Prepared by
Roughan & O'Donovan
Arena House, Arena Road, Sandyford, Dublin 18
Tel: +353 1 2940800 Fax: +353 1 2940820
Email: info@rod.ie www.rod.ie

Proposed Housing Development in Farrankelly, Co. Wicklow

TRAFFIC & TRANSPORT ASSESSMENT REPORT | SEPTEMBER 2019

ROD
ROUGHAN & O'DONOVAN

Proposed Housing Development in Farrankelly, Co. Wicklow

Traffic & Transport Assessment Report

Document No: ..... 16146 TTA

Author:..... Elisa Longo

Checker: ..... John Bell

Approver:..... Seamus MacGearailt

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Traffic & Transport Assessment Report

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1. INTRODUCTION

Roughan & O'Donovan (ROD) was commissioned by Cairn Homes Properties Ltd. to undertake a Traffic and Transport Assessment for a proposed residential development, located off the R761 Kilcoole Road and north of the Eden Gate Housing Development.

2. STUDY METHODOLOGY

This Traffic and Transport Assessment (TTA) has been prepared to assess the traffic and transportation impacts of the proposed residential development. It has been carried out in line with the 'Traffic and Transport Assessment Guidelines' published by TII (NRA) and 'Guidelines for Transport Impact Assessment' published by the Institution of Highways and Transportation (IHT).

3. THE EXISTING RECEIVING ENVIRONMENT (BASELINE SITUATION)

3.1 Site location

The site location of the proposed development will be in Farrankelly, Co. Wicklow, as shown below in Figure 1 Site Location Map. The site is approximately 15.6 ha in area and is bounded by the R761 Kilcoole Road to the East, Eden Gate housing estate to the south, Priory Road to the west and Delgany Glen housing estate and undeveloped lands to the north.

Figure 1 – Site Location Map

3.2 Surrounding Road Network

3.2.1 R761 Kilcoole Road

The R761 Kilcoole Road is a regional road that extends approximately 23.5 km linking Bray to Rathnew. In the vicinity of the site Kilcoole Road extends between the roundabout at the R774 Farrankelly Road and the roundabout at the R762 Mill Road, over a total length of approximately 1.3 km, see Figure 2.

Figure 2 – Location Map Surrounding Road Network

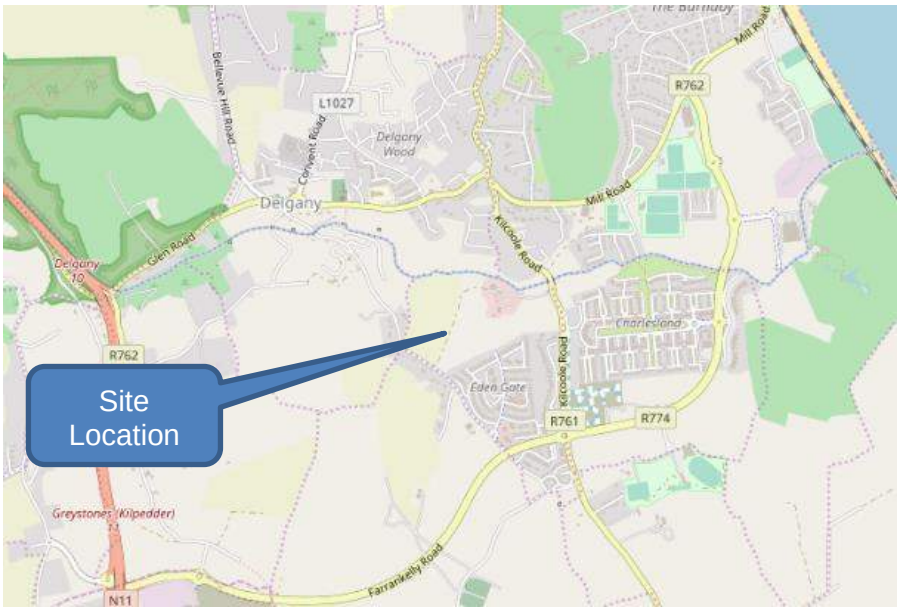

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Figure 3 – Kilcoole Road - end of the footpath provision on the western side of the road approaching Three Trouts Bridge

The section of Kilcoole Road is a two-lane regional road with a posted speed limit of 50 km/h. The carriageway road has a variable width between 6.2m and 7.2. There is a continuous footpath on the east side of the road but there is no footpath on the west side past the site, see Figure 3.

A signalised pedestrian crossing is provided on the R761 approximately 150m north of the roundabout junction with the R774 Farrankelly Road dual carriageway to the west of the site. This facility accommodates pedestrian access to Glenbrook Park and Eden Gate and provides a link between bus stops on each side of the road.

A cycle track has been constructed on the eastern side of the road, along the boundary of the Glenheron development, which connects to the Farrankelly Road. There are no facilities for cyclists along the Kilcoole Road to the north of the site entrance.

On the opposite side of the road to the site there are a number of properties accesses and the entrance to Glenheron the recently completed residential development. To the north on the same side of the road is the entrance to Farrankelly House which includes a number of commercial operations.

3.2.2 Priory Road

Priory Road is a single carriageway road of approximately 1.6km linking between the R744 Farrankelly Road at Eden Gate and the R762 in Delgany. The road has a variable width along the frontage of the site between 4.8m and 5m and there is no footpath in the vicinity of the site.

Along the frontage of the site there are no hard shoulders or footpaths. There are a number of accesses to properties on the opposite side of the road to the site.

3.3 Existing Traffic

Extensive traffic surveys were carried out in April 2016 by Abacus at several locations as part of a study that include the adjacent Glenheron residential developments by Cairn Homes, as shown in Appendix A. Due to the close proximity of the site, have been considered the 8 survey locations and the majority of the traffic that will access the site is expected to do so through these junctions.

The surveys were carried out on Thursday 28th April 2016. Upon examining the survey results, it was determined that the following peak hours occurred;

- Weekday am peak: 08:00 – 09:00
- Weekday pm peak: 17:00 – 18:00

The turning movement diagrams are included in Appendix B.

3.4 Relevant Planning Policies & Objectives

3.4.1 Greystones - Delgany & Kilcoole Local Area Plan 2013 – 2019

Some road and transport objectives from the Greystones - Delgany & Kilcoole Local Area Plan of particular note and relevance to the proposed developments include:

- RO6: *Improvement of the R761* (Kilcoole Road) *from Burnaby Heights to Kilcoole, as appropriate*.
- RO7: *To provide for a local access road to facilitate development of zoned lands and to provide for the development of a through road from Priory Road to the R761* (Kilcoole Road).

- RO11: *Upgrading of Priory Road, including the development of a footpath*.
- TS11: *To provide for the development of sustainable modes of transportation within the Plan area including public transport, walking and cycling, in particular to provide high quality pedestrian and bicycle lines between residential areas and retail, recreation and education facilities*.
- TS12: *To develop the 'greenroute' network for pedestrian and/or cycling facilities. The proposed indicative 'greenroute' network is indicated on Map B. Greenroutes should be developed with a common scheme of signage and/or markings. Where feasible, proposals for development should provide for the development of these greenroutes*…

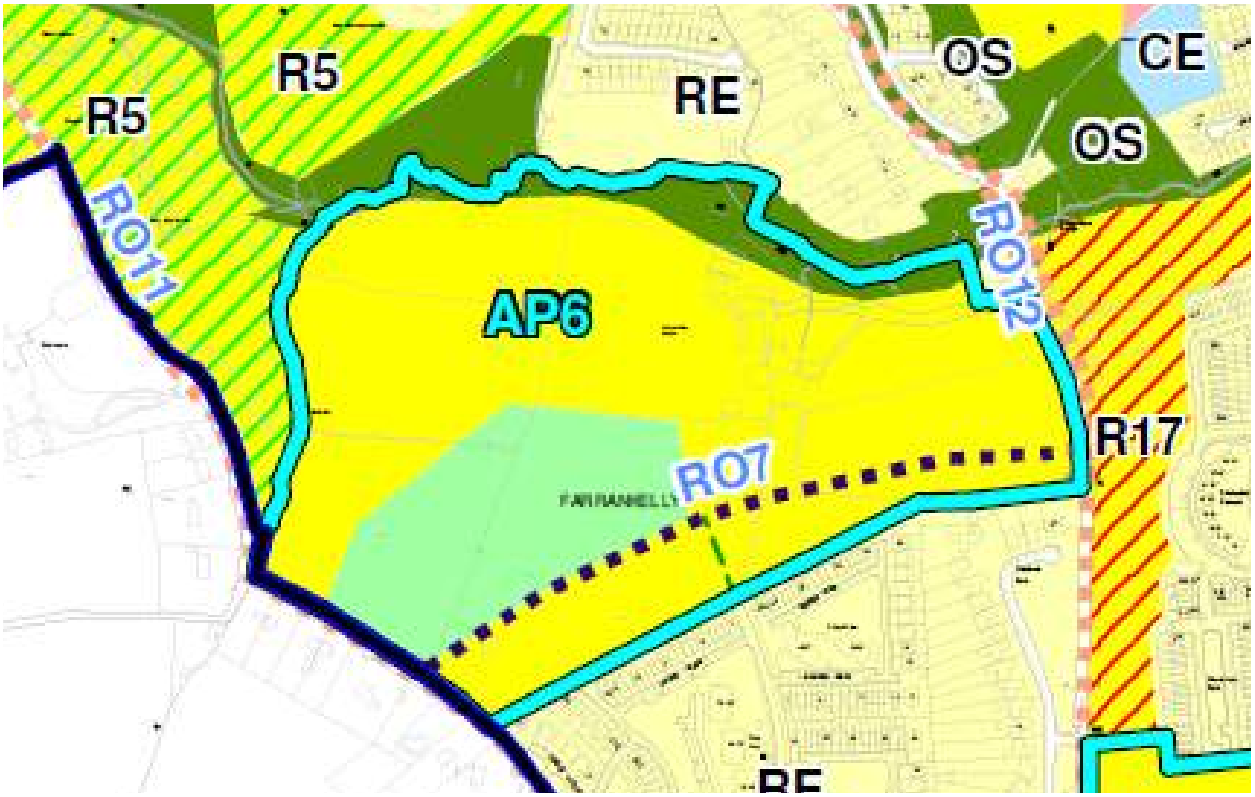
The potential future upgrade proposal of the Kilcoole Road, in accordance with objective RO6 as above, was developed in consultation with the Wicklow County Council Municipal District Engineer, as part of a number of adjacent housing developments including the Glenheron developments on the east side of Kilcoole Road. This has established the following requirements for the improved road layout along the Kilcoole Road:

minimum 6.5m wide carriageway, in accordance with a Link Street function and the Design Manual for Urban Roads and Streets (DMURS);
2.0m cycle tracks on each side (inclusive of 0.5m separator strip from the kerb);
2.0m wide footpaths (DMURS).

This designed includes for the localised realignment of the road carriageway along the proposed development frontage, and encroaching into the subject site, to make space for the provision of a cycle track on the east side of the carriageway so that the properties on the east side of the road are not impacted by this future road upgrade. The proposed site boundary with the Kilcoole Road will be set-back and the lands will be ceded to Wicklow County Council to allow for this future road upgrade.

The proposed development site is identified as an Action Plan, "AP6: Farrankelly Action Plan" in the Local Area Plan. The entire Action Plan area is approximately 24ha as shown in Figure 4. The area is zoned for a mix of uses including residential and active open space.

Figure 4– Extract from Greystones Local Area Plan Zoning and Objectives Map



3.4.2 Wicklow County Development Plan 2016 – 2022

Some transport objectives from the Wicklow County Development Plan 2016 - 2022 of particular note and relevance to the proposed developments:

- *TR9: To improve existing or provide new foot and cycleways on existing public roads, as funding allows.*
- *TR10: To require all new regional and local roads to include foot and cycleways, except in cases where shared road space is provided.*
- *TR11: To facilitate the development of foot and cycleways off road (e.g. through open spaces, along established rights-of-way etc.), in order to achieve the most direct route to the principal destinations (be that town centre, schools, community facilities or transport nodes), while ensuring that personal safety, particularly at night time, is of upmost priority.*
- *TR13: To facilitate the development of cycling and walking amenity routes throughout the County*.

Appendix 1 of the Development Plan sets out Design and Development Standards including the provision of car and cycle parking.

3.5 Accessibility for Cyclists and Pedestrians

A good network of footpaths and cycle facilities are provided in the Greystones, but there are some missing links that will need to be addressed in conjunction with frontage development where appropriate. The road works associated with Glenheron development on the opposite side of the Kilcoole Road has provided a cycle track that connects to Farrankelly Road, which then provides good quality cycle facilities connecting into the Town Centre.

Footpaths will be provided throughout the proposed development and these will link with existing footpaths and facilities.

It is proposed to construction a 650m section of the Three Trouts Stream Greenway at the north end of the site, and this will form part of the overall greenway set out in objective TS12 to link from Delgany through to the coast at the southern edge of Greystones. This greenway will include a connection to the Kilcoole Road at Three Trouts Bridge, where a toucan crossing will be provided (to be constructed in agreement with Wicklow County Council) to connect with the existing Mill Lane, which continues northeast to Mill Road leading towards the Town Centre. The proposed greenway connection and toucan crossing is shown on Drawing Number FK-ROD-ZO-XX-DR-C-009 included in Appendix C and as described in Appendix D DMURS Compliance Report

A greenway link connecting from Eden Gate to the proposed development Spine Road is provided in accordance with Local Objective AP6. This greenway then continues through the proposed development to connect to the proposed Three Trouts Stream Greenway.

The proposed development will have a high level of permeability for pedestrians across the site, and numerous access points for connectivity to the surrounding area so that walking will be direct and convenient for local trips. This will include two connection points to the greenway describe above. In this respect the proposed development will facilitate the residents of adjoining neighbourhoods by opening up walking routes throughout.

The nearest local shops are at the Eden Gate Centre which would be accessible, (through Eden Gate link to the boundary to the south of the site), and the Charlesland Centre which is a c. 15 minute walk. Aldi would be accessible from the Greenway via Mill Lane, while Kilincarraig village is located to the north of the development.

The nearest existing primary school is in Delgany at a distance of 1.6 km, which is a 19 minute walk from the site, or a 7 minute cycle. A new primary school is under construction at the eastern end of the Charlesland, which is a 15 minute walk or a 5 minute cycle.

There are currently two secondary schools in Greystones. St. David's is in the town centre, which is 3.5 km from the subject site, a 14-minute cycle. Temple Carrig is a secondary school at Blacklion on the northern edge of Greystones, which is a 11-minute cycle. These schools are well connected to the site with the local bus services.

A third secondary school is planned on the southern side of the R744 Farrankelly Road at Charlesland, which is much closer at just less than 1km from the subject site. Many local children in Greystones currently travel considerably further to secondary school, especially to schools located along the DART railway line. With improved capacity in local schools there should be a reduction in external school trips in the future.

Overall, it will be safe and convenient for children living in the proposed residential development on the to walk and cycle to local schools for both primary and secondary level at appropriate distances for the relevant ages.

3.6 Public Transport Accessibility

Dublin Bus Route No.84 (Figure 5), with a 1-hour frequency, operates along the Kilcoole Road along the eastern frontage of the site. This service extends from Newcastle through Kilcoole, passing the subject site to Killincarrig and then continues via Mill Road to the Town Centre before proceeding to Bray and on to Blackrock in Dublin.

Route 184 from Newtown Mount Kennedy to Bray via Greystones passes through Killincarrig Crossroads along Mill Road which is about 750 m to the north of the subject site. This route has a 30 minute frequency.

The combined frequency of the 84 and 184 bus routes is every 20 minutes, which is a mid-range service quality. It combines with the DART railway at 30 minute frequency for access to Dublin.

Route 84X provides a high quality express service that connects between Kilcoole and Dublin City Centre, with 5 services in the morning peak towards Dublin accessed from the bus stop on Kilcoole Road immediately adjacent the site.

The current Greystones – Delgany & Kilcoole Local Area Plan 2013 – 2019 states that new housing developments should be located within 450m of bus routes. There are 4 Dublin Bus stops located within a 300m radius of the proposed development site.

Figure 5 – No. 84 Bus on the R761 Kilcoole Road

The DART railway service from Greystones is the main public transport link to Dublin for commuters from the Greystones area, with trains at 30 minute intervals. In addition, there are 3 train services each morning from Wicklow that also serve Greystones.

The station is located at a distance of 2.8km from the subject site, which is approximately 36-minute walk or a 10-minute cycle. Good quality cycle parking is provided at the station (Figure 6). A set down area is also provided along the front of the station.

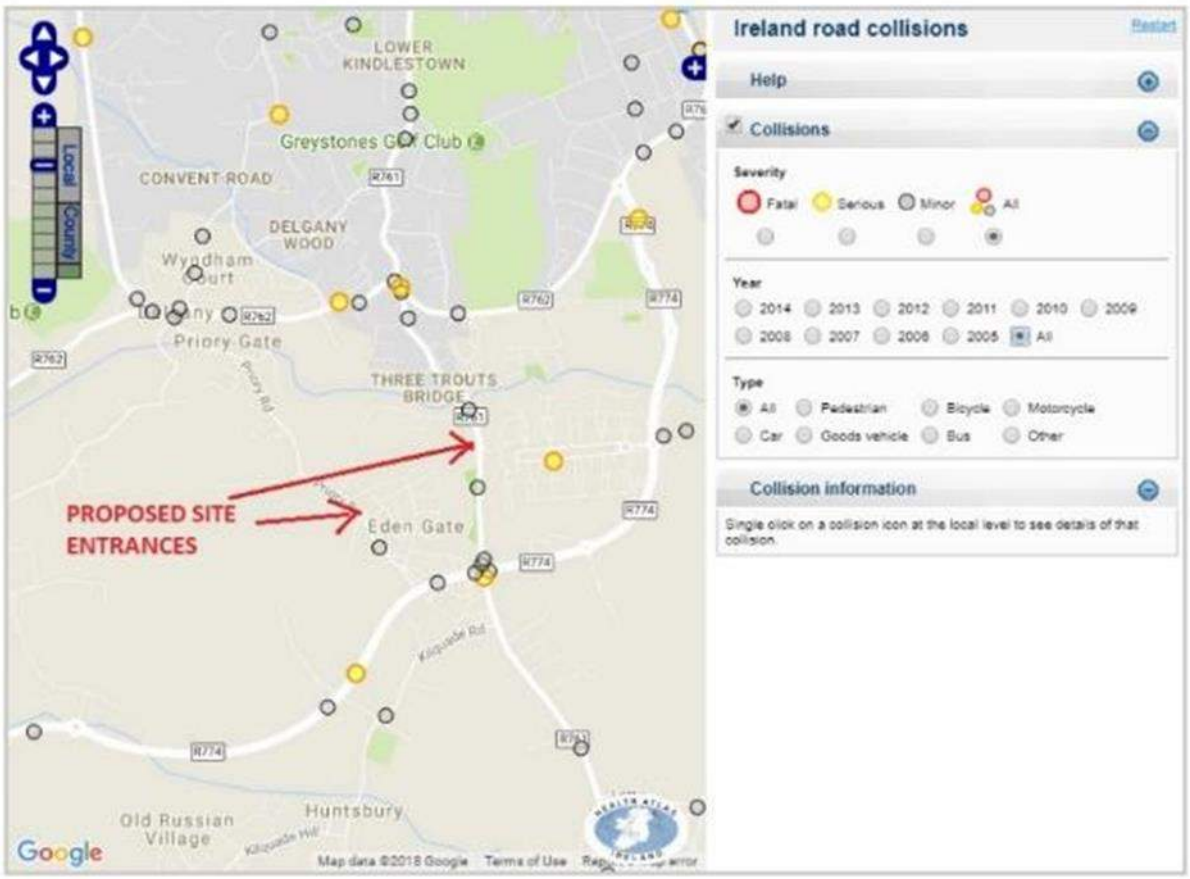
There is a free Park & Ride facility with 462 spaces located 500m south of the railway station. Demand for the car park is high, and post morning peak, spaces can be difficult to find, which demonstrates the strength of demand for the commuter service. Additional paid parking is provided at the South Beach.

Figure 6 – Cycle Parking at Greystones Railway Station

4. ROAD SAFETY

Data relating to any collisions on the R761 Kilcoole Road and roads in the vicinity of the proposed development site, during the 9 year period between 2005 and 2014, was collected from the Road Safety Authority online mapping tool and analysed. The Road Safety Authority online mapping tool provides details and locations of road collisions in Ireland where personal injury was involved. Details regarding the date, severity level, circumstances of each collision are provided, along with the type of vehicle involved. The locations of collisions on the road networks in the vicinity of the development site are shown in Figure 7 below.

Figure 7 – Road Collisions data from RSA



Between 2005 and 2014, there were five minor collisions on R761 Kilcoole Road between the R744 Farrankelly Road Roundabout, and the R762 Killincarrig Crossroads. There were two serious collisions occurring on the same stretch of road, one at each of the roundabouts described above. In the same timeframe, there were two minor collisions on Priory Road. There were no recorded fatalities in the vicinity of the proposed development.

5. CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

5.1 Development Details

The development will consist of the construction of a residential development of 426 no. dwellings, a creche (c. 599 sq. m), residential amenity building (c. 325 sq. m), active open space of c. 4.5 hectares, greenway of c. 2.4 hectares and open space

Access to the subject site will be from a priority junction, located on the Kilcoole Road (R761). The proposal includes for vehicular/pedestrian access from Priory Road. Provision for cyclist and pedestrian access to be provided to boundary of Eden Gate development located to the south (3 no. independent vehicular access points from Priory Road to serve 9 no. dwellings), 762 no. car parking spaces and 235 no. cycle spaces.

5.2 Internal Pedestrian Environment

Cairn Homes have a general policy for their footpaths to have a width of 2m, which is slightly larger than the requirement of the DMURS of 1.8m. There will be at least one footpath on each road throughout the development.

The layout and geometry of the internal roads are arranged in such a way that will restrict vehicle speeds and so provide safety for cyclists to share the road space within the site, and to protect children playing in the estate. As required by Design Manual for Urban Roads and Streets (DMURS), the internal roads are typically restricted to between 5 and 5.5m width to slow traffic.

Long straights have been avoided on the internal road layout, which is arranged in a number of reasonably small blocks for appropriate scale and natural sense of a low-speed environment in each. Several short cul-de-sac roads are arranged as shared surfaces home-zones without formal division into road carriageway and footpath.

While there are various cul-de-sac roads for traffic, there will be a full network of footpaths to allow short walking routes in all directions that cut across most of the gaps between internal roads where level differences permit.

5.3 Proposed R761 Kilcoole Road Access

The proposed development entrance junction with Kilcoole Road will be located on the opposite side and to the south of the Glenheron housing development entrance so as to avoid forming a cross-road. Figure 8 is a view taken from immediately north of the proposed entrance. This will ensure the most efficient traffic operation and greatest traffic capacity in the long-term. The proposed junction is a simple priority junction. The junction layout and visibility splays are designed in accordance with the DMURS as shown on Drawing Number FK-ROD-ZO-XX-DR-C-0095 included in Appendix C and as described in Appendix D DMURS Compliance Report. The proposed entrance on the Kilcoole Road has been designed to serve the entire development.

A footpath will be provided along the entire site frontage and a toucan crossing will be provided across Kilcoole Road located immediately to the south of the proposed access. The access is designed with an entry treatment where the road ramps up to footpath level to provide maximum priority and comfort for pedestrians. This is becoming a more common detail throughout the Country and it is consistent with the entrances to the Glenheron developments across the road.

From the proposed entrance into the site there is a step in levels from Kilcoole Road at 35mOD and just inside the side with a level of 38mOD. This requires the design access road alignment to wind its way up into the site. The horizontal and vertical alignment of the access road has been designed in accordance with the DMURS.

Figure 8 – View south towards the proposed Kilcoole Road access

5.4 Proposed Future Kilcoole Road Improvements

The proposed development will provide a setback boundary to allow for the future upgrade of the R761 Kilcoole Road along the site frontage. The entrance of the proposed development has been designed to cater not only for the subject site, but also to be able to accommodate this future general road improvement. The entrance layout proposed is capable of accommodating the entire development from Kilcoole Road. It is neither dependent on the future road upgrade on the Kilcoole Road or the secondary access to the west on Priory Road or to the south to Eden Gate. This future upgrade is to include the localised road realignment to the west into the subject site and the provision of footpaths and cycle tracks on both sides. The localised realignment of the Kilcoole Road into the subject site will make space for these upgrade works so that the properties on the opposite side of the road are not affected. It is expected that Wicklow County Council will undertake the overall road improvements as part of a future public works scheme, which will include provision of a cycle track on the western side of the road at Glenbrook Park, and will also extend northward to avail of other boundary setbacks as provided for in other planning permissions.

5.5 Proposed Priory Road Entrance

Provision for a future second access on Priory Road is made in the proposed development at the location shown on Figure 9 below. As agreed with Wicklow County Council, the provision of this access will coincide with the general upgrade of the road section of Priory Road to include a footpath along the western frontage of the site. Three further direct accesses are proposed creating frontage development along the site boundary are proposed onto Priory Road. The proposed access junction layouts and visibility splays are designed in accordance with the DMURS as shown on Drawing Number FK-ROD-ZO-XX-DR-C-0094 included in Appendix C and as described in Appendix D DMURS Compliance Report. The proposed development is capable of being served from the single access point onto the Kilcoole Road and is not dependent on the Priory Road entrance. The Priory Road access is not required for the proposed development.

Figure 9 –View of Priory Road west of the proposed development © Google Earth

The current situation of Priory Road at the proposed future site entrance is shown in Figure 9. The existing road has quite a rural character. A 2m wide footpath will be provided along full road frontage (as per the LAP Road Objective 11), which was agreed with Wicklow County Council who require a footpath along the southern boundary of Cairn Homes lands along Priory Road. This path along Cairn Homes lands is provided in the scheme layout. The provision of a footpath between the subject site and the Eden Gate roundabout, will be undertaken by Wicklow County Council, in the future. However, it is important to note that the footpath between the southern boundary of the site is not required for the proposed development, in respect of any meaningful linking function. It is further noted that pedestrian access is being provided to the southern boundary to Eden Gate.

5.6 Access Proposals

It was considered in consultation with Wicklow County Council that the design of the proposed access onto Kilcoole Road should cater for the overall proposed development (in advance of the upgrade of the Priory Road), and that the proposed development should be entirely accessed from Kilcoole Road until such a time that the Priory Road is upgraded which comprises a footpath link from the proposed footpath (along Cairn Homes' site boundary to the Eden Gate Roundabout (c. 350m to the west).

The development has been assessed for a potential phased implementation of the accesses as follows:

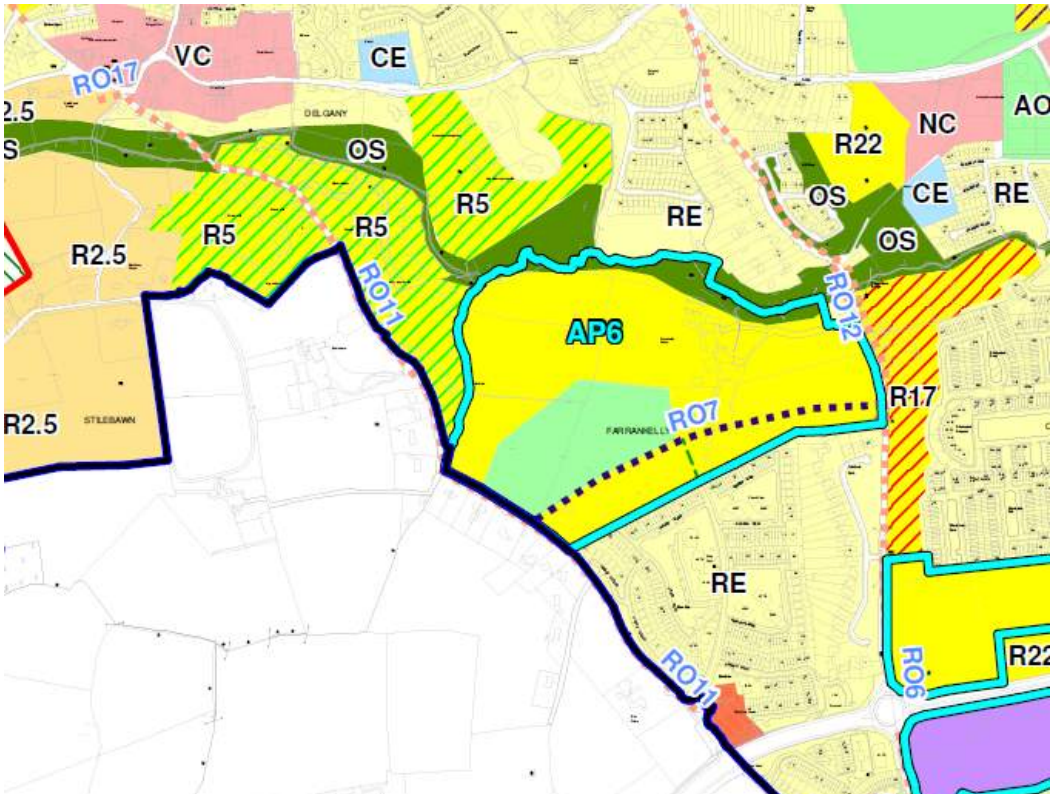
- *SCENARIO 1* - Only the Eastern access on R761 Kilcoole Road is provided.
- *SCENARIO 2 - Both the accesses, on R761 Kilcoole Road and on Priory Road, are provided.*

5.7 Cumulative Development

Within the assessment, an allowance for the future development of the remaining AP6 zoned lands, a primary school, post primary school, employment area and residential housing in close proximity to the junctions was made, based on information obtained from the current Greystones – Delgany & Kilcoole Local Area Plan 2013 – 2019, an extract of which is included in Figure 10 below.

The additional future developments included in the assessment are outlined in cyan in the following map, yellow indicates residential zoning, light blue indicates zoning for schools and purple indicates zoning for employment uses.

Figure 10 – Greystones–Delaney & Kilcoole Local Area Plan (2013 – 2019) map



The traffic analysis performed for the proposed development has been assessed to include the additional traffic associated with these other developments above mentioned.

5.8 Parking

The proposed car parking provision complies with the Wicklow County Development Plan car parking standards as follows:

- 2 off street spaces per dwelling over 2 bedrooms;
- 1 space per 1 or 2 bedroom dwellings, plus 1 per 5 dwellings for visitors.
- Standard parking spaces to be 2.5m x 5m.
- 5% of spaces to be accessible bays 2.5m x 5m plus 0.9m between bays.

It is proposed to provide private parking on the curtilage of each house, rather than to rely upon on-street parking for the residents. The proposed duplex apartments are provided with 1.5 space per dwelling and the apartments are provided with 1 space per unit. The proposed street widths and the provision of numerous driveways and dedicated parking bays which will generally preclude on-street parking on most of the roads within the development. However, some provision is be made for visitor parking informally at street sections that do not have frontage access, such as on gable ends of houses at the end of a row, or on certain streets adjoining green spaces.

At the apartment blocks cycle parking provision will be 1 space per unit and these will be covered and secure. This is considered adequate to accommodate the anticipated demand and the is scope to provide if and when the need arises. Cycle parking for the houses and duplexes can be accommodate with the curtilage of the properties.

6. POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

6.1 Construction Phase

The construction stage of the project is anticipated to last for approximately 24 months. The project is to be completed on a phased basis as detailed in the Construction Management Plan and the initial sequence of works will include:

- The development of the compound and the site enabling works, including the new site entrances off Kilcoole Road and Priory Road;
- Commence the construction of roads and services, and
- Start to prepared footings for house construction on a phased basis.

The initial site entrance will be located off Priory Road to facilitate the site set up and to commence access to the site to form the permanent access off the Kilcoole Road. As the Project develops the access gate on Priory Road will be used for vans, cars and light traffic accessing the car park and site compound. The Kilcoole Road entrance will be used for the delivery of construction materials and heavy vehicles throughout the phase 1 construction, however this construction access point will likely be closed to construction traffic once there is occupancy in the estate (to minimise interaction between the construction traffic and public).

The main construction traffic will be routed from the N11 onto the R774. Light vehicles will exit the R774 onto Priory Road and turn off Priory Road into the site car park. Heavy construction traffic will turn left off the R774 onto the Kilcoole Road and access the site into the permanent access point once it is constructed. The traffic management plan for the development will be reviewed continuously throughout the project.

The surrounding road network is suitable to accommodate the construction traffic and there is sufficient traffic capacity to accommodate the relatively modest volume of construction traffic. A Construction Traffic Management Plan has been prepared (by Cairn) that includes a range of mitigation measures to ensure the safety of the workforce on site and accessing the site, and the public on the surround roads, and to minimise construction traffic generation and disruption on the surrounding road network.

6.2 Operational Phase

6.2.1 Transport Demand Generation

Traffic generated by the proposed residential development have been determined using the TRICS data base. The crèche and residential amenity building will service the proposed development and will not generate any significant external traffic movements. The proposed active open space including sports pitches will primarily service the residents of the proposed development, however, an allowance for external traffic based on the assumption that the pitches could be used by local sports clubs.

As mentioned in the previous sections, other developments have been included in the traffic analysis and specifically:

- Remainder of the AP6 zoned lands.
- Three residential developments (Glenheron Developments currently being completed)
- A Primary School (under construction)
- An Employment Area (zoned)
- A Post Primary School (zoned)

Full details of the traffic generation of these developments are detailed in the Table 1 below. The table includes Trip Rates and Traffic Generated for all the new developments. The methodology

used is based on the evaluation of the Trip rates in the TRICS database and the estimation of the generated traffic dimensioned by the development scale.

The arrivals and departures generated from the developments have been distributed onto the surrounding roads considering the baseline traffic turning movements.

It is noted the Active Open Space is included in the assessment. The potential traffic generation is considered to be an over-estimation of the potential trips, and that the assessment is robust in this regard, as many of the trips could potentially occur outside of the AM and PM peak periods. This traffic estimate for the active open space is considered a worst case scenario and it is only likely to occur on an occasional basis.

Table 1– TRICS Trip Rates and Traffic Generated by the developments

Development type	Zoning	Site Area (ha)	Development Scale		Trip Rate				Traffic Generated			
			Value	Units	AM IN	AM OUT	PM IN	PM OUT	AM IN	AM OUT	PM IN	PM OUT
Glenheron Site A-1	Residential	2.92	51	houses	0.142	0.439	0.396	0.222	7	22	20	11
Glenheron Site B-1	Residential	8.19	110	houses	0.142	0.439	0.396	0.222	16	48	44	24
Glenheron Site B-2	Residential		80	houses	0.142	0.439	0.396	0.222	11	35	32	18
Farrankelly Site	Residential	15.46	429	houses	0.142	0.439	0.396	0.222	61	188	170	95
Remaining AAP6 Lands	Residential		100	Houses	0.142	0.439	0.396	0.222	14	44	40	22
Primary School	Community and Enterprise	1.6	480	pupils								
Post Primary School	Community and Enterprise	2.43	450	pupils	0.256	0.179	0.048	0.053	115	81	22	24
Employment Area	Employment	6.86	660	employees	0.257	0.051	0.055	0.267	170	34	36	176
Active Open Space / Pitches *	Sports		50	Parking spaces					34	30	30	34

*Note: 30 formal car parking spaces plus 20 overspill informal parking spaces.

6.2.2 Traffic Predictions for the Site

The traffic generated by the full development of the subject lands, was the same in all the analysed scenarios, different only in the distribution onto the surrounding road network from the various accesses. The traffic generated in and out the property can be considered conveyed through one access only in the SCENARIO 1, two entrances in SCENARIO 2. Full details of the development traffic distribution is included in Appendix B.

SCENARIO 1

All development traffic is conveyed through the access to be provided at R761 Kilcoole Road. Based on the trip generation rates obtained from the TRICS database summarised in Table 2, the following results have been obtained for R761 Entrance.

Table 2– R761 Kilcoole Road Entrance – Scenario 1

	R761 Entrance		
	Housing Units + Active Open Space / Pitches		
	Arrivals	**Departures**	**Two Way**
AM	95	218	313
PM	199	129	328

SCENARIO 2

The traffic distribution between the two entrances has been carried out considering the traffic survey information as summarised in Table 3 and 4. Analysing in fact the existing traffic flowing through the road have been obtained the following factors:

- R761(Kilcoole Road) 77% AM – 85% PM
- Priory Road – 23% AM- 15% PM

Table 3 – R761 Kilcoole Road Entrance – Scenario 2

	R761 Entrance		
	Housing Units + Active Open Space / Pitches		
	Arrivals	**Departures**	**Two Way**
AM	74	169	243
PM	169	110	279

Table 4 – Priory Road Entrance – Scenario 2

	Priory Road Entrance		
	Housing Units + Active Open Space / Pitches		
	Arrivals	**Departures**	**Two Way**
AM	21	49	70
PM	30	19	49

Scenario 2, where both accesses are open, allows for better distribution of the proposed development traffic onto the surrounding road network. Detailed analysis is undertaken in the

following sections to determine the capacity of the proposed entrance and the surrounding road network.

7. AVOIDANCE, REMEDIAL & MITIGATION MEASURES

7.1 Construction Phase

It is proposed that the construction of the development will be carried out in a number of phases. The primary access will be from R 761 Kilcoole Road where the proposed entrance will be constructed at the commencement of the project. The completion of the spine road through the development that will eventually link between Kilcoole Road and Priory Road will be completed within the first phase. The Priory Road Access may also be used for construction traffic, but this will be limited to access for the initial site setup and for light vehicles only. The subject site has more than sufficient space that the construction compound and car parking for staff and operations can be accommodated entirely within the site.

A preliminary Construction Management Plan including a Construction Traffic Management Plan has been prepared by Cairn and is included in the SHD application, for the proposed development to account for all works associated with the construction of the proposed development. These documents will address likely human health risks and ensure construction practices and measures are put in place to minimise any effects on road users. This preliminary Plan will inform a Contractor, when appointed, of the relevant guidance documentation which will need to be followed during construction phase. A detailed Construction Management Plan will then be prepared by the works contractor, expanding on the preliminary plan, and it will be submitted for approval to Wicklow County Council Road prior to the commencement of any construction works. This plan will ensure that temporary traffic works and road safety measures will be put in place during the construction of the proposed development. The plan will ensure that any required traffic management measures are put in place to minimise the impact on local road users.

It is considered that the construction traffic, with primary access from the Regional Roads of the R761 Kilcoole Road and the R744 Farrankelly Road, will not impact significantly on the existing traffic situation on the surrounding road network.

To minimise disruption to the surrounding environment, the following mitigation measures will be implemented:

- During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads.
- All road works will be adequately signposted and enclosed to ensure the safety of all road users and construction personnel.
- A dedicated ‘construction’ site access / egress junction will be provided with manned security during all construction phases.
- Provision of sufficient on-site parking and compounding to ensure no potential overflow of construction generated traffic onto the local network.
- Site offices and compound will be located within the site boundary. The site will be able to accommodate employee and visitor parking throughout the construction period through the construction of temporary hardstanding areas.
- A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities.
- A series of ‘way finding’ signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.
- Dedicated construction haul routes will be identified and agreed with the local authority prior to the commencement of constructions activities on-site.
- Truck wheel washes will be installed at construction entrances if deem necessary and any specific recommendations with regard to construction traffic management made by the Local Authority will be adhered to.

7.2 Operational Phase

To encourage sustainable travel patterns and to help reduce the potential traffic impact of the proposed development it is proposed to promote sustainable travel to the future occupants of the development. This will involve the preparation of a Travel Plan (form of Mobility Management Plan) that will include providing each property with an Travel Welcome Brochure that will include maps of all pedestrian and cycle routes in the area, highlighting the location of the main community facilities, amenities, retail centres, bus stops and the train station, and providing details of bus and train routes and timetables.

Up to date maps and public transport timetables will be put on display in proposed crèche and residential amenity buildings.

The proposed development will deliver the road objective RO7 from the Greystones - Delgany & Kilcoole Local Area Plan, which is *'To provide for a local access road to facilitate development of zoned lands and to provide for the development of a through road from Priory Road to the R761* (Kilcoole Road). This proposed road link will improve accessibility for the immediate local area including people living along Priory Road and Eden Gate.

The proposed development includes the completion of a 650m section of the proposed Three Trouts Stream Greenway, which is an object of the Greystones - Delgany & Kilcoole Local Area Plan (TS12). A toucan crossing is to be provided across the Kilcoole Road to connect to Mill Lane, which continues northeast to Mill Road leading towards the Town Centre. A greenway link connecting from Eden Gate to the proposed development Spine Road is provided in accordance with Local Objective AP6. This greenway then continues through the proposed development to connect to the proposed Three Trouts Stream Greenway. Footpaths will be provided throughout the proposed development and these will link with existing footpaths and facilities. These measures provide a very high level of permeability for pedestrians and cyclists to and through the site, which will help encourage walking and cycling by both residents and visitors of the proposed development and also the adjacent residential areas.

8. PREDICTED IMPACT OF THE PROPOSED DEVELOPMENT

8.1 Construction Phase

Provided the above mitigation measures and management procedures are incorporated during the construction phase, the residual impact upon the local receiving environment is predicted to be temporary in nature and slight in terms of effect.

8.2 Operational Phase

8.2.1 Transport Impact Analysis

An assessment of the proposed two accesses to the development site via the Proposed Kilcoole Road Access and Priory Road Access was carried. The junction analyses have been based on the traffic data recorded by Abacus Surveys on 28th of April 2016 in combination with the generated traffic calculated for proposed development and future traffic conditions. The time frame analysed were:

- 2020 Base Year
- 2035 Design Year

The base year consists of the 2016 Traffic Survey Data combined with the traffic generated by the proposed nearby developments, as described above. The design year, as prescribed in the Traffic and Transport Assessment Guidelines, represents the Opening Year plus 15 Year Forecast.

Growth rates zone specific have been applied to the base network traffic flows, allowing for a reflective analysis of the future year scenarios. These have been extracted from the TII Publications Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections. The factors used as shown in Table 5 below.

Table 5 – Transport Assessment Growth Rates

	Low Sensitivity Growth			
	2013-2030		**2030-2050**	
	LV	HV	LV	HV
Mid-East *Wicklow*	1.0109	1.0221	1.0018	1.0135

The choice of the Low Sensitivity Growth category has been taken on the basis that the traffic associated with the immediate surrounding developments has also be estimated and added to the base year traffic and this represents an element of double counting or worst case scenario.

The accesses have been analysed respectively in their worst scenarios:

- Kilcoole Road Entrance - SCENARIO 1 – in this scenario all traffic to and from the full development will access via this entrance junction.
- SCENARIO 2 – Priory Road. Priory Road access is considered open and functioning in the second scenario.

PICADY software was used to assess the proposed accesses. The capacity of a junction is assessed based on the Ratio of Flow to Capacity (RFC). The RFC is a measure of the proportion of the capacity of an approach arm of the junction being availed of by traffic. It is considered good practice to ensure the RFC on any arm should not exceed 0.85 (that is to say that the junction should not operate above 85% of its theoretical capacity) as turbulent factors above that threshold may inhibit the optimal performance of the junction. PICADY also estimates the maximum number of vehicles queuing.

8.2.2 Proposed Kilcoole Road Access Junction Analysis

The proposed access to the site to be located at Kilcoole Road has been analysed in four conditions:

- Base Year – AM & PM
- Design Year – AM & PM

A summary of the PICADY analysis results for the worst-case scenario, Scenario 1, is included below and further details are included in Appendix E.

SCENARIO 1 - SUMMARY RESULTS – Kilcoole Road Junction

Base Year - 2016

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Base Year - Scenario 1									
Stream B-AC	1.36	20.94	0.58	C		0.69	17.64	0.41	C	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.09	8.53	0.08	A	C	0.35	10.09	0.26	B	B
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Design Year - 2034

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Des Year - Scenario 1									
Stream B-AC	1.53	23.52	0.61	C		0.77	19.83	0.44	C	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.09	8.84	0.08	A	C	0.37	10.67	0.27	B	C
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

The above results indicate that in the Design Year the Proposed Kilcoole Road Access Junction will operate at only 61% of its theoretical capacity and will be able to easily cater for the level of traffic expected to use the proposed residential development during AM and PM peak hours. That is the entire development (Scenario 1) can access through the proposed simple priority development with no queuing or delays. This analysis confirms that the Kilcoole Road is the only vehicular access required to serve the entire site and that the Priory Road access is not required.

8.2.3 Proposed Priory Road Access Junction Analysis

The proposed future access to the site to be located at Priory Road has been analysed in four conditions:

- Base Year – AM & PM
- Design Year – AM & PM

A summary of the PICADY analysis results is included in the table below and further details are included in Appendix E.

SCENARIO 2 - SUMMARY RESULTS – Kilcoole Road Junction

Base Year - 2016

Summary Results

Mode ▾ Columns ▾

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2									
Stream B-AC	0.12	8.07	0.11	A		0.04	6.80	0.04	A	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.03	6.39	0.03	A	A	0.04	6.60	0.04	A	A
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

Design Year – 2034

Summary Results

Mode ▾ Columns ▾

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenaio 2 - Post Dev - Des Year - Scenario 2									
Stream B-AC	0.12	8.11	0.11	A		0.04	6.86	0.04	A	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.01	6.33	0.01	A	A	0.04	6.65	0.04	A	A
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

The above results indicate that the proposed Priority Road Access junction will operate at only 11% of its theoretical capacity and will be able to easily cater for the very low level of traffic expected to use the proposed residential development during AM and PM peak hours.

8.2.4 Wider Network Traffic Impact

The traffic survey data, obtained to assess the road network surrounding the proposed development, has been derived from eight sites as shown in Figure 11.

The traffic increase due to the proposed development has been calculated for each junction for the two development access scenarios as detailed in Table 6.

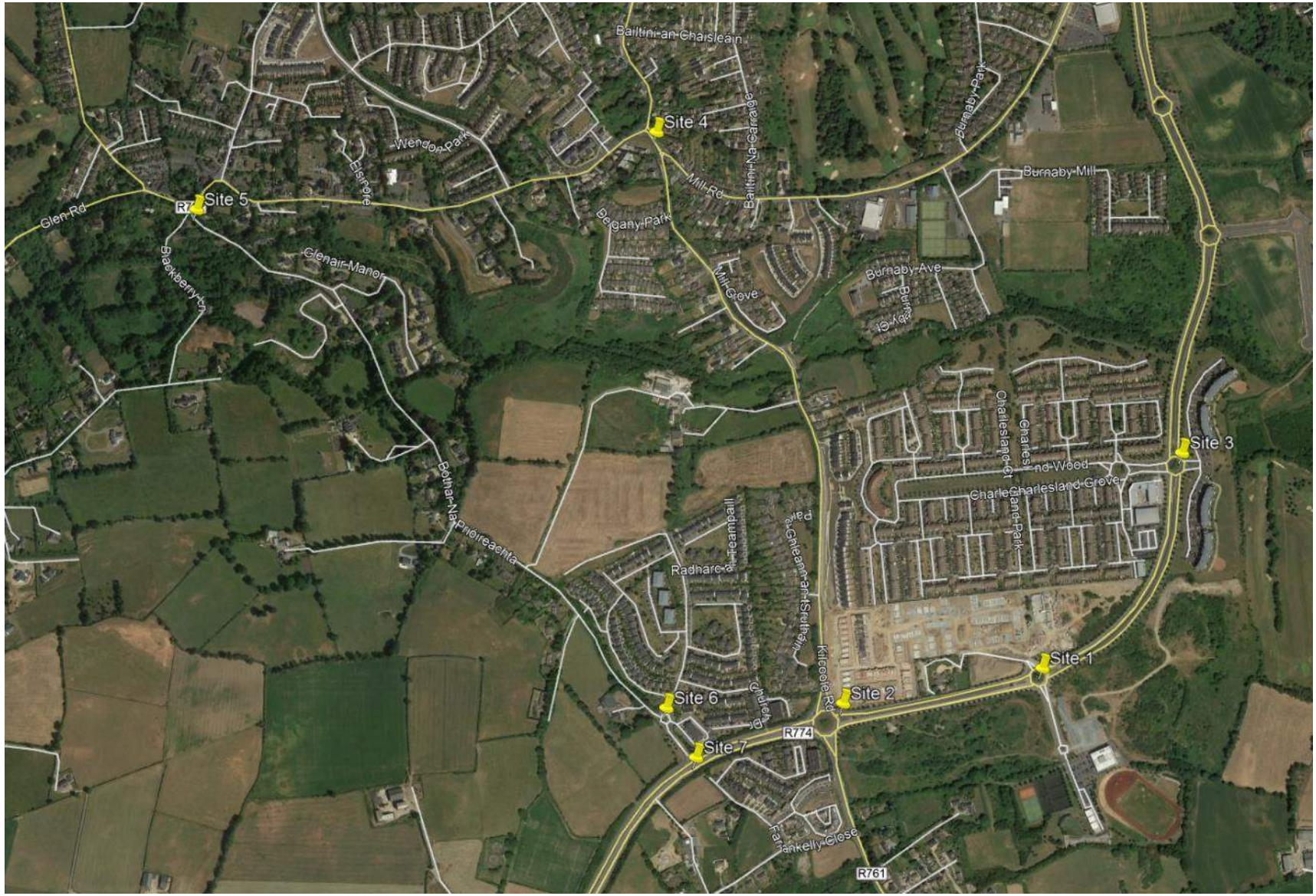


Figure 11 – Traffic Survey Sites Map © Google Earth

Table 6 – Percentage of Traffic Increase due to the Proposed Development

Junction		Scenario 1		Scenario 2	
		AM peak	PM peak	AM peak	PM peak
Site 1	Charlesland Sports Centre Roundabout	3.1%	2.9%	2.4%	2.4%
Site 2	Kilcoole / Farrankelly Roundabout	7.2%	7.1%	5.6%	6.1%
Site 3	Charlesland Roundabout	0.7%	0.8%	0.5%	0.6%
Site 4	Killincarrig Crossroads	12.2%	11.6%	9.4%	9.8%
Site 5	R762 / Priory Road Junction	0.3%	0.6%	4.0%	1.9%
Site 6	Eden Gate Roundabout	2.6%	3.9%	10.0%	9.6%
Site 7	Priory Road/ Farrankelly Road (left in/ left out) Junction	3.3%	3.3%	2.9%	3.2%
Site 8	Killpedder Interchange East Roundabout	2.8%	1.5%	2.8%	1.7%

The percentages calculated in Scenario 1 are on average the highest compared to Scenario 2, apart from the junctions directly influenced by the opening of Proposed Priory Road Access.

The TII Traffic and Transport Assessment Guidelines (PE-PDV-02045) indicates that a full traffic assessment is required where '*traffic to and from the development may be expected to exceed 10% of the existing traffic movements, or 5% in congested or other sensitive locations'.* It is considered that the surrounding road network is not particularly congested or sensitive, with the exception of Kilcoole Farrankelly Road Roundabout and Killincarrig Crossroads.

The calculated percentages for Site 2 Kilcoole / Farrankelly Roundabout and Site 4 Killincarrig Crossroads are in excess of 5% in both scenarios, both AM and PM peak, and therefore detail analysis has been undertaken. The analysis suggested that a more detailed analysis was also appropriate at Site 6 Eden Gate Roundabout in Scenario 2.

This analysis shows that the proposed development will not have a significant impact on Sites 1, 3, 5, 7 and 8 and therefore no further or detailed analysis has been carried out on these junctions.

8.2.5 Site 2 – Kilcoole / Farrankelly Roundabout

Kilcoole / Farrankelly Roundabout is a high capacity roundabout located along the R761 and the R774 and bordered predominantly by housing developments, as shown on Figure 12 below.

Figure 12 – Aerial Image of Kilcoole / Farrankelly Roundabout

As quantified in Table 6 the worst-case scenario for Site 2 Kilcoole / Farrankelly Roundabout is Scenario 1. The junction has been assessed using ARCADY software for Scenario 1, which relates to the entire development using the Kilcoole Road access only.

ARCADY software was used to assess the roundabout junctions. The capacity of a roundabout junction is assessed based on the Ratio of Flow to Capacity (RFC). The RFC is a measure of the proportion of the capacity of an approach arm of the junction being availed of by traffic. It is considered good practice to ensure the RFC on any arm should not exceed 0.85 (that is to say that the junction should not operate above 85% of its theoretical capacity) as turbulent factors above that threshold may inhibit the optimal performance of the junction. ARCADY also estimates the maximum number of vehicles queuing.

The results obtained through the ARCADY software are summarised in the table below and further details are included in Appendix E.

SCENARIO 1 - SUMMARY RESULTS – Site 2 – Kilcoole / Farrankelly roundabout

Base Year – Post Development - 2016

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
Scenaio 1 - Post Dev - Base Year - Scenario 1										
Arm 1	0.32	2.31	0.24	A	A	0.57	2.91	0.36	A	A
Arm 2	0.83	4.09	0.46	A		0.65	3.90	0.40	A	
Arm 3	0.64	2.86	0.39	A		0.86	3.22	0.46	A	
Arm 4	0.44	3.93	0.31	A		0.77	5.41	0.44	A	

Design Year – Post Development - 2034

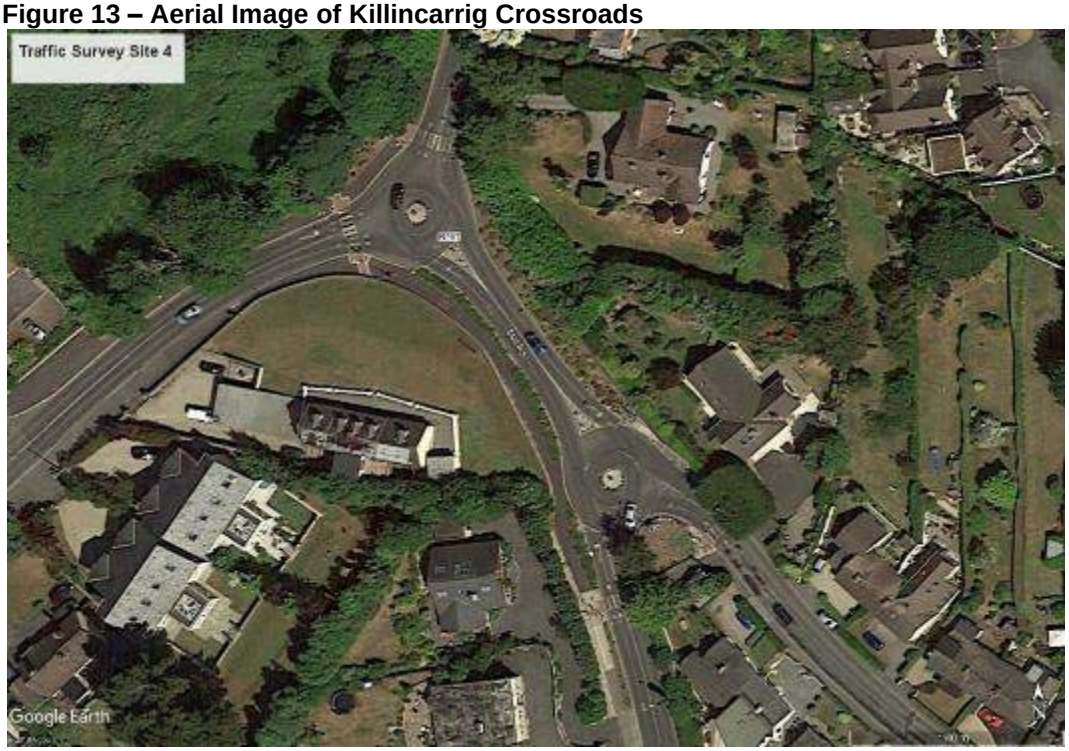
	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
Scenaio 1 - Post Dev - Base Year - Scenario 1										
Arm 1	0.38	2.44	0.28	A	A	0.72	3.26	0.42	A	A
Arm 2	1.09	4.78	0.52	A		0.88	4.57	0.47	A	
Arm 3	0.77	3.15	0.44	A		1.19	3.89	0.55	A	
Arm 4	0.51	4.27	0.34	A		0.95	6.36	0.49	A	

The outcome of Site 2 Kilcoole / Farrankelly Roundabout detailed analysis highlights that the proposed development will only contribute a relatively small traffic increase and that it has more than enough capacity to cope with the additional development traffic. The evaluated Level of Service for the junction is A both in Base and Design Year which can be associated with a maximum RFC of 55% and virtually no queuing. Therefore, the junction can be considered insignificantly impacted by the proposed development.

8.2.6 Site 4 – Killincarrig Crossroads

Site 4 - Killincarrig Crossroads is composed by two linked roundabouts located along the R761 and the R762, as shown in Figure 13 below.

Figure 13 – Aerial Image of Killincarrig Crossroads



The most critical scenario for Site 4 is *Scenario 1 where* a higher portion of the traffic generated by the proposed development will access via Kilcoole Road and it will distribute according to the surveyed traffic, which reveals a substantial proportion of traffic accessing Site 4 Killincarrig Crossroads. The junction analysis has been carried out using ARCADY software. The results of the analysis are summarised in the table below and further details are included in Appendix E.

SCENARIO 1 - SUMMARY RESULTS – Site 4 – Killincarrig Cross Roads

Base Year – Post Development - 2016

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
Scenario 1 - Post Dev - Base Scenaio 1 - Post Dev - Base Year - Scenario 1										
Junction 1 - Arm 1	0.79	9.22	0.45	A	C	1.00	8.32	0.50	A	A
Junction 1 - Arm 2	1.03	8.20	0.51	A		1.69	11.32	0.63	B	
Junction 1 - Arm 3	7.11	28.52	0.89	D		0.25	4.10	0.20	A	
Junction 2 - Arm 1	0.75	5.00	0.43	A	B	0.21	3.51	0.18	A	A
Junction 2 - Arm 2	0.98	10.28	0.50	B		1.47	11.85	0.60	B	
Junction 2 - Arm 3	3.47	18.07	0.78	C		0.92	7.59	0.48	A	

Design Year – Post Development - 2034

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
Scenario 1 - Post Dev - Base Scenaio 1 - Post Dev - Base Year - Scenario 1										
Junction 1 - Arm 1	1.05	10.81	0.52	B	E	1.19	9.12	0.55	A	B
Junction 1 - Arm 2	1.39	9.84	0.59	A		2.27	13.97	0.70	B	
Junction 1 - Arm 3	20.64	70.79	1.00	F		0.25	4.13	0.20	A	
Junction 2 - Arm 1	0.94	5.55	0.49	A	C	0.22	3.53	0.18	A	A
Junction 2 - Arm 2	1.31	12.27	0.57	B		1.80	13.45	0.65	B	
Junction 2 - Arm 3	6.38	31.21	0.88	D		1.32	9.46	0.57	A	

As shown by the results reported above Site 4 is already a busy junction and it slightly exceeds its optimum operation capacity in the design year for Scenario 1 with an RFC of 1.0, when some queuing may start to appear. For Scenario 2, when the Priory Road entrance is opened, the junction performs marginally better. Should queuing and congestion start to build at Killincarrig Crossroads, traffic for the proposed development and the other surrounding development would likely divert onto other routes that have plenty of capacity, such as the Farrankelly Road, which leads to the town centre. This will ensure that any queuing and congestion does not become excessive at this junction.

8.2.7 Site 6 – Eden Gate Roundabout

Site 6 represents the Eden Gate Roundabout, the current only access to the Eden Gate development. The roundabout is linked to Priory Road, Farrankelly Road, the Eden Gate Centre and the Eden Gate residential estate as shown in Figure 14 below.

Figure 14 – Aerial Image of Eden Gate Roundabout

The junction analysis has been carried out using ARCADY software. The results of the analysis are summarised in the table below and further details are included in Appendix E.

	SCENARIO 2 - SUMMARY RESULTS - Site 6 – Eden Gate Roundabout									
Base Year – Post Development - 2016		AM					PM			
		Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2										
	Arm 1	0.07	3.99	0.07	A	A	0.11	3.84	0.10	A	A
	Arm 2	0.10	4.46	0.09	A		0.19	4.60	0.16	A	
	Arm 3	0.13	4.58	0.11	A		0.15	4.87	0.13	A	
	Arm 4	0.25	3.72	0.20	A		0.08	3.22	0.07	A	
Design Year – Post Development - 2034		AM					PM			
		Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2										
	Arm 1	0.08	4.09	0.08	A	A	0.12	3.92	0.11	A	A
	Arm 2	0.12	4.58	0.11	A		0.22	4.74	0.18	A	
	Arm 3	0.15	4.68	0.13	A		0.18	5.04	0.15	A	
	Arm 4	0.29	3.86	0.22	A		0.10	3.31	0.09	A	

The evaluated Level of Service for the junction is A both in Base and Design Year which can be associated with a maximum RFC of 0.22 and virtually no queuing. Therefore, the junction can be considered insignificantly impacted by the proposed development.

8.3 Network Impact

The Institution of Highways and Transportation document 'Guidelines for Traffic Impact Assessments' states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. When such levels of impact are generated a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. These same thresholds are reproduced in the TII document entitled Traffic and Transport Assessment Guidelines (2014).

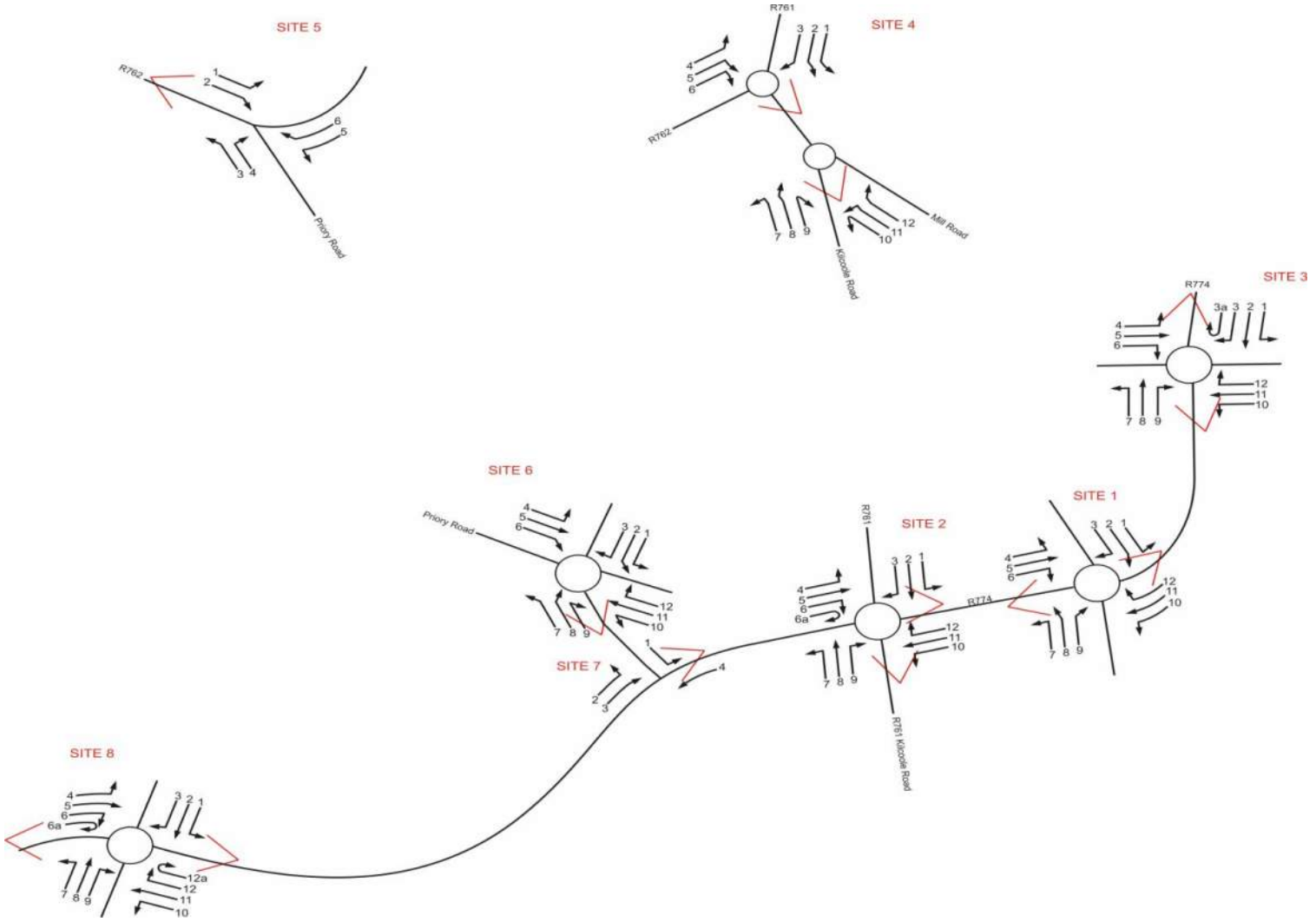
In accordance with the IHT and TII guidelines we have undertaken an assessment to establish the potential level of impact upon the key junctions of the local road network. The results show that the proposed development will not result in any significant traffic impacts on the surrounding road network.

9. ACCIDENTS

During the construction stage, the risk of accidents associated with the proposed development are not predicted to cause unusual, significant or adverse effects to the existing public road network. The vast majority of the works are away from the public road in a controlled environment. Measures will be put in place to access and risk of road traffic accidents during the construction phase. Furthermore, is expected that the risk of accidents would be low during the construction of the proposed development considering the standard construction practices which are to be used and no unusual substance or underground tunnelling works required or predicted.

APPENDIX A
TRAFFIC SURVEYS

Site Numbers/Movement Directions



Job number: Ath/16/036	Job date: 28th April 2016	Drawing No: Ath/16/036-2	abacus Transportation Surveys
Client: Roughan & O'Donovan	Job day Thursday	Author: SPW	

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	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
07:30	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	1	0	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
08:00	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	1	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:00	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
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	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
10:15	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
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
11:15	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
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
12:15	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
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	0	0	0	0	0	0	0	0	0	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
13:30	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
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	1	0	0	0	0	1	1	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
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
16:15	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	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
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
17:00	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
17:30	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	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
18:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	7	0	0	0	0	7	7	0	0	0	0	0	0	0	1	1	1	0	0	3	4

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	56	2	1	0	0	59	60	2	0	0	0	0	2	2
07:15	0	0	0	0	0	0	0	73	8	1	1	0	83	85	1	0	0	0	0	1	1
07:30	0	0	1	0	0	1	2	116	6	2	0	1	125	127	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	97	7	1	1	1	107	110	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	2	342	23	5	2	2	374	381	3	0	0	0	0	3	3
08:00	0	0	0	0	0	0	0	67	8	2	0	3	80	84	2	0	0	0	1	3	4
08:15	0	1	0	0	0	1	1	96	10	5	0	1	112	116	4	0	0	0	0	4	4
08:30	0	0	0	0	0	0	0	156	8	1	0	0	165	166	1	0	0	0	0	1	1
08:45	1	0	0	0	0	1	1	87	13	3	0	1	104	107	5	0	0	0	1	6	7
H/TOT	1	1	0	0	0	2	2	406	39	11	0	5	461	472	12	0	0	0	2	14	16
09:00	0	0	0	0	0	0	0	94	10	2	0	0	106	107	3	0	0	0	0	3	3
09:15	0	0	0	0	0	0	0	85	7	2	0	1	95	97	3	0	0	0	0	3	3
09:30	2	0	0	0	0	2	2	65	12	2	0	1	80	82	9	0	0	0	0	9	9
09:45	0	0	0	0	0	0	0	63	10	2	0	0	75	76	10	0	0	0	0	10	10
H/TOT	2	0	0	0	0	2	2	307	39	8	0	2	356	362	25	0	0	0	0	25	25
10:00	0	0	0	0	0	0	0	46	11	5	1	1	64	69	10	0	0	0	0	10	10
10:15	0	0	0	0	0	0	0	57	8	3	0	0	68	70	9	1	0	0	0	10	10
10:30	0	0	0	0	0	0	0	67	6	1	1	0	75	77	4	0	0	0	0	4	4
10:45	0	0	0	0	0	0	0	77	9	1	1	0	88	90	6	0	0	0	0	6	6
H/TOT	0	0	0	0	0	0	0	247	34	10	3	1	295	305	29	1	0	0	0	30	30
11:00	0	0	0	0	0	0	0	50	17	1	0	0	68	69	4	1	0	0	0	5	5
11:15	0	0	0	0	0	0	0	68	7	0	0	0	75	75	1	0	0	0	0	1	1
11:30	0	0	0	0	0	0	0	60	9	2	0	1	72	74	5	0	0	1	0	6	7
11:45	0	0	0	0	0	0	0	64	8	1	1	1	75	78	7	0	0	0	1	8	9
H/TOT	0	0	0	0	0	0	0	242	41	4	1	2	290	295	17	1	0	1	1	20	22
12:00	0	0	0	0	0	0	0	77	12	1	2	0	92	95	5	0	0	0	0	5	5
12:15	0	0	0	0	0	0	0	54	5	1	0	0	60	61	3	0	0	0	0	3	3
12:30	0	0	0	0	0	0	0	71	18	4	1	0	94	97	2	0	0	0	0	2	2
12:45	0	0	0	0	0	0	0	74	6	2	0	0	82	83	3	0	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	276	41	8	3	0	328	336	13	0	0	0	0	13	13

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
13:00	0	0	0	0	0	0	0	91	10	4	0	0	105	107	9	0	0	0	0	9	9
13:15	0	0	0	0	0	0	0	65	5	0	0	0	70	70	3	1	0	0	0	4	4
13:30	0	0	0	0	0	0	0	84	7	2	0	1	94	96	7	2	0	0	0	9	9
13:45	0	0	0	0	0	0	0	98	10	0	1	2	111	114	5	1	0	0	0	6	6
H/TOT	0	0	0	0	0	0	0	338	32	6	1	3	380	387	24	4	0	0	0	28	28
14:00	0	0	0	0	0	0	0	99	12	0	0	1	112	113	5	0	0	0	0	5	5
14:15	0	0	0	0	0	0	0	104	14	0	0	0	118	118	9	0	0	0	0	9	9
14:30	0	0	0	0	0	0	0	96	6	1	0	0	103	104	4	0	0	0	0	4	4
14:45	0	0	0	0	0	0	0	99	13	0	0	1	113	114	13	0	0	0	0	13	13
H/TOT	0	0	0	0	0	0	0	398	45	1	0	2	446	449	31	0	0	0	0	31	31
15:00	1	0	0	0	0	1	1	81	9	0	1	1	92	94	13	0	0	0	0	13	13
15:15	0	0	0	0	0	0	0	91	14	2	0	0	107	108	11	0	0	0	0	11	11
15:30	0	0	0	0	0	0	0	126	7	2	0	1	136	138	9	0	0	0	0	9	9
15:45	0	0	0	0	0	0	0	80	9	1	0	1	91	93	11	0	0	0	0	11	11
H/TOT	1	0	0	0	0	1	1	378	39	5	1	3	426	433	44	0	0	0	0	44	44
16:00	0	0	0	0	0	0	0	85	10	1	0	1	97	99	9	0	0	0	0	9	9
16:15	0	0	0	0	0	0	0	107	4	1	0	4	116	121	5	0	0	0	0	5	5
16:30	0	0	0	0	0	0	0	79	16	0	1	1	97	99	5	1	0	0	0	6	6
16:45	0	0	0	0	0	0	0	98	6	0	0	0	104	104	13	1	0	0	0	14	14
H/TOT	0	0	0	0	0	0	0	369	36	2	1	6	414	422	32	2	0	0	0	34	34
17:00	0	0	0	0	0	0	0	89	13	0	0	0	102	102	13	0	0	0	0	13	13
17:15	0	0	0	0	0	0	0	95	3	0	0	0	98	98	8	1	0	0	0	9	9
17:30	0	0	0	0	0	0	0	156	11	1	0	0	168	169	9	1	0	0	0	10	10
17:45	1	0	0	0	0	1	1	275	28	7	1	2	313	320	12	0	0	0	0	12	12
H/TOT	1	0	0	0	0	1	1	615	55	8	1	2	681	688	42	2	0	0	0	44	44
18:00	0	0	0	0	0	0	0	129	5	2	1	1	138	141	13	1	0	0	0	14	14
18:15	0	0	0	0	0	0	0	170	19	0	1	0	190	191	32	1	0	0	0	33	33
18:30	1	0	0	0	0	1	1	115	13	0	0	0	128	128	16	3	0	0	0	19	19
18:45	0	0	0	0	0	0	0	125	5	1	0	1	132	134	23	1	0	0	0	24	24
H/TOT	1	0	0	0	0	1	1	539	42	3	2	2	588	594	84	6	0	0	0	90	90
P/TOT	6	1	1	0	0	8	9	4457	466	71	15	30	5039	5124	356	16	0	1	3	376	380

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
07:15	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
07:30	3	0	0	0	0	3	3	0	0	0	0	0	0	0	1	0	0	0	0	1	1
07:45	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	9	1	0	0	0	10	10	0	0	0	0	0	0	0	3	0	0	0	0	3	3
08:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	2
08:15	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
08:30	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	5	0	0	0	0	5	5	0	0	0	0	0	0	0	1	0	0	0	0	1	1
H/TOT	10	0	0	0	0	10	10	0	0	0	0	0	0	0	2	0	0	0	1	3	4
09:00	3	0	0	0	0	3	3	0	0	0	0	0	0	0	1	0	0	0	1	2	3
09:15	1	0	0	0	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	3	3
09:30	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
09:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	7	0	0	0	0	7	7	0	0	0	0	0	0	0	5	0	0	0	1	6	7
10:00	3	0	1	0	0	4	5	0	0	0	0	0	0	0	1	0	0	0	1	2	3
10:15	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	1	0	0	0	1	1
10:30	3	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	2	2
10:45	4	0	0	0	0	4	4	0	0	0	0	0	0	0	1	0	0	0	0	1	1
H/TOT	14	0	1	0	0	15	16	0	0	0	0	0	0	0	4	1	0	0	1	6	7
11:00	6	0	0	0	0	6	6	0	0	0	0	0	0	0	2	0	0	0	1	3	4
11:15	5	1	0	0	0	6	6	0	0	0	0	0	0	0	2	0	0	0	0	2	2
11:30	10	0	0	0	0	10	10	0	0	0	0	0	0	0	4	1	0	0	0	5	5
11:45	4	0	0	0	0	4	4	0	0	0	0	0	0	0	3	0	0	0	1	4	5
H/TOT	25	1	0	0	0	26	26	0	0	0	0	0	0	0	11	1	0	0	2	14	16
12:00	7	0	0	0	0	7	7	0	0	0	0	0	0	0	4	0	0	0	0	4	4
12:15	4	0	0	0	0	4	4	0	0	0	0	0	0	0	2	0	0	0	0	2	2
12:30	6	0	0	0	0	6	6	0	0	0	0	0	0	0	2	0	0	0	0	2	2
12:45	3	0	0	0	0	3	3	0	0	0	0	0	0	0	1	0	0	0	0	1	1
H/TOT	20	0	0	0	0	20	20	0	0	0	0	0	0	0	9	0	0	0	0	9	9

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	3	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	1	3	4
13:15	4	0	0	0	0	4	4	0	0	0	0	0	0	0	1	1	0	0	0	2	2
13:30	8	1	0	0	0	9	9	0	0	0	0	0	0	0	1	0	0	0	0	1	1
13:45	6	0	0	0	0	6	6	0	0	0	0	0	0	0	3	0	0	0	0	3	3
H/TOT	21	1	0	0	0	22	22	0	0	0	0	0	0	0	7	1	0	0	1	9	10
14:00	10	1	0	0	0	11	11	0	0	0	0	0	0	0	10	0	0	0	1	11	12
14:15	7	1	0	0	0	8	8	1	0	0	0	0	1	1	4	0	0	0	0	4	4
14:30	3	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	2	2
14:45	7	0	0	0	0	7	7	0	0	0	0	0	0	0	5	0	0	0	0	5	5
H/TOT	27	2	0	0	0	29	29	1	0	0	0	0	1	1	21	0	0	0	1	22	23
15:00	20	1	0	0	0	21	21	0	0	0	0	0	0	0	16	0	0	0	2	18	20
15:15	9	0	0	0	1	10	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	8	0	0	0	0	8	8	0	0	0	0	0	0	0	3	0	0	0	0	3	3
15:45	10	0	0	0	0	10	10	0	0	0	0	0	0	0	3	1	0	0	0	4	4
H/TOT	47	1	0	0	1	49	50	0	0	0	0	0	0	0	22	1	0	0	2	25	27
16:00	10	1	1	0	0	12	13	0	0	0	0	0	0	0	16	0	0	0	1	17	18
16:15	9	0	0	0	0	9	9	0	0	0	0	0	0	0	2	0	0	0	0	2	2
16:30	6	1	0	0	0	7	7	0	0	0	0	0	0	0	2	0	0	0	0	2	2
16:45	8	0	0	0	0	8	8	0	0	0	0	0	0	0	6	0	0	0	0	6	6
H/TOT	33	2	1	0	0	36	37	0	0	0	0	0	0	0	26	0	0	0	1	27	28
17:00	18	0	0	0	0	18	18	0	0	0	0	0	0	0	8	0	0	0	1	9	10
17:15	13	1	0	0	0	14	14	0	0	0	0	0	0	0	1	0	0	0	0	1	1
17:30	9	0	0	0	0	9	9	0	0	0	0	0	0	0	3	1	0	0	0	4	4
17:45	12	0	0	0	0	12	12	0	0	0	0	0	0	0	6	0	0	0	0	6	6
H/TOT	52	1	0	0	0	53	53	0	0	0	0	0	0	0	18	1	0	0	1	20	21
18:00	17	1	0	0	0	18	18	0	0	0	0	0	0	0	9	0	0	0	1	10	11
18:15	5	1	0	0	0	6	6	0	0	0	0	0	0	0	8	0	0	0	0	8	8
18:30	16	0	0	0	0	16	16	0	0	0	0	0	0	0	5	0	0	0	0	5	5
18:45	9	1	0	0	0	10	10	0	0	0	0	0	0	0	4	1	0	0	0	5	5
H/TOT	47	3	0	0	0	50	50	0	0	0	0	0	0	0	26	1	0	0	1	28	29
P/TOT	312	12	2	0	1	327	329	1	0	0	0	0	1	1	154	6	0	0	12	172	184

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	51	13	0	0	1	65	66	0	0	0	0	0	0	0
07:15	1	0	0	0	0	1	1	67	9	0	0	0	76	76	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	74	9	2	0	1	86	88	0	0	0	0	0	0	0
07:45	2	0	0	0	1	3	4	73	8	2	0	1	84	86	1	0	0	0	0	1	1
H/TOT	3	0	0	0	1	4	5	265	39	4	0	3	311	316	1	0	0	0	0	1	1
08:00	1	0	0	0	0	1	1	104	10	0	0	0	114	114	0	0	0	0	0	0	0
08:15	1	0	0	0	0	1	1	70	10	1	0	0	81	82	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	87	16	0	1	1	105	107	0	0	0	0	0	0	0
08:45	4	0	0	0	0	4	4	93	11	1	0	2	107	110	1	0	0	0	0	1	1
H/TOT	6	0	0	0	0	6	6	354	47	2	1	3	407	412	1	0	0	0	0	1	1
09:00	2	0	0	0	0	2	2	93	10	1	1	0	105	107	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	73	7	1	0	1	82	84	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	56	11	1	0	1	69	71	0	0	0	0	0	0	0
09:45	2	0	0	0	0	2	2	60	8	3	0	0	71	73	0	0	0	0	0	0	0
H/TOT	4	0	0	0	0	4	4	282	36	6	1	2	327	333	0	0	0	0	0	0	0
10:00	2	0	1	0	1	4	6	50	8	3	0	0	61	63	0	0	0	0	0	0	0
10:15	3	0	0	0	0	3	3	43	10	2	1	0	56	58	0	0	0	0	0	0	0
10:30	1	0	0	0	0	1	1	49	10	0	0	0	59	59	0	0	0	0	0	0	0
10:45	3	1	0	0	0	4	4	39	9	3	0	1	52	55	0	0	0	0	0	0	0
H/TOT	9	1	1	0	1	12	14	181	37	8	1	1	228	234	0	0	0	0	0	0	0
11:00	1	0	0	0	0	1	1	52	11	2	1	1	67	70	0	0	0	0	0	0	0
11:15	3	0	0	0	0	3	3	41	9	3	0	1	54	57	0	0	0	0	0	0	0
11:30	3	0	0	0	0	3	3	64	14	6	0	0	84	87	0	0	0	0	0	0	0
11:45	2	0	0	0	0	2	2	53	14	0	0	0	67	67	0	0	0	0	0	0	0
H/TOT	9	0	0	0	0	9	9	210	48	11	1	2	272	281	0	0	0	0	0	0	0
12:00	4	0	0	0	0	4	4	55	11	1	0	2	69	72	0	0	0	0	0	0	0
12:15	2	0	0	0	0	2	2	66	14	3	3	0	86	91	0	0	0	0	0	0	0
12:30	3	0	0	0	0	3	3	77	13	4	0	0	94	96	0	0	0	0	0	0	0
12:45	2	0	0	0	1	3	4	74	5	2	0	0	81	82	0	0	0	0	0	0	0
H/TOT	11	0	0	0	1	12	13	272	43	10	3	2	330	341	0	0	0	0	0	0	0

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 01 DATE: 28th April 2016

LOCATION: R774/Go Gym (Charlesland Leisure Centre) DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	3	0	0	0	0	3	3	72	10	2	1	0	85	87	0	0	0	0	0	0	0
13:15	2	0	0	0	0	2	2	45	7	4	1	1	58	62	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	91	3	1	0	0	95	96	0	0	0	0	0	0	0
13:45	21	0	0	0	1	22	23	43	19	1	1	0	64	66	0	0	0	0	0	0	0
H/TOT	26	0	0	0	1	27	28	251	39	8	3	1	302	311	0	0	0	0	0	0	0
14:00	3	0	0	0	0	3	3	57	9	0	1	1	68	70	1	0	0	0	0	1	1
14:15	3	1	0	0	0	4	4	73	9	0	0	1	83	84	0	0	0	0	0	0	0
14:30	5	0	0	0	0	5	5	72	13	1	0	1	87	89	0	0	0	0	0	0	0
14:45	14	1	0	0	0	15	15	74	11	0	1	1	87	89	0	0	0	0	0	0	0
H/TOT	25	2	0	0	0	27	27	276	42	1	2	4	325	332	1	0	0	0	0	1	1
15:00	9	0	0	0	2	11	13	48	6	5	0	1	60	64	0	0	0	0	0	0	0
15:15	1	0	0	0	0	1	1	46	19	4	0	0	69	71	0	0	0	0	0	0	0
15:30	6	0	0	0	0	6	6	65	9	2	0	1	77	79	0	0	0	0	0	0	0
15:45	7	1	0	0	0	8	8	73	13	5	0	1	92	96	0	0	0	0	0	0	0
H/TOT	23	1	0	0	2	26	28	232	47	16	0	3	298	309	0	0	0	0	0	0	0
16:00	7	0	1	0	1	9	11	72	25	3	0	1	101	104	0	0	0	0	0	0	0
16:15	1	0	0	0	0	1	1	54	21	1	1	1	78	81	0	0	0	0	0	0	0
16:30	4	0	0	0	0	4	4	111	22	0	1	2	136	139	0	0	0	0	0	0	0
16:45	6	0	0	0	0	6	6	93	16	2	0	1	112	114	0	0	0	0	0	0	0
H/TOT	18	0	1	0	1	20	22	330	84	6	2	5	427	438	0	0	0	0	0	0	0
17:00	5	0	0	0	1	6	7	90	24	1	1	2	118	122	0	0	0	0	0	0	0
17:15	3	0	0	0	0	3	3	104	15	1	0	1	121	123	0	0	0	0	0	0	0
17:30	4	0	0	0	0	4	4	108	13	0	0	2	123	125	0	0	0	0	0	0	0
17:45	6	0	0	0	0	6	6	98	12	0	0	0	110	110	0	0	0	0	0	0	0
H/TOT	18	0	0	0	1	19	20	400	64	2	1	5	472	479	0	0	0	0	0	0	0
18:00	9	0	0	0	0	9	9	107	17	0	0	0	124	124	0	0	0	0	0	0	0
18:15	9	0	0	0	1	10	11	98	22	1	0	0	121	122	0	0	0	0	0	0	0
18:30	9	0	0	0	0	9	9	94	21	2	0	1	118	120	0	0	0	0	0	0	0
18:45	10	1	0	0	0	11	11	61	16	0	1	0	78	79	0	0	0	0	0	0	0
H/TOT	37	1	0	0	1	39	40	360	76	3	1	1	441	445	0	0	0	0	0	0	0
P/TOT	189	5	2	0	9	205	215	3413	602	77	16	32	4140	4231	3	0	0	0	0	3	3

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	2	0	0	0	0	2	2	4	1	0	0	1	6	7	9	2	0	0	0	11	11
07:15	1	0	0	0	0	1	1	10	0	0	0	0	10	10	3	2	0	0	0	5	5
07:30	1	0	0	0	0	1	1	6	6	2	0	2	16	19	7	0	1	0	0	8	9
07:45	5	0	0	0	0	5	5	14	4	0	0	0	18	18	10	3	0	0	1	14	15
H/TOT	9	0	0	0	0	9	9	34	11	2	0	3	50	54	29	7	1	0	1	38	40
08:00	5	0	0	0	0	5	5	14	1	1	0	1	17	19	10	2	3	0	0	15	17
08:15	6	1	0	0	0	7	7	20	2	1	0	0	23	24	13	2	2	0	0	17	18
08:30	6	0	0	0	0	6	6	41	5	1	0	0	47	48	17	0	1	0	1	19	21
08:45	4	1	0	0	1	6	7	44	3	0	0	1	48	49	22	1	0	0	0	23	23
H/TOT	21	2	0	0	1	24	25	119	11	3	0	2	135	139	62	5	6	0	1	74	78
09:00	10	1	0	0	0	11	11	59	5	1	0	2	67	70	12	5	0	0	0	17	17
09:15	6	0	0	0	0	6	6	24	4	1	0	0	29	30	22	1	0	0	1	24	25
09:30	8	0	0	0	0	8	8	25	6	0	0	0	31	31	10	2	0	0	0	12	12
09:45	3	0	0	0	0	3	3	29	2	0	0	1	32	33	15	0	1	0	0	16	17
H/TOT	27	1	0	0	0	28	28	137	17	2	0	3	159	163	59	8	1	0	1	69	71
10:00	7	0	0	0	0	7	7	22	1	2	0	1	26	28	8	2	1	0	0	11	12
10:15	5	1	0	0	0	6	6	28	5	1	0	0	34	35	15	3	0	0	0	18	18
10:30	2	0	0	0	0	2	2	24	3	1	1	0	29	31	8	2	2	0	0	12	13
10:45	6	0	0	0	0	6	6	24	6	1	0	1	32	34	16	1	0	0	0	17	17
H/TOT	20	1	0	0	0	21	21	98	15	5	1	2	121	127	47	8	3	0	0	58	60
11:00	6	0	0	0	0	6	6	29	4	1	0	0	34	35	16	0	0	0	0	16	16
11:15	4	1	0	0	0	5	5	19	1	2	0	0	22	23	10	2	2	2	0	16	20
11:30	2	0	0	0	0	2	2	36	2	1	0	1	40	42	15	0	1	1	0	17	19
11:45	6	0	0	0	0	6	6	30	2	1	0	1	34	36	17	0	0	0	0	17	17
H/TOT	18	1	0	0	0	19	19	114	9	5	0	2	130	135	58	2	3	3	0	66	71
12:00	6	0	0	0	0	6	6	30	5	0	0	0	35	35	14	1	1	0	1	17	19
12:15	5	0	0	0	0	5	5	34	2	3	0	0	39	41	22	2	0	0	0	24	24
12:30	4	1	0	0	0	5	5	29	3	1	0	0	33	34	16	3	2	0	1	22	24
12:45	3	0	0	0	0	3	3	29	2	2	0	1	34	36	17	3	0	0	0	20	20
H/TOT	18	1	0	0	0	19	19	122	12	6	0	1	141	145	69	9	3	0	2	83	87

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	10	1	0	0	0	11	11	25	5	1	0	2	33	36	13	3	0	1	0	17	18
13:15	3	0	0	0	0	3	3	41	3	2	0	0	46	47	16	2	2	0	0	20	21
13:30	5	0	0	0	0	5	5	30	6	0	0	0	36	36	15	2	0	0	0	17	17
13:45	8	1	0	0	0	9	9	39	5	2	0	1	47	49	14	3	2	0	0	19	20
H/TOT	26	2	0	0	0	28	28	135	19	5	0	3	162	168	58	10	4	1	0	73	76
14:00	7	1	0	0	0	8	8	23	6	2	0	0	31	32	16	3	2	0	0	21	22
14:15	5	0	0	0	0	5	5	34	6	0	0	0	40	40	15	2	1	0	1	19	21
14:30	11	0	0	0	0	11	11	55	2	0	0	0	57	57	22	2	2	0	0	26	27
14:45	11	2	0	0	0	13	13	56	5	0	1	1	63	65	16	2	0	0	0	18	18
H/TOT	34	3	0	0	0	37	37	168	19	2	1	1	191	194	69	9	5	0	1	84	88
15:00	9	1	0	0	1	11	12	47	6	0	0	2	55	57	25	5	2	0	0	32	33
15:15	12	2	1	0	0	15	16	21	1	2	0	1	25	27	24	5	1	0	1	31	33
15:30	9	0	0	0	0	9	9	28	6	1	0	1	36	38	16	2	1	0	0	19	20
15:45	8	0	0	0	1	9	10	32	2	1	0	1	36	38	19	5	1	0	2	27	30
H/TOT	38	3	1	0	2	44	47	128	15	4	0	5	152	159	84	17	5	0	3	109	115
16:00	5	0	0	0	0	5	5	41	6	0	1	1	49	51	19	5	2	1	2	29	33
16:15	9	0	0	0	0	9	9	26	11	0	0	0	37	37	16	3	1	0	0	20	21
16:30	6	0	0	0	0	6	6	45	5	1	0	0	51	52	25	6	1	0	0	32	33
16:45	17	0	0	0	0	17	17	35	9	0	0	0	44	44	28	4	0	0	0	32	32
H/TOT	37	0	0	0	0	37	37	147	31	1	1	1	181	184	88	18	4	1	2	113	118
17:00	11	1	0	0	0	12	12	61	2	0	0	2	65	67	24	6	1	0	0	31	32
17:15	7	0	0	0	0	7	7	56	5	1	0	0	62	63	29	5	0	0	0	34	34
17:30	10	1	0	0	0	11	11	32	3	1	0	0	36	37	22	2	2	0	1	27	29
17:45	10	1	0	0	0	11	11	45	1	0	0	1	47	48	22	2	0	0	0	24	24
H/TOT	38	3	0	0	0	41	41	194	11	2	0	3	210	214	97	15	3	0	1	116	119
18:00	5	1	0	0	0	6	6	66	0	0	0	1	67	68	15	0	0	0	0	15	15
18:15	7	1	0	0	0	8	8	60	2	1	0	1	64	66	21	1	0	0	0	22	22
18:30	11	0	0	0	0	11	11	50	5	1	0	0	56	57	27	1	0	0	0	28	28
18:45	12	1	0	0	0	13	13	27	2	0	0	0	29	29	16	1	0	0	0	17	17
H/TOT	35	3	0	0	0	38	38	203	9	2	0	2	216	219	79	3	0	0	0	82	82
P/TOT	321	20	1	0	3	345	349	1599	179	39	3	28	1848	1899	799	111	38	5	12	965	1003

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 6a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	8	1	0	0	0	9	9	35	2	1	0	0	38	39	19	5	0	0	1	25	26	8	1	0	0	0	9	9
07:15	16	3	0	0	2	21	23	38	7	1	0	0	46	47	12	3	4	0	1	20	23	7	0	0	0	0	7	7
07:30	23	4	1	0	1	29	31	91	5	3	0	0	99	101	11	6	0	0	2	19	21	4	0	0	0	0	4	4
07:45	19	8	4	0	3	34	39	56	7	1	1	0	65	67	18	9	3	0	1	31	34	6	2	0	0	0	8	8
H/TOT	66	16	5	0	6	93	102	220	21	6	1	0	248	252	60	23	7	0	5	95	104	25	3	0	0	0	28	28
08:00	24	6	2	0	0	32	33	45	8	2	0	1	56	58	31	3	0	1	0	35	36	4	0	0	0	0	4	4
08:15	38	7	1	1	0	47	49	60	8	4	0	1	73	76	29	6	1	0	0	36	37	7	0	0	0	0	7	7
08:30	37	4	0	0	0	41	41	117	6	0	0	0	123	123	27	3	1	0	0	31	32	4	0	1	0	0	5	6
08:45	42	1	0	0	0	43	43	50	10	2	0	1	63	65	44	4	1	0	3	52	56	9	2	0	0	0	11	11
H/TOT	141	18	3	1	0	163	166	272	32	8	0	3	315	322	131	16	3	1	3	154	160	24	2	1	0	0	27	28
09:00	29	3	0	0	0	32	32	50	3	1	0	0	54	55	37	4	2	0	1	44	46	6	1	1	0	0	8	9
09:15	14	1	1	0	0	16	17	43	4	2	0	0	49	50	28	3	4	0	0	35	37	2	1	0	0	0	3	3
09:30	17	0	2	0	0	19	20	40	11	1	0	1	53	55	14	3	1	0	3	21	25	1	0	0	0	0	1	1
09:45	21	0	1	0	1	23	25	44	7	2	0	0	53	54	29	4	3	1	2	39	44	5	0	0	0	0	5	5
H/TOT	81	4	4	0	1	90	93	177	25	6	0	1	209	213	108	14	10	1	6	139	151	14	2	1	0	0	17	18
10:00	15	2	3	0	0	20	22	27	5	4	0	1	37	40	24	5	2	0	1	32	34	3	1	0	0	0	4	4
10:15	17	1	1	0	0	19	20	34	6	3	0	0	43	45	18	4	2	0	1	25	27	5	1	0	0	0	6	6
10:30	15	1	3	0	0	19	21	32	5	1	1	0	39	41	21	3	2	0	0	26	27	5	2	0	0	0	7	7
10:45	20	0	0	0	0	20	20	37	8	1	1	0	47	49	17	4	2	1	0	24	26	1	1	0	0	0	2	2
H/TOT	67	4	7	0	0	78	82	130	24	9	2	1	166	174	80	16	8	1	2	107	114	14	5	0	0	0	19	19
11:00	15	0	1	0	0	16	17	29	14	1	0	0	44	45	23	4	0	1	0	28	29	4	2	0	0	0	6	6
11:15	20	0	1	0	0	21	22	34	5	0	0	0	39	39	15	9	1	1	0	26	28	5	0	0	0	0	5	5
11:30	18	2	2	0	0	22	23	36	6	2	0	1	45	47	23	6	2	0	0	31	32	2	2	0	0	0	4	4
11:45	21	2	1	0	0	24	25	33	4	1	0	1	39	41	22	5	1	0	1	29	31	3	1	0	0	0	4	4
H/TOT	74	4	5	0	0	83	86	132	29	4	0	2	167	171	83	24	4	2	1	114	120	14	5	0	0	0	19	19
12:00	23	4	0	0	0	27	27	55	10	1	1	0	67	69	28	3	3	1	0	35	38	4	1	0	0	0	5	5
12:15	21	2	2	0	0	25	26	29	2	1	0	0	32	33	23	7	1	0	0	31	32	2	0	0	0	0	2	2
12:30	16	2	1	0	0	19	20	40	14	3	1	0	58	61	27	3	4	0	1	35	38	1	0	0	0	0	1	1
12:45	21	3	0	1	0	25	26	41	4	1	0	0	46	47	30	4	3	0	0	37	39	5	2	0	0	0	7	7
H/TOT	81	11	3	1	0	96	99	165	30	6	2	0	203	209	108	17	11	1	1	138	146	12	3	0	0	0	15	15

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 6a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	19	2	2	0	0	23	24	56	7	4	0	0	67	69	18	2	4	0	0	24	26	1	1	0	0	0	2	2
13:15	14	3	2	0	0	19	20	42	1	0	0	0	43	43	23	5	3	1	0	32	35	4	0	0	0	0	4	4
13:30	19	2	2	0	1	24	26	65	7	2	0	0	74	75	26	9	2	0	0	37	38	3	0	0	0	0	3	3
13:45	17	4	1	0	0	22	23	60	8	0	0	1	69	70	19	6	2	0	0	27	28	4	1	0	0	0	5	5
H/TOT	69	11	7	0	1	88	93	223	23	6	0	1	253	257	86	22	11	1	0	120	127	12	2	0	0	0	14	14
14:00	10	1	1	1	0	13	15	65	10	0	0	1	76	77	25	1	0	0	0	26	26	3	2	0	0	0	5	5
14:15	12	0	0	0	0	12	12	75	12	0	0	0	87	87	23	4	1	0	0	28	29	2	1	0	0	0	3	3
14:30	11	1	1	0	0	13	14	65	5	0	0	0	70	70	34	6	0	0	0	40	40	5	1	0	0	0	6	6
14:45	16	1	1	0	0	18	19	70	7	0	0	0	77	77	30	5	3	1	2	41	46	7	0	0	0	0	7	7
H/TOT	49	3	3	1	0	56	59	275	34	0	0	1	310	311	112	16	4	1	2	135	140	17	4	0	0	0	21	21
15:00	9	1	2	0	0	12	13	48	4	0	1	0	53	54	31	2	1	0	0	34	35	1	1	0	0	0	2	2
15:15	14	1	1	0	0	16	17	64	9	0	0	0	73	73	26	4	2	0	1	33	35	5	1	1	0	0	7	8
15:30	15	1	3	2	0	21	25	95	3	2	0	1	101	103	29	13	2	1	0	45	47	2	0	0	0	0	2	2
15:45	18	3	0	0	0	21	21	46	8	1	0	0	55	56	38	8	3	1	1	51	55	5	1	0	0	0	6	6
H/TOT	56	6	6	2	0	70	76	253	24	3	1	1	282	286	124	27	8	2	2	163	172	13	3	1	0	0	17	18
16:00	19	2	0	0	0	21	21	59	5	1	0	1	66	68	33	4	0	0	0	37	37	4	0	0	0	0	4	4
16:15	15	3	2	0	0	20	21	69	4	1	0	3	77	81	32	4	3	0	2	41	45	7	0	0	0	0	7	7
16:30	24	2	1	0	1	28	30	58	16	0	0	1	75	76	45	8	1	0	0	54	55	1	0	0	0	0	1	1
16:45	21	0	0	0	1	22	23	70	6	0	0	0	76	76	43	4	2	0	0	49	50	4	0	0	0	0	4	4
H/TOT	79	7	3	0	2	91	95	256	31	2	0	5	294	300	153	20	6	0	2	181	186	16	0	0	0	0	16	16
17:00	17	3	0	0	0	20	20	37	9	0	0	0	46	46	52	3	1	0	0	56	57	5	0	1	0	0	6	7
17:15	22	2	0	0	0	24	24	56	3	0	0	0	59	59	66	4	0	0	0	70	70	7	1	0	0	0	8	8
17:30	23	0	2	0	0	25	26	114	9	0	0	0	123	123	39	5	0	0	1	45	46	7	0	0	0	0	7	7
17:45	16	6	0	0	0	22	22	231	25	6	1	2	265	271	41	4	3	0	2	50	54	9	1	0	0	0	10	10
H/TOT	78	11	2	0	0	91	92	438	46	6	1	2	493	499	198	16	4	0	3	221	226	28	2	1	0	0	31	32
18:00	15	3	1	0	0	19	20	106	4	2	1	0	113	115	47	8	2	0	0	57	58	7	0	0	0	0	7	7
18:15	13	0	0	0	0	13	13	131	15	0	1	0	147	148	32	5	1	1	0	39	41	3	2	0	0	0	5	5
18:30	15	3	0	0	0	18	18	77	14	0	0	0	91	91	63	3	2	0	0	68	69	8	0	0	0	0	8	8
18:45	19	0	1	0	0	20	21	83	5	1	0	1	90	92	32	8	0	0	0	40	40	6	0	0	0	0	6	6
H/TOT	62	6	2	0	0	70	71	397	38	3	2	1	441	446	174	24	5	1	0	204	208	24	2	0	0	0	26	26
P/TOT	903	101	50	5	10	1069	1111	2938	357	59	9	18	3381	3440	1417	235	81	11	27	1771	1853	213	33	4	0	0	250	252

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	81	9	3	0	0	93	95	17	5	1	0	2	25	28	21	0	0	0	0	21	21
07:15	74	9	2	0	0	85	86	25	4	1	0	2	32	35	35	1	0	1	0	37	38
07:30	46	9	3	0	1	59	62	34	6	2	0	4	46	51	24	1	0	0	1	26	27
07:45	53	5	0	1	1	60	62	43	3	1	0	4	51	56	36	0	0	0	1	37	38
H/TOT	254	32	8	1	2	297	304	119	18	5	0	12	154	169	116	2	0	1	2	121	124
08:00	53	5	3	0	1	62	65	51	6	1	0	1	59	61	19	0	0	0	3	22	25
08:15	50	4	2	0	3	59	63	64	3	0	0	0	67	67	34	2	1	0	0	37	38
08:30	55	2	1	0	0	58	59	57	8	1	0	0	66	67	34	2	1	0	0	37	38
08:45	46	7	1	0	1	55	57	46	3	0	0	1	50	51	39	2	1	0	0	42	43
H/TOT	204	18	7	0	5	234	243	218	20	2	0	2	242	245	126	6	3	0	3	138	143
09:00	47	5	2	0	0	54	55	32	5	1	0	0	38	39	37	6	1	0	0	44	45
09:15	55	6	1	0	0	62	63	40	4	0	0	2	46	48	39	3	0	0	1	43	44
09:30	53	7	3	0	0	63	65	32	3	1	0	0	36	37	28	1	1	0	0	30	31
09:45	42	6	2	0	1	51	53	19	3	1	0	0	23	24	26	3	0	0	0	29	29
H/TOT	197	24	8	0	1	230	235	123	15	3	0	2	143	147	130	13	2	0	1	146	148
10:00	26	6	1	0	0	33	34	25	0	2	0	1	28	30	22	6	1	1	0	30	32
10:15	27	5	3	0	0	35	37	17	5	1	0	1	24	26	27	2	0	0	0	29	29
10:30	22	2	2	0	0	26	27	25	3	0	0	1	29	30	37	1	0	0	0	38	38
10:45	22	7	2	0	0	31	32	22	3	1	0	1	27	29	40	1	0	0	0	41	41
H/TOT	97	20	8	0	0	125	129	89	11	4	0	4	108	114	126	10	1	1	0	138	140
11:00	23	3	3	0	0	29	31	29	3	1	0	0	33	34	19	4	0	0	0	23	23
11:15	26	1	1	0	0	28	29	31	1	0	0	1	33	34	31	1	0	0	0	32	32
11:30	21	7	2	0	0	30	31	25	1	0	0	0	26	26	27	3	0	1	0	31	32
11:45	31	4	1	0	0	36	37	27	1	1	0	0	29	30	32	4	0	1	1	38	40
H/TOT	101	15	7	0	0	123	127	112	6	2	0	1	121	123	109	12	0	2	1	124	128
12:00	33	3	2	0	2	40	43	20	4	1	0	0	25	26	21	2	0	1	0	24	25
12:15	24	6	1	0	0	31	32	27	2	0	0	1	30	31	23	3	0	0	0	26	26
12:30	21	8	2	1	1	33	36	25	3	2	0	0	30	31	29	3	1	0	0	33	34
12:45	24	4	1	1	0	30	32	39	3	0	0	1	43	44	33	2	1	0	0	36	37
H/TOT	102	21	6	2	3	134	143	111	12	3	0	2	128	132	106	10	2	1	0	119	121

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	28	4	3	0	0	35	37	42	3	0	0	0	45	45	34	2	0	0	0	36	36
13:15	18	5	1	0	1	25	27	26	4	1	0	2	33	36	23	5	0	0	0	28	28
13:30	26	7	0	0	0	33	33	30	1	0	1	1	33	35	21	2	0	0	1	24	25
13:45	21	4	2	0	0	27	28	40	3	1	0	0	44	45	35	2	0	1	1	39	41
H/TOT	93	20	6	0	1	120	124	138	11	2	1	3	155	160	113	11	0	1	2	127	130
14:00	24	5	2	0	0	31	32	48	2	0	1	0	51	52	32	1	0	0	0	33	33
14:15	36	2	2	0	0	40	41	42	3	0	0	2	47	49	33	2	0	0	0	35	35
14:30	26	5	4	1	0	36	39	29	2	2	0	0	33	34	24	1	1	0	0	26	27
14:45	24	3	5	1	0	33	37	28	2	0	0	0	30	30	31	4	0	0	1	36	37
H/TOT	110	15	13	2	0	140	149	147	9	2	1	2	161	165	120	8	1	0	1	130	132
15:00	39	5	2	0	1	47	49	45	1	1	0	1	48	50	38	4	0	0	0	42	42
15:15	28	4	1	0	0	33	34	25	2	1	0	1	29	31	26	3	1	0	0	30	31
15:30	36	2	1	1	0	40	42	39	3	0	0	1	43	44	31	4	0	0	0	35	35
15:45	32	7	2	0	1	42	44	38	7	0	0	1	46	47	37	1	0	0	0	38	38
H/TOT	135	18	6	1	2	162	168	147	13	2	0	4	166	171	132	12	1	0	0	145	146
16:00	36	7	2	0	0	45	46	34	5	0	0	2	41	43	30	5	0	0	0	35	35
16:15	39	5	1	0	0	45	46	28	3	1	0	0	32	33	34	0	0	0	1	35	36
16:30	26	3	3	1	2	35	40	39	1	1	0	1	42	44	20	1	0	1	0	22	23
16:45	30	8	1	0	0	39	40	39	6	0	0	0	45	45	24	1	0	0	0	25	25
H/TOT	131	23	7	1	2	164	171	140	15	2	0	3	160	164	108	7	0	1	1	117	119
17:00	47	2	0	0	0	49	49	34	2	1	0	0	37	38	54	3	0	0	0	57	57
17:15	36	3	2	1	0	42	44	32	0	0	0	1	33	34	40	1	0	0	0	41	41
17:30	37	6	0	0	0	43	43	38	5	0	0	1	44	45	41	2	1	0	0	44	45
17:45	25	3	0	0	0	28	28	31	5	0	0	1	37	38	47	2	1	0	0	50	51
H/TOT	145	14	2	1	0	162	164	135	12	1	0	3	151	155	182	8	2	0	0	192	193
18:00	25	4	0	0	1	30	31	33	3	0	0	0	36	36	31	1	0	0	1	33	34
18:15	33	1	1	0	0	35	36	33	0	0	0	1	34	35	64	4	0	0	0	68	68
18:30	21	0	1	0	2	24	27	29	2	0	0	0	31	31	44	2	0	0	0	46	46
18:45	24	1	0	0	0	25	25	33	4	0	0	0	37	37	53	0	0	0	0	53	53
H/TOT	103	6	2	0	3	114	118	128	9	0	0	1	138	139	192	7	0	0	1	200	201
P/TOT	1672	226	80	8	19	2005	2074	1607	151	28	2	39	1827	1883	1560	106	12	7	12	1697	1724

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	7	1	0	0	0	8	8	46	12	0	0	1	59	60	0	0	0	0	0	0	0
07:15	12	2	0	0	0	14	14	52	7	0	0	0	59	59	5	0	0	0	0	5	5
07:30	15	4	0	0	0	19	19	60	5	2	0	1	68	70	2	0	0	0	0	2	2
07:45	14	2	0	0	0	16	16	59	7	2	0	1	69	71	3	0	0	0	0	3	3
H/TOT	48	9	0	0	0	57	57	217	31	4	0	3	255	260	10	0	0	0	0	10	10
08:00	27	2	0	0	0	29	29	72	8	0	0	0	80	80	7	0	0	0	0	7	7
08:15	13	1	0	0	0	14	14	56	10	1	0	0	67	68	3	0	0	0	0	3	3
08:30	27	2	0	0	1	30	31	55	13	0	1	0	69	70	6	1	0	0	0	7	7
08:45	34	3	0	0	2	39	41	58	8	1	0	0	67	68	6	0	0	0	0	6	6
H/TOT	101	8	0	0	3	112	115	241	39	2	1	0	283	285	22	1	0	0	0	23	23
09:00	40	3	1	0	0	44	45	51	6	0	1	0	58	59	5	1	0	0	0	6	6
09:15	30	0	1	0	1	32	34	42	7	0	0	0	49	49	2	0	0	0	0	2	2
09:30	21	3	1	0	1	26	28	36	8	0	0	0	44	44	1	0	0	0	0	1	1
09:45	17	2	0	0	0	19	19	43	5	3	0	0	51	53	1	1	0	0	0	2	2
H/TOT	108	8	3	0	2	121	125	172	26	3	1	0	202	205	9	2	0	0	0	11	11
10:00	20	1	0	0	0	21	21	33	7	4	0	0	44	46	0	0	0	0	0	0	0
10:15	24	3	1	0	0	28	29	20	7	1	1	0	29	31	3	0	0	0	0	3	3
10:30	21	1	0	0	0	22	22	29	9	0	0	0	38	38	2	0	0	0	0	2	2
10:45	18	4	1	0	0	23	24	23	5	2	0	1	31	33	2	0	0	0	0	2	2
H/TOT	83	9	2	0	0	94	95	105	28	7	1	1	142	148	7	0	0	0	0	7	7
11:00	22	3	1	0	0	26	27	30	8	1	1	1	41	44	6	0	0	0	0	6	6
11:15	17	1	1	0	0	19	20	27	9	2	0	1	39	41	2	0	0	0	0	2	2
11:30	30	1	1	0	0	32	33	43	13	5	0	0	61	64	1	0	0	0	0	1	1
11:45	24	5	0	0	0	29	29	26	9	0	0	0	35	35	7	0	0	0	0	7	7
H/TOT	93	10	3	0	0	106	108	126	39	8	1	2	176	183	16	0	0	0	0	16	16
12:00	38	4	0	0	1	43	44	20	7	1	0	1	29	31	4	0	0	0	0	4	4
12:15	34	6	0	0	0	40	40	34	8	3	3	0	48	53	2	0	0	0	0	2	2
12:30	32	4	1	0	0	37	38	48	9	3	0	0	60	62	3	0	0	0	0	3	3
12:45	33	0	1	0	0	34	35	43	5	1	0	0	49	50	1	0	0	0	0	1	1
H/TOT	137	14	2	0	1	154	156	145	29	8	3	1	186	195	10	0	0	0	0	10	10

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 02 DATE: 28th April 2016

LOCATION: R774/R761 Kilcoole Road DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	37	3	0	0	0	40	40	31	7	2	1	0	41	43	7	0	0	0	0	7	7
13:15	21	1	0	0	0	22	22	23	6	4	1	1	35	39	5	0	0	0	0	5	5
13:30	36	2	0	0	0	38	38	59	2	1	0	0	62	63	4	0	0	0	0	4	4
13:45	21	6	1	0	0	28	29	25	13	0	1	0	39	40	3	0	0	0	0	3	3
H/TOT	115	12	1	0	0	128	129	138	28	7	3	1	177	185	19	0	0	0	0	19	19
14:00	30	5	0	0	0	35	35	34	5	0	1	1	41	43	3	0	0	0	0	3	3
14:15	29	4	0	0	0	33	33	45	4	0	0	1	50	51	6	2	0	0	0	8	8
14:30	39	2	1	0	1	43	45	33	11	0	0	0	44	44	3	0	0	0	0	3	3
14:45	33	6	0	0	0	39	39	47	5	0	1	1	54	56	1	0	0	0	0	1	1
H/TOT	131	17	1	0	1	150	152	159	25	0	2	3	189	195	13	2	0	0	0	15	15
15:00	31	3	0	0	0	34	34	27	3	5	0	1	36	40	10	1	0	0	0	11	11
15:15	22	4	0	0	1	27	28	28	15	4	0	0	47	49	5	0	0	0	0	5	5
15:30	30	1	1	0	1	33	35	37	8	1	0	0	46	47	6	0	0	0	0	6	6
15:45	40	6	0	0	0	46	46	38	7	5	0	1	51	55	5	0	0	0	0	5	5
H/TOT	123	14	1	0	2	140	143	130	33	15	0	2	180	190	26	1	0	0	0	27	27
16:00	47	8	1	0	1	57	59	27	16	4	0	0	47	49	8	2	0	0	0	10	10
16:15	35	1	1	0	0	37	38	24	20	0	1	1	46	48	4	0	0	0	0	4	4
16:30	63	5	0	0	1	69	70	48	18	0	1	1	68	70	6	0	0	0	0	6	6
16:45	44	3	1	0	0	48	49	51	13	1	0	1	66	68	6	0	0	0	0	6	6
H/TOT	189	17	3	0	2	211	215	150	67	5	2	3	227	235	24	2	0	0	0	26	26
17:00	36	0	1	0	0	37	38	62	24	0	1	2	89	92	10	0	0	0	0	10	10
17:15	44	3	1	0	0	48	49	69	13	0	0	1	83	84	4	0	0	0	0	4	4
17:30	47	0	0	0	0	47	47	61	13	0	0	2	76	78	9	0	0	0	0	9	9
17:45	41	2	0	0	0	43	43	66	10	0	0	0	76	76	3	0	0	0	0	3	3
H/TOT	168	5	2	0	0	175	176	258	60	0	1	5	324	330	26	0	0	0	0	26	26
18:00	50	3	0	0	0	53	53	66	15	0	0	0	81	81	8	0	0	0	0	8	8
18:15	35	3	0	0	0	38	38	62	20	1	0	0	83	84	6	0	0	0	0	6	6
18:30	57	3	0	0	0	60	60	50	18	2	0	1	71	73	3	0	0	0	0	3	3
18:45	34	1	0	0	0	35	35	31	13	0	1	0	45	46	5	3	0	0	0	8	8
H/TOT	176	10	0	0	0	186	186	209	66	3	1	1	280	284	22	3	0	0	0	25	25
P/TOT	1472	133	18	0	11	1634	1654	2050	471	62	16	22	2621	2695	204	11	0	0	0	215	215

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 3a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	10	7	0	0	1	18	19	1	1	0	0	0	2	2	0	0	0	0	1	1	2
07:15	1	0	0	0	0	1	1	26	7	0	0	0	33	33	4	0	0	0	0	4	4	0	0	0	0	3	3	6
07:30	1	0	0	0	0	1	1	24	6	1	0	0	31	32	10	0	0	0	0	10	10	0	0	0	0	2	2	4
07:45	4	0	0	0	0	4	4	28	5	2	0	2	37	40	10	0	0	0	0	10	10	0	0	0	0	3	3	6
H/TOT	6	0	0	0	0	6	6	88	25	3	0	3	119	124	25	1	0	0	0	26	26	0	0	0	0	9	9	18
08:00	2	0	0	0	0	2	2	45	6	0	0	0	51	51	16	2	0	0	0	18	18	0	0	0	0	1	1	2
08:15	1	0	0	0	0	1	1	24	7	1	0	0	32	33	22	1	0	0	0	23	23	0	0	0	0	2	2	4
08:30	1	1	0	0	1	3	4	31	12	0	0	0	43	43	20	0	1	0	2	23	26	0	0	0	0	0	0	0
08:45	5	0	0	0	0	5	5	49	8	1	0	1	59	61	42	4	1	0	0	47	48	0	0	0	0	2	2	4
H/TOT	9	1	0	0	1	11	12	149	33	2	0	1	185	187	100	7	2	0	2	111	114	0	0	0	0	5	5	10
09:00	2	0	0	0	0	2	2	48	5	1	1	0	55	57	61	0	0	0	0	61	61	0	0	0	0	0	0	0
09:15	4	0	0	0	0	4	4	43	7	0	0	1	51	52	50	2	0	0	0	52	52	0	0	0	0	2	2	4
09:30	2	0	0	0	0	2	2	19	7	1	0	0	27	28	17	0	1	0	1	19	21	1	0	0	0	0	1	1
09:45	3	0	0	0	0	3	3	31	4	3	0	0	38	40	17	3	0	0	0	20	20	0	0	0	0	2	2	4
H/TOT	11	0	0	0	0	11	11	141	23	5	1	1	171	176	145	5	1	0	1	152	154	1	0	0	0	4	5	9
10:00	1	0	0	0	0	1	1	27	2	2	0	1	32	34	16	3	1	0	0	20	21	0	0	0	0	0	0	0
10:15	2	0	0	0	0	2	2	18	6	0	1	0	25	26	16	2	0	0	0	18	18	0	0	0	0	2	2	4
10:30	3	0	0	0	0	3	3	24	7	0	0	0	31	31	25	3	0	0	0	28	28	0	0	0	0	1	1	2
10:45	0	0	0	0	0	0	0	24	6	2	0	1	33	35	20	4	0	0	0	24	24	0	0	0	0	2	2	4
H/TOT	6	0	0	0	0	6	6	93	21	4	1	2	121	126	77	12	1	0	0	90	91	0	0	0	0	5	5	10
11:00	0	0	0	0	0	0	0	25	8	1	1	1	36	39	24	0	0	0	0	24	24	0	0	0	0	1	1	2
11:15	2	0	0	0	0	2	2	27	7	3	0	1	38	41	17	3	0	0	0	20	20	0	0	0	0	1	1	2
11:30	3	0	0	0	0	3	3	44	9	6	0	0	59	62	17	1	0	0	0	18	18	0	0	0	0	1	1	2
11:45	7	0	0	0	0	7	7	29	13	0	0	0	42	42	28	1	1	0	0	30	31	0	0	0	0	1	1	2
H/TOT	12	0	0	0	0	12	12	125	37	10	1	2	175	183	86	5	1	0	0	92	93	0	0	0	0	4	4	8
12:00	2	0	0	0	0	2	2	39	10	0	0	2	51	53	19	1	1	0	0	21	22	1	0	0	0	0	1	1
12:15	2	0	0	0	0	2	2	37	10	3	3	0	53	58	23	2	0	0	0	25	25	0	0	0	0	2	2	4
12:30	3	0	0	0	0	3	3	55	11	0	0	0	66	66	33	2	1	0	0	36	37	0	0	0	0	1	1	2
12:45	2	0	0	0	0	2	2	48	4	2	0	1	55	57	23	2	0	0	0	25	25	0	0	0	0	1	1	2
H/TOT	9	0	0	0	0	9	9	179	35	5	3	3	225	234	98	7	2	0	0	107	108	1	0	0	0	4	5	9

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 3a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	4	0	1	0	1	6	8	39	8	2	1	0	50	52	24	1	0	0	0	25	25	0	0	0	0	2	2	4
13:15	3	0	1	0	0	4	5	23	3	3	1	1	31	35	30	1	0	0	0	31	31	0	0	0	0	1	1	2
13:30	1	0	0	0	0	1	1	61	2	1	0	0	64	65	29	3	0	0	0	32	32	0	0	0	0	2	2	4
13:45	2	2	0	0	0	4	4	29	15	1	0	1	46	48	45	3	1	0	0	49	50	0	0	0	0	1	1	2
H/TOT	10	2	2	0	1	15	17	152	28	7	2	2	191	199	128	8	1	0	0	137	138	0	0	0	0	6	6	12
14:00	2	0	0	0	0	2	2	42	4	0	1	0	47	48	24	2	0	0	1	27	28	0	0	0	0	1	1	2
14:15	2	0	1	0	0	3	4	52	9	0	0	0	61	61	32	0	0	0	1	33	34	0	0	1	0	1	2	4
14:30	6	0	0	0	0	6	6	43	10	1	0	1	55	57	32	0	0	0	0	32	32	0	0	0	0	1	1	2
14:45	4	0	0	0	0	4	4	65	9	0	1	1	76	78	63	4	1	0	0	68	69	0	0	0	0	1	1	2
H/TOT	14	0	1	0	0	15	16	202	32	1	2	2	239	244	151	6	1	0	2	160	163	0	0	1	0	4	5	10
15:00	0	0	0	0	0	0	0	31	2	1	0	2	36	39	42	0	2	0	1	45	47	0	0	0	0	0	0	0
15:15	3	0	0	0	0	3	3	14	12	2	0	0	28	29	43	2	1	0	0	46	47	0	0	0	0	2	2	4
15:30	4	0	0	0	0	4	4	48	7	1	0	0	56	57	19	1	0	0	1	21	22	0	0	0	0	1	1	2
15:45	6	0	0	0	0	6	6	50	12	4	0	1	67	70	34	2	0	1	0	37	38	0	0	0	0	1	1	2
H/TOT	13	0	0	0	0	13	13	143	33	8	0	3	187	194	138	5	3	1	2	149	154	0	0	0	0	4	4	8
16:00	6	0	0	0	0	6	6	56	22	3	0	1	82	85	42	1	0	0	1	44	45	0	0	0	0	0	0	0
16:15	2	1	0	0	0	3	3	32	19	1	1	1	54	57	40	1	0	0	0	41	41	0	0	0	0	2	2	4
16:30	5	0	0	0	0	5	5	76	21	0	0	1	98	99	39	4	1	0	0	44	45	1	0	0	0	0	1	1
16:45	3	0	0	0	0	3	3	53	15	2	0	1	71	73	33	1	0	0	0	34	34	0	0	0	0	3	3	6
H/TOT	16	1	0	0	0	17	17	217	77	6	1	4	305	313	154	7	1	0	1	163	165	1	0	0	0	5	6	11
17:00	5	0	0	0	0	5	5	69	23	1	1	3	97	102	52	5	1	0	1	59	61	0	0	0	0	1	1	2
17:15	4	2	0	0	0	6	6	68	11	0	0	0	79	79	45	1	1	0	0	47	48	0	0	0	0	2	2	4
17:30	3	0	0	0	0	3	3	68	10	0	0	2	80	82	47	1	0	0	0	48	48	0	0	0	0	0	0	0
17:45	6	1	0	0	0	7	7	66	9	0	0	0	75	75	48	2	0	0	0	50	50	0	0	0	0	3	3	6
H/TOT	18	3	0	0	0	21	21	271	53	1	1	5	331	338	192	9	2	0	1	204	206	0	0	0	0	6	6	12
18:00	2	0	0	0	0	2	2	79	15	0	0	0	94	94	65	0	0	0	0	65	65	0	0	0	0	2	2	4
18:15	2	1	0	0	0	3	3	72	20	1	0	1	94	96	35	2	0	0	1	38	39	0	0	0	0	2	2	4
18:30	6	0	0	0	0	6	6	67	17	2	0	0	86	87	60	1	0	0	0	61	61	0	0	0	0	1	1	2
18:45	2	0	1	0	0	3	4	27	14	0	1	0	42	43	32	1	0	0	0	33	33	0	0	0	0	2	2	4
H/TOT	12	1	1	0	0	14	15	245	66	3	1	1	316	320	192	4	0	0	1	197	198	0	0	0	0	7	7	14
P/TOT	136	8	4	0	2	150	154	2005	463	55	13	29	2565	2638	1486	76	15	1	10	1588	1607	3	0	1	0	63	67	131

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	17	1	1	0	0	19	20	1	0	0	0	0	1	1	36	5	0	0	0	41	41
07:15	42	2	0	0	0	44	44	0	0	0	0	0	0	0	36	2	0	0	0	38	38
07:30	48	4	1	0	0	53	54	1	0	0	0	0	1	1	42	3	1	0	1	47	49
07:45	55	1	0	0	0	56	56	0	0	0	0	0	0	0	42	3	0	0	0	45	45
H/TOT	162	8	2	0	0	172	173	2	0	0	0	0	2	2	156	13	1	0	1	171	173
08:00	51	0	0	0	1	52	53	2	0	0	0	0	2	2	57	4	0	0	0	61	61
08:15	78	1	0	0	3	82	85	2	0	0	0	0	2	2	40	3	0	0	0	43	43
08:30	102	3	0	0	1	106	107	2	0	0	0	0	2	2	43	4	0	1	1	49	51
08:45	89	2	1	0	0	92	93	1	0	0	0	0	1	1	43	3	0	0	1	47	48
H/TOT	320	6	1	0	5	332	338	7	0	0	0	0	7	7	183	14	0	1	2	200	203
09:00	57	1	0	0	0	58	58	0	1	0	0	0	1	1	40	3	0	0	0	43	43
09:15	26	0	0	0	0	26	26	1	0	0	0	0	1	1	27	0	1	0	0	28	29
09:30	23	3	0	0	1	27	28	4	1	0	0	0	5	5	29	3	0	0	1	33	34
09:45	20	1	0	0	0	21	21	0	0	0	0	0	0	0	25	4	0	0	0	29	29
H/TOT	126	5	0	0	1	132	133	5	2	0	0	0	7	7	121	10	1	0	1	133	135
10:00	17	1	1	0	0	19	20	1	0	0	0	0	1	1	23	6	2	0	0	31	32
10:15	27	5	0	0	0	32	32	3	1	0	0	0	4	4	24	4	2	0	0	30	31
10:30	19	0	0	0	0	19	19	1	0	0	0	0	1	1	19	2	0	0	0	21	21
10:45	18	4	0	0	0	22	22	0	0	0	0	0	0	0	16	4	1	0	0	21	22
H/TOT	81	10	1	0	0	92	93	5	1	0	0	0	6	6	82	16	5	0	0	103	106
11:00	17	2	0	0	0	19	19	1	1	0	0	0	2	2	24	2	1	0	0	27	28
11:15	16	2	0	0	0	18	18	0	0	1	0	0	1	2	15	2	0	0	0	17	17
11:30	24	0	0	0	0	24	24	0	0	0	0	0	0	0	21	4	0	0	0	25	25
11:45	19	2	0	0	0	21	21	0	1	0	0	0	1	1	24	1	0	0	0	25	25
H/TOT	76	6	0	0	0	82	82	1	2	1	0	0	4	5	84	9	1	0	0	94	95
12:00	18	1	0	0	0	19	19	1	0	0	0	0	1	1	18	1	1	0	0	20	21
12:15	30	3	0	0	0	33	33	0	0	0	0	0	0	0	28	3	0	0	0	31	31
12:30	26	1	0	0	0	27	27	0	0	0	0	0	0	0	22	2	4	0	0	28	30
12:45	42	5	0	0	0	47	47	3	1	0	0	0	4	4	25	1	0	0	0	26	26
H/TOT	116	10	0	0	0	126	126	4	1	0	0	0	5	5	93	7	5	0	0	105	108

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	33	2	0	0	1	36	37	0	0	0	0	0	0	0	34	2	0	0	0	36	36
13:15	44	0	0	0	1	45	46	5	0	0	0	0	5	5	20	3	1	0	0	24	25
13:30	37	1	0	0	0	38	38	0	0	0	0	0	0	0	30	1	0	0	0	31	31
13:45	37	2	0	0	0	39	39	2	0	0	0	0	2	2	30	4	0	1	0	35	36
H/TOT	151	5	0	0	2	158	160	7	0	0	0	0	7	7	114	10	1	1	0	126	128
14:00	45	1	1	0	0	47	48	1	0	0	0	0	1	1	16	4	0	0	1	21	22
14:15	45	2	1	0	1	49	51	2	0	0	0	0	2	2	22	1	0	0	1	24	25
14:30	40	0	0	0	0	40	40	1	0	0	0	0	1	1	30	3	0	0	0	33	33
14:45	20	0	0	0	0	20	20	1	0	0	0	0	1	1	21	3	0	0	0	24	24
H/TOT	150	3	2	0	1	156	158	5	0	0	0	0	5	5	89	11	0	0	2	102	104
15:00	34	3	0	0	1	38	39	1	0	0	0	0	1	1	26	3	2	0	1	32	34
15:15	33	3	0	0	1	37	38	5	1	0	0	0	6	6	30	6	2	0	0	38	39
15:30	26	2	0	0	0	28	28	1	0	0	0	0	1	1	23	0	1	0	1	25	27
15:45	25	1	0	0	0	26	26	0	0	0	0	0	0	0	27	2	1	0	0	30	31
H/TOT	118	9	0	0	2	129	131	7	1	0	0	0	8	8	106	11	6	0	2	125	130
16:00	27	1	0	0	0	28	28	1	0	0	0	0	1	1	22	3	1	0	1	27	29
16:15	29	2	0	0	1	32	33	3	0	0	0	0	3	3	22	2	0	0	0	24	24
16:30	22	1	1	0	0	24	25	3	0	0	0	0	3	3	35	1	0	1	1	38	40
16:45	26	4	0	1	0	31	32	0	1	0	0	0	1	1	42	1	0	0	0	43	43
H/TOT	104	8	1	1	1	115	118	7	1	0	0	0	8	8	121	7	1	1	2	132	136
17:00	36	1	0	0	0	37	37	3	0	0	0	0	3	3	24	1	0	0	0	25	25
17:15	37	0	1	0	0	38	39	5	0	0	0	0	5	5	36	4	1	0	1	42	44
17:30	37	3	0	0	0	40	40	2	0	0	0	0	2	2	44	3	0	0	0	47	47
17:45	34	1	0	0	0	35	35	4	0	0	0	0	4	4	37	2	0	0	0	39	39
H/TOT	144	5	1	0	0	150	151	14	0	0	0	0	14	14	141	10	1	0	1	153	155
18:00	39	1	0	0	0	40	40	1	0	0	0	0	1	1	33	2	0	0	0	35	35
18:15	29	0	0	0	0	29	29	3	0	0	0	0	3	3	31	2	0	0	0	33	33
18:30	34	1	0	0	0	35	35	5	0	0	0	0	5	5	32	4	0	0	1	37	38
18:45	50	2	0	0	0	52	52	6	0	0	0	0	6	6	40	3	0	0	0	43	43
H/TOT	152	4	0	0	0	156	156	15	0	0	0	0	15	15	136	11	0	0	1	148	149
P/TOT	1700	79	8	1	12	1800	1817	79	8	1	0	0	88	89	1426	129	22	3	12	1592	1619

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	7	0	0	0	0	7	7	50	2	1	0	0	53	54	0	0	0	0	0	0	0
07:15	12	1	1	0	0	14	15	62	7	0	1	0	70	71	0	0	0	0	0	0	0
07:30	13	0	1	0	0	14	15	104	6	1	0	1	112	114	0	0	0	0	0	0	0
07:45	22	1	0	1	1	25	27	74	5	1	0	0	80	81	1	1	0	0	0	2	2
H/TOT	54	2	2	1	1	60	63	290	20	3	1	1	315	319	1	1	0	0	0	2	2
08:00	24	2	0	0	2	28	30	43	6	2	0	2	53	56	0	0	0	0	0	0	0
08:15	19	2	1	0	1	23	25	78	8	4	0	0	90	92	0	0	0	0	0	0	0
08:30	12	1	0	0	0	13	13	143	7	1	0	0	151	152	1	0	0	0	0	1	1
08:45	21	2	2	0	0	25	26	68	11	1	0	1	81	83	1	0	0	0	0	1	1
H/TOT	76	7	3	0	3	89	94	332	32	8	0	3	375	382	2	0	0	0	0	2	2
09:00	23	3	0	0	0	26	26	72	7	2	0	1	82	84	0	0	0	0	0	0	0
09:15	22	3	0	0	0	25	25	64	4	2	0	1	71	73	2	0	0	0	0	2	2
09:30	18	2	0	0	1	21	22	47	10	2	0	0	59	60	1	0	0	0	0	1	1
09:45	14	3	1	0	0	18	19	48	7	1	0	0	56	57	2	0	0	0	0	2	2
H/TOT	77	11	1	0	1	90	92	231	28	7	0	2	268	274	5	0	0	0	0	5	5
10:00	17	3	1	0	0	21	22	28	8	2	1	2	41	45	2	0	2	0	0	4	5
10:15	16	3	1	0	0	20	21	38	6	2	0	0	46	47	3	0	0	0	0	3	3
10:30	9	1	0	0	0	10	10	56	4	1	1	0	62	64	4	1	0	0	0	5	5
10:45	18	4	0	1	0	23	24	58	5	1	0	0	64	65	2	0	0	0	0	2	2
H/TOT	60	11	2	1	0	74	76	180	23	6	2	2	213	221	11	1	2	0	0	14	15
11:00	10	2	0	0	0	12	12	39	15	1	0	1	56	58	3	0	0	0	0	3	3
11:15	29	1	0	0	0	30	30	40	6	0	0	0	46	46	1	0	0	0	0	1	1
11:30	11	2	0	0	0	13	13	52	8	2	0	1	63	65	1	0	0	0	0	1	1
11:45	19	0	0	0	0	19	19	45	7	1	1	2	56	60	3	1	0	0	0	4	4
H/TOT	69	5	0	0	0	74	74	176	36	4	1	4	221	228	8	1	0	0	0	9	9
12:00	26	3	0	0	0	29	29	55	8	1	2	0	66	69	0	1	0	0	0	1	1
12:15	25	2	1	0	0	28	29	31	3	0	0	0	34	34	0	0	0	0	0	0	0
12:30	27	3	0	0	0	30	30	43	14	4	1	0	62	65	3	1	0	0	0	4	4
12:45	33	1	0	0	0	34	34	40	5	2	0	0	47	48	2	0	0	0	0	2	2
H/TOT	111	9	1	0	0	121	122	169	30	7	3	0	209	216	5	2	0	0	0	7	7

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	34	2	1	0	0	37	38	56	7	3	0	1	67	70	3	1	0	0	0	4	4
13:15	32	1	0	0	0	33	33	31	4	0	0	0	35	35	3	1	0	0	0	4	4
13:30	31	0	0	0	0	31	31	54	5	2	0	1	62	64	0	2	0	0	0	2	2
13:45	32	1	0	0	1	34	35	68	8	0	1	1	78	80	1	1	0	0	0	2	2
H/TOT	129	4	1	0	1	135	137	209	24	5	1	3	242	249	7	5	0	0	0	12	12
14:00	41	1	0	0	1	43	44	63	11	0	0	1	75	76	5	0	0	0	0	5	5
14:15	29	0	0	0	0	29	29	79	14	0	0	0	93	93	1	0	0	0	0	1	1
14:30	21	2	0	0	0	23	23	72	4	1	0	0	77	78	5	0	0	0	0	5	5
14:45	40	3	0	0	1	44	45	60	10	0	0	0	70	70	4	0	0	0	0	4	4
H/TOT	131	6	0	0	2	139	141	274	39	1	0	1	315	317	15	0	0	0	0	15	15
15:00	48	4	0	0	1	53	54	48	5	0	1	2	56	59	2	0	0	0	0	2	2
15:15	28	5	1	0	0	34	35	59	9	1	0	0	69	70	4	0	0	0	0	4	4
15:30	23	2	1	0	0	26	27	106	5	1	0	1	113	115	0	0	0	0	0	0	0
15:45	28	3	0	0	1	32	33	52	7	1	0	0	60	61	3	0	0	0	0	3	3
H/TOT	127	14	2	0	2	145	148	265	26	3	1	3	298	304	9	0	0	0	0	9	9
16:00	33	5	0	0	0	38	38	64	5	1	0	2	72	75	4	0	0	0	0	4	4
16:15	53	2	0	0	1	56	57	48	2	1	0	3	54	58	8	0	0	0	0	8	8
16:30	45	1	0	0	0	46	46	32	13	0	1	1	47	49	4	2	0	0	0	6	6
16:45	46	1	0	0	0	47	47	54	4	0	0	0	58	58	4	1	0	0	0	5	5
H/TOT	177	9	0	0	1	187	188	198	24	2	1	6	231	239	20	3	0	0	0	23	23
17:00	64	6	0	0	0	70	70	24	7	0	0	1	32	33	9	0	0	0	0	9	9
17:15	60	2	0	0	0	62	62	29	1	0	0	0	30	30	7	0	0	0	0	7	7
17:30	70	4	0	0	0	74	74	86	8	1	0	0	95	96	3	0	0	0	0	3	3
17:45	73	7	0	0	1	81	82	205	19	7	1	1	233	239	3	2	0	0	0	5	5
H/TOT	267	19	0	0	1	287	288	344	35	8	1	2	390	397	22	2	0	0	0	24	24
18:00	56	3	1	0	0	60	61	79	2	1	1	2	85	89	4	0	0	0	0	4	4
18:15	82	5	0	0	0	87	87	88	13	0	1	0	102	103	8	1	0	0	0	9	9
18:30	63	6	0	0	0	69	69	49	6	0	0	0	55	55	8	1	0	0	0	9	9
18:45	58	2	0	0	0	60	60	63	4	1	0	1	69	71	9	0	0	0	0	9	9
H/TOT	259	16	1	0	0	276	277	279	25	2	2	3	311	318	29	2	0	0	0	31	31
P/TOT	1537	113	13	2	12	1677	1698	2947	342	56	13	30	3388	3463	134	17	2	0	0	153	154

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	5	1	0	0	0	6	6	0	0	0	0	0	0	0	3	2	0	0	0	5	5
07:15	6	0	0	0	0	6	6	0	0	0	0	0	0	0	5	0	0	0	0	5	5
07:30	8	0	0	0	0	8	8	4	0	0	0	0	4	4	4	0	0	0	0	4	4
07:45	6	0	0	0	0	6	6	1	0	0	0	0	1	1	7	2	0	0	0	9	9
H/TOT	25	1	0	0	0	26	26	5	0	0	0	0	5	5	19	4	0	0	0	23	23
08:00	3	0	0	0	0	3	3	2	1	0	0	0	3	3	8	0	0	0	0	8	8
08:15	7	0	0	0	0	7	7	2	0	0	0	0	2	2	4	0	0	0	0	4	4
08:30	13	0	0	0	0	13	13	1	0	0	0	0	1	1	12	1	0	0	0	13	13
08:45	6	0	0	0	0	6	6	2	0	0	0	0	2	2	9	2	0	0	0	11	11
H/TOT	29	0	0	0	0	29	29	7	1	0	0	0	8	8	33	3	0	0	0	36	36
09:00	7	2	0	0	0	9	9	0	0	0	0	0	0	0	0	0	1	0	0	1	2
09:15	3	0	0	0	0	3	3	0	0	0	0	0	0	0	4	0	0	0	0	4	4
09:30	8	1	0	0	0	9	9	2	0	0	0	0	2	2	5	0	0	0	0	5	5
09:45	6	0	0	0	0	6	6	1	0	0	0	0	1	1	5	0	0	0	0	5	5
H/TOT	24	3	0	0	0	27	27	3	0	0	0	0	3	3	14	0	1	0	0	15	16
10:00	2	0	0	0	0	2	2	0	1	0	0	0	1	1	2	0	0	0	0	2	2
10:15	4	0	0	0	0	4	4	2	1	0	0	0	3	3	1	0	0	0	0	1	1
10:30	7	1	0	0	0	8	8	1	0	0	0	0	1	1	1	0	0	0	0	1	1
10:45	2	0	0	0	0	2	2	0	2	0	0	0	2	2	5	0	0	0	0	5	5
H/TOT	15	1	0	0	0	16	16	3	4	0	0	0	7	7	9	0	0	0	0	9	9
11:00	4	1	0	0	0	5	5	1	0	0	0	0	1	1	4	0	0	0	0	4	4
11:15	2	0	0	0	0	2	2	1	0	0	0	0	1	1	6	0	0	0	0	6	6
11:30	2	1	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	2	2
11:45	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	1	0	0	0	2	2
H/TOT	10	2	0	0	0	12	12	2	0	0	0	0	2	2	13	1	0	0	0	14	14
12:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	2	0	0	0	0	2	2
12:15	3	1	0	0	0	4	4	0	0	0	0	0	0	0	3	0	0	0	0	3	3
12:30	3	0	0	0	0	3	3	1	0	0	0	0	1	1	2	0	0	0	0	2	2
12:45	3	0	0	0	0	3	3	2	1	0	0	0	3	3	3	0	1	0	0	4	5
H/TOT	11	1	0	0	0	12	12	3	1	0	0	0	4	4	10	0	1	0	0	11	12

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 03 DATE: 28th April 2016

LOCATION: R774/Charlesland Wood/Grove Estate DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	2	0	0	0	0	2	2	0	0	0	0	1	1	2	4	0	0	0	0	4	4
13:15	4	1	0	0	0	5	5	1	0	0	0	0	1	1	3	0	1	0	0	4	5
13:30	0	0	0	0	0	0	0	0	1	1	0	0	2	3	4	0	1	0	0	5	6
13:45	5	0	0	0	0	5	5	1	0	0	0	0	1	1	3	0	0	0	0	3	3
H/TOT	11	1	0	0	0	12	12	2	1	1	0	1	5	7	14	0	2	0	0	16	17
14:00	3	1	0	0	0	4	4	1	1	0	0	0	2	2	4	1	0	0	0	5	5
14:15	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	4	0	0	0	0	4	4	5	0	0	0	0	5	5	2	0	0	0	0	2	2
14:45	2	0	0	0	0	2	2	1	0	0	0	0	1	1	2	0	0	0	0	2	2
H/TOT	11	1	0	0	0	12	12	7	1	0	0	0	8	8	8	1	0	0	0	9	9
15:00	0	1	2	0	0	3	4	2	0	0	0	0	2	2	2	0	0	0	0	2	2
15:15	3	1	0	0	0	4	4	2	1	0	0	0	3	3	3	0	0	0	0	3	3
15:30	0	2	0	0	0	2	2	1	0	0	0	0	1	1	5	0	0	0	0	5	5
15:45	3	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	2	2
H/TOT	6	4	2	0	0	12	13	5	1	0	0	0	6	6	12	0	0	0	0	12	12
16:00	1	0	0	0	0	1	1	2	0	0	0	0	2	2	1	1	0	0	0	2	2
16:15	1	0	0	0	0	1	1	3	0	0	0	0	3	3	0	0	0	0	0	0	0
16:30	4	0	0	0	0	4	4	3	1	0	0	0	4	4	2	1	0	0	0	3	3
16:45	4	0	0	0	0	4	4	6	1	0	0	0	7	7	1	0	0	0	0	1	1
H/TOT	10	0	0	0	0	10	10	14	2	0	0	0	16	16	4	2	0	0	0	6	6
17:00	2	0	0	0	0	2	2	3	1	0	0	0	4	4	4	0	0	0	0	4	4
17:15	3	0	0	0	0	3	3	2	0	0	0	0	2	2	2	0	0	0	0	2	2
17:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	5	0	0	0	0	5	5
17:45	1	1	0	0	0	2	2	2	0	0	0	0	2	2	2	0	0	0	0	2	2
H/TOT	6	1	0	0	0	7	7	8	1	0	0	0	9	9	13	0	0	0	0	13	13
18:00	4	0	0	0	0	4	4	3	0	0	0	0	3	3	2	0	0	0	0	2	2
18:15	4	0	0	0	0	4	4	2	0	0	0	0	2	2	0	0	1	0	0	1	2
18:30	4	0	0	0	0	4	4	1	1	0	0	0	2	2	2	0	0	0	0	2	2
18:45	4	0	0	0	0	4	4	0	0	0	0	0	0	0	5	1	0	0	0	6	6
H/TOT	16	0	0	0	0	16	16	6	1	0	0	0	7	7	9	1	1	0	0	11	12
P/TOT	174	15	2	0	0	191	192	65	13	1	0	1	80	82	158	12	5	0	0	175	178

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	9	0	0	0	0	9	9	7	3	0	0	1	11	12	10	1	1	0	0	12	13
07:15	10	0	0	0	0	10	10	14	0	0	0	0	14	14	14	1	0	0	0	15	15
07:30	11	1	0	0	0	12	12	9	5	3	0	2	19	23	6	0	1	0	0	7	8
07:45	24	1	0	0	1	26	27	29	7	0	0	0	36	36	21	3	0	0	0	24	24
H/TOT	54	2	0	0	1	57	58	59	15	3	0	3	80	85	51	5	2	0	0	58	59
08:00	22	2	1	0	0	25	26	26	4	1	0	0	31	32	25	4	0	0	0	29	29
08:15	14	1	0	0	1	16	17	32	2	1	0	0	35	36	27	0	0	0	0	27	27
08:30	30	6	0	0	0	36	36	45	5	1	0	1	52	54	35	1	2	0	1	39	41
08:45	24	1	1	0	1	27	29	42	5	1	0	0	48	49	32	4	0	0	0	36	36
H/TOT	90	10	2	0	2	104	107	145	16	4	0	1	166	169	119	9	2	0	1	131	133
09:00	36	0	2	0	0	38	39	55	5	1	0	3	64	68	29	4	0	0	0	33	33
09:15	29	1	1	0	0	31	32	43	6	0	0	0	49	49	25	4	1	0	0	30	31
09:30	23	0	0	0	1	24	25	26	3	0	0	0	29	29	19	3	0	0	0	22	22
09:45	34	1	0	0	0	35	35	28	1	0	1	0	30	31	18	1	2	0	0	21	22
H/TOT	122	2	3	0	1	128	131	152	15	1	1	3	172	177	91	12	3	0	0	106	108
10:00	18	0	0	0	0	18	18	23	3	1	0	0	27	28	13	3	0	0	0	16	16
10:15	21	1	0	0	0	22	22	27	9	1	0	0	37	38	16	3	2	0	0	21	22
10:30	23	2	0	0	0	25	25	23	1	1	0	0	25	26	18	1	1	0	0	20	21
10:45	14	2	0	0	0	16	16	28	7	2	0	0	37	38	15	0	0	0	0	15	15
H/TOT	76	5	0	0	0	81	81	101	20	5	0	0	126	129	62	7	3	0	0	72	74
11:00	19	0	0	0	0	19	19	35	3	0	0	0	38	38	14	1	0	0	0	15	15
11:15	14	4	0	0	0	18	18	28	2	1	0	0	31	32	9	0	1	0	0	10	11
11:30	22	3	0	0	0	25	25	38	1	1	0	0	40	41	8	2	0	0	0	10	10
11:45	27	1	0	0	0	28	28	21	3	1	0	1	26	28	9	1	0	0	0	10	10
H/TOT	82	8	0	0	0	90	90	122	9	3	0	1	135	138	40	4	1	0	0	45	46
12:00	23	0	0	0	0	23	23	39	4	0	0	0	43	43	21	1	1	1	0	24	26
12:15	17	0	0	0	0	17	17	42	3	1	0	0	46	47	19	1	0	0	0	20	20
12:30	21	0	2	0	0	23	24	32	5	1	0	1	39	41	17	1	0	0	0	18	18
12:45	26	0	0	0	0	26	26	30	3	1	0	0	34	35	15	2	0	0	0	17	17
H/TOT	87	0	2	0	0	89	90	143	15	3	0	1	162	165	72	5	1	1	0	79	81

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	20	1	0	0	0	21	21	28	3	0	0	1	32	33	15	2	0	0	0	17	17
13:15	30	2	0	0	0	32	32	42	0	1	0	0	43	44	18	1	0	0	0	19	19
13:30	23	1	0	0	0	24	24	35	3	0	0	0	38	38	13	0	0	0	0	13	13
13:45	28	3	0	0	0	31	31	43	6	2	0	0	51	52	17	4	0	0	0	21	21
H/TOT	101	7	0	0	0	108	108	148	12	3	0	1	164	167	63	7	0	0	0	70	70
14:00	19	1	0	0	1	21	22	43	4	1	0	0	48	49	20	1	0	0	0	21	21
14:15	25	2	0	0	1	28	29	40	4	2	0	0	46	47	18	1	0	0	0	19	19
14:30	34	2	0	0	0	36	36	55	5	2	1	0	63	65	16	2	0	0	0	18	18
14:45	34	1	0	0	0	35	35	55	4	2	1	0	62	64	23	1	1	0	1	26	28
H/TOT	112	6	0	0	2	120	122	193	17	7	2	0	219	225	77	5	1	0	1	84	86
15:00	25	2	0	0	1	28	29	56	8	0	0	3	67	70	14	3	0	0	0	17	17
15:15	29	3	0	0	0	32	32	42	4	1	0	1	48	50	14	2	0	0	0	16	16
15:30	27	1	0	0	0	28	28	41	7	1	0	1	50	52	13	0	0	0	0	13	13
15:45	32	3	1	0	0	36	37	50	2	2	0	4	58	63	13	3	0	0	0	16	16
H/TOT	113	9	1	0	1	124	126	189	21	4	0	9	223	234	54	8	0	0	0	62	62
16:00	38	2	1	0	1	42	44	57	8	2	2	1	70	75	22	2	0	0	0	24	24
16:15	21	1	0	0	0	22	22	35	8	1	0	0	44	45	18	3	0	0	0	21	21
16:30	27	1	0	0	0	28	28	34	10	1	0	0	45	46	18	3	1	0	0	22	23
16:45	35	4	0	0	0	39	39	54	10	0	0	0	64	64	22	2	0	0	0	24	24
H/TOT	121	8	1	0	1	131	133	180	36	4	2	1	223	229	80	10	1	0	0	91	92
17:00	30	1	0	0	1	32	33	60	6	0	0	0	66	66	22	4	0	0	0	26	26
17:15	27	1	0	0	0	28	28	53	5	0	0	0	58	58	12	1	0	0	0	13	13
17:30	35	5	0	0	0	40	40	51	4	2	0	0	57	58	22	0	0	0	0	22	22
17:45	27	1	0	0	0	28	28	46	4	0	0	0	50	50	27	0	0	0	0	27	27
H/TOT	119	8	0	0	1	128	129	210	19	2	0	0	231	232	83	5	0	0	0	88	88
18:00	26	2	0	0	0	28	28	60	1	0	0	0	61	61	17	1	0	0	0	18	18
18:15	29	3	0	0	0	32	32	60	2	2	0	0	64	65	19	2	1	0	0	22	23
18:30	25	3	0	0	0	28	28	37	6	1	0	0	44	45	20	1	0	0	0	21	21
18:45	34	4	0	0	0	38	38	32	2	0	0	0	34	34	12	0	0	0	0	12	12
H/TOT	114	12	0	0	0	126	126	189	11	3	0	0	203	205	68	4	1	0	0	73	74
P/TOT	1191	77	9	0	9	1286	1300	1831	206	42	5	20	2104	2152	860	81	15	1	2	959	970

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	5	1	0	0	0	6	6	10	2	0	0	0	12	12	1	0	0	0	0	1	1
07:15	9	3	0	0	0	12	12	20	5	1	0	1	27	29	1	0	0	0	0	1	1
07:30	4	1	0	0	0	5	5	14	3	0	0	1	18	19	2	2	0	0	0	4	4
07:45	11	1	0	0	0	12	12	26	6	0	0	1	33	34	4	0	0	0	0	4	4
H/TOT	29	6	0	0	0	35	35	70	16	1	0	3	90	94	8	2	0	0	0	10	10
08:00	5	1	0	0	0	6	6	18	1	0	0	0	19	19	2	0	0	0	0	2	2
08:15	11	5	0	0	1	17	18	27	4	0	0	1	32	33	7	0	2	0	1	10	12
08:30	24	1	0	0	0	25	25	44	4	0	0	0	48	48	21	0	1	0	0	22	23
08:45	22	4	1	0	0	27	28	44	4	1	0	1	50	52	12	1	0	0	0	13	13
H/TOT	62	11	1	0	1	75	77	133	13	1	0	2	149	152	42	1	3	0	1	47	50
09:00	15	2	0	0	0	17	17	44	2	0	0	0	46	46	18	4	0	0	0	22	22
09:15	19	0	0	0	0	19	19	31	3	3	0	1	38	41	3	2	0	0	0	5	5
09:30	22	2	0	0	0	24	24	25	0	2	0	0	27	28	6	0	0	0	1	7	8
09:45	13	1	0	0	0	14	14	29	0	0	0	1	30	31	5	0	1	0	0	6	7
H/TOT	69	5	0	0	0	74	74	129	5	5	0	2	141	146	32	6	1	0	1	40	42
10:00	17	0	2	0	0	19	20	15	1	1	0	0	17	18	7	0	0	0	0	7	7
10:15	12	1	0	0	0	13	13	23	2	0	0	1	26	27	6	0	1	0	0	7	8
10:30	9	3	0	0	0	12	12	20	2	0	0	0	22	22	7	1	1	0	0	9	10
10:45	15	4	1	1	0	21	23	28	2	2	0	1	33	35	3	0	0	0	0	3	3
H/TOT	53	8	3	1	0	65	68	86	7	3	0	2	98	102	23	1	2	0	0	26	27
11:00	16	1	1	0	0	18	19	20	2	0	0	0	22	22	3	1	1	0	0	5	6
11:15	18	2	0	0	0	20	20	25	1	1	0	1	28	30	5	1	2	1	0	9	11
11:30	8	0	0	0	0	8	8	28	4	0	0	0	32	32	5	1	0	1	0	7	8
11:45	9	0	1	0	0	10	11	24	2	0	0	1	27	28	4	2	0	0	0	6	6
H/TOT	51	3	2	0	0	56	57	97	9	1	0	2	109	112	17	5	3	2	0	27	31
12:00	24	0	1	0	0	25	26	25	7	1	0	0	33	34	8	1	1	0	0	10	11
12:15	8	0	1	0	0	9	10	24	2	1	0	1	28	30	5	0	1	0	0	6	7
12:30	9	3	0	0	0	12	12	17	2	0	0	0	19	19	4	0	1	0	0	5	6
12:45	21	5	1	0	0	27	28	31	1	0	0	1	33	34	6	3	1	0	0	10	11
H/TOT	62	8	3	0	0	73	75	97	12	2	0	2	113	116	23	4	4	0	0	31	33

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	27	0	3	0	0	30	32	34	1	0	0	0	35	35	7	1	0	0	0	8	8
13:15	22	2	0	0	0	24	24	24	3	0	1	2	30	33	8	0	0	0	0	8	8
13:30	13	2	0	0	0	15	15	40	3	0	0	0	43	43	8	1	1	0	0	10	11
13:45	26	2	1	0	0	29	30	28	0	0	0	1	29	30	10	0	0	0	0	10	10
H/TOT	88	6	4	0	0	98	100	126	7	0	1	3	137	141	33	2	1	0	0	36	37
14:00	37	1	0	0	2	40	42	31	3	0	0	0	34	34	10	3	2	0	0	15	16
14:15	29	1	0	0	0	30	30	33	1	2	0	1	37	39	13	2	0	0	1	16	17
14:30	20	0	0	0	0	20	20	51	2	0	0	0	53	53	12	0	0	0	0	12	12
14:45	17	1	0	0	0	18	18	34	1	0	0	1	36	37	21	3	1	0	0	25	26
H/TOT	103	3	0	0	2	108	110	149	7	2	0	2	160	163	56	8	3	0	1	68	71
15:00	19	2	0	0	0	21	21	28	0	0	0	1	29	30	5	2	0	0	0	7	7
15:15	18	4	0	0	0	22	22	32	4	0	0	1	37	38	8	0	1	0	0	9	10
15:30	22	3	1	0	0	26	27	57	1	1	0	0	59	60	9	2	0	0	0	11	11
15:45	21	0	1	0	0	22	23	43	2	1	0	1	47	49	5	2	0	0	0	7	7
H/TOT	80	9	2	0	0	91	92	160	7	2	0	3	172	176	27	6	1	0	0	34	35
16:00	21	3	1	0	0	25	26	34	2	0	0	0	36	36	9	2	1	0	0	12	13
16:15	31	3	0	0	0	34	34	50	9	0	0	1	60	61	7	4	0	0	0	11	11
16:30	32	1	0	0	0	33	33	47	1	0	0	0	48	48	11	1	2	0	0	14	15
16:45	30	2	0	0	0	32	32	35	3	0	0	1	39	40	4	1	0	0	0	5	5
H/TOT	114	9	1	0	0	124	125	166	15	0	0	2	183	185	31	8	3	0	0	42	44
17:00	23	1	0	0	0	24	24	24	2	1	0	0	27	28	8	0	0	0	0	8	8
17:15	27	2	3	0	0	32	34	41	1	0	0	1	43	44	6	2	1	0	1	10	12
17:30	34	0	0	0	0	34	34	58	2	0	0	0	60	60	9	1	0	0	0	10	10
17:45	37	2	0	0	0	39	39	45	3	0	0	1	49	50	11	0	0	0	0	11	11
H/TOT	121	5	3	0	0	129	131	168	8	1	0	2	179	182	34	3	1	0	1	39	41
18:00	31	1	0	0	0	32	32	40	0	1	0	0	41	42	5	0	0	0	0	5	5
18:15	32	1	2	0	0	35	36	59	4	0	0	1	64	65	8	0	0	0	0	8	8
18:30	23	1	0	0	0	24	24	46	4	0	0	0	50	50	7	0	0	0	0	7	7
18:45	23	3	0	0	0	26	26	61	1	0	0	1	63	64	5	1	0	0	0	6	6
H/TOT	109	6	2	0	0	117	118	206	9	1	0	2	218	221	25	1	0	0	0	26	26
P/TOT	941	79	21	1	3	1045	1060	1587	115	19	1	27	1749	1787	351	47	22	2	4	426	444

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	5	0	0	0	0	5	5	24	6	0	0	0	30	30	4	1	0	0	2	7	9
07:15	9	1	0	0	0	10	10	32	8	1	0	0	41	42	3	0	0	0	2	5	7
07:30	13	3	0	0	0	16	16	56	10	2	1	5	74	81	4	0	0	0	3	7	10
07:45	23	1	1	0	0	25	26	44	6	2	0	3	55	59	7	4	2	0	3	16	20
H/TOT	50	5	1	0	0	56	57	156	30	5	1	8	200	212	18	5	2	0	10	35	46
08:00	30	0	3	0	0	33	35	32	6	0	0	0	38	38	8	6	1	0	2	17	20
08:15	32	3	1	0	0	36	37	66	6	0	1	0	73	74	4	1	1	0	0	6	7
08:30	43	3	0	0	1	47	48	55	8	1	0	0	64	65	10	4	0	0	0	14	14
08:45	46	0	0	0	0	46	46	77	6	0	0	1	84	85	4	0	0	0	0	4	4
H/TOT	151	6	4	0	1	162	165	230	26	1	1	1	259	262	26	11	2	0	2	41	44
09:00	18	1	0	0	0	19	19	43	4	1	0	0	48	49	6	3	0	0	0	9	9
09:15	9	0	0	0	0	9	9	38	5	1	0	1	45	47	11	2	0	0	1	14	15
09:30	7	0	2	1	0	10	12	38	3	0	2	0	43	46	7	1	0	0	0	8	8
09:45	8	1	1	0	0	10	11	34	1	1	0	1	37	39	6	1	0	0	0	7	7
H/TOT	42	2	3	1	0	48	51	153	13	3	2	2	173	179	30	7	0	0	1	38	39
10:00	5	1	1	1	0	8	10	31	1	1	1	1	35	38	7	0	0	0	0	7	7
10:15	8	1	1	0	0	10	11	25	5	1	0	0	31	32	11	1	0	0	1	13	14
10:30	11	0	0	1	0	12	13	29	3	2	0	1	35	37	14	1	1	0	0	16	17
10:45	11	2	0	0	0	13	13	28	2	1	0	0	31	32	14	1	0	0	1	16	17
H/TOT	35	4	2	2	0	43	47	113	11	5	1	2	132	138	46	3	1	0	2	52	55
11:00	7	1	0	0	0	8	8	36	1	1	0	0	38	39	12	1	0	0	0	13	13
11:15	4	0	0	0	0	4	4	42	1	0	0	0	43	43	6	0	0	0	1	7	8
11:30	3	1	2	0	0	6	7	36	1	1	0	0	38	39	7	0	0	0	0	7	7
11:45	8	0	0	0	0	8	8	36	3	1	0	0	40	41	13	1	0	0	0	14	14
H/TOT	22	2	2	0	0	26	27	150	6	3	0	0	159	161	38	2	0	0	1	41	42
12:00	10	0	0	0	0	10	10	32	5	0	0	0	37	37	9	3	1	0	0	13	14
12:15	4	0	0	0	0	4	4	33	2	0	1	0	36	37	18	1	0	0	2	21	23
12:30	9	1	0	0	0	10	10	35	5	2	0	0	42	43	10	0	0	0	0	10	10
12:45	16	0	0	0	0	16	16	50	2	0	0	1	53	54	8	1	0	0	1	10	11
H/TOT	39	1	0	0	0	40	40	150	14	2	1	1	168	171	45	5	1	0	3	54	58

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	11	3	0	0	0	14	14	39	2	0	0	0	41	41	14	1	0	0	0	15	15
13:15	9	1	2	0	0	12	13	31	3	1	0	1	36	38	8	1	0	0	1	10	11
13:30	6	1	0	1	0	8	9	39	3	1	0	1	44	46	9	1	1	0	1	12	14
13:45	21	0	1	0	0	22	23	45	3	1	0	0	49	50	12	1	1	0	0	14	15
H/TOT	47	5	3	1	0	56	59	154	11	3	0	2	170	174	43	4	2	0	2	51	54
14:00	23	2	0	0	0	25	25	40	2	1	2	0	45	48	16	1	0	0	0	17	17
14:15	15	0	0	0	0	15	15	36	4	0	0	1	41	42	11	3	0	0	1	15	16
14:30	10	0	0	0	0	10	10	40	2	3	0	1	46	49	12	3	0	0	0	15	15
14:45	7	0	1	0	0	8	9	34	2	0	0	0	36	36	11	2	0	0	0	13	13
H/TOT	55	2	1	0	0	58	59	150	10	4	2	2	168	175	50	9	0	0	1	60	61
15:00	8	0	0	1	0	9	10	55	1	1	1	1	59	62	13	1	0	0	0	14	14
15:15	16	1	0	0	0	17	17	32	5	0	0	0	37	37	12	0	0	0	1	13	14
15:30	11	1	0	0	0	12	12	41	4	0	4	1	50	56	8	0	2	0	0	10	11
15:45	6	2	0	0	0	8	8	39	7	0	0	1	47	48	14	1	0	0	0	15	15
H/TOT	41	4	0	1	0	46	47	167	17	1	5	3	193	203	47	2	2	0	1	52	54
16:00	8	3	1	1	0	13	15	36	4	0	0	1	41	42	21	0	0	0	1	22	23
16:15	8	1	0	0	0	9	9	31	5	2	0	0	38	39	11	2	0	0	0	13	13
16:30	7	0	0	0	0	7	7	44	3	0	0	0	47	47	14	0	1	0	2	17	20
16:45	7	2	0	0	0	9	9	52	3	1	0	1	57	59	19	0	0	0	0	19	19
H/TOT	30	6	1	1	0	38	40	163	15	3	0	2	183	187	65	2	1	0	3	71	75
17:00	7	1	0	0	0	8	8	53	2	1	0	0	56	57	10	0	1	0	0	11	12
17:15	10	0	0	0	0	10	10	50	3	0	0	0	53	53	13	1	0	0	1	15	16
17:30	14	0	0	0	0	14	14	43	6	1	0	0	50	51	13	0	0	0	1	14	15
17:45	8	0	0	0	0	8	8	44	9	0	0	2	55	57	10	3	0	0	0	13	13
H/TOT	39	1	0	0	0	40	40	190	20	2	0	2	214	217	46	4	1	0	2	53	56
18:00	9	1	0	0	0	10	10	50	1	1	0	0	52	53	15	1	0	0	0	16	16
18:15	11	0	0	0	0	11	11	41	4	1	0	0	46	47	15	1	0	0	1	17	18
18:30	6	1	0	0	0	7	7	38	5	0	0	0	43	43	13	0	0	0	0	13	13
18:45	7	3	0	0	0	10	10	32	7	1	0	0	40	41	12	1	0	0	0	13	13
H/TOT	33	5	0	0	0	38	38	161	17	3	0	0	181	183	55	3	0	0	1	59	60
P/TOT	584	43	17	6	1	651	668	1937	190	35	13	25	2200	2259	509	57	12	0	29	607	642

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	3	0	0	0	0	3	3	14	1	0	0	0	15	15	7	0	1	0	0	8	9
07:15	2	1	0	0	0	3	3	21	4	0	0	0	25	25	13	2	2	0	0	17	18
07:30	3	1	0	0	1	5	6	28	4	0	0	1	33	34	13	2	1	0	1	17	19
07:45	5	0	0	0	0	5	5	37	3	1	0	1	42	44	17	1	0	0	0	18	18
H/TOT	13	2	0	0	1	16	17	100	12	1	0	2	115	118	50	5	4	0	1	60	63
08:00	4	0	0	0	0	4	4	52	3	0	0	1	56	57	17	0	0	0	0	17	17
08:15	4	0	0	0	0	4	4	37	1	0	0	1	39	40	22	0	1	0	0	23	24
08:30	5	1	0	0	0	6	6	46	4	2	0	1	53	55	15	2	0	0	0	17	17
08:45	9	0	0	0	1	10	11	38	2	2	0	0	42	43	26	2	0	0	1	29	30
H/TOT	22	1	0	0	1	24	25	173	10	4	0	3	190	195	80	4	1	0	1	86	88
09:00	10	1	0	0	0	11	11	46	1	0	0	1	48	49	22	2	0	0	0	24	24
09:15	10	1	0	0	0	11	11	45	1	1	0	0	47	48	26	0	0	0	1	27	28
09:30	17	2	0	0	0	19	19	35	2	1	0	1	39	41	20	0	0	1	0	21	22
09:45	9	1	0	0	1	11	12	21	4	0	0	1	26	27	12	2	0	0	0	14	14
H/TOT	46	5	0	0	1	52	53	147	8	2	0	3	160	164	80	4	0	1	1	86	88
10:00	9	0	2	0	0	11	12	23	1	3	0	1	28	31	17	0	1	0	0	18	19
10:15	10	3	0	0	0	13	13	30	1	1	0	0	32	33	22	3	0	0	0	25	25
10:30	10	0	0	0	0	10	10	33	3	1	0	3	40	44	16	1	0	0	0	17	17
10:45	14	3	0	0	1	18	19	19	3	1	0	0	23	24	8	1	0	0	0	9	9
H/TOT	43	6	2	0	1	52	54	105	8	6	0	4	123	130	63	5	1	0	0	69	70
11:00	8	1	0	0	0	9	9	27	2	0	0	2	31	33	16	0	0	0	0	16	16
11:15	12	1	0	0	0	13	13	29	1	0	0	0	30	30	25	1	0	0	1	27	28
11:30	10	0	0	0	1	11	12	18	1	0	0	2	21	23	29	2	1	0	0	32	33
11:45	17	1	0	0	0	18	18	22	3	1	0	0	26	27	20	0	1	0	0	21	22
H/TOT	47	3	0	0	1	51	52	96	7	1	0	4	108	113	90	3	2	0	1	96	98
12:00	12	1	0	0	1	14	15	21	5	0	0	0	26	26	17	2	0	0	0	19	19
12:15	20	1	0	0	0	21	21	22	2	0	0	1	25	26	19	0	1	0	0	20	21
12:30	21	1	1	0	0	23	24	23	3	0	0	0	26	26	20	0	0	0	0	20	20
12:45	11	0	0	0	1	12	13	31	2	1	0	1	35	37	25	4	0	0	0	29	29
H/TOT	64	3	1	0	2	70	73	97	12	1	0	2	112	115	81	6	1	0	0	88	89

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 04 DATE: 28th April 2016

LOCATION: R761/R762 DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	7	2	0	0	1	10	11	35	1	0	0	1	37	38	27	1	0	0	2	30	32
13:15	10	4	2	0	0	16	17	39	3	2	1	1	46	49	24	2	0	0	0	26	26
13:30	9	1	0	0	0	10	10	26	6	1	0	0	33	34	25	2	0	0	0	27	27
13:45	20	3	1	0	1	25	27	33	0	0	0	1	34	35	13	1	0	0	0	14	14
H/TOT	46	10	3	0	2	61	65	133	10	3	1	3	150	156	89	6	0	0	2	97	99
14:00	13	0	0	0	0	13	13	34	3	0	0	1	38	39	32	2	0	0	0	34	34
14:15	18	2	0	0	0	20	20	38	2	0	0	1	41	42	15	1	0	0	1	17	18
14:30	15	3	0	0	1	19	20	23	2	2	0	0	27	28	28	1	1	0	1	31	33
14:45	17	0	0	0	1	18	19	26	0	0	1	2	29	32	15	1	0	0	0	16	16
H/TOT	63	5	0	0	2	70	72	121	7	2	1	4	135	141	90	5	1	0	2	98	101
15:00	16	4	0	0	1	21	22	33	2	1	0	0	36	37	22	3	0	0	0	25	25
15:15	11	1	0	0	1	13	14	29	4	1	0	1	35	37	23	0	0	0	2	25	27
15:30	9	0	1	0	1	11	13	24	5	0	0	1	30	31	20	0	0	0	0	20	20
15:45	19	2	1	0	0	22	23	37	5	1	0	0	43	44	23	0	0	0	0	23	23
H/TOT	55	7	2	0	3	67	71	123	16	3	0	2	144	148	88	3	0	0	2	93	95
16:00	16	3	0	0	1	20	21	34	1	0	0	0	35	35	23	1	1	0	0	25	26
16:15	17	2	0	0	0	19	19	34	11	0	0	1	46	47	17	2	1	0	1	21	23
16:30	20	0	0	0	0	20	20	42	4	1	0	1	48	50	20	0	0	0	0	20	20
16:45	18	0	1	0	1	20	22	25	5	0	0	1	31	32	22	0	0	0	0	22	22
H/TOT	71	5	1	0	2	79	82	135	21	1	0	3	160	164	82	3	2	0	1	88	90
17:00	17	0	0	0	1	18	19	42	4	0	0	0	46	46	27	1	0	0	0	28	28
17:15	26	1	0	0	0	27	27	34	3	0	1	1	39	41	38	0	0	0	0	38	38
17:30	14	1	0	0	0	15	15	40	1	0	0	1	42	43	26	3	0	0	0	29	29
17:45	23	1	0	0	1	25	26	32	0	0	0	0	32	32	20	3	0	0	0	23	23
H/TOT	80	3	0	0	2	85	87	148	8	0	1	2	159	162	111	7	0	0	0	118	118
18:00	19	1	0	0	2	22	24	49	1	0	0	0	50	50	30	2	0	0	0	32	32
18:15	13	4	0	0	1	18	19	35	1	0	0	1	37	38	20	2	0	0	0	22	22
18:30	31	1	0	0	0	32	32	38	4	0	0	0	42	42	33	0	0	0	0	33	33
18:45	11	1	0	0	1	13	14	25	0	1	0	1	27	29	20	1	0	0	0	21	21
H/TOT	74	7	0	0	4	85	89	147	6	1	0	2	156	159	103	5	0	0	0	108	108
P/TOT	624	57	9	0	22	712	739	1525	125	25	3	34	1712	1762	1007	56	12	1	11	1087	1105

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 05 DATE: 28th April 2016

LOCATION: R762/Priory Road DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	13	8	0	0	0	21	21	0	0	0	0	0	0	0	22	0	0	0	0	22	22
07:15	25	20	3	0	1	49	52	4	0	0	0	0	4	4	23	0	0	0	0	23	23
07:30	25	8	0	0	1	34	35	2	0	0	0	0	2	2	20	0	0	0	0	20	20
07:45	27	13	1	0	1	42	44	2	1	0	0	0	3	3	21	1	1	0	0	23	24
H/TOT	90	49	4	0	3	146	151	8	1	0	0	0	9	9	86	1	1	0	0	88	89
08:00	47	11	1	0	1	60	62	3	1	0	0	0	4	4	30	1	0	0	0	31	31
08:15	56	9	1	1	3	70	75	4	0	0	0	0	4	4	22	1	0	0	0	23	23
08:30	65	13	0	0	0	78	78	0	0	0	0	0	0	0	16	1	1	0	0	18	19
08:45	63	10	2	0	1	76	78	3	1	0	0	0	4	4	7	1	1	0	0	9	10
H/TOT	231	43	4	1	5	284	292	10	2	0	0	0	12	12	75	4	2	0	0	81	82
09:00	38	7	0	0	0	45	45	4	0	0	0	0	4	4	13	1	0	0	0	14	14
09:15	51	9	6	0	1	67	71	3	1	0	0	0	4	4	5	0	0	0	0	5	5
09:30	41	1	3	0	1	46	49	4	0	0	0	0	4	4	7	0	0	0	0	7	7
09:45	48	2	0	0	1	51	52	7	0	0	0	0	7	7	6	0	0	0	0	6	6
H/TOT	178	19	9	0	3	209	217	18	1	0	0	0	19	19	31	1	0	0	0	32	32
10:00	31	2	2	0	0	35	36	2	0	0	0	0	2	2	3	0	0	0	0	3	3
10:15	29	6	1	0	1	37	39	5	0	0	0	0	5	5	10	0	0	0	0	10	10
10:30	34	5	1	2	0	42	45	4	0	0	0	0	4	4	7	1	0	0	0	8	8
10:45	38	7	2	0	1	48	50	3	0	1	0	0	4	5	9	0	0	0	0	9	9
H/TOT	132	20	6	2	2	162	170	14	0	1	0	0	15	16	29	1	0	0	0	30	30
11:00	45	9	3	0	1	58	61	3	0	0	0	0	3	3	1	0	0	0	0	1	1
11:15	38	9	0	0	0	47	47	3	0	1	0	0	4	5	7	0	0	0	0	7	7
11:30	42	5	0	0	0	47	47	2	0	0	0	0	2	2	11	0	0	0	0	11	11
11:45	32	6	2	0	1	41	43	7	0	0	0	0	7	7	4	0	0	0	0	4	4
H/TOT	157	29	5	0	2	193	198	15	0	1	0	0	16	17	23	0	0	0	0	23	23
12:00	56	13	2	0	0	71	72	5	0	0	0	0	5	5	1	0	0	0	0	1	1
12:15	38	8	3	0	1	50	53	6	0	0	0	0	6	6	7	0	0	0	0	7	7
12:30	37	8	3	1	1	50	54	2	1	0	0	0	3	3	3	0	0	0	0	3	3
12:45	59	6	1	0	1	67	69	3	1	0	0	0	4	4	2	0	0	0	0	2	2
H/TOT	190	35	9	1	3	238	247	16	2	0	0	0	18	18	13	0	0	0	0	13	13

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 05 DATE: 28th April 2016

LOCATION: R762/Priory Road DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	76	7	0	0	0	83	83	7	1	1	0	0	9	10	6	0	0	0	0	6	6
13:15	59	7	0	0	2	68	70	3	3	0	0	0	6	6	5	0	0	0	0	5	5
13:30	49	8	1	0	0	58	59	7	1	0	0	0	8	8	2	0	0	0	0	2	2
13:45	66	8	0	0	2	76	78	6	0	0	1	0	7	8	5	0	0	0	0	5	5
H/TOT	250	30	1	0	4	285	290	23	5	1	1	0	30	32	18	0	0	0	0	18	18
14:00	76	9	1	0	0	86	87	3	0	1	0	0	4	5	8	0	2	0	0	10	11
14:15	74	5	0	0	2	81	83	7	1	0	0	0	8	8	6	0	0	0	0	6	6
14:30	65	4	0	0	0	69	69	2	0	0	0	0	2	2	9	0	0	0	0	9	9
14:45	45	6	1	0	3	55	59	6	0	0	0	0	6	6	3	0	0	0	0	3	3
H/TOT	260	24	2	0	5	291	297	18	1	1	0	0	20	21	26	0	2	0	0	28	29
15:00	63	7	0	0	1	71	72	5	0	0	0	0	5	5	6	0	0	0	0	6	6
15:15	75	9	1	0	0	85	86	3	0	0	0	0	3	3	2	1	0	0	0	3	3
15:30	86	6	2	0	2	96	99	9	1	0	0	0	10	10	5	0	0	0	0	5	5
15:45	61	5	1	0	0	67	68	6	0	0	0	0	6	6	3	0	0	0	0	3	3
H/TOT	285	27	4	0	3	319	324	23	1	0	0	0	24	24	16	1	0	0	0	17	17
16:00	82	10	0	0	0	92	92	9	0	0	0	0	9	9	0	0	1	0	0	1	2
16:15	88	14	1	0	1	104	106	13	0	0	0	0	13	13	3	1	0	0	0	4	4
16:30	99	8	1	0	1	109	111	9	1	0	0	0	10	10	1	0	0	0	0	1	1
16:45	64	9	0	0	0	73	73	4	0	1	0	0	5	6	1	0	0	0	0	1	1
H/TOT	333	41	2	0	2	378	381	35	1	1	0	0	37	38	5	1	1	0	0	7	8
17:00	66	9	3	0	0	78	80	7	0	0	0	0	7	7	5	0	0	0	0	5	5
17:15	90	9	2	0	2	103	106	18	1	0	0	0	19	19	2	2	0	0	0	4	4
17:30	118	4	1	0	1	124	126	9	0	0	0	0	9	9	8	0	0	0	0	8	8
17:45	101	3	0	0	0	104	104	12	0	0	0	0	12	12	2	0	0	0	0	2	2
H/TOT	375	25	6	0	3	409	415	46	1	0	0	0	47	47	17	2	0	0	0	19	19
18:00	104	4	1	0	1	110	112	5	0	0	0	0	5	5	6	0	0	0	0	6	6
18:15	106	11	3	0	0	120	122	14	0	0	0	0	14	14	1	0	0	0	0	1	1
18:30	90	8	0	0	1	99	100	12	0	0	0	0	12	12	7	0	0	0	0	7	7
18:45	98	3	0	0	0	101	101	10	0	0	0	0	10	10	4	0	0	0	0	4	4
H/TOT	398	26	4	0	2	430	434	41	0	0	0	0	41	41	18	0	0	0	0	18	18
P/TOT	2879	368	56	4	37	3344	3414	267	15	5	1	0	288	292	357	11	6	0	0	374	377

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 05 DATE: 28th April 2016

LOCATION: R762/Priory Road DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	56	4	1	0	1	62	64
07:15	3	2	0	0	0	5	5	5	1	0	0	0	6	6	72	6	0	0	0	78	78
07:30	4	1	0	0	0	5	5	7	0	0	0	0	7	7	81	5	1	0	1	88	90
07:45	9	0	0	0	0	9	9	6	0	0	0	0	6	6	99	12	2	0	1	114	116
H/TOT	16	3	0	0	0	19	19	21	1	0	0	0	22	22	308	27	4	0	3	342	347
08:00	5	0	0	0	0	5	5	4	1	0	0	0	5	5	125	6	0	0	1	132	133
08:15	7	1	0	0	0	8	8	8	0	0	0	0	8	8	100	2	3	0	0	105	107
08:30	22	0	0	0	0	22	22	19	2	0	0	0	21	21	127	9	3	1	4	144	151
08:45	12	0	1	0	0	13	14	19	1	0	0	0	20	20	117	9	3	0	0	129	131
H/TOT	46	1	1	0	0	48	49	50	4	0	0	0	54	54	469	26	9	1	5	510	521
09:00	6	2	0	0	0	8	8	14	0	1	0	0	15	16	144	5	0	0	1	150	151
09:15	3	0	0	0	0	3	3	8	1	0	0	0	9	9	95	11	1	0	0	107	108
09:30	4	0	0	0	0	4	4	5	0	0	0	0	5	5	83	9	2	0	1	95	97
09:45	4	0	0	0	0	4	4	6	1	0	0	0	7	7	66	9	3	0	0	78	80
H/TOT	17	2	0	0	0	19	19	33	2	1	0	0	36	37	388	34	6	0	2	430	435
10:00	0	0	0	0	0	0	0	4	3	0	0	0	7	7	53	6	2	0	2	63	66
10:15	1	0	0	0	0	1	1	6	0	0	0	0	6	6	47	4	5	0	0	56	59
10:30	1	0	0	0	0	1	1	5	1	0	0	0	6	6	60	6	2	0	0	68	69
10:45	0	0	0	0	0	0	0	7	1	0	0	0	8	8	41	8	1	0	1	51	53
H/TOT	2	0	0	0	0	2	2	22	5	0	0	0	27	27	201	24	10	0	3	238	246
11:00	1	1	0	0	0	2	2	3	0	0	0	0	3	3	56	8	1	0	1	66	68
11:15	3	0	0	0	0	3	3	4	0	0	0	0	4	4	33	6	0	0	0	39	39
11:30	3	0	0	0	0	3	3	6	0	0	0	0	6	6	43	3	1	0	0	47	48
11:45	1	0	0	0	0	1	1	5	1	0	0	0	6	6	36	6	2	0	1	45	47
H/TOT	8	1	0	0	0	9	9	18	1	0	0	0	19	19	168	23	4	0	2	197	201
12:00	1	0	0	0	0	1	1	4	1	0	0	0	5	5	48	10	1	1	0	60	62
12:15	4	0	0	0	0	4	4	5	2	0	0	0	7	7	44	4	0	0	1	49	50
12:30	2	0	0	0	0	2	2	8	1	0	0	0	9	9	50	6	1	0	0	57	58
12:45	3	0	0	0	0	3	3	7	0	0	0	0	7	7	55	5	0	0	1	61	62
H/TOT	10	0	0	0	0	10	10	24	4	0	0	0	28	28	197	25	2	1	2	227	231

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 05 DATE: 28th April 2016

LOCATION: R762/Priory Road DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	4	1	0	0	0	5	5	14	1	0	0	0	15	15	44	6	1	0	0	51	52
13:15	6	0	0	0	0	6	6	12	0	0	0	0	12	12	45	4	2	1	1	53	56
13:30	4	0	0	0	0	4	4	12	0	0	0	0	12	12	37	7	1	1	0	46	48
13:45	3	0	0	0	0	3	3	11	1	0	0	0	12	12	46	1	3	0	1	51	54
H/TOT	17	1	0	0	0	18	18	49	2	0	0	0	51	51	172	18	7	2	2	201	209
14:00	9	0	0	0	0	9	9	7	1	0	0	0	8	8	53	5	0	0	0	58	58
14:15	8	1	0	0	0	9	9	12	1	0	0	0	13	13	77	7	1	0	1	86	88
14:30	4	0	0	0	0	4	4	15	2	0	0	0	17	17	63	6	1	0	0	70	71
14:45	1	0	0	0	0	1	1	18	0	0	0	0	18	18	81	3	1	1	2	88	92
H/TOT	22	1	0	0	0	23	23	52	4	0	0	0	56	56	274	21	3	1	3	302	308
15:00	1	0	0	0	0	1	1	15	3	0	0	0	18	18	45	5	0	0	0	50	50
15:15	9	0	0	0	0	9	9	19	1	0	0	0	20	20	43	10	2	0	1	56	58
15:30	3	0	0	0	0	3	3	18	0	0	0	0	18	18	60	8	1	1	0	70	72
15:45	0	0	0	0	0	0	0	14	1	0	0	0	15	15	56	12	3	0	1	72	75
H/TOT	13	0	0	0	0	13	13	66	5	0	0	0	71	71	204	35	6	1	2	248	254
16:00	1	0	0	0	0	1	1	14	0	0	0	0	14	14	48	12	0	0	0	60	60
16:15	3	0	0	0	0	3	3	9	2	0	0	0	11	11	57	12	1	0	1	71	73
16:30	0	0	0	0	0	0	0	13	0	0	0	0	13	13	60	13	2	0	1	76	78
16:45	3	0	0	0	0	3	3	9	1	0	0	0	10	10	44	6	0	0	1	51	52
H/TOT	7	0	0	0	0	7	7	45	3	0	0	0	48	48	209	43	3	0	3	258	263
17:00	7	0	0	0	0	7	7	13	1	0	0	0	14	14	63	15	1	0	0	79	80
17:15	3	0	0	0	0	3	3	9	0	0	0	0	9	9	39	6	0	0	1	46	47
17:30	2	0	0	0	0	2	2	16	0	0	0	0	16	16	63	8	1	0	0	72	73
17:45	5	0	0	0	0	5	5	17	0	0	0	0	17	17	55	4	0	0	1	60	61
H/TOT	17	0	0	0	0	17	17	55	1	0	0	0	56	56	220	33	2	0	2	257	260
18:00	6	0	0	0	0	6	6	21	0	0	0	0	21	21	41	6	0	0	0	47	47
18:15	4	0	0	0	0	4	4	10	0	0	0	0	10	10	48	1	1	0	1	51	53
18:30	4	0	0	0	0	4	4	13	1	0	0	0	14	14	62	5	0	0	0	67	67
18:45	1	0	0	0	0	1	1	6	0	0	0	0	6	6	41	3	0	0	1	45	46
H/TOT	15	0	0	0	0	15	15	50	1	0	0	0	51	51	192	15	1	0	2	210	213
P/TOT	190	9	1	0	0	200	201	485	33	1	0	0	519	520	3002	324	57	6	31	3420	3487

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	1	0	0	0	1	2	3	16	0	0	0	0	16	16	17	0	0	0	0	17	17
07:15	0	0	0	0	0	0	0	18	1	0	0	0	19	19	21	0	0	0	0	21	21
07:30	0	0	0	0	0	0	0	18	0	0	0	0	18	18	14	0	0	0	0	14	14
07:45	5	0	0	0	0	5	5	24	1	0	0	0	25	25	21	1	1	0	0	23	24
H/TOT	6	0	0	0	1	7	8	76	2	0	0	0	78	78	73	1	1	0	0	75	76
08:00	0	0	0	0	0	0	0	20	3	0	0	0	23	23	20	0	0	0	0	20	20
08:15	2	0	0	0	0	2	2	25	1	0	0	0	26	26	21	1	0	0	0	22	22
08:30	2	0	0	0	0	2	2	31	1	0	0	0	32	32	28	0	1	0	0	29	30
08:45	4	0	0	0	0	4	4	28	2	0	0	0	30	30	13	0	0	0	0	13	13
H/TOT	8	0	0	0	0	8	8	104	7	0	0	0	111	111	82	1	1	0	0	84	85
09:00	5	0	0	0	0	5	5	16	0	0	0	0	16	16	6	2	0	0	0	8	8
09:15	1	0	0	0	0	1	1	10	0	0	0	0	10	10	5	0	0	0	0	5	5
09:30	0	0	0	0	0	0	0	6	0	0	0	0	6	6	3	0	0	0	0	3	3
09:45	1	0	0	0	0	1	1	10	2	0	0	0	12	12	3	0	0	0	0	3	3
H/TOT	7	0	0	0	0	7	7	42	2	0	0	0	44	44	17	2	0	0	0	19	19
10:00	1	0	0	0	0	1	1	7	0	0	0	0	7	7	4	0	0	0	0	4	4
10:15	1	0	0	0	0	1	1	9	1	0	0	0	10	10	9	1	0	0	0	10	10
10:30	0	0	0	0	0	0	0	9	2	0	0	0	11	11	5	0	0	0	0	5	5
10:45	2	0	0	0	0	2	2	3	0	0	0	0	3	3	7	0	0	0	0	7	7
H/TOT	4	0	0	0	0	4	4	28	3	0	0	0	31	31	25	1	0	0	0	26	26
11:00	0	0	0	0	0	0	0	6	2	0	0	0	8	8	1	0	0	0	0	1	1
11:15	0	0	0	0	0	0	0	5	0	0	0	0	5	5	6	0	0	0	0	6	6
11:30	0	0	0	0	0	0	0	9	1	0	0	0	10	10	8	0	0	0	0	8	8
11:45	4	0	0	0	0	4	4	5	0	0	0	0	5	5	2	0	0	0	0	2	2
H/TOT	4	0	0	0	0	4	4	25	3	0	0	0	28	28	17	0	0	0	0	17	17
12:00	1	0	0	0	0	1	1	11	1	0	0	0	12	12	1	0	0	0	0	1	1
12:15	2	0	0	0	0	2	2	6	0	0	0	0	6	6	7	0	0	0	0	7	7
12:30	0	0	0	0	0	0	0	7	0	0	0	0	7	7	2	0	0	0	0	2	2
12:45	0	0	0	0	0	0	0	10	2	0	0	0	12	12	3	0	0	0	0	3	3
H/TOT	3	0	0	0	0	3	3	34	3	0	0	0	37	37	13	0	0	0	0	13	13

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	0	1	0	0	0	1	1	8	1	0	0	0	9	9	3	0	0	0	0	3	3
13:15	0	1	0	0	0	1	1	6	1	0	0	0	7	7	5	0	0	0	0	5	5
13:30	2	0	0	0	0	2	2	9	0	0	0	0	9	9	2	0	0	0	0	2	2
13:45	1	0	0	0	0	1	1	14	1	0	0	0	15	15	7	0	0	0	0	7	7
H/TOT	3	2	0	0	0	5	5	37	3	0	0	0	40	40	17	0	0	0	0	17	17
14:00	2	0	0	0	0	2	2	10	1	0	1	0	12	13	7	1	0	0	0	8	8
14:15	1	0	0	0	0	1	1	16	0	0	0	0	16	16	9	0	0	0	0	9	9
14:30	1	0	0	0	0	1	1	11	0	0	0	0	11	11	6	0	0	0	0	6	6
14:45	0	0	0	0	0	0	0	21	0	0	0	0	21	21	6	0	0	0	0	6	6
H/TOT	4	0	0	0	0	4	4	58	1	0	1	0	60	61	28	1	0	0	0	29	29
15:00	0	0	0	0	0	0	0	7	0	0	0	0	7	7	3	0	0	0	0	3	3
15:15	2	1	0	0	0	3	3	9	1	0	0	0	10	10	6	1	0	0	0	7	7
15:30	1	0	0	0	0	1	1	18	2	0	0	0	20	20	5	0	0	0	0	5	5
15:45	0	0	0	0	0	0	0	13	2	0	0	0	15	15	3	0	0	0	0	3	3
H/TOT	3	1	0	0	0	4	4	47	5	0	0	0	52	52	17	1	0	0	0	18	18
16:00	0	0	0	0	0	0	0	12	1	0	0	0	13	13	1	1	0	0	0	2	2
16:15	2	0	0	0	0	2	2	12	0	0	0	0	12	12	3	0	0	0	0	3	3
16:30	1	0	0	0	0	1	1	12	1	0	0	0	13	13	1	0	0	0	0	1	1
16:45	1	0	0	0	0	1	1	10	0	0	0	0	10	10	1	0	0	0	0	1	1
H/TOT	4	0	0	0	0	4	4	46	2	0	0	0	48	48	6	1	0	0	0	7	7
17:00	2	0	0	0	0	2	2	12	1	0	0	0	13	13	1	0	0	0	0	1	1
17:15	4	0	0	0	0	4	4	13	0	0	0	0	13	13	4	0	0	0	0	4	4
17:30	0	0	0	0	0	0	0	11	0	0	0	0	11	11	2	0	0	0	0	2	2
17:45	1	0	0	0	0	1	1	18	1	0	0	0	19	19	4	0	0	0	0	4	4
H/TOT	7	0	0	0	0	7	7	54	2	0	0	0	56	56	11	0	0	0	0	11	11
18:00	0	0	0	0	0	0	0	11	0	0	0	0	11	11	6	0	0	0	0	6	6
18:15	1	0	0	0	0	1	1	10	1	0	0	0	11	11	2	0	0	0	0	2	2
18:30	0	0	0	0	0	0	0	8	1	0	0	0	9	9	5	0	0	0	0	5	5
18:45	2	0	0	0	0	2	2	15	0	0	0	0	15	15	5	0	0	0	0	5	5
H/TOT	3	0	0	0	0	3	3	44	2	0	0	0	46	46	18	0	0	0	0	18	18
P/TOT	56	3	0	0	1	60	61	595	35	0	1	0	631	632	324	8	2	0	0	334	335

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	0	0	0	0	1	1
07:15	2	0	0	0	0	2	2	3	0	0	0	0	3	3	0	1	0	0	0	1	1
07:30	1	0	0	0	0	1	1	6	0	0	0	0	6	6	1	0	0	0	0	1	1
07:45	1	1	0	0	0	2	2	3	0	0	0	0	3	3	1	0	0	0	0	1	1
H/TOT	4	1	0	0	0	5	5	16	0	0	0	0	16	16	3	1	0	0	0	4	4
08:00	3	0	0	0	0	3	3	2	2	0	0	0	4	4	3	1	0	0	0	4	4
08:15	5	0	0	0	0	5	5	5	0	0	0	0	5	5	1	0	0	0	0	1	1
08:30	9	2	0	0	0	11	11	10	0	0	0	0	10	10	2	0	1	0	0	3	4
08:45	14	0	0	0	0	14	14	6	0	0	0	0	6	6	1	0	0	0	0	1	1
H/TOT	31	2	0	0	0	33	33	23	2	0	0	0	25	25	7	1	1	0	0	9	10
09:00	8	0	0	0	0	8	8	6	0	1	0	0	7	8	5	0	0	0	0	5	5
09:15	5	0	0	0	0	5	5	3	1	0	0	0	4	4	3	0	0	0	0	3	3
09:30	1	0	0	0	0	1	1	3	0	0	0	0	3	3	1	0	0	0	0	1	1
09:45	4	0	0	0	0	4	4	1	0	0	0	0	1	1	6	0	0	0	0	6	6
H/TOT	18	0	0	0	0	18	18	13	1	1	0	0	15	16	15	0	0	0	0	15	15
10:00	7	1	0	0	0	8	8	1	1	0	0	0	2	2	0	0	0	0	0	0	0
10:15	6	0	0	0	0	6	6	2	0	0	0	0	2	2	2	1	0	0	0	3	3
10:30	2	0	0	0	0	2	2	1	0	0	0	0	1	1	1	1	0	0	0	2	2
10:45	4	0	0	0	0	4	4	1	0	0	0	0	1	1	2	0	1	0	0	3	4
H/TOT	19	1	0	0	0	20	20	5	1	0	0	0	6	6	5	2	1	0	0	8	9
11:00	2	1	0	0	0	3	3	2	0	0	0	0	2	2	2	0	0	0	0	2	2
11:15	3	0	0	0	0	3	3	1	0	0	0	0	1	1	3	0	0	0	0	3	3
11:30	3	0	0	0	0	3	3	1	0	0	0	0	1	1	3	0	0	0	0	3	3
11:45	2	0	0	0	0	2	2	3	2	0	0	0	5	5	5	0	0	0	0	5	5
H/TOT	10	1	0	0	0	11	11	7	2	0	0	0	9	9	13	0	0	0	0	13	13
12:00	6	1	0	0	0	7	7	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:15	6	0	0	0	0	6	6	1	1	0	0	0	2	2	1	1	0	0	0	2	2
12:30	7	0	0	0	0	7	7	3	1	0	0	0	4	4	0	0	0	0	0	0	0
12:45	5	1	0	0	0	6	6	1	0	0	0	0	1	1	3	0	0	0	0	3	3
H/TOT	24	2	0	0	0	26	26	5	2	0	0	0	7	7	5	1	0	0	0	6	6

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	11	1	0	0	0	12	12	1	0	0	0	0	1	1	5	0	0	0	0	5	5
13:15	13	1	0	0	0	14	14	0	0	0	0	0	0	0	5	0	0	0	0	5	5
13:30	14	0	0	0	0	14	14	3	0	0	0	0	3	3	3	2	0	0	0	5	5
13:45	6	0	0	1	0	7	8	2	1	0	0	0	3	3	4	1	0	0	0	5	5
H/TOT	44	2	0	1	0	47	48	6	1	0	0	0	7	7	17	3	0	0	0	20	20
14:00	5	0	0	0	0	5	5	3	0	0	0	0	3	3	2	0	0	0	0	2	2
14:15	10	0	0	0	0	10	10	6	2	0	0	0	8	8	5	0	0	0	0	5	5
14:30	8	0	0	0	0	8	8	1	2	0	0	0	3	3	3	0	0	0	0	3	3
14:45	10	0	0	0	0	10	10	3	0	0	0	0	3	3	5	0	0	0	0	5	5
H/TOT	33	0	0	0	0	33	33	13	4	0	0	0	17	17	15	0	0	0	0	15	15
15:00	16	2	0	0	0	18	18	0	1	0	0	0	1	1	3	0	0	0	0	3	3
15:15	11	0	0	0	0	11	11	2	0	0	0	0	2	2	5	1	0	0	0	6	6
15:30	16	1	0	0	0	17	17	1	0	0	0	0	1	1	5	0	0	0	0	5	5
15:45	13	1	0	0	0	14	14	6	1	0	0	0	7	7	2	0	0	0	0	2	2
H/TOT	56	4	0	0	0	60	60	9	2	0	0	0	11	11	15	1	0	0	0	16	16
16:00	12	0	0	0	0	12	12	3	0	0	0	0	3	3	3	0	0	0	0	3	3
16:15	13	0	0	0	0	13	13	3	0	0	0	0	3	3	6	0	0	0	0	6	6
16:30	10	1	0	0	0	11	11	3	0	0	0	0	3	3	4	1	0	0	0	5	5
16:45	4	1	0	0	0	5	5	5	0	0	0	0	5	5	4	0	0	0	0	4	4
H/TOT	39	2	0	0	0	41	41	14	0	0	0	0	14	14	17	1	0	0	0	18	18
17:00	8	1	0	0	0	9	9	3	0	0	0	0	3	3	6	0	0	0	0	6	6
17:15	13	0	0	0	0	13	13	4	0	0	0	0	4	4	5	0	0	0	0	5	5
17:30	10	0	0	0	0	10	10	7	0	0	0	0	7	7	3	0	0	0	0	3	3
17:45	13	0	0	0	0	13	13	2	0	0	0	0	2	2	7	0	0	0	0	7	7
H/TOT	44	1	0	0	0	45	45	16	0	0	0	0	16	16	21	0	0	0	0	21	21
18:00	22	0	0	0	0	22	22	3	0	0	0	0	3	3	7	0	0	0	0	7	7
18:15	10	0	0	0	0	10	10	1	0	0	0	0	1	1	10	0	0	0	0	10	10
18:30	14	1	0	0	0	15	15	2	0	0	0	0	2	2	6	0	0	0	0	6	6
18:45	12	0	0	0	0	12	12	1	0	0	0	0	1	1	2	0	0	0	0	2	2
H/TOT	58	1	0	0	0	59	59	7	0	0	0	0	7	7	25	0	0	0	0	25	25
P/TOT	380	17	0	1	0	398	399	134	15	1	0	0	150	151	158	10	2	0	0	170	171

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5
07:15	2	1	0	0	0	3	3	0	1	0	0	0	1	1	3	0	0	0	0	3	3
07:30	5	0	0	0	0	5	5	2	0	0	0	0	2	2	7	0	0	0	0	7	7
07:45	4	1	0	0	0	5	5	3	0	0	0	0	3	3	7	1	0	0	0	8	8
H/TOT	11	2	0	0	0	13	13	5	1	0	0	0	6	6	21	2	0	0	0	23	23
08:00	4	1	0	0	0	5	5	5	2	0	0	0	7	7	6	1	0	0	0	7	7
08:15	1	0	0	0	0	1	1	3	1	0	0	0	4	4	7	1	0	0	0	8	8
08:30	0	1	0	1	0	2	3	4	1	0	0	0	5	5	10	1	0	0	0	11	11
08:45	2	0	0	0	0	2	2	5	3	0	0	0	8	8	13	1	0	0	0	14	14
H/TOT	7	2	0	1	0	10	11	17	7	0	0	0	24	24	36	4	0	0	0	40	40
09:00	0	1	0	0	0	1	1	7	1	0	0	0	8	8	9	0	0	0	0	9	9
09:15	1	0	0	0	0	1	1	8	0	0	0	0	8	8	3	1	0	0	0	4	4
09:30	2	1	0	0	0	3	3	3	2	0	0	0	5	5	10	0	0	0	0	10	10
09:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	4	1	0	0	0	5	5
H/TOT	3	2	0	0	0	5	5	22	3	0	0	0	25	25	26	2	0	0	0	28	28
10:00	0	0	0	0	0	0	0	3	1	0	0	0	4	4	2	0	0	0	0	2	2
10:15	0	0	0	0	0	0	0	4	0	0	0	0	4	4	6	1	0	0	0	7	7
10:30	0	0	0	0	0	0	0	3	0	0	0	0	3	3	5	0	0	0	0	5	5
10:45	0	0	0	0	0	0	0	4	1	0	0	0	5	5	2	2	0	0	0	4	4
H/TOT	0	0	0	0	0	0	0	14	2	0	0	0	16	16	15	3	0	0	0	18	18
11:00	1	0	0	0	0	1	1	2	0	0	0	0	2	2	4	0	0	0	0	4	4
11:15	1	0	0	0	0	1	1	1	1	0	0	0	2	2	3	2	0	0	0	5	5
11:30	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	1	0	0	0	2	2
11:45	0	0	0	0	0	0	0	7	0	0	0	0	7	7	7	1	0	0	0	8	8
H/TOT	2	0	0	0	0	2	2	14	1	0	0	0	15	15	15	4	0	0	0	19	19
12:00	0	0	0	0	0	0	0	6	0	0	0	0	6	6	9	2	0	0	0	11	11
12:15	0	0	0	0	0	0	0	5	0	0	0	0	5	5	2	1	0	0	0	3	3
12:30	0	0	0	0	0	0	0	2	1	0	0	0	3	3	3	0	0	0	0	3	3
12:45	1	0	0	0	0	1	1	7	0	0	0	0	7	7	3	2	0	0	0	5	5
H/TOT	1	0	0	0	0	1	1	20	1	0	0	0	21	21	17	5	0	0	0	22	22

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	1	0	0	0	0	1	1	8	1	0	0	0	9	9	6	1	0	0	0	7	7
13:15	1	0	0	0	0	1	1	6	0	0	0	0	6	6	4	1	0	0	0	5	5
13:30	0	1	0	0	0	1	1	9	0	0	0	0	9	9	1	0	0	0	0	1	1
13:45	1	0	0	0	0	1	1	4	0	0	0	0	4	4	8	1	0	0	0	9	9
H/TOT	3	1	0	0	0	4	4	27	1	0	0	0	28	28	19	3	0	0	0	22	22
14:00	0	0	0	0	0	0	0	7	2	0	0	0	9	9	4	0	0	0	0	4	4
14:15	4	0	0	0	0	4	4	4	0	0	0	0	4	4	4	1	0	0	0	5	5
14:30	0	0	0	0	0	0	0	9	1	0	0	0	10	10	2	0	0	0	0	2	2
14:45	0	0	0	0	0	0	0	15	0	0	0	0	15	15	2	0	0	0	0	2	2
H/TOT	4	0	0	0	0	4	4	35	3	0	0	0	38	38	12	1	0	0	0	13	13
15:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	6	1	0	0	0	7	7
15:15	1	0	0	0	0	1	1	10	1	0	0	0	11	11	3	0	0	0	0	3	3
15:30	0	0	0	0	0	0	0	14	0	0	0	0	14	14	2	0	0	0	0	2	2
15:45	0	0	0	0	0	0	0	10	0	0	0	0	10	10	3	1	1	0	0	5	6
H/TOT	1	0	0	0	0	1	1	37	1	0	0	0	38	38	14	2	1	0	0	17	18
16:00	2	0	1	0	0	3	4	11	1	0	0	0	12	12	1	1	0	0	0	2	2
16:15	1	0	0	0	0	1	1	14	0	0	0	0	14	14	8	1	0	0	1	10	11
16:30	1	0	0	0	0	1	1	8	0	0	0	0	8	8	7	0	0	0	0	7	7
16:45	3	0	1	0	0	4	5	13	0	0	0	0	13	13	7	0	0	0	0	7	7
H/TOT	7	0	2	0	0	9	10	46	1	0	0	0	47	47	23	2	0	0	1	26	27
17:00	1	0	0	0	0	1	1	18	0	0	0	0	18	18	11	0	0	0	0	11	11
17:15	0	0	0	0	0	0	0	14	1	1	0	0	16	17	12	1	0	0	0	13	13
17:30	2	0	0	0	0	2	2	21	1	0	0	0	22	22	4	1	0	0	0	5	5
17:45	1	0	0	0	0	1	1	21	2	0	0	0	23	23	14	0	0	0	0	14	14
H/TOT	4	0	0	0	0	4	4	74	4	1	0	0	79	80	41	2	0	0	0	43	43
18:00	2	0	0	0	0	2	2	21	2	0	0	0	23	23	15	0	0	0	0	15	15
18:15	0	0	0	0	0	0	0	17	0	0	0	0	17	17	5	1	0	0	0	6	6
18:30	1	0	0	0	0	1	1	27	2	0	0	0	29	29	9	0	0	0	0	9	9
18:45	0	0	0	0	0	0	0	11	0	0	0	0	11	11	4	0	0	0	0	4	4
H/TOT	3	0	0	0	0	3	3	76	4	0	0	0	80	80	33	1	0	0	0	34	34
P/TOT	46	7	2	1	0	56	58	387	29	1	0	0	417	418	272	31	1	0	1	305	307

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	4	0	1	0	0	5	6	4	0	0	0	0	4	4	0	0	0	0	0	0	0
07:15	3	0	1	0	0	4	5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
07:30	6	0	0	0	0	6	6	2	0	0	0	0	2	2	0	0	0	0	0	0	0
07:45	8	0	0	0	1	9	10	2	0	0	0	0	2	2	2	0	0	0	0	2	2
H/TOT	21	0	2	0	1	24	26	12	0	0	0	0	12	12	2	0	0	0	0	2	2
08:00	2	1	0	0	0	3	3	6	1	0	0	0	7	7	0	0	0	0	0	0	0
08:15	6	2	0	0	0	8	8	4	1	0	0	0	5	5	1	0	0	0	0	1	1
08:30	7	0	0	0	0	7	7	5	0	0	0	0	5	5	1	0	0	0	0	1	1
08:45	7	0	0	0	0	7	7	2	0	0	0	0	2	2	2	0	0	0	0	2	2
H/TOT	22	3	0	0	0	25	25	17	2	0	0	0	19	19	4	0	0	0	0	4	4
09:00	11	2	1	0	0	14	15	6	0	0	0	0	6	6	1	0	0	0	0	1	1
09:15	1	1	0	0	0	2	2	2	0	0	0	0	2	2	1	0	0	0	0	1	1
09:30	5	1	0	0	0	6	6	0	0	0	0	0	0	0	2	0	0	0	0	2	2
09:45	2	0	0	0	0	2	2	1	0	0	0	0	1	1	0	0	0	0	0	0	0
H/TOT	19	4	1	0	0	24	25	9	0	0	0	0	9	9	4	0	0	0	0	4	4
10:00	5	1	0	0	0	6	6	0	0	0	0	0	0	0	2	0	0	0	0	2	2
10:15	2	1	1	0	0	4	5	0	0	0	0	0	0	0	1	0	0	0	0	1	1
10:30	5	1	0	0	0	6	6	1	0	0	0	0	1	1	0	0	0	0	0	0	0
10:45	6	0	0	0	0	6	6	1	0	0	0	0	1	1	1	0	0	0	0	1	1
H/TOT	18	3	1	0	0	22	23	2	0	0	0	0	2	2	4	0	0	0	0	4	4
11:00	6	2	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	2	2	0	0	0	4	4	1	1	0	0	0	2	2	1	0	0	0	0	1	1
11:45	2	0	0	0	0	2	2	0	1	0	0	0	1	1	1	0	0	0	0	1	1
H/TOT	18	4	0	0	0	22	22	1	2	0	0	0	3	3	2	0	0	0	0	2	2
12:00	13	2	0	0	0	15	15	0	0	0	0	0	0	0	4	0	0	0	0	4	4
12:15	5	1	0	0	0	6	6	1	0	0	0	0	1	1	1	0	0	0	0	1	1
12:30	4	1	0	0	0	5	5	1	0	0	0	0	1	1	0	1	0	0	0	1	1
12:45	7	0	0	0	0	7	7	1	0	0	0	0	1	1	1	0	0	0	0	1	1
H/TOT	29	4	0	0	0	33	33	3	0	0	0	0	3	3	6	1	0	0	0	7	7

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 06 DATE: 28th April 2016

LOCATION: Eden Gate/Priory Avenue Estates DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	6	2	0	0	0	8	8	2	1	0	0	0	3	3	0	1	0	0	0	1	1
13:15	5	1	0	0	0	6	6	2	0	0	0	0	2	2	0	0	0	0	0	0	0
13:30	3	2	0	0	0	5	5	2	0	0	0	0	2	2	0	0	0	0	0	0	0
13:45	3	2	0	0	0	5	5	1	0	0	0	0	1	1	2	0	0	0	0	2	2
H/TOT	17	7	0	0	0	24	24	7	1	0	0	0	8	8	2	1	0	0	0	3	3
14:00	10	0	0	0	0	10	10	6	0	0	0	0	6	6	1	0	0	0	0	1	1
14:15	5	1	0	0	0	6	6	3	1	0	0	0	4	4	1	0	0	0	0	1	1
14:30	6	1	0	0	0	7	7	0	0	0	0	0	0	0	1	0	0	0	0	1	1
14:45	2	1	0	0	0	3	3	0	0	0	0	0	0	0	7	0	0	0	0	7	7
H/TOT	23	3	0	0	0	26	26	9	1	0	0	0	10	10	10	0	0	0	0	10	10
15:00	3	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	2	2
15:15	3	2	0	0	0	5	5	0	0	0	0	0	0	0	1	0	0	0	0	1	1
15:30	4	1	0	0	0	5	5	0	0	0	0	0	0	0	3	0	0	0	0	3	3
15:45	4	1	1	0	0	6	7	1	0	0	0	0	1	1	2	0	0	0	0	2	2
H/TOT	14	4	1	0	0	19	20	1	0	0	0	0	1	1	8	0	0	0	0	8	8
16:00	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	1	0	0	0	3	3
16:15	6	1	0	0	1	8	9	1	0	0	0	0	1	1	1	0	0	0	0	1	1
16:30	11	1	0	0	0	12	12	0	0	0	0	0	0	0	2	1	0	0	0	3	3
16:45	7	0	0	0	0	7	7	0	0	0	0	0	0	0	3	0	0	0	0	3	3
H/TOT	25	2	0	0	1	28	29	1	0	0	0	0	1	1	8	2	0	0	0	10	10
17:00	10	0	0	0	0	10	10	2	0	0	0	0	2	2	4	0	0	0	0	4	4
17:15	15	0	0	0	0	15	15	2	0	0	0	0	2	2	6	0	0	0	0	6	6
17:30	20	1	0	0	0	21	21	4	0	0	0	0	4	4	1	0	0	0	0	1	1
17:45	10	1	0	0	0	11	11	3	0	0	0	0	3	3	3	0	0	0	0	3	3
H/TOT	55	2	0	0	0	57	57	11	0	0	0	0	11	11	14	0	0	0	0	14	14
18:00	15	0	0	0	0	15	15	3	0	0	0	0	3	3	5	0	0	0	0	5	5
18:15	13	2	0	0	0	15	15	1	0	0	0	0	1	1	4	0	0	0	0	4	4
18:30	14	0	0	0	0	14	14	2	0	0	0	0	2	2	2	0	0	0	0	2	2
18:45	7	0	0	0	0	7	7	0	0	0	0	0	0	0	4	0	0	0	0	4	4
H/TOT	49	2	0	0	0	51	51	6	0	0	0	0	6	6	15	0	0	0	0	15	15
P/TOT	310	38	5	0	2	355	360	79	6	0	0	0	85	85	79	4	0	0	0	83	83

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SITE: 07 DATE:

LOCATION: Eden Gate DAY:

	MOVEMENT 1							MOVEMENT 2						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	21	0	1	0	0	22	23	4	1	0	0	0	5	5
07:15	21	2	1	0	0	24	25	5	2	0	0	0	7	7
07:30	25	0	0	0	0	25	25	14	0	0	0	0	14	14
07:45	33	1	0	0	1	35	36	14	2	0	0	0	16	16
H/TOT	100	3	2	0	1	106	108	37	5	0	0	0	42	42
08:00	25	5	0	0	0	30	30	15	4	0	0	0	19	19
08:15	32	3	0	0	0	35	35	11	2	0	0	0	13	13
08:30	40	1	1	0	0	42	43	14	3	0	1	0	18	19
08:45	36	2	0	0	0	38	38	20	4	0	0	0	24	24
H/TOT	133	11	1	0	0	145	146	60	13	0	1	0	74	75
09:00	32	2	1	0	0	35	36	16	2	0	0	0	18	18
09:15	14	1	0	0	0	15	15	12	1	0	0	0	13	13
09:30	12	1	0	0	0	13	13	15	3	0	0	0	18	18
09:45	18	2	0	0	0	20	20	8	1	0	0	0	9	9
H/TOT	76	6	1	0	0	83	84	51	7	0	0	0	58	58
10:00	12	1	0	0	0	13	13	5	1	0	0	0	6	6
10:15	13	3	1	0	0	17	18	10	1	0	0	0	11	11
10:30	15	4	0	0	0	19	19	8	0	0	0	0	8	8
10:45	11	0	1	0	0	12	13	6	3	0	0	0	9	9
H/TOT	51	8	2	0	0	61	62	29	5	0	0	0	34	34
11:00	14	4	0	0	0	18	18	7	0	0	0	0	7	7
11:15	16	0	0	0	0	16	16	5	3	0	0	0	8	8
11:30	14	3	0	0	0	17	17	5	1	0	0	0	6	6
11:45	12	0	0	0	0	12	12	14	1	0	0	0	15	15
H/TOT	56	7	0	0	0	63	63	31	5	0	0	0	36	36
12:00	25	3	0	0	0	28	28	15	2	0	0	0	17	17
12:15	12	2	0	0	0	14	14	7	1	0	0	0	8	8
12:30	11	1	0	0	0	12	12	5	1	0	0	0	6	6
12:45	20	2	0	0	0	22	22	11	2	0	0	0	13	13
H/TOT	68	8	0	0	0	76	76	38	6	0	0	0	44	44

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SITE: 07 DATE:

LOCATION: Eden Gate DAY:

	MOVEMENT 1							MOVEMENT 2						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	19	3	0	0	0	22	22	15	2	0	0	0	17	17
13:15	16	2	0	0	0	18	18	11	1	0	0	0	12	12
13:30	15	4	0	0	0	19	19	10	1	0	0	0	11	11
13:45	21	4	0	0	0	25	25	13	1	0	0	0	14	14
H/TOT	71	13	0	0	0	84	84	49	5	0	0	0	54	54
14:00	22	1	0	1	0	24	25	11	2	0	0	0	13	13
14:15	26	1	0	0	0	27	27	12	1	0	0	0	13	13
14:30	20	1	0	0	0	21	21	11	1	0	0	0	12	12
14:45	28	1	0	0	0	29	29	17	0	0	0	0	17	17
H/TOT	96	4	0	1	0	101	102	51	4	0	0	0	55	55
15:00	13	0	0	0	0	13	13	9	1	0	0	0	10	10
15:15	17	4	0	0	0	21	21	14	1	0	0	0	15	15
15:30	27	3	0	0	0	30	30	16	0	0	0	0	16	16
15:45	19	3	1	0	0	23	24	13	1	1	0	0	15	16
H/TOT	76	10	1	0	0	87	88	52	3	1	0	0	56	57
16:00	16	1	0	0	0	17	17	14	2	1	0	0	17	18
16:15	24	1	0	0	1	26	27	23	1	0	0	1	25	26
16:30	27	3	0	0	0	30	30	16	0	0	0	0	16	16
16:45	21	0	0	0	0	21	21	23	0	1	0	0	24	25
H/TOT	88	5	0	0	1	94	95	76	3	2	0	1	82	84
17:00	28	1	0	0	0	29	29	30	0	0	0	0	30	30
17:15	33	0	0	0	0	33	33	26	2	1	0	0	29	30
17:30	34	1	0	0	0	35	35	27	2	0	0	0	29	29
17:45	35	2	0	0	0	37	37	36	2	0	0	0	38	38
H/TOT	130	4	0	0	0	134	134	119	6	1	0	0	126	127
18:00	33	0	0	0	0	33	33	38	2	0	0	0	40	40
18:15	33	3	0	0	0	36	36	22	1	0	0	0	23	23
18:30	28	1	0	0	0	29	29	37	2	0	0	0	39	39
18:45	24	0	0	0	0	24	24	15	0	0	0	0	15	15
H/TOT	118	4	0	0	0	122	122	112	5	0	0	0	117	117
P/TOT	1063	83	7	1	2	1156	1163	705	67	4	1	1	778	782

ABACUS TRANSPORTATION SURVEYS

APRIL 2016 GREYSTONES TRAFFIC COUNTS
ATH/16/036 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

28th April 2016 SITE: 07 DATE:

Thursday LOCATION: Eden Gate DAY:

	MOVEMENT 3							MOVEMENT 4						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	49	9	0	0	1	59	60	144	24	3	0	1	172	175
07:15	52	11	4	0	3	70	75	136	18	2	0	0	156	157
07:30	104	15	4	0	3	126	131	117	14	6	0	2	139	144
07:45	66	25	8	1	3	103	111	128	17	2	1	3	151	156
H/TOT	271	60	16	1	10	358	377	525	73	13	1	6	618	632
08:00	79	12	4	1	1	97	101	139	15	6	0	1	161	165
08:15	102	18	6	1	1	128	133	126	16	5	0	3	150	156
08:30	145	12	1	0	0	158	159	131	15	3	1	1	151	155
08:45	109	15	3	0	4	131	137	135	18	2	0	1	156	158
H/TOT	435	57	14	2	6	514	530	531	64	16	1	6	618	633
09:00	90	9	3	0	1	103	106	116	17	3	1	0	137	140
09:15	73	8	7	0	0	88	92	121	15	1	0	1	138	140
09:30	60	13	4	0	4	81	87	100	17	3	0	0	120	122
09:45	81	9	6	1	3	100	107	105	11	6	0	1	123	127
H/TOT	304	39	20	1	8	372	391	442	60	13	1	2	518	528
10:00	57	12	9	0	2	80	87	70	16	6	0	0	92	95
10:15	61	9	5	0	1	76	80	67	16	4	1	0	88	91
10:30	58	7	6	1	0	72	76	64	15	4	0	0	83	85
10:45	64	13	2	2	0	81	85	62	14	4	0	1	81	84
H/TOT	240	41	22	3	3	309	327	263	61	18	1	1	344	355
11:00	57	16	2	1	0	76	78	73	13	4	1	1	92	96
11:15	58	14	2	1	0	75	77	68	12	5	2	1	88	94
11:30	65	13	6	0	1	85	89	81	22	8	1	0	112	117
11:45	67	12	3	0	2	84	88	77	14	1	0	0	92	93
H/TOT	247	55	13	2	3	320	332	299	61	18	4	2	384	400
12:00	85	15	4	2	0	106	111	71	12	4	0	4	91	97
12:15	63	9	4	0	0	76	78	82	16	4	3	0	105	111
12:30	73	18	8	1	1	101	107	86	20	7	1	2	116	123
12:45	77	11	4	1	0	93	96	89	14	2	1	0	106	108
H/TOT	298	53	20	4	1	376	392	328	62	17	5	6	418	439

ABACUS TRANSPORTATION SURVEYS

APRIL 2016 GREYSTONES TRAFFIC COUNTS
ATH/16/036 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

28th April 2016 SITE: 07 DATE:

Thursday LOCATION: Eden Gate DAY:

	MOVEMENT 3							MOVEMENT 4						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
13:00	75	9	10	0	0	94	99	73	15	5	2	0	95	100
13:15	67	7	5	1	0	80	84	61	13	7	1	2	84	91
13:30	98	14	6	0	1	119	123	103	11	1	0	0	115	116
13:45	79	15	3	0	1	98	101	64	21	4	1	0	90	93
H/TOT	319	45	24	1	2	391	406	301	60	17	4	2	384	400
14:00	81	13	1	0	1	96	98	77	15	4	1	1	98	102
14:15	86	16	1	0	0	103	104	98	9	3	0	2	112	116
14:30	95	12	1	0	0	108	109	86	19	6	1	0	112	116
14:45	95	12	4	1	2	114	119	94	10	5	2	1	112	118
H/TOT	357	53	7	1	3	421	429	355	53	18	4	4	434	452
15:00	76	8	3	1	0	88	91	92	14	9	0	2	117	124
15:15	92	11	4	0	1	108	111	85	25	7	0	1	118	123
15:30	114	14	7	3	1	139	147	91	12	3	1	0	107	110
15:45	88	17	3	1	1	110	114	94	20	8	0	4	126	134
H/TOT	370	50	17	5	3	445	463	362	71	27	1	7	468	490
16:00	99	10	1	0	1	111	113	86	28	8	1	2	125	132
16:15	99	10	6	0	4	119	126	86	28	2	1	1	118	121
16:30	101	23	2	0	2	128	131	100	27	4	2	3	136	144
16:45	117	10	2	0	1	130	132	113	25	2	0	1	141	143
H/TOT	416	53	11	0	8	488	502	385	108	16	4	7	520	540
17:00	83	14	2	0	0	99	100	138	32	2	1	2	175	179
17:15	118	10	0	0	0	128	128	141	22	2	1	1	167	170
17:30	149	13	2	0	1	165	167	127	21	2	0	3	153	157
17:45	262	34	9	1	4	310	320	122	16	0	0	0	138	138
H/TOT	612	71	13	1	5	702	715	528	91	6	2	6	633	645
18:00	142	15	5	1	0	163	167	113	19	0	0	1	133	134
18:15	146	19	1	2	0	168	171	119	24	2	0	0	145	146
18:30	135	19	2	0	0	156	157	106	19	3	0	3	131	136
18:45	116	13	2	0	1	132	134	77	15	0	1	0	93	94
H/TOT	539	66	10	3	1	619	629	415	77	5	1	4	502	510
P/TOT	4408	643	187	24	53	5315	5493	4734	841	184	29	53	5841	6024

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	1	0	0	0	0	1	1	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	2	0	0	0	0	2	2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
07:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	2	0	0	0	0	0	0	0	4	0	0	0	0	4	4
08:00	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
08:30	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
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	1	0	0	0	0	1	1	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	1	0	0	0	0	1	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	2	2
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
10:15	1	0	0	0	0	1	1	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
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	2	2
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
11:15	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	1	0	0	1	2
11:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0	0	2	3
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:15	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
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	0	0	0	0	0	0	0	0	0	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
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	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
14:30	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
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	1	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
16:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
17:30	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	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	8	0	0	0	0	8	8	0	0	0	0	0	0	0	10	1	1	0	0	12	13

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 6a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	2	0	0	0	0	2	2	50	10	0	0	1	61	62	3	1	1	0	0	5	6	0	1	0	1	0	2	3
07:15	0	0	0	0	0	0	0	57	13	4	0	3	77	82	2	2	1	0	0	5	6	2	1	0	0	0	3	3
07:30	1	0	0	0	0	1	1	111	15	4	0	2	132	136	4	0	0	0	0	4	4	6	2	1	0	0	9	10
07:45	0	0	0	0	0	0	0	75	27	8	1	1	112	118	0	0	0	0	0	0	0	7	3	1	0	0	11	12
H/TOT	3	0	0	0	0	3	3	293	65	16	1	7	382	398	9	3	2	0	0	14	15	15	7	2	1	0	25	27
08:00	0	0	0	0	0	0	0	85	15	4	1	1	106	110	0	1	0	0	0	1	1	3	0	0	0	0	3	3
08:15	0	0	0	0	0	0	0	109	19	6	1	1	136	141	0	0	0	0	0	0	0	13	0	0	0	0	13	13
08:30	0	0	0	0	0	0	0	150	15	1	1	0	167	169	0	0	1	0	1	2	4	8	3	0	0	0	11	11
08:45	0	0	0	0	0	0	0	124	17	3	0	4	148	154	1	0	0	0	1	2	3	16	3	0	0	0	19	19
H/TOT	0	0	0	0	0	0	0	468	66	14	3	6	557	574	1	1	1	0	2	5	8	40	6	0	0	0	46	46
09:00	0	0	0	0	0	0	0	100	9	3	0	1	113	116	2	0	0	0	0	2	2	8	1	1	0	1	11	13
09:15	1	0	0	0	0	1	1	83	9	7	0	0	99	103	0	0	0	0	0	0	0	12	3	1	0	0	16	17
09:30	0	0	0	0	0	0	0	71	14	4	0	4	93	99	0	1	0	0	3	4	7	9	3	3	1	0	16	19
09:45	0	0	0	0	0	0	0	84	10	6	1	3	104	111	1	1	0	1	1	4	6	8	0	1	0	0	9	10
H/TOT	1	0	0	0	0	1	1	338	42	20	1	8	409	428	3	2	0	1	4	10	15	37	7	6	1	1	52	57
10:00	2	0	0	0	0	2	2	58	13	9	0	2	82	89	1	0	0	0	1	2	3	13	1	0	0	0	14	14
10:15	0	0	0	0	0	0	0	65	10	5	0	1	81	85	2	0	0	1	0	3	4	7	3	3	1	0	14	17
10:30	0	0	0	0	0	0	0	62	7	6	1	0	76	80	2	1	0	0	1	4	5	8	2	1	0	0	11	12
10:45	0	0	0	0	0	0	0	70	15	2	2	0	89	93	1	0	0	1	0	2	3	7	3	1	0	0	11	12
H/TOT	2	0	0	0	0	2	2	255	45	22	3	3	328	346	6	1	0	2	2	11	16	35	9	5	1	0	50	54
11:00	0	0	0	0	0	0	0	60	16	2	1	0	79	81	1	0	0	0	0	1	1	6	4	0	0	0	10	10
11:15	1	0	0	0	0	1	1	59	15	1	1	0	76	78	1	0	0	0	0	1	1	5	3	0	0	0	8	8
11:30	0	0	0	0	0	0	0	67	14	6	0	0	87	90	1	0	0	0	0	1	1	12	1	0	0	0	13	13
11:45	0	0	0	0	0	0	0	74	13	3	0	2	92	96	0	0	2	0	0	2	3	4	4	2	0	0	10	11
H/TOT	1	0	0	0	0	1	1	260	58	12	2	2	334	345	3	0	2	0	0	5	6	27	12	2	0	0	41	42
12:00	0	0	0	0	0	0	0	91	17	4	2	0	114	119	2	1	0	1	0	4	5	8	3	1	0	0	12	13
12:15	1	0	0	0	0	1	1	67	9	4	0	0	80	82	0	1	0	1	0	2	3	10	0	3	0	0	13	15
12:30	0	0	0	0	0	0	0	76	17	8	1	1	103	109	0	0	0	0	0	0	0	9	3	0	0	0	12	12
12:45	0	0	0	0	0	0	0	81	12	4	1	0	98	101	0	0	0	1	0	1	2	11	0	1	0	0	12	13
H/TOT	1	0	0	0	0	1	1	315	55	20	4	1	395	411	2	2	0	3	0	7	11	38	6	5	0	0	49	52

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 6a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	0	0	0	0	0	0	0	84	9	10	0	0	103	108	1	0	0	0	0	1	1	9	4	0	0	0	13	13
13:15	0	0	0	0	0	0	0	77	7	5	1	0	90	94	0	0	0	0	0	0	0	15	1	1	0	0	17	18
13:30	0	0	0	0	0	0	0	101	15	6	0	0	122	125	0	0	1	0	0	1	2	13	2	0	0	0	15	15
13:45	0	0	0	0	0	0	0	81	16	3	0	1	101	104	3	0	0	0	0	3	3	13	2	0	0	0	15	15
H/TOT	0	0	0	0	0	0	0	343	47	24	1	1	416	430	4	0	1	0	0	5	6	50	9	1	0	0	60	61
14:00	0	0	0	0	0	0	0	86	13	1	0	1	101	103	0	1	0	0	0	1	1	23	2	0	0	0	25	25
14:15	0	0	0	0	0	0	0	96	17	1	0	0	114	115	2	0	1	1	0	4	6	4	2	1	0	0	7	8
14:30	0	0	0	0	0	0	0	100	13	1	0	0	114	115	2	0	0	0	0	2	2	11	4	2	0	0	17	18
14:45	0	0	0	0	0	0	0	108	10	4	1	2	125	130	0	0	0	0	0	0	0	9	2	0	0	0	11	11
H/TOT	0	0	0	0	0	0	0	390	53	7	1	3	454	462	4	1	1	1	0	7	9	47	10	3	0	0	60	62
15:00	0	0	0	0	0	0	0	81	9	3	1	0	94	97	0	0	0	0	0	0	0	7	3	1	0	0	11	12
15:15	0	0	0	0	0	0	0	100	12	4	0	1	117	120	1	1	0	0	1	3	4	16	2	0	1	2	21	24
15:30	0	0	0	0	0	0	0	126	14	7	3	1	151	159	0	0	0	0	1	1	2	11	3	0	0	0	14	14
15:45	0	0	0	0	0	0	0	94	18	4	0	1	117	120	2	0	0	1	0	3	4	10	3	3	0	0	16	18
H/TOT	0	0	0	0	0	0	0	401	53	18	4	3	479	496	3	1	0	1	2	7	10	44	11	4	1	2	62	67
16:00	0	0	0	0	0	0	0	109	12	2	0	1	124	126	1	0	0	0	1	2	3	18	4	2	0	1	25	27
16:15	0	0	0	0	0	0	0	115	11	6	0	5	137	145	1	0	0	0	0	1	1	6	2	1	1	0	10	12
16:30	0	0	0	0	0	0	0	111	23	2	0	2	138	141	0	1	0	0	0	1	1	15	4	1	0	0	20	21
16:45	0	0	0	0	0	0	0	129	10	3	0	1	143	146	0	1	0	1	1	3	5	8	3	2	0	0	13	14
H/TOT	0	0	0	0	0	0	0	464	56	13	0	9	542	558	2	2	0	1	2	7	10	47	13	6	1	1	68	73
17:00	1	0	0	0	0	1	1	101	13	2	0	0	116	117	1	4	0	1	2	8	11	11	4	3	0	0	18	20
17:15	0	0	0	0	0	0	0	136	12	1	0	0	149	150	1	0	0	0	2	3	5	18	1	1	0	0	20	21
17:30	0	0	0	0	0	0	0	167	14	2	0	0	183	184	2	0	0	0	1	3	4	12	4	1	0	0	17	18
17:45	0	0	0	0	0	0	0	291	35	9	1	4	340	350	1	0	0	0	1	2	3	18	1	1	0	0	20	21
H/TOT	1	0	0	0	0	1	1	695	74	14	1	4	788	800	5	4	0	1	6	16	23	59	10	6	0	0	75	78
18:00	0	0	0	0	0	0	0	172	17	5	1	0	195	199	0	1	0	1	0	2	3	16	1	1	0	0	18	19
18:15	0	0	0	0	0	0	0	161	19	1	2	0	183	186	0	1	0	0	0	1	1	17	0	1	0	0	18	19
18:30	0	0	0	0	0	0	0	156	20	2	0	0	178	179	1	0	0	0	0	1	1	9	0	0	0	0	9	9
18:45	0	0	0	0	0	0	0	126	13	2	0	1	142	144	5	0	0	0	1	6	7	10	2	1	0	0	13	14
H/TOT	0	0	0	0	0	0	0	615	69	10	3	1	698	708	6	2	0	1	1	10	12	52	3	3	0	0	58	60
P/TOT	9	0	0	0	0	9	9	4837	683	190	24	48	5782	5956	48	19	7	11	19	104	141	491	103	43	5	4	646	678

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	0	0	3	0	6	9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	3	0	0	0	4	7	11	0	0	0	0	0	0	0	1	0	0	0	1	2	3
07:45	0	1	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	1	1	2
H/TOT	3	1	3	0	14	21	37	0	0	0	0	0	0	0	1	0	0	0	2	3	5
08:00	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	1	1	2	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
08:45	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	0	2	2
H/TOT	1	3	0	0	1	5	6	0	0	0	0	0	0	0	0	2	0	0	0	2	2
09:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
09:15	0	3	0	0	0	3	3	1	0	0	0	0	1	1	0	0	0	0	0	0	0
09:30	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:45	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	5	5	0	0	0	10	10	1	0	0	0	0	1	1	1	1	0	0	0	2	2
10:00	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1
10:15	0	0	1	0	1	2	4	0	0	0	0	0	0	0	1	0	0	0	0	1	1
10:30	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	1	0	0	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	1	1	1	1	7	10	0	0	0	0	0	0	0	2	0	0	0	0	2	2
11:00	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	1	0	0	0	1	1
11:30	3	0	0	1	3	7	11	0	0	0	0	0	0	0	0	0	0	0	1	1	2
11:45	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	1	1	3	8	13	0	0	0	0	0	0	0	0	1	0	0	1	2	3
12:00	1	1	1	0	0	3	4	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:15	0	2	0	1	0	3	4	0	0	0	0	0	0	0	0	1	0	0	0	1	1
12:30	1	0	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	2	4	2	1	0	9	11	0	0	0	0	0	0	0	1	2	0	0	0	3	3

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	0	0	0	1	0	1	2	0	0	0	0	0	0	0	1	1	0	0	0	2	2
13:15	1	0	0	0	0	1	1	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	1	1	2
13:45	1	0	0	0	1	2	3	0	0	0	0	0	0	0	3	0	0	0	0	3	3
H/TOT	2	0	0	1	1	4	6	0	0	0	0	0	0	0	4	1	0	0	1	6	7
14:00	1	1	1	0	1	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	2	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	1	0	1	0	0	2	3	0	0	0	0	0	0	0	1	0	0	0	0	1	1
14:45	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	6	1	2	0	2	11	14	0	0	0	0	0	0	0	1	0	0	0	0	1	1
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	1	0	0	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	1	0	2	3
H/TOT	4	1	0	1	0	6	7	0	0	0	0	0	0	0	1	0	0	1	0	2	3
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:15	1	0	1	0	0	2	3	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:30	3	1	0	0	0	4	4	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
H/TOT	4	1	1	0	0	6	7	0	0	0	0	0	0	0	4	0	0	0	0	4	4
17:00	2	0	1	0	0	3	4	0	0	0	0	0	0	0	1	1	0	0	0	2	2
17:15	2	1	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	2	2	0	0	0	4	4	0	0	0	0	0	0	0	1	1	0	0	0	2	2
17:45	4	0	0	1	0	5	6	0	0	0	0	0	0	0	1	1	0	0	0	2	2
H/TOT	10	3	1	1	1	16	19	0	0	0	0	0	0	0	3	3	0	0	0	6	6
18:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	1	1
18:15	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1
18:30	4	0	0	0	1	5	6	0	0	0	0	0	0	0	0	1	0	0	0	1	1
18:45	5	1	0	1	0	7	8	0	0	0	0	0	0	0	1	0	0	0	0	1	1
H/TOT	12	1	0	1	1	15	17	0	0	0	0	0	0	0	3	1	0	0	0	4	4
P/TOT	55	21	11	7	24	118	157	1	0	0	0	0	1	1	21	11	0	1	4	37	42

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12							MOVEMENT 12a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	1	1	1	0	0	3	4	140	23	2	0	1	166	168	1	0	0	0	0	1	1	2	0	0	0	0	2	2
07:15	0	0	0	0	0	0	0	135	18	2	0	0	155	156	1	0	0	0	0	1	1	0	0	0	0	0	0	0
07:30	1	0	0	0	1	2	3	110	14	6	0	1	131	135	0	0	0	0	0	0	0	6	0	0	0	0	6	6
07:45	1	0	0	0	0	1	1	123	17	2	1	2	145	149	0	0	0	0	0	0	0	4	0	0	0	1	5	6
H/TOT	3	1	1	0	1	6	8	508	72	12	1	4	597	608	2	0	0	0	0	2	2	12	0	0	0	1	13	14
08:00	0	0	0	0	0	0	0	130	14	6	0	1	151	155	0	0	0	0	0	0	0	9	1	0	0	0	10	10
08:15	0	0	0	0	0	0	0	122	15	5	0	3	145	151	0	0	0	0	0	0	0	4	1	0	0	0	5	5
08:30	0	0	0	0	0	0	0	121	15	3	1	1	141	145	1	0	0	0	0	1	1	9	0	0	0	0	9	9
08:45	0	1	0	0	0	1	1	130	17	2	0	1	150	152	0	0	0	0	0	0	0	5	0	0	0	0	5	5
H/TOT	0	1	0	0	0	1	1	503	61	16	1	6	587	602	1	0	0	0	0	1	1	27	2	0	0	0	29	29
09:00	2	0	0	0	0	2	2	110	15	3	1	0	129	132	0	0	0	0	0	0	0	4	2	0	0	0	6	6
09:15	0	0	0	0	1	1	2	119	15	1	0	0	135	136	0	0	0	0	0	0	0	2	0	0	0	0	2	2
09:30	0	0	0	0	0	0	0	96	16	3	0	0	115	117	0	0	0	0	0	0	0	4	1	0	0	0	5	5
09:45	0	0	0	0	0	0	0	100	11	6	0	1	118	122	0	0	0	0	0	0	0	5	0	0	0	0	5	5
H/TOT	2	0	0	0	1	3	4	425	57	13	1	1	497	506	0	0	0	0	0	0	0	15	3	0	0	0	18	18
10:00	1	0	0	0	0	1	1	66	16	6	0	0	88	91	0	0	0	0	0	0	0	3	0	0	0	0	3	3
10:15	0	0	0	0	0	0	0	63	16	4	1	0	84	87	0	0	0	0	0	0	0	4	0	0	0	0	4	4
10:30	0	0	0	0	0	0	0	60	15	4	0	0	79	81	0	0	0	0	0	0	0	4	0	0	0	0	4	4
10:45	0	0	0	0	0	0	0	62	12	3	0	1	78	81	0	1	1	0	0	2	3	0	1	0	0	0	1	1
H/TOT	1	0	0	0	0	1	1	251	59	17	1	1	329	340	0	1	1	0	0	2	3	11	1	0	0	0	12	12
11:00	0	0	0	0	0	0	0	69	13	4	1	1	88	92	0	0	0	0	0	0	0	4	0	0	0	0	4	4
11:15	0	0	0	0	0	0	0	64	11	4	2	1	82	88	0	0	0	0	0	0	0	4	1	1	0	0	6	7
11:30	0	1	0	1	0	2	3	78	21	8	0	0	107	111	0	0	0	0	0	0	0	3	0	0	0	0	3	3
11:45	0	0	0	0	0	0	0	71	14	1	0	0	86	87	0	0	0	0	0	0	0	6	0	0	0	0	6	6
H/TOT	0	1	0	1	0	2	3	282	59	17	3	2	363	377	0	0	0	0	0	0	0	17	1	1	0	0	19	20
12:00	2	0	0	0	0	2	2	61	12	4	0	4	81	87	0	0	0	0	0	0	0	8	0	0	0	0	8	8
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12:30	0	0	0	0	0	0	0	84	18	7	1	2	112	119	0	0	0	0	0	0	0	2	2	0	0	0	4	4
12:45	0	0	0	0	0	0	0	82	14	2	1	0	99	101	0	0	0	0	0	0	0	7	0	0	0	0	7	7
H/TOT	2	1	0	0	0	3	3	306	59	17	5	6	393	414	0	0	0	0	0	0	0	20	2	0	0	0	22	22

ABACUS TRANSPORTATION SURVEYS

GREYSTONES TRAFFIC COUNTS **APRIL 2016**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/16/036**

SITE: 08 DATE: 28th April 2016

LOCATION: R774/Tony Doyle Coaches DAY: Thursday

	MOVEMENT 10							MOVEMENT 11							MOVEMENT 12							MOVEMENT 12a						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
13:00	2	1	0	0	0	3	3	66	13	5	2	0	86	91	0	0	0	0	0	0	0	5	1	0	0	0	6	6
13:15	2	0	0	0	0	2	2	58	12	7	1	2	80	87	0	0	0	0	0	0	0	1	1	0	0	0	2	2
13:30	1	0	0	0	0	1	1	95	11	1	0	0	107	108	0	0	0	0	0	0	0	7	0	0	0	0	7	7
13:45	0	1	0	0	0	1	1	57	20	4	1	0	82	85	0	0	0	0	0	0	0	7	0	0	0	0	7	7
H/TOT	5	2	0	0	0	7	7	276	56	17	4	2	355	371	0	0	0	0	0	0	0	20	2	0	0	0	22	22
14:00	0	0	0	0	0	0	0	71	13	4	1	1	90	94	0	0	0	0	0	0	0	6	2	0	0	0	8	8
14:15	0	0	0	0	0	0	0	96	9	3	0	2	110	114	0	0	0	0	0	0	0	2	0	0	0	0	2	2
14:30	0	0	0	0	0	0	0	81	19	6	1	0	107	111	0	0	0	0	0	0	0	5	0	0	0	0	5	5
14:45	2	0	0	0	0	2	2	88	8	5	2	1	104	110	0	0	0	0	0	0	0	4	2	0	0	0	6	6
H/TOT	2	0	0	0	0	2	2	336	49	18	4	4	411	429	0	0	0	0	0	0	0	17	4	0	0	0	21	21
15:00	0	0	0	0	0	0	0	88	14	9	0	2	113	120	0	0	0	0	0	0	0	4	0	0	0	0	4	4
15:15	1	0	0	0	0	1	1	78	25	7	0	1	111	116	0	0	0	0	0	0	0	6	0	0	0	0	6	6
15:30	1	1	0	1	0	3	4	86	11	3	0	0	100	102	0	0	0	0	0	0	0	4	0	0	0	0	4	4
15:45	0	0	0	0	0	0	0	88	20	8	0	4	120	128	0	0	0	0	0	0	0	6	0	0	0	0	6	6
H/TOT	2	1	0	1	0	4	5	340	70	27	0	7	444	465	0	0	0	0	0	0	0	20	0	0	0	0	20	20
16:00	0	0	0	0	0	0	0	83	28	8	1	2	122	129	0	0	0	0	0	0	0	3	0	0	0	0	3	3
16:15	1	0	0	0	0	1	1	79	28	2	1	1	111	114	0	0	0	0	0	0	0	6	0	0	0	0	6	6
16:30	0	0	0	0	1	1	2	95	27	4	2	2	130	137	0	0	0	0	0	0	0	5	0	0	0	0	5	5
16:45	1	1	0	0	0	2	2	102	24	2	0	1	129	131	1	0	0	0	0	1	1	9	0	0	0	0	9	9
H/TOT	2	1	0	0	1	4	5	359	107	16	4	6	492	511	1	0	0	0	0	1	1	23	0	0	0	0	23	23
17:00	0	0	0	0	0	0	0	127	32	2	1	2	164	168	0	0	0	0	0	0	0	11	0	0	0	0	11	11
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17:30	1	0	0	0	2	3	5	118	21	2	0	0	141	142	0	0	0	0	0	0	0	8	0	0	0	1	9	10
17:45	0	0	0	0	0	0	0	116	16	0	0	0	132	132	0	0	0	0	0	0	0	6	0	0	0	0	6	6
H/TOT	1	1	0	0	2	4	6	494	90	6	2	3	595	604	0	0	0	0	0	0	0	33	0	0	0	1	34	35
18:00	2	0	0	0	0	2	2	105	19	0	0	1	125	126	0	0	0	0	0	0	0	6	0	0	0	0	6	6
18:15	0	0	0	0	0	0	0	113	23	2	0	0	138	139	0	0	0	0	0	0	0	6	1	0	0	0	7	7
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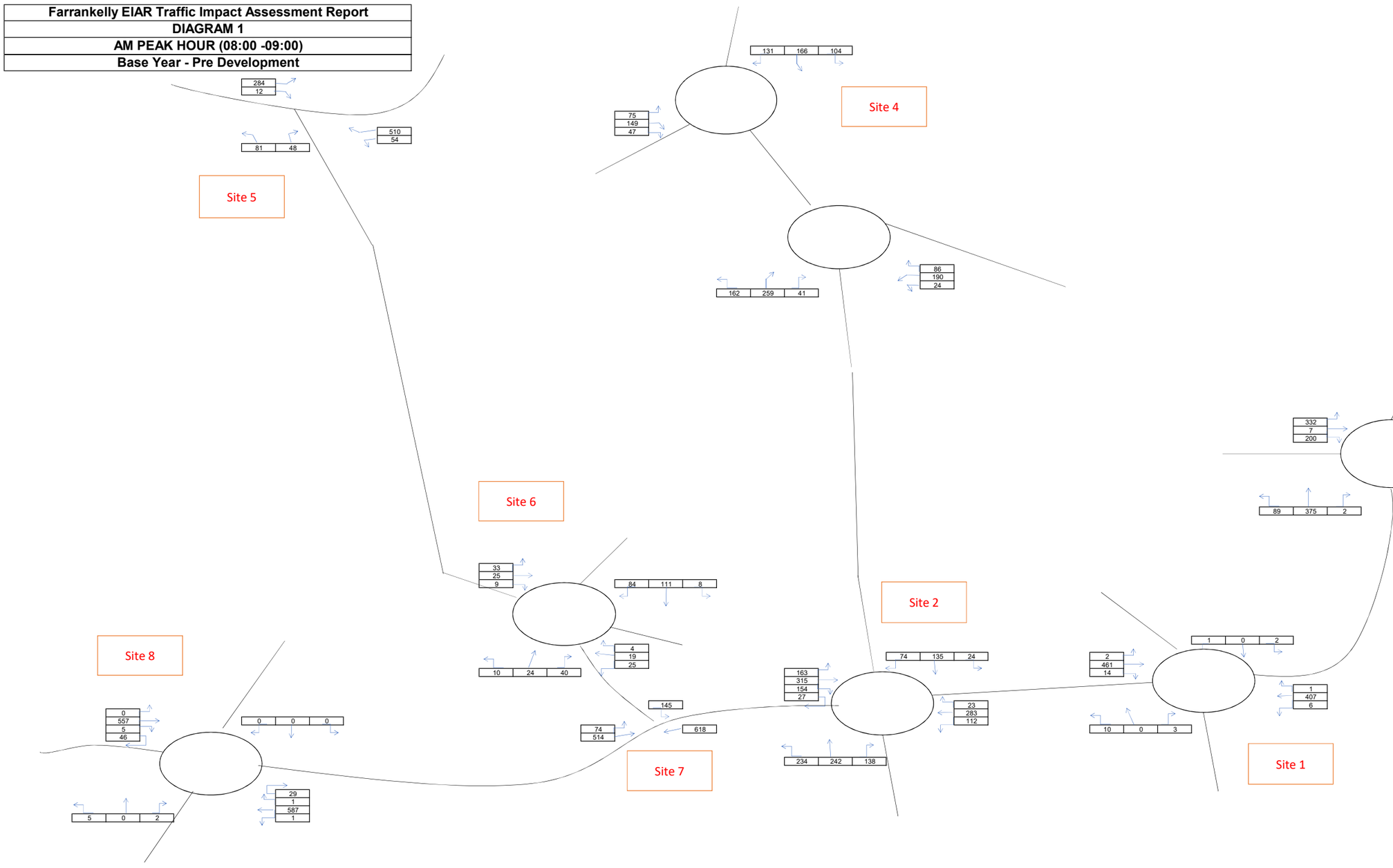
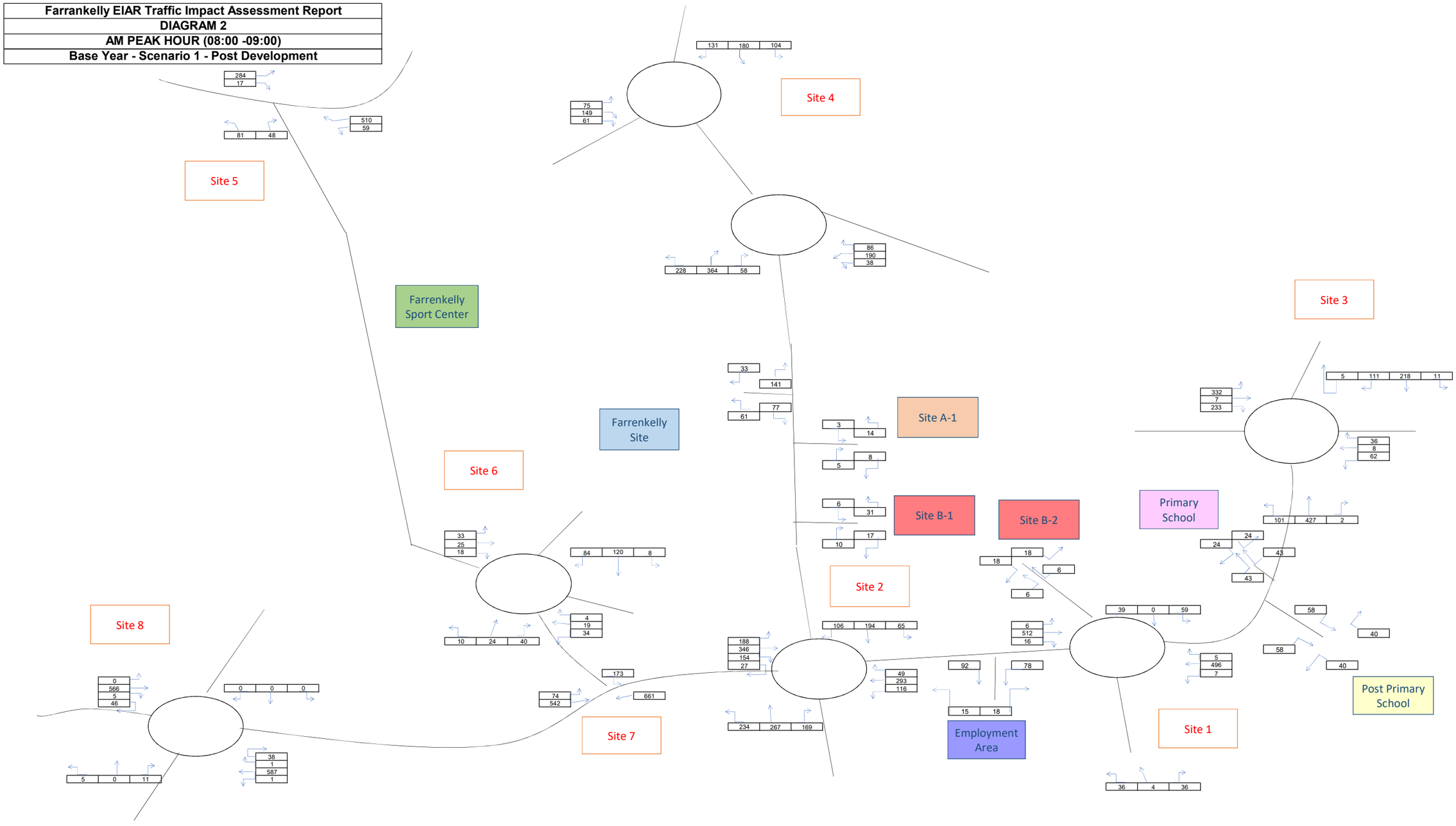
18:45	2	0	0	0	0	2	2	71	15	0	1	0	87	88	0	0	0	0	0	0	0	4	0	0	0	0	4	4
H/TOT	4	0	0	0	0	4	4	379	76	5	1	4	465	473	0	0	0	0	0	0	0	32	1	0	0	0	33	33
P/TOT	24	9	1	2	5	41	49	4459	815	181	27	46	5528	5700	4	1	1	0	0	6	7	247	16	1	0	2	266	269

APPENDIX B
TRAFFIC DIAGRAMS

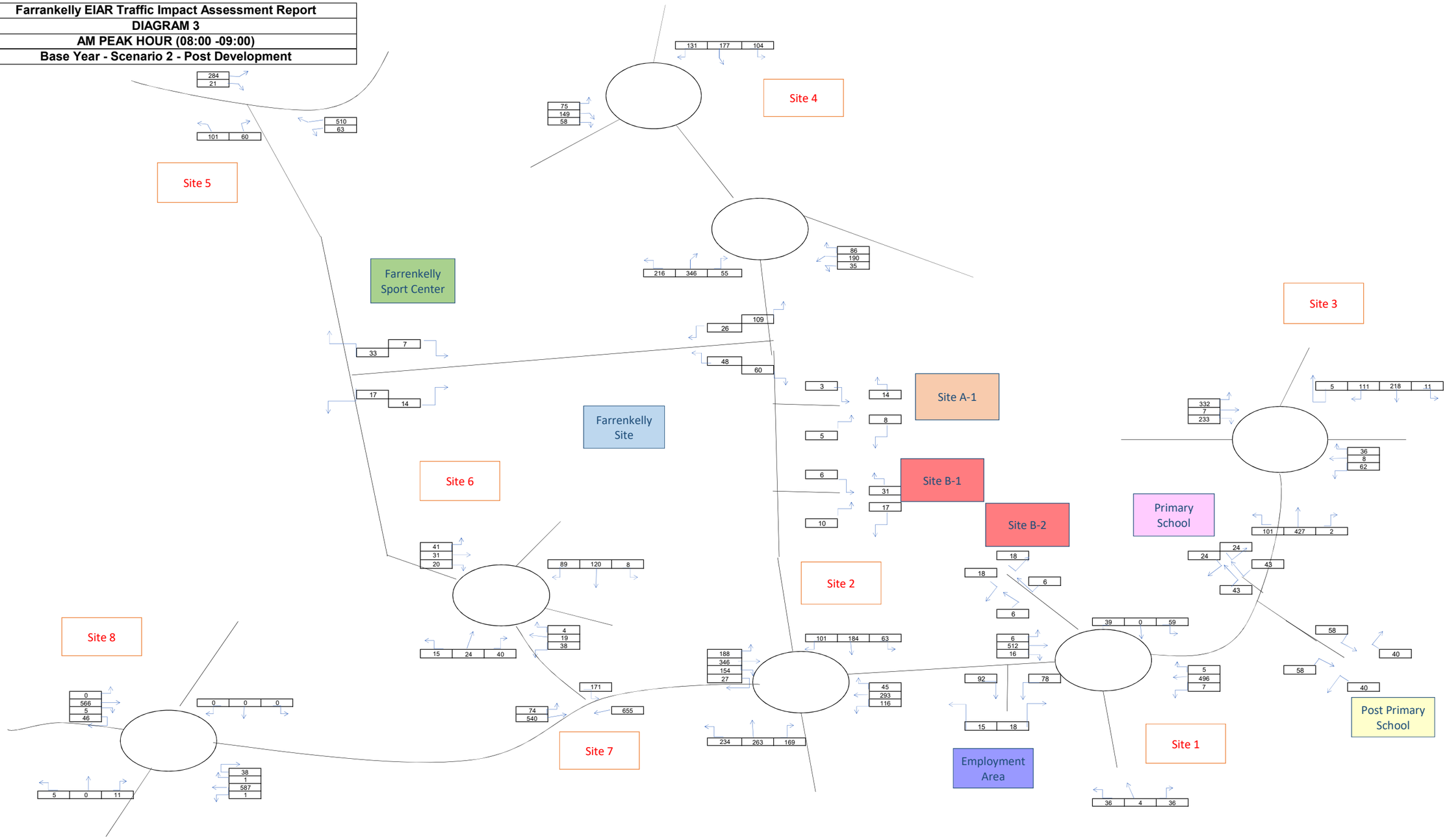
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 1
AM PEAK HOUR (08:00 -09:00)
Base Year - Pre Development



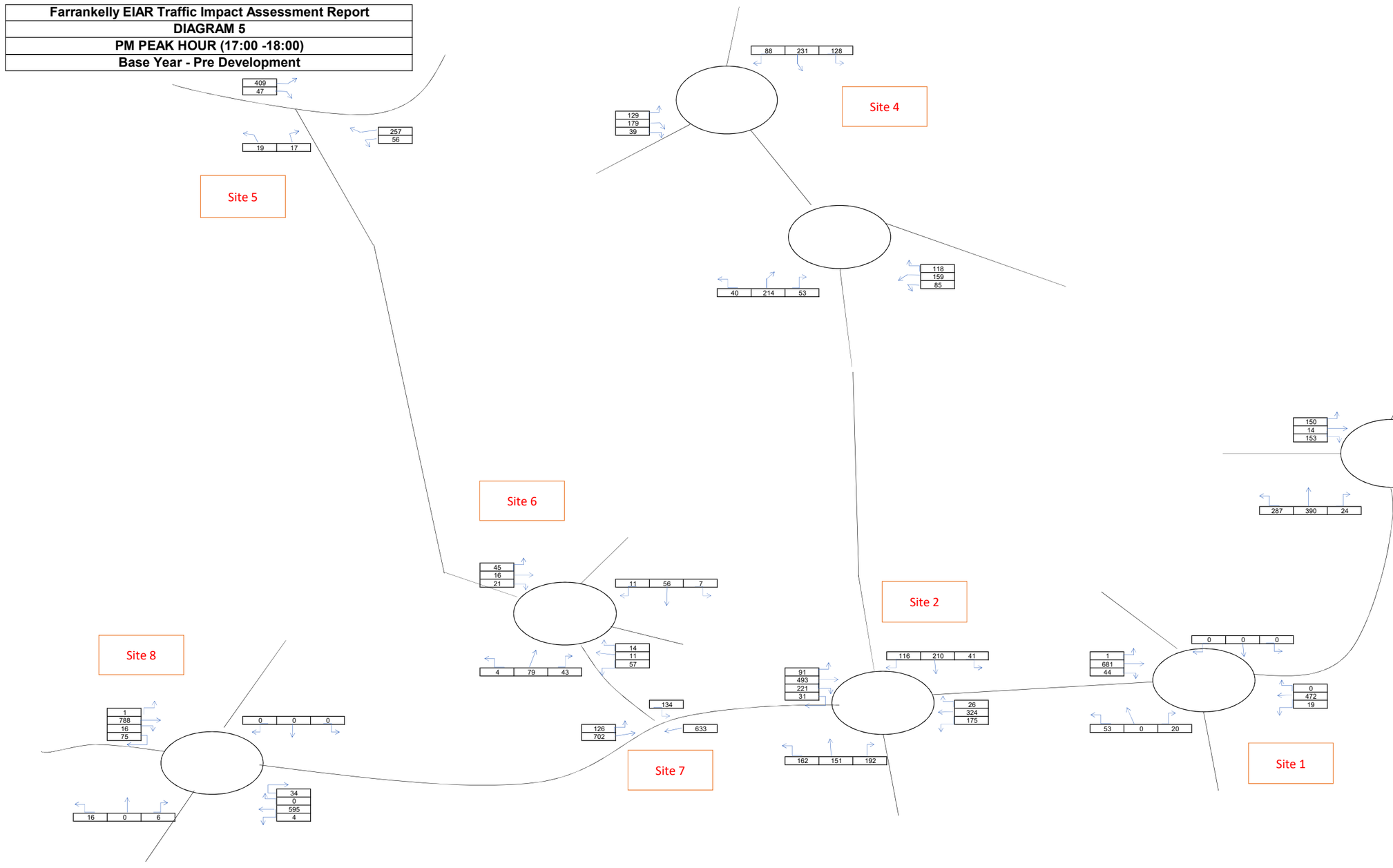
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 2
AM PEAK HOUR (08:00 -09:00)
Base Year - Scenario 1 - Post Development



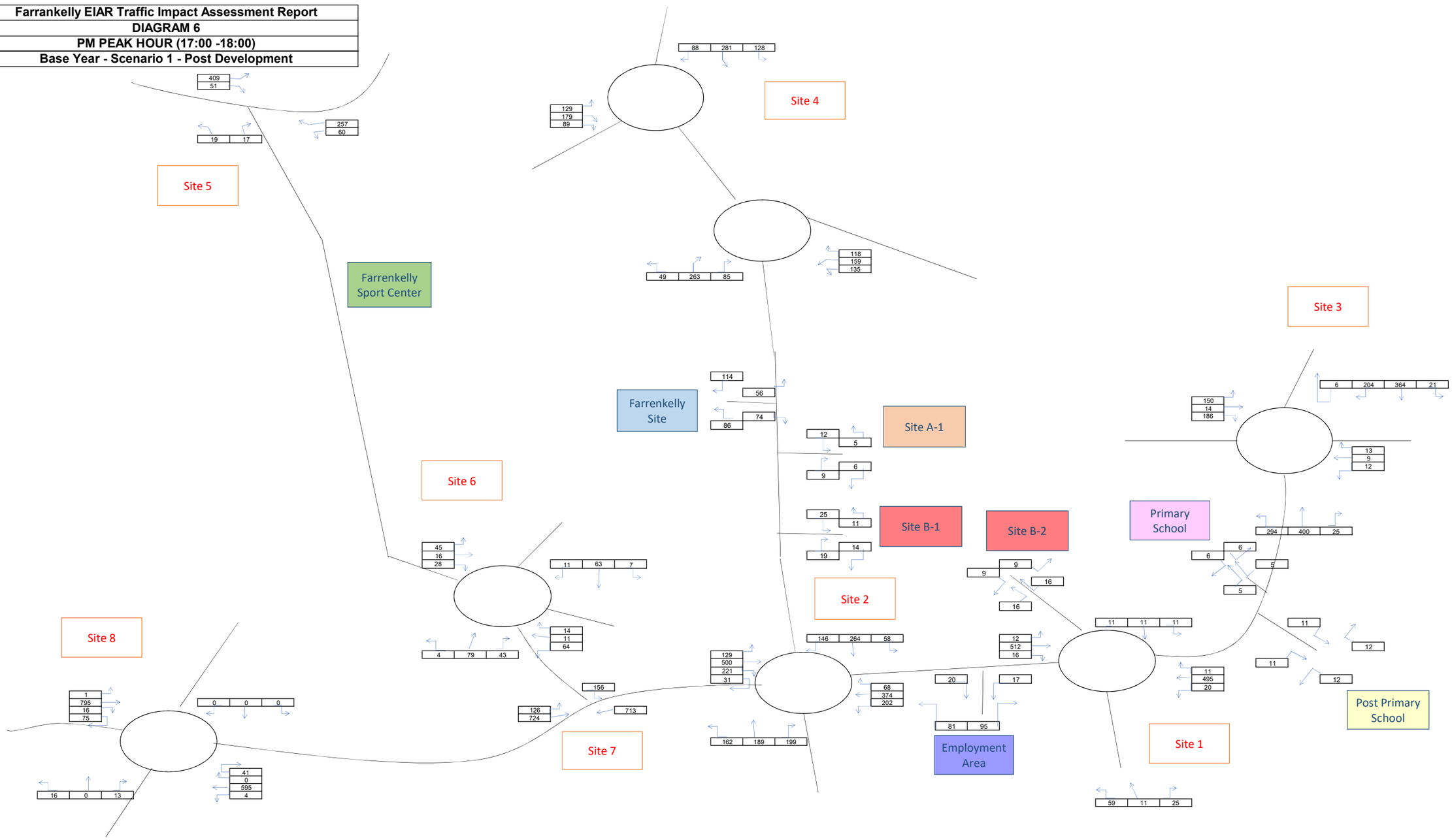
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 3
AM PEAK HOUR (08:00 -09:00)
Base Year - Scenario 2 - Post Development



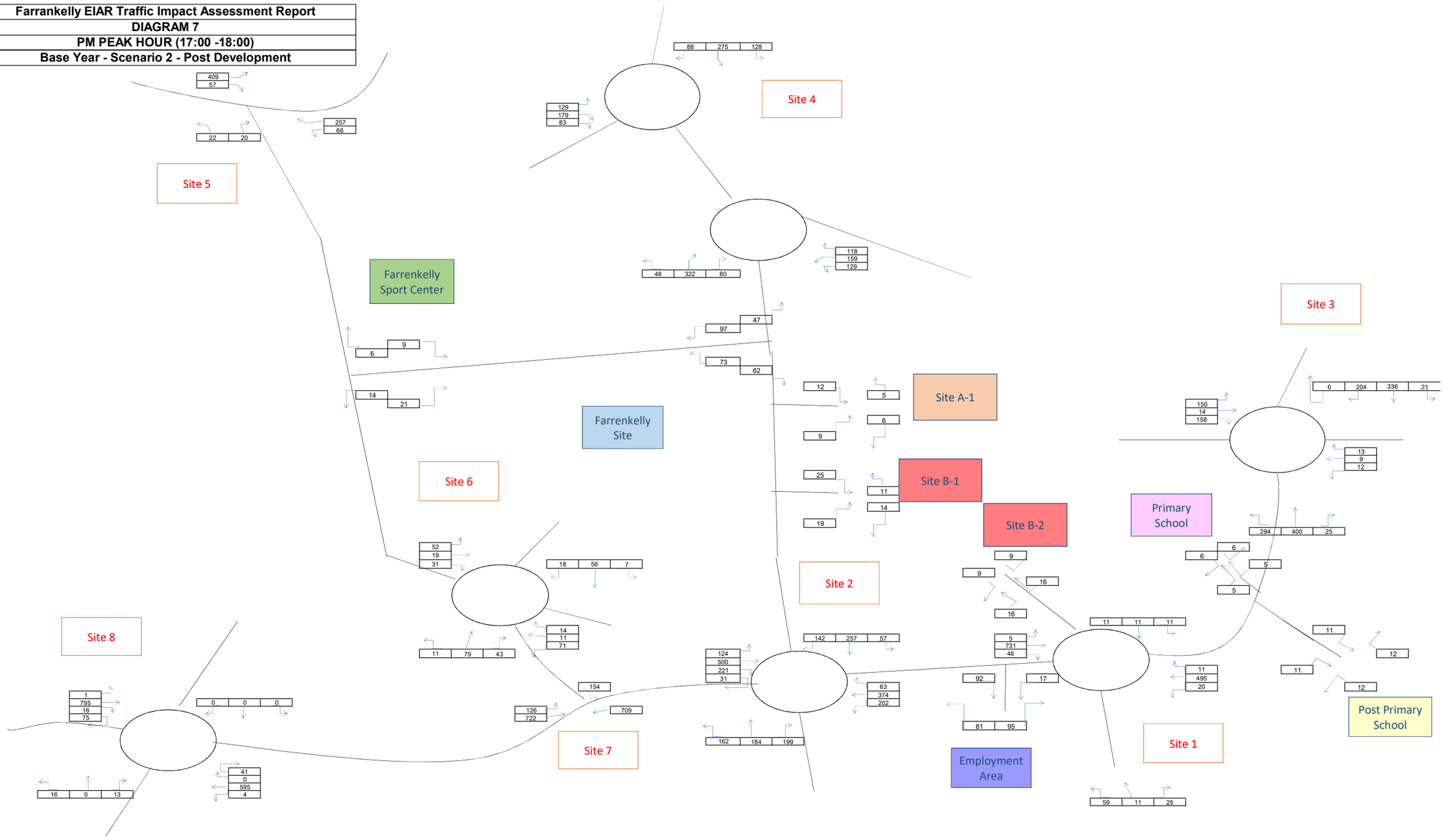
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 5
PM PEAK HOUR (17:00 -18:00)
Base Year - Pre Development



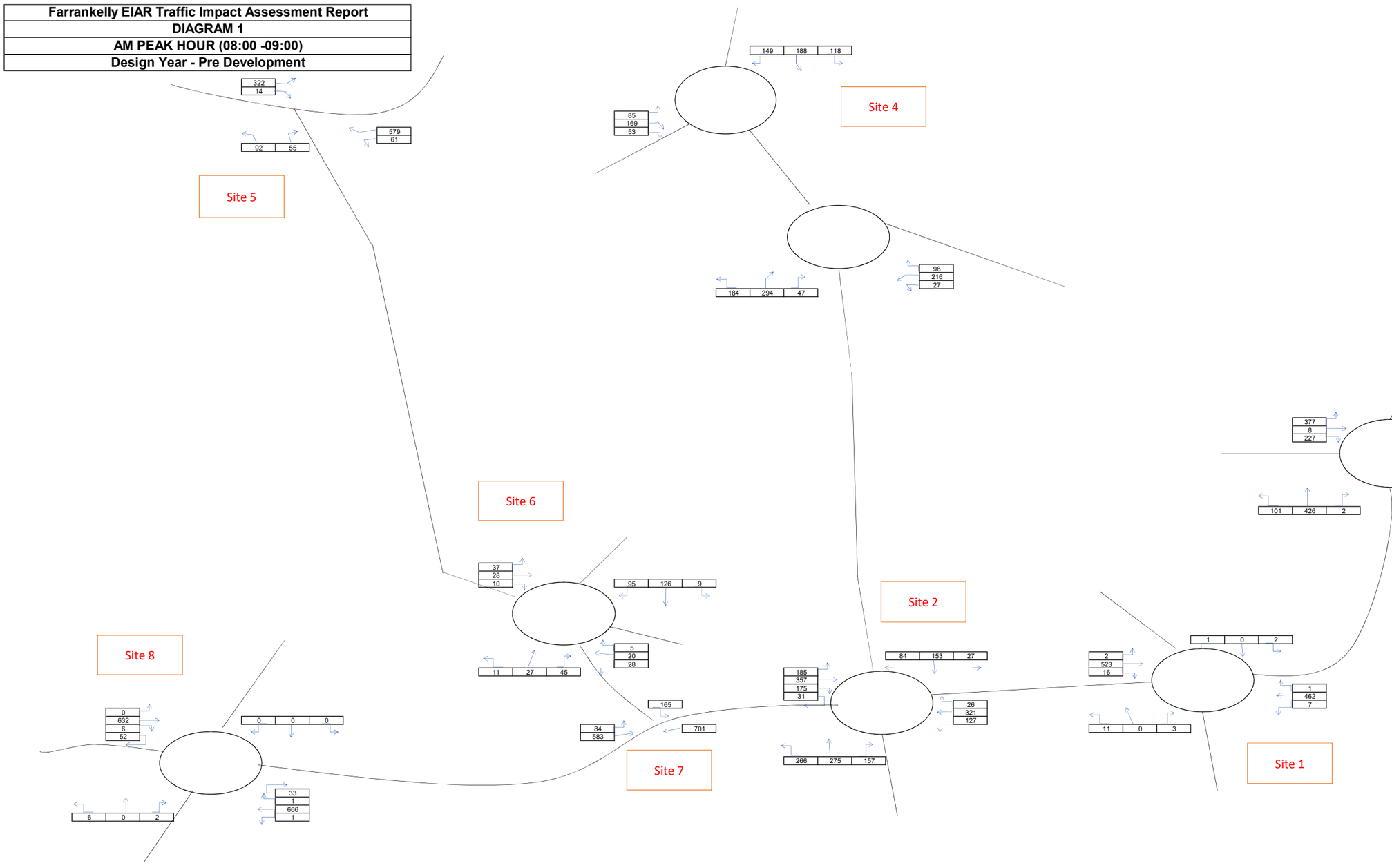
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 6
PM PEAK HOUR (17:00 -18:00)
Base Year - Scenario 1 - Post Development



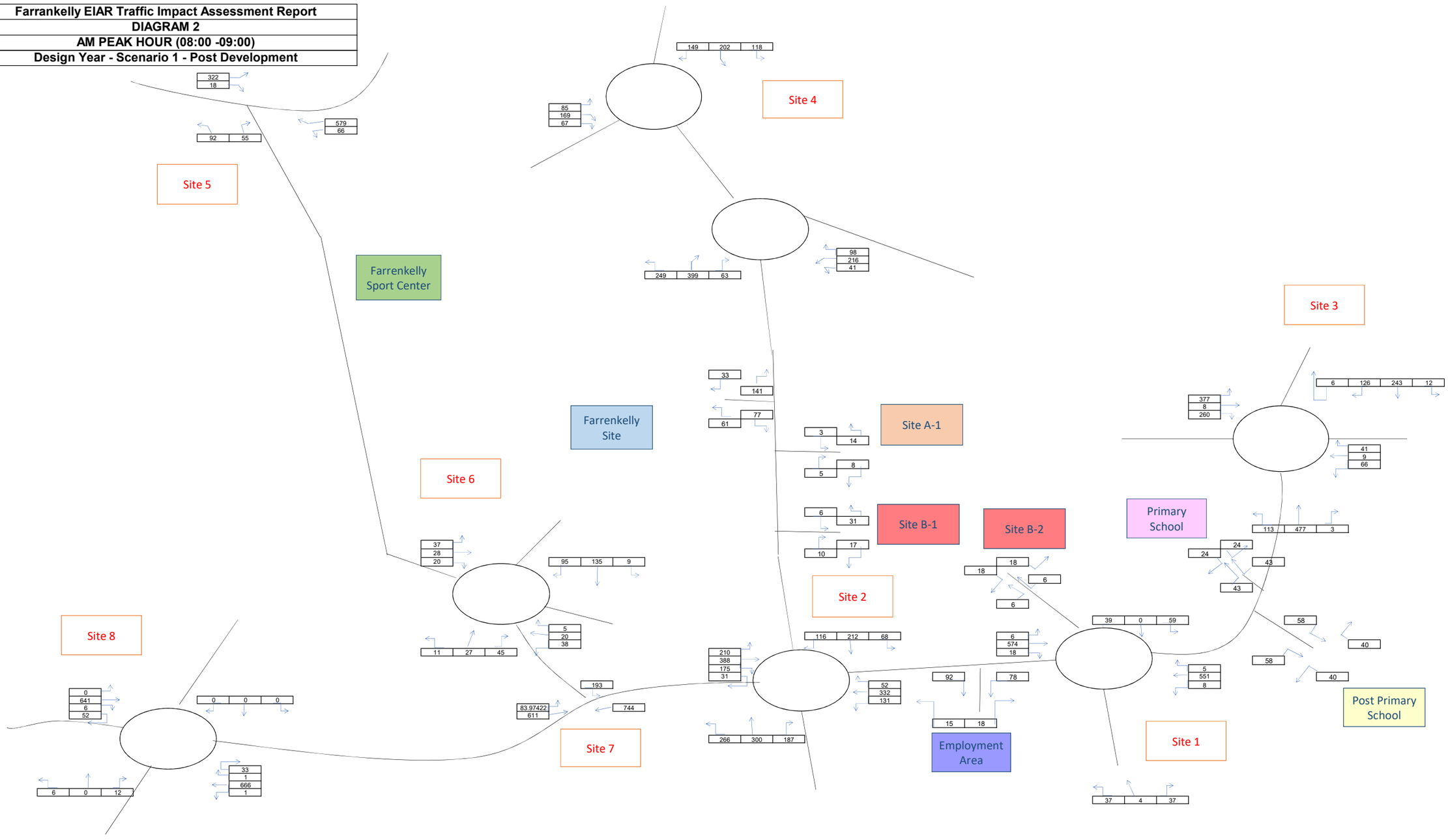
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 7
PM PEAK HOUR (17:00 -18:00)
Base Year - Scenario 2 - Post Development



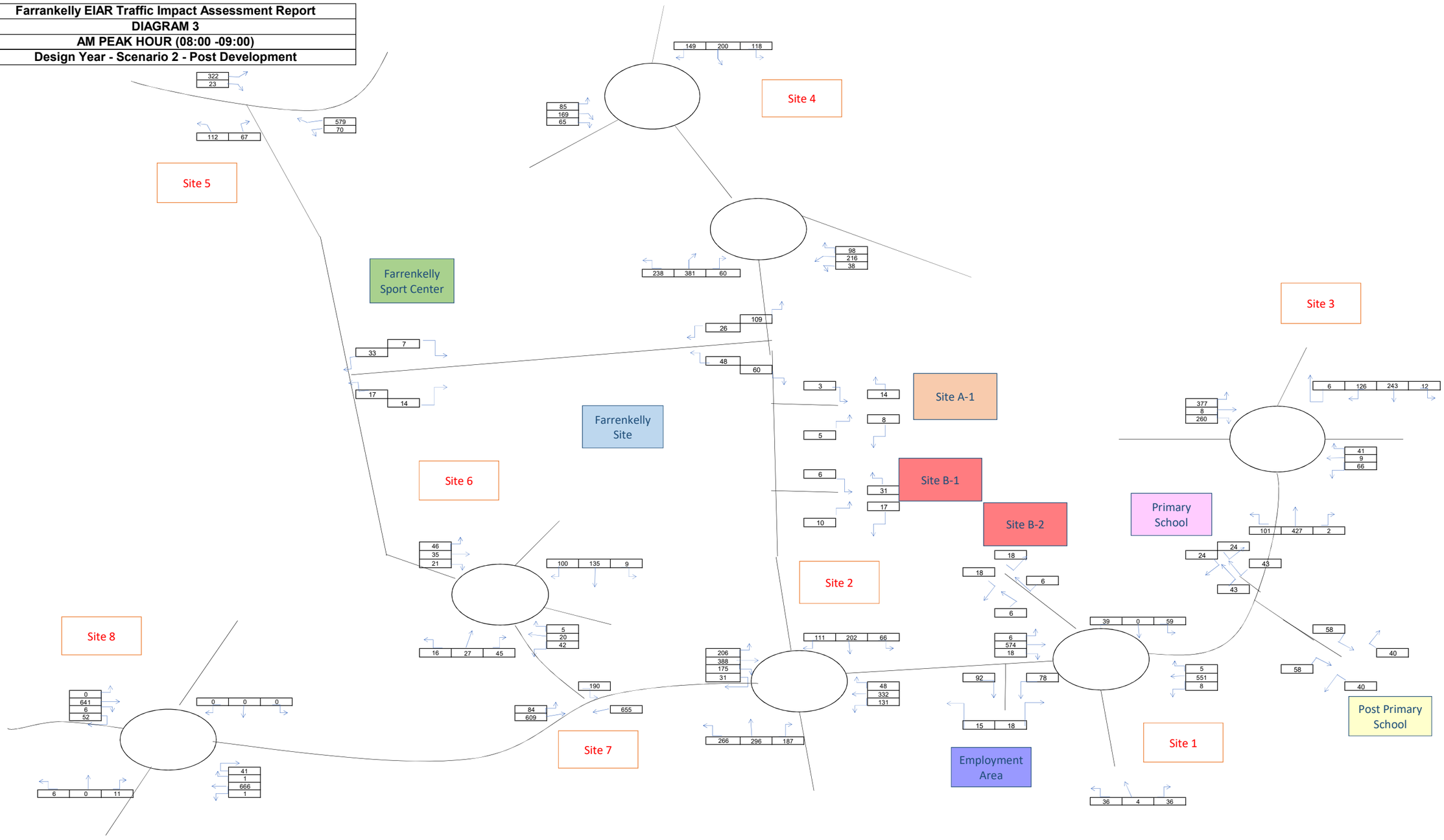
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 1
AM PEAK HOUR (08:00 -09:00)
Design Year - Pre Development



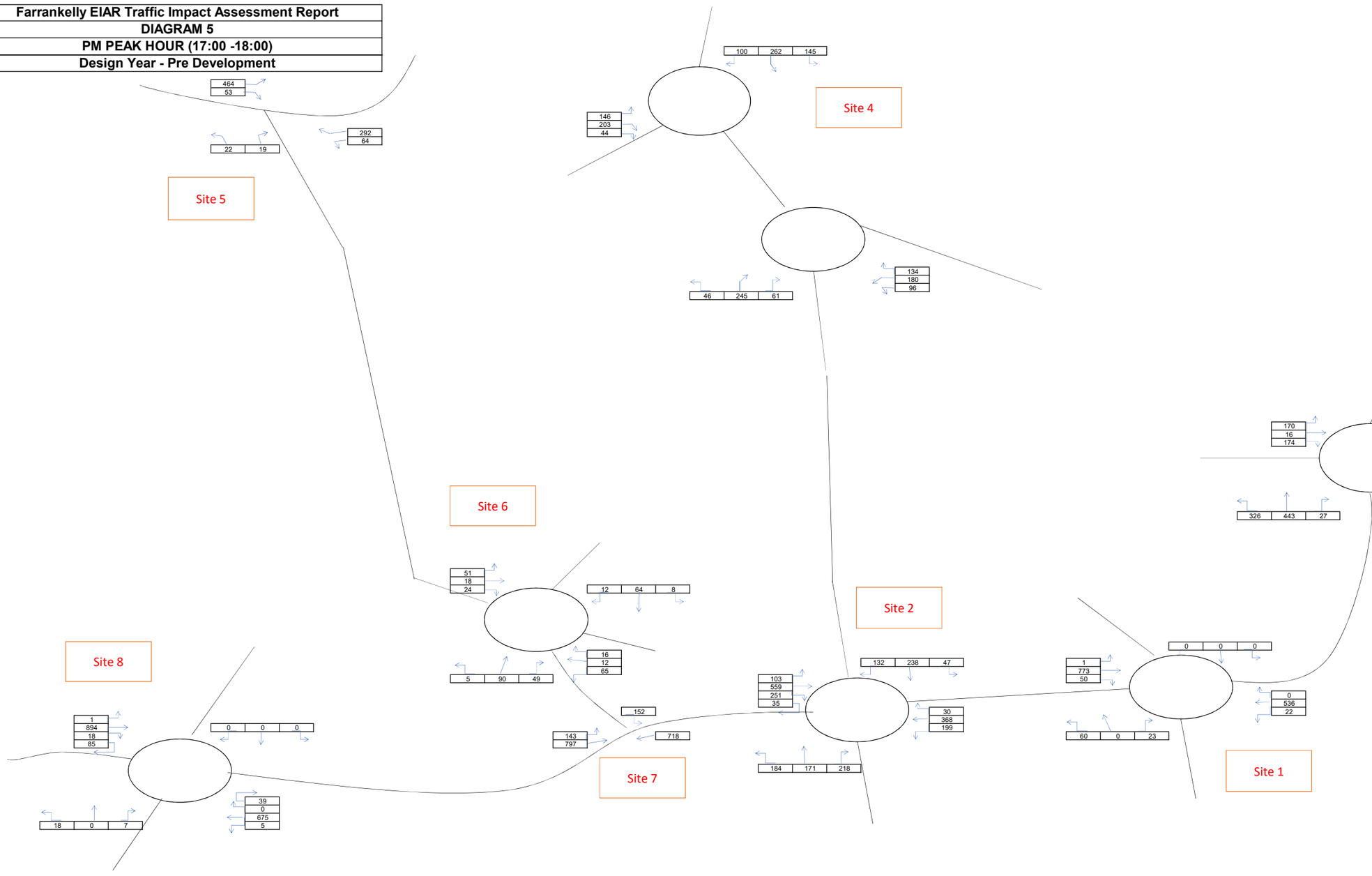
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 2
AM PEAK HOUR (08:00 -09:00)
Design Year - Scenario 1 - Post Development



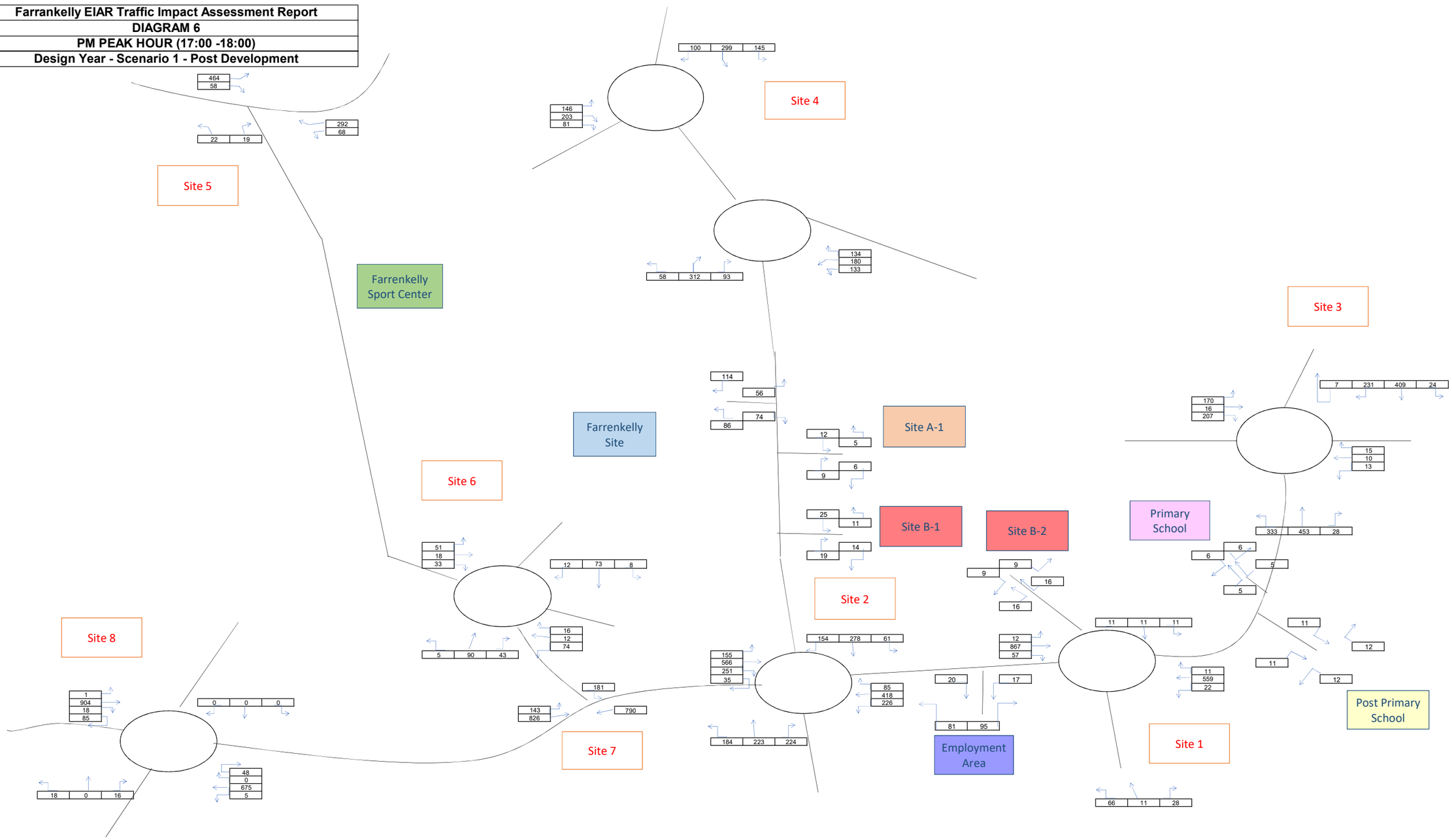
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 3
AM PEAK HOUR (08:00 -09:00)
Design Year - Scenario 2 - Post Development



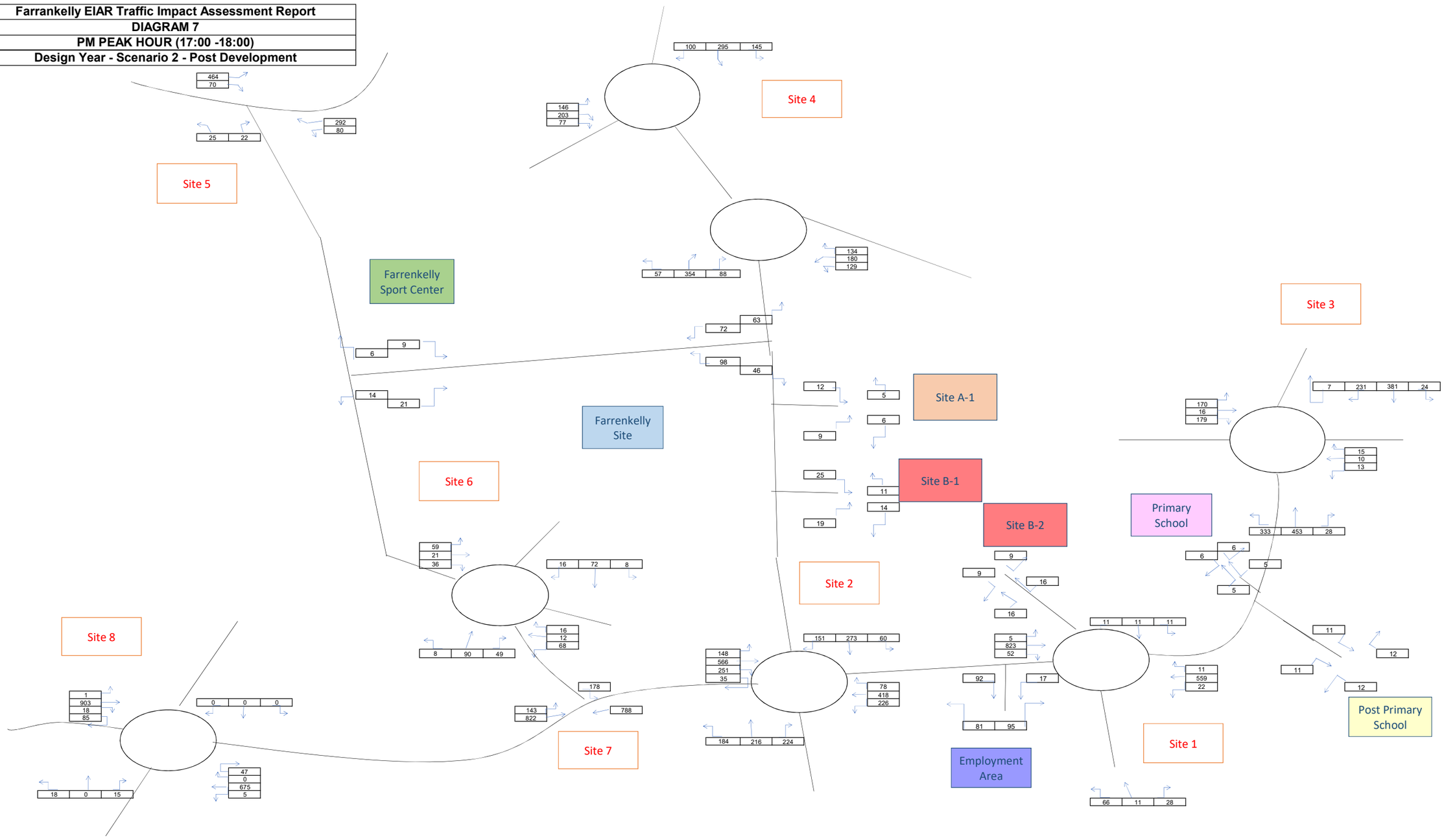
Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 5
PM PEAK HOUR (17:00 -18:00)
Design Year - Pre Development



Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 6
PM PEAK HOUR (17:00 -18:00)
Design Year - Scenario 1 - Post Development



Farrankelly EIAR Traffic Impact Assessment Report
DIAGRAM 7
PM PEAK HOUR (17:00 -18:00)
Design Year - Scenario 2 - Post Development



APPENDIX C
DRAWINGS

Proposed greenway path to connect to Mill Lane

PRIORY ROAD

MATCH LINE

+57.753

+57.284

+56.508

Existing road edge

Proposed 2m wide footpath

35m sightline to existing sharp bend where traffic speeds reduce to approximately 25kph

Sightline

Proposed minor road along the site frontage to provide a consistent 5m wide carriageway

45m sightlines (50kph design speed) taken from a 2.4m setback

Dished kerb entry

PRIORY ROAD

PLAN VIEW 1
SCALE 1:250

Main Link

Shared L

+52.08

Interim arrangement with the access closed to vehicular traffic until the missing section of footpath on Priory Road leading to Eden Gate is completed by Wicklow County Council

PRIORY ROAD

Dished kerb entry

45m sightlines (50kph design speed) taken from a 2.4m setback

Proposed 2m footpath

Existing road edge

Potential future footpath to Eden Gate / Farrankelly Road

EDEN GATE

PRIORY ROAD

Note: Works on public road to be undertaken on behalf of Wicklow County Council.

PLAN VIEW 2
SCALE 1:250

No.	Revision	Date	By	Chk'd	App'd
P6	ISSUED FOR PLANNING	06.09.19	DJK	JB	–

Drawing Status: PLANNING

ROD ROUGHAN & O'DONOVAN
Consulting Engineers
Civil - Structural - Environmental

Arena House, Arena Road, Sandyford, Dublin 18.
Tel: +353 1 2940800
e-mail: info@rod.ie
www.rod.ie

Client: CAIRN HOMES LTD.

Project Title: RESIDENTIAL DEVELOPMENT AT FARRANKELLY, GREYSTONES

Drawing Title: PRIORY ROAD ACCESSES

Drawing Number	Rev.
FK-ROD-Z0-XX-DR-C-0094	P6

Scale	Date	Job No.	Cad File
1:250 @ A1	SEPT 19	16.146	J:\2016\16160\Dwg

Drawn	Checked	Approved
RE	JB	

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

J:\2016\16160\Dwg\FK-ROD-Z0-XX-DR-C-0094 - 0094.dwg, 16/09/2019 11:31:34, DWG To PDF.pc3

Ramped entry treatment

Lands being ceeded to Kilcoole Road upgrade

Local Street 14

Main Link Street 01

+4129

+3389

+3817

Potential future footpath extension

Toucan crossing

LANDSCAPING AND BOUNDARY TREATMENT AS PER ARCHITECTS AND LANDSCAPE ARCHITECT'S DRAWINGS

Telecom pole to be relocated

Lands being ceeded to Kilcoole Road upgrade

Existing access road

Future road realignment

Proposed footpath

Existing bus stop

Existing road edge

R761 Kilcoole Road

Bus stop

STOP

45m sightlines (50kph design speed on a bus route) taken from a 2.4m setback

Existing Glenheron entrance

Potential future footpath extension

Existing road edge

Potential future Kilcoole Road upgrade designed in consultation with Wicklow County Council

Telecom pole to be relocated

Note: Works on public road to be undertaken on behalf of Wicklow County Council.

No.	Revision	Date	By	Chk'd	App'd
P6	ISSUED FOR PLANNING	06.09.19	DJK	JB	–

Drawing Status: PLANNING

ROD ROUGHAN & O'DONOVAN
Consulting Engineers
Civil - Structural - Environmental
Arena House, Arena Road, Sandyford, Dublin 18.
Tel : +353 1 2940800
e-mail : info@rod.ie
www.rod.ie

Client: CAIRN HOMES LTD.

Project Title: RESIDENTIAL DEVELOPMENT AT FARRANKELLY, GREYSTONES

Drawing Title: KILCOOLE PROPOSED SET BACK FOOTPATH

Drawing Number: FK-ROD-Z0-XX-DR-C-0095 Rev: P6

Scale: 1:250 @ A1 | Date: SEPT 19 | Job No: 16.146 | Cad File: J:\2016\16160\Dwg

Drawn: RE | Checked: JB | Approved:

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

J:\2016\16160\Dwg\FK-ROD-Z0-XX-DR-C-0094 - 0096.dwg 18/09/2019 17:32:12, DWG To PDF.pc3

Proposed Three Trout Stream Greenway

65m sightline to traffic signal with view over existing bridge parapet

R761 Kilcoole Road

65m sightline to traffic signal

Proposed toucan crossing

Mill Lane - pedestrian and cycle connection to Mill Road

Three Trout Stream

R761 Kilcoole Road

Note: Works on public road to be undertaken on behalf of Wicklow County Council.

No.	Revision	Date	By	Chk'd	App'd
P6	ISSUED FOR PLANNING	06.09.19	DJK	JB	–

Drawing Status: PLANNING

ROD ROUGHAN & O'DONOVAN

Consulting Engineers
Civil - Structural - Environmental

Arena House, Arena Road, Sandyford, Dublin 18.
Tel: +353 1 2940800
e-mail : info@rod.ie
www.rod.ie

Client: CAIRN HOMES LTD.

Project Title: RESIDENTIAL DEVELOPMENT AT FARRANKELLY, GREYSTONES

Drawing Title: KILCOOLE RD / THREE TROUT BRIDGE TOUCAN CROSSING

Drawing Number		Rev:
	FK-ROD-Z0-XX-DR-C-0096	P6

Scale:	Date:	Job No:	Cad File:
1:200 @ A1	SEPT 19	16.146	J:\2016\16160\Dwg

Drawn: RE | Checked: JB | Approved:

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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APPENDIX D
DMURS DESIGN COMPLIANCE REPORT

Prepared by
Roughan & O'Donovan
Arena House, Arena Road, Sandyford, Dublin 18
Tel: +353 1 2940800 Fax: +353 1 2940820
Email: info@rod.ie www.rod.ie

Proposed Residential Development at Farrankelly, Greystones

Development Access & Street DMURS Design Report

August 2019

ROD
ROUGHAN & O'DONOVAN

Proposed Residential Development at Farrankelly, Greystones

Development Access and Street DMURS Design Report

Document No:.....16.146 DMURS

Author: .....EL

Checker:.....JB

Approver: .....SMG

Document No	Description	Made	Checked	Approved	Date
16.146 DMURS	Draft v1	EL	JB	SMG	19-07-2019
16.146 DMURS	Issue v2	EL	JB	SMG	20-08-2019

Proposed Residential Development at Farrankelly, Greystones

Development Access and Street DMURS Design Report

TABLE OF CONTENTS

1.0 INTRODUCTION

The report described the designs of the access junctions and internal streets for the proposed Farrankelly residential development, and how it complies with the Design Manual for Urban Roads and Streets 2013 (DMURS), published by the DTTAS.

A secondary supplementary reference document adopted in the design is the *Recommendations for Site Development Works for Housing Areas* (1998), published by the Department of Environment and Local Government.

The design proposals are the outcome of an integrated design approach that seeks to provide a sustainable community connected by well-designed streets which deliver safe, convenient and attractive networks within and through the subject lands.

2.0 DMURS JUNCTION VISIBILITY SPLAYS

All visibility splays are designed in accordance with the Design Manual for Urban Roads and Street (DMURS). Relevant extracts from DMURS are included below.

SSD STANDARDS

Design Speed (km/h)	SSD Standard (metres)
10	7
20	14
30	23
40	33
50	45
60	59

Forward Visibility

Design Speed (km/h)	SSD Standard (metres)
10	8
20	15
30	24
40	36
50	49
60	65

Forward Visibility on Bus Routes

Table 4.2: Reduced SSD standards for application within cities towns and villages. Reduced forward visibility increases driver caution and reduces vehicle speeds.

Figure 1 Extract from DMURS – SSD Standards

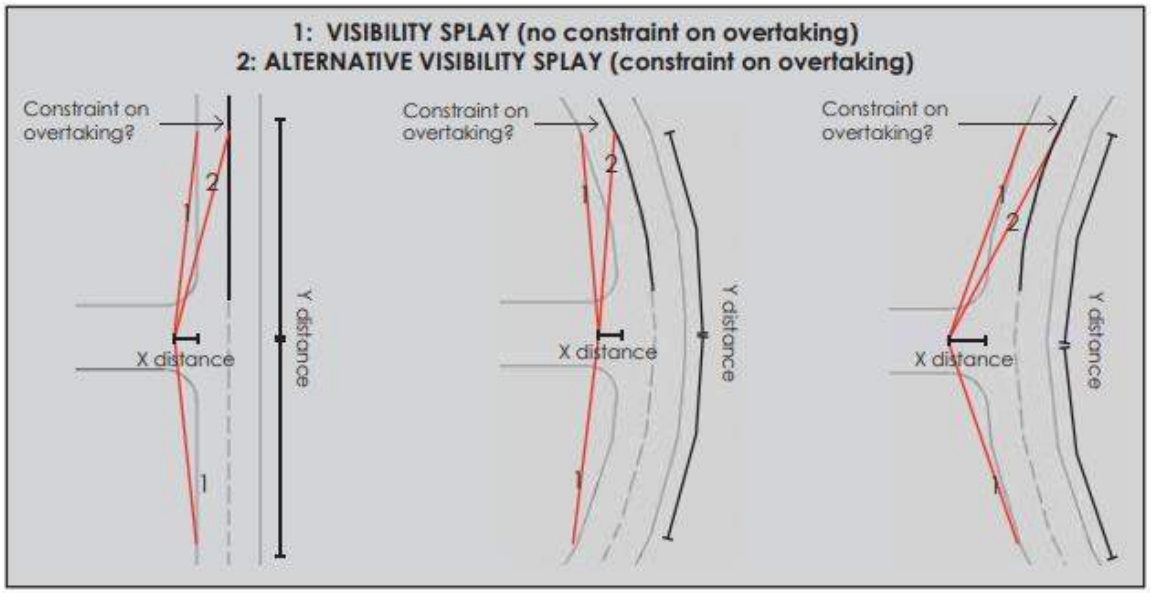


Figure 4.63: Forward visibility splays refer to an X and Y value. The X value allows drivers to observe traffic on the intersected arm. The Y value allows the driver of a vehicle to stop safely should an object enter its path, and is based on the SSD value.

Figure 2 Extract from DMURS – Visibility Splays

The R761 Kilcoole Road entrance junction is located at the start on the inside of a curve and there is a crest curve to the south of the proposed entrance. The proposed entrance location as identified so that suitable visibility splays are achieved. The junction also includes the setting back of the site boundary to include the provision of a footpath and a widened verge to accommodate the future Kilcoole Road upgrade.

The proposed main access on Priory Road is on a relative straight section of the road and will provided with suitable visibility splays and the provision of a footpath.

The proposed access junction layouts including the visibility splays are shown on the drawings FK-ROD-ZO-XX-DR-C--0094, FK-ROD-ZO-XX-DR-C-0095 and FK-ROD-ZO-XX-DR-C-0096 included with the application.

3.0 STREETS DESIGN STANDARDS

The purpose of this section is to summarise the proposed design standards adopted for streets within the proposed development. It is based on the DMURS of which relevant extracts are provided below.

3.1 DESIGN PARAMETERS

The first consideration is the Function and Context for the internal streets within the proposed development in accordance with Table 3.1 and Table 4.1 of DMURS:

DMURS Description	Roads Act/NRA DMRB	Traffic Management Guidelines	National Cycle Manual
Arterial	National	Primary Distributor Roads	Distributor
Link	Regional (see note 1)	District Distributor Local Collector (see Notes 1 and 2)	Local Collector
Local	Local	Access	Access

Notes

Note 1: Larger Regional/District Distributors may fall into the category of *Arterial* where they are the main links between major centres (i.e. towns) or have an orbital function.

Note 2: Local Distributors may fall into the category of *Local* street where they are relatively short in length and simply link a neighbourhood to the broader street network.

Table 3.1: Terminology used within this Manual compared with other key publications.

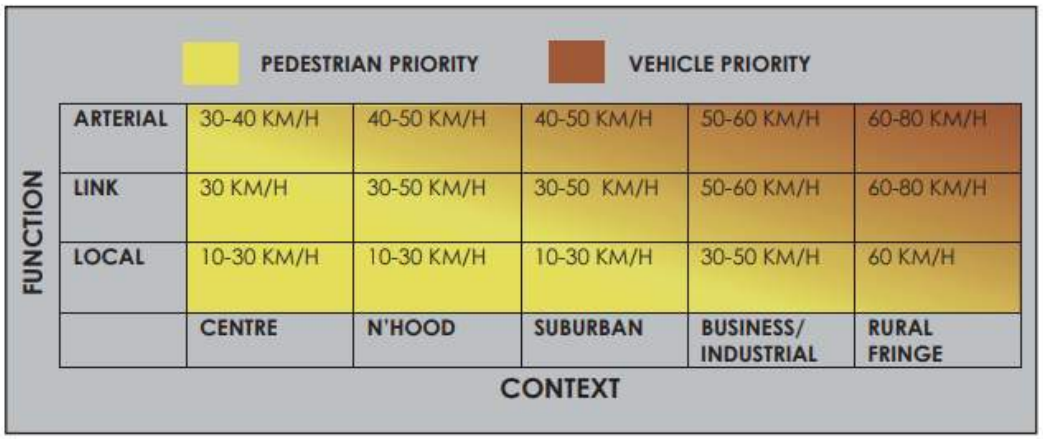


Figure 3 Extracted from DMURS Table 4.1 - Design Speed selection matrix indicating the links between place, movement and speed that need to be taken into account in order to achieve effective and balanced design solutions

All streets within the development have the following function, context as associated design speed range.

- Function: Local
- Context: Neighbourhood
- Speed: 10 - 30 km/h.

All streets within the development are classified as Local Streets with a range of hierarchy within the development including the local link street that connects through the development between Kilcoole Road,

the other side streets and a number of homezones. These design parameters then lead to the selection of the various elements of the street cross-section and alignment as described below.

3.2 FOOTPATHS & PEDESTRIAN CONNECTIVITY

In Section 4.3.1 (page 86), DMURS defines the footway as the minimum width needed for the wheelchairs to pass each other and it proposes a minimum of 1.8m width. A slightly wider footpath width of 2.0m has been adopted as standard throughout the proposed development. On certain streets a footpath is provided on one side only, where there is no specific pedestrian desire line, with a verge on the other side to cater for street landscaping.

The proposed development includes a greenway along the northern boundary for pedestrians and cyclists that will connect with the existing Mill Lane, providing an attractive and direct route leading towards Greystones Town Centre and the Train Station. A series of shared walk and cycle paths are provided through the green open spaces within the development that will connect the greenway to the Eden Gate development to the south.

The footpaths connect with the existing footpath and pedestrian routes in the surrounds via proposed signalised pedestrian crossings on the Kilcoole Road, with one crossing located immediately south of the proposed vehicular access and a second crossing located at the proposed greenway connecting to Mill Lane.

3.3 VERGES

As regards the verges, DMURS in Section 4.3.1 (pages 87-88) clarifies that there is no minimum requirement for verges on Local Streets, therefore the provision of a verge is optional, and it may be provided on certain streets to suit the overall architectural and landscape design including the provision of street trees. Where a verge is provided it has a minimum width of 1.5m to be effective and to suit maintenance of grass or other planting.

3.4 CYCLING

Section 4.3.5 of DMURS encourages the design of lightly-trafficked/low-speed streets to create Shared Streets where cyclists and motor vehicles share the carriageway. The proposed development is designed with a low speed environment and low traffic volumes, and it is not necessary or appropriate to provide segregated cycling facilities along the streets.

3.5 STREET HIERARCHY, CARRIAGEWAY WIDTH & CROSS SECTION

The DMURS section related to the carriageway width is Section 4.4.1 (pages 101 and 102). The standard carriageway widths on Local Streets should be between 5-5.5m (i.e. with lane widths of 2.5-2.75m).

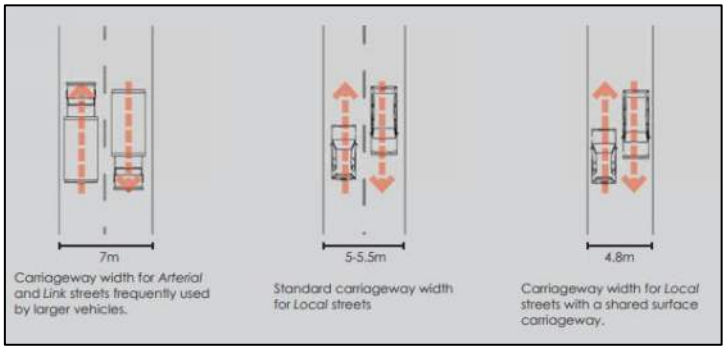


Figure 4 Extracted figure from DMURS (Figure 4.55 originally) - Carriageway widths

From the DMURS provisions outlined above there are a number of combinations of the various cross-section components that are proposed for the various streets within the proposed development as follows.

Local Street Type 1: The main street into the development from Kilcoole Road and Priory Road, including road objective R08, which is designed as follows:

- 5.5m carriageway
- 2.0m footpaths as required
- Verges as required including green open space

Local Street Type 2: Typical side-street with double footpath and no verges.

- 5.0m carriageway
- 2.0m footpath x 2

Local Street Type 3: Home Zone cul-de-sac serving up to 20 houses.

- 4.8m shared surface
- 1.5m verge x 2
- 7.8m total width

The homezones are designed to promote place and provide maximum pedestrian priority on streets where vehicular movements are low.

3.6 DESIGN SPEED, ALIGNMENT AND CURVATURE

Section 4.4.6 provides information regarding horizontal and vertical alignment and curvatures. Within the proposed development the standards that apply for the alignment design speed are as follows:

- Main Local Streets, Type 1: 30 km/h;
- Typical Side Streets, Type 2: 20 km/h;
- Shared Surface Streets, Type 3: no design speed.

HORIZONTAL CURVATURE

Design Speed (km/h)	10	20	30	40	50	60
Minimum Radius with adverse camber of 2.5%	-	11	26	56	104	178
Minimum Radius with superelevation of 2.5 %	-	-	-	46	82	136

VERTICAL CURVATURE

Design Speed (km/h)	10	20	30	40	50	60
Crest Curve K Value	N/A	N/A	N/A	2.6	4.7	8.2
Sag Curve K Value	N/A	N/A	2.3	4.1	6.4	9.2

Figure 5 Extracted table from DMURS (Table 4.3 originally) - Carriageway geometry parameters for horizontal and vertical curvature

In relation to the horizonal alignment, a crossfall of 2.5% is generally provided throughout in accordance with Section 4.4.6 of DMURS. Superelevation is not provided on horizontal curves as this would encourage higher traffic speeds.

As regards the vertical alignment, the site is quite hilly, where it falls from the south-west to the north-east of the site, from 58mOD to 30mOD adjacent to Kilcoole Road. The vertical alignment of the circulation roads required careful design to meet the provisions of DMURS, as specified in Figure 5 and 6.

Maximum and Minimum Gradients

In urban areas, it is likely that the comfort of vulnerable road users will be the determining factor for desirable maximum longitudinal gradients on streets. Part M of the building regulations advises that access routes with a gradient of 1:20 or less are preferred. Therefore a maximum gradient of 5% is desirable on streets where pedestrians are active.

In hilly terrain, steeper gradients may be required but regard must be had to the maximum gradient that most wheelchair users can negotiate of 8.3%, although this should be limited to shorter distances A designer may need to consider mitigation measures, such as intermediate landings, to ensure that pedestrian routes are accessible. This also needs to be considered at the network level and as a response to place making.

The inclusion of streets that exceed these gradients may not be significant within a network where there are alternative routes that can be taken between destinations and where steeper gradients may in fact have placemaking benefits.

Figure 6 Extracted text from DMURS (page 113)

3.7 CAR PARKING

The proposed street widths and the provision of numerous driveways will generally preclude on-street parking on most of the roads within the development. However, some provision is be made for visitor parking informally at street sections that do not have frontage access, such as on gable ends of houses at the end of a row, or on certain streets adjoining green spaces.

The proposed on-street car parking for the duplex units is provided in accordance with DMURS (pages 120-121), which include the recommended dimensions for a parking space as follows:

- 2.4m wide;
- 6.0m long for parallel parking;
- 4.8m long for perpendicular parking with 0.3m overhang space at the inner end and 0.5m separator strip at the outer end = 5.6m total.

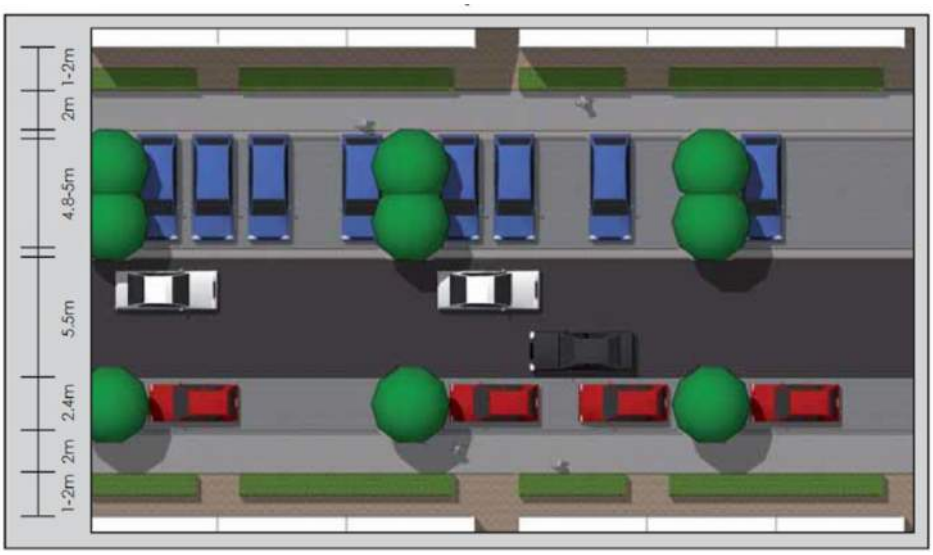
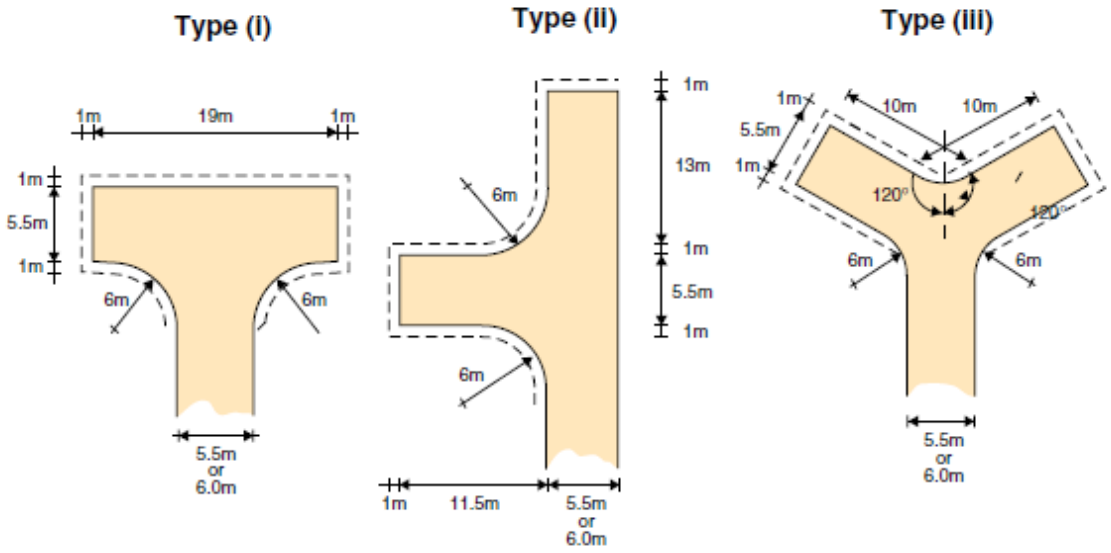
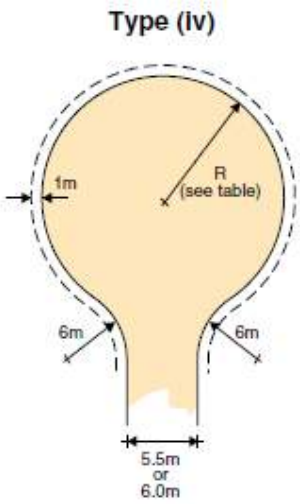


Figure 7 Extract illustrating the layout of a Local Street with a uniform mix of parallel and perpendicular parking

3.8 CUL-DE-SACS

Where cul-de-sacs are longer than 50m turning bays are provided in accordance with the *Recommendations for Site Development Works for Housing Area* Type I & IV as reproduced below, to suit specific site constraints which have occurred. All internal road network and turning bays are assessed using the Autodesk vehicle tracking add on to ensure adequate design for vehicle movements.





Value of R which permits turning without reversing	
Vehicle Type	**R metres**
Private Car	6
Fire Engine	9
Refuse Vehicle	10
Furniture Removal	11

1m clearance for vehicle overhang shown dashed

NOT TO SCALE

Figure 8 Residential Turning Bays

4.0 SUMMARY

The accesses and streets within the proposed development have been designed to be safe, attractive and comfortable for all users and have been designed in accordance with the Design Manual for Urban Roads and Streets.

APPENDIX E
JUNCTION CAPACITY ANALYSIS

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Kilcoole Rd Access - Sc1- post dev - base year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 13:32:54

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Base Year - Scenario 1									
Stream B-AC	1.36	20.94	0.58	C		0.69	17.64	0.41	C	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.09	8.53	0.08	A	C	0.35	10.09	0.26	B	B
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:32:54

File summary

File Description

Title	Farrankelly
Location	Kilcoole Road/Development Access
Site Number	N/A
Date	13/02/2019
Version	
Status	(new file)
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Kilcoole Road Access will serve the Eastern side of the proposed Farrankelly development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 1 - Post Dev - Base Year - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 1 - Post Dev - Base Year	In Scenario 1 only the Kilcoole Road access is open. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Kilcoole Road access	T-Junction	Two-way	A,B,C	19.31	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Kilcoole Road		Major
B	Kilcoole Road access		Minor
C	Kilcoole Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.20		0.00		2.20	49.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										49	49

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.721	0.091	0.230	0.145	0.329
1	B-C	638.395	0.097	0.245	-	-
1	C-B	602.340	0.231	0.231	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	566.00	100.000
B	ONE HOUR	✓	218.00	100.000
C	ONE HOUR	✓	312.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	61.000	505.000
	B	77.000	0.000	141.000
	C	279.000	33.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.11	0.89
	B	0.35	0.00	0.65
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.58	20.94	1.36	C
C-A	-	-	-	-
C-B	0.08	8.53	0.09	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	164.12	162.00	0.00	467.36	0.351	0.53	11.711	B
C-A	210.05	210.05	0.00	-	-	-	-	-
C-B	24.84	24.64	0.00	503.76	0.049	0.05	7.510	A
A-B	45.92	45.92	0.00	-	-	-	-	-
A-C	380.19	380.19	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	195.98	195.02	0.00	444.10	0.441	0.77	14.394	B
C-A	250.82	250.82	0.00	-	-	-	-	-
C-B	29.67	29.61	0.00	484.62	0.061	0.06	7.910	A
A-B	54.84	54.84	0.00	-	-	-	-	-
A-C	453.98	453.98	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	240.02	237.77	0.00	411.49	0.583	1.33	20.452	C
C-A	307.18	307.18	0.00	-	-	-	-	-
C-B	36.33	36.25	0.00	458.17	0.079	0.09	8.529	A
A-B	67.16	67.16	0.00	-	-	-	-	-
A-C	556.02	556.02	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	240.02	239.89	0.00	411.48	0.583	1.36	20.936	C
C-A	307.18	307.18	0.00	-	-	-	-	-
C-B	36.33	36.33	0.00	458.17	0.079	0.09	8.533	A
A-B	67.16	67.16	0.00	-	-	-	-	-
A-C	556.02	556.02	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	195.98	198.18	0.00	444.07	0.441	0.81	14.770	B
C-A	250.82	250.82	0.00	-	-	-	-	-
C-B	29.67	29.75	0.00	484.62	0.061	0.07	7.916	A
A-B	54.84	54.84	0.00	-	-	-	-	-
A-C	453.98	453.98	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	164.12	165.16	0.00	467.31	0.351	0.55	11.955	B
C-A	210.05	210.05	0.00	-	-	-	-	-
C-B	24.84	24.90	0.00	503.76	0.049	0.05	7.520	A
A-B	45.92	45.92	0.00	-	-	-	-	-
A-C	380.19	380.19	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Kilcoole Rd Access - Sc1- post dev - design year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 13:36:25

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Des Year - Scenario 1									
Stream B-AC	1.53	23.52	0.61	C	C	0.77	19.83	0.44	C	C
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.09	8.84	0.08	A		0.37	10.67	0.27	B	
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:36:24

File summary

File Description

Title	Farrankelly
Location	Kilcoole Road/Development Access
Site Number	N/A
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Kilcoole Road Access will serve the Eastern side of the proposed Farrankelly development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 1 - Post Dev - Des Year - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 1 - Post Dev - Des Year	In Scenario 1 only the Kilcoole Road access is open. The year considered is the design year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Kilcoole Road access	T-Junction	Two-way	A,B,C	21.59	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Kilcoole Road		Major
B	Kilcoole Road access		Minor
C	Kilcoole Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.20		0.00		2.20	49.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										49	49

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.721	0.091	0.230	0.145	0.329
1	B-C	638.395	0.097	0.245	-	-
1	C-B	602.340	0.231	0.231	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	624.00	100.000
B	ONE HOUR	✓	218.00	100.000
C	ONE HOUR	✓	343.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	61.000	563.000
	B	77.000	0.000	141.000
	C	310.000	33.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.10	0.90
	B	0.35	0.00	0.65
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.61	23.52	1.53	C
C-A	-	-	-	-
C-B	0.08	8.84	0.09	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	164.12	161.91	0.00	454.75	0.361	0.55	12.204	B
C-A	233.38	233.38	0.00	-	-	-	-	-
C-B	24.84	24.63	0.00	493.66	0.050	0.05	7.671	A
A-B	45.92	45.92	0.00	-	-	-	-	-
A-C	423.86	423.86	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	195.98	194.92	0.00	428.87	0.457	0.82	15.315	C
C-A	278.68	278.68	0.00	-	-	-	-	-
C-B	29.67	29.61	0.00	472.56	0.063	0.07	8.126	A
A-B	54.84	54.84	0.00	-	-	-	-	-
A-C	506.13	506.13	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	240.02	237.36	0.00	392.48	0.612	1.48	22.811	C
C-A	341.32	341.32	0.00	-	-	-	-	-
C-B	36.33	36.25	0.00	443.40	0.082	0.09	8.840	A
A-B	67.16	67.16	0.00	-	-	-	-	-
A-C	619.87	619.87	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	240.02	239.85	0.00	392.46	0.612	1.53	23.515	C
C-A	341.32	341.32	0.00	-	-	-	-	-
C-B	36.33	36.33	0.00	443.40	0.082	0.09	8.843	A
A-B	67.16	67.16	0.00	-	-	-	-	-
A-C	619.87	619.87	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	195.98	198.61	0.00	428.85	0.457	0.87	15.809	C
C-A	278.68	278.68	0.00	-	-	-	-	-
C-B	29.67	29.75	0.00	472.56	0.063	0.07	8.131	A
A-B	54.84	54.84	0.00	-	-	-	-	-
A-C	506.13	506.13	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	164.12	165.28	0.00	454.70	0.361	0.58	12.490	B
C-A	233.38	233.38	0.00	-	-	-	-	-
C-B	24.84	24.90	0.00	493.66	0.050	0.05	7.680	A
A-B	45.92	45.92	0.00	-	-	-	-	-
A-C	423.86	423.86	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Priory Rd Access - Sc2- post dev - base year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc2
Report generation date: 19/02/2019 13:39:49

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2									
Stream B-AC	0.12	8.07	0.11	A		0.04	6.80	0.04	A	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.03	6.39	0.03	A	A	0.04	6.60	0.04	A	A
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 2, AM " model duration: 08:00 - 09:30
"D2 - Scenario 2, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:39:48

File summary

File Description

Title	Farrankelly
Location	Priory Road/Development Access
Site Number	N/A
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	
Description	Priory Road Access will serve the South-western side of the proposed Farrankelly development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 2 - Post Dev - Base Year - Scenario 2, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 2 - Post Dev - Base Year	In Scenario 2 both the site accesses are open to the traffic. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, AM	Scenario 2	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Priory Road Junction	T-Junction	Two-way	A,B,C	7.70	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Priory Road		Major
B	Priory Road access		Minor
C	Priory Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	49.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										49	49

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.721	0.092	0.232	0.146	0.332
1	B-C	638.395	0.098	0.247	-	-
1	C-B	602.340	0.233	0.233	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	91.00	100.000
B	ONE HOUR	✓	50.00	100.000
C	ONE HOUR	✓	136.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	7.000	84.000
	B	33.000	0.000	17.000
	C	122.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.08	0.92
	B	0.66	0.00	0.34
	C	0.90	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	8.07	0.12	A
C-A	-	-	-	-
C-B	0.03	6.39	0.03	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.33	0.00	514.70	0.073	0.08	7.536	A
C-A	91.85	91.85	0.00	-	-	-	-	-
C-B	10.54	10.47	0.00	586.35	0.018	0.02	6.251	A
A-B	5.27	5.27	0.00	-	-	-	-	-
A-C	63.24	63.24	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.88	0.00	509.06	0.088	0.10	7.754	A
C-A	109.68	109.68	0.00	-	-	-	-	-
C-B	12.59	12.57	0.00	583.25	0.022	0.02	6.307	A
A-B	6.29	6.29	0.00	-	-	-	-	-
A-C	75.51	75.51	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	55.05	54.95	0.00	501.27	0.110	0.12	8.064	A
C-A	134.32	134.32	0.00	-	-	-	-	-
C-B	15.41	15.39	0.00	578.96	0.027	0.03	6.387	A
A-B	7.71	7.71	0.00	-	-	-	-	-
A-C	92.49	92.49	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	0.00	501.27	0.110	0.12	8.067	A
C-A	134.32	134.32	0.00	-	-	-	-	-
C-B	15.41	15.41	0.00	578.96	0.027	0.03	6.387	A
A-B	7.71	7.71	0.00	-	-	-	-	-
A-C	92.49	92.49	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.95	45.05	0.00	509.05	0.088	0.10	7.760	A
C-A	109.68	109.68	0.00	-	-	-	-	-
C-B	12.59	12.61	0.00	583.25	0.022	0.02	6.310	A
A-B	6.29	6.29	0.00	-	-	-	-	-
A-C	75.51	75.51	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.72	0.00	514.67	0.073	0.08	7.551	A
C-A	91.85	91.85	0.00	-	-	-	-	-
C-B	10.54	10.56	0.00	586.35	0.018	0.02	6.254	A
A-B	5.27	5.27	0.00	-	-	-	-	-
A-C	63.24	63.24	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Priory Rd Access - Sc2- post dev - design year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc2
Report generation date: 19/02/2019 13:42:40

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Des Year - Scenario 2									
Stream B-AC	0.12	8.11	0.11	A		0.04	6.86	0.04	A	
Stream C-A	-	-	-	-		-	-	-	-	
Stream C-B	0.01	6.33	0.01	A	A	0.04	6.65	0.04	A	A
Stream A-B	-	-	-	-		-	-	-	-	
Stream A-C	-	-	-	-		-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 2, AM " model duration: 08:00 - 09:30
"D2 - Scenario 2, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:42:39

File summary

File Description

Title	Farrankelly
Location	Priory Road/Development Access
Site Number	N/A
Date	13/02/2019
Version	
Status	(new file)
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	
Description	Priory Road Access will serve the South-western side of the proposed Farrankelly development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 2 - Post Dev - Des Year - Scenario 2, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 2 - Post Dev - Des Year	In Scenario 2 both the site accesses are open to the traffic. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, AM	Scenario 2	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Priory Road Junction	T-Junction	Two-way	A,B,C	7.89	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Priory Road		Major
B	Priory Road		Minor
C	Priory Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	49.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										49	49

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	504.721	0.092	0.232	0.146	0.332
1	B-C	638.395	0.098	0.247	-	-
1	C-B	602.340	0.233	0.233	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	100.00	100.000
B	ONE HOUR	✓	50.00	100.000
C	ONE HOUR	✓	143.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	7.000	93.000
	B	33.000	0.000	17.000
	C	136.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.07	0.93
	B	0.66	0.00	0.34
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	8.11	0.12	A
C-A	-	-	-	-
C-B	0.01	6.33	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.33	0.00	513.24	0.073	0.08	7.559	A
C-A	102.39	102.39	0.00	-	-	-	-	-
C-B	5.27	5.23	0.00	584.77	0.009	0.01	6.211	A
A-B	5.27	5.27	0.00	-	-	-	-	-
A-C	70.02	70.02	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.95	44.88	0.00	507.33	0.089	0.10	7.784	A
C-A	122.26	122.26	0.00	-	-	-	-	-
C-B	6.29	6.29	0.00	581.36	0.011	0.01	6.259	A
A-B	6.29	6.29	0.00	-	-	-	-	-
A-C	83.61	83.61	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	55.05	54.95	0.00	499.15	0.110	0.12	8.102	A
C-A	149.74	149.74	0.00	-	-	-	-	-
C-B	7.71	7.70	0.00	576.64	0.013	0.01	6.326	A
A-B	7.71	7.71	0.00	-	-	-	-	-
A-C	102.39	102.39	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	55.05	55.05	0.00	499.15	0.110	0.12	8.106	A
C-A	149.74	149.74	0.00	-	-	-	-	-
C-B	7.71	7.71	0.00	576.64	0.013	0.01	6.326	A
A-B	7.71	7.71	0.00	-	-	-	-	-
A-C	102.39	102.39	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.95	45.05	0.00	507.33	0.089	0.10	7.790	A
C-A	122.26	122.26	0.00	-	-	-	-	-
C-B	6.29	6.30	0.00	581.36	0.011	0.01	6.262	A
A-B	6.29	6.29	0.00	-	-	-	-	-
A-C	83.61	83.61	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.64	37.72	0.00	513.23	0.073	0.08	7.571	A
C-A	102.39	102.39	0.00	-	-	-	-	-
C-B	5.27	5.28	0.00	584.77	0.009	0.01	6.211	A
A-B	5.27	5.27	0.00	-	-	-	-	-
A-C	70.02	70.02	0.00	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.3.332 [14595,13/11/2013]

Filename: Site 2 - Sc1- post dev- base year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 13:49:02

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Base Year - Scenario 1									
Arm 1	0.32	2.31	0.24	A	A	0.57	2.91	0.36	A	A
Arm 2	0.83	4.09	0.46	A		0.65	3.90	0.40	A	
Arm 3	0.64	2.86	0.39	A		0.86	3.22	0.46	A	
Arm 4	0.44	3.93	0.31	A		0.77	5.41	0.44	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:49:01

File summary

File Description

Title	Farrankelly
Location	Kilcoole Roundabout
Site Number	2
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Kilcoole Roundabout is accessed from the north by Kilcoole Road, directly connected to Kilcoole Road access.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 1 - Post Dev - Base Year - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 1 - Post Dev - Base Year	In Scenario 1 only the Kilcoole Road access is open. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Site 2 - Kilcoole roundabout	Roundabout	1,2,3,4			3.29	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R774	
2	R761	
3	R774 - Farrankelly Road	
4	R761 - Kilcoole road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.30	8.40	12.10	35.70	66.00	23.00	
2	3.30	8.60	19.70	227.00	66.00	35.00	
3	6.80	8.20	10.90	101.90	66.00	35.00	
4	3.40	8.30	14.70	22.50	66.00	34.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.654	2424.151
2		(calculated)	(calculated)	0.566	1913.611
3		(calculated)	(calculated)	0.646	2412.866
4		(calculated)	(calculated)	0.528	1733.833

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	458.00	100.000
2	ONE HOUR	✓	670.00	100.000
3	ONE HOUR	✓	736.00	100.000
4	ONE HOUR	✓	365.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	116.000	293.000	49.000
	2	169.000	0.000	234.000	267.000
	3	346.000	175.000	27.000	188.000
	4	65.000	194.000	106.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.25	0.64	0.11
	2	0.25	0.00	0.35	0.40
	3	0.47	0.24	0.04	0.26
	4	0.18	0.53	0.29	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.24	2.31	0.32	A
2	0.46	4.09	0.83	A
3	0.39	2.86	0.64	A
4	0.31	3.93	0.44	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	344.81	344.06	376.79	0.00	2177.70	0.158	0.19	1.962	A
2	504.41	502.75	356.72	0.00	1711.64	0.295	0.42	2.974	A
3	554.10	552.74	363.97	0.00	2177.61	0.254	0.34	2.213	A
4	274.79	273.86	538.36	0.00	1449.56	0.190	0.23	3.057	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	411.73	411.53	450.93	0.00	2129.21	0.193	0.24	2.095	A
2	602.32	601.74	426.76	0.00	1671.98	0.360	0.56	3.362	A
3	661.65	661.22	435.61	0.00	2131.31	0.310	0.45	2.449	A
4	328.13	327.83	644.10	0.00	1393.73	0.235	0.31	3.377	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	504.27	503.93	552.07	0.00	2063.05	0.244	0.32	2.309	A
2	737.68	736.60	522.56	0.00	1617.74	0.456	0.83	4.080	A
3	810.35	809.58	533.25	0.00	2068.20	0.392	0.64	2.859	A
4	401.87	401.35	788.58	0.00	1317.44	0.305	0.44	3.928	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	504.27	504.26	552.71	0.00	2062.64	0.244	0.32	2.309	A
2	737.68	737.67	522.98	0.00	1617.50	0.456	0.83	4.091	A
3	810.35	810.34	533.99	0.00	2067.72	0.392	0.64	2.862	A
4	401.87	401.87	789.42	0.00	1316.99	0.305	0.44	3.933	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	411.73	412.06	451.92	0.00	2128.56	0.193	0.24	2.099	A
2	602.32	603.39	427.44	0.00	1671.60	0.360	0.57	3.375	A
3	661.65	662.41	436.74	0.00	2130.58	0.311	0.45	2.452	A
4	328.13	328.64	645.41	0.00	1393.04	0.236	0.31	3.385	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	344.81	345.01	378.30	0.00	2176.71	0.158	0.19	1.966	A
2	504.41	505.00	357.86	0.00	1710.99	0.295	0.42	2.985	A
3	554.10	554.54	365.54	0.00	2176.60	0.255	0.34	2.219	A
4	274.79	275.09	540.27	0.00	1448.55	0.190	0.24	3.070	A

Junctions 8

ARCADY 8 - Roundabout Module

Filename: Site 2 - Sc1- post dev-design year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 13:53:58

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenaio 1 - Post Dev - Base Year - Scenario 1									
Arm 1	0.38	2.44	0.28	A	A	0.72	3.26	0.42	A	A
Arm 2	1.09	4.78	0.52	A		0.88	4.57	0.47	A	
Arm 3	0.77	3.15	0.44	A		1.19	3.89	0.55	A	
Arm 4	0.51	4.27	0.34	A		0.95	6.36	0.49	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 13:53:57

File summary

File Description

Title	Farrankelly
Location	Kilcoole Roundabout
Site Number	2
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Kilcoole Roundabout is accessed from the north by Kilcoole Road, directly connected to Kilcoole Road access.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenaio 1 - Post Dev - Base Year - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenaio 1 - Post Dev - Base Year			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Site 2 - Kilcoole roundabout	Roundabout	1,2,3,4			3.68	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R774	
2	R761	
3	R774 - Farrankelly Road	
4	R761 - Kilcoole road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.30	8.40	12.10	35.70	66.00	23.00	
2	3.30	8.60	19.70	227.00	66.00	35.00	
3	6.80	8.20	10.90	101.90	66.00	35.00	
4	3.40	8.30	14.70	22.50	66.00	34.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.654	2424.151
2		(calculated)	(calculated)	0.566	1913.611
3		(calculated)	(calculated)	0.646	2412.866
4		(calculated)	(calculated)	0.528	1733.833

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	515.00	100.000
2	ONE HOUR	✓	753.00	100.000
3	ONE HOUR	✓	804.00	100.000
4	ONE HOUR	✓	396.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	131.000	332.000	52.000
	2	187.000	0.000	266.000	300.000
	3	388.000	175.000	31.000	210.000
	4	68.000	212.000	116.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.25	0.64	0.10
	2	0.25	0.00	0.35	0.40
	3	0.48	0.22	0.04	0.26
	4	0.17	0.54	0.29	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.44	0.38	A
2	0.52	4.78	1.09	A
3	0.44	3.15	0.77	A
4	0.34	4.27	0.51	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	387.72	386.85	400.75	0.00	2162.03	0.179	0.22	2.027	A
2	566.90	564.89	398.75	0.00	1687.84	0.336	0.50	3.200	A
3	605.29	603.73	404.40	0.00	2151.48	0.281	0.39	2.324	A
4	298.13	297.08	586.33	0.00	1424.24	0.209	0.26	3.191	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	462.97	462.73	479.63	0.00	2110.44	0.219	0.28	2.184	A
2	676.93	676.16	477.05	0.00	1643.51	0.412	0.70	3.717	A
3	722.78	722.25	484.03	0.00	2100.02	0.344	0.52	2.613	A
4	356.00	355.64	701.52	0.00	1363.41	0.261	0.35	3.572	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	567.03	566.61	587.16	0.00	2040.10	0.278	0.38	2.443	A
2	829.07	827.50	584.11	0.00	1582.90	0.524	1.09	4.756	A
3	885.22	884.24	592.39	0.00	2029.97	0.436	0.77	3.139	A
4	436.00	435.36	858.78	0.00	1280.37	0.341	0.51	4.258	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	567.03	567.02	587.94	0.00	2039.59	0.278	0.38	2.444	A
2	829.07	829.04	584.64	0.00	1582.60	0.524	1.09	4.777	A
3	885.22	885.21	593.43	0.00	2029.30	0.436	0.77	3.145	A
4	436.00	436.00	859.88	0.00	1279.79	0.341	0.51	4.266	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	462.97	463.38	480.83	0.00	2109.65	0.219	0.28	2.188	A
2	676.93	678.49	477.89	0.00	1643.04	0.412	0.71	3.737	A
3	722.78	723.75	485.60	0.00	2099.00	0.344	0.53	2.621	A
4	356.00	356.63	703.21	0.00	1362.52	0.261	0.36	3.583	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	387.72	387.97	402.46	0.00	2160.91	0.179	0.22	2.030	A
2	566.90	567.69	400.08	0.00	1687.09	0.336	0.51	3.220	A
3	605.29	605.83	406.32	0.00	2150.24	0.282	0.39	2.333	A
4	298.13	298.49	588.57	0.00	1423.05	0.210	0.27	3.204	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Site 4 - Sc1- post dev- base year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 14:02:10

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev - Base Year - Scenario 1									
Junction 1 - Arm 1	0.79	9.22	0.45	A	C	1.00	8.32	0.50	A	A
Junction 1 - Arm 2	1.03	8.20	0.51	A		1.69	11.32	0.63	B	
Junction 1 - Arm 3	7.11	28.52	0.89	D		0.25	4.10	0.20	A	
Junction 2 - Arm 1	0.75	5.00	0.43	A	B	0.21	3.51	0.18	A	A
Junction 2 - Arm 2	0.98	10.28	0.50	B		1.47	11.85	0.60	B	
Junction 2 - Arm 3	3.47	18.07	0.78	C		0.92	7.59	0.48	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 14:02:07

File summary

File Description

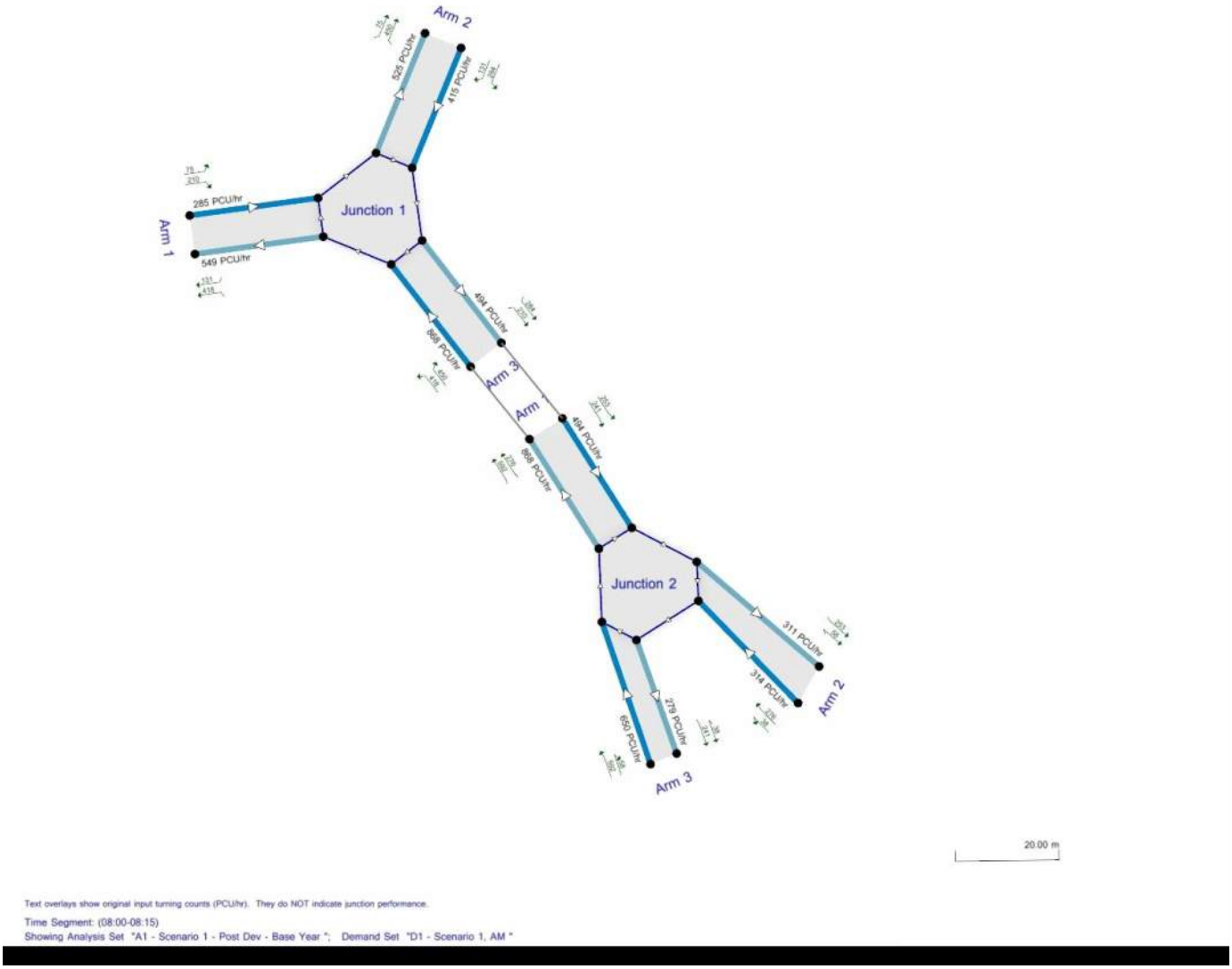
Title	Farrankelly
Location	Killincarrig Cross Roads
Site Number	4
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Killincarrig Cross Roadst is the greater affected roundabout by the proposed development. It will be accessed from the south by Kilcoole Road, directly connected to Kilcoole Road access.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Scenario 1 - Post Dev - Base Year - Scenario 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 1 - Post Dev - Base Year	In Scenario 1 only the Kilcoole Road access is open. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		Varies by Arm	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Northern Roundabout	Roundabout	1,2,3			19.63	C
2	Southern Roundabout	Roundabout	1,2,3			11.96	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1	1	R762	
1	2	R761 -North arm	
1	3	R761 -South arm	
2	1	R761	
2	2	R762 - Mil Road	
2	3	R761 - Kilcoole Road	

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	1	3.20	3.50	19.90	26.20	20.00	66.00	
1	2	3.10	4.20	5.50	39.84	20.00	71.00	
1	3	3.40	3.70	4.30	38.00	20.00	24.00	
2	1	3.30	4.20	7.90	63.95	18.00	15.00	
2	2	2.70	3.50	6.80	11.68	18.00	74.00	
2	3	3.10	3.60	5.06	42.60	18.00	31.00	

Pedestrian Crossings

Junction	Arm	Crossing Type
1	1	None
1	2	None
1	3	None
2	1	None
2	2	None
2	3	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	1		(calculated)	(calculated)	0.471	936.585
1	2		(calculated)	(calculated)	0.484	1007.806
1	3		(calculated)	(calculated)	0.565	1153.090
2	1		(calculated)	(calculated)	0.610	1302.511
2	2		(calculated)	(calculated)	0.422	807.777
2	3		(calculated)	(calculated)	0.544	1078.098

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	1	ONE HOUR	✓	285.00	100.000
1	2	ONE HOUR	✓	415.00	100.000
1	3	Linked Arm		N/A	
2	1	Linked Arm		N/A	
2	2	ONE HOUR	✓	314.00	100.000
2	3	ONE HOUR	✓	650.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	3	2	1	Simple (vertical queueing)	Normal	0.00	100.00	
2	1	1	3	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	75.000	210.000
	2	131.000	0.000	284.000
	3	418.000	450.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.26	0.74
	2	0.32	0.00	0.68
	3	0.48	0.52	0.00

Turning Counts or Proportions (PCU/hr) - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.000	253.000	241.000
	2	276.000	0.000	38.000
	3	592.000	58.000	0.000

Turning Proportions (PCU) - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.00	0.51	0.49
	2	0.88	0.00	0.12
	3	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

Average PCU Per Vehicle - Junction 2 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.45	9.22	0.79	A
1	2	0.51	8.20	1.03	A
1	3	0.89	28.52	7.11	D
2	1	0.43	5.00	0.75	A
2	2	0.50	10.28	0.98	B
2	3	0.78	18.07	3.47	C

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	214.56	213.06	333.09	0.00	779.64	0.275	0.38	6.337	A
1	2	312.43	310.44	156.99	0.00	931.75	0.335	0.50	5.775	A
1	3	648.14	642.50	97.99	0.00	1097.70	0.590	1.41	7.816	A
2	1	369.43	367.81	43.31	0.00	1276.10	0.290	0.40	3.956	A
2	2	236.40	234.51	179.44	0.00	732.09	0.323	0.47	7.207	A
2	3	489.35	485.32	206.13	0.00	966.06	0.507	1.01	7.431	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	256.21	255.65	401.07	0.00	747.60	0.343	0.52	7.310	A
1	2	373.08	372.36	188.38	0.00	916.54	0.407	0.68	6.607	A
1	3	777.63	773.62	117.54	0.00	1086.66	0.716	2.41	11.350	B
2	1	443.20	442.69	51.94	0.00	1270.84	0.349	0.53	4.344	A
2	2	282.28	281.60	215.97	0.00	716.68	0.394	0.64	8.261	A
2	3	584.34	582.04	247.52	0.00	943.56	0.619	1.58	9.894	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	313.79	312.73	483.57	0.00	708.73	0.443	0.78	9.066	A
1	2	456.92	455.55	230.43	0.00	896.17	0.510	1.02	8.144	A
1	3	948.16	932.75	143.80	0.00	1071.81	0.885	6.27	23.599	C
2	1	542.18	541.33	63.23	0.00	1263.95	0.429	0.74	4.975	A
2	2	345.72	344.42	264.09	0.00	696.38	0.496	0.97	10.189	B
2	3	715.66	708.65	302.74	0.00	913.54	0.783	3.34	17.001	C

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	313.79	313.73	493.44	0.00	704.08	0.446	0.79	9.219	A
1	2	456.92	456.89	231.17	0.00	895.81	0.510	1.03	8.200	A
1	3	955.15	951.79	144.22	0.00	1071.58	0.891	7.11	28.522	D
2	1	543.84	543.81	63.81	0.00	1263.60	0.430	0.75	5.001	A
2	2	345.72	345.68	265.30	0.00	695.87	0.497	0.98	10.276	B
2	3	715.66	715.12	303.84	0.00	912.94	0.784	3.47	18.067	C

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	256.21	257.24	417.51	0.00	739.86	0.346	0.54	7.477	A
1	2	373.08	374.42	189.55	0.00	915.97	0.407	0.70	6.663	A
1	3	787.96	805.33	118.19	0.00	1086.29	0.725	2.77	13.529	B
2	1	445.78	446.60	52.78	0.00	1270.33	0.351	0.54	4.374	A
2	2	282.28	283.54	217.88	0.00	715.88	0.394	0.66	8.352	A
2	3	584.34	591.51	249.23	0.00	942.63	0.620	1.68	10.453	B

Main results: (09:15-09:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	214.56	215.16	342.88	0.00	775.02	0.277	0.39	6.438	A
1	2	312.43	313.18	158.54	0.00	931.00	0.336	0.51	5.833	A
1	3	656.40	661.37	98.86	0.00	1097.22	0.598	1.52	8.352	A
2	1	372.86	373.37	43.89	0.00	1275.75	0.292	0.42	3.991	A
2	2	236.40	237.10	182.15	0.00	730.94	0.323	0.48	7.299	A
2	3	489.35	491.88	208.41	0.00	964.82	0.507	1.05	7.651	A

Junctions 8

ARCADY 8 - Roundabout Module

Filename: Site 4 - Sc1- post dev- design year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc1
Report generation date: 19/02/2019 14:09:44

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 1 - Post Dev Design Year - Scenario 1									
Junction 1 - Arm 1	1.05	10.81	0.52	B	E	1.19	9.12	0.55	A	B
Junction 1 - Arm 2	1.39	9.84	0.59	A		2.27	13.97	0.70	B	
Junction 1 - Arm 3	20.64	70.79	1.00	F		0.25	4.13	0.20	A	
Junction 2 - Arm 1	0.94	5.55	0.49	A	C	0.22	3.53	0.18	A	A
Junction 2 - Arm 2	1.31	12.27	0.57	B		1.80	13.45	0.65	B	
Junction 2 - Arm 3	6.38	31.21	0.88	D		1.32	9.46	0.57	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM " model duration: 08:00 - 09:30
"D2 - Scenario 1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 14:09:42

File summary

File Description

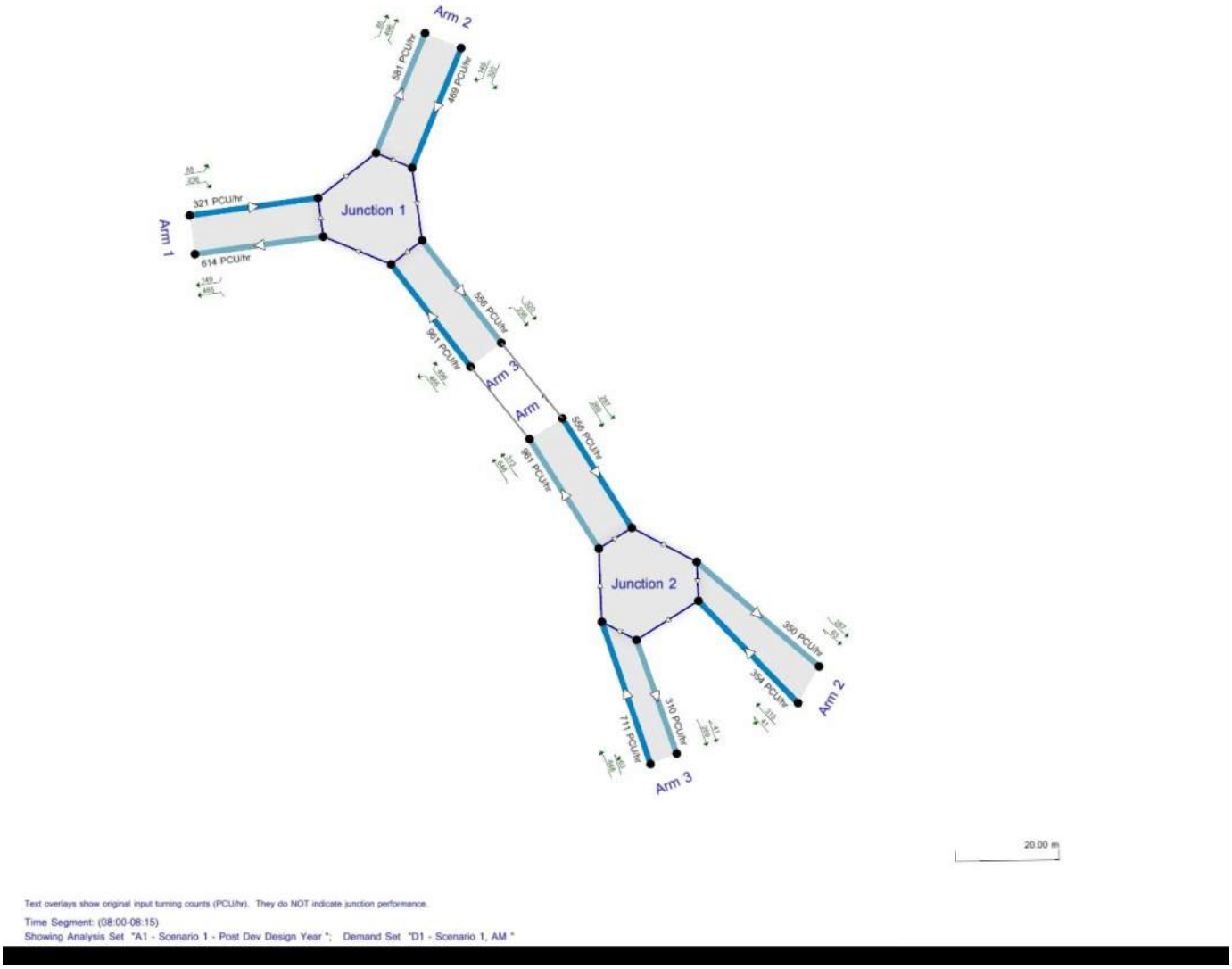
Title	Farrankelly
Location	Killincarrig Cross Roads
Site Number	4
Date	13/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Killincarrig Cross Roads is the greater affected roundabout by the proposed development. It will be accessed from the south by Kilcoole Road, directly connected to Kilcoole Road access.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

Scenario 1 - Post Dev Design Year - Scenario 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 3	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 1	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 1 - Post Dev Design Year	In Scenario 1 only the Kilcoole Road access is open. The year considered is the base year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		Varies by Arm	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	North Roundabout	Roundabout	1,2,3			43.45	E
2	South Roundabout	Roundabout	1,2,3			18.28	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1	1	R762	
1	2	R761 -North arm	
1	3	R761 -South arm	
2	1	R761	
2	2	R762 - Mil Road	
2	3	R761 - Kilcoole Road	

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	1	3.20	3.50	19.90	26.20	20.00	66.00	
1	2	3.10	4.20	5.50	39.84	20.00	71.00	
1	3	3.40	3.70	4.30	38.00	20.00	24.00	
2	1	3.30	4.20	7.90	63.95	18.00	15.00	
2	2	2.70	3.50	6.80	11.68	18.00	74.00	
2	3	3.10	3.60	5.06	42.60	18.00	31.00	

Pedestrian Crossings

Junction	Arm	Crossing Type
1	1	None
1	2	None
1	3	None
2	1	None
2	2	None
2	3	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	1		(calculated)	(calculated)	0.471	936.585
1	2		(calculated)	(calculated)	0.484	1007.806
1	3		(calculated)	(calculated)	0.565	1153.090
2	1		(calculated)	(calculated)	0.610	1302.511
2	2		(calculated)	(calculated)	0.422	807.777
2	3		(calculated)	(calculated)	0.544	1078.098

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	1	ONE HOUR	✓	321.00	100.000
1	2	ONE HOUR	✓	469.00	100.000
1	3	Linked Arm		N/A	
2	1	Linked Arm		N/A	
2	2	ONE HOUR	✓	354.00	100.000
2	3	ONE HOUR	✓	711.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	3	2	1	Simple (vertical queueing)	Normal	0.00	100.00	
2	1	1	3	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	85.000	236.000
	2	149.000	0.000	320.000
	3	465.000	496.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.26	0.74
	2	0.32	0.00	0.68
	3	0.48	0.52	0.00

Turning Counts or Proportions (PCU/hr) - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.000	287.000	269.000
	2	313.000	0.000	41.000
	3	648.000	63.000	0.000

Turning Proportions (PCU) - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.88	0.00	0.12
	3	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

Average PCU Per Vehicle - Junction 2 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.52	10.81	1.05	B
1	2	0.59	9.84	1.39	A
1	3	1.00	70.79	20.64	F
2	1	0.49	5.55	0.94	A
2	2	0.57	12.27	1.31	B
2	3	0.88	31.21	6.38	D

Main Results for each time segment

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	241.67	239.84	366.15	0.00	764.06	0.316	0.46	6.844	A
1	2	353.09	350.63	176.33	0.00	922.38	0.383	0.61	6.271	A
1	3	716.86	709.41	111.40	0.00	1090.13	0.658	1.86	9.284	A
2	1	415.57	413.64	46.98	0.00	1273.86	0.326	0.48	4.176	A
2	2	266.51	264.21	200.13	0.00	723.36	0.368	0.58	7.802	A
2	3	535.28	530.24	233.61	0.00	951.12	0.563	1.26	8.457	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	288.57	287.82	440.12	0.00	729.20	0.396	0.65	8.142	A
1	2	421.62	420.64	211.61	0.00	905.29	0.466	0.86	7.413	A
1	3	859.89	852.73	133.64	0.00	1077.56	0.798	3.65	15.522	C
2	1	498.61	497.96	56.32	0.00	1268.17	0.393	0.64	4.670	A
2	2	318.24	317.32	240.92	0.00	706.16	0.451	0.81	9.236	A
2	3	639.17	635.65	280.57	0.00	925.60	0.691	2.14	12.263	B

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	353.43	351.94	516.81	0.00	693.07	0.510	1.02	10.505	B
1	2	516.38	514.31	258.75	0.00	882.45	0.585	1.38	9.721	A
1	3	1043.02	1001.33	163.39	0.00	1060.74	0.983	14.07	43.434	E
2	1	609.66	608.53	68.07	0.00	1261.01	0.483	0.93	5.509	A
2	2	389.76	387.83	294.42	0.00	683.59	0.570	1.29	12.090	B
2	3	782.83	768.17	342.92	0.00	891.71	0.878	5.81	26.442	D

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	353.43	353.31	531.42	0.00	686.18	0.515	1.05	10.807	B
1	2	516.38	516.31	259.76	0.00	881.96	0.585	1.39	9.841	A
1	3	1055.91	1029.63	164.03	0.00	1060.38	0.996	20.64	70.793	F
2	1	612.03	611.99	69.16	0.00	1260.34	0.486	0.94	5.552	A
2	2	389.76	389.68	296.09	0.00	682.89	0.571	1.31	12.268	B
2	3	782.83	780.52	344.55	0.00	890.82	0.879	6.38	31.213	D

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	288.57	289.96	486.56	0.00	707.32	0.408	0.70	8.655	A
1	2	421.62	423.65	213.18	0.00	904.53	0.466	0.89	7.519	A
1	3	880.32	942.70	134.59	0.00	1077.02	0.817	5.05	34.174	D
2	1	502.23	503.33	58.07	0.00	1267.10	0.396	0.66	4.719	A
2	2	318.24	320.12	243.52	0.00	705.06	0.451	0.84	9.399	A
2	3	639.17	655.34	283.05	0.00	924.25	0.692	2.34	14.116	B

Main results: (09:15-09:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1	241.67	242.57	381.91	0.00	756.63	0.319	0.47	7.017	A
1	2	353.09	354.12	178.34	0.00	921.41	0.383	0.63	6.356	A
1	3	728.08	739.95	112.50	0.00	1089.50	0.668	2.08	10.627	B
2	1	419.95	420.62	47.79	0.00	1273.37	0.330	0.50	4.224	A
2	2	266.51	267.49	203.50	0.00	721.94	0.369	0.59	7.940	A
2	3	535.28	539.36	236.51	0.00	949.54	0.564	1.32	8.861	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Site 6 - Sc2- post dev - base year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc2
Report generation date: 19/02/2019 14:40:28

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2									
Arm 1	0.07	3.99	0.07	A	A	0.11	3.84	0.10	A	A
Arm 2	0.10	4.46	0.09	A		0.19	4.60	0.16	A	
Arm 3	0.13	4.58	0.11	A		0.15	4.87	0.13	A	
Arm 4	0.25	3.72	0.20	A		0.08	3.22	0.07	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 2, AM " model duration: 08:00 - 09:30
"D2 - Scenario 2, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 14:40:28

File summary

File Description

Title	Farrankelly
Location	Eden Gate roundabout
Site Number	
Date	14/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Eden gate roundabout is going to be affected in Scenario 2 by the opening of Priory Road access. It will be accessed from the north and the year considered for the analysis is the base year post development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 2 - Post Dev - Base Year - Scenario 2, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 2 - Post Dev - Base Year	In Scenario 2 both the site accesses are open to the traffic. The year considered is the design year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, AM	Scenario 2	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Eden Gate roundabout	Roundabout	1,2,3,4			4.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eden Centre access	
2	Eden Gate south	
3	L52027 - Priory Road	
4	Eden Gate north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.20	4.20	4.20	15.90	14.00	36.00	
2	3.00	3.50	2.10	33.00	14.00	48.00	
3	2.40	5.20	5.35	18.90	14.00	63.00	
4	3.70	4.20	3.10	29.80	14.00	24.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.532	1103.411
2		(calculated)	(calculated)	0.498	952.007
3		(calculated)	(calculated)	0.468	921.822
4		(calculated)	(calculated)	0.588	1266.083

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	61.00	100.000
2	ONE HOUR	✓	76.00	100.000
3	ONE HOUR	✓	92.00	100.000
4	ONE HOUR	✓	217.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	38.000	19.000	4.000
	2	40.000	0.000	12.000	24.000
	3	31.000	20.000	0.000	41.000
	4	8.000	120.000	89.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.62	0.31	0.07
	2	0.53	0.00	0.16	0.32
	3	0.34	0.22	0.00	0.45
	4	0.04	0.55	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.07	3.99	0.07	A
2	0.09	4.46	0.10	A
3	0.11	4.58	0.13	A
4	0.20	3.72	0.25	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	45.92	45.73	171.74	0.00	1012.02	0.045	0.05	3.725	A
2	57.22	56.95	84.00	0.00	910.20	0.063	0.07	4.218	A
3	69.26	68.93	50.96	0.00	897.97	0.077	0.08	4.339	A
4	163.37	162.76	68.18	0.00	1226.00	0.133	0.15	3.384	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	54.84	54.79	205.71	0.00	993.95	0.055	0.06	3.832	A
2	68.32	68.26	100.61	0.00	901.94	0.076	0.08	4.318	A
3	82.71	82.63	61.08	0.00	893.23	0.093	0.10	4.441	A
4	195.08	194.93	81.74	0.00	1218.03	0.160	0.19	3.518	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	67.16	67.10	251.90	0.00	969.37	0.069	0.07	3.989	A
2	83.68	83.59	123.20	0.00	890.69	0.094	0.10	4.460	A
3	101.29	101.19	74.79	0.00	886.81	0.114	0.13	4.582	A
4	238.92	238.70	100.09	0.00	1207.24	0.198	0.25	3.716	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	67.16	67.16	252.13	0.00	969.25	0.069	0.07	3.990	A
2	83.68	83.68	123.31	0.00	890.64	0.094	0.10	4.460	A
3	101.29	101.29	74.87	0.00	886.77	0.114	0.13	4.582	A
4	238.92	238.92	100.19	0.00	1207.18	0.198	0.25	3.717	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	54.84	54.90	206.10	0.00	993.74	0.055	0.06	3.836	A
2	68.32	68.41	100.80	0.00	901.84	0.076	0.08	4.319	A
3	82.71	82.81	61.21	0.00	893.17	0.093	0.10	4.444	A
4	195.08	195.30	81.91	0.00	1217.93	0.160	0.19	3.522	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	45.92	45.97	172.56	0.00	1011.59	0.045	0.05	3.727	A
2	57.22	57.28	84.40	0.00	910.00	0.063	0.07	4.221	A
3	69.26	69.34	51.25	0.00	897.83	0.077	0.08	4.345	A
4	163.37	163.52	68.58	0.00	1225.76	0.133	0.15	3.391	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.3.332 [14595,13/11/2013]

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Filename: Site 6 - Sc2- post dev - design year.arc8
Path: P:\Proj\2016\16146\16146-14-CALCS\Traffic\Farrankelly Additional Site\Junctions 8 Calculations\All developments considered\Picady & Arcady analysis\Post Development Sc2
Report generation date: 19/02/2019 14:43:06

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS
	Scenario 2 - Post Dev - Base Year - Scenario 2									
Arm 1	0.08	4.09	0.08	A	A	0.12	3.92	0.11	A	A
Arm 2	0.12	4.58	0.11	A		0.22	4.74	0.18	A	
Arm 3	0.15	4.68	0.13	A		0.18	5.04	0.15	A	
Arm 4	0.29	3.86	0.22	A		0.10	3.31	0.09	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 2, AM " model duration: 08:00 - 09:30
"D2 - Scenario 2, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.3.332 at 19/02/2019 14:43:06

File summary

File Description

Title	Farrankelly
Location	Eden Gate roundabout
Site Number	
Date	14/02/2019
Version	
Status	
Identifier	
Client	Cairn
Jobnumber	16.146
Enumerator	EL
Description	Eden gate roundabout is going to be affected in Scenario 2 by the opening of Priory Road access. It will be accessed from the north and the year considered for the analysis is the base year post development.

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Scenario 2 - Post Dev - Base Year - Scenario 2, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Scenario 2 - Post Dev - Base Year	In Scenario 2 both the site accesses are open to the traffic. The year considered is the design year post development.		100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 2, AM	Scenario 2	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Eden Gate roundabout	Roundabout	1,2,3,4			4.18	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eden Centre access	
2	Eden Gate south	
3	L52027 - Priory Road	
4	Eden Gate north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.20	4.20	4.20	15.90	14.00	36.00	
2	3.00	3.50	2.10	33.00	14.00	48.00	
3	2.40	5.20	5.35	18.90	14.00	63.00	
4	3.70	4.20	3.10	29.80	14.00	24.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.532	1103.411
2		(calculated)	(calculated)	0.498	952.007
3		(calculated)	(calculated)	0.468	921.822
4		(calculated)	(calculated)	0.588	1266.083

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	67.00	100.000
2	ONE HOUR	✓	88.00	100.000
3	ONE HOUR	✓	102.00	100.000
4	ONE HOUR	✓	244.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	42.000	20.000	5.000
	2	45.000	0.000	16.000	27.000
	3	35.000	21.000	0.000	46.000
	4	9.000	135.000	100.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.63	0.30	0.07
	2	0.51	0.00	0.18	0.31
	3	0.34	0.21	0.00	0.45
	4	0.04	0.55	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.08	4.09	0.08	A
2	0.11	4.58	0.12	A
3	0.13	4.68	0.15	A
4	0.22	3.86	0.29	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	50.44	50.23	191.97	0.00	1001.26	0.050	0.05	3.785	A
2	66.25	65.94	93.74	0.00	905.35	0.073	0.08	4.288	A
3	76.79	76.42	57.70	0.00	894.81	0.086	0.09	4.397	A
4	183.70	182.99	75.67	0.00	1221.59	0.150	0.18	3.464	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	60.23	60.18	229.95	0.00	981.05	0.061	0.07	3.909	A
2	79.11	79.04	112.28	0.00	896.13	0.088	0.10	4.405	A
3	91.70	91.61	69.16	0.00	889.45	0.103	0.11	4.512	A
4	219.35	219.18	90.71	0.00	1212.75	0.181	0.22	3.623	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	73.77	73.70	281.58	0.00	953.58	0.077	0.08	4.091	A
2	96.89	96.79	137.49	0.00	883.58	0.110	0.12	4.575	A
3	112.30	112.18	84.69	0.00	882.18	0.127	0.15	4.675	A
4	268.65	268.38	111.08	0.00	1200.78	0.224	0.29	3.860	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	73.77	73.77	281.86	0.00	953.43	0.077	0.08	4.092	A
2	96.89	96.89	137.63	0.00	883.51	0.110	0.12	4.576	A
3	112.30	112.30	84.78	0.00	882.13	0.127	0.15	4.675	A
4	268.65	268.65	111.20	0.00	1200.71	0.224	0.29	3.862	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	60.23	60.30	230.42	0.00	980.80	0.061	0.07	3.910	A
2	79.11	79.21	112.51	0.00	896.01	0.088	0.10	4.407	A
3	91.70	91.82	69.31	0.00	889.37	0.103	0.12	4.515	A
4	219.35	219.61	90.91	0.00	1212.63	0.181	0.22	3.628	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	50.44	50.49	192.92	0.00	1000.76	0.050	0.05	3.787	A
2	66.25	66.32	94.20	0.00	905.13	0.073	0.08	4.291	A
3	76.79	76.88	58.03	0.00	894.65	0.086	0.09	4.402	A
4	183.70	183.87	76.12	0.00	1221.33	0.150	0.18	3.469	A