

Taylor Wimpey

Land adjacent to Swanbridge Road, Sully

Transport Assessment

December 2016

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1 INTRODUCTION

- 1.1 Vectos has been retained by Taylor Wimpey to provide traffic and transportation advice in relation to an outline application for the proposed development of up to 190 residential dwellings on land located to the west of Swanbridge Road, Sully.
- 1.2 The site is part of that allocated in the emerging Vale of Glamorgan Local Development Plan for residential development of up to 500 houses (Housing Allocation MG2 (25)), of which 350 have received a resolution to grant under application 2013/01279.
- 1.3 This Transport Assessment provides an overview of the proposed development and considers the potential effect of the development (190 dwellings) on the local highway network. This has been undertaken with the benefit of discussions with highway officers at the Vale of Glamorgan Council (VoGC).
- 1.4 This remainder of this report is structured as follows:
- **Section 2** – provides an accessibility audit of the site;
 - **Section 3** – provides a brief overview of national, regional and local policy;
 - **Section 4** – describes the proposed development, access arrangements and the suitability of the proposed development in terms of non-motorised modes and public transport;
 - **Section 5** – includes the traffic generation of the proposed development and considers the effect of the proposed development;
 - **Section 6** - provides details of the Transport Implementation Strategy including an Interim Travel Plan; and
 - **Section 7** - provides a summary of the report and an overall conclusion.

2 EXISTING CONDITIONS

2.1 This section of the report provides an overall description of the site in the context of its local surroundings and general movement characteristics of the surrounding area.

Site Location

2.2 The site is located on the eastern fringe of Sully to the west of Swanbridge Road. The centre of Sully is approximately 5km from Penarth town centre and 4km from the town centre of Barry. Sully has a population of approximately 4,543 and comprises of a mix of local facilities including a primary school, a local convenience store, post office and doctor's surgery.

2.3 The site is bound to the north by Cog Road and to the east by Swanbridge Road, both of which are local 'Distributor Roads'. Existing residential development lies to the west of the development land and to the south is the disused Penarth to Barry Railway Line. Beyond this is further residential development.

2.4 The location and extent of the site is shown shaded red in **Figure 2.1** below.

Figure 2.1 – Site Location in a Local Context



2.5 The predominant land use to the south and west of the site is residential, whilst to the north and east it is agricultural use. The existing land use at the site is agricultural land.

Existing Travel Behaviour

- 2.6 The existing travel patterns for journeys to work were investigated for the Sully ward. This useful data provides an understanding of the existing travel behaviour of residents in the area. **Table 2.1** shows the mode splits from this ward, taken from the 2011 Census data.

Table 2.1 – Method of Travel to Work (2011 Census)

	Sully (Ward)	The Vale of Glamorgan (County)	Wales (Country)
Work Mainly at or from Home	6%	5%	5%
Underground, Metro, Light Rail, Tram	0%	0%	0%
Train	3%	5%	2%
Bus, Minibus or Coach	3%	3%	5%
Taxi	0%	0%	0%
Motorcycle, Scooter or Moped	1%	1%	1%
Driving a Car or Van	75%	69%	67%
Passenger in a Car or Van	5%	6%	7%
Bicycle	2%	1%	1%
On Foot	4%	9%	11%
Other Method of Travel to Work	1%	1%	1%

* not in employment figures have been excluded from this table

- 2.7 The data summarised in **Table 2.1** illustrates that the existing residents of Sully are currently heavily dependent on private cars for travel to work.
- 2.8 It follows therefore, that new residents in Sully would be expected to have similar travel habits unless alternative provision / choice for travel is created.
- 2.9 As such, there is scope to influence and alter the travel habits of existing and future residents in this area by improving travel choice and creating a culture of travel which views other modes of travel as a viable alternative to the car.

Local Facilities

- 2.10 One of the primary factors to be considered when determining the suitability of a new development is its proximity, accessibility and connectivity in relation to key local facilities by non-car modes.
- 2.11 There are a number of local facilities and amenities within a reasonable walking distance from the site. These are summarised in **Table 2.2**.

Table 2.2 – Local Facilities

Facility	Name	Walking Distance (metres)	Walking Journey Time (mins)	Cycling Journey Time (mins)
Primary School	Sully School, Burnham Avenue, CF64 5SU	1200	14	5
Post Office	Sully Post Office, South Rd, CF64 5SN	1000	12	4
Local Convenience Store	One Stop Stores, South Road, CF64 5SL	1000	12	4
Library	Mobile Library, Sully Sports	1100	13	4
Optician	Jane Thomas, South Road, CF64 5SL	1000	12	4
Doctor	Sully Surgery CF64 5TG	1000	12	4
Hairdresser	The Salon, Cog Road	700	8	3
Public House	The Seashore Grill + Restaurant	1300	16	5
Community Hall	The Old School, South Road	1000	12	4
Community Hall	Jubilee Hall, Smithies Avenue	1200	14	5
Public House	Captains Wife, Swanbridge Road	1300	16	5
Bus Stops	Sully Post Office	1000	12	4

2.12 **Table 2.2** demonstrates that the site is well connected and accessible by foot (8-16 minutes) or by bicycle (under 10 minutes) to a wide range of local amenities in Sully, including bus stops, the local primary school, food stores and other local amenities. The site fully complies with local and national policy in this respect offering real transport choice, improving health and well-being and being socially inclusive.

Accessibility by Non Car Modes

2.13 New developments are to be designed to encourage more trips to be made by more sustainable modes including walking, cycling or on public transport in an effort to maximise social inclusion and minimise the number of single occupancy private car trips. Providing

travel choice is policy compliant and essential in terms of today's modern and dynamic society.

Walking

2.14 Whilst there will always be some short trips for which a car is the most convenient choice, such as carrying heavy shopping, many short journeys can be done on foot, and therefore walking can contribute significantly to a sustainable travel strategy for the development.

2.15 The benefits of walking include:

- It is cheaper in terms of expenditure when compared to the private car or public transport;
- It is convenient, and can provide pleasure and enjoyment;
- It is good exercise, and can form part of a healthy lifestyle; and
- It is environmentally friendly, with no air or noise pollution and no carbon footprint.

2.16 Whilst there are currently limited pedestrian facilities along Cog Road and none along Swanbridge Road there is a comprehensive footpath network adjacent to the western boundary of the site which serves the existing residential areas of Conybeare Road and Arlington Drive.

2.17 Whilst it is not possible for vehicular traffic to travel between Conybeare Road and Arlington Road, pedestrians are able to walk from Cog Road through to South Road using the existing footpath network which in part is segregated from the residential estate roads.

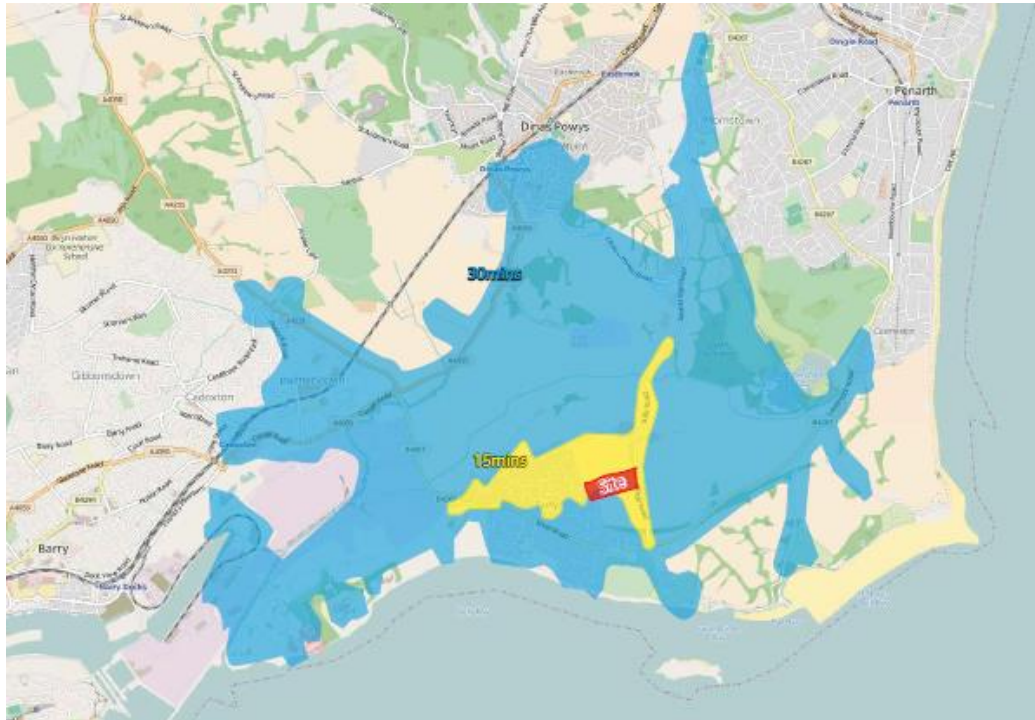
2.18 The existing footpath facilities are shown in the photographs below.



- 2.19 The propensity for people to walk or cycle depends on individual preferences and circumstances. These circumstances might include, for instance, the purpose of the journey, the attractiveness of, and activity along, the route, the weather, and the cost of alternatives.
- 2.20 The thrust of local and National Land Use and Transport Policy is to promote and encourage the choice of walking and cycling above all else where travel needs to occur. Therefore, it is both reasonable to assume that walking is a viable and growing means of travel, and that new development, such as this one, should be designed to promote and encourage it. Section 4 explains the design principles for the site.
- 2.21 We know that schoolchildren already typically walk to school. The National Travel Survey explains that most (79%) primary school children living within 1.6km (1 mile), and most (89%) secondary school children living within 1.6km (1 mile) walk to school. Between 1.6-3.2km, or 1-2 miles, the walking distances are 29% and 54% for primary and secondary school children respectively. The proposed development is located approximately 1.2km from the nearest primary school. We also know that 40-50% of all traffic on the roads during the AM peak hour is school / education related, hence, there is a real opportunity to influence this through design and choice.
- 2.22 In practice, the distance that any individual is likely to choose to walk depends on that individual and the circumstances, but it is fair to assume that over time, given current policies to encourage community, health and wellbeing, the propensity for individuals to walk, and to walk further, will increase.
- 2.23 **Figure 2.2** indicates the walking isochrones of 15 and 30 minutes walking time from the furthest point of the site (furthest dwelling on the site) assuming a comfortable average walking speed of 5km/ hr (3 mph). This demonstrates that Sully is within a comfortable 15

minute walk from the proposed development. Indeed these indicative isochrones demonstrate that the local schools and facilities are mostly within a 15 minute walk, and all are within a 30 minute walk from the site.

Figure 2.2 – 15 & 30 indicative minute walking isochrones



Cycling

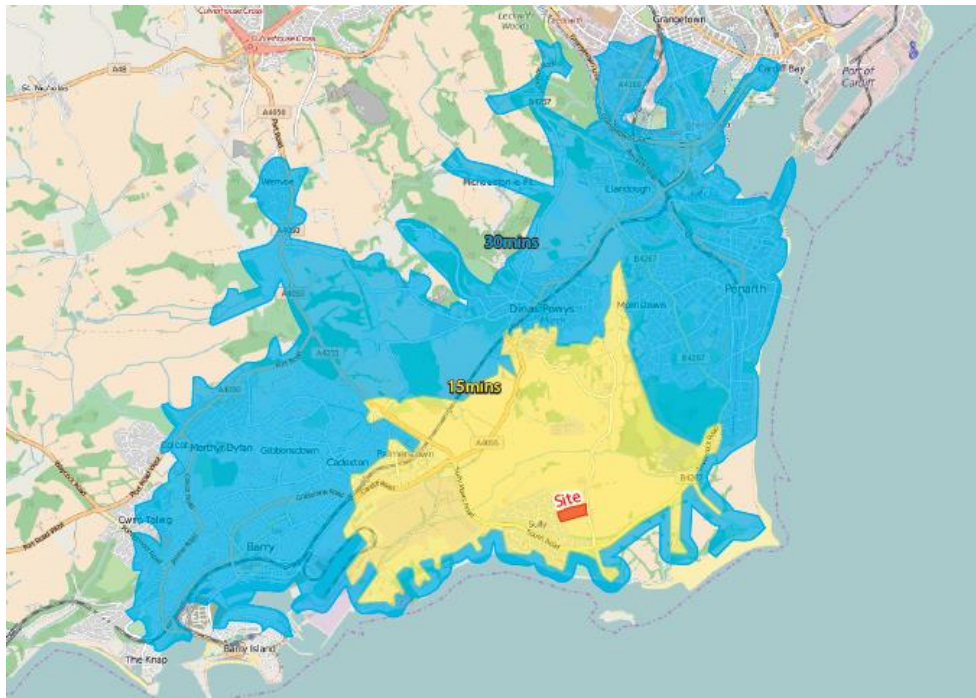
- 2.24 The existing dedicated cycle infrastructure within Sully is in its infancy whereby there are no formal cycle routes within the immediate vicinity of the site, nevertheless there is a shared cycleway/footway provided between Penarth and Barry following Lavernock Road and South Road. The site is suitably well located to enable cyclists to access this facility from the existing residential estate roads. The following photographs show the facilities at the junction with Swanbridge Road. The nature of many of the quieter local road lend themselves to cycling as a mode of travel for short to moderate distances.



- 2.25 South Road benefits from good quality cycle facilities, with dedicated off road sections between Hayes Road and Cog Road and to the east from Elm Close to Penarth.
- 2.26 **Figure 2.3** indicates the cycling isochrones of 15, 30, and 45 minutes from the furthest part of the site (furthest dwelling on site), assuming a comfortable average cycle speed of 15km/hr (9 mph). Sustrans has suggested¹ that up to 5 miles is an appropriate distance for cycle commuting. This equates to 33 minutes at this speed.
- 2.27 This demonstrates that Barry, Penarth, and Dinas Powys are all within a 30 minute cycle from the site. All of Sully is easily within a 15 minute cycle from the site, travelling at a comfortable speed. These isochrones demonstrate that the proposed development is located within suitable reach of any local facilities and major retail areas and areas of interest.

¹ http://www.sustrans.org.uk/sites/default/files/documents/sustrans_mhls_evidence_100511.pdf

Figure 2.3 – 15, 30 & 45 indicative minute cycling isochrones



Bus

- 2.28 There are currently two regular bus services that serve Sully and provide a frequent service between Barry and Cardiff via Penarth.
- 2.29 The 94 Service is operated by Cardiff Bus and provides a half hourly service between Barry and Cardiff via Penarth between Monday and Saturday. An hourly service is provided on Sunday and Bank Holidays.
- 2.30 The 88 service is operated by First Bus and provides a frequent service between Barry and Penarth. An hourly service is provided between Monday and Saturday. There are no services provided on Sundays or Bank Holidays.
- 2.31 Both existing bus services provide regular and convenient linkages to branch line railway stations at Cadoxton and Penarth.
- 2.32 Details of the existing bus services are shown in **Table 2.3** however there are also regular school bus services serving the existing residential areas of Sully providing school bus travel to Penarth and Barry.
- 2.33 A summary of all the services which serve these bus stops is provided in **Table 2.3**.

Table 2.3 – Summary of Bus Services in the Vicinity of the Site

Route No.	Route	Mon - Friday		Saturday		Sunday		Operator	Nearest Stop
		First	Last	First	Last	First	Last		
88	Barry – Sully - Penarth	0715	1815	0715	1815	-	-	Harton Coaches	Post Office
	Penarth – Sully - Barry	0738	1838	0738	1838	-	-	Harton Coaches	Post Office
94	Barry - Sully - Penarth - Cardiff	0630	2232	07:33	22:32	07:01	22:25	Cardiff Bus	Post Office
	Cardiff - Penarth – Sully - Barry	0737	2327	07:43	23:27	08:02	23:28	Cardiff Bus	Post Office
P133 (School Service)	Sully – St Joseph’s RC Primary School	08:50	-	-	-	-	-	N.A.T. Group	Post Office
	St Joseph’s RC Primary School	16:24	-	-	-	-	-	N.A.T. Group	Post Office

2.34 There are a number of bus stops located along South Road. The closest stops which are accessible via continuous footways from the development site are the Post Office stops near the junction with South Road and Arlington Drive. A zebra crossing on South Road assists pedestrians to cross at this location in order to access the Barry bound services.

2.35 There are also bus stops with shelters that are located to the west of the Lavernock Road/ Swanbridge Road junction which are closer to the development site. These would be the closest to the development.

- 2.36 The bus stops located at the Post Office and on Lavernock Road/ South Road junction are circa 1000m from the site using the existing footpath network that runs parallel to the western boundary of the site.

Rail

- 2.37 Whilst Sully is not served by a direct rail service, the closest railway station is located at Cadoxton (Barry) which is located approximately 3.9km from the site. Cadoxton is on the Barry and Vale of Glamorgan line that provides a 15 minute frequency service between Barry and Cardiff during the daytime.
- 2.38 Penarth railway station is approximately 5 km to the east of Sully and on the Penarth Line. A 15 minute service operates on this line during the daytime. Park and Ride facilities are available at both stations. 31 car parking spaces are available 24 hours a day, Monday to Sunday at Cadoxton Rail Station and 15 car parking spaces are available 24 hours a day Monday to Sunday at Penarth Rail Station. Car parking is currently free of charge at both stations.

Summary

- 2.39 The site is located in a sustainable location, within walking and cycling distance of a number of local amenities in Sully, as well as further afield in Dinas Powys and other neighbouring communities.
- 2.40 There are good public transport linkages from the site via bus and train with regular services to Cardiff, Penarth and Barry. This level of public transport, both bus and rail offers real travel choice for new and existing residents.

Learner Travel – Safe Routes to Schools

- 2.41 The Learner Travel (June 2014) guidance supersedes the ‘Safe Routes to School’ initiative. The aim of this guidance is to ensure that major new developments can confirm at least one safe walking route to local schools. This links to the Active Travel (Wales) Act 2007, which aims to change how people travel, resulting in greater social inclusion and improved community safety.

- 2.42 The site already benefits from the route indicated in **Figure 2.4** to the nearest school, in accordance with the Learner Travel guidance, and the Active Travel (Wales) Act. This demonstrates that the site is in keeping with this guidance.

Figure 2.4 – Safe Routes to Schools



Learner Travel, Statutory Provision and Operational Guidance – June 2014

- 2.43 The Learner Travel guidelines were published by the Welsh Government in 2014. Section 1, chapter 5 sets out the *Risk Assessment of Walked Routes to School*.
- 2.44 Although the guidelines state that local authorities and not the developer are required to ‘assess the travel needs of learners walking to school’, in keeping with our ethos for sustainable and attractive communities, the walking route guidance is summarised in the following.
- 2.45 The guidance states that for a route to be considered ‘available’ it needs to be:

A continuous adequate footway on roads which carry medium to heavy traffic flow; **or**
‘Step-offs’ on roads which have low traffic flow but adequate sight lines to provide sufficient advance warning to drivers and pedestrians; **or**
On roads with very low traffic flow, no ‘step offs’, but sufficiently good sight lines to provide adequate advance warning.

2.46 Where there is a need to cross the following provisions should be in place:

- Pedestrian refuges; **or**
- Visibility – good enough to allow vehicles to stop given the 85th percentile speed rule (or the speed at which no more than 15% of the traffic is exceeding); **or**
- Sufficient gap in the traffic flow and sight lines to allow enough opportunities to cross safely; **or**
- Sufficient crossing facilities (for example, zebra, pelican crossings); **or**
- Sufficient pedestrian phases at traffic lights (including necessary refuges); **or**
- Sufficient school crossing patrols.

2.47 Additional factors should be considered in assessing the safety of a route, the most prevalent of these is careful consideration of the accident data.

2.48 This guidance document also details their thresholds for traffic flow, to robustly assess any walking route in accordance with their requirements, including unobstructed, lit footpaths of sufficient width.

Summary

2.49 In line with the guidelines set out above, the current route from the site to the neighbouring school as well as facilities are complies with various points within the Learner Travel.

Local Highway Network

2.50 The location of the site in relation to the local highway network is shown in **Figure 2.5**.

Figure 2.5– Local Highway Network



Cog Road

- 2.51 Cog Road is an unclassified road that forms part of the adopted highway network and links South Road (B4267) with Swanbridge Road and Sully Road. There is no street lighting present on the rural section of Cog Road, however there is sufficient street lighting along the residential section. Cog Road is subject to a 30mph speed limit between its junction with South Road and a point 100m to the east of the junction with Conybeare Road. Beyond this point it is de-restricted and subject to the national speed limit. There are also a number of school bus stops along Cog Road.
- 2.52 At its lower end (south western end) Cog Road provides access to a number of residential developments on both sides of the road via estate roads. There are also a number of residential properties accessed directly from Cog Road. Cog Road has edge of carriageway and centre line markings including carriageway treatment (red surface dressing) to encourage drivers to slow down through the narrow section.
- 2.53 There are no footways provided on the rural section of Cog Road beyond the existing residential dwellings. On this section, a footway is present only on the southern edge of the carriageway. Between the junction with Glastonbury Road and South Road there are intermittent footways on Cog Road until it connects with the shared footway/cycleway facility on South Road.

- 2.54 From a point 100m east of its junction with Conybeare Road, Cog Road becomes more rural in character with soft verges and established hedgerows on either side. Whilst there are no centreline markings along this section, the carriageway is wide enough in places to allow two vehicles to pass, however the existing width assists with reducing traffic speeds. The photographs below show the changing character of Cog Road.



Swanbridge Road

- 2.55 Swanbridge Road links Sully Road and Cog Road with Lavernock Road/South Road (B4267) at a junction known locally as the 'Cog Triangle' where Swanbridge Road has priority and vehicles can turn left to travel on Cog Road or continue onto Sully Road. Swanbridge Road joins with Lavernock Road / South Road in the form of a 4 arm cross-roads junction. Swanbridge Road is subject to a 30mph speed limit approximately 20m from the junction with Cog Road. Prior to the junction with Cog Road, Swanbridge Road is subject to the National Speed Limit.
- 2.56 Similar in character to the eastern end of Cog Road, Swanbridge Road provides direct access to a small number of residential dwellings along its length. At its southern end towards South Road/Lavernock Road, residential dwellings are located on either side with vehicular access provided. There are no footways provided along Swanbridge Road at this location. At its northern end it provides direct access to a number of dwellings on both side of the road again without any dedicated footway provision.
- 2.57 Whilst there are no centreline markings along Swanbridge Road, it is wide enough to allow two vehicles to pass for much of its length. At the lower end towards South Road, the carriageway narrows where it passes under the disused railway line bridge. The height

restriction is 15ft 3inches (4.6m) and signage on site advises high vehicles to travel under the bridge in a single stream.

Sully Road

- 2.58 Sully Road connects with Swanbridge Road and Cog Road to the south via the 'Cog Triangle' and with Redlands Road in the north via a priority T-junction. It is a derestricted road and provides access to a number of private residential dwellings, Ysgol Gymraeg Pen y Garth, Ashgrove School and St Joseph's R.C. Primary School.
- 2.59 There is a footway present on the western edge of the carriageway from 40m north of the junction with Meadowside to the access to St Joseph's R.C. Primary School. Apart from this, there are no footways present on Sully Road and intermittent street lighting present.

B4267 South Road

- 2.60 South road is a two lane single carriageway which is located to the south of the site and is the main east-west link between Barry and Penarth. It links with Cog Road to the west via a priority T-junction, and with Swanbridge Road to the east via a priority cross road junction.
- 2.61 There are footways present on both sides of the carriageway, street lighting and three controlled pedestrian crossing facilities present. South Road also provides direct frontage access to a number of residential dwellings on both sides of the road.
- 2.62 Many of the local facilities in the area such as the GP surgery, local shop, post office and Library are all located along South Road. There are also a number of bus stops located on both sides of South Road.

Junctions

Cog Road / Sully Road / Swanbridge Road

- 2.63 This junction, locally known as the 'Cog Triangle' is located to the north east of the site and takes the form of two linked priority junctions. At this junction, priority is given to Sully Road, There are no pedestrian crossing facilities at this junction.

Cog Road / South Road

- 2.64 The Cog Road / South Road junction is located to the south west of the site and takes the form of a priority T-junction. There is an opportunity for pedestrians to cross Cog Road at this junction via dropped kerbs and a pedestrian refuge island. There is also an informal cycle crossing across South Road approximately 30m west of the junction.

Swanbridge Road / Lavernock Road / Beach Road / South Road

- 2.65 This junction is located to the south of the site and takes the form of a priority crossroad junction where priority is given to South Road and Lavernock Road. There are dropped kerbs on Swanbridge Road to allow cyclists and pedestrians to cross. The speed limit of South Road, Swanbridge Road and Lavernock Road is 30 mph, however the speed limit of Beach Road is subject to National Speed Limit prior to the junction.

Background Traffic Flows

- 2.66 It is not the purpose of planning policy to protect the convenience of the car commuter. Other planning issues, such as growth, designing for community, social inclusion and sustainability often take higher priority. However, in the context of new development, it is appropriate to understand the likely degree of inconvenience to car users associated with growth and development.
- 2.67 The observed traffic flows used in the 2013 TA for 350 units, and the subsequent TAA (2015) and Sensitivity Assessment (2016) have been used in this assessment, to more accurately assess the entire 500 dwelling site as a whole. The background traffic flows are included in **Appendix A**.

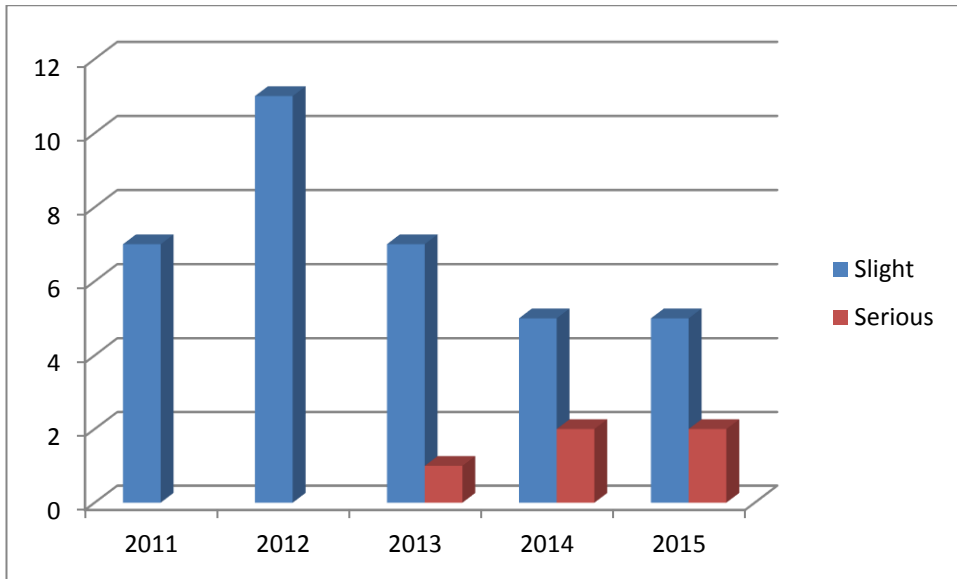
Road Safety Assessment

- 2.68 Collision data was obtained for the area within the cordon shown in the following, which includes those roads that form the main transport routes to and from the development site. The PIC data was obtained for the last 5 year period 2011 to 2015. This data is included in **Appendix G**
- 2.69 Analysis of the collision data shows that:
- There were 40 PIC's recorded during the study period;

- Of these, 40 PIC's, 5 were recorded as serious and the remaining 35 were recorded as slight.

2.70 The following chart shows the profiles and severity of the PIC's within the survey area during the 5 year period. The number of collisions has decreased since 2012.

Chart 2.1 – PIC Summary



3 POLICY

National Policy

Planning Policy Wales (Edition 9, November 2016)

- 3.1 Planning Policy Wales sets out the current land use planning policies of the Welsh Government. This is supplemented by a series of Technical Advice Notes. In terms of transport related policies it places the sustainability of development at the heart of the decision making process (para 4.11.4) and requires that new development proposals minimise the need to travel and increase accessibility by modes other than the private car. It requires that major generators of travel demand be located within existing urban areas that are well served by public transport, or can be reached by walking or cycling.
- 3.2 The principles discussed above are repeated again in PPW's Chapter 8, which deals specifically with Transport issues.
- 3.3 This chapter advocates that a transport hierarchy be established in relation to new developments. It continues that development be located near other related uses to encourage multipurpose trips and reduce the length of journeys (8.1.5).
- 3.4 In terms of plan making and development control it advises (8.7.1) that the following issues should be taken into account:
- the impacts of the proposed development on travel demand;
 - the level and nature of public transport provision;
 - accessibility by a range of different transport modes;
 - the opportunities to promote active travel journeys, and secure new and improved active travel routes and related facilities, in accordance with the provisions of the Active Travel (Wales) Act 2013;
 - the willingness of a developer to promote travel by public transport, walking or cycling, or to provide infrastructure or measures to manage traffic, to overcome transport objections to the proposed development;

- the environmental impact of both transport infrastructure and the traffic generated (with a particular emphasis on minimising the causes of climate change associated with transport); and
- the effects on the safety and convenience of other users of the transport network.

3.5 PPW also requires that the proposed access to a development should reflect the likely travel patterns involved. It should ensure that people can reach the development, as far as practicable, by walking, cycling and public transport, as well as by car (para 8.7.3).

3.6 This is a sustainable site and a natural expansion of the existing residential area. Furthermore, the developer is proposing to enhance the sustainability of the site and the area in general via the development proposals.

Technical Advice Note 18: Transport

3.7 TAN 18: Transport describes how to integrate land use and transport planning and explains how transport impacts should be assessed and mitigated.

3.8 The document states that sustainable development should be achieved by:

- Integration of transport and land use planning;
- Integration between different types of transport; and
- Integration of transport policy with policies for the environment, education, social justice, health, economic development and wealth creation.
- Integration of land use planning and development of transport infrastructure can help the Welsh Government achieve its wider sustainable development policy objectives by:
 - Promoting resource and travel efficient settlement patterns;
 - Ensuring new development is located where there is, or will be, good access by public transport, walking and cycling thereby minimising the need for travel and fostering social inclusion;
 - Managing parking provision;
 - Ensuring that new development and major alterations to existing developments include appropriate provision for pedestrians (including the with special access and

mobility requirements), cycling, public transport, and traffic management and parking/servicing;

- Encouraging the location of development near other related uses to encourage multi-purpose trips;
- Promoting cycling and walking;
- Supporting the provision of high quality, inclusive public transport;
- Supporting provision of a reliable and efficient freight network;
- Encouraging good quality design of streets that provide a safe public realm and a distinct sense of place; and
- Ensuring that transport infrastructure or service improvements necessary to serve new development allow existing transport networks to continue to perform their identified functions.

3.9 The developer, in conjunction with the Council is seeking to improve upon the sustainable connections to this site and the area in general.

Technical Advice Note 12: Design

3.10 TAN 12: Design provides advice on good design for new developments.

3.11 Paragraph 4.13 is pertinent to this development. This states that:

Movement and ease of access for all to and from development should be appraised at the strategic and local level, with a view to supporting a shift from car use to walking, cycling and public transport and recognising the need for better connectivity within areas and with the surrounding areas. Consideration should be given to the volume and relative ease of pedestrian movements, including people with mobility or sensory impairments. Similar consideration of volume and ease of movement should be given to cycle, public transport and car movements, while areas of conflict, congestion and connections should be identified throughout the area surrounding the site.

3.12 The developer, in conjunction with the Council is seeking to improve upon the sustainable connections to this site and the area in general in accordance with this policy.

Manual for Streets

- 3.13 The Department for Transport's 'Manual for Streets' replaced their general road and street design guidance manual 'DB32' in 2007 and specifically focuses on lightly trafficked residential streets and highways.
- 3.14 *'A key consideration for achieving sustainable development is how the design can influence how people choose to travel. Designers and engineers need to respond to a wide range of policies aimed at making car use a matter of choice rather than habit or dependence. Local transport plans and movement strategies can directly inform the design process as part of the policy implementation process.'*
- 3.15 *'By creating linkages between new housing and local facilities and community infrastructure, the public transport network and established walking and cycling routes are fundamental to achieving more sustainable patterns of movement and to reducing people's reliance on the car.'*

Wales National Transport Plan (March 2010)

- 3.16 The Welsh Government has two aims for targeted investment in infrastructure along the South Wales, east-west transport corridor. These aims are:
- 'To improve the reliability, quality and frequency of east-west rail in South Wales; and
 - To improve reliability, journey times and safety along the east-west road corridor in South Wales.'
- 3.17 These two infrastructure improvements may improve the feasibility of commuting to regional workplace destinations, such as Cardiff and Swansea from the proposed residential development.
- 3.18 Further to this, the key issue promoted in the Plan is:
- 'Moving people to more sustainable modes of travel will involve raising awareness of the alternatives to the private car. We will encourage the shift to public transport, and healthy options such as walking and cycling by supporting the provision of the information people need to change their behaviour and to make journey planning simpler.'*

A Walking and Cycling Action Plan for Wales 2009-2013

3.19 This document aims to assist in achieving a change in behaviour which results in more people walking and cycling more often. The key objectives of the Action Plan are to:

- 'Improve the health and wellbeing of Wales through increased physical activity;
- Improve the local environment for walkers and cyclists;
- Encourage sustainable travel to combat climate change;
- Increase levels of walking and cycling through promotion of facilities; and
- Ensure that walking and cycling are prioritised in policies, guidance and funding.'

3.20 The Action Plan also assists in the delivery of objectives in a number of Assembly Government strategies, which includes:

- One Wales – the Plan will assist in the delivery of the One Wales commitment to support greater participation in walking and cycling.
- Wales Transport Strategy (Connecting the Nation) – two of the strategy's key objectives are to promote more sustainable travel option and to make walking and cycling the public's first choice for shorter journeys.

Wales Transport Strategy (Connecting the Nation)

3.21 The wider agenda of this document is to ensure that transport features strongly in the Welsh Assembly Government's policy spectrum:

- 'Getting the most out of our existing transport system;
- Making greater use of more sustainable modes of travel; and
- Reducing demands on the transport system.'

3.22 This is a sustainable, permeable, well connected site and hence it is compliant with the Wales Transport Strategy.

Active Travel Act (Wales) 2013

3.23 The Welsh Government seeks to enable more people to walk, cycle and generally travel by more active methods, so that:

- more people can experience the health benefits of active travel;
- we reduce our greenhouse gas emissions;
- we help address poverty and disadvantage, and
- we help our economy to grow by unlocking sustainable economic growth.

Local Policy

The Vale of Glamorgan Unitary Development Plan

3.24 The Vale of Glamorgan Adopted UDP 1996-2011 was adopted in April 2005 and constitutes the last adopted development plan for the authority, although it is now expired. The UDP concentrates on the issues that the Council consider necessary to address in order to protect and enhance the environment of the Vale of Glamorgan whilst providing detailed guidance for future development proposals.

3.25 Policy 7 of the UDP relates to Transport and states:

‘Improvements to the transportation network will consist of:

Strategic transport schemes within and adjoining the existing urban areas of the waterfront strip of Penarth, Dinas Powys, Barry and Rhose;

Local schemes necessary for environmental and safety reasons; and

Schemes to encourage travel by cyclists and pedestrians.’

3.26 Policy 8 also states:

‘Developments will be favoured in locations which:

i) Are highly accessible by means of travel other than the private car; and

Minimise traffic levels and associated unacceptable environmental effects.’

3.27 The Council’s transportation policy objectives for the UDP are:

- *‘To ensure that a balance is maintained between the need to facilitate the development of the local economy, environmental concerns and social*

considerations, in order to create a safe, efficient and equitable transport network for the Vale of Glamorgan;

- *To maintain and improve access to employment and services;*
- *To ensure that developments are accessible by means of travel other than the private car;*
- *To encourage greater use of public transport, cycling and walking;*
- *To safeguard road lines and routes / sites of approved transport schemes;*
- *To improve the safety and convenience of all means of transport; and*
- *To ensure that adequate parking facilities are provided in accordance with the Council's approved parking guidelines.'*

The Vale of Glamorgan Deposit Local Development Plan 2011-2026

3.28 The Vale of Glamorgan Deposit LDP Written Statement was prepared in 2013. The Deposit LDP concentrates on the issues that the Council consider necessary to address in order to protect and enhance the environment of the Vale of Glamorgan whilst providing detailed guidance for future development proposals.

3.29 Policy SP7 relates to Transport and states:

- The aim is to provide sustainable transport improvements that serve the economic, social and environmental needs of the Vale of Glamorgan.
- Reducing the need for Vale of Glamorgan residents to travel to meet their daily needs and enabling them greater access to sustainable forms of transport.

3.30 The Deposit LDP aims to improve the transportation network through:

- Strategic transport schemes within and adjoining existing urban areas;
- Local schemes are necessary for environmental and safety reasons;
- Schemes encourage travel by cyclists and pedestrians.

3.31 The councils transportation policy objectives are:

- Improved access to services, facilities and employment, partially, by public transport, walking and cycling ;

- Provide a transport system that increases the use of sustainable modes of travel;
- Reduce the demand for travel;
- Develop an efficient and reliable transport system with reduced levels of congestion and improved transport links within the Sewta region;
- Provide a transport system that encourages healthy and active life styles, is safer and supports local communities;
- Reduce significantly the emission of greenhouse gases and air pollution from transportation;
- Ensure that land use development in south east Wales is supported by sustainable transport measures; and
- Make better use of the transport system.

Summary

3.32 It is considered that the proposed development at Cog Road, Sully complies with relevant national and local policies, adopted and emerging, as it is located in close proximity to existing public transport services, cycle infrastructure and the pedestrian network. The site;

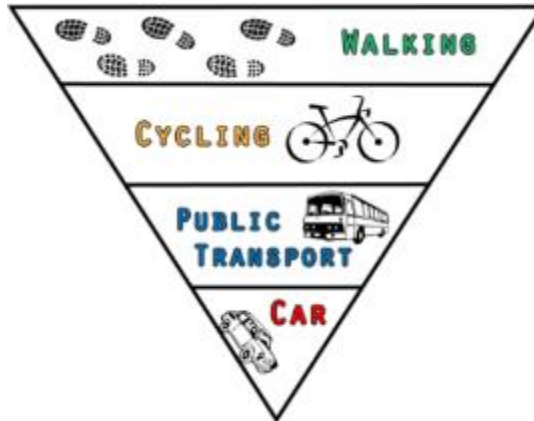
- Promotes the use of more sustainable travel options;
- Promotes walking and cycling for shorter trips; and
- Reduces, where practical, the need to travel by car.

3.33 Furthermore, the site forms part of a housing allocation (MG2-46) within the LDP.

4 DEVELOPMENT PROPOSALS

Overview

- 4.1 The proposals for the sustainable residential development at Sully, includes the provision of up to 190 dwellings located to the immediate south of the recently approved scheme for 350 dwellings accessed from Cog Road and Swanbridge Road.
- 4.2 The site offers direct connections to the existing residential areas of Sully and offers real travel choice from the existing local public transport facilities (bus and rail).
- 4.3 There are four key stages to creating a socially inclusive community, hereby encouraging community interaction (within and neighbouring the scheme), in such a way to encourage non-motorised travel modes, prioritising walking and cycling, followed by use of the bus.
- 4.4 **Design** is in terms of creating communities, where public interaction, outdoor and indoor, is the norm. Where friends and day to day activities are nearby and easy to get to, and where it is not an automatic reaction when leaving home to get into a car. The site is well placed to take advantage of the proximity of a range of day to day facilities.
- 4.5 The site design is of a pedestrian scale. Walking, cycling, and using a bus, will be easy, and vehicle intimidation will be at a minimum.
- 4.6 **Choice** is in terms of providing the **infrastructure** and facilities to minimise reliance on any single option. This widens social inclusion, and for instance, on average, makes contributing to commuter car congestion more of a choice and less of a necessity.
- 4.7 Through increased choices a change in behaviour can be effected. The proposals will introduce and maintain any sustainable transport options through the measures detailed in the remainder of this section, and seek to encourage a net travel behavioural change.
- 4.8 **Behaviour** is in terms of educating people in the options and consequences. It brings together awareness, health, environment and personal convenience.
- 4.9 Finally, one of the 'by design' aims is to create an environment where less people automatically choose to use their cars when leaving their homes, therefore decreasing the impact on the road network. These proposals strive to not only influence the traffic impact of the proposed development, but also the surrounding communities.



4.10 **Network Management** is in terms of managing the road network in accord with the user hierarchy preferred by the Council. Car travel is the lowest capacity network in terms of space occupied per person. It also occupies the lowest priority in the user hierarchy. This means, for instance, prioritising the reliability and speed of bus and cycle movement over that of cars in the commuter peaks.

Masterplan

4.11 Manual for Streets (MfS) and Manual for Streets 2 (MfS2) is used as a framework for the design philosophy, encompassing a comprehensive movement strategy which will inform and shape the layout of the streets serving the development. In particular, the movement strategy will focus on the movement hierarchy within MfS2 with priority given to pedestrians, cyclists and other vulnerable road users.

4.12 The indicative masterplan for the site is shown in **Figure 4.1**.

Figure 4.1 – Indicative Masterplan for Cog Road, Sully



Site Access

- 4.13 Vehicular access to the recently consented 350 dwelling scheme is provided in the form of two priority junctions. The local Highway Authority agreed access into the site from both Cog Road and Swanbridge Road and that local highway improvements will be necessary to both in order to facilitate development at this location.
- 4.14 The site will be developed in line with the principles of Manual for Streets and Manual for Streets 2 (MfS). The site will follow a clear hierarchical approach with respect to site users, with pedestrians and other vulnerable road users are at the top of this hierarchy, and the emphasis on creating a sustainable development which links to the surrounding residential development and existing local facilities with well-connected pedestrian and cycle networks.
- 4.15 Vehicular access is to provided from the 350 dwelling scheme as indicated on the masterplan

Pedestrians & Cyclists

- 4.16 The aim is to provide an environment in which pedestrians and cyclists will feel as though they are generally of highest priority. Pedestrian routes will be direct, convenient and attractive, and contribute to the sense of place created by the design and layout of the site. The development will seek to maximise and enhance the permeability of the site to cyclists and aim to encourage cycling as a mode of transport for short trips, taking advantage of the

NCN route 88. A new pedestrian link is to be formed on the western boundary to link to the existing footpath network.

- 4.17 Whilst there are no formal cycle routes within the immediate vicinity of the site, apart from a shared cycleway/footway which is provided between Penarth and Barry following Lavernock Road and South Road, the site is suitably well located to enable cyclists to access this facility from the existing residential estate roads. The following photographs show the facilities at the junction with Swanbridge Road.



- 4.18 South Road benefits from good quality cycle facilities, with dedicated off road sections between Hayes Road and Cog Road and to the east from Elm Close to Penarth.
- 4.19 Whilst there are currently limited pedestrian facilities along Cog Road and none along Swanbridge Road there is a comprehensive footpath network adjacent to the western boundary of the site which serves the existing residential areas of Conybeare Road and Arlington Drive.
- 4.20 Whilst it is not possible for vehicular traffic to travel between Conybeare Road and Arlington Road, pedestrians are able to walk from Cog Road through to South Road using the existing footpath network, which in part is segregated from the residential estate roads.

4.21 The existing footpath facilities are shown in the photographs below.



4.22 Proposals to enhance the non-vehicular environment on South Road were included in the TAA (2015) for the consented scheme for 350 dwellings. These proposals are illustrated in **Appendix B**, and are summarised in the following:

- Existing pedestrian Zebra crossings placed on new raised tables, with improved lighting;
- 'SLOW' markings and coloured surface dressing added to carriageway to increase driver awareness;
- A raised table at the South Road/Swanbridge Road junction; and
- A new Zebra pedestrian crossing close to the South Road/Cog Road junction.

4.23 It is considered that these measures will increase driver awareness of pedestrian activity, leading to lower speeds and a more comfortable environment for pedestrian movement and the more vulnerable road users.

4.24 The additional pedestrian crossing will be of benefit to pedestrians at the western end of Sully and bus users including school children accessing the bus stop outside the Church Hall. It is understood that local school buses that previously collected children at the 'One Stop' shop on South Road now use the Sully Church stop.

Travel Plan

- 4.25 The developer commits to providing a comprehensive Travel Plan, which will include the measures and improvements set out in this section, as well as significant investment in personalised travel planning (PTP).
- 4.26 Travel patterns in the area will change as a result of new developments, however there is no reason to suppose that this change will result in an increase in total movements or congestion.
- 4.27 The proposed development can deliver physical infrastructure that can influence travel choice. It can also deliver behavioural change measures such as travel planning, which, combined with the physical measures, seek to make a difference to travel patterns for the proposed new development and the existing community.

Sustainable Travel to Local Schools

- 4.28 As part of the overall sustainable strategy of the site, it is important to consider journeys made for education purposes. National Statistics² suggest that some 50% of all journeys during the morning peak hour are related to education. Of these education trips, travel by car accounts for 46% and 23% of journeys to primary and secondary schools respectively. Hence it is important to consider this when reviewing the opportunity to encourage sustainable travel to the local schools in Sully and Penarth.
- 4.29 The site is within 2km of Sully Primary School by foot.
- 4.30 For local schools currently without a Travel Plan, the eventual measures are undefined at present but may include;
- Walking buses
 - Cycling trains
 - Parents' shelters
 - Secure / sheltered scooter parking
 - Secure / sheltered cycle parking
 - Bike to school days

² National Travel Survey 2010/14

- Bikeability days / cycle/ scooter proficiency days / cycle festivals
- Sustainable travel meal days
- Provision of high visibility gear

Vehicular Access

- 4.31 Vehicular access is taken from the recently consented 350 dwelling scheme to the north of the proposed site. An internal spur will provide access to the 190 dwellings and will comprise of a spine road serving a number of small cul-de-sacs and private driveways.
- 4.32 The road network within the site will be designed in accordance with the layout of the 350 dwellings scheme.
- 4.33 The intention is to create an environment within the site in order to encourage pedestrian and cycle activity and to prioritise social inclusion before the private car / motorist.

Walking & Cycling

- 4.34 Walking and cycling provision is adjacent to the western boundary of the site, which serves the existing residential areas of Conybeare Road and Arlington Drive.

Parking

- 4.35 Parking will be provided in accordance with VOGC parking standards as set out in the CSS 'Wales Parking Standards' (2008). The parking standards for a residential development in Zones 2-6 are shown in **Table 4.1**.

Table 4.1 –Parking Standards for Residential Development (Zone 2-6)

Type of Development	Residents	Visitors
General Purpose Houses and Apartments		
Houses	1 space per bedroom (maximum requirement 3 spaces)	1 space per 5 units

- 4.36 Parking will be provided in line with the parking standards shown in **Table 4.1**

Construction Impact

- 4.37 The environmental effect relating to traffic will be set out within a separate Construction Environmental Management Plan (CEMP) which is anticipated to form part of a positive Planning Condition.
- 4.38 The CEMP will set out how the effect of construction traffic will be managed on the local highway network during the anticipated construction period. The purpose of a CEMP is to ensure that the effect of construction traffic is mitigated against, particularly in relation to local residents and any air quality issues and seeks to control, the timings, routing and volume of traffic entering/leaving the site during this period.
- 4.39 All construction traffic will enter and leave the site via Cog Road.

Summary

- 4.40 In summary, the proposed development is designed to promote choice, encourage and accommodate a positive change in the propensity for more socially inclusive and sustainable living travel.
- 4.41 The location and accessibility of the site are excellent, and the proposals will have ancillary benefits for the neighbouring communities. Walking and cycling are encouraged by design within the site, and in the nature of the linkages to the surrounding community.

5 HIGHWAY NETWORK ASSESSMENT

- 5.1 The previous Transport Assessment for the consented scheme assessed the effect of 500 residential dwellings at this site, to incorporate the LDP allocation which includes the 350 dwellings now committed. It has done so on the basis that the development will generate traffic demand in the same way that the existing community does. I.e., there has been no reduction for the effects of a difference in design, travel planning and improved walking, cycling and public transport facilities. It makes no allowance for a reduction in background trips or any sustainability initiatives that one might expect the County to implement over the years and which are anticipated as a direct consequence of this development. As such it is a very robust and worst case assessment.
- 5.2 This application increases the overall number of dwellings on the allocated site to 540 hence a net increase of 40 units.

Scope of Assessment

- 5.3 The extent of the highway network being considered for assessment purposes is the same as the assessed for the 350 dwellings scheme that was recently granted planning consent.

Trip generation and Distribution

- 5.4 This section contains information on the trip generation and distribution of trips associated with the proposed development.

Trip Rates

- 5.5 The Trip Rates for the proposed residential development have been derived from the TRICS database. TRICS is an industry-wide recognised database containing trip rate information, and interrogating the TRICS database to calculate trip rates by land use represents an established and accepted methodology. It is widely used as part of the planning process by both developer consultants and local authorities.
- 5.6 TRICS contains over 6,300 transport surveys at a wide range of development sites across all regions of the UK and Ireland. A filtering system allows sites to be selected which fit within required parameters and can therefore be considered representative of a development site. The trips rates derived from this exercise are average since 85th %ile trip rates could not be

achieved due to the low number of comparable sites. These are demonstrated in **Table 5.1** and the output is contained in **Appendix C**.

Table 5.1– TRICS Vehicular Trip Rates (Residential) – per dwelling

	Arrivals	Departures	Totals
AM	0.153	0.37	0.523
PM	0.382	0.207	0.589

5.7 As a means to validate the TRICS trip rates, a survey was undertaken of Bassett Road, a cul-de-sac close to the proposed site. Due to its location and mix of house types, Bassett Road is considered to be a realistic comparator. The trip rates from this survey are shown in **Table 5.2**.

Table 5.2 – Observed Trip Rate (per dwelling)

Period	Inbound	Outbound	Two-way
08:00-09:00	0.167	0.194	0.361
17:00-18:00	0.315	0.204	0.519

5.8 Applying the vehicular trip rates as summarised in **Table 5.1** to the development of 190 dwellings results in a total number of vehicular trips as summarised in **Table 5.3**.

Table 5.3 – Total Vehicular Trips

	Arrivals	Departures	Totals
AM	29	70	99
PM	73	39	112

Trip Distribution

5.9 As agreed with VoGC highway officers for the consented development of 350 dwellings, the vehicular trip distributions were based on census data along with the existing distributions at junctions on the local highway network. However in order to quantify the effect at the local junctions, a judgement has been made on the anticipated distribution based on Census 2001 travel to work data:

- 50% of development traffic on Swanbridge Road towards the Lavernock Road junction (east)

- 40% of development traffic on Cog Road towards South Road junction (west)
- 5.10 10% of development traffic on Sully Road (north)
- 5.11 For the 350 residential unit application, a sensitivity assessment was included that considered the effects of the full allocation (Housing Allocation 46 – Reserve Site (MG 2(46)) as described in the Deposit Local Development Plan
- 5.12 The distribution of new trips from the proposed development is shown in **Appendix D**.

Traffic Growth

- 5.13 Due to the baseline data being derived from a variety of sources, a common base year of 2013 has been created by using Temprow derived NTM growth factors. These are shown in **Table 5.4**, along with the growth factors used to adjust the base flows to the future years of 2018 and 2026.

Table 5 .4 – Temprow NTM Growth Factors

2011-2012	1.0047
2012-2013	1.0058
2013-2018	1.0538
2013-2026	1.1728

Committed Development

- 5.14 The aforementioned granted scheme for 350 dwellings has been included in the development traffic assessment, to complete the LDP provision at this site.
- 5.15 As also requested by VoG, the assessments include the traffic from the committed developments at St Cyres School and Barry Waterfront. The flows for these have been abstracted from the TA's submitted as part of the applications at the two sites. The committed development flows are illustrated in **Figures 5.1** and **5.2** for the AM and PM peak respectively. The committed development flows are included in the Base 2013 traffic flows.
- 5.16 The flows for this committed development are included in **Appendix E**.

Highway Network

5.17 The local highway network was assessed for 350 and 450 dwellings in the 2013 TA, as well as the subsequent TAA in 2015. These both demonstrated that the percentage impact on the following local junctions is equal to or fewer than 5%:

- Port Road / Barry Docks Link Road – 3 arm roundabout;
- Merrier Harrier – signal controlled junction;
- Sully Moors Road / Cardiff Road – 4 arm roundabout; and
- Cardiff Road / Redlands Road – 3 arm signal controlled junction.

5.18 The percentage impact considering a total of 500 dwellings is contained in **Tables 5.5-5.7**.

Table 5.5 – Percentage Impact – 2013 + Committed

Junction	Total Junction Flow				% Impact	
	Base 2013		Development		AM	PM
	AM	PM	AM	PM		
Port Road / Barry Docks Link Road	3293	3305	74	82	2%	2%
Merrie Harrier	2497	2734	101	123	4%	4%
Sully Moors Road / Cardiff Road	3572	3629	181	204	5%	6%
Cardiff Road / Redlands Road	2513	2741	118	137	5%	5%

Table 5.6 – Percentage Impact – 2018 + Committed

Junction	Total Junction Flow				% Impact	
	2018		Development		AM	PM
	AM	PM	AM	PM		
Port Road / Barry Docks Link Road	3449	3459	74	82	2%	2%
Merrie Harrier	2626	2875	101	123	4%	4%
Sully Moors Road / Cardiff Road	3742	3799	181	204	5%	5%
Cardiff Road / Redlands Road	2639	2878	118	137	4%	5%

Table 5.7 – Percentage Impact – 2026 + Committed

Junction	Total Junction Flow				% Impact	
	2026		Development			
	AM	PM	AM	PM	AM	PM
Port Road / Barry Docks Link Road	3794	3800	74	82	2%	2%
Merrie Harrier	2911	3187	101	123	3%	4%
Sully Moors Road / Cardiff Road	4119	4176	181	204	4%	5%
Cardiff Road / Redlands Road	2917	3187	118	137	4%	4%

5.19 These tables indicate that the total provision of 500 dwellings within the LDP has less than 5% impact at the external junction, with the exception of Sully Moors Road/ Cardiff Road in the 2013 (plus committed) PM peak hour. However, this impact lessens to 5% in both the 2018 and 2026 future years. The percentage impact of these development trips on these junctions are considered to be negligible in significance.

5.20 For this TA a further 40 dwellings are being considered.

Highway Assessment

5.21 The key local junctions and site access junctions have been assessed for the effect of 500 dwellings as a sensitivity assessment for the 350 units consented development.

Cog Road/South Road

5.22 A junction capacity assessment has been undertaken at the Cog Road / South Road junction based on 500 dwellings and the modified junction layout (included in the TAA 2015) which includes minor capacity improvements. **Tables 5.7** and **5.8** show a comparison of the queue lengths on Cog Road based on 350, 450 and 500 dwellings with and without mitigation at the Cog Road / South Road junction. The assessment considers each 15 minute time segment within the AM and PM peak periods.

5.23 The traffic flows in **Table 5.8** are based on a 2026 future year which includes 17% growth between 2013 and 2025. The traffic flows in **Table 5.8** are based on a 2013 base year.

Number of Dwellings	AM Peak (0800-0900)				PM Peak (1700-1800)			
	0800-0815	0815-0830	0830-0845	0845-0900	1700-1715	1715-1730	1730-1745	1745-1800
350	5 (5)	5 (6)	8 (9)	3 (3)	2 (3)	1 (1)	2 (2)	1 (1)

450	8 (9)	9 (11)	15 (19)	6 (9)	3 (3)	2 (2)	2 (2)	1 (1)
500	10 (12)	13 (16)	21 (26)	13 (16)	3 (4)	2 (2)	2 (2)	1 (1)

Note: () without mitigation

Number of Dwellings	AM Peak (0800-0900)				PM Peak (1700-1800)			
	0800-0815	0815-0830	0830-0845	0845-0900	1700-1715	1715-1730	1730-1745	1745-1800
350	2 (3)	2 (3)	3 (3)	2 (2)	1 (2)	1 (1)	1 (1)	1 (1)
450	3 (3)	3 (4)	4 (4)	2 (2)	2 (2)	1 (1)	1 (1)	1 (1)
500	4 (4)	4 (5)	5 (6)	2 (2)	2 (2)	1 (1)	1 (1)	1 (1)

5.24 The results in these tables demonstrate that:

- There are no capacity issues at the junction in the PM peak;
- The change in the queue profile between 450 and 500 dwellings at the junction is negligible and demonstrate that the capacity enhancement works have a beneficial effect;
- Mitigation reduces queues at the junction by up to 20%; and
- Once the junction model becomes unstable during the AM peak i.e. RFC > 0.9, the outputs should be considered with caution and should form the basis from which informed judgements can be made.

5.25 As a comparison, the capacity at the Cog Road / South Road junction has also been tested to account for no background growth in traffic as background growth is likely to come from developments such as this. The results (as shown in **Table 3**) show that the junction (with improvement works) has a maximum queue of 5 vehicles with traffic from 500 dwellings.

	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Max Q	RFC	Max Q
South Road (East)	-	-	-	-
Cog Road	0.852	5	0.622	2
South Road (West)	0.093	1	0.090	1

5.26 As such, and by comparing the results from **Table 5.8** and **5.9**, it is evident that the application of c. 17% background traffic growth between 2013 and 2026 has the main effect on junction capacity rather than the addition of traffic to the total 500 dwellings.

5.27 With an additional 40 dwellings being proposed on the lower site, this results in an increase in overall vehicle movements of 20 vehicles in the AM peak and 24 vehicles in the PM peak.

- 5.28 For the Cog Rd/South Road junction, this results in an additional 10 vehicles per hour on the Cog Road approach arm which is approximately 1 vehicle every 6 mins in the AM peak. For the PM peak, the increase is 6 additional vehicles which equates to 1 vehicle every 10 mins.

Sully Moors Road / Cardiff Road

- 5.29 In the context of the Sully Moors Road/Cardiff Road junction (McDonalds Roundabout), the traffic effect from 500 units would equate to an increase in traffic of 0.3% compared to the 2026 base flows in the AM peak period.

- 5.30 With an increase in the number of dwellings to 540 the effect of this small increase in traffic will be negligible and not result in a noticeable impact on the operation of the junction.

Summary

- 5.31 The results of the junction modelling show that there are no major issues on capacity on the local junction with the proposed measures in place contained within the granted scheme for 350 dwellings. The additional 150 dwellings proposed is demonstrated to be accommodated by the local highway network.

6 TRANSPORT IMPLEMENTATION STRATEGY (TIS)

- 6.1 The objective of the TIS is to promote sustainable modes of transport, including walking, cycling and public transport, and minimise the proportion of single occupancy car driver trips to and from the site.
- 6.2 The existing travel patterns for journeys to work were investigated for the ‘Sully’ ward. **Table 6.1** shows the mode splits from this ward, taken from the 2011 Census data.

Table 6.1 – Method of Travel to Work (2011 Census)

	Sully (Ward)	The Vale of Glamorgan (County)	Wales (Country)
Work Mainly at or from Home	6%	5%	5%
Underground, Metro, Light Rail, Tram	0%	0%	0%
Train	3%	5%	2%
Bus, Minibus or Coach	3%	3%	5%
Taxi	0%	0%	0%
Motorcycle, Scooter or Moped	1%	1%	1%
Driving a Car or Van	75%	69%	67%
Passenger in a Car or Van	5%	6%	7%
Bicycle	2%	1%	1%
On Foot	4%	9%	11%
Other Method of Travel to Work	1%	1%	1%

* not in employment figures have been excluded from this table

- 6.3 Whilst not representative of all journey types, it provides an indication of the approximate baseline mode split for all journeys in the area from which to base the aims and targets of the TIS.
- 6.4 The data summarised in **Table 6.1** illustrates that the existing residents of the ‘Sully’ ward currently travel to work with a high proportion of car drivers (75%), which is higher than travel to work statistics for The Vale of Glamorgan (69%) as a whole. Currently only 4% of existing residents walk to work compared to 9% in The Vale of Glamorgan.
- 6.5 The mode split for all journeys which the TIS seeks to achieve is set out in **Table 6.2**. The only target is car driver, with the targets for individual sustainable travel modes indications of only what one might expect the approximate split of journeys to be, but not specific targets in their own right (i.e all non-car driver modes of travel are sustainable travel modes).

Table 6.2 – TIS Target Mode Split

Mode	Target Mode Split
Work Mainly at or From	2%
Train	1%
Bus, Minibus or Coach	7%
Taxi	1%
Motorcycle, Scooter or	0%
Driving a Car or Van	68%
Passenger in a Car or Van	9%
Bicycle	3%
On Foot	9%
Other Method of Travel	0%
Total	100%

- 6.6 **Table 6.2** demonstrates the sustainable mode split for journeys to and from (and within the site) which the TIS is seeking to achieve. The measures aimed at achieving this mode split are set out in a Walking Strategy, Cycling Strategy and Public Transport Strategy.
- 6.7 In addition, the TIS aims to contribute towards achieving a mode shift towards sustainable travel in the adjoining communities.
- 6.8 Provided the overall contribution of sustainable travel modes helps deliver the car driver target, variations from the targets for sustainable travel modes are acceptable. Indeed, in some instances it is hoped they are exceeded.

Walking Strategy

- 6.9 Walking as a mode of transport has significant potential to contribute to an overall sustainable travel strategy. The main points contained in the walking strategy are contained in Section 2 and ultimately come down to an offer of choice, thereby walking is just one of the many attractive, easy, and safe options.
- 6.10 In 2009, 20% of all journeys made in Great Britain covered less than 1 mile, and more than half (56%) of car journeys covered less than 5 miles (Department for Transport 2010a, Transport Trends 2009).
- 6.11 While there will always be some short trips for which a car is the most convenient choice - such as carrying heavy shopping - many journeys can be undertaken on foot, and therefore walking can contribute significantly to a sustainable travel strategy.

6.12 The benefits of walking include:

- It's cheaper in terms of expenditure when compared to the private car or public transport;
- It's convenient, and can provide pleasure and enjoyment;
- It is good exercise, and can form part of a healthy lifestyle (the recommended amount of exercise over a week is activity which should add up to at least 150 minutes (2½ hours) of moderate-intensity activity, in bouts of 10 minutes or more³); and
- It is environmentally friendly, with no air or noise pollution and no carbon footprint.

Proposed Development

6.13 The Proposed Development facilitates journeys on foot through the provision of:

- A new pedestrian / cycle only access to the west;
- High quality, direct and continuous walking routes;
- A hierarchy of walking routes which includes traffic free routes;
- Safe crossing points along pedestrian desire lines;
- Appropriate signage for pedestrians (and cyclists);
- Integration with other transport modes, including connections to bus routes and rail stations.
- Existing pedestrian Zebra crossings placed on new raised tables, with improved lighting; and
- 'SLOW' markings and coloured surface dressing added to carriageway to increase driver awareness;
 - A raised table at the South Road/Swanbridge Road junction; and
 - A new Zebra pedestrian crossing close to the South Road/Cog Road junction.

³ Start Active, Stay Active – A report on physical activity for health from the four home countries' Chief Medical Officer, July 2011

6.14 The Walking Strategy to Sully Primary School is shown in **Figure 6.1**.

Figure 6.1 – Walking Strategy Plan



6.15 The Proposed Development includes a number of different types of pedestrian routes. In all instances at roads, there will be pavements on both sides, with some sections accommodating cyclists.

6.16 Within the site, design will be on a pedestrian scale to prioritise pedestrian movement and keep vehicle speeds low. Therefore, it is expected that uncontrolled crossing points, equipped with dropped kerbs and tactile paving, will be the most appropriate form of provision.

6.17 The proposed improvements contained in the previous TAA are shown in **Appendix B** and can be summarised as;

- Existing pedestrian Zebra crossings placed on new raised tables, with improved lighting;
- 'SLOW' markings and coloured surface dressing added to carriageway to increase driver awareness;
- A raised table at the South Road/Swanbridge Road junction; and
- A new Zebra pedestrian crossing close to the South Road/Cog Road junction.

- 6.18 It is considered that these measures will increase driver awareness of pedestrian activity, leading to lower speeds and a more comfortable environment for pedestrian movement and the more vulnerable road users.
- 6.19 Pedestrian routes will be well lit, with good natural surveillance, addressing safety and perceived safety. Pedestrian routes will be largely visible to passing traffic, houses and areas of activity, ensuring people feel safe and secure when they are walking.

Summary

- 6.20 A significant proportion of all journeys are undertaken over short distances. Walking as a mode of transport can play a key role in an overall sustainable transport strategy, providing the most efficient method of transporting large numbers of people over short distances.
- 6.21 The design and layout of the proposed development, supported by this Walking Strategy and an Interim Travel Plan, will facilitate and encourage journeys on foot. Increasing the proportion of journeys on foot will create healthier and more socially inclusive environments, assisting the formation of integrated communities.

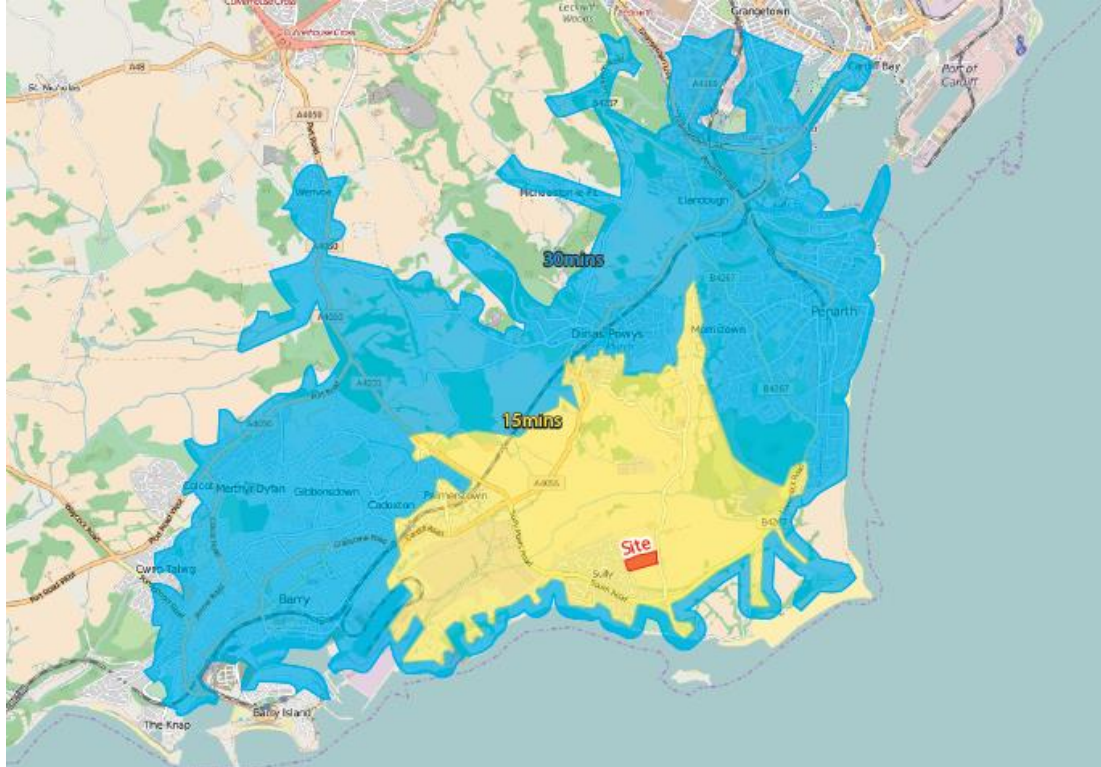
Cycling Strategy

- 6.22 The distance people are prepared to cycle depends on their fitness and physical ability, journey purpose, settlement size and the cycling conditions. In Holland, the proportion of people cycling rose from 6% in the 1970s to 32% now because of a conscious decision by the Dutch Government to prioritise cycling and provide the infrastructure. In Bristol the cycling mode split for the journey to work is growing strongly, and reported at about 30% in some areas, and in London about 25% of rush hour traffic is cyclists.
- 6.23 Whilst the Welsh Government does not provide specific guidance on comfortable cycle distances, Sustrans has suggested⁴ that up to 5 miles is an appropriate distance.
- 6.24 The DfT LTN 1/04 – Policy, Planning and Design for Walking and Cycling states that the mean average length for cycling is 4km, although people will cycle up to three times this distance to access services, facilities or their place of work/ education. It is not unreasonable to assume that people will cycle 30-45 minutes depending on the purpose of the journey. At a conservative average speed of approximately 15km/h (about 9mph) this is a distance of

⁴ http://www.sustrans.org.uk/sites/default/files/documents/sustrans_mhls_evidence_100511.pdf

between 7.5km and 11.25km. On this basis, **Figure 6.2** shows the 15 minute and 30 minute isochrones from the primary site access of the Proposed Development.

Figure 6.2 – 15, 30 & 45 minute indicative Cycling Isochrones



Proposed Development

- 6.25 The Proposed Development has been designed on a pedestrian/ cyclist level. The internal cycle network will be formed of traffic free and shared cycle routes. These shared streets are designed in line with the guidance contained within Manual for Streets.
- 6.26 **Figure 6.3** shows the cycle routes in the local area to the site, National Cycle Network route 88 runs to the east and west of the. National Cycle Route 88 is a proposed coastal route between Newport, Cardiff, Bridgend and Margam Country Park. Additional bike trails run from Cosmeston lakes to Swanbridge Road. These routes are likely to be used for recreational cycle trips, and utilised fully for commuting trips also by new residential to the areas.

Figure 6.3 – Cycle Routes in Vicinity of the Site



- 6.27 The proposed development will provide appropriate cycle parking provision at each residential dwelling, allowing residents to park and store bicycles safely.

Summary

- 6.28 The existing cycle network in the vicinity of the site is reasonable, especially for linking the site with the nearby Town/ Village Centres, Cardiff, and nearby train stations, to a wider area eased by the long distance routes available. Yet, few existing residents take advantage of this network, with only 2% of journeys to work undertaken by bicycle (2011 census).

Public Transport Strategy

Proposed Development

- 6.29 The site will be designed to ensure excellent pedestrian links to existing bus stops. The existing bus provision in the vicinity of the site is sufficient, with services to Cardiff, Penarth and Barry.
- 6.30 Easy access to Barry Rail station, which is within a sensible walking and cycling commuting distance for a multi-modal journey.

Travel Plan

- 6.31 The proposed development will be supported by a detailed Interim Community Travel Plan. The Travel Plan will detail the opportunities for walking within, to and from the proposed development. The Travel Plan will also outline the health, social, and economic benefits of walking. A copy of the Interim Community Travel Plan is contained in **Appendix F**.

Summary

- 6.32 The TIS aims to achieve a sustainable mode split for journeys to and from the site, improving on the existing mode split observed for journeys to work in the Sully ward, and facilitate a mode shift amongst existing residents to help create a more inclusive, pleasant and prosperous community.

7 SUMMARY AND CONCLUSION

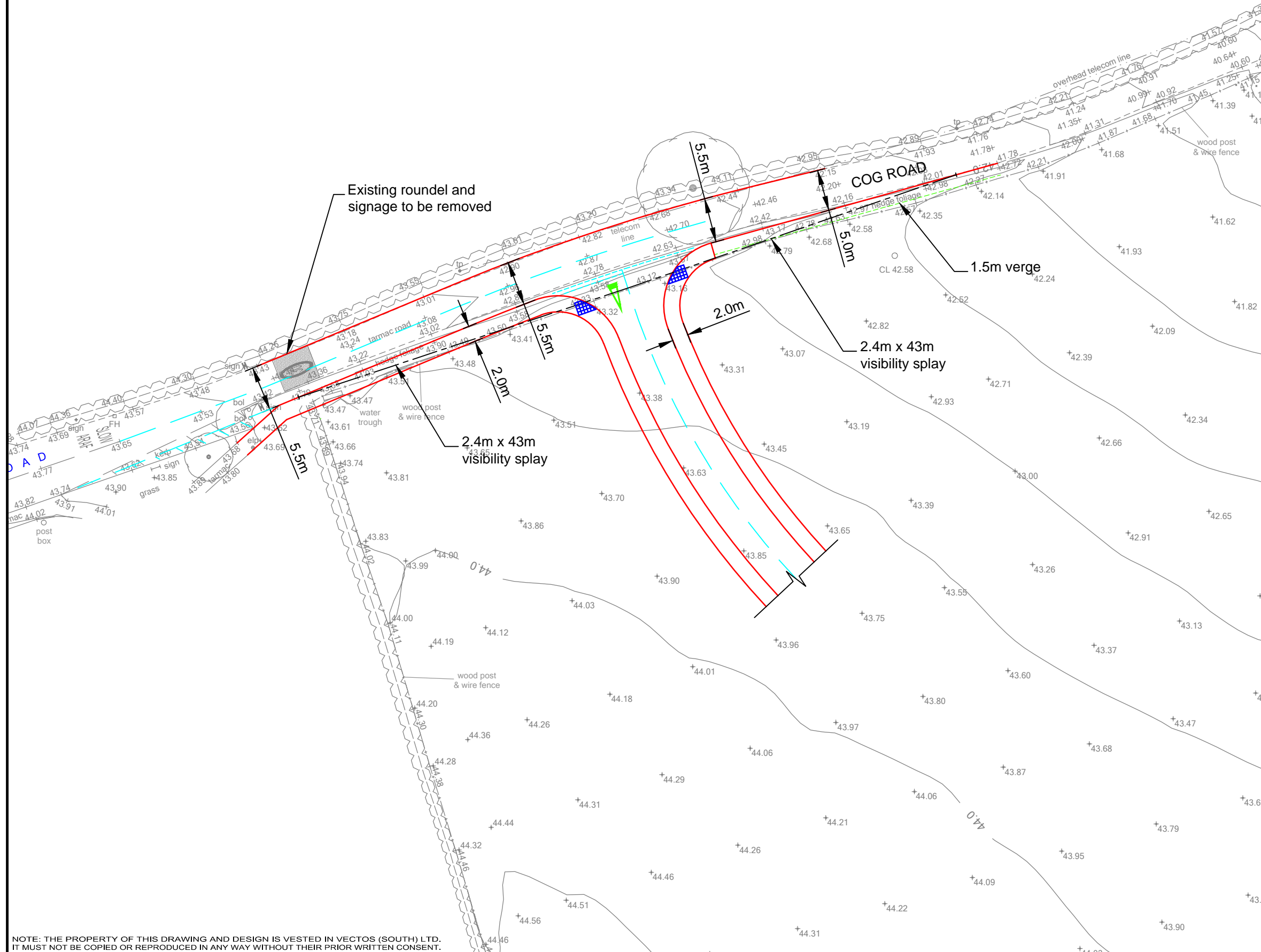
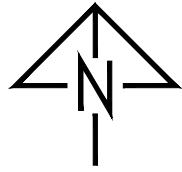
Summary

- 7.1 Vectos has been commissioned by Taylor Wimpey to provide traffic and transportation advice in relation to an outline application for the proposed development of up to 190 residential dwellings on land located to the south of Cog Road, Sully. The application site is an extension to the recently consented 350 dwelling scheme occupying land to the immediate south of the consented scheme.
- 7.2 The site is part of that allocated in the emerging Vale of Glamorgan Local Development Plan for residential development of up to 500 houses (Housing Allocation MG2 (46)), of which 350 have received recent consent, resolution to grant.
- 7.3 The intention is to create a sustainable socially inclusive community with these overriding principles embodied within the indicative masterplan for the site.
- 7.4 The site has been designed to promote pedestrian and cycle movement and there will be significant investment in this regard.
- 7.5 Vehicle access to the site will be from Cog Road via the minor arm of a new priority junction and a similar junction arrangement on Swanbridge Road.
- 7.6 Whilst the traffic impacts for up to the 500 dwellings have been previously reported, this TA has considered increasing this by a further 40 units. The findings are that in the AM peak period a further 20 vehicles are added to the highway network with an extra vehicle every 6 mins on the more sensitive Cog Rd approach to South Rd.
- 7.7 Similarly, in the PM peak, the direct impact on Cog Road approach to South Road is 1 vehicle every 10 minutes.
- 7.8 The impact at more remote junctions is not considered to result in a detrimental effect on the operation of the local highway network during the peak periods.
- 7.9 In order to increase improve travel choice and awareness in this area the development proposes to make a contribution via a Section 106 agreement to the following initiatives:
- £2k per household for sustainable travel improvements.

Conclusion

- 7.10 Therefore, the development provides necessary housing in a short timeframe. It is designed to maximise social inclusion and effect a step change in sustainable travel thinking. It has transport sustainability benefits for the existing local community, and no significant traffic impact.
- 7.11 Therefore, there is good reason to encourage this scheme, and no good reason to resist this on transport grounds.

DRAWINGS



REV.	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
Taylor Wimpey Homes

PROJECT:
Cog Road Sully

DRAWING TITLE:
**Northern Site Access
Priority Junction with Cog Road**

SCALES:
1:500 at A3

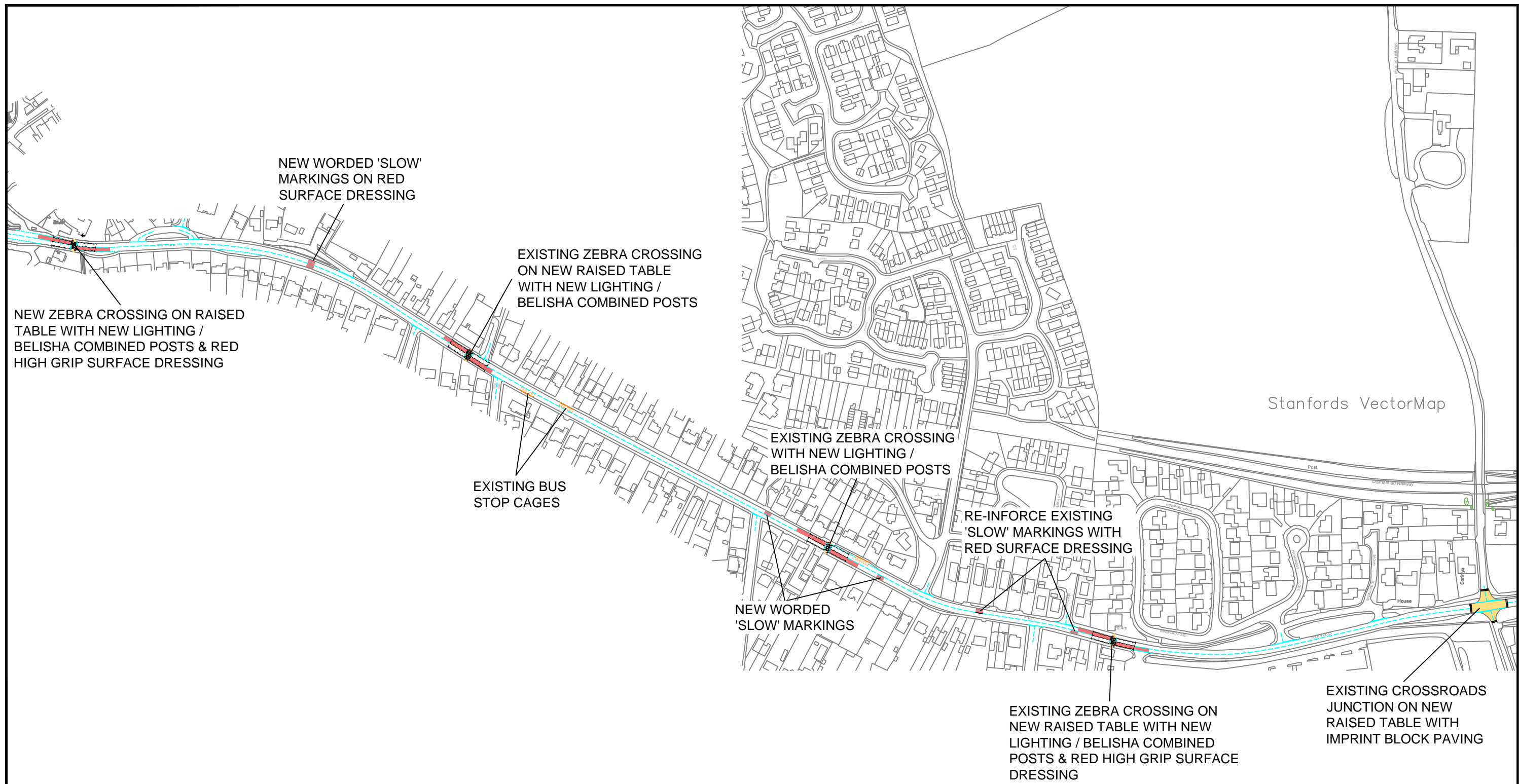
DRAWN: HE CHECKED: MR DATE: 24.2.15

vectors
transport planning specialists

10th Floor, Belmont House, Churchill Way, Cardiff CF10 2HE
t: 02920 720 860 e: enquiries@vectos.co.uk

DRAWING NUMBER: **W120604/A/08** REVISION: .

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REV.	DETAILS	DRAWN	CHECKED	DATE

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Cog Road, Sully

South Road, Sully

Pedestrian Access Improvements

DRAWN: AP CHECKED: MR DATE: 27.05.15 SCALES: Scale at A3

Taylor Wimpey Homes



10th Floor, Belmont House, Churchill Way, Cardiff CF10 2HE
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DRAWING NUMBER: **W120604_SK04** REVISION: .

APPENDIX A

Land South of Cog Road, Sully – Response to DC Comments (Highways)

June 2014

W120604/N03

Introduction

1. This note sets out the Vectos response to comments received from the Vale of Glamorgan (VoG) in relation to the Transport Assessment (TA) submitted as part of the planning application for a proposed residential development adjacent to Cog Road, Sully.
2. A meeting was held with VoG to discuss the comments made by the highway officer (Steve Arthur) in his email of 10th March 2014.
3. Each of the six points raised in the email of 10th March 2014 is dealt with in turn, and where appropriate, additional data is supplied in appendices.

Collision Data

4. The VoG comments requested that additional detail be provided with regards to the accident data in the vicinity of the site. **Appendix A** details each of the accidents identified in the data supplied by VoG. This illustrates that there is no clear factor or factors contributing to a large group of accidents. The frequency of the accidents is not unusual, and is not indicative of an inherent problem which would be exacerbated by the proposed development.
5. There were 13 recorded disparate accidents shown along South Road, with a variety of causation descriptions. These are shown in **Table 1**.

Table 1 – Recorded Accidents on South Road

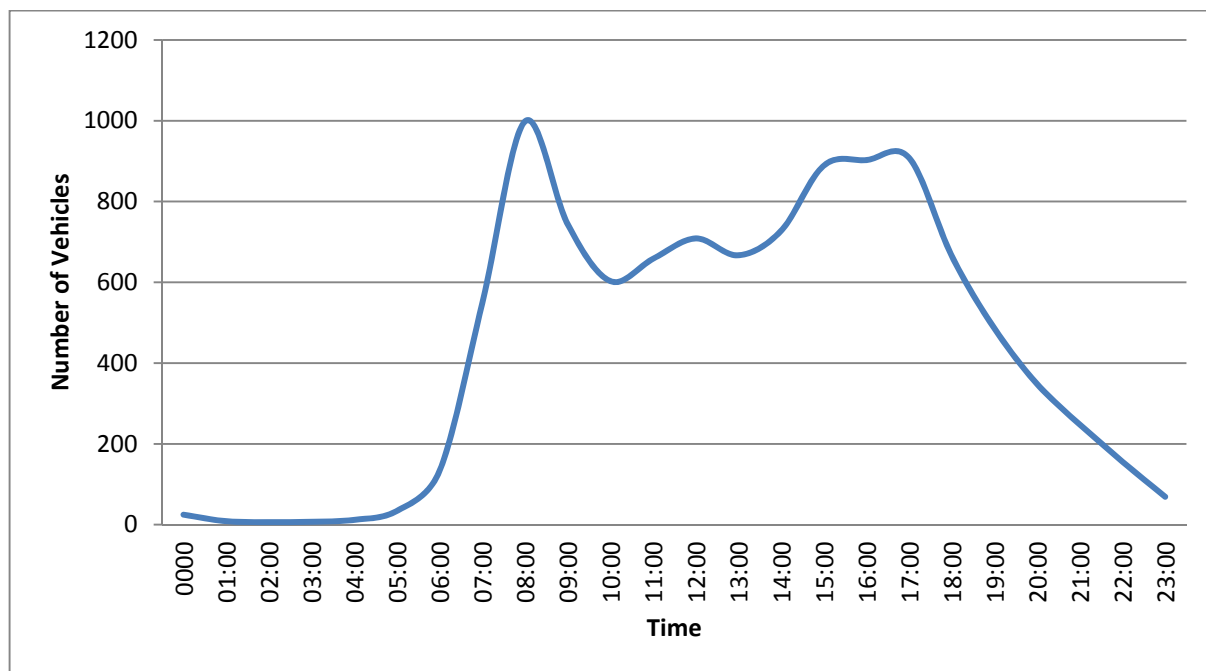
PIA Reference	Location	Time of Day	Causation Factors	Vehicles Involved
070166953	South Road j/w Minehead	08:54	failure to look properly - pulling out of junction	2
070170719	South Road j/w Highbridge Close	16:03	failure to look properly - pulling out of junction	2
070172714	South Road 10m west of Weston Avenue	08:45	pedestrian into path of vehicle	1
070172968	South Road	11:30	failure to look properly - pulling out of junction	2
080181007	South Road	11:30	lost control	2
080182609	South Road	18:31	pedestrian into path of vehicle	1

0214371	South Road j/w Beach Road	00:01	failure to look properly - pulling out of junction	2
080183450	South Road	08:00	failure to look properly - pulling out of junction	2
080184102	South Road j/w Cog Road	22:10	rear end shunt	2
090189606	South Road j/w Clevedon Avenue	15:35	failure to look properly - overtaking	2
090193261	South Road	08:00	direct sunlight	1
110213823	South Road j/w Minehead	12:00	failure to look properly - roadworks	2
100202435	South Road j/w Sully Moors Road	18:05	rear end shunt	3

6. From the above it can be seen that a 50% of the accidents were related to driver error on joining South Road from side roads or whilst travelling along South Rd. There is nothing to suggest that speed was the primary factor in any of the accidents recorded on South Road. The two rear end shunts may be related to vehicle speed but this is not mentioned in the accident data.
7. As the main pedestrian route through Sully, there are improvements which could be made, by way of reducing vehicle speeds. VoG have previously suggested that there is a desire to improve the existing crossing facilities across South Road by raising them. This is an initiative which would be supported, and it is suggested that the sustainable transport contribution which will be forthcoming from the development could be used to bring forward this improvement to the pedestrian environment.

South Road

8. VoG have previously supplied ATC data for an ATC on South Road, between Burnham Road and Minehead Avenue. This survey is contained at **Appendix B** and illustrates that the observed 85%ile speed on South Road is 30mph. The mean speed is 25mph which is lower than the designated speed limit of 30mph.
9. A graph showing the daily profile of the two-way flow on South Road is shown in **Chart 1**.

Chart 1 – Two-way Flows on South Road

10. South Road is a straight and flat road which would make it susceptible to high speeds. However, the speeds recorded from the ATC survey on South Road show that the 85th percentile speeds accord with the speed limit and the average speeds are lower than the 30mph limit.
11. There are many traffic calming features present on South Road i.e. pedestrian crossings, junctions and bus stops within the carriageway. Analysis of the accident data shows that four accidents occurred near the pedestrian crossings on South Road. However, detailed analysis of the accident data at this location shows that two of the accidents were caused by the driver's failure to look properly when pulling out of the junction, one was caused by an obstructed view due to roadworks, and one accident was caused by a pedestrian running into the path of a vehicle. The accidents do not suggest a safety issue caused by high speeds on South Road.
12. The 85th percentile speed recorded on South Road is consistent with the posted speed limit. Notwithstanding this, any measure to reduce speed, as set out above, is likely to be welcomed in terms of improving the perception of vehicle speeds.

Spine Road Design

13. The comments from VoG raised concern over the design of the 'spine road' through the site and its potential use as a rat run.
14. While the application is outline, the design ethos of the site is clear, in that it encourages connectivity through and across the site, without providing a 'highway' feel. The ethos of Manual for Streets will be adopted for the design of the internal routes, in order to promote an inclusive scheme. The spine road will however be designed to accommodate use by school buses, which currently travel between Cog Road and Swanbridge Road.

15. The spine road will not be designed as a straight road and will instead meander through the development in order to discourage high speeds. The spine road will be subject to a 20mph speed limit, encouraging those who are more proficient to cycle on the road, and creating a more pleasant environment for pedestrians.
16. The development will follow a hierarchy of movement which provides greatest priority to pedestrians and cyclists, followed by public transport, with least priority to the private car.
17. Following further discussions with VoG officers, the design of the site is to be amended to better show this.
18. As set out in the Transport Assessment, the traffic survey showed that the number of vehicle movements currently between Cog Road and Swanbridge Road is low, and the design of the scheme will not cause any reason for this to significantly alter this demand.

Trip Rates

19. As detailed in the TA, average trip rates from the TRICS database were used in assessing the potential impact of the development. These trip rates were validated against local surveys, which showed lower trip rates than those derived from TRICS. Good practice is to use local surveys as a starting point, and the approach adopted in the TA, using higher than observed trip rates, can be seen to be robust.
20. The reason for using average, rather than 85%ile trip rates was as a result of filtering applied during the interrogation of TRICS. This resulted in 12 comparable sites. The TRICS Good Practice guidance states that 20 sites should be selected if trying to achieve an 85%ile trip rate.
21. Notwithstanding this, VoG have requested that a sensitivity test is undertaken using 85%ile trip rates. This is considered unnecessary, as the assessment is already overly robust, as it could have justifiably been undertaken using the surveyed trip rates with the TRICS average rates used for a sensitivity test.

Wider Junctions

22. As detailed in the TA, the impact of the proposed development will be slight (less than 5%, and in most instances 3% or less). The impact of the proposed development by arm at each of the wider junctions is shown in **Tables 2 to 5**.

Table 2 – Port Road / Barry Docks Link Road

Link	AM		PM	
	Dev Flows (Vehs)	Additional vehs (per min)	Dev Flows (Vehs)	Additional vehs (per min)
Port Road (N)	51	0.85	58	0.96
Barry Docks Link Road	51	0.85	58	0.96
Port Road (W)	0	0	0	0

Table 3 – Merrie Harrier Junction

Link	AM		PM	
	Dev Flows (Vehs)	Additional vehs (per min)	Dev Flows (Vehs)	Additional vehs (per min)
Penland Road	21	0.36	25	0.41
Barry Road	49	0.82	62	1.03
Andrew Road	0	0	0	0
Cardiff Road	71	1.18	86	1.44

Table 4 – Sully Moors Road / Cardiff Road

Link	AM		PM	
	Dev Flows (Vehs)	Additional vehs (per min)	Dev Flows (Vehs)	Additional vehs (per min)
Cardiff Road (N)	66	1.1	74	1.24
Sully Moors Road	127	2.11	143	2.38
Cardiff Road (S)	10	0.16	11	0.18
Barry Docks Link Road	51	0.85	58	0.96

Table 5 – Cardiff Road / Redlands Road

Link	AM		PM	
	Dev Flows (Vehs)	Additional vehs (per min)	Dev Flows (Vehs)	Additional vehs (per min)
Cardiff Road (N)	85	1.37	96	1.6
Redlands Road	16	0.27	22	0.36
Cardiff Road (S)	66	1.1	74	1.24

23. Based on the results in **Tables 2 to 5** and for the purposes of assessment, the predicted number of additional vehicles per minute is estimated as 2.38 vehicles on the Sully Moors Road arm in the PM Peak. The junctions experience minor increases in additional vehicles over the AM and PM peak periods. However, it is acknowledged by the VoG Council that these junctions already have capacity issues during the peak periods.
24. It is agreed that there is no reasonable mitigation which could be brought forward by this development which would provide betterment at these junctions, and no VoG scheme which can be contributed to. It should also be noted that in the future year scenario it is quite possible that traffic behaviour/flows and peak periods will change.
25. In any event, the development will be providing a significant quantum of money towards sustainable travel. This should be seen as a more suitable long-term form of mitigation than attempting to provide minor improvements to highway capacity.

Cog Road Junction

26. The modelling results in the TA show that the Cog Road junction with South Road may be expected to exceed capacity on the future year of 2026 in the AM peak period, ostensibly with vehicles queuing to exit Cog Road. The queue length at this junction is shown in **Table 6** for each modelling scenario and for each 15 minute time period. The queue lengths at each arm have been derived from the PICADY modelling results.

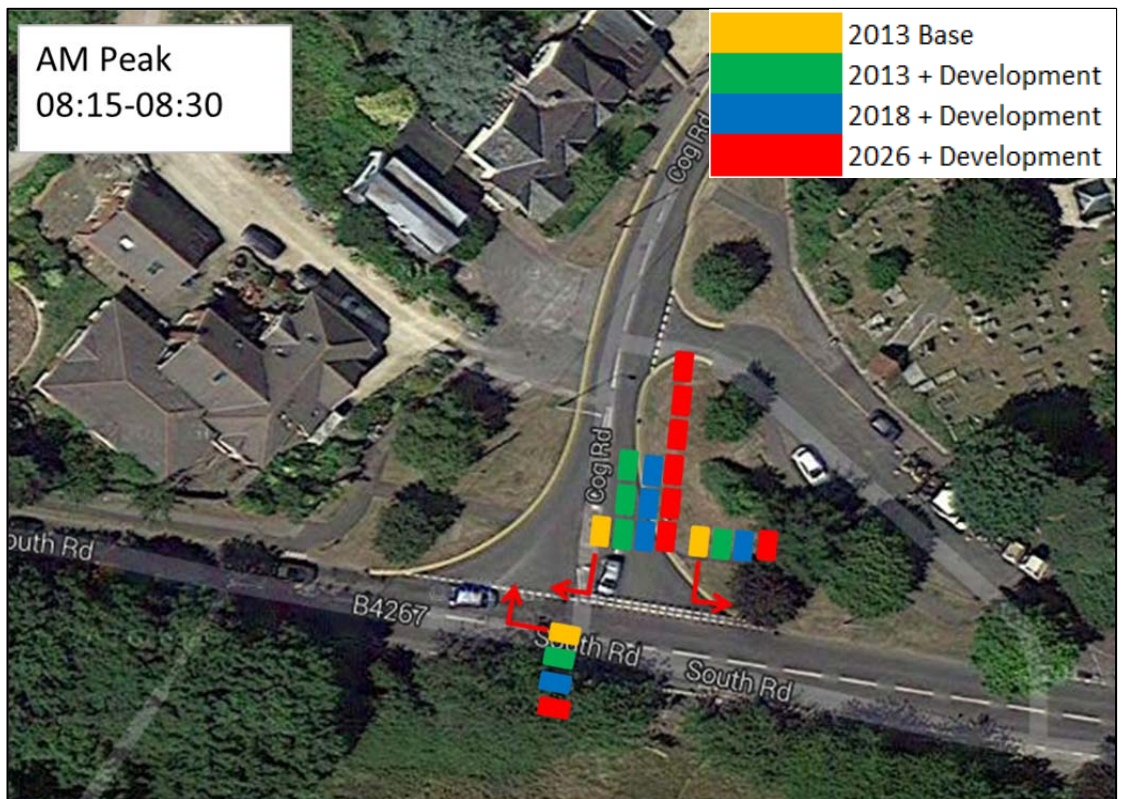
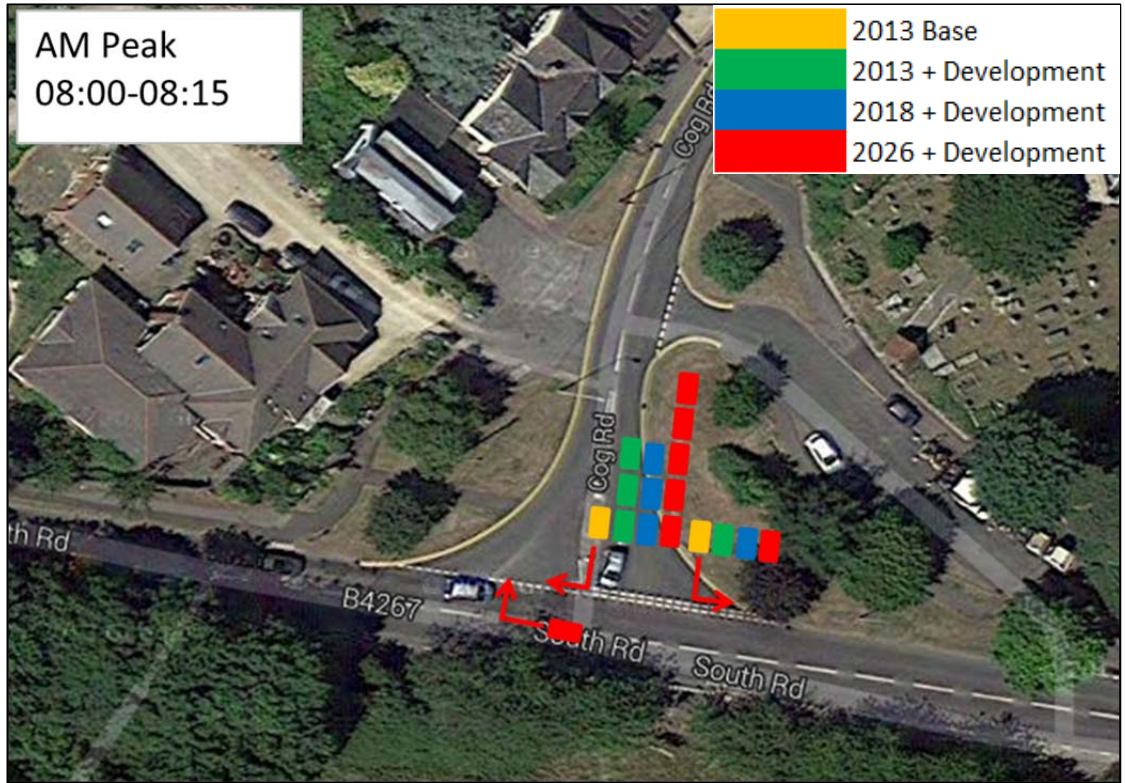
Table 6 – Queuing at Cog Road / South Road Junction

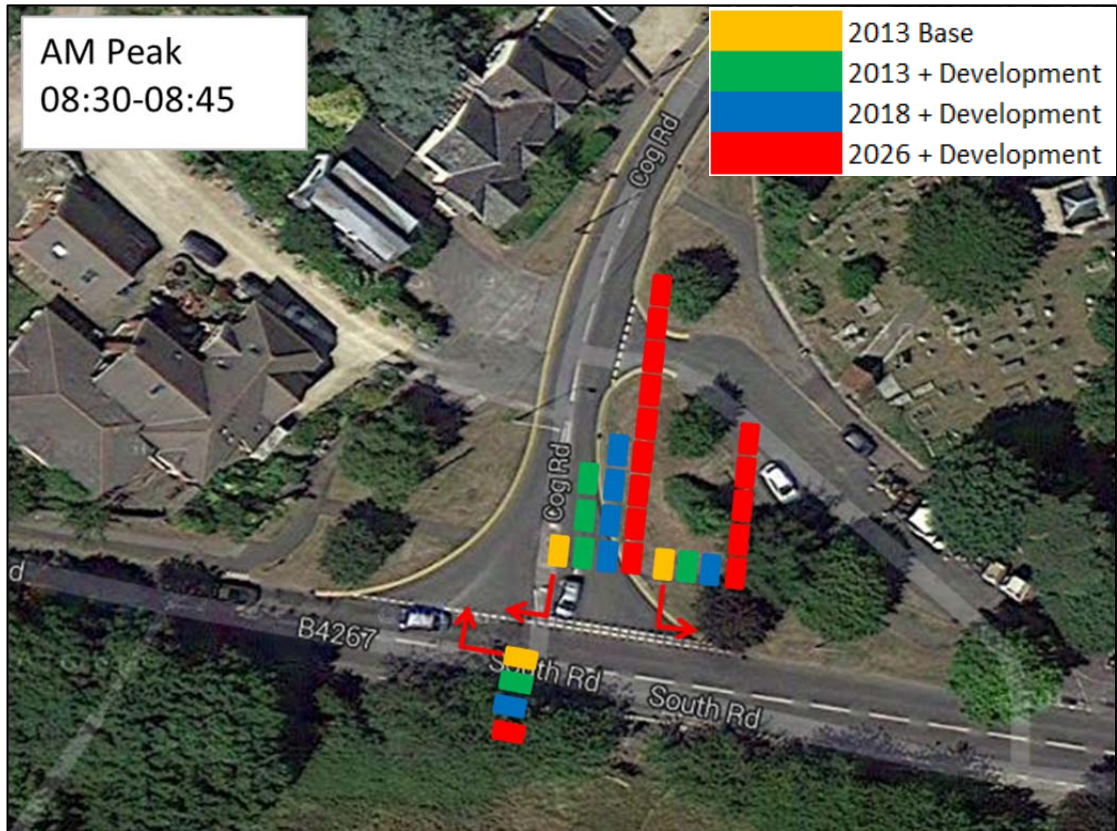
Number of Vehicles in Queue (AM)												
	2013			2013 + Development			2018 + Development			2026 + Development		
	B-A	B-C	C-AB	B-A	B-C	C-AB	B-A	B-C	C-AB	B-A	B-C	C-AB
08:00-08:15	0.6	0.0	0.0	2.1	0.1	0.0	2.6	0.1	0.0	0.2	5.0	0.1
08:15-08:30	0.5	0.1	0.1	2.1	0.1	0.1	2.9	0.1	0.1	0.5	5.4	0.1
08:30-08:45	0.4	0.1	0.1	2.5	0.3	0.1	3.5	0.4	0.1	4.7	8.9	0.2
08:45-09:00	0.3	0.2	0.1	1.2	0.3	0.1	1.5	0.4	0.1	0.8	2.9	0.1
Number of Vehicles in Queue (PM)												
	2013			2013 + Development			2018 + Development			2026 + Development		
	B-A	B-C	C-AB	B-A	B-C	C-AB	B-A	B-C	C-AB	B-A	B-C	C-AB
17:00-17:15	0.5	0.1	0.1	1.2	0.1	0.1	1.4	0.1	0.1	2.0	0.2	0.1
17:15-17:30	0.3	0.1	0.1	0.5	0.1	0.1	0.6	0.1	0.1	0.8	0.2	0.2
17:30-17:45	0.3	0.1	0.1	0.7	0.1	0.1	0.8	0.2	0.1	1.1	0.2	0.1
17:45-18:00	0.2	0.1	0.0	0.3	0.1	0.0	0.4	0.1	0.0	0.5	0.1	0.0

(A = South Road (W), B = Cog Road, C = South Road (E))

27. The results in **Table 6** show that there is a 9 vehicle queue on Cog Road in the 2026 + Development scenario in the AM Peak. However, it is shown that this degree of queuing is present during one 15 minute time segment (08:30-08:45) and that by the end of the next 15 minute segment, the queue decreases to 3 vehicles. In the PM peak there is no excessive queuing in any of the modelling scenarios.
28. For ease of reference, a visual interpretation of the queue length results in the AM peak period is shown in **Figure 1**.

Figure 1 – Queue Lengths at Cog Road / South Road Junction – AM Peak





29. From the evidence in **Table 6** and **Figure 1**, the major change in queue length occurs between 2018 and 2026 which can be attributed to the traffic growth applied to the 2013

base flows for these years. It can be argued that this level of growth is unlikely on Cog Road and also that it is not for the proposed development to mitigate against growth.

30. As with any traffic modelling dealing with future year assessments, a degree of caution needs to be applied when considering the results. Future year traffic growth predictions cannot always be relied on to accurately forecast changes in travel behaviour, particularly over such a long time period. Whilst some queuing is shown in part of the AM peak period, it is not a continuous queue as it ebbs and flows throughout the peak period. By the end of the AM peak period, the level of queuing on Cog Road is 3 vehicles.
31. Nevertheless, as with the wider area junctions, it would “not be appropriate to attempt to mitigate this impact with junction modifications.” The nature of Cog Road and the Cog Road/South Road junction (i.e. the junction has good visibility in both directions, direct driveway access onto Cog Road, access to church frontage/parking, bus stops and cycleway/route crossing) means that there are limited opportunities to change the layout of the junction. Furthermore, policy supports the use of travel planning and smarter choices to encourage changes in travel behaviour. This is consistent with the provision of the funding for sustainable travel which will be provided by the development.
32. The site is located in close proximity to local schools and bus services to secondary education are provided and therefore there is opportunity to reduce the proportion of vehicle trips in the AM peak period. Data from the National Travel Survey (NTS) suggests that 28% of trips in the AM peak are educational trips; therefore the traffic flows from the development are an overestimate.

APPENDIX A

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 0199029	South Road Area - 5 Years		Grid Reference 314780 / 168300 Police Officer Attend: Yes
Date 19/03/2010 Time 08:20 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Sullymoors Road, Sully, Vale of Glamorgan		Description V1 and V2 turning into Sullymoors Road. V2 Stopped Due to Stationary Traffic, V1 Failed to Stop and Collided with Rear of V2. of Accident	
SITE DETAILS Speed Limit 30 MPH Carriageway Roundabout Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 17 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Taking pupil to/from school		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 55 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Slowing or stopping Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 55 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Taking pupil to/from school		Cas No 2 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 13 yrs Sex Female Post code Car Passenger? Front seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Yes on way to or from school Roadworker injured		
		Other Details		
Full Details		21-June-2013		Accident Ref.No 0199029

SEVERITY SLIGHT		District The Vale of Glamorgan Ref.No 0214371		South Road Area - 5 Years		Grid Reference 316410 / 167940	
Date 04/02/2012 Day Saturday		Road B4267 Location B4267 South Road Junction with Beach Road, Sully		Description V1 Has Entered Road Attempting to Cross to Opposite Road and Has Not Seen V2. V1 Has then Collided with V2.		Police Officer Attend: Yes	
Time 00:01		Weather Fine without high winds		Road Surface Dry		Street Lighting Dark: street lights present and lit	
Speed Limit 30 MPH		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None			
Carriageway Single carriageway		Junction Detail Crossroads		Junction Control Give way or uncontrolled		2nd Road Number U	
Pedestrian Facilities None within 50 metres		No physical crossing facility within 50 r					
VEHICLES INVOLVED 2				CASUALTIES INVOLVED 3			
Veh.No. 1 Vehicle type Van/Goods < 3.5t Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Left carriageway nearside Hit object in c'way? None Hit object off c'way? Road sign/traffic signal First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 28 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 28 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Left carriageway offside Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 19 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				Cas No 2 Cas Class Passenger Veh ref No 1 Severity SLIGHT Age 31 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
				Cas No 3 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 19 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured			
Full Details		21-June-2013		Accident Ref.No 0214371			

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 0214641	South Road Area - 5 Years	Grid Reference 314510 / 169150 Police Officer Attend: Yes
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Date 12/02/2012 Day Sunday Time 21:30 Weather Fine without high winds Road Surface Wet/Damp Street Lighting Dark: street lights present and lit	Road A4055 Location A4055, Cardiff Round Roundabout with A4231 Barry Link Road Description as V2 in Process of Negotating Roundabout to Travel ahead V1 Has Entered Roundabout. Front of V2 Has Clipped Rear Offside of V1 of Accident Causing it to Spin.
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 40 MPH Carriageway Roundabout Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number A4231 Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None		CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 18 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Passenger Veh ref No 1 Severity SLIGHT Age 26 yrs Sex Female Post code Car Passenger? Rear seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 28 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	<u>Other Details</u>
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 0214825	South Road Area - 5 Years	Grid Reference 314610 / 168710 Police Officer Attend: Yes
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Date 22/02/2012 Day Wednesday Time 12:15 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight	Road U Location Sully Moors Road, Barry Description V1 Failed to Brake in Time and Collided with Rear of V2. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Single carriageway	None	
Junction Detail T or staggered junction	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number U	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 2
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Veh.No. 1 Manoeuvre Veh. direction from South to North Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 73 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Vehicle type Car Make Model Towing? No tow or articulation Veh. direction from South to North Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 73 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Severity SLIGHT Cas Class Driver or Rider Age 73 yrs Sex Male Veh ref No 1 Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Manoeuvre Veh. direction from South to East Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 46 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	Vehicle type Van/Goods < 3.5t Make Model Towing? No tow or articulation Veh. direction from South to East Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 46 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	Cas No 2 Severity SLIGHT Cas Class Passenger Age 58 yrs Sex Male Veh ref No 2 Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Other Details	
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 0215463	South Road Area - 5 Years			Grid Reference 316810 / 172190 Police Officer Attend: Yes
Date 04/03/2012 Day Sunday Time 16:35 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Sully Road 200 Meters North of Cog Road, Sully, Vale of Glamorgan	Description V2 Has Pulled to Side of Road to Allw VI to Pass, at which Point VI Has Broke Sharply, Lost Control and Collided with V2 of Accident			
SITE DETAILS		SPECIAL SITE CONDITIONS			
Speed Limit 60 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None		CARRIAGEWAY HAZARDS		None
VEHICLES INVOLVED 2			CASUALTIES INVOLVED 1		
Veh.No. 1 Manoeuvre Veh. direction from South to North Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 38 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Vehicle type M/cycle > 500cc Make Model Towing? No tow or articulation Other veh.hit (ref.no) 2 Hit and run Not hit and run Sex Male Breath test Negative Driving Lic Foreign veh. Not foreign registered vehicle	Cas No 1 Cas Class Driver or Rider Age 38 yrs Sex Male Veh ref No 1 Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	Other Details		
Veh.No. 2 Manoeuvre Veh. direction from South to North Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 24 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Vehicle type Car Make Model Towing? No tow or articulation Other veh.hit (ref.no) 1 Hit and run Not hit and run Sex Male Breath test Negative Driving Lic Foreign veh. Not foreign registered vehicle				
Full Details		21-June-2013		Accident Ref.No 0215463	

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070165566	South Road Area - 5 Years		Grid Reference 314470 / 169150 Police Officer Attend: Yes
Date 09/04/2007 Day Monday Time 19:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road A4055 Location Cardiff Road, Barry, Jw Barry Docks Link Road. Description V1 Stopped to Allow V2 Through Gap on Roaundabout and Collision Occurred. of Accident			
SITE DETAILS		SPECIAL SITE CONDITIONS		
Speed Limit 30 MPH Carriageway Roundabout Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None			
		CARRIAGEWAY HAZARDS		
None				
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Manoeuvre Going ahead other Veh. direction from East to West Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Drivers age 49 yrs Sex Female Breath test Negative Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Make Model		Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 49 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	
Veh.No. 2 Vehicle type Car Manoeuvre Going ahead other Veh. direction from North to South Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Drivers age 23 yrs Sex Male Breath test Not requested Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Make Model		Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 23 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	
				Other Details
Full Details		21-June-2013		Accident Ref.No 070165566

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070165611	South Road Area - 5 Years	Grid Reference 314750 / 168120 Police Officer Attend: Yes
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Date 20/04/2007 Day Friday Time 10:20 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Hayes Road, Sully. Description V1 Overtook Queue of Traffic and Collided with V2 which was turning Right. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Single carriageway	None	
Junction Detail Not at or within 20 metres of junction	Junction Control	CARRIAGEWAY HAZARDS	
2nd Road Number	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Bus or Coach Make Model Manoeuvre Overtaking stat veh on its offside Veh. direction from East to West Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 43 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 45 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from East to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 45 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	<u>Other Details</u>
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070166953	South Road Area - 5 Years		Grid Reference 315460 / 168190 Police Officer Attend: Yes
Date 26/05/2007 Day Saturday Time 08:54 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Road, Sully, Junction with Minehead. Description V1 Pulled out of Side Road into Path of V2 and Collision Occurred. of Accident			
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		
		CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Manoeuvre Turning right Veh. direction from East to North Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 2 Drivers age 86 yrs Sex Female Breath test Negative Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 51 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type M/cycle > 500cc Manoeuvre Going ahead other Veh. direction from North to South Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Drivers age 51 yrs Sex Male Breath test Negative Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 2 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 59 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
		Other Details		
Full Details		21-June-2013		Accident Ref.No 070166953

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070168722	South Road Area - 5 Years	Grid Reference 316370 / 168820 Police Officer Attend: Yes
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Date 11/07/2007 Day Wednesday Time 23:20 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Dark: no street lighting	Road U Location Sully Road, Sully Description a Cat Ran into Path of V1 which Caused it to Lose Control and Collide with Hedgerow of Accident
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SPEED LIMIT		SPECIAL SITE CONDITIONS	
Speed Limit 40 MPH	Carriageway Single carriageway	None	
Junction Detail Not at or within 20 metres of junction	Junction Control	CARRIAGEWAY HAZARDS	
2nd Road Number	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	Any animal in carriageway (exce	

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 3
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Veh.No. 1 Vehicle type Car Manoeuvre Going ahead other Veh. direction from Northeast to Southwest Towing? No tow or articulation Skidded Skidded and overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 20 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	<table border="1"> <tr> <td>Cas No 1 Cas Class Passenger Veh ref No 1</td> </tr> <tr> <td>Severity SLIGHT Age 17 yrs Sex Female Post code</td> </tr> <tr> <td>Car Passenger? Front seat passenger PSV Passenger? Not a passenger</td> </tr> <tr> <td>Seat Belt Unknown Cycle Helmet</td> </tr> <tr> <td>Ped Movement Not applicable</td> </tr> <tr> <td>Ped Location Not applicable</td> </tr> <tr> <td>Ped Direction to Not applicable</td> </tr> <tr> <td>School Pupil Other</td> </tr> <tr> <td>Roadworker injured</td> </tr> </table> <table border="1"> <tr> <td>Cas No 2 Cas Class Passenger Veh ref No 1</td> </tr> <tr> <td>Severity SLIGHT Age 19 yrs Sex Male Post code</td> </tr> <tr> <td>Car Passenger? Rear seat passenger PSV Passenger? Not a passenger</td> </tr> <tr> <td>Seat Belt Unknown Cycle Helmet</td> </tr> <tr> <td>Ped Movement Not applicable</td> </tr> <tr> <td>Ped Location Not applicable</td> </tr> <tr> <td>Ped Direction to Not applicable</td> </tr> <tr> <td>School Pupil Other</td> </tr> <tr> <td>Roadworker injured</td> </tr> </table>	Cas No 1 Cas Class Passenger Veh ref No 1	Severity SLIGHT Age 17 yrs Sex Female Post code	Car Passenger? Front seat passenger PSV Passenger? Not a passenger	Seat Belt Unknown Cycle Helmet	Ped Movement Not applicable	Ped Location Not applicable	Ped Direction to Not applicable	School Pupil Other	Roadworker injured	Cas No 2 Cas Class Passenger Veh ref No 1	Severity SLIGHT Age 19 yrs Sex Male Post code	Car Passenger? Rear seat passenger PSV Passenger? Not a passenger	Seat Belt Unknown Cycle Helmet	Ped Movement Not applicable	Ped Location Not applicable	Ped Direction to Not applicable	School Pupil Other	Roadworker injured
Cas No 1 Cas Class Passenger Veh ref No 1																			
Severity SLIGHT Age 17 yrs Sex Female Post code																			
Car Passenger? Front seat passenger PSV Passenger? Not a passenger																			
Seat Belt Unknown Cycle Helmet																			
Ped Movement Not applicable																			
Ped Location Not applicable																			
Ped Direction to Not applicable																			
School Pupil Other																			
Roadworker injured																			
Cas No 2 Cas Class Passenger Veh ref No 1																			
Severity SLIGHT Age 19 yrs Sex Male Post code																			
Car Passenger? Rear seat passenger PSV Passenger? Not a passenger																			
Seat Belt Unknown Cycle Helmet																			
Ped Movement Not applicable																			
Ped Location Not applicable																			
Ped Direction to Not applicable																			
School Pupil Other																			
Roadworker injured																			

<table border="1"> <tr> <td>Cas No 3 Cas Class Passenger Veh ref No 1</td> </tr> <tr> <td>Severity SLIGHT Age 19 yrs Sex Female Post code</td> </tr> <tr> <td>Car Passenger? Rear seat passenger PSV Passenger? Not a passenger</td> </tr> <tr> <td>Seat Belt Unknown Cycle Helmet</td> </tr> <tr> <td>Ped Movement Not applicable</td> </tr> <tr> <td>Ped Location Not applicable</td> </tr> <tr> <td>Ped Direction to Not applicable</td> </tr> <tr> <td>School Pupil Other</td> </tr> <tr> <td>Roadworker injured</td> </tr> </table>	Cas No 3 Cas Class Passenger Veh ref No 1	Severity SLIGHT Age 19 yrs Sex Female Post code	Car Passenger? Rear seat passenger PSV Passenger? Not a passenger	Seat Belt Unknown Cycle Helmet	Ped Movement Not applicable	Ped Location Not applicable	Ped Direction to Not applicable	School Pupil Other	Roadworker injured
Cas No 3 Cas Class Passenger Veh ref No 1									
Severity SLIGHT Age 19 yrs Sex Female Post code									
Car Passenger? Rear seat passenger PSV Passenger? Not a passenger									
Seat Belt Unknown Cycle Helmet									
Ped Movement Not applicable									
Ped Location Not applicable									
Ped Direction to Not applicable									
School Pupil Other									
Roadworker injured									

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070170170	South Road Area - 5 Years		Grid Reference 314551 / 169027 Police Officer Attend: Yes
Date 26/08/2007 Day Sunday Time 11:45 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road B4267 Location B4267 Sullymoors Road, Approx 20 Metres from Jw Cardiff Road, Barry			
Description V1 Overtook V2 and Struck V2's Wing Mirror and Failed to Stop. V2 Followed V1 for some Distance and V1 then Braked Hard Causing of Accident V2 to Brake and Swerve into Oncoming Lane Colliding with V3 and 4.				
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		
		CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 4		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Manoeuvr Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Hit and Run Drivers age ? yrs Sex Not know Breath test Driver not contacted Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 57 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type M/cycle > 500cc Manoeuvr Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 3 Hit and run Not hit and run Drivers age 57 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 2 Cas Class Passenger Veh ref No 4 Severity SLIGHT Age 21 yrs Sex Female Post code Car Passenger? Rear seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
		<u>Other Details</u>		
Full Details		21-June-2013		Accident Ref.No 070170170

Veh.No.	3	Vehicle type	Car	Make		Model	
Manoeuvre	Slowing or stopping						
Veh. direction from	South to North		Towing?	No tow or articulation			
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Approaching junction or waiting						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Offside						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	54 yrs	Sex	Male	Breath test	Negative		
Left Hand Drive	Unknown		Foreign veh.	Not foreign registered vehicle			
Journey purpose	Other						

Veh.No.	4	Vehicle type	Car	Make		Model	
Manoeuvre	Slowing or stopping						
Veh. direction from	South to North		Towing?	No tow or articulation			
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Approaching junction or waiting						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Offside						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	37 yrs	Sex	Male	Breath test	Negative		
Left Hand Drive	Unknown		Foreign veh.	Not foreign registered vehicle			
Journey purpose	Other						

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070170719	South Road Area - 5 Years	Grid Reference 316170 / 167900 Police Officer Attend: Yes
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Date 26/08/2007 Day Sunday Time 16:03 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road B4267 Location South Road, Sully Jun Ction with Highbridge Close. Description VI Pulled out from Junction into Path of V2 and Collision Occurred. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Single carriageway	None	
Junction Detail T or staggered junction	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number U	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Turning right Veh. direction from North to West Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Drivers age 84 yrs Sex Male Left Hand Drive Unknown Journey purpose Other	Make Model Towing? No tow or articulation On main carriageway not in restricted lane Entering main road Did not leave carriageway None None Offside Hit and run Not hit and run Breath test Negative Driving Lic Foreign veh. Not foreign registered vehicle	Cas No 1 Cas Class Driver or Rider Severity SLIGHT Age 84 yrs Sex Male Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	Veh ref No 1 Post code
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<u>Other Details</u>			
Veh.No. 2 Vehicle type Car Manoeuvre Going ahead other Veh. direction from West to East Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Drivers age 28 yrs Sex Female Left Hand Drive Unknown Journey purpose Other	Make Model Towing? No tow or articulation On main carriageway not in restricted lane Approaching junction or waiting Did not leave carriageway None None Front Hit and run Not hit and run Breath test Negative Driving Lic Foreign veh. Not foreign registered vehicle		

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070172714	South Road Area - 5 Years		Grid Reference 315746 / 168039 Police Officer Attend: Yes
Date 26/10/2007 Day Friday Time 08:45 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Road Sully, 10 Metres West of Weston Avenue. Description Appears Pedestrian Ran out into Path of V1 and Collision Occurred. of Accident			
SITE DETAILS Speed Limit 30 MPH Carriageway Dual carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres Zebra crossing		SPECIAL SITE CONDITIONS None CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 1		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 35 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Pedestrian Veh ref No 1 Severity SLIGHT Age 13 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Unknown or other Ped Location In carriageway, not crossing Ped Direction to Northbound School Pupil Other Roadworker injured Not applicable <u>Other Details</u>		
Full Details		21-June-2013		Accident Ref.No 070172714

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 070172968	South Road Area - 5 Years	Grid Reference 316140 / 167900 Police Officer Attend: Yes
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Date 29/08/2007 Day Wednesday Time 11:30 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road B4267 Location South Road, Sully, Vale of Glamorgan Description Vehicle One Has Pulled out of Junction into Path of Vehicle Two. a Collision Has Occured. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None		CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 3
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning left Veh. direction from North to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 86 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 86 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
Veh.No. 2 Vehicle type Bus or Coach Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 54 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 54 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured

Veh.No. 3 Vehicle type Car Make Model Manoeuvre Turning left Veh. direction from North to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 86 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 3 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 74 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Seated passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080181007	South Road Area - 5 Years		Grid Reference 315865 / 167976 Police Officer Attend: Yes
Date 10/07/2008 Day Thursday Time 11:30 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road B4267 Location B4267 South Road, Sully Description Vehicle One Has Clipped Parked Unattended Vehicle Two and Flipped over onto its Roof. of Accident			
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Other junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 2			CASUALTIES INVOLVED 1	
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Overtaking moving veh on its offside Veh. direction from West to East Towing? No tow or articulation Skidded Overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 21 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work			Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 21 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Parked Veh. direction from Parked to Parked Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 67 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other			<u>Other Details</u>	
Full Details			21-June-2013	
			Accident Ref.No 080181007	

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080182125	South Road Area - 5 Years			Grid Reference 314900 / 168280 Police Officer Attend: No - reported over the counter
Date 25/08/2008 Time 12:30 Weather Fine without high winds Road Surface Wet/Damp Street Lighting Daylight	Road U Location Hayes Rd., Sully		Description Vehicle Has Lost Control and Crashed Through a Roundabout and Ended up in a Ditch. of Accident		
SPEED LIMITS		SPECIAL SITE CONDITIONS			
Speed Limit 30 MPH	None				
CARRIAGEWAY HAZARDS					
Carriageway Roundabout	None				
Junction Detail Roundabout					
Junction Control Give way or uncontrolled					
2nd Road Number U					
Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r					
VEHICLES INVOLVED 1			CASUALTIES INVOLVED 4		
Veh.No. 1 Manoeuvre Going ahead right hand bend Veh. direction from Northwest to Southwest Skidded Skidded and overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Left carriageway straight ahead at junction Hit object in c'way? None Hit object off c'way? Road sign/traffic signal First point of impact Front Veh registration no. Drivers age 18 yrs Left Hand Drive Journey purpose	Vehicle type Car Make Model Towing? No tow or articulation Other veh.hit (ref.no) 0 Breath test Negative Foreign veh. Not foreign registered vehicle	Make Model Hit and run Not hit and run Driving Lic	Cas No 1 Severity SLIGHT Car Passenger? Not a passenger Seat Belt Unknown Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	Driver or Rider Age 18 yrs Sex Male PSV Passenger? Not a passenger Cycle Helmet Not applicable Not applicable Other	Veh ref No 1 Post code
			Cas No 2 Severity SLIGHT Car Passenger? Rear seat passenger Seat Belt Unknown Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	Passenger Age 16 yrs Sex Male PSV Passenger? Not a passenger Cycle Helmet Not applicable Not applicable Other	Veh ref No 1 Post code
			Cas No 3 Severity SLIGHT Car Passenger? Rear seat passenger Seat Belt Unknown Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured	Passenger Age 18 yrs Sex Male PSV Passenger? Not a passenger Cycle Helmet Not applicable Not applicable Other	Veh ref No 1 Post code
Full Details		21-June-2013		Accident Ref.No 080182125	

Cas No	4	Cas Class	Passenger	Veh ref No	1		
Severity	SLIGHT	Age	18 yrs	Sex	Male	Post code	
Car Passenger?	Front seat passenger	PSV Passenger?	Not a passenger				
Seat Belt	Unknown	Cycle Helmet					
Ped Movement	Not applicable						
Ped Location	Not applicable						
Ped Direction to	Not applicable						
School Pupil	Other						
Roadworker injured							

Other Details

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080182609	South Road Area - 5 Years	Grid Reference 315820 / 168000 Police Officer Attend: Yes
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Date 08/09/2008 Day Monday Time 18:31 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Rd., Sully Description Pedestrians Step into Path of V1 and Are Injured of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None		CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 2
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 17 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Pedestrian Veh ref No 1 Severity SLIGHT Age 10 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Crossing from driver's nearside Ped Location In centre of carriageway Ped Direction to Northwest bound School Pupil Other Roadworker injured Not applicable
	Cas No 2 Cas Class Pedestrian Veh ref No 1 Severity SLIGHT Age 7 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Crossing from driver's nearside Ped Location In centre of carriageway Ped Direction to Northwest bound School Pupil Other Roadworker injured Not applicable

Other Details

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080182626	South Road Area - 5 Years	Grid Reference 314490 / 169150 Police Officer Attend: No - reported over the counter
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Date 10/09/2008 Day Wednesday Time 09:37 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road A4055 Location A4055 Cardiff Rd., Barry Description V1 Rider of Pedal Cycle Swerved across Two Lanes and Collided with V2 of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH		None	
Carriageway Dual carriageway			
Junction Detail T or staggered junction			
Junction Control Give way or uncontrolled		CARRIAGEWAY HAZARDS	
2nd Road Number U		None	
Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r			

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Pedal Cycle Manoeuvre Going ahead other Veh. direction from South to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 17 yrs Sex Female Breath test Not Applicable Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Pupil riding to/from school	Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 17 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Manoeuvre Overtaking moving veh on its offside Veh. direction from South to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 40 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work	Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080183070	South Road Area - 5 Years	Grid Reference 315110 / 168370 Police Officer Attend: No - reported over the counter
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Date 04/10/2008 Day Saturday Time 22:30 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Dark: street lights present and lit	Road U Location Cog Road, Sully Description Vehicle One Has Lost Control and Collided with Parked and Unattended Vehicle Two. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Junction Detail Not at or within 20 metres of junction	None	
Junction Control		CARRIAGEWAY HAZARDS	
2nd Road Number	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from South to North Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at Ist impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? Parked vehicle Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 24 yrs Sex Male Breath test Positive Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 24 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Make Model Manoeuvre Parked Veh. direction from Parked to Parked Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at Ist impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 19 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	<u>Other Details</u>
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080183364	South Road Area - 5 Years	Grid Reference 315363 / 168250 Police Officer Attend: Yes
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Date 13/10/2008 Day Monday Time 02:50 Weather Fine without high winds Road Surface Dry Street Lighting Dark: street lights present and lit	Road U Location Sully Road, Sully Description VI Has Fallen Asleep as Road Has Rolled to the Left. Vehicle Contined in a Straight Line Hitting a Street Light and Leaving Road. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	
		CARRIAGEWAY HAZARDS
		None

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Going ahead other Veh. direction from East to South Skidded Overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 29 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Passenger Veh ref No 1 Severity SLIGHT Age 29 yrs Sex Male Post code Car Passenger? Front seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
	<u>Other Details</u>

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080183450	South Road Area - 5 Years		Grid Reference 316400 / 167940 Police Officer Attend: Yes
Date 06/10/2008 Day Monday Time 08:00 Weather Unknown Road Surface Dry Street Lighting Daylight	Road U Location South Road, Sully Description Vehicle One Has Pulled out of Junction into the Path of Vehicle Two. of Accident			
SITE DETAILS Speed Limit 30 MPH Carriageway Dual carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		
CARRIAGEWAY HAZARDS None				
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 41 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work		Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 41 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 48 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work		Cas No 2 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 48 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
		Other Details		
Full Details		21-June-2013		Accident Ref.No 080183450

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080183692	South Road Area - 5 Years	Grid Reference 314480 / 169150 Police Officer Attend: Yes
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Date 12/10/2008 Day Sunday Time 17:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road A4055 Location A4055 Cardiff Road, Barry Description V.I Has Driven into Side of V.2 on Rab then Failed to Stop of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Roundabout	None	
Junction Detail Roundabout	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number A4231	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 3
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Hit and Run Drivers age 20 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 42 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Make Model Manoeuvre Changing lane to left Veh. direction from South to North Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 42 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 2 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 11 yrs Sex Male Post code Car Passenger? Front seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 3 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 9 yrs Sex Male Post code Car Passenger? Rear seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080184102	South Road Area - 5 Years	Grid Reference 315066 / 168302 Police Officer Attend: Yes
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Date 31/10/2008 Day Friday Time 22:10 Weather Fine without high winds Road Surface Dry Street Lighting Dark: street lights present and lit	Road U Location South Road J/W Cog Road, Sully Description V1 Travelling Along Road. V2 Following Behind. another Vehicle in Front of V2 Slowed down and Stopped to Turn Right. V2 Did the of Accident Same and Came to a Stop. V1 then Collided into Rear of V2.
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Single carriageway	None	
Junction Detail T or staggered junction	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number U	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 22 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 44 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Other Details	
Veh.No. 2 Vehicle type Car Manoeuvre Slowing or stopping Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 44 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080185024	South Road Area - 5 Years	Grid Reference 316330 / 168420 Police Officer Attend: Yes
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Date 11/12/2008 Day Thursday Time 07:30 Weather Other Road Surface Frost/Ice Street Lighting Daylight	Road U Location Sully Rd., Sully Description Extremely Icy Conditions VI Lost Control and Collided with Embankment of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from North to South Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Did not impact Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 22 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 22 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 080185076	South Road Area - 5 Years	Grid Reference 316090 / 168840 Police Officer Attend: Yes
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Date 27/11/2008 Day Thursday Time 14:30 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight	Road U Location Cog Rd., Sully Description V1 Misjudged Road, Hit Grass Verge, Lost Control, Overturned and Collided with Fence. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	CARRIAGEWAY HAZARDS	None	
Carriageway Single carriageway		None	
Junction Detail Junction - more than 4 arms (not a roundabout)			
Junction Control Give way or uncontrolled			
2nd Road Number U			
Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r			

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Going ahead other Veh. direction from South to North Skidded Overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Left carriageway straight ahead at junction Hit object in c'way? None Hit object off c'way? Other permanent object First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 19 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	<table border="1"> <tr> <td>Cas No 1</td> <td>Cas Class</td> <td>Driver or Rider</td> <td>Veh ref No 1</td> </tr> <tr> <td>Severity SLIGHT</td> <td>Age 19 yrs</td> <td>Sex Male</td> <td>Post code</td> </tr> <tr> <td>Car Passenger? Not a passenger</td> <td>PSV Passenger? Not a passenger</td> <td colspan="2"></td> </tr> <tr> <td>Seat Belt Unknown</td> <td>Cycle Helmet</td> <td colspan="2"></td> </tr> <tr> <td>Ped Movement Not applicable</td> <td colspan="3"></td> </tr> <tr> <td>Ped Location Not applicable</td> <td colspan="3"></td> </tr> <tr> <td>Ped Direction to Not applicable</td> <td colspan="3"></td> </tr> <tr> <td>School Pupil Other</td> <td colspan="3"></td> </tr> <tr> <td>Roadworker injured</td> <td colspan="3"></td> </tr> </table> <p>Other Details</p>	Cas No 1	Cas Class	Driver or Rider	Veh ref No 1	Severity SLIGHT	Age 19 yrs	Sex Male	Post code	Car Passenger? Not a passenger	PSV Passenger? Not a passenger			Seat Belt Unknown	Cycle Helmet			Ped Movement Not applicable				Ped Location Not applicable				Ped Direction to Not applicable				School Pupil Other				Roadworker injured			
Cas No 1	Cas Class	Driver or Rider	Veh ref No 1																																		
Severity SLIGHT	Age 19 yrs	Sex Male	Post code																																		
Car Passenger? Not a passenger	PSV Passenger? Not a passenger																																				
Seat Belt Unknown	Cycle Helmet																																				
Ped Movement Not applicable																																					
Ped Location Not applicable																																					
Ped Direction to Not applicable																																					
School Pupil Other																																					
Roadworker injured																																					

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 090189606	South Road Area - 5 Years		Grid Reference 316010 / 167920 Police Officer Attend: Yes
Date 12/05/2009 Day Tuesday Time 15:35 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Road J/W Clevedon Avenue, Sully	Description V.1 Overtakes Queue at Junction when V.2 Turns into Junction and Collides with V.1 of Accident		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 83 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 61 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from West to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 61 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		<u>Other Details</u>		
Full Details		21-June-2013		Accident Ref.No 090189606

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 090192028	South Road Area - 5 Years		Grid Reference 316380 / 168840 Police Officer Attend: Yes
Date 24/07/2009 Day Friday Time 17:09 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Sully Road, Penarth	Description Cyclist Travelling Along Road and Has Cycled out of Lane Running Adjacent to the Road. Cyclist Has Collided with Nearside of V2. of Accident		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Pedal Cycle Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded Skidded Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 16 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 16 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 18 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Other Details		
Full Details		21-June-2013		Accident Ref.No 090192028

SEVERITY SERIOUS	District The Vale of Glamorgan Ref.No 090193261	South Road Area - 5 Years	Grid Reference 315830 / 168000 Police Officer Attend: Yes
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Date 10/09/2009 Day Thursday Time 08:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road B4267 Location B4267 South Rd., Sully Description Vehicle One Has Travelled into Direct Sunlight and Has Failed to See Pedestrian on Zebra Crossing. Vehicle One Has Collided with of Accident Pedestrian.
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SITE DETAILS		SPECIAL SITE CONDITIONS
Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres Zebra crossing	None	CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 1	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 0 Hit and run Not hit and run Drivers age 54 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Pedestrian Veh ref No 1 Severity SERIOUS Age 54 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Crossing from driver's nearside Ped Location On ped. crossing facility Ped Direction to South bound School Pupil Other Roadworker injured Not applicable Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 090193439	South Road Area - 5 Years	Grid Reference 314490 / 169170 Police Officer Attend: No - reported over the counter
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Date 10/09/2009 Day Thursday Time 07:30 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road A4231 Location A4231 Barry Docks Link Road Junction with A4055 Cardiff Road Description Vehicle One Has Pulled onto Roundabout Failing to See Cyclist and a Collision Has Occurred. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Roundabout	None	
Junction Detail Roundabout	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number A4055	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Moving off Veh. direction from East to West Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Hit and Run Drivers age ? yrs Sex Not knov Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 33 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Pedal Cycle Manoeuvre Going ahead other Veh. direction from South to East Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 33 yrs Sex Male Breath test Not Applicable Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work	Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 090196397	South Road Area - 5 Years		Grid Reference 314510 / 169120 Police Officer Attend: Yes
Date 11/12/2009 Day Friday Time 14:26 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Sully Moors Road, Sully, Vale of Glamorgan	Description V1 Collided with V2 which Shunted into V3 of Accident		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Not at or within 20 metres of junction Junction Control 2nd Road Number Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS Roadworks CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 3		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Slowing or stopping Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 26 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 33 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Waiting to go ahead but held up Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Not at or within 20m of junction Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 33 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work		Other Details		
Full Details		21-June-2013		Accident Ref.No 090196397

Veh.No.	3	Vehicle type	Car	Make		Model	
Manoeuvre	Waiting to go ahead but held up						
Veh. direction from	East to West	Towing?	Other tow				
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Not at or within 20m of junction						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Back						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	54 yrs	Sex	Male	Breath test	Not requested		
Left Hand Drive	Unknown	Foreign veh.	Not foreign registered vehicle				
Journey purpose	Other						

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 100202435	South Road Area - 5 Years		Grid Reference 314930 / 168280 Police Officer Attend: Yes
Date 27/07/2010 Day Tuesday Time 18:05 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Road Junction with Sully Moors Road, Sully, Vale of Glamorgan	Description V1 Has Failed to Notice Stationary Vehicles at Roundabout and Collided with Back of V2 which in Turn Has Collided with V3 Causing of Accident Damage.		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 3		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 28 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 28 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Waiting to go ahead but held up Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 47 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 2 Cas Class Driver or Rider Veh ref No 3 Severity SLIGHT Age 67 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
		Other Details		
Full Details		21-June-2013		Accident Ref.No 100202435

Veh.No.	3	Vehicle type	Car	Make		Model	
Manoeuvre	Waiting to go ahead but held up						
Veh. direction from	East to West	Towing?	No tow or articulation				
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Approaching junction or waiting						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Back						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	67 yrs	Sex	Female	Breath test	Not requested		
Left Hand Drive	Unknown	Foreign veh.	Not foreign registered vehicle				
Journey purpose	Other						

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 100204504	South Road Area - 5 Years	Grid Reference 314490 / 169170 Police Officer Attend: Yes
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Date 20/10/2010 Day Wednesday Time 16:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road A4231 Location Barry Docks Link Road Junction with Cardiff Road, Barry Description V1 Has Misjudged V2 Pulling Away at Junction and Collided with Rear of V2. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS None
Speed Limit 30 MPH Carriageway Roundabout Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number A4055 Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	CARRIAGEWAY HAZARDS None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Slowing or stopping Veh. direction from North to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 18 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Passenger Veh ref No 2 Severity SLIGHT Age 74 yrs Sex Female Post code Car Passenger? Front seat passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Car Make Model Manoeuvre Moving off Veh. direction from North to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 42 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110208574	South Road Area - 5 Years	Grid Reference 315710 / 168680 Police Officer Attend: No - reported over the counter
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Date 07/04/2011 Day Thursday Time 09:15 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location Cog Road Junction with Conybeare Road, Sully, Vale of Glamorgan Description V1 Has Pulled out of Junction and Has Clipped Back Wheel of Pushbike Causing Cyclist to Fall to the Ground. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 30 MPH	Carriageway Single carriageway	None	
Junction Detail T or staggered junction	Junction Control Give way or uncontrolled	CARRIAGEWAY HAZARDS	
2nd Road Number U	Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None	

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Manoeuvre Turning right Veh. direction from South to East Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 45 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 67 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Pedal Cycle Manoeuvre Going ahead other Veh. direction from East to West Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Back Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 67 yrs Sex Male Breath test Not Applicable Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	Other Details
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110209901	South Road Area - 5 Years	Grid Reference 314480 / 169160 Police Officer Attend: No - reported over the counter
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Date 12/06/2011 Day Sunday Time 07:30 Weather Raining without high winds Road Surface Wet/Damp Street Lighting Daylight	Road A4231 Location Barry Docks Link Road J/W Cardiff Road, Barry Description V1 Collided with Cyclist on Roundabout and Fts. of Accident
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SITE DETAILS		SPECIAL SITE CONDITIONS	
Speed Limit 50 MPH Carriageway Slip road Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number A4055 Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r	None		CARRIAGEWAY HAZARDS None

VEHICLES INVOLVED 2	CASUALTIES INVOLVED 1
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Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Leaving main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Hit and Run Drivers age 45 yrs Sex Male Breath test Driver not contacted Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Journey as part of work	Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 25 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured
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Veh.No. 2 Vehicle type Pedal Cycle Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 25 yrs Sex Male Breath test Not Applicable Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other	<u>Other Details</u>
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SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110210539	South Road Area - 5 Years		Grid Reference 316320 / 168750 Police Officer Attend: Yes
Date 07/07/2011 Day Thursday Time 20:00 Weather Fine without high winds Road Surface Wet/Damp Street Lighting Daylight	Road U Location Cog Road Junction with Sully Road, Sully, Vale of Glamorgan	Description V1 Has Veered into Path of V2 Whilst Looking left to See If Merging Traffic was Approaching and Collided Causing Damage.		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from Northeast to Southwest Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 59 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 1 Severity SLIGHT Age 59 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from Southwest to Northeast Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Left carriageway nearside Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 19 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		<u>Other Details</u>		
Full Details		21-June-2013		Accident Ref.No 110210539

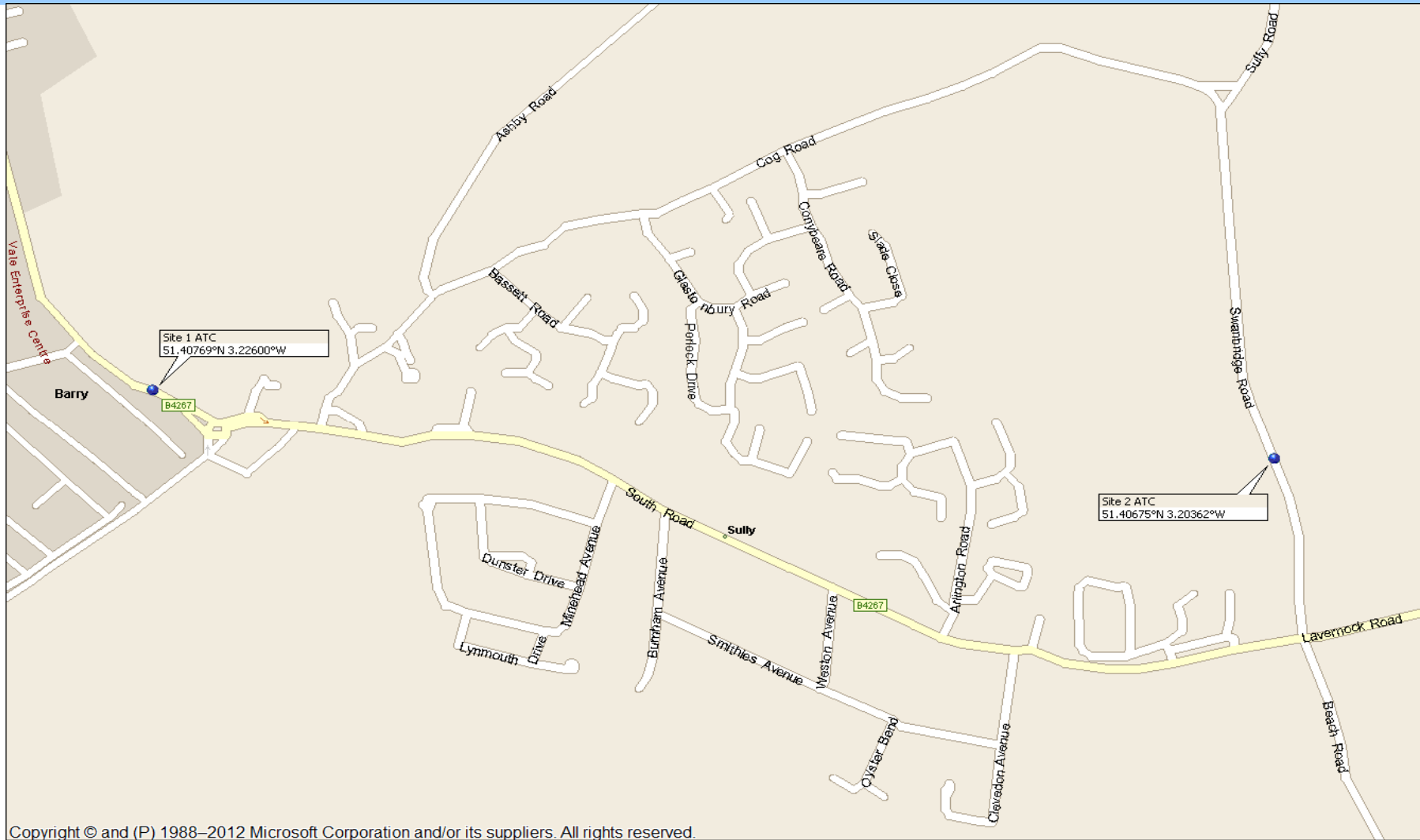
SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110213652	South Road Area - 5 Years		Grid Reference 314450 / 169190 Police Officer Attend: Yes
Date 12/12/2011 Day Monday Time 17:57 Weather Raining with high winds Road Surface Wet/Damp Street Lighting Dark: street lights present and lit	Road A4055 Location A4055 Cardiff Road Inc. Sully Road, Barry. Description V1 Pulled out onto R/About as V2 Also Entered R/About and Whilst on R/About, V1 Struck O/S/R of V2 Causing V2 to Spin. of Accident			
SITE DETAILS Speed Limit 30 MPH Carriageway Roundabout Junction Detail Roundabout Junction Control Give way or uncontrolled 2nd Road Number B4267 Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Moving off Veh. direction from North to South Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 76 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 53 yrs Sex Female Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Moving off Veh. direction from East to West Towing? No tow or articulation Skidded Skidded and overturned Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering roundabout Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 53 yrs Sex Female Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Commuting to/from work		Other Details		
Full Details		21-June-2013		Accident Ref.No 110213652

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110213823	South Road Area - 5 Years		Grid Reference 315450 / 168190 Police Officer Attend: Yes
Date 22/12/2011 Day Thursday Time 12:00 Weather Fine without high winds Road Surface Dry Street Lighting Daylight	Road U Location South Road Junction with Minehead Avenue, Sully, Vale of Glamorgan	Description V1 Has Pulled out into Carriageway and Collided with V2. D1's View was Obstructed by Roadworks. of Accident		
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS Roadworks CARRIAGEWAY HAZARDS None		
VEHICLES INVOLVED 2		CASUALTIES INVOLVED 1		
Veh.No. 1 Vehicle type Car Make Model Manoeuvre Turning right Veh. direction from South to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Cleared junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 77 yrs Sex Female Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 26 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Not applicable Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured Other Details		
Veh.No. 2 Vehicle type M/cycle 125 - 500cc Make Model Manoeuvre Going ahead other Veh. direction from East to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Approaching junction or waiting Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Front Veh registration no. Other veh.hit (ref.no) 1 Hit and run Not hit and run Drivers age 26 yrs Sex Male Breath test Not requested Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other				
Full Details		21-June-2013		Accident Ref.No 110213823

SEVERITY SLIGHT	District The Vale of Glamorgan Ref.No 110213910	South Road Area - 5 Years		Grid Reference 315050 / 168280 Police Officer Attend: Yes
Date 28/12/2011 Day Wednesday Time 13:54 Weather Fine without high winds Road Surface Wet/Damp Street Lighting Daylight	Road B4267 Location B4267 Junction with Cog Road, Sully		Description V1 Pulled out from Cog Road into Path of V2 Who then Swerved into V3 which was Travelling in the Opposite Direction. Minor Injury, of Accident Damage to All Vehicles	
SITE DETAILS Speed Limit 30 MPH Carriageway Single carriageway Junction Detail T or staggered junction Junction Control Give way or uncontrolled 2nd Road Number U Pedestrian Facilities None within 50 metres No physical crossing facility within 50 r		SPECIAL SITE CONDITIONS None		CARRIAGEWAY HAZARDS None
VEHICLES INVOLVED 3		CASUALTIES INVOLVED 2		
Veh.No. 1 Vehicle type Van/Goods < 3.5t Make Model Manoeuvre Turning right Veh. direction from North to West Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Entering main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Nearside Veh registration no. Other veh.hit (ref.no) 2 Hit and run Not hit and run Drivers age 44 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 1 Cas Class Driver or Rider Veh ref No 2 Severity SLIGHT Age 78 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
Veh.No. 2 Vehicle type Car Make Model Manoeuvre Going ahead other Veh. direction from West to East Towing? No tow or articulation Skidded No skidding, jack-knifing or overturning Veh location at impact (restricted lane) On main carriageway not in restricted lane Junct. location of veh. at 1st impact Mid junction - on roundabout or main road Veh left carriageway? Did not leave carriageway Hit object in c'way? None Hit object off c'way? None First point of impact Offside Veh registration no. Other veh.hit (ref.no) 3 Hit and run Not hit and run Drivers age 78 yrs Sex Male Breath test Negative Driving Lic Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle Journey purpose Other		Cas No 2 Cas Class Driver or Rider Veh ref No 3 Severity SLIGHT Age 54 yrs Sex Male Post code Car Passenger? Not a passenger PSV Passenger? Not a passenger Seat Belt Unknown Cycle Helmet Ped Movement Not applicable Ped Location Not applicable Ped Direction to Not applicable School Pupil Other Roadworker injured		
		<u>Other Details</u>		
Full Details		21-June-2013		Accident Ref.No 110213910

Veh.No.	3	Vehicle type	Car	Make		Model	
Manoeuvre	Going ahead other						
Veh. direction from	West to East		Towing? No tow or articulation				
Skidded	No skidding, jack-knifing or overturning						
Veh location at impact (restricted lane)	On main carriageway not in restricted lane						
Junct. location of veh. at 1st impact	Approaching junction or waiting						
Veh left carriageway?	Did not leave carriageway						
Hit object in c'way?	None						
Hit object off c'way?	None						
First point of impact	Front						
Veh registration no.		Other veh.hit (ref.no)	2	Hit and run	Not hit and run		
Drivers age	54 yrs	Sex	Male	Breath test	Not provided (medical r Driving Lic		
Left Hand Drive	Unknown		Foreign veh. Not foreign registered vehicle				
Journey purpose	Other						

APPENDIX B

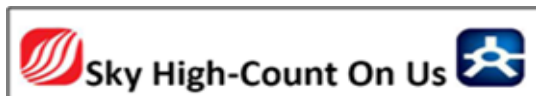


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C0292		SULLY ATCs															
JUNE 2013																	
Site	Location	Lat / Long	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	7 Day Ave.	Posted Speed Limit (PSL)		110%(PSL) + 2 (SL1)		DfT PSL+15 (SL2)		Mean Speed	85%ile Speed
										>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%		
1	B4267 Solly Moors Road -- Att to lamp post	51.40769°N 3.22600°W	Northbound	13 June 2013	19 June 2013	30	47287	7332	6755	33515	70.9	7306	15.5	144	0.3	31.8	34.9
			Southbound	13 June 2013	19 June 2013		45466	7018	6495	42846	94.2	30119	66.2	2301	5.1	36.9	41.4
			Two-Way	13 June 2013	19 June 2013		92753	14350	13250	76361	82	37425	40	2445	3	34	39

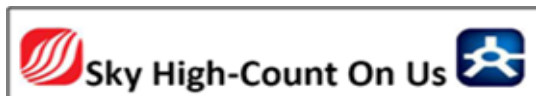
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID		THREE AXLE RIGID	FOUR OR MORE AXLE RIGID		FOUR OR LESS AXLE ARTIC		SIX OR MORE AXLE ARTIC		FIVE OR LESS AXLE MULTI-TRAILER ARTIC		SIX AXLE MULTI-TRAILER ARTIC		SEVEN OR MORE AXLE ARTIC	
13 June 2013																					
00:00	25	0	24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	10	1	8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
02:00	11	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	39	1	34	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
06:00	130	4	109	12	0	1	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0
07:00	412	3	362	29	0	8	3	0	3	0	1	3	0	3	0	0	0	0	0	0	0
08:00	690	3	628	35	0	10	1	0	4	0	4	3	0	4	0	0	0	0	0	2	2
09:00	554	3	494	36	1	7	2	0	4	0	4	2	0	4	0	0	0	0	0	1	1
10:00	430	0	379	33	0	7	2	0	2	0	2	4	0	2	0	0	0	0	0	1	1
11:00	439	4	398	21	1	5	3	0	3	0	3	4	0	0	0	0	0	0	0	0	0
12:00	481	4	423	39	1	6	1	0	2	1	2	3	0	1	0	0	0	0	0	0	0
13:00	471	3	426	24	0	4	3	0	3	0	3	3	0	4	0	0	0	0	0	1	1
14:00	427	3	391	25	0	4	1	0	0	0	0	1	0	2	0	0	0	0	0	0	0
15:00	579	5	513	45	0	7	0	0	4	0	4	2	0	3	0	0	0	0	0	0	0
16:00	605	5	559	27	0	5	0	0	4	0	4	4	0	0	0	0	0	0	0	1	1
17:00	591	4	555	17	0	2	4	0	6	0	6	2	0	1	0	0	0	0	0	0	0
18:00	399	7	373	12	0	3	1	0	1	0	1	1	0	1	0	0	0	0	0	0	0
19:00	315	1	304	3	0	0	0	0	5	0	5	2	0	0	0	0	0	0	0	0	0
20:00	260	2	254	3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
21:00	162	1	156	4	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
22:00	124	3	119	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	50	0	48	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	6078	44	5501	343	3	68	21	0	36	1	36	33	0	22	0	0	0	0	0	6	6
06-22	6945	52	6324	365	3	69	21	0	45	1	45	37	0	22	0	0	0	0	0	6	6
06-00	7119	55	6491	368	3	70	21	0	45	1	45	37	0	22	0	0	0	0	0	6	6
00-00	7217	57	6578	374	3	70	21	0	46	1	46	37	0	24	0	0	0	0	0	6	6



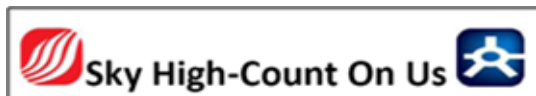
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
14 June 2013															
0000	31	1	29	1	0	0	0	0	0	0	0	0	0	0	0
01:00	12	0	11	1	0	0	0	0	0	0	0	0	0	0	0
02:00	5	0	3	1	0	0	0	0	0	0	0	1	0	0	0
03:00	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
04:00	11	0	9	2	0	0	0	0	0	0	0	0	0	0	0
05:00	29	0	27	1	0	0	0	0	0	0	0	1	0	0	0
06:00	126	1	112	8	0	2	0	0	1	0	0	0	2	0	0
07:00	390	2	351	20	0	8	2	0	2	0	2	3	0	0	0
08:00	640	3	586	31	0	7	8	0	2	0	1	1	0	1	1
09:00	539	1	478	40	1	8	2	0	3	0	3	2	0	1	1
10:00	478	4	420	42	0	4	1	0	0	1	3	2	0	1	1
11:00	445	2	398	33	0	3	0	0	4	0	0	4	0	1	1
12:00	500	5	447	36	0	3	4	0	4	0	0	1	0	0	0
13:00	456	3	417	25	1	4	3	0	2	0	0	1	0	0	0
14:00	494	5	449	27	0	6	2	1	2	0	0	2	0	0	0
15:00	678	2	626	35	0	4	3	0	2	0	1	5	0	0	0
16:00	636	7	595	22	0	3	1	0	4	0	0	3	1	0	0
17:00	556	6	526	18	0	1	2	0	2	0	1	0	0	0	0
18:00	437	1	421	8	0	2	1	0	2	0	1	1	0	0	0
19:00	263	0	255	7	0	0	0	0	1	0	0	0	0	0	0
20:00	220	3	214	2	0	0	1	0	0	0	0	0	0	0	0
21:00	133	0	130	3	0	0	0	0	0	0	0	0	0	0	0
22:00	103	0	99	2	0	1	0	0	1	0	0	0	0	0	0
23:00	72	4	67	0	0	1	0	0	0	0	0	0	0	0	0
07-19	6249	41	5714	337	2	53	29	1	29	1	12	25	1	4	4
06-22	6991	45	6425	357	2	55	30	1	31	1	12	27	1	4	4
06-00	7166	49	6591	359	2	57	30	1	32	1	12	27	1	4	4
00-00	7264	50	6680	365	2	57	30	1	32	1	14	27	1	4	4



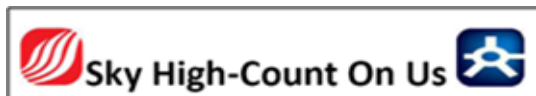
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FOUR OR	SIX OR		FIVE OR LESS		SEVEN OR MORE
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	AXLE MULTI-TRAILER ARTIC	AXLE MULTI-TRAILER ARTIC		
15 June 2013																
0000	51	0	47	4	0	0	0	0	0	0	0	0	0	0	0	0
01:00	26	0	23	2	0	0	0	0	0	0	0	1	0	0	0	
02:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0	0	
03:00	16	0	15	1	0	0	0	0	0	0	0	0	0	0	0	
04:00	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	
05:00	26	0	23	2	0	0	0	0	0	1	0	0	0	0	0	
06:00	61	0	54	4	0	2	0	0	0	1	0	0	0	0	0	
07:00	108	2	94	9	0	2	0	0	0	0	0	0	1	0	0	
08:00	208	5	189	8	0	3	0	0	0	1	0	1	1	0	0	
09:00	329	1	309	13	0	4	0	0	0	1	0	0	1	0	0	
10:00	404	5	386	10	0	1	2	0	0	0	0	0	0	0	0	
11:00	469	4	440	13	0	2	4	0	0	5	0	0	0	0	1	
12:00	453	3	427	18	0	1	2	0	0	2	0	0	0	0	0	
13:00	488	5	468	13	0	1	0	0	0	1	0	0	0	0	0	
14:00	476	4	455	10	0	1	3	0	0	2	0	0	0	0	1	
15:00	435	5	418	7	0	1	1	0	0	2	0	0	1	0	0	
16:00	394	5	374	11	0	1	1	0	0	2	0	0	0	0	0	
17:00	389	3	373	10	0	1	1	0	0	1	0	0	0	0	0	
18:00	342	3	328	5	0	2	0	0	0	4	0	0	0	0	0	
19:00	256	3	247	3	0	0	1	0	0	2	0	0	0	0	0	
20:00	190	3	181	3	1	1	0	0	0	1	0	0	0	0	0	
21:00	137	1	133	2	0	0	0	0	0	1	0	0	0	0	0	
22:00	122	2	117	2	0	0	0	0	0	1	0	0	0	0	0	
23:00	90	2	85	3	0	0	0	0	0	0	0	0	0	0	0	
07-19	4495	45	4261	127	0	20	14	0	0	21	0	1	4	0	2	
06-22	5139	52	4876	139	1	23	15	0	0	26	0	1	4	0	2	
06-00	5351	56	5078	144	1	23	15	0	0	27	0	1	4	0	2	
00-00	5498	56	5213	154	1	23	15	0	0	28	0	2	4	0	2	



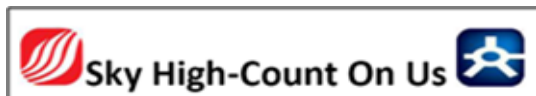
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
16 June 2013															
0000	61	1	57	2	0	0	0	0	0	0	0	1	0	0	0
01:00	21	0	18	2	0	0	1	0	0	0	0	0	0	0	0
02:00	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0
03:00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0
04:00	12	0	11	0	0	0	0	0	0	0	1	0	0	0	0
05:00	19	1	14	3	0	0	0	0	1	0	0	0	0	0	0
06:00	43	1	41	1	0	0	0	0	0	0	0	0	0	0	0
07:00	67	1	66	0	0	0	0	0	0	0	0	0	0	0	0
08:00	171	4	161	5	0	1	0	0	0	0	0	0	0	0	0
09:00	305	10	288	3	0	0	0	0	3	0	0	1	0	0	0
10:00	493	3	471	12	0	1	2	0	4	0	0	0	0	0	0
11:00	463	1	451	4	0	1	2	0	2	0	2	0	0	0	0
12:00	478	2	465	6	0	1	3	0	1	0	0	0	0	0	0
13:00	400	2	388	6	0	1	0	0	2	0	0	1	0	0	0
14:00	474	2	461	9	0	1	0	0	1	0	0	0	0	0	0
15:00	441	3	427	8	0	0	1	0	2	0	0	0	0	0	0
16:00	381	1	367	9	0	1	1	0	1	0	1	0	0	0	0
17:00	350	12	333	3	0	1	0	0	1	0	0	0	0	0	0
18:00	300	4	292	3	0	0	0	0	1	0	0	0	0	0	0
19:00	213	4	204	3	0	0	0	0	2	0	0	0	0	0	0
20:00	191	4	179	3	0	1	1	0	2	0	0	1	0	0	0
21:00	116	1	114	0	0	1	0	0	0	0	0	0	0	0	0
22:00	64	0	63	1	0	0	0	0	0	0	0	0	0	0	0
23:00	36	1	34	1	0	0	0	0	0	0	0	0	0	0	0
07-19	4323	45	4170	68	0	8	9	0	18	0	3	2	0	0	0
06-22	4886	55	4708	75	0	10	10	0	22	0	3	3	0	0	0
06-00	4986	56	4805	77	0	10	10	0	22	0	3	3	0	0	0
00-00	5129	58	4935	84	0	10	11	0	23	0	5	3	0	0	0



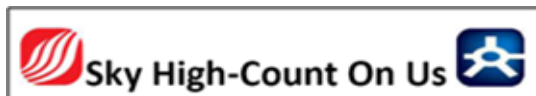
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
17 June 2013															
00:00	19	1	18	0	0	0	0	0	0	0	0	0	0	0	0
01:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
02:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0	0
03:00	8	0	6	2	0	0	0	0	0	0	0	0	0	0	0
04:00	12	1	9	2	0	0	0	0	0	0	0	0	0	0	0
05:00	42	1	38	3	0	0	0	0	0	0	0	0	0	0	0
06:00	114	4	95	8	0	1	1	1	2	0	0	2	0	0	0
07:00	403	4	351	26	0	8	4	0	5	1	1	1	0	2	0
08:00	655	5	608	24	1	6	7	0	2	0	2	0	0	0	0
09:00	511	1	468	29	0	8	2	0	0	0	3	0	0	0	0
10:00	418	3	359	38	1	7	2	0	3	0	2	3	0	0	0
11:00	406	8	361	30	0	1	1	0	2	0	2	0	0	0	1
12:00	483	3	444	24	0	4	2	0	3	0	0	3	0	0	0
13:00	423	5	379	26	0	4	1	0	4	0	3	1	0	0	0
14:00	447	8	394	31	0	4	2	0	3	0	2	1	0	2	0
15:00	627	3	564	35	0	8	6	0	4	0	1	5	0	1	0
16:00	667	4	615	38	0	4	3	0	2	0	0	1	0	0	0
17:00	605	4	568	21	0	4	3	0	3	0	2	0	0	0	0
18:00	433	11	410	9	0	2	0	0	1	0	0	0	0	0	0
19:00	298	9	272	12	0	0	1	0	2	0	1	1	0	0	0
20:00	245	4	237	3	0	0	0	0	1	0	0	0	0	0	0
21:00	145	1	138	6	0	0	0	0	0	0	0	0	0	0	0
22:00	110	1	106	2	0	1	0	0	0	0	0	0	0	0	0
23:00	48	1	45	2	0	0	0	0	0	0	0	0	0	0	0
07-19	6078	59	5521	331	2	60	33	0	32	1	18	15	0	6	0
06-22	6880	77	6263	360	2	61	35	1	37	1	19	18	0	6	0
06-00	7038	79	6414	364	2	62	35	1	37	1	19	18	0	6	0
00-00	7130	82	6495	372	2	62	35	1	37	1	19	18	0	6	0



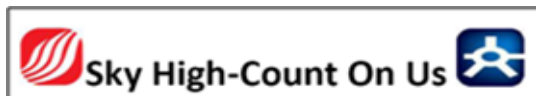
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
18 June 2013															
0000	20	0	18	2	0	0	0	0	0	0	0	0	0	0	0
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
02:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0
03:00	9	0	8	1	0	0	0	0	0	0	0	0	0	0	0
04:00	9	1	5	3	0	0	0	0	0	0	0	0	0	0	0
05:00	33	2	28	1	0	0	0	0	0	0	0	0	2	0	0
06:00	123	4	106	5	0	2	1	0	1	0	3	1	0	0	0
07:00	408	5	355	32	0	10	2	0	1	0	1	2	0	0	0
08:00	673	5	622	24	0	10	4	0	1	0	3	3	0	1	1
09:00	521	6	478	20	1	4	3	0	2	0	3	4	0	0	0
10:00	441	2	384	37	0	5	3	0	4	0	1	3	0	2	2
11:00	446	3	393	36	0	6	2	0	5	0	1	0	0	0	0
12:00	486	3	438	35	0	3	0	0	2	0	2	3	0	0	0
13:00	474	7	434	16	0	7	2	0	2	1	2	3	0	0	0
14:00	500	4	444	32	0	6	7	0	4	1	1	1	0	0	0
15:00	621	4	578	27	0	5	2	0	3	0	0	1	0	1	1
16:00	645	9	595	32	1	4	0	0	2	0	1	1	0	0	0
17:00	608	4	571	24	0	3	1	0	5	0	0	0	0	0	0
18:00	492	12	466	7	0	4	0	0	2	0	0	1	0	0	0
19:00	335	7	317	5	0	0	1	0	3	1	0	1	0	0	0
20:00	260	4	245	8	0	1	0	0	2	0	0	0	0	0	0
21:00	189	0	187	2	0	0	0	0	0	0	0	0	0	0	0
22:00	97	1	94	0	0	2	0	0	0	0	0	0	0	0	0
23:00	45	0	41	3	0	1	0	0	0	0	0	0	0	0	0
07-19	6315	64	5758	322	2	67	26	0	33	2	15	22	0	4	4
06-22	7222	79	6613	342	2	70	28	0	39	3	18	24	0	4	4
06-00	7364	80	6748	345	2	73	28	0	39	3	18	24	0	4	4
00-00	7443	83	6814	353	2	73	28	0	39	3	18	26	0	4	4



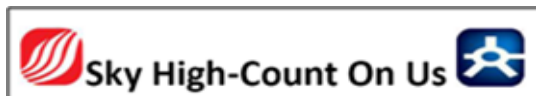
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
19 June 2013															
0000	13	0	11	2	0	0	0	0	0	0	0	0	0	0	0
01:00	8	0	6	2	0	0	0	0	0	0	0	0	0	0	0
02:00	3	0	1	2	0	0	0	0	0	0	0	0	0	0	0
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0
04:00	14	1	10	1	0	1	0	0	0	0	1	0	0	0	0
05:00	40	1	34	4	0	0	0	0	0	0	1	0	0	0	0
06:00	106	4	86	7	0	3	0	0	2	0	2	2	0	0	0
07:00	418	6	361	31	0	7	3	0	5	0	3	1	0	0	1
08:00	674	10	604	32	1	11	7	0	5	0	2	0	0	0	2
09:00	522	4	467	35	0	7	5	0	2	0	1	1	0	0	0
10:00	456	7	399	31	2	7	4	0	1	0	2	3	0	0	0
11:00	437	4	399	20	1	4	1	0	4	0	2	1	0	0	1
12:00	515	7	475	25	0	4	1	0	1	0	1	1	0	0	0
13:00	490	7	443	26	1	5	3	0	1	1	1	1	0	0	1
14:00	522	14	463	26	1	3	1	0	6	0	5	3	0	0	0
15:00	652	2	604	31	0	5	3	0	5	0	0	2	0	0	0
16:00	582	7	532	31	0	2	2	0	5	0	1	2	0	0	0
17:00	624	13	579	18	0	3	3	0	5	0	1	2	0	0	0
18:00	484	16	445	15	0	2	0	0	4	0	1	0	0	0	1
19:00	339	9	322	6	0	0	1	0	1	0	0	0	0	0	0
20:00	271	11	256	3	0	0	0	0	1	0	0	0	0	0	0
21:00	240	1	232	5	0	0	0	0	2	0	0	0	0	0	0
22:00	135	3	128	2	0	1	0	0	1	0	0	0	0	0	0
23:00	54	2	51	1	0	0	0	0	0	0	0	0	0	0	0
07-19	6376	97	5771	321	6	60	33	0	44	1	20	17	0	0	6
06-22	7332	122	6667	342	6	63	34	0	50	1	22	19	0	0	6
06-00	7521	127	6846	345	6	64	34	0	51	1	22	19	0	0	6
00-00	7606	129	6914	357	6	65	34	0	51	1	24	19	0	0	6



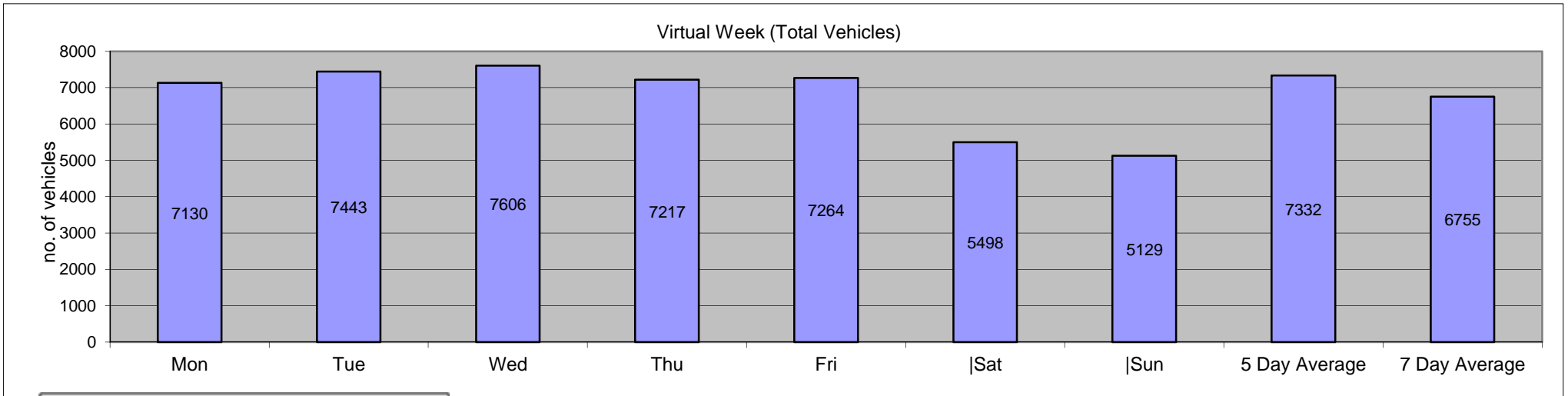
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
Average Day															
0000	31	0	29	2	0	0	0	0	0	0	0	0	0	0	0
01:00	12	0	10	1	0	0	0	0	0	0	0	0	0	0	0
02:00	9	0	8	1	0	0	0	0	0	0	0	0	0	0	0
03:00	9	0	9	1	0	0	0	0	0	0	0	0	0	0	0
04:00	11	0	9	1	0	0	0	0	0	0	0	0	0	0	0
05:00	33	1	28	2	0	0	0	0	0	0	0	0	0	0	0
06:00	100	3	86	6	0	2	0	0	1	0	1	1	0	0	0
07:00	315	3	277	21	0	6	2	0	2	0	1	2	0	0	0
08:00	530	5	485	23	0	7	4	0	2	0	2	1	0	1	1
09:00	469	4	426	25	0	5	2	0	2	0	2	2	0	0	0
10:00	446	3	400	29	0	5	2	0	2	0	1	2	0	1	1
11:00	444	4	406	22	0	3	2	0	4	0	1	1	0	1	1
12:00	485	4	446	26	0	3	2	0	2	0	1	2	0	0	0
13:00	457	5	422	19	0	4	2	0	2	0	1	1	0	0	0
14:00	477	6	437	23	0	4	2	0	3	0	1	1	0	0	0
15:00	576	3	533	27	0	4	2	0	3	0	1	2	0	0	0
16:00	559	5	520	24	0	3	1	0	3	0	0	2	0	0	0
17:00	532	7	501	16	0	2	2	0	3	0	1	1	0	0	0
18:00	412	8	391	8	0	2	0	0	2	0	0	0	0	0	0
19:00	288	5	274	6	0	0	1	0	2	0	0	1	0	0	0
20:00	234	4	224	4	0	0	0	0	1	0	0	0	0	0	0
21:00	160	1	156	3	0	0	0	0	1	0	0	0	0	0	0
22:00	108	1	104	1	0	1	0	0	0	0	0	0	0	0	0
23:00	56	1	53	2	0	0	0	0	0	0	0	0	0	0	0
07-19	5702	56	5242	264	2	48	24	0	30	1	13	17	0	4	4
06-22	6485	69	5982	283	2	50	25	0	36	1	14	19	0	4	4
06-00	6649	72	6139	286	2	51	25	0	36	1	14	19	0	4	4
00-00	6755	74	6233	294	2	51	25	0	37	1	15	19	0	4	4



C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Northbound

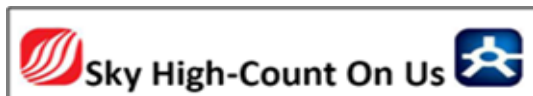
TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
Virtual Week (1)														
Mon	7130	82	6495	372	2	62	35	1	37	1	19	18	0	6
Tue	7443	83	6814	353	2	73	28	0	39	3	18	26	0	4
Wed	7606	129	6914	357	6	65	34	0	51	1	24	19	0	6
Thu	7217	57	6578	374	3	70	21	0	46	1	24	37	0	6
Fri	7264	50	6680	365	2	57	30	1	32	1	14	27	1	4
Sat	5498	56	5213	154	1	23	15	0	28	0	2	4	0	2
Sun	5129	58	4935	84	0	10	11	0	23	0	5	3	0	0
5 Day Average														
[--]	7332	80	6696	364	3	65	30	0	41	1	20	25	0	5
7 Day Average														
[--]	6755	74	6233	294	2	51	25	0	37	1	15	19	0	4
Total Vehicles														
[--]	47287	515	43629	2059	16	360	174	2	256	7	106	134	1	28



C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)									
13 June 2013		to													19 June 2013	Direction	Northbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile	
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
13 June 2013																										
0000	25	0	0	0	0	5	12	6	1	1	0	0	0	0	20	80	8	32	1	4	33.4	37.4				
01:00	10	0	0	0	0	2	5	3	0	0	0	0	0	0	8	80	3	30	0	0	33.1	-				
02:00	11	0	0	0	0	0	7	4	0	0	0	0	0	11	100	4	36.4	0	0	34.4	36.2					
03:00	6	0	0	0	0	1	4	0	0	1	0	0	0	5	83.3	1	16.7	1	16.7	34.7	-					
04:00	7	0	0	0	0	0	4	3	0	0	0	0	0	7	100	3	42.9	0	0	34.6	-					
05:00	39	0	0	0	1	5	16	14	3	0	0	0	0	33	84.6	17	43.6	0	0	34.2	37.8					
06:00	130	0	0	4	0	14	77	30	4	1	0	0	0	112	86.2	35	26.9	1	0.8	33.2	36.5					
07:00	412	0	0	1	12	92	229	71	7	0	0	0	0	307	74.5	78	18.9	0	0	32.2	35.3					
08:00	690	0	1	0	24	192	392	79	1	0	1	0	0	473	68.6	81	11.7	1	0.1	31.4	34.4					
09:00	554	0	0	0	23	193	292	42	4	0	0	0	0	338	61	46	8.3	0	0	30.7	33.6					
10:00	430	0	2	1	14	141	216	46	8	1	1	0	0	272	63.3	56	13	2	0.5	31.2	34.4					
11:00	439	0	0	7	20	147	228	35	2	0	0	0	0	265	60.4	37	8.4	0	0	30.6	33.8					
12:00	481	0	0	3	17	143	255	61	2	0	0	0	0	318	66.1	63	13.1	0	0	31.2	34.7					
13:00	471	0	1	1	19	143	269	36	2	0	0	0	0	307	65.2	38	8.1	0	0	30.9	33.8					
14:00	427	0	0	0	8	135	243	41	0	0	0	0	0	284	66.5	41	9.6	0	0	31.2	34					
15:00	579	0	1	0	30	141	338	63	6	0	0	0	0	407	70.3	69	11.9	0	0	31.4	34.4					
16:00	605	0	0	1	12	162	347	78	4	0	1	0	0	430	71.1	83	13.7	1	0.2	31.6	34.7					
17:00	591	0	2	1	14	103	373	88	8	2	0	0	0	471	79.7	98	16.6	2	0.3	32.4	34.9					
18:00	399	0	1	2	4	72	241	70	8	1	0	0	0	320	80.2	79	19.8	1	0.3	32.6	35.6					
19:00	315	0	0	0	3	53	180	69	7	3	0	0	0	259	82.2	79	25.1	3	1	32.9	36					
20:00	260	0	0	0	3	42	167	43	5	0	0	0	0	215	82.7	48	18.5	0	0	32.5	35.3					
21:00	162	0	1	0	2	29	105	24	1	0	0	0	0	130	80.2	25	15.4	0	0	32	34.9					
22:00	124	0	0	1	1	34	72	12	3	1	0	0	0	88	71	16	12.9	1	0.8	31.6	34.7					
23:00	50	0	0	0	0	14	22	11	3	0	0	0	0	36	72	14	28	0	0	32.8	38.5					
07-19	6078	0	8	17	197	1664	3423	710	52	4	3	0	0	4192	69	769	12.7	7	0.1	31.4	34.4					
06-22	6945	0	9	21	205	1802	3952	876	69	8	3	0	0	4908	70.7	956	13.8	11	0.2	31.6	34.7					
06-00	7119	0	9	22	206	1850	4046	899	75	9	3	0	0	5032	70.7	986	13.9	12	0.2	31.6	34.7					
00-00	7217	0	9	22	207	1863	4094	929	79	11	3	0	0	5116	70.9	1022	14.2	14	0.2	31.6	34.7					

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																								
13 June 2013		to													19 June 2013													Direction	Northbound												
Time Period	Total Vehicles	Speed Bins													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean Speed	85%ile Speed																			
		0-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-130	30	30	35	35	45	45																					
14 June 2013																																									
0000	31	0	0	0	1	3	17	5	4	1	0	0	0	0	27	87.1	10	32.3	1	3.2	34.7	39.4																			
01:00	12	0	0	0	0	3	6	3	0	0	0	0	0	9	75	3	25	0	0	33.3	36																				
02:00	5	0	0	0	0	1	3	0	1	0	0	0	0	4	80	1	20	0	0	33.9	-																				
03:00	10	0	0	0	0	0	7	3	0	0	0	0	0	10	100	3	30	0	0	33.5	-																				
04:00	11	0	0	0	0	1	6	3	1	0	0	0	0	10	90.9	4	36.4	0	0	33.9	35.6																				
05:00	29	0	0	0	1	3	11	13	1	0	0	0	0	25	86.2	14	48.3	0	0	34.2	36.9																				
06:00	126	0	0	1	4	8	73	34	6	0	0	0	0	113	89.7	40	31.7	0	0	33.5	36.9																				
07:00	390	0	2	1	5	66	229	83	4	0	0	0	0	316	81	87	22.3	0	0	32.7	35.8																				
08:00	640	0	0	2	16	208	335	71	8	0	0	0	0	414	64.7	79	12.3	0	0	31.2	34.4																				
09:00	539	0	0	3	22	195	265	53	1	0	0	0	0	319	59.2	54	10	0	0	30.6	34																				
10:00	478	0	0	0	17	157	246	53	5	0	0	0	0	304	63.6	58	12.1	0	0	31.2	34.4																				
11:00	445	0	0	1	13	152	235	37	6	0	1	0	0	279	62.7	44	9.9	1	0.2	31	34																				
12:00	500	0	0	0	7	167	258	60	6	1	1	0	0	326	65.2	68	13.6	2	0.4	31.5	34.7																				
13:00	456	0	0	0	13	133	235	68	6	1	0	0	0	310	68	75	16.4	1	0.2	31.6	35.1																				
14:00	494	0	0	1	15	157	264	52	4	1	0	0	0	321	65	57	11.5	1	0.2	31.1	34.4																				
15:00	678	2	10	8	14	209	365	65	5	0	0	0	0	435	64.2	70	10.3	0	0	30.7	34																				
16:00	636	0	0	2	11	172	349	94	7	1	0	0	0	451	70.9	102	16	1	0.2	31.8	35.1																				
17:00	556	0	1	0	1	136	330	78	8	1	1	0	0	418	75.2	88	15.8	2	0.4	32.1	35.1																				
18:00	437	0	0	0	5	101	263	64	4	0	0	0	0	331	75.7	68	15.6	0	0	32.2	34.9																				
19:00	263	0	0	0	4	57	152	43	6	0	1	0	0	202	76.8	50	19	1	0.4	32.5	35.6																				
20:00	220	0	0	0	1	38	124	48	8	1	0	0	0	181	82.3	57	25.9	1	0.5	33	36																				
21:00	133	0	0	0	3	39	66	21	3	0	0	1	0	91	68.4	25	18.8	1	0.8	32.2	36																				
22:00	103	0	0	0	2	22	54	20	4	1	0	0	0	79	76.7	25	24.3	1	1	32.9	35.8																				
23:00	72	0	0	2	0	17	30	19	3	1	0	0	0	53	73.6	23	31.9	1	1.4	32.7	36.7																				
07-19	6249	2	13	18	139	1853	3374	778	64	5	3	0	0	4224	67.6	850	13.6	8	0.1	31.4	34.7																				
06-22	6991	2	13	19	151	1995	3789	924	87	6	4	1	0	4811	68.8	1022	14.6	11	0.2	31.6	34.9																				
06-00	7166	2	13	21	153	2034	3873	963	94	8	4	1	0	4943	69	1070	14.9	13	0.2	31.6	34.9																				
00-00	7264	2	13	21	155	2045	3923	990	101	9	4	1	0	5028	69.2	1105	15.2	14	0.2	31.6	34.9																				

C0292 SULLY ATCs		Site 1													Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)							
13 June 2013		to													19 June 2013							
		Direction Northbound													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT		
15 June 2013																						
0000	51	0	0	0	1	13	27	9	1	0	0	0	0	0	37	72.5	10	19.6	0	0	31.9	35.3
01:00	26	0	0	0	0	7	12	5	2	0	0	0	0	0	19	73.1	7	26.9	0	0	32.7	36
02:00	14	0	0	0	0	3	7	3	1	0	0	0	0	0	11	78.6	4	28.6	0	0	33.8	36.9
03:00	16	0	0	0	0	4	7	5	0	0	0	0	0	0	12	75	5	31.3	0	0	32.9	36
04:00	14	0	0	0	0	1	7	5	1	0	0	0	0	0	13	92.9	6	42.9	0	0	34.8	38
05:00	26	0	0	0	1	1	12	12	0	0	0	0	0	0	24	92.3	12	46.2	0	0	34.3	37.8
06:00	61	0	0	0	0	10	27	21	3	0	0	0	0	0	51	83.6	24	39.3	0	0	34	37.1
07:00	108	0	0	1	0	14	62	30	1	0	0	0	0	0	93	86.1	31	28.7	0	0	33.3	36
08:00	208	0	2	3	2	29	123	46	1	2	0	0	0	0	172	82.7	49	23.6	2	1	32.6	36
09:00	329	0	0	1	1	66	198	58	4	1	0	0	0	0	261	79.3	63	19.1	1	0.3	32.4	35.6
10:00	404	0	1	1	3	126	217	52	3	1	0	0	0	0	273	67.6	56	13.9	1	0.2	31.5	34.7
11:00	469	0	0	2	12	142	264	45	4	0	0	0	0	0	313	66.7	49	10.4	0	0	31.2	34
12:00	453	0	0	0	11	142	261	35	3	1	0	0	0	0	300	66.2	39	8.6	1	0.2	31.1	34
13:00	488	0	0	0	15	135	290	43	4	1	0	0	0	0	338	69.3	48	9.8	1	0.2	31.3	34
14:00	476	0	0	1	11	111	260	86	5	2	0	0	0	0	353	74.2	93	19.5	2	0.4	32.2	35.3
15:00	435	0	1	0	1	107	263	56	6	0	1	0	0	0	326	74.9	63	14.5	1	0.2	31.9	34.7
16:00	394	0	0	0	0	59	253	72	5	2	3	0	0	0	335	85	82	20.8	5	1.3	33	35.6
17:00	389	0	0	0	1	63	248	75	2	0	0	0	0	0	325	83.5	77	19.8	0	0	32.6	35.3
18:00	342	0	0	0	1	50	228	55	4	3	1	0	0	0	291	85.1	63	18.4	4	1.2	32.9	35.6
19:00	256	0	0	0	2	43	158	48	4	0	1	0	0	0	211	82.4	53	20.7	1	0.4	32.8	35.8
20:00	190	0	0	0	1	39	102	36	10	1	1	0	0	0	150	78.9	48	25.3	2	1.1	33	36.5
21:00	137	0	0	0	3	28	79	23	3	0	1	0	0	0	106	77.4	27	19.7	1	0.7	32.5	35.3
22:00	122	0	0	0	3	42	54	19	4	0	0	0	0	0	77	63.1	23	18.9	0	0	31.9	36
23:00	90	0	0	0	1	30	40	17	2	0	0	0	0	0	59	65.6	19	21.1	0	0	31.9	35.3
07-19	4495	0	4	9	58	1044	2667	653	42	13	5	0	0	0	3380	75.2	713	15.9	18	0.4	32	35.1
06-22	5139	0	4	9	64	1164	3033	781	62	14	8	0	0	0	3898	75.9	865	16.8	22	0.4	32.1	35.1
06-00	5351	0	4	9	68	1236	3127	817	68	14	8	0	0	0	4034	75.4	907	17	22	0.4	32.1	35.1
00-00	5498	0	4	9	70	1265	3199	856	73	14	8	0	0	0	4150	75.5	951	17.3	22	0.4	32.1	35.3



C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)																								
13 June 2013		to													19 June 2013													Direction	Northbound												
Time Period	Total Vehicles	Speed Bins													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean Speed	85%ile Speed																			
		0-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-130	30	30	35	35	45	45																					
16 June 2013																																									
0000	61	0	0	0	0	19	29	8	3	2	0	0	0	0	42	68.9	13	21.3	2	3.3	32.9	36																			
01:00	21	0	0	0	0	4	11	5	1	0	0	0	0	0	17	81	6	28.6	0	0	33.2	36.2																			
02:00	21	0	0	0	0	4	8	9	0	0	0	0	0	0	17	81	9	42.9	0	0	33.3	36.5																			
03:00	9	0	0	0	0	0	5	3	1	0	0	0	0	0	9	100	4	44.4	0	0	35.3	-																			
04:00	12	0	0	0	0	3	4	3	1	1	0	0	0	0	9	75	5	41.7	1	8.3	34.8	36.7																			
05:00	19	0	0	0	1	2	9	6	1	0	0	0	0	0	16	84.2	7	36.8	0	0	33.9	38																			
06:00	43	0	1	0	2	5	23	9	2	0	1	0	0	0	35	81.4	12	27.9	1	2.3	33.4	37.8																			
07:00	67	0	0	1	0	12	36	15	3	0	0	0	0	0	54	80.6	18	26.9	0	0	33	36.2																			
08:00	171	0	1	1	3	50	90	23	2	1	0	0	0	0	116	67.8	26	15.2	1	0.6	31.7	34.9																			
09:00	305	0	1	3	10	95	159	36	1	0	0	0	0	0	196	64.3	37	12.1	0	0	31.1	34.4																			
10:00	493	0	0	5	11	170	270	35	2	0	0	0	0	0	307	62.3	37	7.5	0	0	30.9	33.8																			
11:00	463	0	0	1	9	152	263	35	3	0	0	0	0	0	301	65	38	8.2	0	0	31	33.8																			
12:00	478	0	0	0	9	157	265	44	3	0	0	0	0	0	312	65.3	47	9.8	0	0	31.2	34.2																			
13:00	400	0	0	1	10	127	212	42	8	0	0	0	0	0	262	65.5	50	12.5	0	0	31.4	34.4																			
14:00	474	0	0	0	8	161	241	56	8	0	0	0	0	0	305	64.3	64	13.5	0	0	31.5	34.7																			
15:00	441	0	0	3	3	136	238	53	4	1	1	0	2	0	299	67.8	61	13.8	4	0.9	31.7	34.7																			
16:00	381	0	0	0	4	103	225	43	6	0	0	0	0	0	274	71.9	49	12.9	0	0	31.8	34.7																			
17:00	350	0	1	0	2	75	199	65	7	1	0	0	0	0	272	77.7	73	20.9	1	0.3	32.5	35.8																			
18:00	300	0	0	0	0	63	184	43	8	2	0	0	0	0	237	79	53	17.7	2	0.7	32.6	35.1																			
19:00	213	0	0	0	1	43	120	44	3	2	0	0	0	0	169	79.3	49	23	2	0.9	32.8	36																			
20:00	191	0	0	2	5	39	87	52	6	0	0	0	0	0	145	75.9	58	30.4	0	0	32.7	36.5																			
21:00	116	0	0	0	0	23	62	25	5	1	0	0	0	0	93	80.2	31	26.7	1	0.9	33.2	37.1																			
22:00	64	0	0	0	0	13	37	8	3	1	2	0	0	0	51	79.7	14	21.9	3	4.7	33.6	36																			
23:00	36	0	0	0	0	9	16	10	1	0	0	0	0	0	27	75	11	30.6	0	0	33.3	37.6																			
07-19	4323	0	3	15	69	1301	2382	490	55	5	1	0	2	0	2935	67.9	553	12.8	8	0.2	31.5	34.7																			
06-22	4886	0	4	17	77	1411	2674	620	71	8	2	0	2	0	3377	69.1	703	14.4	12	0.2	31.7	34.9																			
06-00	4986	0	4	17	77	1433	2727	638	75	9	4	0	2	0	3455	69.3	728	14.6	15	0.3	31.7	34.9																			
00-00	5129	0	4	17	78	1465	2793	672	82	12	4	0	2	0	3565	69.5	772	15.1	18	0.4	31.8	34.9																			

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																								
13 June 2013		to													19 June 2013													Direction	Northbound												
Time Period	Total Vehicles	Speed Bins													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean Speed	85%ile Speed																			
		0-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-130	30	30	35	35	45	45																					
17 June 2013																																									
0000	19	0	0	0	0	3	9	7	0	0	0	0	0	0	0	16	84.2	7	36.8	0	0	33.6	36.2																		
01:00	6	0	0	0	0	1	4	1	0	0	0	0	0	0	5	83.3	1	16.7	0	0	32.2	-																			
02:00	5	0	0	0	1	0	3	1	0	0	0	0	0	0	4	80	1	20	0	0	32.7	-																			
03:00	8	0	0	0	0	0	4	3	1	0	0	0	0	0	8	100	4	50	0	0	35.2	-																			
04:00	12	0	1	0	0	2	2	5	2	0	0	0	0	0	9	75	7	58.3	0	0	33.9	38.7																			
05:00	42	0	0	0	0	3	21	16	1	1	0	0	0	0	39	92.9	18	42.9	1	2.4	34.4	37.4																			
06:00	114	0	1	2	1	9	70	26	5	0	0	0	0	0	101	88.6	31	27.2	0	0	33.1	36.9																			
07:00	403	0	1	1	7	81	232	78	3	0	0	0	0	0	313	77.7	81	20.1	0	0	32.3	35.6																			
08:00	655	0	0	2	12	152	412	66	9	0	0	0	2	0	489	74.7	77	11.8	2	0.3	31.7	34.4																			
09:00	511	0	0	1	11	156	287	50	4	2	0	0	0	0	343	67.1	56	11	2	0.4	31.3	34.2																			
10:00	418	0	0	2	25	140	205	44	2	0	0	0	0	0	251	60	46	11	0	0	30.8	34.2																			
11:00	406	0	0	1	14	136	202	49	4	0	0	0	0	0	255	62.8	53	13.1	0	0	31.1	34.4																			
12:00	483	0	0	0	8	140	276	52	5	2	0	0	0	0	335	69.4	59	12.2	2	0.4	31.5	34.4																			
13:00	423	0	1	3	20	129	211	53	5	1	0	0	0	0	270	63.8	59	13.9	1	0.2	31.1	34.4																			
14:00	447	0	2	0	12	128	248	52	5	0	0	0	0	0	305	68.2	57	12.8	0	0	31.4	34.7																			
15:00	627	0	1	1	21	157	370	73	4	0	0	0	0	0	447	71.3	77	12.3	0	0	31.4	34.2																			
16:00	667	0	0	1	11	179	381	85	8	1	1	0	0	0	476	71.4	95	14.2	2	0.3	31.9	34.9																			
17:00	605	0	1	0	11	138	359	86	7	2	1	0	0	0	455	75.2	96	15.9	3	0.5	32.1	34.9																			
18:00	433	0	0	2	7	94	249	78	2	1	0	0	0	0	330	76.2	81	18.7	1	0.2	32.1	35.3																			
19:00	298	0	0	1	2	70	167	53	3	2	0	0	0	0	225	75.5	58	19.5	2	0.7	32.2	35.1																			
20:00	245	0	0	2	2	47	147	42	3	2	0	0	0	0	194	79.2	47	19.2	2	0.8	32.4	35.6																			
21:00	145	0	0	0	1	31	79	27	6	1	0	0	0	0	113	77.9	34	23.4	1	0.7	32.8	36.5																			
22:00	110	0	0	0	0	31	59	17	3	0	0	0	0	0	79	71.8	20	18.2	0	0	31.8	35.3																			
23:00	48	0	0	0	2	11	21	10	2	2	0	0	0	0	35	72.9	14	29.2	2	4.2	33.1	37.8																			
07-19	6078	0	6	14	159	1630	3432	766	58	9	2	0	2	0	4269	70.2	837	13.8	13	0.2	31.6	34.7																			
06-22	6880	0	7	19	165	1787	3895	914	75	14	2	0	2	0	4902	71.3	1007	14.6	18	0.3	31.7	34.9																			
06-00	7038	0	7	19	167	1829	3975	941	80	16	2	0	2	0	5016	71.3	1041	14.8	20	0.3	31.7	34.9																			
00-00	7130	0	8	19	168	1838	4018	974	84	17	2	0	2	0	5097	71.5	1079	15.1	21	0.3	31.7	34.9																			

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)																				
13 June 2013		to													19 June 2013													Direction	Northbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean	85%ile															
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT	Speed	Speed															
18 June 2013																																					
0000	20	0	0	0	1	3	13	2	1	0	0	0	0	0	16	80	3	15	0	0	32.4	34.4															
01:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	100	1	100	0	0	40.6	-															
02:00	7	0	0	0	0	0	4	1	2	0	0	0	0	0	7	100	3	42.9	0	0	36.6	-															
03:00	9	0	0	0	0	1	3	4	1	0	0	0	0	0	8	88.9	5	55.6	0	0	34.5	-															
04:00	9	0	1	0	0	0	4	4	0	0	0	0	0	0	8	88.9	4	44.4	0	0	32.8	-															
05:00	33	0	0	1	1	3	18	6	3	1	0	0	0	0	28	84.8	10	30.3	1	3	33.5	37.8															
06:00	123	0	0	3	6	15	60	33	6	0	0	0	0	0	99	80.5	39	31.7	0	0	32.7	36.7															
07:00	408	0	0	2	4	77	234	88	3	0	0	0	0	0	325	79.7	91	22.3	0	0	32.5	36															
08:00	673	0	0	1	16	192	391	68	5	0	0	0	0	0	464	68.9	73	10.8	0	0	31.3	34															
09:00	521	0	0	0	12	153	277	74	4	1	0	0	0	0	356	68.3	79	15.2	1	0.2	31.5	34.9															
10:00	441	0	0	5	22	148	229	32	4	1	0	0	0	0	266	60.3	37	8.4	1	0.2	30.6	33.8															
11:00	446	0	0	3	36	175	189	36	5	1	1	0	0	0	232	52	43	9.6	2	0.4	30.3	34															
12:00	486	0	0	0	23	178	230	52	2	0	1	0	0	0	285	58.6	55	11.3	1	0.2	30.8	34.4															
13:00	474	0	0	1	6	140	272	51	2	1	0	1	0	0	327	69	55	11.6	2	0.4	31.5	34.2															
14:00	500	0	0	1	10	161	281	38	8	1	0	0	0	0	328	65.6	47	9.4	1	0.2	31.2	34															
15:00	621	0	0	0	13	190	353	60	5	0	0	0	0	0	418	67.3	65	10.5	0	0	31.3	34															
16:00	645	0	0	7	25	200	333	77	3	0	0	0	0	0	413	64	80	12.4	0	0	31.1	34.4															
17:00	608	0	0	1	8	112	371	103	11	1	0	1	0	0	487	80.1	116	19.1	2	0.3	32.5	35.6															
18:00	492	0	1	3	9	109	268	93	7	2	0	0	0	0	370	75.2	102	20.7	2	0.4	32.1	35.3															
19:00	335	0	0	3	8	57	184	73	5	2	1	1	1	0	267	79.7	83	24.8	5	1.5	32.8	36															
20:00	260	0	0	2	7	57	144	42	7	0	1	0	0	0	194	74.6	50	19.2	1	0.4	32.2	35.6															
21:00	189	0	0	0	1	48	101	36	2	0	1	0	0	0	140	74.1	39	20.6	1	0.5	32.4	35.6															
22:00	97	0	0	0	0	27	43	23	2	2	0	0	0	0	70	72.2	27	27.8	2	2.1	32.7	35.8															
23:00	45	0	0	0	2	8	21	12	2	0	0	0	0	0	35	77.8	14	31.1	0	0	32.9	36.2															
07-19	6315	0	1	24	184	1835	3428	772	59	8	2	2	0	0	4271	67.6	843	13.3	12	0.2	31.4	34.7															
06-22	7222	0	1	32	206	2012	3917	956	79	10	5	3	1	0	4971	68.8	1054	14.6	19	0.3	31.6	34.9															
06-00	7364	0	1	32	208	2047	3981	991	83	12	5	3	1	0	5076	68.9	1095	14.9	21	0.3	31.6	34.9															
00-00	7443	0	2	33	210	2054	4023	1008	91	13	5	3	1	0	5144	69.1	1121	15.1	22	0.3	31.6	34.9															

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																								
13 June 2013		to													19 June 2013													Direction	Northbound												
Time Period	Total Vehicles	Speed Bins													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean Speed	85%ile Speed																			
		0-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-130	30	30	35	35	45	45																					
19 June 2013																																									
0000	13	0	0	0	0	6	4	2	1	0	0	0	0	0	7	53.8	3	23.1	0	0	31.7	34.9																			
01:00	8	0	0	0	0	1	6	1	0	0	0	0	0	0	7	87.5	1	12.5	0	0	32.6	-																			
02:00	3	0	0	0	0	1	1	1	0	0	0	0	0	0	2	66.7	1	33.3	0	0	32	-																			
03:00	7	0	0	0	0	1	6	0	0	0	0	0	0	0	6	85.7	0	0	0	0	32.1	-																			
04:00	14	1	0	0	0	3	6	4	0	0	0	0	0	0	10	71.4	4	28.6	0	0	31	36.2																			
05:00	40	0	0	0	0	3	24	11	2	0	0	0	0	0	37	92.5	13	32.5	0	0	34.1	36.7																			
06:00	106	0	1	4	1	9	50	33	7	1	0	0	0	0	91	85.8	41	38.7	1	0.9	33.5	37.1																			
07:00	418	0	0	4	6	56	234	104	12	1	1	0	0	0	352	84.2	118	28.2	2	0.5	33.2	36.7																			
08:00	674	0	0	6	6	183	372	97	10	0	0	0	0	0	479	71.1	107	15.9	0	0	31.8	35.1																			
09:00	522	0	0	0	19	169	263	70	1	0	0	0	0	0	334	64	71	13.6	0	0	31.1	34.7																			
10:00	456	0	1	0	14	152	232	53	4	0	0	0	0	0	289	63.4	57	12.5	0	0	31.1	34.2																			
11:00	437	0	0	2	15	146	219	51	2	1	1	0	0	0	274	62.7	55	12.6	2	0.5	31.2	34.7																			
12:00	515	0	0	4	5	146	302	53	4	1	0	0	0	0	360	69.9	58	11.3	1	0.2	31.5	34.4																			
13:00	490	0	0	3	15	133	281	51	4	2	1	0	0	0	339	69.2	58	11.8	3	0.6	31.5	34.4																			
14:00	522	0	1	4	17	166	266	58	3	2	1	3	0	1	334	64	68	13	7	1.3	31.5	34.7																			
15:00	652	0	0	0	8	217	333	81	11	1	1	0	0	0	427	65.5	94	14.4	2	0.3	31.5	34.7																			
16:00	582	0	0	2	14	157	324	75	9	1	0	0	0	0	409	70.3	85	14.6	1	0.2	31.7	34.9																			
17:00	624	0	1	2	12	107	374	117	8	2	1	0	0	0	502	80.4	128	20.5	3	0.5	32.6	35.6																			
18:00	484	0	0	10	12	99	290	66	5	2	0	0	0	0	363	75	73	15.1	2	0.4	31.9	34.9																			
19:00	339	0	1	1	3	71	189	59	13	2	0	0	0	0	263	77.6	74	21.8	2	0.6	32.7	35.8																			
20:00	271	0	0	0	3	55	149	54	6	2	1	1	0	0	213	78.6	64	23.6	4	1.5	32.9	36.5																			
21:00	240	0	0	0	7	65	129	36	2	1	0	0	0	0	168	70	39	16.3	1	0.4	31.8	35.3																			
22:00	135	0	0	1	0	32	73	25	3	1	0	0	0	0	102	75.6	29	21.5	1	0.7	32.3	35.6																			
23:00	54	0	0	0	0	7	32	12	2	1	0	0	0	0	47	87	15	27.8	1	1.9	33.5	36.7																			
07-19	6376	0	3	37	143	1731	3490	876	73	13	6	3	0	1	4462	70	972	15.2	23	0.4	31.7	34.9																			
06-22	7332	0	5	42	157	1931	4007	1058	101	19	7	4	0	1	5197	70.9	1190	16.2	31	0.4	31.8	35.1																			
06-00	7521	0	5	43	157	1970	4112	1095	106	21	7	4	0	1	5346	71.1	1234	16.4	33	0.4	31.9	35.1																			
00-00	7606	1	5	43	157	1985	4159	1114	109	21	7	4	0	1	5415	71.2	1256	16.5	33	0.4	31.9	35.1																			

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)											
13 June 2013		to											19 June 2013		Direction	Northbound												
		Speed Bins													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)									
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean Speed	85%ile Speed						
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT								
Average Day																												
0000	31	0	0	0	0	7	16	6	2	1	0	0	0	0	24	75	8	24.5	1	1.8	32.9	36.9						
01:00	12	0	0	0	0	3	6	3	1	0	0	0	0	0	9	78.6	3	26.2	0	0	33	36.5						
02:00	9	0	0	0	0	1	5	3	1	0	0	0	0	0	8	84.8	3	34.8	0	0	33.9	-						
03:00	9	0	0	0	0	1	5	3	0	0	0	0	0	0	8	89.2	3	33.8	0	1.5	33.9	-						
04:00	11	0	0	0	0	1	5	4	1	0	0	0	0	0	9	83.5	5	41.8	0	1.3	33.6	37.4						
05:00	33	0	0	0	1	3	16	11	2	0	0	0	0	0	29	88.6	13	39.9	0	0.9	34.1	37.8						
06:00	100	0	0	2	2	10	54	27	5	0	0	0	0	0	86	85.6	32	31.6	0	0.4	33.3	36.9						
07:00	315	0	0	2	5	57	179	67	5	0	0	0	0	0	251	79.8	72	22.8	0	0.1	32.6	36						
08:00	530	0	1	2	11	144	302	64	5	0	0	0	0	0	372	70.3	70	13.3	1	0.2	31.6	34.7						
09:00	469	0	0	1	14	147	249	55	3	1	0	0	0	0	307	65.4	58	12.4	1	0.1	31.2	34.4						
10:00	446	0	1	2	15	148	231	45	4	0	0	0	0	0	280	62.9	50	11.1	1	0.1	31	34.2						
11:00	444	0	0	2	17	150	229	41	4	0	0	0	0	0	274	61.8	46	10.3	1	0.2	30.9	34						
12:00	485	0	0	1	11	153	264	51	4	1	0	0	0	0	319	65.8	56	11.5	1	0.2	31.3	34.4						
13:00	457	0	0	1	14	134	253	49	4	1	0	0	0	0	308	67.2	55	12	1	0.2	31.3	34.4						
14:00	477	0	0	1	12	146	258	55	5	1	0	0	0	0	319	66.8	61	12.8	2	0.3	31.4	34.7						
15:00	576	0	2	2	13	165	323	64	6	0	0	0	0	0	394	68.4	71	12.4	1	0.2	31.4	34.4						
16:00	559	0	0	2	11	147	316	75	6	1	1	0	0	0	398	71.3	82	14.7	1	0.3	31.8	34.9						
17:00	532	0	1	1	7	105	322	87	7	1	0	0	0	0	419	78.7	97	18.2	2	0.3	32.4	35.3						
18:00	412	0	0	2	5	84	246	67	5	2	0	0	0	0	320	77.7	74	18	2	0.4	32.3	35.3						
19:00	288	0	0	1	3	56	164	56	6	2	0	0	0	0	228	79	64	22.1	2	0.8	32.7	35.8						
20:00	234	0	0	1	3	45	131	45	6	1	0	0	0	0	185	78.9	53	22.7	1	0.6	32.7	36						
21:00	160	0	0	0	2	38	89	27	3	0	0	0	0	0	120	75	31	19.6	1	0.5	32.3	35.8						
22:00	108	0	0	0	1	29	56	18	3	1	0	0	0	0	78	72.3	22	20.4	1	1.1	32.3	35.6						
23:00	56	0	0	0	1	14	26	13	2	1	0	0	0	0	42	73.9	16	27.8	1	1	32.7	36.9						
07-19	5702	0	5	19	136	1580	3171	721	58	8	3	1	1	0	3962	69.5	791	13.9	13	0.2	31.6	34.7						
06-22	6485	0	6	23	146	1729	3610	876	78	11	4	1	1	0	4581	70.6	971	15	18	0.3	31.7	34.9						
06-00	6649	0	6	23	148	1771	3692	906	83	13	5	1	1	0	4700	70.7	1009	15.2	19	0.3	31.7	34.9						
00-00	6755	0	6	23	149	1788	3744	935	88	14	5	1	1	0	4788	70.9	1044	15.5	21	0.3	31.8	34.9						

C0292	SULLY ATCs									Site	1				Location	B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)						
	13 June 2013		to							Direction	Northbound											
															Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)			
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean Speed	85%ile Speed
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT		

Virtual Week (1)

Mon	7130	0	8	19	168	1838	4018	974	84	17	2	0	2	0	5097	71.5	1079	15.1	21	0.3	31.7	34.9
Tue	7443	0	2	33	210	2054	4023	1008	91	13	5	3	1	0	5144	69.1	1121	15.1	22	0.3	31.6	34.9
Wed	7606	1	5	43	157	1985	4159	1114	109	21	7	4	0	1	5415	71.2	1256	16.5	33	0.4	31.9	35.1
Thu	7217	0	9	22	207	1863	4094	929	79	11	3	0	0	0	5116	70.9	1022	14.2	14	0.2	31.6	34.7
Fri	7264	2	13	21	155	2045	3923	990	101	9	4	1	0	0	5028	69.2	1105	15.2	14	0.2	31.6	34.9
Sat	5498	0	4	9	70	1265	3199	856	73	14	8	0	0	0	4150	75.5	951	17.3	22	0.4	32.1	35.3
Sun	5129	0	4	17	78	1465	2793	672	82	12	4	0	2	0	3565	69.5	772	15.1	18	0.4	31.8	34.9

5 Day Average

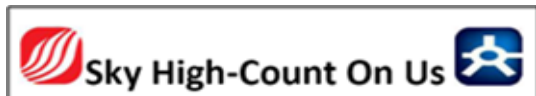
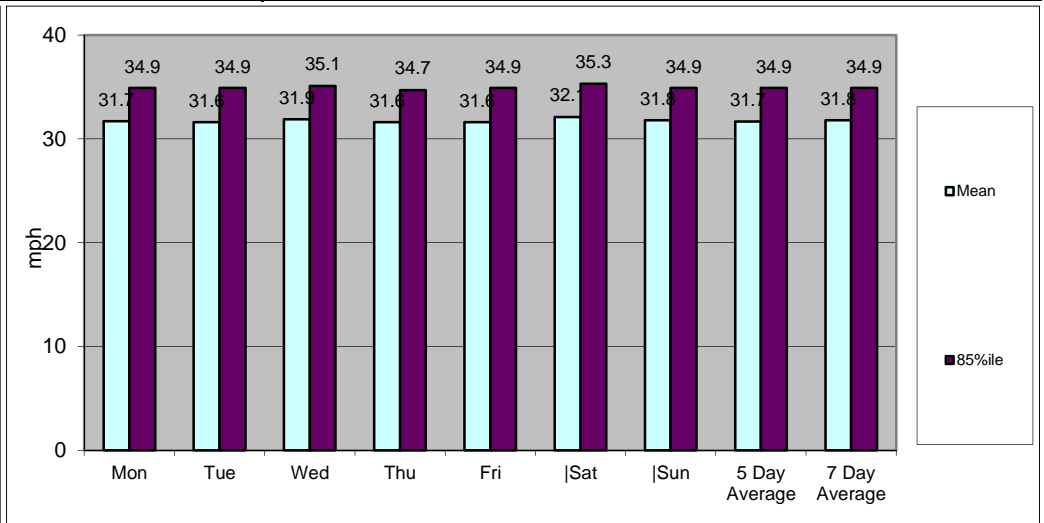
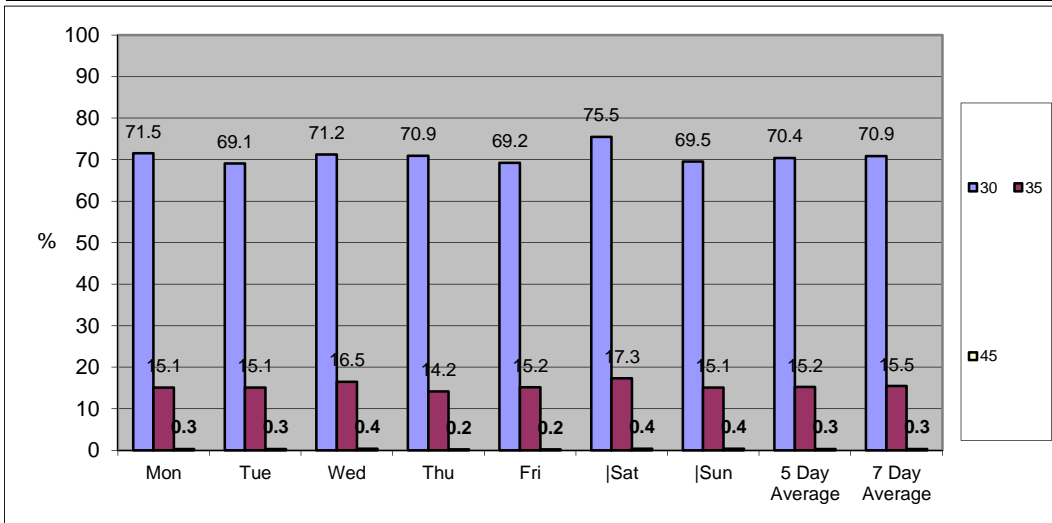
[--]	7332	1	7	28	179	1957	4043	1003	93	14	4	2	1	0	5160	70.4	1117	15.2	21	0.3	31.7	34.9
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7 Day Average

[--]	6755	0	6	23	149	1788	3744	935	88	14	5	1	1	0	4788	70.9	1044	15.5	21	0.3	31.8	34.9
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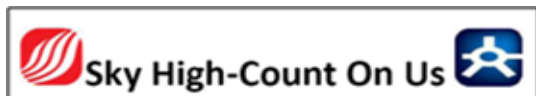
Total Vehicles

[--]	47287	3	45	164	1045	12515	26209	6543	619	97	33	8	5	1	33515	70.9	7306	15.5	144	0.3	31.8	34.9
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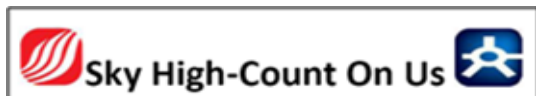
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
13 June 2013															
0000	27	0	23	4	0	0	0	0	0	0	0	0	0	0	0
01:00	11	0	9	1	0	1	0	0	0	0	0	0	0	0	0
02:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	0
03:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	0
04:00	15	0	13	1	0	0	0	0	0	0	0	1	0	0	0
05:00	30	1	23	3	0	1	0	0	1	0	0	1	0	0	0
06:00	100	3	66	24	2	1	1	0	2	0	0	1	0	0	0
07:00	415	3	331	65	4	2	3	1	0	0	2	3	0	1	0
08:00	677	1	577	82	3	6	2	0	2	0	1	3	0	0	0
09:00	501	3	406	64	8	11	2	1	1	0	2	3	0	0	0
10:00	415	1	347	49	2	8	2	0	3	0	0	2	0	1	0
11:00	399	0	337	51	2	5	0	0	1	0	2	1	0	0	0
12:00	420	0	356	49	4	4	1	0	1	0	1	2	0	2	0
13:00	452	3	385	53	2	5	1	0	1	0	2	0	0	0	0
14:00	471	1	388	60	5	5	1	0	3	0	3	5	0	0	0
15:00	548	2	475	57	3	4	2	0	0	0	2	2	0	1	0
16:00	578	4	500	59	3	6	2	0	0	0	2	1	0	1	0
17:00	545	2	504	30	1	3	0	0	1	0	2	1	0	1	0
18:00	489	5	436	41	3	0	0	1	0	0	1	2	0	0	0
19:00	332	4	305	21	0	1	0	0	0	0	0	1	0	0	0
20:00	201	3	185	12	1	0	0	0	0	0	0	0	0	0	0
21:00	145	1	135	8	0	1	0	0	0	0	0	0	0	0	0
22:00	122	1	117	4	0	0	0	0	0	0	0	0	0	0	0
23:00	70	0	67	3	0	0	0	0	0	0	0	0	0	0	0
07-19	5910	25	5042	660	40	59	16	3	13	0	20	25	0	7	0
06-22	6688	36	5733	725	43	62	17	3	15	0	20	27	0	7	0
06-00	6880	37	5917	732	43	62	17	3	15	0	20	27	0	7	0
00-00	6977	38	5997	743	43	64	17	3	16	0	20	29	0	7	0



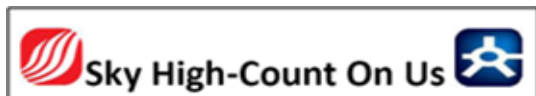
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
14 June 2013															
0000	30	0	27	1	0	2	0	0	0	0	0	0	0	0	0
01:00	12	0	11	1	0	0	0	0	0	0	0	0	0	0	0
02:00	10	0	6	3	0	1	0	0	0	0	0	0	0	0	0
03:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
04:00	10	0	8	2	0	0	0	0	0	0	0	0	0	0	0
05:00	28	2	25	1	0	0	0	0	0	0	0	0	0	0	0
06:00	99	3	81	12	0	2	1	0	0	0	0	0	0	0	0
07:00	416	4	327	73	2	4	3	0	1	0	2	0	0	0	0
08:00	686	0	598	71	3	4	3	0	2	0	1	4	0	0	0
09:00	479	0	392	63	7	10	1	0	1	0	2	2	0	1	0
10:00	402	1	334	60	1	4	0	0	2	0	0	0	0	0	0
11:00	182	2	141	32	0	3	0	0	1	0	1	2	0	0	0
12:00	437	4	366	52	4	3	3	0	3	0	1	1	0	0	0
13:00	336	0	290	36	1	1	0	1	3	1	1	2	0	0	0
14:00	516	3	427	70	7	4	0	0	0	0	1	3	0	1	0
15:00	574	2	501	55	4	5	0	2	2	0	1	1	0	1	0
16:00	568	4	508	46	1	2	0	0	0	0	2	4	0	1	0
17:00	514	4	460	41	3	1	3	0	1	0	1	0	0	0	0
18:00	450	2	413	32	0	3	0	0	0	0	0	0	0	0	0
19:00	344	1	324	16	0	2	1	0	0	0	0	0	0	0	0
20:00	190	1	175	13	1	0	0	0	0	0	0	0	0	0	0
21:00	136	0	121	14	0	1	0	0	0	0	0	0	0	0	0
22:00	107	0	99	7	0	1	0	0	0	0	0	0	0	0	0
23:00	70	0	66	4	0	0	0	0	0	0	0	0	0	0	0
07-19	5560	26	4757	631	33	44	13	3	16	1	13	19	0	4	4
06-22	6329	31	5458	686	34	49	15	3	16	1	13	19	0	4	4
06-00	6506	31	5623	697	34	50	15	3	16	1	13	19	0	4	4
00-00	6602	33	5706	705	34	53	15	3	16	1	13	19	0	4	4



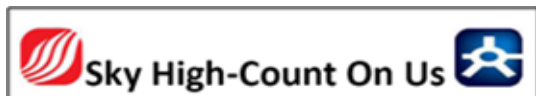
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR			TWO		FOUR OR		FOUR OR		SIX OR		FIVE OR LESS		SEVEN OR MORE	
			CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	MORE AXLE RIGID	LESS AXLE ARTIC	FIVE AXLE ARTIC	MORE AXLE ARTIC	AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC			
15 June 2013																	
0000	48	1	41	6	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	33	0	27	6	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	16	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	10	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	12	0	10	1	0	0	0	0	0	0	0	0	1	0	0	0	0
05:00	19	1	13	3	0	1	0	0	1	0	0	0	0	0	0	0	0
06:00	68	4	52	7	1	2	0	0	0	0	1	1	1	0	0	0	0
07:00	131	0	104	21	2	1	0	0	0	0	2	1	0	0	0	0	0
08:00	218	1	171	36	1	2	1	0	2	0	0	4	0	0	0	0	0
09:00	295	4	252	29	5	1	0	0	1	0	2	1	0	0	0	0	0
10:00	390	5	344	37	0	1	1	0	0	0	0	2	0	0	0	0	0
11:00	417	1	367	41	1	1	1	0	3	0	0	1	0	1	0	1	1
12:00	424	1	372	47	1	2	0	0	0	0	1	0	0	0	0	0	0
13:00	452	1	413	35	1	0	0	0	1	0	1	0	0	0	0	0	0
14:00	440	2	408	28	1	0	1	0	0	0	0	0	0	0	0	0	0
15:00	400	4	368	25	1	0	0	0	1	0	1	0	0	0	0	0	0
16:00	441	1	414	22	1	0	0	1	1	0	1	0	0	0	0	0	0
17:00	403	4	365	31	2	0	0	0	1	0	0	0	0	0	0	0	0
18:00	362	3	324	32	1	0	1	0	0	0	0	1	0	0	0	0	0
19:00	298	2	277	18	0	1	0	0	0	0	0	0	0	0	0	0	0
20:00	170	2	156	10	0	0	0	0	2	0	0	0	0	0	0	0	0
21:00	105	3	92	10	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	105	1	91	12	0	1	0	0	0	0	0	0	0	0	0	0	0
23:00	76	1	72	3	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4373	27	3902	384	17	8	5	1	10	0	8	10	0	1	1	1	1
06-22	5014	38	4479	429	18	11	5	1	12	0	9	11	0	1	1	1	1
06-00	5195	40	4642	444	18	12	5	1	12	0	9	11	0	1	1	1	1
00-00	5333	42	4754	465	18	13	5	1	13	0	9	12	0	1	1	1	1



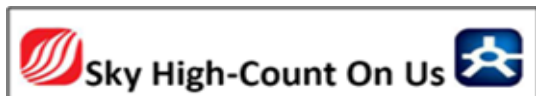
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FOUR OR	SIX OR	FIVE OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC			AXLE ARTIC	LESS AXLE MULTI-TRAILER ARTIC		SIX AXLE MULTI-TRAILER ARTIC
16 June 2013																
0000	41	1	37	3	0	0	0	0	0	0	0	0	0	0	0	0
01:00	18	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0
02:00	15	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0
03:00	13	0	11	1	0	0	0	0	0	0	0	0	1	0	0	0
04:00	11	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0
05:00	16	2	11	2	0	0	0	0	0	1	0	0	0	0	0	0
06:00	97	3	87	6	0	0	1	0	0	0	0	0	0	0	0	0
07:00	148	0	130	14	1	0	0	1	1	0	1	0	0	0	0	0
08:00	204	1	180	19	1	1	0	0	2	0	0	0	0	0	0	0
09:00	353	2	330	18	0	1	0	0	2	0	0	0	0	0	0	0
10:00	364	8	328	25	0	0	0	0	2	0	0	0	0	0	0	1
11:00	460	2	430	25	1	0	1	0	0	0	1	0	0	0	0	0
12:00	499	2	461	36	0	0	0	0	0	0	0	0	0	0	0	0
13:00	423	3	399	20	1	0	0	0	0	0	0	0	0	0	0	0
14:00	408	1	386	20	0	0	0	0	1	0	0	0	0	0	0	0
15:00	386	2	358	21	1	0	4	0	0	0	0	0	0	0	0	0
16:00	400	1	374	24	1	0	0	0	0	0	0	0	0	0	0	0
17:00	317	1	292	21	0	1	0	1	1	0	0	0	0	0	0	0
18:00	276	2	260	13	0	0	0	0	1	0	0	0	0	0	0	0
19:00	217	3	204	9	0	1	0	0	0	0	0	0	0	0	0	0
20:00	167	3	156	5	0	1	0	0	0	0	1	0	0	0	1	1
21:00	93	0	86	7	0	0	0	0	0	0	0	0	0	0	0	0
22:00	80	2	69	9	0	0	0	0	0	0	0	0	0	0	0	0
23:00	39	0	37	2	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4238	25	3928	256	6	3	5	2	10	0	2	0	0	0	1	1
06-22	4812	34	4461	283	6	5	6	2	10	0	3	0	0	0	2	2
06-00	4931	36	4567	294	6	5	6	2	10	0	3	0	0	0	2	2
00-00	5045	39	4661	309	6	5	6	2	11	0	3	1	0	0	2	2



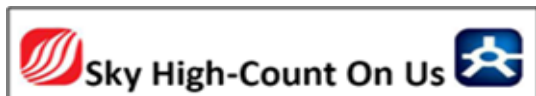
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
17 June 2013															
00:00	24	0	21	3	0	0	0	0	0	0	0	0	0	0	0
01:00	10	0	8	2	0	0	0	0	0	0	0	0	0	0	0
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
03:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
04:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
05:00	29	1	24	1	0	0	0	0	1	1	0	1	0	0	0
06:00	126	4	98	18	2	3	0	0	1	0	0	0	0	0	0
07:00	379	4	313	54	5	2	1	0	0	0	0	0	0	0	0
08:00	662	3	576	70	4	5	3	0	0	0	0	1	0	0	0
09:00	435	1	360	61	4	5	0	0	0	0	1	1	0	2	0
10:00	363	2	298	43	10	3	2	0	3	0	0	2	0	0	0
11:00	454	2	380	58	3	4	3	0	3	0	1	0	0	0	0
12:00	494	3	429	48	1	7	2	0	2	0	0	2	0	0	0
13:00	415	2	348	54	3	1	1	0	3	0	1	2	0	0	0
14:00	461	0	384	67	3	3	2	0	0	0	0	2	0	0	0
15:00	575	3	498	54	6	9	1	0	0	0	1	3	0	0	0
16:00	576	4	510	51	6	0	1	0	1	0	2	1	0	0	0
17:00	570	7	501	53	4	1	0	0	0	1	0	3	0	0	0
18:00	500	5	458	30	2	0	2	0	2	0	0	1	0	0	0
19:00	326	6	296	21	0	1	0	0	0	0	0	2	0	0	0
20:00	211	4	193	13	1	0	0	0	0	0	0	0	0	0	0
21:00	132	1	123	7	0	1	0	0	0	0	0	0	0	0	0
22:00	95	1	89	5	0	0	0	0	0	0	0	0	0	0	0
23:00	48	0	46	2	0	0	0	0	0	0	0	0	0	0	0
07-19	5884	36	5055	643	51	40	18	0	14	1	6	18	0	2	2
06-22	6679	51	5765	702	54	45	18	0	15	1	6	20	0	2	2
06-00	6822	52	5900	709	54	45	18	0	15	1	6	20	0	2	2
00-00	6896	53	5964	715	54	45	18	0	16	2	6	21	0	2	2



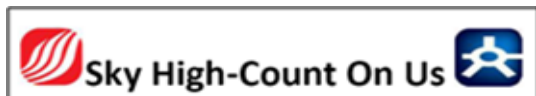
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
18 June 2013															
0000	20	0	17	2	1	0	0	0	0	0	0	0	0	0	0
01:00	5	0	3	1	0	1	0	0	0	0	0	0	0	0	0
02:00	7	0	6	0	0	1	0	0	0	0	0	0	0	0	0
03:00	4	0	3	1	0	0	0	0	0	0	0	0	0	0	0
04:00	5	0	4	1	0	0	0	0	0	0	0	0	0	0	0
05:00	22	2	16	3	0	0	0	0	0	0	0	1	0	0	0
06:00	120	4	91	16	3	3	0	0	1	0	1	1	0	0	0
07:00	409	5	324	65	3	6	4	0	0	0	2	0	0	0	0
08:00	674	4	582	73	6	2	1	0	2	0	1	2	0	1	1
09:00	524	1	438	69	6	3	1	0	1	0	1	3	0	1	1
10:00	396	3	335	45	4	4	1	0	2	0	0	2	0	0	0
11:00	440	3	368	56	2	5	1	1	2	0	0	2	0	0	0
12:00	480	4	412	45	3	4	3	1	3	0	1	4	0	0	0
13:00	433	2	365	56	2	6	1	0	0	0	0	1	0	0	0
14:00	506	3	422	66	4	3	2	0	3	0	0	3	0	0	0
15:00	597	7	512	57	7	4	2	1	1	1	3	2	0	0	0
16:00	567	7	490	51	6	1	1	0	3	0	4	3	0	1	1
17:00	625	3	549	61	2	4	1	1	2	0	0	2	0	0	0
18:00	492	7	443	37	3	0	0	0	1	0	0	1	0	0	0
19:00	357	8	318	26	1	1	0	0	1	0	1	1	0	0	0
20:00	228	4	208	15	1	0	0	0	0	0	0	0	0	0	0
21:00	151	5	138	7	0	1	0	0	0	0	0	0	0	0	0
22:00	98	1	89	6	0	1	0	0	1	0	0	0	0	0	0
23:00	36	0	33	3	0	0	0	0	0	0	0	0	0	0	0
07-19	6143	49	5240	681	48	42	18	4	20	1	12	25	0	3	3
06-22	6999	70	5995	745	53	47	18	4	22	1	14	27	0	3	3
06-00	7133	71	6117	754	53	48	18	4	23	1	14	27	0	3	3
00-00	7196	73	6166	762	54	50	18	4	23	1	15	27	0	3	3



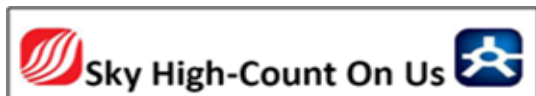
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
19 June 2013															
0000	15	0	13	1	0	1	0	0	0	0	0	0	0	0	0
01:00	12	0	8	3	0	1	0	0	0	0	0	0	0	0	0
02:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0
03:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0
04:00	8	0	7	1	0	0	0	0	0	0	0	0	0	0	0
05:00	27	3	18	5	0	0	0	0	1	0	0	0	0	0	0
06:00	118	6	89	18	2	1	1	0	1	0	0	0	0	0	0
07:00	382	5	315	49	5	3	2	0	1	0	0	2	0	0	0
08:00	676	5	569	86	5	1	5	0	3	0	0	2	0	0	0
09:00	529	3	446	65	4	5	1	1	1	0	1	2	0	0	0
10:00	431	5	371	41	3	7	1	0	0	0	1	1	0	1	1
11:00	469	6	393	54	3	4	4	0	2	0	0	3	0	0	0
12:00	490	10	405	59	4	3	1	0	5	1	1	1	0	0	0
13:00	465	6	401	43	3	3	3	1	1	0	4	0	0	0	0
14:00	521	3	444	58	5	4	2	0	1	0	1	2	0	1	1
15:00	586	9	493	67	5	3	2	1	2	0	2	1	0	1	1
16:00	587	5	510	49	7	3	2	0	3	0	7	1	0	0	0
17:00	632	5	559	55	1	1	2	0	3	0	2	3	0	1	1
18:00	487	6	443	31	4	0	0	0	1	0	0	1	0	1	1
19:00	388	11	357	20	0	0	0	0	0	0	0	0	0	0	0
20:00	241	5	217	16	1	0	0	0	1	0	0	1	0	0	0
21:00	170	4	157	7	0	2	0	0	0	0	0	0	0	0	0
22:00	119	3	112	4	0	0	0	0	0	0	0	0	0	0	0
23:00	55	0	52	3	0	0	0	0	0	0	0	0	0	0	0
07-19	6255	68	5349	657	49	37	25	3	23	1	19	19	0	5	5
06-22	7172	94	6169	718	52	40	26	3	25	1	19	20	0	5	5
06-00	7346	97	6333	725	52	40	26	3	25	1	19	20	0	5	5
00-00	7417	100	6386	737	52	42	26	3	26	1	19	20	0	5	5



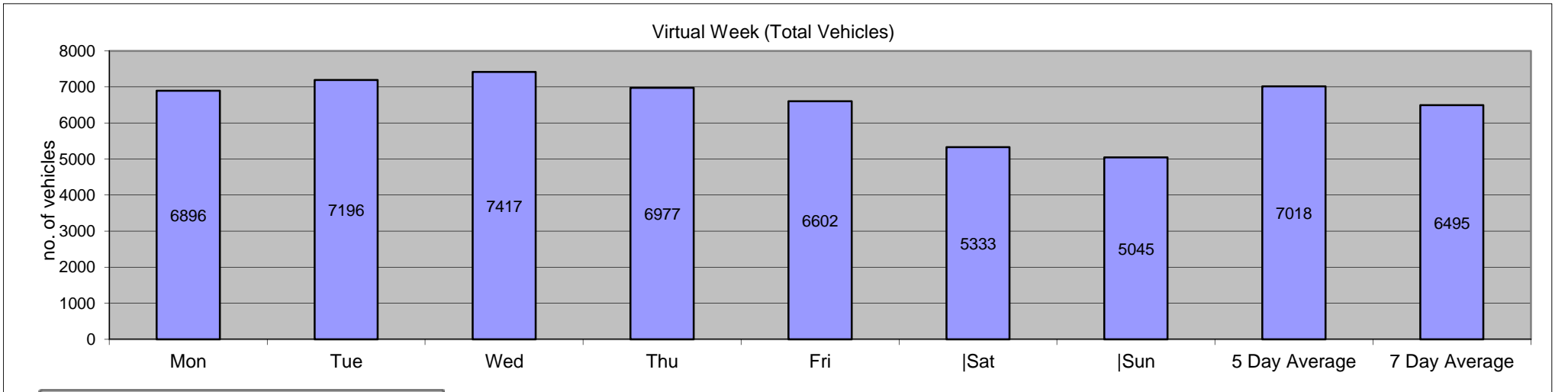
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
Average Day															
0000	29	0	26	3	0	0	0	0	0	0	0	0	0	0	0
01:00	14	0	12	2	0	0	0	0	0	0	0	0	0	0	0
02:00	9	0	7	1	0	0	0	0	0	0	0	0	0	0	0
03:00	7	0	6	1	0	0	0	0	0	0	0	0	0	0	0
04:00	9	0	8	1	0	0	0	0	0	0	0	0	0	0	0
05:00	24	2	19	3	0	0	0	0	1	0	0	0	0	0	0
06:00	104	4	81	14	1	2	1	0	1	0	0	0	0	0	0
07:00	326	3	263	49	3	3	2	0	0	0	1	1	0	0	0
08:00	542	2	465	62	3	3	2	0	2	0	0	2	0	0	0
09:00	445	2	375	53	5	5	1	0	1	0	1	2	0	1	0
10:00	394	4	337	43	3	4	1	0	2	0	0	1	0	0	0
11:00	403	2	345	45	2	3	1	0	2	0	1	1	0	0	0
12:00	463	3	400	48	2	3	1	0	2	0	1	1	0	0	0
13:00	425	2	372	42	2	2	1	0	1	0	1	1	0	0	0
14:00	475	2	408	53	4	3	1	0	1	0	1	2	0	0	0
15:00	524	4	458	48	4	4	2	1	1	0	1	1	0	0	0
16:00	531	4	472	43	4	2	1	0	1	0	3	1	0	0	0
17:00	515	4	461	42	2	2	1	0	1	0	1	1	0	0	0
18:00	437	4	397	31	2	0	0	0	1	0	0	1	0	0	0
19:00	323	5	297	19	0	1	0	0	0	0	0	1	0	0	0
20:00	201	3	184	12	1	0	0	0	0	0	0	0	0	0	0
21:00	133	2	122	9	0	1	0	0	0	0	0	0	0	0	0
22:00	104	1	95	7	0	0	0	0	0	0	0	0	0	0	0
23:00	56	0	53	3	0	0	0	0	0	0	0	0	0	0	0
07-19	5480	37	4753	559	35	33	14	2	15	1	11	17	0	3	3
06-22	6242	51	5437	613	37	37	15	2	16	1	12	18	0	3	3
06-00	6402	52	5586	622	37	37	15	2	17	1	12	18	0	3	3
00-00	6495	54	5662	634	37	39	15	2	17	1	12	18	0	3	3



C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Southbound

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
Virtual Week (1)														
Mon	6896	53	5964	715	54	45	18	0	16	2	6	21	0	2
Tue	7196	73	6166	762	54	50	18	4	23	1	15	27	0	3
Wed	7417	100	6386	737	52	42	26	3	26	1	19	20	0	5
Thu	6977	38	5997	743	43	64	17	3	16	0	20	29	0	7
Fri	6602	33	5706	705	34	53	15	3	16	1	13	19	0	4
Sat	5333	42	4754	465	18	13	5	1	13	0	9	12	0	1
Sun	5045	39	4661	309	6	5	6	2	11	0	3	1	0	2
5 Day Average														
[--]	7018	59	6044	732	47	51	19	3	19	1	15	23	0	4
7 Day Average														
[--]	6495	54	5662	634	37	39	15	2	17	1	12	18	0	3
Total Vehicles														
[--]	45466	378	39634	4436	261	272	105	16	121	5	85	129	0	24

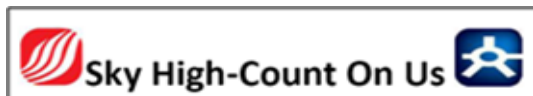


C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)									
13 June 2013		to													19 June 2013	Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile	
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
13 June 2013																										
0000	27	0	0	0	1	1	3	6	10	4	1	0	0	1	25	92.6	22	81.5	6	22.2	40.9	45.9				
01:00	11	0	0	0	0	0	0	3	6	1	0	1	0	0	11	100	11	100	2	18.2	42.9	44.5				
02:00	6	0	0	0	0	0	0	1	1	3	0	1	0	0	6	100	6	100	4	66.7	45.9	-				
03:00	8	0	0	0	0	0	2	1	2	3	0	0	0	0	8	100	6	75	3	37.5	41.9	-				
04:00	15	0	0	0	0	0	4	2	7	2	0	0	0	0	15	100	11	73.3	2	13.3	40.5	44.7				
05:00	30	0	0	0	0	0	6	6	11	4	3	0	0	0	30	100	24	80	7	23.3	41.4	46.1				
06:00	100	0	1	0	0	0	13	45	27	10	3	1	0	0	99	99	86	86	14	14	39.6	44.5				
07:00	415	0	0	0	1	16	116	188	76	15	3	0	0	0	398	95.9	282	68	18	4.3	37.1	41.4				
08:00	677	0	0	1	7	39	240	300	76	12	1	1	0	0	630	93.1	390	57.6	14	2.1	35.7	39.6				
09:00	501	0	0	0	3	25	183	212	67	10	1	0	0	0	473	94.4	290	57.9	11	2.2	35.9	39.8				
10:00	415	0	1	1	2	40	117	204	38	11	1	0	0	0	371	89.4	254	61.2	12	2.9	35.6	39.4				
11:00	399	0	0	0	1	29	146	181	34	7	1	0	0	0	369	92.5	223	55.9	8	2	35.6	38.9				
12:00	420	0	0	0	2	24	118	196	71	7	2	0	0	0	394	93.8	276	65.7	9	2.1	36.5	40.5				
13:00	452	0	0	3	3	40	172	187	39	5	3	0	0	0	406	89.8	234	51.8	8	1.8	35.2	38.9				
14:00	471	0	0	1	5	35	164	204	57	4	1	0	0	0	430	91.3	266	56.5	5	1.1	35.6	39.4				
15:00	548	0	0	1	1	29	161	243	98	12	1	0	2	0	517	94.3	356	65	15	2.7	36.7	40.7				
16:00	578	0	0	1	4	23	146	304	86	12	2	0	0	0	550	95.2	404	69.9	14	2.4	36.7	40.3				
17:00	545	0	0	1	1	7	115	282	116	20	1	2	0	0	536	98.3	421	77.2	23	4.2	37.7	41.4				
18:00	489	0	1	3	3	8	72	224	133	40	5	0	0	0	474	96.9	402	82.2	45	9.2	38.7	43.4				
19:00	332	0	0	1	0	6	70	139	81	25	8	2	0	0	325	97.9	255	76.8	35	10.5	38.6	43.6				
20:00	201	0	0	3	0	3	28	70	68	21	7	1	0	0	195	97	167	83.1	29	14.4	39.5	44.7				
21:00	145	0	0	1	0	3	26	56	41	11	3	4	0	0	141	97.2	115	79.3	18	12.4	39.2	44.1				
22:00	122	0	0	0	0	7	29	53	20	12	1	0	0	0	115	94.3	86	70.5	13	10.7	38	43.8				
23:00	70	0	0	0	0	0	16	18	17	9	8	1	0	1	70	100	54	77.1	19	27.1	41	47.4				
07-19	5910	0	2	12	33	315	1750	2725	891	155	22	3	2	0	5548	93.9	3798	64.3	182	3.1	36.4	40.5				
06-22	6688	0	3	17	33	327	1887	3035	1108	222	43	11	2	0	6308	94.3	4421	66.1	278	4.2	36.7	40.9				
06-00	6880	0	3	17	33	334	1932	3106	1145	243	52	12	2	1	6493	94.4	4561	66.3	310	4.5	36.8	40.9				
00-00	6977	0	3	17	34	335	1947	3125	1182	260	56	14	2	2	6588	94.4	4641	66.5	334	4.8	36.9	41.2				

C0292 SULLY ATCs																Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																								
13 June 2013		to														19 June 2013														Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile			
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean	85%ile																				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT	Speed	Speed																				
14 June 2013																																										
0000	30	0	0	0	0	0	4	8	15	1	1	1	0	0	30	100	26	86.7	3	10	40.7	43.4																				
01:00	12	0	0	0	0	0	0	6	3	2	1	0	0	12	100	12	100	3	25	42	46.5																					
02:00	10	0	0	0	0	0	1	4	2	2	1	0	0	10	100	9	90	3	30	42.5	-																					
03:00	6	0	0	1	0	0	0	1	2	1	0	1	0	5	83.3	5	83.3	2	33.3	40.9	-																					
04:00	10	0	0	0	0	0	2	1	3	4	0	0	0	10	100	8	80	4	40	42.4	-																					
05:00	28	0	0	1	0	2	1	8	7	4	4	1	0	25	89.3	24	85.7	9	32.1	41.1	52.3																					
06:00	99	0	0	1	0	2	10	31	32	15	5	2	1	96	97	86	86.9	23	23.2	41	47.2																					
07:00	416	0	0	1	0	15	87	175	115	18	5	0	0	400	96.2	313	75.2	23	5.5	38	42.5																					
08:00	686	0	1	4	6	55	215	318	74	12	1	0	0	620	90.4	405	59	13	1.9	35.5	39.4																					
09:00	479	2	3	6	1	46	149	198	62	12	0	0	0	421	87.9	272	56.8	12	2.5	35.3	40																					
10:00	402	0	1	0	6	24	165	154	41	11	0	0	0	371	92.3	206	51.2	11	2.7	35.4	39.4																					
11:00	182	0	0	1	3	17	44	71	40	6	0	0	0	161	88.5	117	64.3	6	3.3	36.4	41.2																					
12:00	437	0	1	1	3	45	155	167	52	13	0	0	0	387	88.6	232	53.1	13	3	35.4	39.6																					
13:00	336	0	0	0	0	35	112	130	48	7	3	1	0	301	89.6	189	56.3	11	3.3	35.9	40.5																					
14:00	516	0	0	2	1	26	141	230	97	18	1	0	0	487	94.4	346	67.1	19	3.7	36.9	41.2																					
15:00	574	0	0	3	0	27	221	240	71	11	1	0	0	544	94.8	323	56.3	12	2.1	35.8	39.8																					
16:00	568	0	0	2	3	28	198	254	79	1	3	0	0	535	94.2	337	59.3	4	0.7	35.9	39.8																					
17:00	514	0	0	0	5	19	153	219	101	15	2	0	0	490	95.3	337	65.6	17	3.3	36.8	41.4																					
18:00	450	0	0	1	0	7	125	205	95	15	2	0	0	442	98.2	317	70.4	17	3.8	37.3	41.4																					
19:00	344	0	0	1	0	11	93	131	79	25	3	1	0	332	96.5	239	69.5	29	8.4	37.8	43.2																					
20:00	190	0	0	1	0	9	29	84	45	16	4	2	0	180	94.7	151	79.5	22	11.6	38.6	43.6																					
21:00	136	0	0	0	0	2	35	53	29	10	5	1	1	134	98.5	99	72.8	17	12.5	38.6	44.5																					
22:00	107	0	0	0	1	2	19	53	23	6	2	1	0	104	97.2	85	79.4	9	8.4	38.5	43.4																					
23:00	70	0	0	0	0	3	15	29	14	7	2	0	0	67	95.7	52	74.3	9	12.9	38.4	43.8																					
07-19	5560	2	6	21	28	344	1765	2361	875	139	18	1	0	5159	92.8	3394	61	158	2.8	36.2	40.5																					
06-22	6329	2	6	24	28	368	1932	2660	1060	205	35	7	2	5901	93.2	3969	62.7	249	3.9	36.5	40.9																					
06-00	6506	2	6	24	29	373	1966	2742	1097	218	39	8	2	6072	93.3	4106	63.1	267	4.1	36.5	40.9																					
00-00	6602	2	6	26	29	375	1974	2770	1129	232	46	11	2	6164	93.4	4190	63.5	291	4.4	36.6	41.2																					

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to											19 June 2013	Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile			
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
15 June 2013																										
0000	48	0	0	0	0	2	7	16	16	5	0	2	0	0	46	95.8	39	81.3	7	14.6	39.9	44.5				
01:00	33	0	0	0	0	0	3	9	7	10	2	1	1	0	33	100	30	90.9	14	42.4	43.7	49.2				
02:00	16	0	0	0	0	0	2	7	3	2	2	0	0	0	16	100	14	87.5	4	25	41.6	49.9				
03:00	10	0	0	0	0	0	0	4	3	1	2	0	0	0	10	100	10	100	3	30	42.1	-				
04:00	12	0	0	0	0	1	2	5	3	1	0	0	0	0	11	91.7	9	75	1	8.3	37.4	42.1				
05:00	19	0	0	1	0	0	2	1	7	7	1	0	0	0	18	94.7	16	84.2	8	42.1	42.3	47				
06:00	68	0	1	0	0	1	7	24	20	10	4	0	1	0	66	97.1	59	86.8	15	22.1	40.5	45.9				
07:00	131	0	0	0	0	7	19	58	27	16	2	1	0	1	124	94.7	105	80.2	20	15.3	39.1	44.7				
08:00	218	0	0	0	1	4	29	82	70	22	7	2	1	0	213	97.7	184	84.4	32	14.7	39.9	44.7				
09:00	295	0	0	2	0	17	72	113	73	12	4	2	0	0	276	93.6	204	69.2	18	6.1	37.5	42.1				
10:00	390	1	0	0	0	10	88	199	77	13	2	0	0	0	379	97.2	291	74.6	15	3.8	37.4	41.6				
11:00	417	0	0	2	0	22	138	177	64	14	0	0	0	0	393	94.2	255	61.2	14	3.4	36.3	40.5				
12:00	424	0	0	0	5	19	141	191	56	10	2	0	0	0	400	94.3	259	61.1	12	2.8	36.2	40				
13:00	452	0	0	0	1	19	120	209	82	17	3	1	0	0	432	95.6	312	69	21	4.6	37.1	41.4				
14:00	440	0	0	1	1	7	99	218	95	17	1	0	0	1	431	98	332	75.5	19	4.3	37.6	41.6				
15:00	400	0	0	1	0	13	96	188	85	15	1	0	0	1	386	96.5	290	72.5	17	4.3	37.4	41.4				
16:00	441	0	0	0	0	10	122	209	86	13	1	0	0	0	431	97.7	309	70.1	14	3.2	37.3	40.7				
17:00	403	0	1	1	0	3	101	210	69	15	2	1	0	0	398	98.8	297	73.7	18	4.5	37.4	41.6				
18:00	362	0	0	0	0	13	57	162	100	26	3	1	0	0	349	96.4	292	80.7	30	8.3	38.5	42.9				
19:00	298	0	0	0	0	2	47	114	97	24	13	0	0	1	296	99.3	249	83.6	38	12.8	39.9	44.3				
20:00	170	0	0	0	2	1	19	72	55	12	8	1	0	0	167	98.2	148	87.1	21	12.4	39.8	44.7				
21:00	105	0	0	1	0	5	19	35	28	13	2	2	0	0	99	94.3	80	76.2	17	16.2	39.4	45				
22:00	105	0	0	0	0	0	17	61	16	8	1	2	0	0	105	100	88	83.8	11	10.5	38.8	42.5				
23:00	76	0	0	0	0	5	18	33	15	4	1	0	0	0	71	93.4	53	69.7	5	6.6	37.6	42.5				
07-19	4373	1	1	7	8	144	1082	2016	884	190	28	8	1	3	4212	96.3	3130	71.6	230	5.3	37.4	41.8				
06-22	5014	1	2	8	10	153	1174	2261	1084	249	55	11	2	4	4840	96.5	3666	73.1	321	6.4	37.7	42.1				
06-00	5195	1	2	8	10	158	1209	2355	1115	261	57	13	2	4	5016	96.6	3807	73.3	337	6.5	37.8	42.1				
00-00	5333	1	2	9	10	161	1225	2397	1154	287	64	16	3	4	5150	96.6	3925	73.6	374	7	37.9	42.3				

C0292 SULLY ATCs		Site 1													Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)							
13 June 2013		to													19 June 2013							
		Direction Southbound													Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT		
16 June 2013																						
0000	41	0	0	0	0	1	6	12	12	8	1	0	0	1	40	97.6	34	82.9	10	24.4	41.3	47.6
01:00	18	0	0	0	0	0	1	5	9	1	2	0	0	0	18	100	17	94.4	3	16.7	41.7	44.7
02:00	15	0	0	0	0	2	4	3	3	2	0	1	0	0	13	86.7	9	60	3	20	38.4	45.2
03:00	13	0	0	0	0	1	0	2	7	2	1	0	0	0	12	92.3	12	92.3	3	23.1	42.1	46.1
04:00	11	0	0	0	0	1	0	3	4	3	0	0	0	0	10	90.9	10	90.9	3	27.3	40.6	45
05:00	16	0	0	0	0	1	2	2	5	5	0	1	0	0	15	93.8	13	81.3	6	37.5	42.7	48.1
06:00	97	0	0	0	0	1	27	25	21	18	4	1	0	0	96	99	69	71.1	23	23.7	39.9	47
07:00	148	0	0	0	0	7	16	61	45	14	4	1	0	0	141	95.3	125	84.5	19	12.8	39.3	43.8
08:00	204	0	0	0	2	11	30	92	51	16	2	0	0	0	191	93.6	161	78.9	18	8.8	38.3	43.4
09:00	353	0	0	1	1	21	94	155	62	16	2	1	0	0	330	93.5	236	66.9	19	5.4	36.9	41.6
10:00	364	0	0	5	5	7	109	161	61	14	2	0	0	0	347	95.3	238	65.4	16	4.4	36.6	40.9
11:00	460	0	1	1	2	29	135	211	64	14	3	0	0	0	427	92.8	292	63.5	17	3.7	36.3	40.3
12:00	499	0	0	1	1	27	166	226	68	9	1	0	0	0	470	94.2	304	60.9	10	2	36	40
13:00	423	0	2	0	1	35	118	177	71	15	4	0	0	0	385	91	267	63.1	19	4.5	36.5	41.2
14:00	408	0	0	0	2	19	142	167	66	10	1	1	0	0	387	94.9	245	60	12	2.9	36.4	40.7
15:00	386	0	0	0	2	22	112	160	72	15	0	3	0	0	362	93.8	250	64.8	18	4.7	36.8	40.9
16:00	400	0	0	0	0	21	116	173	69	18	2	1	0	0	379	94.8	263	65.8	21	5.3	37	41.2
17:00	317	0	0	0	2	19	57	150	69	14	5	0	0	1	296	93.4	239	75.4	20	6.3	37.6	41.8
18:00	276	0	0	1	0	2	58	113	74	21	7	0	0	0	273	98.9	215	77.9	28	10.1	38.7	43.6
19:00	217	0	0	0	0	3	30	103	51	21	8	1	0	0	214	98.6	184	84.8	30	13.8	39.7	44.1
20:00	167	0	0	0	3	3	27	62	42	22	2	5	1	0	161	96.4	134	80.2	30	18	39.6	45.2
21:00	93	0	0	0	0	5	13	42	20	7	2	3	0	1	88	94.6	75	80.6	13	14	39.5	44.7
22:00	80	0	0	0	0	1	17	22	33	4	3	0	0	0	79	98.8	62	77.5	7	8.8	39.4	44.1
23:00	39	0	0	0	0	0	7	6	13	11	1	1	0	0	39	100	32	82.1	13	33.3	42	47.2
07-19	4238	0	3	9	18	220	1153	1846	772	176	33	7	0	1	3988	94.1	2835	66.9	217	5.1	36.9	41.2
06-22	4812	0	3	9	21	232	1250	2078	906	244	49	17	1	2	4547	94.5	3297	68.5	313	6.5	37.3	41.8
06-00	4931	0	3	9	21	233	1274	2106	952	259	53	18	1	2	4665	94.6	3391	68.8	333	6.8	37.3	41.8
00-00	5045	0	3	9	21	239	1287	2133	992	280	57	20	1	3	4773	94.6	3486	69.1	361	7.2	37.4	42.1



C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)									
13 June 2013		to													19 June 2013	Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile	
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
17 June 2013																										
0000	24	0	0	0	0	1	4	3	6	7	3	0	0	0	23	95.8	19	79.2	10	41.7	42.4	48.8				
01:00	10	0	0	1	0	0	0	6	1	2	0	0	0	0	9	90	9	90	2	20	38.5	-				
02:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	100	1	100	0	0	36.7	-				
03:00	6	0	0	0	0	0	0	3	1	2	0	0	0	0	6	100	6	100	2	33.3	40.9	-				
04:00	4	0	0	0	0	0	0	1	1	1	1	0	0	0	4	100	4	100	2	50	44.1	-				
05:00	29	0	1	0	0	1	2	10	5	5	3	2	0	0	27	93.1	25	86.2	10	34.5	41.3	50.6				
06:00	126	0	0	1	0	1	12	57	33	16	6	0	0	0	124	98.4	112	88.9	22	17.5	40.2	45.6				
07:00	379	0	1	1	0	10	80	185	86	13	2	1	0	0	367	96.8	287	75.7	16	4.2	37.7	41.8				
08:00	662	0	0	1	1	44	275	247	79	14	1	0	0	0	616	93.1	341	51.5	15	2.3	35.5	39.6				
09:00	435	0	0	0	1	25	130	200	66	11	2	0	0	0	409	94	279	64.1	13	3	36.5	40.5				
10:00	363	0	0	1	9	26	98	149	65	10	4	0	1	0	327	90.1	229	63.1	15	4.1	36.5	41.2				
11:00	454	0	0	0	2	32	138	201	66	13	2	0	0	0	420	92.5	282	62.1	15	3.3	36.5	40.5				
12:00	494	0	0	0	0	15	137	252	70	16	4	0	0	0	479	97	342	69.2	20	4	37	40.7				
13:00	415	0	0	1	1	17	137	179	69	8	3	0	0	0	396	95.4	259	62.4	11	2.7	36.5	40.5				
14:00	461	0	0	0	0	20	169	195	72	3	2	0	0	0	441	95.7	272	59	5	1.1	36.1	40.3				
15:00	575	0	2	1	0	25	175	273	86	12	1	0	0	0	547	95.1	372	64.7	13	2.3	36.5	40.3				
16:00	576	0	1	2	7	20	180	264	93	8	1	0	0	0	546	94.8	366	63.5	9	1.6	36.3	40.3				
17:00	570	0	1	0	0	17	138	283	104	18	8	1	0	0	552	96.8	414	72.6	27	4.7	37.4	41.2				
18:00	500	0	1	2	2	15	154	213	93	18	1	1	0	0	480	96	326	65.2	20	4	36.9	41.4				
19:00	326	0	1	2	1	8	60	141	97	13	3	0	0	0	314	96.3	254	77.9	16	4.9	38.3	42.7				
20:00	211	0	0	2	1	7	49	87	45	16	1	3	0	0	201	95.3	152	72	20	9.5	38	43.2				
21:00	132	0	0	0	0	3	31	52	30	11	4	1	0	0	129	97.7	98	74.2	16	12.1	38.8	43.8				
22:00	95	0	0	0	0	2	23	37	23	8	1	1	0	0	93	97.9	70	73.7	10	10.5	38.5	43.6				
23:00	48	0	0	0	0	0	15	22	7	4	0	0	0	0	48	100	33	68.8	4	8.3	37.7	42.5				
07-19	5884	0	6	9	23	266	1811	2641	949	144	31	3	1	0	5580	94.8	3769	64.1	179	3	36.6	40.7				
06-22	6679	0	7	14	25	285	1963	2978	1154	200	45	7	1	0	6348	95	4385	65.7	253	3.8	36.8	40.9				
06-00	6822	0	7	14	25	287	2001	3037	1184	212	46	8	1	0	6489	95.1	4488	65.8	267	3.9	36.8	41.2				
00-00	6896	0	8	15	25	289	2007	3061	1198	229	53	10	1	0	6559	95.1	4552	66	293	4.2	36.9	41.2				

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																									
13 June 2013		to													19 June 2013													Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile					
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean	85%ile																				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT	Speed	Speed																				
18 June 2013																																										
0000	20	0	0	0	0	0	6	7	2	1	0	3	1	0	20	100	14	70	5	25	41.4	56.6																				
01:00	5	0	0	0	0	0	0	0	1	2	1	1	0	0	5	100	5	100	4	80	49.5	-																				
02:00	7	0	0	0	0	0	2	1	2	2	0	0	0	0	7	100	5	71.4	2	28.6	40.8	-																				
03:00	4	0	0	0	0	0	1	1	0	1	1	0	0	0	4	100	3	75	2	50	41.7	-																				
04:00	5	0	0	0	0	0	1	2	1	0	0	0	0	1	5	100	4	80	1	20	43.3	-																				
05:00	22	0	0	0	0	0	4	4	4	5	3	2	0	0	22	100	18	81.8	10	45.5	43.5	51.4																				
06:00	120	0	0	0	0	3	10	53	31	11	9	1	2	0	117	97.5	107	89.2	23	19.2	40.7	46.1																				
07:00	409	0	0	2	2	19	81	174	102	25	4	0	0	0	386	94.4	305	74.6	29	7.1	37.9	42.3																				
08:00	674	0	1	3	3	37	236	308	73	11	2	0	0	0	630	93.5	394	58.5	13	1.9	35.7	39.6																				
09:00	524	0	0	0	0	29	183	224	73	10	5	0	0	0	495	94.5	312	59.5	15	2.9	36.1	40																				
10:00	396	0	1	1	7	32	135	171	41	7	1	0	0	0	355	89.6	220	55.6	8	2	35.3	39.4																				
11:00	440	0	0	6	5	33	158	181	45	9	2	1	0	0	396	90	238	54.1	12	2.7	35.4	39.6																				
12:00	480	0	0	1	12	62	161	177	54	12	1	0	0	0	405	84.4	244	50.8	13	2.7	35	39.6																				
13:00	433	0	0	0	1	16	144	178	81	12	1	0	0	0	416	96.1	272	62.8	13	3	36.7	40.9																				
14:00	506	0	0	2	1	31	178	217	70	7	0	0	0	0	472	93.3	294	58.1	7	1.4	35.9	39.8																				
15:00	597	0	0	14	8	62	201	228	76	8	0	0	0	0	513	85.9	312	52.3	8	1.3	35.1	39.6																				
16:00	567	0	0	1	4	29	180	264	71	17	1	0	0	0	533	94	353	62.3	18	3.2	36.3	40																				
17:00	625	0	0	1	16	27	160	298	104	17	1	1	0	0	581	93	421	67.4	19	3	36.4	40.7																				
18:00	492	0	2	5	6	9	133	236	81	16	4	0	0	0	470	95.5	337	68.5	20	4.1	36.7	41.2																				
19:00	357	0	0	2	0	7	75	146	98	21	3	2	2	1	348	97.5	273	76.5	29	8.1	38.6	42.9																				
20:00	228	0	0	1	1	1	28	108	67	16	5	1	0	0	225	98.7	197	86.4	22	9.6	39.4	43.8																				
21:00	151	0	0	3	0	1	31	65	31	13	7	0	0	0	147	97.4	116	76.8	20	13.2	38.5	44.1																				
22:00	98	0	0	0	0	3	20	42	20	9	3	1	0	0	95	96.9	75	76.5	13	13.3	38.5	43.8																				
23:00	36	0	0	0	0	2	4	12	11	3	2	1	1	0	34	94.4	30	83.3	7	19.4	40.7	45.6																				
07-19	6143	0	4	36	65	386	1950	2656	871	151	22	2	0	0	5652	92	3702	60.3	175	2.8	36	40.3																				
06-22	6999	0	4	42	66	398	2094	3028	1098	212	46	6	4	1	6489	92.7	4395	62.8	269	3.8	36.4	40.7																				
06-00	7133	0	4	42	66	403	2118	3082	1129	224	51	8	5	1	6618	92.8	4500	63.1	289	4.1	36.4	40.9																				
00-00	7196	0	4	42	66	403	2132	3097	1139	235	56	14	6	2	6681	92.8	4549	63.2	313	4.3	36.5	40.9																				

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)									
13 June 2013		to													19 June 2013	Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile	
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
19 June 2013																										
0000	15	0	0	0	0	0	1	1	8	5	0	0	0	0	15	100	14	93.3	5	33.3	42.6	46.1				
01:00	12	0	0	0	1	0	1	4	4	2	0	0	0	0	11	91.7	10	83.3	2	16.7	38.9	43.6				
02:00	7	0	0	0	0	0	0	4	3	0	0	0	0	0	7	100	7	100	0	0	40.2	-				
03:00	2	0	0	0	0	0	0	1	0	1	0	0	0	0	2	100	2	100	1	50	41.5	-				
04:00	8	0	0	0	0	0	3	1	1	1	1	0	1	0	8	100	5	62.5	3	37.5	43.5	-				
05:00	27	0	1	0	0	0	1	10	5	5	3	2	0	0	26	96.3	25	92.6	10	37	42.3	51.7				
06:00	118	0	0	3	0	2	15	38	41	8	10	1	0	0	113	95.8	98	83.1	19	16.1	40	45				
07:00	382	0	0	3	3	8	50	184	103	23	5	3	0	0	368	96.3	318	83.2	31	8.1	38.7	42.9				
08:00	676	0	6	5	13	44	196	292	101	17	2	0	0	0	608	89.9	412	60.9	19	2.8	35.7	40.3				
09:00	529	0	0	0	2	24	171	235	84	11	2	0	0	0	503	95.1	332	62.8	13	2.5	36.5	40.5				
10:00	431	0	2	3	1	18	130	200	68	8	0	1	0	0	407	94.4	277	64.3	9	2.1	36.3	40.5				
11:00	469	0	1	1	1	24	173	201	60	7	1	0	0	0	442	94.2	269	57.4	8	1.7	35.8	39.8				
12:00	490	0	1	9	6	29	160	199	72	11	3	0	0	0	445	90.8	285	58.2	14	2.9	35.7	40.5				
13:00	465	0	4	4	11	39	138	175	84	7	3	0	0	0	407	87.5	269	57.8	10	2.2	35.5	40.7				
14:00	521	0	0	1	2	25	198	206	80	8	1	0	0	0	493	94.6	295	56.6	9	1.7	36	40				
15:00	586	0	0	1	1	43	203	253	77	8	0	0	0	0	541	92.3	338	57.7	8	1.4	35.8	39.6				
16:00	587	0	1	0	4	26	204	247	91	10	3	1	0	0	556	94.7	352	60	14	2.4	36.3	40.7				
17:00	632	0	0	1	2	17	201	265	126	17	3	0	0	0	612	96.8	411	65	20	3.2	36.9	41.2				
18:00	487	0	1	7	1	26	102	228	89	28	3	2	0	0	452	92.8	350	71.9	33	6.8	37.3	42.3				
19:00	388	0	1	6	6	12	88	152	98	20	4	1	0	0	363	93.6	275	70.9	25	6.4	37.6	42.3				
20:00	241	0	0	2	0	4	41	104	54	28	5	1	2	0	235	97.5	194	80.5	36	14.9	39.3	45				
21:00	170	0	0	1	12	11	50	58	25	9	2	2	0	0	146	85.9	96	56.5	13	7.6	36.1	42.3				
22:00	119	0	0	0	0	1	18	59	19	15	3	4	0	0	118	99.2	100	84	22	18.5	39.6	45.9				
23:00	55	0	0	0	0	2	11	14	17	10	1	0	0	0	53	96.4	42	76.4	11	20	39.6	45.9				
07-19	6255	0	16	35	47	323	1926	2685	1035	155	26	7	0	0	5834	93.3	3908	62.5	188	3	36.3	40.7				
06-22	7172	0	17	47	65	352	2120	3037	1253	220	47	12	2	0	6691	93.3	4571	63.7	281	3.9	36.6	40.9				
06-00	7346	0	17	47	65	355	2149	3110	1289	245	51	16	2	0	6862	93.4	4713	64.2	314	4.3	36.6	41.2				
00-00	7417	0	18	47	66	355	2155	3131	1310	259	55	18	3	0	6931	93.4	4776	64.4	335	4.5	36.7	41.2				

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)																				
13 June 2013		to													19 June 2013													Direction	Southbound	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean	85%ile															
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT	Speed	Speed															
Average Day																																					
0000	29	0	0	0	0	1	4	8	10	4	1	1	0	0	28	97.1	24	82	7	22.4	41.1	46.8															
01:00	14	0	0	0	0	0	1	5	4	3	1	0	0	0	14	98	13	93.1	4	29.7	42.3	47.6															
02:00	9	0	0	0	0	0	1	3	2	2	0	0	0	0	9	96.8	7	82.3	2	25.8	41	-															
03:00	7	0	0	0	0	0	0	2	2	2	1	0	0	0	7	95.9	6	89.8	2	32.7	41.7	-															
04:00	9	0	0	0	0	0	2	2	3	2	0	0	0	0	9	96.9	7	78.5	2	24.6	41	-															
05:00	24	0	0	0	0	1	3	6	6	5	2	1	0	0	23	95.3	21	84.8	9	35.1	42	49.7															
06:00	104	0	0	1	0	1	13	39	29	13	6	1	1	0	102	97.7	88	84.8	20	19.1	40.3	46.1															
07:00	326	0	0	1	1	12	64	146	79	18	4	1	0	0	312	95.8	248	76.1	22	6.8	38	42.5															
08:00	542	0	1	2	5	33	174	234	75	15	2	0	0	0	501	92.4	327	60.2	18	3.3	36	40.3															
09:00	445	0	0	1	1	27	140	191	70	12	2	0	0	0	415	93.3	275	61.8	14	3.2	36.3	40.5															
10:00	394	0	1	2	4	22	120	177	56	11	1	0	0	0	365	92.6	245	62.1	12	3.1	36.1	40.5															
11:00	403	0	0	2	2	27	133	175	53	10	1	0	0	0	373	92.4	239	59.4	11	2.8	36	40															
12:00	463	0	0	2	4	32	148	201	63	11	2	0	0	0	426	91.9	277	59.9	13	2.8	36	40															
13:00	425	0	1	1	3	29	134	176	68	10	3	0	0	0	392	92.2	257	60.6	13	3.1	36.2	40.7															
14:00	475	0	0	1	2	23	156	205	77	10	1	0	0	0	449	94.5	293	61.7	11	2.3	36.4	40.5															
15:00	524	0	0	3	2	32	167	226	81	12	1	0	0	0	487	93	320	61.1	13	2.5	36.2	40.5															
16:00	531	0	0	1	3	22	164	245	82	11	2	0	0	0	504	95	341	64.1	13	2.5	36.5	40.3															
17:00	515	0	0	1	4	16	132	244	98	17	3	1	0	0	495	96.1	363	70.4	21	4	37.1	41.4															
18:00	437	0	1	3	2	11	100	197	95	23	4	1	0	0	420	96.2	320	73.3	28	6.3	37.6	42.1															
19:00	323	0	0	2	1	7	66	132	86	21	6	1	0	0	313	96.9	247	76.4	29	8.9	38.5	43.4															
20:00	201	0	0	1	1	4	32	84	54	19	5	2	0	0	195	96.9	163	81.2	26	12.8	39.1	44.3															
21:00	133	0	0	1	2	4	29	52	29	11	4	2	0	0	126	94.8	97	72.9	16	12.2	38.4	44.1															
22:00	104	0	0	0	0	2	20	47	22	9	2	1	0	0	101	97.7	81	78	12	11.7	38.7	43.8															
23:00	56	0	0	0	0	2	12	19	13	7	2	0	0	0	55	97	42	75.1	10	17.3	39.3	45.6															
07-19	5480	0	5	18	32	285	1634	2419	897	159	26	4	1	1	5139	93.8	3505	64	190	3.5	36.5	40.7															
06-22	6242	0	6	23	35	302	1774	2725	1095	222	46	10	2	1	5875	94.1	4101	65.7	281	4.5	36.8	41.2															
06-00	6402	0	6	23	36	306	1807	2791	1130	237	50	12	2	1	6031	94.2	4224	66	302	4.7	36.9	41.2															
00-00	6495	0	6	24	36	308	1818	2816	1158	255	55	15	3	2	6121	94.2	4303	66.2	329	5.1	36.9	41.4															

C0292	SULLY ATCs									Site	1				Location	B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)						
	13 June 2013		to							Direction	Southbound											
															Speed Limit (PSL)	ACPO (SL1)		DFT (SL2)				
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean Speed	85%ile Speed
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT		

Virtual Week (1)

Mon	6896	0	8	15	25	289	2007	3061	1198	229	53	10	1	0	6559	95.1	4552	66	293	4.2	36.9	41.2
Tue	7196	0	4	42	66	403	2132	3097	1139	235	56	14	6	2	6681	92.8	4549	63.2	313	4.3	36.5	40.9
Wed	7417	0	18	47	66	355	2155	3131	1310	259	55	18	3	0	6931	93.4	4776	64.4	335	4.5	36.7	41.2
Thu	6977	0	3	17	34	335	1947	3125	1182	260	56	14	2	2	6588	94.4	4641	66.5	334	4.8	36.9	41.2
Fri	6602	2	6	26	29	375	1974	2770	1129	232	46	11	2	0	6164	93.4	4190	63.5	291	4.4	36.6	41.2
Sat	5333	1	2	9	10	161	1225	2397	1154	287	64	16	3	4	5150	96.6	3925	73.6	374	7	37.9	42.3
Sun	5045	0	3	9	21	239	1287	2133	992	280	57	20	1	3	4773	94.6	3486	69.1	361	7.2	37.4	42.1

5 Day Average

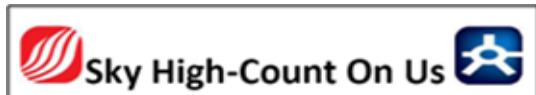
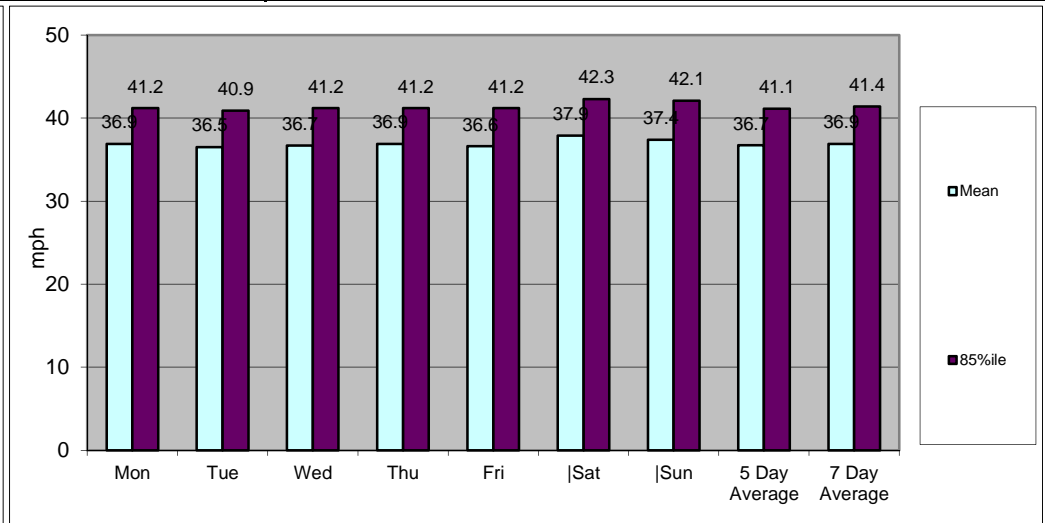
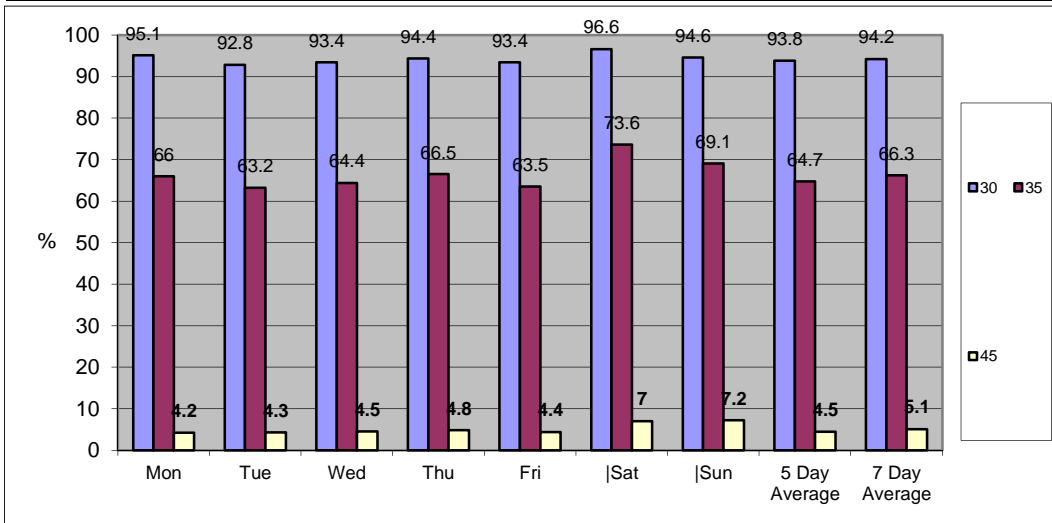
[--]	7018	0	8	29	44	351	2043	3037	1192	243	53	13	3	1	6585	93.8	4542	64.7	313	4.5	36.7	41.1
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7 Day Average

[--]	6495	0	6	24	36	308	1818	2816	1158	255	55	15	3	2	6121	94.2	4303	66.3	329	5.1	36.9	41.4
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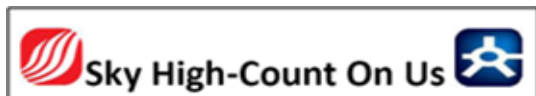
Total Vehicles

[--]	45466	3	44	165	251	2157	12727	19714	8104	1782	387	103	18	11	42846	94.2	30119	66.2	2301	5.1	36.9	41.4
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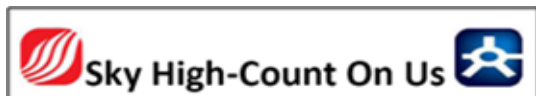
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE AXLE RIGID	FOUR OR MORE		FIVE AXLE ARTIC	SIX OR MORE		SEVEN OR MORE	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX RIGID	AXLE RIGID		AXLE RIGID	AXLE RIGID		AXLE RIGID	AXLE RIGID	AXLE RIGID	AXLE RIGID
13 June 2013															
0000	52	0	47	5	0	0	0	0	0	0	0	0	0	0	0
01:00	21	1	17	1	0	1	0	0	0	0	0	1	0	0	0
02:00	17	0	14	3	0	0	0	0	0	0	0	0	0	0	0
03:00	14	0	13	1	0	0	0	0	0	0	0	0	0	0	0
04:00	22	0	19	2	0	0	0	0	0	0	0	0	1	0	0
05:00	69	2	57	5	0	1	0	0	2	0	1	1	0	0	0
06:00	230	7	175	36	2	2	1	0	4	0	0	3	0	0	0
07:00	827	6	693	94	4	10	6	1	3	0	3	6	0	1	1
08:00	1367	4	1205	117	3	16	3	0	6	0	5	6	0	2	2
09:00	1055	6	900	100	9	18	4	1	5	0	6	5	0	1	1
10:00	845	1	726	82	2	15	4	0	5	0	2	6	0	2	2
11:00	838	4	735	72	3	10	3	0	4	0	2	5	0	0	0
12:00	901	4	779	88	5	10	2	0	3	1	2	5	0	2	2
13:00	923	6	811	77	2	9	4	0	4	0	6	3	0	1	1
14:00	898	4	779	85	5	9	2	0	3	0	4	7	0	0	0
15:00	1127	7	988	102	3	11	2	0	4	0	5	4	0	1	1
16:00	1183	9	1059	86	3	11	2	0	4	0	2	5	0	2	2
17:00	1136	6	1059	47	1	5	4	0	7	0	3	3	0	1	1
18:00	888	12	809	53	3	3	1	1	1	0	2	3	0	0	0
19:00	647	5	609	24	0	1	0	0	5	0	0	3	0	0	0
20:00	461	5	439	15	1	0	0	0	1	0	0	0	0	0	0
21:00	307	2	291	12	0	1	0	0	1	0	0	0	0	0	0
22:00	246	4	236	5	0	1	0	0	0	0	0	0	0	0	0
23:00	120	0	115	5	0	0	0	0	0	0	0	0	0	0	0
07-19	11988	69	10543	1003	43	127	37	3	49	1	42	58	0	13	13
06-22	13633	88	12057	1090	46	131	38	3	60	1	42	64	0	13	13
06-00	13999	92	12408	1100	46	132	38	3	60	1	42	64	0	13	13
00-00	14194	95	12575	1117	46	134	38	3	62	1	44	66	0	13	13



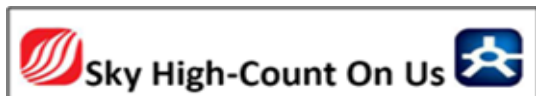
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR		BUSES	TWO		THREE	FOUR OR		FIVE	SIX OR		SEVEN OR	
			CAR-BASED LGV	LIGHT GOODS VEHICLES		AXLE, SIX TYRE, RIGID	AXLE RIGID		MORE AXLE RIGID	LESS AXLE ARTIC		MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	MORE AXLE ARTIC
14 June 2013															
0000	61	1	56	2	0	2	0	0	0	0	0	0	0	0	0
01:00	24	0	22	2	0	0	0	0	0	0	0	0	0	0	0
02:00	15	0	9	4	0	1	0	0	0	0	0	1	0	0	0
03:00	16	0	16	0	0	0	0	0	0	0	0	0	0	0	0
04:00	21	0	17	4	0	0	0	0	0	0	0	0	0	0	0
05:00	57	2	52	2	0	0	0	0	0	0	0	1	0	0	0
06:00	225	4	193	20	0	4	1	0	1	0	0	0	2	0	0
07:00	806	6	678	93	2	12	5	0	3	0	4	3	0	0	0
08:00	1326	3	1184	102	3	11	11	0	4	0	2	5	0	1	1
09:00	1018	1	870	103	8	18	3	0	4	0	5	4	0	2	2
10:00	880	5	754	102	1	8	1	0	2	1	3	2	0	1	1
11:00	627	4	539	65	0	6	0	0	5	0	1	6	0	1	1
12:00	937	9	813	88	4	6	7	0	7	0	1	2	0	0	0
13:00	792	3	707	61	2	5	3	1	5	1	1	3	0	0	0
14:00	1010	8	876	97	7	10	2	1	2	0	1	5	0	1	1
15:00	1252	4	1127	90	4	9	3	2	4	0	2	6	0	1	1
16:00	1204	11	1103	68	1	5	1	0	4	0	2	7	1	1	1
17:00	1070	10	986	59	3	2	5	0	3	0	2	0	0	0	0
18:00	887	3	834	40	0	5	1	0	2	0	1	1	0	0	0
19:00	607	1	579	23	0	2	1	0	1	0	0	0	0	0	0
20:00	410	4	389	15	1	0	1	0	0	0	0	0	0	0	0
21:00	269	0	251	17	0	1	0	0	0	0	0	0	0	0	0
22:00	210	0	198	9	0	2	0	0	1	0	0	0	0	0	0
23:00	142	4	133	4	0	1	0	0	0	0	0	0	0	0	0
07-19	11809	67	10471	968	35	97	42	4	45	2	25	44	1	8	8
06-22	13320	76	11883	1043	36	104	45	4	47	2	25	46	1	8	8
06-00	13672	80	12214	1056	36	107	45	4	48	2	25	46	1	8	8
00-00	13866	83	12386	1070	36	110	45	4	48	2	27	46	1	8	8



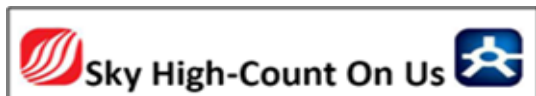
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
15 June 2013															
0000	99	1	88	10	0	0	0	0	0	0	0	0	0	0	0
01:00	59	0	50	8	0	0	0	0	0	0	1	0	0	0	0
02:00	30	0	26	4	0	0	0	0	0	0	0	0	0	0	0
03:00	26	0	23	3	0	0	0	0	0	0	0	0	0	0	0
04:00	26	0	24	1	0	0	0	0	0	0	0	1	0	0	0
05:00	45	1	36	5	0	1	0	0	2	0	0	0	0	0	0
06:00	129	4	106	11	1	4	0	0	1	0	1	1	0	0	0
07:00	239	2	198	30	2	3	0	0	0	0	2	2	0	0	0
08:00	426	6	360	44	1	5	1	0	3	0	1	5	0	0	0
09:00	624	5	561	42	5	5	0	0	2	0	2	2	0	0	0
10:00	794	10	730	47	0	2	3	0	0	0	0	2	0	0	0
11:00	886	5	807	54	1	3	5	0	8	0	0	1	0	2	0
12:00	877	4	799	65	1	3	2	0	2	0	1	0	0	0	0
13:00	940	6	881	48	1	1	0	0	2	0	1	0	0	0	0
14:00	916	6	863	38	1	1	4	0	2	0	0	0	0	1	0
15:00	835	9	786	32	1	1	1	0	3	0	1	1	0	0	0
16:00	835	6	788	33	1	1	1	1	3	0	1	0	0	0	0
17:00	792	7	738	41	2	1	1	0	2	0	0	0	0	0	0
18:00	704	6	652	37	1	2	1	0	4	0	0	1	0	0	0
19:00	554	5	524	21	0	1	1	0	2	0	0	0	0	0	0
20:00	360	5	337	13	1	1	0	0	3	0	0	0	0	0	0
21:00	242	4	225	12	0	0	0	0	1	0	0	0	0	0	0
22:00	227	3	208	14	0	1	0	0	1	0	0	0	0	0	0
23:00	166	3	157	6	0	0	0	0	0	0	0	0	0	0	0
07-19	8868	72	8163	511	17	28	19	1	31	0	9	14	0	3	0
06-22	10153	90	9355	568	19	34	20	1	38	0	10	15	0	3	0
06-00	10546	96	9720	588	19	35	20	1	39	0	10	15	0	3	0
00-00	10831	98	9967	619	19	36	20	1	41	0	11	16	0	3	0



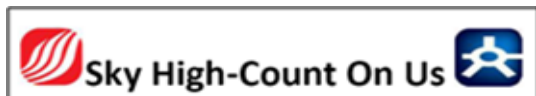
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
16 June 2013															
0000	102	2	94	5	0	0	0	0	0	0	0	1	0	0	0
01:00	39	0	33	5	0	0	1	0	0	0	0	0	0	0	0
02:00	36	0	34	2	0	0	0	0	0	0	0	0	0	0	0
03:00	22	0	20	1	0	0	0	0	0	0	0	0	1	0	0
04:00	23	0	18	4	0	0	0	0	0	0	1	0	0	0	0
05:00	35	3	25	5	0	0	0	0	2	0	0	0	0	0	0
06:00	140	4	128	7	0	0	1	0	0	0	0	0	0	0	0
07:00	215	1	196	14	1	0	0	1	1	0	1	0	0	0	0
08:00	375	5	341	24	1	2	0	0	2	0	0	0	0	0	0
09:00	658	12	618	21	0	1	0	0	5	0	0	1	0	0	0
10:00	857	11	799	37	0	1	2	0	6	0	0	0	0	0	1
11:00	923	3	881	29	1	1	3	0	2	0	3	0	0	0	0
12:00	977	4	926	42	0	1	3	0	1	0	0	0	0	0	0
13:00	823	5	787	26	1	1	0	0	2	0	0	1	0	0	0
14:00	882	3	847	29	0	1	0	0	2	0	0	0	0	0	0
15:00	827	5	785	29	1	0	5	0	2	0	0	0	0	0	0
16:00	781	2	741	33	1	1	1	0	1	0	1	0	0	0	0
17:00	667	13	625	24	0	2	0	1	2	0	0	0	0	0	0
18:00	576	6	552	16	0	0	0	0	2	0	0	0	0	0	0
19:00	430	7	408	12	0	1	0	0	2	0	0	0	0	0	0
20:00	358	7	335	8	0	2	1	0	2	0	1	1	0	0	1
21:00	209	1	200	7	0	1	0	0	0	0	0	0	0	0	0
22:00	144	2	132	10	0	0	0	0	0	0	0	0	0	0	0
23:00	75	1	71	3	0	0	0	0	0	0	0	0	0	0	0
07-19	8561	70	8098	324	6	11	14	2	28	0	5	2	0	0	1
06-22	9698	89	9169	358	6	15	16	2	32	0	6	3	0	0	2
06-00	9917	92	9372	371	6	15	16	2	32	0	6	3	0	0	2
00-00	10174	97	9596	393	6	15	17	2	34	0	8	4	0	0	2



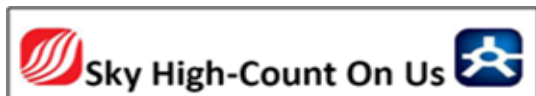
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
17 June 2013															
0000	43	1	39	3	0	0	0	0	0	0	0	0	0	0	0
01:00	16	0	14	2	0	0	0	0	0	0	0	0	0	0	0
02:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0	0
03:00	14	0	12	2	0	0	0	0	0	0	0	0	0	0	0
04:00	16	1	13	2	0	0	0	0	0	0	0	0	0	0	0
05:00	71	2	62	4	0	0	0	0	1	1	0	1	0	0	0
06:00	240	8	193	26	2	4	1	1	3	0	0	2	0	0	0
07:00	782	8	664	80	5	10	5	0	5	1	1	1	0	2	0
08:00	1317	8	1184	94	5	11	10	0	2	0	2	1	0	0	0
09:00	946	2	828	90	4	13	2	0	0	0	4	1	0	2	0
10:00	781	5	657	81	11	10	4	0	6	0	2	5	0	0	0
11:00	860	10	741	88	3	5	4	0	5	0	3	0	0	1	0
12:00	977	6	873	72	1	11	4	0	5	0	0	5	0	0	0
13:00	838	7	727	80	3	5	2	0	7	0	4	3	0	0	0
14:00	908	8	778	98	3	7	4	0	3	0	2	3	0	2	0
15:00	1202	6	1062	89	6	17	7	0	4	0	2	8	0	1	0
16:00	1243	8	1125	89	6	4	4	0	3	0	2	2	0	0	0
17:00	1175	11	1069	74	4	5	3	0	3	1	2	3	0	0	0
18:00	933	16	868	39	2	2	2	0	3	0	0	1	0	0	0
19:00	624	15	568	33	0	1	1	0	2	0	1	3	0	0	0
20:00	456	8	430	16	1	0	0	0	1	0	0	0	0	0	0
21:00	277	2	261	13	0	1	0	0	0	0	0	0	0	0	0
22:00	205	2	195	7	0	1	0	0	0	0	0	0	0	0	0
23:00	96	1	91	4	0	0	0	0	0	0	0	0	0	0	0
07-19	11962	95	10576	974	53	100	51	0	46	2	24	33	0	8	0
06-22	13559	128	12028	1062	56	106	53	1	52	2	25	38	0	8	0
06-00	13860	131	12314	1073	56	107	53	1	52	2	25	38	0	8	0
00-00	14026	135	12459	1087	56	107	53	1	53	3	25	39	0	8	0



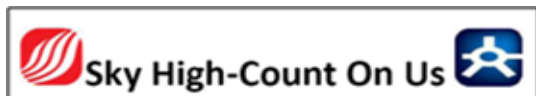
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
18 June 2013															
0000	40	0	35	4	1	0	0	0	0	0	0	0	0	0	0
01:00	6	0	4	1	0	1	0	0	0	0	0	0	0	0	0
02:00	14	0	12	1	0	1	0	0	0	0	0	0	0	0	0
03:00	13	0	11	2	0	0	0	0	0	0	0	0	0	0	0
04:00	14	1	9	4	0	0	0	0	0	0	0	0	0	0	0
05:00	55	4	44	4	0	0	0	0	0	0	1	2	0	0	0
06:00	243	8	197	21	3	5	1	0	2	0	4	2	0	0	0
07:00	817	10	679	97	3	16	6	0	1	0	3	2	0	0	0
08:00	1347	9	1204	97	6	12	5	0	3	0	4	5	0	2	2
09:00	1045	7	916	89	7	7	4	0	3	0	4	7	0	1	1
10:00	837	5	719	82	4	9	4	0	6	0	1	5	0	2	2
11:00	886	6	761	92	2	11	3	1	7	0	1	2	0	0	0
12:00	966	7	850	80	3	7	3	1	5	0	3	7	0	0	0
13:00	907	9	799	72	2	13	3	0	2	1	2	4	0	0	0
14:00	1006	7	866	98	4	9	9	0	7	1	1	4	0	0	0
15:00	1218	11	1090	84	7	9	4	1	4	1	3	3	0	1	1
16:00	1212	16	1085	83	7	5	1	0	5	0	5	4	0	1	1
17:00	1233	7	1120	85	2	7	2	1	7	0	0	2	0	0	0
18:00	984	19	909	44	3	4	0	0	3	0	0	2	0	0	0
19:00	692	15	635	31	1	1	1	0	4	1	1	2	0	0	0
20:00	488	8	453	23	1	1	0	0	2	0	0	0	0	0	0
21:00	340	5	325	9	0	1	0	0	0	0	0	0	0	0	0
22:00	195	2	183	6	0	3	0	0	1	0	0	0	0	0	0
23:00	81	0	74	6	0	1	0	0	0	0	0	0	0	0	0
07-19	12458	113	10998	1003	50	109	44	4	53	3	27	47	0	7	7
06-22	14221	149	12608	1087	55	117	46	4	61	4	32	51	0	7	7
06-00	14497	151	12865	1099	55	121	46	4	62	4	32	51	0	7	7
00-00	14639	156	12980	1115	56	123	46	4	62	4	33	53	0	7	7



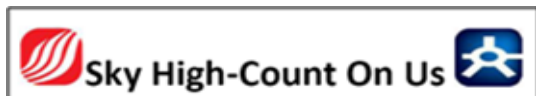
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
19 June 2013															
0000	28	0	24	3	0	1	0	0	0	0	0	0	0	0	0
01:00	20	0	14	5	0	1	0	0	0	0	0	0	0	0	0
02:00	10	0	7	3	0	0	0	0	0	0	0	0	0	0	0
03:00	9	0	7	2	0	0	0	0	0	0	0	0	0	0	0
04:00	22	1	17	2	0	1	0	0	0	0	1	0	0	0	0
05:00	67	4	52	9	0	0	0	0	1	0	1	0	0	0	0
06:00	224	10	175	25	2	4	1	0	3	0	2	2	0	0	0
07:00	800	11	676	80	5	10	5	0	6	0	3	3	0	1	1
08:00	1350	15	1173	118	6	12	12	0	8	0	2	2	0	2	2
09:00	1051	7	913	100	4	12	6	1	3	0	2	3	0	0	0
10:00	887	12	770	72	5	14	5	0	1	0	3	4	0	1	1
11:00	906	10	792	74	4	8	5	0	6	0	2	4	0	1	1
12:00	1005	17	880	84	4	7	2	0	6	1	2	2	0	0	0
13:00	955	13	844	69	4	8	6	1	2	1	5	1	0	1	1
14:00	1043	17	907	84	6	7	3	0	7	0	6	5	0	1	1
15:00	1238	11	1097	98	5	8	5	1	7	0	2	3	0	1	1
16:00	1169	12	1042	80	7	5	4	0	8	0	8	3	0	0	0
17:00	1256	18	1138	73	1	4	5	0	8	0	3	5	0	1	1
18:00	971	22	888	46	4	2	0	0	5	0	1	1	0	2	2
19:00	727	20	679	26	0	0	1	0	1	0	0	0	0	0	0
20:00	512	16	473	19	1	0	0	0	2	0	0	1	0	0	0
21:00	410	5	389	12	0	2	0	0	2	0	0	0	0	0	0
22:00	254	6	240	6	0	1	0	0	1	0	0	0	0	0	0
23:00	109	2	103	4	0	0	0	0	0	0	0	0	0	0	0
07-19	12631	165	11120	978	55	97	58	3	67	2	39	36	0	11	11
06-22	14504	216	12836	1060	58	103	60	3	75	2	41	39	0	11	11
06-00	14867	224	13179	1070	58	104	60	3	76	2	41	39	0	11	11
00-00	15023	229	13300	1094	58	107	60	3	77	2	43	39	0	11	11



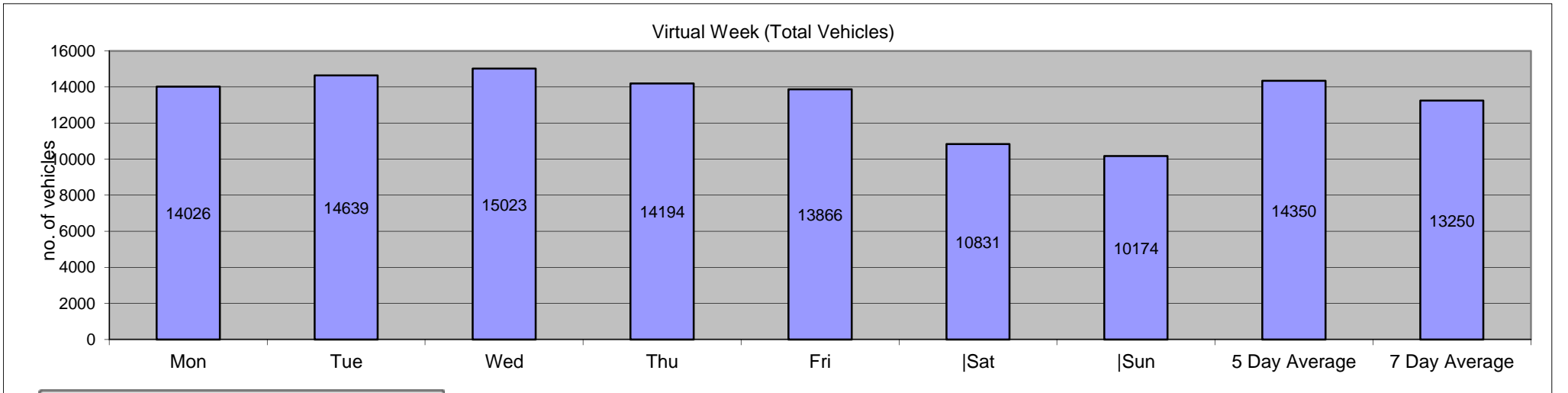
C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV		LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
			AXLE, SIX TYRE, RIGID	AXLE RIGID			AXLE RIGID	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC	AXLE ARTIC			
Average Day															
0000	61	1	55	5	0	0	0	0	0	0	0	0	0	0	0
01:00	26	0	22	3	0	0	0	0	0	0	0	0	0	0	0
02:00	18	0	15	3	0	0	0	0	0	0	0	0	0	0	0
03:00	16	0	15	2	0	0	0	0	0	0	0	0	0	0	0
04:00	21	0	17	3	0	0	0	0	0	0	0	0	0	0	0
05:00	57	3	47	5	0	0	0	0	1	0	1	1	1	0	0
06:00	204	6	167	21	1	3	1	0	2	0	1	2	2	0	0
07:00	641	6	541	70	3	9	4	0	3	0	2	2	2	0	1
08:00	1073	7	950	85	4	10	6	0	4	0	2	3	3	0	1
09:00	914	6	801	78	5	11	3	0	3	0	3	3	3	0	1
10:00	840	7	736	72	3	8	3	0	4	0	2	3	3	0	1
11:00	847	6	751	68	2	6	3	0	5	0	2	3	3	0	1
12:00	949	7	846	74	3	6	3	0	4	0	1	3	3	0	0
13:00	883	7	794	62	2	6	3	0	3	0	3	2	3	0	0
14:00	952	8	845	76	4	6	3	0	4	0	2	3	3	0	1
15:00	1100	8	991	75	4	8	4	1	4	0	2	4	4	0	1
16:00	1090	9	992	67	4	5	2	0	4	0	3	3	3	0	1
17:00	1047	10	962	58	2	4	3	0	5	0	1	2	3	0	0
18:00	849	12	787	39	2	3	1	0	3	0	1	1	3	0	0
19:00	612	10	572	24	0	1	1	0	2	0	0	1	3	0	0
20:00	435	8	408	16	1	1	0	0	2	0	0	0	3	0	0
21:00	293	3	277	12	0	1	0	0	1	0	0	0	3	0	0
22:00	212	3	199	8	0	1	0	0	1	0	0	0	3	0	0
23:00	113	2	106	5	0	0	0	0	0	0	0	0	3	0	0
07-19	11182	93	9996	823	37	81	38	2	46	1	24	33	33	0	7
06-22	12727	119	11419	895	39	87	40	3	52	2	26	37	37	0	7
06-00	13051	124	11725	908	39	89	40	3	53	2	26	37	37	0	7
00-00	13250	128	11895	928	40	90	40	3	54	2	27	38	38	0	7



C0292 SULLY ATCs Site 1 Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)
 13 June 2013 to 19 June 2013 Direction Two-Way

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	CARS OR CAR-BASED LGV	LIGHT GOODS VEHICLES	BUSES	TWO AXLE, SIX TYRE, RIGID	THREE AXLE RIGID	FOUR OR MORE AXLE RIGID	FOUR OR LESS AXLE ARTIC	FIVE AXLE ARTIC	SIX OR MORE AXLE ARTIC	FIVE OR LESS AXLE MULTI-TRAILER ARTIC	SIX AXLE MULTI-TRAILER ARTIC	SEVEN OR MORE AXLE ARTIC
Virtual Week (1)														
Mon	14026	135	12459	1087	56	107	53	1	53	3	25	39	0	8
Tue	14639	156	12980	1115	56	123	46	4	62	4	33	53	0	7
Wed	15023	229	13300	1094	58	107	60	3	77	2	43	39	0	11
Thu	14194	95	12575	1117	46	134	38	3	62	1	44	66	0	13
Fri	13866	83	12386	1070	36	110	45	4	48	2	27	46	1	8
Sat	10831	98	9967	619	19	36	20	1	41	0	11	16	0	3
Sun	10174	97	9596	393	6	15	17	2	34	0	8	4	0	2
5 Day Average														
[--]	14350	140	12740	1097	50	116	48	3	60	2	34	49	0	9
7 Day Average														
[--]	13250	128	11895	928	40	90	40	3	54	2	27	38	0	7
Total Vehicles														
[--]	92753	893	83263	6495	277	632	279	18	377	12	191	263	1	52



C0292 SULLY ATCs		Site 1													Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)									
13 June 2013		to													19 June 2013									
		Direction													Two-Way		Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time	Total	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed		
Period	Vehicles	10	15	20	25	30	35	40	45	50	55	60	65	130	ACPO	ACPO	DFT	DFT						
13 June 2013																								
0000	52	0	0	0	1	6	15	12	11	5	1	0	0	1	45	86.5	30	57.7	7	13.5	37.3	44.5		
01:00	21	0	0	0	0	2	5	6	6	1	0	1	0	0	19	90.5	14	66.7	2	9.5	38.2	44.1		
02:00	17	0	0	0	0	0	7	5	1	3	0	1	0	0	17	100	10	58.8	4	23.5	38.4	45		
03:00	14	0	0	0	0	1	6	1	2	4	0	0	0	0	13	92.9	7	50	4	28.6	38.8	47.9		
04:00	22	0	0	0	0	0	8	5	7	2	0	0	0	0	22	100	14	63.6	2	9.1	38.6	44.7		
05:00	69	0	0	0	1	5	22	20	14	4	3	0	0	0	63	91.3	41	59.4	7	10.1	37.3	44.3		
06:00	230	0	1	4	0	14	90	75	31	11	3	1	0	0	211	91.7	121	52.6	15	6.5	36	41.6		
07:00	827	0	0	1	13	108	345	259	83	15	3	0	0	0	705	85.2	360	43.5	18	2.2	34.7	39.4		
08:00	1367	0	1	1	31	231	632	379	77	12	2	1	0	0	1103	80.7	471	34.5	15	1.1	33.5	37.6		
09:00	1055	0	0	0	26	218	475	254	71	10	1	0	0	0	811	76.9	336	31.8	11	1	33.2	37.8		
10:00	845	0	3	2	16	181	333	250	46	12	2	0	0	0	643	76.1	310	36.7	14	1.7	33.3	38		
11:00	838	0	0	7	21	176	374	216	36	7	1	0	0	0	634	75.7	260	31	8	1	33	37.4		
12:00	901	0	0	3	19	167	373	257	73	7	2	0	0	0	712	79	339	37.6	9	1	33.7	38.5		
13:00	923	0	1	4	22	183	441	223	41	5	3	0	0	0	713	77.2	272	29.5	8	0.9	33	37.4		
14:00	898	0	0	1	13	170	407	245	57	4	1	0	0	0	714	79.5	307	34.2	5	0.6	33.5	38		
15:00	1127	0	1	1	31	170	499	306	104	12	1	0	2	0	924	82	425	37.7	15	1.3	33.9	38.5		
16:00	1183	0	0	2	16	185	493	382	90	12	3	0	0	0	980	82.8	487	41.2	15	1.3	34.1	38.3		
17:00	1136	0	2	2	15	110	488	370	124	22	1	2	0	0	1007	88.6	519	45.7	25	2.2	34.9	39.4		
18:00	888	0	2	5	7	80	313	294	141	41	5	0	0	0	794	89.4	481	54.2	46	5.2	35.9	40.9		
19:00	647	0	0	1	3	59	250	208	88	28	8	2	0	0	584	90.3	334	51.6	38	5.9	35.8	40.9		
20:00	461	0	0	3	3	45	195	113	73	21	7	1	0	0	410	88.9	215	46.6	29	6.3	35.5	41.2		
21:00	307	0	1	1	2	32	131	80	42	11	3	4	0	0	271	88.3	140	45.6	18	5.9	35.4	41.2		
22:00	246	0	0	1	1	41	101	65	23	13	1	0	0	0	203	82.5	102	41.5	14	5.7	34.8	39.8		
23:00	120	0	0	0	0	14	38	29	20	9	8	1	0	1	106	88.3	68	56.7	19	15.8	37.6	45		
07-19	11988	0	10	29	230	1979	5173	3435	943	159	25	3	2	0	9740	81.2	4567	38.1	189	1.6	33.9	38.5		
06-22	13633	0	12	38	238	2129	5839	3911	1177	230	46	11	2	0	11216	82.3	5377	39.4	289	2.1	34.1	38.7		
06-00	13999	0	12	39	239	2184	5978	4005	1220	252	55	12	2	1	11525	82.3	5547	39.6	322	2.3	34.2	38.9		
00-00	14194	0	12	39	241	2198	6041	4054	1261	271	59	14	2	2	11704	82.5	5663	39.9	348	2.5	34.2	38.9		

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to													19 June 2013		Direction	Two-Way	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
14 June 2013																										
0000	61	0	0	0	1	3	21	13	19	2	1	1	0	0	57	93.4	36	59	4	6.6	37.7	42.3				
01:00	24	0	0	0	0	3	6	9	3	2	1	0	0	0	21	87.5	15	62.5	3	12.5	37.6	43.6				
02:00	15	0	0	0	0	1	4	4	3	2	1	0	0	0	14	93.3	10	66.7	3	20	39.6	47.6				
03:00	16	0	0	1	0	0	7	4	2	1	0	1	0	0	15	93.8	8	50	2	12.5	36.2	42.3				
04:00	21	0	0	0	0	1	8	4	4	4	0	0	0	0	20	95.2	12	57.1	4	19	38	45.9				
05:00	57	0	0	1	1	5	12	21	8	4	4	1	0	0	50	87.7	38	66.7	9	15.8	37.6	43.6				
06:00	225	0	0	2	4	10	83	65	38	15	5	2	1	0	209	92.9	126	56	23	10.2	36.8	42.7				
07:00	806	0	2	2	5	81	316	258	119	18	5	0	0	0	716	88.8	400	49.6	23	2.9	35.4	40.5				
08:00	1326	0	1	6	22	263	550	389	82	12	1	0	0	0	1034	78	484	36.5	13	1	33.4	37.6				
09:00	1018	2	3	9	23	241	414	251	63	12	0	0	0	0	740	72.7	326	32	12	1.2	32.8	37.6				
10:00	880	0	1	0	23	181	411	207	46	11	0	0	0	0	675	76.7	264	30	11	1.3	33.1	37.1				
11:00	627	0	0	2	16	169	279	108	46	6	1	0	0	0	440	70.2	161	25.7	7	1.1	32.6	37.1				
12:00	937	0	1	1	10	212	413	227	58	14	1	0	0	0	713	76.1	300	32	15	1.6	33.3	37.8				
13:00	792	0	0	0	13	168	347	198	54	8	3	1	0	0	611	77.1	264	33.3	12	1.5	33.4	38				
14:00	1010	0	0	3	16	183	405	282	101	19	1	0	0	0	808	80	403	39.9	20	2	34.1	38.9				
15:00	1252	2	10	11	14	236	586	305	76	11	1	0	0	0	979	78.2	393	31.4	12	1	33.1	37.6				
16:00	1204	0	0	4	14	200	547	348	86	2	3	0	0	0	986	81.9	439	36.5	5	0.4	33.8	38				
17:00	1070	0	1	0	6	155	483	297	109	16	3	0	0	0	908	84.9	425	39.7	19	1.8	34.3	38.9				
18:00	887	0	0	1	5	108	388	269	99	15	2	0	0	0	773	87.1	385	43.4	17	1.9	34.8	39.4				
19:00	607	0	0	1	4	68	245	174	85	25	4	1	0	0	534	88	289	47.6	30	4.9	35.5	41.2				
20:00	410	0	0	1	1	47	153	132	53	17	4	2	0	0	361	88	208	50.7	23	5.6	35.6	40.9				
21:00	269	0	0	0	3	41	101	74	32	10	5	2	1	0	225	83.6	124	46.1	18	6.7	35.4	40.7				
22:00	210	0	0	0	3	24	73	73	27	7	2	1	0	0	183	87.1	110	52.4	10	4.8	35.7	40.9				
23:00	142	0	0	2	0	20	45	48	17	8	2	0	0	0	120	84.5	75	52.8	10	7	35.5	40.7				
07-19	11809	4	19	39	167	2197	5139	3139	939	144	21	1	0	0	9383	79.5	4244	35.9	166	1.4	33.7	38.3				
06-22	13320	4	19	43	179	2363	5721	3584	1147	211	39	8	2	0	10712	80.4	4991	37.5	260	2	33.9	38.5				
06-00	13672	4	19	45	182	2407	5839	3705	1191	226	43	9	2	0	11015	80.6	5176	37.9	280	2	33.9	38.7				
00-00	13866	4	19	47	184	2420	5897	3760	1230	241	50	12	2	0	11192	80.7	5295	38.2	305	2.2	34	38.7				

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)											
13 June 2013		to													19 June 2013		Direction		Two-Way		Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed						
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT								
15 June 2013																												
0000	99	0	0	0	1	15	34	25	17	5	0	2	0	0	83	83.8	49	49.5	7	7.1	35.8	41.8						
01:00	59	0	0	0	0	7	15	14	9	10	2	1	1	0	52	88.1	37	62.7	14	23.7	38.9	47.4						
02:00	30	0	0	0	0	3	9	10	4	2	2	0	0	0	27	90	18	60	4	13.3	37.9	44.3						
03:00	26	0	0	0	0	4	7	9	3	1	2	0	0	0	22	84.6	15	57.7	3	11.5	36.4	41.2						
04:00	26	0	0	0	0	2	9	10	4	1	0	0	0	0	24	92.3	15	57.7	1	3.8	36	40.5						
05:00	45	0	0	1	1	1	14	13	7	7	1	0	0	0	42	93.3	28	62.2	8	17.8	37.7	45.4						
06:00	129	0	1	0	0	11	34	45	23	10	4	0	1	0	117	90.7	83	64.3	15	11.6	37.4	43.4						
07:00	239	0	0	1	0	21	81	88	28	16	2	1	0	1	217	90.8	136	56.9	20	8.4	36.5	41.8						
08:00	426	0	2	3	3	33	152	128	71	24	7	2	1	0	385	90.4	233	54.7	34	8	36.3	42.3						
09:00	624	0	0	3	1	83	270	171	77	13	4	2	0	0	537	86.1	267	42.8	19	3	34.8	39.8						
10:00	794	1	1	1	3	136	305	251	80	14	2	0	0	0	652	82.1	347	43.7	16	2	34.4	39.1						
11:00	886	0	0	4	12	164	402	222	68	14	0	0	0	0	706	79.7	304	34.3	14	1.6	33.6	38.3						
12:00	877	0	0	0	16	161	402	226	59	11	2	0	0	0	700	79.8	298	34	13	1.5	33.6	38						
13:00	940	0	0	0	16	154	410	252	86	18	3	1	0	0	770	81.9	360	38.3	22	2.3	34.1	38.7						
14:00	916	0	0	2	12	118	359	304	100	19	1	0	0	1	784	85.6	425	46.4	21	2.3	34.8	39.6						
15:00	835	0	1	1	1	120	359	244	91	15	2	0	0	1	712	85.3	353	42.3	18	2.2	34.5	39.4						
16:00	835	0	0	0	0	69	375	281	91	15	4	0	0	0	766	91.7	391	46.8	19	2.3	35.3	39.6						
17:00	792	0	1	1	1	66	349	285	71	15	2	1	0	0	723	91.3	374	47.2	18	2.3	35	39.1						
18:00	704	0	0	0	1	63	285	217	104	29	4	1	0	0	640	90.9	355	50.4	34	4.8	35.8	40.9						
19:00	554	0	0	0	2	45	205	162	101	24	14	0	0	1	507	91.5	302	54.5	39	7	36.6	42.1						
20:00	360	0	0	0	3	40	121	108	65	13	9	1	0	0	317	88.1	196	54.4	23	6.4	36.2	41.8						
21:00	242	0	0	1	3	33	98	58	31	13	3	2	0	0	205	84.7	107	44.2	18	7.4	35.5	41.8						
22:00	227	0	0	0	3	42	71	80	20	8	1	2	0	0	182	80.2	111	48.9	11	4.8	35.1	39.6						
23:00	166	0	0	0	1	35	58	50	17	4	1	0	0	0	130	78.3	72	43.4	5	3	34.5	39.1						
07-19	8868	1	5	16	66	1188	3749	2669	926	203	33	8	1	3	7592	85.6	3843	43.3	248	2.8	34.7	39.4						
06-22	10153	1	6	17	74	1317	4207	3042	1146	263	63	11	2	4	8738	86.1	4531	44.6	343	3.4	34.9	39.8						
06-00	10546	1	6	17	78	1394	4336	3172	1183	275	65	13	2	4	9050	85.8	4714	44.7	359	3.4	34.9	39.8						
00-00	10831	1	6	18	80	1426	4424	3253	1227	301	72	16	3	4	9300	85.9	4876	45	396	3.7	35	39.8						

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to													19 June 2013		Direction	Two-Way	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
16 June 2013																										
0000	102	0	0	0	0	20	35	20	15	10	1	0	0	1	82	80.4	47	46.1	12	11.8	36.3	44.1				
01:00	39	0	0	0	0	4	12	10	10	1	2	0	0	0	35	89.7	23	59	3	7.7	37.1	42.7				
02:00	36	0	0	0	0	6	12	12	3	2	0	1	0	0	30	83.3	18	50	3	8.3	35.4	40.9				
03:00	22	0	0	0	0	1	5	5	8	2	1	0	0	0	21	95.5	16	72.7	3	13.6	39.3	44.1				
04:00	23	0	0	0	0	4	4	6	5	4	0	0	0	0	19	82.6	15	65.2	4	17.4	37.6	45				
05:00	35	0	0	0	1	3	11	8	6	5	0	1	0	0	31	88.6	20	57.1	6	17.1	37.9	45				
06:00	140	0	1	0	2	6	50	34	23	18	5	1	0	0	131	93.6	81	57.9	24	17.1	37.9	45.6				
07:00	215	0	0	1	0	19	52	76	48	14	4	1	0	0	195	90.7	143	66.5	19	8.8	37.3	42.9				
08:00	375	0	1	1	5	61	120	115	53	17	2	0	0	0	307	81.9	187	49.9	19	5.1	35.3	40.7				
09:00	658	0	1	4	11	116	253	191	63	16	2	1	0	0	526	79.9	273	41.5	19	2.9	34.2	39.1				
10:00	857	0	0	10	16	177	379	196	63	14	2	0	0	0	654	76.3	275	32.1	16	1.9	33.3	38				
11:00	923	0	1	2	11	181	398	246	67	14	3	0	0	0	728	78.9	330	35.8	17	1.8	33.7	38.3				
12:00	977	0	0	1	10	184	431	270	71	9	1	0	0	0	782	80	351	35.9	10	1	33.6	38				
13:00	823	0	2	1	11	162	330	219	79	15	4	0	0	0	647	78.6	317	38.5	19	2.3	34	38.9				
14:00	882	0	0	0	10	180	383	223	74	10	1	1	0	0	692	78.5	309	35	12	1.4	33.8	38.5				
15:00	827	0	0	3	5	158	350	213	76	16	1	3	2	0	661	79.9	311	37.6	22	2.7	34.1	38.9				
16:00	781	0	0	0	4	124	341	216	75	18	2	1	0	0	653	83.6	312	39.9	21	2.7	34.5	39.1				
17:00	667	0	1	0	4	94	256	215	76	15	5	0	0	1	568	85.2	312	46.8	21	3.1	34.9	39.8				
18:00	576	0	0	1	0	65	242	156	82	23	7	0	0	0	510	88.5	268	46.5	30	5.2	35.5	41.2				
19:00	430	0	0	0	1	46	150	147	54	23	8	1	0	0	383	89.1	233	54.2	32	7.4	36.3	41.2				
20:00	358	0	0	2	8	42	114	114	48	22	2	5	1	0	306	85.5	192	53.6	30	8.4	35.9	41.4				
21:00	209	0	0	0	0	28	75	67	25	8	2	3	0	1	181	86.6	106	50.7	14	6.7	36	40.7				
22:00	144	0	0	0	0	14	54	30	36	5	5	0	0	0	130	90.3	76	52.8	10	6.9	36.8	43.2				
23:00	75	0	0	0	0	9	23	16	14	11	1	1	0	0	66	88	43	57.3	13	17.3	37.8	45.4				
07-19	8561	0	6	24	87	1521	3535	2336	827	181	34	7	2	1	6923	80.9	3388	39.6	225	2.6	34.2	39.1				
06-22	9698	0	7	26	98	1643	3924	2698	977	252	51	17	3	2	7924	81.7	4000	41.2	325	3.4	34.5	39.4				
06-00	9917	0	7	26	98	1666	4001	2744	1027	268	57	18	3	2	8120	81.9	4119	41.5	348	3.5	34.5	39.6				
00-00	10174	0	7	26	99	1704	4080	2805	1074	292	61	20	3	3	8338	82	4258	41.9	379	3.7	34.6	39.6				

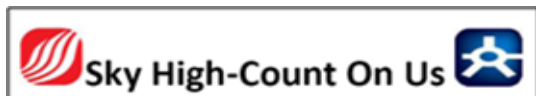
C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to													19 June 2013	Direction	Two-Way	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile	
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
17 June 2013																										
0000	43	0	0	0	0	4	13	10	6	7	3	0	0	0	39	90.7	26	60.5	10	23.3	38.5	46.5				
01:00	16	0	0	1	0	1	4	7	1	2	0	0	0	0	14	87.5	10	62.5	2	12.5	36.1	42.3				
02:00	6	0	0	0	1	0	3	2	0	0	0	0	0	0	5	83.3	2	33.3	0	0	33.4	-				
03:00	14	0	0	0	0	0	4	6	2	2	0	0	0	0	14	100	10	71.4	2	14.3	37.6	42.1				
04:00	16	0	1	0	0	2	2	6	3	1	1	0	0	0	13	81.3	11	68.8	2	12.5	36.5	42.9				
05:00	71	0	1	0	0	4	23	26	6	6	3	2	0	0	66	93	43	60.6	11	15.5	37.2	44.3				
06:00	240	0	1	3	1	10	82	83	38	16	6	0	0	0	225	93.8	143	59.6	22	9.2	36.9	42.7				
07:00	782	0	2	2	7	91	312	263	89	13	2	1	0	0	680	87	368	47.1	16	2	34.9	39.4				
08:00	1317	0	0	3	13	196	687	313	88	14	1	0	2	0	1105	83.9	418	31.7	17	1.3	33.6	37.8				
09:00	946	0	0	1	12	181	417	250	70	13	2	0	0	0	752	79.5	335	35.4	15	1.6	33.7	38.5				
10:00	781	0	0	3	34	166	303	193	67	10	4	0	1	0	578	74	275	35.2	15	1.9	33.4	38.7				
11:00	860	0	0	1	16	168	340	250	70	13	2	0	0	0	675	78.5	335	39	15	1.7	33.9	38.7				
12:00	977	0	0	0	8	155	413	304	75	18	4	0	0	0	814	83.3	401	41	22	2.3	34.3	38.7				
13:00	838	0	1	4	21	146	348	232	74	9	3	0	0	0	666	79.5	318	37.9	12	1.4	33.8	38.7				
14:00	908	0	2	0	12	148	417	247	77	3	2	0	0	0	746	82.2	329	36.2	5	0.6	33.8	38				
15:00	1202	0	3	2	21	182	545	346	90	12	1	0	0	0	994	82.7	449	37.4	13	1.1	33.8	38.3				
16:00	1243	0	1	3	18	199	561	349	101	9	2	0	0	0	1022	82.2	461	37.1	11	0.9	33.9	38.5				
17:00	1175	0	2	0	11	155	497	369	111	20	9	1	0	0	1007	85.7	510	43.4	30	2.6	34.7	38.9				
18:00	933	0	1	4	9	109	403	291	95	19	1	1	0	0	810	86.8	407	43.6	21	2.3	34.7	39.1				
19:00	624	0	1	3	3	78	227	194	100	15	3	0	0	0	539	86.4	312	50	18	2.9	35.4	40.9				
20:00	456	0	0	4	3	54	196	129	48	18	1	3	0	0	395	86.6	199	43.6	22	4.8	35	40				
21:00	277	0	0	0	1	34	110	79	36	12	4	1	0	0	242	87.4	132	47.7	17	6.1	35.6	40.5				
22:00	205	0	0	0	0	33	82	54	26	8	1	1	0	0	172	83.9	90	43.9	10	4.9	34.9	40.5				
23:00	96	0	0	0	2	11	36	32	9	6	0	0	0	0	83	86.5	47	49	6	6.3	35.4	40.7				
07-19	11962	0	12	23	182	1896	5243	3407	1007	153	33	3	3	0	9849	82.3	4606	38.5	192	1.6	34	38.7				
06-22	13559	0	14	33	190	2072	5858	3892	1229	214	47	7	3	0	11250	83	5392	39.8	271	2	34.2	38.9				
06-00	13860	0	14	33	192	2116	5976	3978	1264	228	48	8	3	0	11505	83	5529	39.9	287	2.1	34.2	38.9				
00-00	14026	0	16	34	193	2127	6025	4035	1282	246	55	10	3	0	11656	83.1	5631	40.1	314	2.2	34.3	38.9				

C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)																									
13 June 2013		to													19 June 2013													Direction	Two-Way	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile					
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean	85%ile																				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT	Speed	Speed																				
18 June 2013																																										
0000	40	0	0	0	1	3	19	9	3	1	0	3	1	0	36	90	17	42.5	5	12.5	36.9	41.6																				
01:00	6	0	0	0	0	0	0	0	2	2	1	1	0	0	6	100	6	100	4	66.7	48	-																				
02:00	14	0	0	0	0	0	6	2	4	2	0	0	0	0	14	100	8	57.1	2	14.3	38.7	44.3																				
03:00	13	0	0	0	0	1	4	5	1	1	1	0	0	0	12	92.3	8	61.5	2	15.4	36.7	41.4																				
04:00	14	0	1	0	0	0	5	6	1	0	0	0	0	1	13	92.9	8	57.1	1	7.1	36.5	39.6																				
05:00	55	0	0	1	1	3	22	10	7	6	3	2	0	0	50	90.9	28	50.9	11	20	37.5	47.2																				
06:00	243	0	0	3	6	18	70	86	37	11	9	1	2	0	216	88.9	146	60.1	23	9.5	36.6	42.3																				
07:00	817	0	0	4	6	96	315	262	105	25	4	0	0	0	711	87	396	48.5	29	3.5	35.2	40.3																				
08:00	1347	0	1	4	19	229	627	376	78	11	2	0	0	0	1094	81.2	467	34.7	13	1	33.5	37.8																				
09:00	1045	0	0	0	12	182	460	298	77	11	5	0	0	0	851	81.4	391	37.4	16	1.5	33.9	38.3																				
10:00	837	0	1	6	29	180	364	203	45	8	1	0	0	0	621	74.2	257	30.7	9	1.1	32.9	37.6																				
11:00	886	0	0	9	41	208	347	217	50	10	3	1	0	0	628	70.9	281	31.7	14	1.6	32.9	37.6																				
12:00	966	0	0	1	35	240	391	229	56	12	2	0	0	0	690	71.4	299	31	14	1.4	32.9	37.6																				
13:00	907	0	0	1	7	156	416	229	83	13	1	1	0	0	743	81.9	327	36.1	15	1.7	34	38.7																				
14:00	1006	0	0	3	11	192	459	255	78	8	0	0	0	0	800	79.5	341	33.9	8	0.8	33.5	38.3																				
15:00	1218	0	0	14	21	252	554	288	81	8	0	0	0	0	931	76.4	377	31	8	0.7	33.2	37.8																				
16:00	1212	0	0	8	29	229	513	341	74	17	1	0	0	0	946	78.1	433	35.7	18	1.5	33.5	38																				
17:00	1233	0	0	2	24	139	531	401	115	18	1	2	0	0	1068	86.6	537	43.6	21	1.7	34.5	38.9																				
18:00	984	0	3	8	15	118	401	329	88	18	4	0	0	0	840	85.4	439	44.6	22	2.2	34.4	39.1																				
19:00	692	0	0	5	8	64	259	219	103	23	4	3	3	1	615	88.9	356	51.4	34	4.9	35.8	40.9																				
20:00	488	0	0	3	8	58	172	150	74	16	6	1	0	0	419	85.9	247	50.6	23	4.7	35.6	41.4																				
21:00	340	0	0	3	1	49	132	101	33	13	8	0	0	0	287	84.4	155	45.6	21	6.2	35.1	40.5																				
22:00	195	0	0	0	0	30	63	65	22	11	3	1	0	0	165	84.6	102	52.3	15	7.7	35.6	41.2																				
23:00	81	0	0	0	2	10	25	24	13	3	2	1	1	0	69	85.2	44	54.3	7	8.6	36.4	41.2																				
07-19	12458	0	5	60	249	2221	5378	3428	930	159	24	4	0	0	9923	79.7	4545	36.5	187	1.5	33.7	38.3																				
06-22	14221	0	5	74	272	2410	6011	3984	1177	222	51	9	5	1	11460	80.6	5449	38.3	288	2	33.9	38.7																				
06-00	14497	0	5	74	274	2450	6099	4073	1212	236	56	11	6	1	11694	80.7	5595	38.6	310	2.1	34	38.7																				
00-00	14639	0	6	75	276	2457	6155	4105	1230	248	61	17	7	2	11825	80.8	5670	38.7	335	2.3	34	38.7																				

C0292 SULLY ATCs		Site 1													Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to													19 June 2013									
		Direction													Two-Way		Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed		
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT				
19 June 2013																								
0000	28	0	0	0	0	6	5	3	9	5	0	0	0	0	22	78.6	17	60.7	5	17.9	37.6	45.2		
01:00	20	0	0	0	1	1	7	5	4	2	0	0	0	0	18	90	11	55	2	10	36.4	43.4		
02:00	10	0	0	0	0	1	1	5	3	0	0	0	0	0	9	90	8	80	0	0	37.7	-		
03:00	9	0	0	0	0	1	6	1	0	1	0	0	0	0	8	88.9	2	22.2	1	11.1	34.2	-		
04:00	22	1	0	0	0	3	9	5	1	1	1	0	1	0	18	81.8	9	40.9	3	13.6	35.6	40.5		
05:00	67	0	1	0	0	3	25	21	7	5	3	2	0	0	63	94	38	56.7	10	14.9	37.4	44.3		
06:00	224	0	1	7	1	11	65	71	48	9	10	1	0	0	204	91.1	139	62.1	20	8.9	36.9	42.5		
07:00	800	0	0	7	9	64	284	288	115	24	6	3	0	0	720	90	436	54.5	33	4.1	35.8	40.7		
08:00	1350	0	6	11	19	227	568	389	111	17	2	0	0	0	1087	80.5	519	38.4	19	1.4	33.7	38.5		
09:00	1051	0	0	0	21	193	434	305	85	11	2	0	0	0	837	79.6	403	38.3	13	1.2	33.8	38.7		
10:00	887	0	3	3	15	170	362	253	72	8	0	1	0	0	696	78.5	334	37.7	9	1	33.6	38.5		
11:00	906	0	1	3	16	170	392	252	62	8	2	0	0	0	716	79	324	35.8	10	1.1	33.6	37.8		
12:00	1005	0	1	13	11	175	462	252	76	12	3	0	0	0	805	80.1	343	34.1	15	1.5	33.6	38.3		
13:00	955	0	4	7	26	172	419	226	88	9	4	0	0	0	746	78.1	327	34.2	13	1.4	33.5	38.7		
14:00	1043	0	1	5	19	191	464	264	83	10	2	3	0	1	827	79.3	363	34.8	16	1.5	33.7	38.5		
15:00	1238	0	0	1	9	260	536	334	88	9	1	0	0	0	968	78.2	432	34.9	10	0.8	33.5	37.8		
16:00	1169	0	1	2	18	183	528	322	100	11	3	1	0	0	965	82.5	437	37.4	15	1.3	34	38.5		
17:00	1256	0	1	3	14	124	575	382	134	19	4	0	0	0	1114	88.7	539	42.9	23	1.8	34.7	39.4		
18:00	971	0	1	17	13	125	392	294	94	30	3	2	0	0	815	83.9	423	43.6	35	3.6	34.6	39.4		
19:00	727	0	2	7	9	83	277	211	111	22	4	1	0	0	626	86.1	349	48	27	3.7	35.3	40.7		
20:00	512	0	0	2	3	59	190	158	60	30	6	2	2	0	448	87.5	258	50.4	40	7.8	35.9	41.6		
21:00	410	0	0	1	19	76	179	94	27	10	2	2	0	0	314	76.6	135	32.9	14	3.4	33.6	38.5		
22:00	254	0	0	1	0	33	91	84	22	16	3	4	0	0	220	86.6	129	50.8	23	9.1	35.7	40.7		
23:00	109	0	0	0	0	9	43	26	19	11	1	0	0	0	100	91.7	57	52.3	12	11	36.6	43.2		
07-19	12631	0	19	72	190	2054	5416	3561	1108	168	32	10	0	1	10296	81.5	4880	38.6	211	1.7	34	38.7		
06-22	14504	0	22	89	222	2283	6127	4095	1354	239	54	16	2	1	11888	82	5761	39.7	312	2.2	34.2	38.9		
06-00	14867	0	22	90	222	2325	6261	4205	1395	266	58	20	2	1	12208	82.1	5947	40	347	2.3	34.2	38.9		
00-00	15023	1	23	90	223	2340	6314	4245	1419	280	62	22	3	1	12346	82.2	6032	40.2	368	2.4	34.2	39.1		



C0292 SULLY ATCs															Site	1	Location B4267 Solly Moors Road -- Att to lamp post (51.40769°N 3.22600°W)									
13 June 2013		to													19 June 2013		Direction	Two-Way	Speed Limit (PSL)		ACPO (SL1)		DFT (SL2)		Mean	85%ile
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Speed	Speed				
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT						
Average Day																										
0000	61	0	0	0	1	8	20	13	11	5	1	1	0	0	52	85.6	32	52.2	7	11.8	36.8	43.6				
01:00	26	0	0	0	0	3	7	7	5	3	1	0	0	0	24	89.2	17	62.7	4	16.2	38.1	45.4				
02:00	18	0	0	0	0	2	6	6	3	2	0	0	0	0	17	90.6	11	57.8	2	12.5	37.3	44.3				
03:00	16	0	0	0	0	1	6	4	3	2	1	0	0	0	15	92.1	9	57.9	2	14.9	37.3	44.1				
04:00	21	0	0	0	0	2	6	6	4	2	0	0	0	0	18	89.6	12	58.3	2	11.8	37	44.1				
05:00	57	0	0	0	1	3	18	17	8	5	2	1	0	0	52	91.5	34	59.1	9	15.5	37.5	45				
06:00	204	0	1	3	2	11	68	66	34	13	6	1	1	0	188	91.8	120	58.6	20	9.9	36.8	42.7				
07:00	641	0	1	3	6	69	244	213	84	18	4	1	0	0	563	87.9	320	49.9	23	3.5	35.4	40.3				
08:00	1073	0	2	4	16	177	477	298	80	15	2	0	0	0	874	81.4	397	37	19	1.7	33.8	38.3				
09:00	914	0	1	2	15	173	389	246	72	12	2	0	0	0	722	79	333	36.4	15	1.6	33.7	38.5				
10:00	840	0	1	4	19	170	351	222	60	11	2	0	0	0	646	76.8	295	35.1	13	1.5	33.4	38.3				
11:00	847	0	0	4	19	177	362	216	57	10	2	0	0	0	647	76.4	285	33.7	12	1.4	33.3	38				
12:00	949	0	0	3	16	185	412	252	67	12	2	0	0	0	745	78.6	333	35.1	14	1.5	33.6	38.3				
13:00	883	0	1	2	17	163	387	226	72	11	3	0	0	0	699	79.2	312	35.4	14	1.6	33.7	38.5				
14:00	952	0	0	2	13	169	413	260	81	10	1	1	0	0	767	80.6	354	37.2	12	1.3	33.9	38.5				
15:00	1100	0	2	5	15	197	490	291	87	12	1	0	1	0	881	80.1	391	35.6	14	1.3	33.7	38.3				
16:00	1090	0	0	3	14	170	480	320	88	12	3	0	0	0	903	82.8	423	38.8	15	1.4	34.1	38.5				
17:00	1047	0	1	1	11	120	454	331	106	18	4	1	0	0	914	87.3	459	43.9	22	2.1	34.7	39.1				
18:00	849	0	1	5	7	95	346	264	100	25	4	1	0	0	740	87.2	394	46.4	29	3.4	35	40				
19:00	612	0	0	2	4	63	230	188	92	23	6	1	0	0	541	88.5	311	50.8	31	5.1	35.8	41.2				
20:00	435	0	0	2	4	49	163	129	60	20	5	2	0	0	379	87.2	216	49.8	27	6.2	35.7	41.2				
21:00	293	0	0	1	4	42	118	79	32	11	4	2	0	0	246	84	128	43.8	17	5.8	35.1	40.5				
22:00	212	0	0	0	1	31	76	64	25	10	2	1	0	0	179	84.7	103	48.6	13	6.3	35.5	40.7				
23:00	113	0	0	0	1	15	38	32	16	7	2	0	0	0	96	85.4	58	51.5	10	9.1	36	42.3				
07-19	11182	1	11	38	167	1865	4805	3139	954	167	29	5	1	1	9101	81.4	4296	38.4	203	1.8	34	38.7				
06-22	12727	1	12	46	182	2031	5384	3601	1172	233	50	11	3	1	10455	82.2	5072	39.8	298	2.3	34.2	38.9				
06-00	13051	1	12	46	184	2077	5499	3697	1213	250	55	13	3	1	10731	82.2	5232	40.1	322	2.5	34.2	39.1				
00-00	13250	1	13	47	185	2096	5562	3751	1246	268	60	16	3	2	10909	82.3	5346	40.3	349	2.6	34.3	39.1				



C0292	SULLY ATCs									Site	1				Location	B4267 Solly Moors Road -- Att to lamp post (51.40769° N 3.22600° W)						
	13 June 2013		to							Direction	Two-Way											
															Speed Limit (PSL)	ACPO (SL1)		DFT (SL2)				
Time Period	Total Vehicles	0	10	15	20	25	30	35	40	45	50	55	60	65	30	30	35	35	45	45	Mean Speed	85%ile Speed
		10	15	20	25	30	35	40	45	50	55	60	65	130			ACPO	ACPO	DFT	DFT		

Virtual Week (1)

Mon	14026	0	16	34	193	2127	6025	4035	1282	246	55	10	3	0	11656	83.1	5631	40.1	314	2.2	34.3	38.9
Tue	14639	0	6	75	276	2457	6155	4105	1230	248	61	17	7	2	11825	80.8	5670	38.7	335	2.3	34	38.7
Wed	15023	1	23	90	223	2340	6314	4245	1419	280	62	22	3	1	12346	82.2	6032	40.2	368	2.4	34.2	39.1
Thu	14194	0	12	39	241	2198	6041	4054	1261	271	59	14	2	2	11704	82.5	5663	39.9	348	2.5	34.2	38.9
Fri	13866	4	19	47	184	2420	5897	3760	1230	241	50	12	2	0	11192	80.7	5295	38.2	305	2.2	34	38.7
Sat	10831	1	6	18	80	1426	4424	3253	1227	301	72	16	3	4	9300	85.9	4876	45	396	3.7	35	39.8
Sun	10174	0	7	26	99	1704	4080	2805	1074	292	61	20	3	3	8338	82	4258	41.9	379	3.7	34.6	39.6

5 Day Average

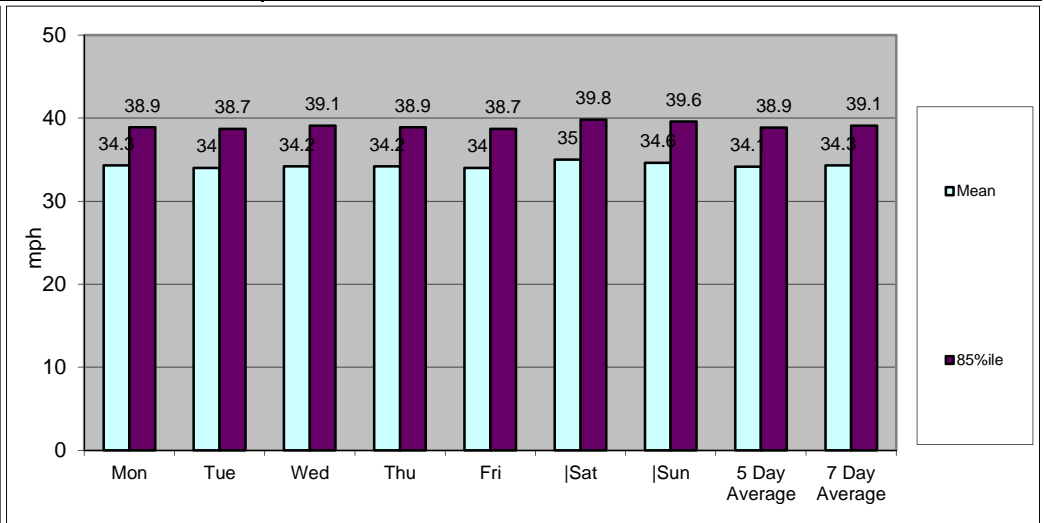
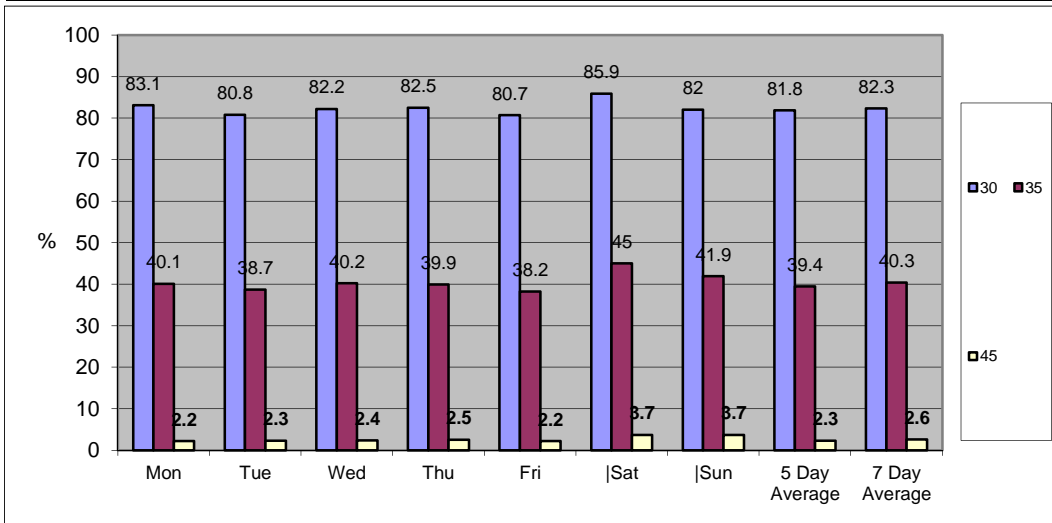
[--]	14350	1	15	57	223	2308	6086	4040	1284	257	57	15	3	1	11745	81.8	5658	39.4	334	2.3	34.1	38.9
------	-------	---	----	----	-----	------	------	------	------	-----	----	----	---	---	-------	------	------	------	-----	-----	------	------

7 Day Average

[--]	13250	1	13	47	185	2096	5562	3751	1246	268	60	16	3	2	10909	82.3	5346	40.3	349	2.6	34.3	39.1
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Total Vehicles

[--]	92753	6	89	329	1296	14672	38936	26257	8723	1879	420	111	23	12	76361	82.3	37425	40.3	2445	2.6	34.3	39.1
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Classification Schemes

Scheme F Classification Scheme (Non-metric)

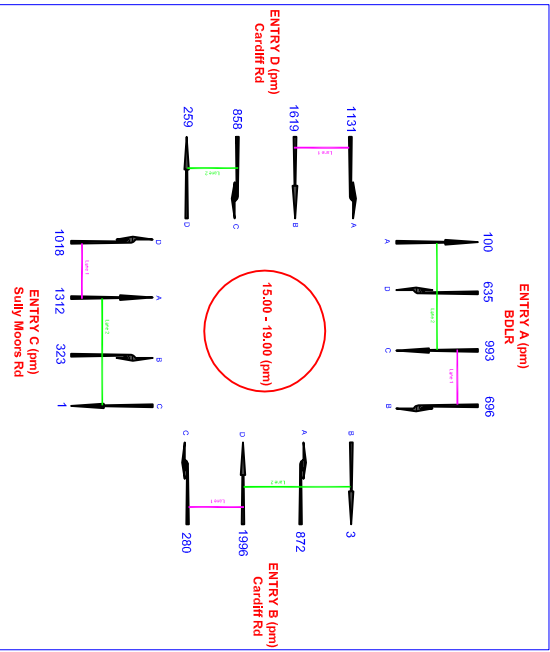
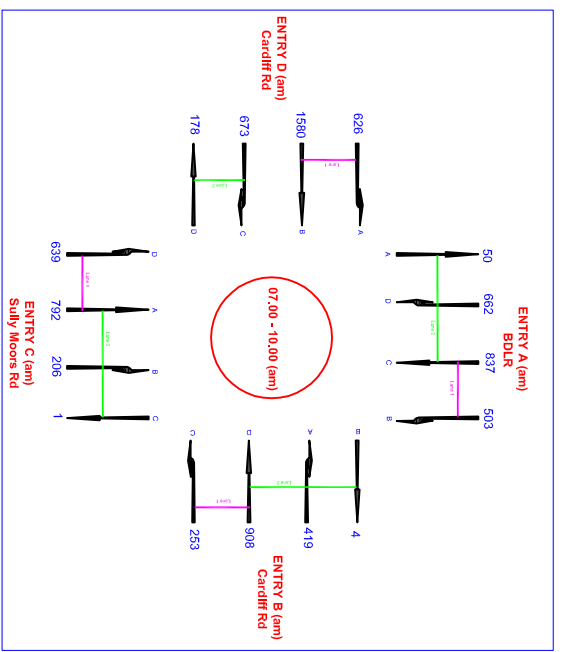
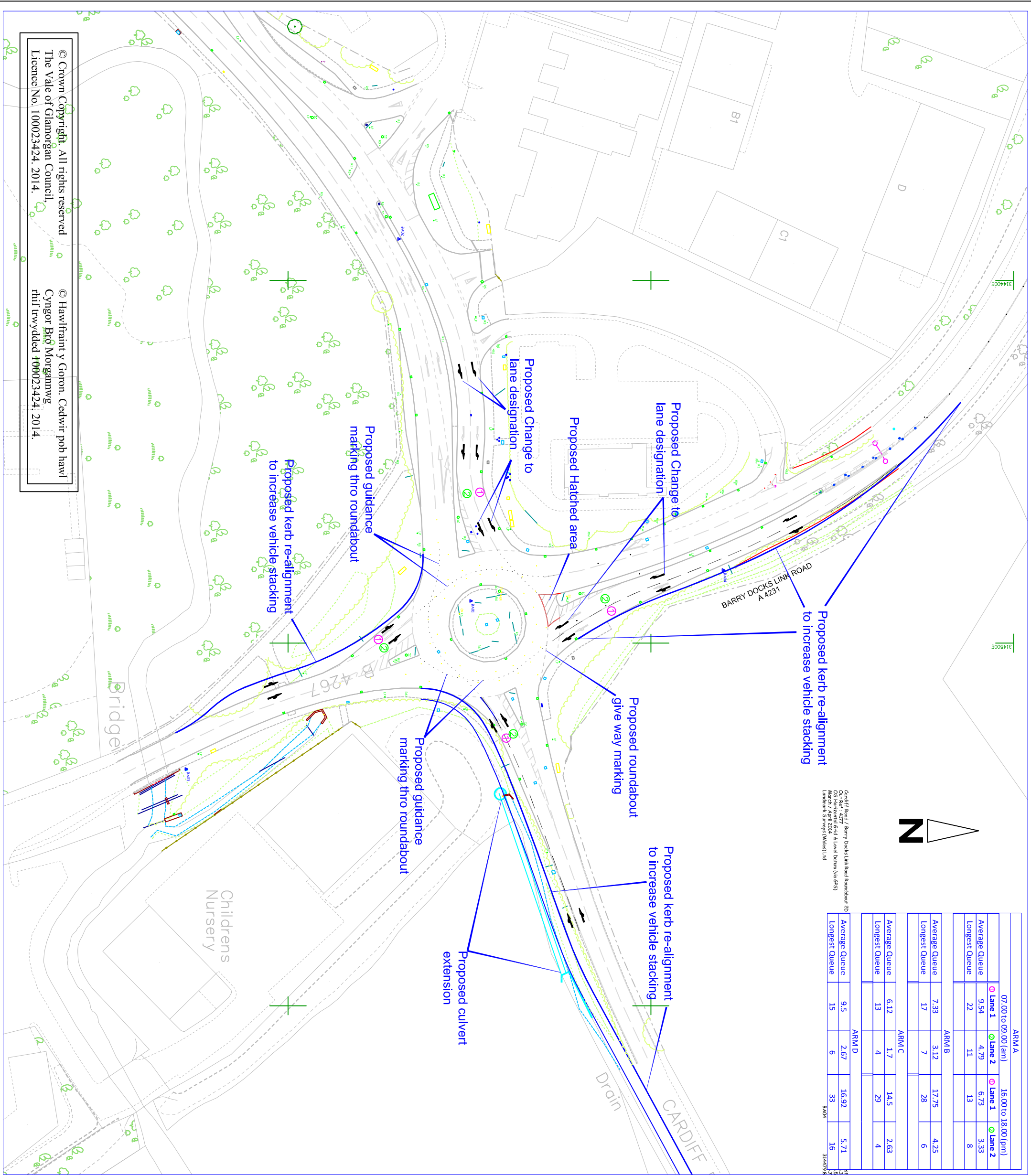
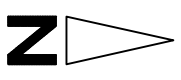
Scheme F is an attempt to implement the FHWA's visual classification scheme as an axle-based classification scheme. This is one of several interpretations.

Class	Vehicle Type	No. of Axles	Axle spacing in feet				
			Axle 1 to 2	Axle 2 to 3	Axle 3 to 4	Axle 4 to 5	Axle 5 to 6
1	motorcycle	2	<6.0				
2	passenger car	2	6.0 - 10.0				
	car + 1 axle trailer	3	<10.0	10.0 - 18.0			
	car + 2 axle trailer	4	<10.0		<3.5		
3	pickup	2	10.0 - 15.0				
	pickup + 1 axle trailer	3	10.0 - 15.0	10.0 - 18.0			
	pickup + 2 axle trailer	4	10.0 - 15.0		<3.5		
	pickup + 3 axle trailer	5	9.9 - 15.0			<3.5	
4	bus	2	>20.0				
	bus	3	>19.0				
5	single unit truck - dual rear axle	2	14.9 - 20.0			<3.5	
6	3 axle truck	3		<18.0			
7	4 axle truck	4					
8	2S1	3		>18.0			
	2S2	4		>5.0	>3.5		
	3S1	4		<5.0	>10.0		
9	3S2	5		<6.1		3.5 - 8.0	
	5 axle combination	5					
10	6 axle combination	6			3.5 - 5.0		
	3S3	6					
11	2S1-2	5		>6.0			
12	3S1-2	6					>10.0
13	truck	7 or more					

APPENDIX B

ARM A		ARM B		ARM C		ARM D	
Average Queue	9.54	Average Queue	7.33	Average Queue	6.12	Average Queue	9.5
Longest Queue	22	Longest Queue	17	Longest Queue	13	Longest Queue	15
07.00 to 09.00 (am)		16.00 to 18.00 (pm)					
○ Lane 1	○ Lane 2	○ Lane 1	○ Lane 2				
9.54	4.79	6.73	3.33				
22	11	13	8				
ARM A		ARM B		ARM C		ARM D	
Average Queue	7.33	Average Queue	3.12	Average Queue	14.5	Average Queue	5.71
Longest Queue	17	Longest Queue	7	Longest Queue	29	Longest Queue	16
ARM A		ARM B		ARM C		ARM D	
Average Queue	6.12	Average Queue	1.7	Average Queue	2.67	Average Queue	16.92
Longest Queue	13	Longest Queue	4	Longest Queue	4	Longest Queue	33
ARM A		ARM B		ARM C		ARM D	
Average Queue	9.5	Average Queue	2.67	Average Queue	16.92	Average Queue	5.71
Longest Queue	15	Longest Queue	6	Longest Queue	33	Longest Queue	16

Cardiff Road / Barry Docks Link Road Roundabout 2D
OS Horizontal Grid & Level Datum (to 675)
March / April 2014
Lundum & Surveys (Wales) Ltd



VALE of GLAMORGAN
VISIBLE SERVICES AND HOUSING
Director: Miles Pugh

BRO MORGANNWG

HIGHWAYS AND ENGINEERING

The Vale of Glamorgan Council

Project: MBU Biglis Roundabout

Drawing Title: Roundabout Improvements - Option 0b

Drawn	Scale	Project No.	Drawing No.
Date			
Checked	Title		
Date	Author		

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Vale of Glamorgan
Vale of Glamorgan Modelling
Modelling Results

Rep/2014/239768/01

Draft 2 | 22 December 2014

Draft

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 239768-00

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ARUP

Document Verification

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Job title		Vale of Glamorgan Modelling		Job number	
				239768-00	
Document title		Modelling Results		File reference	
Document ref		Rep/2014/239768/01			
Revision	Date	Filename	Modelling results (D1).docx		
Draft 1	2 Dec 2014	Description	First draft		
			Prepared by	Checked by	Approved by
		Name	James Eastham	Paul Carr	Paul Carr
		Signature			
Draft 2	22 Dec 2014	Filename	Modelling results (D2).docx		
		Description	Model updates		
			Prepared by	Checked by	Approved by
		Name	James Eastham	Paul Carr	Paul Carr
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
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		Description			
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		Name			
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Issue Document Verification with Document					
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Contents

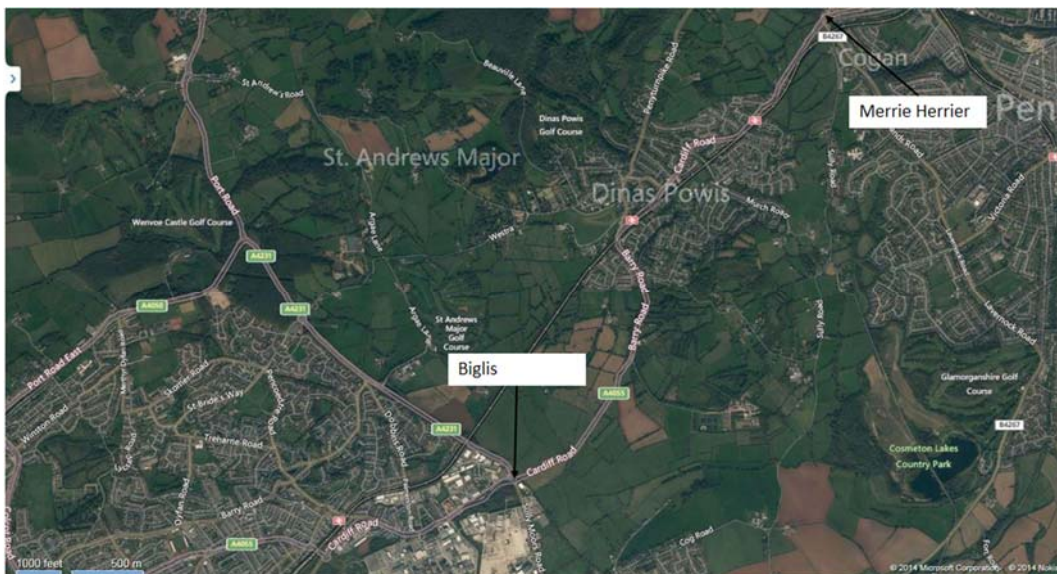
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1 Introduction

Ove Arup and Partners Ltd (hereafter referred to as Arup) have been appointed by the Vale of Glamorgan Council to undertake analysis of two existing junctions and two possible upgrade scenarios for each junction. Each layout is to be assessed with 2014, 2019 and 2024 traffic volumes.

The two junctions to be assessed are the junction of Penlan Road/Barry Road/Cardiff Road, also known as Merrie Harrier, and the junction of Barry Docks Link Road/Cardiff Road/Sully Moors Road in Barry, also known as Biglis. The location of these can be seen in Figure 1.

Figure 1: Location of Merrie Harrier and Biglis Junctions



The layouts have been designed by the Vale of Glamorgan and Arup's commission is to test these for 2014, 2019 and 2024 traffic flows and to write a report outlining the results of the modelling. Arup has not been commissioned to undertake any design work. Although by utilising our knowledge and experience possible small scale suggestions for improvements may be provided in the recommendations of this report.

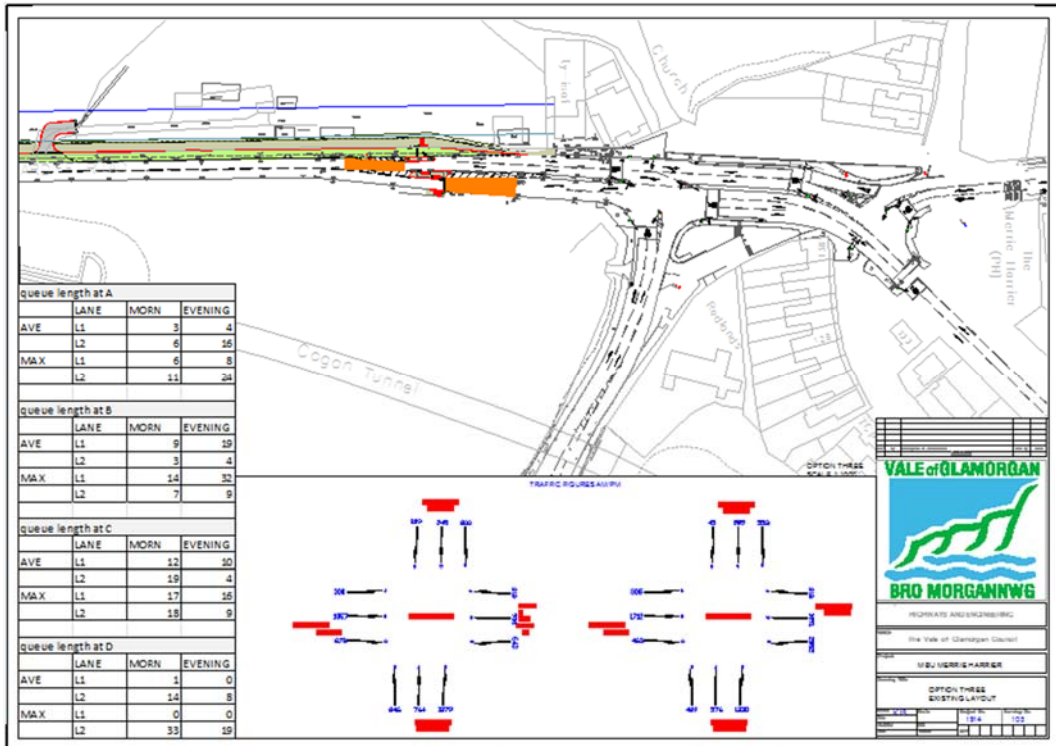
Traffic counts and queue length surveys were commissioned by the Vale of Glamorgan and these were undertaken on 2 April 2014.

1.1 Merrie Harrier Junction

This is currently operating as a signal controlled junction with a bus lane and bus gate to the south-west of the junction on Cardiff Road, for completion this has been included in the model.

The main road through the junction, Barry Road and Cardiff Road, is two lanes and Penlan and Redland Road are single lane roads with flared approaches to the junction. The existing layout can be seen in Figure 2.

Figure 2: Existing Merrie Harrier Junction Layout



The two options remain signalised with additional lanes through the junction in order to provide more capacity and the additional pedestrian crossings. The two options tested can be seen in Figure 3 and Figure 4.

Figure 3: Option 4 Merrie Harrier Junction Layout

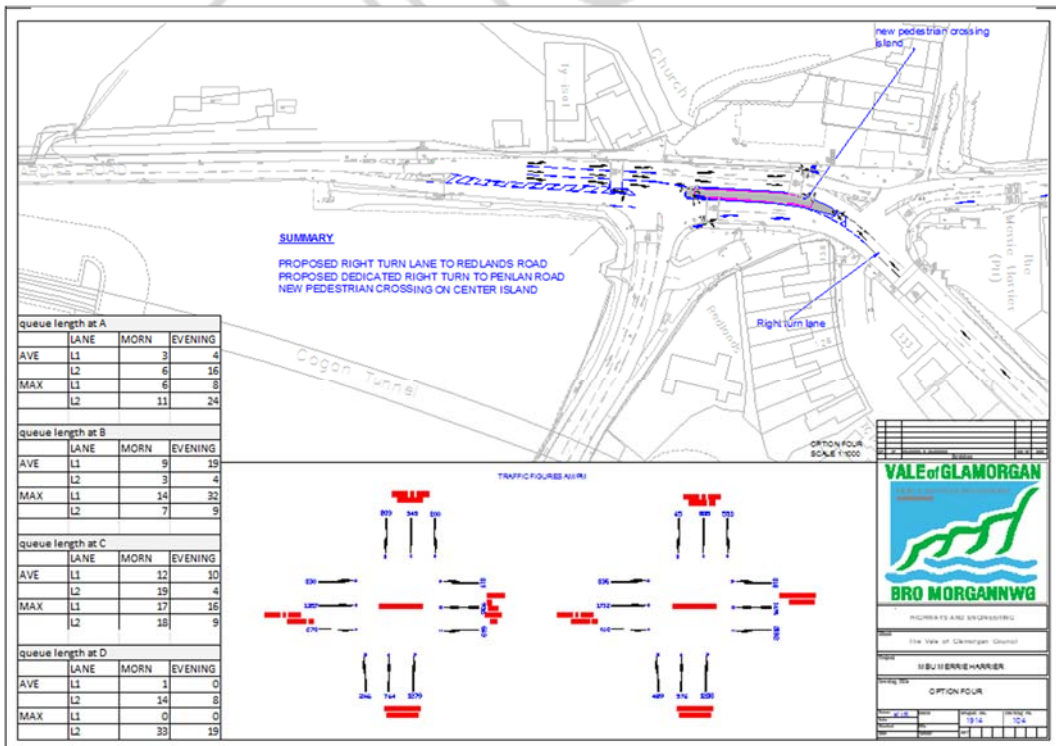
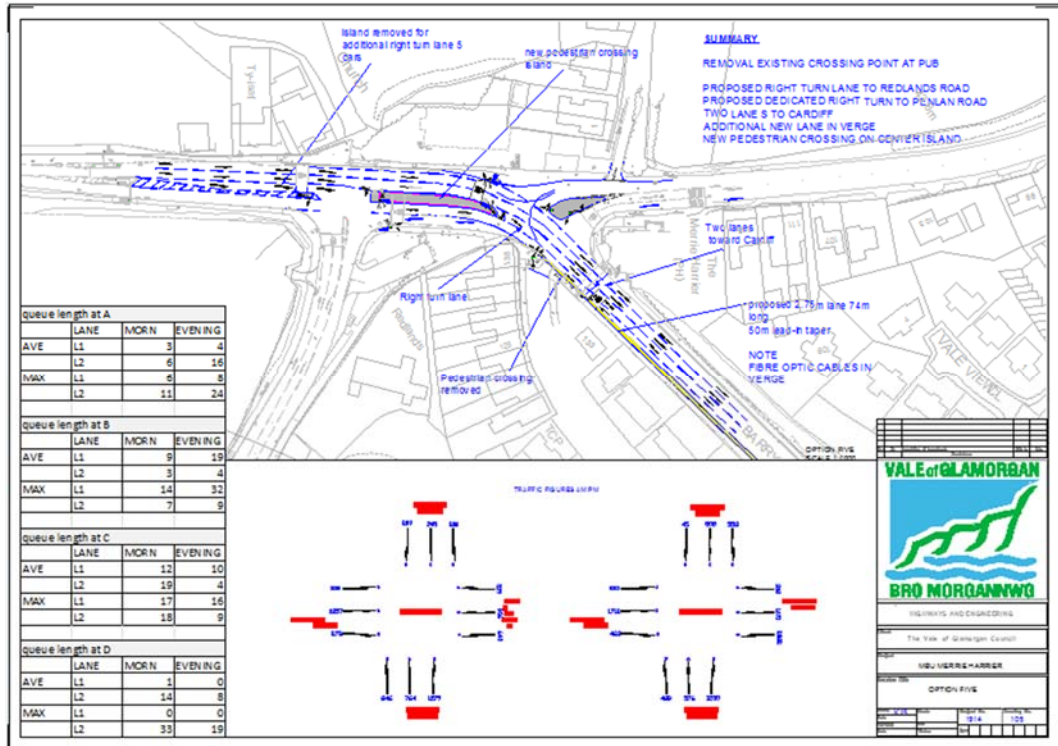


Figure 4: Option 5 Merrie Harrier Junction Layout

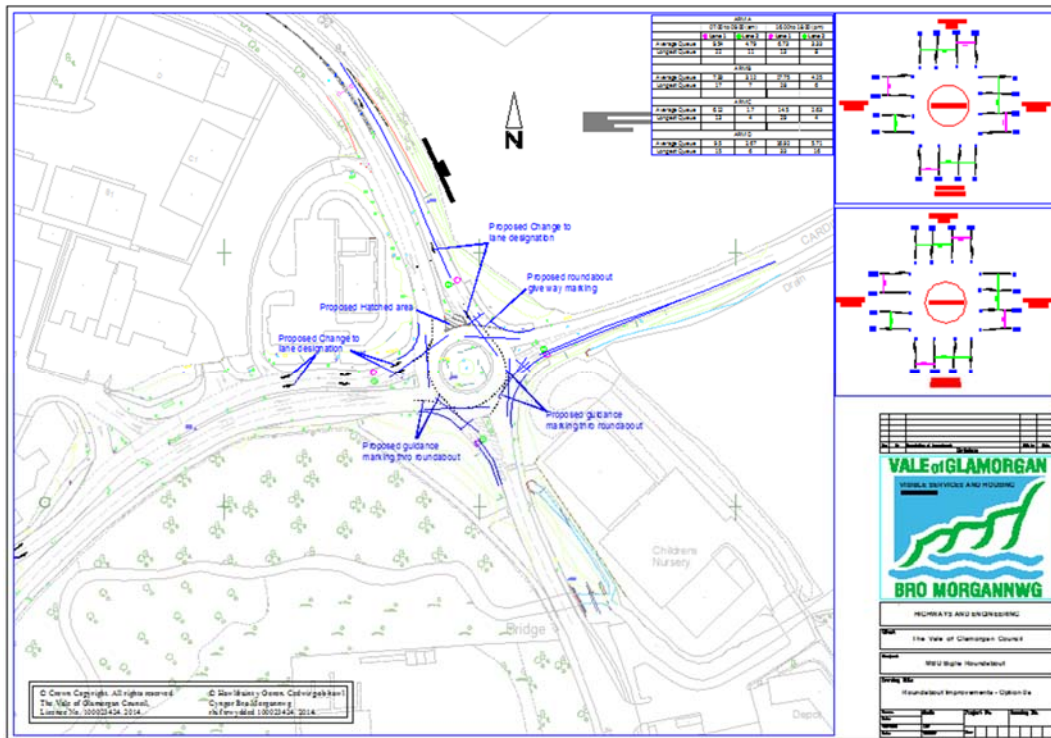


1.2 Biglis Junction

The Biglis junction currently operates as a roundabout with lane markings on the northern and western arm that result in uneven lane utilisation. For the northern arm the offside arm is for left and u-turners only and for the western arm the nearside lane is for right turners only.

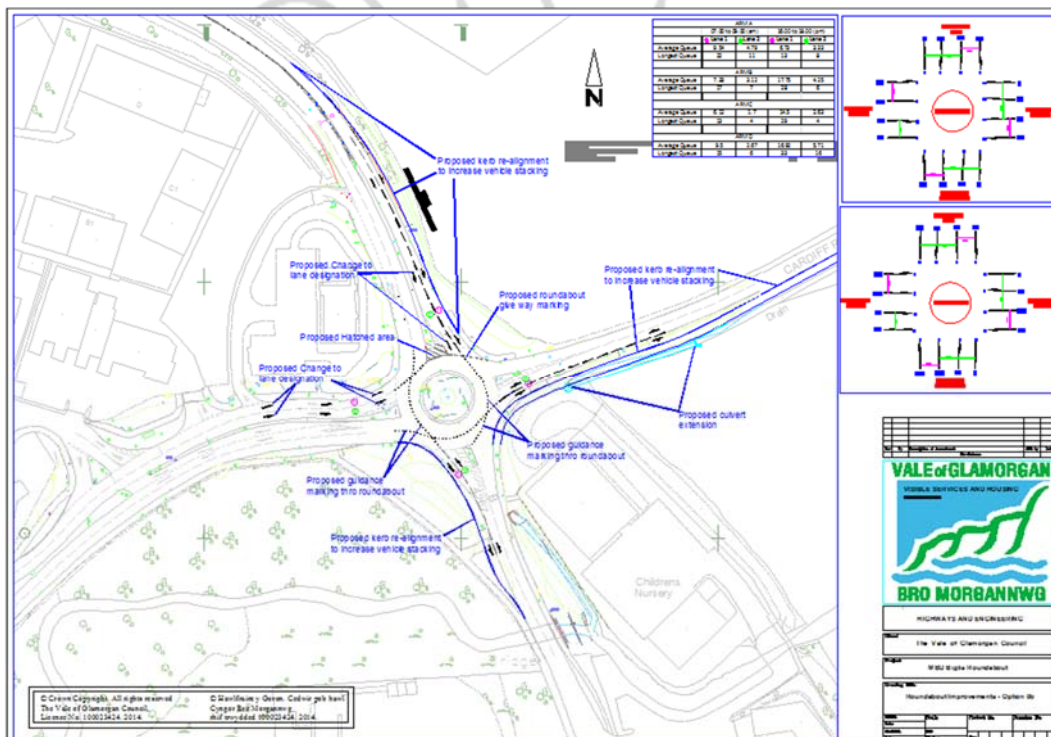
The western arm is the only one that has two lanes on approach for more than 100m, so can be classed as a two lane approach. The remaining arms are all one lane approaches with a flare of various lengths. The existing layout can be seen in Figure 5. The layouts for Option B and Option 1 can be seen in Figure 6 and Figure 7.

Figure 5: Existing Biglis Junction Layout



Option B sees the junction remain as a roundabout with the flares on the northern, eastern and southern arms lengthened to increase the capacity of the roundabout.

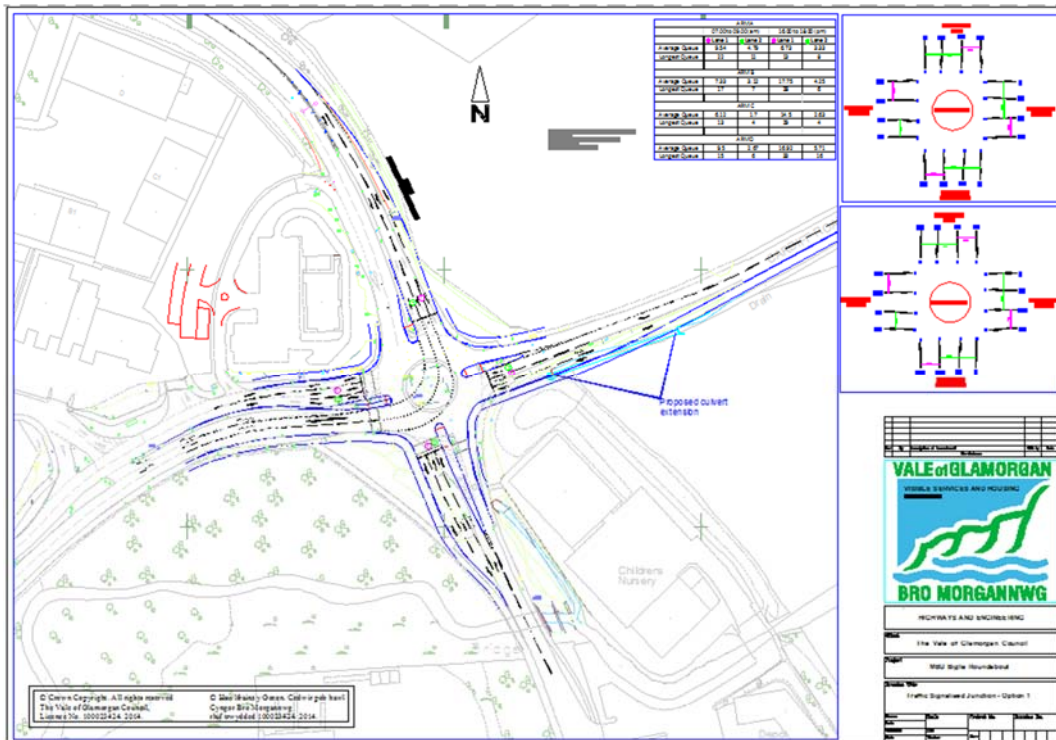
Figure 6: Biglis Junction Option B Layout



Option 1 sees the junction signalised with the northern, eastern and southern arms consisting of one lane on approach with two flared lanes, thus providing three

lanes at the stopline. The western arm remains as two lanes on approach with a flare so there are three lanes at the stopline.

Figure 7: Biglis Junction Option 1 Layout



1.3 Traffic Counts

As stated above a 12 hour traffic count survey was undertaken on 2 April 2014 from 7am to 7pm. The peak hour was determined for the AM and PM peak hours and these were 07:45 to 08:45 for the AM peak and 16:45 to 17:45 for the PM peak hour.

These counts were then converted into Passenger Car Unit (PCU's) for use in the modelling software. For this a light vehicle is equivalent to 1 PCU and a heavy vehicle is equivalent to 2 PCU's.

The resulting traffic counts for the two sites for the AM and PM peaks can be seen in Figure 8 and Figure 9 for Merrie Harrier and Biglis respectively.

Figure 8: Merrie Harrier 2014 Traffic Flows (PCUs)

Merrie Harrier

AM Peak 7.45am-8.45am
PM Peak 4.45pm-5.45pm
AM Peak buses
PM Peak buses

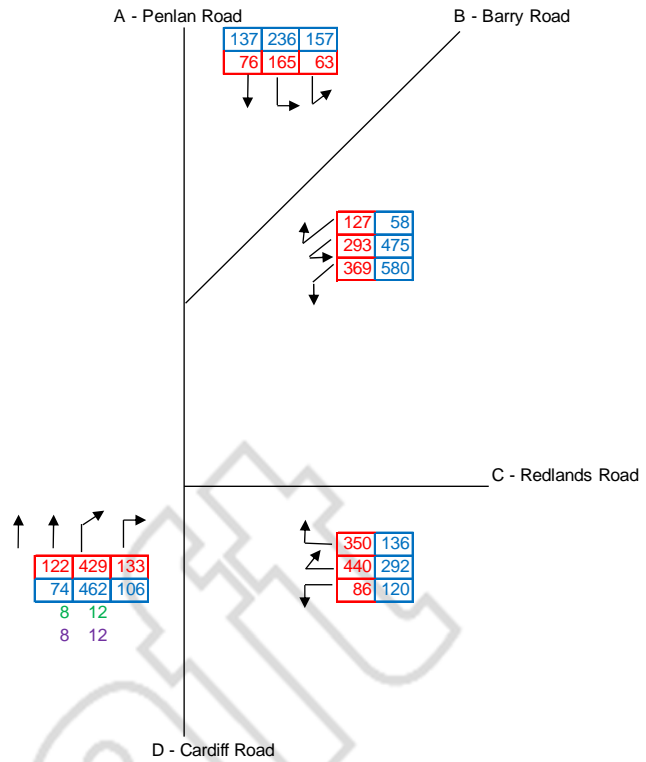
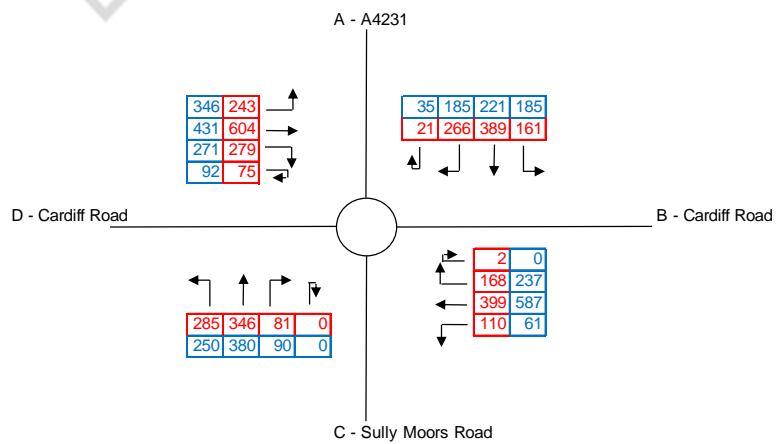


Figure 9: Biglis 2014 Traffic Flows (PCU's)

Biglis

AM Peak 7.45am-8.45am
PM Peak 4.45pm-5.45pm



2 Future Traffic

For this assessment it has been requested that each junction is assessed with the existing traffic flows and then for five years and ten years' time, ie 2019 and 2024.

To determine the growth factor required to increase the 2014 traffic counts to 2019 and 2024 the TEMPRO database and the Road Transport Forecast were used to calculate this factor.

The resultant growth factors used for increasing the 2014 traffic counts can be seen in Table 1.

Table 1: Growth Factors for 2014 - 2019 and 2014 to 2024

	2014 – 2019	2014 – 2024
AM Peak	1.0598	1.323
PM Peak	1.0583	1.1270

The resultant traffic flows for the two junctions for 2019 and 2024 can be seen in Figure 10, Figure 11, Figure 12 and Figure 13.

Figure 10: Merrie Harrier 2019 Traffic Flows (PCU's)

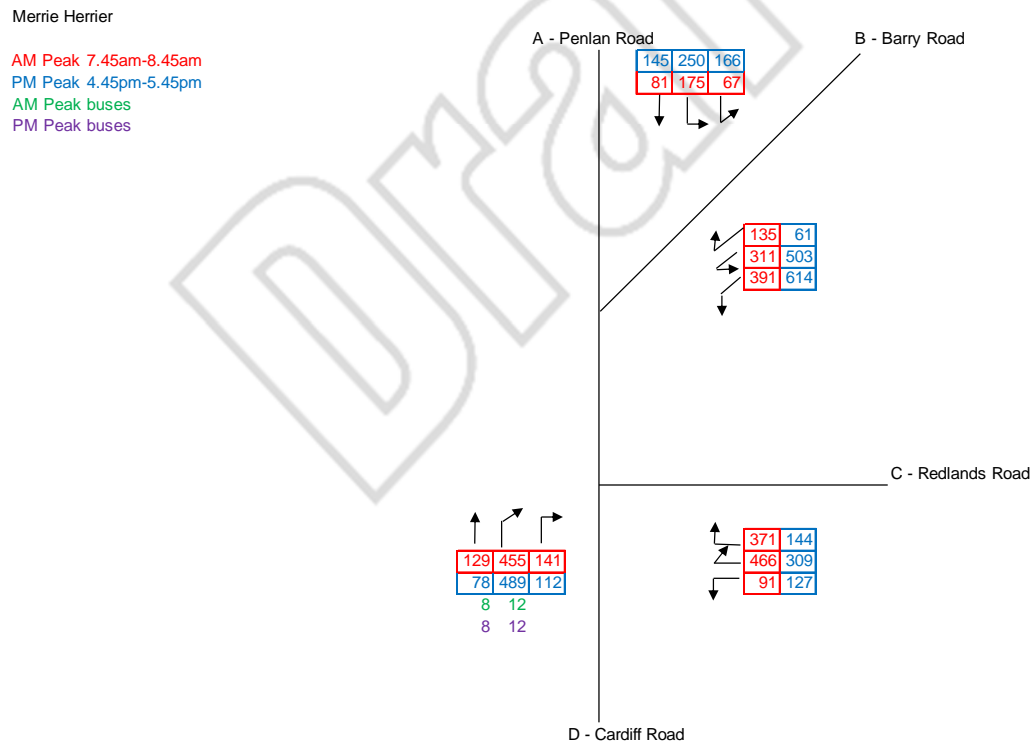


Figure 11: Merrie Harrier 2024 Traffic Flows (PCU's)

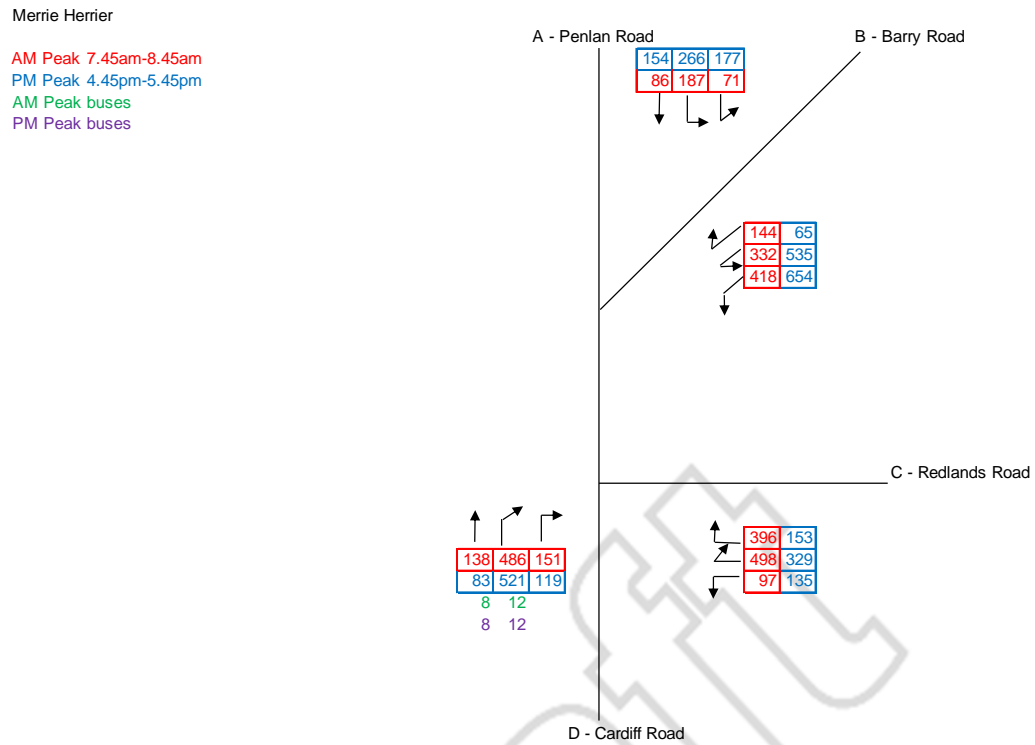


Figure 12: Biglis 2019 Traffic Flows (PCU's)

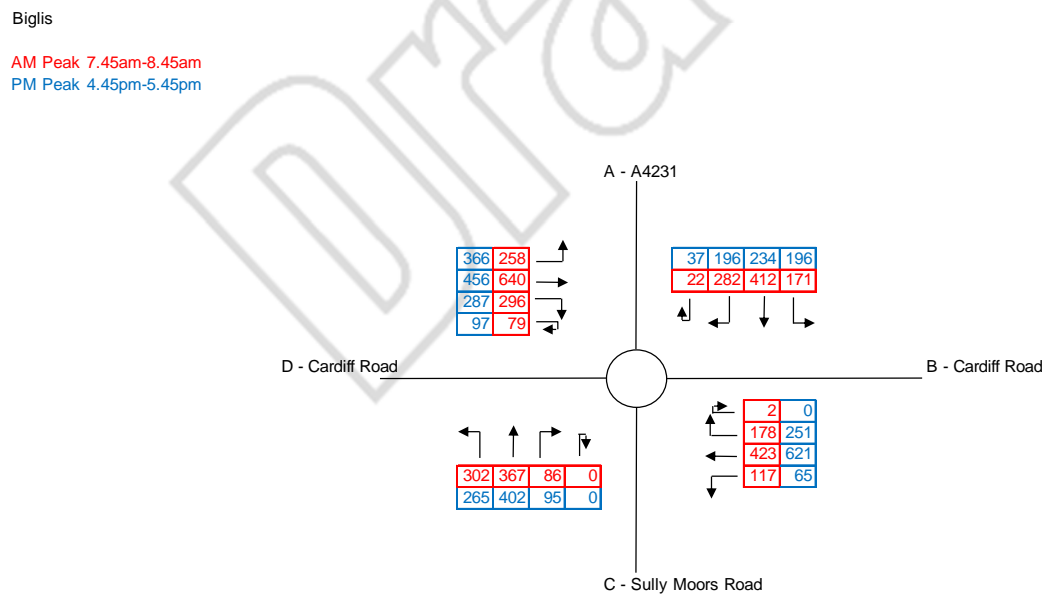
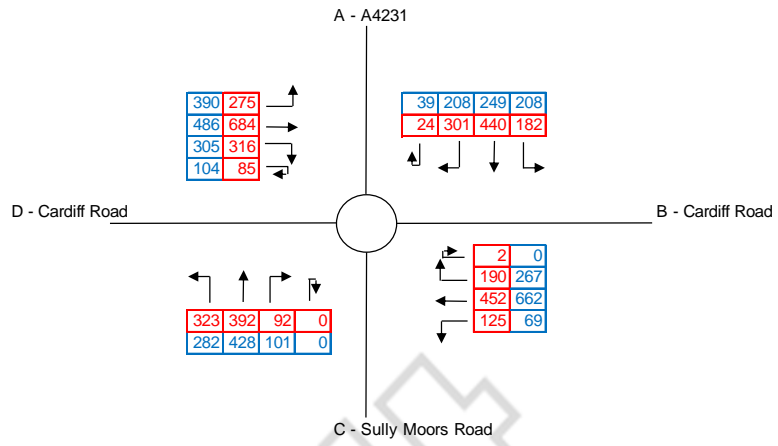


Figure 13: Biglis 2024 Traffic Flows (PCU's)

AM Peak 7.45am-8.45am
PM Peak 4.45pm-5.45pm



DRAFT

3 Junction Analysis

3.1 Merrie Harrier

3.1.1 Existing Layout

The existing layout of the Merrie Harrier junction has been assessed using LINSIG version 3 software.

The results of the AM peak for the Merrie Harrier assessment can be seen in Table 2.

Table 2: Existing Layout with AM Peak 2014 Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	45.4%	65.5	2.0
		Offside	49.2%	38.0	6.0
	Barry Road	Nearside	51.3%	15.2	9.7
		Offside	62.5%	32.5	3.3
	Cardiff Road	Nearside	23.2%	1.2	0.2
		Offside	63.6%	6.2	12.0
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	30.9%	2.4	1.4
		Middle	41.7%	14.6	5.9
		Offside	19.6%	20.1	1.6
	Redlands Road	Nearside	85.5%	54.7	13.6
		Offside	78.8%	46.0	12.6
	Cardiff Road (west)	Nearside	81.4%	30.6	13.5
Offside		32.9%	25.6	1.9	
Cardiff Road Bus Gate	Cardiff Road (east)		26.2%	1.6	1.0
	Cardiff Road (west)		130.3%	499.3	104.1
	Bus Gate		2.2%	15.3	0.3
Overall PRC (%)			-44.8%		
Overall Delay (seconds)			124.2%		
Cycle Time (seconds)			96 seconds		

The results from the AM peak model show that the only link that is over capacity is the Cardiff Road (west) arm at the bus gate.

On-site observations and results from the queue length survey show that during the AM peak this arm always has an excessive queue. Observations from a site visit show that the bus gate restricts the movement of vehicles to the stopline of

the junction and this results in the excessive queues on this arm. The weightings in the model have been adjusted to reflect the current operation of the junction.

The remaining queue lengths and patterns are similar to those in the queue length surveys and it is felt that this model accurately represents the AM peak situation at Merrie Harrier.

One measurement used to assess a junction is the Practical Reserve Capacity (PRC). The PRC is an indication as to whether or not the junction has any spare capacity in its operation to cope with additional traffic. If a PRC is positive then it indicates that a junction is operating within capacity and would be able to accommodate additional traffic. If the PRC is negative then this indicates the junction is over capacity and not able to accommodate any additional traffic.

Overall all this junction operates over capacity with a Practical Reserve Capacity (PRC) of -44.8%.

Table 3: Existing Layout with 2014 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	70.7%	76.5	6.1
		Offside	71.4%	51.7	12.4
	Barry Road	Nearside	72.2%	22.5	20.8
		Offside	61.8%	27.0	4.9
	Cardiff Road	Nearside	11.2%	1.0	0.1
		Offside	60.6%	6.4	10.8
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	46.4%	2.8	2.6
		Middle	40.0%	10.2	7.3
		Offside	28.8%	10.8	2.3
	Redlands Road	Nearside	70.4%	60.4	9.1
		Offside	73.2%	60.8	10.4
	Cardiff Road (west)	Nearside	75.0%	39.1	14.6
		Offside	39.3%	54.4	2.6
	Cardiff Road Bus Gate	Cardiff Road (east)		41.3%	3.4
Cardiff Road (west)			61.7%	6.8	6.9
Bus Gate			15.7%	69.6	0.7
Overall PRC (%)			20.1%		
Overall Delay (seconds)			39.68		
Cycle Time (seconds)			120		

Table 3 shows the results of the existing layout with 2019 PM peak traffic flows.

The results for the PM peak show that the Merrie Harrier junction operates within capacity for the PM peak and those excessive queues at the Bus Gate that are

present in the AM peak are not present in the PM peak. On-site observations indicate that the junction operates within capacity during the PM peak.

The queues modelled in the PM peak are representative of those from the queue survey undertaken at the same time as the traffic counts.

The excessive delay on the bus gate is due to the cycle time and the low number of vehicles that utilise the bus gate. On site the bus gate is vehicle actuated so the delay is lower than that predicted by the model.

Table 4: Existing Layout with 2019 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	48.3%	66.8	2.2
		Offside	52.2%	38.7	6.4
	Barry Road	Nearside	55.4%	15.9	10.8
		Offside	66.5%	36.4	3.5
	Cardiff Road	Nearside	24.3%	1.2	0.2
		Offside	65.8%	7.4	13.4
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	32.7%	2.5	1.5
		Middle	46.2%	15.0	6.5
		Offside	20.8%	23.0	1.9
	Redlands Road	Nearside	87.4%	56.5	14.9
		Offside	80.6%	46.4	13.4
	Cardiff Road (west)	Nearside	84.5%	32.9	13.9
Offside		35.0%	25.3	1.8	
Cardiff Road Bus Gate	Cardiff Road (east)		27.8%	1.8	1.2
	Cardiff Road (west)		138.1%	585.5	130.2
	Bus Gate		2.2%	15.3	0.3
Overall PRC (%)			-53.4%		
Overall Delay (seconds)			150.09		
Cycle Time (seconds)			96		

Table 4 shows the results of the existing layout with 2019 AM peak traffic flows.

The impact of the 2019 AM peak traffic flows is that the operation of the junction worsens as the overall PRC has changed from -44.8% to -53.4% indicating a reduction in the PRC.

With the 2019 traffic flows the Cardiff Road (west) at the bus gate remains the only arm that has a degree of saturation of more than 90%, although the Redlands Road and Cardiff (west) arms of the Cardiff Road / Redlands Road junction are greater than 80% indicating they are close to capacity.

Table 5: Existing Layout with 2019 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	74.8%	80.7	6.7
		Offside	75.6%	54.2	13.6
	Barry Road	Nearside	79.2%	25.6	25.1
		Offside	67.3%	31.2	4.9
	Cardiff Road	Nearside	11.8%	1.0	0.1
		Offside	64.1%	7.5	12.1
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	49.2%	3.0	2.7
		Middle	44.9%	9.9	7.9
		Offside	28.0%	11.5	2.3
	Redlands Road	Nearside	74.5%	63.4	9.5
		Offside	77.5%	64.1	11.4
	Cardiff Road (west)	Nearside	79.1%	41.6	16.1
Offside		47.8%	62.7	2.9	
Cardiff Road Bus Gate	Cardiff Road (east)		43.8%	3.4	14.5
	Cardiff Road (west)		65.9%	7.9	8.3
	Bus Gate		13.9%	66.5	0.7
Overall PRC (%)			13.7%		
Overall Delay (seconds)			45.15		
Cycle Time (seconds)			120		

Table 5 shows the results of the existing layout with 2019 PM peak traffic flows.

The results of modelling the PM peak 2019 traffic flows with the existing layout indicate a worsening of the operation of the junction as the PRC has decreased from 20.1% to 13.7%.

None of the lanes have a degree of saturation of more than 80%, but some of the lanes associated with the Penlan Road/Barry Road junction have degree of saturation of more than 70%.

Some of the links are experiencing excessive queues that on occasions will queue back to the downstream junction.

Table 6: Existing Layout with 2024 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	51.2%	68.3	2.3
		Offside	55.7%	39.6	6.9
	Barry Road	Nearside	61.6%	17.2	12.8
		Offside	67.0%	39.9	3.3
	Cardiff Road	Nearside	25.6%	1.2	0.2
		Offside	68.3%	8.8	14.9
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	35.0%	2.6	1.7
		Middle	54.6%	16.3	7.9
		Offside	19.3%	27.9	2.0
	Redlands Road	Nearside	90.2%	60.8	16.5
		Offside	83.2%	47.8	14.7
	Cardiff Road (west)	Nearside	87.9%	39.6	14.7
Offside		36.6%	27.0	1.9	
Cardiff Road Bus Gate	Cardiff Road (east)		29.7%	2.1	4.8
	Cardiff Road (west)		147.6%	675.6	155.1
	Bus Gate		2.2%	15.3	0.3
Overall PRC (%)					-64.0%
Overall Delay (seconds)					182.09
Cycle Time (seconds)					96

Table 6 shows the results of the existing layout with 2024 AM peak traffic flows.

The impact of the 2024 AM peak flows on the existing layout is to change the PRC from -44.8% to -64.0%. The additional traffic has resulted in a worsening of the operation for all the lanes of the model. With the 2024 flows two lanes are now over capacity, these being the Cardiff Road (west) at the bus gate and the Redlands road (nearside) lane.

Some of the queues on the lanes are excessive for the queue length and on occasions these queues could affect the operation of the downstream junction.

Table 7: Existing Layout with 2024 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	85.0%	101.4	8.2
		Offside	82.9%	61.8	15.5
	Barry Road	Nearside	86.0%	29.9	30.5
		Offside	75.1%	38.8	4.9
	Cardiff Road	Nearside	12.5%	1.1	0.1
		Offside	67.3%	7.4	12.8
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	52.3%	3.1	3.0
		Middle	51.3%	10.5	8.8
		Offside	27.5	13.1	2.7
	Redlands Road	Nearside	76.1	63.4	10.5
		Offside	79.3%	64.6	12.2
	Cardiff Road (west)	Nearside	84.1%	45.2	19.7
Offside		57.5%	70.7	3.1	
Cardiff Road Bus Gate	Cardiff Road (east)		46.6%	3.9	17.2
	Cardiff Road (west)		70.2%	8.8	9.6
	Bus Gate		13.9%	66.5	0.7
Overall PRC (%)					4.6%
Overall Delay (seconds)					53.05
Cycle Time (seconds)					120

Table 7 shows the results of the existing layout with 2024 PM peak traffic flows.

The impact of the 2024 PM peak flows on the existing layout is the operation of the junction worsens as the PRC has decreased from 13.7% to 4.6%. This indicates that the junction is close to capacity.

As with the 2019 PM peak, the 2024 PM peak sees three of the lanes occasionally having queues longer than the length of these lanes.

3.1.2 Option 4

The Option 4 layout has been tested with the 2014, 2019 and 2024 traffic counts to allow a comparison of the operation of this junction with the existing and Option 4 layouts.

Table 8: Option 4 with 2014 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	45.4%	65.5	2.0
		Offside	49.2%	38.0	6.0
	Barry Road	Nearside	65.9%	22.0	13.8
		Offside	53.2%	43.1	2.2
	Cardiff Road	Nearside	30.1%	1.7	0.2
		Offside	74.8%	12.7	15.0
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	33.3%	3.4	18
		Offside	69.3%	24.6	10.9
	Redlands Road	Nearside	92.0%	72.3	15.9
		Offside	84.8%	54.6	13.6
	Cardiff Road (west)	Nearside	24.4%	40.7	3.1
		Offside	92.3%	54.2	16.1
Cardiff Road Bus Gate	Cardiff Road (east)		26.2%	1.2	0.2
	Cardiff Road (west)		116.4%	326.1	74.6
	Bus Gate		2.4%	18.3	0.3
Overall PRC (%)			-29.4%		
Overall Delay (seconds)			102.65		
Cycle Time (seconds)			96		

Table 8 shows the results of the Option 4 layout with 2014 AM peak traffic flows.

The results of the Option 4 Layout with the 2014 AM peak traffic flows shows that overall the performance of the junction has improved as the PRC has changed from -44.8% to -29.4% and the overall delay has decreased from 124.2 seconds to 102.65 seconds.

The main change has been the reduction of Cardiff Road (east) at the Cardiff Road/Redlands Road junction from three lanes to two lanes. The impact of this has been to increase the degree of saturation for these lanes on Cardiff Road (east), but they are still operating within capacity. Instead the Cardiff Road (west) offside lane and the Redlands Road (nearside) lane are over capacity.

Looking at individual lanes it can be seen that layout has had an impact on the Cardiff Road (west) lane at the bus gate as the degree of saturation has decreased from 130.3% to 116.4%, as has the average delay and mean max queue.

Table 9: Option 4 Layout with 2014 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	94.3%	152.8	9.5
		Offside	81.6%	63.9	13.8
	Barry Road	Nearside	93.7%	44.5	38.6
		Offside	19.0%	28.9	0.9
	Cardiff Road	Nearside	13.4%	1.4	0.1
		Offside	62.4%	6.2	10.5
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	49.2%	4.6	4.0
		Offside	74.8%	20.4	16.4
	Redlands Road	Nearside	73.3%	63.8	9.3
		Offside	76.2%	64.4	10.7
	Cardiff Road (west)	Nearside	11.3%	26.3	1.9
		Offside	73.4%	37.0	16.7
Cardiff Road Bus Gate	Cardiff Road (east)		41.3%	1.5	0.5
	Cardiff Road (west)		70.5%	14.2	12.2
	Bus Gate		6.0%	47.0	0.6
Overall PRC (%)			-4.8%		
Overall Delay (seconds)			53.06		
Cycle Time (seconds)			120		

Table 9 shows the results of the Option 4 layout with 2014 PM peak traffic flows.

From this it can be seen that the impact of this option has been negative with the PRC decreasing from 20.1% to -4.8%, thus indicating that the junction is over capacity in the PM peak.

The results show that for Penlan Road (nearside) and Barry Road (offside) the degree of saturation for these lanes has increased to greater than 90%, whereas previously these were at approximately 70%.

Table 10: Option 4 Layout with 2019 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	48.3%	66.8	2.2
		Offside	52.2%	38.7	6.4
	Barry Road	Nearside	69.8%	23.2	15.2
		Offside	59.6%	48	2.5

	Cardiff Road	Nearside	31.4%	1.7	0.2
		Offside	77.2%	14.5	16.4
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	35.3%	3.5	1.9
		Offside	76.0%	30.4	11.9
	Redlands Road	Nearside	93.9%	77.5	17.6
		Offside	86.5%	55.7	14.7
	Cardiff Road (west)	Nearside	25.4%	36.4	3.1
		Offside	96.1%	71.7	7.1
Cardiff Road Bus Gate	Cardiff Road (east)		27.8%	1.2	0.2
	Cardiff Road (west)		123.4%	407.3	71.3
	Bus Gate		2.4%	18.36	0.0
Overall PRC (%)			-37.1%		
Overall Delay (seconds)			129.35		
Cycle Time (seconds)			96		

Table 10 shows the results for Option 4 with the 2019 AM peak traffic flows. From this it can be seen that in comparison to the existing layout and 2019 AM peak traffic flows the junction operation has improved as the PRC has changed from -53.4% to -37.1% and that delay has decreased from 150.09 to 129.35.

In comparison to Option 4 with the 2014 AM peak traffic flows the operation of the junction has worsened as the PRC has changed from -29.4% to -37.1%.

As with the 2014 AM peak flows two links are over capacity with degrees of saturation of more than 90% and both of these being lanes on the Cardiff Road/Redlands Road junction that has seen the greatest change and reduction in capacity.

Table 11: Option 4 2019 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	99.7%	191.0	6.3
		Offside	86.4%	70.6	15.5
	Barry Road	Nearside	99.2%	71.9	51.3
		Offside	22.4%	31.6	1.0
	Cardiff Road	Nearside	14.2%	1.8	0.3
		Offside	66.0%	6.7	11.5
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	52.1%	5.1	5.0
		Offside	79.1%	22.3	17.3
	Redlands Road	Nearside	77.6%	67.5	10.2
		Offside	80.7%	68.9	11.8
	Cardiff Road (west)	Nearside	11.9%	23.6	1.9
		Offside	77.6%	39.5	18.5
Cardiff Road Bus Gate	Cardiff Road (east)		43.8%	1.6	0.5
	Cardiff Road (west)		73.0%	14.1	13.0
	Bus Gate		6.6%	49.3	0.6
Overall PRC (%)			-10.8%		
Overall Delay (seconds)			68.88		
Cycle Time (seconds)			120		

Table 11 shows the results of the Option 4 layout with 2019 PM peak traffic flows.

When the Option 4 2019 PM peak results are compared with the existing layout, then the junction has seen a decrease in performance as the PRC has decreased from a PRC of 13.7% to -10.8%. This is reinforced by the high degrees of saturation experienced at Penlan Road and Barry road.

The Barry road nearside lane shows a queue length of 51.3 PCUs, which is equal to 295m. This excessive queue is a result of changes in the lane designation for Barry Road at the junction of Barry road/Penlan Road as straight ahead is only possible from the nearside lane now rather than from both lanes as is the case with the existing layout. This results in the high degree of saturation and long queue.

Table 12: Option 4 with 2024 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	51.2%	68.3	2.3
		Offside	55.7%	39.6	6.9
	Barry Road	Nearside	74.6%	25.0	17.1
		Offside	70.4%	61.6	3.0
	Cardiff Road	Nearside	33.0%	1.8	0.3
		Offside	80.1%	15.4	17.6
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	37.7%	3.6	2.1
		Offside	81.2%	34.4	13.1
	Redlands Road	Nearside	100.2%	118.0	24.6
		Offside	92.5%	69.2	17.8
	Cardiff Road (west)	Nearside	25.4%	36.4	3.1
		Offside	96.0%	71.4	18.3
Cardiff Road Bus Gate	Cardiff Road (east)		29.7%	1.3	0.2
	Cardiff Road (west)		131.9%	521.2	126.0
	Bus Gate		2.4%	18.3	0.3
Overall PRC (%)			-46.6%		
Overall Delay (seconds)			171.05		
Cycle Time (seconds)			96		

Table 12 shows the results of Option 4 with 2024 AM peak traffic flows.

When comparing this to the existing layout the Option 4 layout is an improvement as the PRC has changed from -64.0% to -46.6%. This result shows that the Option 4 layout only operates marginally worse with the 2024 AM peak flows than the existing layout with 2014 traffic flows does.

The modelling shows that both lanes on Redlands Road are now operating over capacity and that Cardiff Road (west) offside lane is operating over capacity at the same junction.

Cardiff Road (west) at the bus gate operates a lower degree of saturation than it does with the existing layout with a degree of saturation of 131.9% and a queue of 126 PCUs, or approximately 725m.

Table 13: Option 4 with 2024 PM Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	106.3%	262.7	16.0
		Offside	91.8%	83.7	18.2
	Barry Road	Nearside	105.6%	51.3	80.9
		Offside	27.5%	35.3	1.1
	Cardiff Road	Nearside	15.1%	1.6	0.2
		Offside	70.2%	7.8	12.7
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	53.5%	5.2	5.2
		Offside	82.1%	25.0	18.9
	Redlands Road	Nearside	79.2%	67.7	10.9
		Offside	82.5%	69.6	12.6
	Cardiff Road (west)	Nearside	12.9%	26.1	2.1
		Offside	84.4%	49.4	20.1
Cardiff Road Bus Gate	Cardiff Road (east)		44.9%	1.7	0.5
	Cardiff Road (west)		70.9%	9.4	10.2
	Bus Gate		12.5%	63.9	0.7
Overall PRC (%)			-18.1%		
Overall Delay (seconds)			107.57		
Cycle Time (seconds)			120		

Table 13 shows the results of the Option 4 layout with 2024 PM peak traffic flows.

The results show that with the Option 4 layout the junction has seen a worsening in the operation of the junction as the PRC has decreased from 4.6% to -18.1% with the Option 4 layout,. The PRC has also decreased in comparison to the 2019 PM peak flows.

With 2024 PM peak traffic flows both lanes on Penlan Road and Barry Road (nearside) are now operating over capacity with degrees of saturation greater than 90%. The queue for Barry road (nearside) has increased to approximately 465m.

Conclusion

The results from the modelling show that Option 4 results in an improvement in the operation of the junctions in the AM peak. But, in order to improve the AM peak results capacity of the PM peak flows is sacrificed and this results in the junctions operating over capacity in the PM peak.

For both the AM and PM peaks there are lanes that are over capacity for all scenarios but previously operated within capacity with the existing layout. This change in degree of saturation is due to the changes to the layout of the junction

which have changed capacity of certain movements and tried to improve pedestrian movements.

In the AM peak the additional lanes that operate over capacity are Redlands Road (nearside) and Cardiff Road (west, Cardiff Road/Redlands Road) offside lane. These lanes both operate over capacity as a result of the addition of the pedestrian crossing on Cardiff Road (east). This results in less green time being available for the traffic stages in order to find the time for the pedestrian stage to run.

In the PM peak Penlan Road (nearside) lane is over capacity due to the reduction in green time that this lane runs for, this is due to the addition of a pedestrian crossing on Cardiff Road and the reduction in green time available for traffic.

In the PM peak Barry Road (nearside) is over capacity and this is as a result of changes to the lane configuration on Barry Road at this junction. In the existing layout those travelling straight on can use both lanes, but in Option 5 only the nearside lane can be used for those travelling straight on. This change to the lane configuration is not an issue in the AM peak as only 662 vehicles wish to travel straight on, but in the PM peak this increases to 1055 and becomes an issue.

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3.1.3 Option 5

Table 14: Option 5 Layout with 2014 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	45.4%	65.5	2.0
		Offside	49.2%	38.0	6.0
	Barry Road	Nearside	68.2%	22.9	14.1
		Offside	31.3%	24.3	1.9
	Cardiff Road	Nearside	96.7%	56.8	25.2
		Offside	90.7%	37.8	21.3
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	33.3%	3.4	1.8
		Offside	65.0%	21.1	10.3
	Redlands Road	Nearside	99.7%	119.6	21.6
		Offside	91.9%	72.6	16.0
	Cardiff Road (west)	Nearside	57.6%	26.0	8.0
		Offside	51.1%	2.7	4.9
Cardiff Road Bus Gate	Cardiff Road (east)		26.2%	1.2	0.2
	Cardiff Road (west)		116.4%	322.7	72.4
	Bus Gate		2.4%	18.3	0.3
Overall PRC (%)			-29.4%		
Overall Delay (seconds)			117.85		
Cycle Time (seconds)			96		

Table 14 shows the results for the Option 5 layout with 2014 AM peak traffic flows.

The results from the modelling show that Option 5 results in a decrease in the PRC in comparison to the existing layout model, the PRC has decreased from -44.8% to -29.4%, but the PRC from Option 5 is the same as that for Option 4., although Option 4 shows a lower overall delay of 102.65 seconds in comparison to 117.85 seconds for Option 5.

The results show that both lanes on Redlands Road and both lanes on Cardiff Road at the Barry Road/Penlan Road junction are over capacity with degrees of saturation greater than 90%. Cardiff Road (west) at the bus gate sees a reduction in its degree of saturation from 130.3% to 116.4% for Option 5, which is the same as that for Option 4, the delay and queue are similar for Option 4 and Option 5.

The remaining lanes all have degrees of saturation less than 90%, although some of the lanes have queues that are in excess of their lengths and thus occasionally causing queues to reach the downstream junction.

Table 15: Option 5 Layout with 2014 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	94.3%	152.8	9.5
		Offside	81.6%	63.9	13.8
	Barry Road	Nearside	97.0%	17.0	43.7
		Offside	7.9%	14.8	0.8
	Cardiff Road	Nearside	82.0%	17.9	8.9
		Offside	29.5%	18.5	8.9
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	49.2%	4.8	4.4
		Offside	73.5%	19.3	14.8
	Redlands Road	Nearside	85.4%	80.1	11.8
		Offside	71.4%	62.2	9.4
	Cardiff Road (west)	Nearside	73.5%	37.0	13.8
		Offside	58.5%	63.7	2.7
Cardiff Road Bus Gate	Cardiff Road (east)		41.3%	1.5	0.4
	Cardiff Road (west)		65.5%	9.6	9.3
	Bus Gate		9.0%	56.2	0.6
Overall PRC (%)			-7.7%		
Overall Delay (seconds)			61.55		
Cycle Time (seconds)			120		

Table 15 shows the results for the Option 5 layout with 2014 PM peak traffic flows.

From this it can be seen that overall the junction is performing over capacity with a PRC of -7.7% compared to a PRC of 20.1% for the existing layout (this operates within capacity). When compared with the Option 4 layout the Option 5 layout has a PRC value of -7.7% compared to -4.8% for the Option 4 layout.

The modelling shows that Penlan Road nearside and Barry Road nearside lanes are both operating over capacity with degree of saturation greater than 90%.

Table 16: Option 5 Layout with 2019 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	48.3%	66.8	0.5
		Offside	52.2%	38.7	0.5
	Barry Road	Nearside	72.3%	24.3	1.3
		Offside	33.3%	24.9	0.2
	Cardiff Road	Nearside	97.8%	63.8	26.8
		Offside	93.4%	45.2	23.3
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	35.3%	3.5	0.3
		Offside	68.9%	22.0	1.1
	Redlands Road	Nearside	105.7%	188.3	18.6
		Offside	97.3%	98.0	8.1
	Cardiff Road (west)	Nearside	58.9%	26.4	0.7
		Offside	49.8%	22.7	0.5
Cardiff Road Bus Gate	Cardiff Road (east)		27.6%	1.2	0.2
	Cardiff Road (west)		123.4%	82.4	71.3
	Bus Gate		2.4%	18.3	0.0
Overall PRC (%)			-37.1%		
Overall Delay (seconds)			156.63		
Cycle Time (seconds)			96		

Table 16 shows the results for the Option 5 layout with 2019 AM peak traffic flows.

From this it can be seen that in comparison with the existing layout, Option 5 operates at a PRC of -37.1% rather than -53.4%. This shows that this design is not as over capacity as the existing layout is. The Option 4 layout operates at a PRC of -37.1% also, but the overall delay is less than that of Option 5.

As with the 2014 flows, Redlands Road, Cardiff Road (Barry Road/Penland Road junction) and Cardiff road (west) at the bus gate all operated over capacity with degrees of saturation of more than 90%. The Cardiff Road arm also has queues that are in excess of their lengths and thus on occasion the queues could extend through the Cardiff road/Redlands Road junction.

Table 17: Option 5 Layout with 2019 PM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	99.7%	191.0	11.8
		Offside	86.4%	70.6	15.5
	Barry Road	Nearside	102.7%	112.8	63.7
		Offside	8.5%	15.1	0.9
	Cardiff Road	Nearside	85.4%	20.1	10.9
		Offside	32.3%	18.7	9.8
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	51.7%	5.4	5.2
		Offside	77.5%	21.4	15.6
	Redlands Road	Nearside	87.2%	83.9	12.4
		Offside	78.5%	68.0	10.9
	Cardiff Road (west)	Nearside	77.7%	39.6	16.3
		Offside	57.1%	61.5	2.8
Cardiff Road Bus Gate	Cardiff Road (east)		43.0%	1.6	0.5
	Cardiff Road (west)		67.9%	9.4	9.7
	Bus Gate		10.4%	59.6	0.7
Overall PRC (%)			-14.1%		
Overall Delay (seconds)			86.53		
Cycle Time (seconds)			120		

Table 17 shows the results for the Option 5 layout with 2019 PM peak traffic flows.

From the results it is seen that performance of the junction overall is lower than the existing layout as Option 5 results in a PRC of -14.1% compared to 13.7% for the existing layout. In comparison to Option 4, Option 5 operates at a PRC of -14.1% compared to -10.8% for Option 4.

The results show that Penlan Road (nearside) and Barry Road (nearside) all operate over capacity with degrees of saturation greater than 90%. Penlan Road (offside), Cardiff Road (nearside) and Redlands Road (nearside) are all operating close to capacity with degrees of saturation greater than 85%.

The modelling shows that excessive queue lengths occur on Cardiff road (Penlan Road/Barry Road junction), Cardiff Road (east, Cardiff Road/Redlands Road junction) and Cardiff Road (west, Cardiff Road/Redlands Road junction) and that all of these could affect the operation of junctions downstream.

Table 18: Option 5 Layout with 2024 AM Peak Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	51.2%	68.3	2.3
		Offside	55.7%	39.6	6.9
	Barry Road	Nearside	77.2%	26.4	17.5
		Offside	35.5%	25.3	2.1
	Cardiff Road	Nearside	98.5%	68.1	27.8
		Offside	94.6%	49.5	24.4
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	37.7%	3.7	2.2
		Offside	73.6%	23.6	12.3
	Redlands Road	Nearside	112.8%	290.7	47.5
		Offside	104.0%	166.4	30.9
	Cardiff Road (west)	Nearside	59.8%	26.7	8.4
		Offside	50.6%	22.8	4.7
Cardiff Road Bus Gate	Cardiff Road (east)		29.1%	1.3	0.3
	Cardiff Road (west)		131.9%	516.6	121.9
	Bus Gate		2.4%	18.3	0.3
Overall PRC (%)			-46.6%		
Overall Delay (seconds)			214.98		
Cycle Time (seconds)			96		

Table 18 shows the results for the Option 5 layout with 2024 AM peak traffic flows.

When comparing Option 5 with the existing layout Option 5 has a PRC of -46.6% compared to that of -64.0% for the existing layout. The PRC obtained for Option 5 is only slightly higher than obtained for the existing layout with 2014 traffic flows.

The modelling results show that Redlands Road and Cardiff Road (Barry Road/Penlan Road) and Cardiff road (west) at the bus gate are all over capacity with degrees of saturation greater than 90%. The remaining lanes all operate within capacity, although some lanes have excessive queues on. These lanes are Cardiff Road (Barry road/Penlan Road junction), Cardiff road (east) offside lane and Cardiff Road (east) nearside lane at the Cardiff Road/Redlands Road junction.

Table 19: Option 5 Layout with 2024 PM Traffic Flows

Junction	Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Road / Penlan Road	Penlan Road	Nearside	106.3%	262.5	16.0
		Offside	91.8%	83.7	18.2
	Barry Road	Nearside	109.3%	212.6	98.9
		Offside	9.2%	15.6	1.0
	Cardiff Road	Nearside	89.7%	24.9	14.2
		Offside	35.4%	18.9	11.1
Cardiff Road / Redlands Road	Cardiff Road (east)	Nearside	52.8%	5.4	5.2
		Offside	78.5%	22.1	16.3
	Redlands Road	Nearside	89.6%	90.2	13.3
		Offside	86.4%	79.3	13.1
	Cardiff Road (west)	Nearside	82.7%	43.2	19.1
		Offside	60.6%	63.8	3.0
Cardiff Road Bus Gate	Cardiff Road (east)		43.8%	1.6	0.5
	Cardiff Road (west)		71.6%	10.0	10.7
	Bus Gate		11.4%	61.6	0.7
Overall PRC (%)			-21.4%		
Overall Delay (seconds)			133.32		
Cycle Time (seconds)			120		

Table 19 shows the results for the Option 5 layout with 2024 PM peak traffic flows.

From this it can be seen that the Option 5 layout has resulted in a decrease in performance from 4.6% to -21.4%. If this is compared to that for Option 4 then Option 5 operates at a value of -21.4% compared to -18.1% for Option 4.

The results show that Penlan Road and Barry Road nearside lane are operating over capacity with degrees of saturation greater than 90%. Cardiff Road nearside (Barry Road/Penlan Road) and Redlands Road, nearside, are both operating at capacity with degrees of saturation of 90%.

The modelling shows that Cardiff Road (Barry Road/Penlan Road junction), Cardiff road (east, Cardiff Road/Redlands Road) offside lane Cardiff Road (west, Cardiff Road/Redlands Road junction) nearside lane all have excessive queues on.

Conclusion

The results from the modelling show that Option 5 results in an improvement in the operation of the junction in the AM peak as the PRC improves, albeit still remains negative indicating the junction is over capacity. For the PM peak the PRC decreases and becomes negative, as opposed to positive for the existing

layout. This decrease in PRC for the PM peak means that the junction operates within capacity for the existing layout, but over capacity for layout 5.

For both the AM and PM peaks there are lanes that are over capacity for all scenarios, but previously operated within capacity with the existing layout. This change in degree of saturation is due to the changes to the layout of the junction which have changed capacity of certain movements and tried to improve pedestrian movements.

In the AM peak the Cardiff Road lanes at the Barry Road/Penlan Road are over capacity. This is due to the removal of the left turn filter and give way that are present in the existing and Option 4 and the introduction of a pedestrian crossing here. Both of these result in a decrease in green time for and thus they now both operate over capacity.

In the AM peak both Redlands Road lanes are over capacity. This is due to the introduction of a pedestrian crossing across Cardiff Road at this junction. This pedestrian crossing has resulted in a decrease in the amount of green time available and Redlands Road has seen the greatest reduction in green time.

In the PM peak Barry Road (nearside) is over capacity and this is as a result in changes to the lane configuration on Barry Road at this junction. In the existing layout those travelling straight on can use both lanes, but in Option 5 only the nearside lane can be used for those travelling straight on. This change to the lane configuration is not an issue in the AM peak as only 662 vehicles wish to travel straight on, but in the PM peak this increases to 1055 and becomes an issue.

For Penlan Road nearside lane the issue is the reduction in green time available to it as a result of the additional pedestrian crossing on Cardiff Road.

3.2 Biglis Junction

3.2.1 Existing Layout

The existing layout have been assessed using Arcady/Junctions 8.

Table 20: Existing Layout with 2014 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	6.81	28.76	D
Cardiff Road (east)	2.36	12.41	B
Sully Moors Road	3.19	16.13	C
Cardiff Road (west)	10.61	30.20	D
Junction LoS			C

The results of the existing layout with 2014 AM Peak traffic flows can be seen in Table 20. From this it can be seen that the junction currently operates within capacity with an overall Level of Service (LoS) of C.

The junction queues have been compared with those measured onsite when the vehicle counts were undertaken and the fit between the queues observed onsite and those modelled are close enough for the model to present reasonably accurate results.

Table 21: Existing Layout with 2014 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	1.35	7.26	A
Cardiff Road (east)	3.62	14.20	B
Sully Moors Road	5.93	29.06	D
Cardiff Road (west)	8.11	24.40	C
Junction LoS			C

The results for the existing layout with 2014 PM Peak traffic flows can be seen in Table 21. This shows that the junction operates at a LoS C which means that the junction operates within capacity for the PM peak.

As with the AM peak, the queues from the model have been compared with those measured onsite and the fit between these is close enough to present reasonably accurate results.

Table 22: Existing Layout with 2019 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	15.42	57.18	F
Cardiff Road (east)	3.43	16.80	C
Sully Moors Road	5.00	23.54	C
Cardiff Road (west)	26.36	63.65	F
Junction LoS			F

As can be seen from Table 22 the existing layout with the 2019 AM peak flows results in a junction LoS F. This indicates that the junction operates over capacity with the 2019 AM peak flows, whereas with the 2014 flows the junction operated at a LoS C.

Barry Docks Link Road and Cardiff Road (west) both see queue lengths and delays doubling as a result of the increase in traffic between 2014 and 2019.

Table 23: Existing Layout with 2019 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	1.65	8.83	A
Cardiff Road (east)	5.41	20.48	C
Sully Moors Road	13.84	61.02	F
Cardiff Road (west)	17.58	47.60	E
Junction LoS			E

Table 23 shows the results for the existing layout with 2019 PM peak traffic flows. From this it can be seen that with the 2019 PM peak flows the junction operates at a LoS E, compared to LoS C with 2014 PM peak flows. This LoS indicates that the junction no longer operates within capacity.

Sully Moors Road and Cardiff Road (west) both see their queue lengths and delay double as a result of the additional traffic in 2019. Barry Docks Link Road and Cardiff Road (east) both have much smaller increases in queue lengths and delay.

Table 24: Existing Layout with 2024 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	42.66	131.94	F
Cardiff Road (east)	5.66	25.12	D
Sully Moors Road	10.86	45.65	E
Cardiff Road (west)	74.64	145.72	F
Junction LoS			F

Table 24 shows the results for the existing layout with 2024 AM peak traffic flows. When the results are compared with 2014 the LoS has changed to F, indicating the junction is operating over capacity. All of the arms have a LoS that is deemed to indicate that a junction is at or over capacity.

Barry Docks Link Road and Cardiff Road (west) have seen large increases in queues and delays as a result of the increase in traffic between 2014 and 2024.

Table 25: Existing Layout with 2024 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	2.16	10.94	B
Cardiff Road (east)	10.85	38.78	E
Sully Moors Road	49.46	178.03	F
Cardiff Road (west)	47.28	100.46	F
Residual Network Capacity			F

Table 25 shows the results of the existing layout with 2024 PM peak traffic flows. From this it can be seen that the LoS has changed from C to an F. A LoS F indicates that a junction is over capacity. This is confirmed by the long queues and high delay times experienced on Sully Moors Road and Cardiff Road (west).

3.2.2 Option B (Improved Roundabout)

Option B sees the flares on Barry Docks Link Road, Cardiff road (east) and Sully Moors Road being lengthened to increase the capacity of these arms. On Cardiff Road (west) the lane designations are changed so that the nearside lane becomes a left turn only lane.

Table 26: Option B with 2014 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	2.98	12.22	B
Cardiff Road (east)	1.71	8.87	A
Sully Moors Road	2.15	10.62	B
Cardiff Road (west)	52.04	123.18	F
Junction LoS			F

Table 26 shows the results for the Option B layout with 2014 AM peak traffic flows. The modelling shows that the junction will now operate at a LoS F with

these changes, compared to a LoS C with the existing layout. This indicates that this junction is now over capacity with these changes.

The changes to Barry Links Dock Road, Cardiff Road (east) and Sully Moors Road all results in the queue and delay decreasing as a result of the changes to these arms.

The changes to the lane designation for Cardiff Road (west) result in the queue and delay increasing on this arm. The queue increases from 11 PCU's with the existing layout to 52 PCU's with the Option B layout.

Table 27: Option B with 2014 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	0.90	5.09	A
Cardiff Road (east)	2.52	9.94	A
Sully Moors Road	3.33	16.58	C
Cardiff Road (west)	9.67	29.06	D
Junction LoS			C

Table 27 shows the results for the Option B layout with the 2014 PM peak traffic flows. The results show that with the changes to the junction it still operates at a LoS C so is operating within capacity.

The changes to the layout of the junction result in a decrease in the queue and delay for Barry Docks Road, Cardiff Road (east) and Sully Moors Road, but for Cardiff Road (west) the changes result in an increase in queue and delay. The resulting increase in delay on Cardiff Road (west) results in the LoS changing from a C to a D.

Table 28: Option B with 2019 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	3.80	15.51	C
Cardiff Road (east)	2.19	10.85	B
Sully Moors Road	2.98	13.94	B
Cardiff Road (west)	109.96	227.73	F
Junction LoS			F

Table 28 shows the results for the Option B layout with the 2019 AM peak traffic flows. The results show that the junction still operates at a LoS F, even with the changes. Considering that Barry Docks Link Road, Cardiff Road (east) and Sully Moors Road all have a LoS B/C, then the delay on Cardiff Road (west) is sufficiently long to result in the whole junction operating at a LoS F.

Barry Docks Link road, Cardiff Road (east) and Sully Moors Road all see decreases in queues and delays as a result of the changes, whereas Cardiff Road (west) sees a 320% increase in queue length as a result of the changes to that arm.

Table 29: Option B with 2019 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	1.13	5.89	A
Cardiff Road (east)	3.49	13.14	B
Sully Moors Road	5.71	27.02	D
Cardiff Road (west)	24.08	61.53	F
Junction LoS			D

Table 29 shows the results for the Option B layout with 2019 PM Peak traffic flows. The results of the modelling show that with these changes the junction improves to operate at a LoS D, thus the junction now operates at capacity. This change in LoS is due to the reduction in the queue and delay on Sully Moors Road.

Barry Docks Link Road, Cardiff Road (east) and Sully Moors Road see a decrease in queue length and delay as a result the changes, whereas Cardiff Road (west) sees queues and delay doubling as a result of the changes.

Table 30: Option B with 2024 AM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	5.54	21.05	C
Cardiff Road (east)	3.03	14.14	B
Sully Moors Road	4.62	20.97	C
Cardiff Road (west)	192.66	392.32	F
Junction LoS			F

Table 30 shows the results of Option B with the 2024 AM peak traffic flows. From this it can be seen that the LoS remains F with the changes to the junction.

Barry Dock Links Road, Cardiff Road (east) and Sully Moors Road the changes result in a decrease in the queue and delays experienced, whereas Cardiff Road (west) sees a 160% increase in the queue experienced.

Table 31: Option B with 2024 PM Peak Traffic Flows

	Queue (PCU)	Delay (seconds)	Level of Service
Barry Docks Link Road	1.35	6.80	A
Cardiff Road (east)	5.20	18.66	C
Sully Moors Road	13.50	57.51	F
Cardiff Road (west)	65.90	137.50	F
Junction LoS			F

Table 31 shows the results of Option B with the 2024 PM peak traffic flows. The modelling shows that with these changes the junction still operates at a LoS F.

Barry Docks Link Road, Cardiff Road (east) and Sully Moors Road all see a decrease in queue and delays as a result of the changes, whereas Cardiff Road (west) sees an increase in queue and delay. Although Sully Moors Road sees a decrease in delay in comparison to the existing layout it still operates at LoS F.

Conclusion

The modelling for Biglis shows that with the existing layout the junction operates at a LoS C for both the AM and PM peaks thus indicating that the junction operates within capacity and that queues and delays are not that excessive. With the 2019 and 2024 traffic flows the junction operates at a LoS E/F indicating that with these flows the junction is no longer operating within capacity as queues and delays on some arms have reached an excessive point.

Option B sees increases in flare lengths for Barry Docks road, Cardiff Road (east) and Sully Moors Road and Cardiff Road (west) has a change in lane designations so that the nearside lane is left turns only. This results in decreases in the queues and delays for Barry Docks Link Road, Cardiff Road (east) and Sully Moors Road, but Cardiff Road (west) sees queues and delays doubling as a result of changes to the lane designations.

This increase is due to the number of vehicles undertaking the left turn in comparison to the rest of the traffic on that arm. The left turners only account for 20% of traffic in the AM peak and only 30% in the PM peak. This results in large numbers of vehicles using the offside. This is then exasperated by the changes to the other arms that result in greater numbers of vehicles passing over the give way line and circulating the roundabout.

Retaining the existing lane designations on the Cardiff Road (west) arm would improve the operation of the Option B improvement significantly, however this arm would still be over capacity in the future scenarios considered.

3.2.3 Option 1 (Traffic Signals)

Option 1 for Biglis sees this junction converted to operate as a four arm signalised junction.

Table 32: Option 1 Layout with 2014 AM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	103.0%	150.1	38.0
	Offside	96.1%	163.2	10.3
Cardiff Road (east)	Nearside	47.4%	24.7	6.2
	Offside	104.8%	248.0	14.6
Sully Moors Road	Nearside	105.6%	192.8	40.7
	Offside	74.2%	119.9	3.5
Cardiff Road (west)	Nearside	35.4%	31.1	6.1
	Offside	105.4%	169.5	59.6
Overall PRC (%)				-17.3%
Overall Delay (seconds)				129.83
Cycle Time (seconds)				120

The results for Option 1 with 2014 AM peak traffic flows can be seen in Table 32. From this table it can be seen that overall the junction is operating over capacity with a PRC of -17.3%.

The Barry Docks Road arm, Cardiff road (east) offside and Sully Moors Road nearside lane are all operating over capacity with degrees of saturation greater than 90%.

Table 33: Option 1 Layout with 2014 PM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	85.9%	61.1	13.3
	Offside	49.0%	72.1	2.6
Cardiff Road (east)	Nearside	57.8%	24.8	8.6
	Offside	84.3%	82.3	10.1
Sully Moors Road	Nearside	111.8%	285.0	55.7
	Offside	55.0%	77.9	3.1
Cardiff Road (west)	Nearside	48.3%	32.2	9.1
	Offside	114.7%	296.5	68.6
Overall PRC (%)				-27.5%
Overall Delay (seconds)				132.91
Cycle Time (seconds)				120

The results for the 2014 PM peak can be seen in Table 33. From this it can be seen that the junction is over capacity in the PM peak as the PRC is -27.5%.

The results show that like the Sully Moors Road nearside lane and Cardiff Road (west) offside lane are over capacity with degrees of saturation greater than 90%. These two lanes also have high average delay times and queues.

Table 34: Option 1 Layout with 2019 AM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	108.3%	224.1	54.9
	Offside	102.6%	220.2	13.7
Cardiff Road (east)	Nearside	50.4%	25.0	6.6
	Offside	111.1%	320.9	19.0
Sully Moors Road	Nearside	111.4%	277.4	58.2
	Offside	79.8%	133.3	4.1
Cardiff Road (west)	Nearside	37.6%	31.5	6.5
	Offside	111.7%	262.3	86.7
Overall PRC (%)				-24.1%
Overall Delay (seconds)				198.46
Cycle Time (seconds)				120

The results for the 2019 AM peak traffic flows can be seen in Table 34. The results show that in comparison with the 2014 AM peak flows the PRC has increased from -17.3% to -24.1%.

The model shows that for the 2019 AM peak five lanes are now over capacity with degrees of saturation greater than 90%. The only lanes that are not over

capacity are Cardiff road (east) nearside lane, Sully Moors Road offside lane and the Cardiff Road (west) nearside lane.

Table 35: Option 1 Layout for 2019 PM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	88.5%	66.3	14.3
	Offside	56.5%	76.3	3.1
Cardiff Road (east)	Nearside	59.5%	23.8	9.3
	Offside	103.8%	201.8	19.2
Sully Moors Road	Nearside	126.6%	482.5	93.8
	Offside	69.0%	97.5	3.8
Cardiff Road (west)	Nearside	49.0%	31.0	9.4
	Offside	124.1%	415.2	98.1
Overall PRC (%)				-40.7%
Overall Delay (seconds)				211.22
Cycle Time (seconds)				120

The results for the 2019 PM peak traffic flows can be seen in Table 35. Comparing the results with those for the 2014 PM peak traffic flows it can be seen that the performance of the junction has decreased as the PRC has changed from -27.5% to -40.7%. This change in PRC is not as drastic as that experienced with the 2019 AM peak flows.

For the 2019 PM peak traffic flows the Cardiff Road (east) offside, Sully Moors Road (nearside) and Cardiff Road (west) offside lanes are over capacity, with the Barry Docks Link Road nearside lane being close to capacity.

Table 36: Option 1 Layout with 2024 AM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	115.9%	336.3	80.0
	Offside	112.4%	340.4	20.8
Cardiff Road (east)	Nearside	53.0%	24.8	7.1
	Offside	118.6%	413.9	25.1
Sully Moors Road	Nearside	122.9%	433.1	91.9
	Offside	91.7%	187.1	5.7
Cardiff Road (west)	Nearside	39.2%	31.1	7.0
	Offside	120.4	350.7	116.5
Overall PRC (%)				-36.5%
Overall Delay (seconds)				302.83
Cycle Time (seconds)				120

Table 36 shows the Option 1 layout with the 2024 AM peak traffic flows. Comparing the results for 2024 with 2014 and 2019 it can be seen that the operating of the junction has worsened as the PRC has changed from -17.3% with 2014 flows to -36.5% with 2024 flows.

For the AM peak 2024 six of the lanes are overcapacity and the remainder are within capacity. The lanes that are within capacity are Cardiff road (east) nearside and Cardiff road (west) nearside lanes.

Table 37: Option 1 Layout with 2024 PM Peak Traffic Flows

Arm	Lane	Degree of Saturation (%)	Average Delay (seconds / PCU)	Mean Max Queue (PCUs)
Barry Docks Road	Nearside	90.9%	71.6	16.6
	Offside	63.0%	80.6	3.7
Cardiff Road (east)	Nearside	62.5%	23.8	10.4
	Offside	107.2%	240.6	23.3
Sully Moors Road	Nearside	148.4%	712.8	144.7
	Offside	91.3%	175.0	6.1
Cardiff Road (west)	Nearside	51.2%	30.8	10.1
	Offside	143.7%	629.9	152.1
Overall PRC (%)				-64.8%
Overall Delay (seconds)				323.40
Cycle Time (seconds)				120

Table 37 shows the 2024 PM peak results for Option 1. Comparing the 2024 PM peak the with 2014 PM peak it can be observed that the operation of the junction

has worsened as the PRC has changed from -27.5% to -64.8%, which is a doubling of the PRC in the ten year period.

The modelling shows that five of the lanes are operating over capacity and the rest are within capacity. Those lanes within capacity are Barry Docks road offside, Cardiff Road (east) nearside and Cardiff Road (west) nearside.

Those lanes showing high degrees of saturation also exhibit long delays and queues as a result of the high degrees of saturation.

Conclusion

Option 1 sees the junction converted to signal control. For all traffic flows the overall PRC is negative indicating that the junction is over capacity. The results from the Option 1 modelling show that for the Cardiff Road (west) arm the lane designations and resultant lane imbalance ensures that the nearside lane operates within capacity with a degree of saturation less than 55%, whereas the offside lane operates over capacity in all time periods with a degree of saturation in excess of 100%, achieving 140% with the 2024 PM peak traffic flows.

4 Conclusion and Recommendations

4.1 Conclusion

Table 38: Summary of Results for Merrie Harrier Junction

	2014		2019		2024	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Existing	-44.8%	20.1%	-53.4%	13.7%	-64.0%	4.6%
Option 4	-29.4%	-4.8%	-37.1%	-10.8%	-46.6%	-18.1%
Option 5	-29.4%	-7.7%	-37.1%	-14.1%	-46.6%	-21.4%

Table 38 shows a summary of the PRC's for each option for the Merrie Harrier junction. It can be seen that with the existing layout the junction operates over capacity in the AM peak for all years, but for the PM peak operates within capacity for each year.

With the Option 4 layout the PRC for the AM peak has improved and is less than that of the existing layout, but still negative indicating the junction is still over capacity. For the PM peak Option results in a decrease in the PRC and for each year is now negative indicating the junction is over capacity.

For the Option 5 layout the same pattern is observed in that there is an improvement in the operation of the junction in the AM peak, but at the cost of the operation of the junction in the PM peak. Overall the PM peak operates at a slightly higher PRC than the Option 4 layout.

Table 39: Summary of the Results for Biglis Junction

	2014		2019		2024	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Existing	C	C	F	E	F	F
Option B	F	C	F	D	F	F
Option 1	-17.3%	-27.5%	-24.1%	-40.7%	-36.5%	-64.8%

Table 39 provides a summary of the results from the modelling of the options for the Biglis junction.

It can be seen that the existing junction operates within capacity with 2014 traffic flows, but when the 2019 and 2024 traffic flows are modelled the LoS increases to E/F showing the junction is over capacity.

For Option B it can be seen that it is only the 2014 PM peak that operates within capacity as all the other scenarios have a LoS E/F indicating they are over capacity. Retaining the existing lane designations on the Cardiff Road (west) arm would improve the operation of the Option B improvement significantly, however this arm would still be over capacity in the future scenarios considered.

Option 1 shows that again the junction is over capacity in all time periods with all traffic flows.

4.2 Recommendations

The following recommendations are made:

- For Merrie Harrier the modelling shows that Option 4 is the preferred option to take forwards as this results in an improvement in the operation of the junction in the AM peak and the corresponding change in the PM peak is not as great as that of Option 5; and
- For Biglis Option B should be taken forward, but the changes to the lane designation on Cardiff Road (west) should be reconsidered to allow a more balanced lane use.

Draft

APPENDIX C

From S02-MR-Calcs.xlsx

Paste TRICS DATA in box

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

Calculation Factor: 1 HHOLDS

Time Range	No. Days	ARRIVALS			DEPARTURES	
		Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	
00:00-01:00		0	0	0	0	0
01:00-02:00		0	0	0	0	0
02:00-03:00		0	0	0	0	0
03:00-04:00		0	0	0	0	0
04:00-05:00		0	0	0	0	0
05:00-06:00		0	0	0	0	0
06:00-07:00		0	0	0	0	0
07:00-08:00		12	51	0.064	12	51
08:00-09:00		12	51	0.153	12	51
09:00-10:00		12	51	0.176	12	51
10:00-11:00		12	51	0.158	12	51
11:00-12:00		12	51	0.197	12	51
12:00-13:00		12	51	0.189	12	51
13:00-14:00		12	51	0.204	12	51
14:00-15:00		12	51	0.212	12	51
15:00-16:00		12	51	0.281	12	51
16:00-17:00		12	51	0.339	12	51
17:00-18:00		12	51	0.382	12	51
18:00-19:00		12	51	0.235	12	51
19:00-20:00		0	0	0	0	0
20:00-21:00		0	0	0	0	0
21:00-22:00		0	0	0	0	0
22:00-23:00		0	0	0	0	0
23:00-24:00		0	0	0	0	0
Daily Trip Rates:				2.59		

Trip Generations based on			500	Units
Peak Periods	Inbound	Outbound	Total	
08:00-09:00	77	185	262	
17:00-18:00	191	104	295	
Daily	1295	1306	2601	

Trip Generations based on
Peak Periods
08:00-09:00
17:00-18:00
Daily

ED

RES	TOTALS			
Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0.223	12	51	0.287	
0.37	12	51	0.523	
0.206	12	51	0.382	
0.181	12	51	0.339	
0.181	12	51	0.378	
0.171	12	51	0.36	
0.214	12	51	0.418	
0.209	12	51	0.421	
0.194	12	51	0.475	
0.251	12	51	0.59	
0.207	12	51	0.589	
0.204	12	51	0.439	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
2.611			5.201	

Weekday
Dataset: Houses Privately Owned

TRICS Trip Rates

Peak Period	Inbound	Outbound	Total
08:00-09:00	0.153	0.37	0.523
17:00-18:00	0.382	0.207	0.589
Daily	2.59	2.611	5.201

Trip Generations bas 500 Units

Peak Period	Inbound	Outbound	Total
08:00-09:00	77	185	262
17:00-18:00	191	104	295
Daily	1295	1306	2601

Time Period	Arrivals	Departures	Total
07:00	29	100	129
08:00	69	167	235
09:00	79	93	172
10:00	71	81	153
11:00	89	81	170
12:00	85	77	162
13:00	92	96	188
14:00	95	94	189
15:00	126	87	214
16:00	153	113	266
17:00	172	93	265
18:00	106	92	198

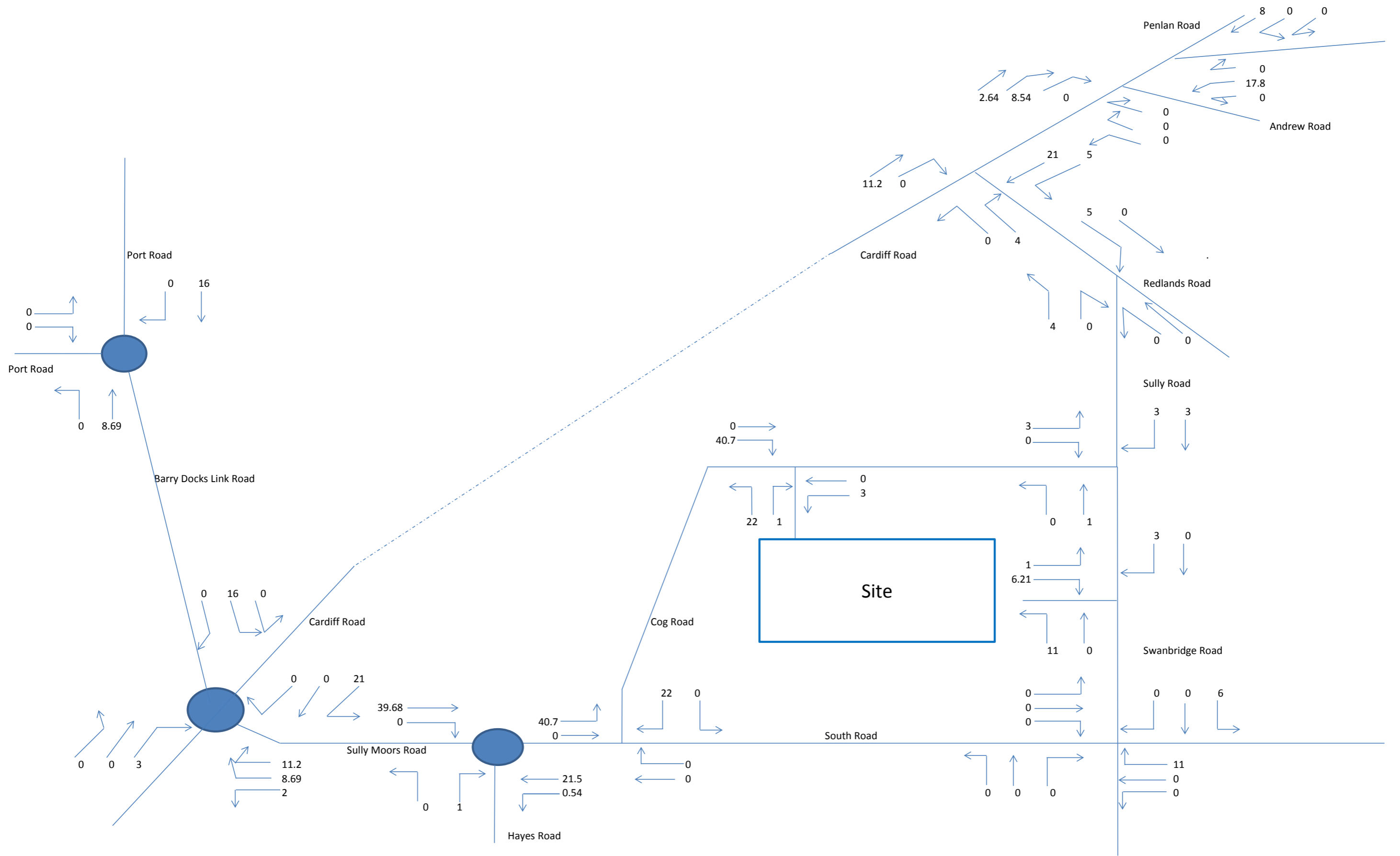
ations bas 100 Units

Inbound	Outbound	Total
15	37	52
38	21	59
259	261	520

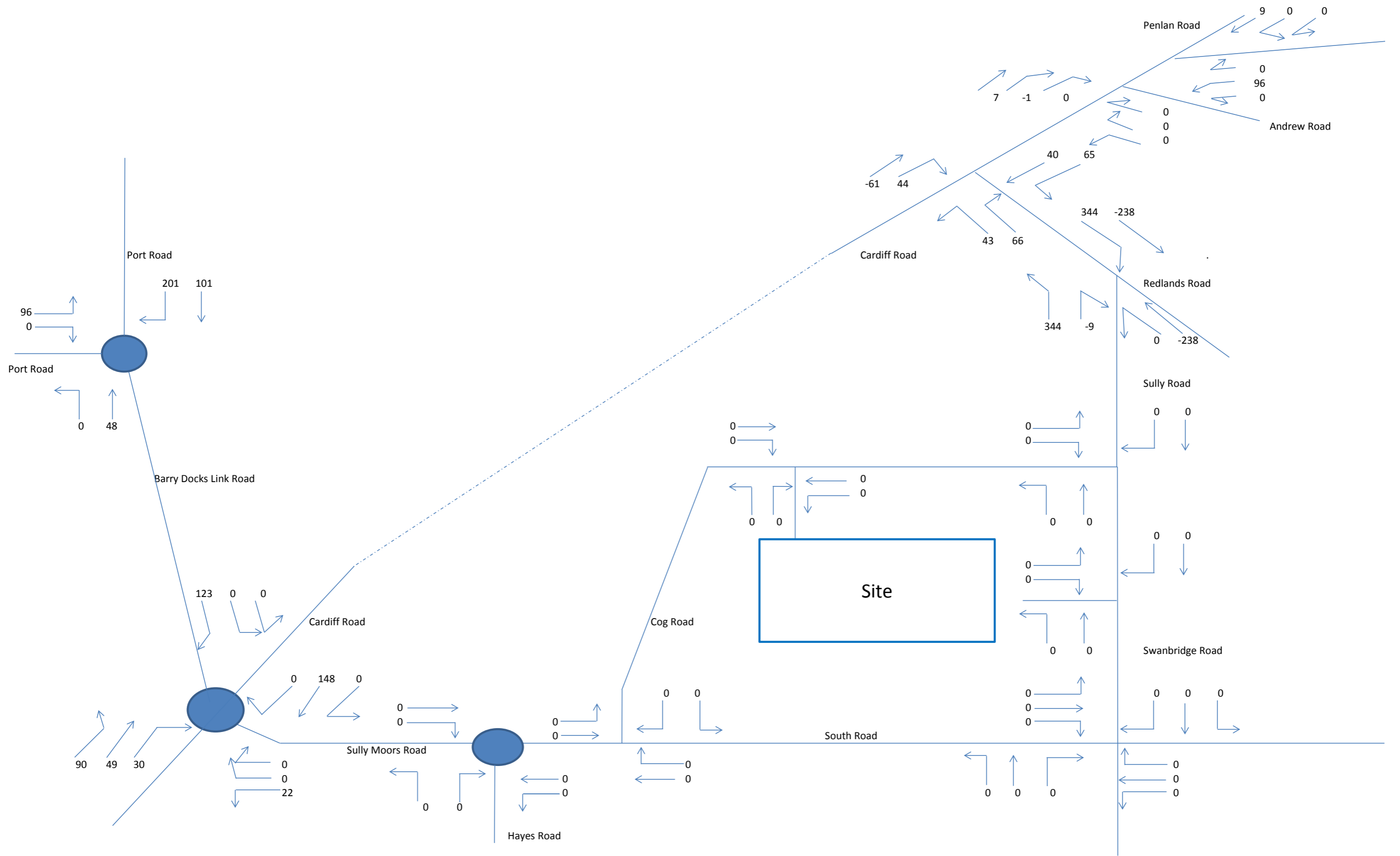
Trip Generations bas 50 Units

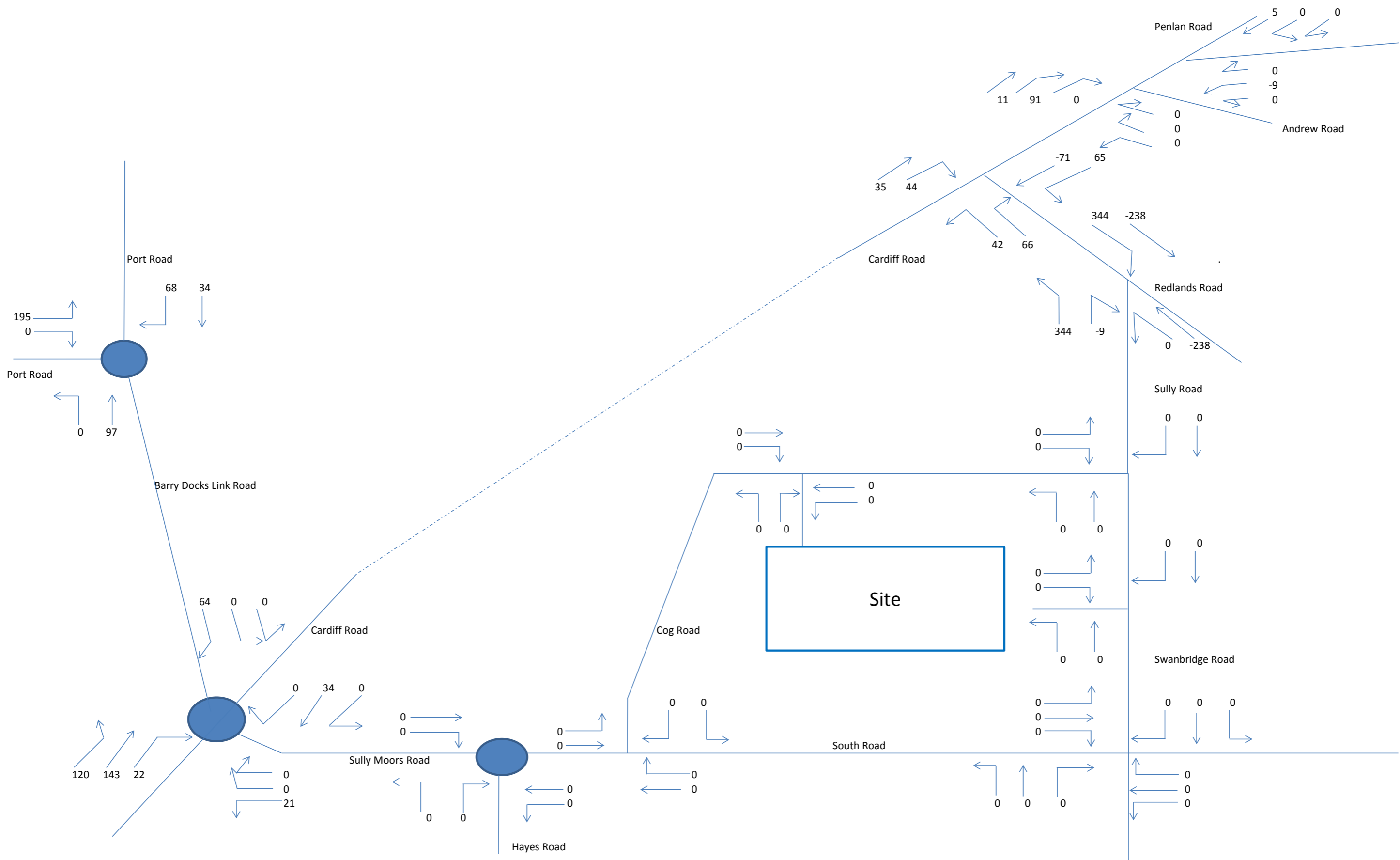
Peak Period	Inbound	Outbound	Total
08:00-09:00	8	19	26
17:00-18:00	19	10	29
Daily	130	131	260

APPENDIX D



APPENDIX E





APPENDIX F

Taylor Wimpey

Land adjacent to Swanbridge Road, Sully

Interim Travel Plan

September 2016

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1 INTRODUCTION

Background

- 1.1 This Interim Travel Plan Framework (ITP) has been prepared by Vectos on behalf of Taylor Wimpey (the applicants) to support the Transport Assessment, which has been submitted as part of the planning application.
- 1.2 This ITP has been prepared in accordance with Travel Plan guidance issued by the Department for Transport and will provide the strategy from which the final Travel Plan can be produced. The final Travel Plan will include modal shift targets based on the results of the travel surveys.

The Development

- 1.3 The proposed development comprises up to 350 residential units. Full details of the proposed development are included in the Transport Assessment.

Travel Plan Scope

- 1.4 This ITP is a strategy setting out the sustainable travel options and measures for the proposed development at Swanbridge Road, Sully.
- 1.5 This ITP will form the basis of a full Travel Plan covering the residential development, which will be produced once baseline travel surveys have been completed. These baseline travel surveys will be undertaken within 3 months of meaningful occupation of the residential development.

Aim of Travel Plan

- 1.6 The main aim of this ITP is to put in place the management tools deemed necessary to enable future residents to make more informed decisions about their travel, which at the same time minimises the adverse impacts of their travel on the environment. This is achieved by setting out a strategy for eliminating the barriers which prevent people from using sustainable modes which in effect can self-manage single-occupancy vehicle use.

- 1.7 The strategy needs to be long term as changing travel habits takes time and will only occur through a combination of incentives, improved facilities, government initiatives, and changes in individual attitudes.
- 1.8 This is an evolving ITP and will change with input from Vale of Glamorgan Council (VoG), the applicant, and other key stakeholders as necessary.

This Document

- 1.9 This ITP has been written as a stand-alone document and contains all the relevant information needed to effectively implement and monitor the full Travel Plan.
- 1.10 The remainder of the document is as follows:
- Section 3 - Outlines relevant policy and best practice;
 - Section 4 - Describes the proposed residential development;
 - Section 5 - Sets out the objectives and benefits of the ITP;
 - Section 6 - Outlines the targets of the ITP;
 - Section 7 – Sets out the management structure of the ITP;
 - Section 8 - Sets out the measures that could be implemented to help achieve the objectives and targets of the full Travel Plan; and
 - Section 9 - Outlines how the monitoring and review programme which will ensure the Travel Plan continues to progress.

2 POLICY AND BEST PRACTICE

National Policy

Planning Policy Wales (Edition 4, February 2011)

2.1 Planning Policy Wales sets out the land use planning policies of the Welsh Government. This is supplemented by a series of Technical Advice Notes. A summary of the transportation and land use policies of the Welsh Government are set out below:

- promote sustainable patterns of development, identifying previously developed land and buildings, and indicating locations for higher density development at hubs and interchanges and close to route corridors where accessibility on foot and by bicycle and public transport is good;
- maintain and improve the vitality, attractiveness and viability of town, district, local and village centres;
- locate development so that it can be well serviced by existing infrastructure.

Technical Advice Note 18 (Transport)

2.2 The Planning Policy Wales Technical Advice Note for Transport (TAN 18), states that sustainable development should be achieved by:

- integration of transport and land use planning;
- integration between different types of transport; and
- integration of transport policy with policies for the environment, education, social justice, health, economic development and wealth creation.

Department for Transport Guidance

2.3 Department for Transport (DfT) guidance in relation to residential travel plans is set out in 'Making Residential Travel Plans Work: Guidelines for New Development'. This document sets out the required design and content of travel plans, and the management, monitoring and review procedures required to ensure a travel plan is effective.

Regional Policy

South East Wales Transport Alliance Regional Transport Plan (March 2010)

- 2.4 The aim of the South East Wales Transport Alliance (SEWTA) Regional Transport Plan (RTP) is to improve regional transport in South East Wales and help deliver the social, economic and environmental objectives of the Wales Spatial Plan and the Wales Transport Strategy.
- 2.5 The wider goals of the RTP are:
- develop the economy, through improving connectivity for business and freight, making transport more effective and efficient, providing access to employment, education, shopping and leisure, and by improving transport integration
 - promote social inclusion and equality, by providing a transport system that is safe, accessible, and affordable to all sections of the community;
 - protect the environment, by minimising transport emissions and consumption of resources and energy, by promoting walking, cycling, quality public transport, modal shift and minimising demand on the transport system; and
 - encourage more people to travel 'actively' by walking and cycling and integrating 'active' modes with public transport. The link between car dependency and the health problems created by sedentary lifestyles is now widely accepted and these aims seek to change this.

Local Policy

The Vale of Glamorgan Unitary Development Plan

- 2.6 The Vale of Glamorgan Adopted UDP 1996-2011 was adopted in April 2005 and constitutes the development plan for the authority. The UDP concentrates on the issues that the Council consider necessary to address in order to protect and enhance the environment of the Vale of Glamorgan whilst providing detailed guidance for future development proposals.
- 2.7 Policy 7 of the UDP relates to Transport and states:

'Improvements to the transportation network will consist of:

- i) Strategic transport schemes within and adjoining the existing urban areas of the waterfront strip of Penarth, Dinas Powys, Barry and Rhose;*
- ii) Local schemes necessary for environmental and safety reasons; and*
- iii) Schemes to encourage travel by cyclists and pedestrians.'*

2.8 Policy 8 also states:

'Developments will be favoured in locations which:

- i) Are highly accessible by means of travel other than the private car; and*
- ii) Minimise traffic levels and associated unacceptable environmental effects.'*

2.9 The Council's transportation policy objectives for the UDP are:

- 'To ensure that a balance is maintained between the need to facilitate the development of the local economy, environmental concerns and social considerations, in order to create a safe, efficient and equitable transport network for the Vale of Glamorgan;*
- To maintain and improve access to employment and services;*
- To ensure that developments are accessible by means of travel other than the private car;*
- To encourage greater use of public transport, cycling and walking;*
- To safeguard road lines and routes / sites of approved transport schemes;*
- To improve the safety and convenience of all means of transport; and*
- To ensure that adequate parking facilities are provided in accordance with the Council's approved parking guidelines.'*

Vale of Glamorgan Local Development Plan

2.10 The Vale of Glamorgan Council is preparing a new Local Development Plan (LDP) which will set out how land within the Vale of Glamorgan is used between 2011 and 2026. When adopted, the LDP will replace the current Adopted UDP.

2.11 The VoGC's Highway Development Control section has prepared an initial consultation response to this land identified as MG25 in the draft LDP. They have indicated that there are

no highway objections to the proposals subject to points relating to access, improvements to existing highway infrastructure and being able to demonstrate that the development will result in nil detriment to the existing traffic situation.

Summary

- 2.12 The proposed development accords with national, regional and local planning policies, and supports the sustainable objectives of national, regional and local planning policies.

3 PROPOSED RESIDENTIAL DEVELOPMENT

Development Schedule

3.1 The development proposal is for 350 residential dwellings with access provided off Cog Road and Swanbridge Road. Full details of the proposed development are included in the Transport Assessment.

Location

- 3.2 The site is located on the eastern fringe of Sully to the west of Swanbridge Road. The centre of Sully is approximately 5km from Penarth town centre and 4km from the town centre of Barry. Sully has a population of approximately 4,543 and comprises of a mix of local facilities including a primary school, a local convenience store, post office and doctor’s surgery.
- 3.3 The site is bound to the north by Cog Road and to the east by Swanbridge Road, both of which are local ‘Distributor Roads’. Existing residential development lies to the west of the development land and to the south is the disused Penarth to Barry Railway Line. Beyond this is further residential development. The site location is shown in **Figure 3.1**.

Figure 3.1 – Site Location



3.4 The predominant land use to the south and west of the site is residential whilst to the north and east it is agricultural use. The existing land use at the site is agricultural land.

Site Layout

- 3.5 The site will be developed in line with the principles of Manual for Streets and Manual for Streets 2 (MfS). The site will follow a clear hierarchical approach with respect to site users, with pedestrians and other vulnerable road users at the top of this hierarchy, and the emphasis on creating a sustainable development which links to the surrounding residential development and existing local facilities with well-connected pedestrian and cycle networks.
- 3.6 At Cog Road, the major road will be diverted into the site at its north-western corner. In this way, the major route becomes the route into the site, discouraging extensive use of Cog Road for 'rat-running', although Cog Road can still be accessed via a priority junction.
- 3.7 The VoGC has recently advertised their intention to introduce a 30mph speed limit on Cog Road from the end of the existing 30mph section as far as its junction with Sully Road/Lavernock Road.
- 3.8 On Swanbridge Road, a priority junction is proposed to provide access to the eastern part of the site.
- 3.9 Both access junctions can be achieved within either the adopted highway or within the land ownership boundary.
- 3.10 The intention of the development will be to link both points of access with a spine road, however this road and subsidiary roads will be designed to ensure traffic speeds are kept below 30mph, in accordance with MfS.

Walking

- 3.11 Whilst there are currently limited pedestrian facilities along Cog Road and none along Swanbridge Road there is a comprehensive footpath network adjacent to the western boundary of the site which serves the existing residential areas of Conybeare Road and Arlington Drive.
- 3.12 Whilst it is not possible for vehicular traffic to travel between Conybeare Road and Arlington Road, pedestrians are able to walk from Cog Road through to South Road using the existing footpath network which in part is segregated from the residential estate roads.
- 3.13 The existing footpath facilities are shown in the photographs below.



Proposed Design

- 3.14 In order to improve pedestrian linkages with the surrounding areas, a number of points of access for pedestrians and cyclists will be provided /enhanced. This will result in a benefit to existing and proposed residents in this area and will significantly improve the opportunities to walk and cycle for all journey purposes

Cycling

- 3.15 Whilst there are no formal cycle routes within the immediate vicinity of the site, apart from a shared cycleway/footway which is provided between Penarth and Barry following Lavernock Road and South Road, the site is suitably well located to enable cyclists to access this facility

from the existing residential estate roads. The following photographs show the facilities at the junction with Swanbridge Road.



- 3.16 South Road benefits from good quality cycle facilities, with dedicated off road routes between Hayes Road and Cog Road and to the east from Elm Close to Penarth.
- 3.17 The proposed residential development will be designed in line with principles of Manual for Streets and Manual for Streets 2, with cyclists accommodated on the carriageway. Low traffic speeds within the site will encourage cycling.

Public Transport

Bus

- 3.18 There are currently two regular bus services that serve Sully and provide a frequent service between Barry and Cardiff via Penarth.
- 3.19 The 94 Service is operated by Cardiff Bus and provides a half hourly service between Barry and Cardiff via Penarth between Monday and Saturday. An hourly service is provided on Sunday and Bank Holidays.
- 3.20 The 88 service is operated by First Bus and provides a frequent service between Barry and Penarth. An hourly service is provided between Monday and Saturday. There are no services provided on Sundays or Bank Holidays.
- 3.21 Both existing bus services provide regular and convenient linkages to branch line railway stations at Cadoxton and Penarth.

3.22 Details of the existing bus services are shown in **Table 5.1** however there are also regular school bus services serving the existing residential areas of Sully.

Table 5.1 – Summary of Bus Services in the Vicinity of the Site

Route No.	Route	Mon - Friday		Saturday		Sunday		Operator	Nearest Stop
		First	Last	First	Last	First	Last		
88	Barry – Sully - Penarth	0715	1815	0715	1815	-	-	Harton Coaches	Post Office
	Penarth – Sully - Barry	0738	1838	0738	1838	-	-	Harton Coaches	Post Office
94	Barry - Sully - Penarth - Cardiff	0630	2232	07:33	22:32	07:01	22:25	Cardiff Bus	Post Office
	Cardiff - Penarth – Sully - Barry	0737	2327	07:43	23:27	08:02	23:28	Cardiff Bus	Post Office
P133 (School Service)	Sully – St Joseph’s RC Primary School	08:50	-	-	-	-	-	N.A.T. Group	Post Office
	St Joseph’s RC Primary School	16:24	-	-	-	-	-	N.A.T. Group	Post Office

3.23 There are a number of bus stops located along South Road. The closest stops which are accessible via continuous footways from the development site are the Post Office stops near the junction with South Road and Arlington Drive. A zebra crossing on South Road assists pedestrians to cross at this location in order to access the Barry bound services.

3.24 There are also bus stops with shelters that are located to the west of the Lavernock Road/Swanbridge Road junction which are closer to the development site. These would be the closest to the development subject to the provision of new pedestrian links along Swanbridge Road.

3.25 The bus stops located at the Post Office are approximately 700m from the centre of the site using the existing footpath network that runs parallel to the western boundary of the site.

3.26 The stops at the Lavernock Road/South Road junction are approximately 650m from the centre of the site.

Rail

3.27 Whilst Sully is not served by a direct rail service, the closest railway station is located at Cadoxton (Barry) which is located approximately 3.9km from the site. Cadoxton is on the Barry and Vale of Glamorgan line that provides a 15min frequency service between Barry and Cardiff during the daytime.

3.28 Penarth railway station is approximately 5km to the east of Sully and on the Penarth Line. A 15min service operates on this line during the daytime. Park and Ride facilities are available at both stations. 31 car parking spaces are available 24 hours a day, Monday to Sunday at Cadoxton Rail Station and 15 car parking spaces are available 24 hours a day Monday to Sunday at Penarth Rail Station. Car parking is currently free of charge at both stations.

Summary

3.29 The existing site is located adjacent to the settlement of Sully and is conveniently located to benefit from existing pedestrian and cycle connections to local amenities within Sully which is typical of a settlement in a semi-rural area.

3.30 In terms of the wider connections, there are reasonable linkages, by a choice of modes, to other neighbouring settlements including Penarth and Barry that offer a wider variety of amenities and employment.

4 OBJECTIVES AND BENEFITS

Mission Statement

- 4.1 The main aim of this ITP is to put in place the management tools deemed necessary to enable residents to make informed decisions about travel, which at the same time minimises the adverse impacts of travel on the environment. This is achieved by setting out a strategy for eliminating barriers that prevent residents from making use of sustainable modes. Use of such modes will reduce single-occupancy vehicle use.
- 4.2 Improving the transport choices available to people, rather than focusing on providing for the private car, will lead to a more equitable and sustainable development that provides travel options for all regardless of whether or not they own a car.

Objectives

- 4.3 The transport principles for the proposed residential development reflect the following sustainable objectives:
- Reduced level of car use, particularly single occupancy car use;
 - Encouragement of residents to use alternative modes of transport to the private car; and,
 - Increased awareness of the environmental and social benefits of using alternative modes of transport.
- 4.4 These objectives are consistent with the objectives set out within policy guidance which aims to increase accessibility to services, reduce the impact and effect of congestion and widen travel choice.
- 4.5 The more detailed objectives of the ITP are to:
- Increase resident awareness of the advantages and availability of sustainable modes, but particularly active modes;
 - Actively promote sustainable transport options for travel to and from the proposed residential development, to enable informed decisions about how to travel to be made by residents;

- Increase the use of active and sustainable travel modes (particularly for shorter trips), and to encourage residents to build active travel into their everyday routines to support and contribute to wider health benefits;
- Enhance as far as is practical the accessibility of the proposed residential development by active modes at all times; and
- Raise awareness of the impacts of travel choices on health, the local environment etc.

Benefits

4.6 The achievement of the objectives will bring about a wide range of benefits for residents and the wider community.

4.7 The resident benefits will be:

- Health benefits associated with walking and cycling, including reduced levels of stress;
- The opportunity to save money by using alternative modes of travel to the car; and,
- Improved quality and reliability of journeys.

4.8 The benefits to the wider community will be:

- A step-change in travel attitudes which should lead to reductions in vehicular generated traffic on the local highway network and a contribution towards overall reduction in travel emissions.

5 TARGETS

- 5.1 In order to assess whether the full Travel Plan is successful in achieving its objectives, a set of targets have been set within this ITP.
- 5.2 All targets need to be SMART; that is Specific, Measureable, Achievable, Realistic and Time related.
- 5.3 There are two types of targets, namely: 'Action' and 'Aim' targets. Action targets set out specific commitments to implement measures to ensure delivery. Aim targets provide numerical goals for mode shift.

Action Targets

- 5.4 The key action targets are set out below. These will be included within an Action Plan to form part of the full Travel Plan:
- A Travel Plan Co-ordinator (TPC) will be appointed prior to first occupation of the proposed residential development;
 - The first travel plan survey will be undertaken within 3 months of meaningful occupation of the proposed residential development;
 - A finalised Travel Plan will be agreed within 6 months of meaningful occupation of the proposed residential development.

Aim Targets

- 5.5 **Table 5.1** outlines the proposed Aim Targets. The baseline mode split figures should be taken from the results of the baseline survey, which will be undertaken within 3 months of meaningful occupation.
- 5.6 It is recognised that it is not always possible to set accurate targets for distant future dates, even when targets are based on up to date modal share data. For this reason targets will change over time as the results of on-going monitoring become available. The revision of targets will be discussed VoG Council as necessary.

Table 5.1: Travel Plan AIM Targets

Target	Indicator	Mode Split		
		Baseline	Year 3	Year 5
Employees				
Achieve a 10% decrease in single occupancy vehicle trips	Modal split monitoring surveys for SOV use	As surveyed	-5%	-10%
Achieve an increase in use of alternative modes to offset reduction in SOV use. Modes to include: Walking Cycling Car share Public transport	Modal Split monitoring surveys for public transport	As surveyed	+5%	+10%
Residents				
Increase awareness of Public Transport options by 10%	Snapshot surveys	As surveyed	+5%	+10%
Increase awareness of cycling and walking options available to access the store by 10%	Snapshot surveys	As surveyed	+5%	+10%

5.7 Within 3 months of meaningful occupation of the proposed residential development the baseline survey will be undertaken to establish baseline travel patterns. Within 6 months of meaningful occupation of the proposed residential development the full Travel Plan will be finalised and targets agreed with VoG Council as necessary.

6 TRAVEL PLAN MEASURES

Introduction

- 6.1 This section of the ITP outlines the measures that will be introduced as part of the development proposals to help achieve the objectives of the ITP, together with the measures which could be introduced by the management company.

Measures - Development Proposals

- 6.2 As detailed in Section 3, the physical design and layout of the site will encourage residents to undertake journeys by sustainable modes.

Travel Pack

- 6.3 All residents will be provided with a Travel Pack when they move in to their property. This Travel Pack will include the following information:
- Name and contact details of the TPC and the availability of the TPC to speak with residents;
 - An introduction to the Travel Plan, its purpose, and a summary document;
 - Information on the health benefits of using active modes of transport;
 - Bus route maps and timetables and any other public transport information; and
 - Map showing walking and cycling routes close to the proposed residential development;
- 6.4 The Travel Packs will have a comment card / return slip to ensure that they are being used.

Personalised Travel Planning

- 6.5 The TPC will offer a personalised Travel Planning service for all residents. It is expected that this will be offered during induction sessions run for residents.
- 6.6 The TPC will be able to draw on advice from journey planning websites such as Transport Direct (www.transportdirect.org.uk).

Public Transport

- 6.7 Details of local bus and rail services will be made available to residents.

- 6.8 The TPC will hold discussions with local bus operators to see if any enhancements or amendments can be made to services for the benefit of residents.

Walking and Cycling

- 6.9 The following measures could promote walking and cycling to and from the proposed residential development:

- The TPC will raise awareness of the health benefits of walking and cycling.
- If there is sufficient demand a Bicycle User Group (BUG) will be set up by the TPC to provide suggestions for further improvements to encourage cycle use.

7 MONITORING AND REVIEW

7.1 It is important a thorough Travel Plan monitoring system is put in place. The two main reasons for monitoring of the Travel Plan are:

- To provide feedback so the Travel Plan can be refined; and,
- To measure the level of success in meeting identified targets using key performance indicators.

7.2 A framework for the monitoring and review strategy is outlined in this section.

Monitoring Strategy

7.3 The Travel Plan will be a living document, allowing for continuous development and refinement which will ensure it remains relevant.

7.4 The monitoring programme will begin with the baseline survey, to be undertaken within 3 months of meaningful occupation of the proposed residential development. The baseline survey will be marketed by the TPCs to encourage a high response rate.

7.5 Further surveys will be carried out annually up to and including Year 5, to monitor progress towards the interim and final targets.

7.6 To judge whether the implementation or proportion of certain measures needs to be modified monitoring of the following will also be undertaken:

- The level of usage of bus passes;
- Levels of parking;
- Comments received from residents relating to the operation and implications of the Travel Plan.

Reporting

7.7 An Annual Travel Plan Review will be undertaken by the TPC every year for a period of 5 years from the commencement of the Travel Plan. This review will assess the progress of the Travel Plan. This will outline the results of the monitoring in the preceding period, measures that have been implemented and any suggested changes to targets and measures as a result of the survey data.

7.8 The monitoring report will include the following aspects:

- Site name and address;
- A summary of the Travel Plan;
- How and when monitoring information was gathered;
- Whether travel patterns are meeting objectives and targets; and
- Proposals to further develop the Travel Plan and make revisions to measures and targets if targets are not being met.

APPENDIX G

Accidents reported to the police, and subsequently recorded on Stats19 returns by year and location:

2011	2012	2013	2014	2015	Total
7	11	8	7	7	40

Year	AccidentReference	Severity	Easting	Northing
2011	0208574	Slight	315,710	168,680
2011	0208805	Slight	314,360	169,120
2011	0209901	Slight	314,480	169,160
2011	0210539	Slight	316,320	168,750
2011	0213652	Slight	314,450	169,190
2011	0213823	Slight	315,450	168,190
2011	0213910	Slight	315,050	168,280
2012	0214371	Slight	316,410	167,940
2012	0214641	Slight	314,510	169,150
2012	0214825	Slight	314,610	168,710
2012	0215510	Slight	314,490	169,160
2012	1200105	Slight	314,900	168,290
2012	1200703	Slight	314,490	169,170
2012	1200898	Slight	314,900	168,230
2012	1200985	Slight	314,580	169,180
2012	1201001	Slight	314,300	169,030
2012	1201099	Slight	314,550	169,010
2012	1300011	Slight	314,480	169,190
2013	1300615	Slight	315,960	167,930
2013	1300910	Slight	316,410	167,940
2013	1300923	Slight	314,690	169,240
2013	1300992	Slight	314,480	169,140
2013	1301203	Slight	315,530	168,150
2013	1302044	Serious	314,500	169,150
2013	1302280	Slight	314,350	169,110
2013	1302355	Slight	314,390	169,300
2014	1400372	Slight	314,508	169,149
2014	1400499	Slight	315,459	168,196
2014	1400760	Serious	316,357	168,807
2014	1401253	Slight	315,174	168,267
2014	1401432	Slight	314,511	169,152
2014	1401693	Slight	314,901	168,277
2014	1401797	Serious	314,867	169,309
2015	1500255	Slight	316,362	168,818
2015	1500415	Serious	315,829	167,997
2015	1500578	Slight	315,590	168,124
2015	1500837	Serious	316,416	167,948
2015	1501312	Slight	315,542	168,146
2015	1501388	Slight	314,513	169,154
2015	1501622	Slight	314,655	168,562