



Cascades Leisure Centre, Gravesend

Transport Assessment

On behalf of

Gravesham Borough Council

Project Ref: 332410895/100 | Rev: AA | Date: November 2022

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Revision	Date	Description	Prepared	Reviewed	Approved

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1 Introduction

- 1.1.1 Stantec has been appointed on behalf of Gravesham Borough Council to provide transport support in relation to a planning application for a leisure centre redevelopment at Cascades Leisure Centre, Gravesend. A planning application is being submitted for :

“Demolition of the existing Cascades Leisure Centre and public house and redevelopment of the site to provide a new leisure centre with community pool, training pool, leisure water, café, soft play, ‘clip n climb’ facility, a six court sports hall, fitness suite, spin studio, 2 no. fitness studios and 2 no. squash courts.”

- 1.1.2 This Transport Assessment has been prepared by Stantec to accompany a planning application for the redevelopment of the Cascades Leisure Centre site in Gravesend. The application is submitted on behalf of Gravesham Borough Council.
- 1.1.3 The following Transport Assessment provides an assessment of the highway aspects of the proposed development.

1.2 Site Location

- 1.2.1 The site lies within Gravesham Borough Council's (GBC) administrative boundary and the local highway authority is Kent County Council (KCC). To the north of the site lies the village of Chalk and immediately to the west lies the Riverview Park neighbourhood. The location of the site is shown in the figure below.



- 1.2.2 The site is located south of the A226 corridor and north of the A2 corridor, to the east of Thong Lane on the east side of Gravesend. Thong Lane connects these two highway corridors.
- 1.2.3 The site is approximately 4.5 hectares in size. The surrounding area includes a golf course, driving range, playing fields, and indoor sports facilities (Legends Sport).

1.3 This document

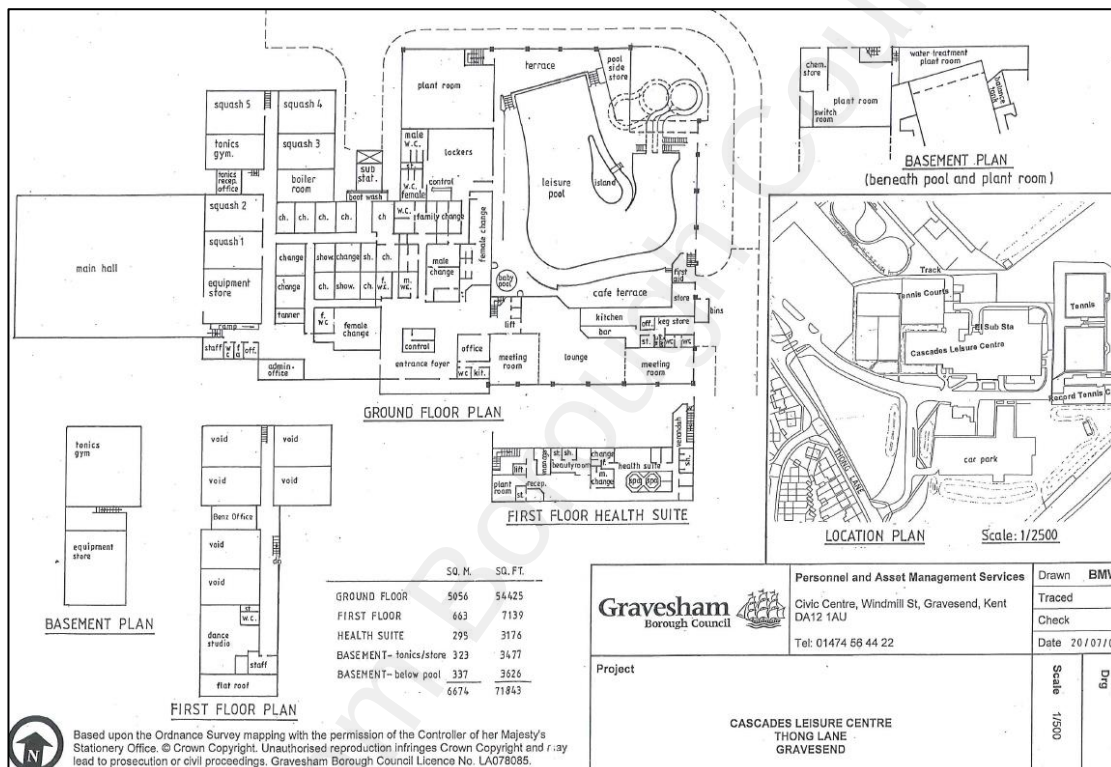
- 1.3.1 A scoping exercise has been undertaken with highway officers.
- 1.3.2 This document has been written with reference to the scoping exercise completed and is structured as follows:
- Section 2 considers the existing and proposed use of the site.
 - Section 3 reviews the local and national policy context relevant to the site.
 - Section 4 provides an overview of the existing transport network serving the site.
 - Section 5 summarises the base year traffic conditions including a summary of recorded crash data and parking demand.
 - Section 6 describes the forecast baseline traffic flows.
 - Section 7 calculates the existing and predicted traffic generation from the existing uses on site and the proposed development replacing this along with the parking supply and demand.
 - Section 8 considers the existing and proposed parking supply and demand and servicing of the site.
 - Section 9 provides an overview of the junction modelling completed for the assessment.
 - Sections 10 to 17 summarise the junction modelling undertaken for the local junctions.
 - Section 18 provides a summary of the report.

2 Existing and proposed use

2.1.1 The following sections provides a summary of the existing and proposed uses on site.

2.2 Existing use

2.2.1 The site is currently occupied by the Cascades Leisure centre. It offers a range of leisure activities within a floor area of around 6,674m² as illustrated below.



2.2.2 Activities at the existing facility include :

- Gym
- Aerobic studios
- Group cycle studio
- Fun 'n' flume swimming pool
- Health suite
- Cafe
- Squash courts
- Sports hall
- Children's play park

2.2.3 The leisure centre is open from 0600-2130 from Monday to Friday and 0800-1800 on Saturdays and Sundays. The gates are locked overnight between 0000-0545 on Monday to Friday and between 0000-0700 on Saturday and Sunday.



- 2.2.4 The entrance to the site is also used by the Gravesend Golf Centre (driving range) located immediately north of the leisure centre building. This facility is open between 0900-2200 on Monday to Friday and 0900-1930 on Saturday and Sunday. This facility will remain as existing.
- 2.2.5 The Legends Sports facility (sports bar and indoor courts and pitches) also share the entrance with Cascades. This facility is open between 1000-2300 on Monday to Friday and 0900-1500 on Saturday and 0900-1300 on Sunday. This facility will remain as existing.
- 2.2.6 On site, Stantec have been advised by the leisure centre operator that there are currently the following number of parking spaces provided to serve the leisure centre :
- Main Car Park 150 spaces (including 6 for mobility impaired drivers)
 - Play park car park 9 spaces
 - Car park near "Bottle bank" 24 spaces
- 2.2.7 There is no charge for parking on site. Vehicular access to the site is via separate in and out entry / exit junctions on Thong Lane. Within the site a one way road connects the in and out junctions and provides access to the car parks. There is also a bus stop located within the site.



View within the site looking at the bus stop / stand



View within the site looking at the one way access road

2.3 Proposed use

2.3.1 A planning application is being submitted for the following:

“Demolition of the existing Cascades Leisure Centre and public house and redevelopment of the site to provide a new leisure centre with community pool, training pool, leisure water, café, soft play, ‘clip n climb’ facility, a six court sports hall, fitness suite, spin studio, 2 no. fitness studios and 2 no. squash courts.”

2.3.2 Hence, it is proposed to demolish the existing leisure centre and replace it with a new building. The new building will offer the same and / or similar facilities and opportunities as the existing leisure centre, but on a larger scale and to modern standards.

2.3.3 It is proposed that the new building will comprise a floor area of just over 7,000m². For the purposes of an assessment envelope a floor area of 7,500m² has been assumed.

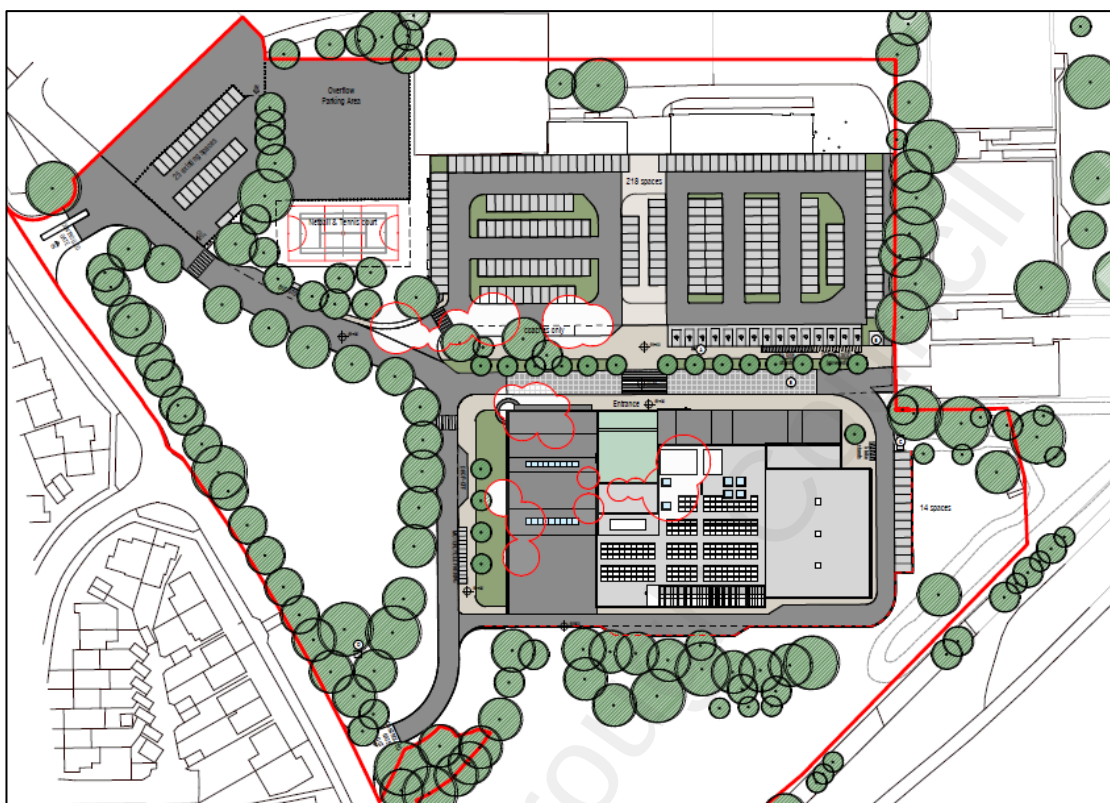
2.3.4 The masterplan for the site (see overleaf) indicates a total parking provision of 232 spaces as summarised below :

- Main car park 218 spaces (including 15 for mobility impaired)
- Staff / service car park 14 spaces (in addition to those above)

2.3.5 There will be no charge for using the car park.

2.3.6 In addition to the above dedicated provision for the leisure centre, the existing 25 space car park at the site entry will also remain as existing and an overflow parking area will be made available to the east of this.

2.3.7 The existing entry and exit junctions on Thong Lane will be retained. The provision of a bus stop on site will be retained, albeit this will be reconfigured to fit within the masterplan.



Illustrative masterplan

3 Policy context

- 3.1.1 This section provides an overview of the national and local transport policy relevant to the development proposals. The below guidance and policy form the basis of review for this Transport Assessment.

3.2 National Planning Policy Framework (2021)

- 3.2.1 The National Planning Policy Framework (NPPF) was published in March 2012 and most recently updated in July 2021 and is the current over-arching planning framework for Local Planning Authorities.
- 3.2.2 The NPPF highlights that sustainable development is made up of three elements that are mutually dependent on each other – economic, social and environmental. It further states that:
- “Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.”*
- 3.2.3 In terms of transport, the key theme of the NPPF is to promote sustainable modes of transport, with development sustainably located and notes that smarter use of technologies can reduce the need to travel. The NPPF does, however, recognise that different policies should be applied in different communities in order to achieve this balance and that opportunities to maximise sustainable modes of transport will vary between urban and rural areas.
- 3.2.4 Paragraph 110 lists a number of considerations for planning authorities to apply in their decision making when reviewing Transport reports. These include the need to consider that opportunities for sustainable transport have been taken up, if the access arrangements are safe and suitable and if there are cost effective improvements to the transport network that could be made.
- 3.2.5 Paragraph 111 of the NPPF states that:
- “Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*
- 3.2.6 Importantly, NPPF advises that development should only be refused on transport grounds if the residual cumulative impacts are likely to be “severe”. The definition of “severe” in this context is unique to the individual site under consideration. However, it may be helpful to consider that within the context of the Environmental Impact Assessment “severe” impacts are often described as those that would have a national or regional significance. In this respect it is clear that NPPF is seeking to strike a positive balance between potential local traffic impacts and local economic or social benefits.
- 3.2.7 It is reasonable to suggest that within many settings, the existing traffic conditions will be busy, with congestion at peak periods. However, NPPF is suggesting that planning authorities should not allow this to stifle valuable economic development. The test is whether any residual impacts could be considered “severe” in the context of NPPF, and it is clear from the assessment that follows that this is not the case.
- 3.2.8 Paragraph 112 of the NPPF requires opportunities for sustainable travel to be exploited and should therefore give priority to pedestrians and cyclists and be accessible by public transport facilities. Developments should also ‘create safe and secure layouts which minimise conflicts

between traffic, cyclists or pedestrians'. The masterplan responds to this through provision of walking and cycling infrastructure on site that connects to the external network.

- 3.2.9 The connectivity of this site with the existing walking network will facilitate movement by this mode. In addition, the site has a bus stop located within the site, as existing, providing excellent connectivity with local bus services.

- 3.2.10 Paragraph 113 states that:

"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

- 3.2.11 This planning application is supported by a Framework Travel Plan document as well as this Transport Assessment.

3.3 National Planning Practice Guidance, 2018

- 3.3.1 The National Planning Practice Guidance (NPPG) was published in July 2018 and sets out current guidance for different aspects to development. For the purposes of this document, the guidance within the NPPG 'Travel Plans, Transport Assessments and Statements' document is considered.

- 3.3.2 The NPPG sets out the following with regards to Transport Assessments:

"Transport Assessments and Transport Statements primarily focus on evaluating the potential transport impacts of a development proposal... The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts... Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe" ..."

- 3.3.3 It is noted within the NPPG that Transport Assessments can positively contribute towards:

- *encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads.*

- 3.3.4 The development proposals include measures to connect the site to the existing walking network and also to integrate the local bus services through provision of a stopping location within the site, as existing. This will encourage and facilitate the use of sustainable travel modes.

3.4 Local Transport Plan 4: Delivering Growth without Gridlock 2016–2031

- 3.4.1 Kent's fourth Local Transport Plan was adopted during August 2017 and sets out KCC's plans to meet its role of enabling:

“planned, sustainable growth and ensure the necessary infrastructure is in place, which will stimulate regeneration and encourage people and businesses to come to Kent. To be able to travel easily, safely and quickly to our destinations we need a transport network that can cater for current demand, enables economic growth, and supports a growing population.”

3.4.2 The LTP4 document sets out five overarching policies that are targeted at delivering specific outcomes as summarised below.

- Policy: Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.

Outcome 1: Economic growth and minimised congestion.

- Policy: Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.

Outcome 2: Affordable and accessible door-to-door journeys.

- Policy: Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.

Outcome 3: Safer travel

- Policy: Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.

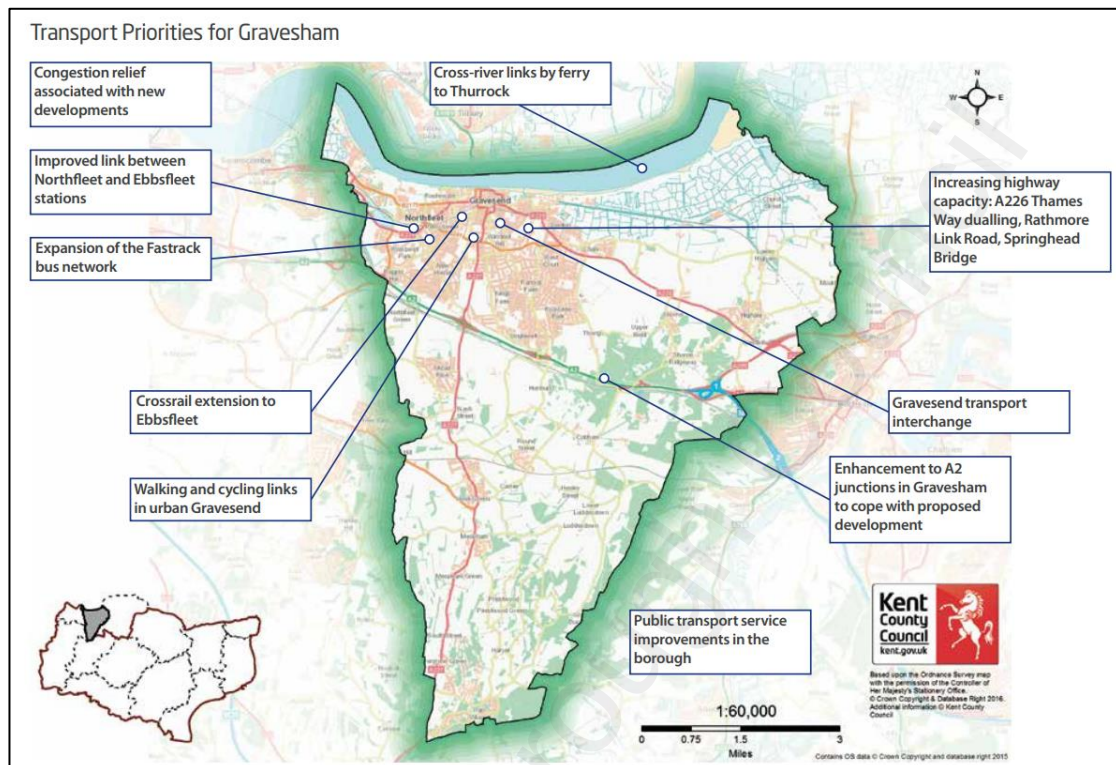
Outcome 4: Enhanced environment

- Policy: Provide and promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.

Outcome 5: Better health and wellbeing

3.4.3 Kent's transport priorities in LTP4 are described as being strategic, countywide or local. The strategic priorities are infrastructure projects that KCC may not directly deliver or operate and are likely to affect a number of districts. Some of these are national priorities. Countywide priorities include promotion of road safety, sustainable travel and maintenance and upgrade of transport assets.

3.4.4 The LTP4 document brings together local priorities from individual Local Plans and supporting Transport Strategies that set out the transport infrastructure requirements to support growth in each district / borough. With respect to Gravesham the LTP4 document identifies several key schemes which will be required to support growth as shown in the figure below.



3.5 KCCs Active Travel Strategy

3.5.1 Kent County Council's Active Travel Strategy was implemented in February 2017, and aims to increase the attractiveness of active travel, making it a realistic choice for short journeys within Kent. The strategy supports the national strategies and work alongside other plans and policies within Kent.

3.5.2 The three actions that are set out within the strategy are;

- Integrate active travel into planning
- Provide and maintain appropriate routes for active travel
- Support active travel in the community

3.5.3 The strategy aims to increase the integrated nature of travel, encouraging multimodal journeys. This would include walking or cycling to the bus stop or train station.

3.5.4 The proposed development is well located to take advantage of the existing sustainable transport network opportunities, and support these.

3.6 Gravesham Local Plan Core Strategy

3.6.1 A Development Plan (or Local Plan) sets out the planning policies that guide development in Gravesham Borough. The Local Plan Core Strategy is the main document in the Gravesham Local Plan. Its role is to:

- *Set out a long-term vision for the future of Gravesham based on evidence of what's needed to support communities and also what makes Gravesham a distinctive and attractive place to live and work.*

- *Guide the amount, type, location and detailed design of future development and provide a consistent basis against which we can decide planning applications.*
- *Support other priorities such as our regeneration proposals, investment in infrastructure, our work to support local businesses and encourage job creation and our efforts to promote healthy communities.*

3.6.2 The Borough's Local Plan Core Strategy was adopted by the Council on 30 September 2014. Policy CS13 relates to sports facilities and states :

"Policy CS13: Green Space, Sport and Recreation

The Council will seek to make adequate provision for and to protect and enhance the quantity, quality and accessibility of green space, playing pitches and other sports facilities, in accordance with an adequate, up to date and relevant evidence base.

A set of consistent green space, playing pitch and sports provision standards will be established which will apply to all new development. Provision should be made on-site. However, where this is not possible because of the site size, location or other specified circumstances, alternative provision or the enhancement of existing facilities will be required off-site. In all cases, provision will include arrangements for the ongoing maintenance of the space."

3.6.3 Hence, the proposed development is consistent with the policy of enhancing the quantity and quality of sports facilities.

3.6.4 Policy CS11 relates to Transport and states :

"Policy CS11: Transport

New developments should mitigate their impact on the highway and public transport networks as required. As appropriate, transport assessments and travel plans should be provided and implemented to ensure the delivery of travel choice and sustainable opportunities for travel. Transport assessment work is required to be undertaken in accordance with national and local policy guidance, and to identify detailed highway and public transport network requirements and management arising from the development.

Sufficient parking in new development will be provided in accordance with adopted parking standards which will reflect the availability of alternative means of transport and accessibility to services and facilities.

The Council will support proposals which improve public transport provision and facilities in the Borough. In particular, it will:

- *seek to maintain and expand, where justified, segregation lanes for Fastrack and existing bus priority measures elsewhere;*
- *require Key Sites to include provision for buses;*
- *support the development of transport hubs at Gravesend Town Centre and Ebbsfleet (in Dartford Borough Council area) to provide high quality interchange facilities between bus, rail, walking and cycling; and*
- *Ensure an adequate supply of public car parking.*

The Council will seek improvements to walking and cycling facilities and networks in the Borough including provision in new development as appropriate. These should provide

improved access to Gravesend Town Centre and Ebbsfleet and to other services and facilities in the Borough. In particular, the Council will seek the provision of pedestrian and cycle links between Northfleet and Ebbsfleet stations and along the River Thames, as part of the proposed Thames Estuary Path.

Land required for the possible future extension of Crossrail and to protect the High Speed 1 (HS1) railway is safeguarded on the Policies Map and proposals that would prejudice these will be refused.

The Council will support proposals which improve the efficiency of freight transport and provide opportunities for alternatives to road transport where possible. The Council will safeguard wharves, as shown on the Policies Map, subject to the provisions of paragraph 5.1.36 of Policy CS07 (Economy, Employment and Skills).

The Council will support proposals which facilitate the use of the River Thames for passenger transport and enable cruise liners to visit the Borough.”

- 3.6.5 Hence, the theme of the policy is to encourage and facilitate access by sustainable travel modes. The proposed development will accord with this through connections with the existing walking network and provision of an on site bus stop, as existing.

3.7 Gravesham Local Plan First Review: Saved and Deleted Policies Version (September 2014)

- 3.7.1 Policy T1 (Impact of Development on the Highway Network) has been saved and considers traffic impact of development on the transport system and ensures all developments are adequately served by the highway network.
- 3.7.2 This Transport Assessment considers the connectivity of the site and its impact on the transport network.

3.8 Gravesham Local Plan Regulation 18 Stage 1 Consultation, Part 2: Development Management Policies Document, April 2018

- 3.8.1 This document is emerging policy and at early stages of production. Therefore, it carries limited weight in the determination of planning applications. Nevertheless, it is proper to consider the content of the emerging policy in relation to the proposed development.

- 3.8.2 Proposed Policy INF3: Understanding and Mitigating Transport Impacts states :

“6.2.29. Development proposals will be required to meet the transport needs generated in a sustainable manner having regard to the principles set out in policy INF 2. They should consider avoiding before mitigating any unacceptable impacts on the safety and operation of the highway, public transport and public rights of way networks or the river as necessary.

6.2.30. Applications should be supported by a proportionate evidence base detailing baseline and future transport conditions and the likely impact of the proposed development, both alone and in combination with other known proposals, as appropriate

6.2.31. Large or complex proposals or proposals with the potential to have unacceptable impacts in areas with existing transportation or associated air quality problems should be supported by a formal Transport Assessment, undertaken in accordance with national and local policy guidance and may also require the production of a Travel Plan, as part of any mitigation package.

6.2.32. Sufficient parking in new development will be provided in accordance with the Council's adopted parking standards which will reflect the availability of alternative means of

transport, accessibility to services and facilities, and the objective to secure a modal shift to more sustainable modes.

6.2.33. Proposals that have an unacceptable impact on highway safety or result in a severe residual cumulative impact on the road network following mitigation or do not contribute positively toward the achievement of the aims of policy INF 2 will not be permitted.”

- 3.8.3 The proposed development is supported by this Transport Assessment document that considers the effects of the development on the highway network and considers the appropriate parking supply.

- 3.8.4 Proposed Policy INF 5 Electric Vehicle Charging Points states :

“6.3.11. In order to reduce emissions and increase the use of plug-in vehicles, where viable the Council will require all new developments to provide charging infrastructure for electric vehicles. The table below sets out how such provision should be accommodated:

Type of Development	Provision of Parking Bays and Charging Points for ULEV
Houses ⁱ	Single charging point per house within garage, car port or driveway
Flats (<50 units) ^{ii+v}	Single parking bay and charging point marked out for use by electric vehicles only
Flats (>50 units) ^{ii+v}	10% of parking bays marked out for use by electric vehicles only with charging points
Other Development (<50 Bays) ^{ii+v}	Single parking bay and charging point marked out for use by electric vehicles only
Other Development (>50 Bays) ^{ii+ iii+v}	10% of parking bays marked out for use by electric vehicles only with charging points
Petrol / Service Stations ^{iv+v}	Single parking bay and charging point marked out for use by electric vehicles only
ⁱ dedicated 32A Type 2 charger as a minimum ⁱⁱ dedicated free standing 32A Type 2 weatherproof chargers as a minimum ⁱⁱⁱ if vehicular movements from proposed development generates 100 or more two-way vehicle movements per day, charger provision should be replaced by dedicated free standing rapid (43kw AC or 50 kw DC) Type 2 weather proof chargers as a minimum ^{iv} dedicated free standing rapid (43kw AC or 50 kw DC) Type 2 weather proof chargers as a minimum ^v provision as above, with installation of groundwork / passive wiring in order to enable further installation to match demand.	

6.3.12. Where charging facilities are shared (for example through the development of flats) any provision of infrastructure should also include arrangements for the future operation and maintenance of the facility.”

- 3.8.5 The proposed development will provide EV charging facilities and this will accord with local policy.

3.9 Parking Standards

- 3.9.1 The Gravesham Local Plan First Review: Saved and Deleted Policies Version (September 2014) document includes Policy P3.

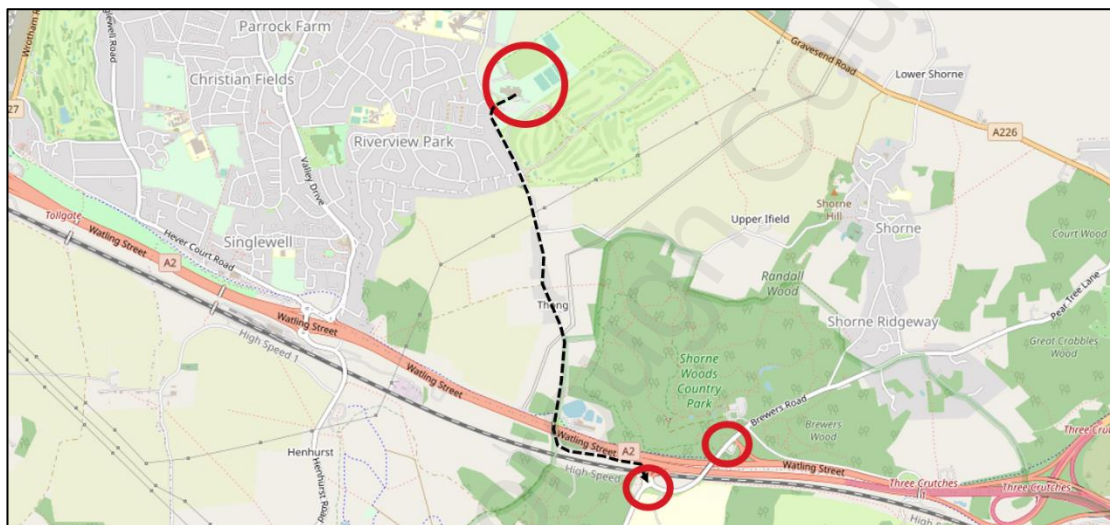
- 3.9.2 Policy P3 relates to Vehicle Parking Standards and states that vehicle parking should be provided in accordance with the Kent County Council Vehicle Parking Standards, unless justified as an exception.
- 3.9.3 Kent and Medway Structure Plan 2006 Mapping out the future: Supplementary Planning Guidance SPG 4 outlines Kent vehicle parking standards for non-residential developments.
- 3.9.4 Parking at the proposed development will provided in accordance with these standards and is considered in detail at section 8.

4 Transport network serving the site

4.1.1 The following section provides a summary of the existing transport network that provides access to the site.

4.2 Existing highway network - strategic

4.2.1 The proposed site is located approximately 1.8km to the north of the A2. The figure below illustrates the strategic highway network in relation to the site.



4.2.2 The A2 connects the port of Dover to London and provides local connections to Gravesend, Ebbsfleet and Dartford to the west and Medway to the east. The A2 has four lanes in each direction in this location and is subject to the national speed limit.

4.2.3 Access to the A2 from the site can be achieved via Thong Lane via a grade separated interchange at its southern extent.

4.2.4 Westbound on and off slips connect the A2 with a four arm roundabout comprising Thong Lane, Halfpence Lane and Brewers Road. Halfpence Lane and Brewers Road have 2 lane entries whilst the A2 and Thong Lane arms half a single lane entry.

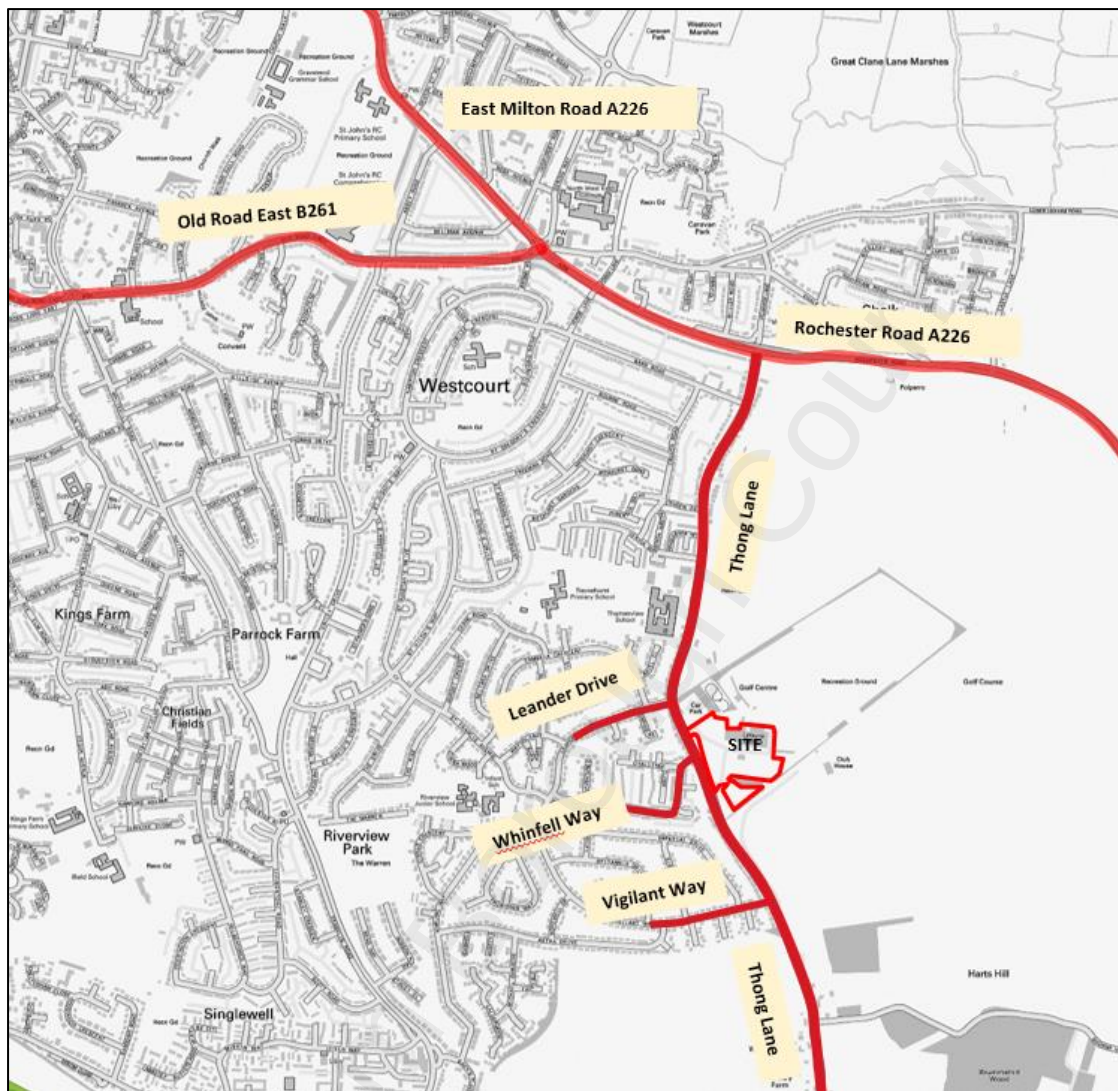
4.2.5 The eastbound on and off slips connect with Brewers Road as a simple priority junction.

4.2.6 The Lower Thames Crossing scheme continues to be developed but the route and funding is not yet confirmed and a planning application is yet to be submitted. Should this scheme be built it is expected to pass to the east of the leisure centre site and connect to the A2 to the south.

4.2.7 For the purposes of this Transport Assessment it has not been considered as a committed scheme. KCC have also expressed the view that the proposed development would be too small to have any impact on the LTC proposals.

4.3 Existing highway network - local

4.3.1 Vehicles leaving the site would either turn right or left onto Thong Lane at the priority give way exit at Cascades Leisure Centre. Thong Lane then heads north to the A226 Rochester Road or south to the A2. The figure below illustrates the local highway network.



- 4.3.2 The intersection to the north connecting Thong Lane with the A226 Rochester Road is a priority give way junction with a central reserve right turn bay. The A226 has a 40mph speed restriction in the vicinity of the junction with Thong Lane and includes a series of street lighting. A segregated cycle lane is provided on the south side of the carriageway and an on road cycle lane on the north side.



View looking east on A226 towards junction with Thong Lane



View looking east on A226 towards junction with Thong Lane



View looking west on A226 towards junction with Thong Lane

- 4.3.3 Thong Lane has footways on both sides running north from the site entry to the A226 Rochester Road corridor. Thong Lane provides on street parking and lighting. A scheme of traffic calming has been introduced on Thong Lane comprising give way pinch points, carriageway narrowings and speed cushions / humps. Thong Lane has a 30mph speed restriction along its extent until it passes the built extent at its southern end.



View looking south on Thong Lane from junction with A226



View looking north on Thong Lane towards junction with A226

- 4.3.4 Heading south on Thong Lane the footways, traffic calming and street lighting continue. The junction with Leander Drive lies just north of the entry to the site. This junction is set out as a mini roundabout with Thong Lane forming the north and south arms and Leander Drive the west arm.



View looking north on Thong Lane towards junction with Leander Drive

- 4.3.5 The site entry junction is a one way inbound access. It allows vehicular entry and a separate side entrance for pedestrians.

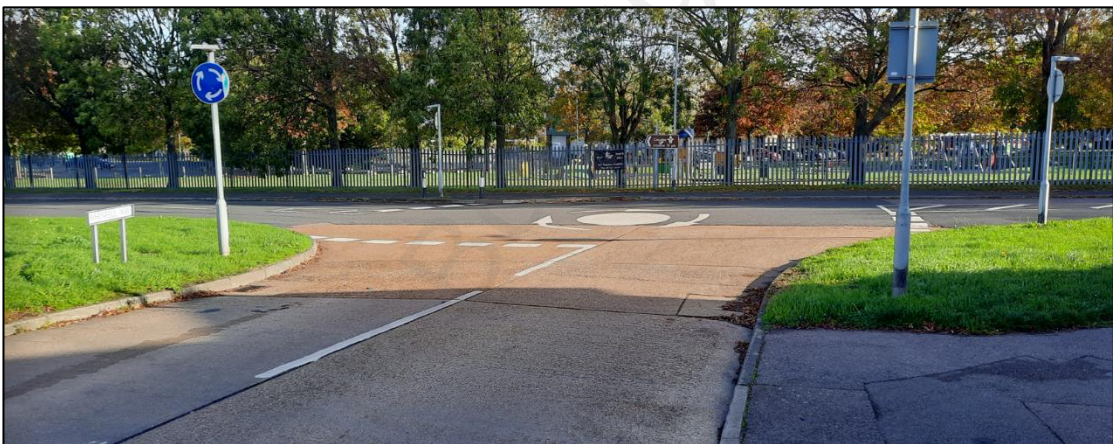


View looking towards Cascades Leisure Centre entrance



View looking south on Thong Lane towards Cascades Leisure Centre entrance

- 4.3.6 Opposite the site lies the residential area of Riverview Park. The junction of Thong Lane with Whinfell Way is set out as a mini roundabout. This provides a route towards Valley Drive and other residential areas within south and south east Gravesend.



View looking east towards Thong Lane from Whinfell Way

- 4.3.7 Continuing south on Thong Lane is the exit from the Cascades Leisure Centre. This is set out as a priority give way junction with separate lanes for left turning and right turning vehicles.



View looking at exit from Cascades Leisure Centre



View looking south on Thong Lane towards exit from Cascades Leisure Centre

- 4.3.8 Continuing south on Thong Lane the footway is provided on the west side of the carriageway and street lighting is also provided.
- 4.3.9 The junction of Thong Lane with Vigilant Way is a simple priority junction.



View looking south on Thong Lane at junction with Vigilant Way

- 4.3.10 Further to the south, beyond the built frontage, there is no footway provided and the speed limit changes to 60mph. Thong Lane becomes more rural in nature and narrow in places as it approaches the A2 overpass.
- 4.3.11 South of the A2, Thong Lane becomes Darnley Lodge Lane and forms a four arm roundabout junction with Halfpence Lane, the A2 eastbound on and off slips and Brewers Road. Brewers Road continues north across the A2 and provides access to the A2 westbound on and off slips.

4.4 Walking and cycling

- 4.4.1 Pedestrian access to the site is directly from Thong Lane alongside the vehicular entry and exit locations as shown on the photos below. Cycling access would use the vehicular entry and exit points.

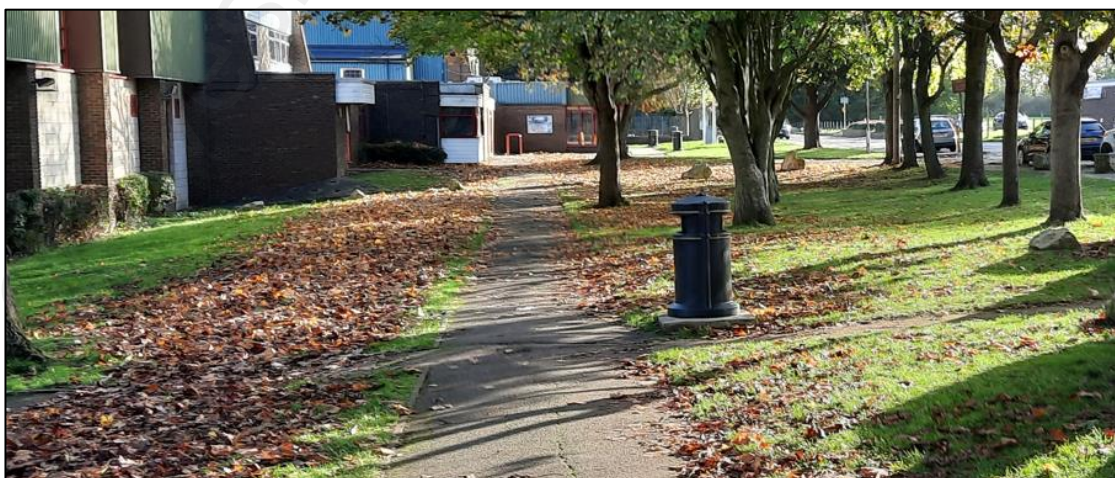


View looking towards the vehicular entry of the site showing the pedestrian access to the right



View looking towards the vehicular exit of the site showing the pedestrian access to the left

- 4.4.2 Within the site pedestrian routes are provided to the main building and car parks through a network of footways as illustrated below.



View looking at footways within the site



View looking at footways within the site

- 4.4.3 Thong Lane is abutted by the built urban / suburban area of east Gravesend on its west side and open areas on its east side. Hence, the significant majority of the leisure centre catchment would be expected to be to the west.
- 4.4.4 The local area to the west of the site has a good level of pedestrian connectivity with footways present on both sides of the majority of highway routes and street lighting. The footways on Thong Lane are generally provided to a width of around 2m or more and are street lit.



View looking south on Thong Lane showing footways on both sides

- 4.4.5 To the west of Thong Lane there are various routes connecting the site to residential areas using Leander Drive, Whinfell Way and Vigilant Way. These routes provide footways and street lighting.

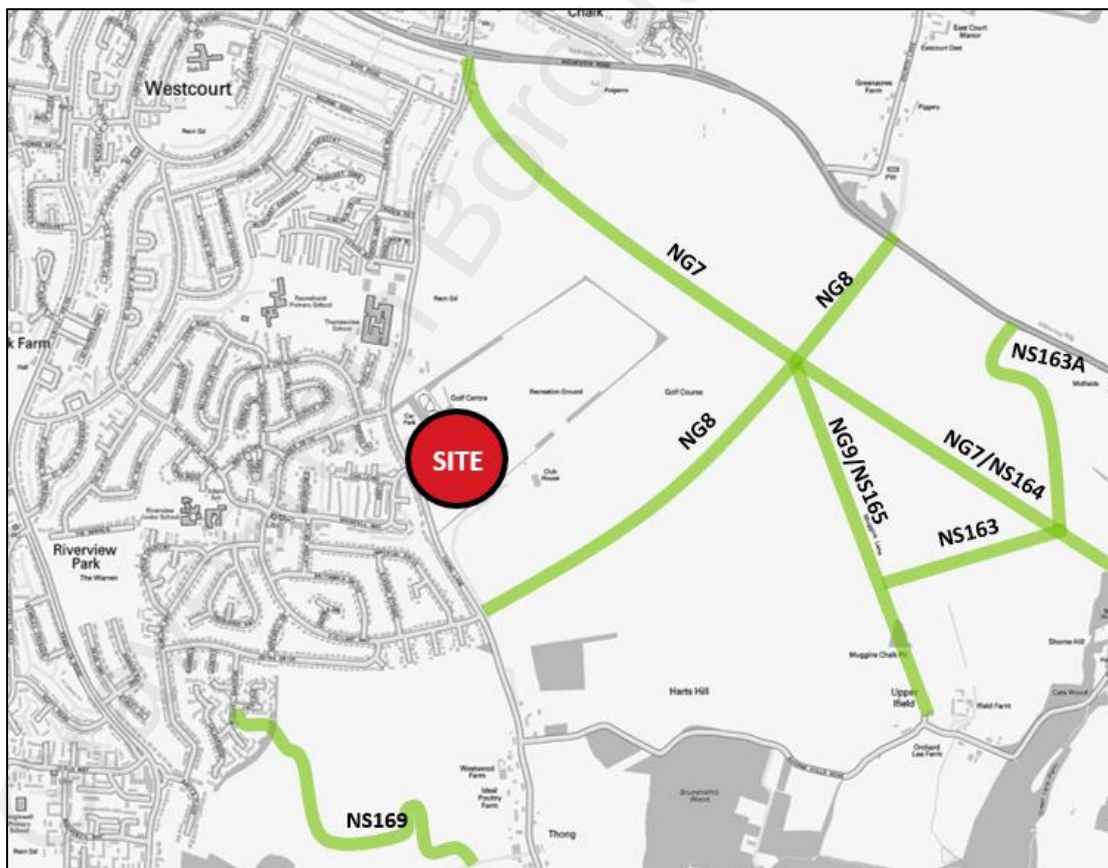


View looking west on Leander Drive



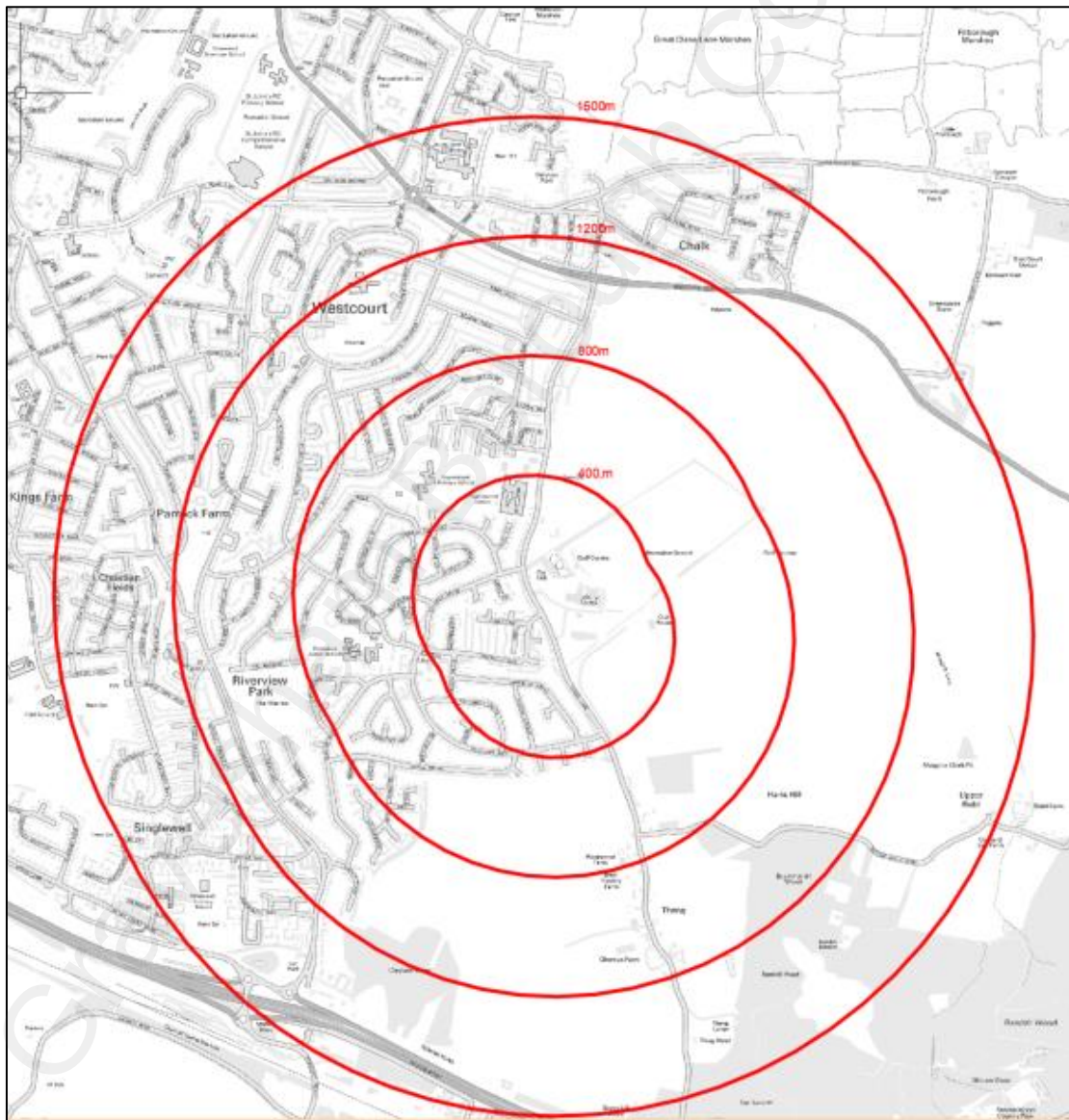
View looking west on Vigilant Way

- 4.4.6 Hence, the site is well connected to the existing local pedestrian network and residential areas of east Gravesend.
- 4.4.7 In addition, there are a number of Public Rights of Way (PROWs) surrounding the site and these are illustrated on the figure below. These routes tend to connect the site surrounds to the open areas to the east.



- 4.4.8 A number of footpaths including NG8 / NG7 / NG9 / NS165 converge to the east of the site.
- 4.4.9 Route NG8 runs from Thong Lane, heading north east to the A226 Gravesend Road and passes through Southern Valley Golf club from the south west entrance.

- 4.4.10 Routes NG7 / NS164 connect Thong Lane north of the site with Crown Lane in Shorne to the south east.
- 4.4.11 The Institution of Highways and Transport (IHT) guidance document 'Planning for Walking' (April 2015) states that 80% of journeys shorter than 1.6km are made wholly on foot with 26% for journeys that are 1.6km to 3.2km long also being undertaken on foot.
- 4.4.12 The same document suggests that routes should connect at local and district levels and form a thorough network. Leisure centres and other key amenities (schools and shops for example) should be connected with good walking routes.
- 4.4.13 The figure below shows 400m, 800m, 1200m and 1600m distances from the site entrance. This equates to approximately 5, 10, 15 and 20 minute walking distances to the site.



- 4.4.14 It is notable from the figure above that a significant number of residential homes are within the 20 minute walk isochrone. This would allow a proportion of local residents to walk to the leisure centre.

- 4.4.15 With respect to cycling there are no designated or segregated cycle routes within the immediate site vicinity. On this basis cyclists share the carriageway with general traffic. The traffic calming on Thong Lane encourages lower traffic speeds that would be compatible with a cycling route.
- 4.4.16 To the north there is a cycle route on the A226. This comprises a segregated cycle facility on the south side of the A226 and an on street cycle lane on the north side of the carriageway. The segregated facility heads north west on the A226 towards the town centre.
- 4.4.17 The closest national cycle route is located around 1.8km to the south, National Route 177 that runs parallel to the A2. National Route 177 runs south from Northfleet in Kent, via Rochester, Maidstone and Ashford, to join with National Route 2 on the South coast. Around 3.8km to the north west lies National Route 1 which runs from Dover to Scotland.



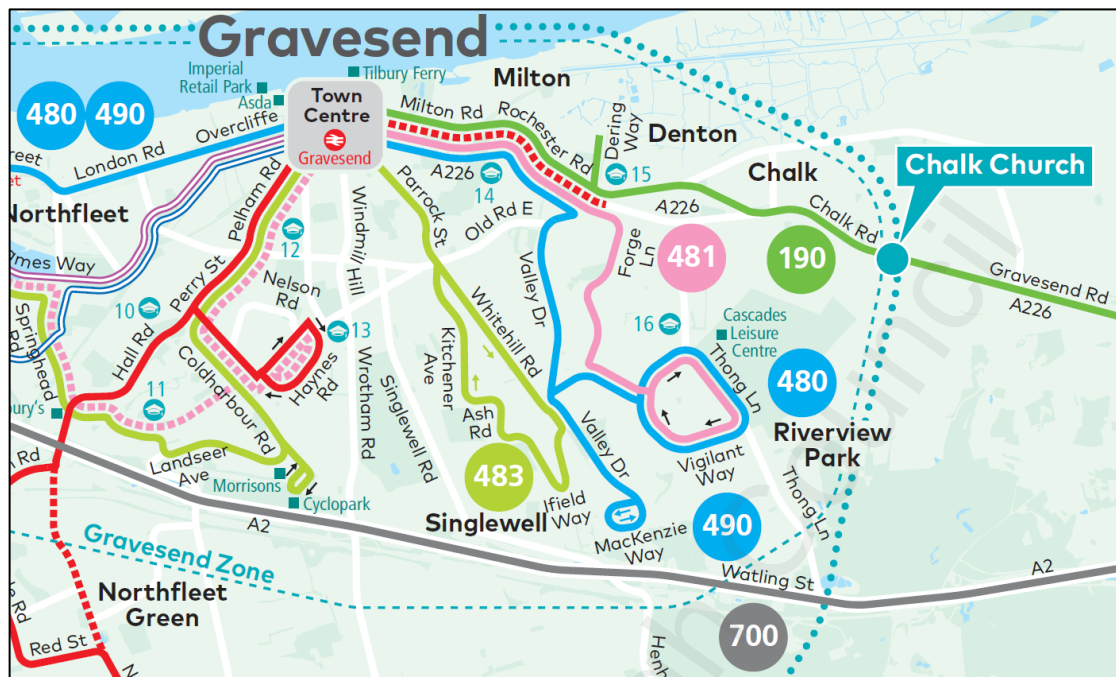
- 4.4.18 Local visitors to the leisure centre would be able to cycle to the site using the local road network within the residential areas to the west of the site.

4.5 Bus

- 4.5.1 Cascades Leisure Centre provides a bus stop within the site and this facility will be retained within the new masterplan. Local bus services are operated by a number of operators, including Arriva, and an extract from the route map is shown below.
- 4.5.2 Within the site the 480 and 481 bus services provide direct access to the leisure centre. The table below provides a summary of the service offered.

Bus Number	Origin	Destination	Frequency
480	Dartford	River View Park	Every 20 minutes 5:42- 18:19
481	Bluewater	River View Park	Every hour 9:30 – 22:30

- 4.5.3 It is noted that the bus service offers frequent services to Gravesend town centre and beyond.



Bus layby within the site

- 4.5.4 Within the site the 480 and 481 bus services provide direct access to the leisure centre. The table below provides a summary of the service offered.

Bus Number	Origin	Destination	Frequency
480	Dartford	River View Park	Every 20 minutes 5:42- 18:19
481	Bluewater	River View Park	Every hour 9:30 – 22:30

- 4.5.5 It is noted that the bus service offers frequent services to Gravesend town centre and beyond to Northfleet and Dartford.
- 4.5.6 External to the site, additional bus stops are provided at the site vehicular entry on Thong Lane and also Leander Drive, around 200m from the site entrance. These stops provide access to the 735 intercity bus (Redwing Coaches) and 111 service (1st bus stop Ltd).



View looking south on Thong Lane at site entrance showing bus stop



Bus stop on Leander Drive

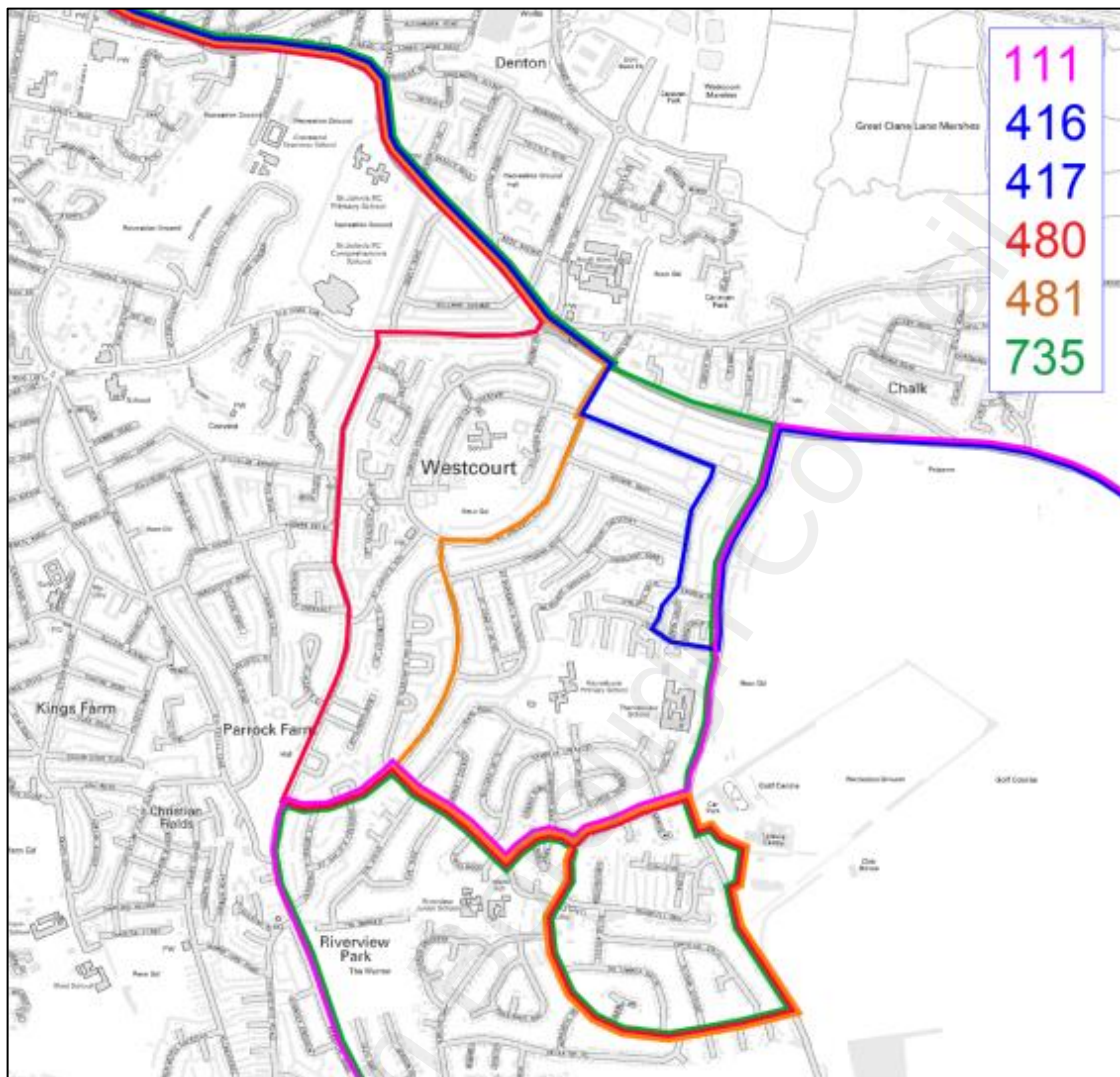


Bus stop on Vigilant Way

- 4.5.7 Additional bus stops are provided on Cervia Way around 600m north of the site entrance on Vigilant Way to the south and these provide access to services 416 and 417 (Redroute buses). The table below provides a summary of the service offered.

Bus Number	Origin	Destination	Frequency
111	Shorne	Gravesend	3 times a day (school times)
416	Meopham	Gravesend	Every 1 hour 25 from 9:30-16:35
417	Cliffe	Gravesend	Every 4 hour 25 from 9:19 – 13:44
735	Gravesend	River View Park	Every 1 hour 20 16:55-18:15

- 4.5.8 The figure below shows the bus routes.



4.5.9 In summary, there is good access to / from the site using existing bus services.

4.6 Rail

4.6.1 The closest rail station to the leisure centre is Gravesend. This rail station is approximately 4.5 kilometres from the site. The rail station is accessible by bus using the 480 / 481 services.

4.6.2 Gravesend rail station services are operated by Southeastern and Thameslink trains and include high speed services to London St Pancras International.

4.6.3 The table below highlights the local rail links and frequency of these services which stop at Gravesend.

Service Destination/Origin	Monday – Friday Frequency	Saturday Frequency	Sunday Frequency	Typical Journey Time
Dartford	Every 30 minutes	2 every 30 minutes	2 every 30 minutes	16 minutes
Stone Crossing	Every 30 minutes	2 every 30 minutes	2 every 30 minutes	11 minutes

Greenhithe	Every 30 minutes	2 every 30 minutes	2 every 30 minutes	10 minutes
Swanscombe	Every 30 minutes	2 every 30 minutes	2 every 30 minutes	6 minutes
Northfleet	Every 30 minutes	2 every 30 minutes	2 every 30 minutes	4 minutes
Higham	Every 30 minutes	Every 30 minutes	Every 30 minutes	8 minutes
Strood	Every 30 minutes	Every 30 minutes	Every 30 minutes	12 minutes

4.7 Summary

- 4.7.1 In summary, it is demonstrated that the site can be accessed by a number of modes, including walking from the local surrounds, bus services that penetrate the site, or stop close by, and rail through connection with the bus services. This will facilitate journeys by sustainable modes and reduces the need for private vehicle journeys.

5 Base year traffic conditions

5.1.1 The following section summarises the derivation of base year traffic flows.

5.2 Scope of junctions assessed

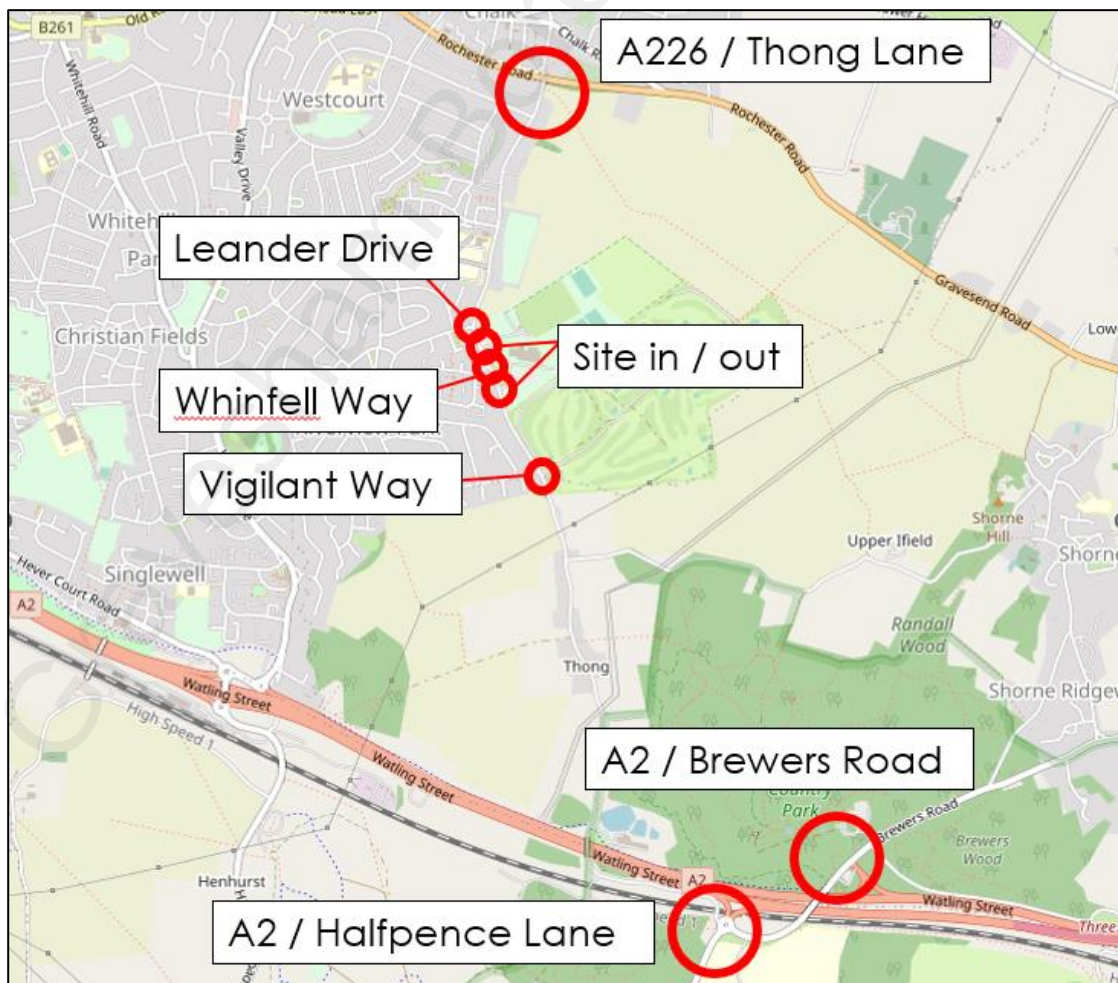
5.2.1 During the scoping exercise with highway authority officers it was agreed that the following junctions would need to be assessed within the Transport Assessment.

- Site access junctions
- A226 Rochester Road / Thong Lane
- Thong Lane / Leander Drive
- Thong Lane / Whinfell Way
- Thong Lane / Vigilant Way

5.2.2 An additional 2 junctions were surveyed to assess connection to the strategic highway network.

- A2 / Thong Lane
- A2 / Brewers Road

5.2.3 These junctions are shown in the plan below.

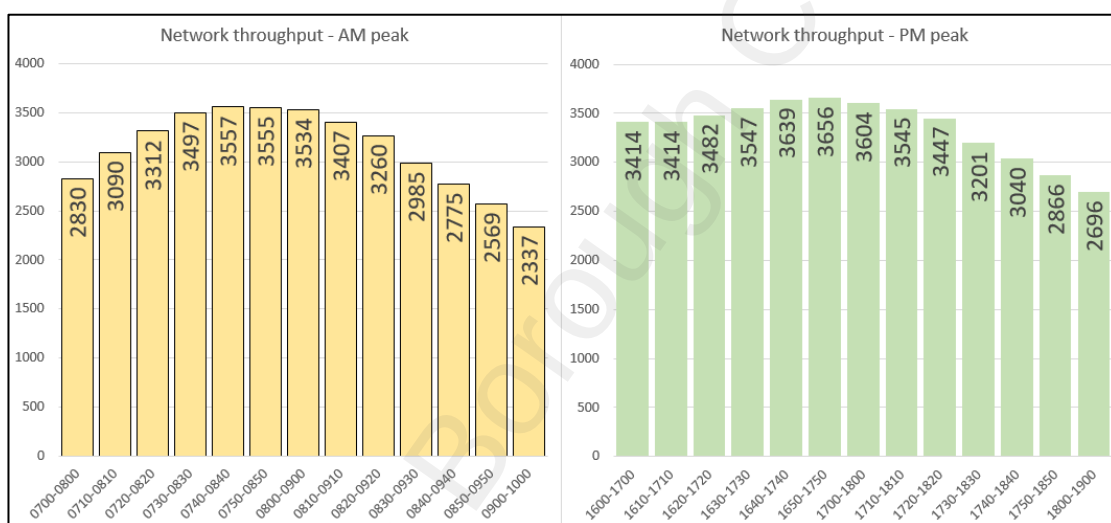


5.3 Observed traffic flows

5.3.1 Manual Classified Count (MCC) surveys were undertaken on Tuesday 18th October 2022 between the hours of 0700-1000 and 1600-1900 for the following junctions.

- Site access junctions
- A226 Rochester Road / Thong Lane
- A2 / Thong Lane
- A2 / Brewers Road

5.3.2 The results of the MCC survey showed that across the network (on the basis of network throughput) the AM peak hour occurred between 0740-0840 and the PM peak hour occurred between 1650-1750 as illustrated by the network throughput graphs illustrated below.



5.3.3 These peak hours have been adopted for assessment purposes.

5.3.4 Additional surveys were conducted on Thursday 3rd November 2022 between the hours of 0730-0930 and 1630-1830 at the following junctions:

- Thong Lane / Leander Drive
- Thong Lane / Whinfell Way
- Thong Lane / Vigilant Way

5.3.5 Surveys at these locations were conducted following a request by highway officers. Due to time constraints the surveys were conducted during a half term period. However, the adjacent junction surveys, described above at 5.3.1, were used to factor the survey data to represent non half term volumes.

5.3.6 Maximum queue lengths were also recorded for each 5 minute interval.

5.3.7 In addition to the MCCs, Automatic Traffic Counters (ATCs) were laid at the entry and exit points to the leisure centre site from Wednesday 12th October to Tuesday 18th October for a period of one week.

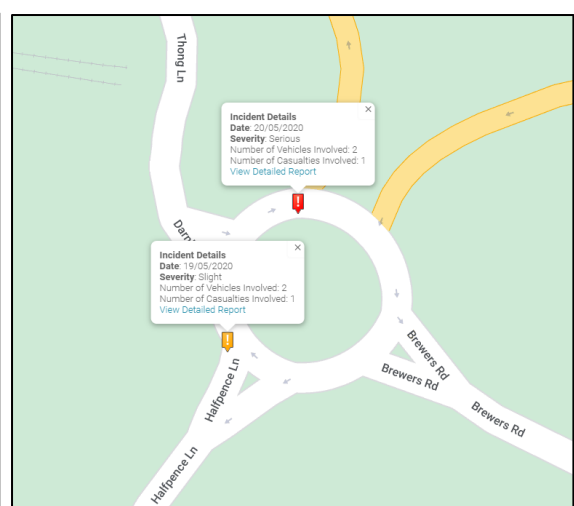
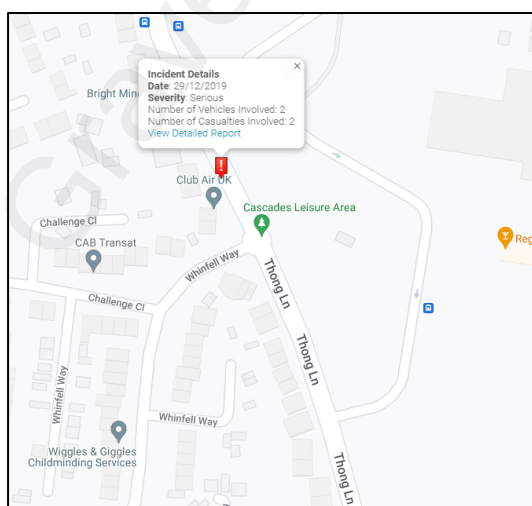
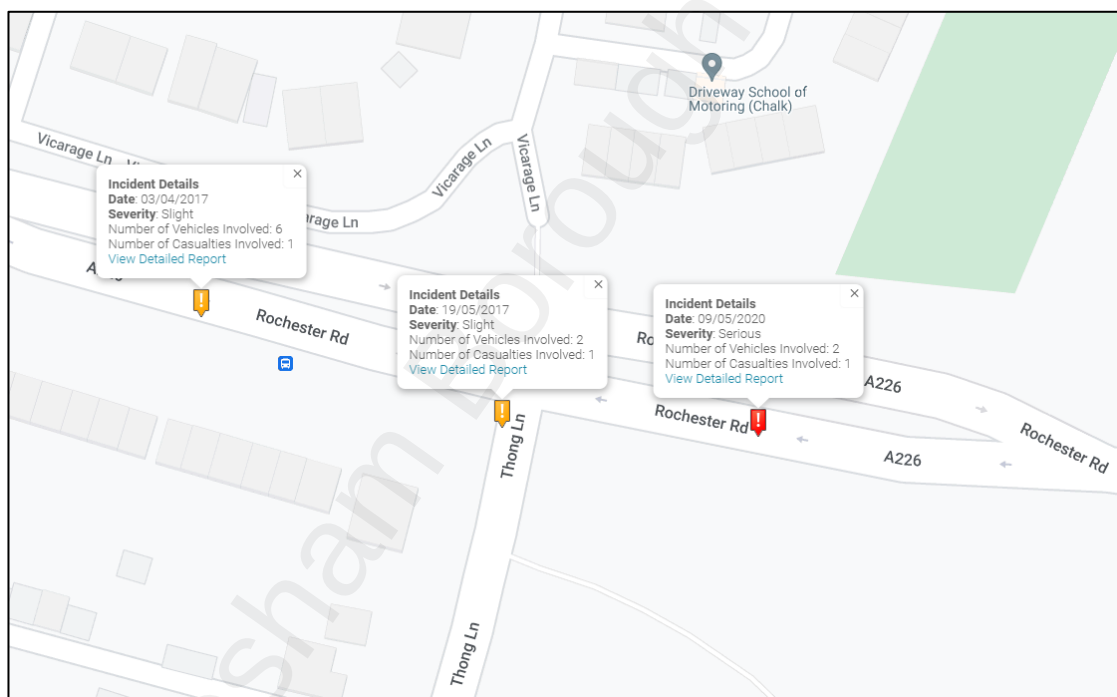
5.3.8 The raw survey data can be seen in Appendix A.

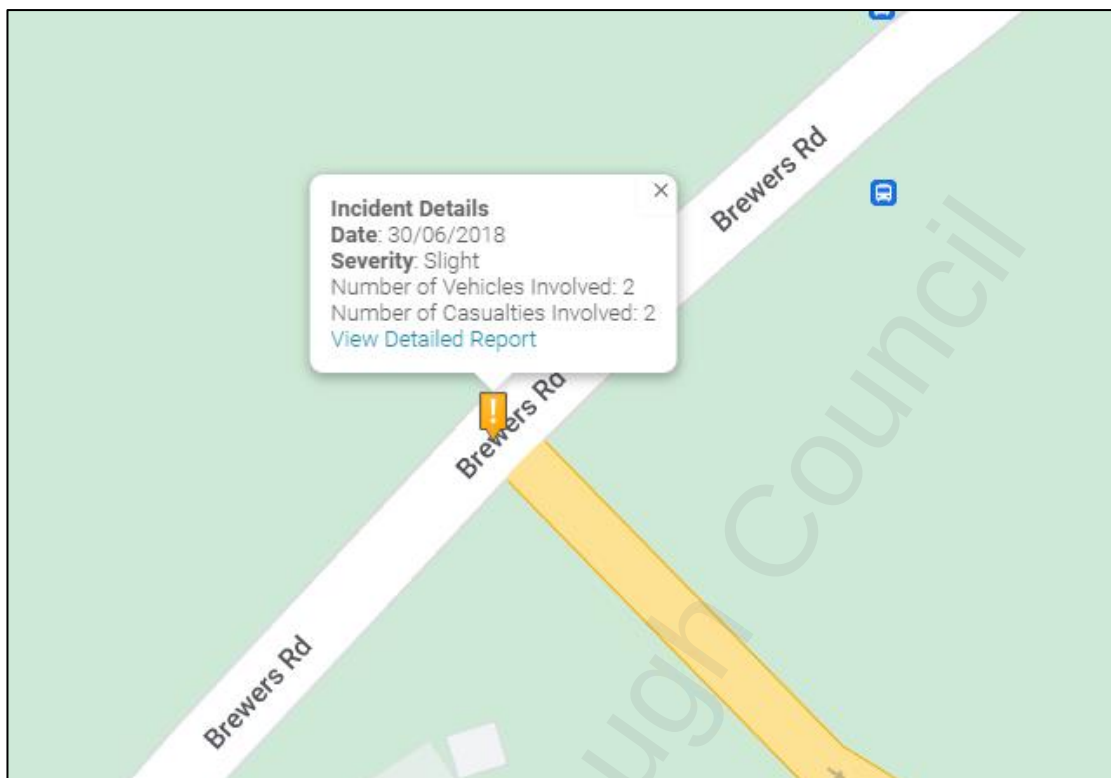
5.3.9 Base year turning flows for these time periods are shown at Figures 5.1 to 5.2.

5.4 Crash data

5.4.1 The Crashmap website has been reviewed for crash data during the previous 5 year period. A summary of the crashes is provided in the table below and location figures extracted from the Crashmap website shown below.

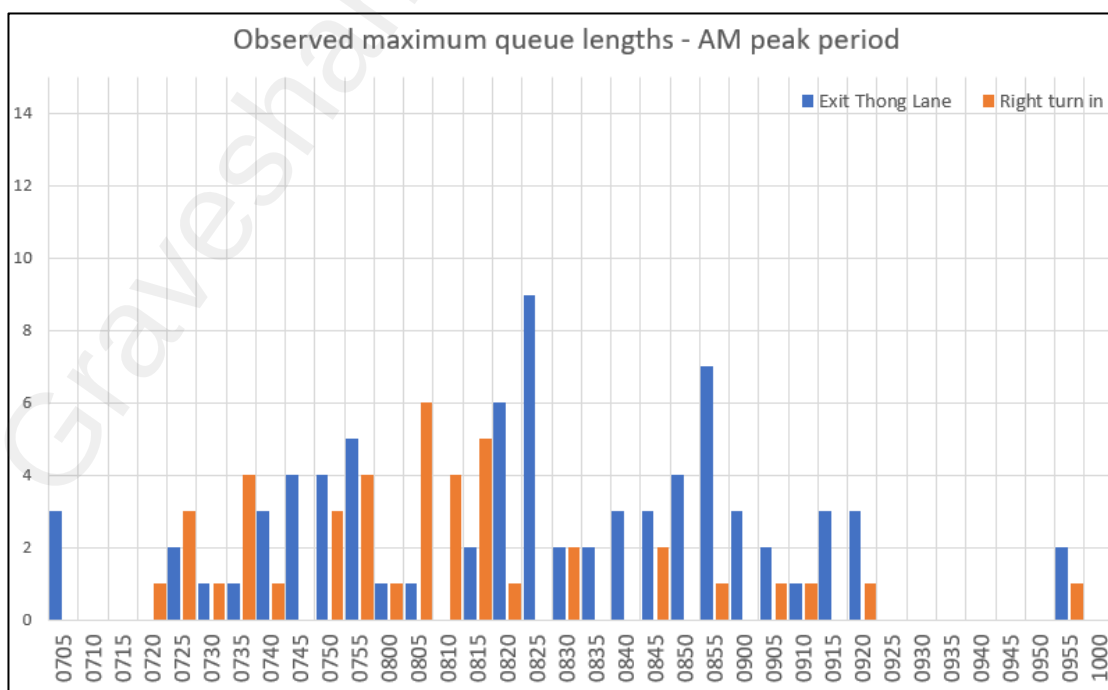
	Slight	Serious	Fatal	Total
A226 / Thong Lane	2	1	0	3
Site access	0	1	0	1
A2 / Thong Lane	1	1	0	2
A2 / Brewers Road	1	0	0	1

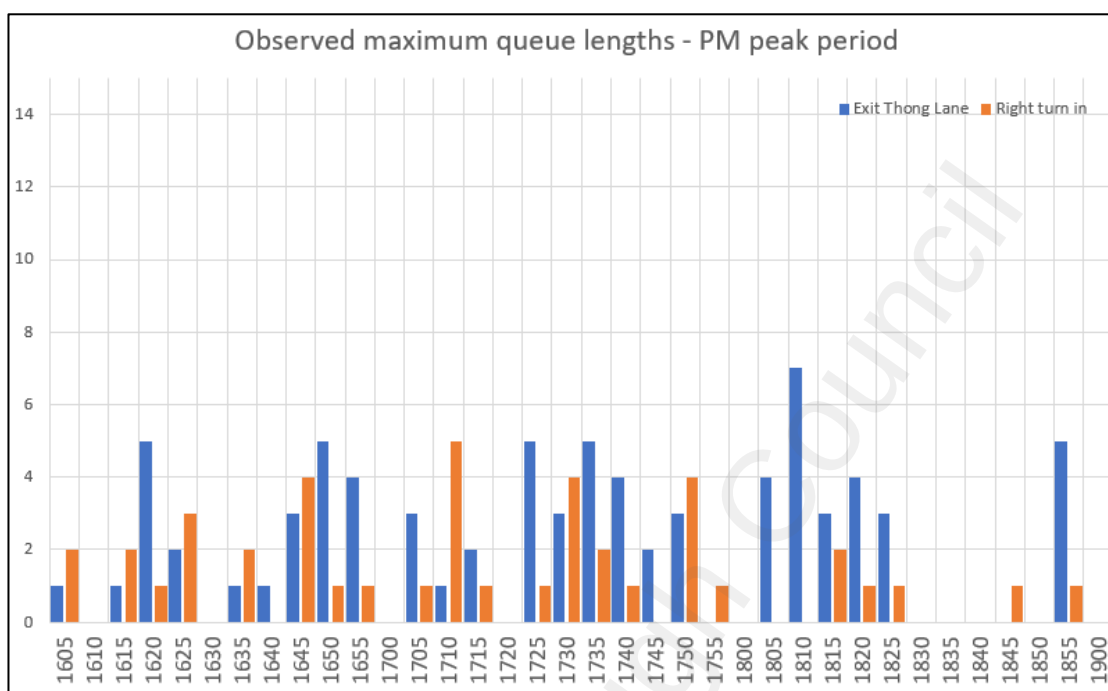




5.5 Queue observations

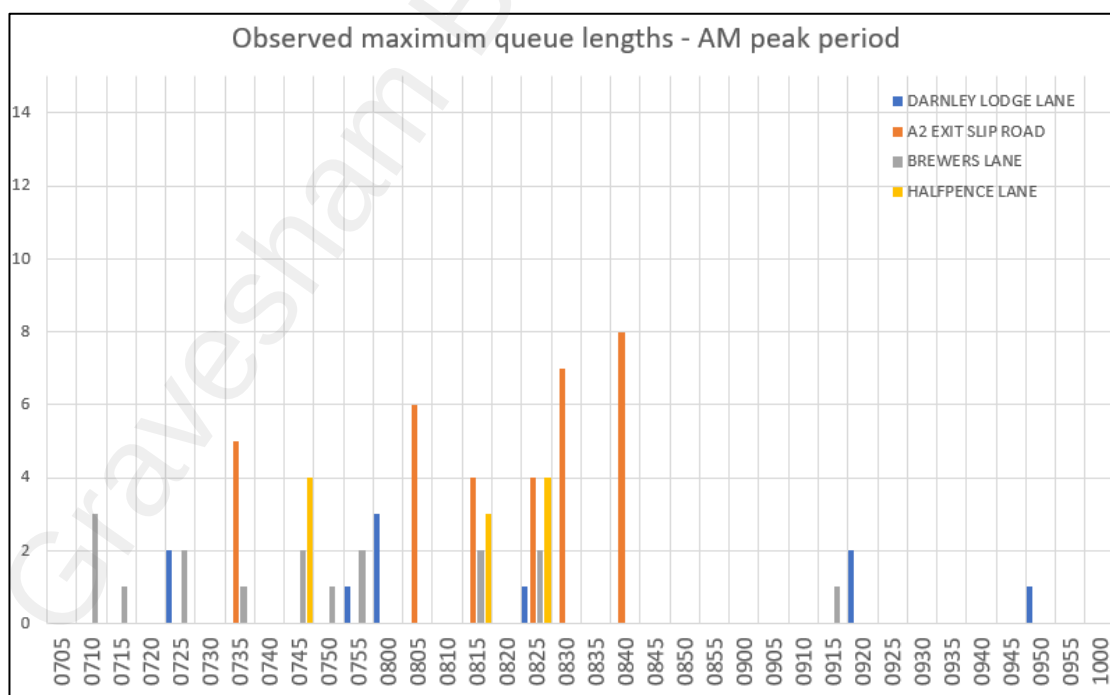
- 5.5.1 During the traffic survey the maximum queues were observed for every 5 minute period. The graphs below summarise the observed maximum queues.
- 5.5.2 The graphs below summarise the maximum queues observed at the A226 Rochester Road / Thong Lane junction for the AM and PM periods.

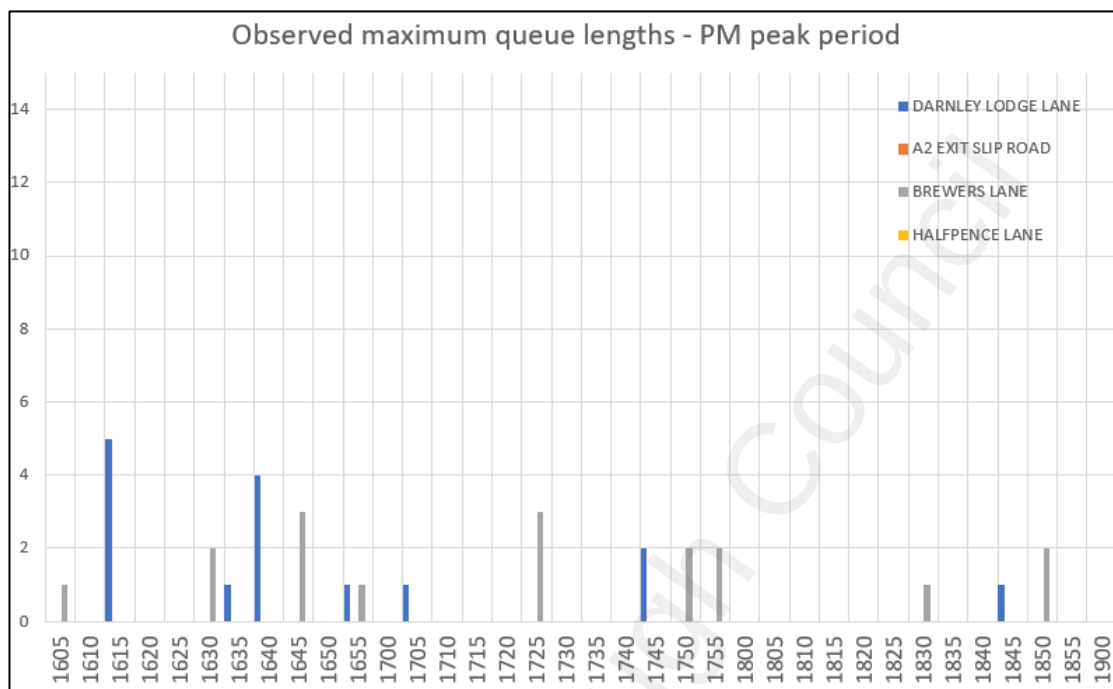




5.5.3 It is noted that queues are generally low, with a maximum of 9 vehicles queued on Thong Lane and a maximum of 6 vehicles on A226 Rochester Road during the morning peak period.

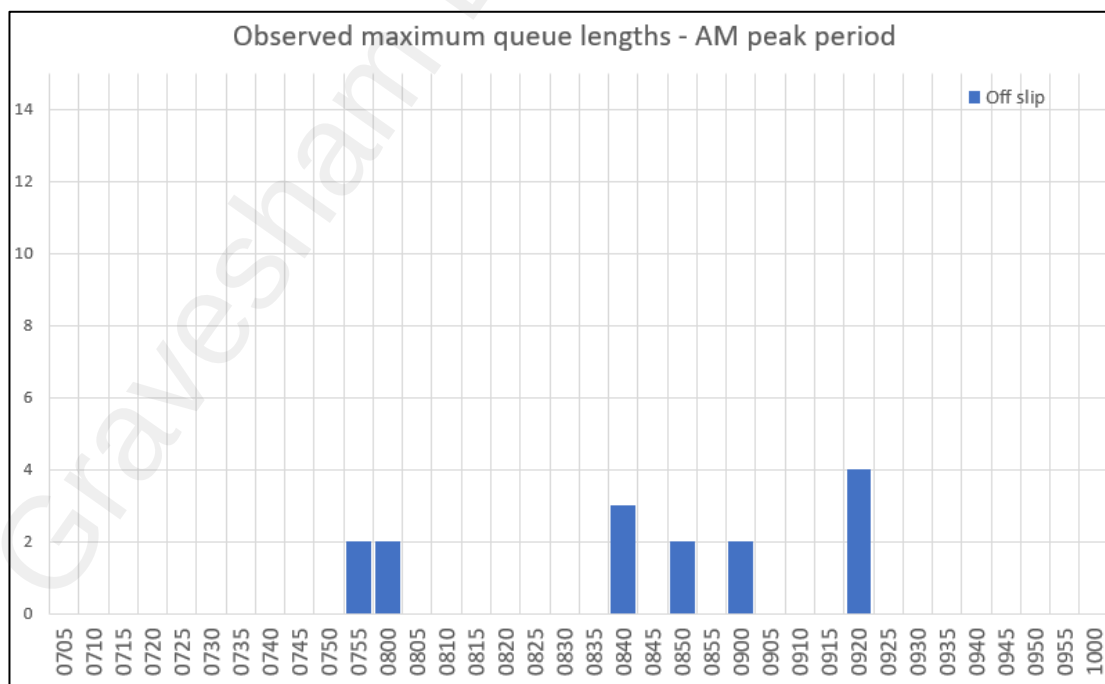
5.5.4 The graphs below summarise the maximum queues observed at the Darnley Lodge Lane / A2 westbound / Brewers Lane / Halfpence Lane roundabout for the AM and PM periods.

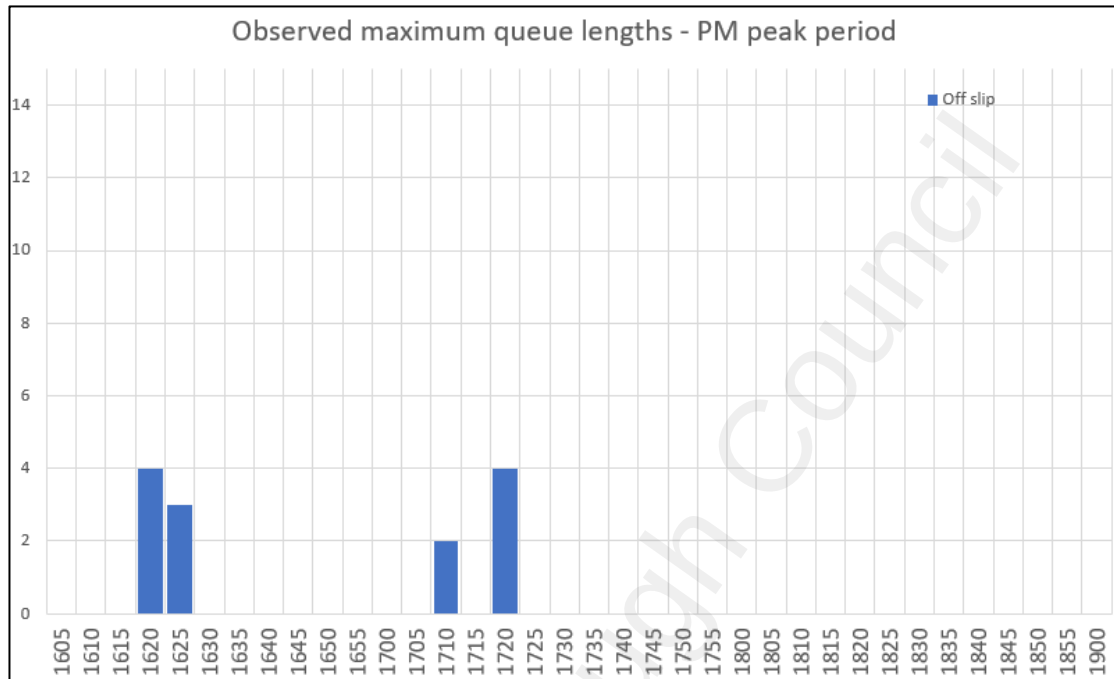




5.5.5 It is noted that queues are generally low, with a maximum of 8 vehicles queued on the A2 exit slip road during the morning peak period.

5.5.6 The graphs below summarise the maximum queues observed at the A2 eastbound off slip for the AM and PM periods.

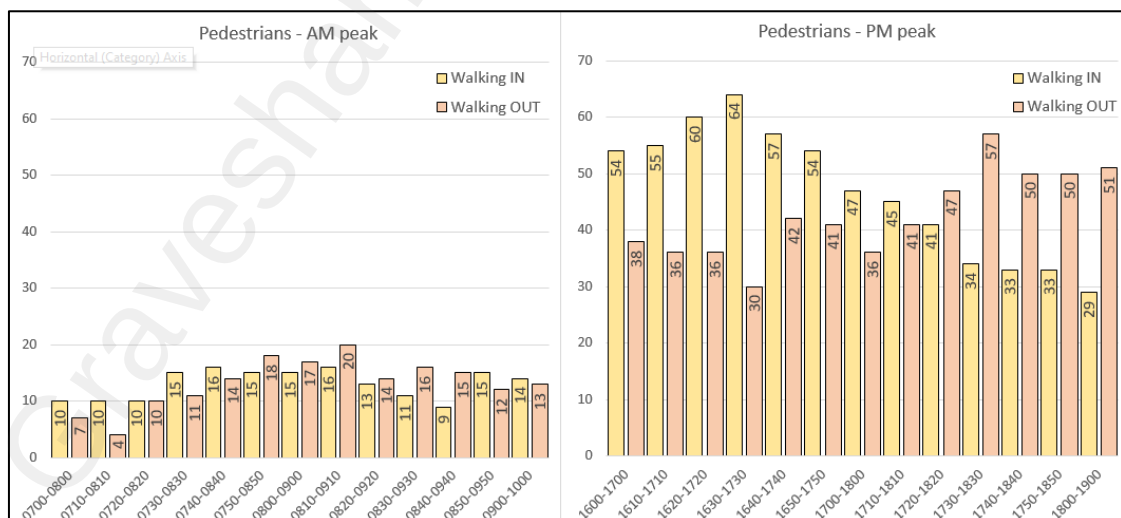


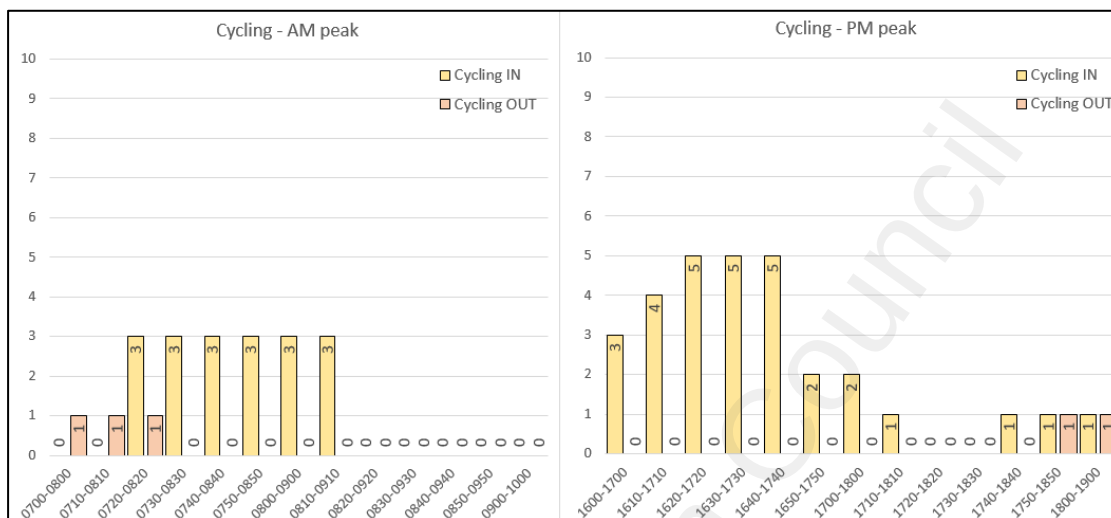


5.5.7 It is noted that queues are low and intermittent. A maximum queue of 4 vehicles was observed.

5.6 Observed walking and cycling

5.6.1 In addition to the vehicle movements associated with the leisure centre, the number of pedestrian and cycle movements were observed. The graphs below illustrate the number of walking and cycling trips entering and leaving the site for each 1 hour period during the morning and evening.





5.6.2 In summary it is noted that walking trips exceed cycling trips and the evening peak period is busier than the morning. A maximum of 64 pedestrians were recorded as entering the site (1630-1730) and 57 leaving (1740-1840).

6 Forecast baseline traffic

6.1.1 The following section considers the forecast baseline traffic flows adopted for assessment purposes.

6.2 Assessment years

6.2.1 During the scoping exercise, KCC officers confirmed that they would be content with a 2028 forecast year, consistent with the Local Plan horizon.

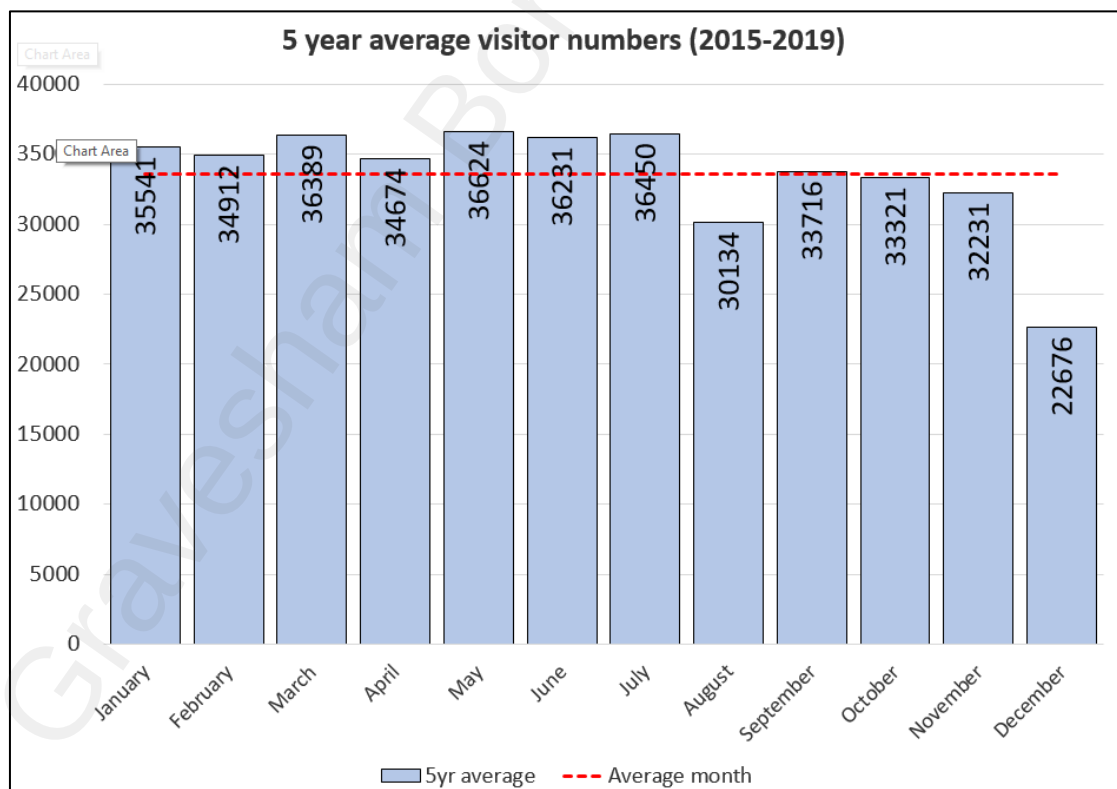
6.2.2 On the basis of the above, the following forecast year assessments have been completed.

- 2028 baseline (including committed development)
- 2028 baseline plus proposed development

6.3 Leisure centre flows

6.3.1 A review has been completed to look at the visitor numbers attending the leisure centre during the year. This has been complete don the basis of monthly attendance data provided by the leisure centre operator for the 5 year period 2015 to 2019 (pre pandemic).

6.3.2 The graph below illustrates the seasonal variation in visitor numbers based upon the monthly averages from the 5 year data. An average month is also indicated.



6.3.3 It is noted that the month of October (when the traffic survey data collection was completed) is an average month. It is noted that May is the busiest month in terms of visitors and is 9.9% busier than October.

- 6.3.4 To facilitate a robust assessment the leisure centre turning movements have been factored by 1.099 to convert them to represent the busiest month.
- 6.3.5 Figures 6.1 to 6.2 illustrate the observed leisure centre turning movements for the assessment peak hours adopted. Beyond the leisure centre access junctions these are assumed to split proportionately at each downstream junction based upon observed turning movement proportions. Figures 6.3 to 6.4 illustrate the leisure centre turning flows factored to represent the busiest month.
- 6.3.6 It is also the case that the observed traffic flows include any vehicle movements associated with the driving range and the Legends sports bar and pitches / courts. These facilities are remaining following redevelopment of the site. However, for the purposes of a robust assessment the traffic associated with these has not been removed and it is hence assumed to be associated with the leisure centre.

6.4 2028 background traffic flows

- 6.4.1 The 2028 background traffic flows have been established by factoring the non leisure centre traffic on the highway network by Temprow growth factors, using RTF 18 database in Temprow 7.
- 6.4.2 The 2022 base year traffic flows (non leisure centre) have been factored to 2028 using the factors summarised below. these represent Gravesham factors for Principal Roads.

2022 > 2028	AM	PM
Principal - Gravesham	1.0387	1.0418

- 6.4.3 The 2028 background traffic flows (with the maximum leisure centre flows added back in) are illustrated at Figures 6.5 to 6.6.

6.5 Committed development sites

- 6.5.1 Committed developments coming forward within the local area will add additional vehicle trips to the local highway network, and therefore generate localised growth. KCC highway officers have identified the expansion of Thamesview School, also in Thong Lane.
- 6.5.2 This was granted planning consent by Kent County Council on 14th September 2021 and details have been downloaded from the KCC Planning Portal under application reference KCC/GR/0113/2021.
- 6.5.3 In summary, the expansion of the school is calculated, by the TA that accompanies its application, to generate an additional 72 inbound and 62 outbound vehicles during the morning peak hour. There is no school traffic during the evening peak hour.
- 6.5.4 The additional traffic has been added to the background traffic using the tidal flow split observed on Thong Lane. The committed development traffic is illustrated at Figures 6.7 to 6.8.

6.6 2028 baseline traffic

- 6.6.1 The baseline traffic flows for 2028 have been derived by adding together the 2028 background traffic flows and committed development traffic flows. It has been assumed that all committed development traffic flows are completed by 2028.
- 6.6.2 The resultant 2028 baseline traffic flows are included as Figures 6.9 and 6.10.

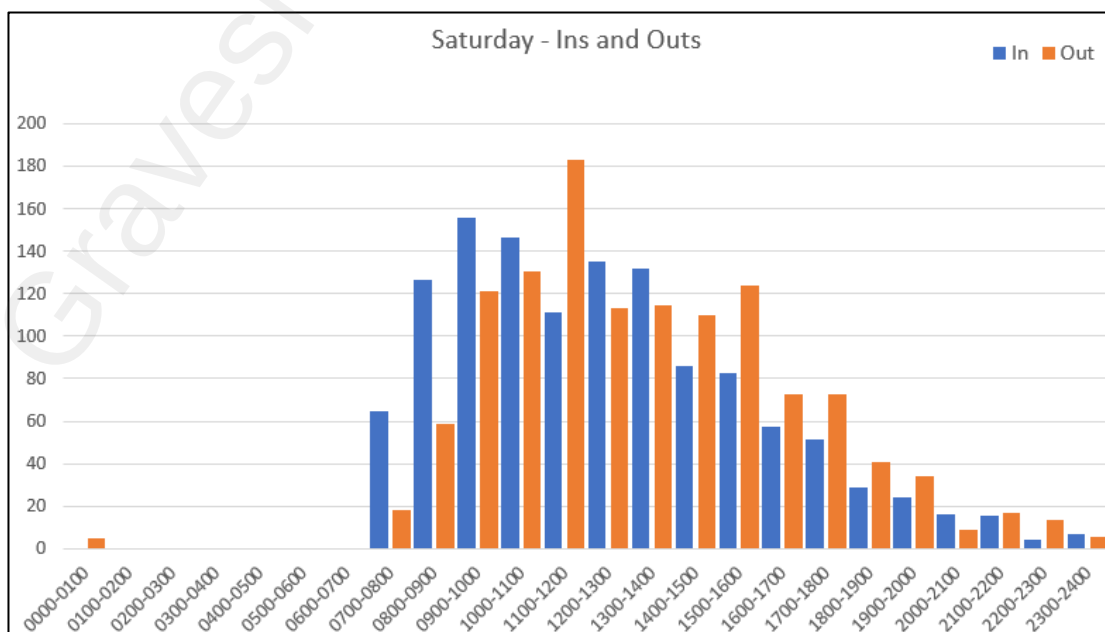
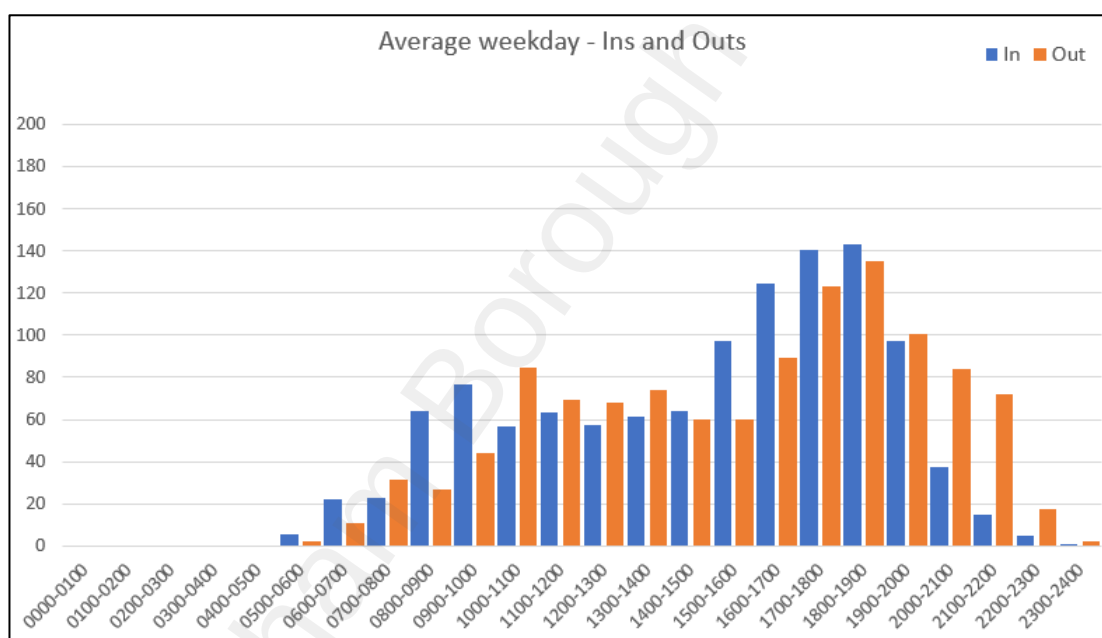
7 Forecast traffic generation and distribution

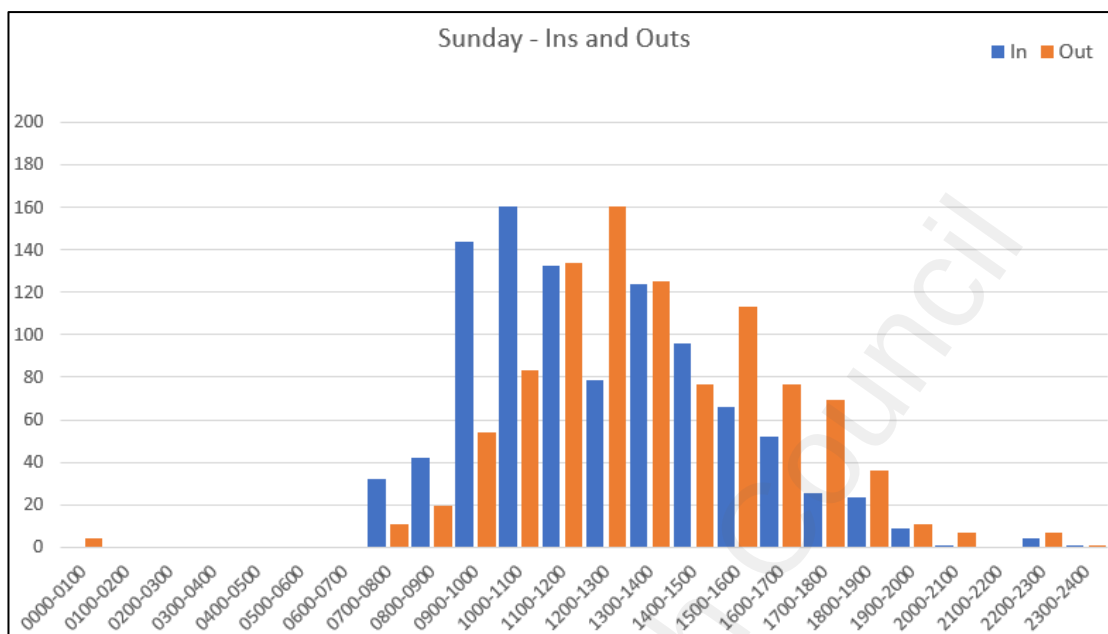
7.1.1 The following section considers the existing traffic generation from the leisure centre and how this may change as a result of the proposed development.

7.2 Existing traffic generation

7.2.1 The traffic generation associated with the existing leisure centre has been determined through the use of traffic survey data collection. Survey data was collected using ATC equipment at the site entry and exit points for a one week period of Wednesday 12th October 2022 to Tuesday 18th October 2022 inclusive.

7.2.2 The ATC data provides an hourly inbound and outbound profile of traffic flow during the one week period. The graphs below illustrate the daily traffic flows recorded, and adjusted to represent the busiest month (see 7.3 for adjustment).



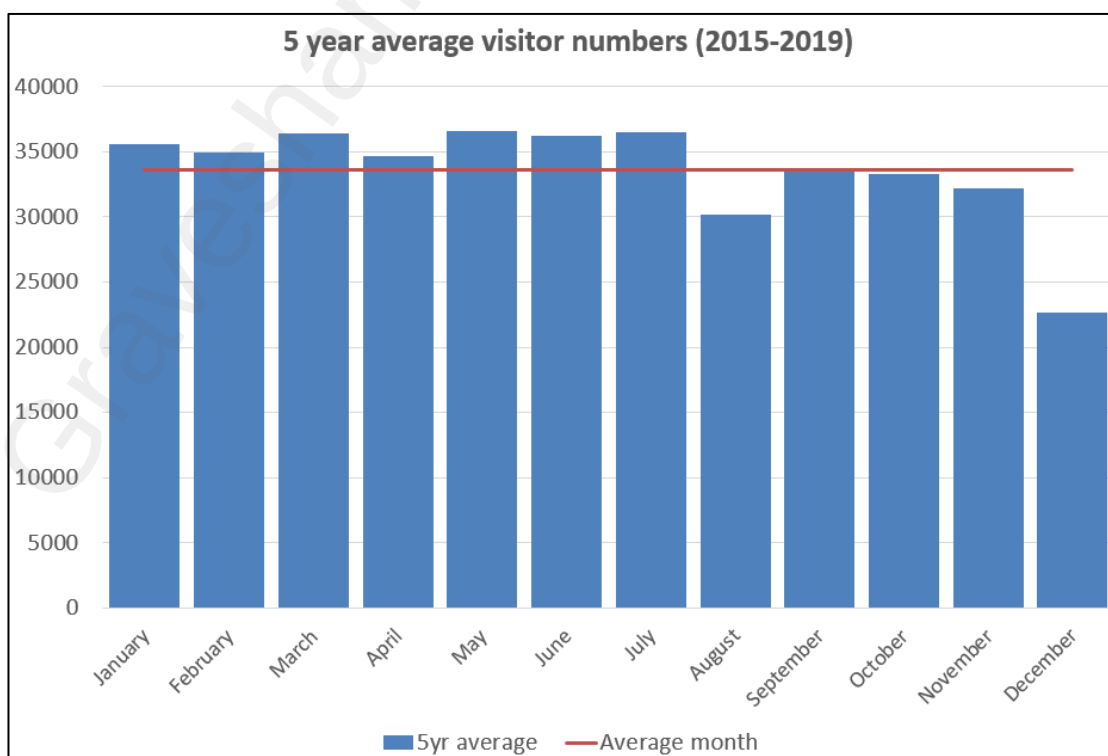


7.2.3 It is noted that during the weekday the leisure centre movements peak during 1800-1900 whilst at the weekend the peak period occurs during the morning.

7.3 Seasonal variation

7.3.1 An exercise has been undertaken that considers the potential seasonal variation in traffic flow associated with the leisure centre use. Data has been provided by the leisure centre operator with respect to the number of visitors using the leisure centre during the year.

7.3.2 Data for a 5 year period (2015-2019) has been reviewed excluding the period of pandemic and an average of this 5 year period has been calculated. The graph below illustrates the monthly number of visitors (average) during the 5 year period month by month along with a typical monthly figure.



- 7.3.3 It is noted that October (the month of survey data collection) is in broad agreement with an average month. It is further noted that the busiest month is May and that to convert the October visitor numbers to represent May visitor numbers would require a factor of 1.099.
- 7.3.4 To consider the maximum visitor numbers, the observed October visitor numbers have been factored by 1.099 to derive the maximum baseline traffic generation from the site.

7.4 Forecast traffic generation

- 7.4.1 It is reasonable to pro-rata the existing traffic generation from the site to reflect the increase in floor area proposed by the proposed development. This is on the basis that the proposed uses on site will closely reflect the existing uses on site, albeit at a greater quantum.
- 7.4.2 In addition, the traffic flows that have been factored also include vehicle movements associated with the driving range and the Legends sports bar and pitches / courts. These facilities are remaining following redevelopment of the site. On this basis a robust assessment has been completed.
- 7.4.3 The existing floor area of the leisure centre has been assumed as is 6,674m² as described at 2.2. The proposed floor area of the new leisure centre has been assumed as 7,500m² as described at 2.3. This represents an increase of 826m², or 12.4%. On this basis it has been considered reasonable to assume that traffic generation from the site will increase by 12.4% as a result of the proposed development.
- 7.4.4 The existing traffic movements associated with the leisure centre have been increased by 12.4% to reflect the proposed development. The difference between the proposed leisure centre traffic and the baseline traffic generation represents the net increase as a result of the proposed development. This increase is illustrated at Figures 7.1 to 7.2.
- 7.4.5 It is noted that during the morning peak hour the increase in traffic flow is 6 vehicles (2 way) whilst during the evening peak hour it is 29 vehicles. This represents an increase of one additional vehicle every 10 minutes and 2 minutes during the morning and evening peak hours respectively. This volume of traffic is unlikely to be perceptible in practise.
- 7.4.6 Traffic flows are shown at Figures 7.3 and 7.4 for 2028 baseline plus proposed development.

7.5 Sporting competitions and events

- 7.5.1 It is expected that the proposed leisure centre will host sporting competitions or events. These will include swimming competitions between local and regional swimming clubs, and indoor sporting events, typically between local clubs and schools.
- 7.5.2 Competitions and events will typically be during a weekend and potentially a Wednesday afternoon for school events. Hence, these will occur outside of the peak hour assessment periods considered within this Transport Assessment and will not necessarily occur every week.
- 7.5.3 Nevertheless, it is considered appropriate to consider the potential parking demand generated by the competitions and events as described below.
- 7.5.4 Spectator seating will be provided in the form of Bleacher seating poolside and within the main sports hall. A total of 106 seats will be provided poolside for spectators at swimming competitions and 250 seats in the sports hall for other sporting events. It is not expected that swimming competitions and sporting events would occur at the same time, and this would be in control of the leisure centre operator.

- 7.5.5 Whilst swimming competitions are in progress the main pool will be unavailable for general public use. Similarly when sporting events are in progress in the sports hall this will be unavailable for general public use.
- 7.5.6 This unavailability will result in reduced parking demand by the general public at the leisure centre for these facilities. However, the reduced parking demand by the general public will be substituted with parking demand from competitors and spectators.
- 7.5.7 Whilst it is not known at this stage is what the net difference in visitors and parking demand would be between the use of facilities for competition or day to day use by the general public.
- 7.5.8 However, it is noted that the KCC parking standards require 1 parking space per 15 spectator seats to be provided, over and above the 1 space per 22m² for typical use. This is summarised in section 8.5. On this basis, an additional 7 parking spaces would be required for the 106 poolside seats and an additional 17 parking spaces for the 250 sports hall seats.
- 7.5.9 An overflow parking area is currently provided on site, albeit it is understood this is on used occasionally. However, this facility will remain available following redevelopment of the site should the need arise to cater for competition or event parking for example.

8 Parking and servicing

8.1.1 The following section reviews the existing parking provided on site and the proposed parking provision and the parking demand predicted. A review is also completed of existing parking standards.

8.2 Existing car parking supply

8.2.1 The entry and exit points to the leisure centre site are locked overnight such that vehicles can only enter or leave the site during the hours of 0545 – 0000. The leisure centre opening times are Monday to Friday 0600-2130 and weekend 0800-1800.

8.2.2 On site, Stantec have been advised by the leisure centre operator that there are currently the following number of parking spaces provided to serve the leisure centre :

- Main Car Park 144 spaces
- Main car park 6 disabled spaces (in addition to those above)
- Play park car park 9 spaces
- Car park near “Bottle bank” 24 spaces

8.2.3 Hence, a total of 183 spaces are currently provided on site. There is no charge for parking on site.

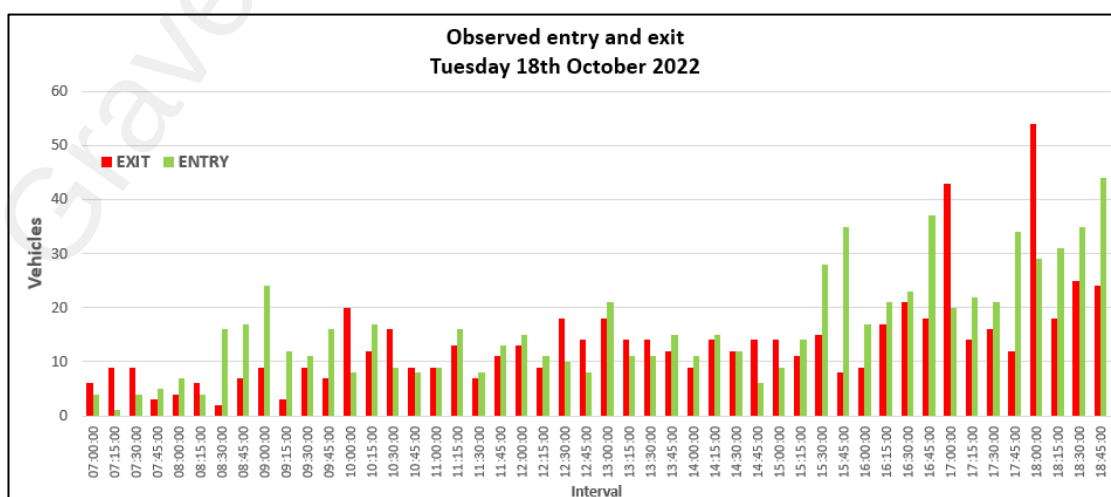
8.2.4 In addition an area is currently available, albeit only used occasionally, for overflow parking.

8.3 Existing car parking demand

8.3.1 An ANPR survey was conducted at the site entry and exit points during a 12 hour period (0700-1900) on Tuesday 18th October 2022. This recorded the entry and exit of vehicles during the survey period and hence is able to provide information with respect to car park utilisation and dwell times of vehicles.

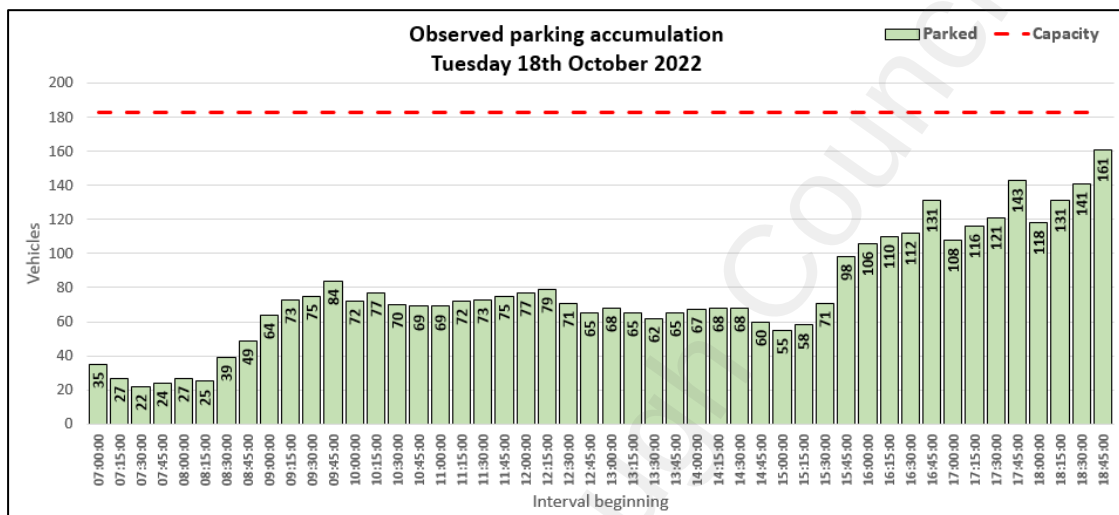
8.3.2 For the purposes of assessment it has been assumed that all of the observed vehicles are associated with the Cascades Leisure centre. In practise a small proportion of the vehicles will be associated with the driving range and Legends sports facility on site.

8.3.3 The graph below illustrates the recorded entry and exit movements during the 12 hour period in 15 minute intervals.

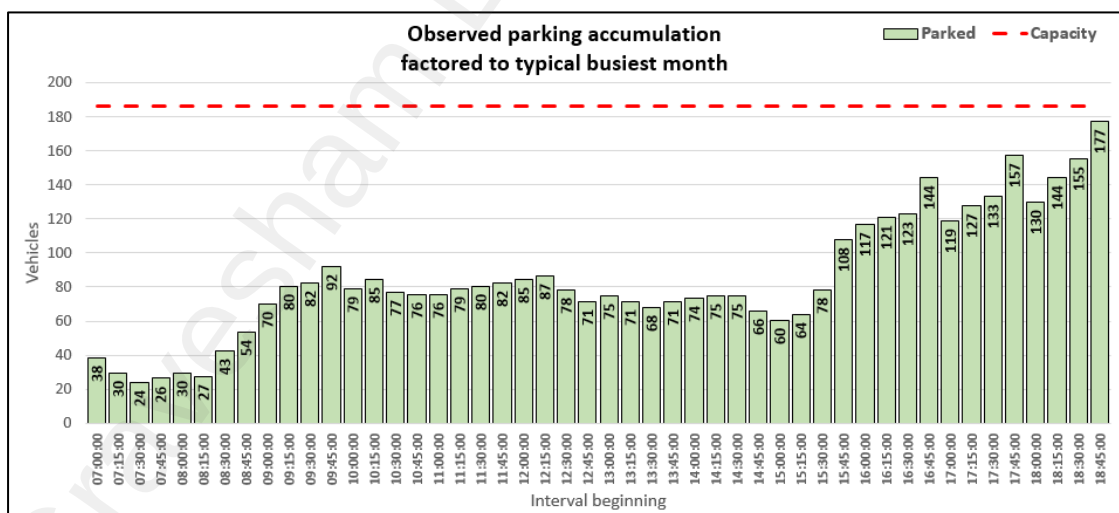


8.3.4 It is noted that the majority of movements in and out occur during the afternoon and evening period.

8.3.5 The graph below converts the data above to show a parking accumulation profile for the on site parking demand. At the beginning of the ANPR survey (0700) a total of 37 vehicles were already parked on site.



8.3.6 The parking accumulation profile above represents Tuesday 18th October 2022. As described in section 6.3, October is an average month in terms of visitor numbers. To provide a robust assessment, the profile above has been factored to represent the busiest month (May) as described at section 6.3. This is illustrated below.



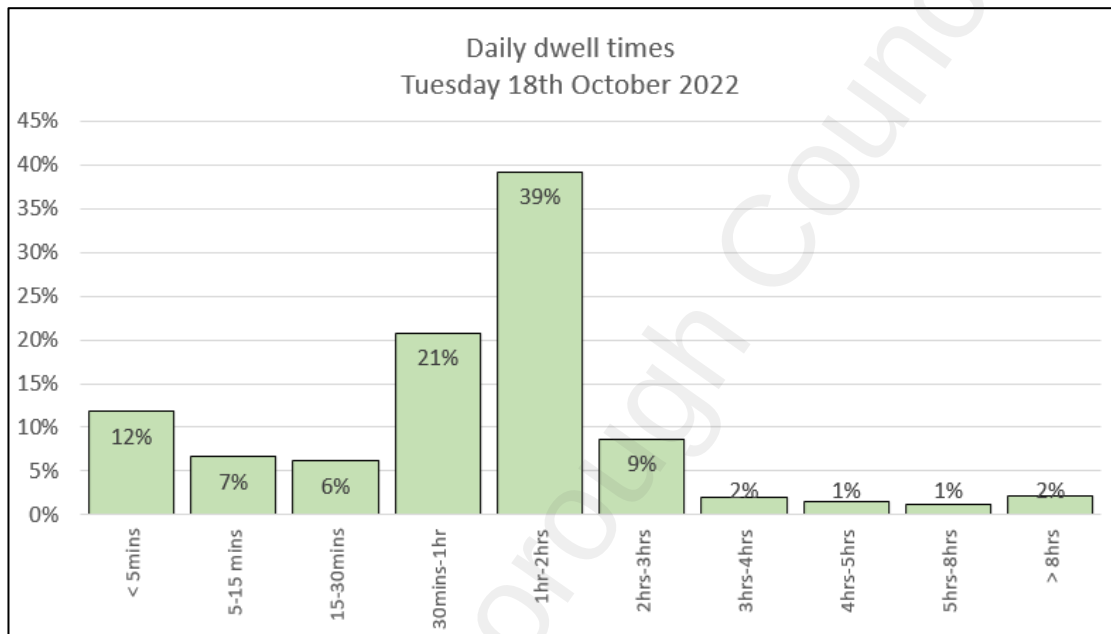
8.3.7 It is noted that the parking accumulation builds during the morning to around 70-80 parked vehicles and remains at this level for much of the day. Parked vehicle numbers increase again from around 1600 reaching 177 vehicles by 1900.

8.4 Existing car park dwell times

8.4.1 The ANPR survey data allows a review of typical dwell times on site. Assumptions have been made for the vehicles parked outside of the survey period.

8.4.2 For vehicles already parked by 0700 it has been assumed that these arrive at 0630 on average. This is on the basis that this is mid point between the leisure centre opening at 0600 and the start of the survey period. For vehicles still parked at 1900 it has been assumed that they leave the site at 2015 on average. This is on the basis that this is the mid point between the survey ending and the leisure centre closing at 2130.

8.4.3 On the basis of the above, the daily dwell times calculated are shown below.



8.4.4 It is noted that the majority of visitors (60%) remain parked on site between 30 minutes and 2 hours. It is further noted that 12% remain on site for less than 5 minutes and are therefore likely picking up or dropping off.

8.5 Proposed parking supply

8.5.1 There will be no charge for using the car park. The proposed development masterplan includes the following parking provision :

- Total spaces 232 spaces
- Of these :
 - Mobility impaired 15 spaces
 - Staff / Servicing 14 spaces

8.5.2 A total of 10% of spaces will be provided with electric vehicle charging.

8.5.3 The provision of 232 spaces falls within the maximum of 357 permitted by the KCC parking standards (see below). On this basis, it is considered that the proposed development meets KCC vehicle parking standards.

8.5.4 In addition to the dedicated provision for the leisure centre as described above, the existing 25 space car park at the site entry will also remain as existing and an overflow parking area will be made available to the east of this.

8.6 Vehicle parking standards

- 8.6.1 Kent and Medway Structure Plan 2006 Mapping out the future: Supplementary Planning Guidance SPG 4 outlines Kent vehicle parking standards for non-residential developments. These are the standards referred to by Gravesham Borough Council.
- 8.6.2 SPG4 provides parking standards for "Land Use Class D2: Assembly & Leisure" on the basis of maximum vehicle parking standards.
- 8.6.3 For multi-activity sports and leisure centres, swimming pools, ice rinks, health and fitness centres and gymnasias it states :
- 1 space per 22m²
 - 1 space per 15 seats where appropriate (for spectators)
- 8.6.4 On the basis of the parking standards above the proposed development would be permitted to provide a maximum of $7500 / 22 = 340$ spaces, plus $250 / 15 = 17$ for spectators. This equates to 357 spaces in total (maximum).
- 8.6.5 With respect to mobility impaired drivers. The standards require the following parking provision:
- Car Parks up to 50 spaces - 1 designated space + 2 spaces of sufficient size but not specifically designated.
 - Car Parks with 50 to 200 spaces - 3 designated spaces or 6% of the total capacity, whichever is greater
 - Car parks with greater than 200 spaces - 4 designated spaces + 4% of the total capacity
- 8.6.6 KCC have also advised that their 2021 draft parking standards, whilst not yet adopted, should be referred to for comparison. Reference to Table 2 in the Appendix of the KCC document "Kent Design Guide – Movement and Connectivity – Parking Standards" shows that the parking standards for a leisure centre use is unchanged from SPG4 as described above.

8.7 Electric vehicle charging

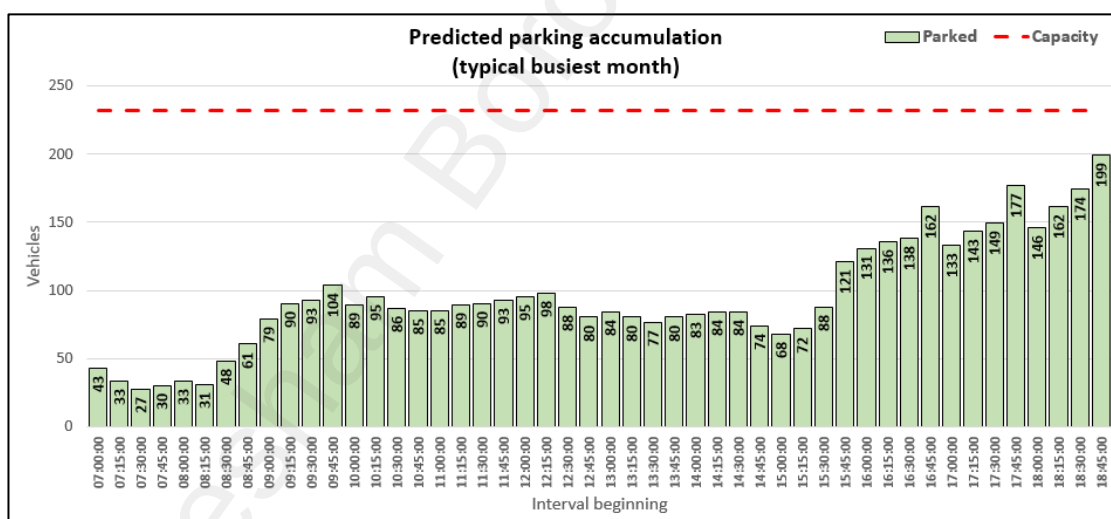
- 8.7.1 With respect to EV charging the current KCC policy "Kent and Medway Structure Plan 2006 Mapping out the future: Supplementary Planning Guidance SPG 4" does not include provision for EV charging.
- 8.7.2 Reference has been made to KCCs draft parking standards document which contains the table below as Table 3 in the appendix to that document.

Table 3: Electric Vehicle Parking Standards	
Residential Uses	
Dwellings with On-Plot Parking	1 Active Charging Point per dwelling minimum output rating 7kW*
Dwellings with unallocated communal parking	10% Active Charging Spaces and 100% Passive Charging Spaces**
Non-Residential Uses	
All Uses with Off-Street Parking	10% Active Charging Spaces and 100% Passive Charging Spaces**
*charge points should be Mode 3, AC.	
** applicable to new sites, change of use applications or extensions will be discussed on an individual basis	

- 8.7.3 However, further consultation has been had with KCC officers on this point. They have advised that the parking standards will need to comply with the Building Regulations in respect of EV charging provision which requires 1 active charging space for non-residential uses with over 10 parking spaces plus 20% passive provision.
- 8.7.4 The Gravesham Local Plan Regulation 18 Stage 1 Consultation, Part 2: Development Management Policies Document, April 2018 is emerging policy and at early stages of production.
- 8.7.5 With respect to electric vehicle charging it states that for development of more than 50 parking spaces, 10% of bays should be marked out for use by electric vehicles only and with charging points. This document doesn't define passive charging percentage but footnote (v) suggests it should match demand.
- 8.7.6 It is proposed that the development will provide 10% (23) of spaces for active charging of electric vehicles. This is better than the Building Regulations requirement required by KCC, and in line with the emerging GBC policy with respect to active charging.

8.8 Proposed development parking demand

- 8.8.1 A parking accumulation exercise has been undertaken to demonstrate that the parking provided would suffice for typical day to day requirements. The parking accumulation exercise is based upon the existing parking demand described at section 8.3 and factored pro rata to the proposed floor area. The graph below illustrates the demand compared to the supply.



- 8.8.2 It is noted that the predicted parking accumulation does not exceed the parking supply. A maximum accumulation of 199 is predicted to occur for a typical day in the busiest month.

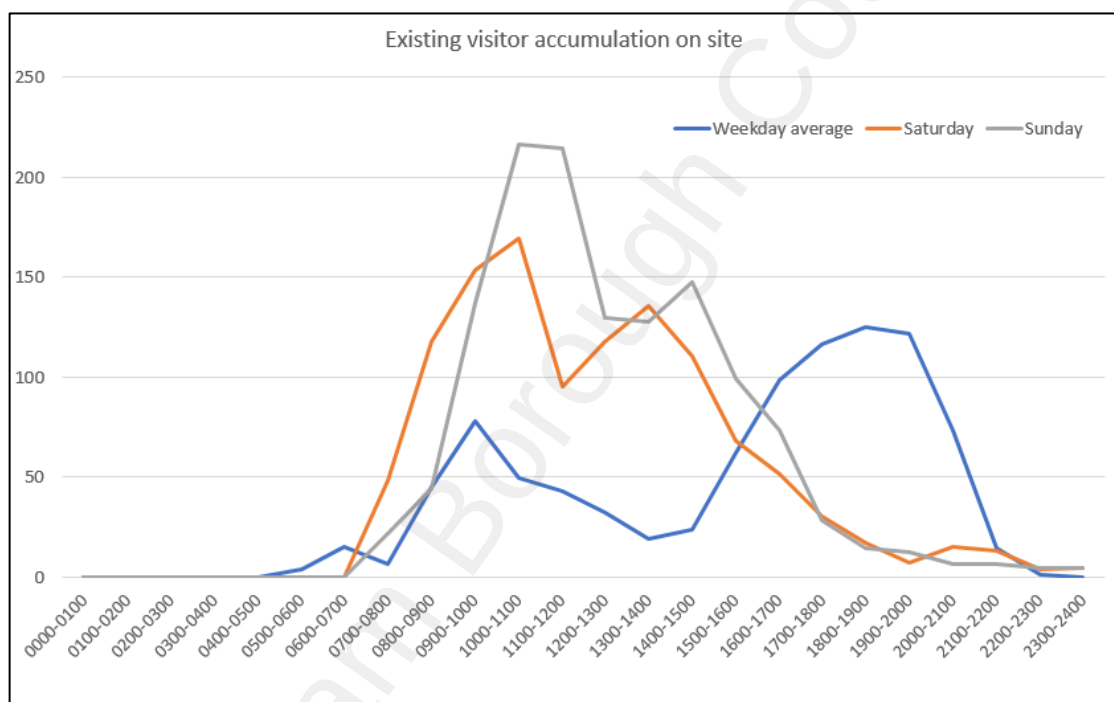
8.9 On site cycle parking

- 8.9.1 Cycle parking at the proposed development will also be provided in accordance with KCC's non residential parking standards contained in Supplementary Planning Guidance 4 (SPG4).
- 8.9.2 SPG4 provides cycle parking standards for "Land Use Class D2: Assembly & Leisure" on the basis of maximum vehicle parking standards.
- 8.9.3 Sports facilities and venues it states :
- 1 space per 10 participants + 10%

- 1 space per 10 staff

8.9.4 For the purposes of assessment it has been assumed that the term participants can be taken to mean the number of people within the leisure centre in any single hour. The number of visitors on a monthly basis is known based upon data received from the leisure centre operator as described at section 6.3.

8.9.5 The busiest month is May with a 5 year average of 36,624 visitors to the leisure centre. This number of visitors has been profiled to represent a typical weekday and a Saturday and Sunday based upon the ATC entry profile recorded and described at section. The graph below illustrates the profile and hence indicates the number of visitors likely to be on site during any particular hour of the busiest month at the existing facility.



8.9.6 It is noted that the largest calculated accumulation is 216 visitors on a Sunday between 1000-1100. On this basis a total of :

- $216 + 10\% = 238$
- $238 / 10 = 24$

8.9.7 Hence, a minimum of 24 cycle parking spaces would be required for visitors. With respect to staff, the project team have advised Stantec that around 60 to 70 staff are employed by the leisure centre. On this basis a minimum additional $70 / 10 = 7$ cycle parking spaces would be required.

8.9.8 On the basis of the cycle parking standards above the existing development would need to provide a minimum of 31 cycle parking spaces.

8.9.9 On the basis that the proposed development is 12.4% larger than the existing it is considered that a minimum total of $31 \times 1.124 = 35$ cycle parking spaces would need to be provided. The proposed provision will accord with standards.

8.10 Servicing

- 8.10.1 There will be on site delivery and refuse collection movements associated with the proposed development as for the existing uses on site. The general layout shows a service road around the building and a service layby to its rear with sufficient space to accommodate refuse collection and delivery vehicles.
- 8.10.2 Vehicle swept path analysis has been undertaken for refuse vehicles servicing the site and this is included as Appendix B.

8.11 Construction related traffic

- 8.11.1 It is expected that a Construction Management Plan (CMP) would be a condition of planning permission and that this would be submitted to Kent County Council, prior to the construction progressing. The purpose of the plan will be to manage construction and delivery vehicle movements to and from the site.
- 8.11.2 The CMP will set out a number of principles to ensure the proactive management of construction and delivery vehicles with respect to parking on site, operational times and agreed routes for example.

9 Junction modelling assessment

9.1.1 Within the study area the local junctions have been assessed, in terms of capacity, in accordance with pre-application discussions with KCC. The following scenarios have been modelled for each local junction;

- 2022 Base year
- 2028 Baseline (including committed development)
- 2028 Baseline plus development

9.1.2 All scenarios have been assessed for both the AM (0750-0850) and PM (1650-1750) peak hours.

9.2 Modelling software

9.2.1 Modelling has been completed using the Junctions10 software package (for roundabouts and priority junctions).

9.3 Modelling results

9.3.1 Using the Junctions10 modelling program, the ratio of flow to capacity (RFC) for each arm is typically reported to provide an understanding of junction performance. This value varies depending on two primary factors, namely the capacity of the arm and the level of traffic demand.

9.3.2 An RFC value of zero means that there is 100% spare capacity on the arm and an RFC value of 1.00 means that there is 0% theoretical spare capacity on the arm. Generally, a maximum desirable RFC value of 0.85 is the objective for new junctions, which provides a 15% capacity buffer. However, an RFC greater than 0.85 is not necessarily regarded as unacceptable, particularly for existing junctions. For example, an RFC value of 0.86 - 1.00 means that the junction is predicted to operate above the desired capacity, but within theoretical maximum capacity.

9.3.3 The effect of the development has been assessed against the baseline scenario modelling.

9.1.10 The results from the modelling exercise are presented such that a colour coding system has been adopted to demonstrate the following:

- Green indicates that the approach arm is operating within the desirable capacity parameters generally adopted for new junctions. This is typically an RFC of 0.85 for priority and roundabout junctions.
- Amber indicates that the approach arm exceeds desirable capacity parameters but remains within theoretical capacity. This is typically an RFC of 0.85 to 1.00 for priority and roundabout junctions. Amber does not necessarily indicate unacceptable operation, particularly for an existing junction
- Red indicates that the approach arm exceeds theoretical capacity parameters. This is an RFC greater than 1.00 for priority and roundabout junctions.

9.3.4 The assessment of junctions on the highway network has been undertaken without reference to the Travel Plan proposed, which will aim to reduce vehicular trips by 10%. On this basis a worst case assessment has been considered.

- 9.3.5 The following sections separately consider the junctions identified as requiring assessment during the scoping exercise.

Gravesend Borough Council

10 Site access junction - inbound

10.1.1 This junction is a simple priority junction whereby traffic turning in to the leisure centre gives way to southbound traffic on Thong Lane.

10.2 Percentage effect of development

10.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	380	468
2028 baseline + development	385	492
Increase	4	25
% increase	1.1%	5.3%

10.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 1.1% and 5.3% at 2028. This equates to an additional 4 to 25 vehicle movements per hour (1 additional vehicle every 15 and 2 minutes respectively). This increase is unlikely to be perceptible in practise.

10.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

10.3 2022 base year

10.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

10.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix C.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre	0	0	0.00	0	0	0.00
Thong Lane Ahead and Right	0	6	0.03	0	5	0.09

10.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

10.4 2028 baseline

10.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

10.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix C.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre	0	0	0.00	0	0	0.00
Thong Lane Ahead and Right	0	6	0.03	0	5	0.10

10.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

10.5 2028 baseline plus development

10.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

10.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix C.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre In	0	0	0.00	0	0	0.00
Thong Lane Ahead and Right	0	6	0.04	0	6	0.11

10.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

10.6 Findings

10.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

11 Site access junction - outbound

11.1.1 This junction is a simple priority junction whereby traffic turning out of the leisure centre gives way to northbound and southbound traffic on Thong Lane.

11.2 Percentage effect of development

11.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	352	376
2028 baseline + development	357	395
Increase	5	18
% increase	1.4%	4.8%

11.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 1.4% and 4.8% at 2028. This equates to an additional 5 to 18 vehicle movements per hour (1 additional vehicle every 12 and 3 minutes respectively). This increase is unlikely to be perceptible in practise.

11.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

11.3 2022 base year

11.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

11.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix D.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre Out Left	0	6	0.03	0	6	0.05
Leisure centre Out Right	0	9	0.02	0	9	0.15
Thong Lane Ahead	0	0	0.00	0	0	0.00

11.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

11.4 2028 baseline

11.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

11.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix D.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre Out Left	0	6	0.03	0	6	0.05
Leisure centre Out Right	0	9	0.02	0	9	0.17
Thong Lane Ahead	0	0	0.00	0	0	0.00

11.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

11.5 2028 baseline plus development

11.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

11.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix D.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Leisure Centre Out Left	0	6	0.03	0	7	0.06
Leisure centre Out Right	0	9	0.03	0	9	0.19
Thong Lane Ahead	0	0	0.00	0	0	0.00

11.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

11.6 Findings

11.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

12 A226 Rochester Road / Thong Lane

12.1.1 This junction is a simple priority junction whereby traffic turning in or out of Thong Lane gives Way to traffic on the A226 Rochester Road.

12.2 Percentage effect of development

12.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	1361	1453
2028 baseline + development	1363	1472
Increase	3	19
% increase	0.2%	1.3%

12.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.2% and 1.3% at 2028. This equates to an additional 3 to 19 vehicle movements per hour (1 additional vehicle every 20 and 3 minutes respectively). This increase is unlikely to be perceptible in practise.

12.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

12.3 2022 base year

12.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

12.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix E.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane Out Left and Right	1	9	0.34	1	9	0.37
A226 Ahead and Right	0	7	0.28	0	7	0.28

12.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

12.4 2028 baseline

12.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

12.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix E.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane Out Left and Right	1	11	0.44	1	10	0.40
A226 Ahead and Right	1	8	0.34	0	7	0.29

12.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

12.5 2028 baseline plus development

12.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

12.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix E.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane Out Left	1	11	0.44	1	10	0.42
A226 Ahead and Right	1	8	0.34	0	7	0.30

12.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

12.6 Findings

12.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

13 Thong Lane / Leander Drive

13.1.1 This junction is a mini roundabout whereby Thong Lane forms the north and south arms whilst Leander Drive the west arm.

13.2 Percentage effect of development

13.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	729	754
2028 baseline + development	731	773
Increase	3	19
% increase	0.4%	2.5%

13.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.4% and 2.5% at 2028. This equates to an additional 3 to 19 vehicle movements per hour (1 additional vehicle every 20 and 3 minutes respectively). This increase is unlikely to be perceptible in practise.

13.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

13.3 2022 base year

13.3.1 This junction has been modelled for a 2022 base year as a roundabout junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

13.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix F.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	1	6	0.34	1	6	0.35
Thong Lane South	0	7	0.25	0	7	0.29
Leander Drive	0	7	0.28	1	7	0.33

13.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

13.4 2028 baseline

13.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

13.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix F.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	1	6	0.38	1	6	0.37
Thong Lane South	0	7	0.30	0	7	0.31
Leander Drive	0	7	0.30	1	8	0.34

13.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

13.5 2028 baseline plus development

13.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

13.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix F.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	1	6	0.38	1	6	0.38
Thong Lane South	0	7	0.30	1	7	0.32
Leander Drive	0	7	0.30	1	8	0.35

13.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

13.6 Findings

13.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

14 Thong Lane / Whinfell Way

14.1.1 This junction is a mini roundabout whereby Thong Lane forms the north and south arms whilst Whinfell Way the west arm.

14.2 Percentage effect of development

14.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	431	506
2028 baseline + development	434	521
Increase	3	15
% increase	0.7%	2.9%

14.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.7% and 2.9% at 2028. This equates to an additional 3 to 15 vehicle movements per hour (1 additional vehicle every 20 and 4 minutes respectively). This increase is unlikely to be perceptible in practise.

14.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

14.3 2022 base year

14.3.1 This junction has been modelled for a 2022 base year as a mini roundabout junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

14.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix G.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	0	5	0.16	0	5	0.17
Thong Lane South	0	6	0.18	0	6	0.22
Whinfell Way	0	5	0.14	0	6	0.27

14.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

14.4 2028 baseline

14.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

14.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix G.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	0	5	0.20	0	5	0.18
Thong Lane South	0	6	0.22	0	6	0.24
Whinfell Way	0	5	0.15	0	6	0.28

14.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

14.5 2028 baseline plus development

14.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

14.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix G.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane North	0	5	0.20	0	5	0.18
Thong Lane South	0	6	0.23	0	6	0.26
Whinfell Way	0	5	0.15	0	7	0.28

14.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

14.6 Findings

14.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

15 Thong Lane / Vigilant Way

15.1.1 This junction is a mini roundabout whereby Thong Lane forms the north and south arms whilst Vigilant Way the west arm.

15.2 Percentage effect of development

15.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	438	379
2028 baseline + development	442	388
Increase	4	9
% increase	0.8%	2.4%

15.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.8% and 2.4% at 2028. This equates to an additional 4 to 9 vehicle movements per hour (1 additional vehicle every 15 and 6 minutes respectively). This increase is unlikely to be perceptible in practise.

15.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

15.3 2022 base year

15.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

15.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix H.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Vigilant Way Right and Left	0	8	0.16	0	7	0.09
Thong Lane Right	0	6	0.08	0	7	0.17

15.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

15.4 2028 baseline

15.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

15.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix H.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Vigilant Way Right and Left	0	8	0.17	0	7	0.09
Thong Lane Right	0	6	0.09	0	7	0.18

15.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

15.5 2028 baseline plus development

15.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

15.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix H.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Vigilant Way Right and Left	0	8	0.17	0	7	0.09
Thong Lane Right	0	6	0.09	0	7	0.18

15.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

15.6 Findings

15.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

16 A2 / Thong Lane

16.1.1 This junction is a four arm roundabout junction.

16.2 Percentage effect of development

16.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	1186	862
2028 baseline + development	1190	871
Increase	4	9
% increase	0.3%	1.1%

16.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.3% and 1.1% at 2028. This equates to an additional 4 to 9 vehicle movements per hour (1 additional vehicle every 15 and 6 minutes respectively). This increase is unlikely to be perceptible in practise.

16.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

16.3 2022 base year

16.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

16.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix I.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
A2 Westbound off Slip	1	5	0.43	0	3	0.23
Brewers Road	0	3	0.17	0	3	0.11
Halfpence Lane	0	3	0.12	0	3	0.20
Darnley Lodge Lane	0	4	0.20	0	4	0.12

16.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

16.4 2028 baseline

16.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

16.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix I.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
A2 Westbound off Slip	1	5	0.46	0	4	0.25
Brewers Road	0	3	0.19	0	3	0.11
Halfpence Lane	0	3	0.13	0	3	0.21
Darnley Lodge Lane	0	5	0.23	0	4	0.13

16.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

16.5 2028 baseline plus development

16.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

16.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix I.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Thong Lane	1	5	0.46	0.4	3	0.27
A2 westbound off slip	0	3	0.19	0.1	3	0.11
Brewers Road	0	3	0.13	0.3	3	0.21
Halfpence Lane	0	5	0.24	0.2	4	0.13

16.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

16.6 Findings

16.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

17 A2 / Brewers Road

17.1.1 This junction is a simple priority junction whereby traffic turning in or out of the A2 eastbound slip roads gives way to traffic on Brewers Road.

17.2 Percentage effect of development

17.2.1 The table below summarises the percentage effect of development traffic. This is based upon a comparison of junction throughput between the baseline scenarios and the baseline with development scenarios.

	AM	PM
2028 baseline	676	680
2028 baseline + development	677	683
Increase	1	3
% increase	0.2%	0.4%

17.2.2 It is noted that the proposed development traffic is predicted to increase traffic flows between 0.2% and 0.4% at 2028. This equates to an additional 53 to 55 vehicle movements per hour (1 additional vehicle every 60 and 20 minutes respectively). This increase is unlikely to be perceptible in practise.

17.2.3 The effect of the additional development traffic has been modelled in detail and this is summarised below.

17.3 2022 base year

17.3.1 This junction has been modelled for a 2022 base year as a priority junction using the Junctions10 software. Both morning and evening weekday peak hours have been modelled.

17.3.2 The results from the 2022 models are summarised in the table below whilst the Junctions10 output and geometry drawing is included as Appendix J.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
A2 slip Out Right and Left	1	11	0.37	0	10	0.31
Brewers Road Ahead and Right	1	9	0.42	1	10	0.49

17.3.3 The results of the 2022 base year modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

17.4 2028 baseline

17.4.1 The 2022 base year model described above has been adopted to produce a 2028 baseline model.

17.4.2 The results from the baseline models are summarised in the table below, whilst the full model output is included as Appendix J.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
A2 slip Out Right and Left	1	11	0.40	1	11	0.33
Brewers Road Ahead and Right	1	10	0.46	1	11	0.52

17.4.3 The results of the 2028 baseline modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

17.5 2028 baseline plus development

17.5.1 The 2028 baseline models described above have been adopted to produce a 2028 baseline plus development model.

17.5.2 The results from the baseline plus development models are summarised in the table below, whilst the Junctions10 output is included as Appendix J.

	AM peak			PM peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
A2 slip Out Right and Left	1	11	0.40	1	11	0.33
Brewers Road Ahead and Right	1	10	0.46	1	11	0.52

17.5.3 The results of the 2028 plus development modelling show that all arms of the junction operate well within capacity in both the AM and PM peak hours.

17.6 Findings

17.6.1 Based on the modelling evidence above it is concluded that this junction operates satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

18 Summary

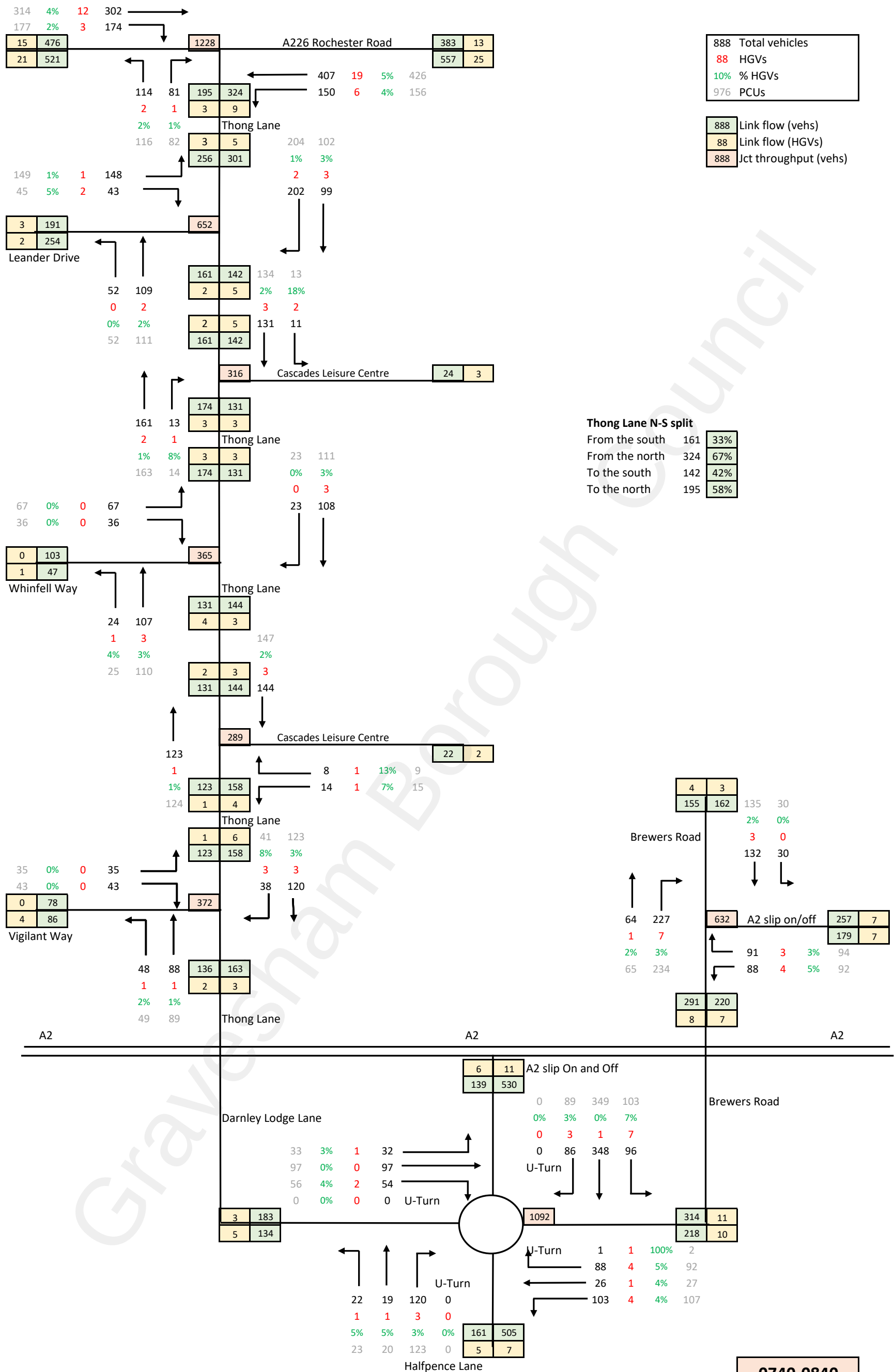
- 18.1.1 Stantec has been appointed to provide transport support in relation to a planning application for a leisure centre redevelopment at Cascades Leisure Centre, Gravesend. This Transport Assessment has been prepared by Stantec to accompany a planning application for the redevelopment and provides an assessment of the highway aspects of the proposed development. A scoping exercise has been undertaken with highway officers.
- 18.1.2 The site is currently occupied by the Cascades Leisure centre. The entrance to the site is also used by the Gravesend Golf Centre (driving range) and the Legends Sports facility (sports bar and indoor courts and pitches).
- 18.1.3 A planning application is being submitted for redevelopment of the site to replace the existing leisure centre with a new leisure centre. It is proposed that the new building will comprise a floor area larger than the existing leisure centre floor area and an increase in parking capacity.
- 18.1.4 A review of national and local planning policy has been undertaken. The general thrust of transport policy is to promote and encourage sustainable travel choices. The connectivity of this site with the existing walking network will facilitate movement by this mode. In addition, the site will retain a bus stop located within the site, as existing, providing excellent connectivity with local bus services. Electric vehicle charging will also be provided on site.
- 18.1.5 Vehicles leaving the site would either turn right or left onto Thong Lane. Thong Lane then heads north to the A226 Rochester Road or south to the A2. The proposed site is located approximately 1.8km to the north of the A2. Access to the A2 from the site can be achieved via Thong Lane.
- 18.1.6 The junction of Thong Lane with Leander Drive lies just north of the entry to the site. This junction is set out as a mini roundabout. Opposite the site lies the residential area of Riverview Park. The junction of Thong Lane with Whinfell Way is set out as a mini roundabout. This provides a route towards Valley Drive and other residential areas within south and south east Gravesend. To the south, the junction of Thong Lane with Vigilant Way is a simple priority junction.
- 18.1.7 Pedestrian access to the site is directly from Thong Lane alongside the vehicular entry and exit locations. Cycling access would use the vehicular entry and exit points. Within the site pedestrian routes are provided to the main building and car parks through a network of footways.
- 18.1.8 The local area to the west of the site has a good level of pedestrian connectivity with footways present on both sides of the majority of highway routes and street lighting. To the west of Thong Lane there are various routes connecting the site to residential areas using Leander Drive, Whinfell Way and Vigilant Way. These routes provide footways and street lighting.
- 18.1.9 In addition, there are a number of Public Rights of Way (PRoWs) surrounding the site. These routes tend to connect the site surrounds to the open areas to the east.
- 18.1.10 With respect to cycling there are no designated or segregated cycle routes within the immediate site vicinity. On this basis cyclists share the carriageway with general traffic. The traffic calming on Thong Lane encourages lower traffic speeds that would be compatible with a cycling route. To the north there is a cycle route on the A226. This comprises a segregated cycle facility on the south side of the A226 and an on street cycle lane on the north side of the carriageway. The segregated facility heads north west on the A226 towards the town centre.
- 18.1.11 Cascades Leisure Centre provides a bus stop within the site and this facility will be retained within the new masterplan. Within the site the 480 and 481 bus services provide direct access

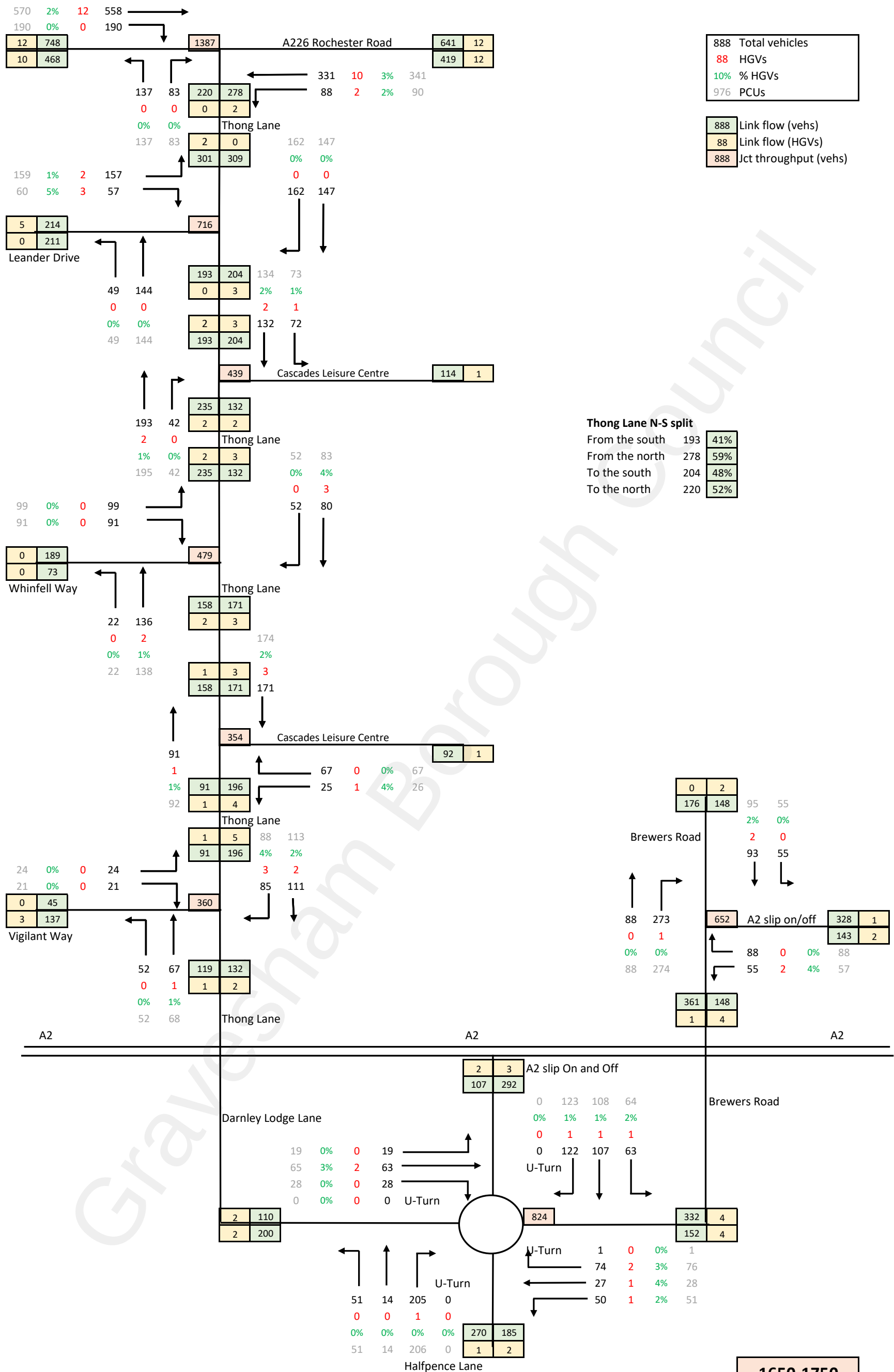
to the leisure centre from Gravesend town centre and beyond. External to the site, additional bus stops are provided at the site vehicular entry on Thong Lane and also Leander Drive, around 200m from the site entrance. Additional bus stops are provided on Cervia Way around 600m north of the site entrance on Vigilant Way to the south.

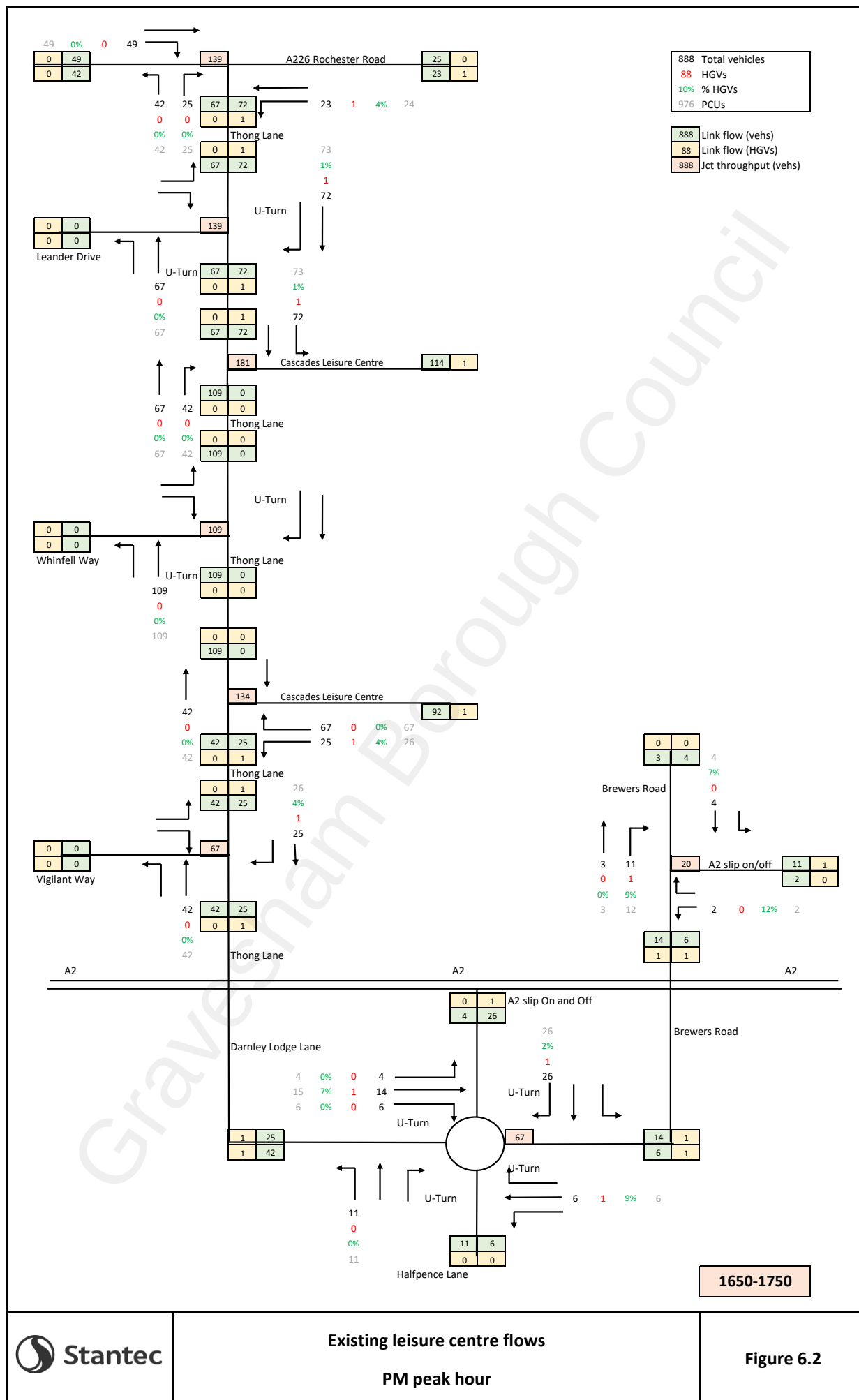
- 18.1.12 The closest rail station to the leisure centre is Gravesend. This rail station is approximately 4.5 kilometres from the site. The rail station is accessible by bus.
- 18.1.13 During the scoping exercise with highway authority officers it was agreed that a number of junctions should be surveyed. Surveys were undertaken during the morning and evening peak periods. In addition, Automatic Traffic Counters were laid at the entry and exit points to the leisure centre site. Queue observations were made and it was noted that queues are generally low.
- 18.1.14 A 2028 forecast year has been considered for assessment. The leisure centre turning movements have been factored to convert them to represent the busiest month. The survey data also includes any vehicle movements associated with the driving range and the Legends sports bar and pitches / courts. These have been retained within the turning movements for the purposes of a robust assessment.
- 18.1.15 The 2028 background traffic flows have been established by factoring the non leisure centre traffic on the highway network by Temprow growth factors. Committed development has been added to the 2028 flows to generate the baseline traffic flows for 2028.
- 18.1.16 The traffic generation associated with the existing leisure centre has been determined through the use of traffic survey data collection. This has been factored to represent the busiest month based upon data provided by the leisure centre operator. It is reasonable to pro-rata the existing traffic generation from the site to reflect the increase in floor area proposed by the proposed development. This has been undertaken to calculate predicted traffic flows from the proposed development.
- 18.1.17 It is noted that during the morning peak hour the increase in traffic flow is predicted to be 6 vehicles (2 way) whilst during the evening peak hour it is 29 vehicles. This represents an increase of one additional vehicle every 10 minutes and 2 minutes during the morning and evening peak hours respectively. This volume of traffic is unlikely to be perceptible in practise.
- 18.1.18 It is expected that the proposed leisure centre will host sporting competitions or events. Competitions and events will typically be during a weekend and potentially a Wednesday afternoon for school events. Hence, these will occur outside of the peak hour assessment periods considered within this Transport Assessment.
- 18.1.19 An overflow parking area is currently provided on site, albeit it is understood this is on used occasionally. However, this facility will remain available following redevelopment of the site should the need arise to cater for competition or event parking for example.
- 18.1.20 On site, Stantec have been advised by the leisure centre operator that there are currently 183 parking spaces to serve the leisure centre. A parking accumulation profile shows that the parking accumulation builds during the morning to around 70-80 parked vehicles and remains at this level for much of the day. Parked vehicle numbers increase again from around 1600 reaching 177 vehicles by 1900.
- 18.1.21 The ANPR survey data allows a review of typical dwell times on site. It is found that the majority of visitors (60%) remain parked on site between 30 minutes and 2 hours. It is further noted that 12% remain on site for less than 5 minutes and are therefore likely picking up or dropping off.
- 18.1.22 Kent and Medway Structure Plan 2006 Mapping out the future: Supplementary Planning Guidance SPG 4 outlines Kent vehicle parking standards for non-residential developments.

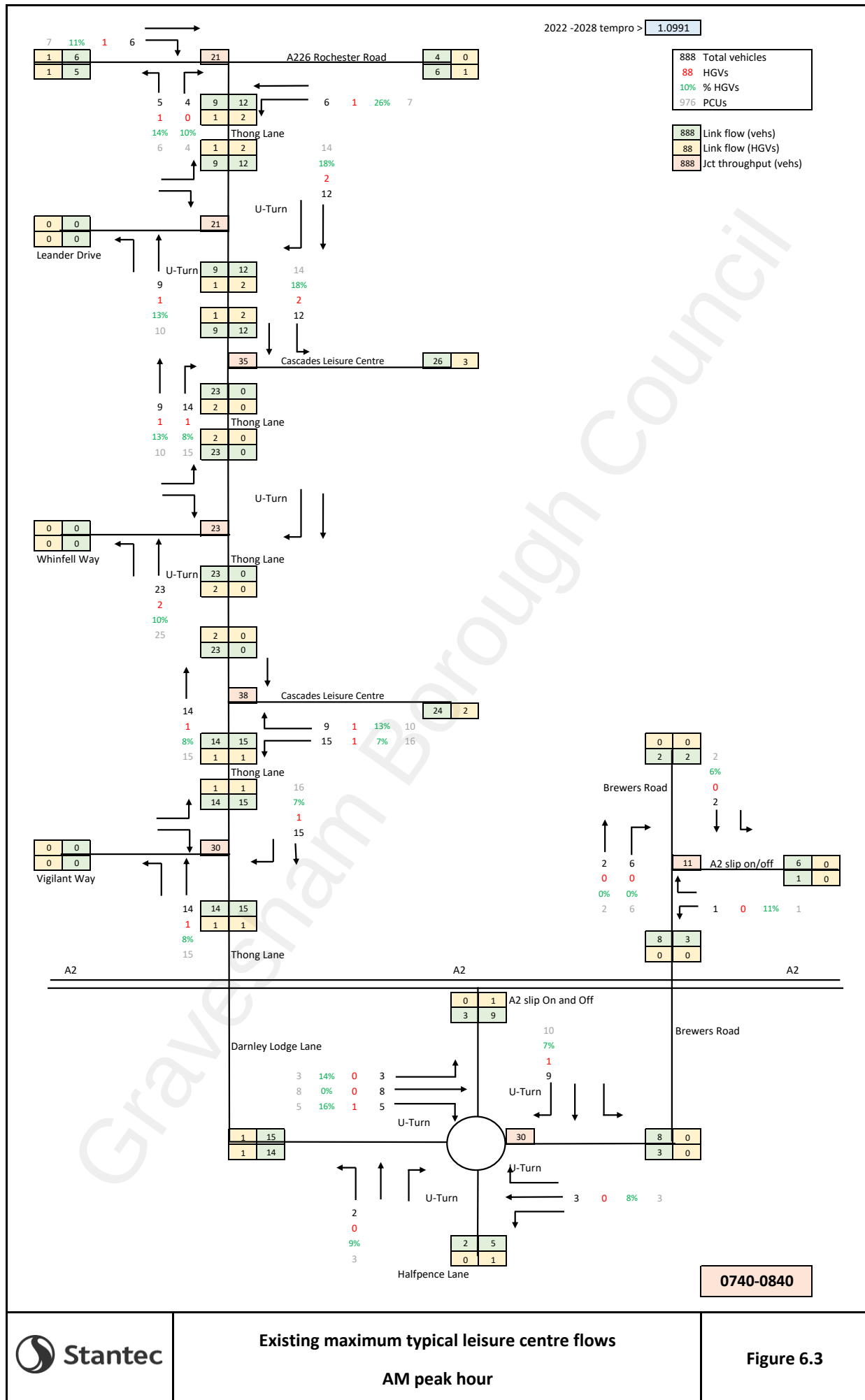
On the basis of these parking standards the proposed development would be permitted to provide a maximum of 357 spaces in total. The proposed development masterplan includes parking provision for 232 vehicles. A total of 10% of spaces will be provided with electric vehicle charging.

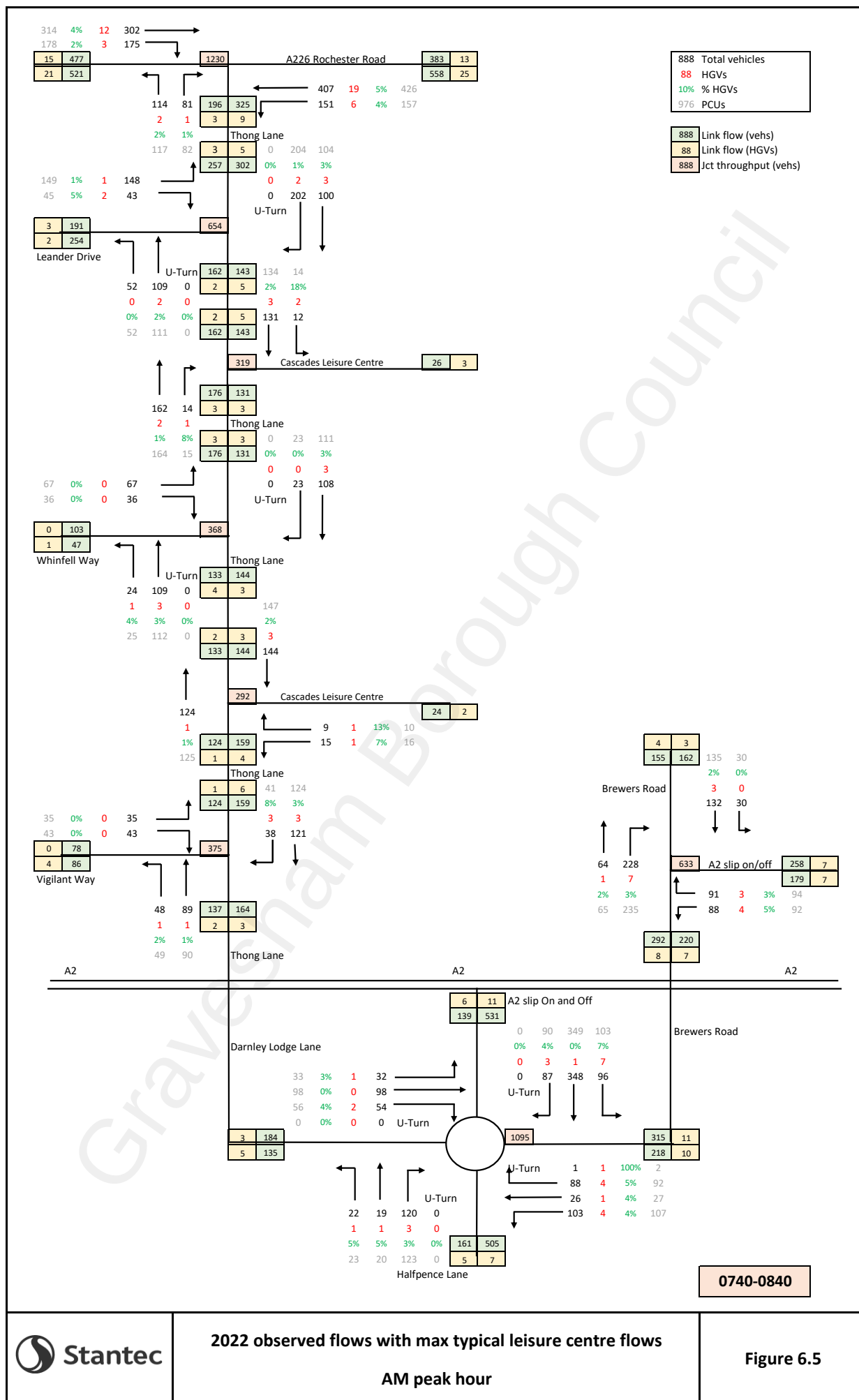
- 18.1.23 Reference to Table 2 in the Appendix of the KCC draft document “Kent Design Guide – Movement and Connectivity – Parking Standards” shows that the parking standards for a leisure centre use is unchanged from SPG4 as described above.
- 18.1.24 The proposed development will provide 10% (23) of spaces for active charging of electric vehicles. This is better than the Building Regulations requirement required by KCC, and in line with the emerging GBC policy with respect to active charging.
- 18.1.25 A parking accumulation exercise has been undertaken to demonstrate that the parking provided would suffice for typical day to day requirements. The parking accumulation exercise is based upon the existing parking demand factored pro rata to the proposed floor area. The predicted parking accumulation does not exceed the parking supply.
- 18.1.26 Cycle parking at the proposed development will be provided in accordance with KCC’s non residential parking standards contained in Supplementary Planning Guidance 4 (SPG4).
- 18.1.27 There will be on site delivery and refuse collection movements associated with the proposed development as for the existing uses on site. The general layout shows a service road surrounding the building with a service layby to the rear with sufficient space to accommodate refuse collection and delivery vehicles. Vehicle swept path analysis has been undertaken for refuse vehicles entering and leaving the site.
- 18.1.28 Within the study area the local junctions have been assessed, in terms of capacity, in accordance with pre-application discussions with KCC. For all junctions and all scenarios the modelling results show that all arms of each junction operate well within capacity in both the AM and PM peak hours.
- 18.1.29 Based on the modelling evidence above it is concluded that the local junctions operate satisfactorily with development added and hence mitigation measures are not required as a result of the proposed development.

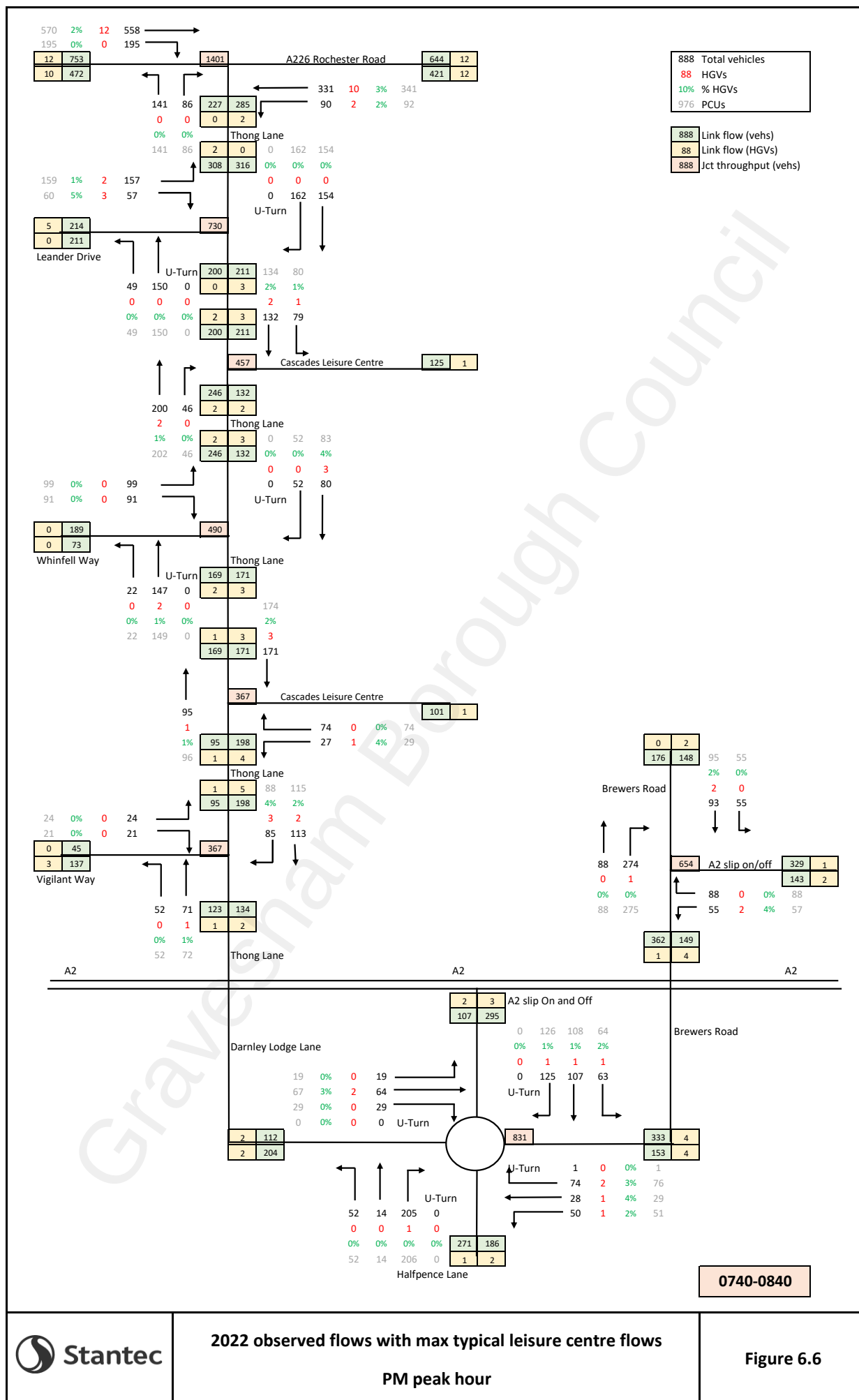


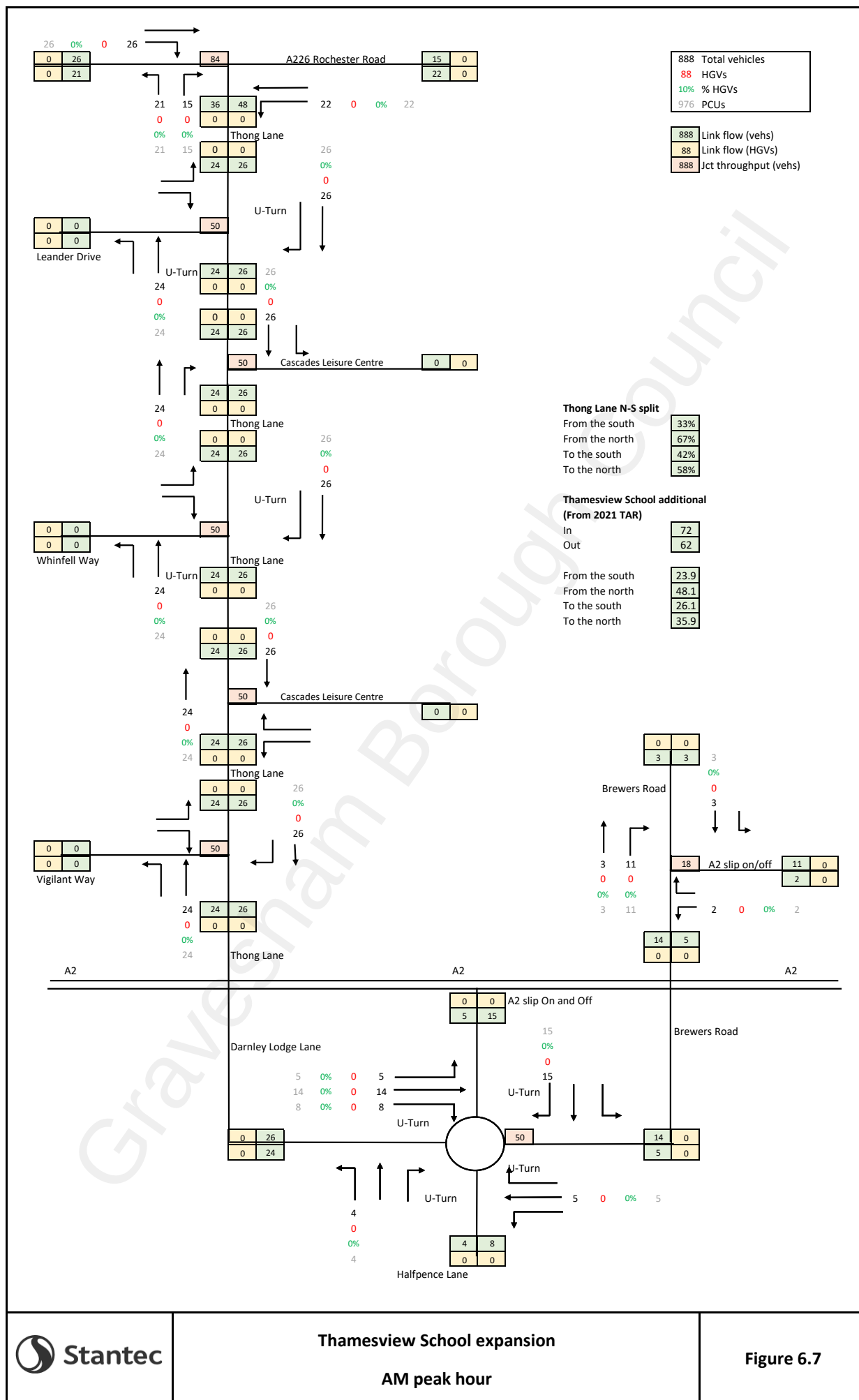


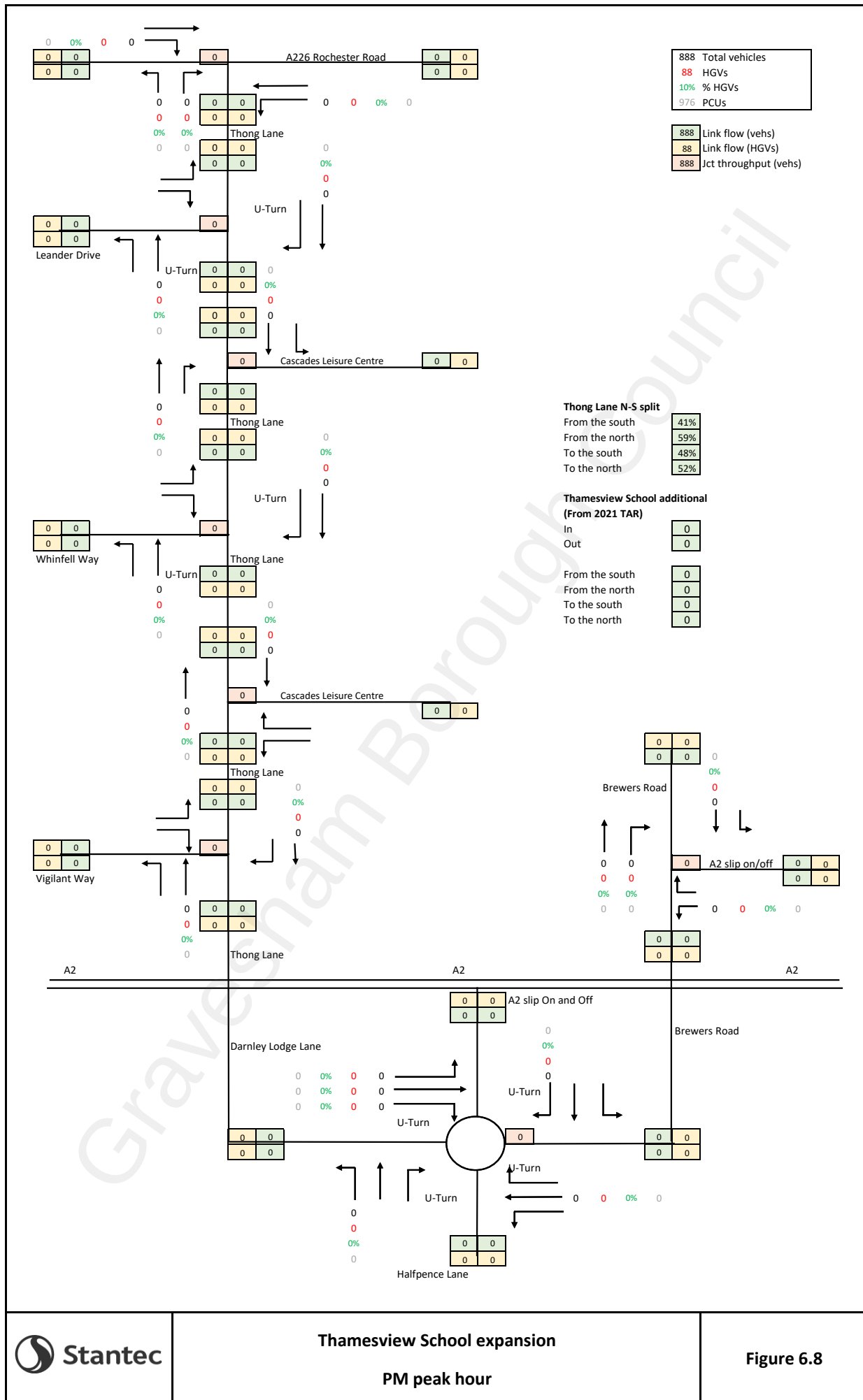


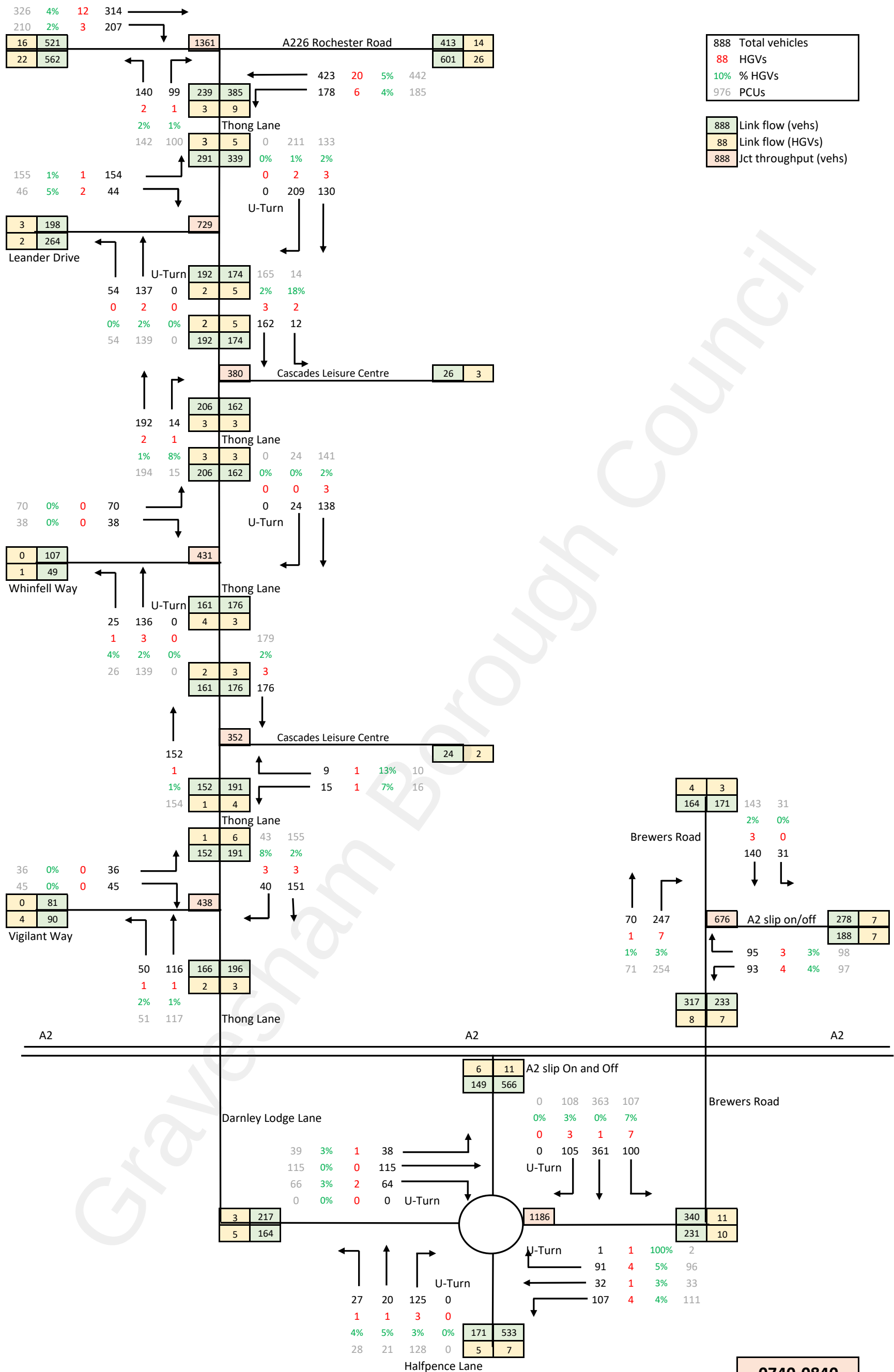


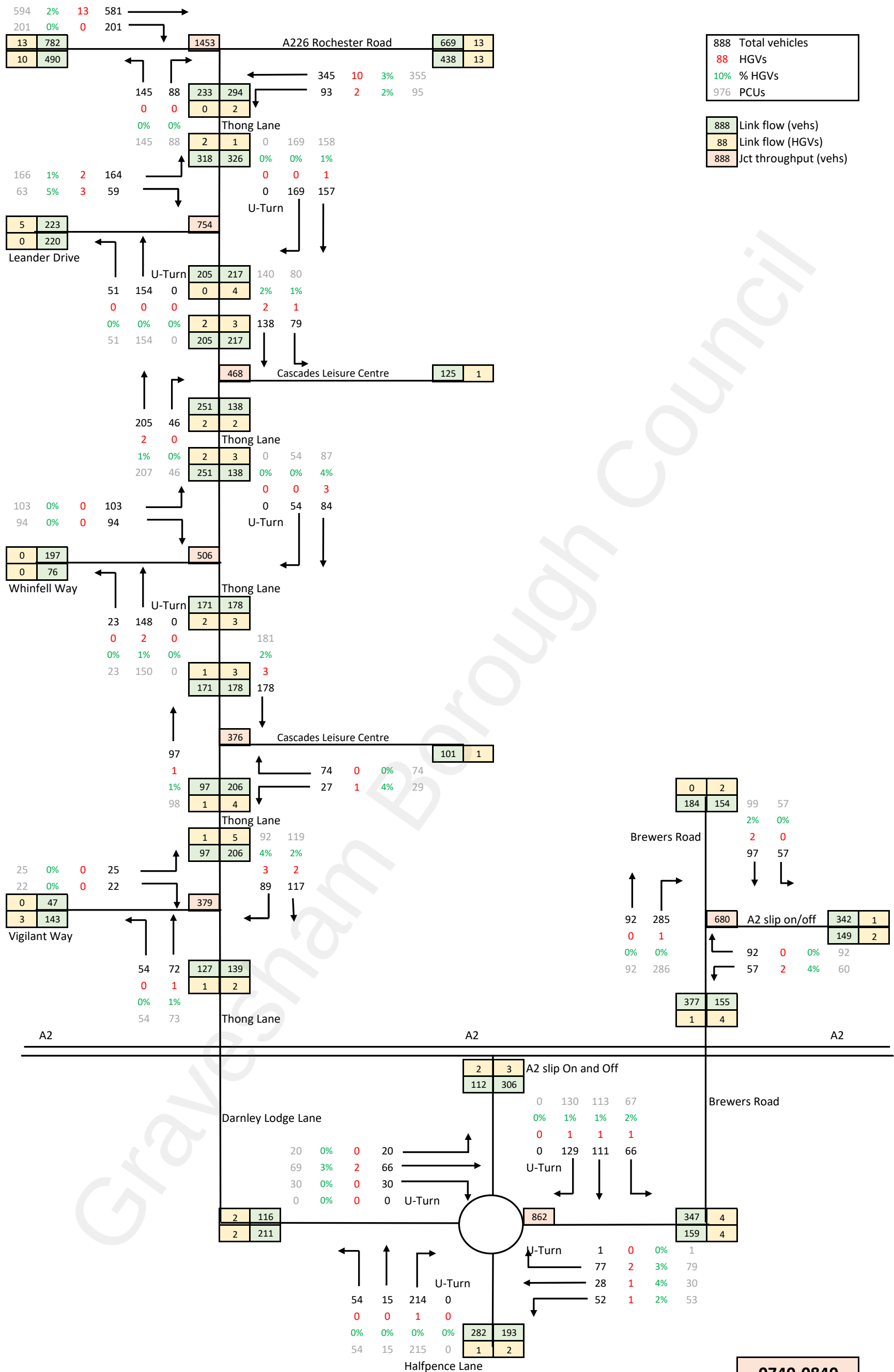


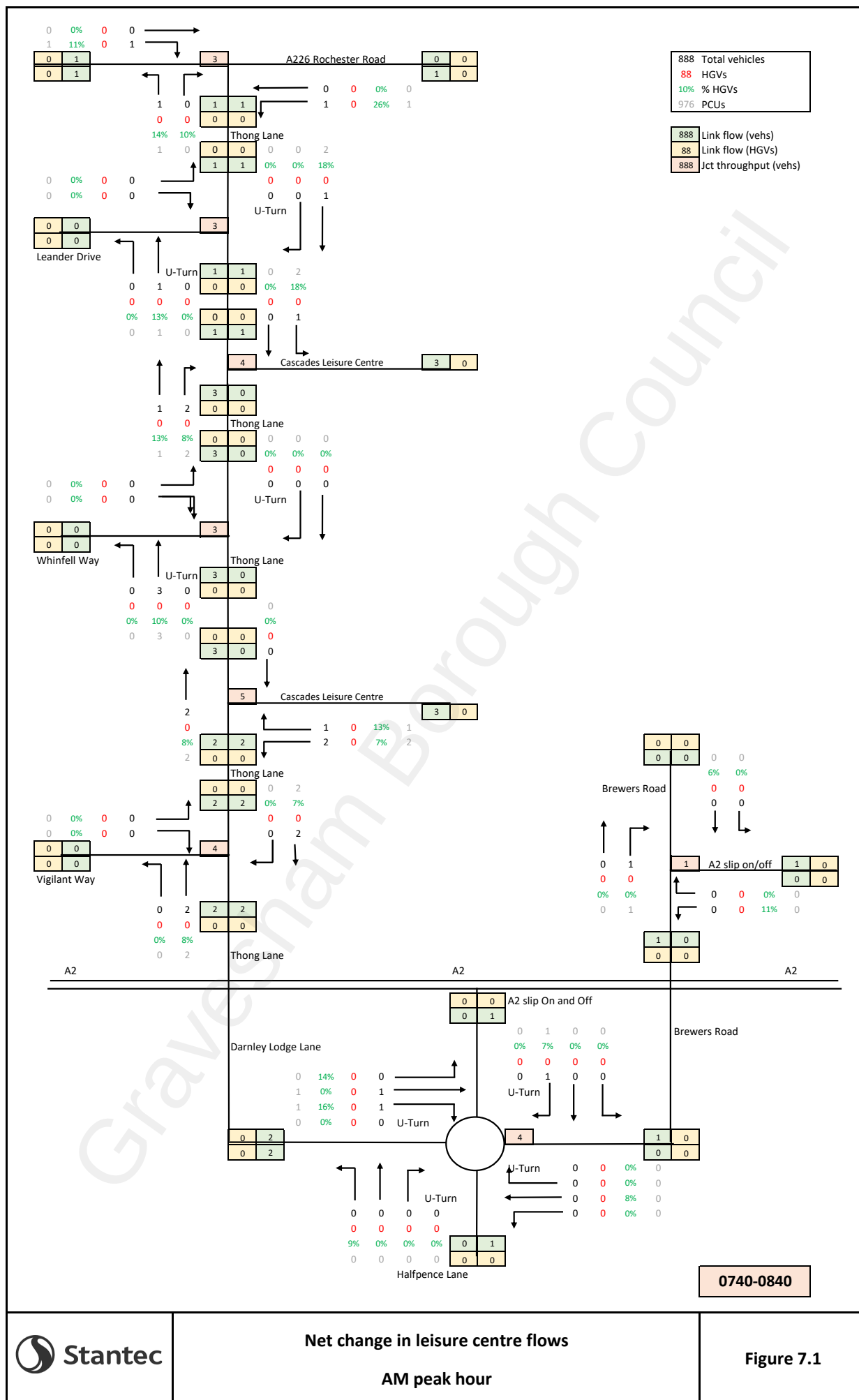


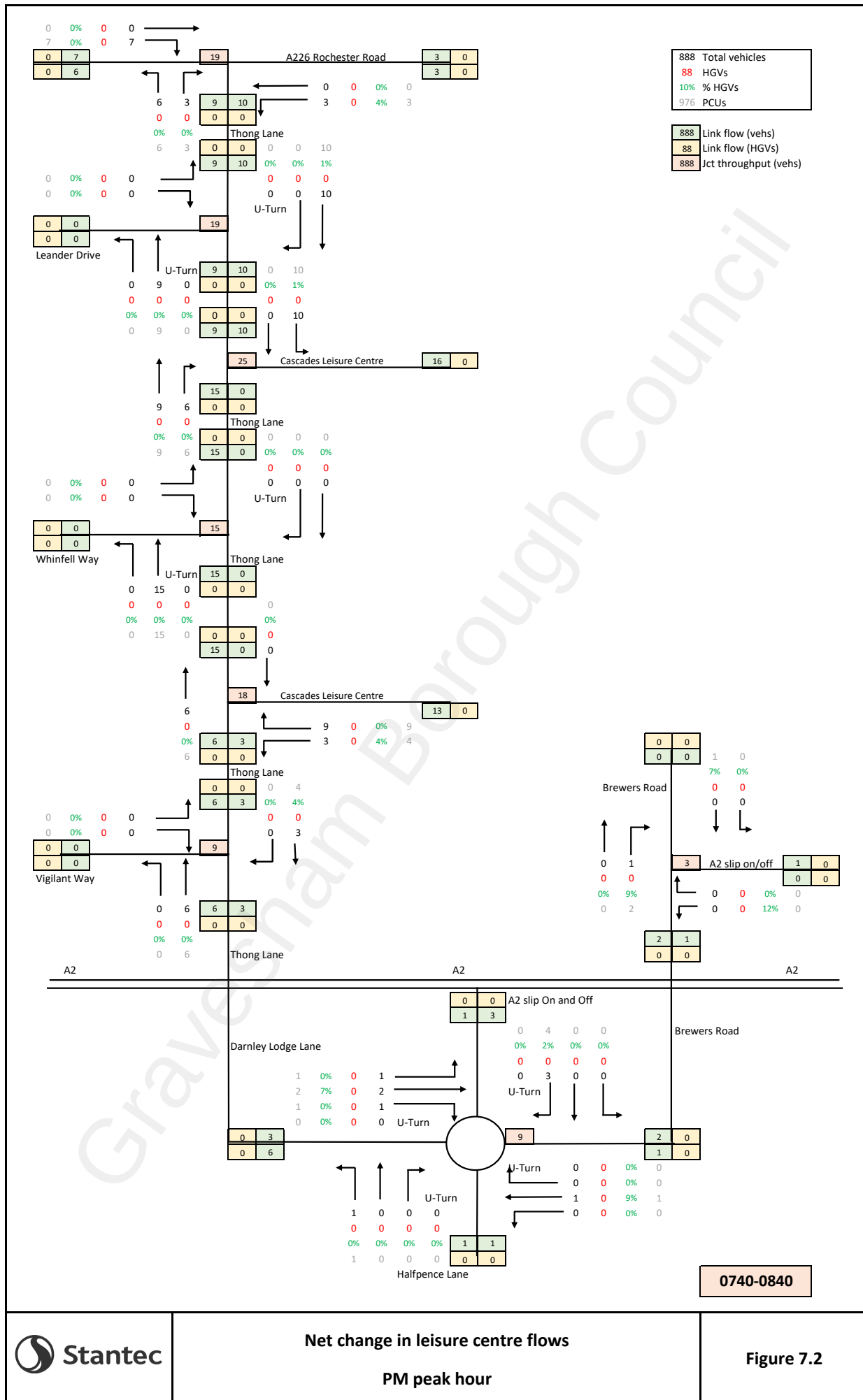


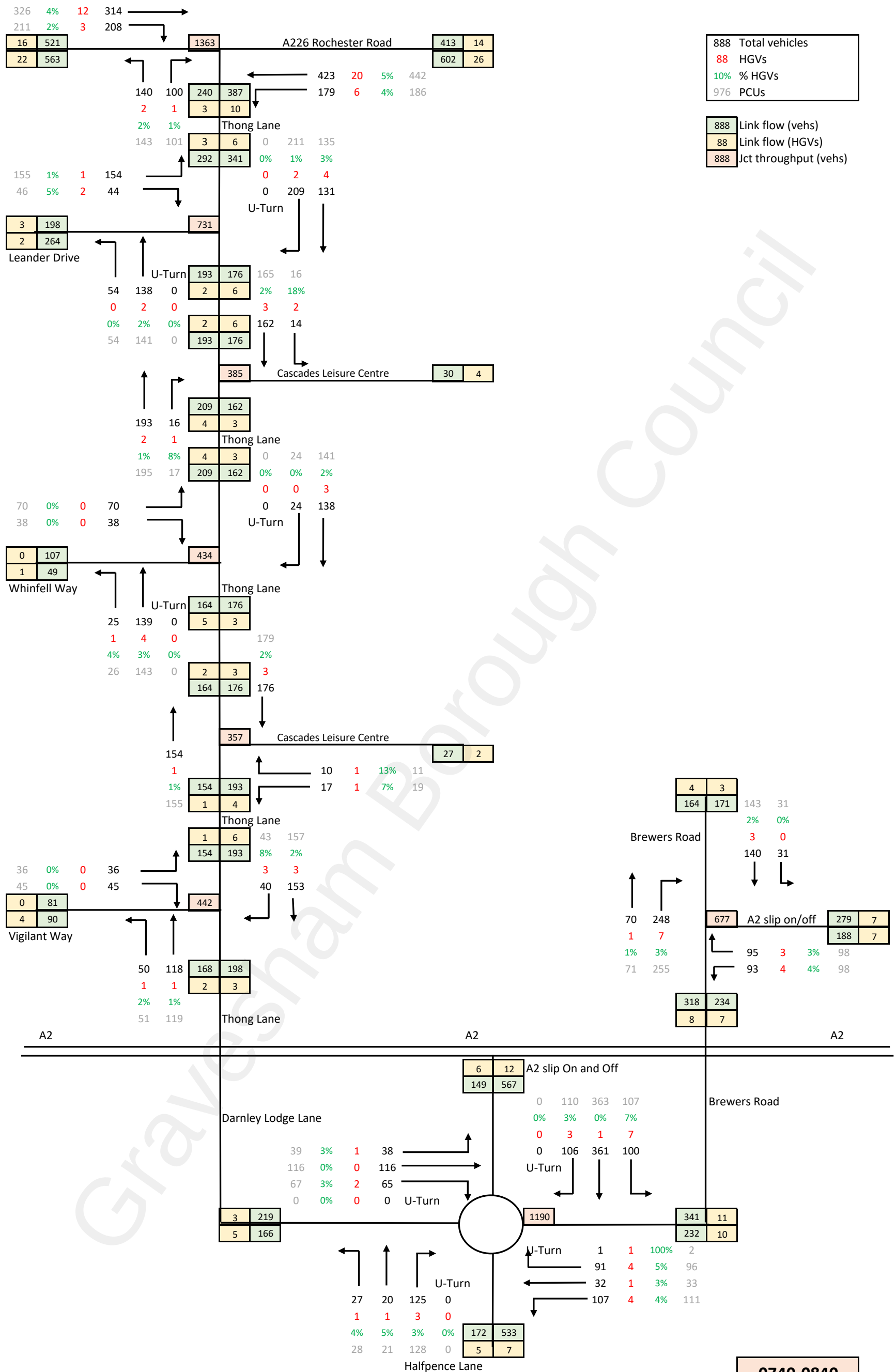




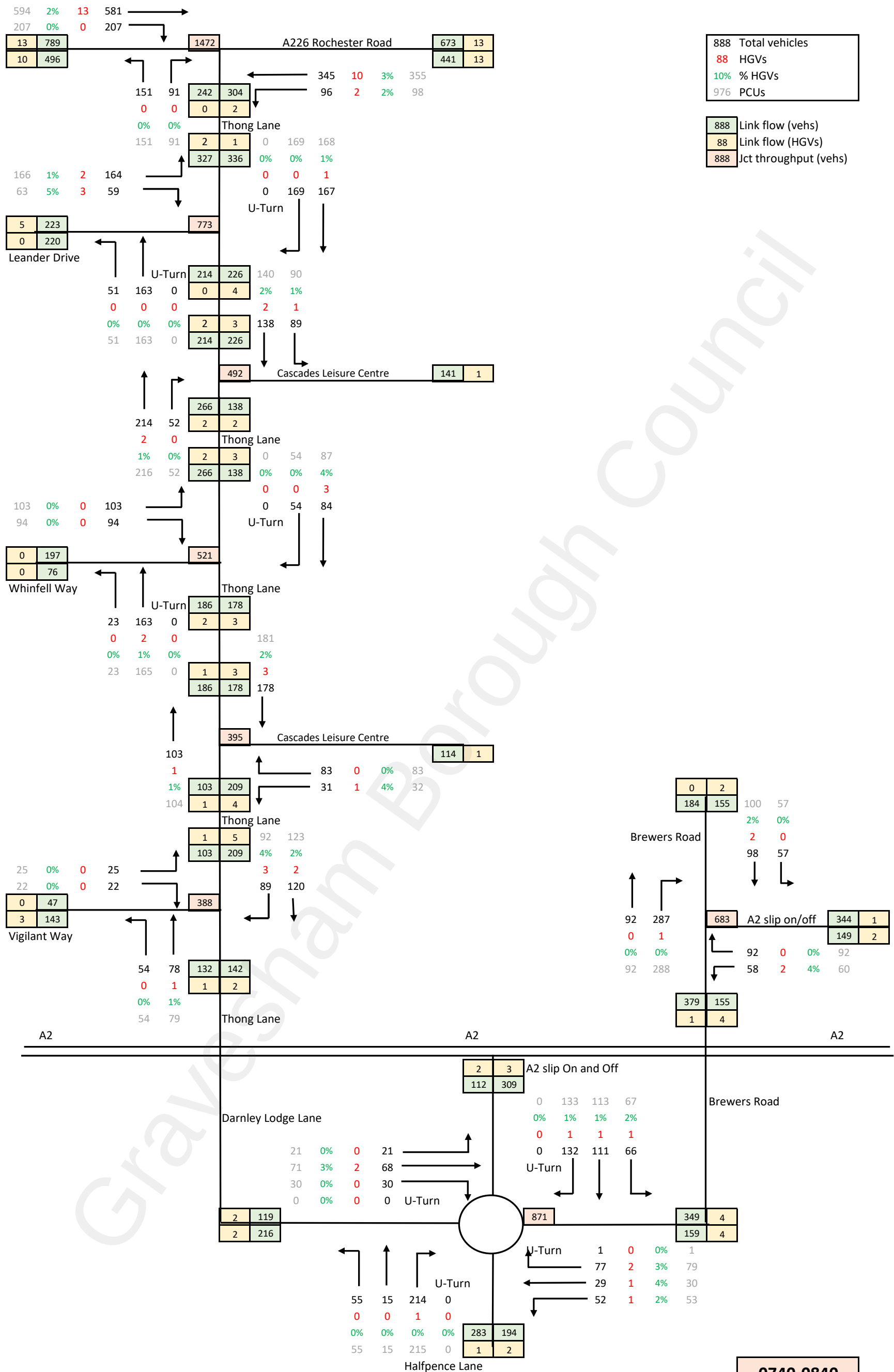








	2028 baseline plus proposed leisure centre traffic flows AM peak hour	Figure 7.3
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Appendix A

Survey data

Gravesham Borough Council

K&M TRAFFIC SURVEYS

SITE: CASCADES ENTRY

LOCATION: Attached to entrance gate

GRID REFERENCE: 51.420330, 0.399130

DIRECTION: EASTBOUND

SPEED LIMIT: 10

	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Averages	
	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	1-5.	1-7.
Hour									
0000-0100	0	0	0	0	0	0	0	0	0
0100-0200	0	0	0	0	0	0	0	0	0
0200-0300	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0
0500-0600	5	3	3	0	0	7	8	5.2	3.7
0600-0700	23	17	18	0	0	17	25	20	14.3
0700-0800	16	26	25	59	29	20	17	20.8	27.4
0800-0900	70	47	65	115	38	67	41	58	63.3
0900-1000	56	78	84	142	130	65	62	69	88.1
1000-1100	62	41	49	133	145	64	41	51.4	76.4
1100-1200	45	67	58	101	120	67	49	57.2	72.4
1200-1300	61	41	54	123	71	54	49	51.8	64.7
1300-1400	52	54	51	120	112	57	64	55.6	72.9
1400-1500	74	57	48	78	87	57	53	57.8	64.9
1500-1600	88	75	102	75	60	82	92	87.8	82
1600-1700	109	86	139	52	47	116	113	112.6	94.6
1700-1800	131	127	153	47	23	121	102	126.8	100.6
1800-1900	135	160	79	26	21	135	137	129.2	99
1900-2000	81	101	66	22	8	81	110	87.8	67
2000-2100	32	44	24	15	1	35	33	33.6	26.3
2100-2200	11	28	11	14	0	5	12	13.4	11.6
2200-2300	5	6	5	4	4	3	3	4.4	4.3
2300-2400	2	0	0	6	1	0	0	0.4	1.3
Totals									
0700-1900	899	859	907	1071	883	905	820	878	906.3
0600-2200	1046	1049	1026	1122	892	1043	1000	1032.8	1025.4
0600-0000	1053	1055	1031	1132	897	1046	1003	1037.6	1031
0000-0000	1058	1058	1034	1132	897	1053	1011	1042.8	1034.7
AM Peak	800	900	900	900	1000	1100	900		
	70	78	84	142	145	67	62		
PM Peak	1800	1800	1700	1200	1300	1800	1800		
	135	160	153	123	112	135	137		

K&M TRAFFIC SURVEYS

SITE: CASCADES EXIT

LOCATION: Attached to gate

GRID REFERENCE: 51.418945, 0.400015

DIRECTION: WESTBOUND

SPEED LIMIT: 10

	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Averages	
	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	1-5.	1-7.
Hour									
0000-0100	0	0	0	4	4	0	0	0	1.1
0100-0200	0	0	0	0	0	0	0	0	0
0200-0300	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0
0500-0600	2	2	0	0	0	4	2	2	1.4
0600-0700	14	7	7	0	0	7	15	10	7.1
0700-0800	31	25	30	16	10	17	39	28.4	24
0800-0900	24	29	25	52	18	18	25	24.2	27.3
0900-1000	41	39	38	107	49	39	42	39.8	50.7
1000-1100	76	75	73	115	76	85	71	76	81.6
1100-1200	63	74	79	161	122	57	40	62.6	85.1
1200-1300	59	47	58	100	146	78	63	61	78.7
1300-1400	78	64	61	101	114	64	67	66.8	78.4
1400-1500	53	63	51	97	70	50	52	53.8	62.3
1500-1600	59	49	52	109	103	58	52	54	68.9
1600-1700	92	69	102	64	70	68	71	80.4	76.6
1700-1800	106	110	159	64	63	91	88	110.8	97.3
1800-1900	121	110	112	36	33	137	127	121.4	96.6
1900-2000	91	91	63	30	10	97	110	90.4	70.3
2000-2100	80	92	39	8	6	82	85	75.6	56
2100-2200	75	87	49	15	0	49	65	65	48.6
2200-2300	15	19	21	12	6	8	15	15.6	13.7
2300-2400	1	1	5	5	1	2	0	1.8	2.1
Totals									
0700-1900	803	754	840	1022	874	762	737	779.2	827.4
0600-2200	1063	1031	998	1075	890	997	1012	1020.2	1009.4
0600-0000	1079	1051	1024	1092	897	1007	1027	1037.6	1025.3
0000-0000	1081	1053	1024	1096	901	1011	1029	1039.6	1027.9
AM Peak	1000	1000	1100	1100	1100	1000	1000		
	76	75	79	161	122	85	71		
PM Peak	1800	1800	1700	1500	1200	1800	1800		
	121	110	159	109	146	137	127		

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - A226 ROCHESTER ROAD / THONG LANE PRIORITY JUNCTION

	THONG LANE OUT LEFT TO A226 ROCHESTER RD WEST						THONG LANE OUT RIGHT TO A226 ROCHESTER RD EAST						THONG LANE RIGHT TURN IN FROM A226 ROCHESTER RD WEST						THONG LANE LEFT TURN IN FROM A226 ROCHESTER RD EAST					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0700-0710	13			1	1	15	3					3	6					6	1					1
0710-0720	17			1		18	9					9	6	1	1			8	3					3
0720-0730	14					14	10					10	13				1	14	5		1			6
0730-0740	17		1	1		19	12					12	19					19	7					7
0740-0750	25					25	7			1		8	7					7	8		1			9
0750-0800	21	2				23	10					10	29					29	16	1				17
0800-0810	19					19	6					6	32					32	31		1	1		33
0810-0820	14					14	10					10	29	1				30	37					37
0820-0830	16					16	28					28	45					45	31	2				33
0830-0840	17					17	19	1				20	29	2				31	21	1				22
0840-0850	18	2		1		21	15					15	19					19	13					13
0850-0900	36					36	16	1				17	23	1	1			25	24	1				25
0900-0910	20					20	6	1				7	17	2				19	5					5
0910-0920	21	1				22	14					14	13					13	9					9
0920-0930	15					15	9					9	11					11	10		1			11
0930-0940	12					12	6	1				7	15			1		16	4		1			5
0940-0950	15			1		16	7					7	10	1				11	7					7
0950-1000	13					13	13					13	29					29	6		1			7
0700-1000	323	5	1	5	1	335	200	4	0	1	0	205	352	8	2	1	1	364	238	5	6	1	0	250
0700-0800	107	2	1	3	1	114	51	0	0	1	0	52	80	1	1	0	1	83	40	1	2	0	0	43
0710-0810	113	2	1	2	0	118	54	0	0	1	0	55	106	1	1	0	1	109	70	1	3	1	0	75
0720-0820	110	2	1	1	0	114	55	0	0	1	0	56	129	1	0	0	1	131	104	1	3	1	0	109
0730-0830	112	2	1	1	0	116	73	0	0	1	0	74	161	1	0	0	0	162	130	3	2	1	0	136
0740-0840	112	2	0	0	0	114	80	1	0	1	0	82	171	3	0	0	0	174	144	4	2	1	0	151
0750-0850	105	4	0	1	0	110	88	1	0	0	0	89	183	3	0	0	0	186	149	4	1	1	0	155
0800-0900	120	2	0	1	0	123	94	2	0	0	0	96	177	4	1	0	0	182	157	4	1	1	0	163
0810-0910	121	2	0	1	0	124	94	3	0	0	0	97	162	6	1	0	0	169	131	4	0	0	0	135
0820-0920	128	3	0	1	0	132	98	3	0	0	0	101	146	5	1	0	0	152	103	4	0	0	0	107
0830-0930	127	3	0	1	0	131	79	3	0	0	0	82	112	5	1	0	0	118	82	2	1	0	0	85
0840-0940	122	3	0	1	0	126	66	3	0	0	0	69	98	3	1	1	0	103	65	1	2	0	0	68
0850-0950	119	1	0	1	0	121	58	3	0	0	0	61	89	4	1	1	0	95	59	1	2	0	0	62
0900-1000	96	1	0	1	0	98	55	2	0	0	0	57	95	3	0	1	0	99	41	0	3	0	0	44

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - A226 ROCHESTER ROAD / THONG LANE PRIORITY JUNCTION

	THONG LANE OUT LEFT TO A226 ROCHESTER RD WEST						THONG LANE OUT RIGHT TO A226 ROCHESTER RD EAST						THONG LANE RIGHT TURN IN FROM A226 ROCHESTER RD WEST						THONG LANE LEFT TURN IN FROM A226 ROCHESTER RD EAST					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1600-1610	19					19	11		1			12	28					28	13					13
1610-1620	21					21	15					15	26	1				27	14					14
1620-1630	25					25	13					13	32	1				33	11					11
1630-1640	19	2				21	6					6	15					15	7					7
1640-1650	21					21	14					14	16					16	10					10
1650-1700	26					26	8					8	30					30	12		1			13
1700-1710	15					15	20					20	32					32	17					17
1710-1720	28					28	16					16	37					37	15					15
1720-1730	22					22	19					19	32					32	15	1				16
1730-1740	22					22	9					9	25				2	27	16					16
1740-1750	24					24	11					11	34				1	35	11					11
1750-1800	15					15	9					9	24			1		25	13					13
1800-1810	13					13	12		1			13	22	1				23	12					12
1810-1820	22					22	13					13	26		1			27	16					16
1820-1830	11					11	12					12	14					14	10					10
1830-1840	18					18	15					15	15					15	1					1
1840-1850	22					22	8					8	14					14	8					8
1850-1900	21	1				22	10				1	11	20				1	21	6					6
1600-1900	364	3	0	0	0	367	221	0	2	1	0	224	442	3	1	2	3	451	207	1	1	0	0	209
1600-1700	131	2	0	0	0	133	67	0	1	0	0	68	147	2	0	0	0	149	67	0	1	0	0	68
1610-1710	127	2	0	0	0	129	76	0	0	0	0	76	151	2	0	0	0	153	71	0	1	0	0	72
1620-1720	134	2	0	0	0	136	77	0	0	0	0	77	162	1	0	0	0	163	72	0	1	0	0	73
1630-1730	131	2	0	0	0	133	83	0	0	0	0	83	162	0	0	0	0	162	76	1	1	0	0	78
1640-1740	134	0	0	0	0	134	86	0	0	0	0	86	172	0	0	0	2	174	85	1	1	0	0	87
1650-1750	137	0	0	0	0	137	83	0	0	0	0	83	190	0	0	0	3	193	86	1	1	0	0	88
1700-1800	126	0	0	0	0	126	84	0	0	0	0	84	184	0	0	1	3	188	87	1	0	0	0	88
1710-1810	124	0	0	0	0	124	76	0	1	0	0	77	174	1	0	1	3	179	82	1	0	0	0	83
1720-1820	118	0	0	0	0	118	73	0	1	0	0	74	163	1	1	1	3	169	83	1	0	0	0	84
1730-1830	107	0	0	0	0	107	66	0	1	0	0	67	145	1	1	1	3	151	78	0	0	0	0	78
1740-1840	103	0	0	0	0	103	72	0	1	0	0	73	135	1	1	1	1	139	63	0	0	0	0	63
1750-1850	101	0	0	0	0	101	69	0	1	0	0	70	115	1	1	1	0	118	60	0	0	0	0	60
1800-1900	107	1	0	0	0	108	70	0	1	1	0	72	111	1	1	1	0	114	53	0	0	0	0	53

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - A226 ROCHESTER ROAD / THONG LANE PRIORITY JUNCTION

	A226 ROCHESTER RD FROM WEST STRAIGHT AHEAD TO A226 ROCHESTER RD EAST / HIGHAM						A226 ROCHESTER RD FROM EAST STRAIGHT AHEAD TO A226 ROCHESTER RD WEST / G,END						CROSSING THONG LANE WESTBOUND TO GRAVESEND			CROSSING THONG LANE EASTBOUND TO HIGHAM		
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	PEDS	PCY	TOT	PEDS	PCY	TOT
0700-0710	39					39	71	4	4	1		80	0	0	0	0	0	0
0710-0720	42	7				49	66	6	2			74	0	0	0	0	0	0
0720-0730	36	7	1			44	83	1	3	1		88	0	0	0	0	0	0
0730-0740	38	5	3			46	86			1		87	1	0	1	0	0	0
0740-0750	48	1		1		50	102	3	1	1		107	0	0	0	1	0	1
0750-0800	45	2				47	80	2	1	1	1	85	0	0	0	0	0	0
0800-0810	45	3				48	84	4				88	0	0	0	1	0	1
0810-0820	47	1				48	38	2				40	0	0	0	0	0	0
0820-0830	57	1	1			59	34	3				37	0	0	0	0	0	0
0830-0840	48	3				51	50	2	1			53	0	0	0	0	0	0
0840-0850	54	2				56	56	3				59	0	0	0	2	0	2
0850-0900	48	5	3			56	63	4	1	1		69	0	0	0	0	0	0
0900-0910	37	2	2	1		42	31	1		1	1	34	0	0	0	0	0	0
0910-0920	38	3	2			43	52		4	2	2	60	0	0	0	0	0	0
0920-0930	36	2				38	51	5	1			57	0	0	0	0	0	0
0930-0940	42	3	1			46	64	4	1			69	0	0	0	0	0	0
0940-0950	31	3		1		35	35	1		1		37	0	0	0	0	0	0
0950-1000	30	1	1			32	45	4				49	0	0	0	0	0	0
0700-1000	761	51	14	3	0	829	1091	49	19	10	4	1173	1	0	1	4	0	4
0700-0800	248	22	4	1	0	275	488	16	11	5	1	521	1	0	1	1	0	1
0710-0810	254	25	4	1	0	284	501	16	7	4	1	529	1	0	1	2	0	2
0720-0820	259	19	4	1	0	283	473	12	5	4	1	495	1	0	1	2	0	2
0730-0830	280	13	4	1	0	298	424	14	2	3	1	444	1	0	1	2	0	2
0740-0840	290	11	1	1	0	303	388	16	3	2	1	410	0	0	0	2	0	2
0750-0850	296	12	1	0	0	309	342	16	2	1	1	362	0	0	0	3	0	3
0800-0900	299	15	4	0	0	318	325	18	2	1	0	346	0	0	0	3	0	3
0810-0910	291	14	6	1	0	312	272	15	2	2	1	292	0	0	0	2	0	2
0820-0920	282	16	8	1	0	307	286	13	6	4	3	312	0	0	0	2	0	2
0830-0930	261	17	7	1	0	286	303	15	7	4	3	332	0	0	0	2	0	2
0840-0940	255	17	8	1	0	281	317	17	7	4	3	348	0	0	0	2	0	2
0850-0950	232	18	8	2	0	260	296	15	7	5	3	326	0	0	0	0	0	0
0900-1000	214	14	6	2	0	236	278	15	6	4	3	306	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - A226 ROCHESTER ROAD / THONG LA J1 - A226 ROCHESTER RO J1 - A226 ROCHESTER ROAD / THONG LA

	A226 ROCHESTER RD FROM WEST STRAIGHT AHEAD TO A226 ROCHESTER RD EAST / HIGHAM						A226 ROCHESTER RD FROM EAST STRAIGHT AHEAD TO A226 ROCHESTER RD WEST / G,END						CROSSING THONG LANE WESTBOUND TO GRAVESEND			CROSSING THONG LANE EASTBOUND TO HIGHAM		
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	PEDS	PCY	TOT	PEDS	PCY	TOT
1600-1610	88	2	1	2	1	94	41	1	1	1		44	0	0	0	0	0	0
1610-1620	82	1	1			84	49		1			50	0	0	0	0	0	0
1620-1630	90	3	2	1	1	97	48				1	49	0	0	0	2	0	2
1630-1640	72					72	46	2				48	0	0	0	0	0	0
1640-1650	88		1	2		91	47		1			48	0	0	0	0	0	0
1650-1700	92	3		2		97	47	2	1			50	0	0	0	0	0	0
1700-1710	93	3	1			97	53	1		1		55	1	0	1	1	0	1
1710-1720	97	2	1			100	58	3				61	0	0	0	0	0	0
1720-1730	95	1		2		98	59					59	0	0	0	0	0	0
1730-1740	93	1		1		95	61	1		1		63	0	0	0	0	0	0
1740-1750	76			1	1	78	43		2			45	0	0	0	0	0	0
1750-1800	79			2		81	48					48	0	0	0	0	0	0
1800-1810	81	3	1	1		86	52					52	0	0	0	0	0	0
1810-1820	71	1				72	43		1	1		45	1	0	1	0	0	0
1820-1830	76	1		2	1	80	57	1			1	59	0	0	0	0	0	0
1830-1840	48	3	1	1	1	54	48	2		3		53	0	0	0	1	0	1
1840-1850	70	2		1		73	43	1		1		45	0	0	0	0	0	0
1850-1900	46	3				49	54	1	1	2		58	0	0	0	0	0	0
1600-1900	1437	29	9	18	5	1498	897	15	8	10	2	932	2	0	2	4	0	4
1600-1700	512	9	5	7	2	535	278	5	4	1	1	289	0	0	0	2	0	2
1610-1710	517	10	5	5	1	538	290	5	3	1	1	300	1	0	1	3	0	3
1620-1720	532	11	5	5	1	554	299	8	2	1	1	311	1	0	1	3	0	3
1630-1730	537	9	3	6	0	555	310	8	2	1	0	321	1	0	1	1	0	1
1640-1740	558	10	3	7	0	578	325	7	2	2	0	336	1	0	1	1	0	1
1650-1750	546	10	2	6	1	565	321	7	3	2	0	333	1	0	1	1	0	1
1700-1800	533	7	2	6	1	549	322	5	2	2	0	331	1	0	1	1	0	1
1710-1810	521	7	2	7	1	538	321	4	2	1	0	328	0	0	0	0	0	0
1720-1820	495	6	1	7	1	510	306	1	3	2	0	312	1	0	1	0	0	0
1730-1830	476	6	1	7	2	492	304	2	3	2	1	312	1	0	1	0	0	0
1740-1840	431	8	2	7	3	451	291	3	3	4	1	302	1	0	1	1	0	1
1750-1850	425	10	2	7	2	446	291	4	1	5	1	302	1	0	1	1	0	1
1800-1900	392	13	2	5	2	414	297	5	2	7	1	312	1	0	1	1	0	1

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J2 - THONG LANE / CASCADES LEISURE CENTRE - ENTRANCE

	CASCADES LEISURE CENTRE ENTRANCE RIGHT TURN IN FROM THONG LANE SOUTH						CASCADES LEISURE CENTRE ENTRANCE LEFT TURN IN FROM THONG LANE NORTH						THIONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH						THIONG LANE FROM NORTH STRAIGHT AHEAD TO THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0700-0710	2					2	1					1	12					12	6	1				7
0710-0720	0					0	1		1			2	13					13	11		1			12
0720-0730	0					0	0		1			1	14					14	11			1		12
0730-0740	0	1				1	3		1			4	17					17	17			2		19
0740-0750	0					0	0					0	27	1				28	13					13
0750-0800	4					4	1					1	20				1	21	16	1				17
0800-0810	2					2	3					3	36	1				37	26					26
0810-0820	2				3	5	1					1	28					28	25					25
0820-0830	2					2	1					1	24					24	24			1		25
0830-0840	2	1				3	3	2				5	24			1		25	24	2				26
0840-0850	5					5	6					6	30	3				33	15					15
0850-0900	6	2				8	8					8	27					27	11					11
0900-0910	6					6	15	1				16	18	1			1	20	12					12
0910-0920	5					5	7					7	18				1	19	14					14
0920-0930	1					1	3		1			4	17	1				18	11					11
0930-0940	2					2	4		2			6	9					9	8					8
0940-0950	1					1	8	1				9	21					21	9					9
0950-1000	2					2	7					7	14	1				15	13					13
0700-1000	42	4	0	0	3	49	72	4	6	0	0	82	369	8	0	1	3	381	266	4	1	0	4	275
0700-0800	6	1	0	0	0	7	6	0	3	0	0	9	103	1	0	0	1	105	74	2	1	0	3	80
0710-0810	6	1	0	0	0	7	8	0	3	0	0	11	127	2	0	0	1	130	94	1	1	0	3	99
0720-0820	8	1	0	0	3	12	8	0	2	0	0	10	142	2	0	0	1	145	108	1	0	0	3	112
0730-0830	10	1	0	0	3	14	9	0	1	0	0	10	152	2	0	0	1	155	121	1	0	0	3	125
0740-0840	12	1	0	0	3	16	9	2	0	0	0	11	159	2	0	1	1	163	128	3	0	0	1	132
0750-0850	17	1	0	0	3	21	15	2	0	0	0	17	162	4	0	1	1	168	130	3	0	0	1	134
0800-0900	19	3	0	0	3	25	22	2	0	0	0	24	169	4	0	1	0	174	125	2	0	0	1	128
0810-0910	23	3	0	0	3	29	34	3	0	0	0	37	151	4	0	1	1	157	111	2	0	0	1	114
0820-0920	26	3	0	0	0	29	40	3	0	0	0	43	141	4	0	1	2	148	100	2	0	0	1	103
0830-0930	25	3	0	0	0	28	42	3	1	0	0	46	134	5	0	1	2	142	87	2	0	0	0	89
0840-0940	25	2	0	0	0	27	43	1	3	0	0	47	119	5	0	0	2	126	71	0	0	0	0	71
0850-0950	21	2	0	0	0	23	45	2	3	0	0	50	110	2	0	0	2	114	65	0	0	0	0	65
0900-1000	17	0	0	0	0	17	44	2	3	0	0	49	97	3	0	0	2	102	67	0	0	0	0	67

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

ONE PRIORITY JUNCTION

J2 - THONG LANE / CASCADES LEISURE CENTRE - ENTRANCE

	CASCADES LEISURE CENTRE ENTRANCE RIGHT TURN IN FROM THONG LANE SOUTH						CASCADES LEISURE CENTRE ENTRANCE LEFT TURN IN FROM THONG LANE NORTH						THIONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH						THIONG LANE FROM NORTH STRAIGHT AHEAD TO THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1600-1610	9					9	4		1			5	23					23	23	1				24
1610-1620	7					7	4					4	22	1				23	20					20
1620-1630	3					3	11					11	26					26	23	1				24
1630-1640	4					4	9		2			11	28	1				29	11					11
1640-1650	6					6	14				3	17	24		1			25	18					18
1650-1700	10					10	26					26	26				1	27	18	1				19
1700-1710	9					9	8				1	9	37					37	28					28
1710-1720	3					3	5				1	6	30		1		1	32	16					16
1720-1730	7					7	16		1			17	34					34	25	1				26
1730-1740	8					8	6					6	39	1				40	23				1	24
1740-1750	5					5	10					10	25				1	26	20				1	21
1750-1800	9					9	3		1	1		5	24					24	11					11
1800-1810	10					10	11					11	36				1	37	13					13
1810-1820	4	1				5	15		1			16	39					39	20					20
1820-1830	14					14	9		2			11	13					13	10					10
1830-1840	5					5	18				1	19	24					24	18					18
1840-1850	9					9	19		1			20	19					19	16					16
1850-1900	12					12	20					20	15		1	1		17	14					14
1600-1900	134	1	0	0	0	135	208	0	9	1	6	224	484	3	2	2	4	495	327	4	0	0	2	333
1600-1700	39	0	0	0	0	39	68	0	3	0	3	74	149	2	0	1	1	153	113	3	0	0	0	116
1610-1710	39	0	0	0	0	39	72	0	2	0	4	78	163	2	0	1	1	167	118	2	0	0	0	120
1620-1720	35	0	0	0	0	35	73	0	2	0	5	80	171	1	1	1	2	176	114	2	0	0	0	116
1630-1730	39	0	0	0	0	39	78	0	3	0	5	86	179	1	1	1	2	184	116	2	0	0	0	118
1640-1740	43	0	0	0	0	43	75	0	1	0	5	81	190	1	1	1	2	195	128	2	0	0	1	131
1650-1750	42	0	0	0	0	42	71	0	1	0	2	74	191	1	1	0	3	196	130	2	0	0	2	134
1700-1800	41	0	0	0	0	41	48	0	2	1	2	53	189	1	1	0	2	193	123	1	0	0	2	126
1710-1810	42	0	0	0	0	42	51	0	2	1	1	55	188	1	1	0	3	193	108	1	0	0	2	111
1720-1820	43	1	0	0	0	44	61	0	3	1	0	65	197	1	0	0	2	200	112	1	0	0	2	115
1730-1830	50	1	0	0	0	51	54	0	4	1	0	59	176	1	0	0	2	179	97	0	0	0	2	99
1740-1840	47	1	0	0	0	48	66	0	4	1	1	72	161	0	0	0	2	163	92	0	0	0	1	93
1750-1850	51	1	0	0	0	52	75	0	5	1	1	82	155	0	0	0	1	156	88	0	0	0	0	88
1800-1900	54	1	0	0	0	55	92	0	4	0	1	97	146	0	1	1	1	149	91	0	0	0	0	91

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - THONG LANE / CASCADES LEISURE CENTRE - EXIT

CASCADES ACCESS			CASCADES LEISURE CENTRE EXIT OUT LEFT TO THONG LANE SOUTH						CASCADES LEISURE CENTRE EXIT OUT RIGHT TO THONG LANE NORTH						THIONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH						THIONG LANE FROM NORTH STRAIGHT AHEAD TO THONG LANE SOUTH					
IN	OUT																									
PEDS	PEDS		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1	3	0700-0710	0					0	4					4	5					5	6					6
3	0	0710-0720	2		1			3	4					4	7					7	10		1	1		12
0	0	0720-0730	2		1			3	4				1	5	12					12	10					10
3	1	0730-0740	0					0	4	1				5	15				1	16	13					13
1	1	0740-0750	4		1			5	2					2	12					12	14	1				15
0	1	0750-0800	0					0	1					1	19	1				20	21				1	22
1	0	0800-0810	3					3	1					1	24					24	33	2				35
3	6	0810-0820	1					1	2					2	30					30	27					27
3	0	0820-0830	3					3	0					0	21					21	21					21
3	2	0830-0840	2					2	1	1				2	16				1	17	25			1		26
0	3	0840-0850	1	1				2	1					1	10					10	27	1				28
2	0	0850-0900	4					4	1	1				2	14					14	24					24
2	1	0900-0910	2		1			3	3					3	9					9	19			1		20
0	1	0910-0920	1					1	4					4	15					15	20					20
3	1	0920-0930	0		1			1	2					2	7					7	16					16
2	1	0930-0940	2		1			3	1					1	8					8	8		2			10
5	2	0940-0950	0					0	2					2	5					5	8					8
1	1	0950-1000	2					2	5					5	9					9	8	1				9
33	24	0700-1000	29	1	6	0	0	36	42	3	0	0	1	46	238	1	0	0	2	241	310	5	3	3	1	322
8	6	0700-0800	8	0	3	0	0	11	19	1	0	0	1	21	70	1	0	0	1	72	74	1	1	1	1	78
8	3	0710-0810	11	0	3	0	0	14	16	1	0	0	1	18	89	1	0	0	1	91	101	3	1	1	1	107
8	9	0720-0820	10	0	2	0	0	12	14	1	0	0	1	16	112	1	0	0	1	114	118	3	0	0	1	122
11	9	0730-0830	11	0	1	0	0	12	10	1	0	0	0	11	121	1	0	0	1	123	129	3	0	0	1	133
11	10	0740-0840	13	0	1	0	0	14	7	1	0	0	0	8	122	1	0	0	1	124	141	3	0	1	1	146
10	12	0750-0850	10	1	0	0	0	11	6	1	0	0	0	7	120	1	0	0	1	122	154	3	0	1	1	159
12	11	0800-0900	14	1	0	0	0	15	6	2	0	0	0	8	115	0	0	0	1	116	157	3	0	1	0	161
13	12	0810-0910	13	1	1	0	0	15	8	2	0	0	0	10	100	0	0	0	1	101	143	1	0	2	0	146
10	7	0820-0920	13	1	1	0	0	15	10	2	0	0	0	12	85	0	0	0	1	86	136	1	0	2	0	139
10	8	0830-0930	10	1	2	0	0	13	12	2	0	0	0	14	71	0	0	0	1	72	131	1	0	2	0	134
9	7	0840-0940	10	1	3	0	0	14	12	1	0	0	0	13	63	0	0	0	0	63	114	1	2	1	0	118
14	6	0850-0950	9	0	3	0	0	12	13	1	0	0	0	14	58	0	0	0	0	58	95	0	2	1	0	98
13	7	0900-1000	7	0	3	0	0	10	17	0	0	0	0	17	53	0	0	0	0	53	79	1	2	1	0	83

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - THONG LANE / CASCADES LEISURE CENTRE - EXIT

CASCADES ACCESS		CASCADES LEISURE CENTRE EXIT OUT LEFT TO THONG LANE SOUTH						CASCADES LEISURE CENTRE EXIT OUT RIGHT TO THONG LANE NORTH						THIONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH						THIONG LANE FROM NORTH STRAIGHT AHEAD TO THONG LANE SOUTH					
IN	OUT																								
PEDS	PEDS	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
7	5	3	1				4	5					5	24					24	34	1				35
2	8	1					1	6	1				7	16					16	18					18
6	8	4					4	6					6	19					19	23					23
10	1	1		1			2	11					11	14					14	20					20
8	7	5		1			6	10					10	11					11	22		1			23
12	6	3					3	10					10	18	1				19	27	1			1	29
6	3	10					10	22					22	18					18	25					25
7	7	1					1	13					13	15					15	23		1		1	25
8	2	5		1			6	8					8	15					15	32					32
4	11	3					3	9					9	11				1	12	30				1	31
4	5	2					2	5					5	13				1	14	31	1				32
7	1	5		1			6	4					4	8				1	9	32					32
3	2	10		1			11	25					25	11					11	32					32
3	14	9					9	22					22	14					14	19					19
5	10	1		1			2	4					4	6					6	15					15
3	7	5		1			6	10					10	14					14	22					22
7	3	5					5	12				1	13	11					11	13					13
4	2	6		1			7	5	1				6	10					10	12		1			13
106	102	79	1	8	0	0	88	187	2	0	0	1	190	248	1	0	0	3	252	430	3	3	0	3	439
45	35	17	1	2	0	0	20	48	1	0	0	0	49	102	1	0	0	0	103	144	2	1	0	1	148
44	33	24	0	2	0	0	26	65	1	0	0	0	66	96	1	0	0	0	97	135	1	1	0	1	138
49	32	24	0	2	0	0	26	72	0	0	0	0	72	95	1	0	0	0	96	140	1	2	0	2	145
51	26	25	0	3	0	0	28	74	0	0	0	0	74	91	1	0	0	0	92	149	1	2	0	2	154
45	36	27	0	2	0	0	29	72	0	0	0	0	72	88	1	0	0	1	90	159	1	2	0	3	165
41	34	24	0	1	0	0	25	67	0	0	0	0	67	90	1	0	0	2	93	168	2	1	0	3	174
36	29	26	0	2	0	0	28	61	0	0	0	0	61	80	0	0	0	3	83	173	1	1	0	2	177
33	28	26	0	3	0	0	29	64	0	0	0	0	64	73	0	0	0	3	76	180	1	1	0	2	184
29	35	34	0	3	0	0	37	73	0	0	0	0	73	72	0	0	0	3	75	176	1	0	0	1	178
26	43	30	0	3	0	0	33	69	0	0	0	0	69	63	0	0	0	3	66	159	1	0	0	1	161
25	39	32	0	4	0	0	36	70	0	0	0	0	70	66	0	0	0	2	68	151	1	0	0	0	152
28	37	35	0	4	0	0	39	77	0	0	0	1	78	64	0	0	0	1	65	133	0	0	0	0	133
25	38	36	0	4	0	0	40	78	1	0	0	1	80	66	0	0	0	0	66	113	0	1	0	0	114

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

CASCADES ACCESS			DARNLEY LODGE LANE LEFT TURN TO A2 LONDON BOUND						DARNLEY LODGE LANE STRAIGHT AHEAD TO BREWERS LANE EAST						DARNLEY LODGE LANE RIGHT TURN TO HALFPENCE LANE SOUTH						DARNLEY LODGE LANE U TURNS					
IN	OUT																									
PEDS	PEDS		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	0	0700-0710	3					3	4		1			5	4			1		5	0					
0	1	0710-0720	2					2	13					13	2					2	0					
0	0	0720-0730	3					3	12					12	6					6	0					
0	0	0730-0740	1					1	10					10	13		1			14	0					
0	0	0740-0750	5					5	16					16	7					7	0					
2	0	0750-0800	5					5	14					14	3					3	0					
0	0	0800-0810	7					7	13					13	11	1				12	0					
0	1	0810-0820	6	1				7	23					23	6	1				7	0					
2	1	0820-0830	6					6	20					20	11					11	0					
1	2	0830-0840	2					2	11					11	14					14	0					
0	2	0840-0850	4					4	11					11	10				1	11	0					
0	0	0850-0900	9					9	15					15	2					2	0					
0	2	0900-0910	9					9	8	1				9	6					6	0					
0	0	0910-0920	1					1	7					7	5					5	0					
0	2	0920-0930	4					4	5					5	0					0	0					
0	2	0930-0940	1					1	7					7	0				1	1	0					
1	0	0940-0950	4					4	3					3	5					5	0					
0	0	0950-1000	3					3	8					8	4					4	0					
6	13	0700-1000	75	1	0	0	0	76	200	1	1	0	0	202	109	2	1	1	2	115	0	0	0	0	0	
2	1	0700-0800	19	0	0	0	0	19	69	0	1	0	0	70	35	0	1	1	0	37	0	0	0	0	0	
2	1	0710-0810	23	0	0	0	0	23	78	0	0	0	0	78	42	1	1	0	0	44	0	0	0	0	0	
2	1	0720-0820	27	1	0	0	0	28	88	0	0	0	0	88	46	2	1	0	0	49	0	0	0	0	0	
4	2	0730-0830	30	1	0	0	0	31	96	0	0	0	0	96	51	2	1	0	0	54	0	0	0	0	0	
5	4	0740-0840	31	1	0	0	0	32	97	0	0	0	0	97	52	2	0	0	0	54	0	0	0	0	0	
5	6	0750-0850	30	1	0	0	0	31	92	0	0	0	0	92	55	2	0	0	1	58	0	0	0	0	0	
3	6	0800-0900	34	1	0	0	0	35	93	0	0	0	0	93	54	2	0	0	1	57	0	0	0	0	0	
3	8	0810-0910	36	1	0	0	0	37	88	1	0	0	0	89	49	1	0	0	1	51	0	0	0	0	0	
3	7	0820-0920	31	0	0	0	0	31	72	1	0	0	0	73	48	0	0	0	1	49	0	0	0	0	0	
1	8	0830-0930	29	0	0	0	0	29	57	1	0	0	0	58	37	0	0	0	1	38	0	0	0	0	0	
0	8	0840-0940	28	0	0	0	0	28	53	1	0	0	0	54	23	0	0	0	2	25	0	0	0	0	0	
1	6	0850-0950	28	0	0	0	0	28	45	1	0	0	0	46	18	0	0	0	1	19	0	0	0	0	0	
1	6	0900-1000	22	0	0	0	0	22	38	1	0	0	0	39	20	0	0	0	1	21	0	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

CASCADES ACCESS			DARNLEY LODGE LANE LEFT TURN TO A2 LONDON BOUND							DARNLEY LODGE LANE STRAIGHT AHEAD TO BREWERS LANE EAST							DARNLEY LODGE LANE RIGHT TURN TO HALFPENCE LANE SOUTH							DARNLEY LODGE LANE U TURNS					
IN	OUT																												
PEDS	PEDS		CAR	HGV	BUS	MCY	PCY	TOT		CAR	HGV	BUS	MCY	PCY	TOT		CAR	HGV	BUS	MCY	PCY	TOT		CAR	HGV	BUS	MCY	PCY	
0	0	1600-1610	5		1			6		13					13		2					2		0					
0	1	1610-1620	9					9		20			1		21		2					2		0					
2	0	1620-1630	5					5		9					9		4					4		0					
1	1	1630-1640	2					2		14					14		3					3		0					
3	1	1640-1650	3	1				4		3				1	4		4					4		0					
3	0	1650-1700	4					4		9					9		6					6		0					
2	0	1700-1710	2					2		12	1	1			14		5					5		0					
0	2	1710-1720	3					3		11					11		1					1		0					
4	0	1720-1730	3					3		4					4		6					6		0					
0	3	1730-1740	5					5		15					15		3					3		0					
4	2	1740-1750	2					2		10					10		7					7		0					
1	0	1750-1800	1					1		6				1	7		1					1		0					
3	6	1800-1810	2					2		3			1		4		1					1		0					
0	1	1810-1820	4					4		10					10		4					4		0					
0	2	1820-1830	1					1		9					9		0					0		0					
0	0	1830-1840	4	1				5		9					9		0					0		1					
1	4	1840-1850	2					2		10					10		3					3		0					
0	0	1850-1900	5					5		7					7		1					1		0					
24	23	1600-1900	62	2	1	0	0	65		174	1	1	2	2	180		53	0	0	0	0	53		1	0	0	0	0	
9	3	1600-1700	28	1	1	0	0	30		68	0	0	1	1	70		21	0	0	0	0	21		0	0	0	0	0	
11	3	1610-1710	25	1	0	0	0	26		67	1	1	1	1	71		24	0	0	0	0	24		0	0	0	0	0	
11	4	1620-1720	19	1	0	0	0	20		58	1	1	0	1	61		23	0	0	0	0	23		0	0	0	0	0	
13	4	1630-1730	17	1	0	0	0	18		53	1	1	0	1	56		25	0	0	0	0	25		0	0	0	0	0	
12	6	1640-1740	20	1	0	0	0	21		54	1	1	0	1	57		25	0	0	0	0	25		0	0	0	0	0	
13	7	1650-1750	19	0	0	0	0	19		61	1	1	0	0	63		28	0	0	0	0	28		0	0	0	0	0	
11	7	1700-1800	16	0	0	0	0	16		58	1	1	0	1	61		23	0	0	0	0	23		0	0	0	0	0	
12	13	1710-1810	16	0	0	0	0	16		49	0	0	1	1	51		19	0	0	0	0	19		0	0	0	0	0	
12	12	1720-1820	17	0	0	0	0	17		48	0	0	1	1	50		22	0	0	0	0	22		0	0	0	0	0	
8	14	1730-1830	15	0	0	0	0	15		53	0	0	1	1	55		16	0	0	0	0	16		0	0	0	0	0	
8	11	1740-1840	14	1	0	0	0	15		47	0	0	1	1	49		13	0	0	0	0	13		1	0	0	0	0	
5	13	1750-1850	14	1	0	0	0	15		47	0	0	1	1	49		9	0	0	0	0	9		1	0	0	0	0	
4	13	1800-1900	18	1	0	0	0	19		48	0	0	1	0	49		9	0	0	0	0	9		1	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		A2 EXIT SLIP ROAD LEFT TURN TO BREWERS LANE EAST						A2 EXIT SLIP ROAD STRAIGHT AHEAD TO HALFPENCE LANE SOUTH						A2 EXIT SLIP ROAD RIGHT TURN TO DARNLEY LODGE LANE WEST						A2 EXIT SLIP ROAD U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	0700-0710	18	1				19	46	2				48	11					11	0					
0	0710-0720	11					11	60			1		61	8			1		9	0					
0	0720-0730	8	1				9	92					92	11			1		12	0					
0	0730-0740	13					13	91					91	13					13	0					
0	0740-0750	16	2				18	70					70	14	1		1		16	0					
0	0750-0800	11					11	47					47	11	1				12	0					
0	0800-0810	21					21	49					49	21	1				22	0					
0	0810-0820	12	2				14	74	1				75	13					13	0					
0	0820-0830	19	1				20	57					57	11					11	0					
0	0830-0840	10	2				12	50					50	13					13	0					
0	0840-0850	18	2				20	31	1				32	18					18	0					
0	0850-0900	16	1				17	35	1				36	12	1				13	0					
0	0900-0910	9	1				10	30	2		2		34	8					8	0					
0	0910-0920	8	1				9	17					17	9					9	0					
0	0920-0930	10	2				12	17					17	6					6	0					
0	0930-0940	14					14	12	1				13	5					5	0					
0	0940-0950	14		2			16	23	1				24	4					4	0					
0	0950-1000	7					7	19					19	10					10	0					
0	0700-1000	235	16	2	0	0	253	820	9	0	3	0	832	198	4	0	3	0	205	0	0	0	0	0	
0	0700-0800	77	4	0	0	0	81	406	2	0	1	0	409	68	2	0	3	0	73	0	0	0	0	0	
0	0710-0810	80	3	0	0	0	83	409	0	0	1	0	410	78	3	0	3	0	84	0	0	0	0	0	
0	0720-0820	81	5	0	0	0	86	423	1	0	0	0	424	83	3	0	2	0	88	0	0	0	0	0	
0	0730-0830	92	5	0	0	0	97	388	1	0	0	0	389	83	3	0	1	0	87	0	0	0	0	0	
0	0740-0840	89	7	0	0	0	96	347	1	0	0	0	348	83	3	0	1	0	87	0	0	0	0	0	
0	0750-0850	91	7	0	0	0	98	308	2	0	0	0	310	87	2	0	0	0	89	0	0	0	0	0	
0	0800-0900	96	8	0	0	0	104	296	3	0	0	0	299	88	2	0	0	0	90	0	0	0	0	0	
0	0810-0910	84	9	0	0	0	93	277	5	0	2	0	284	75	1	0	0	0	76	0	0	0	0	0	
0	0820-0920	80	8	0	0	0	88	220	4	0	2	0	226	71	1	0	0	0	72	0	0	0	0	0	
0	0830-0930	71	9	0	0	0	80	180	4	0	2	0	186	66	1	0	0	0	67	0	0	0	0	0	
0	0840-0940	75	7	0	0	0	82	142	5	0	2	0	149	58	1	0	0	0	59	0	0	0	0	0	
0	0850-0950	71	5	2	0	0	78	134	5	0	2	0	141	44	1	0	0	0	45	0	0	0	0	0	
0	0900-1000	62	4	2	0	0	68	118	4	0	2	0	124	42	0	0	0	0	42	0	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		A2 EXIT SLIP ROAD LEFT TURN TO BREWERS LANE EAST						A2 EXIT SLIP ROAD STRAIGHT AHEAD TO HALFPENCE LANE SOUTH						A2 EXIT SLIP ROAD RIGHT TURN TO DARNLEY LODGE LANE WEST						A2 EXIT SLIP ROAD U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	1600-1610	5	2				7	10					10	19					19	0					
0	1610-1620	14					14	14					14	12					12	0					
0	1620-1630	10					10	15					15	16			1		17	0					
0	1630-1640	13					13	14					14	16					16	0					
0	1640-1650	12					12	15					15	17					17	0					
0	1650-1700	7			1		8	17					17	16					16	0					
0	1700-1710	13	1				14	28	1				29	19					19	0					
0	1710-1720	11					11	15					15	11					11	0					
0	1720-1730	12					12	14					14	26					26	0					
0	1730-1740	11					11	12					12	29	1				30	0					
0	1740-1750	8					8	20					20	20					20	0					
0	1750-1800	11	1				12	11					11	28					28	0					
0	1800-1810	13					13	8					8	13					13	0					
0	1810-1820	6					6	19			1		20	20					20	0					
0	1820-1830	8					8	8					8	12					12	0					
1	1830-1840	10					10	5					5	4					4	0					
0	1840-1850	7					7	10					10	1					1	0					
0	1850-1900	6					6	5					5	5					5	0					
1	1600-1900	177	4	0	1	0	182	240	1	0	1	0	242	284	1	0	1	0	286	0	0	0	0	0	
0	1600-1700	61	2	0	1	0	64	85	0	0	0	0	85	96	0	0	1	0	97	0	0	0	0	0	
0	1610-1710	69	1	0	1	0	71	103	1	0	0	0	104	96	0	0	1	0	97	0	0	0	0	0	
0	1620-1720	66	1	0	1	0	68	104	1	0	0	0	105	95	0	0	1	0	96	0	0	0	0	0	
0	1630-1730	68	1	0	1	0	70	103	1	0	0	0	104	105	0	0	0	0	105	0	0	0	0	0	
0	1640-1740	66	1	0	1	0	68	101	1	0	0	0	102	118	1	0	0	0	119	0	0	0	0	0	
0	1650-1750	62	1	0	1	0	64	106	1	0	0	0	107	121	1	0	0	0	122	0	0	0	0	0	
0	1700-1800	66	2	0	0	0	68	100	1	0	0	0	101	133	1	0	0	0	134	0	0	0	0	0	
0	1710-1810	66	1	0	0	0	67	80	0	0	0	0	80	127	1	0	0	0	128	0	0	0	0	0	
0	1720-1820	61	1	0	0	0	62	84	0	0	1	0	85	136	1	0	0	0	137	0	0	0	0	0	
0	1730-1830	57	1	0	0	0	58	78	0	0	1	0	79	122	1	0	0	0	123	0	0	0	0	0	
1	1740-1840	56	1	0	0	0	57	71	0	0	1	0	72	97	0	0	0	0	97	0	0	0	0	0	
1	1750-1850	55	1	0	0	0	56	61	0	0	1	0	62	78	0	0	0	0	78	0	0	0	0	0	
1	1800-1900	50	0	0	0	0	50	55	0	0	1	0	56	55	0	0	0	0	55	0	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		BREWERS LANE EAST LEFT TURN TO HALFPENCE LANE SOUTH						BREWERS LANE EAST STRAIGHT AHEAD TO DARNLEY LODGE LANE WEST						BREWERS LANE EAST RIGHT TURN TO A2 LONDON BOUND						BREWERS LANE EAST U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	0700-0710	7					7	2					2	2	1				3	0					
0	0710-0720	6					6	2				2	4	3			1		4	0					
0	0720-0730	13	2				15	0					0	4			1		5	0					
0	0730-0740	15					15	4					4	8	1				9	0					
0	0740-0750	15	2				17	1					1	8					8	0		1			
0	0750-0800	29			1		30	3					3	14	2	1			17	0					
0	0800-0810	9	1				10	5					5	18					18	0					
0	0810-0820	17					17	5					5	18					18	0					
0	0820-0830	17					17	7	1				8	16					16	0					
0	0830-0840	12	1				13	4					4	10			1		11	0					
0	0840-0850	23				1	24	6					6	16					16	0					
0	0850-0900	13					13	6					6	7					7	1					
0	0900-0910	11					11	8					8	14					14	1					
0	0910-0920	9	1				10	3					3	18			1		19	1					
0	0920-0930	8					8	6					6	14	1				15	0					
0	0930-0940	9					9	4					4	9			1		10	0					
0	0940-0950	8					8	1					1	12	1				13	0					
0	0950-1000	7	1	1			9	3					3	12	1				13	0					
0	0700-1000	228	8	1	1	1	239	70	1	0	0	2	73	203	7	4	2	0	216	3	0	1	0	0	
0	0700-0800	85	4	0	1	0	90	12	0	0	0	2	14	39	4	1	2	0	46	0	0	1	0	0	
0	0710-0810	87	5	0	1	0	93	15	0	0	0	2	17	55	3	1	2	0	61	0	0	1	0	0	
0	0720-0820	98	5	0	1	0	104	18	0	0	0	0	18	70	3	1	1	0	75	0	0	1	0	0	
0	0730-0830	102	3	0	1	0	106	25	1	0	0	0	26	82	3	1	0	0	86	0	0	1	0	0	
0	0740-0840	99	4	0	1	0	104	25	1	0	0	0	26	84	2	2	0	0	88	0	0	1	0	0	
0	0750-0850	107	2	0	1	1	111	30	1	0	0	0	31	92	2	2	0	0	96	0	0	0	0	0	
0	0800-0900	91	2	0	0	1	94	33	1	0	0	0	34	85	0	1	0	0	86	1	0	0	0	0	
0	0810-0910	93	1	0	0	1	95	36	1	0	0	0	37	81	0	1	0	0	82	2	0	0	0	0	
0	0820-0920	85	2	0	0	1	88	34	1	0	0	0	35	81	0	2	0	0	83	3	0	0	0	0	
0	0830-0930	76	2	0	0	1	79	33	0	0	0	0	33	79	1	2	0	0	82	3	0	0	0	0	
0	0840-0940	73	1	0	0	1	75	33	0	0	0	0	33	78	1	2	0	0	81	3	0	0	0	0	
0	0850-0950	58	1	0	0	0	59	28	0	0	0	0	28	74	2	2	0	0	78	3	0	0	0	0	
0	0900-1000	52	2	1	0	0	55	25	0	0	0	0	25	79	3	2	0	0	84	2	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		BREWERS LANE EAST LEFT TURN TO HALFPENCE LANE SOUTH						BREWERS LANE EAST STRAIGHT AHEAD TO DARNLEY LODGE LANE WEST						BREWERS LANE EAST RIGHT TURN TO A2 LONDON BOUND						BREWERS LANE EAST U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0	1600-1610	8					8	3					3	12					12	0					0
0	1610-1620	11		2			13	6					6	6					6	1					1
0	1620-1630	12					12	5					5	18					18	0					0
0	1630-1640	17				2	19	6					6	19	1		1		21	0					0
0	1640-1650	9		2	1		12	4					4	21	1		2		24	0					0
0	1650-1700	5		1		1	7	6					6	9					9	0					0
0	1700-1710	6				1	7	2					2	10					10	0					0
0	1710-1720	5					5	3			1		4	3					3	0					0
0	1720-1730	15			1		16	6					6	21					21	0					0
0	1730-1740	11					11	7					7	16			1		17	1					1
0	1740-1750	7					7	2	1				3	13	1				14	0					0
0	1750-1800	11					11	5					5	20					20	0					0
0	1800-1810	7			1		8	5					5	11			1	1	13	0					0
0	1810-1820	6			1		7	2					2	8			1		9	0					0
0	1820-1830	4			2		6	6					6	4	1				5	0					0
0	1830-1840	4					4	3					3	12	1				13	0					0
0	1840-1850	5					5	3					3	2					2	0					0
0	1850-1900	3					3	6					6	6	1				7	0					0
0	1600-1900	146	0	5	6	4	161	80	1	0	1	0	82	211	6	5	2	0	224	2	0	1	0	0	0
0	1600-1700	62	0	5	1	3	71	30	0	0	0	0	30	85	2	3	0	0	90	1	0	1	0	0	0
0	1610-1710	60	0	5	1	4	70	29	0	0	0	0	29	83	2	3	0	0	88	1	0	0	0	0	0
0	1620-1720	54	0	3	1	4	62	26	0	0	1	0	27	80	2	3	0	0	85	0	0	0	0	0	0
0	1630-1730	57	0	3	2	4	66	27	0	0	1	0	28	83	2	3	0	0	88	0	0	0	0	0	0
0	1640-1740	51	0	3	2	2	58	28	0	0	1	0	29	80	1	3	0	0	84	1	0	0	0	0	0
0	1650-1750	49	0	1	1	2	53	26	1	0	1	0	28	72	1	1	0	0	74	1	0	0	0	0	0
0	1700-1800	55	0	0	1	1	57	25	1	0	1	0	27	83	1	1	0	0	85	1	0	0	0	0	0
0	1710-1810	56	0	0	2	0	58	28	1	0	1	0	30	84	1	2	1	0	88	1	0	0	0	0	0
0	1720-1820	57	0	0	3	0	60	27	1	0	0	0	28	89	1	2	2	0	94	1	0	0	0	0	0
0	1730-1830	46	0	0	4	0	50	27	1	0	0	0	28	72	2	2	2	0	78	1	0	0	0	0	0
0	1740-1840	39	0	0	4	0	43	23	1	0	0	0	24	68	3	1	2	0	74	0	0	0	0	0	0
0	1750-1850	37	0	0	4	0	41	24	0	0	0	0	24	57	2	1	2	0	62	0	0	0	0	0	0
0	1800-1900	29	0	0	4	0	33	25	0	0	0	0	25	43	3	1	2	0	49	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		HALFPENCE LANE SOUTH LEFT TURN TO DARNLEY LODGE LANE WEST						HALFPENCE LANE SOUTH STRAIGHT AHEAD TO A2 LONDON BOUND						HALFPENCE LANE SOUTH RIGHT TURN TO BREWERS LANE EAST						HALFPENCE LANE SOUTH U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	0700-0710	1					1	0					0	8					8	0					
0	0710-0720	0					0	0					0	9				1	10	0					
0	0720-0730	0					0	3	1				4	7					7	0					
0	0730-0740	3					3	1					1	9		1			10	0					
1	0740-0750	3					3	4			1		5	9		2			11	0					
0	0750-0800	4	1				5	3					3	22					22	0					
0	0800-0810	3				1	4	2					2	18					18	0					
0	0810-0820	2					2	4					4	18					18	0					
0	0820-0830	4					4	3	1				4	31		1		2	34	0					
0	0830-0840	5			1		6	2					2	19					19	0					
0	0840-0850	3					3	4	1		1		6	15					15	0					
1	0850-0900	14					14	8		1			9	21		1	1		23	0					
1	0900-0910	7					7	9					9	23	1				24	0					
1	0910-0920	6					6	3					3	19	1				20	0					
0	0920-0930	5					5	4	1				5	9	1	1			11	0					
0	0930-0940	2					2	4					4	13		1			14	0					
0	0940-0950	3					3	5	1				6	6					6	0					
0	0950-1000	1	1			1	3	2					2	9	1				10	0					
4	0700-1000	66	2	0	1	2	71	61	5	1	2	0	69	265	4	7	1	3	280	0	0	0	0	0	
1	0700-0800	11	1	0	0	0	12	11	1	0	1	0	13	64	0	3	0	1	68	0	0	0	0	0	
1	0710-0810	13	1	0	0	1	15	13	1	0	1	0	15	74	0	3	0	1	78	0	0	0	0	0	
1	0720-0820	15	1	0	0	1	17	17	1	0	1	0	19	83	0	3	0	0	86	0	0	0	0	0	
1	0730-0830	19	1	0	0	1	21	17	1	0	1	0	19	107	0	4	0	2	113	0	0	0	0	0	
1	0740-0840	21	1	0	1	1	24	18	1	0	1	0	20	117	0	3	0	2	122	0	0	0	0	0	
0	0750-0850	21	1	0	1	1	24	18	2	0	1	0	21	123	0	1	0	2	126	0	0	0	0	0	
1	0800-0900	31	0	0	1	1	33	23	2	1	1	0	27	122	0	2	1	2	127	0	0	0	0	0	
2	0810-0910	35	0	0	1	0	36	30	2	1	1	0	34	127	1	2	1	2	133	0	0	0	0	0	
3	0820-0920	39	0	0	1	0	40	29	2	1	1	0	33	128	2	2	1	2	135	0	0	0	0	0	
3	0830-0930	40	0	0	1	0	41	30	2	1	1	0	34	106	3	2	1	0	112	0	0	0	0	0	
3	0840-0940	37	0	0	0	0	37	32	2	1	1	0	36	100	3	3	1	0	107	0	0	0	0	0	
3	0850-0950	37	0	0	0	0	37	33	2	1	0	0	36	91	3	3	1	0	98	0	0	0	0	0	
2	0900-1000	24	1	0	0	1	26	27	2	0	0	0	29	79	4	2	0	0	85	0	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J4 - DARNLEY LODGE LANE / HALFPENCE LANE / BREWERS LANE / A2 OFF SLIP ROAD ROUNDABOUT JUNCTION

		HALFPENCE LANE SOUTH LEFT TURN TO DARNLEY LODGE LANE WEST						HALFPENCE LANE SOUTH STRAIGHT AHEAD TO A2 LONDON BOUND						HALFPENCE LANE SOUTH RIGHT TURN TO BREWERS LANE EAST						HALFPENCE LANE SOUTH U TURNS					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
1	1600-1610	6					6	4					4	36	2				38	0					
1	1610-1620	3					3	2					2	33					33	0					
0	1620-1630	3					3	9					9	31					31	0					
0	1630-1640	1					1	2					2	28					28	0					
0	1640-1650	11				1	12	6					6	35		1	3		39	0					
0	1650-1700	7					7	3					3	32					32	0					
0	1700-1710	0					0	2					2	22					22	0					
0	1710-1720	11				1	12	5					5	45				2	47	0					
0	1720-1730	10					10	2					2	43	1				44	0					
1	1730-1740	11					11	1					1	27			1		28	0					
0	1740-1750	12				1	13	1					1	35					35	0					
0	1750-1800	10					10	6					6	42					42	0					
0	1800-1810	8					8	5					5	36					36	0					
0	1810-1820	6					6	4					4	23	1		1	1	26	0					
0	1820-1830	3					3	3					3	24			4		28	0					
0	1830-1840	6					6	2					2	31			1		32	0					
0	1840-1850	4					4	5					5	20					20	0					
0	1850-1900	3					3	1					1	8					8	0					
3	1600-1900	115	0	0	0	3	118	63	0	0	0	0	63	551	4	1	10	3	569	0	0	0	0	0	
2	1600-1700	31	0	0	0	1	32	26	0	0	0	0	26	195	2	1	3	0	201	0	0	0	0	0	
1	1610-1710	25	0	0	0	1	26	24	0	0	0	0	24	181	0	1	3	0	185	0	0	0	0	0	
0	1620-1720	33	0	0	0	2	35	27	0	0	0	0	27	193	0	1	3	2	199	0	0	0	0	0	
0	1630-1730	40	0	0	0	2	42	20	0	0	0	0	20	205	1	1	3	2	212	0	0	0	0	0	
1	1640-1740	50	0	0	0	2	52	19	0	0	0	0	19	204	1	1	4	2	212	0	0	0	0	0	
1	1650-1750	51	0	0	0	2	53	14	0	0	0	0	14	204	1	0	1	2	208	0	0	0	0	0	
1	1700-1800	54	0	0	0	2	56	17	0	0	0	0	17	214	1	0	1	2	218	0	0	0	0	0	
1	1710-1810	62	0	0	0	2	64	20	0	0	0	0	20	228	1	0	1	2	232	0	0	0	0	0	
1	1720-1820	57	0	0	0	1	58	19	0	0	0	0	19	206	2	0	2	1	211	0	0	0	0	0	
1	1730-1830	50	0	0	0	1	51	20	0	0	0	0	20	187	1	0	6	1	195	0	0	0	0	0	
0	1740-1840	45	0	0	0	1	46	21	0	0	0	0	21	191	1	0	6	1	199	0	0	0	0	0	
0	1750-1850	37	0	0	0	0	37	25	0	0	0	0	25	176	1	0	6	1	184	0	0	0	0	0	
0	1800-1900	30	0	0	0	0	30	20	0	0	0	0	20	142	1	0	6	1	150	0	0	0	0	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J5 - BREWERS LANE / A2 ENTRY / EXIT SLIP PRIORITY JUNCTION

		A2 ON / OFF SLIP ROAD OUT LEFT TO BREWERS LANE SOUTH						A2 ON / OFF SLIP ROAD OUT RIGHT TO BREWERS LANE NORTH						A2 ON / OFF SLIP ROAD RIGHT TURN IN FROM BREWERS LANE SOUTH						A2 ON / OFF SLIP ROAD LEFT TURN BREWERS LANE NORTH					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0	0700-0710	5	1				6	2					2	12					12	4					
0	0710-0720	1					1	4					4	20					20	1					
0	0720-0730	8					8	7					7	21					21	5					
0	0730-0740	6					6	8	1				9	20					20	2					
0	0740-0750	6	2				8	7					7	30	1	1			32	8					
0	0750-0800	20	2				22	15	1				16	51					51	7					
0	0800-0810	6					6	10					10	21					21	3					
0	0810-0820	20					20	8					8	39	2				41	4					
0	0820-0830	17					17	21	1				22	50	1				51	3					
0	0830-0840	15					15	27	1				28	29	2				31	5					
0	0840-0850	17					17	11	1				12	27	2				29	11					
0	0850-0900	9					9	19					19	23					23	6					
0	0900-0910	4					4	23	1				24	35	3				38	5					
0	0910-0920	6					6	19					19	25	1				26	6					
0	0920-0930	6					6	15					15	17	3	1			21	3					
0	0930-0940	5					5	19					19	21		1			22	3					
0	0940-0950	7	3				10	14					14	16		1			17	6					
0	0950-1000	5	1				6	13	2				15	7				7	1				1		
0	0700-1000	163	9	0	0	0	172	242	8	0	0	0	250	464	15	4	0	0	483	83	0	0	1	0	
0	0700-0800	46	5	0	0	0	51	43	2	0	0	0	45	154	1	1	0	0	156	27	0	0	0	0	
0	0710-0810	47	4	0	0	0	51	51	2	0	0	0	53	163	1	1	0	0	165	26	0	0	0	0	
0	0720-0820	66	4	0	0	0	70	55	2	0	0	0	57	182	3	1	0	0	186	29	0	0	0	0	
0	0730-0830	75	4	0	0	0	79	69	3	0	0	0	72	211	4	1	0	0	216	27	0	0	0	0	
0	0740-0840	84	4	0	0	0	88	88	3	0	0	0	91	220	6	1	0	0	227	30	0	0	0	0	
0	0750-0850	95	2	0	0	0	97	92	4	0	0	0	96	217	7	0	0	0	224	33	0	0	0	0	
0	0800-0900	84	0	0	0	0	84	96	3	0	0	0	99	189	7	0	0	0	196	32	0	0	0	0	
0	0810-0910	82	0	0	0	0	82	109	4	0	0	0	113	203	10	0	0	0	213	34	0	0	0	0	
0	0820-0920	68	0	0	0	0	68	120	4	0	0	0	124	189	9	0	0	0	198	36	0	0	0	0	
0	0830-0930	57	0	0	0	0	57	114	3	0	0	0	117	156	11	1	0	0	168	36	0	0	0	0	
0	0840-0940	47	0	0	0	0	47	106	2	0	0	0	108	148	9	2	0	0	159	34	0	0	0	0	
0	0850-0950	37	3	0	0	0	40	109	1	0	0	0	110	137	7	3	0	0	147	29	0	0	0	0	
0	0900-1000	33	4	0	0	0	37	103	3	0	0	0	106	121	7	3	0	0	131	24	0	0	1	0	

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DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J5 - BREWERS LANE / A2 ENTRY / EXIT SLIP PRIORITY JUNCTION

		A2 ON / OFF SLIP ROAD OUT LEFT TO BREWERS LANE SOUTH						A2 ON / OFF SLIP ROAD OUT RIGHT TO BREWERS LANE NORTH						A2 ON / OFF SLIP ROAD RIGHT TURN IN FROM BREWERS LANE SOUTH						A2 ON / OFF SLIP ROAD LEFT TURN BREWERS LANE NORTH					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	
0	1600-1610	19					19	27					27	51	1				52	12					
0	1610-1620	1					1	13	1				14	43			1		44	19			1		
0	1620-1630	13					13	8	1				9	41					41	11					
0	1630-1640	15					15	12					12	49					49	7					
0	1640-1650	8	1		1		10	18					18	45			2		47	7				1	
0	1650-1700	7					7	14					14	39					39	8					
0	1700-1710	8					8	13					13	37					37	9					
0	1710-1720	13					13	19			1		20	46					46	10					
0	1720-1730	6					6	14					14	43					43	5					
0	1730-1740	11	1				12	13					13	41			1		42	8					
0	1740-1750	8	1				9	15					15	66	1				67	15					
0	1750-1800	8					8	2					2	39	1				40	7					
0	1800-1810	9					9	16					16	32					32	4					
0	1810-1820	4			2		6	6					6	31			1		32	4					
0	1820-1830	5	1		1		7	12			1		13	30					30	5					
0	1830-1840	4	1				5	10					10	46					46	5			1		
0	1840-1850	6	1				7	8					8	30					30	3					
0	1850-1900	4					4	6					6	15					15	3					
0	1600-1900	149	6	0	4	0	159	226	2	0	2	0	230	724	3	0	5	0	732	142	0	0	2	1	
0	1600-1700	63	1	0	1	0	65	92	2	0	0	0	94	268	1	0	3	0	272	64	0	0	1	1	
0	1610-1710	52	1	0	1	0	54	78	2	0	0	0	80	254	0	0	3	0	257	61	0	0	1	1	
0	1620-1720	64	1	0	1	0	66	84	1	0	1	0	86	257	0	0	2	0	259	52	0	0	0	1	
0	1630-1730	57	1	0	1	0	59	90	0	0	1	0	91	259	0	0	2	0	261	46	0	0	0	1	
0	1640-1740	53	2	0	1	0	56	91	0	0	1	0	92	251	0	0	3	0	254	47	0	0	0	1	
0	1650-1750	53	2	0	0	0	55	88	0	0	1	0	89	272	1	0	1	0	274	55	0	0	0	0	
0	1700-1800	54	2	0	0	0	56	76	0	0	1	0	77	272	2	0	1	0	275	54	0	0	0	0	
0	1710-1810	55	2	0	0	0	57	79	0	0	1	0	80	267	2	0	1	0	270	49	0	0	0	0	
0	1720-1820	46	2	0	2	0	50	66	0	0	0	0	66	252	2	0	2	0	256	43	0	0	0	0	
0	1730-1830	45	3	0	3	0	51	64	0	0	1	0	65	239	2	0	2	0	243	43	0	0	0	0	
0	1740-1840	38	3	0	3	0	44	61	0	0	1	0	62	244	2	0	1	0	247	40	0	0	1	0	
0	1750-1850	36	3	0	3	0	42	54	0	0	1	0	55	208	1	0	1	0	210	28	0	0	1	0	
0	1800-1900	32	3	0	3	0	38	58	0	0	1	0	59	184	0	0	1	0	185	24	0	0	1	0	

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J5 - BREWERS LANE / A2 ENTRY / EXIT SLIP PRIORITY JUNCTION

		BREWERS LANE FROM SOUTH STRAIGHT AHEAD TO BREWERS LANE NORTH						BREWERS LANE FROM NORTH STRAIGHT AHEAD TO BREWERS LANE SOUTH					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
4	0700-0710	12		1			13	13			1	1	15
1	0710-0720	10				1	11	11				2	13
5	0720-0730	10					10	15			1		16
2	0730-0740	12		1			13	19					19
8	0740-0750	12		1			13	22		1	1		24
7	0750-0800	9					9	30		1			31
3	0800-0810	11				1	12	12				1	13
4	0810-0820	3					3	23					23
3	0820-0830	14					14	16					16
5	0830-0840	14				2	16	26	1				27
11	0840-0850	12					12	17					17
6	0850-0900	16	1				17	16					16
5	0900-0910	14					14	28					28
6	0910-0920	9	1				10	30	2				32
3	0920-0930	8					8	19	1				20
3	0930-0940	11					11	18		1			19
6	0940-0950	15		1			16	16				1	17
2	0950-1000	10	1				11	11		1			12
84	0700-1000	202	3	4	0	4	213	342	4	4	3	5	358
27	0700-0800	65	0	3	0	1	69	110	0	2	3	3	118
26	0710-0810	64	0	2	0	2	68	109	0	2	2	3	116
29	0720-0820	57	0	2	0	1	60	121	0	2	2	1	126
27	0730-0830	61	0	2	0	1	64	122	0	2	1	1	126
30	0740-0840	63	0	1	0	3	67	129	1	2	1	1	134
33	0750-0850	63	0	0	0	3	66	124	1	1	0	1	127
32	0800-0900	70	1	0	0	3	74	110	1	0	0	1	112
34	0810-0910	73	1	0	0	2	76	126	1	0	0	0	127
36	0820-0920	79	2	0	0	2	83	133	3	0	0	0	136
36	0830-0930	73	2	0	0	2	77	136	4	0	0	0	140
34	0840-0940	70	2	0	0	0	72	128	3	1	0	0	132
29	0850-0950	73	2	1	0	0	76	127	3	1	0	1	132
25	0900-1000	67	2	1	0	0	70	122	3	2	0	1	128

K&M TRAFFIC SURVEYS

DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J5 - BREWERS LANE / A2 ENTRY / EXIT SLIP PRIORITY JUNCTION

		BREWERS LANE FROM SOUTH STRAIGHT AHEAD TO BREWERS LANE NORTH						BREWERS LANE FROM NORTH STRAIGHT AHEAD TO BREWERS LANE SOUTH					
TOT		CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
12	1600-1610	12	2	1			15	17		1			18
20	1610-1620	9					9	13		1			14
11	1620-1630	12					12	28					28
7	1630-1640	13					13	13					13
8	1640-1650	19		1			20	21					21
8	1650-1700	15			1		16	10		1		1	12
9	1700-1710	14					14	9					9
10	1710-1720	18				1	19	15			1		16
5	1720-1730	17					17	20					20
8	1730-1740	7					7	19					19
15	1740-1750	17				1	18	18	1				19
7	1750-1800	13					13	18					18
4	1800-1810	13			1		14	13		1	2		16
4	1810-1820	8				1	9	8					8
5	1820-1830	11			4	1	16	7					7
6	1830-1840	6					6	15					15
3	1840-1850	12				1	13	15					15
3	1850-1900	4					4	7					7
145	1600-1900	220	2	2	6	5	235	266	1	4	3	1	275
66	1600-1700	80	2	2	1	0	85	102	0	3	0	1	106
63	1610-1710	82	0	1	1	0	84	94	0	2	0	1	97
53	1620-1720	91	0	1	1	1	94	96	0	1	1	1	99
47	1630-1730	96	0	1	1	1	99	88	0	1	1	1	91
48	1640-1740	90	0	1	1	1	93	94	0	1	1	1	97
55	1650-1750	88	0	0	1	2	91	91	1	1	1	1	95
54	1700-1800	86	0	0	0	2	88	99	1	0	1	0	101
49	1710-1810	85	0	0	1	2	88	103	1	1	3	0	108
43	1720-1820	75	0	0	1	2	78	96	1	1	2	0	100
43	1730-1830	69	0	0	5	3	77	83	1	1	2	0	87
41	1740-1840	68	0	0	5	3	76	79	1	1	2	0	83
29	1750-1850	63	0	0	5	3	71	76	0	1	2	0	79
25	1800-1900	54	0	0	5	3	62	65	0	1	2	0	68

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DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

QUEUE DATA

Longest queue with 5 min period	THOING LANE / A226	
	OUT FROM THONG LANE	RIGHT TURN IN
	INSIDE	INSIDE
0705	3	0
0710	0	0
0715	0	0
0720	0	1
0725	2	3
0730	1	1
0735	1	4
0740	3	1
0745	4	0
0750	4	3
0755	5	4
0800	1	1
0805	1	6
0810	0	4
0815	2	5
0820	6	1
0825	9	0
0830	2	2
0835	2	0
0840	3	0
0845	3	2
0850	4	0
0855	7	1
0900	3	0
0905	2	1
0910	1	1
0915	3	0
0920	3	1
0925	0	0
0930	0	0
0935	0	0
0940	0	0
0945	0	0
0950	0	0
0955	2	1
1000	0	0

Longest queue with 5 min period	A2 / DARNLEY LODGE LA / HALFPENCE LA / BREWERS LA R/BOUT			
	DARNLEY LODGE LANE	A2 EXIT SLIP ROAD	BREWERS LANE	HALFPENCE LANE
	INSIDE	INSIDE	INSIDE	INSIDE
0705	0	0	0	0
0710	0	0	3	0
0715	0	0	1	0
0720	0	0	0	0
0725	2	0	2	0
0730	0	0	0	0
0735	0	5	1	0
0740	0	0	0	0
0745	0	0	2	4
0750	0	0	1	0
0755	1	0	2	0
0800	3	0	0	0
0805	0	6	0	0
0810	0	0	0	0
0815	0	4	2	3
0820	0	0	0	0
0825	1	4	2	4
0830	0	7	0	0
0835	0	0	0	0
0840	0	8	0	0
0845	0	0	0	0
0850	0	0	0	0
0855	0	0	0	0
0900	0	0	0	0
0905	0	0	0	0
0910	0	0	0	0
0915	0	0	1	0
0920	2	0	0	0
0925	0	0	0	0
0930	0	0	0	0
0935	0	0	0	0
0940	0	0	0	0
0945	0	0	0	0
0950	1	0	0	0
0955	0	0	0	0
1000	0	0	0	0

Longest queue with 5 min period	A2 SLIP / BREWERS LA
	FROM A2 COASTBOUND
	INSIDE
0705	0
0710	0
0715	0
0720	0
0725	0
0730	0
0735	0
0740	0
0745	0
0750	0
0755	2
0800	2
0805	0
0810	0
0815	0
0820	0
0825	0
0830	0
0835	0
0840	3
0845	0
0850	2
0855	0
0900	2
0905	0
0910	0
0915	0
0920	4
0925	0
0930	0
0935	0
0940	0
0945	0
0950	0
0955	0
1000	0

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DATE : TUESDAY 18TH OCTOBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

QUEUE DATA

Longest queue with 5 min period	THOING LANE / A226	
	OUT FROM THONG LANE	RIGHT TURN IN
	INSIDE	INSIDE
1605	1	2
1610	0	0
1615	1	2
1620	5	1
1625	2	3
1630	0	0
1635	1	2
1640	1	0
1645	3	4
1650	5	1
1655	4	1
1700	0	0
1705	3	1
1710	1	5
1715	2	1
1720	0	0
1725	5	1
1730	3	4
1735	5	2
1740	4	1
1745	2	0
1750	3	4
1755	0	1
1800	0	0
1805	4	0
1810	7	0
1815	3	2
1820	4	1
1825	3	1
1830	0	0
1835	0	0
1840	0	0
1845	0	1
1850	0	0
1855	5	1
1900	0	0

Longest queue with 5 min period	A2 / DARNLEY LODGE LA / HALFENCE LA / BREWERS LA R/BOUT			
	DARNLEY LODGE LANE	A2 EXIT SLIP ROAD	BREWERS LANE	HALFENCE LANE
	INSIDE	INSIDE	INSIDE	INSIDE
1605	0	0	1	0
1610	0	0	0	0
1615	5	0	0	0
1620	0	0	0	0
1625	0	0	0	0
1630	0	0	2	0
1635	1	0	0	0
1640	4	0	0	0
1645	0	0	3	0
1650	0	0	0	0
1655	1	0	1	0
1700	0	0	0	0
1705	1	0	0	0
1710	0	0	0	0
1715	0	0	0	0
1720	0	0	0	0
1725	0	0	3	0
1730	0	0	0	0
1735	0	0	0	0
1740	0	0	0	0
1745	2	0	0	0
1750	0	0	2	0
1755	0	0	2	0
1800	0	0	0	0
1805	0	0	0	0
1810	0	0	0	0
1815	0	0	0	0
1820	0	0	0	0
1825	0	0	0	0
1830	0	0	1	0
1835	0	0	0	0
1840	0	0	0	0
1845	1	0	0	0
1850	0	0	2	0
1855	0	0	0	0
1900	0	0	0	0

Longest queue with 5 min period	A2 SLIP / BREWERS LA
	FROM A2 COASTBOUND
	INSIDE
1605	0
1610	0
1615	0
1620	4
1625	3
1630	0
1635	0
1640	0
1645	0
1650	0
1655	0
1700	0
1705	0
1710	2
1715	0
1720	4
1725	0
1730	0
1735	0
1740	0
1745	0
1750	0
1755	0
1800	0
1805	0
1810	0
1815	0
1820	0
1825	0
1830	0
1835	0
1840	0
1845	0
1850	0
1855	0
1900	0

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - VIGILANT WAY / THONG LANE JUNCTION

	VIGILANT WAY OUT LEFT TO THONG LANE NORTH / A226						THONG LANE OUT RIGHT TO THONG LANE SOUTH						THONG LANE RIGHT TURN IN FROM THONG LANE NORTH / A226						THONG LANE LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	2					2	5					5	2		1			3	3					3
0740-0750	9					9	8					8	3		1			4	8					8
0750-0800	5					5	11					11	3					3	11	1				12
0800-0810	3					3	5					5	3		1			4	7					7
0810-0820	2					2	3					3	3					3	4					4
0820-0830	2					2	5					5	6					6	6					6
0830-0840	2					2	11					11	1		1			2	11					11
0840-0850	7					7	10					10	6					6	7					7
0850-0900	1					1	13					13	2					2	5					5
0900-0910	10					10	4					4	4		1			5	7					7
0910-0920	4					4	3					3	1					1	4	1				5
0920-0930	2					2	5					5	3		1			4	2					2
0730-0930	49	0	0	0	0	49	83	0	0	0	0	83	37	0	6	0	0	43	75	2	0	0	0	77
0730-0830	23	0	0	0	0	23	37	0	0	0	0	37	20	0	3	0	0	23	39	1	0	0	0	40
0740-0840	23	0	0	0	0	23	43	0	0	0	0	43	19	0	3	0	0	22	47	1	0	0	0	48
0750-0850	21	0	0	0	0	21	45	0	0	0	0	45	22	0	2	0	0	24	46	1	0	0	0	47
0800-0900	17	0	0	0	0	17	47	0	0	0	0	47	21	0	2	0	0	23	40	0	0	0	0	40
0810-0910	24	0	0	0	0	24	46	0	0	0	0	46	22	0	2	0	0	24	40	0	0	0	0	40
0820-0920	26	0	0	0	0	26	46	0	0	0	0	46	20	0	2	0	0	22	40	1	0	0	0	41
0830-0930	26	0	0	0	0	26	46	0	0	0	0	46	17	0	3	0	0	20	36	1	0	0	0	37

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - VIGILANT WAY / THONG LANE JUNCTION

	VIGILANT WAY OUT LEFT TO THONG LANE NORTH / A226						THONG LANE OUT RIGHT TO THONG LANE SOUTH						THONG LANE RIGHT TURN IN FROM THONG LANE NORTH / A226						THONG LANE LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	6					6	11					11	4		2	1		7	9					9
1640-1650	6			1		7	5					5	4					4	9					9
1650-1700	4					4	2					2	6					6	9					9
1700-1710	10					10	5					5	8					8	12					12
1710-1720	7			2		9	3					3	7		1			8	7					7
1720-1730	3					3	5					5	4					4	8					8
1730-1740	9					9	3					3	5		1			6	7					7
1740-1750	1					1	3					3	7		1			8	9					9
1750-1800	7				1	8	2					2	5					5	8					8
1800-1810	6				1	7	3					3	9		1			10	9					9
1810-1820	5				1	6	7					7	6					6	6					6
1820-1830	4				1	5	2					2	3					3	4					4
1630-1830	68	0	0	3	4	75	51	0	0	0	0	51	68	0	6	1	0	75	97	0	0	0	0	97
1630-1730	36	0	0	3	0	39	31	0	0	0	0	31	33	0	3	1	0	37	54	0	0	0	0	54
1640-1740	39	0	0	3	0	42	23	0	0	0	0	23	34	0	2	0	0	36	52	0	0	0	0	52
1650-1750	34	0	0	2	0	36	21	0	0	0	0	21	37	0	3	0	0	40	52	0	0	0	0	52
1700-1800	37	0	0	2	1	40	21	0	0	0	0	21	36	0	3	0	0	39	51	0	0	0	0	51
1710-1810	33	0	0	2	2	37	19	0	0	0	0	19	37	0	4	0	0	41	48	0	0	0	0	48
1720-1820	31	0	0	0	3	34	23	0	0	0	0	23	36	0	3	0	0	39	47	0	0	0	0	47
1730-1830	32	0	0	0	4	36	20	0	0	0	0	20	35	0	3	0	0	38	43	0	0	0	0	43

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - VIGILANT WAY / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	14					14	5					5
0740-0750	10					10	6					6
0750-0800	12					12	6	1				7
0800-0810	8					8	5					5
0810-0820	10					10	17					17
0820-0830	11					11	10					10
0830-0840	18					18	13			1		14
0840-0850	15					15	15	1				16
0850-0900	10					10	16					16
0900-0910	9					9	10					10
0910-0920	4					4	5					5
0920-0930	10					10	4					4
0730-0930	131	0	0	0	0	131	112	2	0	1	0	115
0730-0830	65	0	0	0	0	65	49	1	0	0	0	50
0740-0840	69	0	0	0	0	69	57	1	0	1	0	59
0750-0850	74	0	0	0	0	74	66	2	0	1	0	69
0800-0900	72	0	0	0	0	72	76	1	0	1	0	78
0810-0910	73	0	0	0	0	73	81	1	0	1	0	83
0820-0920	67	0	0	0	0	67	69	1	0	1	0	71
0830-0930	66	0	0	0	0	66	63	1	0	1	0	65

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J1 - VIGILANT WAY / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	8					8	20				1	21
1640-1650	8					8	9					9
1650-1700	7					7	12					12
1700-1710	10					10	17					17
1710-1720	16					16	14					14
1720-1730	3					3	18					18
1730-1740	9			2		11	16					16
1740-1750	7				1	8	19					19
1750-1800	9					9	8					8
1800-1810	8					8	19					19
1810-1820	9					9	18					18
1820-1830	11					11	21					21
1630-1830	105	0	0	2	1	108	191	0	0	0	1	192
1630-1730	52	0	0	0	0	52	90	0	0	0	1	91
1640-1740	53	0	0	2	0	55	86	0	0	0	0	86
1650-1750	52	0	0	2	1	55	96	0	0	0	0	96
1700-1800	54	0	0	2	1	57	92	0	0	0	0	92
1710-1810	52	0	0	2	1	55	94	0	0	0	0	94
1720-1820	45	0	0	2	1	48	98	0	0	0	0	98
1730-1830	53	0	0	2	1	56	101	0	0	0	0	101

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J2 - WHINFELL WAY / THONG LANE JUNCTION

	WHINFELL WAY OUT LEFT TO THONG LANE NORTH / A226						WHINFELL WAY OUT RIGHT TO THONG LANE SOUTH						WHINFELL WAY RIGHT TURN IN FROM THONG LANE NORTH / A226						WHINFELL WAY LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	1					1	4					4	3					3	2					2
0740-0750	2					2	2					2	4					4	2					2
0750-0800	2					2	0					0	1					1	2					2
0800-0810	5					5	4					4	3					3	2	1				3
0810-0820	2					2	3					3	3					3	2					2
0820-0830	3					3	3					3	3					3	3					3
0830-0840	1					1	1					1	1					1	6					6
0840-0850	3					3	5					5	4	1				5	2					2
0850-0900	12					12	1					1	7	1				8	2					2
0900-0910	1					1	1					1	6					6	4					4
0910-0920	3					3	1					1	2					2	4					4
0920-0930	2					2	2					2	7					7	2					2
0730-0930	37	0	0	0	0	37	27	0	0	0	0	27	44	2	0	0	0	46	33	1	0	0	0	34
0730-0830	15	0	0	0	0	15	16	0	0	0	0	16	17	0	0	0	0	17	13	1	0	0	0	14
0740-0840	15	0	0	0	0	15	13	0	0	0	0	13	15	0	0	0	0	15	17	1	0	0	0	18
0750-0850	16	0	0	0	0	16	16	0	0	0	0	16	15	1	0	0	0	16	17	1	0	0	0	18
0800-0900	26	0	0	0	0	26	17	0	0	0	0	17	21	2	0	0	0	23	17	1	0	0	0	18
0810-0910	22	0	0	0	0	22	14	0	0	0	0	14	24	2	0	0	0	26	19	0	0	0	0	19
0820-0920	23	0	0	0	0	23	12	0	0	0	0	12	23	2	0	0	0	25	21	0	0	0	0	21
0830-0930	22	0	0	0	0	22	11	0	0	0	0	11	27	2	0	0	0	29	20	0	0	0	0	20

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J2 - WHINFELL WAY / THONG LANE JUNCTION

	WHINFELL WAY OUT LEFT TO THONG LANE NORTH / A226						WHINFELL WAY OUT RIGHT TO THONG LANE SOUTH						WHINFELL WAY RIGHT TURN IN FROM THONG LANE NORTH / A226						WHINFELL WAY LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	3					3	1					1	5					5	6					6
1640-1650	4					4	4					4	6				1	7	4					4
1650-1700	10					10	2					2	11					11	1					1
1700-1710	5					5	1					1	4				1	5	3					3
1710-1720	8					8	4					4	8					8	3					3
1720-1730	3					3	2					2	4					4	7					7
1730-1740	5					5	2					2	5					5	7			1		8
1740-1750	9					9	1				1	2	4					4	6					6
1750-1800	10					10	2					2	2					2	1					1
1800-1810	3					3	2					2	4					4	10					10
1810-1820	7					7	1					1	6					6	7					7
1820-1830	7					7	2					2	7					7	2					2
1630-1830	74	0	0	0	0	74	24	0	0	0	1	25	66	0	0	0	2	68	57	0	0	0	1	58
1630-1730	33	0	0	0	0	33	14	0	0	0	0	14	38	0	0	0	2	40	24	0	0	0	0	24
1640-1740	35	0	0	0	0	35	15	0	0	0	0	15	38	0	0	0	2	40	25	0	0	0	1	26
1650-1750	40	0	0	0	0	40	12	0	0	0	1	13	36	0	0	0	1	37	27	0	0	0	1	28
1700-1800	40	0	0	0	0	40	12	0	0	0	1	13	27	0	0	0	1	28	27	0	0	0	1	28
1710-1810	38	0	0	0	0	38	13	0	0	0	1	14	27	0	0	0	0	27	34	0	0	0	1	35
1720-1820	37	0	0	0	0	37	10	0	0	0	1	11	25	0	0	0	0	25	38	0	0	0	1	39
1730-1830	41	0	0	0	0	41	10	0	0	0	1	11	28	0	0	0	0	28	33	0	0	0	1	34

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J2 - WHINFELL WAY / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	11					11	4	1				5
0740-0750	11					11	17					17
0750-0800	13					13	8					8
0800-0810	6					6	10					10
0810-0820	9					9	18					18
0820-0830	15					15	13					13
0830-0840	15					15	14			1		15
0840-0850	14					14	25					25
0850-0900	11					11	20					20
0900-0910	10					10	20					20
0910-0920	3					3	7					7
0920-0930	9					9	9					9
0730-0930	127	0	0	0	0	127	165	1	0	1	0	167
0730-0830	65	0	0	0	0	65	70	1	0	0	0	71
0740-0840	69	0	0	0	0	69	80	0	0	1	0	81
0750-0850	72	0	0	0	0	72	88	0	0	1	0	89
0800-0900	70	0	0	0	0	70	100	0	0	1	0	101
0810-0910	74	0	0	0	0	74	110	0	0	1	0	111
0820-0920	68	0	0	0	0	68	99	0	0	1	0	100
0830-0930	62	0	0	0	0	62	95	0	0	1	0	96

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J2 - WHINFELL WAY / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	6		1	1		8	32				1	33
1640-1650	9					9	27			1		28
1650-1700	13					13	20					20
1700-1710	11	1				12	29					29
1710-1720	7					7	41					41
1720-1730	6					6	18					18
1730-1740	10			2		12	27					27
1740-1750	8					8	34				1	35
1750-1800	10					10	25	1			1	27
1800-1810	10					10	25				1	26
1810-1820	7					7	24					24
1820-1830	9					9	22				1	23
1630-1830	106	1	1	3	0	111	324	1	0	1	5	331
1630-1730	52	1	1	1	0	55	167	0	0	1	1	169
1640-1740	56	1	0	2	0	59	162	0	0	1	0	163
1650-1750	55	1	0	2	0	58	169	0	0	0	1	170
1700-1800	52	1	0	2	0	55	174	1	0	0	2	177
1710-1810	51	0	0	2	0	53	170	1	0	0	3	174
1720-1820	51	0	0	2	0	53	153	1	0	0	3	157
1730-1830	54	0	0	2	0	56	157	1	0	0	4	162

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - LEANDER DRIVE / THONG LANE JUNCTION

	LEANDER DRIVE OUT LEFT TO THONG LANE NORTH / A226						LEANDER DRIVE OUT RIGHT TO THONG LANE SOUTH						LEANDER DRIVE RIGHT TURN IN FROM THONG LANE NORTH / A226						LEANDER DRIVE LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	11	1				12	9		1			10	15					15	1					1
0740-0750	15					15	3					3	11					11	5					5
0750-0800	10					10	5		1			6	16					16	3					3
0800-0810	13					13	2					2	19	1	1			21	1					1
0810-0820	10	1				11	6					6	18					18	8					8
0820-0830	8					8	3		1			4	23					23	4					4
0830-0840	22					22	7					7	43					43	7					7
0840-0850	46					46	7					7	28					28	8	2				10
0850-0900	52					52	21	1				22	17					17	5					5
0900-0910	25	1				26	14		2			16	18					18	4					4
0910-0920	16					16	7					7	13					13	2					2
0920-0930	11					11	6					6	8	1				9	1					1
0730-0930	239	3	0	0	0	242	90	1	5	0	0	96	229	2	1	0	0	232	49	2	0	0	0	51
0730-0830	67	2	0	0	0	69	28	0	3	0	0	31	102	1	1	0	0	104	22	0	0	0	0	22
0740-0840	78	1	0	0	0	79	26	0	2	0	0	28	130	1	1	0	0	132	28	0	0	0	0	28
0750-0850	109	1	0	0	0	110	30	0	2	0	0	32	147	1	1	0	0	149	31	2	0	0	0	33
0800-0900	151	1	0	0	0	152	46	1	1	0	0	48	148	1	1	0	0	150	33	2	0	0	0	35
0810-0910	163	2	0	0	0	165	58	1	3	0	0	62	147	0	0	0	0	147	36	2	0	0	0	38
0820-0920	169	1	0	0	0	170	59	1	3	0	0	63	142	0	0	0	0	142	30	2	0	0	0	32
0830-0930	172	1	0	0	0	173	62	1	2	0	0	65	127	1	0	0	0	128	27	2	0	0	0	29

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - LEANDER DRIVE / THONG LANE JUNCTION

	LEANDER DRIVE OUT LEFT TO THONG LANE NORTH / A226						LEANDER DRIVE OUT RIGHT TO THONG LANE SOUTH						LEANDER DRIVE RIGHT TURN IN FROM THONG LANE NORTH / A226						LEANDER DRIVE LEFT TURN IN FROM THONG LANE SOUTH					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	20					20	11		1			12	28					28	7					7
1640-1650	21					21	5					5	18					18	7					7
1650-1700	27					27	10					10	22					22	7					7
1700-1710	16					16	4		1			5	13					13	11					11
1710-1720	21	1				22	4					4	18					18	7					7
1720-1730	12	1				13	7		1			8	18					18	5					5
1730-1740	27					27	3		1			4	13					13	4					4
1740-1750	23					23	7					7	24			1	2	27	6					6
1750-1800	26					26	10		1			11	9				1	10	5					5
1800-1810	25					25	9					9	15					15	12			1		13
1810-1820	25					25	6					6	22					22	3					3
1820-1830	21					21	8					8	11					11	6			1		7
1630-1830	264	2	0	0	0	266	84	0	5	0	0	89	211	0	0	1	3	215	80	0	0	0	2	82
1630-1730	117	2	0	0	0	119	41	0	3	0	0	44	117	0	0	0	0	117	44	0	0	0	0	44
1640-1740	124	2	0	0	0	126	33	0	3	0	0	36	102	0	0	0	0	102	41	0	0	0	0	41
1650-1750	126	2	0	0	0	128	35	0	3	0	0	38	108	0	0	1	2	111	40	0	0	0	0	40
1700-1800	125	2	0	0	0	127	35	0	4	0	0	39	95	0	0	1	3	99	38	0	0	0	0	38
1710-1810	134	2	0	0	0	136	40	0	3	0	0	43	97	0	0	1	3	101	39	0	0	0	1	40
1720-1820	138	1	0	0	0	139	42	0	3	0	0	45	101	0	0	1	3	105	35	0	0	0	1	36
1730-1830	147	0	0	0	0	147	43	0	2	0	0	45	94	0	0	1	3	98	36	0	0	0	2	38

NO QUEUES AT JUNCTION

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - LEANDER DRIVE / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
0730-0740	4					4	3					3
0740-0750	9	1				10	13					13
0750-0800	6					6	9					9
0800-0810	8					8	9					9
0810-0820	10					10	14					14
0820-0830	17					17	6					6
0830-0840	14					14	7			1		8
0840-0850	14					14	13					13
0850-0900	17					17	11					11
0900-0910	18					18	14					14
0910-0920	13					13	5					5
0920-0930	16					16	4					4
0730-0930	146	1	0	0	0	147	108	0	0	1	0	109
0730-0830	54	1	0	0	0	55	54	0	0	0	0	54
0740-0840	64	1	0	0	0	65	58	0	0	1	0	59
0750-0850	69	0	0	0	0	69	58	0	0	1	0	59
0800-0900	80	0	0	0	0	80	60	0	0	1	0	61
0810-0910	90	0	0	0	0	90	65	0	0	1	0	66
0820-0920	93	0	0	0	0	93	56	0	0	1	0	57
0830-0930	92	0	0	0	0	92	54	0	0	1	0	55

K&M TRAFFIC SURVEYS

DATE : THURSDAY 3RD NOVEMBER 2022

LOCATION : CASCADES SITE, GRAVESEND, KENT

J3 - LEANDER DRIVE / THONG LANE JUNCTION

	THONG LANE FROM NORTH / A226 STRAIGHT AHEAD TO THONG LANE SOUTH						THONG LANE FROM SOUTH STRAIGHT AHEAD TO THONG LANE NORTH / A226					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1630-1640	15					15	18					18
1640-1650	25					25	18			1		19
1650-1700	25					25	17					17
1700-1710	14	1				15	12					12
1710-1720	18					18	27					27
1720-1730	14					14	11					11
1730-1740	10					10	20			1		21
1740-1750	16					16	30					30
1750-1800	13					13	14					14
1800-1810	15					15	17					17
1810-1820	15					15	20					20
1820-1830	15					15	18					18
1630-1830	195	1	0	0	0	196	222	0	0	2	0	224
1630-1730	111	1	0	0	0	112	103	0	0	1	0	104
1640-1740	106	1	0	0	0	107	105	0	0	2	0	107
1650-1750	97	1	0	0	0	98	117	0	0	1	0	118
1700-1800	85	1	0	0	0	86	114	0	0	1	0	115
1710-1810	86	0	0	0	0	86	119	0	0	1	0	120
1720-1820	83	0	0	0	0	83	112	0	0	1	0	113
1730-1830	84	0	0	0	0	84	119	0	0	1	0	120

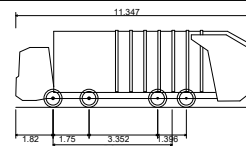
Appendix B

Swept path analysis

Gravesham Borough Council



Stantec UK Limited
ASHFORD
Unit 10, Connect 38, 1 Dover Place, Ashford TN23 1FB
Tel: +44 1233 527 250
www.stantec.com/uk



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 3.751m
Overall Body Height 0.304m
Min Body Ground Clearance 2.500m
Track Width 6.00s
Lock to lock time 11.330m
Wall to Wall Turning Radius

P01 FIRST ISSUE
Issued/Revision

CB GH 2022.11.22
By Appd YYYY.MM.DD

Client/Project:
GRAVESHAM BOROUGH COUNCIL

CASCADES LEISURE
CENTRE, GRAVESHAM

Project No.:
332410895

Title
REFUSE VEHICLE SWEEP
PATH

Revision: P01 Date: 2022.11.24 Drawing No. 332410895/100/001

