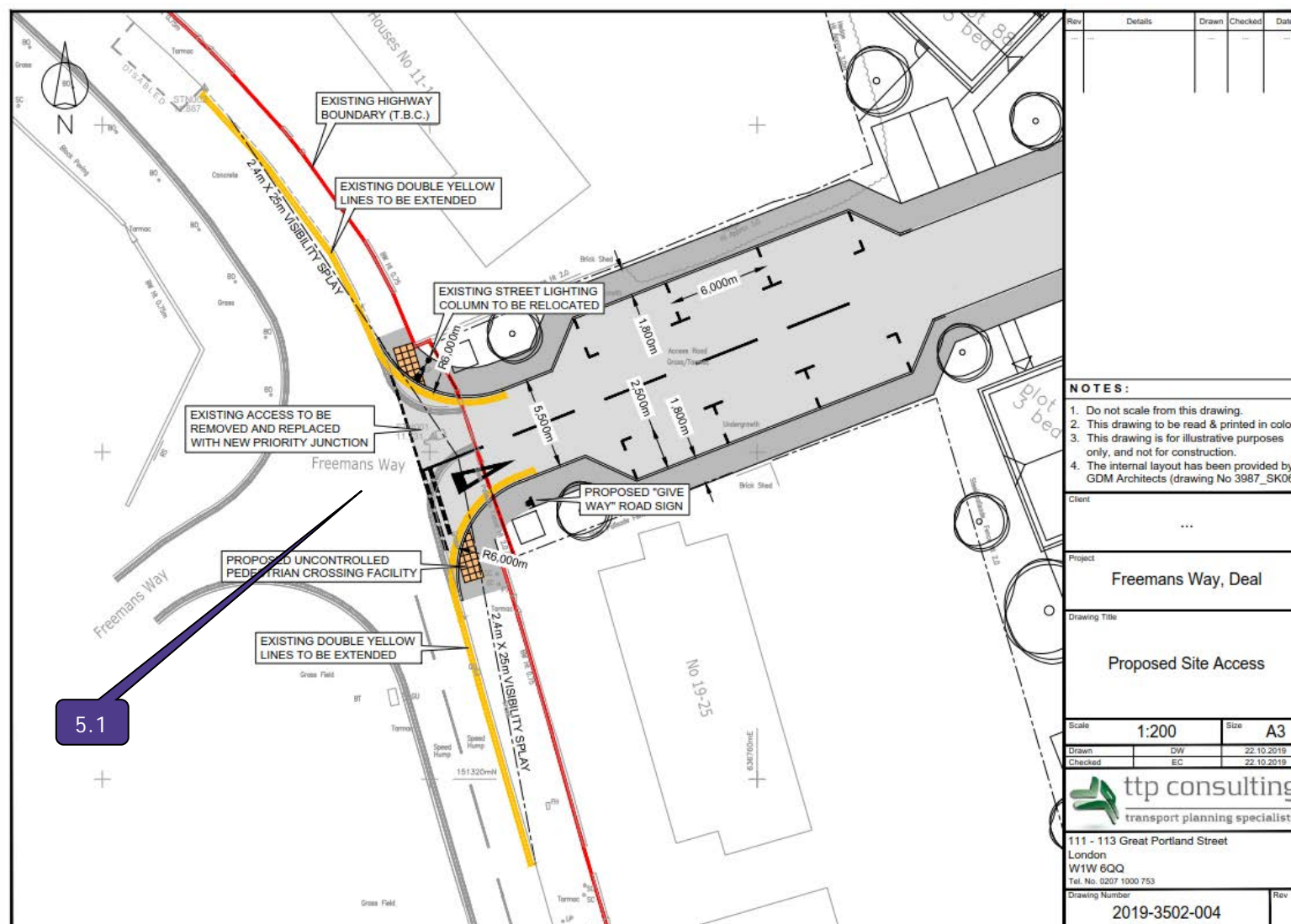
Signed:




Date: 31st October 2019

APPENDIX A

Location Plan(s)



- NOTES:**
1. Do not scale from this drawing.
 2. This drawing to be read & printed in colour.
 3. This drawing is for illustrative purposes only, and not for construction.
 4. The internal layout has been provided by GDM Architects (drawing No 3987_SK06c).

Client	...		
Project	Freemans Way, Deal		
Drawing Title	Proposed Site Access		
Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	
 transport planning specialists			
111 - 113 Great Portland Street London W1W 6QQ Tel. No. 0207 1000 753			
Drawing Number	2019-3502-004		Rev

2019-3502-004 - PROPOSED SITE ACCESS DWG

APPENDIX B

RSA Decision Log

Project: Freemens Way, Deal
Proposed Site Access
Client: TTP Consulting
Document: Stage 1 Road Safety Audit
Gateway TSP ref: WP/JS/1910064 RSA1 v1.0
Status: v1.0
Issue date: 31st October 2019

Item No.	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action (design organisation and overseeing organisations agreed action to the problem)
5.1	Physical measures should be proposed to deter injudicious parking on footways and verges, and carriageway markings should be provided for drivers at the Freemens Way 'loop' access opposite the proposed junction.			
5.2				
5.3				
5.4				
5.5				

Project: Freemens Way, Deal
Proposed Site Access
Client: TTP Consulting
Document: Stage 1 Road Safety Audit
Gateway TSP ref: WP/JS/1910064 RSA1 v1.0
Status: v1.0
Issue date: 31st October 2019

Design Organisation statement:

On behalf of the Design Organisation I certify that:

1. The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.

Name:

Signed:

.....

Position:

Organisation:

Date:

Overseeing Organisation statement:

On behalf of the Overseeing Organisation I certify that:

1. The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Design Organisation.
2. The agreed RSA actions will be progressed.

Name:

Signed:

.....

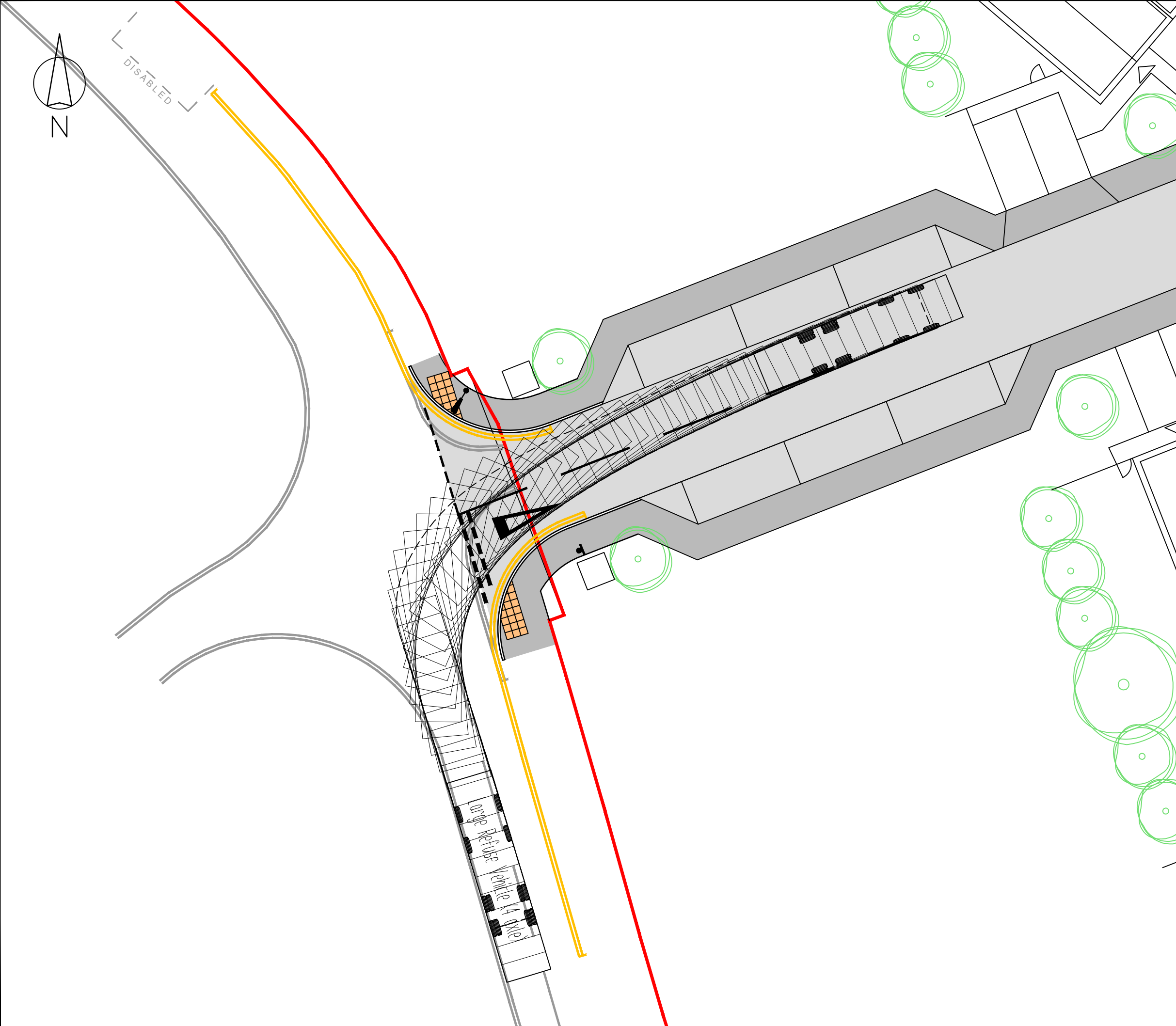
Position:

Organisation:

Date:

APPENDIX F

(Swept Path Analysis)



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	18.12.2019

NOTES:

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only, and not for construction.

LARGE REFUSE VEHICLE (4 AXLE)

Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to Lock Time 6.00s
Wall to Wall Turning Radius 11.330m

	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemans Way, Deal

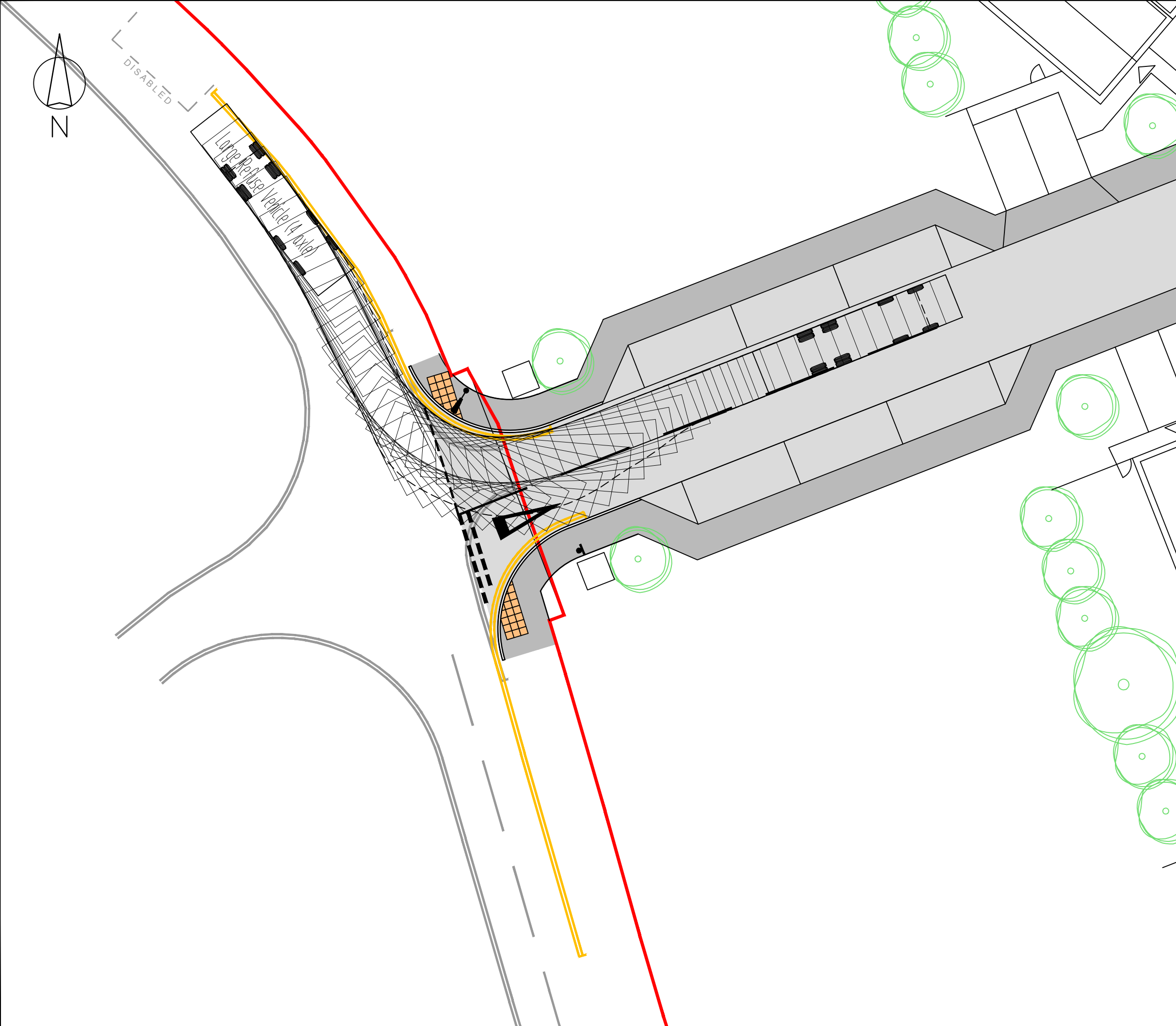
Drawing Title
**Vehicular Swept Paths Analysis
of the Proposed Site Access
using Large 4-Axle Refuse
Vehicle (Sheet 1 of 4)**

Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



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Drawing Number	Rev
2019-3502-TR02	A



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	18.12.2019

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 - 3. This drawing is for illustrative purposes only, and not for construction.

LARGE REFUSE VEHICLE (4 AXLE)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to Lock Time	6.00s
Wall to Wall Turning Radius	11.330m

	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemans Way, Deal

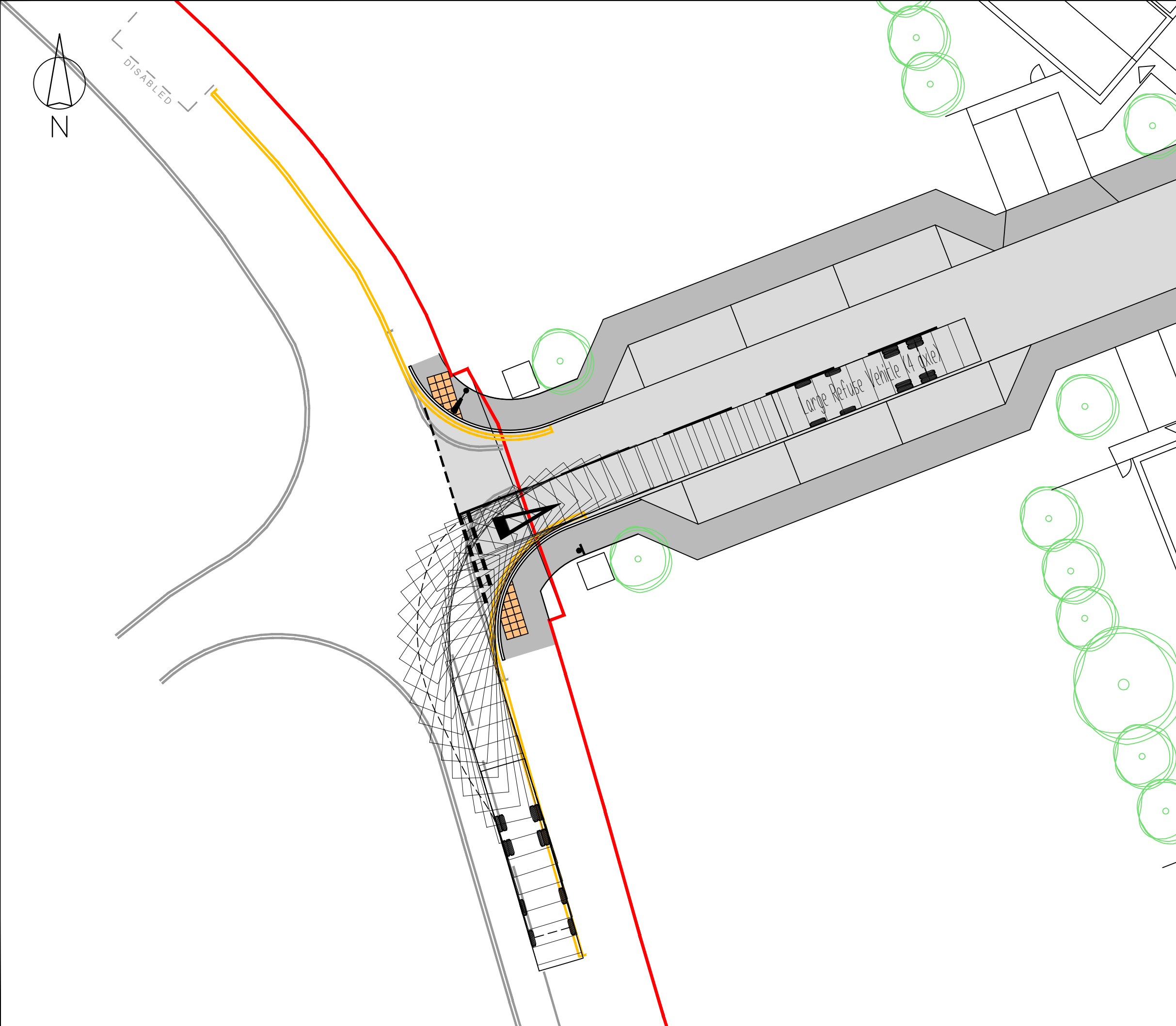
Drawing Title
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of the Proposed Site Access
using Large 4-Axle Refuse
Vehicle (Sheet 2 of 4)**

Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



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Drawing Number	Rev
2019-3502-TR02	A

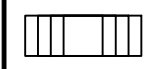



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
1. Do not scale from this drawing.
 2. This drawing to be read & printed in colour.
 3. This drawing is for illustrative purposes only, and not for construction.

LARGE REFUSE VEHICLE (4 AXLE)

Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to Lock Time 6.00s
Wall to Wall Turning Radius 11.330m

 **FORWARD MOVEMENTS**
(design speed - 5kph)

 **REVERSE MOVEMENTS**
(design speed - 2.5kph)

Client

...

Project

Freemans Way, Deal

Drawing Title

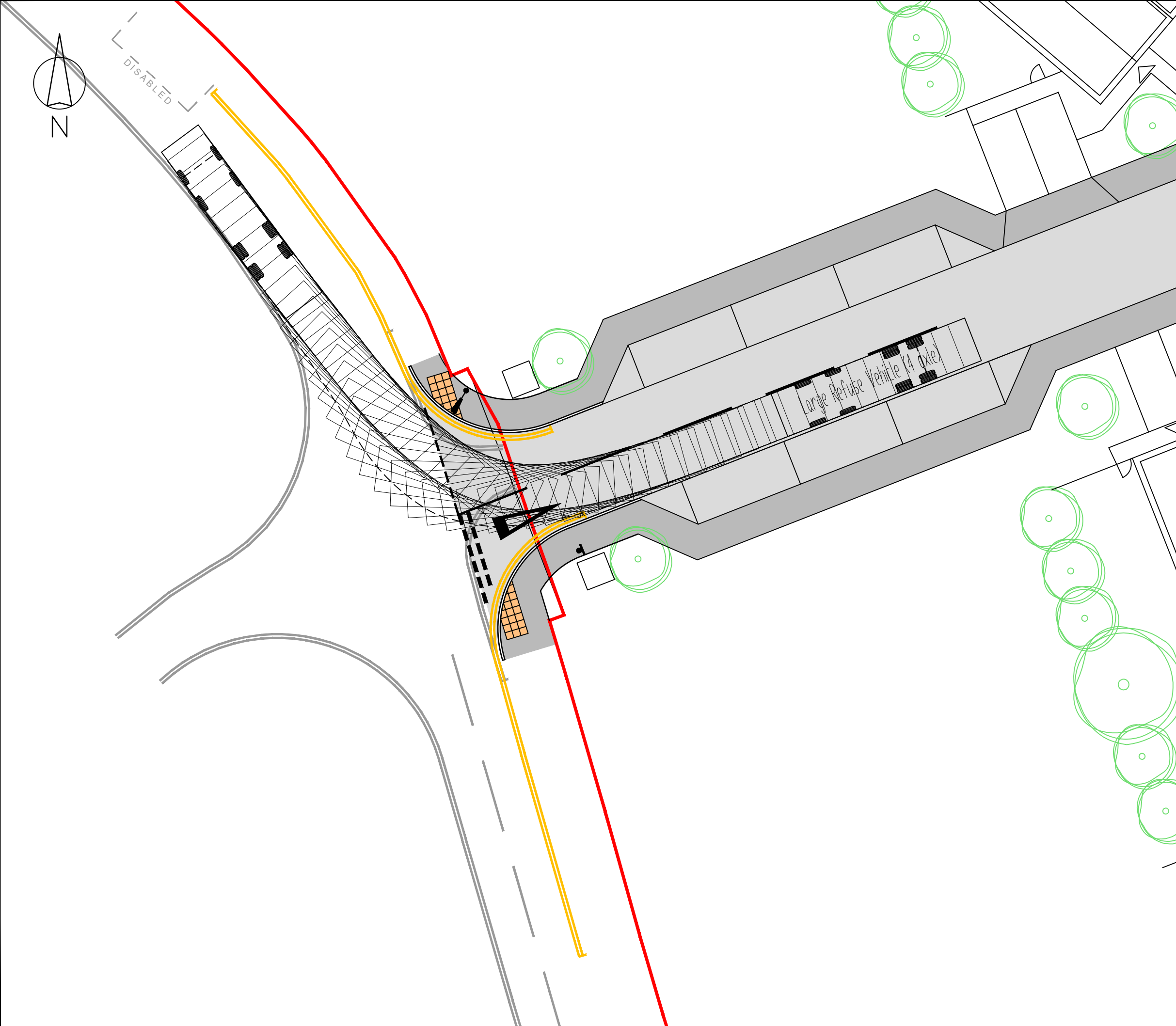
Vehicular Swept Paths Analysis
of the Proposed Site Access
using Large 4-Axle Refuse
Vehicle (Sheet 3 of 4)

Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



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Drawing Number	Rev
2019-3502-TR02	A



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
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LARGE REFUSE VEHICLE (4 AXLE)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to Lock Time	6.00s
Wall to Wall Turning Radius	11.330m

	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemans Way, Deal

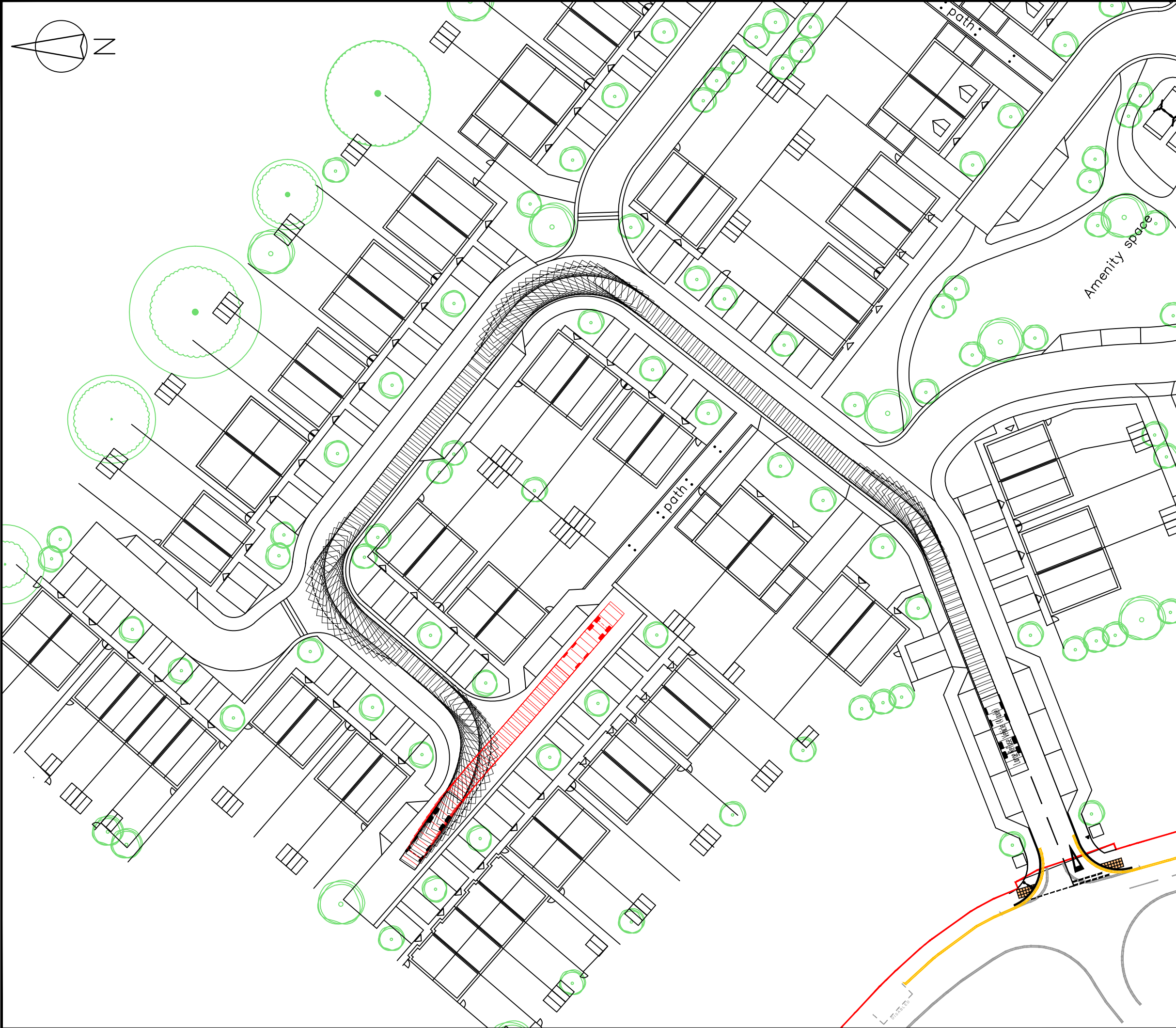
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Vehicular Swept Paths Analysis
of the Proposed Site Access
using Large 4-Axle Refuse
Vehicle (Sheet 4 of 4)

Scale	1:200	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	

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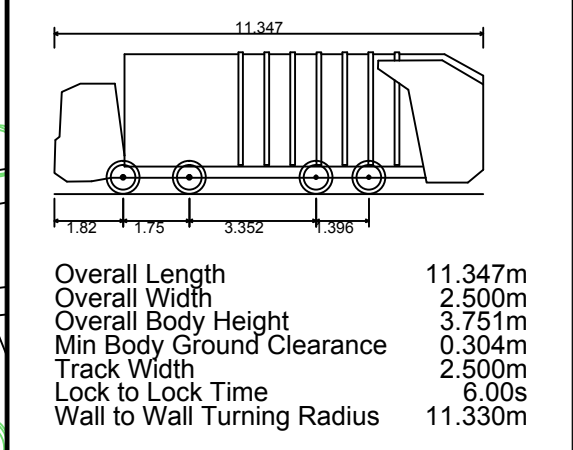
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Rev	Details	Drawn	Checked	Date
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B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
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 2. This drawing to be read & printed in colour.
 3. This drawing is for illustrative purposes only, and not for construction.
 4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

LARGE REFUSE VEHICLE (4 AXLE)



	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemen's Way, Deal

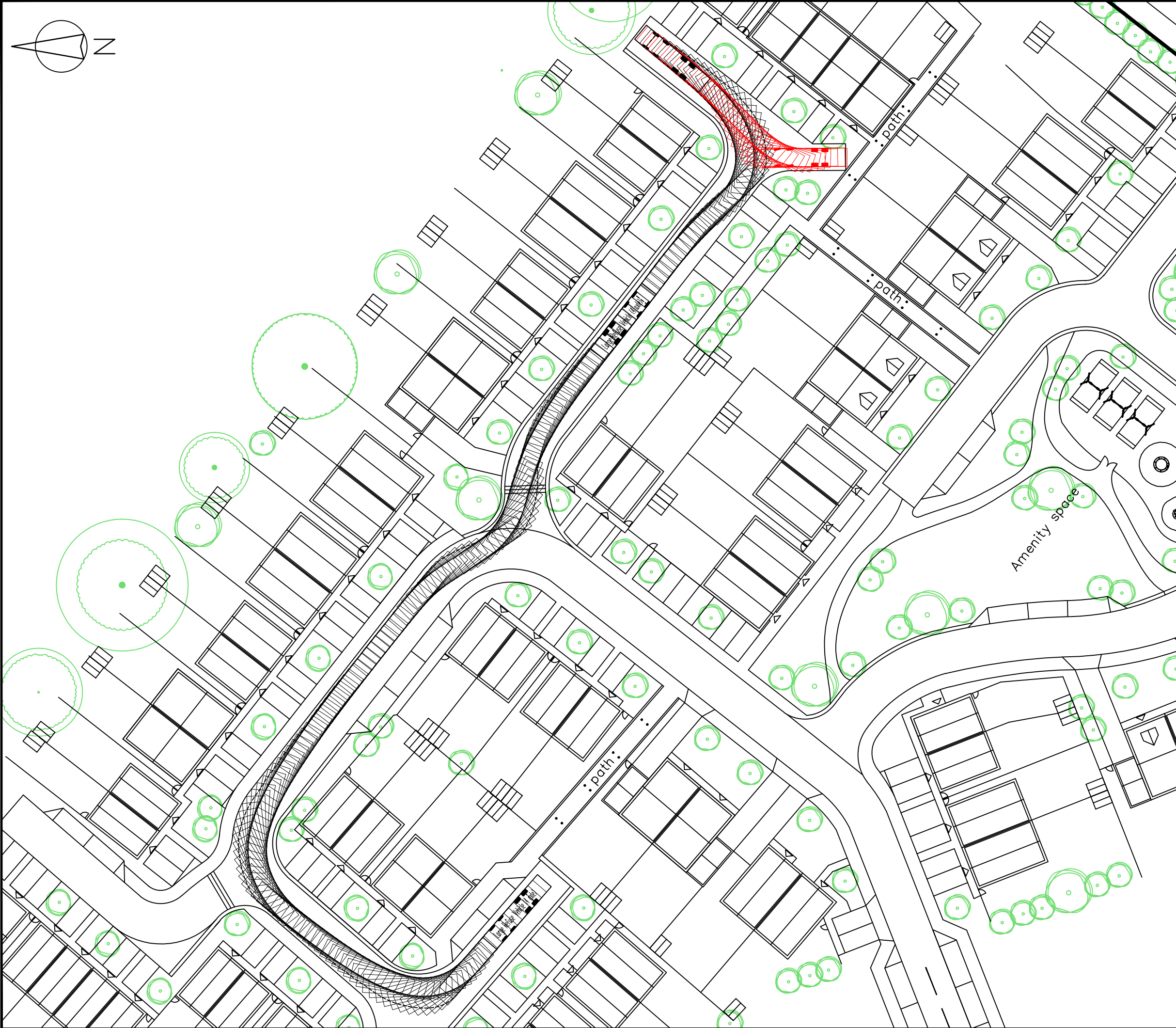
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of the Proposed Site using Large
4-Axle Refuse Vehicle
(Sheet 1 of 4)**

Scale	1:500	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



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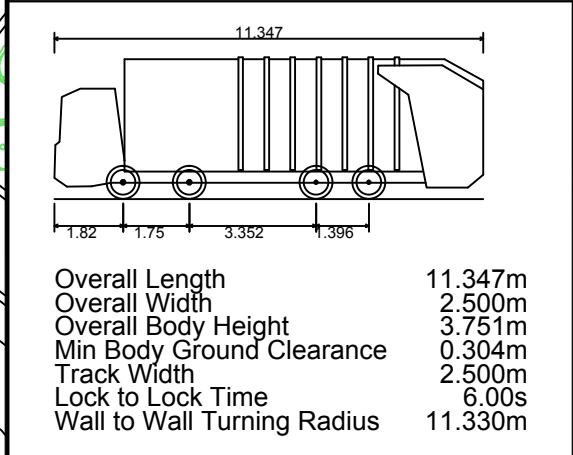
Drawing Number	2019-3502-TR03	Rev	C
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Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	05.11.2019
B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

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 3. This drawing is for illustrative purposes only, and not for construction.
 4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

LARGE REFUSE VEHICLE (4 AXLE)



	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemen's Way, Deal

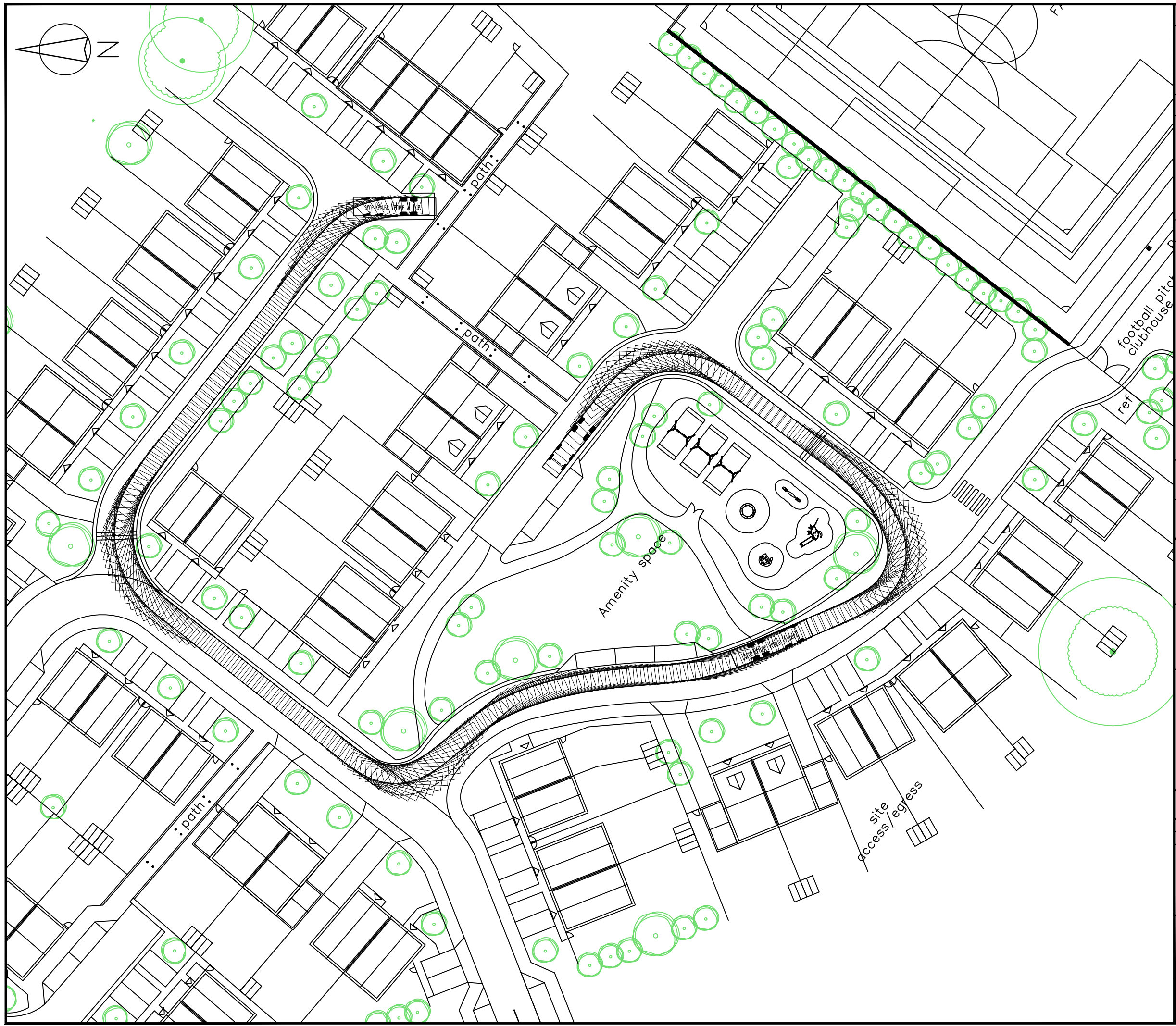
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of the Proposed Site using Large
4-Axle Refuse Vehicle
(Sheet 2 of 4)**

Scale	1:500	Size	A3
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Checked	EC	22.10.2019	



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Tel. No. 0207 1000 753

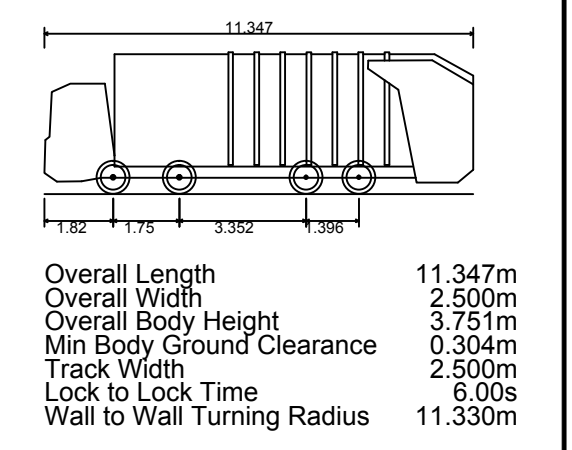
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Rev	Details	Drawn	Checked	Date
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B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

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LARGE REFUSE VEHICLE (4 AXLE)



	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemen's Way, Deal

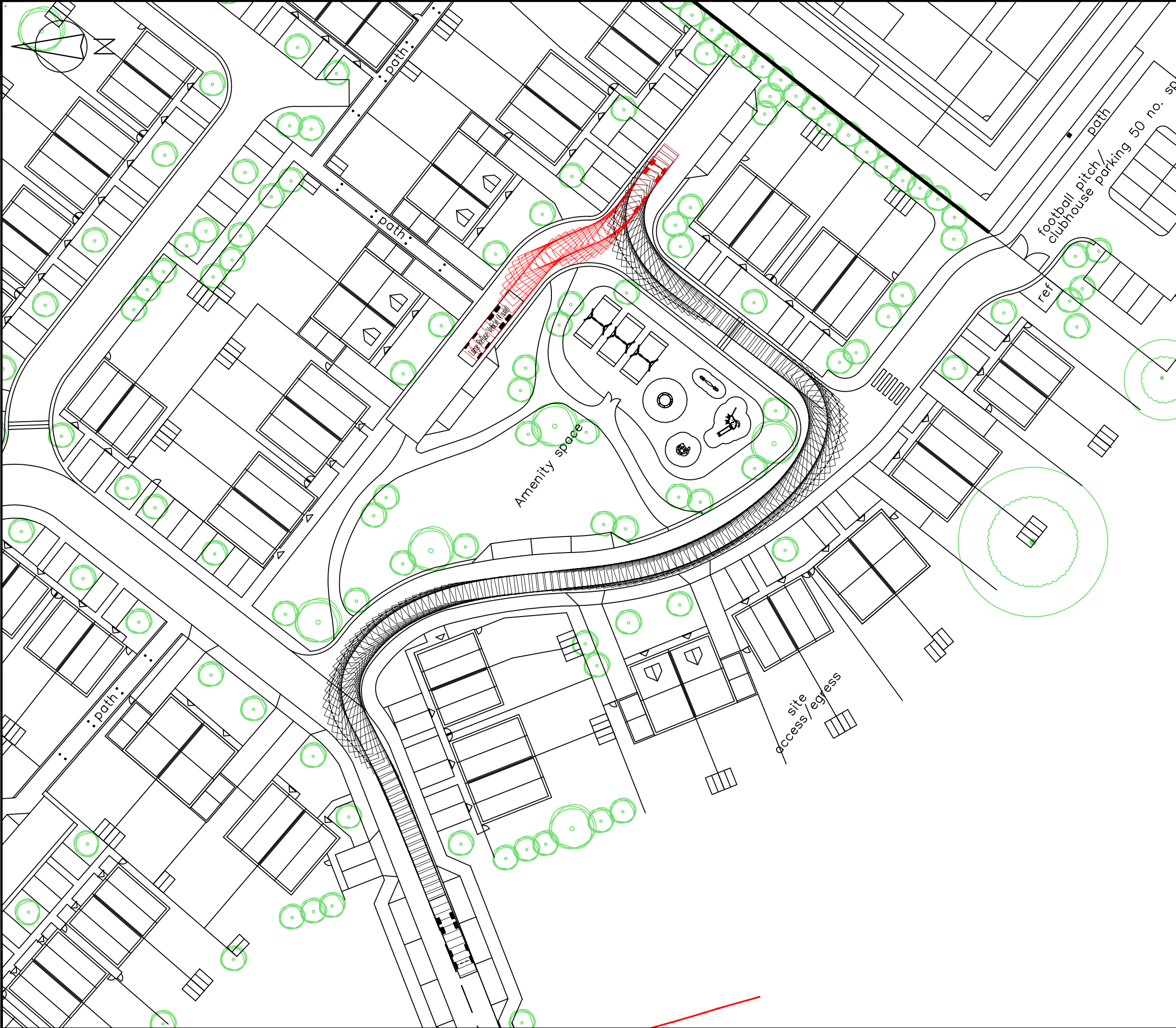
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**Vehicular Swept Paths Analysis
of the Proposed Site using Large
4-Axle Refuse Vehicle
(Sheet 3 of 4)**

Scale	1:500	Size	A3
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Checked	EC	22.10.2019	



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Tel. No. 0207 1000 753

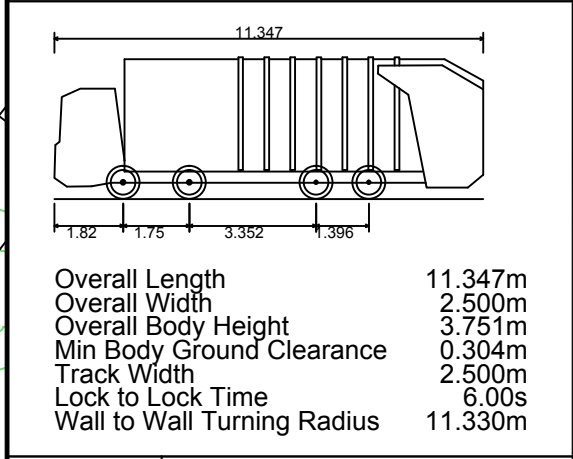
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Rev	Details	Drawn	Checked	Date
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B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
1. Do not scale from this drawing.
 2. This drawing to be read & printed in colour.
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 4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

LARGE REFUSE VEHICLE (4 AXLE)



	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client
...

Project
Freemen's Way, Deal

Drawing Title
**Vehicular Swept Paths Analysis
of the Proposed Site using Large
4-Axle Refuse Vehicle
(Sheet 4 of 4)**

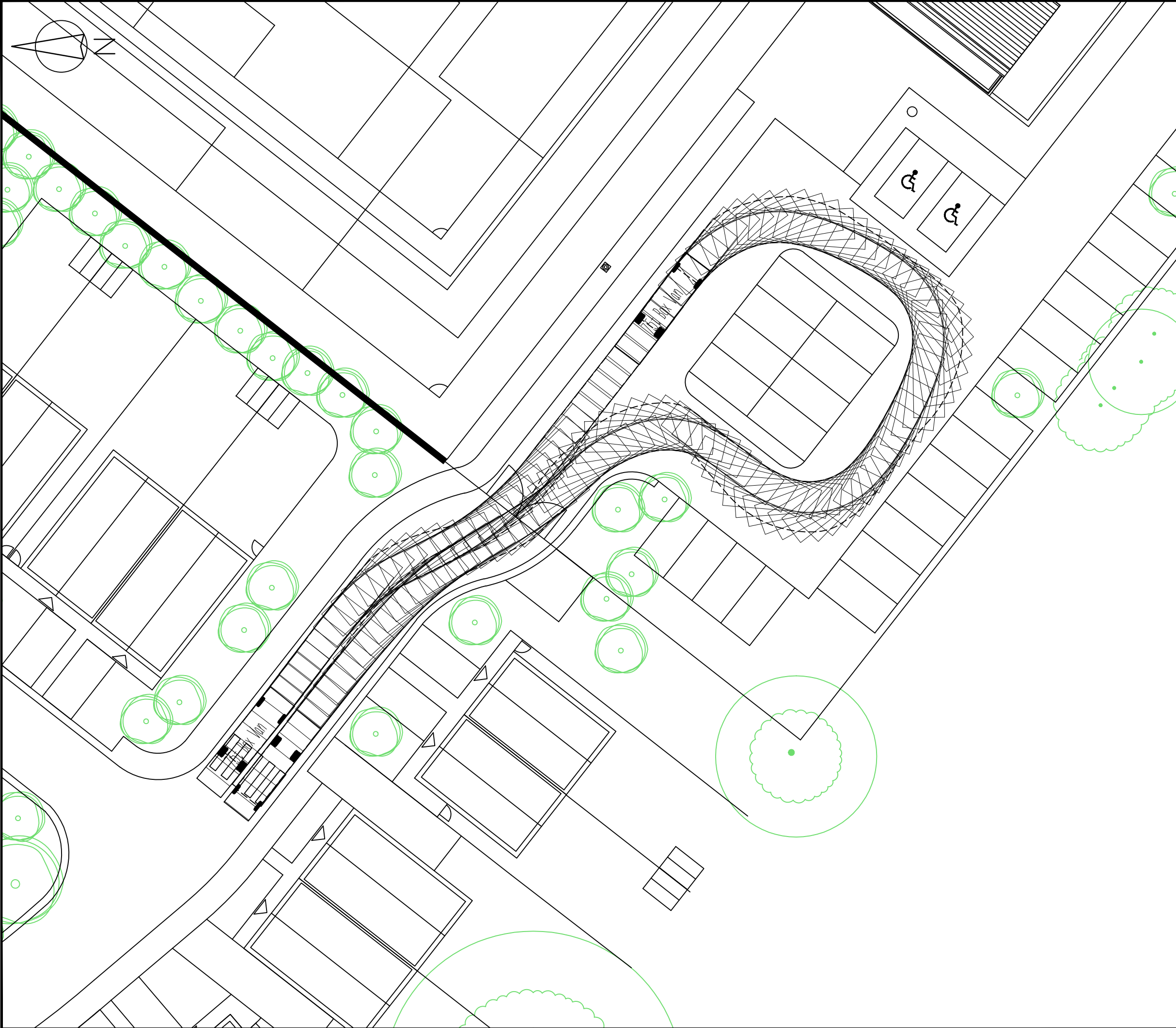
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Checked	EC	22.10.2019	



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Tel. No. 0207 1000 753

Drawing Number	2019-3502-TR03	Rev	C
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2019-3502-TR03_C - V.S.P.A. OF THE PROPOSED SITE USING LARGE 4-AXLE REFUSE VEHICLE.DWG



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	04.12.2019
B	Site layout updated.	DW	EC	18.12.2019

- NOTES:**
- 1. Do not scale from this drawing.
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 - 3. This drawing is for illustrative purposes only, and not for construction.
 - 4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

7.5T BOX VAN

Overall Length 8.010m
Overall Width 2.100m
Overall Body Height 3.556m
Min Body Ground Clearance 0.351m
Track Width 2.064m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 7.400m

	FORWARD MOVEMENTS (design speed - 5kph)
	REVERSE MOVEMENTS (design speed - 2.5kph)

Client

...

Project

Freemen's Way, Deal

Drawing Title

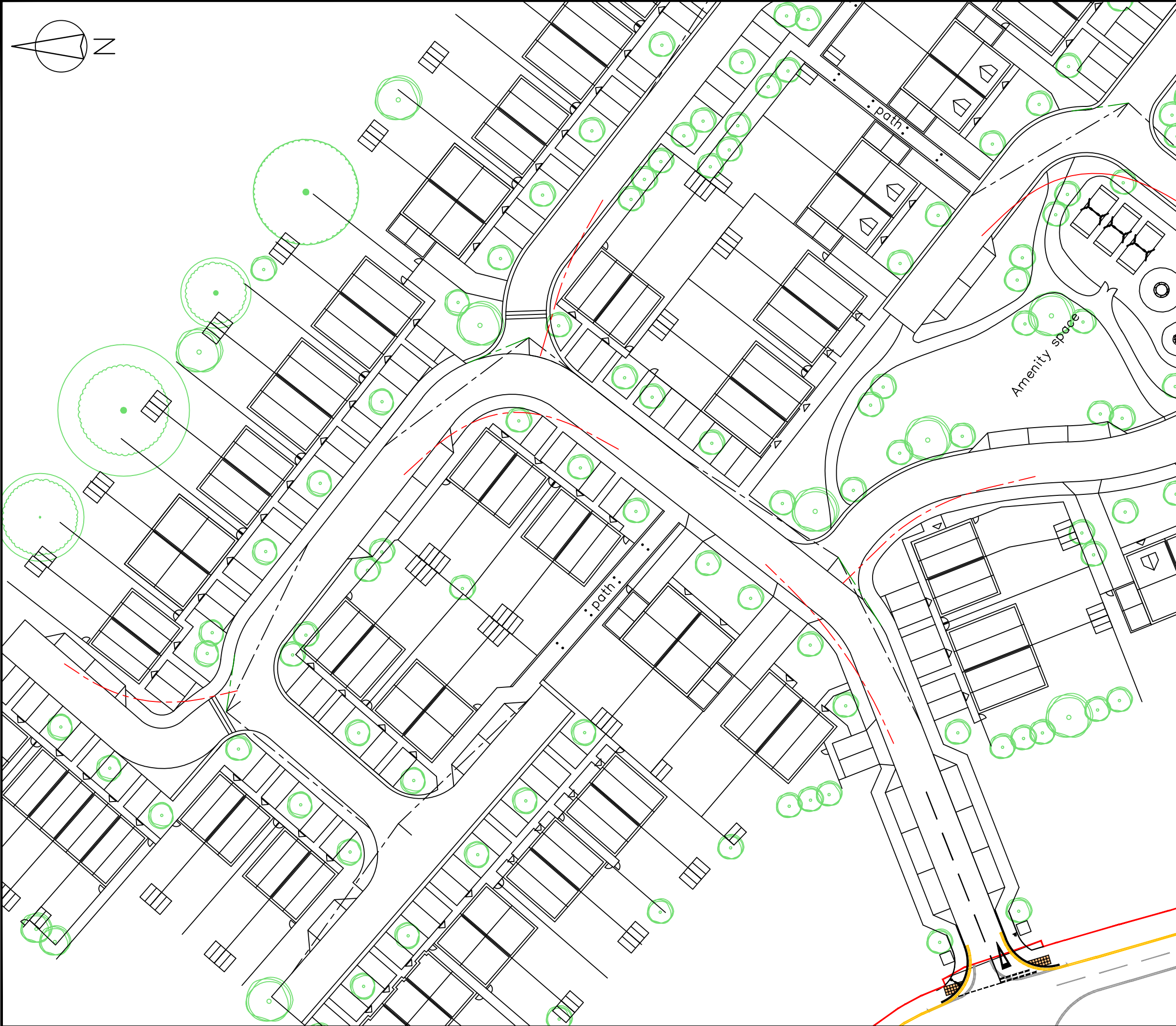
**Vehicular Swept Paths Analysis
using 7.5T Box Van**

Scale	1:250	Size	A3
Drawn	DW	05.11.2019	
Checked	EC	05.11.2019	

ttp consulting
transport planning specialists

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London
W1W 6QQ
Tel. No. 0207 1000 753

Drawing Number	Rev
2019-3502-TR04	B



Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	05.11.2019
B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

NOTES:

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only, and not for construction.
4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

KEY:	
	2.4m x 25m JUNCTION VISIBILITY SPLAYS
	JUNCTION VISIBILITY SPLAYS TO TANGENT OF CURVES
	18m FORWARD VISIBILITY SPLAYS ROUND CORNERS
	AREAS WITHIN VISIBILITY SPLAYS TO BE KEPT CLEAR

Client
...

Project
Freemen's Way, Deal

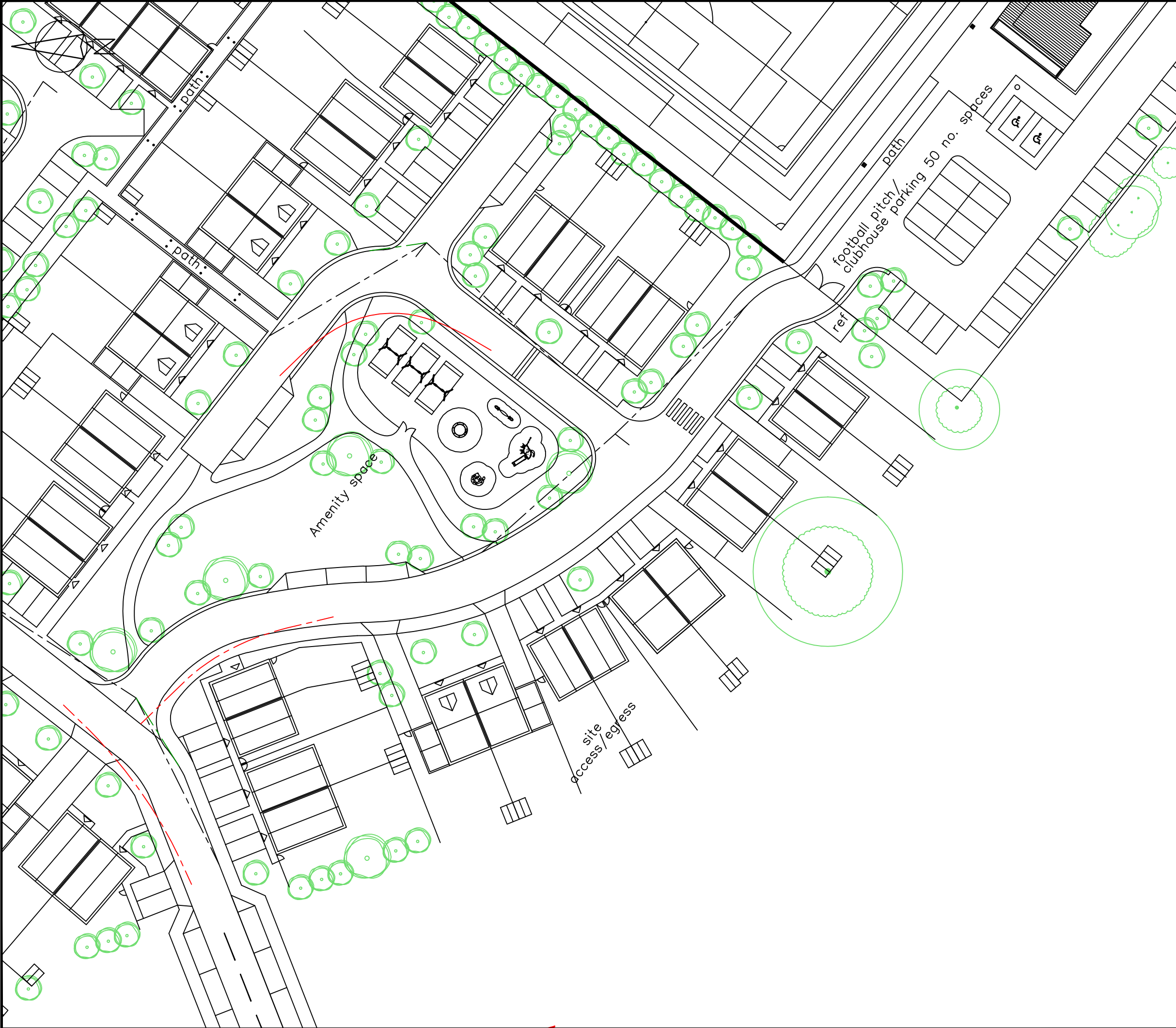
Drawing Title
Visibility Splays within the Proposed Site (Sheet 1 of 2)

Scale	1:500	Size	A3
Drawn	DW		22.10.2019
Checked	EC		22.10.2019



111 - 113 Great Portland Street
London
W1W 6QQ
Tel. No. 0207 1000 753

Drawing Number	2019-3502-005	Rev	C
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Rev	Details	Drawn	Checked	Date
A	Site layout updated.	DW	EC	05.11.2019
B	Site layout updated.	DW	EC	04.12.2019
C	Site layout updated.	DW	EC	18.12.2019

NOTES:

1. Do not scale from this drawing.
2. This drawing to be read & printed in colour.
3. This drawing is for illustrative purposes only, and not for construction.
4. The internal layout has been provided by GDM Architects (drawing No. 3987-P100e).

KEY:	
	2.4m x 25m JUNCTION VISIBILITY SPLAY
	JUNCTION VISIBILITY LINE TO TANGENT OF CURVE
	FORWARD VISIBILITY SPLAY ROUND THE CORNER
	AREAS WITHIN VISIBILITY SPLAYS TO BE KEPT CLEAR

Client
...

Project
Freemen's Way, Deal

Drawing Title
Visibility Splays within the Proposed Site
(Sheet 2 of 2)

Scale	1:500	Size	A3
Drawn	DW	22.10.2019	
Checked	EC	22.10.2019	



111 - 113 Great Portland Street
London
W1W 6QQ
Tel. No. 0207 1000 753

Drawing Number	2019-3502-005	Rev	C
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APPENDIX G

(TRICS Output Files)

Calculation Reference: AUDIT-752101-191108-1110

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
 Category : L - FOOTBALL (5-a-side)
 VEHICLES

Selected regions and areas:

05 EAST MIDLANDS
 NT NOTTINGHAMSHIRE 1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of pitches
 Actual Range: 6 to 6 (units:)
 Range Selected by User: 2 to 18 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 26/11/18

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Saturday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

D2 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

25,001 to 50,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:

500,001 or More

1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No

1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present

1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1

NT-07-L-01

WIGMAN ROAD

NOTTINGHAM

BILBOROUGH

Edge of Town

Residential Zone

Total Number of pitches:

Survey date: SATURDAY

ASTRO KINGS

6

14/07/18

NOTTINGHAMSHIRE

Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DV-07-L-01	type
KI-07-L-01	type
WM-07-L-01	type

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)
VEHICLES

Calculation factor: 1 PITCH

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PITCH	Trip Rate	No. Days	Ave. PITCH	Trip Rate	No. Days	Ave. PITCH	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	1	6	6.167	1	6	2.167	1	6	8.334
11:00 - 12:00	1	6	6.833	1	6	6.000	1	6	12.833
12:00 - 13:00	1	6	5.000	1	6	4.833	1	6	9.833
13:00 - 14:00	1	6	5.500	1	6	5.167	1	6	10.667
14:00 - 15:00	1	6	4.667	1	6	3.333	1	6	8.000
15:00 - 16:00	1	6	3.167	1	6	4.833	1	6	8.000
16:00 - 17:00	1	6	3.167	1	6	3.167	1	6	6.334
17:00 - 18:00	1	6	2.167	1	6	3.500	1	6	5.667
18:00 - 19:00	1	6	1.667	1	6	4.167	1	6	5.834
19:00 - 20:00	1	6	0.167	1	6	1.333	1	6	1.500
20:00 - 21:00	1	6	0.000	1	6	0.000	1	6	0.000
21:00 - 22:00	1	6	0.000	1	6	0.000	1	6	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			38.502			38.500			77.002

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected: 6 - 6 (units:)
 Survey date range: 01/01/11 - 26/11/18
 Number of weekdays (Monday-Friday): 0
 Number of Saturdays: 1
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 3

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-752101-191118-1156

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
03	SOUTH WEST	
	DC DORSET	1 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	3 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 10 to 97 (units:)
 Range Selected by User: 6 to 4334 (units:)

Parking Spaces Range: Selected: 12 to 150 Actual: 12 to 1894

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 08/07/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	4 days
Wednesday	6 days
Thursday	4 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	19 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town	19
--------------	----

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	17
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories

Secondary Filtering selection:

Use Class:

C3

19 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	7 days
15,001 to 20,000	3 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	5 days
125,001 to 250,000	3 days
250,001 to 500,000	3 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	14 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	15 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	18 days
2 Poor	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CH-03-A-09 GREYSTOKE ROAD MACCLESFIELD HURDSFIELD Edge of Town Residential Zone Total Number of dwellings: 24 <i>Survey date: MONDAY 24/11/14</i>	TERRACED HOUSES	CHESHIRE	<i>Survey Type: MANUAL</i>
2	CH-03-A-10 MEADOW DRIVE NORTHWICH BARNTON Edge of Town Residential Zone Total Number of dwellings: 40 <i>Survey date: TUESDAY 04/06/19</i>	SEMI-DETACHED & TERRACED	CHESHIRE	<i>Survey Type: MANUAL</i>
3	DC-03-A-08 HURSTDENE ROAD BOURNEMOUTH CASTLE LANE WEST Edge of Town Residential Zone Total Number of dwellings: 28 <i>Survey date: MONDAY 24/03/14</i>	BUNGALOWS	DORSET	<i>Survey Type: MANUAL</i>
4	ES-03-A-02 SOUTH COAST ROAD PEACEHAVEN Edge of Town Residential Zone Total Number of dwellings: 37 <i>Survey date: FRIDAY 18/11/11</i>	PRIVATE HOUSING	EAST SUSSEX	<i>Survey Type: MANUAL</i>
5	EX-03-A-02 MANOR ROAD CHIGWELL GRANGE HILL Edge of Town Residential Zone Total Number of dwellings: 97 <i>Survey date: MONDAY 27/11/17</i>	DETACHED & SEMI-DETACHED	ESSEX	<i>Survey Type: MANUAL</i>
6	GM-03-A-10 BUTT HILL DRIVE MANCHESTER PRESTWICH Edge of Town Residential Zone Total Number of dwellings: 29 <i>Survey date: WEDNESDAY 12/10/11</i>	DETACHED/SEMI	GREATER MANCHESTER	<i>Survey Type: MANUAL</i>
7	HC-03-A-21 PRIESTLEY ROAD BASINGSTOKE HOUNDMILLS Edge of Town Residential Zone Total Number of dwellings: 39 <i>Survey date: TUESDAY 13/11/18</i>	TERRACED & SEMI-DETACHED	HAMPSHIRE	<i>Survey Type: MANUAL</i>
8	HC-03-A-22 BOW LAKE GARDENS NEAR EASTLEIGH BISHOPSTOKE Edge of Town Residential Zone Total Number of dwellings: 40 <i>Survey date: WEDNESDAY 31/10/18</i>	MIXED HOUSES	HAMPSHIRE	<i>Survey Type: MANUAL</i>
9	LC-03-A-31 GREENSIDE PRESTON COTTAM Edge of Town Residential Zone Total Number of dwellings: 32 <i>Survey date: FRIDAY 17/11/17</i>	DETACHED HOUSES	LANCASHIRE	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

10	NF-03-A-03 HALING WAY THETFORD	DETACHED HOUSES		NORFOLK
	Edge of Town Residential Zone Total Number of dwellings:	10		
	Survey date: WEDNESDAY	16/09/15		Survey Type: MANUAL
11	NY-03-A-07 CRAVEN WAY BOROUGHBRIDGE	DETACHED & SEMI DET.		NORTH YORKSHIRE
	Edge of Town No Sub Category Total Number of dwellings:	23		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
12	NY-03-A-10 BOROUGHBRIDGE ROAD RIPON	HOUSES AND FLATS		NORTH YORKSHIRE
	Edge of Town No Sub Category Total Number of dwellings:	71		
	Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
13	NY-03-A-11 HORSEFAIR BOROUGHBRIDGE	PRIVATE HOUSING		NORTH YORKSHIRE
	Edge of Town Residential Zone Total Number of dwellings:	23		
	Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
14	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES		SUFFOLK
	Edge of Town Residential Zone Total Number of dwellings:	18		
	Survey date: WEDNESDAY	09/09/15		Survey Type: MANUAL
15	SH-03-A-05 SANDCROFT TELFORD SUTTON HILL	SEMI -DETACHED/TERRACED		SHROPSHIRE
	Edge of Town Residential Zone Total Number of dwellings:	54		
	Survey date: THURSDAY	24/10/13		Survey Type: MANUAL
16	SH-03-A-06 ELLESMERE ROAD SHREWSBURY	BUNGALOWS		SHROPSHIRE
	Edge of Town Residential Zone Total Number of dwellings:	16		
	Survey date: THURSDAY	22/05/14		Survey Type: MANUAL
17	SM-03-A-01 WEMBDON ROAD BRIDGWATER NORTHFIELD	DETACHED & SEMI		SOMERSET
	Edge of Town Residential Zone Total Number of dwellings:	33		
	Survey date: THURSDAY	24/09/15		Survey Type: MANUAL
18	ST-03-A-08 SILKMORE CRESCENT STAFFORD MEADOWCROFT PARK	DETACHED HOUSES		STAFFORDSHIRE
	Edge of Town Residential Zone Total Number of dwellings:	26		
	Survey date: WEDNESDAY	22/11/17		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

19	WK-03-A-02	BUNGALOWS	WARWICKSHIRE
	NARBERTH WAY		
	COVENTRY		
	POTTERS GREEN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	19	35	0.079	19	35	0.263	19	35	0.342
08:00 - 09:00	19	35	0.131	19	35	0.350	19	35	0.481
09:00 - 10:00	19	35	0.135	19	35	0.183	19	35	0.318
10:00 - 11:00	19	35	0.128	19	35	0.129	19	35	0.257
11:00 - 12:00	19	35	0.137	19	35	0.169	19	35	0.306
12:00 - 13:00	19	35	0.145	19	35	0.132	19	35	0.277
13:00 - 14:00	19	35	0.155	19	35	0.148	19	35	0.303
14:00 - 15:00	19	35	0.134	19	35	0.164	19	35	0.298
15:00 - 16:00	19	35	0.228	19	35	0.177	19	35	0.405
16:00 - 17:00	19	35	0.268	19	35	0.128	19	35	0.396
17:00 - 18:00	19	35	0.312	19	35	0.119	19	35	0.431
18:00 - 19:00	19	35	0.218	19	35	0.099	19	35	0.317
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.163			2.134			4.297

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected: 10 - 97 (units:)
 Survey date range: 01/01/11 - 08/07/19
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX H

(Picady Output)

<h1>Junctions 9</h1>
PICADY 9 - Priority Intersection Module
Version: 9.0.0.4211 □ © Copyright TRL Limited, 2019
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Version: 9.0.0.4211
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- » «With Development, Saturday
- » Junction Network
- » Arms
- » Traffic Demand
- » Origin-Destination Data
- » Vehicle Mix
- » Results

[illegible]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	21/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TTPC"EChipperfield
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	With Development	Saturday	ONE HOUR	11:30	13:00	15

With Development, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
----------	------	------	-------------

Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
---------	------------------	------------------	---

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Denington Road / London Road	T-Junction	Two-way	1.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	London Road (South)		Major
B	Denington Road		Minor
C	London Road (North)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	11.00		✓	2.20	120.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.00	3.50	3.30	2.25		8.00	31	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
----------	--------	--------------------	---------------	---------------	---------------	---------------

1	B-A	534.045	0.076	0.192	0.121	0.275
1	B-C	712.376	0.085	0.216	-	-
1	C-B	643.457	0.195	0.195	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	787.00	100.000
B		✓	119.00	100.000
C		✓	682.00	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A	B	C
	A	0.000	66.000	721.000
	B	50.000	0.000	69.000
	C	605.000	77.000	0.000

Vehicle Mix

Heavy Vehicle proportion

	To			
From		A	B	C
	A	0	2	1
	B	0	0	4
	C	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-C	0.16	8.79	0.2	0.5	A
B-A	0.20	16.81	0.3	1.2	C
C-AB	0.18	9.40	0.2	1.0	A
C-A					
A-B					
A-C					

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	51.95	551.85	0.094	51.53	0.1	7.189	A
B-A	37.64	352.95	0.107	37.17	0.1	11.383	B
C-AB	57.97	521.41	0.111	57.47	0.1	7.752	A
C-A	455.48			455.48			
A-B	49.69			49.69			
A-C	542.81			542.81			

Main results: (11:45-12:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	62.03	524.51	0.118	61.91	0.1	7.780	A
B-A	44.95	317.73	0.141	44.77	0.2	13.180	B
C-AB	69.22	498.96	0.139	69.08	0.2	8.372	A
C-A	543.88			543.88			
A-B	59.33			59.33			
A-C	648.16			648.16			

Main results: (12:00-12:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	75.97	485.75	0.156	75.77	0.2	8.776	A
B-A	55.05	269.10	0.205	54.69	0.3	16.762	C
C-AB	84.78	467.92	0.181	84.54	0.2	9.384	A
C-A	666.12			666.12			
A-B	72.67			72.67			

A-C	793.84			793.84			
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Main results: (12:15-12:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	75.97	485.47	0.156	75.97	0.2	8.790	A
B-A	55.05	269.09	0.205	55.04	0.3	16.814	C
C-AB	84.78	467.92	0.181	84.77	0.2	9.395	A
C-A	666.12			666.12			
A-B	72.67			72.67			
A-C	793.84			793.84			

Main results: (12:30-12:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	62.03	524.08	0.118	62.22	0.1	7.799	A
B-A	44.95	317.75	0.141	45.30	0.2	13.231	B
C-AB	69.22	498.96	0.139	69.45	0.2	8.385	A
C-A	543.88			543.88			
A-B	59.33			59.33			
A-C	648.16			648.16			

Main results: (12:45-13:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	51.95	551.36	0.094	52.07	0.1	7.211	A
B-A	37.64	352.92	0.107	37.83	0.1	11.431	B
C-AB	57.97	521.41	0.111	58.12	0.1	7.774	A
C-A	455.48			455.48			
A-B	49.69			49.69			
A-C	542.81			542.81			

Queue Variation Results for each time segment

Queue Variation results: (11:30-11:45)

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.00	0.00	0.45	0.48			N/A	N/A
B-A	0.12	0.00	0.00	0.45	0.48			N/A	N/A
C-AB	0.12	0.00	0.00	0.45	0.48			N/A	N/A
C-A									
A-B									
A-C									

Queue Variation results: (11:45-12:00)

Queue Variation results: (12:45-13:00)

[illegible]

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.0.0.4211 © Copyright TRL Limited, 2019
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Filename: Denington Road_London Road_Reduced Right Turn (191217).j9
Path: \\TTPCSEVER\Projects\2019\3618 - Denington Road,
 Wellingborough\Modelling\191217\Denington Road_London Road_Right Turning
 Lane (191217)_Junctions 9 Report
Report generation date: 19/12/2019 14:04:20

«With Development, Saturday

»Junction Network

»Arms

»Traffic Demand

»Origin-Destination Data

»Vehicle Mix

»Results

Summary of junction performance

	Weekday AM				Weekday PM				Saturday			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Baseline											
Stream B-C	0.2	8.54	0.13	A	0.2	8.29	0.14	A	0.1	8.12	0.10	A
Stream B-A	0.1	15.24	0.12	C	0.1	14.22	0.07	B	0.1	14.65	0.10	B
Stream C-AB	0.3	9.84	0.23	A	0.1	8.48	0.11	A	0.1	8.75	0.12	A
Stream C-A												
Stream A-B												
Stream A-C												
	With Development											
Stream B-C	0.2	8.90	0.16	A	0.2	8.95	0.18	A	0.2	8.79	0.16	A
Stream B-A	0.2	15.86	0.17	C	0.1	14.92	0.13	B	0.3	16.82	0.20	C
Stream C-AB	0.4	10.32	0.26	B	0.2	9.01	0.16	A	0.2	9.40	0.18	A
Stream C-A												
Stream A-B												
Stream A-C												

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	21/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TTPC"EChipperfield
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	With Development	Saturday	ONE HOUR	11:30	13:00	15

With Development, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Denington Road / London Road	T-Junction	Two-way	1.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	London Road (South)		Major
B	Denington Road		Minor
C	London Road (North)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	11.00		✓	2.20	120.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.00	3.50	3.30	2.25		3.00	31	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	534.045	0.076	0.192	0.121	0.275
1	B-C	712.376	0.085	0.216	-	-
1	C-B	643.457	0.195	0.195	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	787.00	100.000
B		✓	119.00	100.000
C		✓	682.00	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0.000	66.000	721.000
	B	50.000	0.000	69.000
	C	605.000	77.000	0.000

Vehicle Mix

Heavy Vehicle proportion

	To			
		A	B	C
	A	0	2	1
	B	0	0	4
	C	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
--------	---------	---------------	-----------------	---------

B-C	0.16	8.79	0.2	A
B-A	0.20	16.82	0.3	C
C-AB	0.18	9.40	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	51.95	551.84	0.094	51.53	0.1	7.189	A
B-A	37.64	352.95	0.107	37.17	0.1	11.383	B
C-AB	57.97	521.41	0.111	57.47	0.1	7.752	A
C-A	455.48			455.48			
A-B	49.69			49.69			
A-C	542.81			542.81			

Main results: (11:45-12:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	62.03	524.48	0.118	61.91	0.1	7.781	A
B-A	44.95	317.73	0.141	44.77	0.2	13.181	B
C-AB	69.22	498.96	0.139	69.08	0.2	8.372	A
C-A	543.88			543.88			
A-B	59.33			59.33			
A-C	648.16			648.16			

Main results: (12:00-12:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	75.97	485.62	0.156	75.77	0.2	8.779	A
B-A	55.05	269.08	0.205	54.69	0.3	16.764	C
C-AB	84.78	467.92	0.181	84.54	0.2	9.384	A
C-A	666.12			666.12			
A-B	72.67			72.67			
A-C	793.84			793.84			

Main results: (12:15-12:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	75.97	485.34	0.157	75.97	0.2	8.793	A

B-A	55.05	269.07	0.205	55.04	0.3	16.816	C
C-AB	84.78	467.92	0.181	84.77	0.2	9.395	A
C-A	666.12			666.12			
A-B	72.67			72.67			
A-C	793.84			793.84			

Main results: (12:30-12:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	62.03	524.05	0.118	62.23	0.1	7.798	A
B-A	44.95	317.74	0.141	45.30	0.2	13.232	B
C-AB	69.22	498.96	0.139	69.45	0.2	8.385	A
C-A	543.88			543.88			
A-B	59.33			59.33			
A-C	648.16			648.16			

Main results: (12:45-13:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	51.95	551.35	0.094	52.07	0.1	7.211	A
B-A	37.64	352.92	0.107	37.83	0.1	11.433	B
C-AB	57.97	521.41	0.111	58.12	0.1	7.774	A
C-A	455.48			455.48			
A-B	49.69			49.69			
A-C	542.81			542.81			

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: Site Access_Right Turn Introduced (191217).j9
Path: \\TTPCSEVER\Projects\2019\3618 - Denington Road,
 Wellingborough\Modelling\191217\Site Access_Right Turn Introduced
 (191217)_Junctions 9 Report
Report generation date: 19/12/2019 14:00:31

«With Development, Saturday
»Junction Network
»Arms
»Traffic Demand
»Origin-Destination Data
»Vehicle Mix
»Results

Summary of junction performance

	Weekday AM				Weekday PM				Saturday			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	Baseline											
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A												
Stream A-B												
Stream A-C												
	With Development											
Stream B-AC	0.1	5.53	0.05	A	0.1	5.57	0.07	A	0.1	5.76	0.09	A
Stream C-AB	0.0	5.94	0.05	A	0.1	6.03	0.07	A	0.1	6.14	0.08	A
Stream C-A												
Stream A-B												
Stream A-C												

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	21/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TTPC"EChipperfield
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	With Development	Saturday	ONE HOUR	11:30	13:00	15

With Development, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Denington Road east)		Major
B	Site Access		Minor
C	Denington Road (west)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.00		✓	3.00	60.0	✓	3.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	5.00	28	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	595.910	0.094	0.239	0.150	0.341
1	B-C	763.982	0.102	0.257	-	-
1	C-B	661.709	0.223	0.223	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	84.00	100.000
B		✓	59.00	100.000
C		✓	143.00	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0.000	12.000	72.000
	B	12.000	0.000	47.000
	C	94.000	49.000	0.000

Vehicle Mix

Heavy Vehicle proportion

	To			
		A	B	C
	A	0	0	4
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-AC	0.09	5.76	0.1	0.5	A
C-AB	0.08	6.14	0.1	0.5	A
C-A					

A-B					
A-C					

Main Results for each time segment

Main results: (11:30-11:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	44.42	700.00	0.063	44.15	0.1	5.486	A
C-AB	36.89	647.14	0.057	36.65	0.1	5.897	A
C-A	70.77			70.77			
A-B	9.03			9.03			
A-C	54.21			54.21			

Main results: (11:45-12:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	53.04	695.54	0.076	52.98	0.1	5.602	A
C-AB	44.05	644.32	0.068	44.00	0.1	5.996	A
C-A	84.50			84.50			
A-B	10.79			10.79			
A-C	64.73			64.73			

Main results: (12:00-12:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	64.96	689.36	0.094	64.87	0.1	5.764	A
C-AB	53.96	640.45	0.084	53.88	0.1	6.137	A
C-A	103.49			103.49			
A-B	13.21			13.21			
A-C	79.27			79.27			

Main results: (12:15-12:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	64.96	689.35	0.094	64.96	0.1	5.764	A
C-AB	53.96	640.45	0.084	53.95	0.1	6.137	A
C-A	103.49			103.49			
A-B	13.21			13.21			
A-C	79.27			79.27			

Main results: (12:30-12:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	53.04	695.53	0.076	53.12	0.1	5.604	A

C-AB	44.05	644.33	0.068	44.12	0.1	5.998	A
C-A	84.50			84.50			
A-B	10.79			10.79			
A-C	64.73			64.73			

Main results: (12:45-13:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	44.42	699.97	0.063	44.48	0.1	5.494	A
C-AB	36.89	647.14	0.057	36.94	0.1	5.899	A
C-A	70.77			70.77			
A-B	9.03			9.03			
A-C	54.21			54.21			

Queue Variation Results for each time segment

Queue Variation results: (11:30-11:45)

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.45	0.48			N/A	N/A
C-AB	0.06	0.00	0.00	0.45	0.48			N/A	N/A
C-A									
A-B									
A-C									

Queue Variation results: (11:45-12:00)

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.46	0.49			N/A	N/A
C-AB	0.07	0.00	0.00	0.45	0.48			N/A	N/A
C-A									
A-B									
A-C									

Queue Variation results: (12:00-12:15)

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.47	0.49			N/A	N/A

