

Meadowlands, Vale of Glamorgan

Proposed Affordable Dwellings



Transport Statement

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1 Introduction

- 1.1 Meadowlands will be affordable houses, flats and a bungalow with access from Drope Road. This Transport Statement has been prepared at the request of the Vale of Glamorgan Council Highways Department and will address the points raised by the Highways Officer in the previous Pre-Application for a similar development off Drope Road (Appendix A)



Fig 1 Site Location

2 Local Accessibility

- 2.1 Drope Road is a lightly trafficked highway with no street lighting or footways near the proposed development. There is a shared surface road in front of Drope Terrace some 15m east of the site and a footway on both sides of the bridge over Route A4232 around 130m from the site. Drope Road then crosses the Vale of Glamorgan boundary and enters Cardiff City. Shortly after crossing Route A4232 a 30mph speed limit is in operation and in around 250m the road changes from rural to urban. Approximately 850m from the site access Drope Road joins Michaelston Road at an uncontrolled T-junction. On the south-west corner there is a group of education and community premises including St. Fagan's Primary School, Ely and Caerau Children's Centre, an Activity Centre and Michaelston Community College.
- 2.2 Drope Road is approximately 6.6m wide at the proposed access junction and maintains this width to the bridge over Route A4232. For around 70 m west of the access the road is around 7m wide after which it narrows to around 4.5m.
- 2.3 It is understood that the Vale of Glamorgan Council have no proposals to introduce walking/cycle facilities on Drope Road near to the development. No reference to Drope Road is on the Integrated Network Maps. Cardiff Council do not appear to have any proposals for walking or cycling for the area east of Route A4232.

3 Proposed Development

- 3.1 The development will be known as Meadowlands with a bungalow, four flats and four houses:



Fig 2 Proposed site layout

- 3.2 The proposed access to the site will be in the location of an existing farm gate:

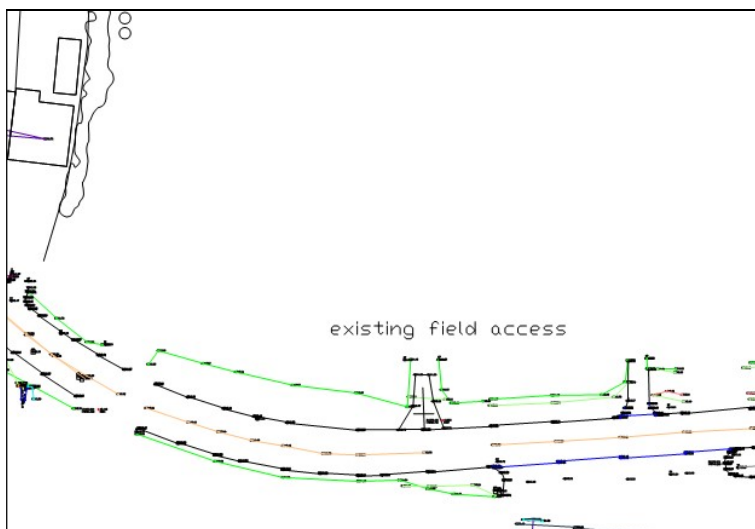


Fig 3 Existing Field Access from Drope Road

- 3.3 Vehicular access to the proposed development will be designed to local authority standards as it has been assumed that it will be adopted under S38 of the Highways Act 1980. The road will be 5.5m wide with 2m footways on each side. It will be lit and a 20mph speed limit introduced.
- 3.4 The VoG Parking Guidelines require a maximum of one space per bedroom for houses and flats plus a visitor space per five units. These will be provided.
- 3.5 There is an existing bus stop around 35m to the east of the proposed development. A footway will be constructed from the access to the stop and a shelter constructed. This footway will continue to the bridge over Route A4232.

3.6 Swept paths for a 11.22m long 3 axle refuse vehicle shows that they can manoeuvre the site and enter and leave travelling in a forward direction in and out of the development (Appendix B):

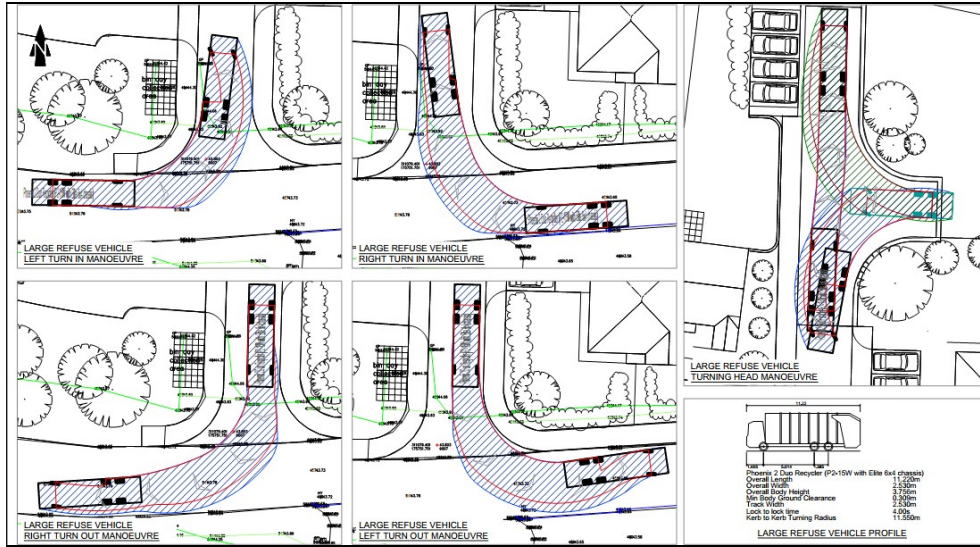


Fig 4 11.22m Refuse Vehicle Swept Path

3.7 A speed count was carried out in August 2016 for the application to transfer excavated stone to Barry Docks at a site located approximately 60m east of the proposed development. Traffic speed data shows that the five-day average for vehicles travelling eastbound is 38.8mph and westbound 38mph with forward visibility in both directions of around 100m (Appendix C).

This corresponds with Fig 7.16 of MfS1 for a 7m wide road where with a forward visibility of 100m then the 85th percentile speed will be around 38mph:

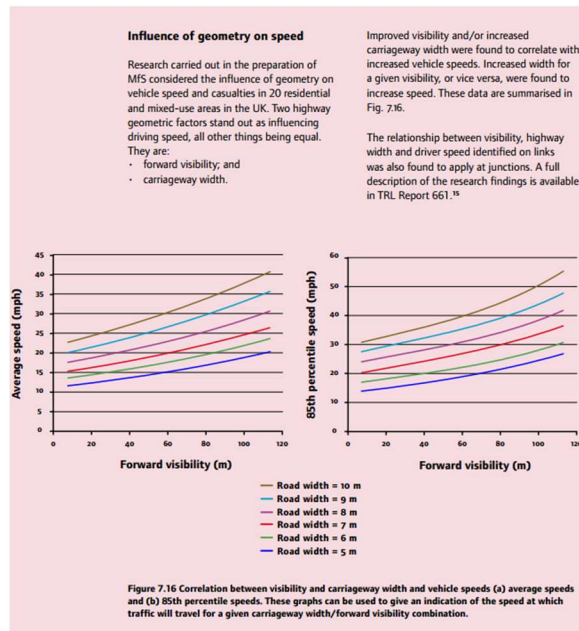


Fig 4 MfS1 Influence of Geometry on Speed

As indicated previously the road to the west of the site Drope Road is around 7m wide for around 64m west of the site access after which it narrows to around 4.5m. Based on Fig 7.19 the estimated 85th percentile speed for westbound vehicles will be around 28mph.

3.8 MfS2 Para 1.3.7 states:

'...in rural areas many parts of the highway network are subject to the national speed limit but have traffic speeds significantly below 60mph. Again, in these situations where speeds are lower than 40mph, MfS SSD parameters are recommended.'

The measured 85th percentile speed is well below 60mph. A topographical survey carried out for the junction with Drope Road identifies that the visibility splays will be around 2.4x 65m to the right and to the left over 2.4 x 76m. These are above the MfS1 recommended maximum value of 56m:

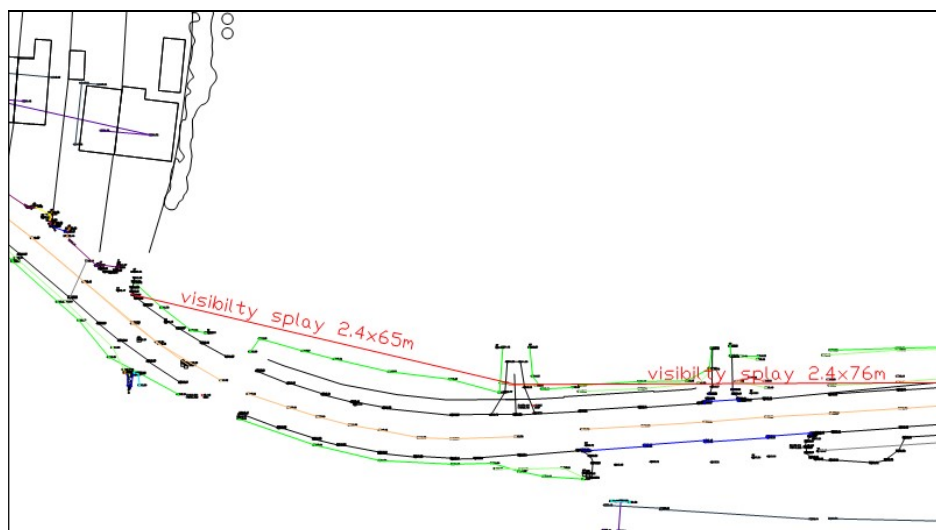


Fig 4 Visibility Splays

4 Vale of Glamorgan Highways Pre-Application Observations

- 1 *Drope Road fronting the proposed site and giving access into the development is National Speed Limit (60 mph). A 7-day speed survey taking in the frontage of the proposed development and 100m either side to be undertaken.*
- 2 *Visibility splays to the proposed development entrance off Drope Road to be agreed in accordance with the 85th percentile speed from the 7- day speed survey.*

Comments: suitable visibility splays will be available.

- 3 *Development layout to be designed to allow a 11.22m long 3 axle refuse vehicle to provide swept path analysis in and out of the development and manoeuvring through the site. Junction and development layout radius to be in line with swept paths.*

Comment: The swept paths are detailed in Appendix B.

- 6 *Development layout to be designed to be compliant with Manual for Streets*

Comment: The access road will be 5.5m with 2m footways on both sides.

- 7 *The site is located in a rural setting where there is clear absence of pedestrian and street lighting facilities along the adjacent highway connecting to local amenities.*

Comment: A footway will be constructed on the north side of Drope Road between the site access and the bridge over Route A4232

- 8 *There are existing public transport facilities (bus service 320) with existing bus stops within close proximity to the development. The existing bus stop facilities to be improved; provisions to be agreed.*

Comment: A shelter will be provided at the existing bus stop on the north side of Drope Road. This will be approximately 35m from the proposed access and linked with the footway to be constructed on the north-side of Drope Road.

5 Summary

- 5.1 It is proposed to construct nine residential units to be known as Meadowlands comprising a bungalow, four houses and four flats on behalf of a Housing Association. The access road will have street lighting and be designed to appropriate local highway standards and the junction with Drope Road will have a suitable visibility splay.
- 5.2 Parking spaces for the residential units will be provided in line with VoG Guidelines.
- 5.3 Swept paths show that refuse vehicles can access and egress the site while travelling in a forward direction.
- 5.4 Meadowlands will benefit the local community by providing a shelter at the existing bus stop and a new footway from the development to the bridge over Route A4232.
- 5.5 There are no transport reasons why the proposed development cannot be granted planning permission.

A Highway Officer Pre-App Observations

Proposed Development at the Drope – Newydd Housing

Pre-Application highway comments based on Feasibility Layout plan 04 – Option 1 and location plan included with the pre-application enquiry form:

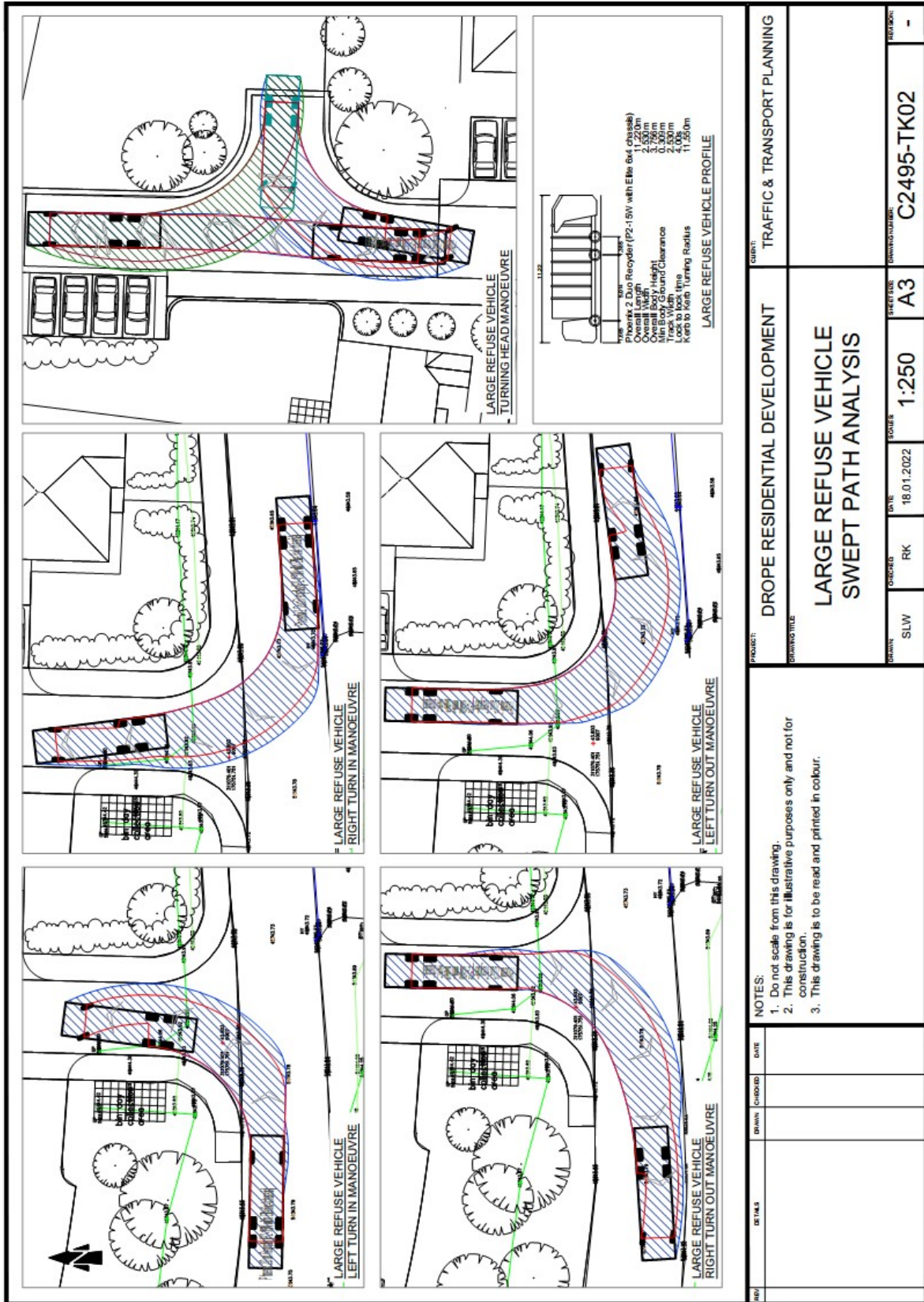
1. Drope Road fronting the proposed site and giving access into the development is national speed limit (60mph). A 7 day speed survey taking in the frontage of the proposed development and 100m either side to be undertaken.
2. Visibility splays to the proposed development entrance off Drope Road to be agreed in accordance with the 85th percentile speed from the 7 day speed survey.
3. Development layout to be designed to allow 11.22m long 3 axle refuse vehicle; to provide swept path analysis in and out of the development and manoeuvring through the site. Junction and development layout radius to be in line with the swept paths.
4. Thought given to location of services and to take account of the private sprinkler system mains loop throughout the development.
5. Development to take account of the SuDS and SAB to discuss with VoGCC SAB Authority, as discussed the use of rain gardens as opposed to road gullies. Possible use of FormPave within private drives and shared surfaces.
6. Development layout to be designed to be compliant with Manual for Streets:
 - Roads designed for 20mph where straits to be max 60-70m before a change I direction.
 - Shared surfaces to be designed for 10 – 15mph to be short cul-de-sacs.
 - Road widths to be 5.5m with 2m footways each side, shared surfaces to be 6.8m wide in block construction.
 - Forward visibility splays and junction visibility splays to be in line with Table A below.

VISIBILITY REQUIREMENTS – HIGHWAY SAFETY	
Please ensure that all vision splays and forward visibility envelopes are within highway land and not across 3 rd party land.	
<u>Primary Routes – 30mph.</u>	Carriageway Tarmacadam, width 5.5m with 2m footways either side Junction – “Y” distance = 43m, “x” distance = 3m Forward visibility along road/bends = 43m
<u>Primary Routes – 20mph.</u>	Carriageway Tarmacadam, width 5.5m with 2m footways either side Junction – “Y” distance = 25m, “x” distance = 3m Forward visibility along road/bends = 25m
<u>Secondary Routes – 20mph.</u>	Carriageway Tarmacadam, width 5.5m with 2m footways either side Junction – “Y” distance = 25m, “x” distance = 2.4m Forward visibility along road/bends = 25m
<u>Shared Surfaces – 15mph.</u>	Carriageway Tarmacadam, width 6.8m with localised widening for visitor parking Junction – “Y” distance = 25m, “x” distance = 2.4m Forward visibility along road/bends = 17m
<u>Private Drives – 15mph/10mph</u>	“Y” distance = 25m Forward visibility along road/bends = Max 17m, Min 11m

Table A.

7. The site is located in a rural setting where it is clear absence of pedestrian and street lighting facilities along the adjacent highway connecting to local amenities. This will have a detrimental impact on highway safety in terms of pedestrian and cycle links to local amenities from the proposed development.
8. There are existing public transport facilities bus service 320 with existing bus stops within close proximity to the development. The existing bus stop facilities to be improved; provisions to be agreed.
9. Based on drawing Feasibility Layout plan 04 – Option 1 see below for further marked up comments:

B Swept Paths Refuse Vehicles



Appendix C Speed and Vehicle Count August 2016

C1 Eastbound

Site No: 99165102 Site Reference: 99165102
 Drope Road, Cardiff, on T/S as requested
 Speed Summary (Mon to Fri)-Fr From: 16/08/2016 To 24/08/2016 Channel: East to Cardiff

Time	Total	85th	Mean	Std.	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12	Bin 13
Begin	Vol.	Wile	Ave.	Dev.	<60/mph	6-11	11-16	16-21	21-26	26-31	31-36	36-41	41-46	46-51	51-56	56-61	=61
0:00	0	-	34.8	-	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	1	-	33.1	-	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	-	31	-	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	-	28.5	-	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	2	-	27	-	0	0	1	0	0	0	0	0	0	0	0	0	0
5:00	1	-	42.5	-	0	0	0	0	0	0	0	1	0	0	0	0	0
6:00	6	-	30.1	10	0	0	1	1	0	2	1	1	0	0	0	0	0
7:00	12	39.1	32.2	8.5	0	0	1	1	0	2	4	4	1	0	0	0	0
8:00	18	39.8	32.2	9.2	0	0	2	1	1	4	4	5	2	0	0	0	0
9:00	19	38.6	31	8	0	0	1	1	1	3	4	4	5	1	0	0	0
10:00	18	37.4	30.6	7.3	0	0	1	0	2	4	6	3	1	0	0	0	0
11:00	17	37	29.3	7.5	0	0	1	1	2	4	4	3	0	0	0	0	0
12:00	16	38.4	31.4	7.9	0	0	1	1	1	4	5	3	1	0	0	0	0
13:00	17	37.9	30.9	8.3	0	1	0	0	2	5	4	3	1	0	0	0	0
14:00	14	39	30.9	7.1	0	0	0	1	2	3	4	3	1	0	0	0	0
15:00	18	38.2	31.5	5.9	0	0	0	0	3	5	5	2	1	0	0	0	0
16:00	13	38.8	31	8.7	0	0	1	1	1	3	3	2	1	0	0	0	0
17:00	19	39	31.8	8.4	0	0	2	1	1	5	6	4	1	0	0	0	0
18:00	15	37.9	31.6	6.1	0	0	0	0	2	3	5	3	1	0	0	0	0
19:00	12	39.8	33	7.2	0	0	1	1	0	2	3	3	1	0	0	0	0
20:00	9	-	31.5	6.8	0	0	0	1	1	2	3	1	0	0	0	0	0
21:00	6	-	31.5	4.8	0	0	0	0	0	1	2	1	0	0	0	0	0
22:00	3	-	31.9	2.9	0	0	0	0	0	0	2	0	0	0	0	0	0
23:00	4	-	31.3	5.7	0	0	0	0	0	1	1	1	0	0	0	0	0
12H:7-19	196	38.9	31	7.8	0	2	10	8	20	46	54	41	12	0	0	0	0
16H:6-22	228	38.8	31	7.7	0	2	11	11	21	53	62	47	13	0	0	0	0
18H:6-24	235	38.8	31	7.8	0	2	12	11	22	54	65	49	13	0	0	0	0
24H:0-24	239	38.9	31	7.8	0	2	12	12	22	54	65	49	14	0	0	0	0
Am	9:00	-	5:00	-	11:00	11:00	8:00	7:00	9:00	10:00	10:00	9:00	8:00	9:00	8:00	-	11:00
Peak	19	-	42.5	-	0	0	2	1	3	4	6	5	2	0	0	-	0
Pm	17:00	-	19:00	16:00	14:00	13:00	17:00	19:00	15:00	15:00	17:00	17:00	17:00	21:00	20:00	13:00	12:00
Peak	19	-	33	8.7	0	1	2	1	3	5	6	4	1	0	0	0	0

Created at 10:17:12 on 25 Aug 2016

C2 Westbound

Site Reference: 99165102
 Site No: 99165102
 Drope Road, Caudiff, on T/S as requested
 Speed Summary (Mon to Fri) from 16/08/2016 To 24/08/2016 Channel: West to St. George's

Time	Total	85th	Mean	Std.	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12	Bin 13
Begin	Vol.	Wile	Ave.	Dev.	<61mph	6-<11	11-<16	16-<21	21-<26	26-<31	31-<36	36-<41	41-<46	46-<51	51-<56	56-<61	>=61
0000	1	-	33	-	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	1	-	36.5	-	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	-	51.8	-	0	0	0	0	0	0	0	0	0	0	0	0	0
3000	1	-	27.6	-	0	0	0	0	1	0	0	0	0	0	0	0	0
4000	0	-	33.5	-	0	0	0	0	0	0	0	0	0	0	0	0	0
5000	0	-	33.5	-	0	0	0	0	0	0	0	0	0	0	0	0	0
6000	1	-	26	-	0	0	0	0	0	0	0	0	0	0	0	0	0
7000	7	-	32.2	7.6	0	0	0	1	0	1	2	2	0	0	0	0	0
8000	10	-	31.7	8.1	0	0	0	1	2	3	1	2	1	0	0	0	0
9000	10	35.7	29.6	8.8	0	0	1	0	1	2	3	1	1	0	0	0	0
10000	13	36.4	29.2	7.6	0	0	1	1	1	4	3	2	0	0	0	0	0
11000	19	35.2	28.1	8.1	0	1	1	1	2	6	5	2	0	0	0	0	0
12000	20	35.2	29.2	7	0	0	1	2	2	5	7	2	0	0	0	0	0
13000	15	36.2	30.3	7.3	0	0	1	1	1	4	5	2	0	0	0	0	0
14000	17	38.7	30.8	8.6	0	0	1	2	2	3	4	4	1	0	0	0	0
15000	18	37.7	30.4	6.9	0	0	0	1	3	4	5	4	1	0	0	0	0
16000	22	38	30.9	7.8	0	0	1	2	2	4	7	4	1	0	0	0	0
17000	28	37.4	30.7	6.6	0	0	0	2	4	7	8	5	1	0	0	0	0
18000	19	39.8	32.4	7.4	0	0	0	2	1	4	6	3	2	0	0	0	0
19000	17	38.2	30.5	8	0	0	1	1	2	5	3	3	1	0	0	0	0
20000	13	37.9	30.6	7.9	0	0	0	2	1	4	2	2	1	0	0	0	0
21000	7	-	32.5	8.7	0	0	0	1	0	1	2	1	1	0	0	0	0
22000	6	-	34	8.9	0	0	0	1	1	0	2	2	0	0	0	0	0
23000	5	-	36.3	3.2	0	0	0	0	0	0	1	2	0	0	0	0	0
12h,7-19	198	37.8	30.2	7.6	0	2	7	16	21	47	56	33	8	0	0	0	0
16h,6-22	236	38	30.3	7.6	0	2	8	19	24	57	64	39	11	0	0	0	0
18h,6-24	247	38.2	30.4	7.6	0	2	8	20	25	58	67	42	12	0	0	0	0
24h,0-24	250	38.2	30.4	7.6	0	2	8	20	25	59	67	42	12	0	0	0	0
Am	11:00	-	2:00	-	11:00	11:00	11:00	11:00	11:00	11:00	11:00	10:00	8:00	7:00	11:00	11:00	-
Peak	19	-	51.8	-	0	1	1	1	2	6	5	2	1	0	0	0	-
Pm	17:00	-	23:00	22:00	15:00	14:00	16:00	16:00	17:00	17:00	17:00	17:00	18:00	21:00	23:00	14:00	22:00
Peak	28	-	36.3	8.9	0	0	1	2	4	7	8	5	2	0	0	0	0

Created at 10:17:12 on 25 Aug 2016