

**PANDA WASTE SERVICES  
FACILITY AT RATHDRINAGH, CO. MEATH**

**Study of Traffic Generation Rates 2009-2013  
& Traffic Impact Assessment**

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## 1 INTRODUCTION

### 1.1 Summary

1.1.1 This report assesses existing and future traffic conditions on the local roads network in the vicinity of the PANDA waste management facility at Rathdrinagh Cross Roads in County Meath. The assessment compares future year traffic scenarios which take account of the current proposed intensification of on-site activities. For the purposes of the traffic assessment it is assumed that such intensification will result in the current facility accepting the maximum annual waste tonnage of 250,000 as allowed under the current planning permission.

1.1.2 The traffic assessment is based upon traffic surveys undertaken in 2006 and in March 2013. The assessments also considered comprehensive weighbridge data for the seven year period 2006 to 2012. Based upon the traffic data, the proposed development is calculated as likely to generate an additional 63 HGV trips per day during the typical weekday. This figure is the 85<sup>th</sup> percentile figure recommended by the NRA as appropriate for the assessment of traffic impact.

1.1.3 From the calculations and assessments provided herein, it is considered that the development related traffic is not likely to have a significant adverse impact on the operation of the receiving local roads network in the vicinity of the Panda Waste Management Facility. The impact of the proposal over the current traffic flows at the site is categorised as likely to be imperceptible to existing users of the receiving road network.

### 1.2 Background

1.2.1 The existing waste management facility is located proximate to the Rathdrinagh Crossroads on the N2 approximately 4km south of Slane and is operated by Panda Waste Services Ltd.

1.2.2 In 2007 Meath County Council granted a planning permission under Planning File Reference SA/60656 to construct a third building and to extend the site area to allow an expansion of recycling activities. Accompanying that application was a Traffic

Impact Assessment prepared by **Trafficwise** Ltd. In November 2006 which provided a detailed analysis of the receiving road network and the impact arising directly from the proposed increase in waste acceptance from 165,000 t/a to 250,000 t/a.

1.2.3 In determining application SA/60656 Meath County Council Roads Department considered the existing roads infrastructure serving the site had sufficient capacity to accommodate the proposed increase in waste acceptance.

1.2.4 In May 2007, Panda applied to the EPA to revise the waste licence to increase the license area, construct Building 3 and increase the volume of waste inputs to 250,000 tonnes per annum. The revised Licence W0140-03 was issued in March 2009 and Building 3 was completed in 2010.

1.2.5 In 2009, Panda applied for planning permission to construct a new building (Building 4) to house a biological treatment plant and to manufacture Refuse Derived Fuel in Building 3. The Council granted permission under Planning File Reference SA/900875.

1.2.6 In September 2009, Panda applied to the EPA to revise the waste licence to extend the licence area and construct Building 4 and to approve the expansion of the RDF manufacturing process in Building 3.

### 1.3 **Study Methodology**

1.3.1 **Trafficwise** Ltd. has been retained to undertake a study into the historic traffic generation and relative affects of same upon the capacity and operation of the receiving road network and access arrangements serving the existing Panda Waste Services waste management facility located close to the N2 National Primary Road at Rathdrinagh, Beauparc, Co Meath.

1.3.2 Based upon weighbridge records, this report provides a comprehensive review of waste traffic generation rates recorded at the site over the period 2006 to 2012. Recent 2013 traffic surveys undertaken at the Rathdrinagh Crossroads identify the existing traffic conditions prevailing on the receiving road network.

- 1.3.3 Traffic surveys were carried out on behalf of **Trafficwise** Ltd. at the Rathdrinagh Crossroads in 2006. In the interest of a comprehensive appraisal of the receiving road traffic environment the report provides an assessment of the traffic flow variations between the traffic counts on the various approach arms of the crossroad junction.
- 1.3.4 The report provides a technical assessment of the relative level of impact which the existing development has on the local road network whilst operating at current waste input levels as compared to when operating at the permitted maximum waste acceptance rate of 250,000 tonnes per annum.
- 1.3.5 The report identifies how existing and future traffic associated with the permitted development can be accommodated on the existing local road network. Where considered appropriate, measures are discussed regarding the management of traffic associated with the proposed development.
- 1.3.6 In line with the document Spatial Planning and National Roads (Guidelines for Planning Authorities – January 2012), Chapter 3, ‘Development Management and Roads’, the technical approach and methodology adopted accords with the Traffic Management Guidelines and the National Road Authority (NRA) Traffic and Transport Assessment Guidelines. The methodology generally accords with the advice of the Chartered Institution of Highways & Transportation (CIHT) document ‘Guidelines for Traffic Impact Assessment’ (September 1994); a document which is recognised by the NRA to represent a structured approach to the preparation of Traffic and Transport Assessments.
- 1.3.7 In accordance with the NRA and CIHT guidelines, the true measure of the impact of the permitted development receiving various volumes of waste will be the incremental difference in the respective volumes of traffic generation measured against the existing and future traffic volumes on the receiving road network. It is anticipated that this recommended approach will provide the decision makers with a comprehensive picture of existing and likely future traffic conditions on the receiving roads environment together with a mechanism upon which the ability or capacity of the receiving road to accept such volumes can be suitably evaluated and determination .

- 1.3.8 The advice to local authorities in Spatial Planning and National Roads is to make sure that development located close to national road and their junctions can be catered for by the design assumptions underpinning such roads and junctions thereby avoiding potentially compromising the capacity and efficiency of the national road. The assessments provided in this traffic assessment will clearly show through appropriate detailed traffic modelling that the traffic generated by the proposed development will not give rise to a premature or unacceptable reduction in the level of service available to road users in the vicinity of the Panda development.

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## 2 EXISTING CONDITIONS

### 2.1 General Location of Site

2.1.1 The site is located at Rathdrinagh Cross Roads on the N2 National Primary Road approximately 4km south of Slane. This area lies within the local authority jurisdiction of Meath County Council.

2.1.2 The facility is bounded to the west by the N2 Dublin to Derry Road and to the north by a minor road known as the Knockcommon Road. The River Boyne flows in an easterly direction approximately 3km north east of the site

2.1.3 Surrounding activity is primarily agricultural, as would be expected in a rural area, however there are some commercial units directly adjacent to the site. There are also a number of residential dwellings immediately to the east along the Knockcommon Road and some residences located along the N2.

### 2.2 Site Access and Road Network

2.2.1 The Knockcommon Road is a single lane road of approximately 6.0m width and is subject to a posted speed limit of 80kph. The site at Rathdrinagh enjoys direct vehicular access to the Knockcommon Road via a single simple priority entrance located on the northern site boundary. This site access was granted planning permission by Meath County Council under Planning File Reference 01/4304 whilst the completed construction of the access was scrutinised and approved under subsequent applications at site in 2002, 2003, 2006 and 2009.

2.2.2 The site access is located approximately 70m to the east of the junction of the Knockcommon Road with the N2. The N2 has a posted speed limit of 100kph locally. The Knockcommon Road together with the N2 mainline carriageway and the L1013 Painestown Road form the staggered junction known as the Rathdrinagh Crossroads. The stagger between the Knockcommon Road and the Painestown Road is the NRA: Design Manual for Roads and Bridges (DMRB) preferred right-left type and the stagger distance is approximately 30m.

2.2.3 The N2 Dublin to Derry Road represents one of the main traffic arteries in the country and is the primary access route to the site. The N2 is a wide single carriageway road characterised by hard shoulders and the provision of ghost island right turning lanes at significant junctions; locally these include McGruders Cross (L1600) to the north, Rathdrinagh Crossroad (L1013) at the development, and the Kentstown Crossroad (R150) and Balrath Crossroad (R153) to the south.

2.2.4 The Knockcommon Road travels past the site in an easterly direction where it leads to Duleek approximately 7km east of the site.

2.2.5 The Painestown Road (L1013) travels from the Rathdrinagh Crossroads in a south-westerly direction where after approximately 6km it eventually connects to the R153 Kentstown to Navan Road. This junction between the Painestown Road and the R153 is located approximately 4km to the west of Navan.

## 2.3 General Condition of Road Infrastructure

2.3.1 The Knockcommon Road was observed to be in good condition during our recent site visit, with proper delineation at its junction with the N2, in accordance with the requirements of the NRA: Traffic Signs Manual.

2.3.2 Access from the N2 into the Knockcommon Road for right turning vehicles is aided by the provision of a ghost island right turning lane. There is also a left turn taper provided between the N2 and Knockcommon Road.

## 2.4 Site Infrastructure

2.4.1 The existing site occupies 4.7 hectares and site layout is shown on O'Callaghan Moran Drawing No 101-102. The majority of the site is either paved (35,000m<sup>2</sup>), or occupied by buildings (10,000m<sup>2</sup>). There are three main waste processing buildings (Buildings 1, 2 and 3) whilst a Lean-to construction houses the C&D processing plant, there is also a skip repair building, a weighbridge with an associated office, and a main administration building. In addition to the buildings there are two Wright Drying Tunnels, three oil storage tanks (above ground), a ground water reservoir (above ground) and underground surface water holding tanks.

## 2.5 Description of Existing and Future Site Activities and Operations

2.5.1 The existing facility at Rathdrinagh is licensed to handle ca. 250,000 tonnes of waste per annum. The existing facility contains the following infrastructure: offices, three recycling buildings for screening and sorting, a concrete yard, a weighbridge, a vehicle parking area and a skip parking area. The existing facility accepts and processes non hazardous mixed MSW together with mixed and source segregated C&I waste and C&D wastes that are primarily collected in the North East Region. Waste processing activities generally include:

- Sorting, separating and compaction of the mixed dry recyclables,
- Baling of the source segregated dry recyclables,
- Mechanical treatment of the mixed MSW, recovery of recyclables and the manufacture of RDF,
- Mechanical treatment of C&D wastes to recover recyclables.

2.5.2 The current Waste Licence allows the composting of 20,000 tonnes of biodegradable wastes annually. It had been the intention to develop a composting process based on the Wright Tunnels, however on account of poor quality product the tunnels are instead used to treat the mixed MSW before it was sent for disposal.

2.5.3 Panda intends to construct the permitted new building (Building 4) on lands north of the existing site boundary to house a biological treatment system comprising dry fermentation anaerobic digestion and composting. The system will treat the residual organic fraction recovered from the 'black bin' waste and source segregated household/commercial food waste. The process will produce a bio-gas that will be used in an on-site Combined Heat and Power (CHP) plant. The electricity generated in the CHP plant will be sent to the National Grid. The heat will be used in the RDF manufacturing process in Building 3. Panda also intends to expand its Refuse Derived Fuel manufacturing process in Building 3 by installing a biomass fuelled drier that will reduce the moisture content of the processed materials thereby increasing both the calorific and market value of the materials. The biomass furnace will form part of the odour control system in Building 3.

2.5.4 C & D wastes are currently processed in a Lean-to construction located along the eastern boundary of the current licensed area. The Lean-to is enclosed on three sides, with the western side open. The processing plant uses a crusher, a screener

(flip-flop) and an enclosed density separator. The crusher and screener are located inside the Lean-to, with the density separator positioned outside. The floor of the Lean-to and the adjacent open yards are concrete paved.

2.5.5 The C&D wastes are initially processed inside Building 2 where they are segregated into different fraction sizes and then transferred to the Lean-To. Heavy items (>1kg), such as concrete blocks and rubble, are passed through the crusher, which produces an inert aggregate. The smaller fraction is passed through the 'flip flop' screen, which produces two fractions. The larger fraction (>12mm) is passed through the density separator, which removes paper and plastics. The materials processed in the 'flip flop' are stored in bays inside the Lean-To. The inert aggregate produced by the crusher is stockpiled in the open yard. The materials from the density separator are stored in roofed bays.

## 2.6 Hours of Operation

2.6.1 The Waste Licence authorises that wastes can be accepted between 08:00 and 18:30 Monday to Friday inclusive and between 09:00 and 14:00hrs on Saturdays. With the exception of the automated composting operations, or as may be necessary in an emergency, the operational hours are 07:30 to 19:00 Monday to Friday and 08:30 and 17:00 on Saturdays. The facility can only operate or accept/dispatch waste on Sundays and Public Holidays subject to the agreement of the Agency.

## 2.7 Local Authority Specific Objectives which may Influence Traffic Conditions

2.7.1 In summarising the current transport policies for County Meath, reference has been made to the Meath County Development Plan 2013-2019.

2.7.2 County Meath is well serviced by the national road network with the M1 Dublin - Belfast, the M2/N2 Dublin - Derry, N3 Dublin to Ballyshannon and M4 Dublin - Galway, traversing through the county linking the Dublin Metropolitan Area to the regions. The national secondary roads N51 and N52 are medium distance through-routes connecting important towns. Improvements in the key strategic transport links serving County Meath in recent times include the following:

- The completion of the M1 Motorway in June 2003

- Construction of the M2 Motorway
- Completion of the N2 Ashbourne Bypass in 2006.
- Completion of the M3 Motorway, providing for bypasses of Dunboyne, Dunshaughlin, Navan and Kells in 2010.
- Construction of the M4 Motorway linking Kilcock, Enfield, Kinnegad
- The advancement of the Slane bypass project to the planning stage (Refused).

2.7.3 Save for isolated junction improvement works and link improvements it is understood that the Council has no proposals to significantly upgrade the section of the N2 in the immediate vicinity of the proposed development site.

2.7.4 The Meath County Development Plan 2013-2019 includes the construction of a bypass of Slane together with the following works near Slane and the development site.

- N52 Fringetown: Re-alignment of approximately 3km of the existing N52
- N51 Dunmoe, Halltown, R164 Junction: Various improvements
- N51 Slane to Louth boundary: Re-alignment including widening of Mattock Bridge, and junction improvements.
- N52 Balrath Junction: Realign N52 and improve junction

2.7.5 In the long term the Dublin Outer Orbital Route has been identified by the Dublin Regional Authority and the Mid-East Regional Authority as a key strategic link between Drogheda-Navan-Trim-Maynooth-Naas-Wicklow. The full development of this project is nonetheless understood as likely to be pushed out beyond 2030.

### 3 QUANTIFICATION OF CURRENT TRAFFIC FLOWS ON LINKS AND JUNCTIONS

#### 3.1 Threshold Approach for a Traffic and Transport Assessment

3.1.1 In Ireland, a Traffic and Transport Statement (TTS) must accompany all planning applications for developments that could potentially act as traffic generators. A Traffic and Transport Statement is a brief outline of the transport requirements for the development and is used as a first step to identify the likely impact of any development. The Traffic and Transport Statement is also used to determine if further, more detailed traffic analysis is required.

3.1.2 An in depth analysis of the impact of a development in terms of traffic is carried out through the preparation of a Traffic and Transport Assessment (TTA). This report is a TTA.

3.1.3 The NRA Traffic and Transport Assessment Guidelines recommend the following thresholds for undertaking a TTA:

*“Applications that exceed any of the following thresholds will be required to produce full TTAs, in addition to completing a TTS. The TTS should summarise the findings of the TTA and briefly outline the mitigating measures proposed by the developer or agent:*

- *Industry GFA in excess of 5,000 sq.m*
- *Distribution and Warehousing GFA in excess of 10,000 sq.m*
- *100 trips (in/out combined) in the peak hour*
- ***Development traffic exceeds 10% of two-way traffic flow on adjoining road***
- ***Development traffic exceeds 5% of two-way traffic flow on adjoining road if congestive or sensitive***
- *100 on-site parking spaces”*

*(Reference-NRA Traffic and Transport Assessment Guidelines: Table 2.2; page 4)*

3.1.4 In accordance with the above advice we have included in our assessment locations on the local roads network considered as having the ‘potential’ to experience traffic

flow fluctuations of between +5% and +10% based upon the current traffic generation of the site versus the potential traffic generation if operating at the permitted waste acceptance capacity of 250,000t/a.

### **3.2 Independent Traffic Surveys**

3.2.1 In establishing the scope of the study it was estimated that the influence of any additional traffic generated by the proposed development was not likely to be significant beyond the immediate vicinity of the existing site.

3.2.2 In the interest of a comprehensive assessment of traffic patterns on the local roads network in the vicinity of the proposed development **Trafficwise** Ltd. has commissioned Abacus Transportation Surveys (Abacus) to carry out 12 hour classified traffic turning count surveys at the entrance to the existing site together with the nearby Rathdrinagh Crossroads.

3.2.3 Historically traffic surveys were carried out by Abacus on Tuesday 24<sup>th</sup> October 2006 over the period 07:00-19:00hrs using video surveillance, a copy of which can be made available upon request. More recently the same surveys were re-commissioned and undertaken on Thursday 14<sup>th</sup> March 2013.

3.2.4 As is normal practice, the surveys were carried out on 'neutral' days of the week since generally traffic flows manifest on a neutral day are considered more likely to be representative of typical traffic conditions on the local roads network. It is also acknowledged that both October and March are accepted as neutral months in traffic terms and include for normal schools related traffic, which can have a significant impact on the operation of the general roads network during the commuter peak hour.

3.2.5 Both surveys at the site access not only record the number of vehicle movements but also the category of vehicle and the entering and exiting the existing Panda development at the Knockcommon Road, but the surveys also record the turning movements undertaken by every Panda vehicle at the Rathdrinagh Crossroad. This exercise was undertaken in the interest of establishing existing traffic distribution patterns. A copy of the 2013 survey data together with a location map of the

junctions surveyed is provided in Appendix A.

#### Identification of Network Peak Traffic Flows – N2 Mainline Traffic

- 3.2.6 The morning and evening peak hour periods for general network traffic flow on the N2 past the site were recorded in both the 2006 and 2013 traffic surveys as being 08:00-09:00hrs and 17:00-18:00hrs respectively. These times correspond to the typical network commuter peak hour periods.
- 3.2.7 The 2006 recorded peak hour accumulative two-way traffic flow on the N2 in the morning period 08:00-09:00hrs is 820 vehicle movements; 694 of which are cars and light vans and 126 HGV. Of these vehicles 485 cars and 69 HGV travelled southbound whilst 209 cars and 57 HGV travelled northbound.
- 3.2.8 In 2013 the recorded peak hour accumulative two-way traffic flow on the N2 in the morning period 08:00-09:00hrs is 636 vehicle movements; 555 of which are cars and light vans and 81 HGV. Of these vehicles 393 cars and 36 HGV travelled southbound whilst 162 cars and 45 HGV travelled northbound.
- 3.2.9 Between 2006 and 2013 during the morning peak hour period 08:00-09:00hrs there has been an overall reduction in general traffic movements on the N2 in the vicinity of the site in the order of 184 vehicles per hour. This is a 22.5% reduction in total daily traffic flows between 2006 and 2013.
- 3.2.10 Between 2006 and 2013 the morning peak hour car and light traffic on the N2 has reduced by 139 vehicles per hour or 20%
- 3.2.11 Between 2006 and 2013 the morning peak hour HGV traffic flows have reduced by 45 HGV per hour or 36%.
- 3.2.12 The 2006 recorded peak hour accumulative two-way traffic flow in the evening period 17:00-18:00hrs on the N2 shows 1,009 vehicle movements; 871 of which are cars and light vans and 138 HGV. Of these vehicles 248 cars and 52 HGV travelled southbound whilst 623 cars and 86 HGV travelled northbound.



- 3.2.13 The 2013 recorded peak hour accumulative two-way traffic flow in the evening period 17:00-18:00hrs on the N2 is 728 vehicle movements, 654 of which are cars and light vans and 74 HGV. Of these vehicles 208 cars and 22 HGV travelled southbound whilst 446 cars and 52 HGV travelled northbound.
- 3.2.14 Between 2006 and 2013 in the evening period 17:00-18:00hrs there has been an overall reduction in general traffic movements in the order of 281 vehicles per hour or 27.8% between 2006 and 2013.
- 3.2.15 Between 2006 and 2013 the evening peak hour flow of car and light traffic has reduced by 217 vehicles per hour or 25%
- 3.2.16 Between 2006 and 2013 the evening peak hour flow of HGV traffic has reduced by 64 HGV per hour or 46%.
- 3.2.17 Some of the reduction in peak hour general traffic flow is likely to have arisen from the opening of the M3 in 2010 nonetheless some element of the reduction, especially relating to HGV flows, is likely to be attributable to the economic state of the country.
- 3.2.18 Appendix B Figure 1 is a graph showing northbound and southbound recorded N2 traffic flows past the site during the 12 hour survey period for 2006 whilst Appendix B Figure 2 shows the corresponding graph for the 2013 surveys. Comparing the two figures the reduction in traffic and in the intensity of the flow during the peak hours can easily be appreciated.
- 3.2.19 Appendix B Figure 2 shows that during the day there is a relatively consistent volume of traffic in both directions. Between 10am and 4pm the recorded traffic flows in either direction are practically equal with average combined 2-way hourly traffic flows generally in the order of 400 vehicles, a reduction of 123 vehicles per hour from the 2006 surveys for the same period of the day.
- 3.2.20 Over the entire 2013 12hr survey period the N2 carried 3,154 vehicles northbound, of which 18% (590) were HGV. Some 2,911 vehicles travelled southbound, of which 16% (476) were HGV.

- 3.2.21 Between 2006 and 2013 the recorded 12 hour HGV traffic flow has reduced from 1,561 HGV to 1,066 HGV a reduction in the order of 495 HGV or 32%.
- 3.2.22 Using National Roads Authority document RT201 to convert the recorded traffic levels gives an indicative AADT for the N2 in 2006 somewhere in the range of 8,600 to 11,400 vehicles (12hr x 1.29 ± 14%); this equates to 10,000± 14%.
- 3.2.23 For 2013 the AADT is estimated to be somewhere in the range of 7,200 to 9,300 vehicles (12hr x 1.36 ± 13%); this equates to 8,250± 13%.

#### Identification of Network Peak Traffic Flows – Knockcommon Road Traffic

- 3.2.24 The following relates only to the section of road between the Rathdrinagh Crossroad and the existing site access to Panda.
- 3.2.25 The morning and evening peak hour periods on the Knockcommon Road past the site correlate well with the same periods on the N2 i.e. 08:00-09:00hrs and 17:00-18:00hrs respectively.
- 3.2.26 The 2006 morning peak hour 08:00-09:00hrs accumulative two-way traffic flow on the Knockcommon Road in the morning shows 128 movements; 101 of which are cars and light vans and 27 HGV. Of these vehicles 74 cars and 7 HGV travelled eastbound whilst 27 cars and 20 HGV travelled westbound.
- 3.2.27 The 2013 morning peak hour accumulative two-way traffic flow on the Knockcommon Road in the morning shows 104 movements; 88 of which are cars and light vans and 16 HGV. Of these vehicles 57 cars and 5 HGV travelled eastbound (toward the Panda site access) whilst 31 cars and 11 HGV travelled westbound.
- 3.2.28 Between 2006 and 2013 the surveys show a 19% reduction in total morning peak hour traffic flow. The reduction in peak hour car traffic flow is 12.8% whilst the reduction in HGV traffic flow is 41%.

- 3.2.29 The 2006 evening the peak hour 17:00-18:00hrs accumulative two-way traffic flow on the Knockcommon Road shows 138 movements, 123 of which are cars and light vans and 15 HGV. In total 65 cars and 6 HGV travelled eastbound whilst 58 cars and 9 HGV travelled westbound.
- 3.2.30 The 2013 evening the peak hour 17:00-18:00hrs accumulative two-way traffic flow on the Knockcommon Road shows 128 movements, 119 of which are cars and light vans and 9 HGV. In total 43 cars and 3 HGV travelled eastbound (toward the Panda site access) whilst 76 cars and 6 HGV travelled westbound.
- 3.2.31 Between 2006 and 2013 the surveys show a 7% reduction in total evening peak hour traffic flow which is not considered significant. The reduction in peak hour car traffic flow is negligible whilst the reduction in HGV traffic flow is 40%.
- 3.2.32 Appendix B Figure 3 is a graph showing eastbound and westbound recorded Knockcommon Road traffic flows between the N2 and the site access during the 12 hour survey period for 2006 whilst Appendix B Figure 4 shows the corresponding graph for the 2013 surveys.
- 3.2.33 Appendix B Figures 3 and 4 show that during the day there is a relatively consistent volume of traffic in both directions. Between 10am and 4pm the recorded traffic flows in either direction are practically equal in both surveys with an average combined 2-way hourly traffic flow generally in the order of 80 vehicles.
- 3.2.34 Appendix B Figures 3 and 4 shows that the Knockcommon Road does not carry a significant amount of traffic when compared with the N2 mainline.
- 3.2.35 Using National Roads Authority document RT201 to convert the recorded traffic levels gives an indicative AADT for the Knockcommon Road somewhere in the range of 1,480 ± 14% for 2006; the equivalent figure for 2013 is 1,361± 13%.

### Identification of Peak Hour for Existing Waste Management Facility

- 3.2.36 In order to assess the likely maximum period of impact on the operation of the roads network Appendix B Figure 5 shows the total vehicle movements (inbound and outbound) for the two vehicle type categories (HGV and light) at the existing facility as observed during the 2006 traffic survey. Appendix B Figure 6 shows the corresponding graph using the 2013 traffic survey data.
- 3.2.37 Appendix B Figures 5 and 6 show graphically the cumulative two-way traffic flow to and from the existing facility as recorded in the traffic surveys of 2006 and 2013 respectively. During the entire survey period in 2006 a total of 493 vehicles were recorded at the facility; of these 288 were HGV and 205 were cars/light vans. In 2013 a total of 437 vehicles were recorded at the facility; of these 132 were HGV and 305 were cars/light vans. Between 2006 and 2013 there has been a reduction in overall traffic flow of 11% and a reduction in HGV flows in the order of 54%. There has been an increase of 48% in the number of light vehicles entering the site.
- 3.2.38 On an hourly basis the facility was shown in 2006 to generate approximately 40 vehicle movements of which around 25 are HGV and 15 are cars or light vans. In 2013 the average hourly flow is 38 vehicle movements of which 12 are HGV and 26 are cars or light vans.
- 3.2.39 The busiest period for traffic activity at the facility in 2006 was between 08:00-09:00hrs when a total of 55 vehicle movements were recorded. Of these 55 vehicles 32 were HGV and 23 were cars or vans. The busiest period for traffic activity at the facility in 2013 was between 17:00-18:00hrs when a total of 70 vehicle movements were recorded. Of these 6 were HGV and 64 were cars or vans.
- 3.2.40 This change in the character and composition of the traffic flow at the existing facility indicates a reduction in waste acceptance at the site nonetheless there has been a significant increase in the volume of car and light vehicle traffic. The latter increase is expected to be due to the increase in the numbers of staff employed at the site which is a central headquarters for the coordination of much of Pandas wider waste related business.

- 3.2.41 From the most recent 2013 traffic survey data Clearly the period of likely maximum traffic impact arising directly from development generated traffic is likely to be manifest during the evening commuter peak hour period 17:00-18:00hrs.
- 3.2.42 Appendix B Figure 7 shows the inbound movement of vehicles at the facility whilst Appendix B Figure 8 shows the outbound movement of vehicles recorded in the 2006 traffic surveys. Appendix B Figures 9 and 10 show the corresponding information as recorded in the 2013 traffic surveys.
- 3.2.43 Appendix B Figure 7 shows the 2006 breakdown of light and heavy vehicles entering the facility throughout the working day. During the survey a total of 237 vehicles were recorded entering the facility, of which 144 were HGV and 93 were cars or vans. With respect to light vehicles activity it can be seen that on average 8 cars or light vans access the site every hour over the course of the day. The high inbound peak for cars in the morning is clearly associated with staff arrivals. The average HGV entry traffic flow throughout the course of the day is 12 HGV. The absolute maximum HGV entry traffic flow in any one hour period was between 15:00-16:00hrs when 21 HGV were recorded.
- 3.2.44 Appendix B Figure 9 shows the 2013 breakdown of light and heavy vehicles entering the facility throughout the working day. During the survey a total of 213 vehicles were recorded entering the facility, of which 78 were HGV and 135 were cars or vans. With respect to light vehicles activity it can be seen that on average 11 cars or light vans access the site every hour over the course of the day. The higher inbound peak for cars in the morning is clearly associated with staff arrivals. The average HGV entry traffic flow throughout the course of the day is 7 HGV. The absolute maximum HGV entry traffic flow in any one hour period was between 15:00-16:00hrs when 17 HGV were recorded.
- 3.2.45 Appendix B Figure 8 shows the outbound or exiting traffic flows recorded at the facility in 2006. During the entire survey period a total of 256 vehicles were recorded departing the facility, of which 144 were HGV and 112 were cars or vans. The busiest period for light vehicles departing the facility occurred between 18:00-19:00hrs when 29 vehicles were recorded. The average number of light vehicle departures for every other period throughout the day was approximately 7 vehicles. The average HGV departure traffic flow throughout the course of the day was

12 HGV. During the period 0800-0900hrs a maximum of 19 HGV were recorded.

- 3.2.46 Appendix B Figure 10 shows the outbound or exiting traffic flows recorded at the facility in 2013. During the entire survey period a total of 224 vehicles were recorded departing the facility, of which 54 were HGV and 170 were cars or vans. The busiest period for light vehicles departing the facility occurred between 17:00-18:00hrs when 56 vehicles were recorded. The average number of light vehicle departures for every other period throughout the day was approximately 14 vehicles. The average HGV departure traffic flow throughout the course of the day was 6 HGV. The absolute maximum number of HGV exiting in any one hour period was between 12:00-13:00hrs when 9 HGV were recorded.
- 3.2.47 From all of the above it has been identified that the network morning and evening peak hours for network and development traffic generation occur between 08:00-09:00 and 17:00-18:00hrs respectively.
- 3.2.48 The evening peak hour is that period of highest traffic flow therefore in the interest of a robust assessment, and providing the Local Authority with some degree of comfort in determining the application in terms of Traffic & Transportation, the future capacity assessment scenarios in this report will consider the coincident occurrence of the development peak with this network peak in the period 17:00-18:00hrs.

#### Composition of Existing Facility Traffic

- 3.2.49 Based upon the two-way recorded movement of vehicles to and from the site Appendix B Figure 11 shows the general breakdown in HGV vehicle category or types using the facility in 2006. Appendix B Figure 12 shows the corresponding breakdown recorded in the most recent traffic surveys of 2013.
- 3.2.50 It can be seen from Appendix B Figures 11 and 12 that the relative composition of vehicle type has reduced from an approximate 50/50 split in 2006 between articulate and smaller vehicles, and the composition now favours skip type vehicles in 2013 with approximately 30% of HGV traffic entering and exiting the existing facility being composed of large articulated HGV.

### 3.3 Recorded Weighbridge Data (2006-2012)

3.3.1 In addition to the traffic surveys Trafficwise has analysed the computerised weighbridge data at the site. The weighbridge analysis covers the past seven years of waste acceptance from January 2006 to December 2012. Analysis of the weighbridge data will be used to establish the following:

- Maximum Annual Tonnage Received (2006-2012)
- Maximum Annual HGV Traffic Generation (2006-2012)
- Typical Seasonal Fluctuations in Traffic Generation

3.3.2 Appendix B Figure 13 shows a graph of the annual tonnage received at the existing development over the period 2006 to 2013 whilst Appendix B Figure 14 shows the corresponding HGV traffic generation at the site access. It is clear from the data that annual tonnage reached a maximum in 2007 after planning permission SA/60656 was granted for the increase in tonnage from 165,000t/a to 250,000t/a. In 2007 the site received 232,537 tonnes of waste. This equates to approximately 93% of the current permitted tonnage and indeed the tonnage envisaged under the current applications at the site which are considered in the current EIS.

3.3.3 Appendix B Figure 15 shows the monthly fluctuation in HGV traffic generation at the site access over the 7 year survey period whilst Appendix B Figure 16 shows the fluctuations based upon vehicle numbers by month for each of the years.

3.3.4 It can be seen from Appendix B Figure 16 that there are modest seasonal variations in the volume of traffic generated by the site. During the summer months the increase in traffic generation is expected to be as a result of increased building activity, the generation of additional garden waste and the general increase in activity associated with the summer months.

## 4 TRAFFIC CHARACTERISTICS OF PROPOSED DEVELOPMENT

### 4.1 Forecast Traffic Generation

4.1.1 Based upon the analysis of weighbridge data, given that the proposed development is proposed to generate 250,000t/a of waste material, which is highly likely to be transported in the existing fleet and thus be composed of similar vehicle types, it is reasonable to use the 2007 data profile factored by 7% in order to model the likely future traffic scenario. From detailed weighbridge data for 2007 it will be possible to establish maximum, minimum and average daily HGV traffic flows. From the 2007 data it will also be possible to establish the 85<sup>th</sup> percentile figure of daily HGV traffic generation which is that figure recommended by the CIHT and the NRA as appropriate for the assessment of traffic.

4.1.2 Maximum, minimum, average and 85<sup>th</sup> percentile daily HGV traffic generation rates for the facility have been derived from weighbridge figures for the 12 month period January 2007 to December 2007. The data excludes for Saturdays, bank holidays and the period around Christmas when traffic generation at the site is low. The resulting analysed figures have then been factored to account for the differential between the tonnage received in 2007 and the proposed and permitted tonnage of 250,000t/a. The figures are presented in Table 4.1 below.

Traffic Generation	Loads Over Weighbridge		Total Trips
	Inbound	Outbound	In/Out
Minimum Daily Traffic Generation	77	25	102
Average Daily Traffic Generation	118	48	167
85 <sup>th</sup> ile Daily Traffic Generation	137	58	195
Maximum Daily Traffic Generation	169	88	257
(Recorded HGV March 2013)	78	54	132

**Table 4.1** Forecast Traffic Generation



4.1.3 The weighbridge data analysis shows that the surveys undertaken in March 2013 represent a reduced waste acceptance rate from that which is permitted. For the avoidance of doubt the survey figures are also included in Table 4.1 above. Based upon the assumption that every vehicle that enters full leaves empty or vice versa then the number of vehicle movements to and from the site is double that shown in Table 4.1. Provided in Table 4.2 below is a summary of the total HGV vehicle movements recorded in the traffic surveys together with the 85<sup>th</sup> percentile HGV vehicle movement numbers factored by 7% from the 2007 data assumed to be representative of a model of the future traffic flow scenario with the site operating at the proposed and permitted waste acceptance rate of 250,000t/a.

Traffic Generation	Vehicle Movements	
	Inbound	Outbound
85 <sup>th</sup> ile Assessment Traffic Generation	137 + 58 = 195	58 + 137 = 195
Recorded HGV March 2013	78 + 54 = 132	54 + 78 = 132
Difference	63	63

**Table 4.2** Forecast 85<sup>th</sup> Percentile Assessment Traffic Generation

4.1.4 It can be seen that the traffic generation figures listed above that the traffic survey data of March 2013 is approximately 63 HGV vehicle movements or 32% lower than the appropriate 85<sup>th</sup> percentile assessment traffic generation rate calculated as likely to arise at the proposed facility operating at 250,000t/a.

4.1.5 Given that between 2006 and 2013 the recorded 12 hour HGV traffic flow on the N2 National Road has reduced from 1,561 HGV to 1,066 HGV a reduction in the order of 495 HGV or 32%, it is unlikely that the proposed development increase of 63 vehicle movements between current and future flows would have a significant impact upon the operation of the receiving road.

4.1.6 In considering this factor it should be noted that development generated traffic in 2007 (prior to M3 Motorway Opening and prior to the collapse in the economy) did not cause any capacity issues on the N2 when general traffic flows on the network

were higher than today. The traffic surveys show that N2 traffic has reduced by approximately 130 vehicles per hour and HGV traffic has reduced by between 30 and 50%.

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## 5 POTENTIAL FUTURE TRAFFIC GENERATION OF FACILITY

### 5.1 Overview

5.1.1 The waste acceptance capacity of the development when fully operational will increase to ca. 250,000 tonnes per annum. The projected turnover of materials at the waste management facility is discussed in more detail below.

5.1.2 Estimates of the likely traffic operation and distribution of traffic at the facility presented in this report are based on the recent traffic surveys together with analysis of representative weighbridge data recorded at the facility over the past seven year.

5.1.3 For the purposes of this assessment it is not intended that the procedures for accepting waste at the facility will alter, accordingly we assume for the purposes of this report that the proposed development will effectively be simply a scaled up version of the existing operation.

5.1.4 In terms of traffic, waste is generally brought to the site in relatively small vehicles including skips, trailers, hook loaders etc. After the waste has been treated it is exported from the site either to landfill or elsewhere to be further treated. In general the vehicles exporting from the site do so in the most economically feasible quantities, accordingly vehicles leaving the site are large articulated vehicles capable of carrying in excess of 20 tonnes.

### 5.2 Methodology to Estimate Future HGV Traffic Generation

5.2.1 It has already been established that the facility processed some 232,537 tonnes of waste over the period January 2007 to December 2007. Based on the 85<sup>th</sup> percentile daily traffic generation of the facility for 2007, the above total annual tonnage and increasing the levels of future traffic on a pro rata basis it is possible to determine the total assessment flow number of HGV likely to be generated as a direct result of the proposed increase in waste acceptance from the current day volumes to 250,000t/a.

5.2.2 Based upon the calculation set out in Section 4 above the 85<sup>th</sup> percentile

assessment value for HGV traffic generation at the site is likely to increase from by 63 inbound and 63 outbound movements per day over that recorded in the March 2013 traffic surveys.

### **5.3 Methodology to Estimate Other Sources of Future Traffic Generation**

5.3.1 In addition to HGV there will be other sources of traffic generation at the facility. This traffic will arise primarily from staff, sundry visitors etc., and the outbound delivery of skips.

5.3.2 Although it is expected that tonnages at the site will increase perhaps by more than 32%, it is not expected that staff numbers, visitors etc., would increase on a pro rata basis, nor is it expected that visitors such as the postman etc., would visit any more frequently. For the purposes of this assessment therefore no increase in staff numbers at the site has been assumed.

5.3.3 In terms of the outbound delivery of skips, it is common practice that several are stacked on top of each other and delivered by a single skip lorry. Under normal circumstance these (delivery) skip lorries return with a full skip which is recorded as it crosses the weighbridge. Nevertheless the outbound skip delivery vehicle is not recorded by the weighbridge. Clearly the number of skip deliveries (outbound empties) is therefore difficult to quantify. The current volume of outbound skip movements is accounted for in the traffic surveys of March 2013 nonetheless the calculations of Section 4 ignore the stacking of skips for outbound delivery. Accordingly the incremental increase in skip delivery movements can be considered robust since the increase assumes that each empty skip is delivered separately.

### **5.4 Potential Future Traffic Generation of Facility**

5.4.1 Table 4.2 shows the forecast 85<sup>th</sup> percentile assessment daily traffic generation at the facility when it is operating at the full capacity of 250,000 tonnes per annum. Table 4.2 shows that the proposed and permitted 250,000t/a rate of waste acceptance is likely to generate an 85<sup>th</sup> percentile flow which equates to 63 additional inbound and 63 additional outbound HGV movements.

5.4.2 The hourly HGV traffic flows recorded in the March 2013 survey are shown in the following Table 5.1. Table 5.2 shows the forecast 85<sup>th</sup> percentile daily traffic flow and is based upon an uplift from the March survey data of 63 vehicle movements for both inbound and outbound vehicles distributed in proportion to the existing hourly flows over the course of the day.

Time	Vehicle Movements			
	Inbound		Outbound	
	Car	HGV	Car	HGV
07:00-08:00	17	3	4	6
<b>08:00-09:00 AM Peak</b>	<b>37</b>	<b>5</b>	<b>4</b>	<b>6</b>
09:00-10:00	19	6	9	7
10:00-11:00	8	3	5	3
11:00-12:00	5	5	2	4
12:00-13:00	6	9	8	9
13:00-14:00	7	7	13	5
14:00-15:00	8	3	16	4
15:00-16:00	10	17	16	5
16:00-17:00	7	14	28	3
<b>17:00-18:00 PM Peak</b>	<b>8</b>	<b>4</b>	<b>56</b>	<b>2</b>
18:00-19:00	3	0	9	0
<b>Total</b>	<b>135</b>	<b>78</b>	<b>170</b>	<b>54</b>

**Table 5.1** Recorded Traffic Generation March 2013

Time	Vehicle Movements			
	Inbound		Outbound	
	Car	HGV	Car	HGV
07:00-08:00	17	5	4	13
<b>08:00-09:00 AM Peak</b>	<b>37</b>	<b>9</b>	<b>4</b>	<b>13</b>
09:00-10:00	19	14	9	15
10:00-11:00	8	5	5	7
11:00-12:00	5	9	2	9
12:00-13:00	6	16	8	20
13:00-14:00	7	13	13	11
14:00-15:00	8	5	16	9
15:00-16:00	10	31	16	11
16:00-17:00	7	25	28	7
<b>17:00-18:00 PM Peak</b>	<b>8</b>	<b>7</b>	<b>56</b>	<b>4</b>
18:00-19:00	3	0	9	0
<b>Total</b>	<b>135</b>	<b>141</b>	<b>170</b>	<b>117</b>

**Table 5.2** Forecast 85<sup>th</sup> Percentile Assessment Traffic Generation

5.4.3 Albeit that the traffic generation rates are not derived from a TRICS type database, they are derived from a site specific database, that being the weighbridge records for the past seven years of operation at the subject site, accordingly the 85<sup>th</sup> percentile figures considered appropriate for traffic assessments have been calculated bearing in mind the flowing advice provided in the Institution of Highways & Transportation

guidelines for the forecast of likely traffic generation at a proposed development:

*“having assessed the database to derive an estimate of trip attraction, professional judgement has to be applied in determining how the information should be used. It will be noted that that for most land uses the spread of data is very large and hence the use of average trip rates as a guide to the design of junction layout or the sizing of a car park could lead to under or over-provision. As the real cost of undersizing infrastructure is frequently very considerable, since additional land cannot be made available later, it is recommended that developers and highway authorities should adopt a robust forecast i.e. a value higher than the average. An approach that is currently in widespread use is to consider a range of values with the higher value being the 85<sup>th</sup> percentile of the data sample (i.e. the trip rate exceeded by only 15% of the sample) and the lower value being reflected by the average trip rate.”*

5.4.4 In light of the above advice and as is common practice in the assessment of development traffic the assessments do not address an average scenario but more appropriately include for the likely 85<sup>th</sup> percentile traffic generation at the proposed site. This is done in the in the interest of a robust assessment, clearly, for the calculation of contributions etc. it is the average that is used.

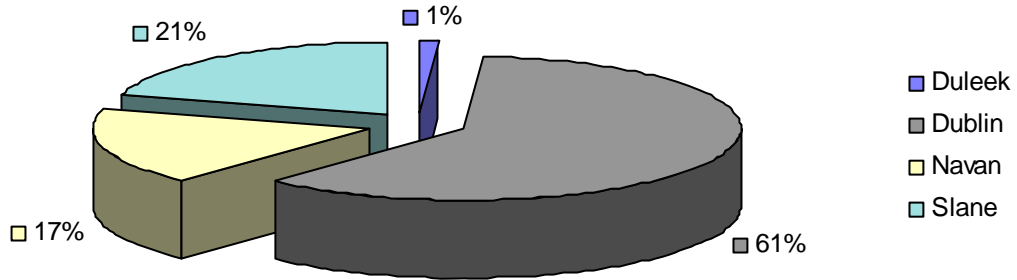
## 5.5 Distribution of Development Traffic

5.5.1 In terms of the distribution of development traffic on the local roads network, as is established practice and recommended by the Institution of Highways & Transportation, future traffic flows have been distributed to the network in the proportions yielded in the March 2013 survey of existing facility traffic travelling to and from the N2.

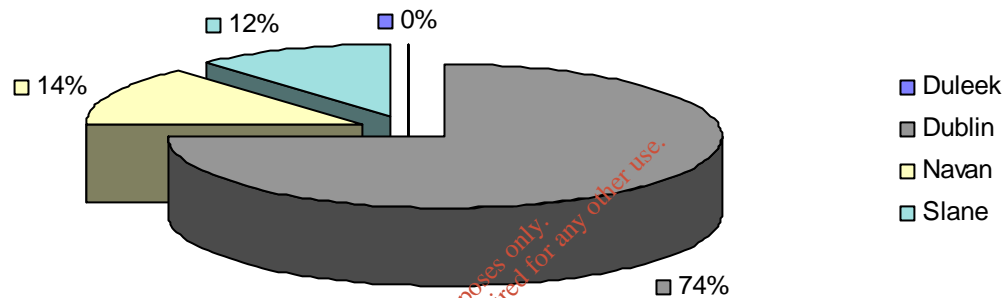
5.5.2 Considering that the sources of waste (both waste entering and leaving) are not likely to change as a result of the proposed development we consider this a reasonable assumption. Accordingly it is assumed that the turning proportions at the existing entrance would not alter, but would intensify under the current proposals.

5.5.3 Figure 5.1 below provides the percentage breakdown of HGV traffic distribution to the local road network as recorded at the facility in 2006. Figure 5.2 provide the

distribution of HGV traffic recorded in the recent March 2013 surveys and is the distribution that will be used in the assessment of traffic.

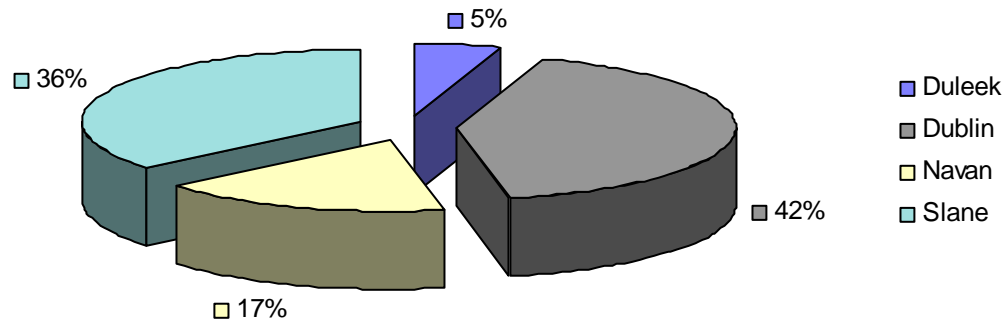


**Figure 5.1** Directional Distribution of Panda HGV Traffic 2006



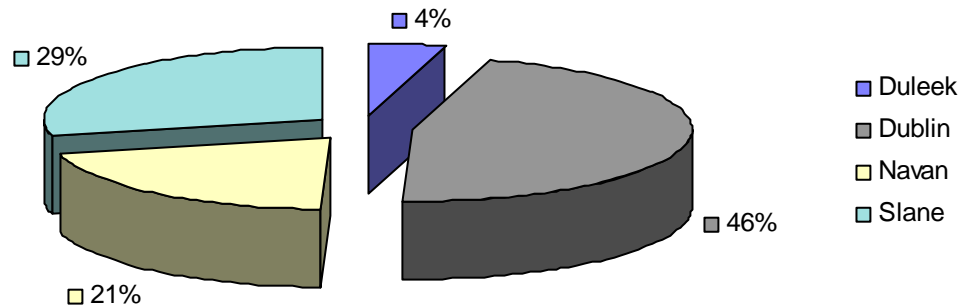
**Figure 5.2** Directional Distribution of Panda HGV Traffic 2013 & Assessment

5.5.4 Figure 5.3 below provides the percentage breakdown of car and light traffic distribution to the local road network as recorded at the facility in 2006. Figure 5.4 provide the distribution of HGV traffic recorded in the recent March 2013 surveys and is the distribution that will be used in the assessment of traffic.



**Figure 5.3** Directional Distribution of Panda Car & Light Traffic 2006





**Figure 5.4** Directional Distribution of Panda Car & Light Traffic 2013 & Assessment

5.5.5 The existing site clearly imports waste which is subsequently transferred to landfill. The existing site is currently served by the Greenstar Knockharley Residual Landfill, located practically opposite the existing Panda site.

5.5.6 Considering that all waste arriving at modern landfill sites must have been previously treated (at a facility similar to Panda) clearly the location of the two complimentary facilities can be considered to accord with the principles of sustainable transport.

## 5.6 Construction Related Traffic Attraction

5.6.1 The construction phase of the project will generate traffic on the local road network. The primary generators of traffic will be deliveries of construction materials and construction staff.

5.6.2 Taking into account the above estimates of traffic generation at the proposed development site, from our experience in the implementation of other similar projects it is not expected that the traffic associated with construction would outnumber that generated by the development upon opening.

5.6.3 Accordingly traffic generation and therefore impact during the construction period is likely to be considerably lower than forecast above.

5.6.4 Considering the expected lower levels of traffic generation during construction, it is not thought necessary or worthwhile to assess these 'short term' impacts.

## 5.7 Construction Traffic Management Plan (Outline)

5.7.1 Construction Management Plans are generally required for developments generating significant<sup>1</sup> construction activity. Management plans generally contain measures to mitigate against the effects of construction addressing issues such as traffic management, hours of working, delivery times and methods of prevention of noise and dust, reinstatement of damaged roadways, footways and grass verges, and the accommodation of construction and staff parking within the development during the construction period.

5.7.2 The construction works associated with the proposed development will involve normal construction activities such as excavation, filling, lifting, pumping, pipe laying, concrete works, mechanical installation etc.

5.7.3 A detailed Construction Management Plan will be drawn up prior to the commencement of construction activities (typically prepared together with programme of works upon appointment of contractor), in order to minimize the impacts to the environment during construction.

5.7.4 Parking for all construction staff will be provided on site.

5.7.5 The Construction Management Plan will detail the allowable working day, construction traffic, parking arrangements and will incorporate environmental protection measures. Provisions to reduce the environmental impact of the construction activities will include the following:

- Requiring contractors to ensure that no pollution or obstruction of ground water and watercourses is caused by their operations.
- Requiring contractors to comply at a minimum with the provisions of BS 5228 (Noise Control on Construction and Demolition Sites) or other noise control measures prescribed by the Planning Authority.
- Where necessary, require contractors to erect suitable noise barriers to minimize disturbance and avoid nuisance when operating machines at night (between 1900 hours and 0800 hours).

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<sup>1</sup> Defined as the construction of three or more dwellings

- Limiting vibration caused by construction plant to the maximum permitted values in BS6472 (Guide to evaluation of human exposure to vibration in buildings (1Hz to 80Hz) or other control measures prescribed by the Planning Authority.
- Requiring contractors to take reasonable precautions to ensure that all wastewater discharged shall not be harmful to or cause obstruction or deposit in drains and to prevent oil, grease or other objectionable matter being discharged into drains.
- Requiring contractors, during the execution of works, to keep all plant and materials and all equipment connected with the construction of the works in good order and clean and tidy.
- Requiring contractors to remove any waste materials from the site to a licensed waste facility.
- Requiring contractors to ensure that the public roads in the vicinity of the site are maintained free from all mud, dirt and rubbish, which may arise from or by reason of the execution of the works. To facilitate this, the Contractor could be required to provide a wheel washing facility to an approved standard within the construction site.
- Prohibiting the disposal of excess concrete on any part of the construction site.
- Requiring the contractor to provide a designated bin for washing down the chutes of concrete lorries on site.
- Requiring the contractors to keep the construction compounds free and clear of excess dirt, rubbish piles and scrap wood etc. at all times. Requiring the contractors to keep the designated parking area and other common areas clear and free of rubbish and debris.
- Requiring contractors to be responsible for the disposal of all wood, food, food packaging and paper generated during the construction phase and requiring them to furnish containers and vehicles to collect and haul these items and dispose of them to a licensed waste facility. Dumping of these items within the construction site will be prohibited.
- Requiring scrap materials, rubbish, etc. to be hauled out of the work areas (daily) and disposed of by the Contractor on a daily basis to a licensed waste disposal facility.

- Requiring the contractor to obtain any necessary permits from the Local Authority or Environmental Protection Agency for the disposal of waste.
- At the completion of the work, require contractors to leave the construction area in a neat, clean and orderly condition.
- Requiring individual contractors to provide sanitary facilities that would be adequate for their construction personnel. Sanitary facilities should include proper wash down WC's with sewer connections, or if this is impractical, chemical closets.
- Requiring that all temporary buildings associated with construction of the development comply with the Safety, Health and Welfare Regulations. On completion of the works, contractors should remove them entirely with all slab, drains and water mains and restore the surface of the land to its original condition or other reasonable conditions.

5.7.6 In addition, any excavated material generated during the construction of the plant will be reused on site, where appropriate. Parking facilities for construction vehicles and private transportation will be located within the development site. Temporary site fencing will be erected and maintained to secure the site during the construction phase.

## 5.8 **Need for a Traffic and Transport Assessment**

5.8.1 The threshold approach of the National Roads Authority as outlined previously in Section 3.1 of this report determines the need for a detailed assessment (computer modelling analysis of road link and junction performance) of traffic impact arising from the proposed development.

5.8.2 The thresholds considered as most pertinent in relation to whether the proposed development requires a Traffic and Transport Assessment (TTA) include the following:

*'Distribution and Warehousing GFA in excess of 10,000 square metres',  
'developments generating 100 trips in/out combined in the peak hour' and  
'development traffic exceeds 10 percent of two-way flow on adjoining road' or  
'5% of two-way flow on adjoining road if congestive or sensitive'.*

- 5.8.3 The proposed development incorporates the construction of a building in excess of 10,000 square metres for the processing of waste materials. Based upon 85<sup>th</sup> percentile traffic generation rates the site is expected to generate an additional 63 HGV trips (63 inbound and 63 outbound) over the course of a typical working day. Table 5.2 above shows that the forecast increase in traffic during the peak hour equates to 11 HGV trips in/out combined (movements) in the morning peak hour and 6 in the evening peak hour. These figures are not significant when compared with the threshold value of 100 movements accordingly the proposed development does not warrant the preparation of a detailed traffic modelling assessment.
- 5.8.4 The remaining relevant threshold for the preparation of a TTA requires the development traffic to exceed 5% of the two way traffic flow on the adjoining road, presuming that the N2 is congestive or sensitive (10% in free flowing conditions).
- 5.8.5 The March 2013 12hr traffic surveys show a total flow of 6065 vehicles on the N2 inclusive of 590 HGV. It has been calculated that an additional 63 trips or 126 vehicle movements per day are likely to be generated by an intensification of activities at the facility. The 126 vehicular movements associated with the new development represent approximately 2% of existing traffic flow recorded on the N2 between 07:00 and 19:00hrs. Relative to the estimated AADT of 8,250±13% the increase is 1.5%. In the morning peak hour the increase in general total traffic flow is calculated to be 1.7% ( $100 \times (11/636)$ ) whilst the increase in HGV traffic alone in the morning peak hour is 13.5% ( $100 \times (11/81)$ ). In the evening peak hour the increase in general total traffic flow is 0.8% ( $100 \times (6/728)$ ) whilst the increase in HGV traffic alone in the evening peak hour is 8% ( $100 \times (6/74)$ ).
- 5.8.6 Purely in terms of traffic volumes the above increases on the 'adjacent' road network attributable to the proposed application are not considered significant.
- 5.8.7 Accordingly it could reasonably be assumed that a detailed investigation of traffic impact and junction performance through the use of mathematical computer modelling is not warranted. Nonetheless due to the nature of activities and high percentages of HGV at the site, and in the interest of a comprehensive assessment detailed capacity assessments of the Rathdrinagh Cross Roads have been undertaken.

## 6 ASSESSMENT YEAR(S) AND ESTIMATION OF TRAFFIC GROWTH

### 6.1 Development Traffic

6.1.1 The levels of traffic generation and distribution assumed at the proposed development site have already been outlined. Nonetheless it is expected that it will take some time for business to develop and thus for such tonnages to be realised at the site.

6.1.2 Considering that the development site will receive a finite amount of material every year during the lifetime of the facility, it is assumed that the waste management site will have a relatively finite or consistent level of traffic attraction over its life span.

6.1.3 It is not considered that the levels of traffic to and from the development site assumed in this report will fluctuate appreciably, and therefore we do not consider that the forecast levels of traffic at the site could reasonably be expected to experience significant growth in relation to time.

6.1.4 Furthermore, as will be discussed later in this report, the levels of traffic assumed at the proposed development site could be considered robust since no allowance has been made for pass-by trips and trips diverted from the local road network; in other words all additional traffic has been assumed to be new to the network.

6.1.5 Therefore, in the assessments to follow in this report no account has been made for growth in the estimated levels of traffic to and from the development site over time.

### 6.2 Assessment Scenarios

6.2.1 Regarding the choice of appropriate assessment years the NRA: Traffic and Transport Assessment Guidelines advise as follows;

*"Timescale: Traffic volumes for opening year, opening +5 and opening year +15. These timescales are fairly standard and should be expected".*

6.2.2 In the interest of evaluating the incremental impact of an intensification of facility

operations on the local roads network, we have examined a number of future year scenarios in the capacity assessments, based on the assumed base year of 2014:

6.2.3 A series of traffic scenarios have been assessed both with and without the proposed development in place. These are referred to respectively as the 'do nothing' and 'do something' scenarios and are normally provided so that the incremental impact of development traffic can be evaluated against a baseline or existing scenario.

6.2.4 A series of comparative analyses have been undertaken for the following scenarios:

- **Scenario 1:** Base Year 2014 – Do Nothing Peak Flows
- **Scenario 2:** Base Year 2014 – Do Something Peak Flows
- **Scenario 3:** Base Year +5 2019 – Do Nothing Peak Flows
- **Scenario 4:** Base Year +5 2019 – Do Something Peak Flows
- **Scenario 5:** Base Year +15 2029 – Do Nothing Peak Flows
- **Scenario 6:** Base Year +15 2029 – Do Something Peak Flows

6.2.5 These scenarios have been tested for all links of the Rathdrinagh Cross Roads junction.

### 6.3 Estimation of Network Traffic Growth

6.3.1 Background traffic flows on the public road network have been assumed to grow in accordance with the latest growth factors published by the National Roads Authority (NRA) in January 2011 in the document 'Project Appraisal Guidelines: Unit 5.5 Link-Based Traffic Growth Forecasting'.

6.3.2 Medium growth factors have been used in the derivation of the future traffic flows from the surveyed 2013 flows. The NRA forecast medium growth factors assume traffic growth of 1.1% per annum between 2013 and 2025 and 0.9% per annum thereafter. HGV traffic medium growth rates are lower at 0.8% between 2013 and 2025, reducing to 0.1% thereafter.

- 6.3.3 At present Ireland is in a period of unprecedented economic turmoil with significant unemployment. Data provided on the NRA website shows that traffic flows on the national roads network have in many locations reduced significantly in the past 2-3 years. Furthermore construction/development has practically ground to a halt (as has construction/development related traffic). Accordingly the above growth factors should be viewed as optimistic and robust in the short to medium term.
- 6.3.4 Save for the N2, the road network in the vicinity of the waste management facility is made up principally of distributor routes, which under normal circumstances would usually experience a lower growth rate than the National Primary Road Network. Nonetheless in the interest of a robust assessment National Roads Authority low growth rates have been applied to the local roads. The NRA forecast low growth factors assume traffic growth of 0.9% per annum between 2013 and 2025 and 0.8% per annum thereafter. HGV traffic low growth rates are lower at 0.5% between 2013 and 2025, reducing to 0.1% thereafter.
- 6.3.5 Since traffic growth on the local roads network is for a large part attributed to development in the area, it could be assumed that a portion of this network growth would account for the traffic generated by the proposed development. However, in the interests of preparing a robust analysis of the future traffic situation this consideration has been discounted.
- 6.3.6 It must be appreciated that in our analysis of the roads network we have applied the above traffic growth rates directly to the peak hour period. However these growth rates are not always applicable to the peak hour period and it is generally accepted by traffic engineers that the peak hour, instead of increasing or intensifying as a peak, tends to spread over a longer period.
- 6.3.7 Therefore in light of the above considerations we believe that it can be assumed that the figures used in the peak hour analysis are robust in terms of the likely levels of traffic on the local roads network in the vicinity of the proposed development.



## 6.4 Assessment Network Flow Diagrams

6.4.1 It is not expected that the impact of the traffic generated by the proposed development would have any detectable influence on the operation of the local road network beyond the immediate environs of the development site.

6.4.2 As a result the scope of future year assessments includes only the local road network. The above growth factors have been applied to the existing road network and the resulting network traffic flows are shown on the following network flow diagrams in Appendix C:

- **Figure 1:** 2013 Existing Peak Hour
- **Figure 2:** Proposed Development – 85<sup>th</sup> Percentile Assessment Peak Hour
- **Figure 3:** Base Year 2014 – Do Nothing Assessment Peak Hour
- **Figure 4:** Base Year 2014 – Do Something Assessment Peak Hour
- **Figure 5:** Base Year +5 2019 – Do Nothing Assessment Peak Hour
- **Figure 6:** Base Year +5 2019 – Do Something Assessment Peak Hour
- **Figure 7:** Base Year +15 2029 – Do Nothing Assessment Peak Hour
- **Figure 8:** Base Year +15 2029 – Do Something Assessment Peak Hour

6.4.3 The 'Do Nothing Scenario' is a scenario in which no distinct allowance is made for any specific planned developments; essentially the present and future scenarios assuming that no further development takes place at the existing facility.

6.4.4 The 'Do Something Scenario' accounts for the potential 85<sup>th</sup> percentile additional assessment volumes of traffic forecast to use the proposed development.

## 7 CAPACITY ASSESSMENTS OF ROAD NETWORK

### 7.1 Computer-modelling Programs used in Capacity Assessments

7.1.1 As recommended by the NRA: Design Manual for Roads and Bridges (DMRB) and the Institution of Highways & Transportation, the Transport Research Laboratory (TRL), the computer modelling program PICADY (Priority Intersection Capacity and DelaY) has been used for the assessment of major/minor priority junctions on the local road network, principally the junction of the Rathdrinagh Crossroads.

7.1.2 In general terms this program operates on the gap acceptance theory. The output provides information for roads designers and planners with regards to capacity, queuing and delay. The programs are intended primarily as a means of assessing junction performance and can also be used as an aid in junction design.

7.1.3 Generally a reserve capacity of 10-15% corresponding to a Ratio of Flow to Capacity (RFC) of 0.850-0.900 is accepted at junctions in urban areas (0.700-0.750 in rural areas), however as with the other programs, this figure should not be considered in isolation and should be viewed together with queuing and delay information.

7.1.4 A copy of the full PICADY results for each of the assessments carried out on the local road network is available on request (**Trafficwise** Ltd. Ph: (01) 8253015 Job Ref: 02967).

### 7.2 Capacity Assessments of Rathdrinagh Cross Roads

7.2.1 Observations during the traffic survey indicated that the junction functions well within capacity with no queuing observed.

7.2.2 Table 7.1 below summarises the morning peak hour PICADY modelling analysis undertaken for the Rathdrinagh Crossroads for the base year (2014).

Traffic Movement at Crossroads	Expected No. of Vehicles (veh/hr)	Queuing Delay per vehicle (sec)	Max Queue (vehs)	Max RFC	Reserve Capacity
<b>Scenario 1: Base Year (2014) Without Development - PM Peak</b>					
B-C	12.8	7.2	0	0.031	96.9%
B-AD	26.5	7.8	1	0.068	93.2%
A-D	17.4	6.0	0	0.036	96.4%
D-ABC	75.0	6.6	1	0.146	85.4%
C-B	11.9	5.4	0	0.022	97.8%
<b>Scenario 2: Base Year (2014) With Development - PM Peak</b>					
B-C	12.8	7.2	0	0.031	96.9%
B-AD	27.4	7.8	1	0.073	92.7%
A-D	20.1	6.6	0	0.045	95.5%
D-ABC	88.6	6.6	1	0.160	84.0%
C-B	11.9	5.4	0	0.022	97.8%
A: N2 South B: L1013 C: N2 North D: Knockcommon Road					

**Table 7.1** Base Year (2014) Capacity Assessments

- 7.2.3 From Table 7.1 above, it can be seen that the existing Rathdrinagh Crossroads is operating well within capacity.
- 7.2.4 Under both base year 2007 traffic flows with and without the development, the reserve capacity of the junction is not shown not to fall below 80% during the morning peak hour period. A reserve capacity of 25% is normally accepted to be the threshold below which a rural junction is considered to be over capacity.
- 7.2.5 Accordingly it can be seen that the existing junction will be likely to operate well within capacity at the forecast base year or year of opening. The modelling

assessments indicate that the proposed development is not likely to cause any additional queues or delays on the junction approach arms.

7.2.6 Table 7.2 below summarises the morning peak hour PICADY modelling analysis undertaken for the Rathdrinagh Cross roads for the base year +5 (2019).

Traffic Movement at Crossroads	Expected No. of Vehicles (veh/hr)	Queuing Delay per vehicle (sec)	Max Queue (vehs)	Max RFC	Reserve Capacity
<b>Scenario 3: Base Year +5 (2019) Without Development - PM Peak</b>					
B-C	13.7	7.2	0	0.026	97.4%
B-AD	27.4	7.8	1	0.055	94.5%
A-D	18.3	6.6	0	0.030	97.0%
D-ABC	78.6	6.6	1	0.121	87.9%
C-B	12.8	5.4	0	0.019	98.1%
<b>Scenario 4: Base Year +5 (2019) With Development - PM Peak</b>					
B-C	13.7	7.2	0	0.034	97.6%
B-AD	28.3	8.4	1	0.077	92.3%
A-D	21.0	6.6	0	0.047	95.3%
D-ABC	82.3	6.6	1	0.168	83.2%
C-B	12.8	5.4	0	0.024	97.6%
A: N2 South B: L1013 C: N2 North D: Knockcommon Road					

**Table 7.2** Base Year +5 (2019) Capacity Assessments

7.2.7 Table 7.2 shows that in the year 2019 the realisation of the proposed application is likely to result in a 4.7% reduction of the reserve capacity of the junction, from 87.9% to 83.2%. This reduction can not be considered significant.

7.2.8 Queues are shown not to increase throughout the junction however minor increases in delay at the junction are expected. These delays are shown to occur for vehicles turning to and from the L1013 and are in the region of 0.6 seconds per vehicles. This increase is not considered significant in the context of the peak hour operation of the existing Rathdrinagh Crossroad Junction.

7.2.9 Tables 7.3 below summarise the morning peak hour PICADY modelling analysis undertaken for the Rathdrinagh Crossroads for the base year +15 (2029).

Traffic Movement at Crossroads	Expected No. of Vehicles (veh/hr)	Queuing Delay per vehicle (sec)	Max Queue (vehs)	Max RFC	Reserve Capacity
<b>Scenario 5: Base Year +15 (2029) Without Development - PM Peak</b>					
B-C	14.6	7.2	0	0.037	96.3%
B-AD	31.1	8.4	1	0.085	91.5%
A-D	19.2	6.6	0	0.040	96.0%
D-ABC	85.9	6.6	1	0.173	82.7%
C-B	13.7	5.4	0	0.026	97.4%
<b>Scenario 6: Base Year +15 (2029) With Development - PM Peak</b>					
B-C	14.6	7.2	0	0.037	96.3%
B-AD	32.0	8.4	1	0.089	91.1%
A-D	21.9	6.6	1	0.049	95.1%
D-ABC	89.6	7.2	1	0.187	81.3%
C-B	13.7	5.4	0	0.026	97.4%

**Table 7.3** Base Year +15 (2029) Capacity Assessments

7.2.10 It can be seen by comparing the results of the assessments from Scenario 5 and 6 that the reserve capacity in the year 2029 is likely to reduce by 1.4%, from 82.7% to 81.3%. This reduction can not be considered significant.

- 7.2.11 Queuing at the cross roads is expected to be unaffected by the realisation of the proposed development. Delays are also generally expected to remain unchanged save for vehicles turning from the Knockcommon Road onto the N2, where an extra delay of approximately 0.6 seconds per vehicles is likely.
- 7.2.12 From the above therefore, we believe it to be clear that the additional traffic associated with the proposed application is not likely to have a significant impact on the operation of the local roads network in the vicinity of the site.

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## 8 EXISTING ACCESS APPRAISAL

### 8.1 Visibility Criteria in Accordance with NRA: DMRB

8.1.1 The roads standard by which the visibility sightlines have been evaluated is the NRA: Design Manual for Roads and Bridges.

### 8.2 Existing Visibility Sightlines at Site Access

8.2.1 The Knockcommon Road is subject to a speed limit of 80kph. Table 2 of TD9 'Highway Link Design' shows that the appropriate 'desirable' minimum Stopping Sight Distance or 'y' distance for a design speed of 85kph is 160m.

8.2.2 Paragraph 7.7 of TD41-42 provides advice on the required 'x' distance (setback distance from road edge by which the 160m 'y' distance visibility sightline is measured).

8.2.3 The desirable minimum 'x' distance for all junctions and direct accesses on the National Primary Road network is 3.0m. A relaxation to 2.4 is permitted for simple junctions in stop controlled situations. On regional and local roads a further relaxation to 2.0m is permitted. It can be appreciated that the Knockcommon Road is not a National Primary Road but a local road accordingly an 'x' distance of 2.4m is satisfactory.

8.2.4 From a set-back 'x' distance of 2.4 metres at the existing site access, visibility to the left (towards the N2) is good, with a 1.0m high wall located along the adjacent property boundary and offset from the road edge, which ensures no visibility obstructions from any hedgerows or trees. Drivers exiting the existing site can see as far as the Rathdrinagh Crossroad which is some 75m to the west of the access.

8.2.5 Visibility to the right is currently impaired by the existing trees/hedgerow which inhibits an adequate provision of NRA: Design Manual for Roads and Bridges compatible sight distance for vehicles exiting the site.

8.2.6 It is recommended that some of the trees/hedgerow located to the east of the existing site access be removed to accommodate full visibility sightlines at the access. It should be noted that the screening function of the trees/hedgerow from the Waste Management Facility will not be compromised as they are planted several rows deep back from the property boundary. In addition there is further screening and planting inside the site boundary.

### **8.3 Existing Visibility Sightlines at Rathdrinagh Cross Roads**

8.3.1 It has already been established from the surveys that 100% of HGV traffic accesses the waste management facility via the Rathdrinagh Cross Roads. As such it is imperative to undertake a visibility assessment at this junction.

8.3.2 The N2 is subject to a speed limit of 100kph. Table 3 of TD9 'Highway Link Design' shows that the appropriate 'desirable' minimum Stopping Sight Distance or 'y' distance for a design speed of 100kph is 215m.

8.3.3 We have observed that the full visibility envelope measuring 215m from a point 3.0m from the edge of the road is currently achievable in both directions.

8.3.4 In addition to assessing visibility for vehicles entering the Rathdrinagh Cross roads from the Knockcommon Road, we have assessed forward visibility in the vicinity of the junction in accordance with the advice provided in TD9 paragraph 2.2.

8.3.5 Forward visibility of 215m is currently achievable travelling in both directions from a point 1.5 times Stopping Sight Distance (or 323m) in advance of the access.



## 8.4 Capacity and Dimensions of Ghost Island Right Turn Lane

8.4.1 Through reference to the NRA: Design Manual for Roads and Bridges, paragraph 7.45 of TD41-42 states the following with respect to the provision of a ghost island right turn lane:

*“The overall length of a right turning lane provided at a ghost island, single lane dualling and dual carriageway junctions, will depend on the major road design speed and the gradient. It consists of a turning length, as described in paragraphs 7.40 and 7.41, and a deceleration length. This component shall be provided in accordance with Tables 7/6, in which the gradient is the average for the 500m length before the minor road.”*

8.4.2 In the vicinity of the Rathdrinagh Cross Roads to the south of the junction with the Knockcommon Road there are a number of services located to the east of the N2, including a diner, service station etc. The road layout incorporates a hatched median with right turn provision.

8.4.3 The existing ghost island right turn lane provided on the N2 for right turning vehicles onto the Knockcommon Road has been provided with a turning length of 20m and a deceleration length of 80m.

8.4.4 This is in accordance with Table 7/6 of TD 41-42 for a road design speed of 100kph where the up/down gradient of the road is between 0-4%.

## 9 CONCLUSION

- 9.1 The potential incremental increase in traffic flow resulting from the current proposal to construct the new building and intensifying operations to the maximum of 250,000t/a allowed under the current planning permission at the existing facility is likely to be negligible in the context of the operation of the surrounding roads network.
- 9.2 The detailed traffic analyses and modelling assessments show that in terms of traffic impact the current proposed building and associated activities will have a minimal, if not an imperceptible effect on the operation of the local public roads network.

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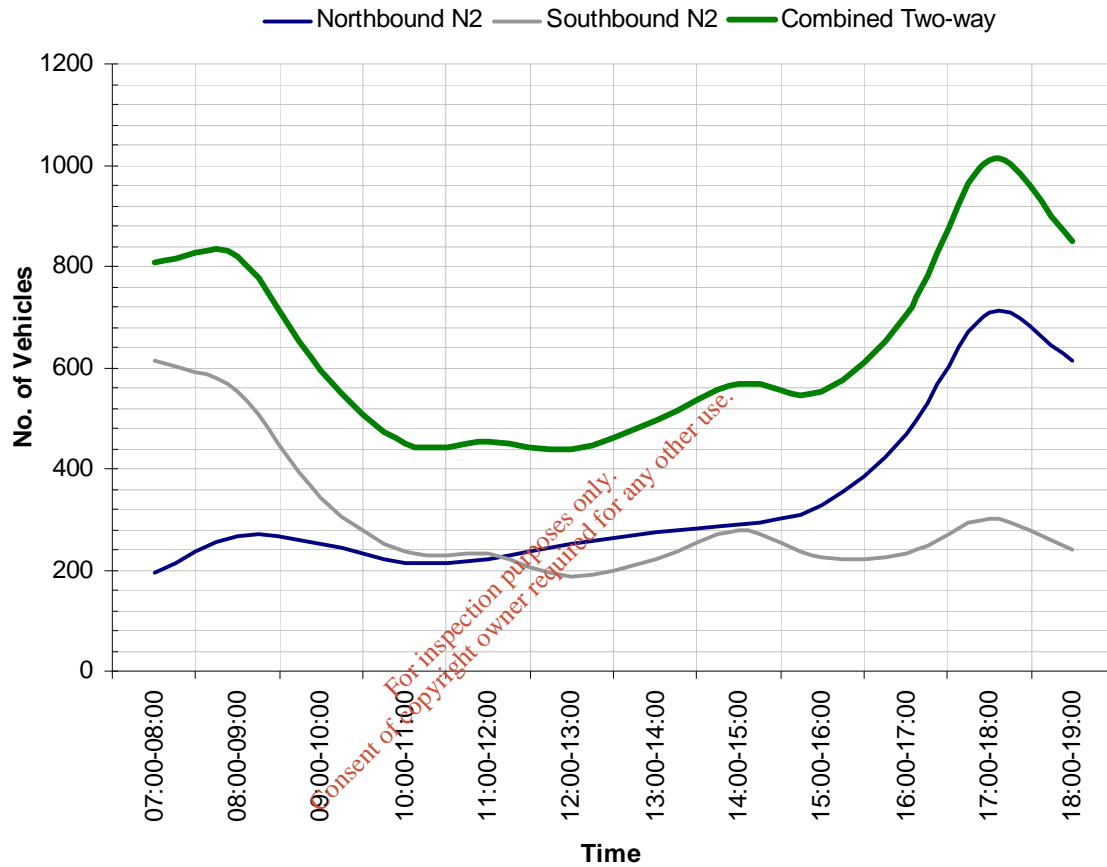
**Appendix A**  
Traffic Survey Data

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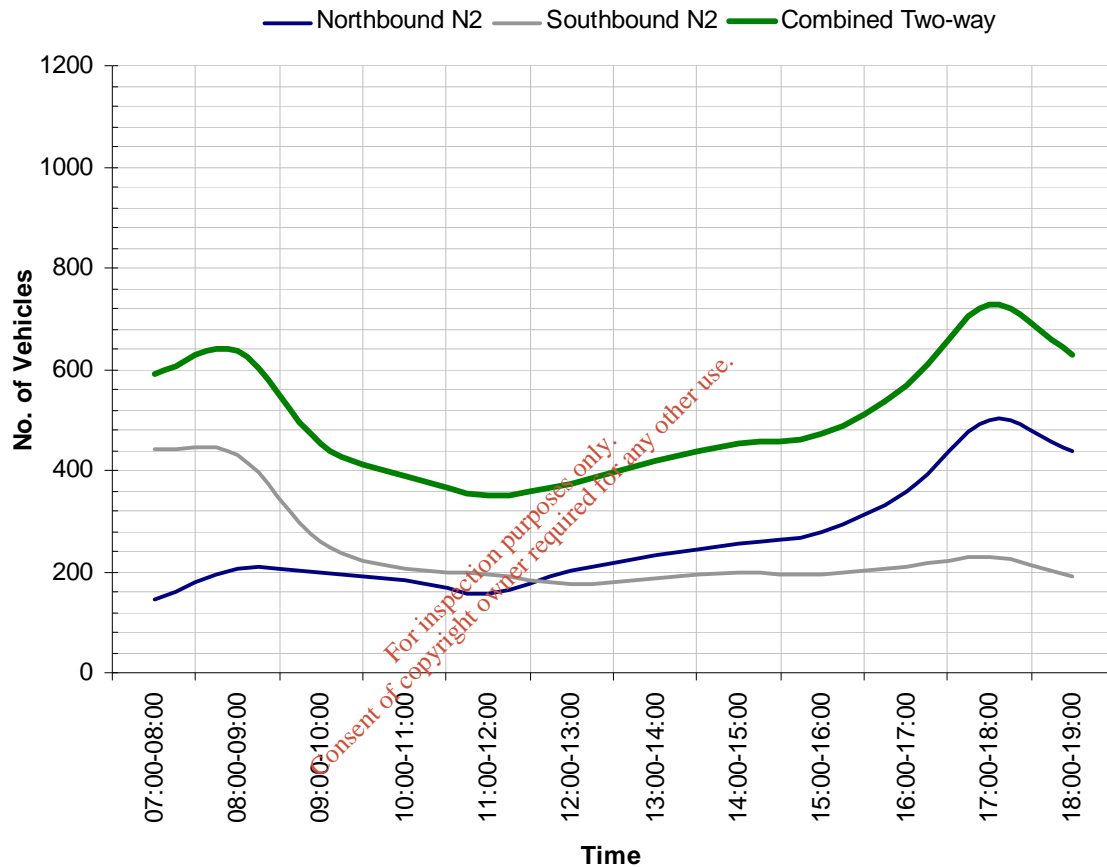
## Appendix B

### Report Figures

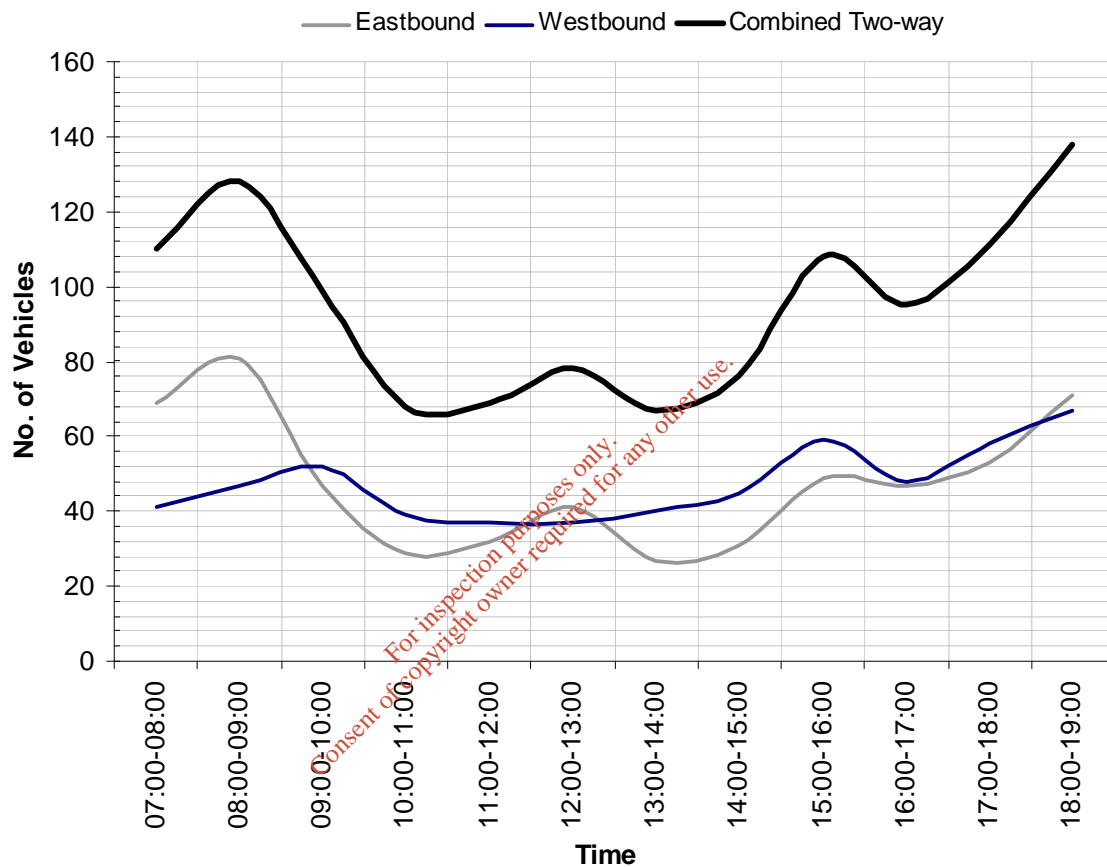
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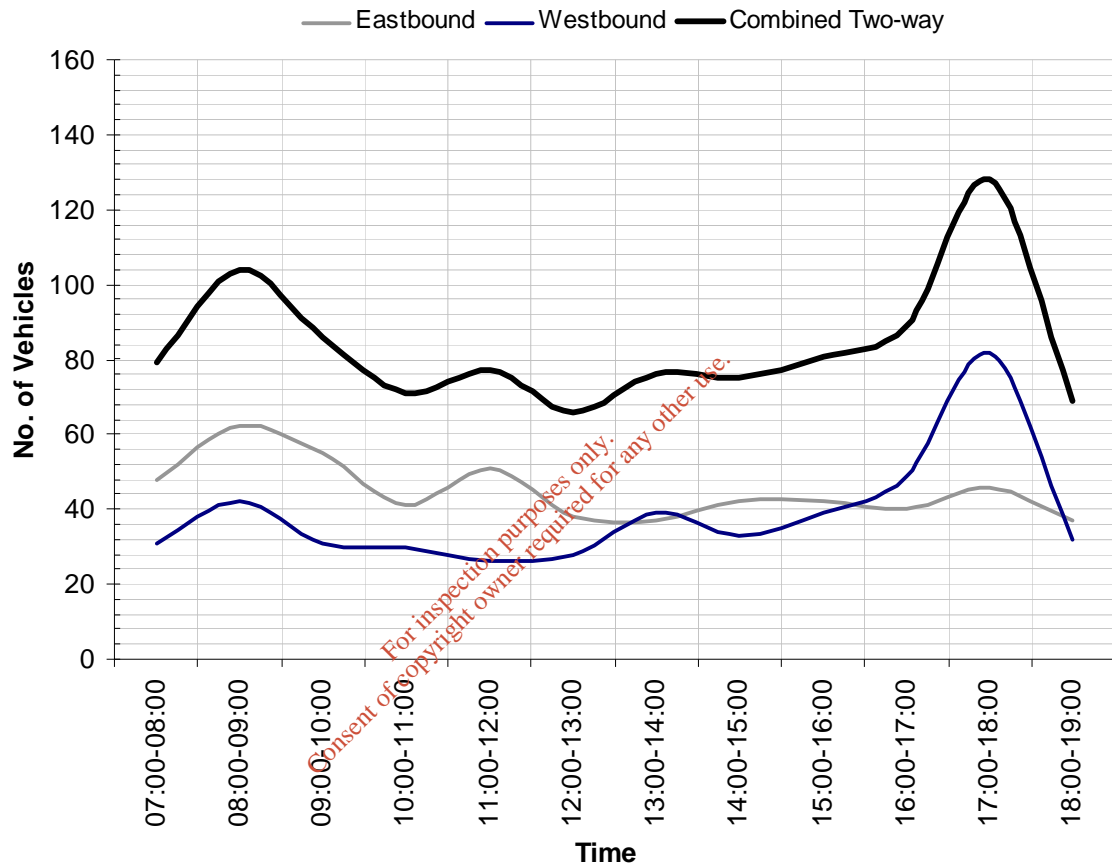
**Figure 1** Mainline N2 Recorded Hourly Traffic Flows (2006)



**Figure 2** Mainline N2 Recorded Hourly Traffic Flows (2013)

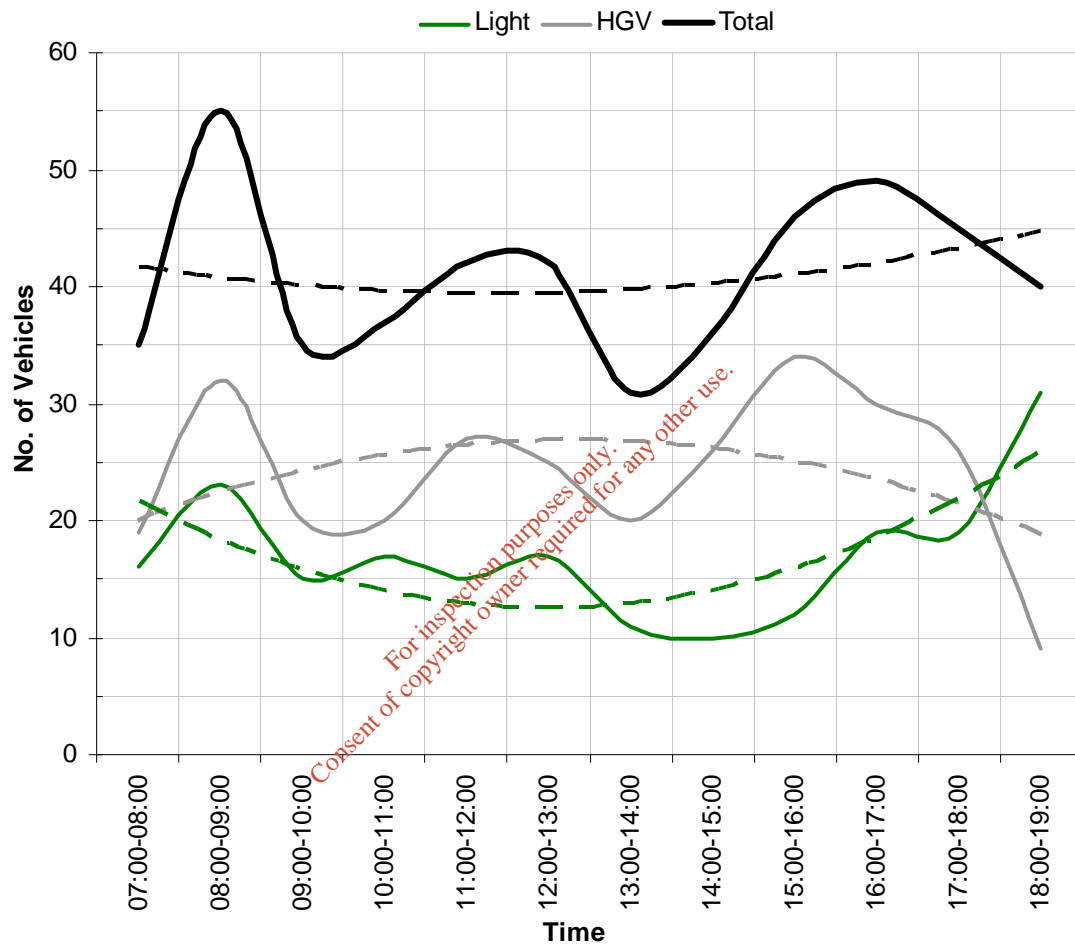


**Figure 3** Knockcommon Road Recorded Hourly Traffic Flows (2006)

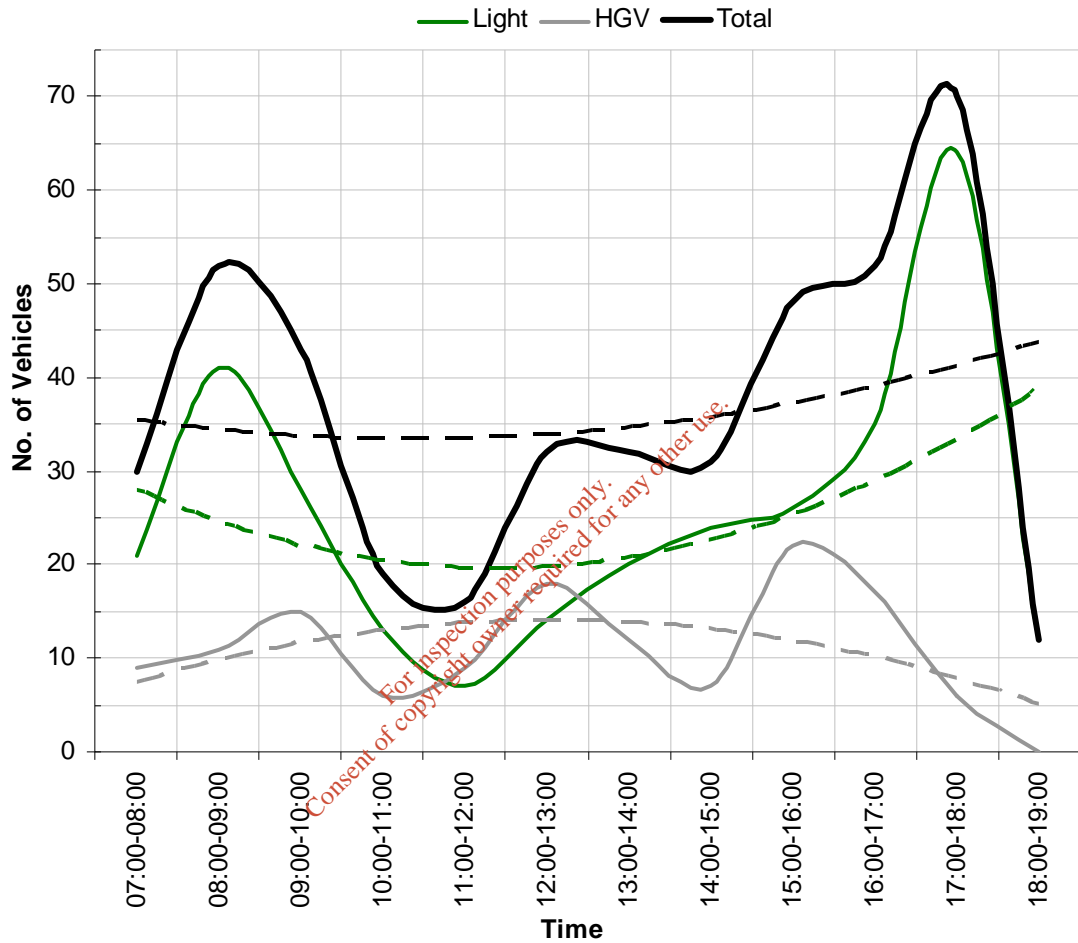


**Figure 4** Knockcommon Road Recorded Hourly Traffic Flows (2013)

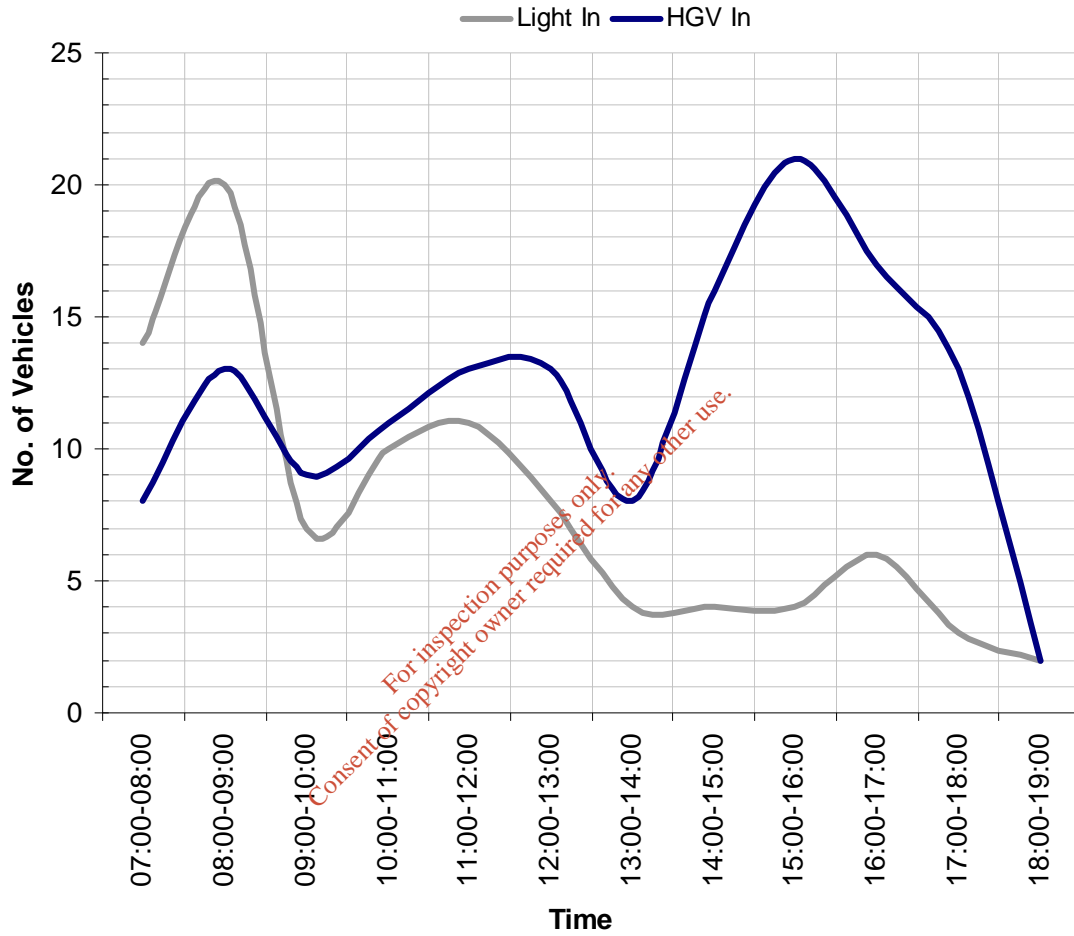




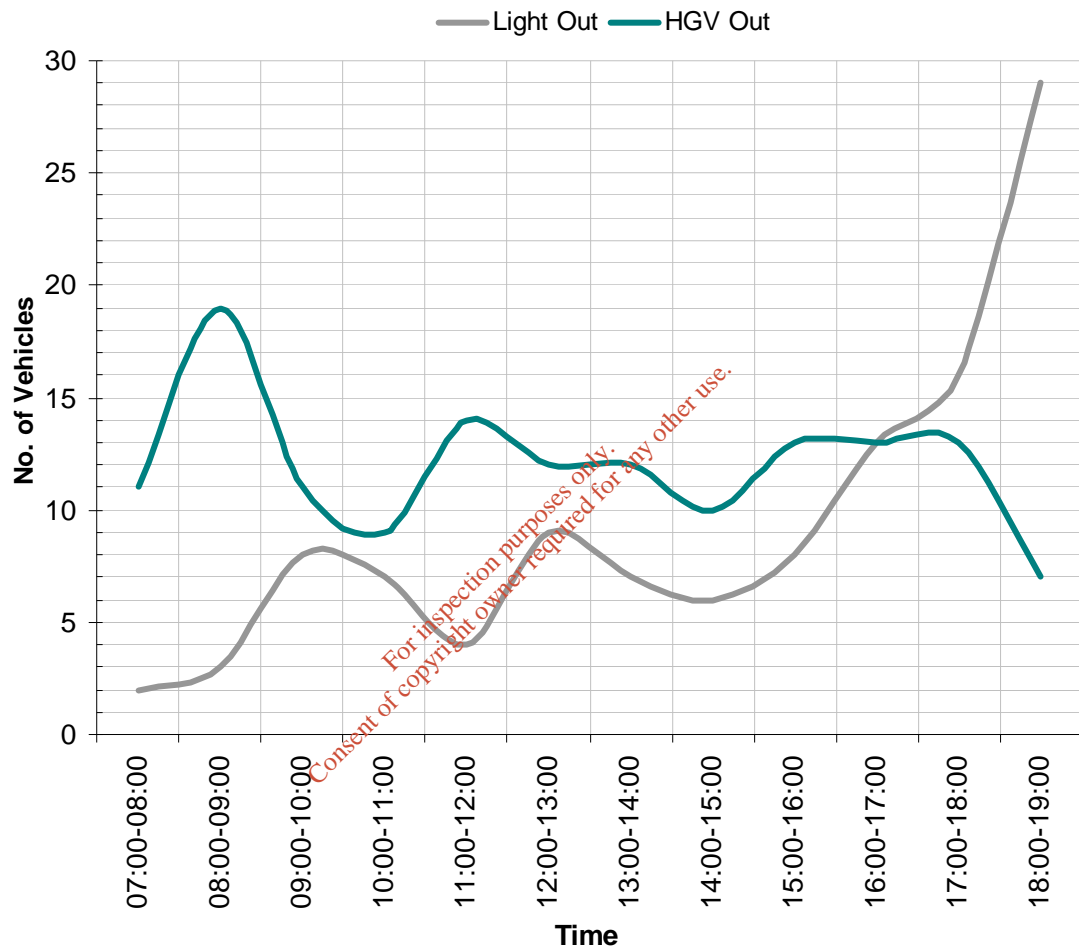
**Figure 5** Hourly Traffic Flows at Facility 2006 (Inbound + Outbound)



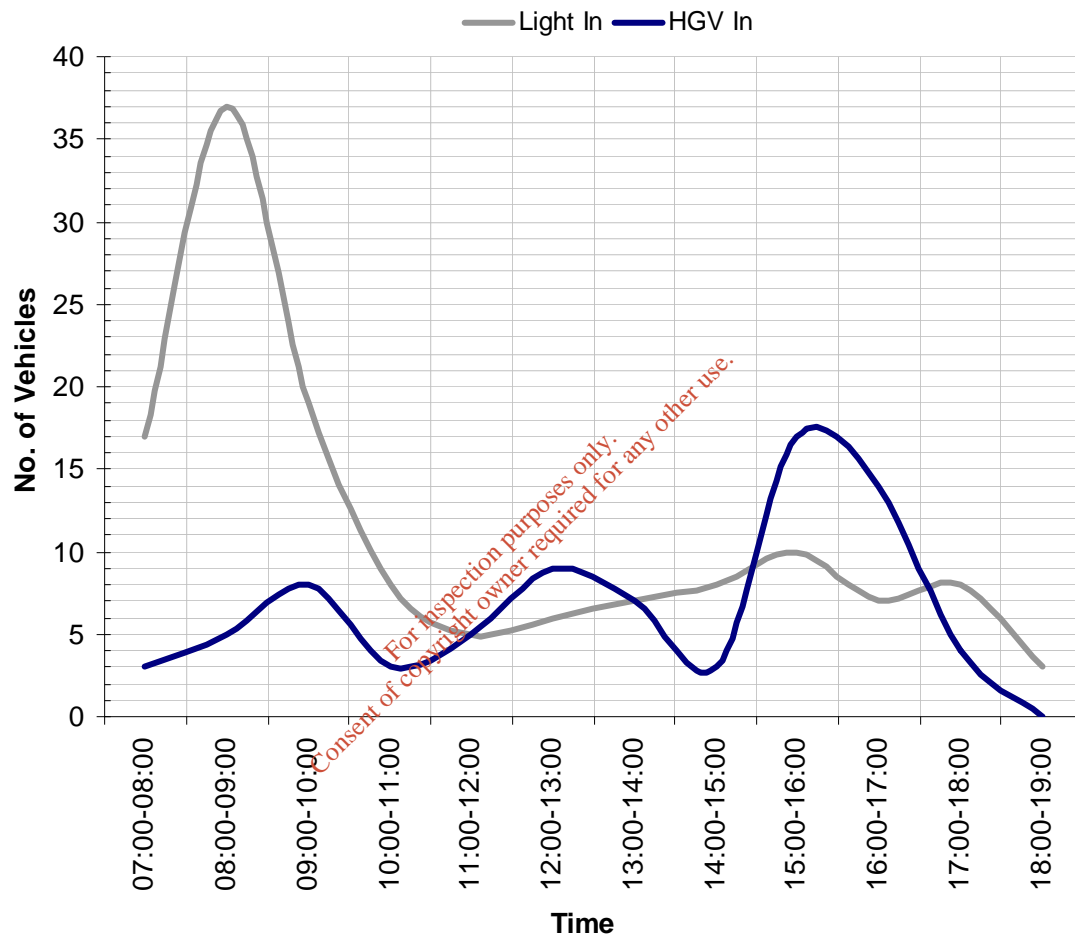
**Figure 6** Hourly Traffic Flows at Facility 2013 (Inbound + Outbound)



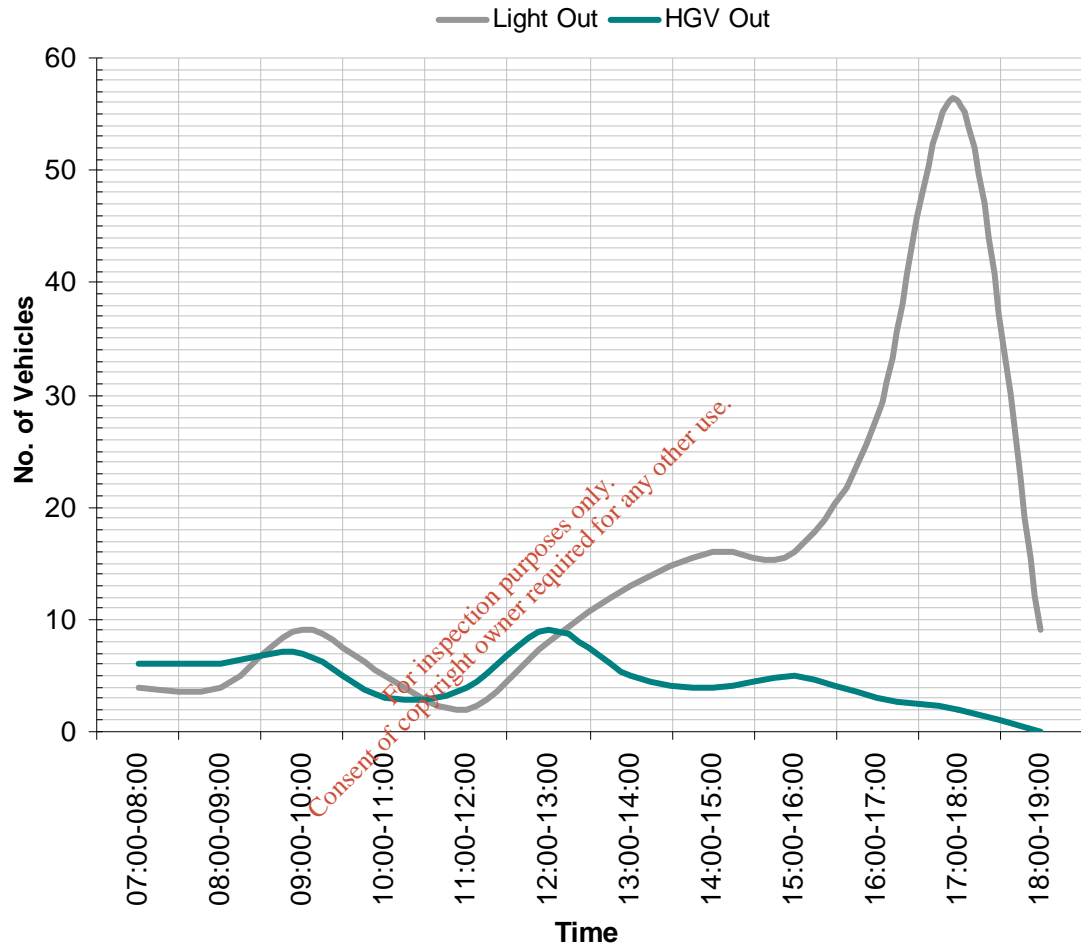
**Figure 7** Inbound Traffic Flows at Facility 2006



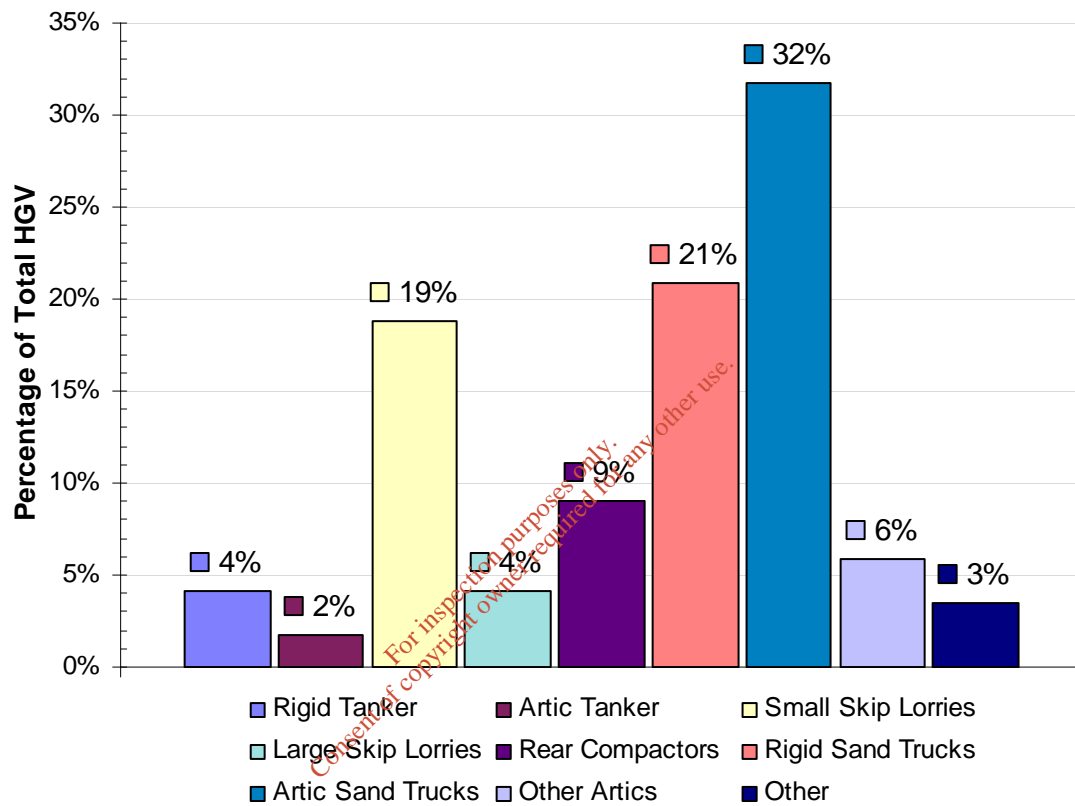
**Figure 8** Outbound Traffic Flows at Facility 2006



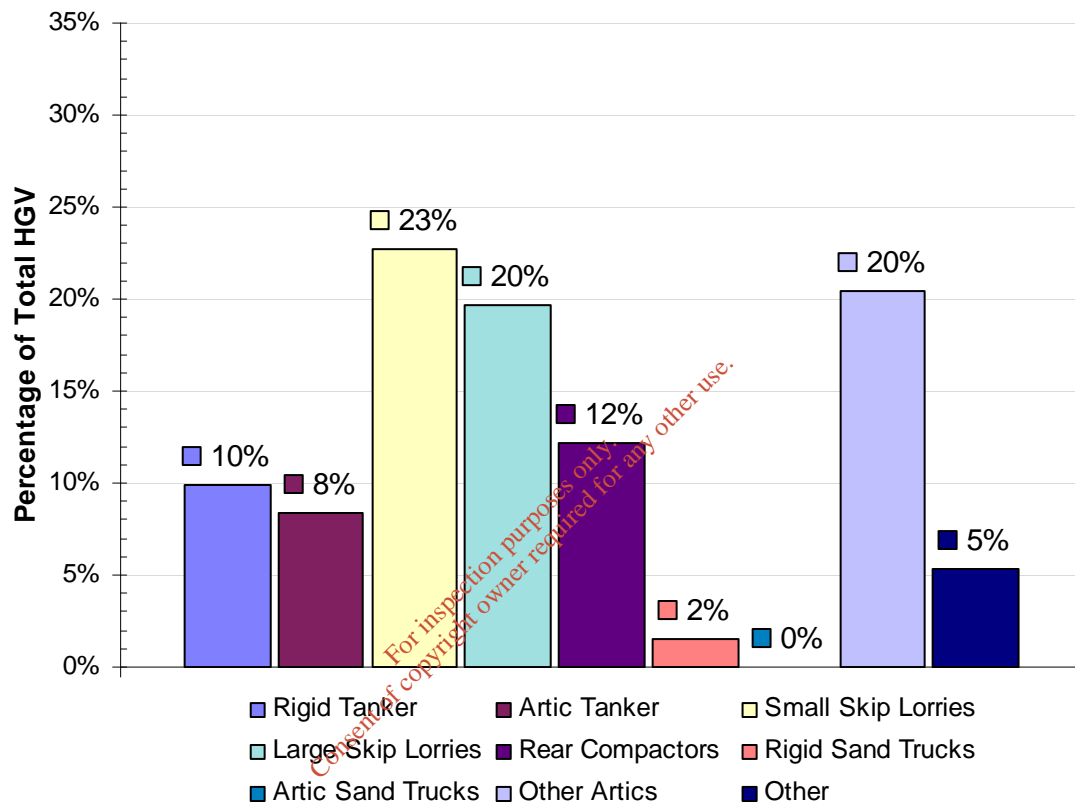
**Figure 9** Inbound Traffic Flows at Facility 2013



**Figure 10** Outbound Traffic Flows at Facility 2013

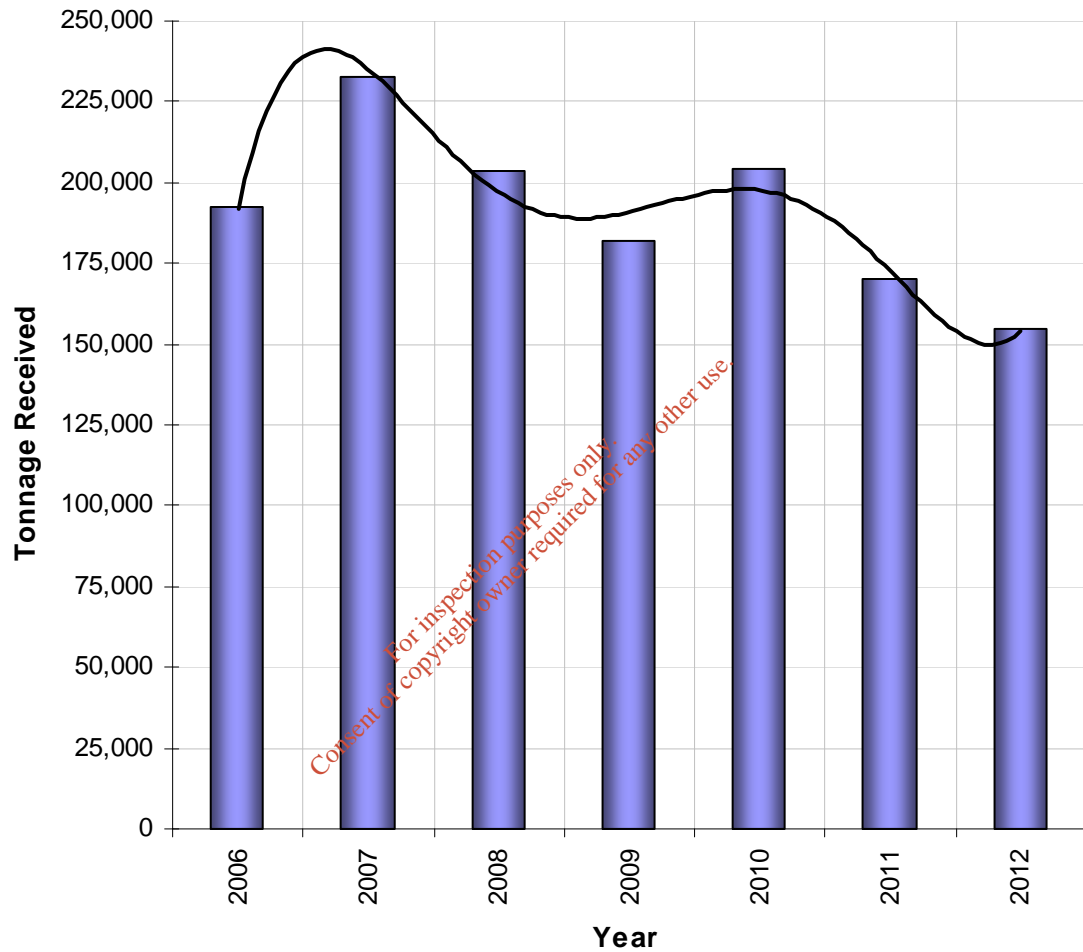


**Figure 11** Composition of HGV Traffic at Facility 2006

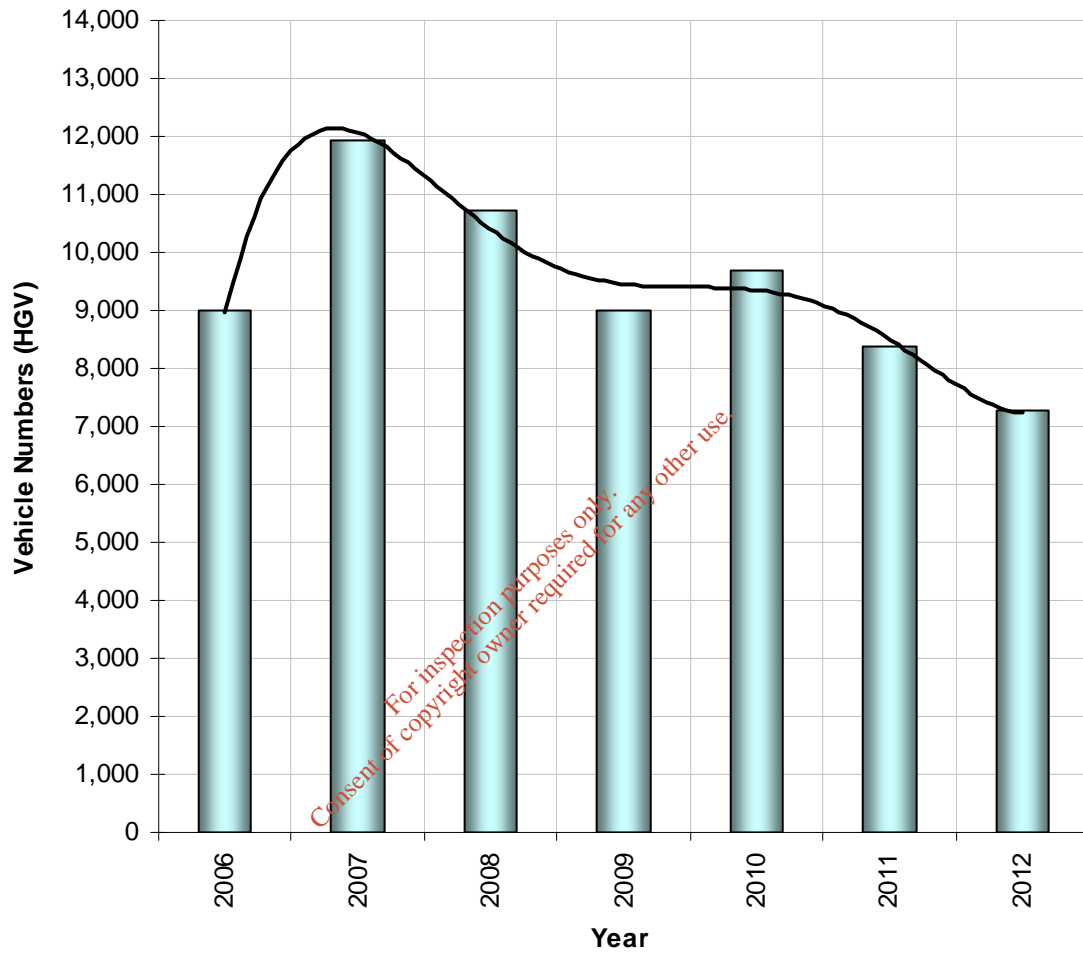


**Figure 12** Composition of HGV Traffic at Facility 2013

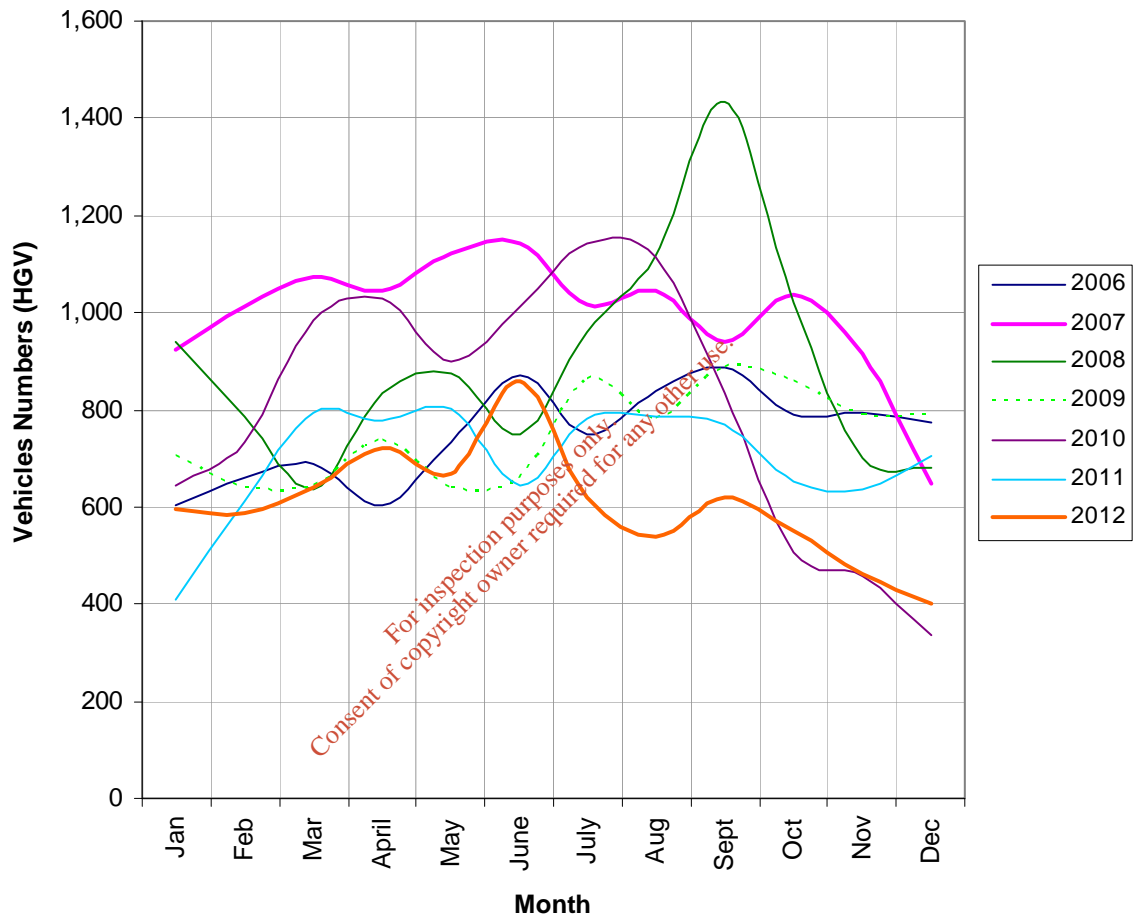




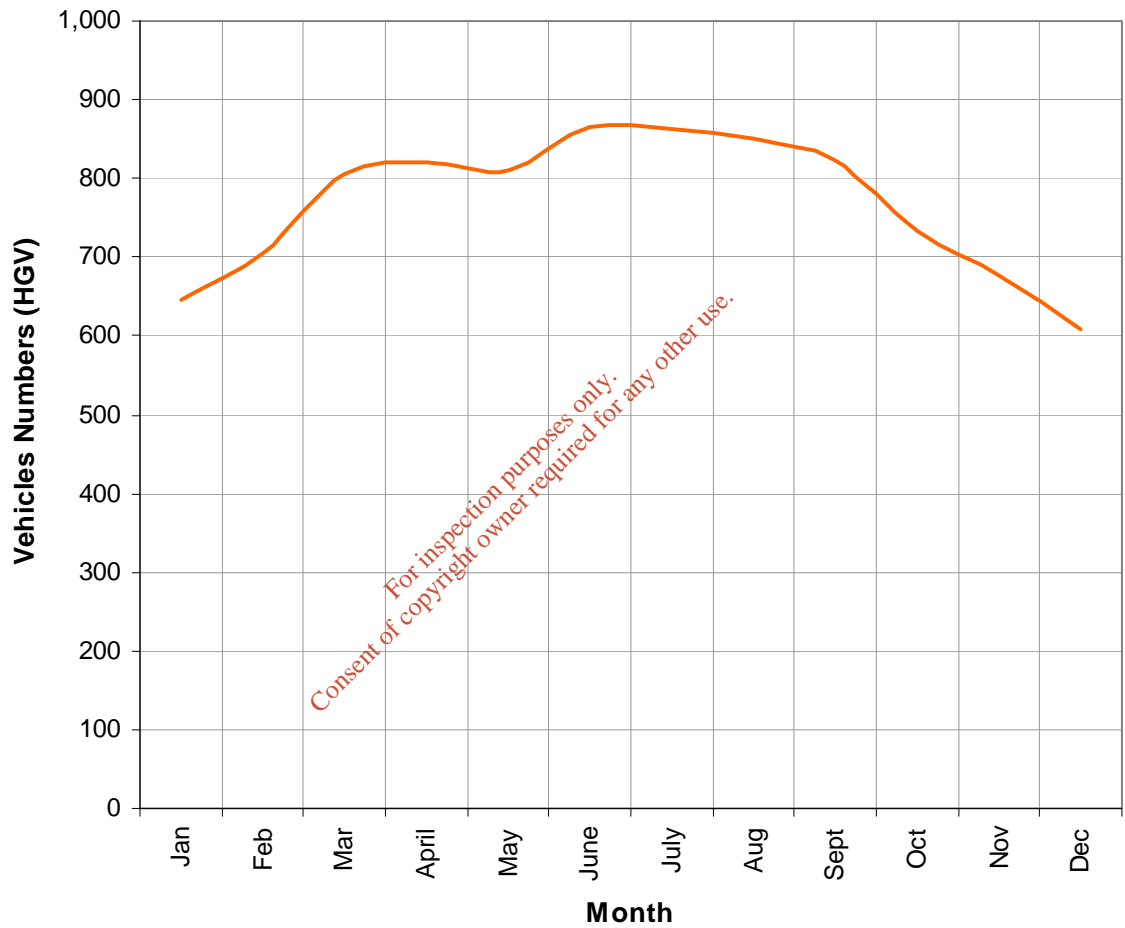
**Figure 13** Annual Tonnage Received 2006 to 2012



**Figure 14** Annual HGV Traffic Generation 2006 to 2012



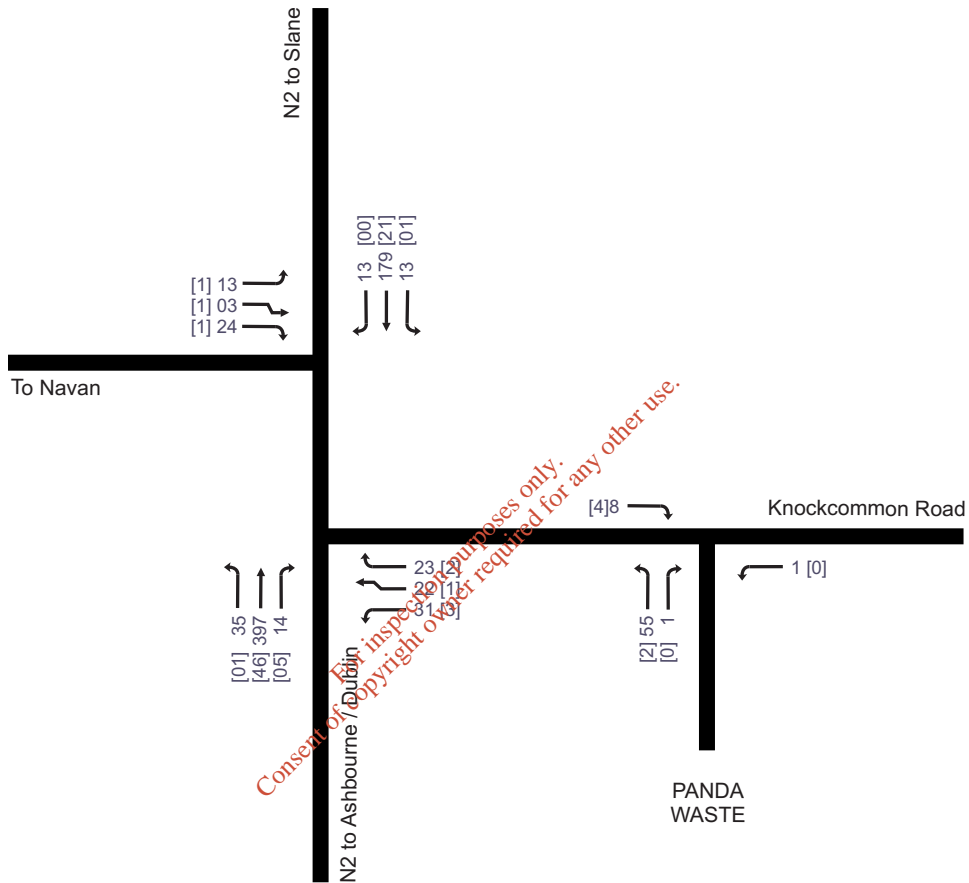
**Figure 15** Monthly HGV Traffic Generation 2006 to 2012



**Figure 16** Average Monthly HGV Traffic Fluctuation 2006 to 2012

**Appendix C**  
Network Flow Diagrams

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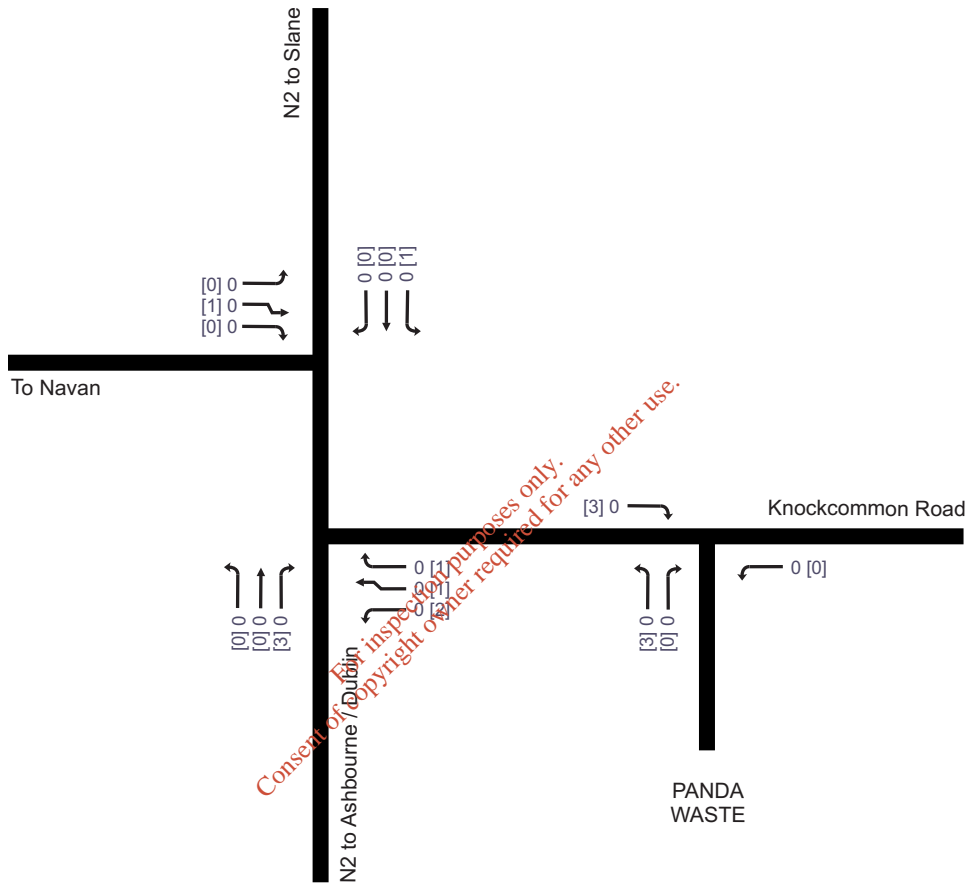
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PM Peak Hour Surveyed Flows**

Drawn by: JK  
Checked by:  
Approved by:

Date: May 2013  
Date:  
Date:

Scale: N.A  
JOB No: 02967  
Figure 1

Appendix C

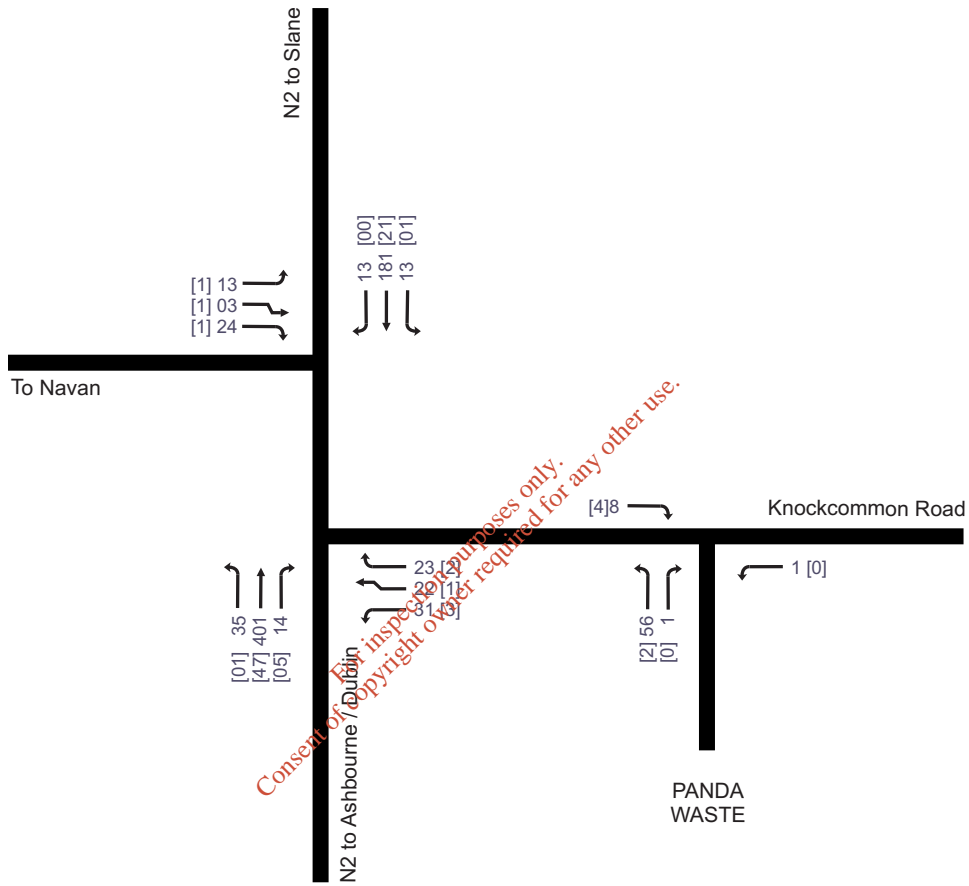


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Drawing Title	<b>85th Percentile Development PM Peak Flows (Additional Traffic)</b>		Date:	Date:	Date:
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Project/Job Title **PANDA Waste, Rathdrinagh**

Drawing Title **Base Year 2014 - Do Nothing  
PM Peak Flows**

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JK

Date:  
May 2013

Scale:  
N.A

Checked by:

Date:

JOB No: 02967

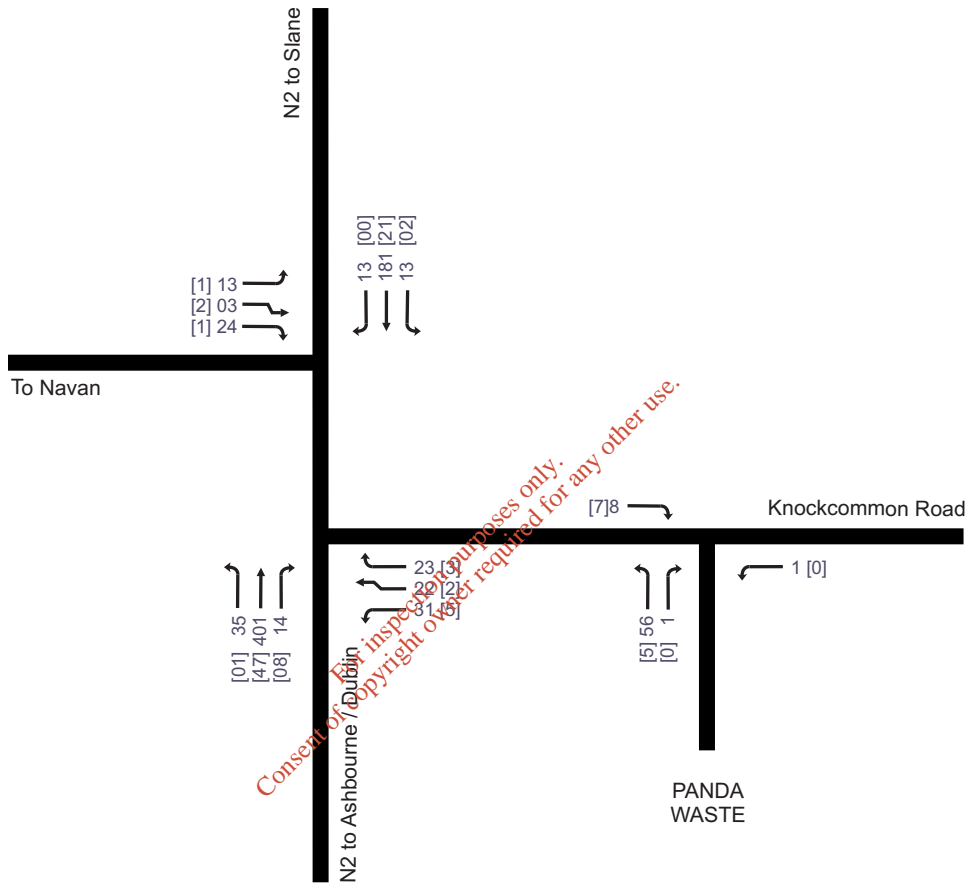
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Figure

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Drawing Title **Base Year 2014 - Do Something  
PM Peak Flows**

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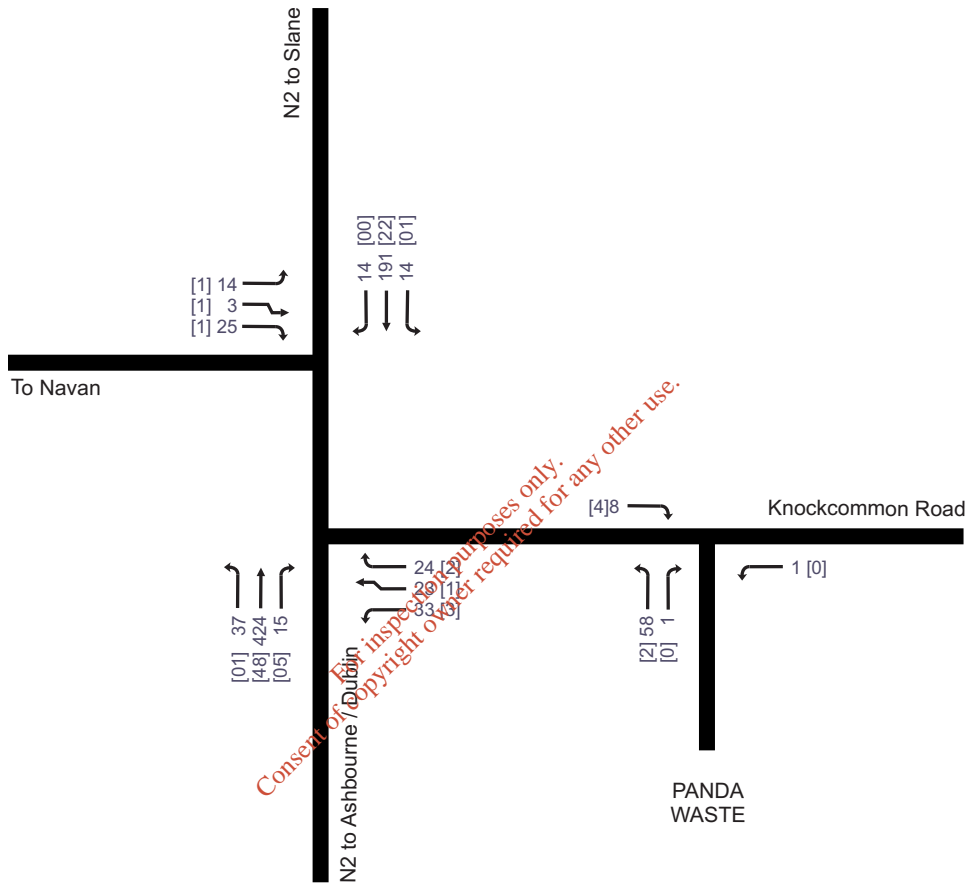
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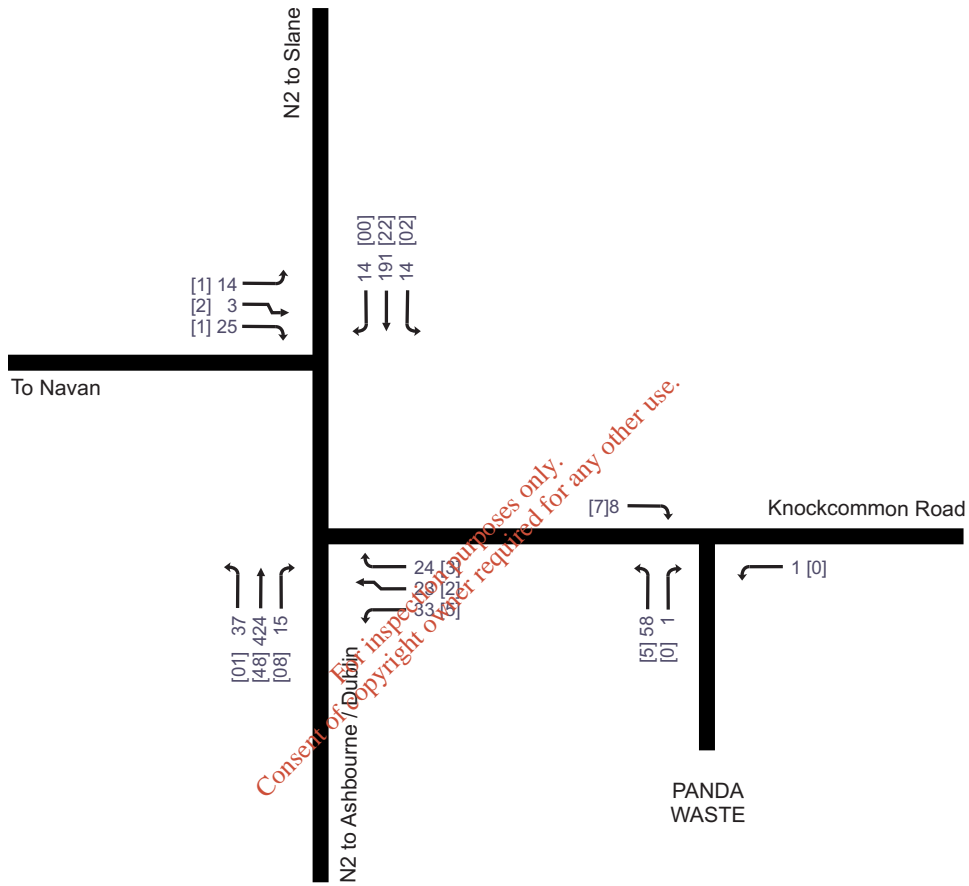
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Drawing Title **Base Year +5 2019 - Do Nothing  
PM Peak Flows**

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Appendix C		



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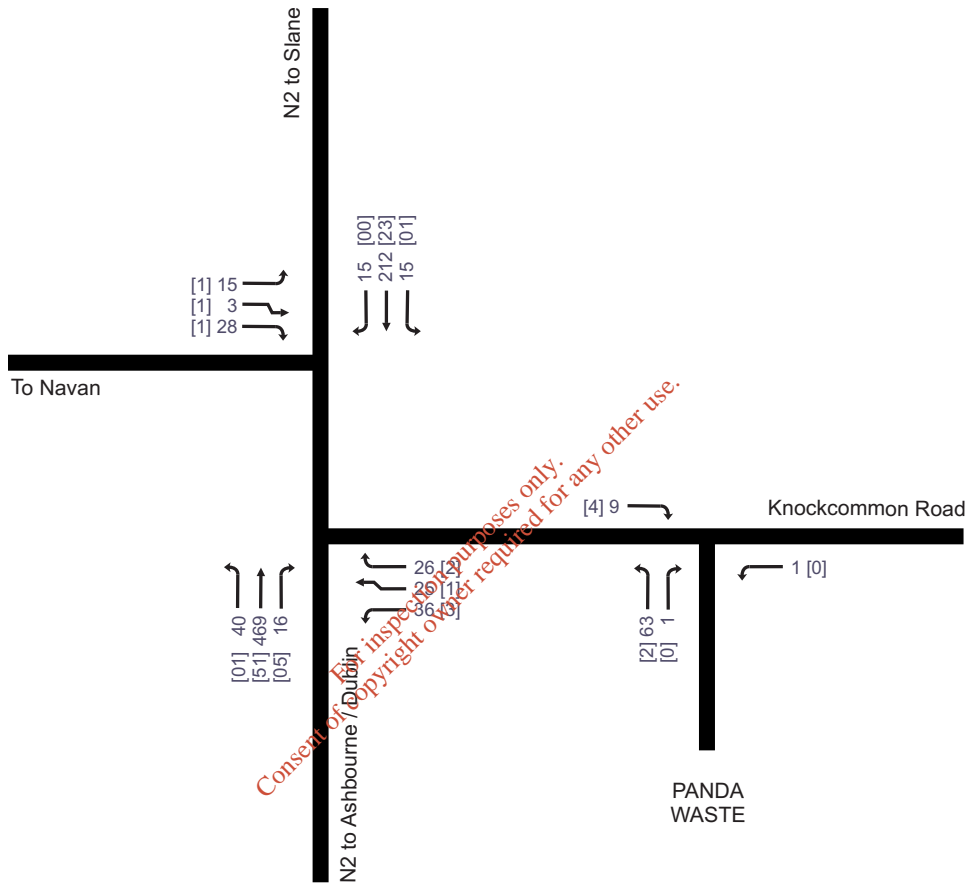
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Figure 6

Appendix C



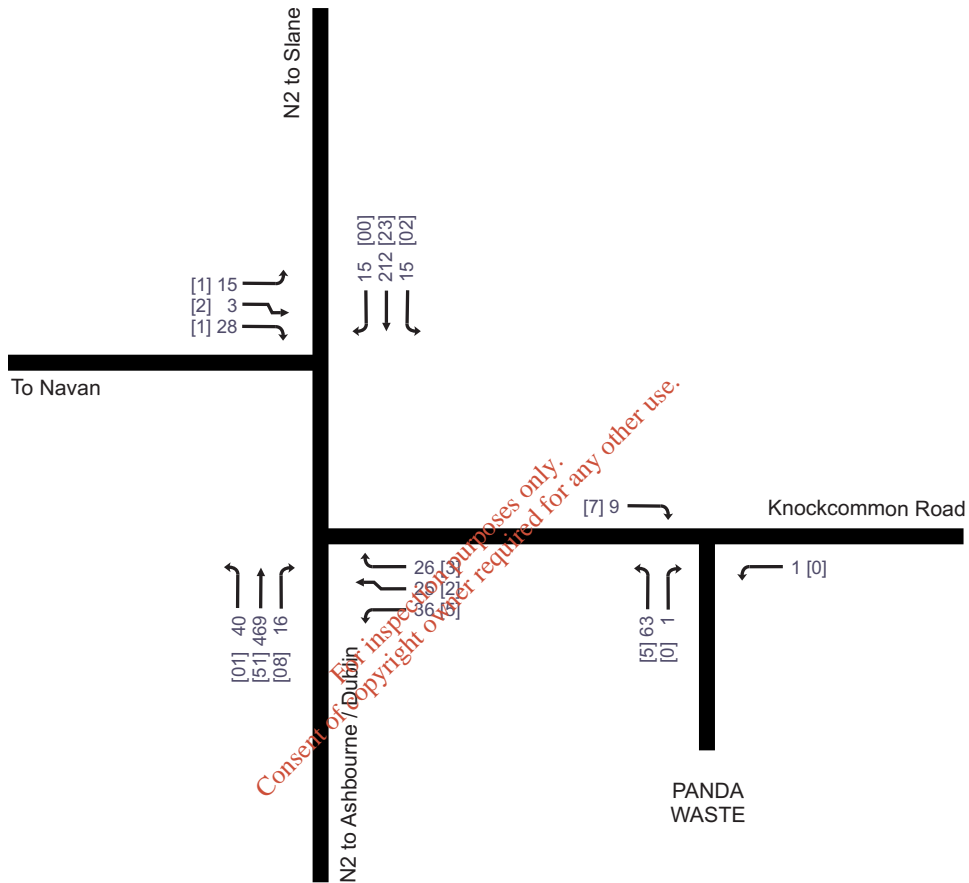
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Appendix C		



Cars [HGV]



Bracetown Business Park,  
Clonee,  
Dublin.  
Telephone: +353 (0)1 8014009  
Fax: +353 (0)1 8014035  
Website: www.trafficwise.ie  
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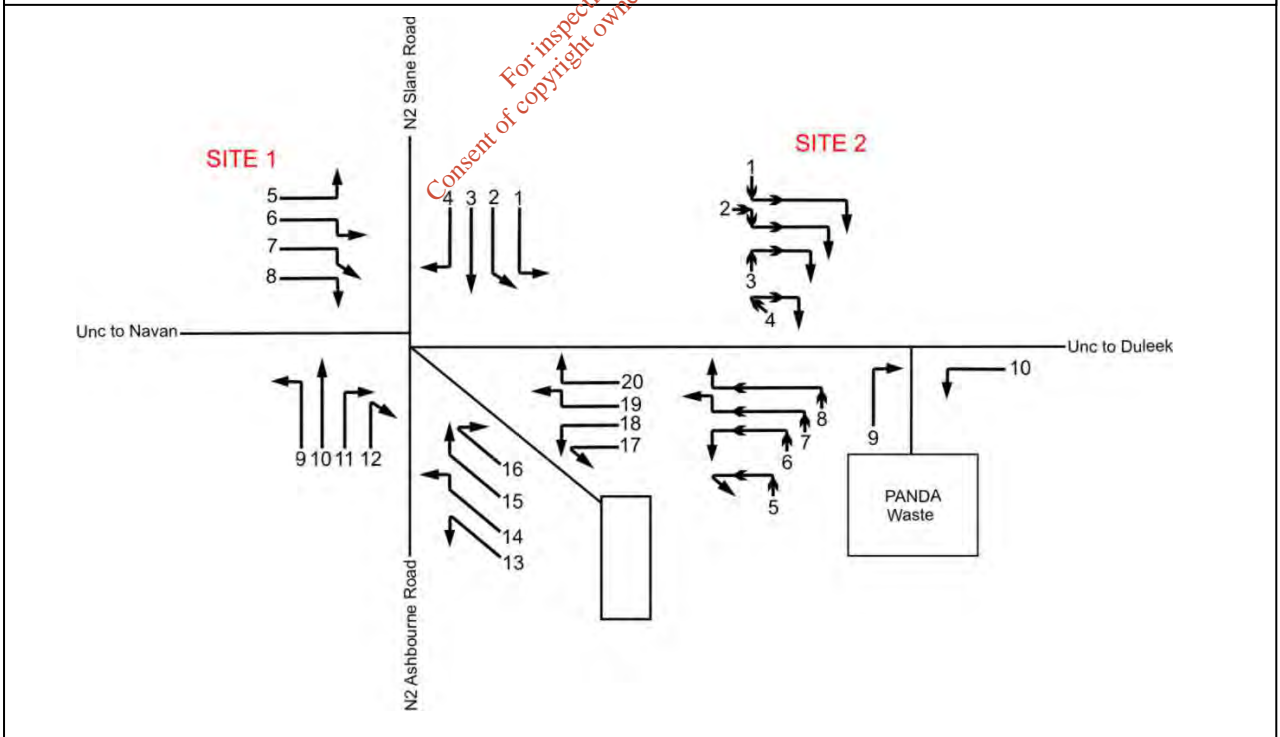
Project/Job Title **PANDA Waste, Rathdrinagh**  
 Drawing Title **Base Year +15 2029 - Do Something PM Peak Flows**

Drawn by: JK	Checked by:	Approved by:
Date: May 2013	Date:	Date:
Scale: N.A	JOB No: 02967	Figure 8
Appendix C		

# Site Locations



# Movement Numbers & Directions



	Job number: ATH/13/033	Job date: 14 <sup>th</sup> March 2013	Drawing No: ATH/13/033-1	 Transportation Surveys
	Client: Traffic Wise	Job day: Thursday	Author: SPW	

## ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3						MOVEMENT 4					
	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT
###	2	2	0	0	0	4	0	0	0	0	0	0	62	24	2	3	0	91	1	0	0	0	0	1
###	1	1	0	0	0	2	1	0	0	0	0	1	76	37	3	9	3	128	1	1	0	0	0	2
###	1	0	0	0	0	1	0	0	0	0	0	0	65	34	3	8	1	111	1	0	1	0	0	2
###	3	0	0	0	0	3	3	0	0	0	0	3	68	18	0	6	1	93	1	0	0	0	0	1
I/TO	7	3	0	0	0	10	4	0	0	0	0	4	271	113	8	26	5	423	4	1	1	0	0	6
###	2	0	0	0	0	2	0	0	0	0	0	0	89	20	2	2	1	114	0	0	0	1	0	1
###	1	0	0	0	0	1	0	0	0	0	0	0	85	11	2	5	1	104	4	0	1	0	0	5
###	3	0	0	0	0	3	0	0	0	0	0	0	59	15	0	4	1	79	3	1	0	0	0	4
###	3	0	0	0	0	3	1	1	0	0	0	2	72	19	4	11	0	106	4	0	0	1	0	5
I/TO	9	0	0	0	0	9	1	1	0	0	0	2	305	65	8	22	3	403	11	1	1	2	0	15
###	3	0	0	0	0	3	0	0	0	0	0	0	44	10	3	7	0	64	3	0	0	0	0	3
###	1	0	0	0	0	1	0	0	0	0	0	0	39	6	6	5	1	57	1	0	0	0	0	1
###	4	0	0	0	0	4	0	0	0	0	0	0	39	6	3	3	0	51	2	1	1	0	0	4
###	0	0	0	0	0	0	1	0	0	0	0	1	38	9	5	12	3	67	1	0	1	0	0	2
I/TO	8	0	0	0	0	8	1	0	0	0	0	1	160	31	17	27	4	239	7	1	2	0	0	10
###	0	1	0	1	0	2	0	0	0	0	0	0	29	13	2	7	1	52	2	1	1	1	0	5
###	0	0	0	0	0	0	0	0	0	0	0	0	29	3	4	5	0	41	1	0	0	0	0	1
###	2	1	0	0	0	3	1	0	1	0	0	2	30	3	2	6	0	41	3	1	0	0	0	4
###	0	0	0	0	0	0	2	1	0	0	0	3	27	5	5	10	0	47	3	0	1	0	0	4
I/TO	2	2	0	1	0	5	3	1	1	0	0	5	115	24	13	28	1	181	9	2	2	1	0	14
###	0	1	0	0	0	1	1	0	0	0	0	1	27	3	2	11	0	43	0	1	0	0	0	1
###	0	0	0	0	0	0	2	0	0	0	0	2	19	6	4	8	0	37	1	0	0	2	0	3
###	1	0	0	0	0	1	1	0	0	0	0	1	27	6	3	12	1	49	2	0	0	0	0	2
###	1	1	0	0	0	2	0	0	0	0	0	0	25	7	4	9	2	47	1	1	0	1	0	3
I/TO	2	2	0	0	0	4	4	0	0	0	0	4	98	22	13	40	3	176	4	2	0	3	0	9
###	0	0	1	0	0	1	1	0	0	0	0	1	24	9	0	3	1	37	0	0	0	0	0	0
###	0	0	0	0	0	0	2	0	0	0	0	2	28	5	3	10	0	46	2	0	0	0	0	2
###	1	0	0	0	0	1	0	0	0	0	0	0	23	9	3	4	0	39	1	1	0	0	0	2
###	2	0	0	0	0	2	1	0	0	0	0	1	30	3	0	7	0	40	0	0	0	0	0	0
I/TO	3	0	1	0	0	4	4	0	0	0	0	4	105	26	6	24	1	162	3	1	0	0	0	4

## ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3						MOVEMENT 4					
	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT
###	0	1	0	0	0	1	2	0	0	0	0	2	38	2	4	4	0	48	1	0	0	0	0	1
###	0	0	0	0	0	0	1	0	0	0	0	1	18	5	6	5	0	34	1	0	0	1	0	2
###	1	0	1	0	0	2	0	0	0	0	0	0	38	4	1	7	3	53	2	0	0	0	0	2
###	0	0	0	0	0	0	0	0	0	0	0	0	28	4	2	4	1	39	1	0	0	0	0	1
I/TO	1	1	1	0	0	3	3	0	0	0	0	3	122	15	13	20	4	174	5	0	0	1	0	6
###	1	1	0	0	0	2	0	0	0	1	0	1	32	10	3	2	0	47	1	1	0	2	0	4
###	1	0	0	0	0	1	0	0	0	0	0	0	36	5	4	4	0	49	0	0	0	0	0	0
###	2	0	0	0	0	2	0	0	0	0	0	0	32	3	4	4	0	42	1	0	0	0	0	1
###	2	0	1	0	0	3	0	0	0	0	0	0	27	4	7	6	0	44	0	1	0	1	0	2
I/TO	6	1	1	0	0	8	0	0	0	1	0	1	126	22	18	16	0	182	2	2	0	3	0	7
###	0	0	2	0	0	2	1	0	0	0	0	1	28	2	5	5	0	40	2	1	0	2	0	5
###	1	0	0	0	0	1	0	0	1	0	0	1	26	2	5	4	1	38	1	0	1	0	0	2
###	1	0	0	0	0	1	0	0	1	0	0	1	32	10	3	5	1	51	5	0	0	0	0	5
###	1	0	1	1	0	3	0	0	0	0	0	0	22	12	1	3	2	40	2	0	1	0	0	3
I/TO	3	0	3	1	0	7	1	0	2	0	0	3	108	26	14	17	4	169	10	1	2	2	0	15
###	0	0	0	0	0	0	2	0	0	0	0	2	26	8	4	2	1	41	1	0	0	1	0	2
###	2	0	1	1	0	4	0	0	0	0	0	0	27	11	6	1	0	45	3	1	0	3	0	7
###	0	0	0	1	0	1	2	0	0	0	0	2	32	5	7	4	1	49	1	2	0	0	1	4
###	1	0	0	0	0	1	0	0	0	0	0	0	39	6	2	1	2	50	2	1	0	0	0	3
I/TO	3	0	1	2	0	6	4	0	0	0	0	4	124	30	19	8	4	185	7	4	0	4	1	16
###	4	0	0	0	0	4	1	0	0	0	0	1	33	13	3	4	0	53	4	1	0	0	0	5
###	2	2	0	0	0	4	0	1	0	0	0	1	49	10	0	1	1	61	4	0	0	0	0	4
###	0	1	0	1	0	2	0	0	0	0	0	0	36	5	4	4	0	49	2	0	0	0	0	2
###	4	0	0	0	0	4	1	0	0	0	0	1	29	4	2	2	0	37	2	0	0	0	0	2
I/TO	10	3	0	1	0	14	2	1	0	0	0	3	147	32	9	11	1	200	12	1	0	0	0	13
###	3	1	0	0	0	4	0	0	0	0	0	0	42	6	3	4	0	55	3	0	0	0	0	3
###	1	0	0	0	0	1	0	0	0	0	0	0	29	7	4	3	0	43	3	1	0	0	0	4
###	0	0	0	0	0	0	1	0	0	0	0	1	24	3	3	5	0	35	2	0	0	0	0	2
###	0	0	0	0	0	0	0	0	0	0	0	0	31	3	0	4	1	39	2	0	0	1	0	3
I/TO	4	1	0	0	0	5	1	0	0	0	0	1	126	19	10	16	1	172	10	1	0	1	0	12
P/TO	42	10	7	5	0	64	23	2	3	1	0	29	###	247	132	207	23	###	69	15	6	15	1	106



## ABACUS TRANSPORTATION SURVEYS

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**MARCH 2013  
ATH/13/033**

SITE: 01

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LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 5					TOT	MOVEMENT 6					TOT	MOVEMENT 7					TOT	MOVEMENT 8					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
###	2	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	0	2	3	0	1	0	0	4
###	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	2	4	1	0	0	0	5
###	0	3	0	0	0	3	3	0	0	0	0	3	0	0	0	0	0	0	5	2	0	0	0	7
###	0	0	0	0	1	1	1	0	0	0	0	1	2	0	0	0	0	2	8	5	0	0	0	13
I/TO	2	3	0	0	1	6	7	0	0	0	0	7	6	0	0	0	0	6	20	8	1	0	0	29
###	2	0	0	0	0	2	2	1	0	0	0	3	0	0	0	0	0	0	8	0	0	0	1	9
###	3	1	0	0	0	4	5	0	0	0	0	5	2	0	0	0	0	2	3	0	1	1	0	5
###	1	0	1	0	0	2	5	3	0	0	0	8	0	0	0	0	0	0	4	2	0	0	0	6
###	5	0	0	0	0	5	2	1	1	0	0	4	0	0	0	0	0	0	6	1	0	0	0	7
I/TO	11	1	1	0	0	13	14	5	1	0	0	20	2	0	0	0	0	2	21	3	1	1	1	27
###	2	1	1	0	0	4	0	2	1	0	0	3	0	0	0	0	0	0	4	4	0	0	0	8
###	2	1	0	2	0	5	2	0	0	0	0	2	0	1	0	0	0	1	2	1	1	0	0	4
###	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0	5	0	0	0	0	5
###	0	2	0	1	0	3	4	0	1	0	0	5	0	0	1	0	0	1	10	0	1	0	0	11
I/TO	5	4	1	3	0	13	8	2	2	0	0	12	0	1	1	0	0	2	21	5	2	0	0	28
###	4	0	0	0	0	4	1	0	0	0	0	1	0	1	0	1	0	2	2	0	0	0	0	2
###	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9
###	4	0	0	0	0	4	0	0	1	0	0	1	0	0	0	0	0	0	7	0	0	0	0	7
###	0	1	0	2	0	3	0	1	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	4
I/TO	8	1	1	4	0	14	1	1	1	0	0	3	0	1	0	1	0	2	21	1	0	0	0	22
###	3	2	0	0	0	5	0	1	1	0	0	2	0	0	0	0	0	0	1	1	0	0	0	2
###	1	0	0	0	0	1	5	1	0	0	0	6	1	0	0	0	0	1	5	4	1	0	0	10
###	5	0	0	0	0	5	1	2	0	0	0	3	0	0	0	0	0	0	3	1	2	0	0	6
###	0	3	3	1	0	7	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
I/TO	9	5	3	1	0	18	7	4	1	0	0	12	2	0	0	0	0	2	10	6	3	0	0	19
###	0	0	0	2	0	2	0	2	1	0	0	3	0	0	0	0	0	0	2	2	0	0	0	4
###	3	0	0	0	0	3	0	1	0	0	0	1	1	0	0	0	0	1	6	2	1	0	0	9
###	3	1	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	3
###	1	0	0	0	0	1	0	2	0	0	0	2	0	0	0	2	0	2	2	0	0	0	0	2
I/TO	7	1	0	2	0	10	1	5	1	0	0	7	1	0	0	2	0	3	13	4	1	0	0	18

## ABACUS TRANSPORTATION SURVEYS

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**MARCH 2013  
ATH/13/033**

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LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 5					TOT	MOVEMENT 6					TOT	MOVEMENT 7					TOT	MOVEMENT 8					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
###	0	1	0	0	0	1	1	1	0	1	0	3	0	0	0	0	0	5	0	0	0	0	5	
###	0	1	1	0	0	2	1	0	0	0	0	1	0	0	0	0	0	8	2	0	0	0	10	
###	1	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	1	1	1	2	0	0	4	
###	1	2	0	0	0	3	1	1	0	0	0	2	0	0	0	0	0	2	0	0	0	1	3	
I/TO	2	4	1	0	0	7	3	2	1	1	0	7	1	0	0	0	1	16	3	2	0	1	22	
###	2	0	0	0	0	2	5	0	1	0	0	6	0	0	0	0	0	3	1	1	0	0	5	
###	2	0	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	6	4	0	0	0	10	
###	1	0	0	3	0	4	1	1	0	0	0	2	0	0	0	0	0	4	0	0	0	0	4	
###	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0	5	
I/TO	5	0	0	3	0	8	7	1	1	1	0	10	0	0	0	0	0	18	5	1	0	0	24	
###	3	3	0	0	0	6	2	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	1	
###	0	1	0	0	0	1	2	0	1	0	0	3	1	0	0	0	0	1	7	1	0	0	8	
###	2	1	0	2	0	5	2	0	0	0	0	2	1	0	0	0	0	1	2	0	0	0	2	
###	0	1	0	2	0	3	0	0	0	0	0	0	1	0	0	0	0	1	5	0	0	0	5	
I/TO	5	6	0	4	0	15	6	0	1	1	0	8	3	0	0	0	0	3	15	1	0	0	16	
###	0	1	0	0	0	1	2	1	0	0	0	3	0	0	0	0	0	3	0	0	2	0	5	
###	2	0	1	0	0	3	2	0	1	0	0	3	0	0	0	0	0	1	2	0	0	0	3	
###	2	1	0	0	0	3	1	0	0	1	0	2	0	0	0	0	0	7	0	1	0	0	8	
###	3	1	0	1	0	5	0	1	1	0	0	2	1	0	0	0	0	1	1	0	0	0	1	
I/TO	7	3	1	1	0	12	5	2	2	1	0	10	1	0	0	0	0	12	2	1	2	0	17	
###	6	0	0	0	0	6	1	0	1	0	0	2	0	1	0	0	0	1	5	2	0	0	7	
###	3	0	0	1	0	4	2	0	0	0	0	2	1	0	0	0	0	1	8	1	1	0	10	
###	3	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1	4	2	0	0	6	
###	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	
I/TO	13	0	0	1	0	14	3	0	1	0	0	4	2	1	0	0	0	3	19	5	1	0	25	
###	1	1	2	0	0	4	4	1	0	0	0	5	0	0	0	0	0	3	3	1	0	0	7	
###	1	0	0	1	0	2	1	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	4	
###	4	0	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	3	1	0	0	0	4	
###	1	1	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	2	
I/TO	7	2	2	1	0	12	7	1	0	0	0	8	0	0	0	0	0	12	4	1	0	0	17	
P/TO	68	26	9	20	0	123	48	18	11	4	0	81	10	3	1	3	0	17	157	36	12	2	1	208

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**MARCH 2013  
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SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 9						MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT
###	1	1	0	0	0	2	9	8	0	3	0	20	1	0	0	0	0	1	0	0	0	0	0	
###	1	0	0	0	0	1	16	8	0	3	0	27	2	0	0	0	0	2	1	0	0	0	1	
###	3	1	0	0	0	4	20	6	4	5	0	35	2	0	0	1	0	3	0	0	0	0	0	
###	5	1	0	1	0	7	21	6	4	5	1	37	3	1	2	0	0	6	0	0	0	0	0	
I/TO	10	3	0	1	0	14	66	28	8	16	1	119	8	1	2	1	0	12	1	0	0	0	1	
###	4	0	1	0	0	5	23	6	0	2	1	32	4	1	0	4	0	9	1	0	0	0	1	
###	3	1	0	0	0	4	21	3	4	8	0	36	5	0	0	0	0	5	0	0	0	0	0	
###	6	1	0	0	0	7	28	3	5	7	0	43	5	1	1	0	0	7	0	0	0	0	0	
###	8	2	0	0	0	10	22	8	3	8	0	41	4	2	0	1	0	7	0	0	0	0	0	
I/TO	21	4	1	0	0	26	94	20	12	25	0	152	18	4	1	5	0	28	1	0	0	0	1	
###	5	0	0	2	0	7	26	5	6	6	0	43	7	1	1	2	0	11	0	0	0	0	0	
###	1	0	2	1	0	4	20	7	2	7	1	37	1	2	0	1	0	4	0	0	0	0	0	
###	2	0	0	0	0	2	25	6	2	6	0	39	2	0	1	1	0	4	0	0	0	0	0	
###	3	0	0	0	0	3	20	8	1	12	1	42	1	0	0	0	0	1	0	0	0	0	0	
I/TO	11	0	2	3	0	16	91	26	11	31	2	161	11	3	2	4	0	20	0	0	0	0	0	
###	3	1	0	0	0	4	21	7	3	3	3	37	2	1	0	0	0	3	0	0	0	0	0	
###	3	1	1	0	0	5	32	3	2	5	0	42	1	0	1	1	0	3	0	0	0	0	0	
###	3	1	1	0	0	5	21	8	3	10	0	42	3	0	0	0	0	3	0	0	0	0	0	
###	1	0	1	0	0	2	20	6	4	5	0	35	1	2	0	0	0	3	0	0	0	0	0	
I/TO	10	3	3	0	0	16	94	24	12	23	3	156	7	3	1	1	0	12	0	0	0	0	0	
###	6	2	0	0	0	8	15	6	2	10	0	33	1	0	0	2	0	3	0	0	0	0	0	
###	6	1	0	0	0	7	15	4	1	7	0	27	1	0	0	1	0	2	0	0	0	0	0	
###	1	2	0	0	0	3	14	5	3	6	1	29	0	0	0	1	0	1	0	0	0	0	0	
###	4	1	0	0	0	5	14	8	2	10	1	35	1	2	0	2	0	5	0	0	0	0	0	
I/TO	17	6	0	0	0	23	58	23	8	33	2	124	3	2	0	6	0	11	0	0	0	0	0	
###	4	4	1	0	0	9	11	2	3	6	0	22	4	1	1	0	0	6	0	0	0	0	0	
###	4	0	0	0	0	4	28	8	3	6	0	45	0	2	0	3	0	5	0	0	0	0	0	
###	5	2	0	0	0	7	32	7	4	6	0	49	3	2	0	1	0	6	0	0	0	0	0	
###	4	1	0	0	0	5	26	2	1	8	0	37	4	2	0	0	0	6	0	0	0	0	0	
I/TO	17	7	1	0	0	25	97	19	11	26	0	153	11	7	1	4	0	23	0	0	0	0	0	

# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 9						MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT
###	4	1	0	1	0	6	20	14	2	11	0	47	1	1	0	1	0	3	0	0	0	0	0	0
###	4	1	1	0	0	6	28	4	4	7	0	43	3	2	3	2	0	10	2	0	0	0	0	2
###	5	0	1	1	0	7	39	10	1	5	1	56	2	0	0	1	0	3	0	0	0	0	0	0
###	5	1	0	0	0	6	26	3	5	4	1	39	1	3	1	1	0	6	0	0	0	0	0	0
I/TO	18	3	2	2	0	25	113	31	12	27	2	185	7	6	4	5	0	22	2	0	0	0	0	2
###	4	1	0	0	0	5	22	11	5	14	0	52	1	0	0	1	0	2	0	0	0	0	0	0
###	9	1	0	1	0	11	40	10	9	9	1	69	2	1	0	1	0	4	0	0	0	0	0	0
###	3	1	0	0	0	4	38	11	2	5	0	56	0	0	0	0	0	1	0	0	0	0	0	0
###	4	0	0	0	0	4	21	4	5	13	0	43	2	0	1	1	0	4	0	0	0	0	0	0
I/TO	20	3	0	1	0	24	121	36	21	41	0	220	6	1	1	3	0	11	0	0	0	0	0	0
###	4	1	1	1	0	7	30	6	2	7	0	46	2	1	0	4	0	7	0	0	0	0	0	0
###	8	1	0	0	0	9	37	8	3	8	0	56	1	2	1	3	0	7	0	0	0	0	0	0
###	7	0	0	0	0	7	44	7	1	11	1	64	1	0	0	2	0	3	0	0	0	0	0	0
###	4	0	1	1	0	6	37	6	4	8	2	57	2	3	1	3	0	9	0	0	0	0	0	0
I/TO	23	2	2	2	0	29	148	27	10	34	4	223	6	6	2	12	0	26	0	0	0	0	0	0
###	7	2	2	2	0	13	45	8	3	8	0	64	4	2	0	3	0	9	0	0	0	0	0	0
###	0	2	0	0	0	2	40	17	3	5	0	65	2	2	0	0	0	4	0	0	0	0	0	0
###	3	1	0	1	0	5	64	16	7	7	1	95	2	1	2	4	0	9	0	0	0	0	0	0
###	4	4	0	0	0	8	53	17	3	4	1	78	2	3	0	1	0	6	0	0	0	0	0	0
I/TO	14	9	2	3	0	28	202	58	16	24	2	302	10	8	2	8	0	28	0	0	0	0	0	0
###	4	0	1	0	0	5	75	39	6	6	0	126	4	1	0	3	0	8	0	0	0	0	0	0
###	16	1	0	0	0	17	57	15	5	9	0	86	1	0	0	0	0	1	0	0	0	0	0	0
###	7	2	0	0	0	9	80	8	3	2	2	95	4	0	0	2	0	6	0	0	0	0	0	0
###	3	2	0	0	0	5	97	26	5	8	0	136	4	0	0	0	0	4	0	0	0	0	0	0
I/TO	30	5	1	0	0	36	309	88	19	25	2	443	13	1	0	5	0	19	0	0	0	0	0	0
###	15	1	0	1	0	17	85	25	2	7	0	119	2	0	0	0	0	2	0	0	0	0	0	0
###	6	2	0	0	0	8	66	15	0	1	1	83	0	0	0	0	0	0	0	0	0	0	0	0
###	9	5	2	0	0	16	71	17	3	5	2	98	4	0	0	0	0	4	0	0	0	0	0	0
###	6	0	1	0	0	7	68	11	0	3	1	83	1	0	0	0	0	1	0	0	0	0	0	0
I/TO	36	8	3	1	0	48	290	68	5	16	4	383	7	0	0	0	0	7	0	0	0	0	0	0
P/TO	196	46	16	12	0	270	###	400	125	280	22	###	81	37	13	48	0	179	2	0	0	0	0	2

## ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 13						MOVEMENT 14						MOVEMENT 15						MOVEMENT 16					
	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT
###	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	
###	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
I/TO	0	0	0	1	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	2	
###	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	0	2	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
I/TO	1	0	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	1	3	0	0	0	3	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
I/TO	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
I/TO	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	0	0	3	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
###	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
###	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	1	1	
I/TO	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	1	1	

# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 13					TOT	MOVEMENT 14					TOT	MOVEMENT 15					TOT	MOVEMENT 16					TOT
	CAR	LGV	OGV	10GV	2 BUS		CAR	LGV	OGV	10GV	2 BUS		CAR	LGV	OGV	10GV	2 BUS		CAR	LGV	OGV	10GV	2 BUS	
###	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
I/TO	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	3
###	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	2
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
I/TO	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	4
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
I/TO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0
I/TO	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
###	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1
###	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
I/TO	0	0	0	0	0	0	4	0	0	0	0	4	0	1	0	0	0	1	2	1	0	0	0	3
###	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
###	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
###	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	2
###	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
I/TO	3	0	0	0	0	3	3	0	0	0	0	3	1	0	0	0	0	1	1	2	0	0	0	3
P/TO	3	0	0	0	0	3	11	0	0	0	0	11	5	3	0	0	0	8	15	8	0	1	0	24

## ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 01

DATE: Thursday 14th March

LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 17						MOVEMENT 18						MOVEMENT 19						MOVEMENT 20					
	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT	CAR	LGV	OGV	10GV	2 BUS	TOT
###	0	0	0	0	0	0	2	0	1	0	0	3	0	0	2	0	0	2	0	0	0	0	0	
###	0	1	0	0	0	1	3	1	1	2	0	7	0	0	0	0	0	0	2	1	0	0	0	3
###	0	0	0	0	0	0	1	1	0	1	0	3	1	0	0	0	0	1	0	0	0	1	0	1
###	0	0	0	0	0	0	1	2	1	1	0	5	2	0	0	0	0	2	0	0	1	0	3	
I/TO	0	1	0	0	0	1	7	4	3	4	0	18	3	0	2	0	0	5	4	1	0	2	0	7
###	0	0	0	0	0	0	6	0	1	0	0	7	0	0	0	0	0	0	2	2	0	1	0	5
###	0	0	0	0	0	0	2	2	1	0	0	5	1	0	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	6	0	0	1	0	7	0	0	0	1	0	4	0	0	0	0	0	0
###	2	0	0	0	0	2	1	1	2	1	0	5	1	1	1	2	0	5	0	1	0	0	0	1
I/TO	2	0	0	0	0	2	15	3	4	2	0	24	5	1	1	3	0	10	2	3	0	1	0	6
###	0	0	0	1	0	1	1	1	0	0	0	2	1	0	0	1	0	2	0	0	0	2	0	2
###	0	0	0	0	0	0	2	1	0	0	0	3	1	1	0	0	0	2	0	1	0	0	0	1
###	0	0	0	0	0	0	4	1	1	0	0	6	0	0	1	0	0	1	2	0	0	0	0	2
###	0	0	0	0	0	0	4	1	1	1	0	7	2	0	0	0	0	2	0	0	0	0	0	0
I/TO	0	0	0	1	0	1	11	4	2	1	0	18	4	1	1	1	0	7	2	1	0	2	0	5
###	0	0	0	0	0	0	7	1	0	0	0	8	0	2	0	0	0	2	0	0	0	0	0	0
###	0	0	0	0	0	0	2	0	0	1	0	3	0	2	0	0	0	2	0	0	0	0	0	0
###	0	0	0	0	0	0	2	1	0	0	0	3	2	2	1	0	0	5	0	1	0	0	0	1
###	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	2	1	1	0	0	4
I/TO	0	0	0	0	0	0	12	3	0	1	0	16	2	6	1	0	0	9	2	2	1	0	0	5
###	0	1	0	0	0	1	1	2	0	0	0	3	0	0	0	0	0	0	2	1	0	0	0	3
###	1	1	0	0	0	2	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	2	0	0	1	0	3	0	2	0	0	0	2	0	0	0	0	0	0
###	0	0	0	0	0	0	3	0	2	1	0	6	1	0	0	1	0	2	1	0	0	0	0	1
I/TO	1	2	0	0	0	3	7	2	2	3	0	14	1	3	0	1	0	5	3	1	0	0	0	4
###	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0
###	0	0	0	0	0	0	2	1	0	1	0	4	0	1	1	0	0	2	1	0	0	0	0	1
###	0	0	0	0	0	0	3	1	0	1	0	5	1	0	0	0	0	1	0	1	0	0	0	1
###	0	0	0	0	0	0	1	2	1	2	0	6	2	1	2	0	0	5	0	0	0	0	0	0
I/TO	0	0	0	0	0	0	6	5	1	5	0	17	3	3	3	0	0	9	1	1	0	0	0	2

## ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
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**MARCH 2013  
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SITE: 01

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LOCATION: N2/L1013/Unc to Duleek (Rathdrinagh Cross Roads)

DAY: Thursday

TIME	MOVEMENT 17						MOVEMENT 18						MOVEMENT 19						MOVEMENT 20					
	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT
###	0	0	0	0	0	0	3	2	0	0	0	5	3	1	1	0	0	5	2	0	0	0	0	2
###	0	0	0	0	0	0	1	1	0	2	0	4	2	0	0	1	0	3	0	0	0	0	0	0
###	0	0	0	0	0	0	4	1	0	1	0	6	2	0	0	0	0	2	1	1	0	0	0	2
###	0	0	0	0	0	0	1	1	0	1	0	3	4	0	0	0	0	4	1	1	1	0	0	3
I/TO	0	0	0	0	0	0	9	5	0	4	0	18	11	1	1	1	0	14	4	2	1	0	0	7
###	1	0	0	0	0	1	1	0	1	0	0	2	0	1	1	0	0	2	0	0	0	0	0	0
###	0	0	0	0	0	0	6	1	0	0	0	7	0	1	0	0	0	1	1	0	0	0	0	1
###	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	1	1	0	0	0	0	1
###	0	1	0	0	0	1	4	2	1	0	0	7	3	0	0	0	0	3	2	0	0	0	0	2
I/TO	1	1	0	0	0	2	15	3	2	0	0	20	4	2	1	0	0	7	4	0	0	0	0	4
###	1	0	0	0	0	1	1	2	0	0	0	3	2	0	0	1	0	3	1	0	0	0	0	1
###	0	0	0	0	0	0	2	1	0	0	0	3	1	1	0	0	0	2	0	0	0	0	0	0
###	1	0	1	0	0	2	2	0	1	1	0	4	3	1	1	0	0	5	1	3	0	0	0	4
###	0	0	0	0	0	0	5	1	0	0	0	6	2	0	2	0	0	4	1	0	0	0	0	1
I/TO	2	0	1	0	0	3	10	4	1	1	0	16	8	2	3	1	0	14	3	3	0	0	0	6
###	0	0	0	0	0	0	2	0	0	1	0	3	3	0	0	1	0	4	2	1	0	0	0	3
###	0	0	0	0	0	0	1	0	0	0	0	1	4	2	0	0	0	6	3	2	0	0	0	5
###	0	0	0	0	0	0	6	1	1	0	0	8	1	1	0	0	0	2	3	0	0	0	0	3
###	1	0	0	0	0	1	2	0	0	0	0	2	4	2	0	0	0	6	4	1	0	0	0	5
I/TO	1	0	0	0	0	1	11	1	1	1	0	14	12	5	0	1	0	18	12	4	0	0	0	16
###	0	0	0	0	0	0	7	1	2	1	0	11	5	0	0	1	0	6	7	2	1	0	0	10
###	0	0	0	0	0	0	10	3	0	0	0	13	3	0	0	0	0	3	7	1	0	0	0	8
###	0	0	0	0	0	0	6	0	0	0	0	6	7	1	0	0	0	8	3	1	0	1	0	5
###	0	0	0	0	0	0	3	1	0	0	0	4	6	0	0	0	0	6	1	1	0	0	0	2
I/TO	0	0	0	0	0	0	26	5	2	1	0	34	21	1	0	1	0	23	18	5	1	1	0	25
###	0	0	0	0	0	0	6	2	0	0	0	8	1	0	0	0	0	1	4	0	0	0	0	4
###	1	0	0	0	0	1	2	0	0	0	0	2	3	1	0	0	0	4	3	0	0	0	0	3
###	0	0	0	0	0	0	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0
###	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	3	0	0	0	0	3
I/TO	1	0	0	0	0	1	10	2	0	0	0	12	7	2	0	0	0	9	10	0	0	0	0	10
P/TO	6	3	1	1	0	11	117	34	11	17	0	179	73	26	10	6	0	115	59	19	3	3	0	84



# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 1											TOT	MOVEMENT 2											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
07:00	2	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	1
07:15	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:45	2	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
08:00	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
08:15	5	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
08:30	3	1	0	0	0	0	0	0	0	0	0	4	3	2	0	0	0	0	0	0	0	0	0	5
08:45	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
09:00	4	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	2
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
09:30	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
10:00	1	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	0	0
10:30	1	0	0	0	1	0	0	0	0	0	0	2	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
11:00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:15	1	0	0	0	0	0	0	0	0	0	0	1	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	1	0	0	0	0	0	0	0	0	0	1
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
12:00	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 1											TOT	MOVEMENT 2											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	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	1	0	0	0	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	4
14:00	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
14:15	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
14:30	2	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	4	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0	2
15:00	0	0	1	0	0	0	0	0	0	0	0	1	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	1	0	0	0	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1
16:00	1	0	0	1	0	0	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1
16:15	0	1	1	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	1	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	1	1	1	2	1	0	1	0	0	0	0	7	0	0	0	1	0	0	0	0	0	0	0	1
17:00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	1	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	2	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
18:15	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
<b>P/TOT</b>	35	6	2	3	3	0	1	0	0	1	0	51	11	9	0	2	3	1	1	0	0	0	0	27

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 3											TOT	MOVEMENT 4											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
07:00	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:15	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:30	2	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
07:45	1	1	0	0	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	4	1	0	0	0	2	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0
08:15	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
08:30	3	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
08:45	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	3	0	1	0	1	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
09:15	3	0	1	0	1	0	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0
09:30	1	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
10:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
10:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
11:00	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:45	1	1	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
12:00	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	1	1	0	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
12:30	1	1	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 3											TOT	MOVEMENT 4											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
13:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	1	1	0	1	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
13:30	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
13:45	0	1	0	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
14:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
14:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
15:00	1	1	0	0	2	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:30	1	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1
15:45	1	2	0	0	0	0	1	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>21</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
16:00	2	2	0	0	1	0	1	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17:00	1	2	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	1	0	0	0	0	0	0	0	0	0	0	1	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	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>46</b>	<b>21</b>	<b>4</b>	<b>4</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>3</b>	<b>127</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 5											TOT	MOVEMENT 6											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
07:30	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	1	6
08:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	1	0	0	0	0	1	0	2
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	2	2	0	0	0	1	0	8
09:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	4
09:45	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	3
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	1	0	6	2	0	0	1	1	0	1	0	0	0	11
10:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	2
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0	1	0	5
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	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	0	0	1	0	0	0	0	1	0	0
<b>H/TOT</b>	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	4
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	2
12:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1
<b>H/TOT</b>	1	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	2	0	0	0	0	2	0	9

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 5											TOT	MOVEMENT 6											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
13:15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	2
13:30	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	4	5	0	0	0	2	0	0	0	1	0	12
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
14:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	2
14:45	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	3
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	1	0	1	0	0	1	13
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	2
15:15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
15:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	3	3	1	0	1	1	1	0	0	0	0	10
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	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	3	0	1	0	0	0	0	0	0	0	0	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0	1	0	9
17:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	1	1	5	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	0	0	0	10
17:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
17:45	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	0	0	1	1	24
18:00	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	5
18:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
18:30	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	6
<b>P/TOT</b>	2	0	0	0	0	0	0	0	0	1	0	3	61	19	3	2	5	12	1	2	0	9	3	117

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 7											TOT	MOVEMENT 8											TOT	
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		
07:00	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	0	0	0	0	1	0	0	0	0	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	1	0	0	0	0	0	0	0	0	2	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	1	0	0	1	0	0	0	0	0	0	1
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	3
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	3
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	1	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	1	0	0	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	1	1	1	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	1	2	1	0	2	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	1

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 7											TOT	MOVEMENT 8											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
13:00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
13:15	1	0	0	0	0	0	0	0	0	0	1	1	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	1	0	0	0	0	0	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
14:00	1	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
14:15	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
15:30	2	0	0	0	1	0	0	0	0	0	0	3	1	2	0	0	0	0	0	0	0	0	0	3
15:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
16:00	2	0	0	0	0	1	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	3
16:15	4	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	2
16:30	2	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
16:45	1	1	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
<b>H/TOT</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>
17:00	3	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0	6
17:15	2	0	0	0	0	0	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0	0	0	7
17:30	5	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	0	0	0	4
17:45	4	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0	0	0	0	0	0	0	0	2
<b>H/TOT</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>18</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>
18:00	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>37</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>54</b>	<b>32</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 9											TOT	MOVEMENT 10											TOT	
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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# ABACUS TRANSPORTATION SURVEYS

**PANDA WASTE TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS**

**MARCH 2013  
ATH/13/033**

SITE: 02

DATE: 14th March 2013

LOCATION: Rathdrinagh Crossroads/PANDA Waste Access

DAY: Thursday

TIME	MOVEMENT 9											TOT	MOVEMENT 10											TOT
	CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER		CAR	LGV	Rigid Tanker	Artic Tanker	SMALL SKIP LORRIES	LARGE SKIP LORRIES	REAR COMPACTORS	RIGID SAND TRUCKS	ARTIC SAND TRUCKS	OTHER ARTIC'S	OTHER	
13:00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
14:00	0	0	0	0	0	0	0	0	0	0	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	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
16:00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	1	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	0
16:45	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17:00	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	1	0	0	0	0	0	0	0	0	0	0	1	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	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	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	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

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