

GREVATT'S LANE, YAPTON

TRANSPORT STATEMENT

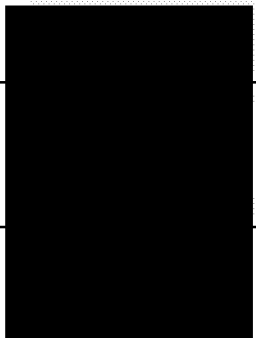
February 2019

Landlink Estates

CREMATORIUM DEVELOPMENT
GREAVTTS LANE
YAPTON

TRANSPORT STATEMENT

CONTROLLED DOCUMENT

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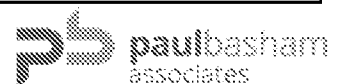
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**CREMATORIUM DEVELOPMENT
GREVATT'S LANE
YAPTON**

TRANSPORT STATEMENT

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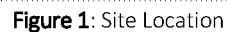
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1.1 This Transport Statement (TS) has been prepared by Paul Basham Associates on behalf of Landlink Estates to support a full planning application for the development of a crematorium on land off Grevatt's Lane West, Yapton. The site location is shown below in **Figure 1**.



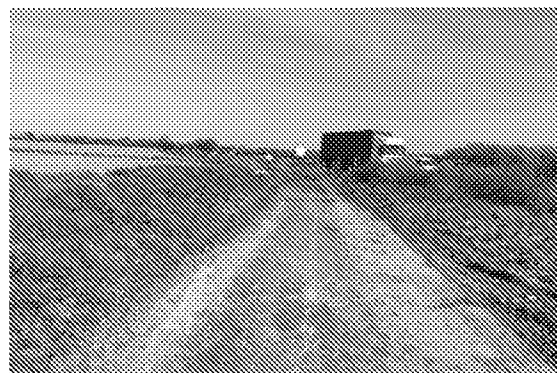
- 1.2 The site is located approximately 300m from the eastern boundary of the village of Bilsham, 1km to the south of Yapton, circa 1.5km to the north of Middleton-on-Sea and c.5km to the east of Bognor Regis. The site comprises of agricultural land which is accessed from Grevatt's Lane West. This application proposes the development of a single chapel with single cremator. The chapel would have a Gross Floor Area (GFA) of 740sqm. The proposed site layout is attached as **Appendix A**.
- 1.3 The scope of this TS has been informed by pre-application discussions with West Sussex County Council's (WSCC) highway officers in November 2018. During discussions with WSCC's highways officers the principle of development in this location was discussed along with access, trip generation, pedestrian connection and parking. The feedback received from WSCC is attached as **Appendix B**.
- 1.4 Accordingly, this TS will discuss existing conditions, site accessibility, development proposals, trip generation, access arrangements, servicing arrangements, parking provision and highway impact before drawing conclusions from this assessment.

2. EXISTING CONDITIONS AND SITE ACCESSIBILITY

- 2.1 As previously described, the site is located approximately 1km to the south of Yapton, circa 1.5km to the north of Middleton-on-Sea and c.5km to the east of Bognor Regis. The site is bordered by agricultural land on all sides. The site currently comprises agricultural land, which is accessed via Grevatt's Lane West to the south, and the wider agricultural land via Bilsham Road to the west.
- 2.2 Grevatt's Lane West connects in the west to Bilsham Road (B2132) and also continues 400m to the east where it terminates. At present no connection is provided onto the A259 (Grevatt's Lane). Access into the site from Bilsham Road is controlled through a field gate to the immediate east of the side access into 'RSD Cars Service'. A track of c.3m wide then continues to the east and facilitates access into the site (**Photograph 1**). A further gated access is provided to the eastern section of Grevatt's Lane West onto the A259 Grevatt's Lane. Although the access to the A259 is currently restricted by a gate, there is no formal order removing highway rights, access to the A259 remains extant (**Photograph 2**).



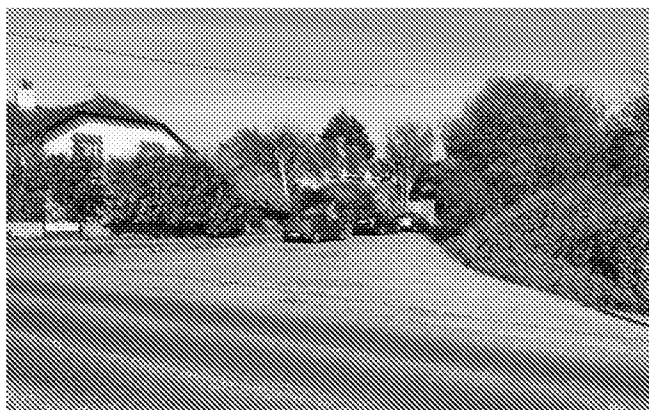
Photograph 1: Access Track on Grevatt's Lane West



Photograph 2: Gated Access onto A2599 Grevatt's Lane

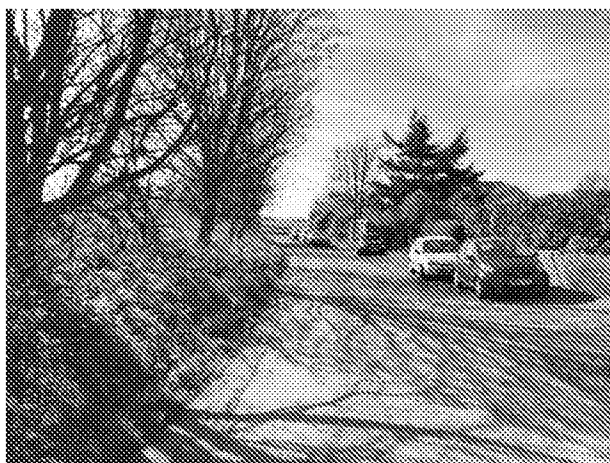
Bilsham Road

- 2.3 To the west Grevatt's Lane West connects to Bilsham Road (B2132) through a priority junction. This junction is currently designed to accommodate larger vehicles associated with the agricultural uses on-site and in the surrounding area with large radii to allow for turning onto/from Bilsham Road (as shown in **Photograph 3**). For the first c.18m the access has a minimum width of 6m. The existing junction onto Bilsham Road (B2132) is demonstrated in **Photograph 3**.



Photograph 3: Grevatt's Lane West / Bilsham Road Junction

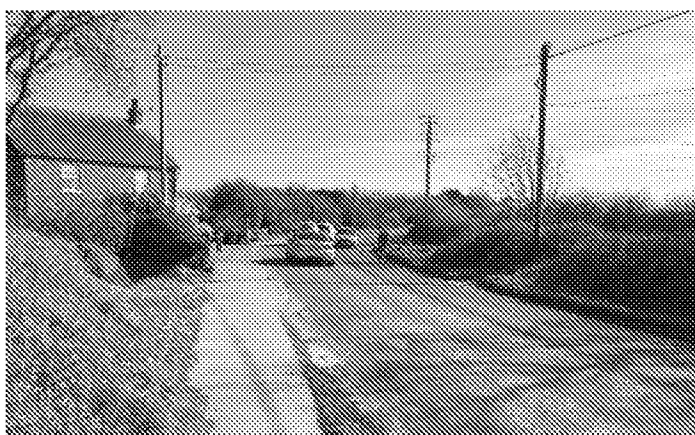
- 2.4 At its western extent Grevatt's Lane West provides access to three residential dwellings and 'RSD Cars Service'. Whilst on-site vehicles were observed to be parked on the verges of Grevatt's Lane West, all residential properties and existing uses on Grevatt's Lane are provided with driveways and off-street parking (see **Photograph 4**). It is therefore considered likely that residents park on the roadside as a result of convenience rather than necessity.



Photograph 4: On Street Parking on Grevatt's Lane West

- 2.5 No formal pedestrian infrastructure is in place along Grevatt's Lane West, with the carriageway acting as an informal shared surface. This is typical of rural locations and likely due the fact that Grevatt's Lane West currently provides access to a small number of residential dwellings and agricultural land, with low vehicle volume and speed.
- 2.6 Bilsham Road runs north to south and measures c.6m wide and providing access into Yapton to the north and the A259 to the south through the 'Comet Corner' right turn lane junction (approximately 500m to the south)

- 2.7 The site is considered to be ideally located in relation to the strategic network, with the A259 facilitating access into surrounding centres such as Chichester, Portsmouth, Worthing and Bognor Regis.
- 2.8 Bilsham Road (B2132) benefits from a continuous footway along the eastern edge of the carriageway south of the Grevatt's Lane West junction. A small section of footway is also provided on the western edge on Bilsham Road to the south, towards 'Comet Corner'. The footways along Bilsham Road provide access to numerous bus stops and residential properties. A formal pedestrian crossing point is located on the A259 which allows pedestrians safe access when travelling into Middleton-on-Sea and surrounding residential areas. The existing conditions on Bilsham Road for pedestrians are shown in **Photograph 5**.



Photograph 5: Conditions on Bilsham Road

A259 Grevatt's Lane

- 2.9 The A259 Grevatt's Lane borders the site to the east and provides a distributor road into Bognor Regis to the west and Littlehampton to the east. The carriageway of the A259 measures c.7m wide and is subject to a derestricted speed limit.
- 2.10 To confirm existing conditions on the A259 a 7 day ATC survey was undertaken in the vicinity of the proposed access location. The surveys were undertaken from the 9th–16th September 2018, during school term time. The results confirm 85th percentile speeds of 52mph eastbound and 54mph westbound and 5-day average flows of 18,627 westbound and 10,851 eastbound. The results of the ATC surveys are included as **Appendix C**.
- 2.11 Works have recently been undertaken by WSCC on the A259 to provide a safer and more direct route for pedestrian and cyclists travelling between Bognor Regis and Littlehampton. This route takes the form of a 3m wide footway/cycleway which runs along the northern/western edge of the A259. The route to Littlehampton and Bognor Regis is supported by formalised crossing points.

- 2.12 This route forms part of National Cycle Network (NCN) route 2 and further enhances the site's connectivity by sustainable modes. Whilst cycling/walking may not be a viable mode for visitors from further afield, it would be feasible and convenient for members of staff who are likely to live in the local area. The location of NCN route 2 in context to the site is shown in **Figure 2**.



Figure 2: NCN Route 2

Local Bus Network

- 2.13 The closest bus stops to the site are located along Bilsham Road, c.20m south of the junction between Grevatt's Lane West and Bilsham Road. These bus stops facilitate travel onto Chichester and Littlehampton. The 700 Coastline bus service operates from these stops every 20 minutes Monday to Friday and Sundays and every 10 minutes on Saturdays. Journeys into Chichester last approximately 35 minutes and journeys into Littlehampton last approximately 11 minutes.



Photograph 6: Bus Stops on Bilsham Road

Local Rail Network

- 2.14 The closest rail station to the site is Littlehampton. Littlehampton Rail Station is accessible via a 20 minute cycle on NCN route 2 or a 14 minute bus journey on the 700 Coastliner service. The station is facilitated by 82 cycle storage spaces, a car park, taxi services, ticket machines, CCTV, waiting rooms, step free access and customer help points. Services from Littlehampton operate to Bognor Regis, Haywards Heath, Portsmouth & Southsea and London Victoria (via Worthing and Hove) once an hour on average.

Summary

- 2.15 The site is located within an accessible location with short walking and cycling times to local public transport services and excellent links to the wider strategic network. Whilst it may not be possible, given the proposed nature of the site, for all visitors to travel by sustainable modes it would be suitable for members of staff and visitors in the local area to travel via modes such as walking, cycling and public transport.

Personal Injury Accident Data

- 2.16 To assess the existing safety conditions on the surrounding highway network Personal Injury Accident (PIA) data has been obtained from the Sussex Safer Roads Partnership for a period of 5 years from 2013 to 2018.
- 2.17 This data indicates that there has been one slight incident, in 2013, c.60m to the west of the proposed access location onto the A259.
- 2.18 Given that the A259 is subject to flows of at least 10,000 vehicles per day, it is not considered that this accident indicates a significant existing highways safety concern which would be exacerbated by the proposed development.

3. DEVELOPMENT PROPOSALS

- 3.1 The proposed development will consist of a single chapel crematorium with a single cremator, associated gardens and a car parking area. The chapel would provide c.126 seats. The proposed site layout is attached as **Appendix A**.

Operation

- 3.2 The site is anticipated to operate between 09:00 and 17:00 Monday to Friday and potential for weekend operation. Services are anticipated to last approximately 1-hour. This equates to a maximum of 8 services a day, equating to up to 40 services a week.
- 3.3 It is anticipated that the site would be staffed Monday to Fridays only, with staff on-site during the weekend as required. The site is anticipated to have 5 full time staff members, with infrequent visits to site undertaken by maintenance personnel and gardeners.

Access Arrangements

- 3.1 As previously described, the existing site is accessed onto Grevatt's Lane West via a gated access. At current no connection is made onto the A259 from Grevatt's Lane West.
- 3.2 The site proposes the creation of a new right turn lane junction onto the A259 by utilising the existing field gate location at the point where Grevatt's Lane West terminates to the east. The site itself would be accessed directly from the Grevatt's Lane West carriageway before running approximately 300m east and connecting to the A259. A bellmouth access would be provided on Grevatt's Lane West directly into the site. This access would have geometries of 8.4m wide with radii of 8m.
- 3.3 It has been noted through pre-application discussions with WSCC highways officers that the development would form a connection between the A259 and Bilsham Road. Whilst the connection from the site onto Bilsham Road has been closed off for many years and accessible only to agricultural vehicles through the existing field gate, precautionary design measures have been undertaken to discourage 'rat running' between the Bilsham Road/Grevatt's Lane West junction and the new proposed junction to the east onto the A259.



- 3.4 At the entrance to the site from Grevatt's Lane West a build out is proposed on the western side of the site access. This will physically restrict right turn manoeuvres and would naturally guide vehicles to turn right 'in' and left 'out'. In addition to this, it is proposed that a bollard would be provided adjacent to the build out to prevent unauthorised vehicles from travelling west towards Bilsham Rod and vice versa. A bollard would also be provided in the centre of the Grevatts Lane West carriageway to the west of the site in the place of the existing gate. The proposed access design is shown on the site layout attached as **Appendix D**. Signage would also be provided at the site access to promote the right 'in' and left 'out' arrangement. This would be confirmed through the detailed design phase.
- 3.5 It is proposed that the existing carriageway of Grevatt's Lane West would be widened within the highway boundary by c.1.8m to provide a continuous width of 4.8m. In line with Manual for Streets (MfS) guidance 4.8m wide is sufficient to allow a large vehicle and car to pass concurrently. This arrangement would improve existing conditions on Grevatt's Lane West and would ensure that vehicles accessing the proposed development and the neighbouring agricultural land could pass one another concurrently. The proposed widening scheme is attached as **Appendix D**.
- 3.6 Approximately 10m to the west of the site access, Grevatt's Lane West would taper to the existing carriageway width of circa 3m. This would further discourage the use of the connection to Bilsham Road, by vehicles associated with the development.
- 3.7 The connection between the A259 and Grevatt's Lane West would be re-established in the form of a right turn lane junction on the A259. The proposed general arrangement drawing for this access is attached as **Appendix E** and is considered to be in line with DMRB guidance. The right turn lane would have a width of 3.5m, which results in the carriageway of the A259 being widened to the south to provide a 3.65m wide through lane.
- 3.8 Approximately 36m to the west of the connection onto the A259 it is proposed that the access road (Grevatt's Lane West) would decrease from 7.3m wide to a width of 4.8m, shown in **Appendix D**.
- 3.9 Given that a newly constructed footway/cycleway runs along the proposed access location (NCN Route 2), it is proposed that a crossing point would be provided across the access to allow cyclists and pedestrians to continue along this route safely.
- 3.10 Tracking has been undertaken of the site access using an articulated vehicle (max legal length) and is attached as **Appendix E**. It is anticipated that an articulated vehicle would only require access to the site during the construction period.

- 3.11 In accordance with 85th percentile speeds of 52mph eastbound and 54mph on the A259 Grevatt's Lane, visibility splays of 4.5m x 159.1m eastbound and 4.5m x 169.5m westbound are achievable at the proposed junction at Grevatt's Lane West and the A259. Visibility splays at the access are demonstrated in **Appendix E**.

Stage 1 Road Safety Audit

- 3.12 In accordance with WSCC's guidance, the proposed connection on the A259 has been subject to a Stage 1 Road Safety Audit. This was undertaken by an external and independent Road Safety Auditor. To inform the Road Safety Audit a brief was provided to the audit team. A copy of the brief is attached as **Appendix F** for reference.
- 3.13 The Road Safety Audit did not raise any concerns and is attached in **Appendix F**.
- 3.14 It should be noted that the Stage 1 Road Safety Audit would have assessed the safety implications of the site access for all road users including cyclists and pedestrians, particularly given the recently completed cycle route which runs parallel to the A259.
- 3.15 Further to discussions with WSCC, a Stage 1 Road Safety Audit has also been undertaken of the site access onto Grevatts Lane West and the site access road. This audit was undertaken by the same audit team who have been fully briefed on the scheme. an external and independent Road Safety Auditor. The Road Safety Audit did not raise any concerns and is also included in **Appendix F**.

Pedestrian and Cycle Survey Results

- 3.16 It is noted that comments have been made with regard to the impact of the site access on the footway/cycleway which runs parallel to the A259. Whilst no concerns have been raised by the Highway Authority, two pedestrian and cycle movement surveys have been undertaken by an independent and external surveyor to understand the impact of the access on this route. The scope of these surveys and the times in which they have been undertaken has been agreed with WSCC's highways officer.
- 3.17 The surveys were undertaken at the proposed access location on Sunday 10th and Tuesday 5th February 2019 between the hours of 08:00 to 18:00. The surveys accounted for pedestrians, joggers and cyclists (both on the road and on the cycles path) travelling towards Littlehampton to the east and Bognor to the west. The results of the surveys are summarised across the peak hours in **Table 1**. The peak hours for the Sunday survey has been determined by the highest number of morning and afternoon trips using this route. The highest number of trips across the day has also been consulted for the Both the Tuesday and Sunday survey. Full outputs of the survey attached as **Appendix G**.

Survey date	Time	Pedestrians	Joggers	Cyclist on Path	Cyclist on Road
5 th February 2019	0800-09:00 (AM peak)	0	0	3	0
	11:00-12:00 (Late Morning Peak)	0	1	5	1
	17:00-18:00 (PM peak)	0	0	8	0
10 th February 2019	0800-09:00 (AM peak)	0	3	7	2
	13:00-14:00 (Early Afternoon Peak)	0	1	6	0
	15:00-16:00 (PM peak)	0	1	5	1

Table 1: Pedestrian and Cycle Survey Results

- 3.18 The result of the surveys indicate that this route is lightly trafficked by both pedestrians and cyclists with an average of 46 cycle and pedestrians using this route over a 10-hour period across both survey times. This equates to 5 cycle/pedestrian movements an hour on average over a 10-hour period. Across the traditional lunchtime peak hour 12:00-13:00 the results of the surveys indicate that there is an average of 2 pedestrian/cycle movements or one movement every 30 minutes across the hour.
- 3.19 During the Tuesday surveys there were a total of 3 cyclists using this route in the AM peak and 8 cyclists using this route in the PM peak, with no pedestrian or joggers observed during the peak periods. During the Sunday survey there were a total of 10 movements across the site access during the AM peak (7 cycles and 3 joggers) and 7 movements in the PM peak (1 jogger, 4 cycles on the cycle path and 1 cycle on the carriageway).
- 3.20 Across both surveys there is an average of 7 pedestrian/cycle movements in the AM peak and an average of 8 pedestrian/cycle movements in the PM peak, which equates to one cyclist/pedestrian crossing the access every 8-9 minutes during the peak hours. Given that the site would operate 09:00 and 17:00 (Monday to Friday) the site would generate a minimal number of trips across peak hours (when most people would be using this route).

- 3.21 Throughout the day, the results of the surveys indicate that this route is very lightly trafficked. However, to present a robust assessment the peak periods outside the AM and PM peaks have also been assessed. The Tuesday survey identifies that there is a late morning peak between 11:00-12:00, where there were a total of 7 pedestrian/cycle movements (1 jogger, 4 cycles on the cycle path and 1 cycle on the carriageway). The results of the Sunday survey indicate that there was an early afternoon peak between the hours of 13:00-14:00 where there were 7 pedestrian and cycle movements of which there were 6 cycles and 1 jogger. The surveys identify that as a worst case there are 7 cycle/pedestrian movements travelling across the site access outside the peak hours, which equates to one cycle/pedestrian movement every 8-9 minutes.
- 3.22 Each service from the proposed development is anticipated to generate 38 two-way vehicle movements with each service lasting approximately 1 hour. Given the nature of the site it is likely that all trips would be arriving and leaving the site at the same time, with there likely to a minor number of trips undertaken whilst services are in progress (for visitors to the remembrance court and any staff members). It is therefore unlikely that there would be interaction between vehicles and cyclists/pedestrians over the day, given there would be periods where minimal trips are being generated by the site due to no services or whilst a service is in progress.
- 3.23 Following review of the survey results, it is considered to be unlikely that vehicles generated by the site and cyclists/pedestrians would interact, particularly as the results of the pedestrian and cycle surveys show that the existing footway/cycleway is relatively lightly trafficked, and that the development would operate outside the traditional AM peak (from 09:00-17:00 Monday to Friday). Furthermore, the site access proposes the implementation of a crossing point along the pedestrian/cycle desire line. This crossing point is facilitated by a refuge island and is suitable to accommodate the safe crossing of both pedestrians and cyclists. The proposals would therefore maintain safe access to the footway/cycleway for both pedestrians/cyclists.
- 3.24 The implementation of the site access onto the A259 is not considered to have a severe impact on the operation or safety of this route, particularly as a pedestrian/cycle crossing is proposed at the site access. It should also be noted that several crossing points are provided along the existing footway/cycleway including a similar arrangement at the Comet Corner junction to the west. It is therefore not considered to be impractical to provide a pedestrian/cycle crossing across the site access given that the site is not anticipated to generate a significant level of traffic, particularly across the AM and PM peaks when most pedestrians/cyclists are using this route.



Traffic Regulation Order

- 3.25 The layout of the access to the site will ensure the design discourages any vehicles wishing to turn right from the site access and use of Grevatt's Lane West towards Bilsham Lane. In addition to this it is proposed that lockable bollards would be provided adjacent to the crematorium access on Grevatt's Lane West and also in place of the existing gate on Grevatt's Lane West to the west of the site. These bollards would be implemented as part of a Traffic Regulation Order (TRO). The implementation of these bollards would address the County Council's concerns over the use of Grevatt's Lane West by vehicles existing the site and turning right. It is proposed that this TRO could be secured as part of a Section 106 agreement if the necessary trigger of vehicle movements are exceeded and the TRO is proven to be necessary to reinforce the physical works. The Section 106 will have an undertaking to fund the legal and physical works to secure this should it be proved necessary.

Internal Site Access

- 3.26 The site's access road would facilitate access to the main car park, servicing area, Porte cochere and overspill and overflow parking areas. A number of footpaths/ways would be provided through the car park to facilitate safe access to the chapel and remembrance court.
- 3.27 Given the nature of the development laybys and waiting areas would be provided for horse and coaches and hearses. Tracking of the site layout including the Porte cohere has been undertaken with a hearse. This exercise is attached in **Appendix H**, with the site's internal layout is shown in **Appendix A**.

Parking Provision

- 3.28 Whist WSCC do not identify parking standards for crematoria, based on the capacity of the Chapel for 126 people and assuming a minimum of 2 people per car, the maximum parking demand is anticipated to be 63 spaces. It should however be noted that occupancy at funerals is typically higher than 2 people per car therefore reducing the demand for parking further. The site proposes that 107 visitor spaces would be provided. This allows for parking before/after services as well as for visitors to the remembrance court. The hour allocated to services also means that the overlap between those leaving a service and those arriving would be minimal.
- 3.29 The Federation of Burial and Cremation Authorities (FBCA) suggest that parking for crematoria should be provided for approximately two thirds of the total seating capacity of the chapel. The proposed chapel would provide a total of 126 seats, which equates to a demand of 84 parking spaces.
- 3.30 The total number of car parking spaces equates to 119 and have been categorised as follows. The main car parking for the proposed crematorium would be provided to the immediate south of the



crematorium. The main car park would provide a total of 32 parking spaces (including 12 blue badge spaces).

- 3.31 To the south of the main car park, north east of the site access, an overspill parking area is proposed. This would provide a further 56 car parking spaces.
- 3.32 Whilst attendance at funerals fluctuates, the site proposes that an overspill parking area is provided to cater the larger albeit infrequent services. This is proposed to the west of the chapel and would provide 19 parallel parking spaces. As these spaces would only be used infrequently it is proposed that these would be made using grasscrete or similar.
- 3.33 In addition, 12 staff/visitor parking spaces would be provided opposite the service yard to accommodate staff and additional visitors associated with the crematorium.
- 3.34 The level of parking provided on-site takes into consideration that the majority of visitors/staff would travel by car and ensures that all users can be accommodated on-site without overspill onto Grevatt's Lane West.
- 3.35 To ensure that the spaces proposed are accessible and convenient, a tracking exercise has been undertaken of the proposed parking areas and is attached as **Appendix H** which shows that a standard family car can navigate and track around the site without restriction.

Cycle Parking Provision

- 3.36 During pre-application discussions with WSCC, it was recommended that a small level of cycle parking is provided for members of staff. With this in mind it is proposed that a total of 6 cycle parking spaces would be provided in the service yard.

Servicing Arrangements

- 3.37 The site would be serviced by small delivery vehicles such as vans or 7.5t lorries which would be associated with the small office on-site or operational related deliveries.
- 3.38 Refuse collection would occur on a weekly basis, with a bin store proposed on the ground floor to facilitate collection. Refuse collection would be undertaken in accordance with the bin carrying distances identified in MfS guidance for a 1,100 litre eurobin.

- 3.39 To support deliveries and servicing, it is proposed that a service yard would be provided on-site to the north of the chapel. A tracking exercise has been undertaken to demonstrate that a refuse vehicle can enter, turn and exit the site. This is attached as **Appendix H**.
- 3.40 A tracking exercise has also been undertaken with a fire tender. This is also attached in **Appendix H** and demonstrates that a fire tender can enter, turn and exit the site.

4. TRIP GENERATION & TRIP DISTRIBUTION

- 4.1 The TRICS database does not provide any comparable sites, given the specific nature of the proposal and therefore information on the level of trips generated by the proposed crematorium have been informed by the applicant's experiences at other comparative and operational crematorium sites as well as technical information provided at planning appeal decisions.
- 4.2 Mourners would either be travelling together as part of the cortege or would be more likely to car share with family and friends. As such car occupancy levels are much higher than for other forms of development
- 4.3 Based on the operation of sites of a similar scale and nature, it is anticipated that each service would generate 19 vehicle trips on average (38 two-way movements). Given that there would be a maximum of 8 services a day it is anticipated that the site would generate up to 152 trips (304 two-way movements) over a daily period. These trip rates have been agreed with WSCC's highways officer through pre-application discussions.
- 4.4 It should be noted that the given the anticipated opening times (09:00-17:00 Monday to Friday), the majority of trips generated by the site would be outside the typical AM (08:00-09:00) and PM peaks (17:00-18:00), with trips spread evenly throughout the crematorium's opening hours.

Trip Distribution

- 4.5 To gain an understanding of the crematorium's impact on the surrounding highway network the trips generated by the site have been distributed across the network. As no data is available to confirm the exact location of visitors/staff given the site's location, between Littlehampton and Bognor Regis, it is anticipated that there would be a 50/50 split between trips travelling to/from the east and to/from the west.
- 4.6 The distributions identified above have been used to assess the impact of the proposed development on the local highway network using the trips identified in paragraph 4.2. The site's distribution diagrams are attached as **Appendix I** for reference.

5. JUNCTION MODELLING & HIGHWAY IMPACT

- 5.1 Further to pre-application discussions, the operation of the proposed right turn lane junction on the A259 has been subject to a junction capacity assessment. This has been undertaken using JUNCTIONS 9 modelling software. In line with guidance, the access onto the A259 has been assessed for the following scenarios, the application year (2018) and 10 years following the year of application.
- 5.2 Whilst the proposed development is anticipated to generate a minimal number of trips across the peak hours, in order to present a worst case assessment, modelling of the access has been undertaken using the trips anticipated for each hourly service (38 two-way vehicle movements, as per paragraph 4.2).
- 5.3 The ATC survey results have also been used to inform the existing flows on the major arm of the junction (A259).

TEMPro Growth Traffic

- 5.4 To assess the development's impact in the future years, background traffic has been factored up to the future year of 2028. To factor up background traffic, growth rates have been obtained from the TEMPro database for the area of Arun. The growth rates are summarised in **Table 2** and represent the increase in background traffic across the peak periods.

Year 2018-2028	
AM	PM
1.1411	1.1423

Table 2: TEMPro Growth Rates

Modelling Results

- 5.5 The results of the capacity modelling at the proposed right turn lane junction between the site and the A259 are summarised in **Table 3**, with outputs attached as **Appendix J**.

	AM Peak			PM Peak		
	Max Q	Delay (s)	RFC	Max Q	Delay (s)	RFC
Baseline 2018 Plus Development Scenario						
Site Access – A259 Grevatt's Lane	0.0	8.16	0.05	0.1	8.61	0.05
A259 Grevatt's Lane – Site Access	0.0	7.08	0.02	0.0	6.74	0.02
Baseline 2028 Plus Development Scenario						
Site Access – A259 Grevatt's Lane	0.1	9.07	0.05	0.1	9.84	0.06
A259 Grevatt's Lane – Site Access	0.0	7.40	0.02	0.0	6.99	0.02

Table 3: Modelling Results

- 5.6 The modelling demonstrates that this junction would operate well under capacity in all scenarios with the highest RFC being 0.06 in the 2028 PM peak for vehicles turning onto Grevatt's Lane. This exercise also indicates that no queueing is anticipated to occur on Grevatt's Lane West or the A259, with

sufficient gaps in traffic available for vehicles turning right in/out of the site. Vehicles turning right from the site onto the A259 are anticipated to experience a maximum delay of 9.84 seconds in the 2028 PM peak.

- 5.7 The proposed development is therefore not anticipated to impact on the operation or capacity conditions on the A259.

Highway Impact

- 5.8 Given the nature of the development it is anticipated that the majority of trips generated by the site would be undertaken by car, with the majority of site users anticipated to live within Littlehampton and Bognor Regis. It is also anticipated that, given the nature of the site, that there would be a high level of car sharing. This would further reduce the number of trips accessing the site for each service.
- 5.9 As the majority of users would live within the locale of the site, visitors would be aware of local bus, cycle and pedestrian links and whilst no formal connection is provided into the site from Grevatt's Lane West it would be possible for pedestrians and cyclist to access the site from Bilsham Road and via the A259.
- 5.10 In addition, the National Planning Policy Framework 84 recognises planning policies and decisions should recognise that sites to meet local business and community needs in rural areas may have to be found adjacent to or beyond existing settlements, and in locations that are not well served by public transport.
- 5.11 When using the trip generation figures, the site is anticipated to result in the addition of 10 trips travelling east and west on the A259. This equates to the addition of 1 trip every minute during the peaks at the 'Comet Corner' and 'Oyster Catcher' junctions as a worst case scenario. It is not considered that the addition of 1 trip every minute would have a significant impact on these junctions given that they are subject to over 1,000 vehicles during the AM and PM peak periods.
- 5.12 The proposed development is therefore not anticipated to have a severe impact on the operation of the surrounding highway network, particularly given the strategic nature of the A259 and that improvement schemes are proposed at the 'Comet Corner' and 'Oyster Catcher' junctions which will support future growth.

6. SUMMARY AND CONCLUSIONS

- 6.1 This TS has been prepared by Paul Basham Associates on behalf of Landlink Estates to support a full planning application for the development of a crematorium on land off Grevatt's Lane West, Yapton.
- 6.2 The site is located c.1km to the south of Yapton, c.1.5km to the north of Middleton-on-Sea. The site currently comprises of agricultural land, which is accessed via a track on Grevatt's Lane West. The site is located in a reasonably accessible location and is within close proximity to local public transport services and the wider strategic network. Whilst it may not be possible, given the nature of the site, for all visitors to travel by sustainable modes it would be suitable for members of staff and visitors in the local area to travel via sustainable modes such as walking, cycling and public transport.
- 6.3 The site would comprise of a single chapel crematorium with a single cremator, associated gardens and car parking area. The hours of operation of the site are anticipated to be 9:00 to 17:00 Monday to Friday. Each service is anticipated to last approximately one hour, equating up to 40 services a week.
- 6.4 The site proposes the creation of a new right turn lane junction onto the A259 by utilising the existing field gate location at the point where Grevatt's Lane West terminates to the east. This junction has been designed in accordance with DMRB guidance. Visibility splays at this junction are achievable to the kerbline in both directions in line with 85th percentile speeds on the A259.
- 6.5 The site would itself would be accessed directly from the Grevatt's Lane West carriageway before running approximately 300m east and connecting to the A259. The site itself proposes to be accessed via a bellmouth arrangement, which would measure 8.4m wide with 8m radii and would be designed to encourage right 'in' and left 'out' manoeuvres.
- 6.6 As part of the development, it is proposed that the carriageway of Grevatt's Lane West would be widened by c.1.8m to provide a continuous width of 4.8m. In line with MfS guidance this would allow a large vehicle and car to pass concurrently.
- 6.7 A number of comments have been made in regard to the impact of the site access on the footway/cycleway which runs parallel to the A259. Whilst no concerns have been raised by the Highway Authority, two pedestrian and cycle movement surveys have been undertaken by an independent and external surveyor. Across both surveys there is an average of 7 pedestrian/cycle movements in the AM peak and an average of 8 pedestrian/cycle movements in the PM peak, which equates to one cyclist/pedestrian crossing the access every 8-9 minutes during the peak hours.

- 6.8 Given the nature and hours of operation, the site would generate a minimal number of trips across peak hours (when most people would be using this route) with the site not fully operational during the weekend. It would therefore be unlikely that vehicles generated by the site and cyclists/pedestrians would interact, particularly as the results of the pedestrian and cycle surveys show that the existing footway/cycleway is relatively lightly trafficked.
- 6.9 The site proposes that a total of 119 parking spaces are provided for site users. These are broken down into three parking areas the main car park, overflow car park and overspill car park. This level of provision ensures that all site users can be accommodated on-site without overspill onto the carriageway of Grevatt's Lane West.
- 6.10 To support servicing of the site, a service yard is proposed to the north of the chapel. Tracking has been undertaken to demonstrate that a refuse vehicle and fire tender can enter, turn and exit the site. Refuse collection would be undertaken in line with MfS guidance.
- 6.11 The proposed development is anticipated to generate 19 vehicle trips per service on average. Given that there is anticipated to be a maximum of 8 services a day (Monday to Friday) it is therefore anticipated that the site would generate up to 152 trips over a daily period. This equates to the addition of one trip every three minutes over the site's 8-hour operational period. Given that the majority of trips associated with the site would occur outside the typical AM and PM peaks of 08:00-09:00 and 17:00-18:00 it is not considered that the development would have a significant impact on the operation of the surrounding highways network, particularly given that the site provides access via the A259 which provides direct access to the strategic road network.
- 6.12 Given the site's strategic location between Littlehampton and Bognor Regis, it is anticipated that there would be a 50/50 split between trips travelling to/from the east and to/from the west.
- 6.13 Modelling has been undertaken of the site access for the year of application (2018) and 10 years following the year of application (2028) using Junctions 9 software. The results of the modelling indicate that the proposed access would operate well under capacity in all scenarios with no queuing anticipated to occur on Grevatt's Lane West or the A259. The highest RFC is anticipated to be 0.06 in the 2028 PM peak, with a maximum delay of 9.84 seconds in the 2028 PM peak. The proposed access is therefore not anticipated to have an impact on the operation of the A259.
- 6.14 This TS demonstrates that the proposed development is not anticipated to have a significant impact on the operation of the surrounding highways network and we would therefore ask that WSCC look favourably on this application with regard to highways.

Appendix A



GENERAL NOTES:
1. DO NOT SCALE FROM THIS DRAWING. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. PLINCKE SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
5. PLINCKE ACCEPTS NO LIABILITY FOR ANY EXPENSE, LOSS OR DAMAGE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM ANY VARIATION MADE TO THIS DRAWING OR IN THE EXECUTION OF THE WORK TO WHICH IT RELATES WHICH HAS NOT BEEN REFERRED TO THEM AND PRIOR APPROVAL OBTAINED.

A1 Original Sheet Size
0mm 50mm

KEY PLAN



CDM:
IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

ITEM NO.	RISK REGISTER DETAILS

KEY:

0 10 20 50m

- Application boundary
- Strategic views to wider landscape & existing trees

- 01 Porte Cochere
- 02 Cortage waiting area
- 03 Protected view
- 04 Floral Tribute
- 05 Remembrance Court

- 06 Main car park
= 32no spaces (incl. of 12no Blue Badge bays)
- 07 Overflow car park
= 56 no spaces
- 08 Overflow car park
= 19 no spaces (reinforced grass)
- 09 Staff / Visitor parking
= 12 no spaces
- Total parking = 119 spaces**

- 10 Service yard
- 11 Congregation pedestrian route from car park
- 12 Native planting belts between parking areas
- 13 Native tree belt
- 14 Wildflower meadows
- 15 Swale
- 16 Drainage attenuation basin
- 17 Cortage pick up parking
- 18 New tree avenue on approach road

FOR PLANNING

PL01	ISSUED FOR PLANNING	19.12.18	CJ	AC
REV	REVISION	DATE	DWN	APPD

plincke.
landscape urbanism design
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Project:
ARUN CREMATORIUM

Drawing:
PROPOSED SITE PLAN

Date:
15.11.18
Scale:
1:500 @A1

Status:
FOR PLANNING
Dm:
CJ
App'd:
AC

Drawing No:
0524-DR-100
Rev:
PL01

Appendix B

**WEST SUSSEX COUNTY COUNCIL
PRE-APPLICATION CONSULTATION**

DATE: 13/11/18

TO: Paul Basham Associates FAO Spencer Bryan

FROM: Stephen Gee

SUBJECT: PRE-87-18

The site proposes the development of a single chapel with single cremator, associated gardens and car parking area.

Land off, Grevatts Lane West, Yapton, BN18 0LA

RECOMMENDATION:

Advice ☒ Modification ☐ More information ☐

Objection ☐ No objection ☐ Refusal ☐

The Highways Authority has been consulted for pre-application advice in regard to the proposed residential development at Land off, Grevatts Lane West, Yapton, BN18 0LA. We currently operate a scheme of charging for detailed highways and transport pre-application advice to enable this service to be provided to a consistent and high standard. Please find further information on our charging procedure at the link below:

<https://www.westsussex.gov.uk/preapphighways>

A pre application meeting took place on Monday the 12th of November 2018 with representation from Landlink and Paul Basham Associates. A technical scoping note (TN) was provided in advance of the meeting.

Background

The proposed development is for a crematorium consisting of a single chapel and single cremator and associated gardens and car park at Land off Grevatts Lane West, Yapton.

It is noted that previous proposals for a crematorium on Land West of Bilsham Lane were submitted (and later withdrawn) as part of planning applications ref Y/70/07 and Y/70/06

The site is currently accessed via Grevatts Lane West which connects to the west to Bilsham Road. Grevatts Lane West is currently a dead end with no vehicular access onto the A259. It should be noted that a gate is present across the end of Grevatts Lane West and is situated on the boundary between the adopted Grevatts Lane West and the adopted A259.

The Arun Local Plan 2018 safeguards land along the A259 for Highway improvements. It is noted that there is no safeguarding in place on the section in the vicinity of Grevatts Lane West.

Access

3 Options were presented within the TN which are considered below.

A, In/Out onto Bilsham Road –

The applicant has undertaken a speed survey on Bilsham Road which recorded 85th% speeds of 42 and 41 within a 40mph limit which would require visibility splays of 2.4 x 120m in line with DMRB standards. At present the junction serves three properties and provides a secondary access to a small number of industrial units. Visibility to the north is currently 28.6m and 22.5m to the south (taken from drawing ref 128.0001.002 A)

The applicant proposes “to widen and realign the carriageway of Bilsham Road. Bilsham Road would be widened by 1.03m to the west by utilising the existing highway verge. Following the widening of Bilsham Road, the give way line on Grevatts Lane West would be shifted west into the Bilsham Road carriageway, improving visibility at the junction”

This would improve visibility to 41m to the north and 74m to the south, however both of these are well below the required standard and given the potential intensification of vehicle movements the option is not support. During the discussion the potential for measuring to the centre line or a roundabout were proposed however is not felt either options are suitable and would not be supported.

B, In/Out onto A259

As discussed above there is currently no connection between Grevatts Lane West and the A259 Grevatts Lane however the highway boundaries do join and as such there would not appear to be a land ownership issue that would preclude the development of such a link.

The proposal is to provide to complete the link and provide a right hand turn lane on the A259. The applicant has undertaken a speed survey on the A259 Grevatts Lane which recorded 85th% speeds of 52mph eastbound and 54mph westbound which would require visibility splays of 4.5m x 159.1m and 4.5m x 169.5m in line with DMRB standards.

Appendix C of the TN provides drawing ref 128.0001.002 rev A which details that the splays could be provided.

Given the daily flows recorded on the A259 of approximately 29,000 vehicles. a right hand turn lane would be required.

Measures would be required to discourage vehicles to travel north along Grevatts Lane West from the application site and general traffic as a way of avoiding Comet Corner. Potential solutions included build outs and Traffic Regulation Orders. Any proposals should be developed with reference to the consultation requirements included within the Developer Funded Traffic Engineering and Traffic Calming Scheme guidance note.

https://www.westsussex.gov.uk/media/9306/developers_guidance_note.pdf

C, In – Bilsham Road / Out – A259

The third proposal would utilise the existing access from Bilsham Road and provide a new link between Grevatts Lane West and the A259 to provide an exit only. No right hand turn facility would be required on the A259.

Forward visibility for right hand turning vehicles should be provided on vehicles on Bilsham Road.

An appropriate signage strategy would be required to inform vehicles on the appropriate routing and again measures would be required to discourage vehicles to travel north along Grevatts Lane West from the application site and general traffic as a way of avoiding Comet Corner.

Further Option

During the course of discussions a 4th alternative was also discussed travelling directly south from the application site to the A259 across land under the applicant’s control. It is felt that visibility splays are likely to be achievable. The comments provided would replicate B and C above.

Access Conclusion

Options B, C and the further option could be supported subject to the provision of additional technical information as set out above and including junction modelling of the access proposals, safety audit and if necessary designers response.

Grevatts Lane West

The applicant proposes to widen the highway by 1.8m to 4.8m to enable a large vehicle and car to pass. It is noted that on drawing 128.0001.002 rev A that a 7.3m carriageway is shown.

Sustainability

PT – The 700 service runs along Bilsham Road which provides a regular service with 20 minute headway in either direction serving Chichester, Bognor Regis, Yapton and Littlehampton.

Walking – No formal footways are provided along Grevatts Lane West. Given the low flows the Lane could operate as a shared space. A site visit during inclement weather was discussed as a way of indicating whether the current surface was suitable for any pedestrians along the lane.

Cycling – The site is well located with the NCN2 running along the A259 and offers the potential for staff to travel by bike.

Hours of operation

The hours of operation of the site are anticipated to be between 09:00 and 17:00 (Monday to Friday) with services lasting 1-hour. This equates to a maximum of 8 services a day or 40 services a week.

During the discussions it was detailed that the mid-morning services were the most likely to be booked and have the potential for larger numbers of mourners. The use of planning conditions to move the start of a service away from the traditional peak hours (on the road network) was also said to be utilised by other local crematoriums (Chichester) The application and TA would benefit from the narrative presented at the meeting.

Trip generation

The TN provided details that each service would be expected to generate 19 vehicle trips. On the basis of these being recorded as single trips when in fact they should be doubled to create 38 two way vehicle trips per service then based on previous experience this level would be accepted. The TA should include a narrative on the trip generation as provided in the pre application meeting.

Impact on Comet Corner / Oyster Catcher junctions.

It would be beneficial to set out the peak hour trips that would be the above junctions. It is not anticipated that the junctions would require any junction modelling but this exercise would benefit the application when reporting its impacts.

Parking

The proposal is to provide 100 vehicle parking spaces with an overflow area. The level of overflow spaces should be set out. A justification for the level of parking provision should be provided within the application

Cycle Parking

Whilst it is anticipated most visitors will travel by motor vehicle an appropriate level of cycle parking should be included for staff.

The Highway Authority would require the following documents to be submitted as part of any future application:

- A site location plan scale (1:1250) with site boundary indicated

- Schedule of existing uses including planning history with reference numbers
 - Description, including site layout plans, of the proposed development and schedule of uses
 - Summary of reasons supporting the site access/highways works proposals, including plan (scale 1:250 or similar) with achievable visibility splays indicated
 - Design Audit of proposed Highway works, including plan identified departures from standards
 - Final Stage 1 Road Safety Audit of proposed highway works and designers response, including amended plans and a 'Design Audit' of proposed highway works including identified departures from standards
 - A 'Transport Statement', including location plan of key services, availability of sustainable modes of transport and existing/future vehicular generation
 - Reference to supporting national, regional, and local planning documents and policies
 - Parking strategy, including provision of parking for all modes of transport
 - Relevant data collected to date
 - Proposed trip rates with accompanying evidence
-

I have provided, below, some standard guidance relating to road design and current standards.

There are two sets of guidance which govern road design: Manual for Streets (MfS) for lightly trafficked residential streets; and Design Manual for Roads and Bridges (DMRB) for all other roads, including rural roads. I have included links to both below.

WSCC supports the approach set out in MFS, which has been adopted guidance for residential street design since its introduction in 2007. Within this document there are some very useful references to visibility splays, turning circles and car parking layouts. The document does not however provide specific measurements for visibility splays, so:

"X "Distances from the (kerb back) are typically:

- 2.0 metres -domestic single accesses
- 2.4 metres- for shared or busy crossovers
- 4.5 metres- for busy junctions
- 9.0 metres-major junctions

"Y "Distances are based on vehicle speed, and for lightly trafficked residential streets MFS would be applied:

- 20 mph- 25 metres
- 25 mph- 33 metres
- 30 mph- 43 metres

For a road where the 85th percentile speed is in excess of 37 mph and for roads where MFS does not apply, TD/93 distances from DMRB would be applied:

- 40 mph-120 metres
- 50 mph-160 metres
- 60 mph-215 metres

I have attached a link to our Local Design Guide which provides further advice on how MfS is to be interpreted and applied within West Sussex.

I have also included a link to our parking standards which we adopted in 2003 as Supplementary Planning Guidance (SPG) and that sets out parking standards for development in West Sussex. However, in September 2010 a new approach to parking in residential developments was adopted and changes to the original SPG which are affected by the

September 2010 changes have been highlighted in the 'Guidance on Car Parking in Residential Development' document provided in the link below. This also contains recommended levels of cycle provision.

Manual for Streets:

[Manual for Streets](#) and [Manual for Streets 2](#)

DMRB supplementary documents TD/93:

<http://www.standardsforhighways.co.uk/ha/standards/dmr/t93/section1.htm>

Local Design Guide:

<https://www.westsussex.gov.uk/preapphighways> – available under Additional Information

WSCC car parking standards:

<https://www.westsussex.gov.uk/preapphighways> – available under Additional Information

Stephen Gee

STRATEGIC PLANNING

Appendix C

Site No. 00000029

Site Ref. 00000029

as undet

From 09/09/2018 To 16/09/2018

Channel:

EASTBOUND

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <30mph	Bin 2 30<=35	Bin 3 35<=40	Bin 4 40<=45	Bin 5 45<=50	Bin 6 50<=55	Bin 7 55<=60	Bin 8 60<=65	Bin 9 65<=70	Bin 10 70<=75	Bin 11 75<=80	Bin 12 80<=85	Bin 13 >=85
00:00	26	58	51	8	0	0	2	5	6	7	4	2	1	0	0	0	0
01:00	17	59	51	8	0	0	1	3	4	4	3	1	1	0	0	0	0
02:00	15	60	52	10	0	0	1	2	5	2	2	1	1	0	1	0	0
03:00	19	59	52	9	0	0	1	3	4	4	4	2	0	0	0	0	0
04:00	40	62	54	8	0	0	1	5	7	12	7	4	3	1	0	0	0
05:00	133	58	51	7	0	0	5	17	38	39	22	9	2	0	0	0	0
06:00	352	53	47	6	2	4	18	92	134	74	22	4	1	0	0	0	0
07:00	607	49	43	6	50	20	68	218	183	58	9	1	0	0	0	0	0
08:00	551	50	44	7	40	12	66	155	192	70	14	2	1	0	0	0	0
09:00	590	51	45	6	9	9	58	199	211	83	16	3	1	0	0	0	0
10:00	568	50	45	5	9	10	70	202	193	67	14	2	0	0	0	0	0
11:00	509	50	43	7	62	14	56	151	152	59	11	2	1	0	0	0	0
12:00	487	50	43	7	59	9	50	148	151	55	13	2	1	0	0	0	0
13:00	499	51	45	6	16	10	51	147	182	72	17	3	0	0	0	0	0
14:00	481	51	45	6	9	9	63	144	164	70	18	3	0	0	0	0	0
15:00	505	52	45	7	26	13	65	140	158	81	18	3	1	0	0	0	0
16:00	566	51	45	6	13	20	67	171	196	75	20	4	1	0	0	0	0
17:00	519	51	44	8	74	9	54	119	162	77	18	4	1	0	0	0	0
18:00	433	53	47	6	6	5	42	95	153	95	31	4	1	0	0	0	0
19:00	265	54	47	7	5	3	25	64	82	57	21	5	2	0	0	0	0
20:00	185	54	47	7	3	1	21	47	54	38	15	4	1	0	0	0	0
21:00	126	56	49	7	0	2	11	27	36	29	15	4	2	1	0	0	0
22:00	88	56	48	8	1	2	9	19	24	19	9	4	1	0	1	0	0
23:00	50	58	50	8	0	0	4	10	15	10	6	3	1	0	0	0	0
Total																	
12H(7-19)	6314	51	45	7	373	141	710	1889	2098	862	198	34	7	1	0	0	0
16H(6-22)	7242	51	45	7	384	151	785	2119	2404	1060	271	51	13	2	1	0	0
18H(6-24)	7381	52	45	7	385	154	797	2148	2442	1089	286	58	16	3	2	0	0
24H(0-24)	7631	52	45	7	385	154	808	2182	2506	1157	328	78	24	4	3	1	1
AM Peak	07:00	04:00	04:00	02:00	11:00	07:00	10:00	07:00	09:00	09:00	06:00	05:00	04:00	04:00	02:00	04:00	09:00
	607	62	54	10	62	20	70	218	211	83	22	9	3	1	1	0	0
PM Peak	16:00	23:00	23:00	23:00	17:00	16:00	16:00	16:00	16:00	18:00	18:00	19:00	21:00	21:00	22:00	23:00	21:00



Site No. 00000029 Site Ref. 00000029
A259 AT GREVATTS LANE

From 09/09/2018 To 16/09/2018

Channel: WESTBOUND

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <30Mph	Bin 2 30<=35	Bin 3 35<=40	Bin 4 40<=45	Bin 5 45<=50	Bin 6 50<=55	Bin 7 55<=60	Bin 8 60<=65	Bin 9 65<=70	Bin 10 70<=75	Bin 11 75<=80	Bin 12 80<=85	Bin 13 >=85
00:00	59	65	55	9	1	0	1	5	10	14	13	6	6	2	1	0	0
01:00	34	66	58	9	0	0	1	1	5	7	9	6	3	2	1	0	0
02:00	21	69	59	10	0	0	0	1	2	4	5	3	2	2	1	0	0
03:00	22	68	59	9	0	0	0	1	3	4	6	4	2	1	1	1	0
04:00	33	67	57	10	0	0	1	2	4	8	7	4	3	2	1	0	0
05:00	88	62	54	8	0	0	1	6	18	25	19	11	5	1	1	0	0
06:00	269	58	51	7	8	2	5	22	81	83	49	14	4	1	0	0	0
07:00	537	55	49	6	11	4	18	84	199	149	55	13	4	1	0	0	0
08:00	599	55	49	6	8	5	25	84	222	173	65	12	4	1	0	0	0
09:00	608	54	48	6	11	4	32	138	207	146	53	14	3	0	0	0	0
10:00	629	54	48	6	6	2	31	134	243	150	50	10	2	0	0	0	0
11:00	733	52	46	6	15	5	62	198	273	141	32	5	2	0	0	0	0
12:00	735	53	47	6	19	9	44	190	265	151	44	9	2	0	0	0	0
13:00	736	54	47	6	11	8	43	163	283	162	52	11	2	0	0	0	0
14:00	751	53	47	6	27	12	42	179	265	167	49	7	3	0	0	0	0
15:00	789	53	47	6	6	10	57	218	285	159	44	8	1	0	0	0	0
16:00	952	53	47	6	5	9	65	270	370	176	44	9	2	1	0	0	0
17:00	939	53	47	6	9	8	58	234	350	205	63	10	2	0	0	0	0
18:00	642	55	49	6	7	5	27	97	232	186	66	17	5	0	0	0	0
19:00	456	55	49	6	2	1	13	88	159	127	51	10	3	1	0	0	0
20:00	297	57	50	7	1	2	9	53	81	86	46	12	4	1	1	0	0
21:00	228	58	51	7	1	1	8	30	62	68	40	13	3	1	1	0	0
22:00	178	59	52	7	0	1	4	16	47	53	33	14	5	2	1	0	0
23:00	101	63	55	8	0	0	1	7	24	23	22	15	5	2	1	0	0
Total																	
12H(7-19)	8650	54	48	6	137	82	504	1988	3194	1966	616	125	31	5	1	1	1
16H(6-22)	9899	54	48	6	148	88	538	2181	3577	2331	802	175	45	8	3	2	1
12H(6-24)	10179	54	48	6	149	89	544	2204	3647	2407	857	204	55	13	6	2	1
24H(0-24)	10435	54	48	7	150	90	548	2219	3689	2468	916	238	76	23	11	4	3
AM Peak	11:00	02:00	03:00	02:00	11:00	08:00	11:00	11:00	11:00	08:00	08:00	09:00	00:00	01:00	04:00	03:00	01:00
	733	69	59	10	15	5	62	198	273	173	65	14	6	2	1	1	0
PM Peak	16:00	23:00	23:00	23:00	14:00	14:00	16:00	16:00	16:00	17:00	18:00	18:00	22:00	22:00	23:00	22:00	20:00



Site No. 00000029 Site Ref. 00000029
A259 AT GREVATTS LANE

From 09/09/2018 To 16/09/2018

Channel: lot assigned

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <30mph	Bin 2 30<=35	Bin 3 35<=40	Bin 4 40<=45	Bin 5 45<=50	Bin 6 50<=55	Bin 7 55<=60	Bin 8 60<=65	Bin 9 65<=70	Bin 10 70<=75	Bin 11 75<=80	Bin 12 80<=85	Bin 13 >=85
00:00	85	63	54	9	1	0	3	9	17	21	17	8	7	2	1	0	0
01:00	50	64	55	9	0	0	2	4	9	10	12	7	3	2	1	0	0
02:00	36	67	56	10	0	0	1	3	7	6	7	4	3	2	1	0	0
03:00	40	64	56	10	0	0	1	4	6	7	10	5	3	1	1	1	0
04:00	73	65	55	9	0	0	1	7	12	20	14	9	7	2	2	0	0
05:00	221	59	52	7	1	1	7	23	56	64	41	19	7	2	1	0	0
06:00	621	55	49	7	10	6	23	115	215	157	71	18	5	1	1	0	0
07:00	1144	53	46	7	61	25	85	302	381	207	64	14	4	1	0	0	0
08:00	1150	53	47	7	48	17	92	239	414	242	78	14	5	1	0	0	0
09:00	1197	53	47	6	20	13	90	337	418	230	69	17	3	0	0	0	0
10:00	1197	53	47	6	15	12	102	337	436	218	64	12	2	0	0	0	0
11:00	1242	52	45	7	78	20	118	349	425	201	42	7	2	0	0	0	0
12:00	1222	52	45	7	78	18	94	338	416	206	57	11	3	0	0	0	0
13:00	1235	53	47	6	27	19	93	310	465	234	69	14	2	0	0	0	0
14:00	1232	53	46	6	36	21	105	323	429	237	67	9	3	0	0	0	0
15:00	1295	53	46	6	33	24	121	358	443	240	62	12	2	0	0	0	0
16:00	1518	52	46	6	18	29	132	440	567	251	64	13	2	1	0	0	0
17:00	1457	53	46	7	84	17	112	353	512	282	81	14	3	0	0	0	0
18:00	1074	54	48	6	13	10	68	192	385	281	96	22	6	0	0	0	0
19:00	721	55	48	6	7	4	38	152	241	184	72	15	5	1	0	0	0
20:00	482	56	49	7	4	3	30	100	136	125	61	16	5	1	1	1	0
21:00	354	57	50	7	1	3	19	57	98	97	54	17	5	2	1	0	0
22:00	266	59	51	8	1	3	13	35	70	72	42	18	6	2	2	0	0
23:00	152	62	53	8	0	0	5	17	38	33	28	18	6	3	2	1	0
Total																	
12H(7-19)	14964	53	46	6	510	223	1214	3877	5292	2828	814	160	38	5	1	1	1
16H(6-22)	17141	53	47	7	532	240	1323	4300	5981	3391	1073	226	58	11	4	2	2
12H(6-24)	17559	53	47	7	534	243	1341	4352	6089	3496	1143	263	71	16	8	3	2
24H(0-24)	18066	54	47	7	536	244	1356	4401	6196	3625	1244	315	100	27	14	5	3
AM Peak	11:00	02:00	02:00	02:00	11:00	07:00	11:00	11:00	10:00	08:00	08:00	05:00	05:00	04:00	04:00	03:00	09:00
	1242	67	56	10	78	25	118	349	436	242	78	19	7	2	2	1	0
PM Peak	16:00	23:00	23:00	23:00	17:00	16:00	16:00	16:00	16:00	17:00	18:00	18:00	22:00	23:00	23:00	23:00	21:00



Site No. 00000029

Site Ref. 00000029

A259 AT GREVATTS LANE

e Count Summary

From 09/09/2018 To 16/09/2018

Channel:

EASTBOUND

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-Day Ave.	7-Day Ave.
00:00	21	47	26	20	8	24	38	24	26
01:00	17	17	24	11	8	17	23	15	17
02:00	15	19	21	16	6	14	17	15	15
03:00	14	21	32	17	4	24	19	18	19
04:00	63	60	61	31	15	27	25	46	40
05:00	216	209	209	120	63	69	46	163	133
06:00	588	581	577	366	167	108	77	456	352
07:00	895	894	886	742	468	231	130	777	607
08:00	731	717	807	604	299	393	307	632	551
09:00	695	630	708	466	337	488	803	567	590
10:00	638	573	641	441	314	563	805	521	568
11:00	398	558	569	364	361	557	754	450	509
12:00	314	558	609	390	275	556	708	429	487
13:00	594	595	519	318	248	548	673	455	499
14:00	616	618	479	286	304	437	628	461	481
15:00	669	645	545	289	417	408	564	513	505
16:00	719	795	648	292	524	387	597	596	566
17:00	716	683	590	261	400	408	572	530	519
18:00	518	572	492	202	352	353	539	427	433
19:00	345	335	280	105	191	240	356	251	265
20:00	233	237	230	71	138	155	233	182	185
21:00	179	169	125	53	89	118	152	123	126
22:00	115	120	64	24	69	124	101	78	88
23:00	56	75	41	16	43	71	51	46	50
Total									
12H(7-19)	7503	7838	7493	4655	4299	5329	7080	6358	6314
16H(6-22)	8848	9160	8705	5250	4884	5950	7898	7369	7242
18H(6-24)	9019	9355	8810	5290	4996	6145	8050	7494	7381
24H(0-24)	9365	9728	9183	5505	5100	6320	8218	7776	7631
AM Peak	07:00	07:00	07:00	07:00	07:00	10:00	10:00	07:00	07:00
	895	894	886	742	468	563	805	777	607
PM Peak	16:00	16:00	16:00	12:00	16:00	12:00	12:00	16:00	16:00
	719	795	648	390	524	556	708	596	566

VDA Lite 16/09/2018

Site No. 00000029

Site Ref. 00000029

A259 AT GREVATTS LANE

e Count Summary

From 09/09/2018 To 16/09/2018

Channel:

WESTBOUND

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-Day Ave.	7-Day Ave.
00:00	36	43	44	42	48	87	112	43	59

01:00	27	28	25	32	26	36	62	28	34
02:00	15	19	18	17	19	22	36	18	21
03:00	10	24	20	18	25	23	32	19	22
04:00	39	42	36	36	29	31	18	36	33
05:00	118	105	113	99	104	42	34	108	88
06:00	350	318	310	354	328	123	98	332	269
07:00	690	666	698	642	653	266	144	670	537
08:00	703	722	687	698	674	465	245	697	599
09:00	638	619	633	636	600	588	540	625	608
10:00	503	539	570	664	569	780	779	569	629
11:00	541	588	620	704	706	941	1034	632	733
12:00	572	609	647	711	740	861	1007	656	735
13:00	730	660	654	687	797	767	856	706	736
14:00	761	746	741	730	870	696	712	770	751
15:00	738	792	856	765	983	683	709	827	789
16:00	1025	995	1070	1031	1207	702	632	1066	952
17:00	1079	1025	1069	1079	1010	720	588	1052	939
18:00	662	686	679	731	723	585	425	696	642
19:00	433	421	464	558	511	445	360	477	456
20:00	262	278	317	336	361	275	249	311	297
21:00	241	210	235	254	261	224	171	240	228
22:00	150	181	162	187	226	211	131	181	178
23:00	76	83	76	98	132	173	70	93	101
Total									
12H(7-19)	8642	8647	8924	9078	9532	8054	7671	8965	8650
16H(6-22)	9928	9874	10250	10580	10993	9121	8549	10325	9899
18H(6-24)	10154	10138	10488	10865	11351	9505	8750	10599	10179
24H(0-24)	10399	10399	10744	11109	11602	9746	9044	10851	10435
AM Peak	08:00	08:00	07:00	11:00	11:00	11:00	11:00	08:00	11:00
	703	722	698	704	706	941	1034	697	733
PM Peak	17:00	17:00	16:00	17:00	16:00	12:00	12:00	16:00	16:00
	1079	1025	1070	1079	1207	861	1007	1066	952

VDA Lite 16/09/2018

Site No. 00000029

Site Ref. 00000029

A259 AT GREVATTS LANE

e Count Summary

From 09/09/2018 To 16/09/2018

Channel: Not assigned

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5-Day Ave.	7-Day Ave.
00:00	57	90	70	62	56	111	150	67	85
01:00	44	45	49	43	34	53	85	43	50
02:00	30	38	39	33	25	36	53	33	36
03:00	24	45	52	35	29	47	51	37	40
04:00	102	102	97	67	44	58	43	82	73
05:00	334	314	322	219	167	111	80	271	221
06:00	938	899	887	720	495	231	175	788	621
07:00	1585	1560	1584	1384	1121	497	274	1447	1144
08:00	1434	1439	1494	1302	973	858	552	1328	1150
09:00	1333	1249	1341	1102	937	1076	1343	1192	1197
10:00	1141	1112	1211	1105	883	1343	1584	1090	1197

11:00	939	1146	1189	1068	1067	1498	1788	1082	1242
12:00	886	1167	1256	1101	1015	1417	1715	1085	1222
13:00	1324	1255	1173	1005	1045	1315	1529	1160	1235
14:00	1377	1364	1220	1016	1174	1133	1340	1230	1232
15:00	1407	1437	1401	1054	1400	1091	1273	1340	1295
16:00	1744	1790	1718	1323	1731	1089	1229	1661	1518
17:00	1795	1708	1659	1340	1410	1128	1160	1582	1457
18:00	1180	1258	1171	933	1075	938	964	1123	1074
19:00	778	756	744	663	702	685	716	729	721
20:00	495	515	547	407	499	430	482	493	482
21:00	420	379	360	307	350	342	323	363	354
22:00	265	301	226	211	295	335	232	260	266
23:00	132	158	117	114	175	244	121	139	152
Total									
12H(7-19)	16145	16485	16417	13733	13831	13383	14751	15322	14964
16H(6-22)	18776	19034	18955	15830	15877	15071	16447	17694	17141
18H(6-24)	19173	19493	19298	16155	16347	15650	16800	18093	17559
24H(0-24)	19764	20127	19927	16614	16702	16066	17262	18627	18066
AM Peak	07:00	07:00	07:00	07:00	07:00	11:00	11:00	07:00	11:00
	1585	1560	1584	1384	1121	1498	1788	1447	1242
PM Peak	17:00	16:00	16:00	17:00	16:00	12:00	12:00	16:00	16:00
	1795	1790	1718	1340	1731	1417	1715	1661	1518

VDA Lite 16/09/2018

Site No. 00000029 Site Ref. 00000029
A259 AT GREVATTS LANE

From 09/09/2018 To 16/09/2018

Channel: EASTBOUND

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 ≤4AxDbi	Bin 9 5AxDbi	Bin 10 ≥6AxDbi	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 ≥7AxMulti
00:00	26	0	24	3	0	0	0	0	0	0	0	0	0	0
01:00	17	0	14	2	0	1	0	0	0	0	0	0	0	0
02:00	15	0	12	2	0	0	0	0	0	0	0	0	0	0
03:00	19	0	15	2	0	1	0	0	0	0	0	0	0	0
04:00	40	0	30	7	1	2	0	0	0	0	0	0	0	0
05:00	133	1	105	19	3	4	0	0	0	0	0	0	0	0
06:00	352	3	273	60	5	9	0	1	0	1	0	0	0	0
07:00	607	10	462	103	11	14	2	3	1	0	0	0	0	0
08:00	551	7	423	88	13	16	2	2	0	1	0	0	0	0
09:00	590	10	464	80	10	19	2	3	1	1	0	0	0	0
10:00	568	8	445	76	11	21	3	2	1	1	0	0	0	0
11:00	509	10	396	67	11	21	2	2	1	1	0	0	0	0
12:00	487	11	382	65	9	17	1	1	1	0	0	0	0	0
13:00	499	11	383	72	9	19	1	2	1	0	0	0	0	0
14:00	481	9	373	68	10	17	1	1	0	1	0	0	0	0
15:00	505	10	389	70	13	18	1	2	1	1	0	0	0	0
16:00	566	13	443	76	11	18	1	1	1	1	0	0	0	0
17:00	519	13	414	61	12	16	1	1	1	0	0	0	0	0
18:00	433	7	355	50	9	10	1	1	0	0	0	0	0	0
19:00	265	4	220	27	6	6	0	1	0	0	0	0	0	0
20:00	185	1	160	18	3	3	0	0	0	0	0	0	0	0
21:00	126	1	111	8	2	2	0	0	0	0	0	0	0	0
22:00	88	1	78	6	1	1	0	0	0	0	0	0	0	0
23:00	50	0	46	4	0	0	0	0	0	0	0	0	0	0
Total														
12H(7-19)	6314	120	4929	875	128	206	18	20	9	6	2	0	0	0
16H(6-22)	7242	130	5693	989	144	227	18	22	9	8	2	0	0	0
18H(6-24)	7381	131	5816	999	146	228	18	22	10	8	2	0	0	0
24H(0-24)	7631	133	6015	1033	151	237	19	23	10	9	2	0	0	0
AM Peak	07:00 607	09:00 10	09:00 464	07:00 103	08:00 13	11:00 21	10:00 3	09:00 3	11:00 1	10:00 1	08:00 0	11:00 0	10:00 0	11:00 0
PM Peak	16:00 566	16:00 13	16:00 443	16:00 76	15:00 13	13:00 19	15:00 1	15:00 2	17:00 1	14:00 1	15:00 0	23:00 0	23:00 0	23:00 0

VDA Lite 16/09/2018

Site No. 00000029 Site Ref. 00000029
A259 AT GREVATTS LANE

From 09/09/2018 To 16/09/2018

Channel: WESTBOUND

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 ≤4AxDbi	Bin 9 5AxDbi	Bin 10 ≥6AxDbi	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 ≥7AxMulti
00:00	59	1	48	9	0	1	0	0	0	0	0	0	0	0
01:00	34	0	26	6	1	0	0	0	0	0	0	0	0	0
02:00	21	0	14	5	1	1	0	0	0	0	0	0	0	0
03:00	22	0	14	5	0	2	0	0	0	0	0	0	0	0
04:00	33	0	22	6	0	2	2	0	0	1	0	0	0	0
05:00	88	3	56	17	2	7	1	1	0	1	0	0	0	0
06:00	269	5	192	52	4	11	2	1	0	1	0	0	0	0
07:00	537	7	388	108	5	15	6	4	1	2	1	0	0	0
08:00	599	9	454	101	7	19	2	4	1	2	1	0	0	0
09:00	608	8	453	110	7	20	2	4	0	2	1	0	0	0
10:00	629	5	490	100	7	18	3	4	0	1	1	0	0	0
11:00	733	9	574	114	7	20	3	3	1	2	1	0	0	0
12:00	735	10	578	115	7	18	3	2	1	1	1	0	0	0
13:00	736	8	575	114	10	20	3	2	1	1	1	0	0	0
14:00	751	10	587	121	9	15	3	3	1	2	0	0	0	0
15:00	789	11	611	134	8	16	3	3	1	2	1	0	0	0
16:00	952	11	761	150	7	16	3	3	0	1	0	0	0	0
17:00	939	9	782	123	8	11	2	2	1	1	0	0	0	0
18:00	642	5	541	82	4	7	1	1	0	1	0	0	0	0
19:00	456	4	378	63	3	5	1	1	1	0	0	0	0	0
20:00	297	2	252	37	2	3	0	0	1	1	0	0	0	0
21:00	228	2	190	30	2	3	0	0	0	0	0	0	0	0
22:00	178	1	157	18	1	1	0	0	0	0	0	0	0	0
23:00	101	1	85	13	1	1	0	0	0	0	0	0	0	0
Total														
12H(7-19)	8650	100	6795	1373	88	195	33	34	7	17	8	0	0	0
16H(6-22)	9899	113	7806	1555	99	217	36	37	9	20	9	0	0	0
18H(6-24)	10179	114	8048	1585	101	219	36	37	9	20	9	0	0	0
24H(0-24)	10435	119	8229	1633	105	232	39	37	9	22	9	0	1	0
AM Peak	11:00	11:00	11:00	11:00	10:00	11:00	07:00	08:00	11:00	11:00	09:00	11:00	06:00	11:00
	733	9	574	114	7	20	6	4	1	2	1	0	0	0
PM Peak	16:00	16:00	17:00	16:00	13:00	13:00	14:00	15:00	17:00	15:00	15:00	23:00	23:00	23:00
	952	11	782	150	10	20	3	3	1	2	1	0	0	0

VDA Lite 16/09/2018

Site No. 00000029
A259 AT GREVATTS LANE

Site Ref. 00000029

From 09/09/2018 To 16/09/2018

Channel: Not assigned

	Total Volume	Bin 1 Mb	Bin 2 Cr/Cr+Tr	Bin 3 Van	Bin 4 Bus	Bin 5 2AxSng	Bin 6 3AxSng	Bin 7 4AxSng	Bin 8 ≤4AxDbf	Bin 9 5AxDbf	Bin 10 ≥6AxDbf	Bin 11 5AxMulti	Bin 12 6AxMulti	Bin 13 ≥7AxMulti
00:00	85	1	72	11	0	1	0	0	0	0	0	0	0	0
01:00	50	0	40	8	1	1	0	0	0	0	0	0	0	0
02:00	36	0	26	7	1	1	0	0	0	0	0	0	0	0
03:00	40	1	28	7	1	3	0	0	0	0	0	0	0	0
04:00	73	0	52	13	1	4	2	0	0	1	0	0	0	0
05:00	221	4	162	36	5	11	1	1	0	1	0	0	0	0
06:00	621	8	465	112	9	19	2	2	0	2	0	0	0	0
07:00	1144	17	850	211	16	29	8	6	2	2	1	0	0	0
08:00	1150	15	877	188	20	35	4	6	1	2	2	0	0	0
09:00	1197	18	917	190	17	39	5	6	1	2	2	0	0	0
10:00	1197	13	935	176	18	39	6	6	1	2	1	0	0	0
11:00	1242	19	970	181	18	41	4	5	2	3	1	0	0	0
12:00	1222	21	960	180	17	35	4	3	1	1	1	0	0	0
13:00	1235	19	959	187	20	39	4	4	2	2	1	0	0	0
14:00	1232	19	960	189	19	32	4	4	1	3	0	0	0	0
15:00	1295	21	1000	204	21	35	4	5	1	2	2	0	0	0
16:00	1518	24	1205	226	18	34	4	4	1	1	0	0	0	0
17:00	1457	22	1195	184	20	27	3	3	2	1	0	0	0	0
18:00	1074	12	896	132	13	17	1	1	1	1	0	0	0	0
19:00	721	8	598	90	9	11	1	2	1	1	0	0	0	0
20:00	482	3	412	55	4	6	0	0	1	1	0	0	0	0
21:00	354	3	301	38	5	5	0	1	0	1	0	0	0	0
22:00	266	2	234	24	2	3	0	0	1	0	0	0	0	0
23:00	152	1	130	17	2	1	0	0	0	0	0	0	0	0
Total														
12H(7-19)	14964	220	11723	2248	216	401	51	54	16	24	10	0	0	0
16H(6-22)	17141	243	13499	2543	243	443	54	59	18	28	10	0	1	0
18H(6-24)	17559	246	13864	2584	247	447	54	59	19	29	11	0	1	0
24H(0-24)	18066	252	14243	2666	256	468	58	60	19	31	11	0	1	0
AM Peak	11:00 1242	11:00 19	11:00 970	07:00 211	08:00 20	11:00 41	07:00 8	09:00 6	11:00 2	11:00 3	09:00 2	11:00 0	08:00 0	11:00 0
PM Peak	16:00 1518	16:00 24	16:00 1205	16:00 226	15:00 21	13:00 39	13:00 4	15:00 5	17:00 2	14:00 3	15:00 2	23:00 0	23:00 0	23:00 0