



Hafan y Môr, Pwllheli

Transport Statement

December 2019



Hafan y Môr, Pwllheli Transport Statement

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Produced by:



For:



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1. Introduction

- 1.1 Integrated Transport Planning Limited has been commissioned by Lichfields, on behalf of the client – Bourne Leisure Ltd, to prepare a Transport Statement to assess the transport impacts of the proposed development at Hafan y Môr Holiday Park, Pwllheli, Wales.
- 1.2 Hafan y Môr Holiday Park is situated on the Llŷn Peninsula, approximately 6km east of Pwllheli. The park currently comprises 1,365 static holiday units (consisting of static caravans and apartments) and touring pitches, as well as ancillary entertainment, leisure and maintenance buildings.
- 1.3 The development proposals involve extending and improving the facilities at the park, as well as ensuring that it has appropriate long-term coastal erosion protection.
- 1.4 In terms of impact upon traffic generation the Transport Statement compares the additional traffic generated by the proposed development against the existing traffic generated by the site. The current application is for 165 new static caravan pitches. Considering the proposed demolition of 56 chalet apartments, the net impact of the proposed development is 109 additional units.

Report Structure

- 1.5 The proposed development has been considered in context of *Planning Policy Wales* (10th ed., 2018), *Anglesey and Gwynedd Joint Local Development Plan* (2011 – 2026) and accords with the *Transport Assessment Guidance* contained within the *Planning Policy Wales Technical Advice Note 18* (2007).
- 1.6 A review of the existing and proposed operation of the site has been undertaken as well as the access and parking requirements, to demonstrate the suitability of the site to accommodate the development proposals.
- 1.7 The structure of this Transport Statement is as follows:
 - Section 2 introduces relevant national and local transport planning policy;
 - Section 3 describes the existing site conditions;
 - Section 4 outlines the proposed development;
 - Section 5 calculates the likely traffic impact;
 - Section 6 provides a summary of key findings, and conclusion.

2. Policy

Planning Policy Wales

2.1 *Planning Policy Wales – Edition 10 (2018) states:*

'The Welsh Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by: encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel.'

- 2.2 Ensuring that development is accessible by means other than the private car will help to meet the Welsh Government's objectives for social inclusion. Encouraging cycling and walking will contribute to the aim of improving the levels of health in North Wales.
- 2.3 Despite the site's rural setting, it has a relatively high level of infrastructure in place for cycling walking and public transport. It is also unlikely to generate perceivable levels of movement on the wider transport network, with an increase in trip generation of just 8% above the current situation.

Anglesey and Gwynedd Joint Local Development Plan

- 2.4 The Joint Local Development Plan, adopted in July 2017, includes a number of strategic and detailed policies relating to transport and accessibility.
- 2.5 Part of Policy TRA 1 sets out the requirement for Transport Assessments:

'3. Transport Assessments

Proposals for large-scale development or developments in sensitive areas that substantially increase the number of journeys made by private vehicles will be refused unless they include measures as part of a Transport Assessment and/or a Travel Plan. Where the Transport Assessment reveals the need for a Transport Implementation Strategy this will need to be secured through a planning obligation.'

- 2.6 Policy TRA 2 requires the consideration of the Councils' parking standards:

'Parking provision for all modes of transport should be in accordance with the Councils' Parking Standards.'...

- 2.7 Policy TRA 4 reinforces the hierarchy of provision that is set out by Planning Policy Wales:

'Where appropriate, proposals should be planned and designed in a manner that promotes the most sustainable modes of transport having regard to a hierarchy of users:

- 1. Pedestrians, including people with prams and/or young children;*
- 2. Disabled people with mobility impairments and particular access needs;*
- 3. Cyclists;*
- 4. Powered two-wheelers;*
- 5. Public transport;*
- 6. Vehicular access and traffic management within the site and its vicinity;*
- 7. Car parking and servicing;*
- 8. Coach parking; and*
- 9. Horse-riders.*

Proposals that would cause unacceptable harm to the safe and efficient operation of the highway, public transport and other movement networks including pedestrian and cycle routes, public rights of way and bridle routes, will be refused. The degree of unacceptable harm will be determined by the local authority on a case by case basis.'

Transport Assessment Guidance

- 2.8 The Transport Assessment guidance contained within the *Planning Policy Wales Technical Advice Note 18* (2007):

- 2.9 *'A Transport assessment (TA) should clearly set out what the impact of a proposed development, or redevelopment, are likely to be so that they are easily understood. It should be based on the person and freight trips generated by the development and include analysis of potential effects on existing movement patterns.'*

- 2.10 The document goes on to say that the TA should have clear aims which are to:

- 'understand the transport impacts of the development;*
- clearly communicate the impacts to assist the decision making process;*
- demonstrate the development is sited in a location that will produce a desired and predicted output (for example in terms of target modal split);*

- *mitigate negative transport impacts through the design process and secured through planning conditions or obligations;*
- *maximise the accessibility of the development by non-car modes;*
- *contribute to relevant development plan and RTP objectives relating to accessibility of services and modal share.'*

2.11 With specific reference to developments in the tourism industry, the policy denotes:

'Tourism proposals, particularly in rural areas, should demonstrate access by a choice of modes to avoid locking in the requirement for travel by car. Even small-scale tourist facilities that rely on car-based travel can offer public transport information or arrange pick-ups from rail stations or coach/bus stops.'

2.12 As the holiday park can demonstrate good accessibility by modes of transport other than private car, it is considered to satisfy this requirement.

3. Existing Conditions

- 3.1 This chapter of the Transport Statement describes the existing conditions of Hafan y Môr Holiday Park; including its location, site composition, current site operations, details of the local highway network and sustainable transport infrastructure, as well as analysis of historical collision data in the vicinity of the park.

Site Location

- 3.2 Hafan y Môr Holiday Park, operated by Bourne Leisure Ltd as a Haven Holiday Park, is located on the Llŷn Peninsula of the Gwynedd coastline, alongside the A497 and Cambrian Railway Line.
- 3.3 The holiday park lies midway between the two settlements of Pwllheli and Criccieth, which are situated approximately 6km either side of the park, as shown in Figure 3-1.

Figure 3-1: Site Location



Source: Open Street Map contributors

Current Operation

Visitor Accommodation

- 3.4 In total, there are currently 1,365 visitor accommodation units at Hafan y Môr Holiday Park, configured in numerous 'villages' throughout the park.

Opening periods

- 3.5 Hafan y Môr Holiday Park is open from 1st March to 30th November for owners of static holiday units, closing for a 3-month window for maintenance and to comply with licensing regulations. Owners of holiday homes have access to the site 24-hours a day, 7-days a week and are free to come and go as they please during the open period.
- 3.6 Holiday lets and touring pitches are available from 22nd March to 4th November, and typically comprise of 3 or 4-day breaks (Mon-Fri, Fri-Mon), or one-week holidays.
- 3.7 Peak season is experienced between June and September with additional notable busy periods occurring at Easter Half term (29th March – 12th April), and May bank holiday weekends.
- 3.8 Changeover days for holiday lets are Mondays, Fridays and Saturdays. Tourers can arrive and depart on any day of the week.
- 3.9 Check-out time for tourers and holiday lets is 10:00. Check in times for holidays lets are staggered, hourly, between 13:00 and 16:00. Tourers can check in any time from 10:00.

Facilities

- 3.10 Hafan y Môr Holiday Park provides a significant number of onsite facilities and attractions, including:
- Indoor swimming pool and water park
 - Nature exploration and adventure trails
 - Amusement arcade
 - Golf course
 - Boating lake
 - Climbing wall
 - Restaurants, bar, and convenience store
 - Indoor and outdoor sport and play facilities

- 3.11 These various facilities result in the site being promoted as a self-contained holiday park with a broad selection of recreational activities, which gives guests the choice as to whether to stay at the site or travel to nearby attractions. This flexibility reduces the likelihood that leisure trips will coincide with peak periods on the local highway network.
- 3.12 The facilities provided onsite are primarily for use by the holiday park guests and owners; Hafan y Môr Holiday Park does, however already allow day visitors. This will not change as a result of this application therefore hasn't been considered further as part of this assessment.

Sustainable Transport

Walking and Cycling

- 3.13 To help create a safe environment for pedestrians and cyclists, the speed limit within Hafan y Môr Holiday Park is 10mph. Traffic calming measures, road markings and signage are used to encourage drivers to drive slowly and carefully within the site, as shown in Figure 3-2. Within the complex, pedestrian routes and crossings are marked out, coupled with the low vehicle speed limits and traffic calming, encourages an environment that favours walking and cycling.

Figure 3-2: Traffic calming measures and signage within the site



Source: Google Satellite / Street view

- 3.14 The park is located directly on the coast, with access available on foot to nearby beaches and coastal paths – a key attractor for visitors looking to stay at the park.

- 3.15 Holiday guests and staff, who are leaving the site on foot, have segregated access via a footway alongside the bus stop at the site access, which continues to the A497, as shown in Figure 3-6. The footway leads to a pedestrian crossing point immediately adjacent to the site access, allowing pedestrians to access the shared use cycleway footway on the opposing side of the A497 (See Figure 3-3).
- 3.16 The pedestrian crossing at this location has tactile paving and is lit. The shared use cycleway footway provides connections to Abererch and Pwllheli via westbound travel and connects to Llanystumdwy and Criccieth to the east.

Figure 3-3: Crossing points on Links Road



Source: Google Satellite / Street view

- 3.17 The shared use pedestrian cycleway runs alongside the A497 adjacent to Hafan y Môr Holiday Park offering an off-road cycle option for holidaymakers wishing to undertake a leisure ride whilst staying at the park. The shared use pedestrian cycleway connects to Regional Cycle Network (NCN) routes 40 and 41 either side of the park.
- 3.18 NCN route 40 lies to the east of the holiday park and forms a loop around Llangybi and connects to National Cycle Route (NCN) 8 at Bryncir. National cycle Route 8 runs north to south, from Bangor in the north to Porthmadog in the south. Regional cycle route 41 to the west, loops around Nefyn, Llannor and Yr Efailnewydd.
- 3.19 Figure 3-4 shows the National Cycle Network routes in the vicinity of the application site.

Figure 3-4: Nearby National Cycle Network



Source: Sustrans; contains OS Data © Crown copyright and database rights 2019

Bus

- 3.20 The closest bus stop to Hafan y Môr is located at the main access to the park, less than 100m walk from Hafan y Môr Holiday Park reception. This bus stop is served by the number 3 bus, which provides access westbound to Pwllheli and eastbound to Blaenau Ffestiniog via Criccieth and Porthmadog, reachable via footway from the park. It includes a shelter and real-time information display.
- 3.21 There are additional bus stops in the vicinity of the site; located on both sides of the A497, which can be reached via footway connections and crossings outside of the development site. These bus stops are served additionally by the number 3B service, which runs on an increased frequency to that of the number 3. Both bus stops have a shelter and timetable information. These bus stops are served by the number 3 and 3B services. Further details of these services are provided in Table 3-1.

Table 3-1: Relevant local bus services

Bus Service	Operator	Route	Monday – Saturday		
			Frequency	First bus	Last bus
3	Arriva	Pwllheli to Blaenau Ffestiniog	Hourly	08:07	20:00
3B		via Criccieth, Porthmadog, Portmeirion (3B), Penrhyndeudraeth and Llan Ffestiniog	Every 20 minutes	05:30	21:47

Source: Traveline

- 3.22 These services can be used by staff when commuting, by Hafan y Môr Holiday Park guests for day trips, and to connect the wider coach/rail network. Information on these local bus services are provided at the site reception.

Coach

- 3.23 National Express coach number 545 serves the site, stopping at the bus stop within the holiday park access. The 545 service runs from Newcastle to Pwllheli, via Manchester, Liverpool, Prestatyn, Colwyn Bay, Llandudno and Bangor. It operates once per day in each direction.
- 3.24 Information on local buses and details of the National Express' pick up and drop off points are provided at the holiday park reception. The nearest bus station is in Pwllheli, approximately 6km from Hafan y Môr.

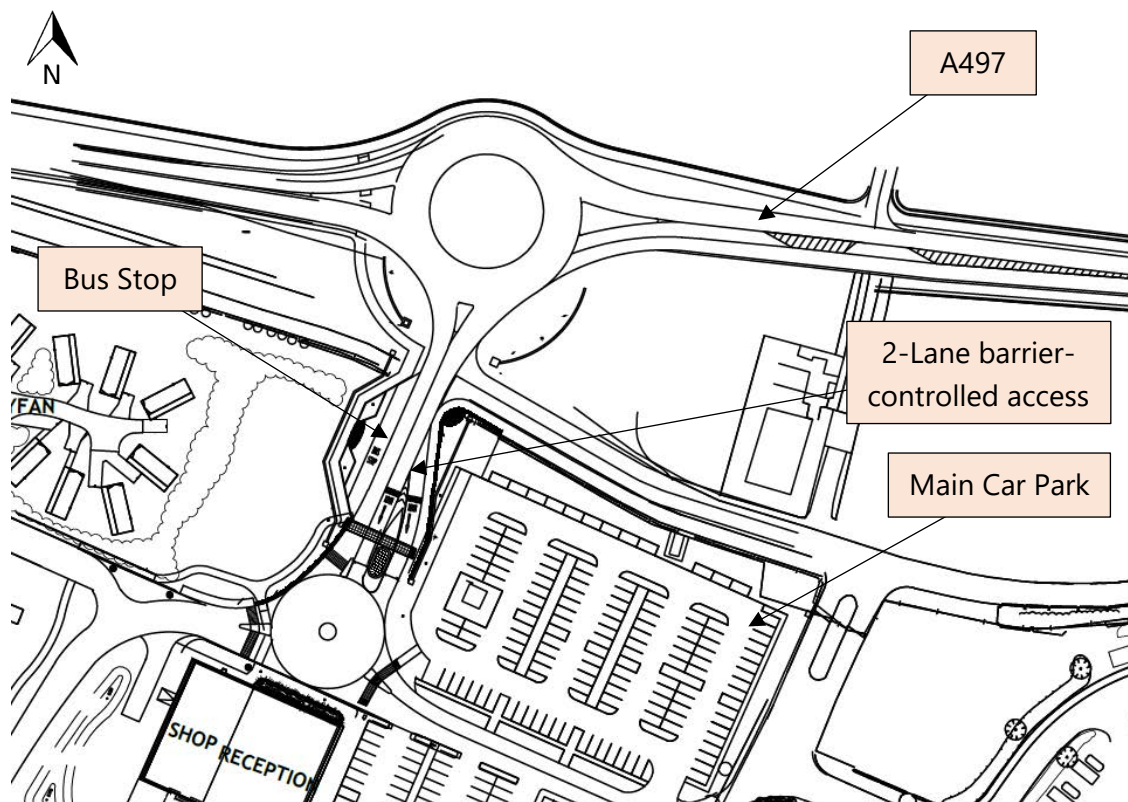
Rail

- 3.25 The nearest railway station to Hafan y Môr Holiday park is Penychain, a single-track station located 600m from the site entrance. The station offers services between Pwllheli and Machynlleth every two hours, operated by Transport for Wales, with a number of these extending as far as Shrewsbury and Birmingham International.
- 3.26 A limited service operates on Sundays with one service per day in winter and three services per day in summer.

Vehicular Access and Parking

- 3.27 Hafan y Môr Holiday Park is accessed by a single vehicular access, directly from the A497 via a dedicated junction and short approach road. The layout of the access junction comprises a priority roundabout junction, which includes a bus stop and dedicated access lanes on the junction arm which enters the site. Figure 3-5 shows the layout of the site's vehicular access.

Figure 3-5: Existing site access



Source: 1087.39.1 REV Q Masterplan

- 3.28 Figure 3-6 shows the main access arrangement on the ground.

Figure 3-6: Main vehicular entrance



Source: Google Satellite / Street view

- 3.29 The existing internal site layout comprises traffic calmed roads, which operate to a 10mph standard to help create a safe environment and relaxed holiday atmosphere for pedestrians and cyclists.
- 3.30 The site also has a large main car park (Figure 3-7), providing in excess of 100 car parking spaces including provision for disabled bays, which provides space for visitors to park when first arriving or departing from the site.

Figure 3-7: Main car park



Source: Google Satellite / Street view

- 3.31 Most of the pitches are allocated one parking space adjacent to the pitch, with some of the newer, larger pitches having two spaces. There are also multiple communal car parks located around the application site; one for each of the 'villages' within the park and one for each of the main entertainment centres / shopping facilities within the site.

- 3.32 Any cars brought onto site which cannot be accommodated on plot are parked in the nearest communal car park or in the main visitor car park.

Local Highway Network

- 3.33 The local highway network is shown Figure 3-8. The A497 runs adjacent to Hafan y Môr Holiday Park. At this location, the A497 is a single carriageway road, subject to the national speed limit of 60mph. It is fully lit in the vicinity of the holiday park and a wide shared footway and cycleway is provided alongside the carriageway.

Figure 3-8: A497 alongside Hafan y Môr Holiday Park



Source: Google Satellite / Street view

- 3.34 Westbound, the A497 provides access to Pwllheli, 4 miles from the application site and the junction with the A499 for northbound connections. To the east, the A497 provides a link to Criccieth, 4 miles from the park, and continues to Porthmadog, approximately 10 miles further along the coastline.
- 3.35 Brown tourist signs are in place at appropriate locations on the A497 to direct visitors to the Hafan y Môr Holiday Park entrance (as shown in Figure 3-9).

Figure 3-9: Brown tourism signs at the entrance of Hafan y Môr Holiday Park

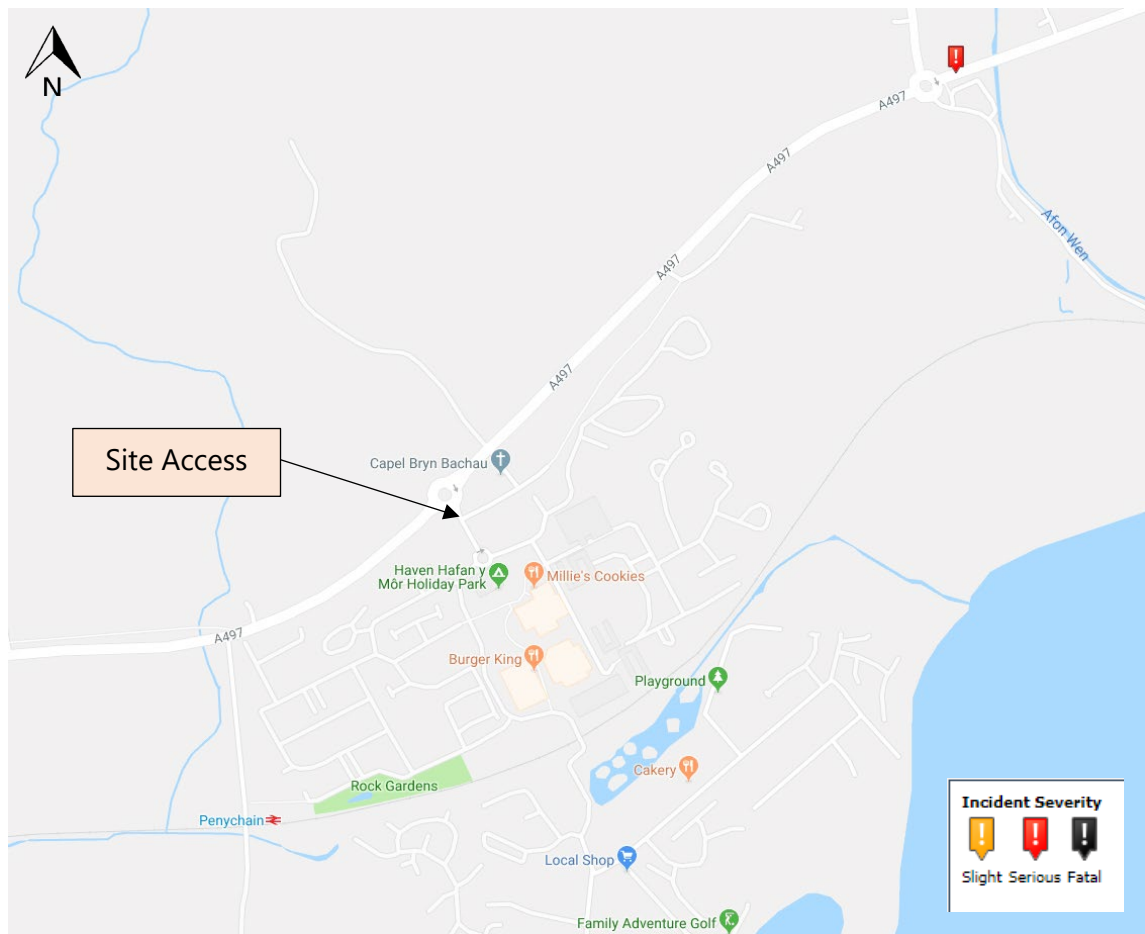


Source: Google Satellite / Street view

Collision Analysis

- 3.36 ITP has investigated Personal Injury Collision (PIC) data obtained from the 'Crash Map' website, for the section of the A497 which runs alongside Hafan y Môr Holiday Park (between the access for Penchain Railway Station in the West and the A497 / unnamed road roundabout to the East) either side of the access junction for Hafan y Môr Holiday Park. Collision records have been interrogated for the most-recent available three-year period – in this case 2016–18, inclusively.
- 3.37 Within a three-year period, a single collision was recorded some distance from the holiday park, which was classified as 'serious' but did not involve any fatalities. A plot showing the location of the collision is provided in Figure 3-10.

Figure 3-10: Collision locations



Source: www.crashmap.co.uk

- 3.38 There have not been any collisions on the local highway network within the vicinity of Hafan y Môr Holiday Park vehicular access during the period reviewed. It is noted however, that the A497 roundabout junction to the east of the site appears to have experienced a single collision on its eastern arm during the period reviewed, in 2017, although there is nothing to suggest the proposed development would exacerbate any existing issues.
- 3.39 The recorded incident has been classified as 'serious' in severity, which involved a car and a heavy goods vehicle (HGV); the collision occurred on approach to the roundabout from the eastern side. The recorded collision did not involve non-motorised users or motorcycles.
- 3.40 Reviewing the collision summary data and locations, it is considered that there is no obvious pattern that would suggest there is an existing problem within the search area, nor would the existing situation be exacerbated by the proposed development.

4. Proposed Development

- 4.1 The proposed development involves the modernisation and expansion of Hafan y Môr Holiday Park, including a net increase of 109 pitches, as well as some ancillary development and improvement to long-term coastal erosion protection. Individual elements of this proposal include:
- Addition of 165 static caravan pitches;
 - Demolition of 56 chalets;
 - A new car park;
 - A new beach café and terrace,
 - Play area;
 - Improvement of a 120m length of existing coastal revetment; and
 - Introduction of a further 210m section of coastal protection (comprising rock armour and beach recharge).
- 4.2 The proposed expansion will take place on multiple parcels of land throughout the application site, as shown on the masterplan in Appendix A. The masterplan denotes the siting and boundaries of each of the land parcels which are to accommodate the proposed expansions, providing an overview of the proposed new site layout.
- 4.3 With the proposed development implemented, there will be a combined total of 1,479 static caravans, apartments and touring pitches on the site. As part of the development process, 56 chalet apartments will be demolished to accommodate the proposals.

Access

- 4.4 No changes are proposed to the Hafan y Môr Holiday Park site access as part of this application. The internal road layout within the development (privately maintained roads), will be extended to provide access to the proposed development, and the 10mph speed limit, along with traffic management, will be continued into the new sections of the holiday park.

Car Parking

- 4.5 Each of the additional static holiday units will be provided with parking for at least one car, at some pitches that may be increased to two car spaces, depending on the layout. Visitor parking is provided in proximity to the main entrance and an additional car park is to come forward as an element of this proposal.
- 4.6 Planning Policy Wales requires local authorities to implement maximum parking standards, therefore, in the absence of specific parking standards, provision equal to or slightly below the existing ratio is likely to be found acceptable.

Servicing

- 4.7 The internal roads currently accommodate a standard sized refuse vehicle, as well as vehicles towing caravans. Hafan y Môr Holiday Park management have confirmed that the existing refuse collection arrangement at the site will be continued for the proposed extension, with the proposed internal roads constructed to same design standard.
- 4.8 The development would take place during the winter period to avoid any impact of construction on Hafan y Môr Holiday Park operations (i.e. avoiding the peak summer season). Static caravans would be transported by low loader to the application site in the same way that replacement static caravans are currently delivered. There are no operational issues associated with accessing Hafan y Môr Holiday Park for construction purposes via the existing junction.

5. Traffic Impact

Trip Rates and Traffic Generation

- 5.1 Traffic surveys have been undertaken at Hafan y Môr Holiday Park in order to obtain site-specific data, which has subsequently been used to derive trip rates for Hafan y Môr Holiday Park.
- 5.2 A 12-hour Classified Turning Count (CTC) was undertaken at the access road junction for Hafan y Môr Holiday Park on Friday 18th August 2017. This date fell within the school summer holidays, which is the peak period for the holiday park and therefore provides a robust account of the vehicular trip data.
- 5.3 The CTC was conducted between the hours of 07:00 and 19:00, providing 12 hours of data. This data is used to establish the access and egress turning movements of vehicles using site and which direction the trips originate from (Survey Data is included in Appendix B).
- 5.4 The CTC was undertaken on a Friday, which is the peak day for trip generation by the site, due to it being the main changeover day for the holiday lets. The CTC recorded noticeable peaks in the number of two-way trips during the hours of 10:00–11:00 and 15:00–16:00, which accords with the check-out and check-in times for holiday lets and touring pitches.
- 5.5 For the purpose of trip generation and junction assessment, the AM peak period for Hafan y Môr Holiday Park is identified as 1000 - 1100 and the PM peak period is identified as 1500 - 1600. These peak periods, derived from the traffic survey, present the busiest times for Hafan y Môr Holiday Park; when the highest number of two-way trips were recorded at the site access. By using data recorded for the identified peak periods, it produces a sound and accurate trip rate, which will therefore provide for a robust assessment of the additional trips generated from the proposed net increase of 108 additional pitches.
- 5.6 Table 5-1 presents the peak hour trip generation by the existing site as recorded by the turning count at the site access.

Table 5-1: Existing vehicular trip generation (1,365 visitor accommodation units)

	AM peak (10:00-11:00)	PM peak (15:00-16:00)
Arrivals	67	217
Departures	263	93
Two-way	330	310

- 5.7 This trip generation data has been used to calculate a site-wide trip rate per pitch for Hafan y Môr Holiday Park, as presented in Table 5-2.

Table 5-2: Vehicular trip rates (per visitor accommodation units)

	AM peak (10:00-11:00)	PM peak (15:00-16:00)
Arrivals	0.049	0.159
Departures	0.193	0.068
Two-way	0.242	0.227

- 5.8 Based on these peak hour trip rates, trip generation by the proposed development (109 additional pitches) has been forecast and is presented in Table 5-3.

Table 5-3: Trip generation by 109 additional accommodation units

	AM peak (10:00-11:00)	PM peak (15:00-16:00)
Arrivals	5	17
Departures	21	7
Two-way	26	25

Highways Impact and Junction Assessment

- 5.9 On a peak changeover day (Friday), it is forecast that the proposed development will generate up to 26 additional vehicular trips in the AM development peak hour and 25 additional vehicular trips in the PM development peak hour. This assumes full occupancy of the holiday park and therefore a lower impact will be seen away from peak holiday periods.
- 5.10 An ARCADY capacity assessment has been carried out at the site access junction on the A497, to allow the impact of the proposed development to be quantified. The capacity assessment has been derived by adding the additional trips that will be generated by the proposal onto the existing trips for the identified peak periods (turning movements shown in Appendix C).
- 5.11 The results of the capacity assessment are shown in Table 5-4 with the two assessed scenarios (with and without development). The full model output report is included in Appendix D.

Table 5-4: Existing Site Access Junction Assessment Summary

Arm	AM Peak (10:00-11:00)		PM Peak (15:00-16:00)	
	Queue (PCU)	RFC	Queue (PCU)	RFC
Existing Scenario				
A497 (E)	<1	0.10	<1	0.21
Hafan y Môr Park Access	<1	0.22	<1	0.08
A497 (W)	<1	0.17	<1	0.19
With Development Scenario				
A497 (E)	<1	0.10	<1	0.21
Hafan y Môr Park Access	<1	0.24	<1	0.09
A497 (W)	<1	0.17	<1	0.20

- 5.12 As demonstrated through the capacity assessment, the site access junction currently operates well within capacity and has enough spare capacity to accommodate the negligible increase in trip generation as a result of the proposed development.

- 5.13 The traffic surveys and site observations from Hafan y Môr Holiday Park confirm the results of the junction assessment, in that no capacity issues are evident at the site access.
- 5.14 Given that all junction arms fall well within the recognised industry standard capacity threshold of 0.85 RFC it is therefore considered that any impact will be imperceptible, particularly as trips will tend to occur outside of the recognised highway peak hours.
- 5.15 The robust criteria that was used to formulate the impact assessment must also be noted; the assessment is comprised of the peak hour trip generation, on a peak changeover day, in the peak summer season.
- 5.16 Additionally, the local access route does not pass any neighbouring residential properties and therefore there are not considered to be any local receptors sensitive to minor increases in trip generation.

6. Summary and Conclusions

- 6.1 Integrated Transport Planning Limited has been appointed by Bourne Leisure Ltd, to prepare this Transport Statement to be submitted in association with a planning application for the proposed site expansion and modernisation at Hafan y Môr Holiday Park, East Pwllheli, Wales.
- 6.2 Hafan y Môr Holiday Park is situated on the Llŷn Peninsula, approximately 6km east of Pwllheli. The park currently has 1,365 static holiday units (consisting of static caravans, apartments and touring caravans).
- 6.3 The proposed development will seek to expand the Hafan y Môr Holiday Park to create 165 additional static holiday units on the site. In addition, 56 of the existing apartments will be demolished as part of the development, producing a net increase of 109 units.
- 6.4 Given the site's remote location, it is relatively well connected to sustainable modes of transport. The closest bus stop is less than 100m walk from the holiday park reception, offering services to the nearby towns and to connections further afield. The nearest rail station is Penchain, which is located adjacent to the site approximately a 7-minute walk from the site entrance (600m), offering services between Pwllheli and Birmingham International. The site is located within proximity to regional cycle routes 40 and 41, as well as National Cycle Route 8.
- 6.5 Traffic count data was used to derive bespoke daily trip-rates for pitches at Hafan y Môr Holiday Park, which were then used to forecast trip generation by the proposed extension. On a peak changeover day, it is forecasted that the proposed development that will generate up to 26 additional vehicular trips in the AM peak hour for the development, and 25 additional vehicular trips in the PM development peak. During other periods the impact will be significantly lower.
- 6.6 As demonstrated through the capacity assessments, the site access junction has sufficient capacity to accommodate this increased trip generation. The traffic surveys, site observations and anecdotal evidence from Hafan y Môr Holiday Park confirm that no capacity issues are evident at the site access.
- 6.7 The forecasted trip generation equates to less than 1 additional trip per minute on the A497. It considered that this will have a negligible impact on the operation of the A497. It must also be noted that this impact assessment is robust, as it is based on;

development peak hour trip generation, on a peak changeover day, in the peak summer season.

- 6.8 Collision data obtained from the Crashmap website (available at: www.crashmap.co.uk) indicates that within the last 3 years there have not been any accidents on the section of the A497 which runs alongside Hafan y Môr Holiday Park.
- 6.9 Given the single collision within the defined search area during the 3-year period analysed, and the proximity of this collision to the development, it is concluded that there are no safety issues on the local highway network that may be exacerbated as a result of the proposed development.
- 6.10 The scale of the proposed development, off-peak trip generation, its location and lack of neighbouring receptors, on-site and nearby amenities accessible on foot, and connectivity via rail and bus combine to result in a development that will not perceptibly alter the number of vehicles that currently enter the local area. Existing infrastructure is considered to be sufficient to handle an increase in demand.
- 6.11 It can be concluded that the proposed development will not have an adverse impact on the local highway network; any impact will be imperceptible, particularly as trips will tend to occur outside of traditional peak hours. Therefore, it is considered that there are no transport-related reasons why the development as proposed should not be recommended for approval by the local highway authority.

Appendix A

Proposed Site Masterplan

KEY

PARCEL B - 27 STATICS
PROPOSED DEVELOPMENT OF LAKESIDE ACCOMMODATION -
AMENDED ROAD AROUND FISHING LAKE.

PARCEL C - 8 STATICS
PROPOSED DEVELOPMENT OF 8 NO. ACCOMMODATION

PARCEL E - 3 STATICS AND 2 ADDITIONAL TEAM
ACCOMMODATION UNITS PLUS REWORKED ROAD AND
PARKING

PARCEL F - 26 BEACHSIDE STATICS ON AREA CONSENTED
IN 2011
PLUS DEMOLITION OF OLD "CHALET" LINES
56 APARTMENTS/272 GUEST BEDS
RETAIN: 134 APARTMENTS/831 GUEST BEDS
50 STAFF UNITS

PARCEL G - 84 STATICS AND FEATURE LAKES ON AREA
PARTIALLY CONSENTED IN 2011 - APPROX. 54 NO. OUTSIDE
CONSENTED DEVELOPMENT BOUNDARY

PARCEL H - BEACH CAFE FACILITY , PLAY AREA AND CAR
PARK

PARCEL I - 18 STATICS ON AREA PARTIALLY CONSENTED
IN 2011
APPROX. 4 NO. OUTSIDE CONSENTED DEVELOPMENT
BOUNDARY

PARCEL J - PROPOSED COASTAL DEFENCES

----- AREAS ALREADY CONSENTED

KEY

- PROPOSED STATIC BASE
- PROPOSED FOOTPATH TO STATIC BASE
- PROPOSED MAIN FOOTPATH
- PROPOSED ROAD AND PARKING BAY
- PROPOSED TREES
- PROPOSED LAKE

U	RED LINE TO PARCEL G AMENDED AND	10/12/19	JG
IX	BASE ADDED TO PARCEL I		
T	NOTE ADDED & MINOR ADJUSTMENTS	24/10/19	JG
S	PARCEL H AND F AMENDED	17/10/19	JG
R	PARCELS I AND H AMENDED	09/09/19	JG
Q	GENERAL AMENDMENTS	05/08/19	MY
P	BEACH CAFE AREA AMENDED	30/07/19	JG
O	KEY AMENDED, NOTES ADDED	26/06/19	JG
N	DEV WEST OF LAKE AMENDED	20/06/19	JG
M	DEV EAST OF LAKE AMENDED NOW 15 NO	10/06/19	JG
L	EAST FIELD DEV AMENDED+1 BASE ADDED	20/05/19	JG
K	LAYOUTS AMENDED	20/05/19	JG
J	S BEACH PITCHES IN SW CORNER ADDED	13/05/19	JG
I	AREA G AMENDED	16/04/19	JG
H	LAYOUT ADJUSTED	12/09/18	JG
G	LAYOUT ADJUSTED	20/08/18	LD
F	NOTES/KEY AMENDED	24/07/18	JG
E	BEACHES/GROYNES/CAFE/PATH AMENDED	06/07/18	LD
D	NOTES/CARAVANS AMENDED	15/05/18	LD
C	PROPOSALS AMENDED	30/04/18	LD
B	PROPOSALS AMENDED	23/03/18	LD
A	GROYNES AND COASTAL AREA AMENDED	14/11/17	LD
REV	DESCRIPTION	DATE	INITIALS

Bratherton
PARK DESIGN CONSULTANTS
Waverton House • Bell Meadow Business Park
Pulford • Chester • CH4 9EP
T: 01244 853 000 • F: 01244 570 054
E: parkdesign@bratherton.co.uk W: www.bratherton.co.uk

HAFAN-Y-MŌR
HOLIDAY PARK

ILLUSTRATIVE MASTERPLAN

Appendix B

Traffic Survey Data

**INTEGRATED TRANSPORT
PLANNING
HAFAN Y MOR
TRAFFIC SURVEY**

**SURVEY REPORT
AUGUST 2017**

PROJECT NO.	7804
CHECKED	N. TOONE
DATE	30/08/2017
CONTACT	M. NORRIS
REVISION	

CONTENTS

Introduction

General Location Plan

Drawings 7804-01 & 02

Appendix A – Vehicle Categories

Appendix B – Classified Count Data

Appendix C – Queue Length Data

Introduction

Nationwide Data Collection (NDC) was instructed by Integrated Transport Planning to undertake classified turning counts and queue length surveys in Hafan Y Mor, Pwllheli. A general location plan is given in Diagram 1.

Classified Turning Counts

Classified turning counts were undertaken at the following locations:

Site 1 – A497 / Hafan Y Mor Holiday Park

Site 2 – A497 Afon Wen

The surveys were carried out on Friday 18th August 2017; survey hours were 07:00 to 19:00. All information was collected in fifteen-minute intervals and has been tabulated in Excel with hourly and period totals. Details of the observed movements are given in Drawing 7804-01 & 02.

Vehicles were classified into the following categories:

Cars and taxis (**CAR**), Light Goods Vehicles (**LGV**), Other Goods Vehicles type 1 (**OGV1**), Other Goods Vehicles type 2 (**OGV2**), Public Service Vehicles (**PSV**) and Motorcycles (**MCL**).

A detailed description of the vehicles included in each category is included in Appendix A.

The results of the classified counts are contained in Appendix B.

Queue Length Observations

Queue length observations were carried out on all approaches, by lane. Queue lengths were recorded at the 5-minute interval. Lane numbering is always outwards from the kerb in the direction of travel. All observations are in vehicle numbers rather than a linear measurement. Arm labelling and survey hours are consistent with the classified counts carried out at the junctions.

The results of the queue length observations are contained in Appendix C.

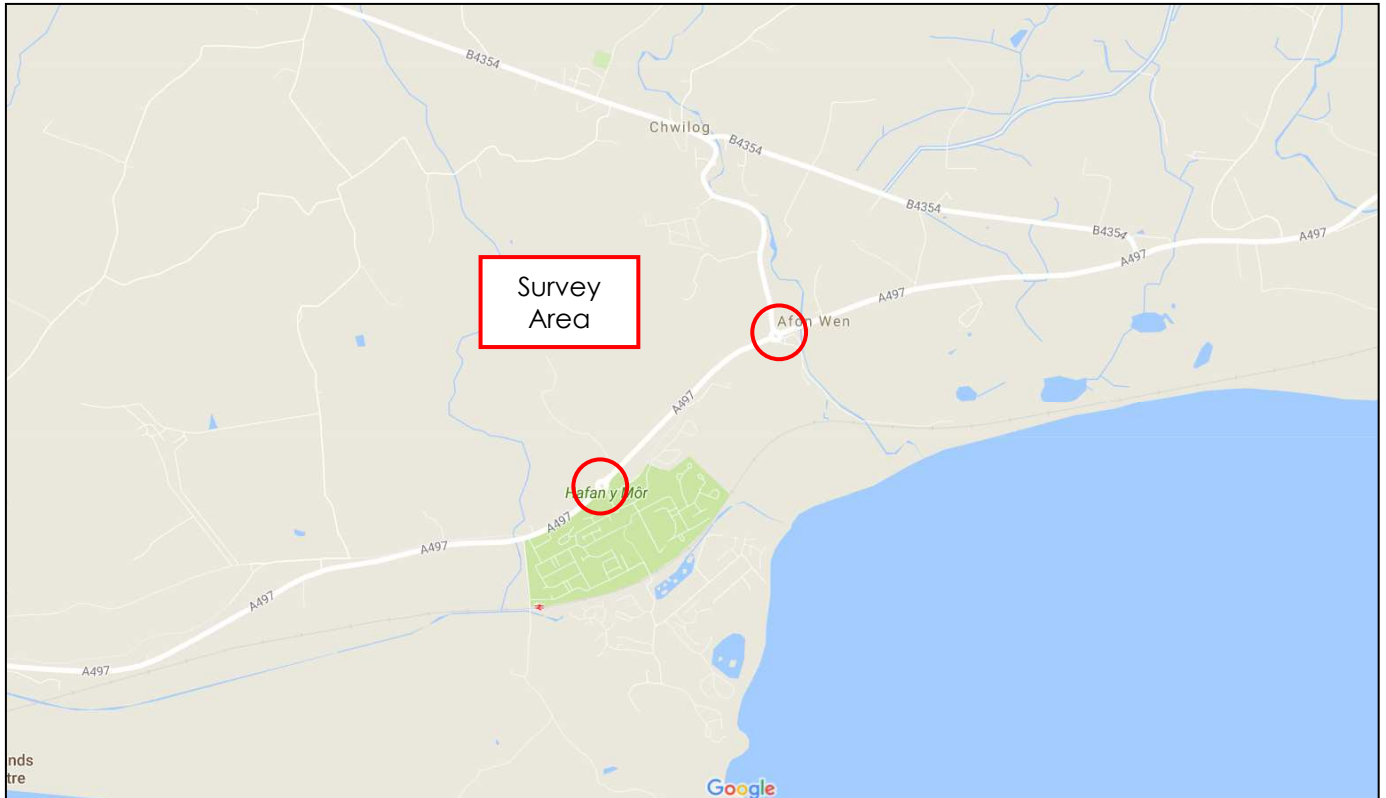
Site Notes

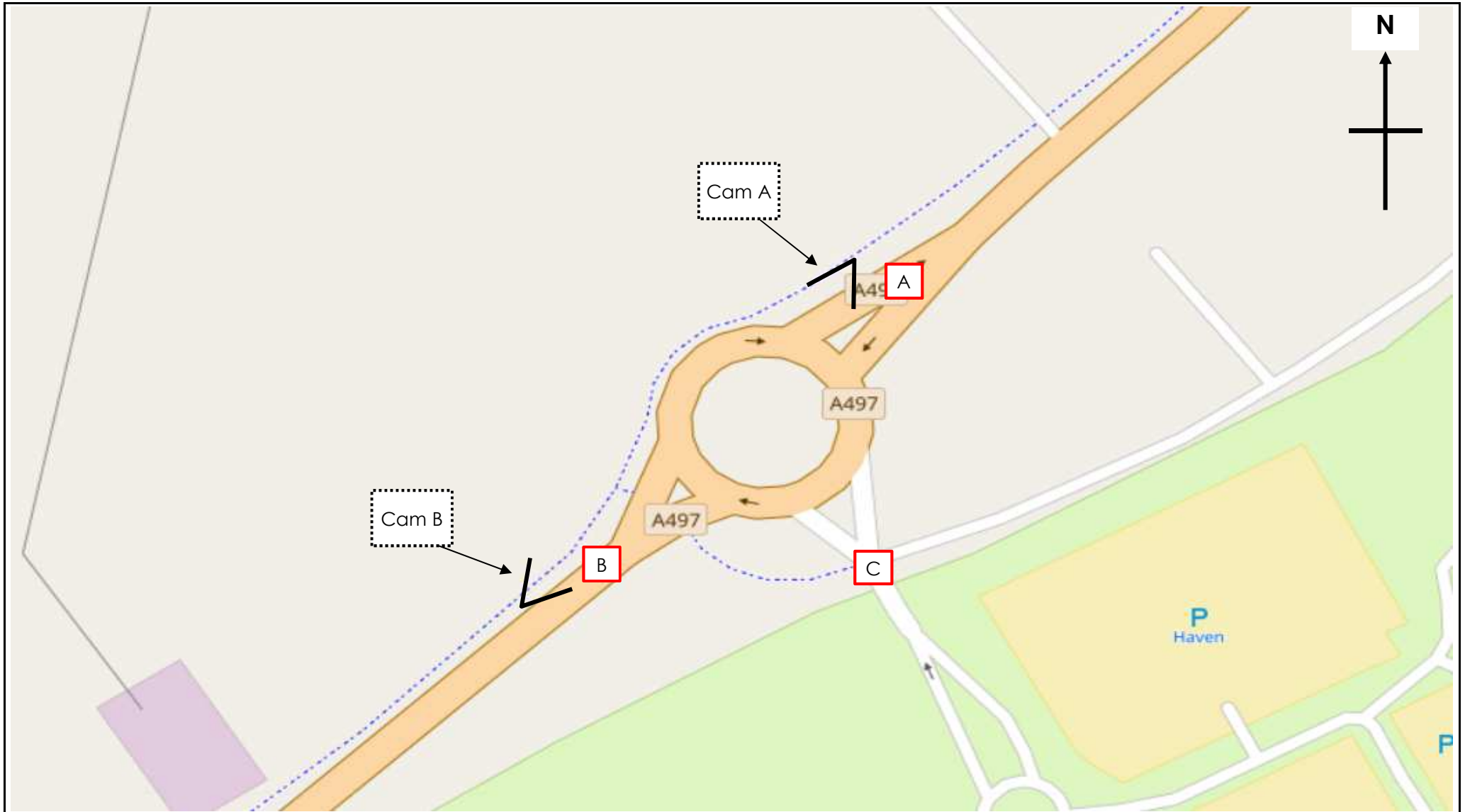
Any junction counts which are directly linked will include a “checks” tab in the Excel file; this shows the matching between sites for each 15-minute time period, and for each vehicle type. Where links are not 100% there should be a reason given such as “industrial estate between sites”.

Although the roads were wet at the beginning of the survey the weather was dry and fine throughout the morning, becoming overcast from 15:00. There were rain showers between approximately 16:30 and 18:00. There were no accidents or other incidents likely to affect the survey results.

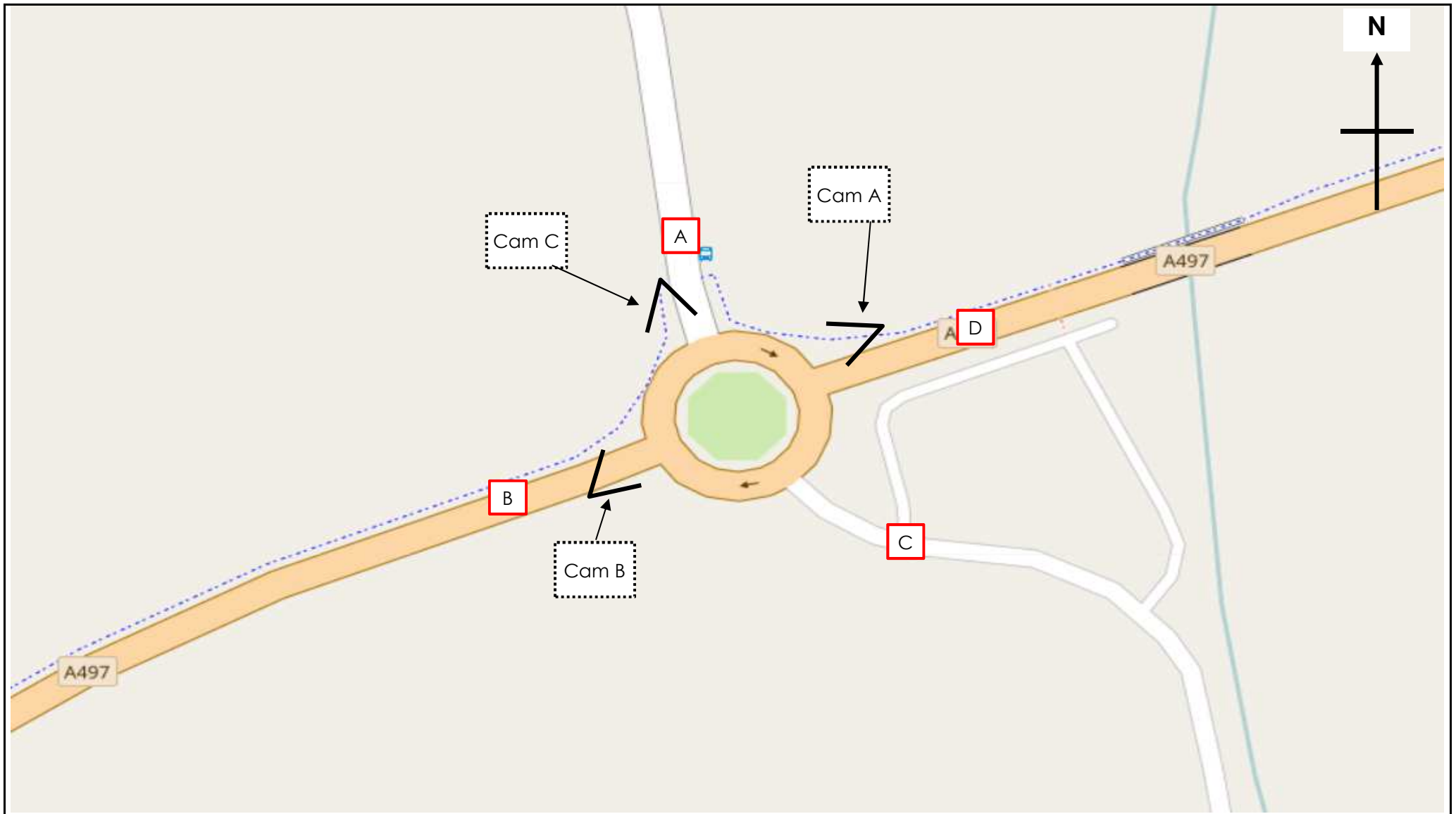
All data has been emailed to Dan Palmer at palmer@itpworld.net

Diagram 1 – General Location Plan





	Site / Location:	Site 1, A497 / Hafan Y Mor Holiday Park	Project No:	7804	Drawing No:	7804-01	Drawn By:	MN
	Survey Date:	Friday 18th August 2017	Project Name:	Hafan Y Mor				
	Survey Times:	07:00 to 19:00	Drawing Title:	Site Layout and Observed Movements				



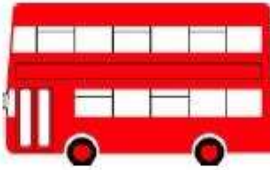
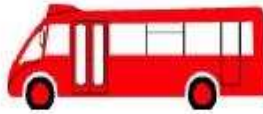
	Site / Location:	Site 2, A497 Afon Wen	Project No:	7804	Drawing No:	7804-02	Drawn By:	MN
	Survey Date:	Friday 18th August 2017	Project Name:	Hafan Y Mor				
	Survey Times:	07:00 to 19:00	Drawing Title:	Site Layout and Observed Movements				



APPENDIX A

Vehicle Categories

COBA VEHICLE CATEGORIES

CAR	 SALOON  ESTATE  PEOPLE CARRIER  CAR TOWING CARAVAN / TRAILER
LIGHT GOODS VEHICLE (LGV)	 VAN  <3.5 TONNES – single rear tyres  PICK-UP
OTHER GOODS VEHICLE (OGV1)	 > 3.5 TONNES – twin rear tyres  2-AXLES RIGID  2-AXLES RIGID  3 AXLES-RIGID
OTHER GOODS VEHICLE (OGV2)	 4 OR MORE AXLES RIGID  3-AXLES ARTIC  4 OR MORE AXLES ARTIC  OTHER GOODS VEHICLE WITH TRAILER
BUSES & COACHES (PSV)	 DOUBLE DECK BUS  SINGLE DECK BUS OR COACH

COBA VEHICLE CATEGORIES

Definition of Categories

The various components of traffic have different characteristics in terms of operating costs, growth and occupancy. The most common categories into which the traffic is split in COBA; these are defined as:

Cars (CARS)

Including taxis, estate cars, 'people carriers' and other passenger vehicles (for example, minibuses and camper vans) with a gross vehicle weight of less than 3.5 tonnes, normally ones which can accommodate not more than 15 seats. Three-wheeled cars, motor invalid carriages, Land Rovers, Range Rovers and Jeeps and smaller ambulances are included. Cars towing caravans or trailers are counted as one vehicle unless included as a separate class.

Light Goods Vehicles (LGV)

Includes all goods vehicles up to 3.5 tonnes gross vehicle weight (goods vehicles over 3.5 tonnes have sideguards fitted between axles), including those towing a trailer or caravan. This includes all car delivery vans and those of the next larger carrying capacity such as transit vans. Included here are small pickup vans, three-wheeled goods vehicles, milk floats and pedestrian controlled motor vehicles. Most of this group is delivery vans of one type or another.

Other Goods Vehicles (OGV 1)

Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles Includes larger ambulances, tractors (without trailers), road rollers for tarmac pressing, box vans and similar large vans. A two or three axle motor tractive unit without a trailer is also included.

Other Goods Vehicles (OGV 2)

This category includes all rigid vehicles with four or more axles and all articulated vehicles. Also included in this class are OGV1 goods vehicles towing a caravan or trailer.

Buses and Coaches (PSV)

Includes all public service vehicles and works buses with a gross vehicle weight of 3.5 tonnes or more, usually vehicles with more than 16 seats.



APPENDIX B

Classified Count Data



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	A to C						TOT	A to B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	2	1	0	0	0	0	3	4	3	1	0	0	0	8
07:15	1	0	0	0	1	0	2	13	3	2	1	0	0	19
07:30	3	1	0	0	0	0	4	7	6	3	0	0	0	16
07:45	5	2	0	0	0	0	7	18	5	1	1	0	0	25
H/TOT	11	4	0	0	1	0	16	42	17	7	2	0	0	68
08:00	3	0	1	0	0	0	4	14	7	2	0	0	0	23
08:15	7	0	0	0	1	0	8	34	6	4	2	0	0	46
08:30	9	0	1	0	1	0	11	40	8	1	0	0	1	50
08:45	9	0	0	1	0	0	10	45	6	2	1	0	0	54
H/TOT	28	0	2	1	2	0	33	133	27	9	3	0	1	173
09:00	10	0	0	0	0	0	10	36	11	4	0	0	0	51
09:15	6	0	0	0	1	0	7	22	4	4	2	0	1	33
09:30	12	0	0	0	1	0	13	39	6	3	0	0	0	48
09:45	6	0	0	0	1	0	7	42	7	2	0	0	0	51
H/TOT	34	0	0	0	3	0	37	139	28	13	2	0	1	183
10:00	4	0	0	0	1	0	5	26	6	4	0	0	0	36
10:15	6	2	1	0	1	0	10	46	7	1	1	0	0	55
10:30	9	0	0	0	1	0	10	39	2	0	0	0	0	41
10:45	8	1	0	0	0	0	9	46	5	0	0	0	0	51
H/TOT	27	3	1	0	3	0	34	157	20	5	1	0	0	183
11:00	8	0	1	0	2	0	11	50	4	2	1	0	0	57
11:15	12	1	0	0	1	0	14	39	6	2	0	0	0	47
11:30	11	1	0	0	0	0	12	50	9	4	1	0	0	64
11:45	13	2	1	1	0	0	17	49	2	4	0	0	0	55
H/TOT	44	4	2	1	3	0	54	188	21	12	2	0	0	223
12:00	18	3	0	0	1	0	22	59	9	2	1	0	0	71
12:15	13	2	0	0	1	0	16	53	4	1	0	0	0	58
12:30	14	2	1	0	0	0	17	54	10	4	0	0	0	68
12:45	12	0	0	0	1	0	13	41	7	0	1	0	0	49
H/TOT	57	7	1	0	3	0	68	207	30	7	2	0	0	246
13:00	19	1	0	0	0	0	20	40	4	1	0	0	0	45
13:15	18	0	0	0	1	0	19	53	2	2	0	0	1	58
13:30	23	0	0	0	0	0	23	64	5	4	0	0	0	73
13:45	32	0	0	0	1	0	33	45	3	2	0	0	1	51
H/TOT	92	1	0	0	2	0	95	202	14	9	0	0	2	227
14:00	33	2	0	0	1	0	36	56	3	1	1	0	0	61
14:15	21	1	0	0	1	0	23	71	10	3	0	0	1	85
14:30	35	0	0	0	1	0	36	61	9	2	0	0	0	72
14:45	23	0	0	0	0	0	23	70	5	1	0	0	0	76
H/TOT	112	3	0	0	3	0	118	258	27	7	1	0	1	294
15:00	28	2	0	0	1	0	31	68	3	2	0	0	1	74
15:15	27	2	0	0	1	0	30	77	5	0	0	0	1	83
15:30	36	2	0	0	1	0	39	72	8	1	1	0	2	84
15:45	31	0	0	0	1	1	33	72	12	1	0	0	0	85
H/TOT	122	6	0	0	4	1	133	289	28	4	1	0	4	326
16:00	24	2	0	0	1	0	27	62	8	2	0	0	1	73
16:15	26	4	1	0	2	0	33	74	3	0	0	0	0	77
16:30	26	0	0	0	0	0	26	67	8	0	0	1	0	76
16:45	29	2	0	0	0	0	31	78	7	1	0	0	1	87
H/TOT	105	8	1	0	3	0	117	281	26	3	0	1	2	313
17:00	24	0	0	0	1	0	25	72	5	1	2	0	0	80
17:15	21	3	0	0	1	0	25	72	10	0	1	0	0	83
17:30	33	0	0	0	0	0	33	84	7	1	0	0	0	92
17:45	21	0	0	0	1	0	22	66	5	0	1	0	0	72
H/TOT	99	3	0	0	3	0	105	294	27	2	4	0	0	327
18:00	17	2	0	0	2	0	21	56	8	0	0	1	1	66
18:15	17	1	0	0	0	0	18	62	5	1	0	0	0	68
18:30	11	1	0	0	0	0	12	45	4	1	0	0	0	50
18:45	16	2	1	0	0	0	19	51	6	0	0	0	0	57
H/TOT	61	6	1	0	2	0	70	214	23	2	0	1	1	241
P/TOT	792	45	8	2	32	1	880	2404	288	80	18	2	12	2804

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	A to A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0
13:30	1	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1
14:00	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0
16:15	2	0	0	0	0	0	2
16:30	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0
17:15	1	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0
17:45	0	1	0	0	0	0	1
H/TOT	1	1	0	0	0	0	2
18:00	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1
P/TOT	5	1	0	0	0	0	6



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	B to A						TOT	B to C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	7	7	3	1	0	0	18	2	0	0	0	1	0	3
07:15	18	3	0	0	0	0	21	2	0	1	0	0	0	3
07:30	14	8	1	0	0	0	23	2	0	0	0	1	0	3
07:45	21	5	3	0	0	0	29	2	2	0	0	0	0	4
H/TOT	60	23	7	1	0	0	91	8	2	1	0	2	0	13
08:00	30	7	1	0	0	0	38	5	1	0	0	1	0	7
08:15	29	2	1	0	0	0	32	3	2	2	0	0	0	7
08:30	39	7	2	0	1	1	50	7	0	1	0	0	0	8
08:45	30	6	3	1	0	0	40	11	1	0	0	1	0	13
H/TOT	128	22	7	1	1	1	160	26	4	3	0	2	0	35
09:00	24	0	3	1	0	0	28	4	0	0	0	0	0	4
09:15	27	8	1	2	0	0	38	9	0	0	0	1	0	10
09:30	39	7	2	0	0	1	49	6	0	0	0	0	0	6
09:45	47	4	1	1	0	0	53	11	2	0	0	2	0	15
H/TOT	137	19	7	4	0	1	168	30	2	0	0	3	0	35
10:00	44	3	2	0	0	0	49	3	1	0	0	1	0	5
10:15	48	3	2	3	0	1	57	4	1	0	0	1	0	6
10:30	55	8	1	0	0	0	64	8	1	2	0	0	0	11
10:45	63	8	3	0	0	0	74	10	0	0	0	1	0	11
H/TOT	210	22	8	3	0	1	244	25	3	2	0	3	0	33
11:00	57	6	5	2	0	1	71	6	1	0	0	0	0	7
11:15	52	7	1	1	0	0	61	7	0	0	0	1	0	8
11:30	71	7	2	0	0	0	80	8	0	0	0	1	0	9
11:45	57	7	1	1	0	0	66	12	2	0	0	1	0	15
H/TOT	237	27	9	4	0	1	278	33	3	0	0	3	0	39
12:00	49	6	2	0	0	0	57	7	0	0	0	0	0	7
12:15	66	9	1	0	0	0	76	10	4	0	0	0	0	14
12:30	63	1	1	0	0	0	65	9	0	0	0	1	0	10
12:45	52	6	3	2	0	0	63	9	1	0	0	1	0	11
H/TOT	230	22	7	2	0	0	261	35	5	0	0	2	0	42
13:00	39	7	2	1	0	0	49	10	0	0	0	0	0	10
13:15	46	6	1	2	0	0	55	12	2	1	0	1	0	16
13:30	51	7	3	0	0	0	61	13	1	0	0	0	0	14
13:45	45	4	1	0	0	0	50	17	1	0	0	2	0	20
H/TOT	181	24	7	3	0	0	215	52	4	1	0	3	0	60
14:00	41	8	2	0	0	1	52	13	0	0	0	0	0	13
14:15	41	7	0	1	0	1	50	13	0	0	0	0	0	13
14:30	53	4	1	0	0	2	60	8	0	1	0	1	0	10
14:45	55	7	2	1	0	0	65	16	0	0	0	1	0	17
H/TOT	190	26	5	2	0	4	227	50	0	1	0	2	0	53
15:00	48	7	2	0	0	0	57	22	1	0	0	1	0	24
15:15	51	8	2	2	0	0	63	27	0	0	0	0	0	27
15:30	52	8	1	0	0	0	61	16	1	0	0	1	0	18
15:45	61	6	3	0	0	0	70	15	0	0	0	0	0	15
H/TOT	212	29	8	2	0	0	251	80	2	0	0	2	0	84
16:00	54	8	0	1	0	1	64	11	0	0	0	0	0	11
16:15	60	3	1	1	0	0	65	20	0	0	0	0	0	20
16:30	68	8	1	0	0	2	79	16	1	0	0	1	0	18
16:45	61	7	0	0	0	0	68	19	1	0	0	1	0	21
H/TOT	243	26	2	2	0	3	276	66	2	0	0	2	0	70
17:00	55	10	1	0	0	1	67	17	0	0	0	0	0	17
17:15	70	4	2	1	0	0	77	10	0	0	0	1	0	11
17:30	46	1	0	0	0	0	47	24	0	0	0	0	0	24
17:45	36	2	0	0	0	0	38	18	1	1	0	0	0	20
H/TOT	207	17	3	1	0	1	229	69	1	1	0	1	0	72
18:00	32	3	0	0	1	1	37	11	0	0	0	1	0	12
18:15	27	2	1	0	0	0	30	18	0	0	0	0	0	18
18:30	18	0	0	0	0	0	18	16	1	0	0	0	0	17
18:45	21	2	0	0	0	0	23	15	0	0	0	1	0	16
H/TOT	98	7	1	0	1	1	108	60	1	0	0	2	0	63
P/TOT	2133	264	71	25	2	13	2508	534	29	9	0	27	0	599

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	B to B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
13:00	1	0	0	0	0	0	1
13:15	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1
14:00	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0
15:15	1	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1
16:00	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0
16:45	0	0	0	0	1	0	1
H/TOT	0	0	0	0	1	0	1
17:00	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	1
17:45	1	0	0	0	0	0	1
H/TOT	2	0	0	0	0	0	2
18:00	1	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1
P/TOT	5	0	0	0	1	0	6



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	C to B						TOT	C to A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:15	0	0	0	0	1	0	1	2	0	0	0	0	0	2
07:30	3	1	0	0	0	0	4	5	0	0	0	1	0	6
07:45	3	0	0	0	0	0	3	4	0	0	0	0	0	4
H/TOT	6	1	0	0	1	0	8	11	0	0	0	2	0	13
08:00	1	1	0	0	0	0	2	6	1	0	0	1	0	8
08:15	8	1	0	0	1	0	10	4	0	1	0	0	0	5
08:30	3	0	1	0	1	0	5	11	0	0	0	1	0	12
08:45	2	0	0	0	0	0	2	13	0	1	0	1	0	15
H/TOT	14	2	1	0	2	0	19	34	1	2	0	3	0	40
09:00	8	1	0	0	0	0	9	33	2	1	0	0	0	36
09:15	14	1	0	0	1	0	16	38	2	1	0	1	0	42
09:30	10	1	0	0	1	0	12	47	0	0	2	0	0	49
09:45	17	0	0	0	1	0	18	30	3	0	0	2	0	35
H/TOT	49	3	0	0	3	0	55	148	7	2	2	3	0	162
10:00	19	1	0	0	0	0	20	52	0	0	0	2	0	54
10:15	25	1	0	0	1	0	27	52	0	0	0	1	0	53
10:30	17	1	1	0	1	0	20	37	0	0	0	0	0	37
10:45	18	0	0	0	0	0	18	30	3	0	0	1	0	34
H/TOT	79	3	1	0	2	0	85	171	3	0	0	4	0	178
11:00	21	0	2	0	2	0	25	29	2	1	0	0	0	32
11:15	13	0	0	0	1	0	14	39	0	0	0	1	0	40
11:30	13	0	0	0	0	0	13	39	1	0	0	1	0	41
11:45	17	1	0	0	0	0	18	31	2	0	0	1	0	34
H/TOT	64	1	2	0	3	0	70	138	5	1	0	3	0	147
12:00	16	1	0	0	1	0	18	32	3	0	0	0	0	35
12:15	10	1	0	0	1	0	12	28	1	1	0	0	0	30
12:30	16	1	1	0	0	0	18	15	3	0	1	1	0	20
12:45	9	1	0	0	1	0	11	20	1	1	0	1	0	23
H/TOT	51	4	1	0	3	0	59	95	8	2	1	2	0	108
13:00	10	0	0	0	0	0	10	16	1	0	0	0	0	17
13:15	12	0	0	0	1	0	13	16	0	0	0	1	0	17
13:30	15	2	0	0	0	0	17	14	0	0	0	0	0	14
13:45	11	0	0	0	0	0	11	13	1	0	0	2	0	16
H/TOT	48	2	0	0	1	0	51	59	2	0	0	3	0	64
14:00	6	1	0	0	2	0	9	10	2	1	0	0	0	13
14:15	14	0	0	0	1	0	15	7	1	0	0	0	0	8
14:30	5	0	0	0	1	0	6	9	3	0	0	1	0	13
14:45	12	1	0	0	0	0	13	6	0	0	0	1	0	7
H/TOT	37	2	0	0	4	0	43	32	6	1	0	2	0	41
15:00	9	0	0	0	1	0	10	12	0	0	0	1	0	13
15:15	6	1	0	0	1	0	8	16	2	0	0	0	0	18
15:30	12	1	0	0	0	0	13	10	1	0	0	2	0	13
15:45	6	1	0	0	1	0	8	7	2	0	0	1	0	10
H/TOT	33	3	0	0	3	0	39	45	5	0	0	4	0	54
16:00	11	1	0	0	0	0	12	8	2	0	0	0	0	10
16:15	6	0	0	0	0	0	6	7	2	1	0	0	0	10
16:30	11	1	0	0	2	0	14	11	2	1	0	1	0	15
16:45	15	0	0	0	0	0	15	4	1	0	0	1	0	6
H/TOT	43	2	0	0	2	0	47	30	7	2	0	2	0	41
17:00	17	1	0	0	1	0	19	9	0	0	0	0	0	9
17:15	11	1	1	0	1	0	14	10	0	0	0	1	0	11
17:30	13	0	0	0	0	0	13	8	0	0	0	0	0	8
17:45	12	1	1	0	0	0	14	2	0	0	0	0	0	2
H/TOT	53	3	2	0	2	0	60	29	0	0	0	1	0	30
18:00	13	0	0	0	2	0	15	15	1	1	0	0	0	17
18:15	9	0	0	0	0	0	9	6	0	0	0	0	0	6
18:30	19	0	0	0	0	0	19	5	0	0	0	0	0	5
18:45	8	1	0	0	0	0	9	6	0	0	0	1	0	7
H/TOT	49	1	0	0	2	0	52	32	1	1	0	1	0	35
P/TOT	526	27	7	0	28	0	588	824	45	11	3	30	0	913

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	C to C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0
09:45	1	0	0	0	0	0	1
H/TOT	1	0	0	0	0	0	1
10:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
11:00	2	0	0	0	0	0	2
11:15	1	0	0	0	0	0	1
11:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0
H/TOT	3	0	0	0	0	0	3
12:00	0	0	0	0	0	0	0
12:15	0	1	0	0	0	0	1
12:30	0	0	0	0	0	0	0
12:45	1	0	0	0	0	0	1
H/TOT	1	1	0	0	0	0	2
13:00	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0
18:45	2	0	0	0	0	0	2
H/TOT	2	0	0	0	0	0	2
P/TOT	7	1	0	0	0	0	8



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	TO ARM A						TOT	FROM ARM A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	7	7	3	1	1	0	19	6	4	1	0	0	0	11
07:15	20	3	0	0	0	0	23	14	3	2	1	1	0	21
07:30	19	8	1	0	1	0	29	10	7	3	0	0	0	20
07:45	25	5	3	0	0	0	33	23	7	1	1	0	0	32
H/TOT	71	23	7	1	2	0	104	53	21	7	2	1	0	84
08:00	36	8	1	0	1	0	46	17	7	3	0	0	0	27
08:15	33	2	2	0	0	0	37	41	6	4	2	1	0	54
08:30	50	7	2	0	2	1	62	49	8	2	0	1	1	61
08:45	43	6	4	1	1	0	55	54	6	2	2	0	0	64
H/TOT	162	23	9	1	4	1	200	161	27	11	4	2	1	206
09:00	57	2	4	1	0	0	64	46	11	4	0	0	0	61
09:15	65	10	2	2	1	0	80	28	4	4	2	1	1	40
09:30	86	7	2	2	0	1	98	51	6	3	0	1	0	61
09:45	77	7	1	1	2	0	88	48	7	2	0	1	0	58
H/TOT	285	26	9	6	3	1	330	173	28	13	2	3	1	220
10:00	96	3	2	0	2	0	103	30	6	4	0	1	0	41
10:15	100	3	2	3	1	1	110	52	9	2	1	1	0	65
10:30	92	8	1	0	0	0	101	48	2	0	0	1	0	51
10:45	93	11	3	0	1	0	108	54	6	0	0	0	0	60
H/TOT	381	25	8	3	4	1	422	184	23	6	1	3	0	217
11:00	86	8	6	2	0	1	103	58	4	3	1	2	0	68
11:15	91	7	1	1	1	0	101	51	7	2	0	1	0	61
11:30	110	8	2	0	1	0	121	61	10	4	1	0	0	76
11:45	88	9	1	1	1	0	100	62	4	5	1	0	0	72
H/TOT	375	32	10	4	3	1	425	232	25	14	3	3	0	277
12:00	81	9	2	0	0	0	92	77	12	2	1	1	0	93
12:15	94	10	2	0	0	0	106	66	6	1	0	1	0	74
12:30	78	4	1	1	1	0	85	68	12	5	0	0	0	85
12:45	72	7	4	2	1	0	86	53	7	0	1	1	0	62
H/TOT	325	30	9	3	2	0	369	264	37	8	2	3	0	314
13:00	55	8	2	1	0	0	66	59	5	1	0	0	0	65
13:15	62	6	1	2	1	0	72	71	2	2	0	1	1	77
13:30	66	7	3	0	0	0	76	88	5	4	0	0	0	97
13:45	58	5	1	0	2	0	66	77	3	2	0	1	1	84
H/TOT	241	26	7	3	3	0	280	295	15	9	0	2	2	323
14:00	51	10	3	0	0	1	65	89	5	1	1	1	0	97
14:15	48	8	0	1	0	1	58	92	11	3	0	1	1	108
14:30	62	7	1	0	1	2	73	96	9	2	0	1	0	108
14:45	61	7	2	1	1	0	72	93	5	1	0	0	0	99
H/TOT	222	32	6	2	2	4	268	370	30	7	1	3	1	412
15:00	60	7	2	0	1	0	70	96	5	2	0	1	1	105
15:15	67	10	2	2	0	0	81	104	7	0	0	1	1	113
15:30	62	9	1	0	2	0	74	108	10	1	1	1	2	123
15:45	68	8	3	0	1	0	80	103	12	1	0	1	1	118
H/TOT	257	34	8	2	4	0	305	411	34	4	1	4	5	459
16:00	62	10	0	1	0	1	74	86	10	2	0	1	1	100
16:15	69	5	2	1	0	0	77	102	7	1	0	2	0	112
16:30	79	10	2	0	1	2	94	93	8	0	0	1	0	102
16:45	65	8	0	0	1	0	74	107	9	1	0	0	1	118
H/TOT	275	33	4	2	2	3	319	388	34	4	0	4	2	432
17:00	64	10	1	0	0	1	76	96	5	1	2	1	0	105
17:15	81	4	2	1	1	0	89	94	13	0	1	1	0	109
17:30	54	1	0	0	0	0	55	117	7	1	0	0	0	125
17:45	38	3	0	0	0	0	41	87	6	0	1	1	0	95
H/TOT	237	18	3	1	1	1	261	394	31	2	4	3	0	434
18:00	47	4	1	0	1	1	54	73	10	0	0	3	1	87
18:15	33	2	1	0	0	0	36	79	6	1	0	0	0	86
18:30	24	0	0	0	0	0	24	57	5	1	0	0	0	63
18:45	27	2	0	0	1	0	30	67	8	1	0	0	0	76
H/TOT	131	8	2	0	2	1	144	276	29	3	0	3	1	312
P/TOT	2962	310	82	28	32	13	3427	3201	334	88	20	34	13	3690



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	TO ARM B						TOT	FROM ARM B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	4	3	1	0	0	0	8	9	7	3	1	1	0	21
07:15	13	3	2	1	1	0	20	20	3	1	0	0	0	24
07:30	10	7	3	0	0	0	20	16	8	1	0	1	0	26
07:45	21	5	1	1	0	0	28	23	7	3	0	0	0	33
H/TOT	48	18	7	2	1	0	76	68	25	8	1	2	0	104
08:00	15	8	2	0	0	0	25	35	8	1	0	1	0	45
08:15	42	7	4	2	1	0	56	32	4	3	0	0	0	39
08:30	43	8	2	0	1	1	55	46	7	3	0	1	1	58
08:45	47	6	2	1	0	0	56	41	7	3	1	1	0	53
H/TOT	147	29	10	3	2	1	192	154	26	10	1	3	1	195
09:00	44	12	4	0	0	0	60	28	0	3	1	0	0	32
09:15	36	5	4	2	1	1	49	36	8	1	2	1	0	48
09:30	49	7	3	0	1	0	60	45	7	2	0	0	1	55
09:45	59	7	2	0	1	0	69	58	6	1	1	2	0	68
H/TOT	188	31	13	2	3	1	238	167	21	7	4	3	1	203
10:00	45	7	4	0	0	0	56	47	4	2	0	1	0	54
10:15	71	8	1	1	1	0	82	52	4	2	3	1	1	63
10:30	56	3	1	0	1	0	61	63	9	3	0	0	0	75
10:45	64	5	0	0	0	0	69	73	8	3	0	1	0	85
H/TOT	236	23	6	1	2	0	268	235	25	10	3	3	1	277
11:00	71	4	4	1	2	0	82	63	7	5	2	0	1	78
11:15	52	6	2	0	1	0	61	59	7	1	1	1	0	69
11:30	63	9	4	1	0	0	77	79	7	2	0	1	0	89
11:45	66	3	4	0	0	0	73	69	9	1	1	1	0	81
H/TOT	252	22	14	2	3	0	293	270	30	9	4	3	1	317
12:00	75	10	2	1	1	0	89	56	6	2	0	0	0	64
12:15	63	5	1	0	1	0	70	76	13	1	0	0	0	90
12:30	70	11	5	0	0	0	86	72	1	1	0	1	0	75
12:45	50	8	0	1	1	0	60	61	7	3	2	1	0	74
H/TOT	258	34	8	2	3	0	305	265	27	7	2	2	0	303
13:00	51	4	1	0	0	0	56	50	7	2	1	0	0	60
13:15	65	2	2	0	1	1	71	58	8	2	2	1	0	71
13:30	79	7	4	0	0	0	90	64	8	3	0	0	0	75
13:45	56	3	2	0	0	1	62	62	5	1	0	2	0	70
H/TOT	251	16	9	0	1	2	279	234	28	8	3	3	0	276
14:00	62	4	1	1	2	0	70	54	8	2	0	0	1	65
14:15	85	10	3	0	1	1	100	54	7	0	1	0	1	63
14:30	66	9	2	0	1	0	78	61	4	2	0	1	2	70
14:45	82	6	1	0	0	0	89	71	7	2	1	1	0	82
H/TOT	295	29	7	1	4	1	337	240	26	6	2	2	4	280
15:00	77	3	2	0	1	1	84	70	8	2	0	1	0	81
15:15	84	6	0	0	1	1	92	79	8	2	2	0	0	91
15:30	84	9	1	1	0	2	97	68	9	1	0	1	0	79
15:45	78	13	1	0	1	0	93	76	6	3	0	0	0	85
H/TOT	323	31	4	1	3	4	366	293	31	8	2	2	0	336
16:00	73	9	2	0	0	1	85	65	8	0	1	0	1	75
16:15	80	3	0	0	0	0	83	80	3	1	1	0	0	85
16:30	78	9	0	0	3	0	90	84	9	1	0	1	2	97
16:45	93	7	1	0	1	1	103	80	8	0	0	2	0	90
H/TOT	324	28	3	0	4	2	361	309	28	2	2	3	3	347
17:00	89	6	1	2	1	0	99	72	10	1	0	0	1	84
17:15	83	11	1	1	1	0	97	80	4	2	1	1	0	88
17:30	98	7	1	0	0	0	106	71	1	0	0	0	0	72
17:45	79	6	1	1	0	0	87	55	3	1	0	0	0	59
H/TOT	349	30	4	4	2	0	389	278	18	4	1	1	1	303
18:00	70	8	0	0	3	1	82	44	3	0	0	2	1	50
18:15	71	5	1	0	0	0	77	45	2	1	0	0	0	48
18:30	64	4	1	0	0	0	69	34	1	0	0	0	0	35
18:45	59	7	0	0	0	0	66	36	2	0	0	1	0	39
H/TOT	264	24	2	0	3	1	294	159	8	1	0	3	1	172
P/TOT	2935	315	87	18	31	12	3398	2672	293	80	25	30	13	3113



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

TIME	TO ARM C						TOT	FROM ARM C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	4	1	0	0	1	0	6	0	0	0	0	1	0	1
07:15	3	0	1	0	1	0	5	2	0	0	0	1	0	3
07:30	5	1	0	0	1	0	7	8	1	0	0	1	0	10
07:45	7	4	0	0	0	0	11	7	0	0	0	0	0	7
H/TOT	19	6	1	0	3	0	29	17	1	0	0	3	0	21
08:00	8	1	1	0	1	0	11	7	2	0	0	1	0	10
08:15	10	2	2	0	1	0	15	12	1	1	0	1	0	15
08:30	16	0	2	0	1	0	19	14	0	1	0	2	0	17
08:45	20	1	0	1	1	0	23	15	0	1	0	1	0	17
H/TOT	54	4	5	1	4	0	68	48	3	3	0	5	0	59
09:00	14	0	0	0	0	0	14	41	3	1	0	0	0	45
09:15	15	0	0	0	2	0	17	52	3	1	0	2	0	58
09:30	18	0	0	0	1	0	19	57	1	0	2	1	0	61
09:45	18	2	0	0	3	0	23	48	3	0	0	3	0	54
H/TOT	65	2	0	0	6	0	73	198	10	2	2	6	0	218
10:00	7	1	0	0	2	0	10	71	1	0	0	2	0	74
10:15	10	3	1	0	2	0	16	77	1	0	0	2	0	80
10:30	17	1	2	0	1	0	21	54	1	1	0	1	0	57
10:45	18	1	0	0	1	0	20	48	3	0	0	1	0	52
H/TOT	52	6	3	0	6	0	67	250	6	1	0	6	0	263
11:00	16	1	1	0	2	0	20	52	2	3	0	2	0	59
11:15	20	1	0	0	2	0	23	53	0	0	0	2	0	55
11:30	19	1	0	0	1	0	21	52	1	0	0	1	0	54
11:45	25	4	1	1	1	0	32	48	3	0	0	1	0	52
H/TOT	80	7	2	1	6	0	96	205	6	3	0	6	0	220
12:00	25	3	0	0	1	0	29	48	4	0	0	1	0	53
12:15	23	7	0	0	1	0	31	38	3	1	0	1	0	43
12:30	23	2	1	0	1	0	27	31	4	1	1	1	0	38
12:45	22	1	0	0	2	0	25	30	2	1	0	2	0	35
H/TOT	93	13	1	0	5	0	112	147	13	3	1	5	0	169
13:00	29	1	0	0	0	0	30	26	1	0	0	0	0	27
13:15	30	2	1	0	2	0	35	28	0	0	0	2	0	30
13:30	36	1	0	0	0	0	37	29	2	0	0	0	0	31
13:45	49	1	0	0	3	0	53	24	1	0	0	2	0	27
H/TOT	144	5	1	0	5	0	155	107	4	0	0	4	0	115
14:00	46	2	0	0	1	0	49	16	3	1	0	2	0	22
14:15	34	1	0	0	1	0	36	21	1	0	0	1	0	23
14:30	43	0	1	0	2	0	46	14	3	0	0	2	0	19
14:45	39	0	0	0	1	0	40	18	1	0	0	1	0	20
H/TOT	162	3	1	0	5	0	171	69	8	1	0	6	0	84
15:00	50	3	0	0	2	0	55	21	0	0	0	2	0	23
15:15	54	2	0	0	1	0	57	22	3	0	0	1	0	26
15:30	52	3	0	0	2	0	57	22	2	0	0	2	0	26
15:45	46	0	0	0	1	1	48	13	3	0	0	2	0	18
H/TOT	202	8	0	0	6	1	217	78	8	0	0	7	0	93
16:00	35	2	0	0	1	0	38	19	3	0	0	0	0	22
16:15	46	4	1	0	2	0	53	13	2	1	0	0	0	16
16:30	42	1	0	0	1	0	44	22	3	1	0	3	0	29
16:45	48	3	0	0	1	0	52	19	1	0	0	1	0	21
H/TOT	171	10	1	0	5	0	187	73	9	2	0	4	0	88
17:00	41	0	0	0	1	0	42	26	1	0	0	1	0	28
17:15	31	3	0	0	2	0	36	21	1	1	0	2	0	25
17:30	57	0	0	0	0	0	57	21	0	0	0	0	0	21
17:45	39	1	1	0	1	0	42	14	1	1	0	0	0	16
H/TOT	168	4	1	0	4	0	177	82	3	2	0	3	0	90
18:00	28	2	0	0	3	0	33	28	1	1	0	2	0	32
18:15	35	1	0	0	0	0	36	15	0	0	0	0	0	15
18:30	27	2	0	0	0	0	29	24	0	0	0	0	0	24
18:45	33	2	1	0	1	0	37	16	1	0	0	1	0	18
H/TOT	123	7	1	0	4	0	135	83	2	1	0	3	0	89
P/TOT	1333	75	17	2	59	1	1487	1357	73	18	3	58	0	1509

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	A to D						TOT	A to C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	2	1	0	0	0	3	0	0	0	0	0	0	0
07:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
07:30	0	1	1	1	0	0	3	1	1	0	0	0	0	2
07:45	1	1	1	0	0	0	3	0	0	0	0	0	0	0
H/TOT	2	4	3	1	0	0	10	1	1	0	0	0	0	2
08:00	0	0	0	2	0	0	2	0	0	0	0	0	0	0
08:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0
08:30	3	0	0	1	0	0	4	0	0	0	0	0	0	0
08:45	6	0	1	0	0	0	7	0	0	0	0	0	0	0
H/TOT	13	0	1	3	0	0	17	0	0	0	0	0	0	0
09:00	2	0	2	2	0	0	6	1	0	0	0	0	0	1
09:15	7	0	0	0	0	0	7	0	0	0	0	0	0	0
09:30	16	0	1	1	0	0	18	0	0	0	0	0	0	0
09:45	7	0	2	1	0	0	10	0	0	0	0	0	0	0
H/TOT	32	0	5	4	0	0	41	1	0	0	0	0	0	1
10:00	13	2	1	1	0	0	17	0	0	0	0	0	0	0
10:15	10	0	0	0	0	0	10	0	0	0	0	0	0	0
10:30	13	1	0	1	0	0	15	1	0	0	0	0	0	1
10:45	13	1	0	1	0	0	15	0	0	0	0	0	0	0
H/TOT	49	4	1	3	0	0	57	1	0	0	0	0	0	1
11:00	5	1	2	1	0	0	9	2	0	0	0	0	0	2
11:15	10	0	1	2	0	0	13	0	0	0	0	0	0	0
11:30	12	0	1	2	0	0	15	0	0	0	0	0	0	0
11:45	13	0	1	0	0	0	14	0	0	0	0	0	0	0
H/TOT	40	1	5	5	0	0	51	2	0	0	0	0	0	2
12:00	12	2	1	0	0	0	15	1	0	0	0	0	0	1
12:15	11	3	0	0	1	0	15	0	0	0	0	0	0	0
12:30	5	1	3	0	0	0	9	0	1	0	0	0	0	1
12:45	8	0	0	0	0	0	8	0	1	0	0	0	0	1
H/TOT	36	6	4	0	1	0	47	1	2	0	0	0	0	3
13:00	3	1	0	2	0	0	6	0	0	0	0	0	0	0
13:15	9	1	0	0	0	0	10	0	0	0	0	0	0	0
13:30	5	1	2	0	0	0	8	0	1	0	0	0	0	1
13:45	5	1	4	1	0	0	11	0	0	0	0	0	0	0
H/TOT	22	4	6	3	0	0	35	0	1	0	0	0	0	1
14:00	9	1	2	0	0	1	13	0	0	0	0	0	0	0
14:15	10	1	1	0	0	0	12	1	0	0	0	0	0	1
14:30	9	1	2	1	0	0	13	0	0	0	0	0	0	0
14:45	10	0	0	0	0	0	10	0	0	0	0	0	0	0
H/TOT	38	3	5	1	0	1	48	1	0	0	0	0	0	1
15:00	8	1	1	2	1	0	13	0	0	0	0	0	0	0
15:15	7	1	2	0	0	0	10	1	1	0	0	0	0	2
15:30	8	2	1	0	0	0	11	2	0	0	0	0	0	2
15:45	11	2	0	0	0	0	13	0	0	0	0	0	0	0
H/TOT	34	6	4	2	1	0	47	3	1	0	0	0	0	4
16:00	8	0	3	0	0	0	11	1	0	0	0	0	0	1
16:15	9	1	0	0	0	0	10	0	0	0	0	0	0	0
16:30	11	1	1	0	0	0	13	0	0	0	0	0	0	0
16:45	5	0	0	0	0	0	5	1	0	0	0	0	0	1
H/TOT	33	2	4	0	0	0	39	2	0	0	0	0	0	2
17:00	6	1	0	0	0	0	7	0	0	0	0	0	0	0
17:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
17:30	3	0	0	0	0	0	3	3	0	0	0	0	0	3
17:45	6	0	0	0	0	0	6	0	0	0	0	0	0	0
H/TOT	16	1	0	0	0	0	17	3	0	0	0	0	0	3
18:00	9	0	0	1	0	0	10	0	0	0	0	0	0	0
18:15	4	0	0	0	0	0	4	1	0	0	0	0	0	1
18:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
18:45	2	0	1	0	0	0	3	0	0	0	0	0	0	0
H/TOT	16	0	1	1	0	0	18	1	0	0	0	0	0	1
P/TOT	331	31	39	23	2	1	427	16	5	0	0	0	0	21

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	A to B						TOT	A to A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
07:15	2	0	0	0	1	0	3	0	0	0	0	0	0	0
07:30	1	1	0	0	0	0	2	0	0	0	0	0	0	0
07:45	4	1	1	0	0	0	6	0	0	0	0	0	0	0
H/TOT	9	2	1	0	1	0	13	0	0	0	0	0	0	0
08:00	4	1	1	0	0	0	6	0	0	0	0	0	0	0
08:15	6	0	1	0	1	0	8	0	0	0	0	0	0	0
08:30	8	2	1	0	1	1	13	0	0	0	0	0	0	0
08:45	14	2	0	0	0	0	16	0	0	0	0	0	0	0
H/TOT	32	5	3	0	2	1	43	0	0	0	0	0	0	0
09:00	9	3	0	0	0	0	12	0	0	0	0	0	0	0
09:15	9	2	0	0	1	0	12	0	0	0	0	0	0	0
09:30	11	1	1	0	0	0	13	1	0	0	0	0	0	1
09:45	8	0	0	0	1	0	9	0	0	0	0	0	0	0
H/TOT	37	6	1	0	2	0	46	1	0	0	0	0	0	1
10:00	4	2	0	0	1	0	7	0	0	0	0	0	0	0
10:15	9	0	0	0	2	0	11	0	0	0	0	0	0	0
10:30	8	0	0	0	0	0	8	0	0	0	0	0	0	0
10:45	13	1	0	0	0	0	14	0	0	0	0	0	0	0
H/TOT	34	3	0	0	3	0	40	0	0	0	0	0	0	0
11:00	8	0	0	0	1	0	9	0	0	0	0	0	0	0
11:15	5	0	0	0	1	0	6	1	0	0	0	0	0	1
11:30	15	1	0	0	0	0	16	0	0	0	0	0	0	0
11:45	12	1	2	0	0	0	15	0	0	0	0	0	0	0
H/TOT	40	2	2	0	2	0	46	1	0	0	0	0	0	1
12:00	7	0	0	0	1	0	8	0	0	0	0	0	0	0
12:15	5	1	0	0	1	0	7	0	0	0	0	0	0	0
12:30	5	2	0	0	0	0	7	0	0	0	0	0	0	0
12:45	3	0	0	0	1	0	4	0	0	0	0	0	0	0
H/TOT	20	3	0	0	3	0	26	0	0	0	0	0	0	0
13:00	7	1	0	0	0	0	8	0	0	0	0	0	0	0
13:15	8	0	2	0	1	0	11	0	0	0	0	0	0	0
13:30	5	3	0	0	0	0	8	0	0	0	0	0	0	0
13:45	8	1	0	0	1	0	10	0	0	0	0	0	0	0
H/TOT	28	5	2	0	2	0	37	0	0	0	0	0	0	0
14:00	6	1	0	0	1	0	8	0	0	0	0	0	0	0
14:15	11	1	0	0	1	0	13	0	0	0	0	0	0	0
14:30	8	0	0	0	0	0	8	0	0	0	0	0	0	0
14:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0
H/TOT	34	2	0	0	2	0	38	0	0	0	0	0	0	0
15:00	9	1	1	0	1	1	13	0	0	0	0	0	0	0
15:15	5	1	0	0	1	0	7	0	0	0	0	0	0	0
15:30	7	3	0	0	1	0	11	0	0	0	0	0	0	0
15:45	6	0	0	0	1	0	7	0	0	0	0	0	0	0
H/TOT	27	5	1	0	4	1	38	0	0	0	0	0	0	0
16:00	9	0	0	0	0	0	9	0	0	0	0	0	0	0
16:15	3	0	1	0	2	0	6	0	0	0	0	0	0	0
16:30	9	0	0	0	0	0	9	0	0	0	0	0	0	0
16:45	8	2	0	0	0	1	11	0	0	0	0	0	0	0
H/TOT	29	2	1	0	2	1	35	0	0	0	0	0	0	0
17:00	5	0	0	2	1	0	8	0	0	0	0	0	0	0
17:15	9	0	0	1	1	0	11	0	0	0	0	0	0	0
17:30	6	0	1	0	0	0	7	0	0	0	0	0	0	0
17:45	11	0	0	0	0	0	11	0	0	0	0	0	0	0
H/TOT	31	0	1	3	2	0	37	0	0	0	0	0	0	0
18:00	11	0	0	0	1	1	13	0	0	0	0	0	0	0
18:15	8	0	1	0	0	0	9	0	0	0	0	0	0	0
18:30	5	0	0	0	0	0	5	0	0	0	0	0	0	0
18:45	6	2	0	0	0	0	8	0	0	0	0	0	0	0
H/TOT	30	2	1	0	1	1	35	0	0	0	0	0	0	0
P/TOT	351	37	13	3	26	4	434	2	0	0	0	0	0	2

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	B to A						TOT	B to D						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	1	0	0	0	1	0	2	7	7	2	1	0	0	17
07:15	2	0	0	0	0	0	2	16	4	0	0	0	0	20
07:30	1	2	0	0	1	0	4	16	5	1	0	0	0	22
07:45	1	1	1	0	0	0	3	26	5	2	0	0	0	33
H/TOT	5	3	1	0	2	0	11	65	21	5	1	0	0	92
08:00	3	1	1	0	1	0	6	31	7	1	0	0	0	39
08:15	3	0	0	0	0	0	3	28	2	2	0	0	0	32
08:30	0	1	0	0	0	0	1	51	6	2	0	2	1	62
08:45	4	0	1	0	1	0	6	34	6	2	0	0	0	42
H/TOT	10	2	2	0	2	0	16	144	21	7	0	2	1	175
09:00	3	1	1	0	0	0	5	57	2	3	2	0	0	64
09:15	6	2	0	0	1	0	9	55	9	3	3	0	0	70
09:30	5	0	0	0	0	0	5	87	7	1	1	0	1	97
09:45	3	2	0	1	2	0	8	75	5	2	1	0	0	83
H/TOT	17	5	1	1	3	0	27	274	23	9	7	0	1	314
10:00	5	0	1	0	1	0	7	90	2	1	0	1	0	94
10:15	8	0	0	0	1	0	9	90	2	2	3	0	1	98
10:30	8	2	0	0	0	0	10	76	7	1	0	0	0	84
10:45	12	0	0	0	1	0	13	86	11	2	0	0	0	99
H/TOT	33	2	1	0	3	0	39	342	22	6	3	1	1	375
11:00	5	1	1	0	0	0	7	84	7	7	2	0	0	100
11:15	3	1	1	0	1	0	6	85	6	0	1	0	1	93
11:30	5	1	0	0	0	0	6	101	7	1	0	1	0	110
11:45	12	1	0	0	1	0	14	75	8	2	0	0	0	85
H/TOT	25	4	2	0	2	0	33	345	28	10	3	1	1	388
12:00	5	3	0	0	0	0	8	73	6	3	0	0	0	82
12:15	8	3	0	0	0	0	11	84	5	2	0	0	0	91
12:30	7	1	0	0	1	0	9	72	5	0	1	0	0	78
12:45	5	1	1	1	1	0	9	63	6	3	1	0	0	73
H/TOT	25	8	1	1	2	0	37	292	22	8	2	0	0	324
13:00	2	1	0	0	0	0	3	51	7	2	0	0	0	60
13:15	7	1	1	0	1	0	10	54	5	0	3	0	0	62
13:30	6	1	0	0	0	0	7	58	7	3	0	0	0	68
13:45	3	2	1	0	1	0	7	52	3	0	0	1	0	56
H/TOT	18	5	2	0	2	0	27	215	22	5	3	1	0	246
14:00	6	4	0	0	0	1	11	41	6	3	0	0	0	50
14:15	4	1	0	0	0	0	5	45	7	0	1	0	1	54
14:30	7	1	0	0	1	0	9	52	5	1	0	0	2	60
14:45	6	0	0	1	1	0	8	57	8	1	0	0	0	66
H/TOT	23	6	0	1	2	1	33	195	26	5	1	0	3	230
15:00	6	0	1	0	0	0	7	51	6	2	0	1	0	60
15:15	8	1	1	0	0	0	10	60	9	1	2	0	0	72
15:30	5	2	0	0	2	0	9	51	7	1	0	0	0	59
15:45	11	0	0	0	1	0	12	55	9	3	0	0	0	67
H/TOT	30	3	2	0	3	0	38	217	31	7	2	1	0	258
16:00	9	3	0	0	0	0	12	47	6	0	1	0	1	55
16:15	9	3	1	0	0	0	13	65	4	1	1	0	0	71
16:30	4	3	0	0	1	0	8	70	5	1	0	0	2	78
16:45	10	0	1	0	0	0	11	55	8	0	0	1	0	64
H/TOT	32	9	2	0	1	0	44	237	23	2	2	1	3	268
17:00	7	1	0	0	0	0	8	61	10	1	0	0	1	73
17:15	13	0	1	0	1	0	15	74	4	1	1	0	0	80
17:30	12	0	0	0	0	0	12	36	1	0	0	0	0	37
17:45	9	1	0	0	0	0	10	34	3	0	0	0	0	37
H/TOT	41	2	1	0	1	0	45	205	18	2	1	0	1	227
18:00	7	0	0	0	1	1	9	40	4	0	0	1	0	45
18:15	6	0	0	0	0	0	6	22	2	1	0	0	0	25
18:30	2	0	0	0	0	0	2	18	0	0	0	0	0	18
18:45	2	0	0	0	0	0	2	24	2	0	0	0	0	26
H/TOT	17	0	0	0	1	1	19	104	8	1	0	1	0	114
P/TOT	276	49	15	3	24	2	369	2635	265	67	25	8	11	3011



SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	B to C						TOT	B to B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
08:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	2	0	0	0	0	0	2
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0
15:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	4	0	0	0	0	0	4	0	0	0	0	0	0	0
16:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	1	1	0	0	0	0	2	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
P/TOT	13	1	0	0	0	0	14	4	0	0	0	0	0	4

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	C to B						TOT	C to A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2
07:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
07:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
H/TOT	2	0	0	0	0	0	2	3	1	0	0	0	0	4
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
09:45	1	0	0	0	0	0	1	2	0	0	0	0	0	2
H/TOT	1	0	0	0	0	0	1	3	0	0	0	0	0	3
10:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	2	0	1	0	0	0	3	0	0	0	0	0	0	0
H/TOT	3	0	1	0	0	0	4	0	0	0	0	0	0	0
11:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	2	0	0	0	0	0	2
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	1	0	0	0	0	0	1
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
14:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	1	0	0	0	0	0	1
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0
15:30	5	0	0	0	0	0	5	1	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	7	0	0	0	0	0	7	2	0	0	0	0	0	2
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	0	0	0	0	3	2	0	0	0	0	0	2
17:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	0	1	0	0	0	0	1
18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	1	0	0	0	0	0	1	2	0	0	0	0	0	2
P/TOT	23	0	1	0	0	0	24	17	2	0	0	0	0	19



SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	C to D						TOT	C to C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	1	0	0	0	0	1	0	0	0	0	0	0	0
07:15	1	1	0	0	0	0	2	0	0	0	0	0	0	0
07:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	2	0	0	0	0	4	0	0	0	0	0	0	0
08:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
08:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
08:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	0	0	0	0	3	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	1	0	0	0	0	1	0	0	0	0	0	0	0
12:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	1	1	0	0	0	0	2	0	0	0	0	0	0	0
13:00	1	1	0	0	0	0	2	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	1	0	0	0	0	2	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	12	4	0	0	0	0	16	0	0	0	0	0	0	0

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	D to C						TOT	D to B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0	6	3	1	0	0	0	10
07:15	0	0	0	0	0	0	0	9	4	2	1	0	0	16
07:30	0	0	0	0	0	0	0	9	5	3	0	0	0	17
07:45	0	0	0	0	0	0	0	17	6	0	1	0	0	24
H/TOT	0	0	0	0	0	0	0	41	18	6	2	0	0	67
08:00	0	0	0	0	0	0	0	13	8	2	0	0	0	23
08:15	0	0	0	0	0	0	0	34	6	3	2	0	0	45
08:30	0	0	0	0	0	0	0	40	6	1	0	0	0	47
08:45	0	0	0	0	0	0	0	43	6	2	2	0	0	53
H/TOT	0	0	0	0	0	0	0	130	26	8	4	0	0	168
09:00	1	0	0	0	0	0	1	37	7	4	0	0	0	48
09:15	0	0	0	0	0	0	0	22	3	4	2	0	1	32
09:30	0	0	0	0	0	0	0	36	4	2	0	1	0	43
09:45	0	0	0	0	0	0	0	38	6	2	1	0	0	47
H/TOT	1	0	0	0	0	0	1	133	20	12	3	1	1	170
10:00	0	0	0	0	0	0	0	30	8	3	0	0	0	41
10:15	0	0	0	0	0	0	0	41	6	1	1	0	0	49
10:30	0	0	0	0	0	0	0	40	2	2	0	0	0	44
10:45	1	0	1	0	0	0	2	44	7	0	0	0	0	51
H/TOT	1	0	1	0	0	0	2	155	23	6	1	0	0	185
11:00	0	0	0	0	0	0	0	53	3	2	0	1	0	59
11:15	1	0	0	0	0	0	1	37	6	2	0	0	0	45
11:30	0	0	0	0	0	0	0	53	9	4	1	0	0	67
11:45	2	0	0	0	0	0	2	55	2	3	1	0	0	61
H/TOT	3	0	0	0	0	0	3	198	20	11	2	1	0	232
12:00	0	0	0	0	0	0	0	56	12	2	1	0	0	71
12:15	0	0	0	0	0	0	0	61	4	2	0	0	0	67
12:30	0	1	0	0	0	0	1	64	9	4	0	0	0	77
12:45	2	0	0	0	0	0	2	47	9	0	1	0	0	57
H/TOT	2	1	0	0	0	0	3	228	34	8	2	0	0	272
13:00	0	0	0	0	0	0	0	56	4	1	0	0	0	61
13:15	1	0	0	0	0	0	1	62	2	1	0	0	1	66
13:30	0	0	0	0	0	0	0	78	4	3	0	0	0	85
13:45	1	0	0	0	0	0	1	63	2	2	0	0	1	68
H/TOT	2	0	0	0	0	0	2	259	12	7	0	0	2	280
14:00	0	0	0	0	0	0	0	85	6	1	1	0	0	93
14:15	0	0	0	0	0	0	0	78	11	3	0	0	1	93
14:30	2	0	0	0	0	0	2	94	9	2	0	1	0	106
14:45	0	0	0	0	0	0	0	87	4	1	0	0	0	92
H/TOT	2	0	0	0	0	0	2	344	30	7	1	1	1	384
15:00	0	0	0	0	0	0	0	80	5	1	0	0	0	86
15:15	0	0	0	0	0	0	0	95	8	0	0	0	1	104
15:30	2	0	0	0	0	0	2	96	6	1	1	0	3	107
15:45	0	0	0	0	0	0	0	101	14	1	0	0	0	116
H/TOT	2	0	0	0	0	0	2	372	33	3	1	0	4	413
16:00	1	0	0	0	0	0	1	82	10	2	0	1	1	96
16:15	3	0	0	0	0	0	3	90	7	0	0	0	0	97
16:30	1	0	0	0	0	0	1	82	8	0	0	1	0	91
16:45	0	0	0	0	0	0	0	99	6	1	0	0	0	106
H/TOT	5	0	0	0	0	0	5	353	31	3	0	2	1	390
17:00	1	0	0	0	0	0	1	86	5	1	0	0	0	92
17:15	0	0	0	0	0	0	0	87	12	0	0	0	0	99
17:30	0	0	0	0	0	0	0	110	6	0	0	0	0	116
17:45	1	0	0	0	0	0	1	76	6	0	1	1	0	84
H/TOT	2	0	0	0	0	0	2	359	29	1	1	1	0	391
18:00	0	0	0	0	0	0	0	63	8	0	0	2	0	73
18:15	0	0	0	0	0	0	0	73	5	0	0	0	0	78
18:30	2	0	0	0	0	0	2	52	6	1	0	0	0	59
18:45	0	0	0	0	0	0	0	58	6	1	0	0	0	65
H/TOT	2	0	0	0	0	0	2	246	25	2	0	2	0	275
P/TOT	22	1	1	0	0	0	24	2818	301	74	17	8	9	3227

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	D to A						TOT	D to D						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	2	0	0	1	0	0	3	0	0	0	0	0	0	0
07:15	4	1	0	0	0	0	5	0	0	0	0	0	0	0
07:30	1	0	0	1	0	0	2	0	0	0	0	0	0	0
07:45	4	0	1	0	0	0	5	0	0	0	0	0	0	0
H/TOT	11	1	1	2	0	0	15	0	0	0	0	0	0	0
08:00	0	1	2	0	0	0	3	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	1	1	0	0	3	0	0	0	0	0	0	0
08:45	2	0	1	1	0	0	4	0	0	0	0	0	0	0
H/TOT	2	2	4	2	0	0	10	0	0	0	0	0	0	0
09:00	3	2	0	1	0	0	6	0	0	0	0	0	0	0
09:15	5	0	1	0	0	0	6	0	0	0	0	0	0	0
09:30	6	1	3	0	0	0	10	1	0	0	0	0	0	1
09:45	2	0	0	1	0	0	3	0	0	0	0	0	0	0
H/TOT	16	3	4	2	0	0	25	1	0	0	0	0	0	1
10:00	5	3	0	2	0	0	10	0	1	1	0	0	0	2
10:15	3	0	0	1	0	0	4	0	0	0	0	0	0	0
10:30	3	0	1	0	0	0	4	0	0	0	0	0	0	0
10:45	0	0	4	0	0	0	4	0	0	0	0	0	0	0
H/TOT	11	3	5	3	0	0	22	0	1	1	0	0	0	2
11:00	3	1	0	0	0	0	4	0	0	0	0	0	0	0
11:15	4	1	0	1	0	0	6	0	0	0	0	0	0	0
11:30	4	1	0	1	0	0	6	0	0	0	0	0	0	0
11:45	6	2	0	1	0	0	9	0	0	0	0	0	0	0
H/TOT	17	5	0	3	0	0	25	0	0	0	0	0	0	0
12:00	5	0	1	2	0	0	8	0	0	0	0	0	0	0
12:15	7	0	1	1	0	0	9	0	0	0	0	0	0	0
12:30	2	0	1	1	0	0	4	0	1	0	0	0	0	1
12:45	5	1	2	1	0	0	9	0	0	0	0	0	0	0
H/TOT	19	1	5	5	0	0	30	0	1	0	0	0	0	1
13:00	7	0	1	0	0	0	8	0	1	0	0	0	0	1
13:15	3	2	1	1	0	0	7	0	0	0	0	0	0	0
13:30	1	1	2	0	0	0	4	0	0	0	0	0	0	0
13:45	4	1	1	2	0	0	8	1	0	0	0	0	0	1
H/TOT	15	4	5	3	0	0	27	1	1	0	0	0	0	2
14:00	6	0	3	1	0	0	10	0	0	0	0	0	0	0
14:15	8	0	1	1	0	0	10	0	0	0	0	0	0	0
14:30	5	0	1	1	0	0	7	0	0	0	0	0	0	0
14:45	9	0	2	0	0	0	11	0	0	0	0	0	0	0
H/TOT	28	0	7	3	0	0	38	0	0	0	0	0	0	0
15:00	6	2	1	2	0	1	12	0	0	0	0	0	0	0
15:15	7	0	0	0	0	0	7	0	0	0	0	0	0	0
15:30	12	7	0	0	0	0	19	1	0	0	0	0	0	1
15:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0
H/TOT	34	9	1	2	0	1	47	1	0	0	0	0	0	1
16:00	5	0	0	0	0	1	6	0	0	0	0	0	0	0
16:15	5	1	0	1	0	0	7	0	0	0	0	0	0	0
16:30	9	0	1	0	0	0	10	0	0	0	0	0	0	0
16:45	11	2	0	0	0	0	13	0	0	0	0	0	0	0
H/TOT	30	3	1	1	0	1	36	0	0	0	0	0	0	0
17:00	10	1	0	0	0	0	11	0	0	0	0	0	0	0
17:15	15	0	1	0	0	0	16	0	0	0	0	0	0	0
17:30	7	0	0	0	0	0	7	0	0	0	0	0	0	0
17:45	7	0	0	0	0	0	7	0	0	0	0	0	0	0
H/TOT	39	1	1	0	0	0	41	0	0	0	0	0	0	0
18:00	7	0	0	0	0	0	7	1	0	0	0	0	0	1
18:15	3	1	0	0	0	0	4	0	0	0	0	0	0	0
18:30	9	2	0	0	0	0	11	0	0	0	0	0	0	0
18:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0
H/TOT	22	3	0	0	0	0	25	1	0	0	0	0	0	1
P/TOT	244	35	34	26	0	2	341	4	3	1	0	0	0	8



7804 / HAFAN Y MOR
AUGUST 2017
CLASSIFIED TURNING COUNT

SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	TO ARM A						TOT	FROM ARM A						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	3	1	0	1	1	0	6	2	2	1	0	0	0	5
07:15	8	1	0	0	0	0	9	3	0	0	0	1	0	4
07:30	2	2	0	1	1	0	6	2	3	1	1	0	0	7
07:45	6	1	2	0	0	0	9	5	2	2	0	0	0	9
H/TOT	19	5	2	2	2	0	30	12	7	4	1	1	0	25
08:00	3	2	3	0	1	0	9	4	1	1	2	0	0	8
08:15	3	0	0	0	0	0	3	10	0	1	0	1	0	12
08:30	0	2	1	1	0	0	4	11	2	1	1	1	1	17
08:45	6	0	2	1	1	0	10	20	2	1	0	0	0	23
H/TOT	12	4	6	2	2	0	26	45	5	4	3	2	1	60
09:00	6	3	1	1	0	0	11	12	3	2	2	0	0	19
09:15	11	2	1	0	1	0	15	16	2	0	0	1	0	19
09:30	13	1	3	0	0	0	17	28	1	2	1	0	0	32
09:45	7	2	0	2	2	0	13	15	0	2	1	1	0	19
H/TOT	37	8	5	3	3	0	56	71	6	6	4	2	0	89
10:00	10	3	1	2	1	0	17	17	4	1	1	1	0	24
10:15	11	0	0	1	1	0	13	19	0	0	0	2	0	21
10:30	11	2	1	0	0	0	14	22	1	0	1	0	0	24
10:45	12	0	4	0	1	0	17	26	2	0	1	0	0	29
H/TOT	44	5	6	3	3	0	61	84	7	1	3	3	0	98
11:00	8	2	1	0	0	0	11	15	1	2	1	1	0	20
11:15	9	2	1	1	1	0	14	16	0	1	2	1	0	20
11:30	10	2	0	1	0	0	13	27	1	1	2	0	0	31
11:45	18	3	0	1	1	0	23	25	1	3	0	0	0	29
H/TOT	45	9	2	3	2	0	61	83	3	7	5	2	0	100
12:00	10	3	1	2	0	0	16	20	2	1	0	1	0	24
12:15	15	3	1	1	0	0	20	16	4	0	0	2	0	22
12:30	10	1	1	1	1	0	14	10	4	3	0	0	0	17
12:45	10	2	3	2	1	0	18	11	1	0	0	1	0	13
H/TOT	45	9	6	6	2	0	68	57	11	4	0	4	0	76
13:00	10	1	1	0	0	0	12	10	2	0	2	0	0	14
13:15	10	3	2	1	1	0	17	17	1	2	0	1	0	21
13:30	7	2	2	0	0	0	11	10	5	2	0	0	0	17
13:45	7	3	2	2	1	0	15	13	2	4	1	1	0	21
H/TOT	34	9	7	3	2	0	55	50	10	8	3	2	0	73
14:00	12	4	3	1	0	1	21	15	2	2	0	1	1	21
14:15	13	1	1	1	0	0	16	22	2	1	0	1	0	26
14:30	12	1	1	1	1	0	16	17	1	2	1	0	0	21
14:45	15	0	2	1	1	0	19	19	0	0	0	0	0	19
H/TOT	52	6	7	4	2	1	72	73	5	5	1	2	1	87
15:00	12	2	2	2	0	1	19	17	2	2	2	2	1	26
15:15	15	1	1	0	0	0	17	13	3	2	0	1	0	19
15:30	18	9	0	0	2	0	29	17	5	1	0	1	0	24
15:45	21	0	0	0	1	0	22	17	2	0	0	1	0	20
H/TOT	66	12	3	2	3	1	87	64	12	5	2	5	1	89
16:00	14	3	0	0	0	1	18	18	0	3	0	0	0	21
16:15	14	4	1	1	0	0	20	12	1	1	0	2	0	16
16:30	15	3	1	0	1	0	20	20	1	1	0	0	0	22
16:45	21	2	1	0	0	0	24	14	2	0	0	0	1	17
H/TOT	64	12	3	1	1	1	82	64	4	5	0	2	1	76
17:00	17	2	0	0	0	0	19	11	1	0	2	1	0	15
17:15	28	0	2	0	1	0	31	10	0	0	1	1	0	12
17:30	19	1	0	0	0	0	20	12	0	1	0	0	0	13
17:45	16	1	0	0	0	0	17	17	0	0	0	0	0	17
H/TOT	80	4	2	0	1	0	87	50	1	1	3	2	0	57
18:00	15	0	0	0	1	1	17	20	0	0	1	1	1	23
18:15	9	1	0	0	0	0	10	13	0	1	0	0	0	14
18:30	11	2	0	0	0	0	13	6	0	0	0	0	0	6
18:45	6	0	0	0	0	0	6	8	2	1	0	0	0	11
H/TOT	41	3	0	0	1	1	46	47	2	2	1	1	1	54
P/TOT	539	86	49	29	24	4	731	700	73	52	26	28	5	884



SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	TO ARM B						TOT	FROM ARM B						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	8	3	1	0	0	0	12	8	7	2	1	1	0	19
07:15	11	4	2	1	1	0	19	19	4	0	0	0	0	23
07:30	11	6	3	0	0	0	20	17	7	1	0	1	0	26
07:45	22	7	1	1	0	0	31	27	6	3	0	0	0	36
H/TOT	52	20	7	2	1	0	82	71	24	6	1	2	0	104
08:00	17	9	3	0	0	0	29	35	8	2	0	1	0	46
08:15	40	6	4	2	1	0	53	31	2	2	0	0	0	35
08:30	48	8	2	0	1	1	60	51	7	2	0	2	1	63
08:45	57	8	2	2	0	0	69	38	6	3	0	1	0	48
H/TOT	162	31	11	4	2	1	211	155	23	9	0	4	1	192
09:00	46	10	4	0	0	0	60	60	3	4	2	0	0	69
09:15	31	5	4	2	1	1	44	61	11	3	3	1	0	79
09:30	47	5	3	0	1	0	56	94	7	1	1	0	1	104
09:45	47	6	2	1	1	0	57	78	7	2	2	2	0	91
H/TOT	171	26	13	3	3	1	217	293	28	10	8	3	1	343
10:00	35	10	3	0	1	0	49	95	2	2	0	2	0	101
10:15	50	6	1	1	2	0	60	98	2	2	3	1	1	107
10:30	48	2	2	0	0	0	52	84	9	1	0	0	0	94
10:45	60	8	1	0	0	0	69	99	11	2	0	1	0	113
H/TOT	193	26	7	1	3	0	230	376	24	7	3	4	1	415
11:00	62	3	2	0	2	0	69	89	8	8	2	0	0	107
11:15	42	6	2	0	1	0	51	88	7	1	1	1	1	99
11:30	68	10	4	1	0	0	83	106	8	1	0	1	0	116
11:45	69	3	5	1	0	0	78	88	9	2	0	1	0	100
H/TOT	241	22	13	2	3	0	281	371	32	12	3	3	1	422
12:00	65	12	2	1	1	0	81	80	9	3	0	0	0	92
12:15	66	5	2	0	1	0	74	92	8	2	0	0	0	102
12:30	69	11	4	0	0	0	84	80	6	0	1	1	0	88
12:45	50	9	0	1	1	0	61	68	7	4	2	1	0	82
H/TOT	250	37	8	2	3	0	300	320	30	9	3	2	0	364
13:00	63	5	1	0	0	0	69	53	8	2	0	0	0	63
13:15	70	2	3	0	1	1	77	63	6	1	3	1	0	74
13:30	83	7	3	0	0	0	93	64	8	3	0	0	0	75
13:45	72	3	2	0	1	1	79	55	5	1	0	2	0	63
H/TOT	288	17	9	0	2	2	318	235	27	7	3	3	0	275
14:00	91	7	1	1	1	0	101	47	10	3	0	0	1	61
14:15	89	12	3	0	1	1	106	49	8	0	1	0	1	59
14:30	103	9	2	0	1	0	115	59	6	1	0	1	2	69
14:45	96	4	1	0	0	0	101	63	8	1	1	1	0	74
H/TOT	379	32	7	1	3	1	423	218	32	5	2	2	4	263
15:00	89	6	2	0	1	1	99	57	6	3	0	1	0	67
15:15	102	9	0	0	1	1	113	70	10	2	2	0	0	84
15:30	108	9	1	1	1	3	123	58	9	1	0	2	0	70
15:45	107	14	1	0	1	0	123	66	9	3	0	1	0	79
H/TOT	406	38	4	1	4	5	458	251	34	9	2	4	0	300
16:00	91	10	2	0	1	1	105	57	9	0	1	0	1	68
16:15	96	7	1	0	2	0	106	74	7	2	1	0	0	84
16:30	91	8	0	0	1	0	100	74	8	1	0	1	2	86
16:45	107	8	1	0	0	1	117	65	9	1	0	1	0	76
H/TOT	385	33	4	0	4	2	428	270	33	4	2	2	3	314
17:00	92	5	1	2	1	0	101	68	11	1	0	0	1	81
17:15	96	12	0	1	1	0	110	87	4	2	1	1	0	95
17:30	116	6	1	0	0	0	123	48	1	0	0	0	0	49
17:45	88	6	0	1	1	0	96	43	4	0	0	0	0	47
H/TOT	392	29	2	4	3	0	430	246	20	3	1	1	1	272
18:00	74	8	0	0	3	1	86	47	4	0	0	2	1	54
18:15	81	5	1	0	0	0	87	28	2	1	0	0	0	31
18:30	58	6	1	0	0	0	65	21	0	0	0	0	0	21
18:45	64	8	1	0	0	0	73	26	2	0	0	0	0	28
H/TOT	277	27	3	0	3	1	311	122	8	1	0	2	1	134
P/TOT	3196	338	88	20	34	13	3689	2928	315	82	28	32	13	3398



SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	TO ARM C						TOT	FROM ARM C						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	0	0	0	0	0	0	0	0	2	0	0	0	0	2
07:15	1	0	0	0	0	0	1	3	1	0	0	0	0	4
07:30	1	1	0	0	0	0	2	2	0	0	0	0	0	2
07:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
H/TOT	2	1	0	0	0	0	3	7	3	0	0	0	0	10
08:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
08:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	3	0	0	0	0	0	3
09:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1
09:45	0	0	0	0	0	0	0	3	0	0	0	0	0	3
H/TOT	4	0	0	0	0	0	4	4	0	0	0	0	0	4
10:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
10:45	1	0	1	0	0	0	2	2	0	1	0	0	0	3
H/TOT	2	0	1	0	0	0	3	3	0	1	0	0	0	4
11:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1
11:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
11:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1
H/TOT	5	0	0	0	0	0	5	5	0	0	0	0	0	5
12:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	1	2	0	0	0	0	3	1	1	0	0	0	0	2
12:45	2	1	0	0	0	0	3	1	0	0	0	0	0	1
H/TOT	4	3	0	0	0	0	7	2	1	0	0	0	0	3
13:00	0	0	0	0	0	0	0	2	1	0	0	0	0	3
13:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0
13:30	0	1	0	0	0	0	1	0	0	0	0	0	0	0
13:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
H/TOT	4	1	0	0	0	0	5	3	1	0	0	0	0	4
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	1	0	0	0	0	0	1	2	0	0	0	0	0	2
14:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1
14:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	3	0	0	0	0	0	3	4	0	0	0	0	0	4
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	3	1	0	0	0	0	4	2	0	0	0	0	0	2
15:30	6	0	0	0	0	0	6	7	0	0	0	0	0	7
15:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	9	1	0	0	0	0	10	10	0	0	0	0	0	10
16:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0
16:15	3	0	0	0	0	0	3	3	0	0	0	0	0	3
16:30	1	0	0	0	0	0	1	2	0	0	0	0	0	2
16:45	1	1	0	0	0	0	2	0	0	0	0	0	0	0
H/TOT	8	1	0	0	0	0	9	5	0	0	0	0	0	5
17:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	3	0	0	0	0	0	3	1	1	0	0	0	0	2
17:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
H/TOT	5	0	0	0	0	0	5	3	1	0	0	0	0	4
18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
18:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
18:30	3	0	0	0	0	0	3	1	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	4	0	0	0	0	0	4	3	0	0	0	0	0	3
P/TOT	51	7	1	0	0	0	59	52	6	1	0	0	0	59



SITE: 2

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

TIME	TO ARM D						TOT	FROM ARM D						TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL		CAR	LGV	OGV1	OGV2	PSV	MCL	
07:00	7	10	3	1	0	0	21	8	3	1	1	0	0	13
07:15	18	5	0	0	0	0	23	13	5	2	1	0	0	21
07:30	17	6	2	1	0	0	26	10	5	3	1	0	0	19
07:45	27	6	3	0	0	0	36	21	6	1	1	0	0	29
H/TOT	69	27	8	2	0	0	106	52	19	7	4	0	0	82
08:00	32	7	1	2	0	0	42	13	9	4	0	0	0	26
08:15	33	2	2	0	0	0	37	34	6	3	2	0	0	45
08:30	55	6	2	1	2	1	67	40	7	2	1	0	0	50
08:45	40	6	3	0	0	0	49	45	6	3	3	0	0	57
H/TOT	160	21	8	3	2	1	195	132	28	12	6	0	0	178
09:00	59	2	5	4	0	0	70	41	9	4	1	0	0	55
09:15	62	9	3	3	0	0	77	27	3	5	2	0	1	38
09:30	104	7	2	2	0	1	116	43	5	5	0	1	0	54
09:45	82	5	4	2	0	0	93	40	6	2	2	0	0	50
H/TOT	307	23	14	11	0	1	356	151	23	16	5	1	1	197
10:00	103	5	3	1	1	0	113	35	12	4	2	0	0	53
10:15	100	2	2	3	0	1	108	44	6	1	2	0	0	53
10:30	89	8	1	1	0	0	99	43	2	3	0	0	0	48
10:45	99	12	2	1	0	0	114	45	7	5	0	0	0	57
H/TOT	391	27	8	6	1	1	434	167	27	13	4	0	0	211
11:00	89	8	9	3	0	0	109	56	4	2	0	1	0	63
11:15	95	6	1	3	0	1	106	42	7	2	1	0	0	52
11:30	114	7	2	2	1	0	126	57	10	4	2	0	0	73
11:45	88	8	3	0	0	0	99	63	4	3	2	0	0	72
H/TOT	386	29	15	8	1	1	440	218	25	11	5	1	0	260
12:00	85	8	4	0	0	0	97	61	12	3	3	0	0	79
12:15	95	8	2	0	1	0	106	68	4	3	1	0	0	76
12:30	77	8	3	1	0	0	89	66	11	5	1	0	0	83
12:45	72	6	3	1	0	0	82	54	10	2	2	0	0	68
H/TOT	329	30	12	2	1	0	374	249	37	13	7	0	0	306
13:00	55	10	2	2	0	0	69	63	5	2	0	0	0	70
13:15	63	6	0	3	0	0	72	66	4	2	1	0	1	74
13:30	63	8	5	0	0	0	76	79	5	5	0	0	0	89
13:45	58	4	4	1	1	0	68	69	3	3	2	0	1	78
H/TOT	239	28	11	6	1	0	285	277	17	12	3	0	2	311
14:00	50	7	5	0	0	1	63	91	6	4	2	0	0	103
14:15	56	8	1	1	0	1	67	86	11	4	1	0	1	103
14:30	61	6	3	1	0	2	73	101	9	3	1	1	0	115
14:45	68	8	1	0	0	0	77	96	4	3	0	0	0	103
H/TOT	235	29	10	2	0	4	280	374	30	14	4	1	1	424
15:00	59	7	3	2	2	0	73	86	7	2	2	0	1	98
15:15	67	10	3	2	0	0	82	102	8	0	0	0	1	111
15:30	61	9	2	0	0	0	72	111	13	1	1	0	3	129
15:45	66	11	3	0	0	0	80	110	14	1	0	0	0	125
H/TOT	253	37	11	4	2	0	307	409	42	4	3	0	5	463
16:00	55	6	3	1	0	1	66	88	10	2	0	1	2	103
16:15	74	5	1	1	0	0	81	98	8	0	1	0	0	107
16:30	81	6	2	0	0	2	91	92	8	1	0	1	0	102
16:45	60	8	0	0	1	0	69	110	8	1	0	0	0	119
H/TOT	270	25	6	2	1	3	307	388	34	4	1	2	2	431
17:00	67	11	1	0	0	1	80	97	6	1	0	0	0	104
17:15	75	4	1	1	0	0	81	102	12	1	0	0	0	115
17:30	40	1	0	0	0	0	41	117	6	0	0	0	0	123
17:45	40	3	0	0	0	0	43	84	6	0	1	1	0	92
H/TOT	222	19	2	1	0	1	245	400	30	2	1	1	0	434
18:00	50	4	0	1	1	0	56	71	8	0	0	2	0	81
18:15	26	2	1	0	0	0	29	76	6	0	0	0	0	82
18:30	19	0	0	0	0	0	19	63	8	1	0	0	0	72
18:45	26	2	1	0	0	0	29	61	6	1	0	0	0	68
H/TOT	121	8	2	1	1	0	133	271	28	2	0	2	0	303
P/TOT	2982	303	107	48	10	12	3462	3088	340	110	43	8	11	3600



APPENDIX C

Queue Length Data

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
 Lane numbering is outwards from the kerb in the direction of travel.
 When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

	ARM A		ARM B	ARM C
TIME	LANE 1	LANE 2	LANE 1	LANE 1
07:00	0	0	0	0
07:05	0	0	0	0
07:10	0	0	0	0
07:15	0	0	0	0
07:20	0	0	0	0
07:25	0	0	0	0
07:30	0	0	0	0
07:35	0	0	0	0
07:40	0	0	0	0
07:45	0	0	0	0
07:50	0	0	0	0
07:55	0	0	0	0
08:00	0	0	0	0
08:05	0	0	0	0
08:10	0	0	0	0
08:15	0	0	0	0
08:20	0	0	0	0
08:25	0	0	0	0
08:30	0	0	0	0
08:35	0	0	0	0
08:40	0	0	0	0
08:45	0	0	0	0
08:50	0	0	0	0
08:55	0	0	0	0
09:00	0	0	0	0
09:05	0	0	0	0
09:10	0	0	0	0
09:15	0	0	0	0
09:20	0	0	0	0
09:25	0	0	0	0
09:30	0	0	0	1
09:35	0	0	0	0
09:40	0	0	0	0
09:45	0	0	0	0
09:50	0	0	0	0
09:55	0	0	0	0
10:00	0	0	0	0
10:05	0	0	0	0
10:10	0	0	0	0
10:15	0	0	0	0
10:20	0	0	0	0
10:25	0	0	0	0
10:30	0	0	0	0
10:35	0	0	0	0
10:40	0	0	0	0
10:45	0	0	0	0
10:50	0	0	0	0
10:55	0	0	0	0

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
 Lane numbering is outwards from the kerb in the direction of travel.
 When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

	ARM A		ARM B	ARM C
TIME	LANE 1	LANE 2	LANE 1	LANE 1
11:00	0	0	0	1
11:05	0	0	0	0
11:10	0	0	0	0
11:15	0	0	0	0
11:20	0	0	0	0
11:25	0	0	0	0
11:30	0	0	2	0
11:35	0	0	0	0
11:40	0	0	0	0
11:45	0	0	0	2
11:50	0	0	0	0
11:55	0	0	1	0
12:00	0	0	0	0
12:05	0	0	0	0
12:10	0	0	0	0
12:15	0	0	0	0
12:20	0	0	0	0
12:25	0	0	0	0
12:30	0	0	0	0
12:35	0	0	0	0
12:40	0	0	0	0
12:45	0	0	0	0
12:50	0	0	0	0
12:55	0	0	0	0
13:00	0	0	0	0
13:05	0	0	0	0
13:10	0	0	0	0
13:15	0	0	0	0
13:20	0	0	0	0
13:25	0	0	0	0
13:30	0	0	0	0
13:35	0	0	0	0
13:40	0	0	0	0
13:45	0	0	0	0
13:50	0	0	0	0
13:55	0	0	0	0
14:00	0	0	0	0
14:05	0	0	0	0
14:10	0	0	0	1
14:15	0	0	0	0
14:20	0	0	0	0
14:25	0	0	0	0
14:30	0	0	0	0
14:35	0	0	0	0
14:40	0	0	0	0
14:45	0	0	0	0
14:50	0	0	0	0
14:55	0	0	0	0

SITE: 1

DATE: 18/08/2017

LOCATION: A497 / Hafan Y Mor Holiday Park

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
 Lane numbering is outwards from the kerb in the direction of travel.
 When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

	ARM A		ARM B	ARM C
TIME	LANE 1	LANE 2	LANE 1	LANE 1
15:00	0	0	0	0
15:05	0	0	0	0
15:10	0	0	0	0
15:15	0	0	0	0
15:20	0	0	0	0
15:25	0	0	0	0
15:30	0	0	0	0
15:35	0	0	0	0
15:40	0	0	0	0
15:45	0	0	0	0
15:50	0	0	0	0
15:55	0	0	0	0
16:00	0	0	0	0
16:05	0	0	0	2
16:10	0	0	0	0
16:15	0	0	0	0
16:20	0	0	0	0
16:25	0	0	0	0
16:30	0	0	0	0
16:35	0	0	0	0
16:40	0	0	0	0
16:45	0	0	0	0
16:50	0	0	0	0
16:55	0	0	0	0
17:00	0	0	0	0
17:05	0	0	0	0
17:10	0	0	0	0
17:15	0	0	0	0
17:20	0	0	0	0
17:25	0	0	0	0
17:30	0	0	0	0
17:35	0	0	0	0
17:40	0	0	0	0
17:45	0	0	0	0
17:50	0	0	0	0
17:55	0	0	0	0
18:00	0	0	0	0
18:05	0	0	0	0
18:10	2	0	0	1
18:15	0	0	0	0
18:20	0	0	0	0
18:25	0	0	0	0
18:30	0	0	0	0
18:35	0	0	0	0
18:40	0	0	0	0
18:45	0	0	0	0
18:50	0	0	0	0
18:55	0	0	0	0
19:00	0	0	0	0
MAX QUEUE	2	0	2	2

SITE: 1

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
Lane numbering is outwards from the kerb in the direction of travel.
When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

	ARM A	ARM B		ARM C	ARM D
TIME	LANE 1	LANE 1	LANE 2	LANE 1	LANE 1
07:00	0	0	0	0	0
07:05	0	0	0	0	0
07:10	0	0	0	0	0
07:15	0	0	0	0	0
07:20	0	0	0	0	0
07:25	0	0	0	0	0
07:30	0	0	0	0	0
07:35	0	0	0	0	0
07:40	0	0	0	0	0
07:45	0	0	0	0	0
07:50	0	0	0	0	0
07:55	0	0	0	0	0
08:00	0	0	0	0	0
08:05	0	0	0	0	0
08:10	0	0	0	0	0
08:15	0	0	0	0	0
08:20	0	0	0	0	0
08:25	0	0	0	0	0
08:30	0	0	0	0	0
08:35	0	0	0	0	0
08:40	0	0	0	0	0
08:45	0	0	0	0	0
08:50	0	0	0	0	0
08:55	0	0	0	0	0
09:00	0	0	0	0	0
09:05	0	0	0	0	0
09:10	0	0	0	0	0
09:15	0	0	0	0	0
09:20	0	0	0	0	0
09:25	0	0	0	0	0
09:30	0	2	0	0	0
09:35	0	0	0	0	0
09:40	0	0	0	0	0
09:45	0	0	0	0	0
09:50	0	0	0	0	0
09:55	0	0	0	0	0
10:00	0	0	0	0	0
10:05	0	0	0	0	0
10:10	0	0	0	0	0
10:15	0	0	0	0	0
10:20	1	0	0	0	0
10:25	0	0	0	0	0
10:30	0	0	0	0	0
10:35	0	0	0	0	0
10:40	1	0	0	0	0
10:45	0	0	0	0	0
10:50	0	0	0	0	0
10:55	0	0	0	0	0

SITE: 1

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
Lane numbering is outwards from the kerb in the direction of travel.
When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

	ARM A	ARM B		ARM C	ARM D
TIME	LANE 1	LANE 1	LANE 2	LANE 1	LANE 1
11:00	0	0	0	0	0
11:05	0	0	0	0	0
11:10	0	0	0	0	0
11:15	0	0	0	0	0
11:20	0	0	0	0	0
11:25	0	0	0	0	0
11:30	0	0	0	0	0
11:35	0	0	0	0	0
11:40	0	0	0	0	0
11:45	0	0	0	0	0
11:50	0	0	0	0	0
11:55	0	0	0	0	0
12:00	0	0	0	0	0
12:05	0	0	0	0	0
12:10	0	0	0	0	0
12:15	0	0	0	0	0
12:20	0	0	0	0	0
12:25	0	0	0	0	0
12:30	0	0	0	0	0
12:35	0	0	0	0	0
12:40	0	0	0	0	0
12:45	0	0	0	0	0
12:50	0	0	0	0	0
12:55	0	0	0	0	0
13:00	0	0	0	0	2
13:05	0	0	0	1	0
13:10	0	0	0	0	0
13:15	0	0	0	0	0
13:20	0	0	0	0	0
13:25	0	0	0	0	0
13:30	0	0	0	0	0
13:35	0	0	0	0	0
13:40	0	0	0	0	0
13:45	0	0	0	0	0
13:50	0	0	0	0	0
13:55	0	0	0	0	0
14:00	0	0	0	0	0
14:05	0	0	0	0	0
14:10	0	0	0	0	0
14:15	0	0	0	0	0
14:20	0	0	0	0	0
14:25	0	0	0	0	0
14:30	0	0	0	0	0
14:35	0	0	0	0	0
14:40	0	0	0	0	0
14:45	0	0	0	0	0
14:50	0	0	0	0	0
14:55	0	0	0	0	0

SITE: 1

DATE: 18/08/2017

LOCATION: A497 Afon Wen

DAY: Friday

Notes: All queues are measured in vehicle numbers on the 5-minute interval.
Lane numbering is outwards from the kerb in the direction of travel.
When a junction is signalised, queues are taken at the end of the red phase nearest to the time interval.

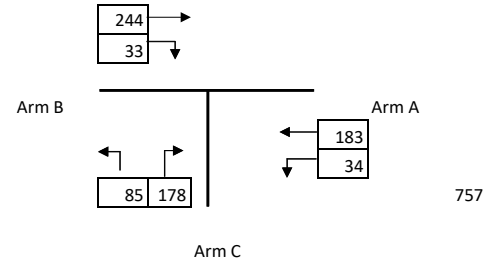
	ARM A	ARM B		ARM C	ARM D
TIME	LANE 1	LANE 1	LANE 2	LANE 1	LANE 1
15:00	0	0	0	0	0
15:05	0	0	0	0	0
15:10	0	0	0	0	0
15:15	0	0	0	0	0
15:20	0	0	0	0	0
15:25	0	0	0	0	0
15:30	0	0	0	0	0
15:35	0	0	0	0	0
15:40	0	0	0	0	0
15:45	0	0	0	0	0
15:50	0	0	0	0	0
15:55	0	0	0	0	0
16:00	0	0	0	0	0
16:05	0	0	0	0	0
16:10	0	0	0	0	0
16:15	0	0	0	0	0
16:20	1	0	0	0	0
16:25	0	0	0	0	0
16:30	0	0	0	0	0
16:35	0	0	0	0	0
16:40	1	0	0	0	0
16:45	0	0	0	0	0
16:50	0	0	0	0	0
16:55	0	0	0	0	0
17:00	0	0	0	0	0
17:05	0	0	0	0	0
17:10	0	0	0	0	0
17:15	0	0	0	0	0
17:20	0	0	0	0	0
17:25	0	0	0	0	0
17:30	0	0	0	0	0
17:35	0	0	0	0	0
17:40	0	0	0	0	0
17:45	0	0	0	0	0
17:50	0	0	0	0	0
17:55	0	0	0	0	0
18:00	0	0	0	0	0
18:05	0	0	0	0	0
18:10	0	0	0	0	0
18:15	0	0	0	0	0
18:20	0	0	0	0	0
18:25	0	0	0	0	0
18:30	0	0	0	0	0
18:35	0	0	0	0	0
18:40	0	0	0	0	0
18:45	0	0	0	0	0
18:50	0	0	0	0	0
18:55	0	0	0	0	0
19:00	0	0	0	0	0
MAX QUEUE	1	2	0	1	2

Appendix C

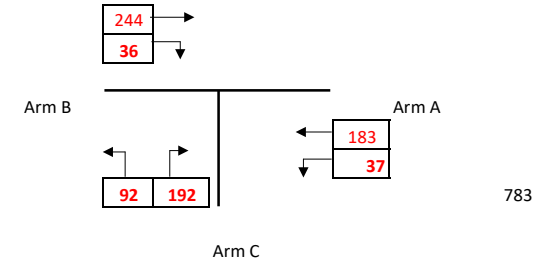
Trip Distribution

AM HOLIDAY PARK PEAK: 10:00 - 11:00

Arm Destination					
Arm Origin	A	B	C	Total	
	A	0	183	34	217
	B	244	0	33	277
	C	178	85	0	263
	Total	422	268	67	

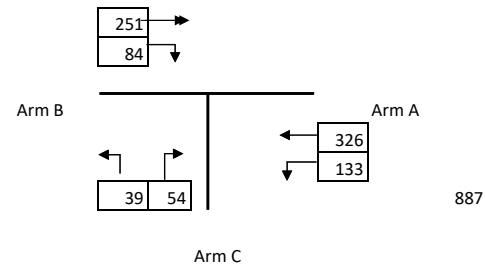


AM HOL PEAK + Dev

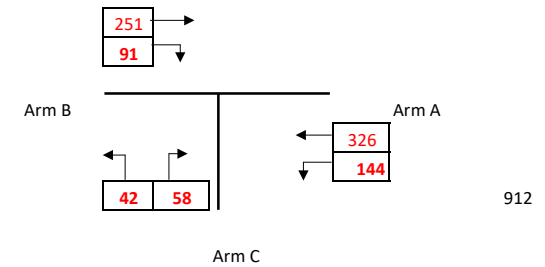


PM HOLIDAY PARK PEAK: 15:00 - 16:00

Arm Destination					
Arm Origin	A	B	C	Total	
	A	0	326	133	459
	B	251	1	84	336
	C	54	39	0	93
	Total	305	366	217	



PM HOL PEAK + Dev



Appendix D

ARCADY Results

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462
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Filename: Hafan Y Mor Site Access - A497 Roundabout.j9

Path: F:\2400-2499\2471 Hafan Y Mor\Modelling

Report generation date: 10-Dec-19 14:55:12

- »Existing Layout - Existing, AM Peak
- »Existing Layout - Existing, PM Peak
- »Existing Layout - Existing + Development, AM Peak
- »Existing Layout - Existing + Development, PM Peak

Summary of junction performance

	AM Peak		PM Peak	
	Queue (Veh)	RFC	Queue (Veh)	RFC
Existing Layout - Existing				
1 - A497 (E)	0.1	0.10	0.3	0.21
2 - Hafan Y Mor Park Access	0.3	0.22	0.1	0.08
3 - A497 (W)	0.2	0.17	0.2	0.19
Existing Layout - Existing + Development				
1 - A497 (E)	0.1	0.10	0.3	0.21
2 - Hafan Y Mor Park Access	0.3	0.24	0.1	0.09
3 - A497 (W)	0.2	0.17	0.2	0.20

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

File summary

File Description

Title	Hafan Y Mor
Location	Hafan Y Mor Holiday Park
Site number	
Date	10-Dec-19
Version	3
Status	
Identifier	
Client	Lichfields
Jobnumber	2471
Enumerator	ML
Description	

Units

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



Flows show original traffic demand (veh/h).

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Existing	AM Peak		ONE HOUR	09:45	11:15	15
D2	Existing	PM Peak		ONE HOUR	14:45	16:15	15
D3	Existing + Development	AM Peak	Net increase of 109 holiday units	ONE HOUR	09:45	11:15	15
D4	Existing + Development	PM Peak	Net increase of 109 holiday units	ONE HOUR	14:45	16:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Existing Layout	100.000

Existing Layout - Existing, AM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Hafan Y Mor Site access - A497 Roundabout	Standard Roundabout		1, 2, 3	2.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A497 (E)	
2	Hafan Y Mor Park Access	
3	A497 (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A497 (E)	6.50	8.00	28.4	41.6	45.0	12.5	
2 - Hafan Y Mor Park Access	3.50	6.20	6.4	20.1	45.0	22.5	
3 - A497 (W)	4.30	6.90	18.7	64.3	45.0	13.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A497 (E)	0.822	2561
2 - Hafan Y Mor Park Access	0.586	1446
3 - A497 (W)	0.718	2019

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Existing	AM Peak	ONE HOUR	09:45	11:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A497 (E)		✓	217	100.000
2 - Hafan Y Mor Park Access		✓	263	100.000
3 - A497 (W)		✓	277	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
1 - A497 (E)		0	34	183
2 - Hafan Y Mor Park Access		178	0	85
3 - A497 (W)		244	33	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
1 - A497 (E)		0	3	3
2 - Hafan Y Mor Park Access		0	0	1
3 - A497 (W)		5	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A497 (E)	0.10	1.62	0.1	A
2 - Hafan Y Mor Park Access	0.22	3.49	0.3	A
3 - A497 (W)	0.17	2.43	0.2	A

Existing Layout - Existing, PM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Hafan Y Mor Site access - A497 Roundabout	Standard Roundabout		1, 2, 3	2.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	Existing	PM Peak	ONE HOUR	14:45	16:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A497 (E)		✓	459	100.000
2 - Hafan Y Mor Park Access		✓	93	100.000
3 - A497 (W)		✓	335	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
From	1 - A497 (E)	0	133	326
	2 - Hafan Y Mor Park Access	54	0	39
	3 - A497 (W)	251	84	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
From	1 - A497 (E)	0	0	2
	2 - Hafan Y Mor Park Access	0	0	0
	3 - A497 (W)	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A497 (E)	0.21	1.85	0.3	A
2 - Hafan Y Mor Park Access	0.08	3.19	0.1	A
3 - A497 (W)	0.19	2.32	0.2	A

Existing Layout - Existing + Development, AM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Hafan Y Mor Site access - A497 Roundabout	Standard Roundabout		1, 2, 3	2.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	Existing + Development	AM Peak	Net increase of 109 holiday units	ONE HOUR	09:45	11:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A497 (E)		✓	220	100.000
2 - Hafan Y Mor Park Access		✓	284	100.000
3 - A497 (W)		✓	280	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
From	1 - A497 (E)	0	37	183
	2 - Hafan Y Mor Park Access	192	0	92
	3 - A497 (W)	244	36	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
From	1 - A497 (E)	0	3	3
	2 - Hafan Y Mor Park Access	0	0	1
	3 - A497 (W)	5	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A497 (E)	0.10	1.63	0.1	A
2 - Hafan Y Mor Park Access	0.24	3.57	0.3	A
3 - A497 (W)	0.17	2.45	0.2	A

Existing Layout - Existing + Development, PM Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Hafan Y Mor Site access - A497 Roundabout	Standard Roundabout		1, 2, 3	2.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	Existing + Development	PM Peak	Net increase of 109 holiday units	ONE HOUR	14:45	16:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A497 (E)		✓	470	100.000
2 - Hafan Y Mor Park Access		✓	100	100.000
3 - A497 (W)		✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
From	1 - A497 (E)	0	144	326
	2 - Hafan Y Mor Park Access	58	0	42
	3 - A497 (W)	251	91	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - A497 (E)	2 - Hafan Y Mor Park Access	3 - A497 (W)
1 - A497 (E)		0	0	2
2 - Hafan Y Mor Park Access		0	0	0
3 - A497 (W)		4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1 - A497 (E)	0.21	1.87	0.3	A
2 - Hafan Y Mor Park Access	0.09	3.21	0.1	A
3 - A497 (W)	0.20	2.34	0.2	A



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