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TRANSPORT ASSESSMENT
Former Brickworks Site, Star Lane,
Great Wakering, Essex

Prepared for: Inner London Group
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1.0 Introduction

- 1.1 This report has been prepared by Glanville Consultants on behalf of Inner London Group. The Transport Assessment has been undertaken to accompany a planning application for the redevelopment of land to the east of B1017 Star Lane, Great Wakering, Essex. The development would deliver 116 residential dwellings, a new access / egress point, on-site parking, servicing and associated landscaping.
- 1.2 In order to define and agree the scope of the Transport Assessment and agree the key parameters used in the traffic assessments, extensive pre-application discussions have been held with Essex County Council (ECC), as local highway authority. Southend Borough Council (SBC) has also been consulted owing to Star Lane's proximity to the local authority boundary, whereby land to the west of B1017 Star Lane lies immediately on the boundary of land within the control of Southend Borough Council. A copy of the approved scoping document is included at Appendix A.
- 1.3 This report describes the existing conditions which prevail on site and the scale of the proposed development. The traffic generation of the proposal is considered and traffic distribution and assignment described. The ability of the local road network to accommodate traffic from the development is assessed and, where required, mitigation measures are considered. The future accessibility of the site by all modes of transport is assessed, together with the level of parking proposed and the intended servicing arrangements.
- 1.4 This Transport Assessment follows guidance contained in *Guidance on Transport Assessment (March 2007)* published by the Department for Transport and advice from Central Government in the form of *National Planning Policy Framework (NPPF)*.

2.0 Site Location, Description and Proposed Development

Site Location & Local Road Network

- 2.1 Great Wakering is located in the east of Essex, as shown on Figure 1. The village lies approximately three kilometres to the west of the east coast of England and to the north of Shoeburyness. Southend-on-Sea lies approximately six kilometres to the south-west of the village.
- 2.2 B1017 High Street is the main route through Great Wakering. To the west of the village, B1017 High Street joins Little Wakering Road and Southend Road. Little Wakering Road connects with Barrow Hall Road approximately 350 metres to the north, and then heads westbound towards Southend Airport and Rochford. To the west of the village, Southend Road links with B1017 Star Lane. Star Lane continues south before joining with Poynters Lane at a priority T-junction. Poynters Lane then continues west where it links with the A13 towards Southend-on-Sea.
- 2.3 The site is located in the southwest corner of Great Wakering and is bounded by a line of residential properties and B1017 High Street to the north and B1017 Star Lane to the west. Agricultural land bounds the southern perimeter of the site. Alexandra Road, along with small areas of grass and woodland are situated on the eastern boundary. All adjoining properties and land will remain unaffected by the proposals.

Site Description

- 2.4 The development site is approximately 3.28 hectares and was previously occupied by a brickworks factory. The factory ceased operations in 2005 and all associated buildings and plant have since been demolished or removed such that the site now largely comprises areas of hardstanding. Land to the east of the former brickworks factory comprises agricultural land along with areas of grass and woodland. A few small lakes are situated in the south east corner of the site. The existing site layout is shown on Figure 2.
- 2.5 Vehicular access to the former brickworks factory was achieved from B1017 Star Lane via a simple priority T-junction arrangement.
- 2.6 B1017 Star Lane comprises a single carriageway approximately six metres wide which is subject, for the most part, to a speed limit of 60mph. Approximately 140 metres south of its junction with Southend Road the speed limit along Star Lane reduces to 30mph.

Proposed Development

- 2.7 The existing site will be redeveloped for residential purposes and will comprise 116 residential units ranging from one bedroom apartments to four-bedroom family homes. 11 units (equivalent to 10% of the total development) will be allocated to affordable housing, with the remaining 105 units being privately owned.

- 2.8 A total of 257 parking spaces will be provided within the development inclusive of 29 unallocated visitors parking spaces. As detailed in ECC's parking standards document entitled '*Parking Standards – Design and Good Practice*', September 2009, 1 parking space should be provided for all properties containing 1 bedroom and 2 parking spaces should be provided for properties containing 2 or more bedrooms as well as 0.25 visitor spaces per unit. This is based on a minimum parking standard and is only applicable to developments containing trip origins (i.e. residential developments). The proposed parking allocation therefore accords with ECC's parking standards.
- 2.9 ECC's parking standards recommend that 1 secure and covered cycle space should be provided for each dwelling. However, no cycle parking space needs to be provided if a garage or secure area is located within the curtilage of the dwelling. The standards also state that visitor cycle parking should be provided at a rate of 1 secure and covered space per 8 dwellings. Consequently, 131 secure and covered cycle parking spaces will be provided across the development with some cycle parking spaces being provided for visitors. The visitor cycle parking spaces will be located throughout the site. This allocation accords with ECC's parking standards for cycles.
- 2.10 10 spaces will be provided for motorcycles.
- 2.11 The proposed site layout is shown on Figure 3.
- 2.12 Vehicular access to the development will be achieved from a new priority (give way) T-junction which will be located on B1017 Star Lane, approximately 100 metres south of the existing site access associated with the former brickworks factory. The existing access will be closed off and the footway and kerbing will be reinstated. The new access will comprise 10 metre radii on either side.
- 2.13 In accordance with TD 42/95 '*Geometric Design of Major / Minor Priority Junctions*', an assessment has been carried out to show the achievable visibility to the left and right from the proposed site access. Based on an existing speed limit of 60mph, which applies to Star Lane in the vicinity of the proposed site access, the visibility splay has been constructed assuming an X-distance of 4.5 metres and a Y-distance of 215 metres. This assessment reveals that, currently, a length of existing hedging will need to be removed from either side of the proposed site access to ensure that visibility splays are not compromised.
- 2.14 However, as part of the development proposals it is likely that the boundary between the 60mph and 30mph speed limits on Star Lane will be moved further south to coincide with the southern boundary of the site. Therefore, the proposed site access will be located within a 30mph zone. Accordingly, a further visibility assessment has been carried out based on an X-distance of 4.5 metres and a Y-distance of 90 metres, which reveals that a slightly shorter length of existing hedging will need to be removed from either side of the proposed site access. This proposal is most likely to be taken forward. The results of these assessments, along with the proposed preliminary junction layout on Star Lane, are shown on Figure 4.

- 2.15 The internal roads within the site have been designed in accordance with the specific requirements of ECC's Design Guide. The principal access road through the site has been designed as a Type 4 Minor Access Road with the exception of a short section of internal road between the first internal junction and the main site access on Star Lane, which has been designed with a carriageway width of 5.5 metres. The use of a Type 4 Minor Access Road for this development has been agreed with ECC as highway authority. All other internal roads within the site have been designed as Type 6 shared surfaces.
- 2.16 The internal layout meets the specific requirements of EEC's Design Guide insofar as 1.5 x 1.5 metre pedestrian / vehicle intervisibility splays can be achieved at egresses from properties and 2.0 x 33.0 metre visibility splays can be achieved at all internal junctions, which accords with guidance provided in Manual for Streets for vehicle speeds up to 25 mph.
- 2.17 Swept path analyses have been carried out for vehicles entering and exiting the proposed site along with the internal circulation. These analyses are shown on Figures 5 and 6 respectively and demonstrate that the proposed site access and internal roads are adequately sized to accommodate the anticipated vehicle manoeuvres.
- 2.18 Traffic calming is provided at all internal junctions in the form of raised tables.
- 2.19 A second vehicular access will be provided on the southern boundary of the site from Star Lane but use of this access will be restricted to emergency vehicles only. To prevent others from using this access, a lockable barrier will be installed but this will be specifically positioned to ensure that an emergency vehicle can wholly park off the carriageway. Figure 7 shows the swept path for an emergency vehicle entering and exiting this access.
- 2.20 An independent Stage 1 Road Safety Audit has been undertaken on the preliminary design proposals for the site access.
- 2.21 The audit did not reveal any significant or material highway safety concerns with either junction design. A Designer's Response has been prepared and where considered appropriate the recommendations contained within the safety audit have been incorporated on the drawings. A copy of the Stage 1 Road Safety Audit and accompanying Designer's Response is included in Appendix B.

3.0 Transport Planning Policy

3.1 The transport policy documents, which set the context for this development proposal, include:

National and Regional Highways Planning Policy

3.2 Highway planning policy documents relating to the proposed development at a national and regional level include the following:

- The Future of Transport White Paper, 2004 - *A Network for 2030*
- National Planning Policy Framework (NPPF), 2012
- Regional Spatial Strategy for the East of England (RSS), 2008 - *The East of England Plan*

The Future of Transport White Paper, 2004 - A Network for 2030

3.3 The Government set out its policy for the future of transport in The Future of Transport White Paper, 2004 - *A Network for 2030*. It states that a transport network is needed that can meet the challenges of a growing economy and the increasing demand for travel, but can also achieve their environmental objectives. This means coherent transport networks with:

- *the road network providing a more reliable and freer-flowing service for both personal travel and freight, with people able to make informed choices about how and when they travel;*
- *the rail network providing a fast, reliable and efficient services, particularly for interurban journeys and commuting into large urban areas;*
- *bus services that are reliable, flexible, convenient and tailored to local needs;*
- *making walking and cycling a real alternative for local trips; and*
- *ports and airports providing improved international and domestic links.*

3.4 The proposed development meets the criteria identified within this document in terms of being located close to public transport facilities such as the bus stops located on Star Lane and High Street. The site is also afforded good pedestrian access to local amenities and facilities within Great Wakering.

National Planning Policy Framework (NPPF), 2012

3.5 NPPF was published by Central Government in March 2012 and supersedes a number of planning policy documents such as Planning Policy Guidance 13 and Planning Policy Statement 3.

3.6 The NPPF sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive neighbourhood plans, which reflect the needs and priorities of their communities.

- 3.7 In terms of transport, NPPF states that developments should be located and designed where practical to:
- *accommodate the efficient delivery of goods and supplies;*
 - *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
 - *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;*
 - *incorporate facilities for charging plug-in and other ultra-low emission vehicles; and*
 - *consider the needs of people with disabilities by all modes of transport.*

- 3.8 The site is located near to public transport facilities such as local bus services, which connect with the local rail network and therefore provide residents with the opportunity to travel by modes other than the private car and thus reducing the need to travel by car.

Regional Spatial Strategy for the East of England (RSS), 2008 – The East of England Plan

- 3.9 RSS was published by the Government Office for the East of England in May 2008. The Regional Transport Strategy (RTS) in RSS sets the regional context for transport planning for the period up to 2021. The RTS for the East of England is set out in Section 7 of the RSS and provides a regional framework for the delivery of transport investment policy priorities to support the aims of the spatial strategy.

- 3.10 The overall vision of the RSS is translated into the RTS in the form of a number of objectives and policies. In particular, Policy T1 of the RTS, sets out the objectives of the RTS to provide a clear priority to increase passenger and freight movement by more sustainable modes, whilst reflecting on the functionality required of the region's transport networks. The objectives as set out in Policy T1 are described below:

- *to manage travel behaviour and the demand for transport to reduce the rate of road traffic growth and ensure the transport sector makes an appropriate contribution to reducing greenhouse gas emissions;*
- *to encourage the efficient use of existing transport infrastructure;*
- *to enable the provision of the infrastructure and transport services necessary to support existing communities and development proposed in the spatial strategy; and*
- *to improve access to jobs, services and leisure facilities.*

- 3.11 The proposed development is such that it has good pedestrian links to facilities provided within Great Wakering as well as the public transport network, therefore, encouraging the use of more sustainable modes and reducing the reliance on private vehicles. The proposed development therefore meets the criteria as set out in Policy T1 of the RTS. Whilst it is recognised that it is the Government's intention to revoke the RSS, a successful High Court challenge made by CALA Homes in November 2010 means that the RSS and therefore the RTA continue to form part of the development plan.

Local Highway Planning Policy

3.12 Highway Planning Policy documents relating to the proposed development at a local level include the following:

- Essex County Council Local Transport Plan - Essex Transport Strategy June 2011

Essex County Council Local Transport Plan - Essex Transport Strategy June 2011

3.13 The Local Transport Plan (LTP) identifies Essex County Council's vision for transport within the county as:

'Our vision is for a transport system that supports sustainable economic growth and helps deliver the best quality of life for the residents of Essex.'

3.14 In addition to the vision set out above, five broad outcomes have been developed and are set out below:

- *Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration;*
- *Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology;*
- *Improve safety on the transport network and enhance and promote a safe travelling environment;*
- *Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; and*
- *Provide sustainable access and travel choice for Essex residents to help create sustainable communities.*

3.15 The proposed development provides residents with access to sustainable modes of transport such as local bus services thus reducing the reliance on the private car and is therefore considered to accord with local policy.

4.0 Study Area

4.1 It has been agreed with both ECC and SBC that the impact of the development will be considered in detail at the following off-site junctions:

Ref 1A: A1159 Royal Artillery Way / A13 Southchurch Boulevard / Thorpe Hall Ave / A13 Bournes Green Chase (4-arm roundabout)

Ref 1B: A13 Bournes Green Chase / Shoebury Road / A13 Southchurch Boulevard / Wakering Road (3-arm junction)

Ref 2: A13 Bournes Green Chase / Maplin Way North (3-arm roundabout)

Ref 3: A13 Bournes Green Chase / B1017 Poynters Lane / A13 North Shoebury Road / Bishopsteignton (4-arm roundabout)

Ref 4: B1017 Star Lane / Poynters Lane (priority T-junction)

Ref 5: B1017 Star Lane / Southend Road (3-arm mini-roundabout)

Ref 6: B1017 Star Lane / Proposed Site Access (priority T-junction)

4.2 Junction refs. 1A, 1B, 2 and 3 all lie within the local authority boundary of SBC. The remaining junctions lie within the local authority boundary of ECC.

4.3 The location of these junctions is shown on Figure 8.

5.0 Existing Traffic Conditions

5.1 To establish baseline traffic flows at each of the junctions forming the study area, classified turning movement counts were carried out. These traffic surveys took place on Tuesday 22 March 2011 at junction refs. 1A, 1B, 2, 3, 4 and 5. The survey period on each day was from 07:00 to 10:00 hours and from 15:00 to 19:00 hours which coincided with the anticipated peak traffic flows on the local road network.

5.2 The traffic surveys established the network peak hours as follows:

- Weekday AM 08:00 to 09:00
- Weekday PM 16:45 to 17:45

5.3 Existing (2011) traffic flows for the Friday AM and PM periods are shown on Figures 9 and 10 respectively. Full results of the classified turning counts are included at Appendix C.

5.4 In addition to the classified turning movement counts an automatic traffic count (ATC) was undertaken for a continuous 7-day period (24 hours each day) from Monday 21 to Sunday 27 March 2011. The ATC tubes were positioned on Star Lane, close to the proposed site access (junction ref. 6 as described in paragraph 4.1).

5.5 The ATC recorded both traffic volume and speed data and the full results are included at Appendix D. The 5-day and 7-day average traffic volumes are summarised in Table 1 below.

Table 1: ATC Traffic Volumes

| Direction | Traffic Volumes (Vehicles) | |
|------------|----------------------------|---------------|
| | 5-day Average | 7-day Average |
| Southbound | 3288 | 3012 |
| Northbound | 3080 | 2871 |

5.6 The 7-day average and 85th percentile traffic speeds are summarised below.

Table 2: ATC Traffic Speeds

| Direction | 7-Day Traffic Speeds (mph) | |
|------------|----------------------------|-----------------------|
| | Average | 85 th %ile |
| Southbound | 44.8 | 53.6 |
| Northbound | 43.6 | 53.4 |

5.7 It can be seen from the above that 7-day average traffic speeds on Star Lane are well below the signed speed limit of 60mph and the 7-day 85th percentile traffic speeds are also below the speed limit.

6.0 Assessment Year Traffic

Assessment Scenarios

6.1 As agreed with ECC, for the purposes of this study the assessment year is 2018, i.e. 5 years after application. Therefore, traffic conditions have been assessed for the junctions forming the study area during the weekday AM and PM peak periods for the following scenarios:

- Existing (2013), the 'Application Year'
- Assessment Year (2018) - without development
- Assessment Year (2018) - with development

6.2 The "existing" and "without development" assessments are based on traffic flows as established by the traffic counts. Factors from the *TEMPRO* database have been used to growth the surveyed traffic flows from 2011 to 2013 and 2013 to 2018.

6.3 The "with development" assessments are based on the site's proposed use and agreed trip generation, distribution and assignment.

Traffic Growth

6.4 Background traffic growth has been derived from *TEMPRO* 6.2 incorporating growth factors from the National Traffic Model (NTM 09) as follows:

- 2011 to 2013 Weekday AM peak 1.0007
- 2011 to 2013 Weekday PM peak 1.0035
- 2013 to 2018 Weekday AM peak 1.0411
- 2013 to 2018 Weekday PM peak 1.0492

6.5 The baseline weekday AM and PM peak hour "without development" traffic flows for Assessment Year 2018 are shown on Figures 11 and 12.

7.0 Trip Generation, Distribution and Assignment

Trip Generation

- 7.1 The existing site is currently undeveloped such that the trips generated by the proposed residential development will be entirely 'new' to the highway network and thus will be assumed to be so for the purposes of assessment. However, the former brickworks site would have generated a small number of trips and its closure would have therefore resulted in a small reduction in traffic on the highway network. It is assumed that an equivalent proportion of trips generated by the Brickworks development will 'fill' this reduction in traffic on the highway network. Hence it is proposed that the trips generated by the former brickworks are removed from the total trips generated by the development to arrive at a net trip generation for the site.
- 7.2 In order to establish appropriate trip rates for the development, reference has been made to the TRICS database (2010(b) v6.6.2, September 2010) under the land use 'Residential' and the sub-category 'Mixed Private Housing'. The proposed trip rates for this category are set out in the following table, whilst the TRICS output data is included at Appendix E.

Table 3: Proposed 'Residential' Trip Rates (Mixed Private Housing) - Brickworks

| Peak Hour | Residential Trip Rate (trips / dwelling) | | |
|-----------------------------|--|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 0.095 | 0.354 | 0.449 |
| Weekday PM (16.45 to 17.45) | 0.274 | 0.148 | 0.422 |

- 7.3 Based on the proposed 105 privately owned dwellings, the anticipated trip generation for the development is summarised in Table 4 below:

Table 4: Proposed 'Residential' Trips (Mixed Private Housing) – Brickworks

| Peak Hour | Trip Generation (vehicles) | | |
|-----------------------------|----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 10 | 37 | 47 |
| Weekday PM (16.45 to 17.45) | 29 | 15 | 44 |

- 7.4 In order to establish appropriate trip rates for the affordable housing element of the development, reference has been made to the TRICS database (2010(b) v6.6.2, September 2010) under the land use 'Residential' and the sub-category 'Mixed Non-Private Housing'. It is recommended by TRICS that the sub-category 'Mixed Non-Private Housing' should be used when deriving trip rates for affordable or rented accommodation. The proposed trip rates for this category are set out in the following table, whilst the TRICS output data is included at Appendix E.

Table 5: Proposed 'Residential' Trip Rates (Mixed Non-Private Housing) - Brickworks

| Peak Hour | Trip Rate (trips / dwelling) | | |
|-----------------------------|------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 0.160 | 0.328 | 0.488 |
| Weekday PM (16.45 to 17.45) | 0.294 | 0.143 | 0.437 |

- 7.5 Based on the proposed 11 affordable dwellings, the anticipated trip generation for the development is summarised in Table 6 over page:

Table 6: Proposed 'Residential' Trips (Mixed Non-Private Housing) – Brickworks

| Peak Hour | Trip Generation (vehicles) | | |
|-----------------------------|----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 2 | 3 | 5 |
| Weekday PM (16.45 to 17.45) | 3 | 2 | 5 |

- 7.6 The total trip generation for the development, based on a mixed private and non-private allocation, is summarised in Table 7 below.

Table 7: Total Proposed 'Residential' Trips – Brickworks

| Peak Hour | Trip Generation (vehicles) | | |
|-----------------------------|----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 12 | 40 | 52 |
| Weekday PM (16.45 to 17.45) | 32 | 17 | 49 |

- 7.7 In order to establish appropriate trip rates for the former brickworks site, reference has been made to the TRICS database (2010(b) v6.6.2, September 2010) under the land uses 'Employment' and sub-category 'Quarry'. The proposed trip rates are set out in the following table, while the TRICS output data is included in Appendix E.

Table 8: Proposed 'Brickworks' Trips Rates

| Peak Hour | Trip Rates (trips / ha) | | |
|-----------------------------|-------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 0.735 | 0.612 | 1.347 |
| Weekday PM (16.45 to 17.45) | 0.300 | 1.500 | 1.800 |

- 7.8 Based on an existing site area of 3.28 hectares, the former brickworks site is assumed to have generated trips as summarised in Table 9 below.

Table 9: Total 'Brickworks' Trips

| Peak Hour | Trip Generation (vehicles) | | |
|-----------------------------|----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 2 | 2 | 4 |
| Weekday PM (16.45 to 17.45) | 1 | 5 | 6 |

- 7.9 Therefore the net trip generation for the development is as summarised in the following table:

Table 10: Net Total Proposed 'Residential' Trips – Brickworks

| Peak Hour | Trip Generation (vehicles) | | |
|-----------------------------|----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08:00 to 09:00) | 10 | 38 | 48 |
| Weekday PM (16.45 to 17.45) | 31 | 12 | 43 |

Trip Distribution and Assignment

- 7.10 In order to establish a distribution pattern for the trips generated by the development, reference has been made to the 2001 Census and specifically data sets which relate to travel to work patterns for the ward of Foulness and Great Wakering within which the site is located. The principle of this methodology was agreed with ECC during the scoping process.

- 7.11 Based upon the above methodology, the Brickworks development traffic distribution for the weekday AM and PM peak hours is illustrated on Figure 13.
- 7.12 The resultant traffic flows for the weekday AM and PM peak hours, with development traffic, are illustrated on Figures 14 and 15.

8.0 Highway Impact

- 8.1 The proposed development is expected to alter traffic levels at the principal junctions within the study area in the assessment year (2018) by the percentages summarised in Table 11 below. The percentage impact at junction ref. 6 has not been included in Table 11 as this will be a new junction on the network.

Table 11: Percentage Impacts

| Jct Ref. | Scenario | Change in Peak Hour Traffic | | | |
|----------|-----------------------|-----------------------------|----------|-----------------|----------|
| | | Weekday AM Peak | | Weekday PM Peak | |
| | | 2018 | | 2018 | |
| | | Traffic | % Change | Traffic | % Change |
| 1A | Without Dev | 3,735 | - | 3,706 | - |
| | With Dev (Brickworks) | 3,763 | 0.7% | 3,730 | 0.6% |
| 1B | Without Dev | 3,049 | - | 3,010 | - |
| | With Dev (Brickworks) | 3,077 | 0.9% | 3,034 | 0.8% |
| 2 | Without Dev | 2,071 | - | 2,242 | - |
| | With Dev (Brickworks) | 2,103 | 1.5% | 2,269 | 1.2% |
| 3 | Without Dev | 1,992 | - | 2,238 | - |
| | With Dev (Brickworks) | 2,027 | 1.8% | 2,268 | 1.3% |
| 4 | Without Dev | 1,002 | - | 995 | - |
| | With Dev (Brickworks) | 1,040 | 3.8% | 1,028 | 3.3% |
| 5 | Without Dev | 1,047 | - | 1,039 | - |
| | With Dev (Brickworks) | 1,057 | 1.0% | 1,049 | 1.0% |

Junction Capacity Analysis

- 8.2 In order to understand the resultant effect from the change in traffic flows, capacity analyses have been carried out at the key junctions using computer modelling software e.g. PICADY or ARCADY as appropriate where:

RFC – Ratio of Flow to Capacity (RFC)
 Q – Number of vehicles in queue (vehicles)

The data output including a summary of the results of these assessments is included in Appendices F to K.

Junction Ref. 1A – A1159 Royal Artillery Way / A13 Southchurch Boulevard / Thorpe Hall Ave / A13 Bournes Green Chase

- 8.3 An existing layout of junction ref. 1A is shown on Figure 16. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix F.

- 8.4 The analyses show that during the AM peak, Arm B (Southchurch Boulevard) would operate over capacity under 2013 traffic conditions as well as in 2018 'without' and 'with' development traffic. During the PM peak Arm A (A1159 Royal Artillery Way) is shown to operate over capacity under 2013 traffic conditions as well as in 2018 'without' and 'with' development traffic. Predicted queue lengths on Arm B will increase from 6 PCUs under 2013 traffic conditions to approximately 10 PCUs with background traffic growth and the addition of development traffic, while predicted queue lengths on Arm A will increase from 6 PCUs in 2013 to 11 PCUs with background growth and the addition of development traffic. All other arms will operate well within capacity for each scenario and during both peak hours.
- 8.5 Given that Arms A and B are both currently operating overcapacity without any increase in background traffic growth and addition of development traffic, mitigation measures are proposed such that the capacity of these arms is no worse in 2018 than it is in 2013, i.e. it is proposed that the junction is slightly modified to produce a 'nil detriment' condition. The proposed modifications comprise minor realignment of the nearside kerb line on both arms in order to increase the flare length on these approaches. These proposed modifications are shown on Figure 22 and full details of the results are included in Appendix F.

Junction Ref. 1B - A13 Bournes Green Chase / Shoebury Road / A13 Southchurch Boulevard / Wakering Road

- 8.6 The existing layout of junction ref. 1B is shown on Figure 17. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix G.
- 8.7 The analysis shows that under 2013 traffic conditions and also in 2018 'without' and 'with' development traffic, the junction would operate within capacity during the AM peak hour. However, during the PM peak hour the capacity assessments show that the junction would operate over capacity under 2013 traffic conditions as well 'without' and 'with' development traffic in 2018. However, the degree to which the junction operates over capacity 'with' development in 2018 compared to 'without' development is minimal i.e. 0.10 RFC such that mitigation measures are not considered to be necessary.

Junction Ref. 2 - A13 Bournes Green Chase / Maplin Way North

- 8.8 The existing layout of junction ref. 2 is shown on Figure 18. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix H.
- 8.9 The analyses show that under 2013 traffic conditions and also in 2018 'without' and 'with' development traffic, Arm C (Bournes Green Chase) operates over capacity during the PM peak hour. Predicted queue lengths on this arm will increase from 15 PCUs at existing up to 36 PCUs with background traffic growth and the addition of development traffic. The resultant RFC, which for a junction operating below capacity should be less than 0.85, is approaching 1.03. This suggests that the junction could become unstable with excessive queuing at unsustainable levels in the near future. All other arms will operate well within capacity for each scenario and during both peak hours.

- 8.10 Given that Arm C currently operates over capacity without any increase in background traffic growth and with the addition of development traffic, mitigation measures are proposed such that the capacity of this arm is no worse in 2018 than it is in 2013, i.e. it is proposed that the junction is slightly modified to produce a 'nil detriment' condition. The proposed modifications comprise minor realignment of the nearside kerb line of Arm C in order to increase the flare length on these approaches. The proposed modifications are shown on Figure 23 and full details of the results are included in Appendix H.

Junction Ref. 3 - A13 Bournes Green Chase / B1017 Poynters Lane / A13 North Shoebury Road / Bishopsteignton

- 8.11 The existing layout of junction ref. 3 is shown on Figure 19. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix I.
- 8.12 The analyses show that under 2013 traffic conditions and also in 2018 'without' and 'with' development traffic, the junction will operate within capacity during the AM and PM peak hours.

Junction Ref. 4 - B1017 Star Lane / Poynters Lane

- 8.13 The existing layout of junction ref 4 is shown on Figure 20. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix J.
- 8.14 The analyses show that under 2013 traffic conditions and also in 2018 'without' and 'with' development traffic, the junction would operate within capacity during the AM and PM peak hours.

Junction Ref. 5 - B1017 Star Lane / Southend Road

- 8.15 The existing layout of junction ref 5 is shown on Figure 21. Junction capacity under 2013 traffic conditions and 2018 'without' and 'with' development traffic has been analysed using ARCADY 6.0. Full details of the capacity assessments are included in Appendix K.
- 8.16 The analyses show that under 2013 traffic conditions and also in 2018 'without' and 'with' development traffic, the junction would operate within capacity during the AM and PM peak hours.

Junction Ref. 6 - B1017 Star Lane / Proposed Site Access

- 8.17 The proposed site access on B1017 Star Lane is shown on Figure 4. Full details of the capacity assessments are included in Appendix L.
- 8.18 The analyses show that in 2018 'with' development traffic, the junction will operate within capacity during the AM and PM peak hours.

Speed Limit on Star Lane

- 8.19 In addition to the proposed mitigation works at two junctions within the study area, it is also proposed that the existing 30mph speed limit on B1017 Star Lane will be extended to include the new site access. As shown on Figure 4, it is proposed that the new 30mph speed limit will be moved approximately 245 metres south to coincide with the southern boundary of the development. The 60mph speed limit will then continue south from this terminal point.
- 8.20 ECC's *Draft Speed Management Strategy and Policies for Essex*, dated 2008 suggests that the terminal points for village speed limits are positioned within sight of the first residential property which gives drivers a clear message that they are entering a village and therefore this proposed change is in line with local policy and should be found acceptable.
- 8.21 Any amendments made to the existing speed limits on Star Lane will require a Traffic Regulation Order (TRO) and will therefore require the successful completion of a statutory consultation and advertising process. No amendments can or will be made to the existing speed limits on Star Lane until this process has been successfully concluded.
- 8.22 Amendments to existing street lighting provision and the requirement to install new lighting columns in recognition of this revised speed limit will be given due consideration during the detailed design process associated with the new site access.
- 8.23 The proposal to revise the existing speed limit on Star Lane has been reviewed as part of a Stage 1 Road Safety Audit. The Audit Team raised no particular concerns although it was recommended that the terminal point should coincide with some form of gateway feature. A formal response to this recommendation and all other recommendations made in the safety audit is included in Appendix B and has been shown on Figure 4, where appropriate.

9.0 Highway Safety

9.1 Accident records for the period between 1 August 2006 and 31 October 2012 were obtained from ECC. The records reveal a total of 42 personal injury accidents at the junctions and on roads within the study area. These accidents are summarised in Table 12 below.

Table 12: Accident Summary

| Location | Accident Summary | | | Total |
|---|------------------|----------|----------|-----------|
| | Slight | Serious | Fatal | |
| B1017 Star Lane / Southend Road | 0 | 0 | 0 | 0 |
| B1017 Star Lane / Poynters Lane | 4 | 0 | 0 | 4 |
| A13 Bournes Green Chase / A1159 Eastern Avenue / A13 Southchurch Boulevard / Thorpe Hall Avenue | 9 | 1 | 0 | 10 |
| A13 Bournes Green Chase / Shoebury Road / A13 Southchurch Boulevard / Wakering Road | 6 | 0 | 0 | 6 |
| A13 Bournes Green Chase / Maplin Way North | 4 | 0 | 1 | 5 |
| A13 Bournes Green Chase / B1017 Poynters Lane / A13 North Shoebury Road / Bishopsteignton | 4 | 4 | 0 | 8 |
| Star Lane | 1 | 2 | 2 | 5 |
| Southend Road | 2 | 0 | 0 | 2 |
| A13 Bournes Green Close | 1 | 0 | 0 | 1 |
| Southchurch Boulevard | 1 | 0 | 0 | 1 |
| Total | 32 | 7 | 3 | 42 |

9.2 The summary shows that the most accidents occurred at the A13 Bournes Green Chase / A1159 Eastern Avenue / A13 Southchurch Boulevard / Thorpe Hall Avenue roundabout junction. Although this junction suffered from more accidents than any other junction, the frequency of accidents still equates to less than two per year.

9.3 Further analysis of the accidents suggests that many were due to drivers failing to observe other road users when entering or exiting junctions. A number of accidents also resulted from drivers being impaired by alcohol at the time of the accident.

-
- 9.4 As shown in the table above, five accidents occurred along Star Lane. Of these, two resulted in fatalities, both of which occurred to the south of the proposed site access. One accident involved a vehicle colliding with a pedestrian who had allegedly appeared from nowhere, while the second involved a vehicle colliding with a cyclist who had crossed its path. Extension of the existing 30mph speed limit and installation of a gateway feature will help to reduce average vehicle speeds along this section of carriageway and therefore should reduce the likelihood of further fatalities occurring.
- 9.5 Overall, the frequency of accidents at the key junctions within the study area is less than two per year and therefore road safety is not considered to be a particular concern. Furthermore, none of the accidents recorded were caused by a deficiency in the highway network. As such, it is considered that the increase in traffic generated by development could be accommodated on the local road network without detriment to highway safety and without the need for any safety-related mitigation measures.

10.0 Site Sustainability

- 10.1 The site can be considered highly accessible by non-car modes of transport which will help promote alternative modes of travel and reduce the impact of the development on the local road network. The following paragraphs set out the benefits of the site's location from the perspective of encouraging trips by modes other than the private car. A number of facilities and amenities are provided along High Street in Great Wakering village, and in Shoeburyness.

Pedestrians

- 10.2 It is generally considered that two kilometres is an acceptable distance for pedestrians to walk to work or nearby facilities and amenities. As such, the site is easily accessible by foot from the whole of Great Wakering village and the residential areas of Little Wakering, North Shoebury and Bournes Green.
- 10.3 A footway is provided along the western side of Star Lane between Southend-on-Sea town centre and the bus stop located just north of the access to the Star Lane Industrial Estate. Although a footway is provided along the eastern side of Star Lane this only extends between the Star Lane / Southend Road mini-roundabout and the bus stop located just to the south of the access to the Star Lane Industrial Estate.
- 10.4 No formal crossing facilities are provided along Star Lane. A zebra crossing facility is however provided in Great Wakering, some 200 metres east of High Street / Southend Road / Little Wakering Road mini-roundabout.
- 10.5 It is proposed to extend the eastern footway to the northern edge of the new development, where an uncontrolled pedestrian crossing facility will be provided across Star Lane. This will provide pedestrians with a safer place to cross the carriageway before continuing their journey south using the existing footway located on the western side of the road.

Cyclists

- 10.6 It is generally considered that five kilometres is an acceptable distance for cyclists to cycle to work, local amenities and facilities. This is generally regarded as being five kilometres. As such, residential areas as far as Shoeburyness, Rochford and Southend-on-Sea are all accessible by cycling.
- 10.7 No on or off-road cycle paths exist along Star Lane.

Public Transport

Buses

- 10.8 It is generally accepted that 400 metres is an acceptable distance to walk to a bus stop. Existing bus stops are located on Star Lane, approximately 200 metres north of the site access to the development. The bus stops are flagged and provide passengers with easy access kerbs and timetable information. Further stops are located on High Street.

- 10.9 The stops are served by a number of services, which provide a realistic opportunity for future residents to undertake local shopping trips by public transport rather than the private car. The services, which operate from the stops and their respective frequencies, are set out in Table 13 below while Figure 24 illustrates the local bus routes.

Table 13: Bus Services Summary – Correct at February 2013

| Route | Operator | Route Description | Monday - Saturday Frequency | Sunday Frequency |
|-------|----------------------|--|-----------------------------|------------------|
| 4/4A | Arriva | Great Wakering - North Shoebury - Southend | Every 45 mins | Every 60 mins |
| 7 | Arriva | Rayleigh - Hockley - Southend - North Shoebury | 3 per day | No Service |
| 14 | Stephensons of Essex | Southend - Barling - Shoeburyness | Every 90 mins | No Service |
| 814 | Stephensons of Essex | Rochford - Shoebury - Southend Pier - Chalkwell - Leigh On Sea | 1 per day (Mon - Fri Only) | No Service |

- 10.10 Analysis of the timetables of the bus services shown in Table 13 has been undertaken to confirm that an appropriate level of service is available to ensure commuters from Star Lane are able to arrive at and depart from Southend before 09.00 and after 17.00.

Rail

- 10.11 Shoeburyness is the closest railway station, located some three kilometres to the south of the site. The station, which is operated by c2c, provides direct and frequent services to London Fenchurch Street. The station is within cycling distance of the site and is accessible using bus services 4A and 14. Further services are available from the two railway stations located within Southend. The local rail network is shown on Figure 25.

11.0 Summary and Conclusion

Summary

11.1 This Transport Assessment has been undertaken to accompany a detailed planning application for the redevelopment of land to the east of B1017 Star Lane, Great Wakering, Essex. The principal findings of the assessment are summarised below.

- The development site was occupied by a brickworks factory, which ceased operations in 2005. All associated buildings and plant have since been demolished or removed such that this part of the site now largely comprises areas of hard standing. To the east of the former brickworks factory the remainder of the development site comprises agricultural land along with areas of grassland and small woods. A few small lakes are situated in the south east corner of the site.
- It is proposed to develop the site for residential purposes. The development will comprise 116 residential units ranging from one bedroom apartments to four-bedroom family homes. 11 units will be allocated to affordable housing.
- A total of 257 parking spaces will be provided for the development, which accords with the minimum parking standards for residential developments as set out in Essex County Council's *'Parking Standards – Design and Good Practice'* September 2009.
- Vehicular access to the development site will be achieved from a new priority T-junction on B1017 Star Lane.
- An assessment of traffic impact has been carried out based on traffic surveys and trip generation, distribution and assignment methodology agreed with Essex County Council. This assessment concluded that traffic generated by the development would only have a material impact on two junctions, namely A1159 Royal Artillery Way / A13 Southchurch Boulevard / Thorpe Hall Ave / A13 Bourne Green Chase A13 and Bourne Green Chase / Maplin Way North.
- Analyses demonstrated that these junctions currently operate over capacity based on 2013 traffic flows. Hence, the mitigation measures proposed will ensure that junction capacity will be no worse in 2018 than it is in 2013, i.e. it is proposed that the junctions will be slightly modified to produce a 'nil detriment' condition. It has been demonstrated that the proposed mitigation works will return the junctions to 2013 operating conditions and therefore the impact of the development can be accommodated on the local highway network.
- The mitigation measures proposed would be carried out at the developer's expense and would be delivered through a Section 278 Agreement between the developer and Essex County Council as highway authority.
- The proposed site access has been subjected to a Stage 1 Road Safety Audit which did not reveal any significant or material highway safety concerns associated with the junction design.

- Road safety has been examined and is not considered to be a major concern at any of the junctions within the study area. However, some further mitigation works in the vicinity of the proposed site access on Star Lane are proposed to reduce average vehicle speeds.
- These proposed highway works have been subjected to a Stage 1 Road Safety Audit which did not reveal any significant or material highway safety concerns associated with the junction design. The increase in traffic generated by the development can be accommodated on the local road network without detriment to highway safety.
- The proposed development has been planned to meet the particular requirements of pedestrians, cyclists, public transport users, motorists and those with special needs.

Conclusion

- 11.2 The development is accessible by a range of transport modes and complies with Central and Local Government transport policies. Off-site highway works are proposed where necessary to mitigate the impact of additional traffic flows as a result of the development. Therefore, the development is considered to be acceptable in transport terms.

Figures



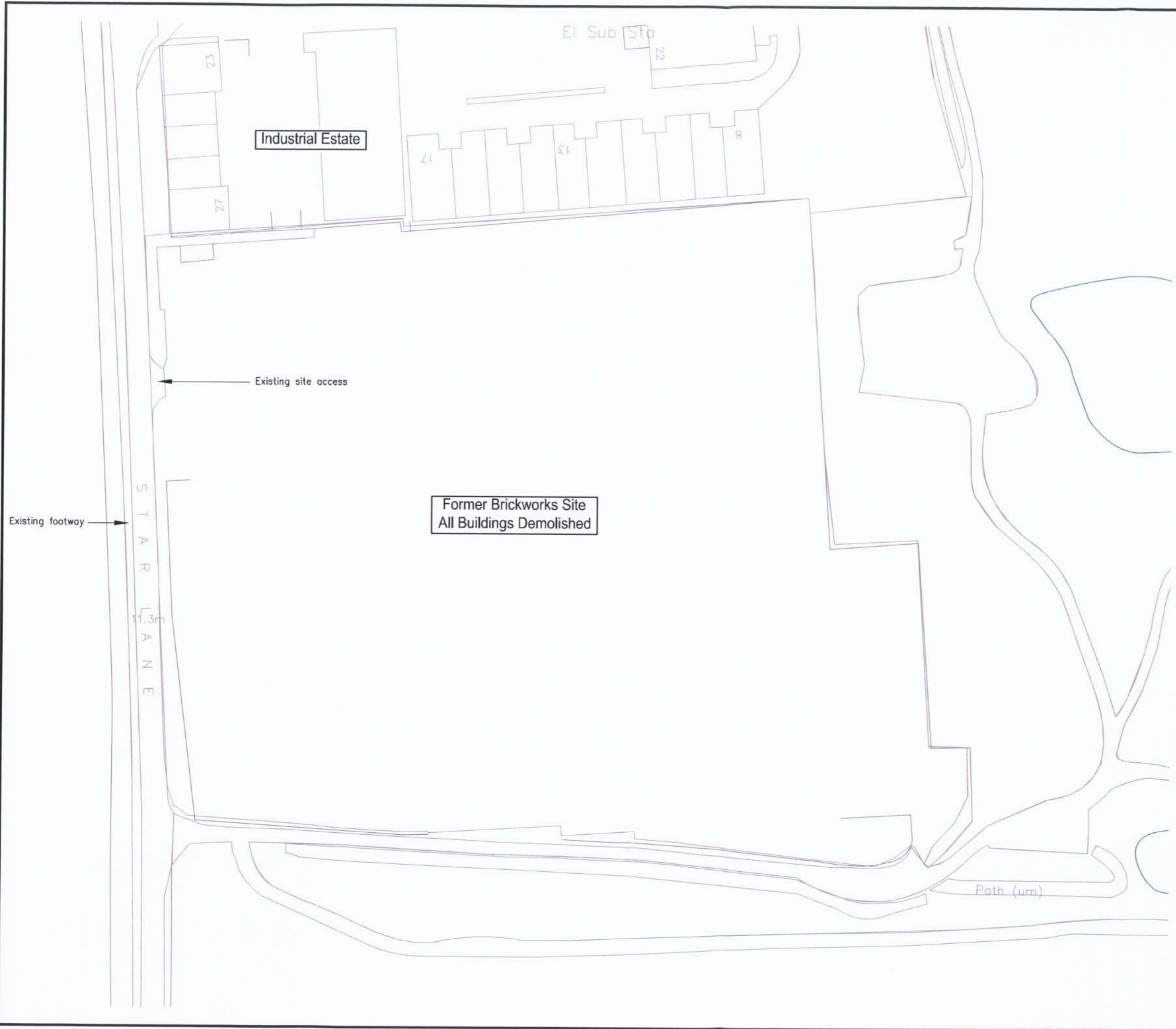
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5KM

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| Client: | | Inner London Group | |
| Project: | | Star Lane Great Waking | |
| Title: | | Site Location Plan | |
| Project Engineer: | | G. Turner | Scale: As Shown @ A3 |
| Project Director: | | T. Foxall | Date: February 2013 |
| Status: | | | |

Drawing No. Figure 1 Rev



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 Tel: (01235) 515550 Fax: (01235) 817799
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Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Existing Site Layout

Project Engineer : G. Turner Scale : 1:1000 @ A3
 Project Director : T. Foxall Date : February 2013
 Status :

Drawing No. Figure 2 Rev

GEOMETRIC PARAMETERS

| Wmajor (m) | Wcr | Vc-b (m) | Wminor (m) | Vl (m) | Vr (m) |
|------------|------|----------|------------|--------|--------|
| 6.00 | 0.00 | 245.00 | 3.40 | 90.00 | 90.00 |

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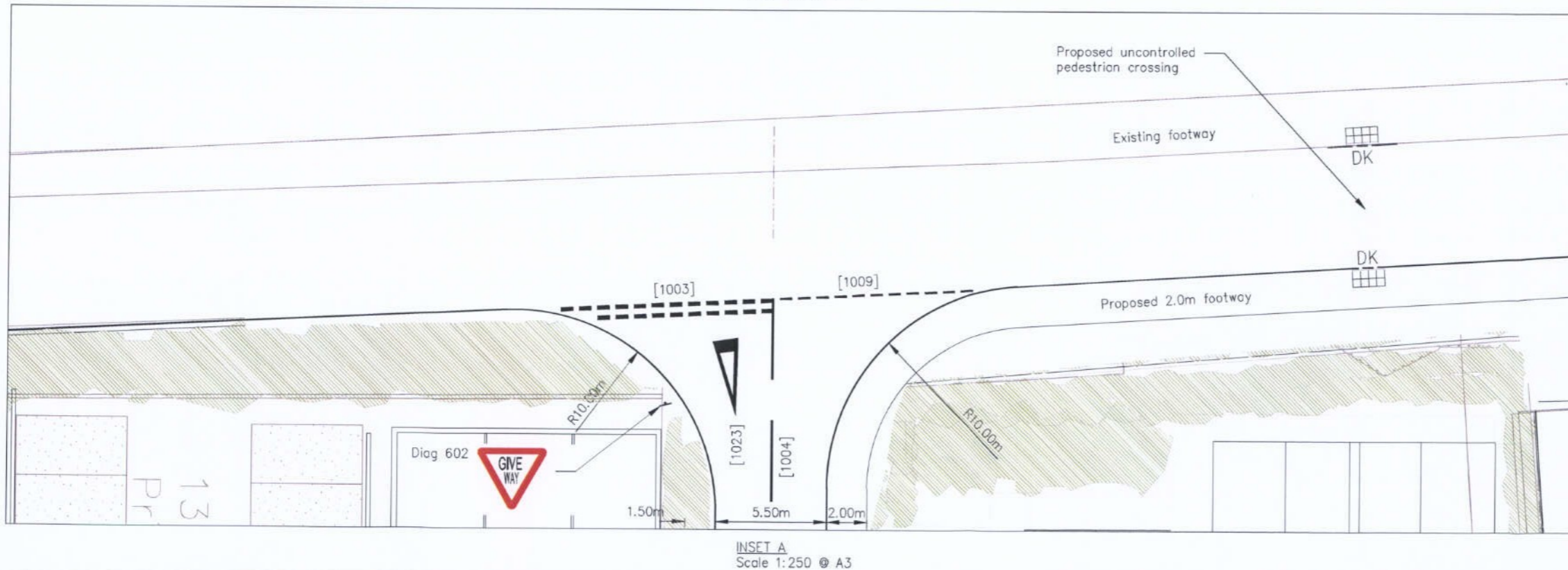
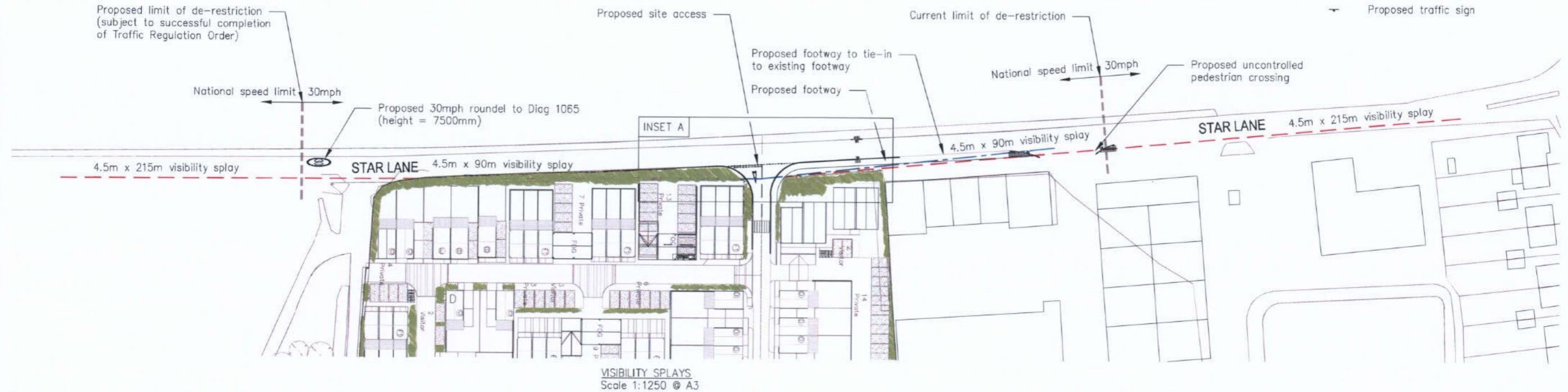


NOTES

1. This drawing to be read in conjunction with all relevant documents and specifications.
2. Dimensions not to be scaled.

KEY

- 4.5m x 90m visibility splay (30mph)
- 4.5m x 215m visibility splay (60mph)
- Dropped kerbs
- Tactile paving
- Road marking or traffic sign diagram number (TSRGD 2002)
- Proposed traffic sign



| Rev. | Description | Date | Chkd |
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Client :
Inner London Group

Project :
**Star Lane
Great Woking**

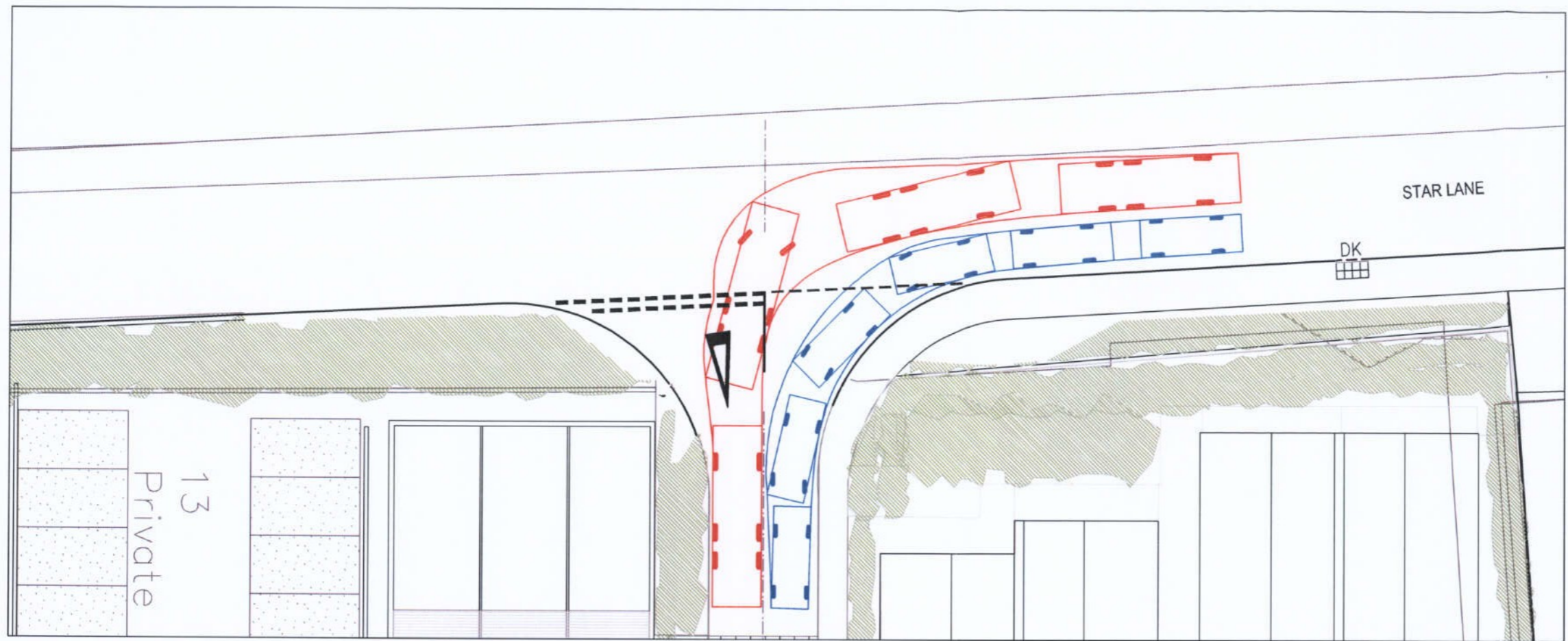
Title :
**Junction Ref 6
Proposed Site Access Layout on Star Lane**

Project Engineer : G. Turner Scale : As Shown @ A3

Project Director : T. Foxall Date : February 2013

Status :

Drawing No. **Figure 4** Rev



NOTES

1. This drawing to be read in conjunction with all relevant documents and specifications.
2. Dimensions not to be scaled.

KEY

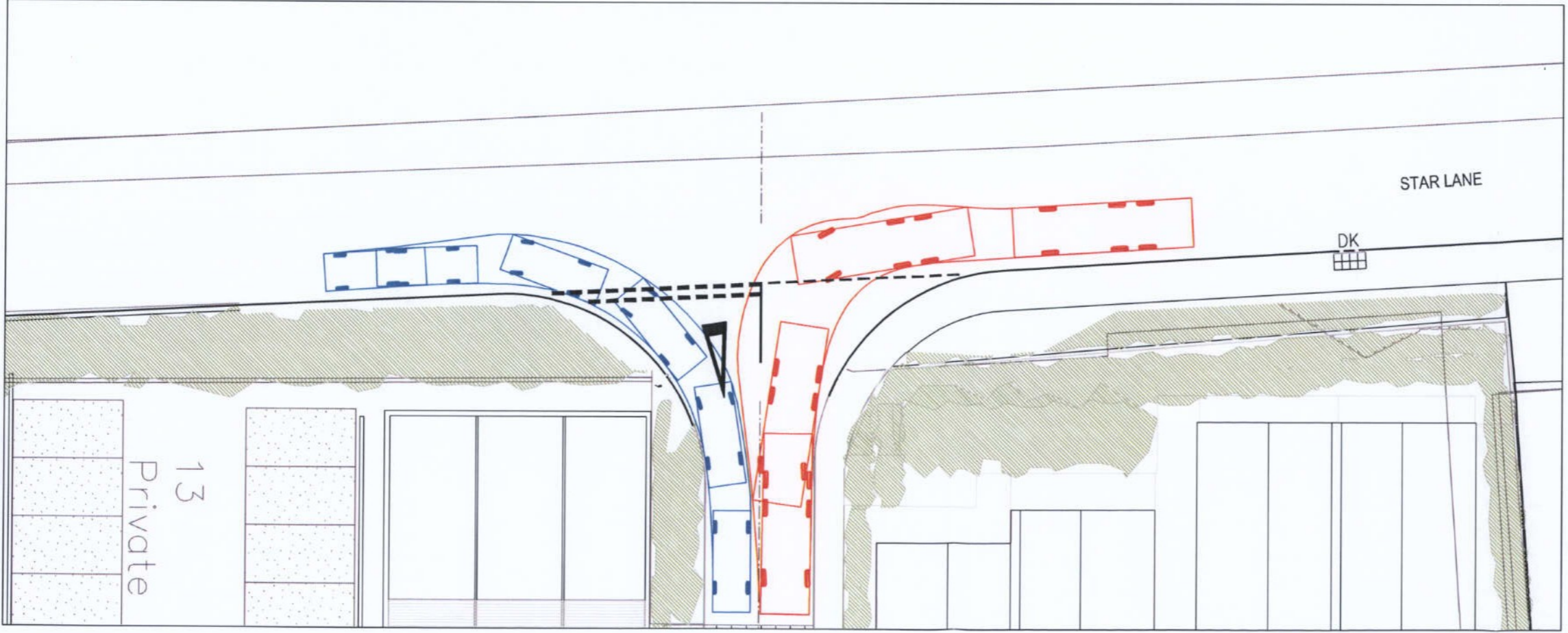


Large car (2006 Mercedes-Benz S-Class) – forward gear



Medium refuse lorry – forward gear

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Client :
Inner London Group

Project :
**Star Lane
 Great Waking**

Title :
**Vehicle Swept Path
 (Site Access)**

Project Engineer : G. Turner Scale : 1:250 @ A3

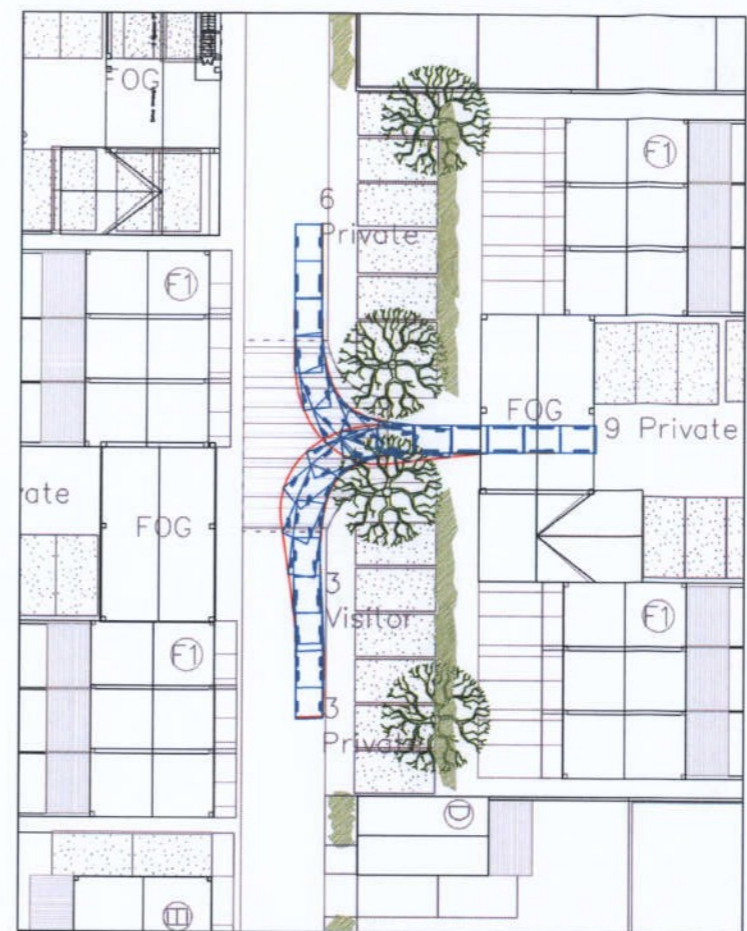
Project Director : T. Foxall Date : February 2013

Status :

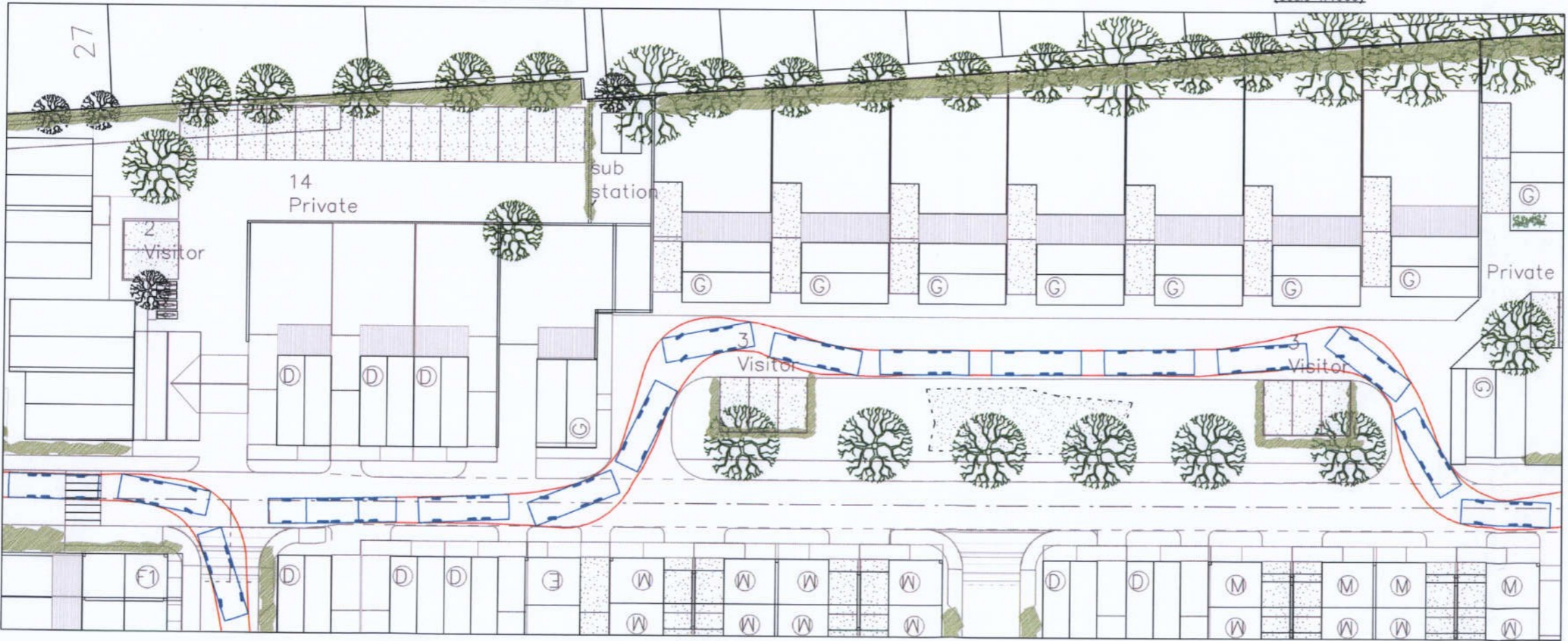
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|-------------|----------|-----|
| Drawing No. | Figure 5 | Rev |
|-------------|----------|-----|



SOUTH AREA - REFUSE VEHICLE
(Scale 1:1000)



ENTRY/EXIT FROM FOG - LARGE CAR
(Scale 1:1000)



NORTH AREA - REFUSE VEHICLE
(Scale 1:500)

- NOTES**
1. This drawing to be read in conjunction with all relevant documents and specifications.
 2. Dimensions not to be scaled.
 3. Based upon drawing prepared by Stock Woolstencroft.

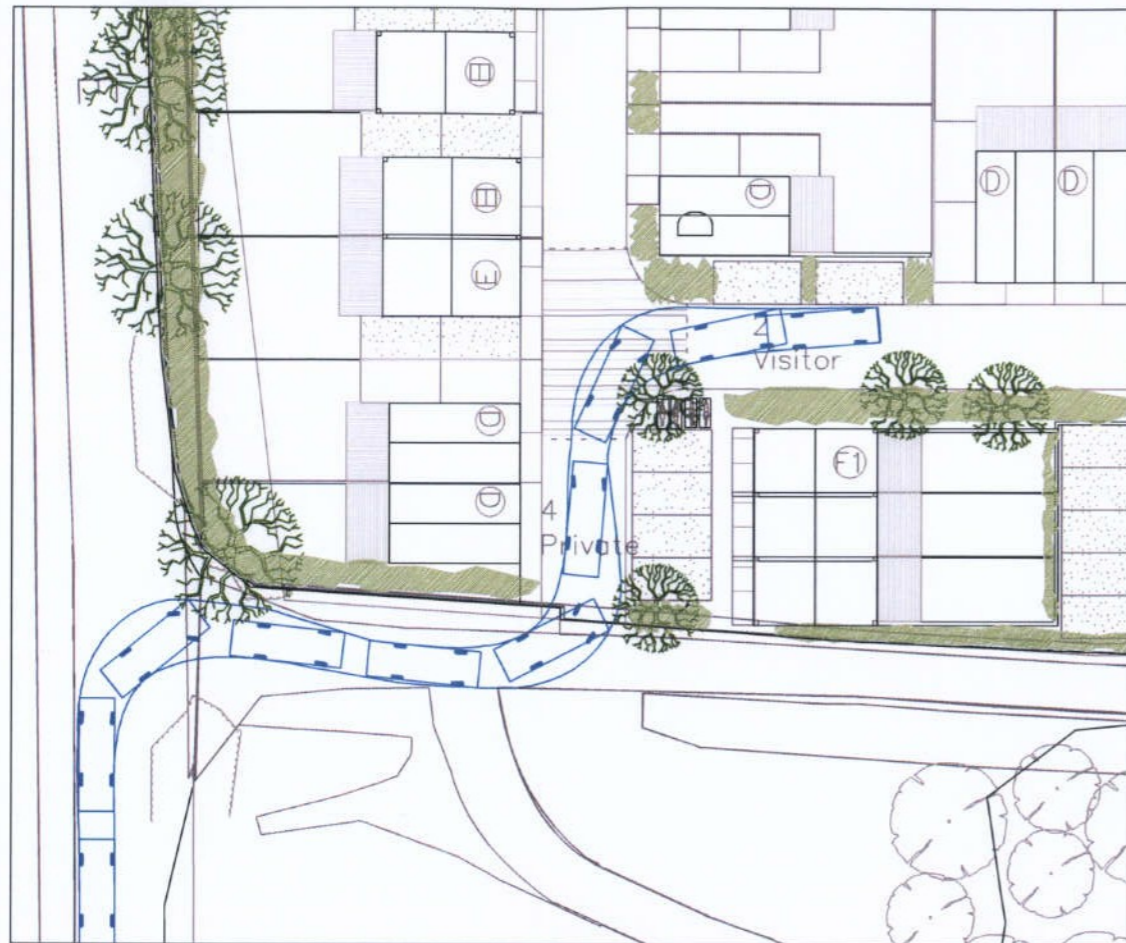
- KEY**
- Medium refuse vehicle - forward gear
 - Large car - forward gear

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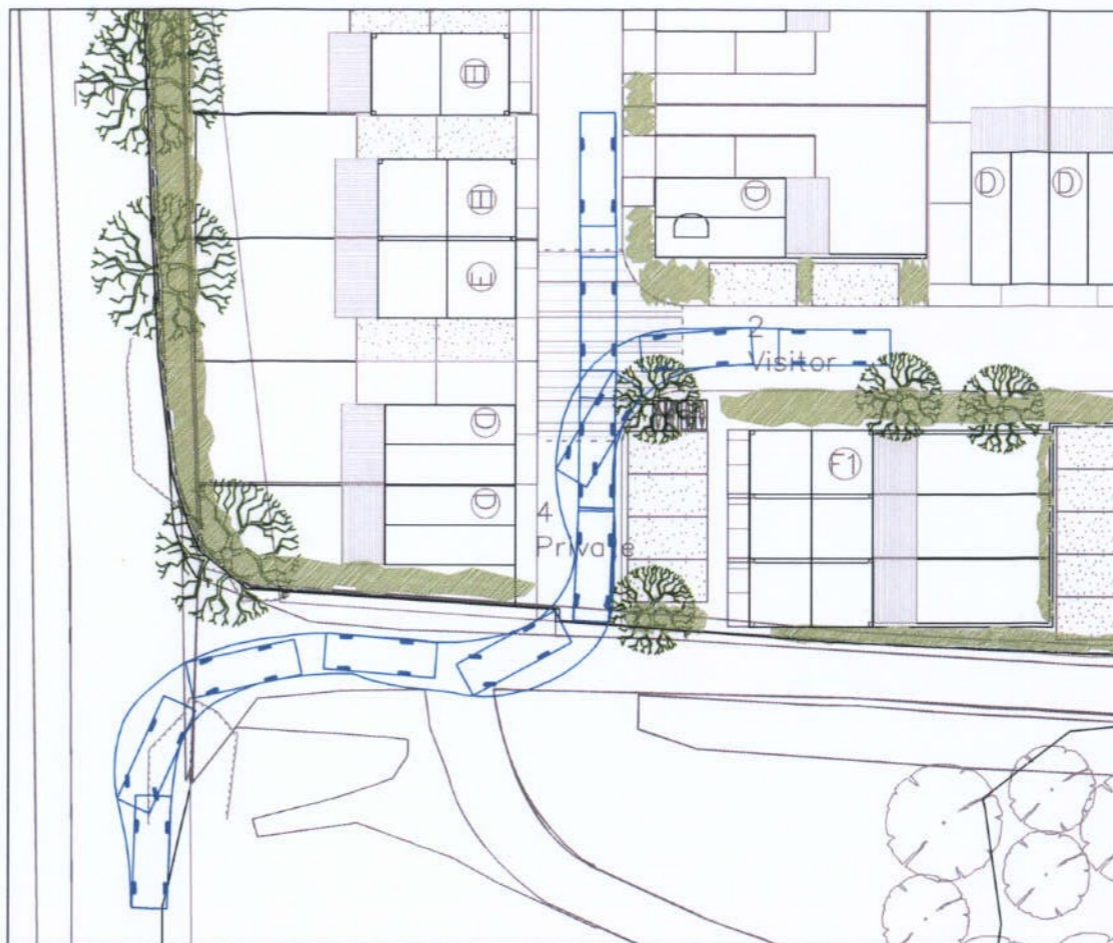


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| Client : | | Inner London Group | |
| Project : | | Star Lane Great Waking | |
| Title : | | Vehicle Swept Paths (Internal Roads) | |
| Project Engineer : | | G. Turner | Scale : As Shown @ A3 |
| Project Director : | | T. Foxall | Date : February 2013 |
| Status : | | | |

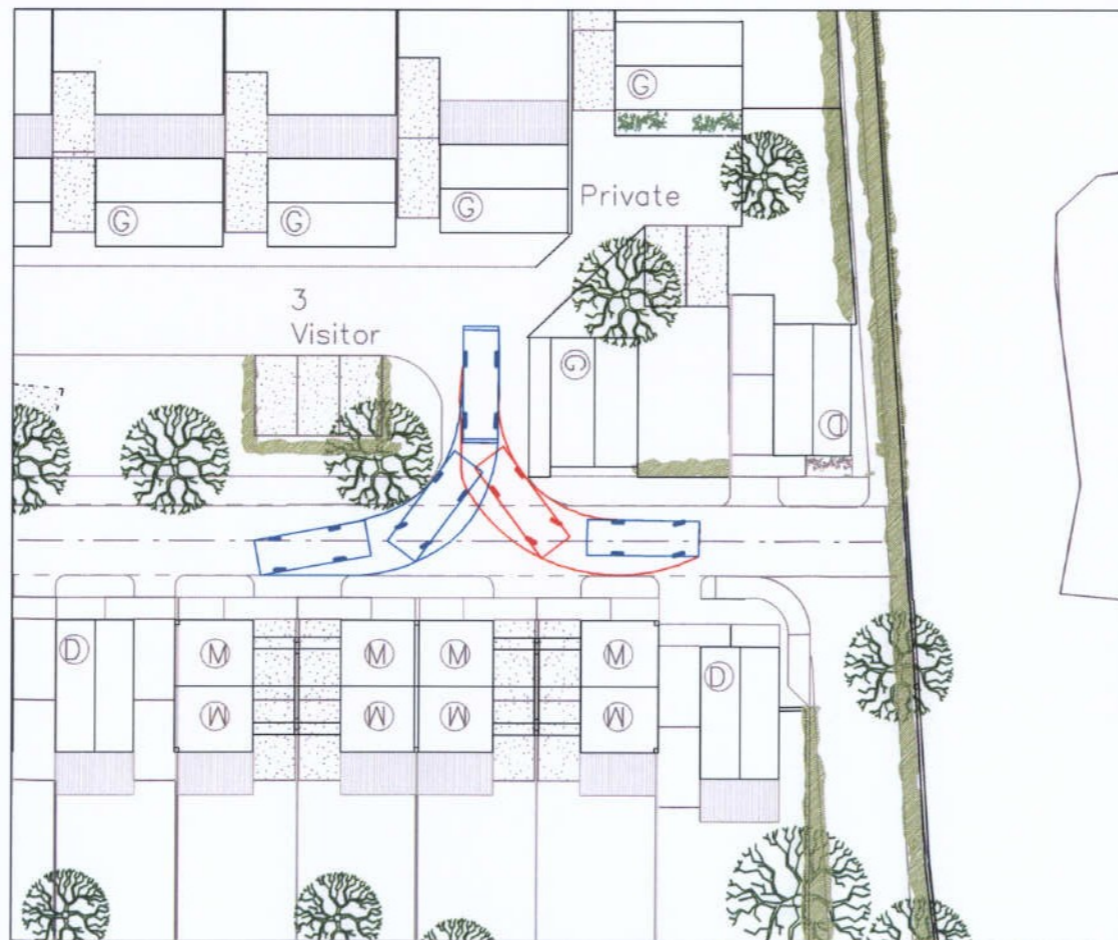
| | | |
|-------------|----------|-----|
| Drawing No. | Figure 6 | Rev |
|-------------|----------|-----|



SOUTH-WEST CORNER OF DEVELOPMENT – ENTRY



SOUTH-WEST CORNER OF DEVELOPMENT – EXIT



NORTH-EAST CORNER OF DEVELOPMENT

NOTES

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2. Dimensions not to be scaled.
3. Based upon drawing prepared by Stock Woolstencroft.

KEY

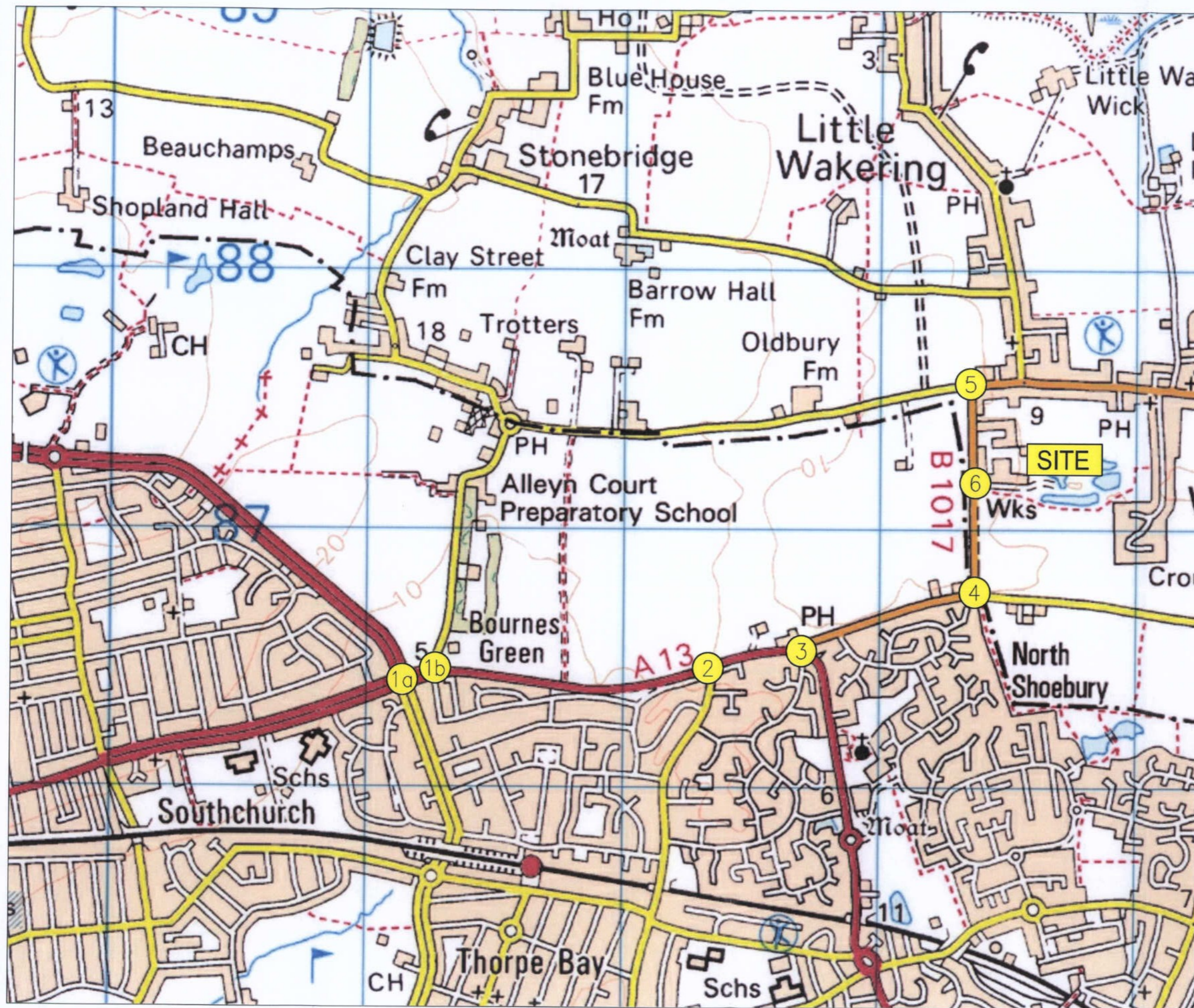


LWB fire tender – forward gear

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| Client : Inner London Group | | | |
| Project : Star Lane Great Woking | | | |
| Title : Vehicle Swept Paths (Emergency Access and Turning Head) | | | |
| Project Engineer : G. Turner | | Scale : 1:500 @ A3 | |
| Project Director : T. Foxall | | Date : February 2013 | |
| Status : | | | |
| Drawing No. Figure 7 | | | Rev |



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KEY

6 Junction Reference

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| Client: | | Inner London Group | |
| Project: | | Star Lane Great Wakering | |
| Title: | | Study Area | |
| Project Engineer: | | G. Turner | Scale: As Shown @ A3 |
| Project Director: | | T. Foxall | Date: February 2013 |
| Status: | | | |

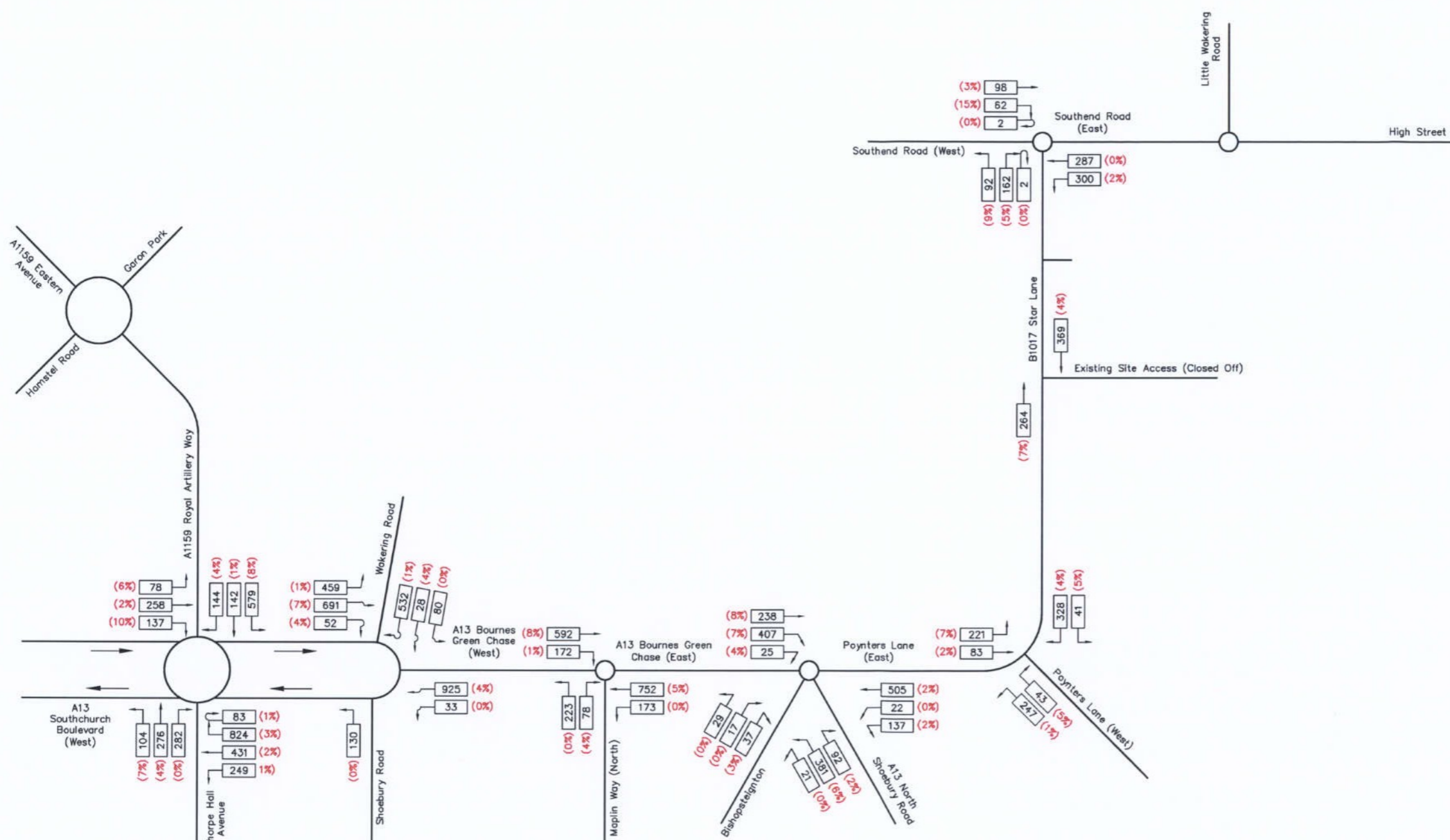
Drawing No. Figure 8 Rev

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Surveyed 2011 to 2013 growth factor: 1.0007



KEY
 9 Traffic Flows
 (1%) Percentage of HGV's
 → Direction of One-Way Flow



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| Client: | | Inner London Group | |
| Project: | | Star Lane Great Waking | |
| Title: | | Existing (2013) Traffic Flows Weekday AM Peak Hour | |
| Project Engineer: | | G. Turner | Scale: N.T.S |
| Project Director: | | T. Foxall | Date: February 2013 |
| Status: | | | |
| Drawing No. | | Figure 9 | Rev |

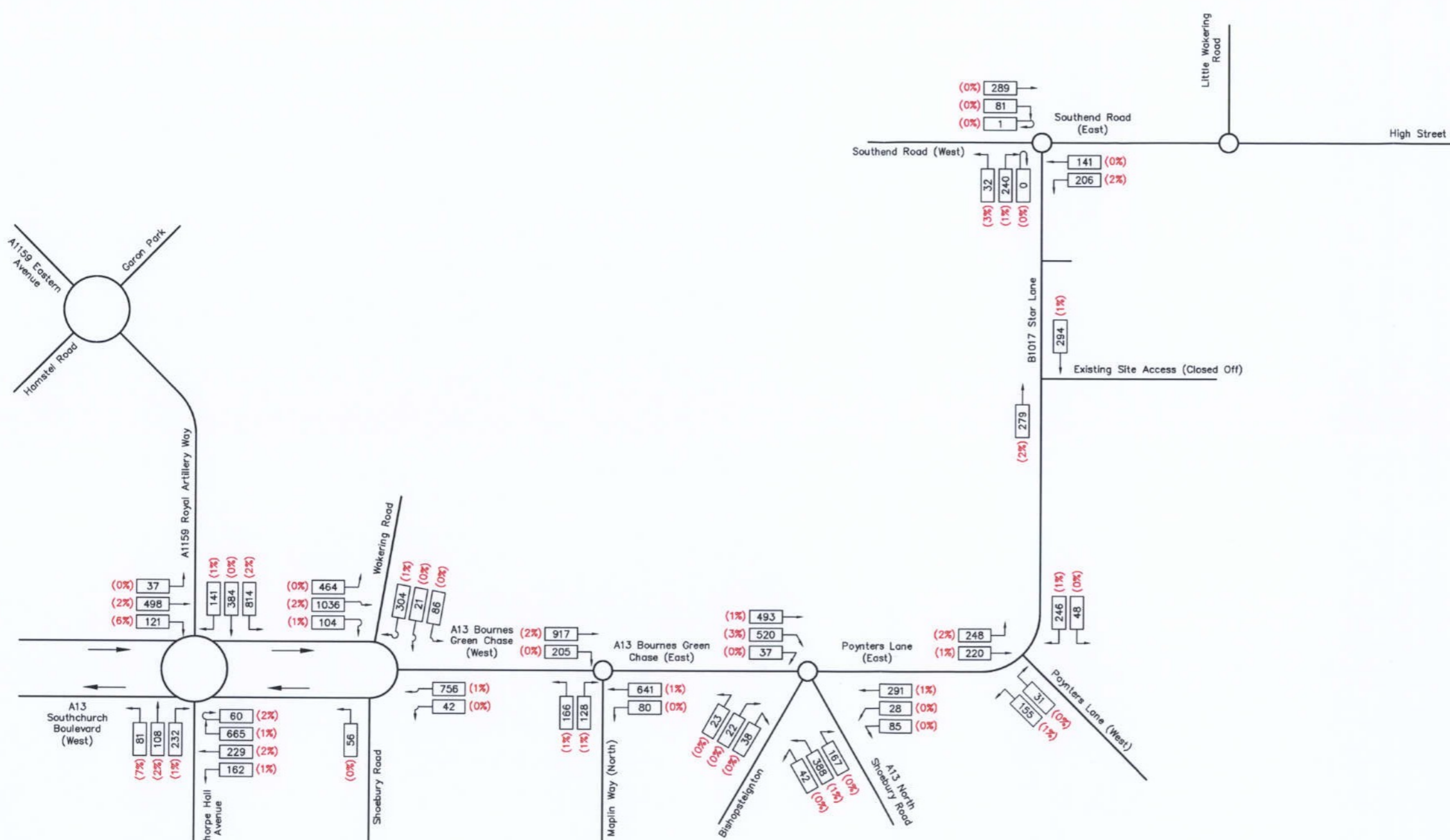
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Surveyed 2011 to 2013 growth factor: 1.0035



KEY

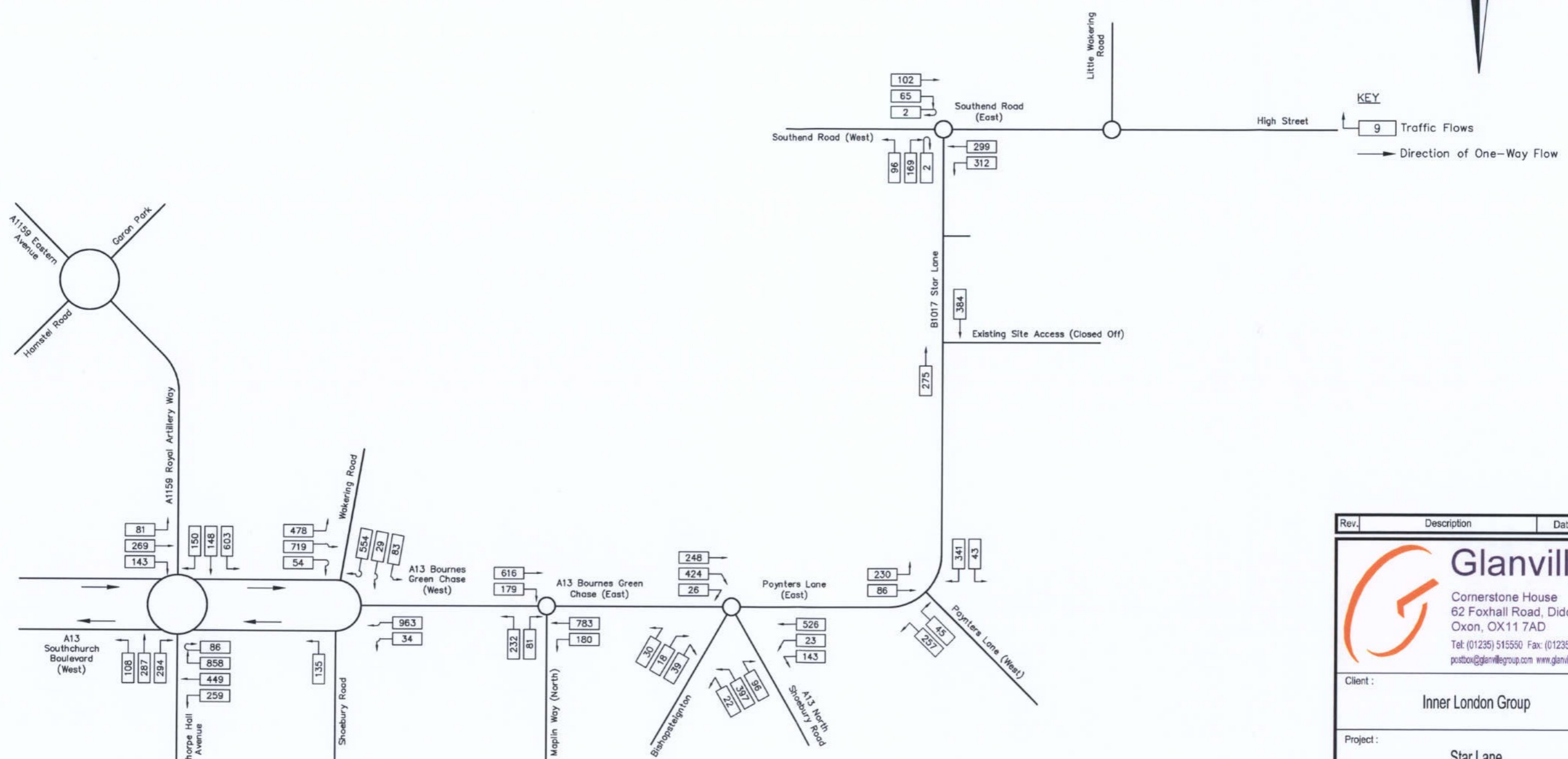
- 9 Traffic Flows
- (1%) Percentage of HGV's
- Direction of One-Way Flow



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| Client : | | Inner London Group | |
| Project : | | Star Lane Great Woking | |
| Title : | | Existing (2013) Traffic Flows Weekday PM Peak Hour | |
| Project Engineer : | | G. Turner | Scale : N.T.S |
| Project Director : | | T. Foxall | Date : February 2013 |
| Status : | | | |
| Drawing No. Figure 10 | | | Rev |

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Surveyed 2013 to 2018 growth factor: 1.0411



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| Client : Inner London Group | | | |
| Project : Star Lane Great Woking | | | |
| Title : Assessment Year (2018) Traffic Flows "Without Development" Weekday AM Peak Hour | | | |
| Project Engineer : G. Turner | | Scale : N.T.S. | |
| Project Director : T. Foxall | | Date : February 2013 | |
| Status : | | | |

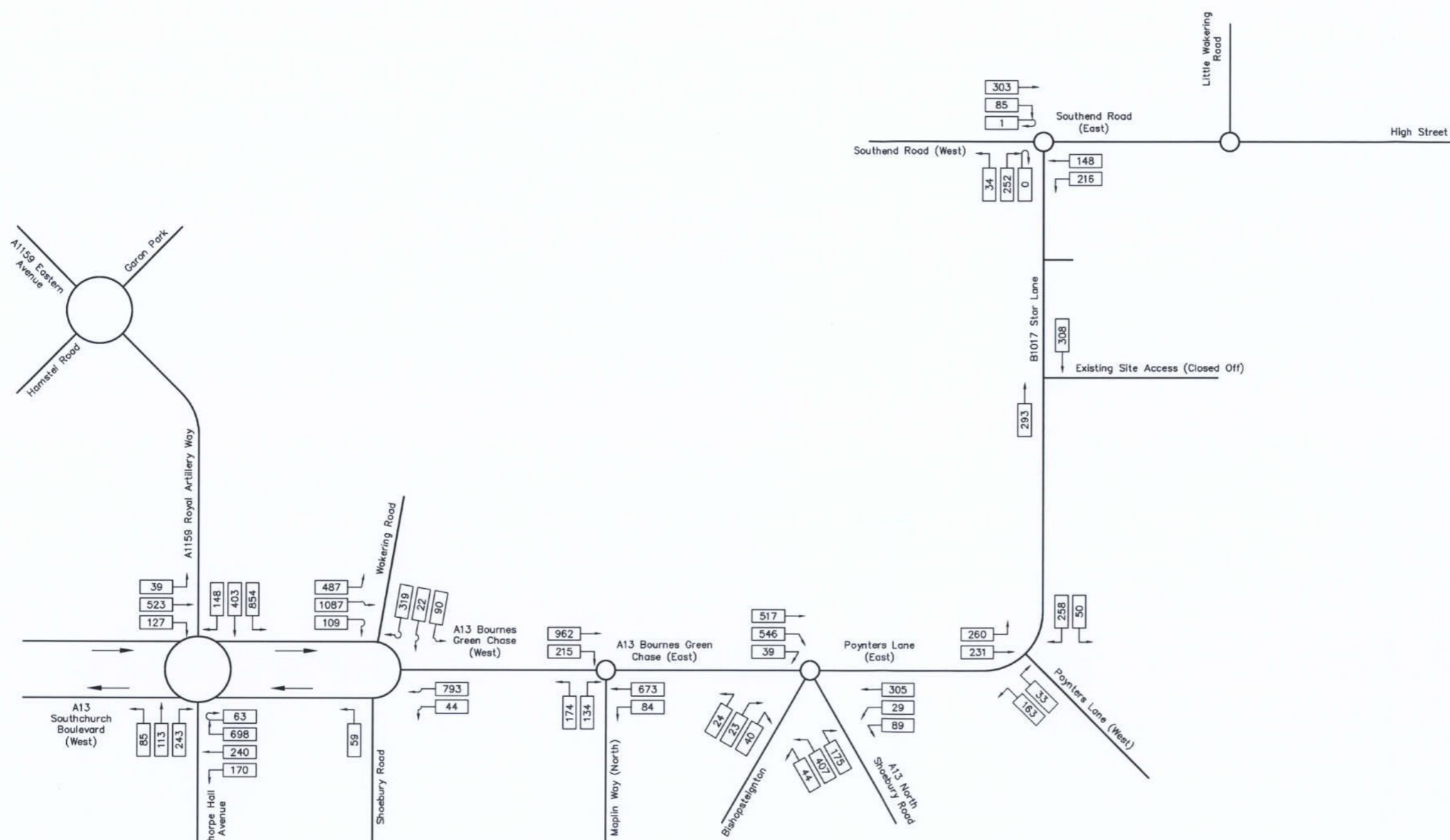
Drawing No. **Figure 11** Rev

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Surveyed 2013 to 2018 growth factor: 1.0492



KEY
 9 Traffic Flows
 → Direction of One-Way Flow

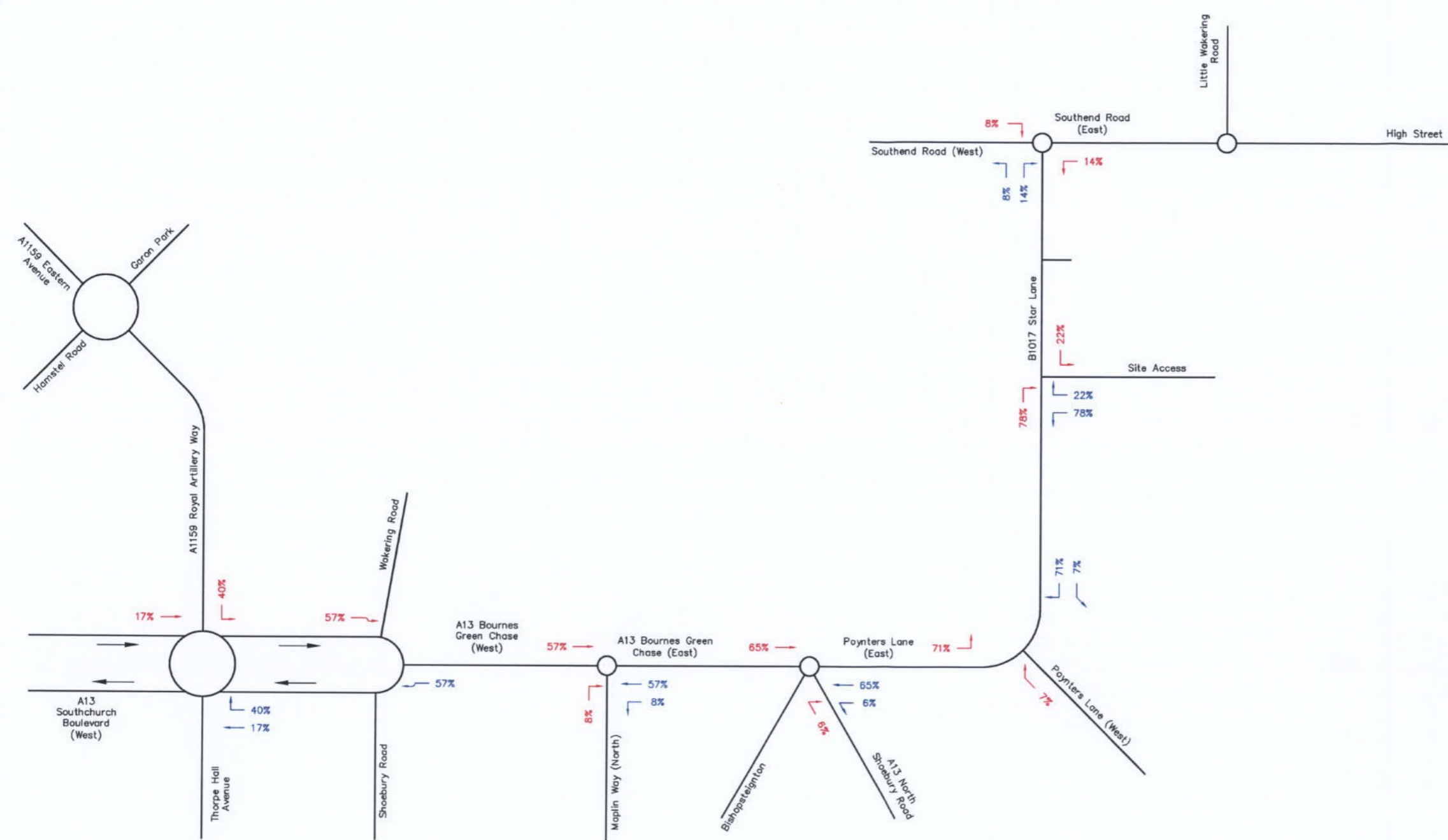


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| Client : Inner London Group | | | |
| Project : Star Lane Great Woking | | | |
| Title : Assessment Year (2018) Traffic Flows "Without Development" Weekday PM Peak Hour | | | |
| Project Engineer : G. Turner | | Scale : N.T.S | |
| Project Director : T. Foxall | | Date : February 2013 | |
| Status : | | | |
| Drawing No. Figure 12 | | | Rev |

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KEY
 49% → Inbound Traffic
 49% ← Outbound Traffic
 → Direction of One-Way Flow



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| Client : | | Inner London Group | |
| Project : | | Star Lane Great Woking | |
| Title : | | Trip Assignment | |
| Project Engineer : | | G. Turner | Scale : N.T.S |
| Project Director : | | T. Foxall | Date : February 2013 |
| Status : | | | |

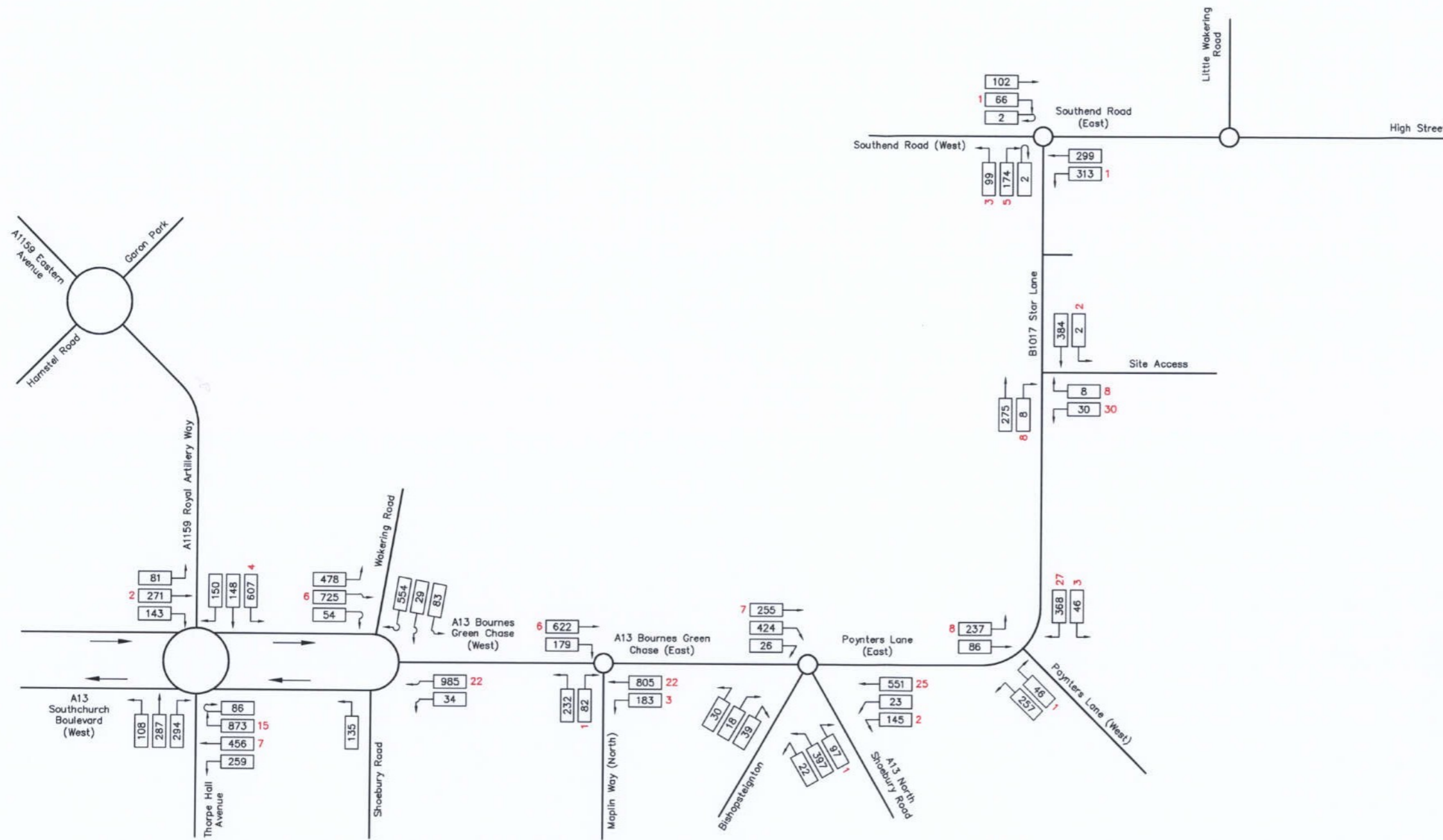
Drawing No. Figure 13 Rev

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KEY

- 9 Traffic Flows
- 11 Development Traffic
- Direction of One-Way Flow



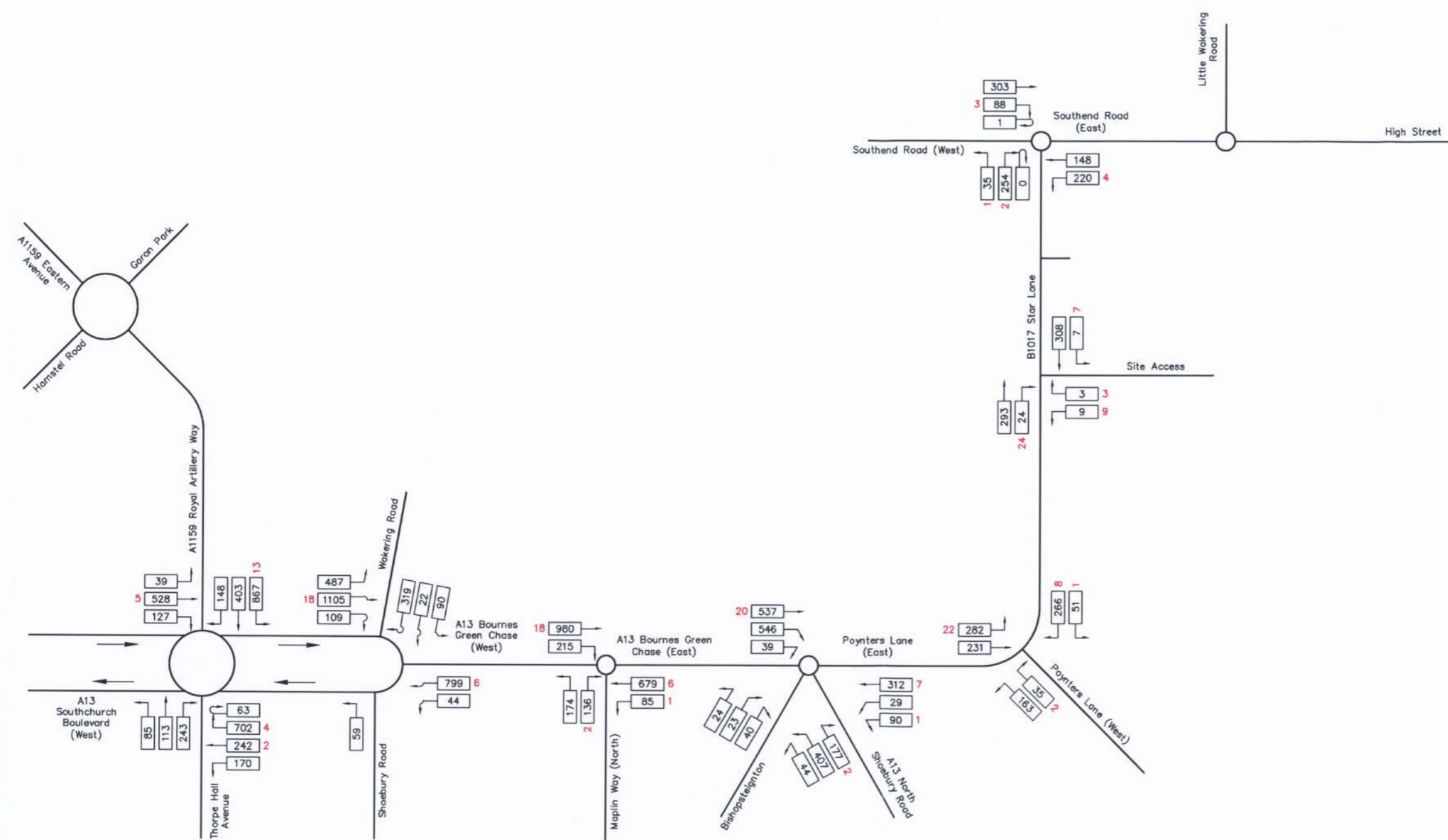
| Rev. | Description | Date | Chkd |
|--|-------------|----------------------|------|
|  Glanville Cornerstone House 62 Foxhall Road, Didcot Oxon, OX11 7AD Tel: (01235) 515550 Fax: (01235) 817799 postbox@glanvillegroup.com www.glanvillegroup.com | | | |
| Client : Inner London Group | | | |
| Project : Star Lane Great Woking | | | |
| Title : Assessment Year (2018) Traffic Flows "With Brickworks Development" Weekday AM Peak Hour | | | |
| Project Engineer : G. Turner | | Scale : N.T.S. | |
| Project Director : T. Foxall | | Date : February 2013 | |
| Status : | | | |

| | | |
|-------------|-----------|-----|
| Drawing No. | Figure 14 | Rev |
|-------------|-----------|-----|

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KEY
 9 Traffic Flows
 11 Development Traffic
 → Direction of One-Way Flow



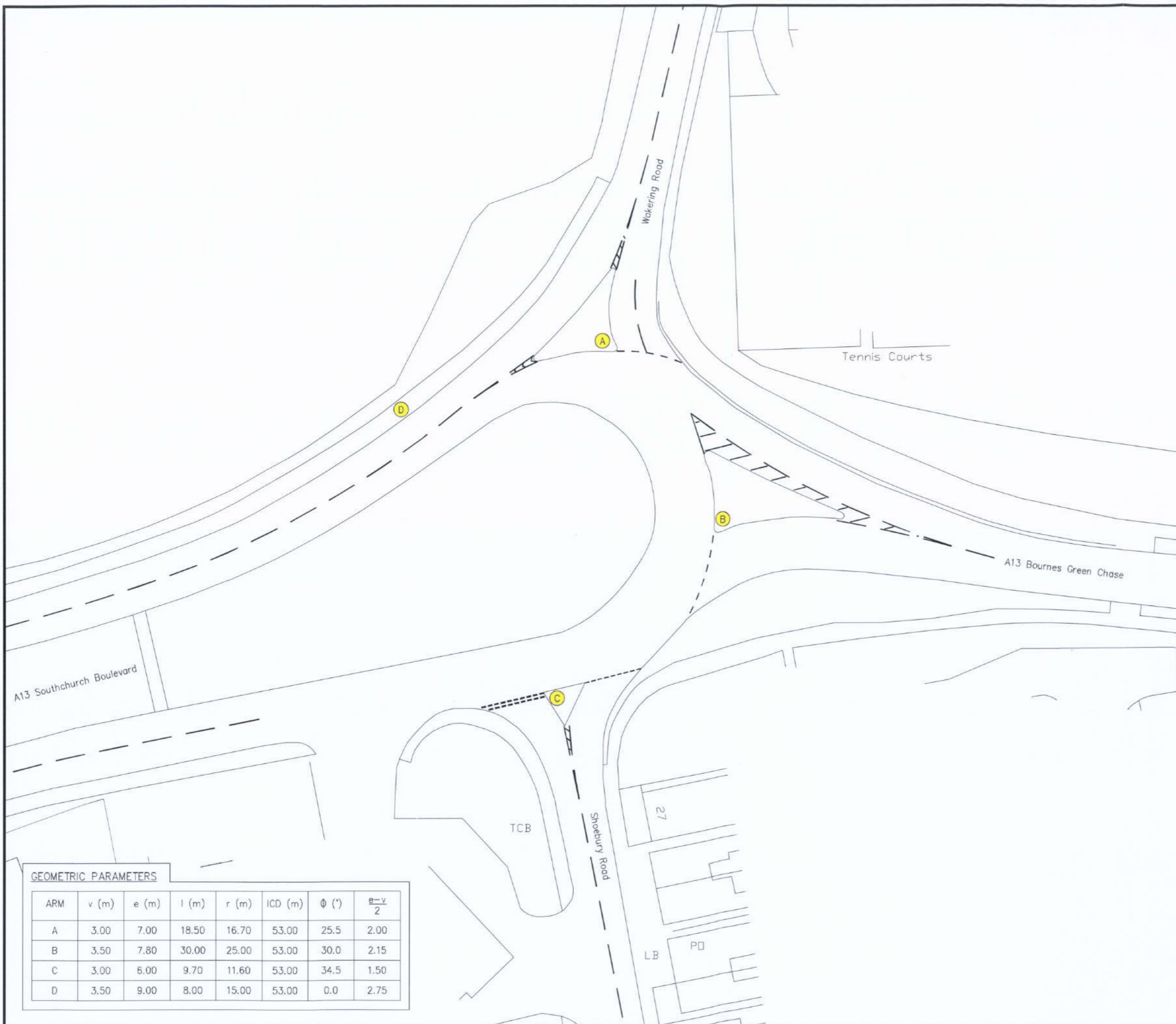
| Rev. | Description | Date | Chkd |
|--|-------------|----------------------|------|
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| Client : Inner London Group | | | |
| Project : Star Lane Great Woking | | | |
| Title : Assessment Year (2018) Traffic Flows "With Brickworks Development" Weekday PM Peak Hour | | | |
| Project Engineer : G. Turner | | Scale : N.T.S. | |
| Project Director : T. Foxall | | Date : February 2013 | |
| Status : | | | |

Drawing No. Figure 15 Rev

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KEY
 (A) Arm reference



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|------|-------------|------|------|
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Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Junction Ref 1B - A13 Bournes Green Chase /
 Shoebury Road / A13 Southchurch Boulevard /
 Wakering Road (3-arm junction)

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

Status :

Drawing No. Figure 17 Rev

GEOMETRIC PARAMETERS

| ARM | v (m) | e (m) | l (m) | r (m) | ICD (m) | Φ (°) | $\frac{e-v}{2}$ |
|-----|-------|-------|-------|-------|---------|-------|-----------------|
| A | 3.00 | 7.00 | 18.50 | 16.70 | 53.00 | 25.5 | 2.00 |
| B | 3.50 | 7.80 | 30.00 | 25.00 | 53.00 | 30.0 | 2.15 |
| C | 3.00 | 6.00 | 9.70 | 11.60 | 53.00 | 34.5 | 1.50 |
| D | 3.50 | 9.00 | 8.00 | 15.00 | 53.00 | 0.0 | 2.75 |

GEOMETRIC PARAMETERS

| ARM | v (m) | e (m) | l (m) | r (m) | ICD (m) | Φ (°) | $\frac{e-v}{2}$ |
|-----|-------|-------|-------|-------|---------|-------|-----------------|
| A | 3.50 | 5.20 | 15.00 | 18.00 | 31.00 | 25.0 | 0.85 |
| B | 3.50 | 5.00 | 20.20 | 11.80 | 30.50 | 33.0 | 0.75 |
| C | 4.00 | 5.00 | 10.30 | 27.70 | 31.00 | 44.0 | 0.50 |

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KEY

(A) Arm reference



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|------|-------------|------|------|
| | | | |

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Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Junction Ref 2
 A13 Bournes Green Chase / Maplin Way North
 (3-arm roundabout)

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

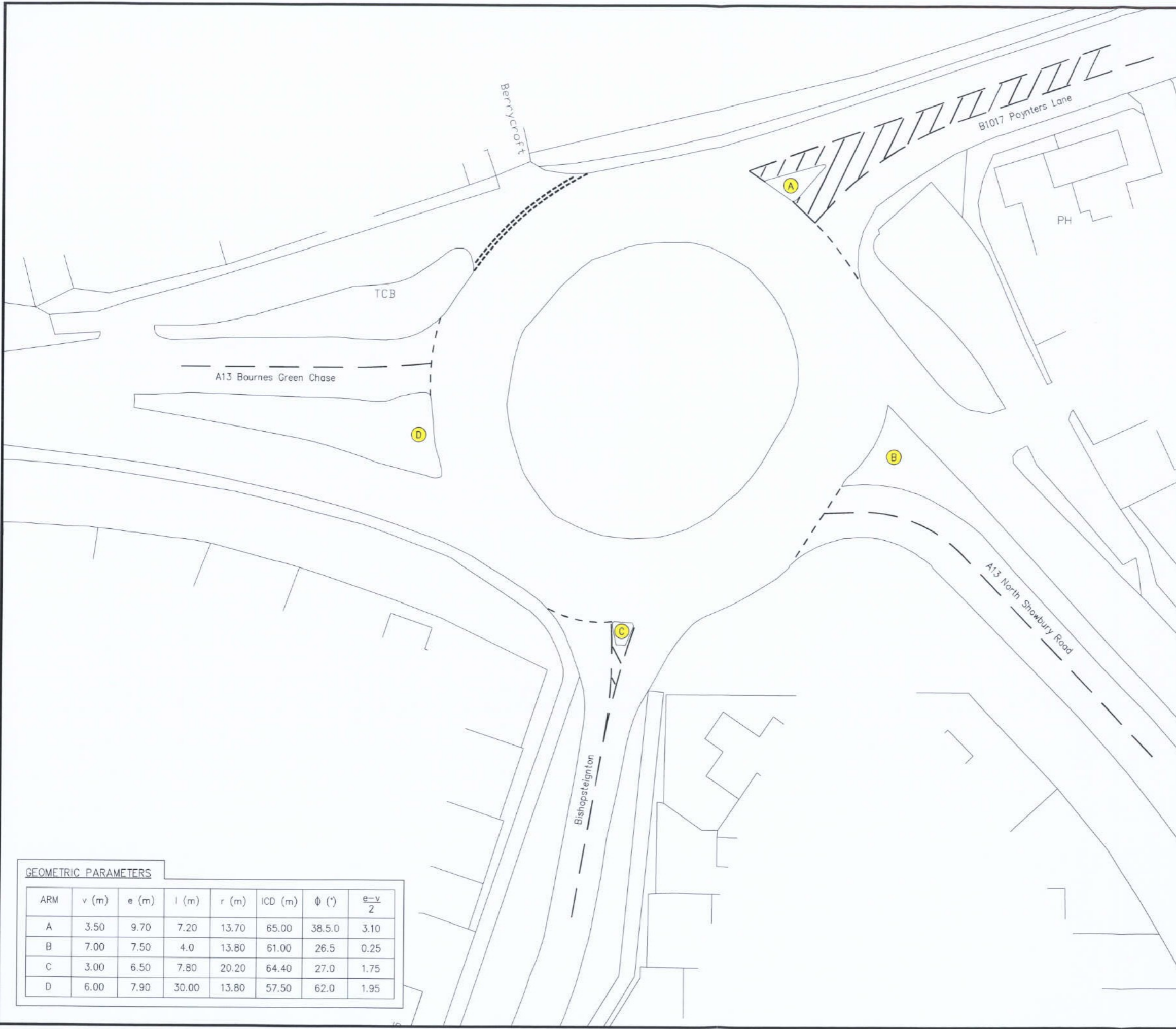
Status :
 Drawing No. Figure 18 Rev

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KEY

(A) Arm reference



GEOMETRIC PARAMETERS

| ARM | v (m) | e (m) | l (m) | r (m) | ICD (m) | ϕ (°) | $\frac{e-v}{2}$ |
|-----|-------|-------|-------|-------|---------|------------|-----------------|
| A | 3.50 | 9.70 | 7.20 | 13.70 | 65.00 | 38.5.0 | 3.10 |
| B | 7.00 | 7.50 | 4.0 | 13.80 | 61.00 | 26.5 | 0.25 |
| C | 3.00 | 6.50 | 7.80 | 20.20 | 64.40 | 27.0 | 1.75 |
| D | 6.00 | 7.90 | 30.00 | 13.80 | 57.50 | 62.0 | 1.95 |

| Rev. | Description | Date | Chkd |
|------|-------------|------|------|
|------|-------------|------|------|

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Client :
Inner London Group

Project :
**Star Lane
 Great Woking**

Title :
**Junction Ref 3 - A13 Bournes Green Chase /
 B1017 Poynters Lane / A13 North Shoebury Road /
 Bishopsteignton (4-arm roundabout)**

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

Status :

Drawing No. Figure 19 Rev

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KEY

A Arm reference



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| | | | |



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Client :
Inner London Group

Project :
**Star Lane
 Great Woking**

Title :
**Junction Ref 4
 B1017 Star Lane / Poynters Lane
 (priority T-junction)**

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

Status :

Drawing No. Figure 20 Rev

GEOMETRIC PARAMETERS

| W _{major} (m) | W _{cr} | V _{c-b} (m) | W _{minor} (m) | V _i (m) | V _r (m) |
|---------------------------|-----------------|-------------------------|---------------------------|-----------------------|-----------------------|
| 6.05 | 0.00 | 140.00 | 3.76 | 67.00 | 54.00 |

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KEY

(A) Arm reference



| Rev. | Description | Date | Chkd |
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| | | | |



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Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Junction Ref 5
 B1017 Star Lane / Southend Road
 (3-arm mini-roundabout)

Project Engineer : G. Turner Scale : 1:500 @ A3

Project Director : T. Foxall Date : February 2013

Status :

GEOMETRIC PARAMETERS

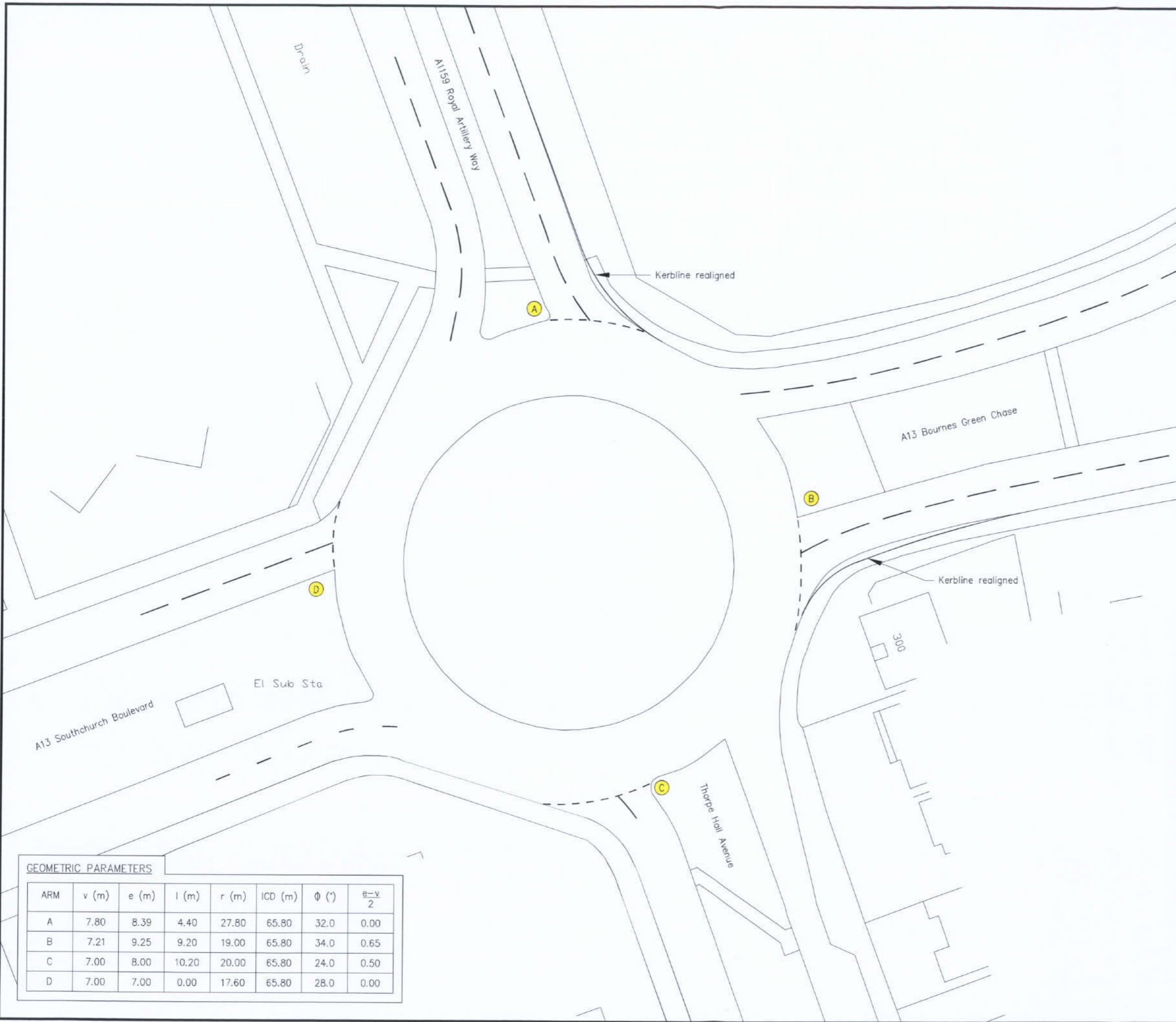
| ARM | v (m) | e' (m) | vm (m) | l'm (m) | an (m) | kx (m) |
|-----|-------|--------|--------|---------|--------|--------|
| A | 3.00 | 5.00 | 3.00 | 6.60 | 10.50 | 8.10 |
| B | 3.10 | 6.70 | 3.00 | 11.50 | 11.00 | 9.00 |
| C | 3.25 | 5.60 | 2.70 | 9.70 | 10.50 | 6.90 |

Drawing No. Figure 21 Rev

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KEY
 (A) Arm reference



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|------|-------------|------|------|

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Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Proposed Mitigation
 Junction Ref 1A

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

Status :

Drawing No. Figure 22 Rev

| GEOMETRIC PARAMETERS | | | | | | | |
|----------------------|-------|-------|-------|-------|---------|-------|-----------------|
| ARM | v (m) | e (m) | l (m) | r (m) | ICD (m) | Φ (°) | $\frac{e-y}{2}$ |
| A | 7.80 | 8.39 | 4.40 | 27.80 | 65.80 | 32.0 | 0.00 |
| B | 7.21 | 9.25 | 9.20 | 19.00 | 65.80 | 34.0 | 0.65 |
| C | 7.00 | 8.00 | 10.20 | 20.00 | 65.80 | 24.0 | 0.50 |
| D | 7.00 | 7.00 | 0.00 | 17.60 | 65.80 | 28.0 | 0.00 |

GEOMETRIC PARAMETERS

| ARM | v (m) | e (m) | l (m) | r (m) | ICD (m) | ϕ (°) | $\frac{e-v}{2}$ |
|-----|-------|-------|-------|-------|---------|------------|-----------------|
| A | 3.50 | 5.20 | 15.00 | 18.00 | 31.00 | 25.0 | 0.85 |
| B | 3.50 | 5.00 | 20.20 | 11.80 | 30.50 | 33.0 | 0.75 |
| C | 4.00 | 5.70 | 12.10 | 27.70 | 31.00 | 44.0 | 0.50 |

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KEY

(A) Arm reference



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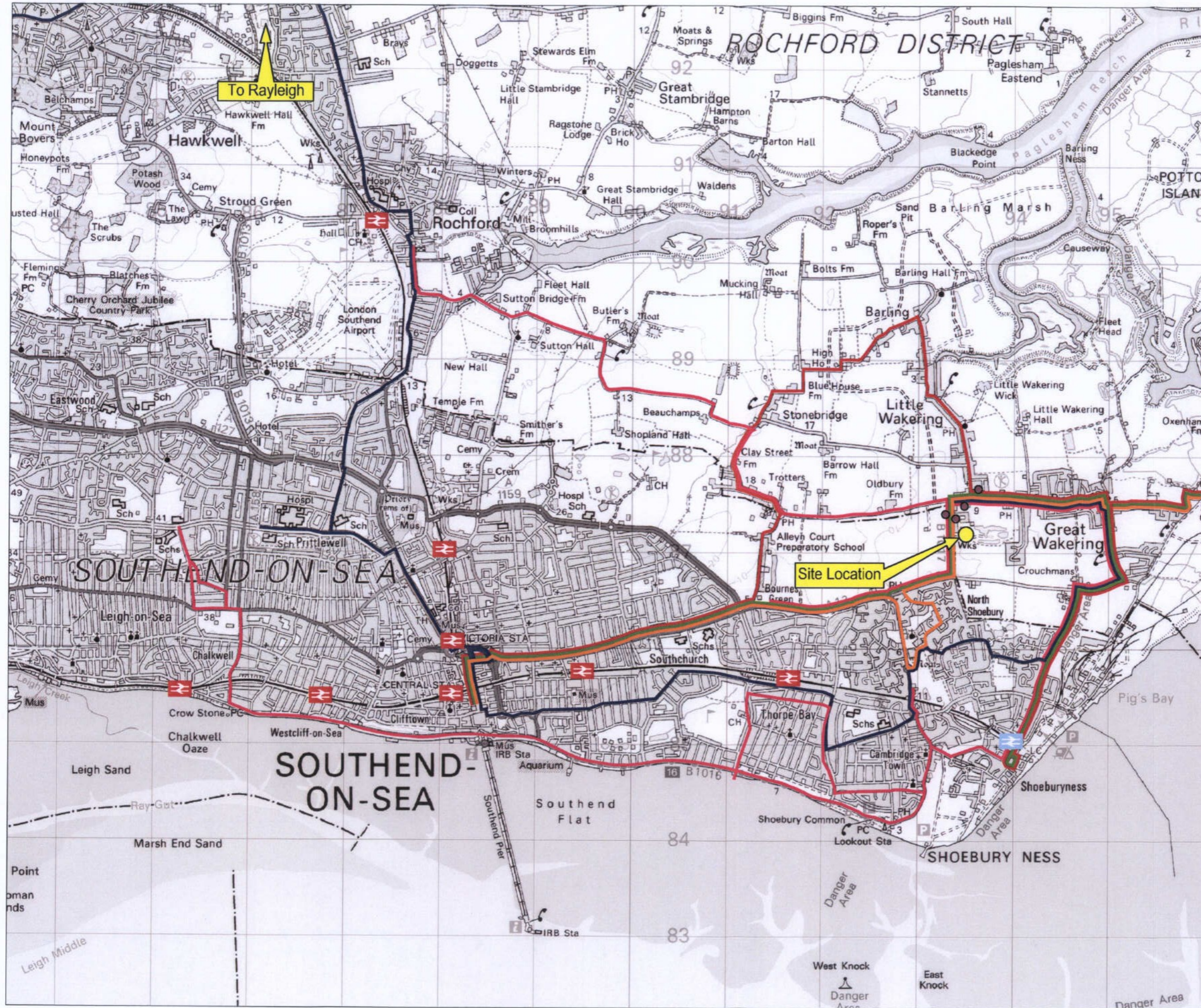
Client :
 Inner London Group

Project :
 Star Lane
 Great Woking

Title :
 Proposed Mitigation
 Junction Ref 2

Project Engineer : G. Turner Scale : 1:500 @ A3
 Project Director : T. Foxall Date : February 2013

Status :
 Drawing No. Figure 23 Rev



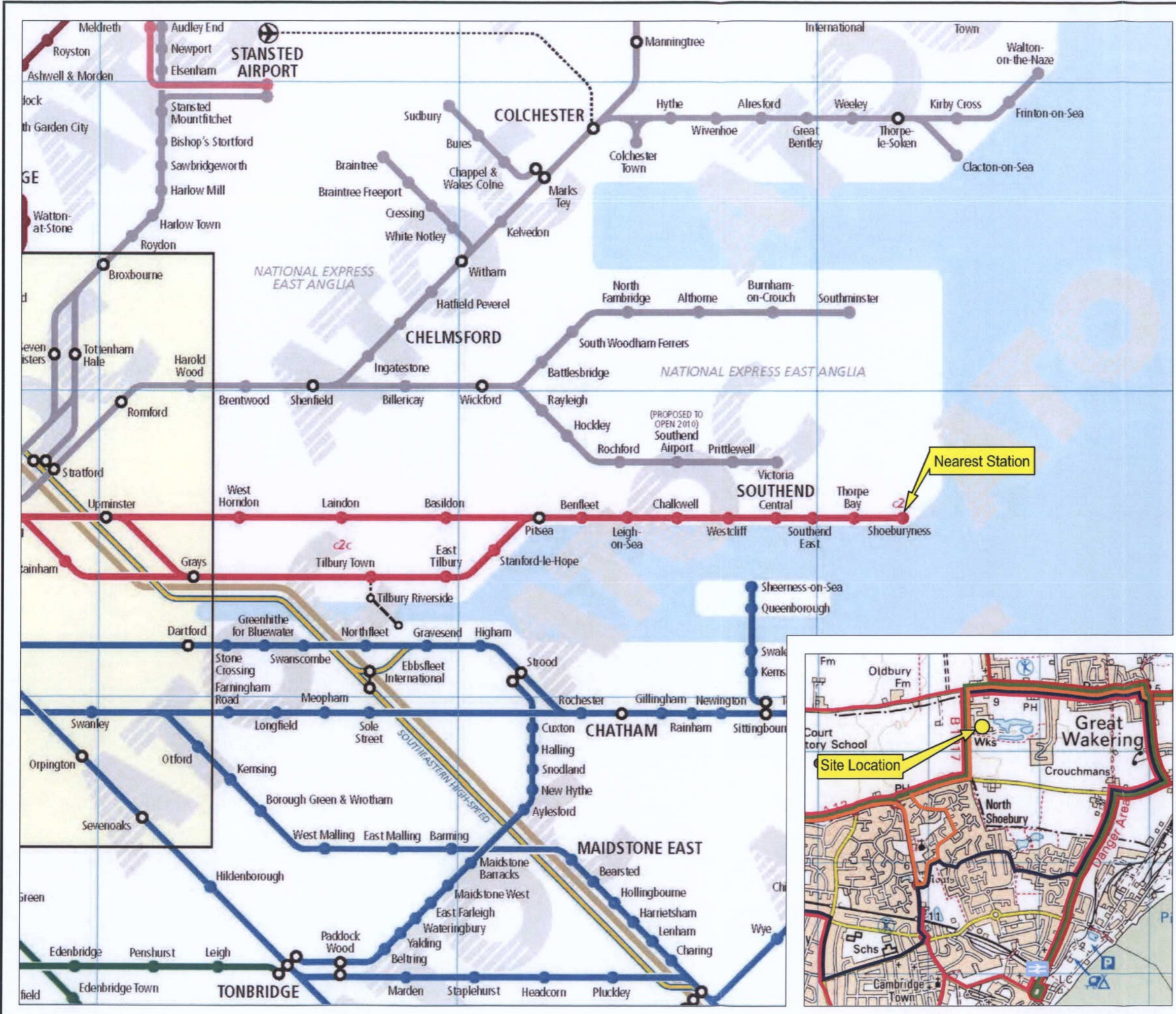
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- KEY**
- Route 4
 - Route 4A
 - Route 7
 - Route 14
 - Route 814
 - Rail Station
 - Nearest Station
 - Nearest Bus Stops

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|--|-------------|--------------------------|----------------------|
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| Client: | | Inner London Group | |
| Project: | | Star Lane Great Wakering | |
| Title: | | Local Bus Network | |
| Project Engineer: | | G. Turner | Scale: As Shown @ A3 |
| Project Director: | | T. Foxall | Date: February 2013 |
| Status: | | | |
| Drawing No. | | Figure 24 | Rev |

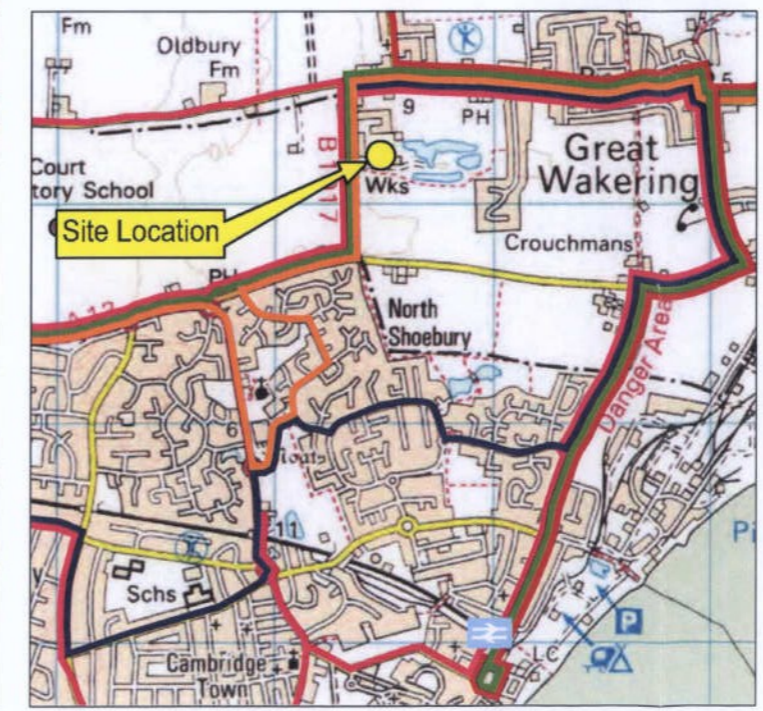
5KM



Note:
Source: ATOC



KEY
 Nearest Station



| Rev. | Description | Date | Chkd |
|--|-------------|------------------------|----------------------|
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| Client : | | Inner London Group | |
| Project : | | Star Lane Great Waking | |
| Title : | | Local Rail Network | |
| Project Engineer : | | G. Turner | Scale : N.T.S |
| Project Director : | | T. Foxall | Date : February 2013 |
| Status : | | | |
| Drawing No. Figure 25 | | Rev | |

Appendices

Appendix A
Scoping Information for Transport Assessment

RESIDENTIAL DEVELOPMENT, STAR LANE, GREAT WAKERING, ESSEX

PROPOSED SCOPE OF TRANSPORT ASSESSMENT (ISSUE 3)

Introduction

- Glanville Consultants has prepared this scoping report on behalf of the Inner London Group. This report identifies the key aspects of analysis and assessment to be undertaken for inclusion within the Transport Assessment that will be prepared to accompany a planning application for the development of land East of B1017 Star Lane, Great Wakering, Essex.

Existing and Proposed Development

Existing Development

- The existing development site is approximately 3.26 hectares in size and lies to the South of High Street, Great Wakering. The site is bounded by industrial warehousing to the North, fields to the East, trees and landscaping to the South and B1017 Star Lane to the West.
- The site was formally occupied by Star Lane brickworks, which closed in 2005. All buildings associated with the former brickworks have since been demolished such that the site now largely comprises demolition arisings and areas of hard standing. The principle of development on the site is therefore long established.
- Vehicular access to the existing site is achieved from Star Lane via a simple priority T-junction arrangement.
- B1017 Star Lane comprises a single carriageway which links with Southend Road via a mini-roundabout to the North and Poynters Lane, via a priority T-junction, to the South. The speed limit along the majority of Star Lane is 60mph with the exception of the last 140m on the approach to the mini-roundabout junction of B1017 Star Lane / Southend Road, where the speed limit is 30mph.

Proposed Development

- The proposal relates to the redevelopment of the site for residential purposes. Planning permission will be sought for 130 units ranging from apartments and 2 bed to 4 bed family homes. The development will include a percentage of affordable houses, which will be confirmed when the application is submitted.
- The development will include parking in line with Essex County Council's document entitled '*Parking Standards – Design and Good Practice*', dated September 2009.
- Parking for cycles will be provided which will be in line with Essex County Council's parking standards.
- It is proposed that access to the development will be achieved by way of a new priority T-junction which will be constructed on B1017 Star Lane, approximately 10m South of the existing site access.

- The visibility requirements for the proposed site access shall conform with TD42/95 'Geometric Design of Major / Minor Priority Junctions', assuming an x-distance of 4.5m and a y-distance of 215m.
- The proposed development access arrangement is still being reviewed and will be passed on as soon as possible.

Proposed Scope of Transport Assessment

General

- Owing to the nature, size and location of the development, a full multi-modal Transport Assessment (TA) will be prepared and submitted with the planning application. This is to ensure that the transport related aspects of the development are fully assessed and to enable the impacts to be considered and managed. This is in-line with advice provided in *Guidance on Transport Assessment* prepared by the Department for Transport.
- The TA will be prepared in consultation with Essex County Council as local Highway Authority, in accordance with an agreed scoping study. The boundary of land within the control of Southend Borough Council lies immediately to the West of B1017 Star Lane and crosses Poynters Lane. Hence, Southend Borough Council will also be consulted as part of these proposals.
- The TA will give prominence to issues related to pedestrians, cyclists and public transport in accordance with Government guidelines to assess accessibility of the development by modes other than the private car.
- Existing public transport provision and facilities will be reviewed and the scope and necessity for improvements to services and infrastructure to enhance the attractiveness of public transport will be assessed.
- Existing pedestrian and cyclist facilities will be reviewed and the scope and necessity for improvements to infrastructure will be assessed, taking into account safety and convenience.
- The suitability of the internal layout will be assessed, with particular reference to access and circulation in respect of refuse and emergency vehicles, parking provision and servicing.
- A section of the TA will deal with planning policies relevant to the site and proposed use in terms of its transport needs and effects on travel patterns and the transport network.
- The suitability of the site access will be assessed in terms of geometry, junction spacing, capacity, intervisibility between modes, facilities for pedestrians and other vulnerable road users, public transport, vehicle manoeuvring and other appropriate design criteria.

Trip Generation

- The existing site is currently undeveloped, such that the trips generated by the development will be entirely 'new' to the highway network and will be assumed to be so for the purposes of assessment. However, the former brickworks site would have generated trips and its closure would have therefore resulted in a small reduction in traffic on the highway network. It is assumed that an equivalent proportion of trips generated by the residential development will 'fill' this reduction in traffic on the highway network. Hence it is proposed that the trips generated by the former brickworks are removed from the total trips generated by the proposed residential development to arrive at a net trip generation for the site.
- In order to establish appropriate trip rates for the development, reference has been made to the TRICS database (2010(b) v6.6.2, September 2010) under the land uses 'Residential' and sub-categories 'Mixed Private Housing' and 'Mixed Non-Private Housing'. It is recommended by TRICS that the sub-category 'Mixed Non-Private Housing' should be used when deriving trip rates for affordable or rented accommodation. The proposed trip rates for each of the categories described above, to establish the overall traffic generation of the site, are set out in the following tables, while the TRICS output data is appended for reference.

Table 1: Proposed 'Residential' Trip Rates (Mixed Private Housing)

| Peak Hour | Residential Trip Rates (trips / dwelling) | | |
|----------------------------|---|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 0.095 | 0.354 | 0.449 |
| Weekday PM (17.00 – 18.00) | 0.274 | 0.148 | 0.422 |

- Based on the assumption that 117 dwellings will be privately owned, the development is predicted to generate trips as summarised in Table 2 below.

Table 2: Proposed 'Residential' Trips (Mixed Private Housing)

| Peak Hour | Residential Trips (vehicles) | | |
|----------------------------|------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 11 | 41 | 53 |
| Weekday PM (17.00 – 18.00) | 32 | 17 | 49 |

Table 3: Proposed 'Residential' Trip Rates (Mixed Non-Private Housing)

| Peak Hour | Residential Trip Rates (trips / 100m ² GFA) | | |
|----------------------------|--|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 0.160 | 0.328 | 0.488 |
| Weekday PM (17.00 – 18.00) | 0.294 | 0.143 | 0.437 |

- Based on the assumption that 13 dwellings (10%) will be non-privately owned, the development is predicted to generate trips as summarised in Table 4 below.

Table 4: Proposed 'Residential' Trips (Mixed Non-Private Housing)

| Peak Hour | Residential Trips (vehicles) | | |
|----------------------------|------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 2 | 4 | 6 |
| Weekday PM (17.00 – 18.00) | 4 | 2 | 6 |

- The total trip generation for the site based on mixed private and non-private housing will be as summarised on Table 5.
- *Table 5: Total Proposed Residential Trip Generation for Site.*

| Peak Hour | Residential Trips (vehicles) | | |
|----------------------------|------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 13 | 45 | 59 |
| Weekday PM (17.00 – 18.00) | 36 | 19 | 55 |

- In order to establish appropriate trip rates for the former brickworks site reference has been made to the TRICS database (2010(b) v6.6.2, September 2010) under the land uses 'Employment' and sub-category 'Quarry'. The proposed trip rates are set out in the following table, while the TRICS output data is appended for reference.

Table 6: Proposed Brickworks Trip Rates

| Peak Hour | Residential Trip Rates (trips / ha) | | |
|----------------------------|-------------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 0.735 | 0.612 | 1.347 |
| Weekday PM (17.00 – 18.00) | 0.300 | 1.500 | 1.800 |

- Based on the existing site area of 3.26 hectares the former brickworks site is assumed to have generated trips as summarised in Table 7 below.

Table 7: Proposed Brickworks Trips

| Peak Hour | Brickworks Trips (vehicles) | | |
|----------------------------|-----------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 2 | 2 | 4 |
| Weekday PM (17.00 – 18.00) | 1 | 5 | 6 |

- The net trip distribution for the site is summarised in the following table.

| Peak Hour | Net Trip Generation (vehicles) | | |
|----------------------------|--------------------------------|------------|---------|
| | Arrivals | Departures | Two-Way |
| Weekday AM (08.00 – 09.00) | 11 | 43 | 55 |
| Weekday PM (17.00 – 18.00) | 35 | 14 | 49 |

- Trip distribution will be determined from origin and destination data listed in the Census 2001.

Development Impact

- The assessment year will be assumed to be 2014 with background traffic flows factored up using TEMPRO v6.2. These growth rates will be tailored to the opening year using National Trip End Model (NTEM) forecasts.
- Development traffic flows will be distributed across the local highway network including the following junctions. These junctions will constitute the 'study area'.
 - A) B1017 Star Lane / Southend Road – Mini-roundabout (4-arm)
 - B) B1017 Star Lane / Poynters Lane – Priority T-Junction
- In addition to the junctions listed above manual classified turning movement counts will also be carried out at the following junctions:
 - C) A1159 Eastern Ave / A13 Southchurch Boulevard / Thorpe Hall Ave / A13 Bournes Green Chase 4-arm roundabout.
 - D) A13 Bournes Green Chase / Shoebury Road / A13 Southchurch Boulevard / Wakering Road.
 - E) A13 Bournes Green Chase / Maplin Way North 3-arm roundabout.
 - F) A13 Bournes Green Chase / B1017 Poynters Lane / A13 North Shoebury Road / Bishopsteignton 4-arm roundabout.
- Capacity assessments of the above junctions are only needed where increases in traffic, as a result of the development, suggest a material impact on the highway network. Where capacity assessments are deemed necessary, junctions will be assessed using empirical modelling software such as ARCADY, PICADY and LINSIG.
- Where junction performance is shown to materially worsen, appropriate mitigation measures will be derived and submitted to the Highway Authority for approval.

Road Traffic Accidents

- Accident records for the most recent 5 year period will be obtained for the junctions forming the study area. The injury accident statistical data will be analysed and any junctions or links with an accident rate greater than expected will be identified.
- Where appropriate, suitable mitigation works will be proposed where an increase in trips could perceptibly exacerbate an existing accident problem.

Travel Management Plan

It is understood that Essex County Council will not require submission of a Travel Management Plan (TMP). However, it is likely that the Developer will be expected to pay a contribution towards the production of Resident Information Packs, which will include public transport timetables. The contribution is likely to be requested via a S106 Agreement.

Appendix B

Stage 1 Road Safety Audit and Designer's Response

STAR LANE, GREAT WAKERING – PROPOSED RESIDENTIAL ACCESS ARRANGEMENTS

DESIGNER'S RESPONSE TO STAGE 1 ROAD SAFETY AUDIT

The following is provided in response to a Stage 1 Road Safety Audit (Ref. TMS 10036). The audit has been undertaken by TMS in respect of proposed highway works to construct a priority T-junction on B1017 Star Lane and High Street, Great Wakering, Essex. This response should be read in conjunction with drawings TR8100953/100 Rev A and TR8100953/200 Rev A which have been revised in response to the Audit Team's comments as follows:

Star Lane Access

Problem: High Vehicle Speeds (Para 2.1)

The proposed amendments to the existing 30mph speed limit will be subject to a Traffic Regulation Order (TRO) and hence will be subject to the successful completion of a statutory consultation and advertising process. Once the TRO process has been completed and the signage has been installed the speed limit will be enforceable by the police in the normal manner.

The Design Organisation accepts the Audit Team's recommendation in respect of providing a gateway feature and has included a 30mph roundel at the new terminal point. The roundel will confirm to Diag 1065 of the Traffic Sign Regulations and General Directions 2002.

Problem: Carriageway Illumination (Para 2.2)

Amendments to existing street lighting provision and the requirement to install new lighting columns as a consequence of the proposed revisions to the speed limit will be reviewed as part of the detailed design process associated with the Star Lane site access.

Problem: Pedestrian Trip Hazard (Para 2.3)

The proposed uncontrolled crossing across Star Lane has been positioned on the north side of the site access. This location is considered to be on the pedestrian desire line given its proximity to an existing bus stop location on the west side of Star Lane. The provision of a second uncontrolled crossing across Star Lane is considered by this Design Organisation to be unnecessary.

Problem: Pedestrian Trip Hazard (Para 2.4)

The Design Organisation accepts the Audit Team's recommendation and has amended the drawing to show a tactile paved landing and associated dropped kerbing on either side of the existing access to Star Lane Industrial Estate.

Observation (Para 2.5)

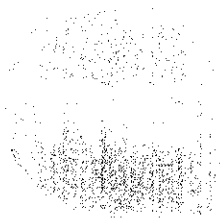
The majority of the internal roads will comprise shared facilities and hence pedestrians, cyclists and cars will share the same road space. However, a pedestrian footway will be provided on the north side of the main spine road through the development. The precise details have not yet been finalised but the Audit Team's comment is noted and will be passed on to the consultants dealing with the site's internal layout.

Problem: Vehicle / Vehicle Collision (Para 2.6)

The Design Organisation accepts the Audit Team's recommendation and will consult with the highway authority on this matter during the detailed design process.

Observation (Para 2.7)

The Design Organisation accepts the Audit Team's recommendation and has amended the drawing to include a traffic sign at each junction conforming to Diag 602 of the Traffic Sign Regulations and General Directions 2002.



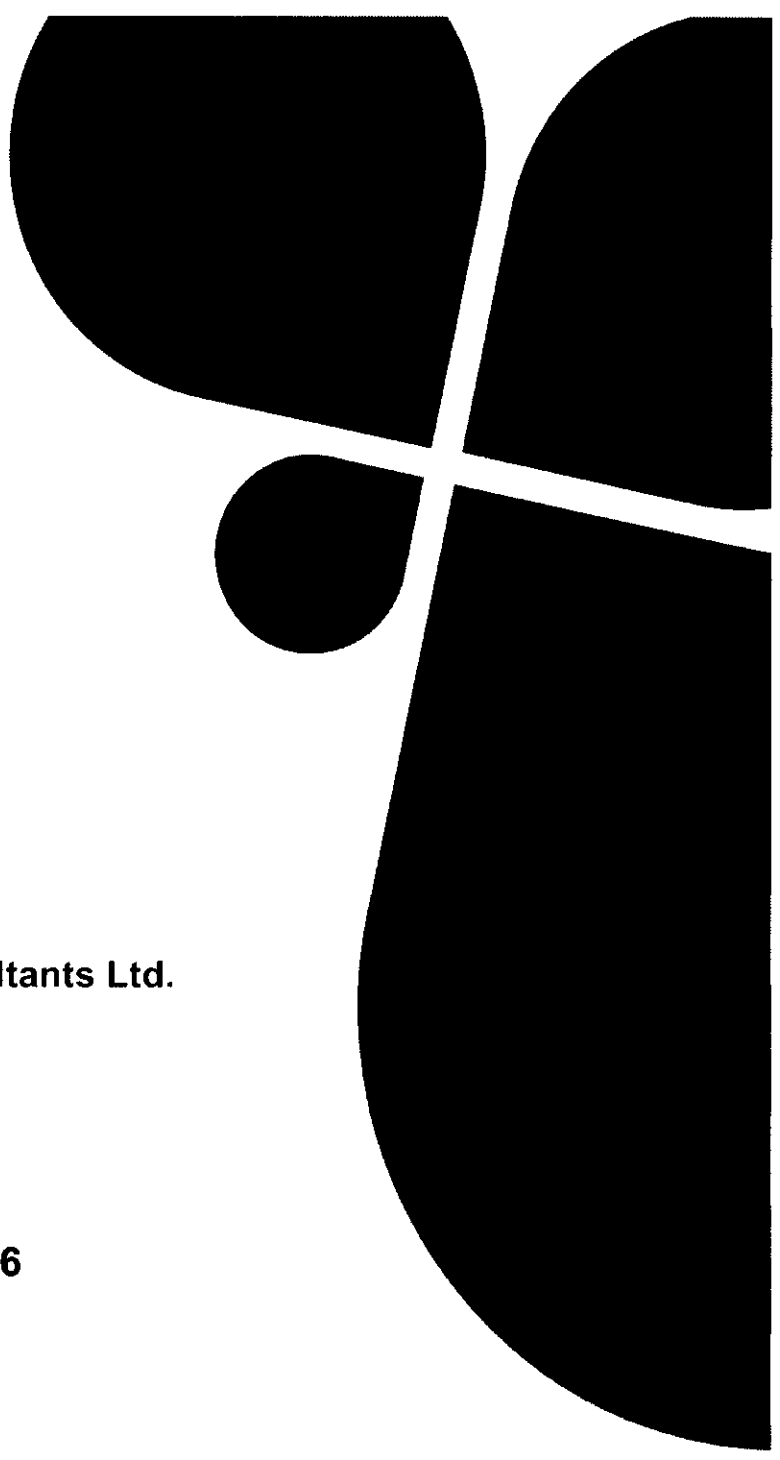
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Star Lane, Great Wakering

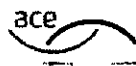
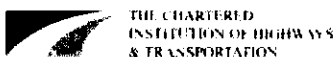
Road Safety Audit Stage 1

on behalf of Glanville Consultants Ltd.

TMS reference no: 10036



Vanguard Centre, University of Warwick Science Park,
St William Lyons Road, Coventry CV4 7EZ



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Web: www.tmsconsultancy.co.uk

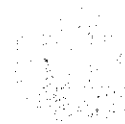


Star Lane, Great Wakering

Road Safety Audit Stage 1

1. Introduction

- 1.1 This report describes a Stage 1 Road Safety Audit carried out on access arrangements for a residential development off Star Lane, Great Wakering, on behalf of Glanville Consultants Ltd. The audit was carried out on 21st September 2011 in the offices of TMS Consultancy.
- 1.2 The audit team members were as follows:-
- Andy Coleman - BA (Hons), MCIHT, MSoRSA
Assistant Engineer, TMS Consultancy
- Harminder Aulak - BSc (Hons), IEng, FIHE, RegRSA (IHE)
Senior Engineer, TMS Consultancy
- 1.3 The audit comprised an examination of the drawings and other information relating to the scheme supplied by the design office, which is listed in **Appendix A**. The site was visited by the Audit Team on 20th September 2011. The weather was overcast and dry. Traffic flows were moderate. Pedestrian and cycle flows were light.
- 1.4 The terms of reference of the audit are as described in HD 19/03. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.
- 1.5 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise accident occurrence. The locations of specific problems are referenced on the plan in **Appendix B**.
- 1.6 The scheme consists of two priority access junctions to serve a large residential development in Great Wakering. The site is bounded by Star Lane to the west and Horner's Corner / High Street to the north. The Star Lane junction will be situated just south of an industrial estate access, and the High Street access will be situated between Property numbers 269 and 277.



2. Items Resulting From This Stage 1

Star Lane Junction

2.1 PROBLEM

Location – Star Lane Access

Summary: High vehicle speeds may lead to collisions.

The accident data provided shows two fatalities on Star Lane within the vicinity of the development access. These two collisions indicate high vehicle speeds and although the 30mph speed limit is proposed to be lengthened to include the development, it is not known how the reduced speed will be enforced. Measured 85%ile speeds over a 7 day period were recorded at 53.6mph (with 85%ile speeds up to 65.6mph). High vehicle speeds on Star Lane may lead to further high severity collisions.

RECOMMENDATION

Measures to reduce vehicle speed (such as a gateway treatment at the speed limit change) should be provided on Star Lane.

2.2 PROBLEM

Location – Star Lane, Street Lighting

Summary: Increased risk of collisions during darkness.

No lighting details have been provided for the audit. Existing street lighting only extends to the 30mph speed limit. There is an increased risk of collisions during darkness and in poor weather if the street lighting is not extended to encompass the new development junction.

RECOMMENDATION

The street lighting should be extended southwards to encompass the new junction for the development.



2.3 PROBLEM

Location – Star Lane

Summary: Pedestrian trip hazard.

There is no pedestrian crossing provision on the south side of the development. Pedestrians wishing to travel south are unlikely to divert to the crossing proposed on the north side of the development. Mobility impaired pedestrians may resort to travelling within the carriageway at risk of conflict with vehicles.

RECOMMENDATION

An uncontrolled dropped kerb crossing with tactile paving should be provided on the south side of the access.

2.4 PROBLEM

Location – Star Lane j/w Great Wakering Industrial Estate

Summary: Pedestrian trip hazard.

There is a full height kerb on the north side of the industrial estate access that presents a trip hazard for pedestrians and restricts further access for mobility impaired pedestrians travelling towards the development.

RECOMMENDATION

A dropped kerb with tactile paving should be provided on the north side of the crossing of the industrial estate access road with correctly aligned tactile paving on the south side.

2.5 OBSEVATION

An appropriate pedestrian route should be provided within the development with conveniently located dropped kerb crossing points with tactile paving.



High Street Junction

2.6 PROBLEM

Location – High Street Access

Summary: Vehicle to vehicle emerging type collisions.

Off-street parking was evident on the east side of the proposed access. It is not clear whether parking is permitted by the highway authority in this location but vehicles parked behind the footway would obstruct driver's visibility to the right. This may lead to vehicles emerging into the path of westbound vehicles.

RECOMMENDATION

Parking within the visibility splay should be prohibited.

2.7 OBSERVATION

Location – Both Accesses

A give way triangle road marking has been proposed at both junctions. The road marking should only be provided in conjunction with a Give Way sign (Dia. 602).



3. **Audit Team Statement**

I certify that the terms of reference of the audit are as described in HD 19/03.

Audit Team Leader

Andy Coleman - BA (Hons), MCIHT, MSoRSA
Assistant Engineer, TMS Consultancy



Signed 

Date22nd September 2011.....

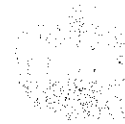
Audit Team Member

Harminder Aulak - BSc (Hons), IEng, FIHE, RegRSA (IHE)
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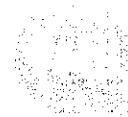
Appendix A

List of Drawings Examined:

- Drawing No. TR8100953/100
- Drawing No. TR8100953/100_SP01
- Drawing No. TR8100953/200_SP01
- Drawing No. TR8100953/01 – Rev A
- Drawing No. PL155

Other Information Provided:

- Location Plan
- Traffic Flows and Speeds
- Accident Data (01/08/2006 – 31/07/2011)



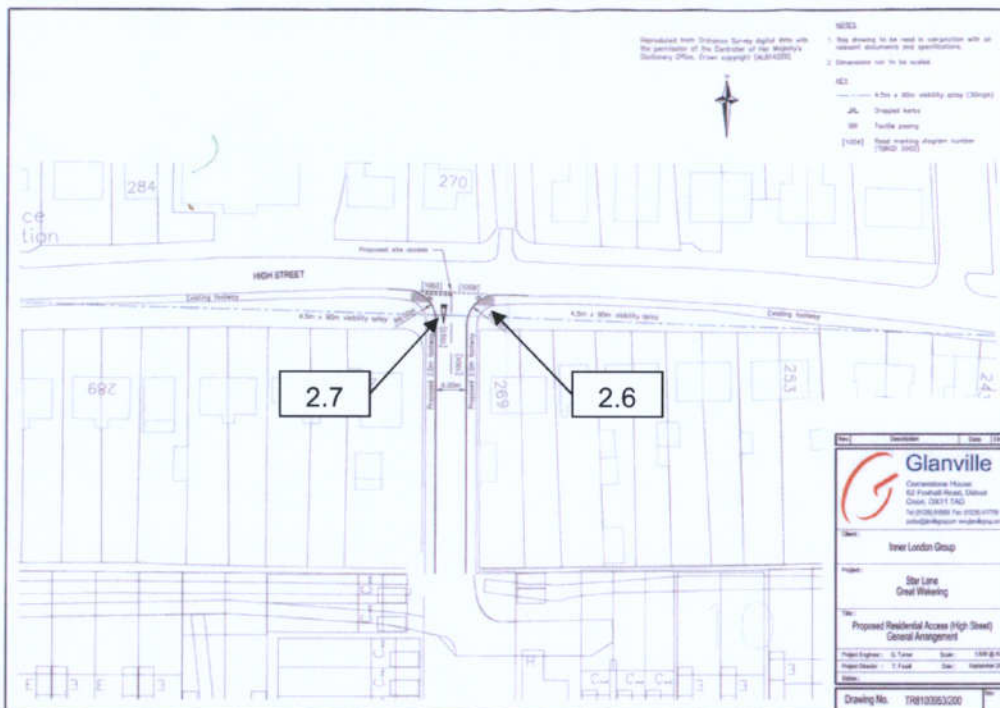
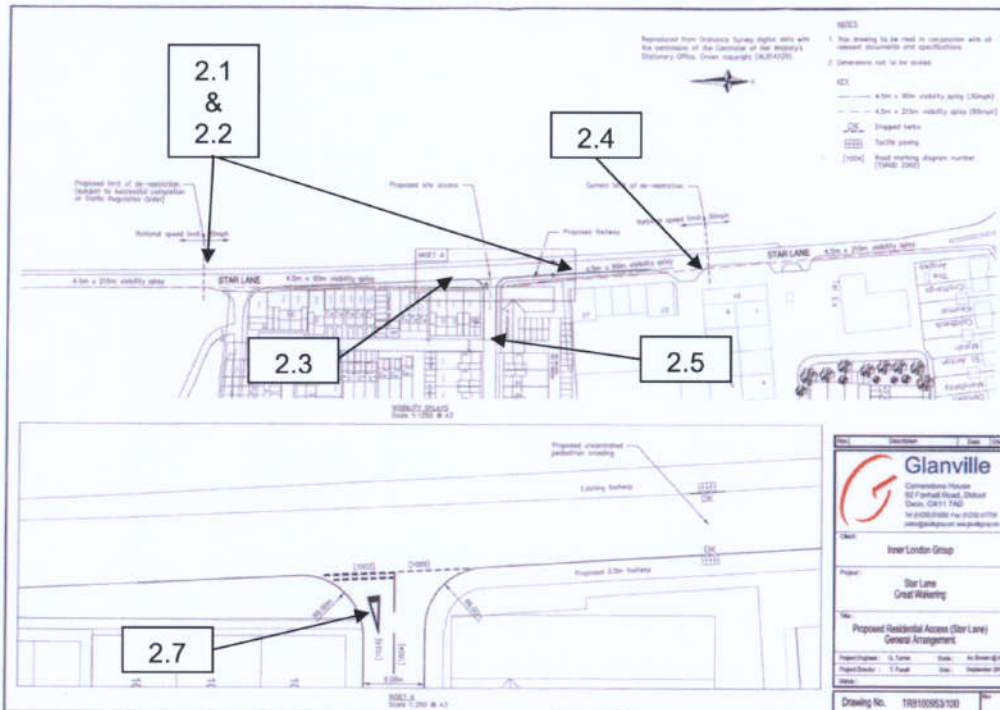
Appendix B

Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).



Client: Glanville Consultants Ltd.
Scheme: Star Lane, Great Wakering

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Appendix C

Traffic Survey Data – Classified Turning Counts

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (1) Royal Artillery Way / Southchurch Boulevard / Thorpe Hall Avenue

Approach: Royal Artillery Way

| TIME | Left to Southchurch Boulevard (East) | | | | | | | | Ahead to Thorpe Hall Avenue | | | | | | | | Right to Southchurch Boulevard (West) | | | | | | | |
|----------------------|--------------------------------------|-----------|-------------|------------|-----------|-----------|-----------|-------------|-----------------------------|----------|------------|-----------|----------|----------|----------|------------|---------------------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 1 | 53 | 10 | 3 | 3 | 1 | 71 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 8 | 0 | 1 | 6 | 1 | 0 | 0 | 0 | 8 |
| 0715 - 0730 | 1 | 0 | 81 | 13 | 11 | 4 | 1 | 111 | 0 | 0 | 9 | 1 | 3 | 1 | 0 | 14 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 20 |
| 0730 - 0745 | 0 | 0 | 88 | 19 | 4 | 2 | 4 | 117 | 0 | 0 | 14 | 9 | 1 | 0 | 0 | 24 | 0 | 0 | 20 | 4 | 1 | 0 | 0 | 25 |
| 0745 - 0800 | 1 | 2 | 83 | 27 | 1 | 2 | 1 | 117 | 0 | 0 | 20 | 10 | 0 | 0 | 0 | 30 | 0 | 0 | 31 | 2 | 1 | 0 | 0 | 34 |
| Hourly Total | 2 | 3 | 305 | 69 | 19 | 11 | 7 | 416 | 0 | 0 | 49 | 22 | 4 | 1 | 0 | 76 | 0 | 1 | 76 | 8 | 2 | 0 | 0 | 87 |
| 0800 - 0815 | 2 | 2 | 110 | 36 | 7 | 3 | 4 | 164 | 0 | 0 | 23 | 5 | 2 | 0 | 0 | 30 | 0 | 2 | 47 | 2 | 0 | 0 | 0 | 51 |
| 0815 - 0830 | 1 | 1 | 111 | 25 | 6 | 2 | 1 | 147 | 0 | 0 | 30 | 8 | 0 | 0 | 0 | 38 | 0 | 0 | 43 | 4 | 0 | 0 | 0 | 52 |
| 0830 - 0845 | 4 | 0 | 96 | 21 | 8 | 7 | 2 | 138 | 0 | 0 | 39 | 4 | 0 | 0 | 0 | 43 | 0 | 0 | 18 | 2 | 0 | 0 | 1 | 21 |
| 0845 - 0900 | 0 | 0 | 94 | 37 | 3 | 2 | 1 | 137 | 0 | 0 | 25 | 6 | 0 | 0 | 0 | 31 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 20 |
| Hourly Total | 7 | 3 | 411 | 119 | 24 | 14 | 8 | 586 | 0 | 0 | 117 | 23 | 2 | 0 | 0 | 142 | 0 | 2 | 127 | 9 | 0 | 0 | 6 | 144 |
| 0900 - 0915 | 2 | 2 | 101 | 20 | 5 | 4 | 1 | 135 | 0 | 0 | 42 | 6 | 0 | 0 | 0 | 48 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 15 |
| 0915 - 0930 | 0 | 0 | 111 | 29 | 4 | 2 | 1 | 147 | 0 | 0 | 30 | 5 | 0 | 0 | 0 | 35 | 0 | 0 | 14 | 2 | 0 | 0 | 0 | 16 |
| 0930 - 0945 | 0 | 0 | 88 | 23 | 1 | 3 | 1 | 116 | 0 | 0 | 24 | 6 | 0 | 0 | 0 | 30 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 0945 - 1000 | 1 | 0 | 96 | 25 | 5 | 3 | 3 | 133 | 0 | 0 | 25 | 9 | 0 | 0 | 0 | 34 | 0 | 0 | 21 | 1 | 0 | 0 | 0 | 22 |
| Hourly Total | 3 | 2 | 396 | 97 | 15 | 12 | 6 | 531 | 0 | 0 | 121 | 26 | 0 | 0 | 0 | 147 | 0 | 0 | 64 | 6 | 0 | 0 | 0 | 70 |
| Session Total | 12 | 8 | 1112 | 285 | 58 | 37 | 21 | 1533 | 0 | 0 | 287 | 71 | 6 | 1 | 0 | 365 | 0 | 3 | 267 | 23 | 2 | 0 | 6 | 301 |
| 1600 - 1615 | 0 | 1 | 160 | 27 | 4 | 2 | 0 | 194 | 0 | 1 | 54 | 2 | 0 | 0 | 0 | 57 | 0 | 1 | 27 | 4 | 0 | 0 | 1 | 33 |
| 1615 - 1630 | 0 | 4 | 151 | 20 | 6 | 0 | 0 | 181 | 0 | 1 | 68 | 8 | 0 | 0 | 0 | 77 | 0 | 0 | 23 | 3 | 0 | 0 | 0 | 26 |
| 1630 - 1645 | 0 | 0 | 157 | 27 | 1 | 0 | 1 | 186 | 0 | 0 | 83 | 12 | 0 | 0 | 1 | 96 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 |
| 1645 - 1700 | 1 | 4 | 147 | 23 | 5 | 1 | 0 | 181 | 0 | 0 | 107 | 14 | 0 | 0 | 0 | 121 | 0 | 0 | 28 | 4 | 1 | 0 | 0 | 33 |
| Hourly Total | 1 | 9 | 615 | 97 | 16 | 3 | 1 | 742 | 0 | 2 | 312 | 36 | 0 | 0 | 1 | 351 | 0 | 1 | 102 | 11 | 1 | 0 | 1 | 116 |
| 1700 - 1715 | 2 | 6 | 171 | 30 | 0 | 0 | 0 | 209 | 0 | 0 | 63 | 7 | 0 | 0 | 0 | 70 | 0 | 0 | 35 | 5 | 0 | 0 | 0 | 40 |
| 1715 - 1730 | 1 | 4 | 177 | 22 | 1 | 2 | 0 | 207 | 0 | 0 | 71 | 12 | 0 | 0 | 0 | 83 | 0 | 0 | 32 | 1 | 0 | 0 | 0 | 33 |
| 1730 - 1745 | 1 | 3 | 186 | 26 | 1 | 2 | 0 | 219 | 1 | 0 | 97 | 12 | 0 | 0 | 0 | 110 | 0 | 1 | 32 | 2 | 0 | 0 | 0 | 35 |
| 1745 - 1800 | 0 | 3 | 173 | 20 | 2 | 1 | 0 | 199 | 0 | 1 | 79 | 7 | 0 | 0 | 0 | 87 | 0 | 0 | 24 | 2 | 0 | 0 | 0 | 26 |
| Hourly Total | 4 | 16 | 707 | 98 | 4 | 5 | 0 | 834 | 1 | 1 | 310 | 38 | 0 | 0 | 0 | 350 | 0 | 1 | 123 | 10 | 0 | 0 | 0 | 134 |
| 1800 - 1815 | 1 | 3 | 195 | 21 | 1 | 0 | 1 | 222 | 0 | 0 | 82 | 5 | 0 | 0 | 0 | 87 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 1815 - 1830 | 0 | 1 | 163 | 21 | 0 | 1 | 1 | 187 | 1 | 0 | 71 | 4 | 0 | 0 | 0 | 76 | 0 | 0 | 20 | 3 | 0 | 0 | 0 | 23 |
| 1830 - 1845 | 0 | 3 | 171 | 19 | 1 | 0 | 0 | 194 | 0 | 0 | 57 | 7 | 0 | 0 | 0 | 64 | 0 | 0 | 24 | 2 | 0 | 0 | 0 | 26 |
| 1845 - 1900 | 1 | 1 | 162 | 16 | 0 | 0 | 0 | 180 | 0 | 1 | 48 | 2 | 0 | 0 | 0 | 51 | 0 | 0 | 23 | 1 | 0 | 0 | 0 | 24 |
| Hourly Total | 2 | 8 | 691 | 77 | 2 | 1 | 2 | 783 | 1 | 1 | 258 | 18 | 0 | 0 | 0 | 278 | 0 | 0 | 83 | 7 | 0 | 0 | 0 | 90 |
| Session Total | 7 | 33 | 2013 | 272 | 22 | 9 | 3 | 2359 | 2 | 4 | 880 | 92 | 0 | 0 | 1 | 979 | 0 | 2 | 308 | 28 | 1 | 0 | 1 | 340 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (1) Royal Artillery Way / Southchurch Boulevard / Thorpe Hall Avenue

Approach: Southchurch Boulevard (East)

| TIME | Left to Thorpe Hall Avenue | | | | | | | Ahead to Southchurch Boulevard (West) | | | | | | | Right to Royal Artillery Way | | | | | | | U-Turn to Southchurch Boulevard (East) | | | | | | | | | | |
|----------------------|----------------------------|----------|------------|-----------|----------|----------|----------|---------------------------------------|----------|-----------|------------|-----------|-----------|----------|------------------------------|-------------|----------|-----------|-------------|------------|-----------|--|-----------|-------------|----------|----------|------------|----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 | 2 | 1 | 41 | 6 | 1 | 0 | 1 | 52 | 0 | 4 | 147 | 23 | 7 | 3 | 0 | 184 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 0715 - 0730 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 59 | 4 | 0 | 0 | 0 | 63 | 0 | 2 | 181 | 30 | 7 | 1 | 5 | 226 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 12 |
| 0730 - 0745 | 0 | 0 | 17 | 3 | 1 | 0 | 0 | 21 | 0 | 2 | 63 | 8 | 1 | 0 | 2 | 76 | 0 | 5 | 215 | 31 | 6 | 5 | 1 | 263 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 15 |
| 0745 - 0800 | 3 | 0 | 22 | 6 | 0 | 0 | 0 | 31 | 2 | 0 | 77 | 2 | 4 | 2 | 2 | 89 | 0 | 4 | 204 | 31 | 4 | 5 | 0 | 248 | 0 | 0 | 21 | 2 | 0 | 0 | 0 | 23 |
| Hourly Total | 3 | 0 | 64 | 11 | 1 | 0 | 0 | 79 | 4 | 3 | 240 | 20 | 6 | 2 | 5 | 280 | 0 | 15 | 747 | 115 | 24 | 14 | 6 | 921 | 0 | 0 | 56 | 3 | 0 | 0 | 0 | 59 |
| 0800 - 0815 | 0 | 0 | 38 | 6 | 1 | 0 | 0 | 45 | 2 | 1 | 103 | 7 | 1 | 0 | 2 | 116 | 0 | 2 | 205 | 20 | 3 | 4 | 0 | 234 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 16 |
| 0815 - 0830 | 1 | 0 | 50 | 4 | 0 | 0 | 0 | 55 | 0 | 4 | 118 | 12 | 0 | 0 | 0 | 134 | 0 | 2 | 172 | 21 | 2 | 4 | 0 | 201 | 0 | 0 | 25 | 1 | 1 | 0 | 0 | 27 |
| 0830 - 0845 | 1 | 1 | 94 | 5 | 1 | 0 | 0 | 102 | 0 | 2 | 85 | 5 | 1 | 0 | 2 | 95 | 0 | 1 | 191 | 13 | 5 | 2 | 2 | 214 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 12 |
| 0845 - 0900 | 0 | 0 | 42 | 7 | 0 | 0 | 0 | 49 | 1 | 3 | 79 | 4 | 0 | 0 | 2 | 89 | 0 | 0 | 147 | 21 | 4 | 1 | 1 | 174 | 0 | 1 | 27 | 0 | 0 | 0 | 0 | 28 |
| Hourly Total | 2 | 1 | 224 | 22 | 2 | 0 | 0 | 251 | 3 | 10 | 385 | 28 | 2 | 0 | 6 | 434 | 0 | 5 | 715 | 75 | 14 | 11 | 3 | 823 | 0 | 1 | 79 | 2 | 1 | 0 | 0 | 83 |
| 0900 - 0915 | 0 | 0 | 26 | 2 | 1 | 0 | 0 | 29 | 0 | 0 | 74 | 5 | 1 | 1 | 0 | 81 | 0 | 1 | 133 | 18 | 6 | 6 | 5 | 169 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 0915 - 0930 | 0 | 0 | 42 | 2 | 1 | 0 | 0 | 45 | 1 | 0 | 82 | 6 | 0 | 0 | 1 | 90 | 0 | 0 | 109 | 25 | 6 | 2 | 1 | 143 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 0930 - 0945 | 0 | 0 | 21 | 1 | 1 | 0 | 0 | 23 | 1 | 1 | 58 | 5 | 2 | 0 | 2 | 70 | 0 | 1 | 112 | 18 | 5 | 5 | 0 | 139 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| 0945 - 1000 | 0 | 0 | 14 | 2 | 1 | 0 | 0 | 17 | 0 | 0 | 45 | 6 | 2 | 1 | 0 | 54 | 0 | 0 | 98 | 20 | 2 | 3 | 3 | 126 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| Hourly Total | 0 | 0 | 103 | 7 | 4 | 0 | 0 | 114 | 2 | 1 | 260 | 22 | 5 | 2 | 3 | 295 | 0 | 2 | 452 | 79 | 19 | 16 | 9 | 577 | 0 | 0 | 44 | 1 | 0 | 0 | 0 | 48 |
| Session Total | 5 | 1 | 391 | 40 | 7 | 0 | 0 | 444 | 9 | 14 | 885 | 70 | 13 | 4 | 14 | 1009 | 0 | 22 | 1914 | 269 | 57 | 41 | 16 | 2321 | 0 | 1 | 179 | 6 | 1 | 0 | 0 | 187 |
| 1600 - 1615 | 0 | 1 | 39 | 2 | 1 | 0 | 0 | 43 | 0 | 2 | 53 | 5 | 0 | 0 | 1 | 61 | 0 | 0 | 103 | 24 | 3 | 3 | 1 | 134 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| 1615 - 1630 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 42 | 1 | 0 | 38 | 7 | 0 | 0 | 0 | 48 | 0 | 2 | 117 | 15 | 0 | 0 | 1 | 135 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 8 |
| 1630 - 1645 | 0 | 0 | 31 | 3 | 0 | 0 | 0 | 34 | 1 | 0 | 47 | 6 | 0 | 0 | 1 | 55 | 0 | 3 | 133 | 16 | 2 | 2 | 0 | 156 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 1645 - 1700 | 1 | 0 | 45 | 3 | 0 | 0 | 0 | 49 | 0 | 0 | 35 | 5 | 0 | 0 | 2 | 42 | 1 | 0 | 160 | 19 | 1 | 2 | 1 | 184 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 10 |
| Hourly Total | 1 | 1 | 157 | 8 | 1 | 0 | 0 | 168 | 2 | 2 | 173 | 23 | 0 | 0 | 4 | 204 | 1 | 5 | 513 | 74 | 6 | 7 | 3 | 609 | 0 | 1 | 39 | 1 | 0 | 0 | 1 | 42 |
| 1700 - 1715 | 3 | 0 | 44 | 6 | 0 | 0 | 0 | 53 | 1 | 2 | 71 | 6 | 0 | 0 | 0 | 80 | 0 | 2 | 144 | 16 | 0 | 0 | 0 | 162 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 |
| 1715 - 1730 | 1 | 0 | 25 | 6 | 1 | 0 | 0 | 33 | 2 | 2 | 44 | 2 | 0 | 0 | 0 | 50 | 0 | 0 | 127 | 13 | 0 | 2 | 0 | 142 | 0 | 0 | 8 | 3 | 0 | 0 | 0 | 11 |
| 1730 - 1745 | 0 | 0 | 29 | 2 | 0 | 0 | 0 | 31 | 1 | 1 | 46 | 9 | 1 | 0 | 2 | 60 | 1 | 3 | 155 | 17 | 1 | 0 | 0 | 177 | 0 | 0 | 13 | 1 | 1 | 0 | 0 | 15 |
| 1745 - 1800 | 0 | 1 | 30 | 1 | 0 | 0 | 0 | 32 | 0 | 1 | 51 | 6 | 0 | 0 | 0 | 58 | 0 | 3 | 130 | 16 | 0 | 0 | 0 | 149 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| Hourly Total | 4 | 1 | 128 | 15 | 1 | 0 | 0 | 149 | 4 | 6 | 212 | 23 | 1 | 0 | 2 | 248 | 1 | 6 | 596 | 62 | 1 | 2 | 0 | 630 | 0 | 0 | 57 | 4 | 1 | 0 | 0 | 62 |
| 1800 - 1815 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 42 | 8 | 1 | 0 | 0 | 51 | 0 | 2 | 150 | 13 | 0 | 0 | 1 | 146 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 1815 - 1830 | 2 | 0 | 20 | 2 | 0 | 0 | 0 | 24 | 1 | 2 | 39 | 6 | 0 | 0 | 0 | 48 | 0 | 0 | 128 | 9 | 0 | 0 | 0 | 135 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 12 |
| 1830 - 1845 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 20 | 0 | 0 | 39 | 5 | 0 | 0 | 0 | 44 | 0 | 1 | 119 | 9 | 0 | 0 | 1 | 130 | 0 | 0 | 10 | 1 | 1 | 0 | 0 | 12 |
| 1845 - 1900 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 45 | 8 | 0 | 0 | 1 | 52 | 0 | 0 | 133 | 8 | 0 | 0 | 0 | 141 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 |
| Hourly Total | 2 | 0 | 78 | 4 | 0 | 0 | 0 | 84 | 1 | 2 | 165 | 25 | 1 | 0 | 1 | 195 | 0 | 3 | 508 | 39 | 0 | 0 | 2 | 552 | 0 | 0 | 44 | 4 | 1 | 0 | 0 | 49 |
| Session Total | 7 | 2 | 383 | 27 | 2 | 0 | 0 | 401 | 7 | 10 | 550 | 71 | 2 | 0 | 7 | 647 | 2 | 16 | 1577 | 175 | 7 | 9 | 5 | 1791 | 0 | 1 | 140 | 9 | 2 | 0 | 1 | 153 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Public Information Consultancy

Junction: (1) Royal Artillery Way / Southchurch Boulevard / Thorpe Hall Avenue

Approach: Thorpe Hall Avenue

| TIME | Left to Southchurch Boulevard (West) | | | | | | | | Ahead to Royal Artillery Way | | | | | | | | Right to Southchurch Boulevard (East) | | | | | | | |
|----------------------|--------------------------------------|----------|------------|-----------|----------|----------|-----------|------------|------------------------------|----------|------------|-----------|-----------|----------|----------|------------|---------------------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 10 | 2 | 0 | 0 | 1 | 13 | 0 | 0 | 46 | 6 | 0 | 0 | 0 | 52 | 0 | 0 | 13 | 3 | 0 | 0 | 0 | 16 |
| 0715 - 0730 | 1 | 0 | 11 | 1 | 1 | 0 | 2 | 16 | 1 | 1 | 58 | 3 | 0 | 0 | 0 | 63 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 19 |
| 0730 - 0745 | 0 | 0 | 11 | 2 | 0 | 0 | 1 | 14 | 0 | 0 | 73 | 5 | 2 | 0 | 0 | 80 | 0 | 0 | 21 | 5 | 0 | 0 | 0 | 26 |
| 0745 - 0800 | 0 | 0 | 12 | 3 | 1 | 0 | 1 | 17 | 0 | 0 | 87 | 6 | 2 | 0 | 0 | 95 | 0 | 1 | 34 | 6 | 0 | 0 | 0 | 41 |
| Hourly Total | 1 | 0 | 44 | 8 | 2 | 0 | 5 | 60 | 1 | 1 | 264 | 20 | 4 | 0 | 0 | 290 | 0 | 1 | 85 | 16 | 0 | 0 | 0 | 102 |
| 0800 - 0815 | 0 | 0 | 25 | 1 | 0 | 0 | 1 | 27 | 0 | 0 | 71 | 7 | 3 | 0 | 0 | 81 | 0 | 0 | 36 | 6 | 0 | 0 | 0 | 42 |
| 0815 - 0830 | 0 | 0 | 30 | 1 | 0 | 0 | 3 | 34 | 0 | 0 | 62 | 2 | 2 | 0 | 0 | 66 | 0 | 0 | 86 | 4 | 0 | 0 | 0 | 90 |
| 0830 - 0845 | 0 | 0 | 15 | 2 | 0 | 0 | 1 | 18 | 0 | 0 | 56 | 3 | 2 | 0 | 2 | 63 | 0 | 1 | 81 | 3 | 1 | 0 | 0 | 86 |
| 0845 - 0900 | 0 | 0 | 20 | 2 | 1 | 0 | 2 | 25 | 0 | 0 | 62 | 2 | 2 | 0 | 0 | 66 | 0 | 0 | 50 | 14 | 0 | 0 | 0 | 64 |
| Hourly Total | 0 | 0 | 90 | 6 | 1 | 0 | 7 | 104 | 0 | 0 | 251 | 14 | 9 | 0 | 2 | 276 | 0 | 1 | 253 | 27 | 1 | 0 | 0 | 282 |
| 0900 - 0915 | 0 | 0 | 19 | 1 | 0 | 0 | 1 | 21 | 0 | 0 | 58 | 3 | 4 | 0 | 0 | 65 | 0 | 0 | 65 | 7 | 0 | 0 | 0 | 72 |
| 0915 - 0930 | 1 | 0 | 13 | 1 | 0 | 0 | 1 | 16 | 0 | 0 | 19 | 2 | 2 | 0 | 0 | 23 | 0 | 1 | 45 | 6 | 1 | 0 | 0 | 53 |
| 0930 - 0945 | 0 | 0 | 20 | 1 | 0 | 0 | 2 | 23 | 0 | 0 | 43 | 2 | 2 | 0 | 0 | 47 | 0 | 0 | 31 | 2 | 1 | 0 | 0 | 34 |
| 0945 - 1000 | 2 | 0 | 20 | 2 | 0 | 0 | 2 | 26 | 0 | 0 | 40 | 3 | 2 | 1 | 0 | 46 | 0 | 0 | 25 | 4 | 1 | 0 | 0 | 30 |
| Hourly Total | 3 | 0 | 72 | 5 | 0 | 0 | 6 | 86 | 0 | 0 | 160 | 10 | 10 | 1 | 0 | 181 | 0 | 1 | 166 | 19 | 3 | 0 | 0 | 189 |
| Session Total | 4 | 0 | 206 | 19 | 3 | 0 | 18 | 250 | 1 | 1 | 675 | 44 | 23 | 1 | 2 | 747 | 0 | 3 | 504 | 62 | 4 | 0 | 0 | 573 |
| 1600 - 1615 | 0 | 1 | 14 | 1 | 0 | 0 | 1 | 17 | 0 | 0 | 27 | 6 | 1 | 0 | 0 | 34 | 0 | 1 | 55 | 4 | 1 | 0 | 0 | 61 |
| 1615 - 1630 | 0 | 1 | 20 | 0 | 0 | 0 | 2 | 23 | 0 | 0 | 38 | 3 | 2 | 0 | 0 | 43 | 0 | 2 | 63 | 11 | 0 | 0 | 0 | 76 |
| 1630 - 1645 | 0 | 0 | 13 | 2 | 0 | 0 | 1 | 16 | 0 | 1 | 21 | 5 | 3 | 0 | 0 | 30 | 0 | 1 | 65 | 11 | 1 | 0 | 0 | 78 |
| 1645 - 1700 | 2 | 0 | 14 | 3 | 1 | 0 | 0 | 20 | 0 | 0 | 24 | 2 | 0 | 0 | 0 | 26 | 0 | 1 | 68 | 8 | 1 | 0 | 0 | 78 |
| Hourly Total | 2 | 2 | 61 | 6 | 1 | 0 | 4 | 76 | 0 | 1 | 110 | 16 | 6 | 0 | 0 | 133 | 0 | 5 | 251 | 34 | 3 | 0 | 0 | 293 |
| 1700 - 1715 | 0 | 0 | 22 | 0 | 0 | 0 | 3 | 25 | 0 | 0 | 29 | 5 | 1 | 0 | 0 | 35 | 1 | 0 | 49 | 8 | 0 | 0 | 1 | 59 |
| 1715 - 1730 | 1 | 0 | 18 | 2 | 0 | 0 | 1 | 22 | 0 | 0 | 16 | 1 | 1 | 0 | 0 | 18 | 0 | 0 | 42 | 2 | 0 | 0 | 0 | 44 |
| 1730 - 1745 | 0 | 0 | 15 | 1 | 0 | 0 | 1 | 17 | 0 | 1 | 26 | 2 | 0 | 0 | 0 | 29 | 0 | 1 | 40 | 10 | 0 | 0 | 0 | 51 |
| 1745 - 1800 | 0 | 0 | 13 | 0 | 0 | 0 | 1 | 14 | 0 | 0 | 22 | 1 | 0 | 0 | 0 | 23 | 1 | 1 | 50 | 3 | 0 | 0 | 0 | 55 |
| Hourly Total | 1 | 0 | 68 | 3 | 0 | 0 | 6 | 78 | 0 | 1 | 93 | 9 | 2 | 0 | 0 | 105 | 2 | 2 | 181 | 23 | 0 | 0 | 1 | 209 |
| 1800 - 1815 | 0 | 0 | 15 | 1 | 0 | 0 | 2 | 18 | 0 | 0 | 26 | 2 | 0 | 0 | 0 | 28 | 1 | 1 | 42 | 4 | 0 | 0 | 0 | 48 |
| 1815 - 1830 | 0 | 0 | 20 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 49 | 2 | 0 | 0 | 0 | 51 |
| 1830 - 1845 | 0 | 0 | 18 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 25 | 1 | 1 | 0 | 0 | 27 | 0 | 0 | 32 | 5 | 0 | 0 | 0 | 37 |
| 1845 - 1900 | 0 | 0 | 12 | 1 | 0 | 0 | 1 | 14 | 0 | 0 | 21 | 2 | 0 | 0 | 0 | 23 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 45 |
| Hourly Total | 0 | 0 | 65 | 2 | 0 | 0 | 5 | 72 | 0 | 0 | 94 | 5 | 1 | 0 | 0 | 100 | 1 | 1 | 168 | 11 | 0 | 0 | 0 | 181 |
| Session Total | 3 | 2 | 194 | 11 | 1 | 0 | 15 | 226 | 0 | 2 | 297 | 30 | 9 | 0 | 0 | 338 | 3 | 8 | 600 | 68 | 3 | 0 | 1 | 683 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (1) Royal Artillery Way / Southchurch Boulevard / Thorpe Hall Avenue

Approach: Southchurch Boulevard (West)

| TIME | Left to Royal Artillery Way | | | | | | | | Ahead to Southchurch Boulevard (East) | | | | | | | | Right to Thorpe Hall Avenue | | | | | | | |
|----------------------|-----------------------------|----------|------------|----------|----------|----------|----------|------------|---------------------------------------|-----------|-------------|-----------|-----------|----------|-----------|-------------|-----------------------------|----------|------------|-----------|----------|----------|-----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 1 | 2 | 17 | 1 | 0 | 0 | 2 | 23 | 0 | 0 | 14 | 2 | 0 | 0 | 0 | 16 |
| 0715 - 0730 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 22 | 6 | 0 | 0 | 2 | 30 | 0 | 0 | 14 | 2 | 4 | 0 | 0 | 20 |
| 0730 - 0745 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 17 | 3 | 0 | 0 | 1 | 21 | 0 | 2 | 9 | 2 | 0 | 0 | 2 | 15 |
| 0745 - 0800 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 12 | 0 | 1 | 35 | 4 | 0 | 0 | 0 | 40 | 0 | 0 | 18 | 2 | 0 | 0 | 4 | 24 |
| Hourly Total | 2 | 0 | 26 | 0 | 0 | 0 | 0 | 28 | 1 | 3 | 91 | 14 | 0 | 0 | 5 | 114 | 0 | 2 | 55 | 8 | 4 | 0 | 6 | 75 |
| 0800 - 0815 | 2 | 0 | 23 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 53 | 1 | 0 | 1 | 1 | 56 | 0 | 0 | 27 | 1 | 3 | 0 | 1 | 32 |
| 0815 - 0830 | 2 | 0 | 28 | 1 | 0 | 0 | 3 | 34 | 0 | 0 | 90 | 4 | 0 | 0 | 0 | 94 | 0 | 0 | 29 | 3 | 0 | 0 | 3 | 35 |
| 0830 - 0845 | 0 | 0 | 12 | 1 | 0 | 1 | 1 | 15 | 0 | 1 | 52 | 7 | 1 | 0 | 1 | 62 | 0 | 0 | 31 | 2 | 0 | 0 | 2 | 35 |
| 0845 - 0900 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 41 | 3 | 2 | 0 | 0 | 46 | 0 | 0 | 30 | 1 | 2 | 0 | 2 | 35 |
| Hourly Total | 4 | 0 | 70 | 3 | 0 | 1 | 4 | 82 | 0 | 1 | 236 | 15 | 3 | 1 | 2 | 258 | 0 | 0 | 117 | 7 | 5 | 0 | 8 | 137 |
| 0900 - 0915 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 21 | 3 | 2 | 0 | 2 | 28 | 0 | 0 | 27 | 2 | 0 | 0 | 2 | 31 |
| 0915 - 0930 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 32 | 2 | 2 | 0 | 0 | 36 | 0 | 0 | 20 | 1 | 0 | 0 | 3 | 24 |
| 0930 - 0945 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 27 | 6 | 2 | 1 | 1 | 37 | 0 | 0 | 20 | 6 | 0 | 0 | 2 | 28 |
| 0945 - 1000 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 36 | 5 | 5 | 0 | 1 | 47 | 0 | 0 | 31 | 2 | 0 | 0 | 0 | 33 |
| Hourly Total | 2 | 0 | 18 | 1 | 0 | 0 | 0 | 21 | 0 | 0 | 116 | 16 | 11 | 1 | 4 | 148 | 0 | 0 | 98 | 11 | 0 | 0 | 7 | 116 |
| Session Total | 8 | 0 | 114 | 4 | 0 | 1 | 4 | 131 | 1 | 4 | 443 | 45 | 14 | 2 | 11 | 520 | 0 | 2 | 270 | 26 | 9 | 0 | 21 | 328 |
| 1600 - 1615 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 83 | 2 | 5 | 0 | 0 | 90 | 0 | 1 | 36 | 12 | 0 | 0 | 3 | 52 |
| 1615 - 1630 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 2 | 2 | 102 | 3 | 6 | 0 | 0 | 115 | 0 | 0 | 29 | 4 | 0 | 0 | 1 | 34 |
| 1630 - 1645 | 0 | 1 | 17 | 1 | 0 | 0 | 0 | 19 | 2 | 2 | 102 | 7 | 1 | 0 | 1 | 115 | 0 | 0 | 27 | 1 | 0 | 0 | 3 | 31 |
| 1645 - 1700 | 1 | 0 | 11 | 1 | 0 | 0 | 0 | 13 | 2 | 0 | 110 | 7 | 1 | 0 | 0 | 120 | 0 | 0 | 14 | 2 | 0 | 0 | 3 | 19 |
| Hourly Total | 1 | 1 | 46 | 2 | 0 | 0 | 0 | 50 | 6 | 4 | 397 | 19 | 13 | 0 | 1 | 440 | 0 | 1 | 106 | 19 | 0 | 0 | 10 | 136 |
| 1700 - 1715 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 2 | 105 | 6 | 4 | 0 | 2 | 119 | 0 | 0 | 33 | 3 | 0 | 0 | 1 | 37 |
| 1715 - 1730 | 1 | 0 | 11 | 1 | 0 | 0 | 0 | 13 | 3 | 0 | 121 | 11 | 0 | 0 | 0 | 135 | 2 | 0 | 29 | 5 | 0 | 0 | 1 | 37 |
| 1730 - 1745 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 1 | 2 | 118 | 6 | 1 | 0 | 0 | 128 | 1 | 0 | 27 | 1 | 0 | 0 | 2 | 31 |
| 1745 - 1800 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 12 | 1 | 0 | 134 | 12 | 0 | 0 | 0 | 147 | 0 | 0 | 29 | 3 | 0 | 0 | 2 | 34 |
| Hourly Total | 1 | 0 | 33 | 4 | 0 | 0 | 0 | 38 | 5 | 4 | 478 | 35 | 5 | 0 | 2 | 529 | 3 | 0 | 118 | 12 | 0 | 0 | 6 | 139 |
| 1800 - 1815 | 0 | 0 | 6 | 0 | 0 | 0 | 2 | 8 | 0 | 1 | 77 | 3 | 2 | 1 | 2 | 86 | 0 | 0 | 26 | 2 | 0 | 0 | 1 | 29 |
| 1815 - 1830 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 1 | 2 | 88 | 3 | 0 | 0 | 0 | 94 | 0 | 0 | 23 | 1 | 0 | 0 | 2 | 26 |
| 1830 - 1845 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 4 | 2 | 78 | 2 | 0 | 0 | 2 | 88 | 0 | 0 | 24 | 3 | 0 | 0 | 0 | 27 |
| 1845 - 1900 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 21 | 4 | 0 | 0 | 1 | 26 |
| Hourly Total | 1 | 0 | 19 | 1 | 0 | 0 | 2 | 23 | 5 | 5 | 308 | 8 | 2 | 1 | 4 | 333 | 0 | 0 | 94 | 10 | 0 | 0 | 4 | 108 |
| Session Total | 3 | 1 | 98 | 7 | 0 | 0 | 2 | 111 | 16 | 13 | 1183 | 62 | 20 | 1 | 7 | 1302 | 3 | 1 | 318 | 41 | 0 | 0 | 20 | 383 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Safety Information Consultancy

Junction: (2) Wakering Road / Bourmes Green Chase / Shoebury Road / Southchurch Boulevard

Approach: Wakering Road

| TIME | Left to Bourmes Green Chase | | | | | | | | Ahead to Shoebury Road | | | | | | | | Right to Southchurch Boulevard | | | | | | | |
|----------------------|-----------------------------|----------|------------|-----------|----------|----------|----------|------------|------------------------|----------|-----------|-----------|----------|----------|----------|-----------|--------------------------------|-----------|------------|-----------|----------|----------|----------|-------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 49 | 6 | 1 | 0 | 1 | 58 |
| 0715 - 0730 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 67 | 9 | 1 | 0 | 0 | 77 |
| 0730 - 0745 | 0 | 0 | 12 | 3 | 0 | 0 | 0 | 15 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 0 | 1 | 72 | 12 | 0 | 0 | 0 | 85 |
| 0745 - 0800 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 3 | 2 | 0 | 0 | 0 | 6 | 0 | 2 | 84 | 7 | 0 | 0 | 1 | 94 |
| Hourly Total | 0 | 0 | 26 | 5 | 0 | 0 | 0 | 31 | 1 | 0 | 10 | 6 | 0 | 0 | 0 | 17 | 1 | 3 | 272 | 34 | 2 | 0 | 2 | 314 |
| 0800 - 0815 | 0 | 0 | 15 | 2 | 0 | 0 | 0 | 17 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 9 | 0 | 1 | 104 | 1 | 2 | 0 | 0 | 108 |
| 0815 - 0830 | 0 | 0 | 22 | 1 | 0 | 0 | 0 | 23 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 124 | 11 | 0 | 0 | 0 | 137 |
| 0830 - 0845 | 0 | 0 | 20 | 2 | 0 | 0 | 0 | 22 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 7 | 1 | 3 | 166 | 8 | 0 | 0 | 2 | 180 |
| 0845 - 0900 | 0 | 0 | 17 | 1 | 0 | 0 | 0 | 18 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 | 0 | 1 | 101 | 6 | 0 | 0 | 0 | 108 |
| Hourly Total | 0 | 0 | 74 | 6 | 0 | 0 | 0 | 80 | 0 | 0 | 23 | 4 | 1 | 0 | 0 | 28 | 1 | 7 | 495 | 26 | 2 | 0 | 2 | 533 |
| 0900 - 0915 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 9 | 0 | 0 | 7 | 3 | 1 | 0 | 0 | 11 | 0 | 0 | 60 | 1 | 0 | 0 | 3 | 64 |
| 0915 - 0930 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 65 | 4 | 0 | 0 | 0 | 70 |
| 0930 - 0945 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 47 | 4 | 5 | 0 | 0 | 57 |
| 0945 - 1000 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 7 | 0 | 0 | 37 | 9 | 0 | 1 | 2 | 49 |
| Hourly Total | 0 | 0 | 31 | 6 | 0 | 0 | 0 | 37 | 0 | 0 | 16 | 4 | 2 | 0 | 0 | 22 | 2 | 0 | 209 | 18 | 5 | 1 | 5 | 240 |
| Session Total | 0 | 0 | 131 | 17 | 0 | 0 | 0 | 148 | 1 | 0 | 49 | 14 | 3 | 0 | 0 | 67 | 4 | 10 | 976 | 78 | 9 | 1 | 9 | 1087 |
| 1600 - 1615 | 0 | 0 | 11 | 0 | 1 | 0 | 0 | 12 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 9 | 0 | 1 | 73 | 6 | 0 | 0 | 0 | 80 |
| 1615 - 1630 | 0 | 0 | 15 | 2 | 0 | 0 | 0 | 17 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 6 | 0 | 1 | 48 | 1 | 0 | 0 | 1 | 51 |
| 1630 - 1645 | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 11 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 1 | 3 | 62 | 8 | 0 | 0 | 0 | 74 |
| 1645 - 1700 | 0 | 0 | 24 | 3 | 0 | 0 | 0 | 27 | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 7 | 1 | 1 | 103 | 8 | 0 | 1 | 0 | 114 |
| Hourly Total | 0 | 0 | 60 | 5 | 2 | 0 | 0 | 67 | 1 | 1 | 22 | 4 | 0 | 0 | 0 | 28 | 2 | 6 | 286 | 23 | 0 | 1 | 1 | 319 |
| 1700 - 1715 | 0 | 0 | 19 | 5 | 0 | 0 | 0 | 24 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 1 | 1 | 73 | 8 | 0 | 0 | 0 | 83 |
| 1715 - 1730 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 46 | 9 | 0 | 1 | 0 | 57 |
| 1730 - 1745 | 0 | 0 | 22 | 2 | 0 | 0 | 0 | 24 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 43 | 6 | 1 | 0 | 1 | 52 |
| 1745 - 1800 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 14 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 6 | 0 | 1 | 64 | 10 | 0 | 0 | 0 | 75 |
| Hourly Total | 0 | 0 | 64 | 9 | 0 | 0 | 0 | 73 | 1 | 1 | 19 | 1 | 0 | 0 | 0 | 22 | 2 | 3 | 226 | 33 | 1 | 1 | 1 | 267 |
| 1800 - 1815 | 0 | 1 | 11 | 3 | 0 | 0 | 0 | 15 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 47 | 7 | 0 | 0 | 0 | 54 |
| 1815 - 1830 | 0 | 0 | 14 | 3 | 0 | 0 | 0 | 17 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 5 | 3 | 0 | 33 | 3 | 0 | 0 | 0 | 39 |
| 1830 - 1845 | 0 | 0 | 8 | 3 | 0 | 0 | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 35 | 5 | 0 | 0 | 0 | 40 |
| 1845 - 1900 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 40 | 2 | 0 | 0 | 0 | 42 |
| Hourly Total | 0 | 1 | 43 | 9 | 0 | 0 | 0 | 53 | 0 | 1 | 11 | 1 | 0 | 0 | 0 | 13 | 3 | 0 | 155 | 17 | 0 | 0 | 0 | 175 |
| Session Total | 0 | 1 | 167 | 23 | 2 | 0 | 0 | 193 | 2 | 3 | 52 | 6 | 0 | 0 | 0 | 63 | 7 | 9 | 667 | 73 | 1 | 2 | 2 | 761 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Partnership of Essex Councils

Junction: (2) Wakering Road / Bournes Green Chase / Shoebury Road / Southchurch Boulevard

Approach: Southchurch Boulevard

| TIME | Left to Wakering Road | | | | | | | | Ahead to Bournes Green Chase | | | | | | Right to Shoebury Road | | | | | | | | | |
|----------------------|-----------------------|-----------|-------------|------------|----------|----------|----------|-------------|------------------------------|-----------|-------------|------------|-----------|-----------|------------------------|-------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 1 | 2 | 13 | 7 | 0 | 1 | 0 | 24 | 0 | 1 | 71 | 6 | 3 | 2 | 3 | 86 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 |
| 0715 - 0730 | 1 | 0 | 27 | 4 | 0 | 0 | 0 | 32 | 0 | 0 | 98 | 17 | 9 | 4 | 3 | 131 | 0 | 0 | 6 | 1 | 2 | 0 | 0 | 9 |
| 0730 - 0745 | 0 | 0 | 28 | 6 | 0 | 0 | 0 | 34 | 0 | 0 | 105 | 18 | 4 | 2 | 4 | 133 | 0 | 0 | 8 | 3 | 0 | 0 | 1 | 12 |
| 0745 - 0800 | 1 | 1 | 56 | 9 | 0 | 0 | 0 | 67 | 0 | 3 | 115 | 28 | 1 | 2 | 1 | 150 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| Hourly Total | 3 | 3 | 124 | 26 | 0 | 1 | 0 | 157 | 0 | 4 | 389 | 69 | 17 | 10 | 11 | 500 | 0 | 0 | 24 | 7 | 2 | 0 | 1 | 34 |
| 0800 - 0815 | 1 | 0 | 90 | 12 | 0 | 0 | 0 | 103 | 1 | 2 | 119 | 26 | 7 | 4 | 4 | 163 | 0 | 0 | 6 | 5 | 0 | 0 | 1 | 12 |
| 0815 - 0830 | 0 | 0 | 142 | 8 | 0 | 0 | 0 | 150 | 1 | 1 | 157 | 24 | 7 | 2 | 1 | 193 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 15 |
| 0830 - 0845 | 0 | 1 | 108 | 9 | 3 | 2 | 0 | 123 | 3 | 1 | 124 | 22 | 7 | 5 | 2 | 164 | 1 | 0 | 8 | 1 | 0 | 0 | 1 | 11 |
| 0845 - 0900 | 0 | 0 | 64 | 19 | 1 | 0 | 0 | 84 | 0 | 1 | 136 | 32 | 4 | 2 | 1 | 176 | 0 | 0 | 12 | 3 | 0 | 0 | 0 | 15 |
| Hourly Total | 1 | 1 | 404 | 48 | 4 | 2 | 0 | 460 | 5 | 5 | 536 | 104 | 25 | 13 | 8 | 696 | 1 | 0 | 39 | 11 | 0 | 0 | 2 | 53 |
| 0900 - 0915 | 1 | 1 | 55 | 2 | 0 | 1 | 0 | 60 | 1 | 1 | 129 | 26 | 7 | 3 | 3 | 170 | 0 | 0 | 12 | 2 | 0 | 0 | 0 | 14 |
| 0915 - 0930 | 0 | 1 | 67 | 14 | 1 | 0 | 1 | 84 | 0 | 0 | 122 | 24 | 5 | 2 | 0 | 153 | 0 | 0 | 15 | 0 | 1 | 0 | 0 | 16 |
| 0930 - 0945 | 0 | 0 | 26 | 3 | 2 | 0 | 0 | 31 | 0 | 0 | 117 | 26 | 2 | 4 | 2 | 151 | 0 | 0 | 15 | 2 | 0 | 0 | 0 | 17 |
| 0945 - 1000 | 1 | 0 | 33 | 9 | 2 | 0 | 2 | 47 | 0 | 0 | 123 | 22 | 8 | 3 | 2 | 158 | 0 | 0 | 8 | 3 | 1 | 0 | 0 | 12 |
| Hourly Total | 2 | 2 | 181 | 28 | 5 | 1 | 3 | 222 | 1 | 1 | 491 | 98 | 22 | 12 | 7 | 632 | 0 | 0 | 50 | 7 | 2 | 0 | 0 | 59 |
| Session Total | 6 | 6 | 709 | 102 | 9 | 4 | 3 | 839 | 6 | 10 | 1416 | 271 | 64 | 35 | 26 | 1828 | 1 | 0 | 113 | 25 | 4 | 0 | 3 | 146 |
| 1600 - 1615 | 0 | 0 | 93 | 13 | 0 | 1 | 0 | 107 | 0 | 2 | 193 | 19 | 8 | 1 | 0 | 223 | 0 | 0 | 19 | 1 | 2 | 0 | 0 | 22 |
| 1615 - 1630 | 1 | 1 | 98 | 12 | 1 | 0 | 0 | 113 | 1 | 6 | 194 | 21 | 11 | 0 | 1 | 234 | 0 | 1 | 31 | 1 | 0 | 0 | 0 | 33 |
| 1630 - 1645 | 0 | 1 | 121 | 17 | 0 | 0 | 1 | 140 | 2 | 2 | 199 | 28 | 3 | 0 | 1 | 235 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 21 |
| 1645 - 1700 | 1 | 0 | 108 | 14 | 1 | 0 | 0 | 124 | 1 | 5 | 210 | 22 | 6 | 1 | 0 | 245 | 1 | 1 | 16 | 2 | 0 | 0 | 0 | 20 |
| Hourly Total | 2 | 2 | 420 | 56 | 2 | 1 | 1 | 484 | 4 | 15 | 796 | 90 | 28 | 2 | 2 | 937 | 1 | 2 | 86 | 5 | 2 | 0 | 0 | 96 |
| 1700 - 1715 | 2 | 2 | 94 | 12 | 0 | 0 | 0 | 110 | 1 | 5 | 231 | 29 | 4 | 0 | 2 | 272 | 0 | 1 | 24 | 3 | 0 | 0 | 1 | 29 |
| 1715 - 1730 | 3 | 2 | 111 | 17 | 0 | 0 | 0 | 133 | 1 | 2 | 218 | 18 | 1 | 2 | 0 | 242 | 0 | 0 | 19 | 3 | 0 | 0 | 0 | 22 |
| 1730 - 1745 | 2 | 2 | 87 | 12 | 0 | 0 | 0 | 103 | 0 | 4 | 241 | 26 | 3 | 2 | 0 | 276 | 0 | 0 | 29 | 5 | 0 | 0 | 0 | 34 |
| 1745 - 1800 | 0 | 0 | 85 | 11 | 0 | 0 | 0 | 96 | 2 | 4 | 250 | 22 | 2 | 1 | 0 | 281 | 0 | 0 | 34 | 2 | 0 | 0 | 0 | 36 |
| Hourly Total | 7 | 6 | 377 | 52 | 0 | 0 | 0 | 442 | 4 | 15 | 940 | 95 | 10 | 5 | 2 | 1071 | 0 | 1 | 106 | 13 | 0 | 0 | 1 | 121 |
| 1800 - 1815 | 0 | 2 | 90 | 9 | 1 | 0 | 1 | 103 | 1 | 3 | 221 | 18 | 2 | 1 | 2 | 248 | 1 | 0 | 19 | 2 | 0 | 0 | 0 | 22 |
| 1815 - 1830 | 1 | 1 | 73 | 3 | 0 | 0 | 0 | 78 | 0 | 2 | 212 | 23 | 0 | 1 | 1 | 239 | 0 | 0 | 26 | 1 | 0 | 0 | 0 | 27 |
| 1830 - 1845 | 1 | 1 | 87 | 6 | 0 | 0 | 1 | 96 | 2 | 3 | 181 | 20 | 2 | 0 | 1 | 209 | 1 | 1 | 23 | 1 | 0 | 0 | 0 | 26 |
| 1845 - 1900 | 0 | 0 | 84 | 2 | 0 | 0 | 0 | 86 | 1 | 1 | 185 | 14 | 0 | 0 | 0 | 201 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 |
| Hourly Total | 2 | 4 | 334 | 20 | 1 | 0 | 2 | 363 | 4 | 9 | 799 | 75 | 4 | 2 | 4 | 897 | 2 | 1 | 78 | 5 | 0 | 0 | 0 | 86 |
| Session Total | 11 | 12 | 1131 | 128 | 3 | 1 | 3 | 1289 | 12 | 39 | 2535 | 260 | 42 | 9 | 8 | 2905 | 3 | 4 | 270 | 23 | 2 | 0 | 1 | 303 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Traffic Information Consultancy

Junction: (3) Bournes Green Chase / Maplin Way North

Approach: Bournes Green Chase (East)

| TIME | Left to Maplin Way North | | | | | | | | Ahead to Bournes Green Chase (West) | | | | | | | |
|---------------------|--------------------------|----------|------------|-----------|----------|----------|----------|------------|-------------------------------------|-----------|------------|------------|-----------|-----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 | 0 | 4 | 126 | 22 | 6 | 2 | 0 | 160 |
| 0715 - 0730 | 0 | 0 | 22 | 3 | 0 | 0 | 0 | 25 | 0 | 2 | 150 | 24 | 6 | 1 | 6 | 189 |
| 0730 - 0745 | 0 | 0 | 24 | 2 | 0 | 0 | 0 | 26 | 2 | 7 | 170 | 25 | 9 | 9 | 0 | 222 |
| 0745 - 0800 | 1 | 0 | 19 | 1 | 0 | 0 | 0 | 21 | 1 | 1 | 174 | 29 | 7 | 3 | 1 | 216 |
| Hourly Total | 1 | 0 | 81 | 7 | 0 | 0 | 0 | 89 | 3 | 14 | 620 | 100 | 28 | 15 | 7 | 787 |
| 0800 - 0815 | 1 | 0 | 37 | 5 | 0 | 0 | 0 | 43 | 2 | 4 | 166 | 27 | 3 | 5 | 2 | 209 |
| 0815 - 0830 | 0 | 0 | 50 | 5 | 0 | 0 | 0 | 55 | 1 | 2 | 157 | 18 | 4 | 4 | 0 | 186 |
| 0830 - 0845 | 0 | 1 | 43 | 3 | 0 | 0 | 0 | 47 | 0 | 2 | 163 | 12 | 3 | 1 | 2 | 183 |
| 0845 - 0900 | 1 | 0 | 26 | 3 | 0 | 0 | 0 | 30 | 0 | 1 | 146 | 19 | 6 | 1 | 3 | 176 |
| Hourly Total | 2 | 1 | 156 | 16 | 0 | 0 | 0 | 175 | 3 | 9 | 632 | 76 | 16 | 11 | 7 | 754 |
| 0900 - 0915 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 27 | 0 | 1 | 126 | 20 | 8 | 6 | 1 | 162 |
| 0915 - 0930 | 0 | 0 | 22 | 2 | 0 | 0 | 0 | 24 | 0 | 0 | 133 | 27 | 6 | 2 | 2 | 170 |
| 0930 - 0945 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 14 | 0 | 1 | 116 | 14 | 5 | 5 | 2 | 143 |
| 0945 - 1000 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 15 | 0 | 0 | 87 | 18 | 3 | 4 | 1 | 113 |
| Hourly Total | 0 | 0 | 76 | 4 | 0 | 0 | 0 | 80 | 0 | 2 | 462 | 79 | 22 | 17 | 6 | 588 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|-----------|-------------|------------|-----------|-----------|-----------|-------------|
| Session Total | 3 | 1 | 313 | 27 | 0 | 0 | 0 | 344 | 6 | 25 | 1714 | 255 | 66 | 43 | 20 | 2129 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|-----------|-------------|------------|-----------|-----------|-----------|-------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|-----------|----------|----------|----------|----------|-----------|----------|-----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 1 | 1 | 26 | 0 | 0 | 0 | 0 | 28 | 0 | 2 | 92 | 25 | 4 | 2 | 2 | 127 |
| 1615 - 1630 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 10 | 1 | 1 | 119 | 15 | 0 | 1 | 1 | 138 |
| 1630 - 1645 | 0 | 0 | 21 | 5 | 0 | 0 | 0 | 26 | 0 | 0 | 126 | 17 | 2 | 2 | 0 | 147 |
| 1645 - 1700 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 21 | 1 | 0 | 112 | 19 | 0 | 1 | 2 | 135 |
| Hourly Total | 1 | 1 | 76 | 7 | 0 | 0 | 0 | 85 | 2 | 3 | 449 | 76 | 6 | 6 | 5 | 547 |
| 1700 - 1715 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 25 | 1 | 2 | 168 | 15 | 0 | 0 | 0 | 186 |
| 1715 - 1730 | 0 | 0 | 13 | 3 | 0 | 0 | 0 | 16 | 1 | 2 | 123 | 14 | 3 | 1 | 1 | 145 |
| 1730 - 1745 | 1 | 0 | 17 | 1 | 0 | 0 | 0 | 19 | 1 | 3 | 157 | 16 | 0 | 0 | 0 | 177 |
| 1745 - 1800 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 23 | 0 | 4 | 119 | 11 | 0 | 0 | 0 | 134 |
| Hourly Total | 1 | 0 | 78 | 4 | 0 | 0 | 0 | 83 | 3 | 11 | 567 | 56 | 3 | 1 | 1 | 642 |
| 1800 - 1815 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 19 | 0 | 3 | 117 | 9 | 1 | 0 | 1 | 131 |
| 1815 - 1830 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 117 | 11 | 1 | 0 | 0 | 130 |
| 1830 - 1845 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 19 | 0 | 1 | 123 | 9 | 0 | 0 | 1 | 134 |
| 1845 - 1900 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 113 | 11 | 0 | 0 | 1 | 125 |
| Hourly Total | 0 | 0 | 58 | 5 | 0 | 0 | 0 | 63 | 0 | 5 | 470 | 40 | 2 | 0 | 3 | 520 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|-----------|-------------|------------|-----------|----------|----------|-------------|
| Session Total | 2 | 1 | 212 | 16 | 0 | 0 | 0 | 231 | 5 | 19 | 1486 | 172 | 11 | 7 | 9 | 1709 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|-----------|-------------|------------|-----------|----------|----------|-------------|



Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (3) Bournes Green Chase / Maplin Way North

Approach: Maplin Way North

| TIME | Left to Bournes Green Chase (West) | | | | | | | | Right to Bournes Green Chase (East) | | | | | | | |
|---------------------|------------------------------------|----------|------------|-----------|----------|----------|----------|------------|-------------------------------------|----------|-----------|-----------|----------|----------|----------|-----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 2 | 27 | 2 | 1 | 0 | 0 | 32 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 8 |
| 0715 - 0730 | 0 | 0 | 48 | 4 | 0 | 0 | 0 | 52 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 10 |
| 0730 - 0745 | 0 | 0 | 50 | 5 | 0 | 0 | 2 | 57 | 0 | 0 | 13 | 2 | 2 | 0 | 0 | 17 |
| 0745 - 0800 | 0 | 0 | 56 | 3 | 0 | 0 | 0 | 59 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 20 |
| Hourly Total | 0 | 2 | 181 | 14 | 1 | 0 | 2 | 200 | 0 | 0 | 47 | 6 | 2 | 0 | 0 | 55 |
| 0800 - 0815 | 0 | 0 | 69 | 7 | 0 | 0 | 0 | 76 | 0 | 0 | 14 | 2 | 0 | 0 | 0 | 16 |
| 0815 - 0830 | 0 | 0 | 51 | 2 | 0 | 0 | 0 | 53 | 0 | 0 | 19 | 2 | 0 | 0 | 0 | 21 |
| 0830 - 0845 | 0 | 0 | 35 | 6 | 1 | 0 | 0 | 42 | 0 | 0 | 18 | 4 | 0 | 0 | 0 | 22 |
| 0845 - 0900 | 0 | 0 | 45 | 7 | 0 | 0 | 0 | 52 | 0 | 0 | 16 | 3 | 0 | 0 | 0 | 19 |
| Hourly Total | 0 | 0 | 200 | 22 | 1 | 0 | 0 | 223 | 0 | 0 | 67 | 11 | 0 | 0 | 0 | 78 |
| 0900 - 0915 | 0 | 0 | 46 | 3 | 0 | 0 | 1 | 50 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 |
| 0915 - 0930 | 0 | 0 | 45 | 4 | 0 | 0 | 0 | 49 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 |
| 0930 - 0945 | 0 | 1 | 34 | 3 | 0 | 0 | 0 | 38 | 0 | 2 | 13 | 2 | 0 | 0 | 0 | 17 |
| 0945 - 1000 | 0 | 0 | 37 | 4 | 1 | 0 | 0 | 42 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 16 |
| Hourly Total | 0 | 1 | 162 | 14 | 1 | 0 | 1 | 179 | 0 | 2 | 68 | 4 | 0 | 0 | 0 | 74 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 0 | 3 | 543 | 50 | 3 | 0 | 3 | 602 | 0 | 2 | 182 | 21 | 2 | 0 | 0 | 207 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 0 | 0 | 29 | 5 | 0 | 0 | 1 | 35 | 0 | 0 | 19 | 4 | 0 | 0 | 0 | 23 |
| 1615 - 1630 | 0 | 0 | 30 | 3 | 0 | 0 | 0 | 33 | 0 | 0 | 31 | 4 | 0 | 0 | 0 | 35 |
| 1630 - 1645 | 0 | 0 | 30 | 2 | 0 | 0 | 0 | 32 | 0 | 0 | 31 | 2 | 0 | 0 | 0 | 33 |
| 1645 - 1700 | 0 | 0 | 35 | 3 | 0 | 0 | 1 | 39 | 0 | 0 | 30 | 2 | 0 | 0 | 1 | 33 |
| Hourly Total | 0 | 0 | 124 | 13 | 0 | 0 | 2 | 139 | 0 | 0 | 111 | 12 | 0 | 0 | 1 | 124 |
| 1700 - 1715 | 0 | 0 | 43 | 0 | 0 | 1 | 0 | 44 | 0 | 1 | 31 | 3 | 0 | 0 | 0 | 35 |
| 1715 - 1730 | 0 | 0 | 35 | 3 | 0 | 0 | 0 | 38 | 0 | 0 | 26 | 5 | 0 | 0 | 0 | 31 |
| 1730 - 1745 | 0 | 0 | 39 | 5 | 0 | 0 | 0 | 44 | 0 | 0 | 26 | 3 | 0 | 0 | 0 | 29 |
| 1745 - 1800 | 0 | 0 | 35 | 2 | 0 | 0 | 0 | 37 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 30 |
| Hourly Total | 0 | 0 | 152 | 10 | 0 | 1 | 0 | 163 | 0 | 1 | 113 | 11 | 0 | 0 | 0 | 125 |
| 1800 - 1815 | 0 | 0 | 41 | 6 | 0 | 0 | 0 | 47 | 0 | 0 | 28 | 4 | 0 | 0 | 0 | 32 |
| 1815 - 1830 | 0 | 0 | 34 | 2 | 0 | 0 | 0 | 36 | 0 | 0 | 27 | 2 | 0 | 0 | 0 | 29 |
| 1830 - 1845 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 25 | 2 | 0 | 0 | 0 | 27 |
| 1845 - 1900 | 0 | 0 | 41 | 4 | 0 | 0 | 0 | 45 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 21 |
| Hourly Total | 0 | 0 | 144 | 12 | 0 | 0 | 0 | 156 | 0 | 0 | 100 | 9 | 0 | 0 | 0 | 109 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 0 | 0 | 420 | 35 | 0 | 1 | 2 | 458 | 0 | 1 | 324 | 32 | 0 | 0 | 1 | 358 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Traffic Information Consultancy

Junction: (3) Bournes Green Chase / Maplin Way North

Approach: Bournes Green Chase (West)

| TIME | Ahead to Bournes Green Chase (East) | | | | | | | | Right to Maplin Way North | | | | | | | |
|---------------------|-------------------------------------|----------|------------|-----------|-----------|-----------|-----------|------------|---------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 1 | 67 | 4 | 2 | 3 | 4 | 81 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 |
| 0715 - 0730 | 0 | 0 | 92 | 20 | 7 | 4 | 2 | 125 | 0 | 0 | 11 | 1 | 1 | 0 | 2 | 15 |
| 0730 - 0745 | 0 | 0 | 88 | 18 | 5 | 2 | 3 | 116 | 0 | 0 | 26 | 2 | 0 | 0 | 0 | 28 |
| 0745 - 0800 | 0 | 3 | 99 | 25 | 1 | 2 | 1 | 131 | 0 | 0 | 28 | 4 | 0 | 0 | 0 | 32 |
| Hourly Total | 0 | 4 | 346 | 67 | 15 | 11 | 10 | 453 | 0 | 0 | 71 | 8 | 1 | 0 | 2 | 82 |
| 0800 - 0815 | 0 | 2 | 93 | 24 | 7 | 3 | 3 | 132 | 0 | 0 | 38 | 3 | 1 | 0 | 0 | 42 |
| 0815 - 0830 | 2 | 0 | 131 | 20 | 6 | 2 | 2 | 163 | 0 | 1 | 46 | 5 | 0 | 0 | 0 | 52 |
| 0830 - 0845 | 2 | 0 | 105 | 20 | 7 | 6 | 1 | 141 | 0 | 0 | 36 | 5 | 0 | 0 | 0 | 41 |
| 0845 - 0900 | 0 | 1 | 126 | 25 | 4 | 2 | 2 | 160 | 0 | 0 | 29 | 8 | 0 | 0 | 0 | 37 |
| Hourly Total | 4 | 3 | 455 | 89 | 24 | 13 | 8 | 596 | 0 | 1 | 149 | 21 | 1 | 0 | 0 | 172 |
| 0900 - 0915 | 2 | 2 | 110 | 18 | 7 | 3 | 2 | 144 | 0 | 0 | 20 | 9 | 0 | 0 | 0 | 29 |
| 0915 - 0930 | 0 | 0 | 109 | 17 | 6 | 2 | 0 | 134 | 0 | 0 | 18 | 7 | 0 | 0 | 0 | 25 |
| 0930 - 0945 | 0 | 0 | 107 | 26 | 3 | 3 | 2 | 141 | 0 | 0 | 25 | 3 | 0 | 0 | 0 | 28 |
| 0945 - 1000 | 0 | 0 | 113 | 19 | 6 | 3 | 2 | 143 | 0 | 0 | 17 | 3 | 0 | 0 | 0 | 20 |
| Hourly Total | 2 | 2 | 439 | 80 | 22 | 11 | 6 | 562 | 0 | 0 | 80 | 22 | 0 | 0 | 0 | 102 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|-------------|------------|-----------|-----------|-----------|-------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 6 | 9 | 1240 | 236 | 61 | 35 | 24 | 1611 | 0 | 1 | 300 | 51 | 2 | 0 | 2 | 356 |
|----------------------|----------|----------|-------------|------------|-----------|-----------|-----------|-------------|----------|----------|------------|-----------|----------|----------|----------|------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|-----------|------------|-----------|-----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 0 | 3 | 157 | 19 | 7 | 2 | 0 | 188 | 0 | 0 | 43 | 1 | 1 | 0 | 0 | 45 |
| 1615 - 1630 | 1 | 5 | 165 | 22 | 11 | 0 | 1 | 205 | 0 | 0 | 42 | 2 | 0 | 0 | 0 | 44 |
| 1630 - 1645 | 2 | 3 | 173 | 28 | 4 | 0 | 0 | 210 | 0 | 0 | 42 | 1 | 0 | 0 | 1 | 44 |
| 1645 - 1700 | 1 | 4 | 190 | 18 | 5 | 2 | 0 | 220 | 0 | 0 | 48 | 5 | 0 | 0 | 0 | 53 |
| Hourly Total | 4 | 15 | 685 | 87 | 27 | 4 | 1 | 823 | 0 | 0 | 175 | 9 | 1 | 0 | 1 | 186 |
| 1700 - 1715 | 1 | 4 | 203 | 27 | 3 | 1 | 2 | 241 | 0 | 0 | 50 | 6 | 0 | 0 | 0 | 56 |
| 1715 - 1730 | 1 | 1 | 192 | 15 | 2 | 1 | 0 | 212 | 0 | 1 | 33 | 4 | 0 | 0 | 0 | 38 |
| 1730 - 1745 | 0 | 5 | 210 | 24 | 3 | 1 | 1 | 244 | 0 | 0 | 53 | 4 | 0 | 0 | 0 | 57 |
| 1745 - 1800 | 2 | 5 | 210 | 16 | 2 | 1 | 0 | 236 | 0 | 0 | 48 | 7 | 0 | 0 | 0 | 55 |
| Hourly Total | 4 | 15 | 815 | 82 | 10 | 4 | 3 | 933 | 0 | 1 | 184 | 21 | 0 | 0 | 0 | 206 |
| 1800 - 1815 | 0 | 4 | 187 | 17 | 2 | 0 | 1 | 211 | 0 | 0 | 44 | 3 | 0 | 0 | 0 | 47 |
| 1815 - 1830 | 1 | 2 | 169 | 22 | 0 | 1 | 1 | 196 | 0 | 0 | 51 | 5 | 0 | 0 | 0 | 56 |
| 1830 - 1845 | 1 | 2 | 154 | 19 | 1 | 0 | 1 | 178 | 0 | 0 | 37 | 4 | 0 | 0 | 0 | 41 |
| 1845 - 1900 | 2 | 1 | 162 | 10 | 1 | 0 | 0 | 176 | 0 | 0 | 30 | 2 | 0 | 0 | 0 | 32 |
| Hourly Total | 4 | 9 | 672 | 68 | 4 | 1 | 3 | 761 | 0 | 0 | 162 | 14 | 0 | 0 | 0 | 176 |

| | | | | | | | | | | | | | | | | |
|----------------------|-----------|-----------|-------------|------------|-----------|----------|----------|-------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 12 | 39 | 2172 | 237 | 41 | 9 | 7 | 2517 | 0 | 1 | 521 | 44 | 1 | 0 | 1 | 568 |
|----------------------|-----------|-----------|-------------|------------|-----------|----------|----------|-------------|----------|----------|------------|-----------|----------|----------|----------|------------|

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (4) Poynters Lane / North Shoebury Road / Bishopsteignton / Bournes Green Chase

Approach: Poynters Lane

| TIME | Left to North Shoebury Road | | | | | | | | Ahead to Bishopsteignton | | | | | | | | Right to Bournes Green Chase | | | | | | | |
|----------------------|-----------------------------|----------|------------|-----------|----------|----------|----------|------------|--------------------------|----------|-----------|----------|----------|----------|----------|-----------|------------------------------|----------|-------------|------------|-----------|-----------|----------|-------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 98 | 7 | 0 | 0 | 0 | 105 |
| 0715 - 0730 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 100 | 13 | 2 | 0 | 5 | 121 |
| 0730 - 0745 | 0 | 0 | 17 | 1 | 2 | 0 | 0 | 20 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 93 | 16 | 5 | 1 | 1 | 119 |
| 0745 - 0800 | 0 | 0 | 18 | 3 | 0 | 0 | 0 | 21 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 114 | 21 | 3 | 1 | 0 | 142 |
| Hourly Total | 0 | 0 | 52 | 6 | 2 | 0 | 0 | 60 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 2 | 5 | 405 | 57 | 10 | 2 | 6 | 487 |
| 0800 - 0815 | 0 | 0 | 22 | 3 | 0 | 1 | 0 | 26 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 5 | 1 | 1 | 116 | 15 | 0 | 3 | 0 | 136 |
| 0815 - 0830 | 0 | 1 | 45 | 5 | 1 | 0 | 0 | 52 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 1 | 1 | 106 | 13 | 0 | 2 | 0 | 123 |
| 0830 - 0845 | 0 | 0 | 26 | 2 | 1 | 0 | 0 | 29 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 | 0 | 2 | 127 | 11 | 1 | 1 | 1 | 143 |
| 0845 - 0900 | 0 | 0 | 29 | 1 | 0 | 0 | 0 | 30 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 87 | 14 | 3 | 1 | 0 | 106 |
| Hourly Total | 0 | 1 | 122 | 11 | 2 | 1 | 0 | 137 | 0 | 0 | 18 | 4 | 0 | 0 | 0 | 22 | 3 | 4 | 436 | 53 | 4 | 7 | 1 | 508 |
| 0900 - 0915 | 0 | 1 | 22 | 5 | 1 | 0 | 0 | 29 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 59 | 9 | 2 | 4 | 0 | 74 |
| 0915 - 0930 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 19 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 83 | 9 | 0 | 1 | 1 | 94 |
| 0930 - 0945 | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 15 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 69 | 6 | 2 | 2 | 1 | 80 |
| 0945 - 1000 | 1 | 0 | 10 | 3 | 0 | 0 | 0 | 14 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 44 | 13 | 0 | 1 | 0 | 58 |
| Hourly Total | 1 | 1 | 61 | 13 | 1 | 0 | 0 | 77 | 0 | 0 | 15 | 3 | 0 | 0 | 0 | 18 | 0 | 0 | 255 | 37 | 4 | 8 | 2 | 306 |
| Session Total | 1 | 2 | 235 | 30 | 5 | 1 | 0 | 274 | 0 | 0 | 41 | 7 | 0 | 0 | 0 | 48 | 5 | 9 | 1096 | 147 | 18 | 17 | 9 | 1301 |
| 1600 - 1615 | 0 | 0 | 16 | 2 | 0 | 0 | 0 | 18 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 2 | 64 | 9 | 2 | 2 | 2 | 81 |
| 1615 - 1630 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 19 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 62 | 9 | 0 | 0 | 1 | 73 |
| 1630 - 1645 | 1 | 0 | 24 | 4 | 0 | 0 | 0 | 29 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 67 | 9 | 0 | 0 | 2 | 78 |
| 1645 - 1700 | 0 | 0 | 27 | 1 | 0 | 0 | 0 | 28 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 11 | 0 | 0 | 64 | 9 | 0 | 1 | 1 | 75 |
| Hourly Total | 1 | 0 | 85 | 8 | 0 | 0 | 0 | 94 | 0 | 0 | 19 | 3 | 0 | 0 | 0 | 22 | 0 | 3 | 257 | 36 | 2 | 3 | 6 | 307 |
| 1700 - 1715 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 15 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 9 | 0 | 1 | 76 | 6 | 0 | 0 | 0 | 83 |
| 1715 - 1730 | 1 | 0 | 16 | 3 | 0 | 0 | 0 | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 51 | 4 | 0 | 0 | 0 | 57 |
| 1730 - 1745 | 1 | 0 | 20 | 3 | 0 | 0 | 0 | 24 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 65 | 10 | 0 | 0 | 1 | 76 |
| 1745 - 1800 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 19 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 72 | 5 | 0 | 0 | 0 | 77 |
| Hourly Total | 2 | 0 | 67 | 9 | 0 | 0 | 0 | 78 | 0 | 0 | 20 | 2 | 0 | 0 | 0 | 22 | 1 | 2 | 264 | 25 | 0 | 0 | 1 | 293 |
| 1800 - 1815 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 15 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 58 | 10 | 0 | 0 | 1 | 70 |
| 1815 - 1830 | 0 | 0 | 18 | 3 | 0 | 0 | 0 | 21 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 70 | 5 | 0 | 0 | 0 | 75 |
| 1830 - 1845 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 12 | 0 | 2 | 6 | 2 | 0 | 0 | 0 | 10 | 0 | 1 | 52 | 4 | 0 | 0 | 1 | 58 |
| 1845 - 1900 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 15 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 66 | 5 | 0 | 0 | 0 | 71 |
| Hourly Total | 0 | 0 | 57 | 6 | 0 | 0 | 0 | 63 | 0 | 2 | 20 | 2 | 0 | 0 | 0 | 24 | 0 | 2 | 246 | 24 | 0 | 0 | 2 | 274 |
| Session Total | 3 | 0 | 209 | 23 | 0 | 0 | 0 | 235 | 0 | 2 | 59 | 7 | 0 | 0 | 0 | 68 | 1 | 7 | 767 | 85 | 2 | 3 | 9 | 874 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (4) Poynters Lane / North Shoebury Road / Bishopsteignton / Bournes Green Chase

Approach: North Shoebury Road

| TIME | Left to Bishopsteignton | | | | | | | | Ahead to Bournes Green Chase | | | | | | | | Right to Poynters Lane | | | | | | | |
|----------------------|-------------------------|----------|-----------|----------|----------|----------|----------|------------|------------------------------|-----------|------------|------------|-----------|-----------|-----------|-------------|------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 36 | 12 | 6 | 2 | 0 | 59 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| 0715 - 0730 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 63 | 10 | 4 | 0 | 1 | 81 | 0 | 0 | 9 | 1 | 0 | 2 | 0 | 12 |
| 0730 - 0745 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 4 | 88 | 11 | 3 | 6 | 0 | 112 | 0 | 0 | 9 | 3 | 0 | 0 | 0 | 12 |
| 0745 - 0800 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 1 | 74 | 11 | 5 | 4 | 0 | 95 | 0 | 1 | 19 | 7 | 0 | 0 | 0 | 27 |
| Hourly Total | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 11 | 1 | 10 | 261 | 44 | 18 | 12 | 1 | 347 | 0 | 1 | 41 | 12 | 0 | 2 | 0 | 56 |
| 0800 - 0815 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 2 | 2 | 77 | 12 | 2 | 2 | 2 | 99 | 0 | 0 | 10 | 2 | 1 | 0 | 1 | 14 |
| 0815 - 0830 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 94 | 11 | 5 | 2 | 1 | 115 | 0 | 0 | 10 | 3 | 0 | 0 | 0 | 13 |
| 0830 - 0845 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 68 | 7 | 4 | 0 | 0 | 79 | 0 | 0 | 32 | 5 | 0 | 0 | 0 | 37 |
| 0845 - 0900 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 10 | 0 | 1 | 79 | 6 | 2 | 0 | 2 | 90 | 1 | 0 | 25 | 3 | 0 | 0 | 0 | 29 |
| Hourly Total | 0 | 0 | 18 | 3 | 0 | 0 | 0 | 21 | 2 | 5 | 318 | 36 | 13 | 4 | 5 | 383 | 1 | 0 | 77 | 13 | 1 | 0 | 1 | 93 |
| 0900 - 0915 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 97 | 15 | 5 | 2 | 2 | 122 | 0 | 0 | 20 | 0 | 2 | 0 | 0 | 22 |
| 0915 - 0930 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 63 | 11 | 7 | 1 | 0 | 82 | 0 | 0 | 14 | 1 | 0 | 0 | 1 | 16 |
| 0930 - 0945 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 1 | 54 | 16 | 3 | 3 | 1 | 78 | 0 | 0 | 15 | 3 | 1 | 0 | 0 | 19 |
| 0945 - 1000 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 9 | 0 | 0 | 59 | 10 | 2 | 2 | 1 | 74 | 0 | 0 | 13 | 0 | 1 | 0 | 0 | 14 |
| Hourly Total | 0 | 0 | 15 | 3 | 0 | 0 | 0 | 18 | 0 | 2 | 273 | 52 | 17 | 8 | 4 | 356 | 0 | 0 | 62 | 4 | 4 | 0 | 1 | 71 |
| Session Total | 0 | 0 | 42 | 8 | 0 | 0 | 0 | 50 | 3 | 17 | 852 | 132 | 48 | 24 | 10 | 1086 | 1 | 1 | 180 | 29 | 5 | 2 | 2 | 220 |
| 1600 - 1615 | 1 | 0 | 5 | 1 | 0 | 0 | 0 | 7 | 1 | 2 | 49 | 13 | 2 | 0 | 0 | 67 | 0 | 0 | 36 | 4 | 0 | 0 | 0 | 40 |
| 1615 - 1630 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 69 | 8 | 0 | 1 | 0 | 78 | 0 | 0 | 28 | 0 | 1 | 0 | 0 | 29 |
| 1630 - 1645 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 79 | 10 | 2 | 2 | 0 | 94 | 0 | 1 | 28 | 1 | 2 | 0 | 0 | 32 |
| 1645 - 1700 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 | 1 | 0 | 70 | 9 | 0 | 0 | 0 | 80 | 0 | 1 | 36 | 3 | 0 | 0 | 0 | 40 |
| Hourly Total | 1 | 0 | 30 | 1 | 0 | 0 | 0 | 32 | 3 | 2 | 267 | 40 | 4 | 3 | 0 | 319 | 0 | 2 | 128 | 8 | 3 | 0 | 0 | 141 |
| 1700 - 1715 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 1 | 1 | 78 | 9 | 0 | 0 | 0 | 89 | 1 | 1 | 41 | 0 | 0 | 0 | 0 | 43 |
| 1715 - 1730 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 88 | 12 | 2 | 1 | 0 | 104 | 0 | 0 | 46 | 1 | 0 | 0 | 0 | 47 |
| 1730 - 1745 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 12 | 2 | 2 | 103 | 10 | 1 | 0 | 0 | 118 | 2 | 0 | 37 | 0 | 0 | 0 | 0 | 39 |
| 1745 - 1800 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 4 | 67 | 7 | 0 | 0 | 0 | 78 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 43 |
| Hourly Total | 0 | 0 | 38 | 1 | 0 | 0 | 0 | 39 | 3 | 8 | 336 | 38 | 3 | 1 | 0 | 389 | 3 | 1 | 167 | 1 | 0 | 0 | 0 | 172 |
| 1800 - 1815 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 2 | 71 | 2 | 2 | 0 | 0 | 77 | 0 | 1 | 29 | 2 | 0 | 0 | 0 | 32 |
| 1815 - 1830 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 70 | 8 | 1 | 0 | 0 | 79 | 0 | 0 | 34 | 5 | 0 | 0 | 0 | 39 |
| 1830 - 1845 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 67 | 7 | 0 | 0 | 0 | 74 | 0 | 1 | 27 | 0 | 0 | 0 | 0 | 28 |
| 1845 - 1900 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 71 | 7 | 0 | 0 | 0 | 78 | 0 | 0 | 26 | 1 | 0 | 0 | 0 | 27 |
| Hourly Total | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 29 | 0 | 2 | 279 | 24 | 3 | 0 | 0 | 306 | 0 | 2 | 116 | 8 | 0 | 0 | 0 | 126 |
| Session Total | 1 | 0 | 97 | 2 | 0 | 0 | 0 | 100 | 6 | 12 | 882 | 102 | 10 | 4 | 0 | 1016 | 3 | 5 | 411 | 17 | 3 | 0 | 0 | 439 |

Junction: (4) Poynters Lane / North Shoebury Road / Bishopsteignton / Bourmes Green Chase

Approach: Bishopsteignton

| TIME | Left to Bourmes Green Chase | | | | | | | Ahead to Poynters Lane | | | | | | | Right to North Shoebury Road | | | | | | | | | |
|----------------------|-----------------------------|----------|-----------|----------|----------|----------|----------|------------------------|----------|----------|-----------|----------|----------|----------|------------------------------|-----------|----------|----------|-----------|----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0715 - 0730 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 0730 - 0745 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 13 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 0745 - 0800 | 2 | 0 | 8 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| Hourly Total | 2 | 0 | 36 | 3 | 0 | 0 | 0 | 41 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 16 |
| 0800 - 0815 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 |
| 0815 - 0830 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 9 | 0 | 1 | 0 | 0 | 10 |
| 0830 - 0845 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 |
| 0845 - 0900 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 10 | 1 | 0 | 0 | 0 | 12 |
| Hourly Total | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 17 | 1 | 0 | 33 | 3 | 1 | 0 | 0 | 38 |
| 0900 - 0915 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 |
| 0915 - 0930 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 |
| 0930 - 0945 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 12 |
| 0945 - 1000 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 9 | 2 | 0 | 0 | 0 | 11 |
| Hourly Total | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 35 | 4 | 0 | 0 | 0 | 39 |
| Session Total | 2 | 0 | 88 | 3 | 0 | 0 | 0 | 93 | 0 | 0 | 35 | 2 | 0 | 0 | 0 | 37 | 1 | 0 | 84 | 7 | 1 | 0 | 0 | 93 |
| 1600 - 1615 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 1615 - 1630 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 1630 - 1645 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 |
| 1645 - 1700 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 15 |
| Hourly Total | 0 | 0 | 15 | 4 | 0 | 0 | 0 | 19 | 0 | 0 | 21 | 1 | 0 | 0 | 0 | 22 | 0 | 0 | 35 | 1 | 0 | 0 | 0 | 36 |
| 1700 - 1715 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 1715 - 1730 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 1730 - 1745 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 13 |
| 1745 - 1800 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| Hourly Total | 0 | 1 | 25 | 1 | 0 | 0 | 0 | 27 | 0 | 1 | 21 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 28 | 1 | 0 | 0 | 0 | 29 |
| 1800 - 1815 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 1815 - 1830 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 13 | 3 | 0 | 0 | 0 | 16 |
| 1830 - 1845 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 1845 - 1900 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| Hourly Total | 0 | 1 | 22 | 1 | 0 | 0 | 0 | 24 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 34 | 3 | 0 | 0 | 0 | 37 |
| Session Total | 0 | 2 | 62 | 6 | 0 | 0 | 0 | 70 | 0 | 1 | 61 | 1 | 0 | 0 | 0 | 63 | 0 | 0 | 97 | 5 | 0 | 0 | 0 | 102 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Traffic Information Consultancy

Junction: (4) Poynters Lane / North Shoebury Road / Bishopsteignton / Bournes Green Chase

Approach: Bournes Green Chase

| TIME | Left to Poynters Lane | | | | | | | | Ahead to North Shoebury Road | | | | | | | | Right to Bishopsteignton | | | | | | | |
|----------------------|-----------------------|-----------|-------------|------------|-----------|-----------|-----------|-------------|------------------------------|-----------|-------------|------------|-----------|-----------|-----------|-------------|--------------------------|----------|-----------|----------|----------|----------|----------|-----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 1 | 21 | 1 | 0 | 0 | 4 | 27 | 0 | 0 | 47 | 7 | 2 | 3 | 0 | 59 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 0715 - 0730 | 0 | 0 | 29 | 5 | 2 | 2 | 0 | 38 | 0 | 0 | 72 | 15 | 4 | 4 | 2 | 97 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0730 - 0745 | 0 | 0 | 25 | 5 | 1 | 1 | 0 | 32 | 0 | 0 | 72 | 15 | 5 | 0 | 3 | 95 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 0745 - 0800 | 0 | 2 | 37 | 11 | 0 | 1 | 1 | 52 | 0 | 0 | 77 | 15 | 2 | 0 | 0 | 94 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| Hourly Total | 0 | 3 | 112 | 22 | 3 | 4 | 5 | 149 | 0 | 0 | 268 | 52 | 13 | 7 | 5 | 345 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| 0800 - 0815 | 0 | 0 | 33 | 1 | 1 | 1 | 0 | 36 | 0 | 2 | 71 | 21 | 5 | 1 | 3 | 103 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 7 |
| 0815 - 0830 | 0 | 1 | 54 | 9 | 2 | 1 | 1 | 68 | 1 | 0 | 90 | 13 | 4 | 2 | 1 | 111 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 7 |
| 0830 - 0845 | 0 | 0 | 59 | 8 | 2 | 3 | 1 | 73 | 2 | 0 | 58 | 15 | 5 | 3 | 0 | 83 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 |
| 0845 - 0900 | 0 | 0 | 50 | 4 | 3 | 2 | 2 | 61 | 1 | 1 | 88 | 22 | 2 | 0 | 0 | 114 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 |
| Hourly Total | 0 | 1 | 196 | 22 | 8 | 7 | 4 | 238 | 4 | 3 | 307 | 71 | 16 | 6 | 4 | 411 | 0 | 0 | 19 | 5 | 1 | 0 | 0 | 25 |
| 0900 - 0915 | 0 | 0 | 56 | 9 | 2 | 2 | 1 | 70 | 1 | 1 | 76 | 10 | 5 | 1 | 1 | 95 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 |
| 0915 - 0930 | 0 | 0 | 42 | 5 | 0 | 2 | 0 | 49 | 1 | 1 | 76 | 14 | 5 | 1 | 0 | 98 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 |
| 0930 - 0945 | 0 | 0 | 33 | 6 | 0 | 0 | 0 | 39 | 0 | 1 | 86 | 20 | 4 | 2 | 2 | 115 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 |
| 0945 - 1000 | 0 | 1 | 39 | 9 | 2 | 1 | 1 | 53 | 0 | 0 | 85 | 10 | 4 | 2 | 1 | 102 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 |
| Hourly Total | 0 | 1 | 170 | 29 | 4 | 5 | 2 | 211 | 2 | 3 | 323 | 54 | 18 | 6 | 4 | 410 | 0 | 0 | 19 | 4 | 0 | 0 | 0 | 23 |
| Session Total | 0 | 5 | 478 | 73 | 15 | 16 | 11 | 598 | 6 | 6 | 898 | 177 | 47 | 19 | 13 | 1166 | 0 | 0 | 49 | 9 | 1 | 0 | 0 | 59 |
| 1600 - 1615 | 0 | 1 | 91 | 11 | 1 | 0 | 0 | 104 | 0 | 3 | 76 | 11 | 5 | 1 | 0 | 96 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 |
| 1615 - 1630 | 0 | 0 | 83 | 11 | 1 | 1 | 0 | 96 | 1 | 4 | 111 | 12 | 8 | 0 | 1 | 137 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1630 - 1645 | 0 | 3 | 95 | 13 | 0 | 0 | 0 | 111 | 2 | 0 | 104 | 17 | 7 | 0 | 0 | 130 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| 1645 - 1700 | 0 | 4 | 101 | 13 | 1 | 0 | 1 | 120 | 1 | 1 | 112 | 6 | 4 | 1 | 0 | 125 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| Hourly Total | 0 | 8 | 370 | 48 | 3 | 1 | 1 | 431 | 4 | 8 | 403 | 46 | 24 | 2 | 1 | 488 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 21 |
| 1700 - 1715 | 1 | 4 | 101 | 17 | 0 | 0 | 1 | 124 | 0 | 1 | 123 | 12 | 3 | 1 | 1 | 141 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| 1715 - 1730 | 0 | 0 | 115 | 13 | 0 | 0 | 0 | 128 | 0 | 1 | 102 | 10 | 2 | 1 | 0 | 116 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| 1730 - 1745 | 0 | 5 | 104 | 9 | 1 | 0 | 1 | 120 | 0 | 1 | 116 | 17 | 2 | 1 | 0 | 137 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| 1745 - 1800 | 0 | 2 | 99 | 15 | 1 | 0 | 0 | 117 | 2 | 2 | 128 | 4 | 1 | 1 | 0 | 138 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| Hourly Total | 1 | 11 | 419 | 54 | 2 | 0 | 2 | 489 | 2 | 5 | 469 | 43 | 8 | 4 | 1 | 532 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 39 |
| 1800 - 1815 | 0 | 3 | 110 | 12 | 1 | 0 | 0 | 126 | 0 | 1 | 94 | 9 | 1 | 0 | 1 | 106 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 1815 - 1830 | 0 | 1 | 100 | 11 | 0 | 0 | 1 | 113 | 0 | 2 | 85 | 12 | 0 | 1 | 0 | 100 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 13 |
| 1830 - 1845 | 0 | 0 | 97 | 9 | 1 | 0 | 0 | 107 | 1 | 0 | 73 | 12 | 0 | 0 | 1 | 87 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 1845 - 1900 | 1 | 1 | 90 | 6 | 1 | 0 | 0 | 99 | 1 | 0 | 85 | 7 | 0 | 0 | 0 | 93 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| Hourly Total | 1 | 5 | 397 | 38 | 3 | 0 | 1 | 445 | 2 | 3 | 337 | 40 | 1 | 1 | 2 | 386 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 31 |
| Session Total | 2 | 24 | 1186 | 140 | 8 | 1 | 4 | 1365 | 8 | 16 | 1209 | 129 | 33 | 7 | 4 | 1406 | 0 | 0 | 90 | 1 | 0 | 0 | 0 | 91 |



Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (5) Star Lane / Poynters Lane

Approach: Star Lane

| TIME | Left to Poynters Lane (East) | | | | | | | | Ahead to Poynters Lane (West) | | | | | | | |
|---------------------|------------------------------|----------|-----------|----------|----------|----------|----------|-----------|-------------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 39 | 2 | 1 | 0 | 0 | 42 |
| 0715 - 0730 | 0 | 1 | 11 | 2 | 0 | 0 | 0 | 14 | 0 | 0 | 37 | 2 | 1 | 0 | 6 | 46 |
| 0730 - 0745 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 46 | 5 | 4 | 1 | 0 | 57 |
| 0745 - 0800 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 2 | 0 | 36 | 10 | 1 | 1 | 0 | 50 |
| Hourly Total | 0 | 3 | 28 | 3 | 0 | 0 | 0 | 34 | 3 | 0 | 158 | 19 | 7 | 2 | 6 | 195 |
| 0800 - 0815 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 66 | 5 | 0 | 3 | 1 | 77 |
| 0815 - 0830 | 0 | 0 | 9 | 4 | 2 | 0 | 0 | 15 | 1 | 1 | 76 | 7 | 2 | 1 | 0 | 88 |
| 0830 - 0845 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 12 | 1 | 1 | 74 | 8 | 2 | 1 | 1 | 88 |
| 0845 - 0900 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 1 | 1 | 69 | 5 | 2 | 0 | 0 | 78 |
| Hourly Total | 0 | 0 | 33 | 6 | 2 | 0 | 0 | 41 | 3 | 5 | 285 | 25 | 6 | 5 | 2 | 331 |
| 0900 - 0915 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 50 | 7 | 2 | 4 | 1 | 65 |
| 0915 - 0930 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 43 | 4 | 0 | 1 | 0 | 48 |
| 0930 - 0945 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 45 | 6 | 2 | 0 | 1 | 55 |
| 0945 - 1000 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 8 | 1 | 0 | 40 | 8 | 0 | 2 | 0 | 51 |
| Hourly Total | 0 | 0 | 24 | 3 | 0 | 0 | 0 | 27 | 2 | 1 | 178 | 25 | 4 | 7 | 2 | 219 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|-----------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|-----------|-----------|-----------|------------|
| Session Total | 0 | 3 | 85 | 12 | 2 | 0 | 0 | 102 | 8 | 6 | 621 | 69 | 17 | 14 | 10 | 745 |
|----------------------|----------|----------|-----------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|-----------|-----------|-----------|------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|-----------|----------|----------|----------|----------|-----------|----------|----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 1 | 51 | 6 | 2 | 2 | 1 | 63 |
| 1615 - 1630 | 0 | 0 | 12 | 2 | 0 | 0 | 0 | 14 | 0 | 1 | 51 | 3 | 0 | 0 | 1 | 56 |
| 1630 - 1645 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 53 | 6 | 0 | 0 | 0 | 59 |
| 1645 - 1700 | 0 | 1 | 13 | 1 | 0 | 0 | 0 | 15 | 1 | 0 | 57 | 4 | 0 | 0 | 0 | 62 |
| Hourly Total | 0 | 1 | 40 | 5 | 0 | 0 | 0 | 46 | 1 | 2 | 212 | 19 | 2 | 2 | 2 | 240 |
| 1700 - 1715 | 0 | 0 | 11 | 5 | 0 | 0 | 0 | 16 | 0 | 1 | 61 | 7 | 0 | 0 | 0 | 69 |
| 1715 - 1730 | 0 | 1 | 7 | 3 | 0 | 0 | 0 | 11 | 1 | 1 | 35 | 5 | 0 | 1 | 0 | 43 |
| 1730 - 1745 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 65 | 6 | 1 | 0 | 1 | 74 |
| 1745 - 1800 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 53 | 6 | 0 | 0 | 0 | 59 |
| Hourly Total | 0 | 2 | 33 | 8 | 0 | 0 | 0 | 43 | 2 | 2 | 214 | 24 | 1 | 1 | 1 | 245 |
| 1800 - 1815 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 45 | 2 | 0 | 0 | 1 | 49 |
| 1815 - 1830 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 53 | 4 | 0 | 0 | 0 | 57 |
| 1830 - 1845 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 35 | 2 | 0 | 0 | 1 | 39 |
| 1845 - 1900 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 46 | 4 | 0 | 0 | 0 | 50 |
| Hourly Total | 0 | 1 | 29 | 0 | 0 | 0 | 0 | 30 | 0 | 2 | 179 | 12 | 0 | 0 | 2 | 195 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 0 | 4 | 102 | 13 | 0 | 0 | 0 | 119 | 3 | 6 | 605 | 55 | 3 | 3 | 5 | 680 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Traffic Information Consultancy

Junction: (5) Star Lane / Poynters Lane

Approach: Poynters Lane (East)

| TIME | Left to Poynters Lane (West) | | | | | | | | Right to Star Lane | | | | | | | |
|---------------------|------------------------------|----------|------------|-----------|----------|----------|----------|------------|--------------------|----------|-----------|----------|----------|----------|----------|-----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 44 | 6 | 0 | 0 | 0 | 50 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 |
| 0715 - 0730 | 0 | 0 | 57 | 11 | 1 | 0 | 0 | 69 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| 0730 - 0745 | 0 | 2 | 59 | 12 | 3 | 0 | 0 | 76 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 6 |
| 0745 - 0800 | 0 | 1 | 50 | 9 | 1 | 0 | 0 | 61 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 9 |
| Hourly Total | 0 | 3 | 210 | 38 | 5 | 0 | 0 | 256 | 0 | 1 | 27 | 2 | 0 | 0 | 0 | 30 |
| 0800 - 0815 | 0 | 0 | 62 | 14 | 0 | 2 | 0 | 78 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 9 |
| 0815 - 0830 | 0 | 1 | 56 | 7 | 0 | 0 | 0 | 64 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 12 |
| 0830 - 0845 | 0 | 0 | 47 | 6 | 0 | 0 | 0 | 53 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 |
| 0845 - 0900 | 0 | 0 | 41 | 10 | 1 | 0 | 0 | 52 | 1 | 0 | 12 | 2 | 0 | 0 | 0 | 15 |
| Hourly Total | 0 | 1 | 206 | 37 | 1 | 2 | 0 | 247 | 1 | 0 | 37 | 4 | 2 | 0 | 0 | 44 |
| 0900 - 0915 | 0 | 0 | 38 | 9 | 1 | 0 | 0 | 48 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 0915 - 0930 | 0 | 0 | 47 | 5 | 0 | 0 | 0 | 52 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 0930 - 0945 | 0 | 2 | 34 | 7 | 0 | 0 | 0 | 43 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 8 |
| 0945 - 1000 | 0 | 0 | 31 | 6 | 0 | 1 | 0 | 38 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| Hourly Total | 0 | 2 | 150 | 27 | 1 | 1 | 0 | 181 | 0 | 0 | 20 | 2 | 0 | 0 | 0 | 22 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|------------|----------|----------|----------|------------|----------|----------|-----------|----------|----------|----------|----------|-----------|
| Session Total | 0 | 6 | 566 | 102 | 7 | 3 | 0 | 684 | 1 | 1 | 84 | 8 | 2 | 0 | 0 | 96 |
|----------------------|----------|----------|------------|------------|----------|----------|----------|------------|----------|----------|-----------|----------|----------|----------|----------|-----------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|-----------|----------|----------|----------|----------|-----------|
| 1600 - 1615 | 1 | 1 | 35 | 7 | 0 | 0 | 1 | 45 | 0 | 0 | 17 | 3 | 0 | 0 | 0 | 20 |
| 1615 - 1630 | 0 | 0 | 31 | 5 | 0 | 0 | 0 | 36 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 7 |
| 1630 - 1645 | 0 | 0 | 35 | 7 | 0 | 0 | 2 | 44 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 9 |
| 1645 - 1700 | 0 | 0 | 40 | 7 | 0 | 1 | 1 | 49 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 11 |
| Hourly Total | 1 | 1 | 141 | 26 | 0 | 1 | 4 | 174 | 0 | 1 | 41 | 5 | 0 | 0 | 0 | 47 |
| 1700 - 1715 | 0 | 0 | 43 | 3 | 0 | 0 | 0 | 46 | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 10 |
| 1715 - 1730 | 1 | 0 | 27 | 4 | 0 | 0 | 0 | 32 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 1730 - 1745 | 0 | 0 | 26 | 2 | 0 | 0 | 0 | 28 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 1745 - 1800 | 1 | 0 | 32 | 3 | 0 | 0 | 0 | 36 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| Hourly Total | 2 | 0 | 128 | 12 | 0 | 0 | 0 | 142 | 0 | 0 | 25 | 2 | 0 | 0 | 0 | 27 |
| 1800 - 1815 | 0 | 0 | 29 | 6 | 0 | 0 | 0 | 35 | 1 | 0 | 10 | 2 | 0 | 0 | 0 | 13 |
| 1815 - 1830 | 0 | 0 | 34 | 7 | 0 | 0 | 0 | 41 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 1830 - 1845 | 0 | 1 | 36 | 5 | 0 | 0 | 0 | 42 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 8 |
| 1845 - 1900 | 0 | 0 | 34 | 2 | 0 | 0 | 0 | 36 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| Hourly Total | 0 | 1 | 133 | 20 | 0 | 0 | 0 | 154 | 1 | 0 | 26 | 4 | 0 | 0 | 0 | 31 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|-----------|-----------|----------|----------|----------|------------|
| Session Total | 3 | 2 | 402 | 58 | 0 | 1 | 4 | 470 | 1 | 1 | 92 | 11 | 0 | 0 | 0 | 105 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|-----------|-----------|----------|----------|----------|------------|



Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (5) Star Lane / Poynters Lane

Approach: Poynters Lane (West)

| TIME | Ahead to Star Lane | | | | | | | | Right to Poynters Lane (East) | | | | | | | |
|---------------------|--------------------|----------|------------|-----------|----------|----------|----------|------------|-------------------------------|----------|-----------|-----------|----------|----------|----------|-----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 8 | 3 | 0 | 0 | 1 | 12 | 0 | 1 | 13 | 0 | 0 | 0 | 3 | 17 |
| 0715 - 0730 | 0 | 0 | 11 | 3 | 2 | 3 | 0 | 19 | 0 | 0 | 23 | 1 | 0 | 0 | 0 | 24 |
| 0730 - 0745 | 1 | 0 | 14 | 7 | 1 | 2 | 0 | 25 | 0 | 0 | 14 | 1 | 0 | 0 | 1 | 16 |
| 0745 - 0800 | 2 | 1 | 30 | 7 | 0 | 1 | 1 | 42 | 0 | 0 | 16 | 4 | 0 | 0 | 0 | 20 |
| Hourly Total | 3 | 1 | 63 | 20 | 3 | 6 | 2 | 98 | 0 | 1 | 66 | 6 | 0 | 0 | 4 | 77 |
| 0800 - 0815 | 1 | 0 | 23 | 3 | 1 | 0 | 0 | 28 | 0 | 0 | 15 | 1 | 0 | 1 | 0 | 17 |
| 0815 - 0830 | 1 | 0 | 44 | 9 | 2 | 1 | 1 | 58 | 0 | 1 | 17 | 4 | 0 | 0 | 0 | 22 |
| 0830 - 0845 | 0 | 1 | 58 | 12 | 1 | 4 | 1 | 77 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 21 |
| 0845 - 0900 | 0 | 0 | 48 | 7 | 2 | 2 | 1 | 60 | 0 | 0 | 22 | 0 | 1 | 0 | 0 | 23 |
| Hourly Total | 2 | 1 | 173 | 31 | 6 | 7 | 3 | 223 | 0 | 1 | 74 | 6 | 1 | 1 | 0 | 83 |
| 0900 - 0915 | 0 | 0 | 46 | 6 | 4 | 0 | 0 | 56 | 0 | 0 | 24 | 3 | 0 | 1 | 0 | 28 |
| 0915 - 0930 | 0 | 0 | 28 | 5 | 1 | 1 | 2 | 37 | 0 | 0 | 16 | 1 | 0 | 1 | 1 | 19 |
| 0930 - 0945 | 0 | 0 | 23 | 6 | 0 | 0 | 0 | 29 | 0 | 0 | 20 | 3 | 0 | 0 | 0 | 23 |
| 0945 - 1000 | 0 | 1 | 33 | 6 | 2 | 1 | 1 | 44 | 0 | 0 | 16 | 3 | 1 | 0 | 0 | 20 |
| Hourly Total | 0 | 1 | 130 | 23 | 7 | 2 | 3 | 166 | 0 | 0 | 76 | 10 | 1 | 2 | 1 | 90 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|-----------|-----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 5 | 3 | 366 | 74 | 16 | 15 | 8 | 487 | 0 | 2 | 216 | 22 | 2 | 3 | 5 | 250 |
|----------------------|----------|----------|------------|-----------|-----------|-----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 0 | 0 | 63 | 13 | 1 | 0 | 0 | 77 | 0 | 1 | 36 | 5 | 0 | 0 | 0 | 42 |
| 1615 - 1630 | 0 | 0 | 58 | 4 | 2 | 1 | 0 | 65 | 0 | 0 | 41 | 6 | 0 | 0 | 0 | 47 |
| 1630 - 1645 | 1 | 0 | 49 | 6 | 1 | 0 | 1 | 58 | 0 | 3 | 40 | 6 | 0 | 0 | 0 | 49 |
| 1645 - 1700 | 0 | 2 | 43 | 6 | 1 | 0 | 1 | 53 | 0 | 3 | 43 | 8 | 1 | 0 | 0 | 55 |
| Hourly Total | 1 | 2 | 213 | 29 | 5 | 1 | 2 | 253 | 0 | 7 | 160 | 25 | 1 | 0 | 0 | 193 |
| 1700 - 1715 | 2 | 2 | 45 | 7 | 0 | 0 | 1 | 57 | 0 | 2 | 42 | 8 | 0 | 0 | 0 | 52 |
| 1715 - 1730 | 0 | 2 | 61 | 6 | 0 | 0 | 0 | 69 | 0 | 0 | 56 | 8 | 0 | 0 | 0 | 64 |
| 1730 - 1745 | 0 | 2 | 60 | 6 | 1 | 0 | 1 | 70 | 2 | 2 | 44 | 2 | 0 | 0 | 0 | 50 |
| 1745 - 1800 | 1 | 1 | 48 | 5 | 0 | 1 | 0 | 56 | 0 | 1 | 42 | 8 | 1 | 0 | 0 | 52 |
| Hourly Total | 3 | 7 | 214 | 24 | 1 | 1 | 2 | 252 | 2 | 5 | 184 | 26 | 1 | 0 | 0 | 218 |
| 1800 - 1815 | 0 | 2 | 41 | 11 | 0 | 0 | 0 | 54 | 0 | 1 | 60 | 4 | 0 | 0 | 1 | 66 |
| 1815 - 1830 | 0 | 1 | 48 | 8 | 0 | 0 | 0 | 57 | 0 | 0 | 47 | 6 | 0 | 0 | 0 | 53 |
| 1830 - 1845 | 0 | 3 | 38 | 5 | 0 | 0 | 0 | 46 | 0 | 0 | 51 | 4 | 0 | 0 | 0 | 55 |
| 1845 - 1900 | 0 | 0 | 29 | 4 | 2 | 0 | 0 | 35 | 0 | 0 | 39 | 4 | 0 | 0 | 0 | 43 |
| Hourly Total | 0 | 6 | 156 | 28 | 2 | 0 | 0 | 192 | 0 | 1 | 197 | 18 | 0 | 0 | 1 | 217 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|-----------|------------|-----------|----------|----------|----------|------------|----------|-----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 4 | 15 | 583 | 81 | 8 | 2 | 4 | 697 | 2 | 13 | 541 | 69 | 2 | 0 | 1 | 628 |
|----------------------|----------|-----------|------------|-----------|----------|----------|----------|------------|----------|-----------|------------|-----------|----------|----------|----------|------------|

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Traffic Information Consultancy

Junction: (6) Southend Road / Star Lane

Approach: Southend Road (East)

| TIME | Left to Star Lane | | | | | | | | Ahead to Southend Road (West) | | | | | | | |
|---------------------|-------------------|----------|------------|-----------|----------|----------|----------|------------|-------------------------------|----------|------------|-----------|----------|----------|----------|------------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 1 | 40 | 1 | 0 | 0 | 0 | 42 | 0 | 0 | 56 | 10 | 0 | 1 | 0 | 67 |
| 0715 - 0730 | 0 | 1 | 42 | 1 | 3 | 0 | 5 | 52 | 2 | 0 | 69 | 10 | 0 | 0 | 1 | 82 |
| 0730 - 0745 | 0 | 0 | 33 | 4 | 2 | 0 | 1 | 40 | 0 | 0 | 62 | 12 | 0 | 0 | 0 | 74 |
| 0745 - 0800 | 2 | 0 | 39 | 7 | 1 | 0 | 0 | 49 | 0 | 0 | 80 | 7 | 0 | 0 | 0 | 87 |
| Hourly Total | 2 | 2 | 154 | 13 | 6 | 0 | 6 | 183 | 2 | 0 | 267 | 39 | 0 | 1 | 1 | 310 |
| 0800 - 0815 | 3 | 1 | 55 | 5 | 0 | 0 | 1 | 65 | 2 | 1 | 82 | 6 | 0 | 0 | 1 | 92 |
| 0815 - 0830 | 1 | 0 | 72 | 8 | 1 | 0 | 0 | 82 | 0 | 5 | 65 | 6 | 0 | 0 | 0 | 76 |
| 0830 - 0845 | 0 | 0 | 75 | 3 | 1 | 1 | 1 | 81 | 0 | 1 | 46 | 5 | 0 | 0 | 0 | 52 |
| 0845 - 0900 | 2 | 1 | 72 | 3 | 0 | 0 | 0 | 78 | 0 | 1 | 61 | 7 | 0 | 0 | 0 | 69 |
| Hourly Total | 6 | 2 | 274 | 19 | 2 | 1 | 2 | 306 | 2 | 8 | 254 | 24 | 0 | 0 | 1 | 289 |
| 0900 - 0915 | 1 | 1 | 54 | 7 | 1 | 1 | 1 | 66 | 0 | 0 | 53 | 1 | 0 | 1 | 1 | 56 |
| 0915 - 0930 | 0 | 0 | 49 | 3 | 1 | 0 | 0 | 53 | 0 | 1 | 56 | 5 | 0 | 0 | 1 | 63 |
| 0930 - 0945 | 0 | 1 | 39 | 4 | 0 | 0 | 1 | 45 | 0 | 1 | 40 | 3 | 0 | 0 | 0 | 44 |
| 0945 - 1000 | 1 | 0 | 39 | 7 | 0 | 1 | 0 | 48 | 0 | 0 | 40 | 2 | 0 | 0 | 0 | 42 |
| Hourly Total | 2 | 2 | 181 | 21 | 2 | 2 | 2 | 212 | 0 | 2 | 189 | 11 | 0 | 1 | 2 | 205 |

| | | | | | | | | | | | | | | | | |
|----------------------|-----------|----------|------------|-----------|-----------|----------|-----------|------------|----------|-----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 10 | 6 | 609 | 53 | 10 | 3 | 10 | 701 | 4 | 10 | 710 | 74 | 0 | 2 | 4 | 804 |
|----------------------|-----------|----------|------------|-----------|-----------|----------|-----------|------------|----------|-----------|------------|-----------|----------|----------|----------|------------|

| | | | | | | | | | | | | | | | | |
|---------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| 1600 - 1615 | 0 | 1 | 40 | 4 | 1 | 1 | 1 | 48 | 0 | 0 | 28 | 6 | 0 | 0 | 0 | 34 |
| 1615 - 1630 | 0 | 0 | 55 | 4 | 0 | 0 | 0 | 59 | 0 | 0 | 18 | 4 | 0 | 0 | 0 | 22 |
| 1630 - 1645 | 0 | 1 | 50 | 3 | 0 | 0 | 0 | 54 | 1 | 0 | 31 | 6 | 0 | 0 | 1 | 39 |
| 1645 - 1700 | 0 | 0 | 52 | 4 | 0 | 0 | 1 | 57 | 1 | 1 | 28 | 5 | 0 | 0 | 0 | 35 |
| Hourly Total | 0 | 2 | 197 | 15 | 1 | 1 | 2 | 218 | 2 | 1 | 105 | 21 | 0 | 0 | 1 | 130 |
| 1700 - 1715 | 1 | 0 | 46 | 6 | 0 | 0 | 0 | 53 | 0 | 0 | 24 | 5 | 0 | 0 | 0 | 29 |
| 1715 - 1730 | 1 | 1 | 41 | 6 | 0 | 1 | 0 | 50 | 1 | 0 | 35 | 8 | 0 | 0 | 0 | 44 |
| 1730 - 1745 | 0 | 0 | 40 | 5 | 1 | 0 | 1 | 47 | 0 | 1 | 27 | 7 | 0 | 0 | 0 | 35 |
| 1745 - 1800 | 0 | 0 | 29 | 2 | 0 | 0 | 0 | 31 | 0 | 1 | 40 | 2 | 0 | 0 | 0 | 43 |
| Hourly Total | 2 | 1 | 156 | 19 | 1 | 1 | 1 | 181 | 1 | 2 | 126 | 22 | 0 | 0 | 0 | 151 |
| 1800 - 1815 | 0 | 1 | 24 | 3 | 0 | 0 | 1 | 29 | 0 | 0 | 27 | 3 | 0 | 0 | 0 | 30 |
| 1815 - 1830 | 0 | 0 | 42 | 3 | 0 | 0 | 0 | 45 | 0 | 0 | 24 | 3 | 0 | 0 | 0 | 27 |
| 1830 - 1845 | 0 | 1 | 35 | 2 | 0 | 0 | 1 | 39 | 0 | 0 | 28 | 1 | 0 | 0 | 0 | 29 |
| 1845 - 1900 | 0 | 0 | 32 | 4 | 0 | 0 | 0 | 36 | 0 | 0 | 28 | 3 | 0 | 0 | 0 | 31 |
| Hourly Total | 0 | 2 | 133 | 12 | 0 | 0 | 2 | 149 | 0 | 0 | 107 | 10 | 0 | 0 | 0 | 117 |

| | | | | | | | | | | | | | | | | |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|
| Session Total | 2 | 5 | 486 | 46 | 2 | 2 | 5 | 548 | 3 | 3 | 338 | 53 | 0 | 0 | 1 | 398 |
|----------------------|----------|----------|------------|-----------|----------|----------|----------|------------|----------|----------|------------|-----------|----------|----------|----------|------------|

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011

Junction: (6) Southend Road / Star Lane

Approach: Star Lane

| TIME | Left to Southend Road (West) | | | | | | | | Right to Southend Road (East) | | | | | | | | U-Turn to Star Lane | | | | | | | |
|----------------------|------------------------------|----------|------------|-----------|-----------|-----------|----------|------------|-------------------------------|-----------|------------|-----------|----------|----------|----------|------------|---------------------|----------|----------|----------|----------|----------|----------|----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 9 | 2 | 0 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 0 | 11 | 2 | 0 | 3 | 0 | 16 | 0 | 0 | 4 | 1 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 14 | 3 | 1 | 1 | 0 | 19 | 0 | 0 | 7 | 5 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 0 | 16 | 2 | 0 | 1 | 0 | 19 | 0 | 1 | 19 | 5 | 0 | 1 | 1 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 51 | 7 | 1 | 5 | 0 | 64 | 0 | 1 | 39 | 13 | 2 | 1 | 2 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 1 | 12 | 2 | 1 | 0 | 0 | 16 | 0 | 0 | 21 | 2 | 1 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 1 | 0 | 20 | 4 | 1 | 1 | 0 | 27 | 0 | 0 | 26 | 6 | 1 | 0 | 1 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0830 - 0845 | 0 | 0 | 23 | 3 | 0 | 1 | 0 | 27 | 0 | 0 | 39 | 5 | 0 | 2 | 0 | 46 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0845 - 0900 | 1 | 0 | 15 | 4 | 3 | 1 | 0 | 24 | 1 | 0 | 51 | 4 | 1 | 1 | 1 | 59 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Hourly Total | 2 | 1 | 70 | 13 | 5 | 3 | 0 | 94 | 1 | 0 | 137 | 17 | 3 | 3 | 2 | 163 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 0900 - 0915 | 0 | 0 | 17 | 2 | 2 | 0 | 0 | 21 | 0 | 0 | 33 | 5 | 1 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0915 - 0930 | 0 | 0 | 9 | 0 | 1 | 1 | 0 | 11 | 0 | 0 | 23 | 4 | 0 | 0 | 1 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0930 - 0945 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 24 | 4 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0945 - 1000 | 0 | 0 | 13 | 1 | 1 | 2 | 0 | 17 | 0 | 1 | 23 | 5 | 1 | 0 | 1 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 44 | 5 | 4 | 3 | 0 | 56 | 0 | 1 | 103 | 18 | 2 | 0 | 2 | 126 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Session Total | 2 | 1 | 165 | 25 | 10 | 11 | 0 | 214 | 1 | 2 | 279 | 48 | 7 | 4 | 6 | 347 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 1600 - 1615 | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 15 | 0 | 0 | 66 | 11 | 1 | 0 | 0 | 78 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1615 - 1630 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 8 | 0 | 0 | 60 | 3 | 2 | 1 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 12 | 0 | 1 | 47 | 6 | 1 | 0 | 1 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 48 | 7 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 30 | 5 | 1 | 0 | 0 | 37 | 0 | 3 | 221 | 27 | 4 | 1 | 1 | 257 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1700 - 1715 | 0 | 1 | 10 | 1 | 0 | 0 | 1 | 13 | 1 | 0 | 44 | 9 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 8 | 0 | 1 | 61 | 4 | 0 | 0 | 1 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 3 | 51 | 7 | 0 | 0 | 1 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1745 - 1800 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 1 | 43 | 6 | 1 | 1 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 1 | 35 | 1 | 0 | 0 | 1 | 39 | 1 | 5 | 199 | 26 | 1 | 1 | 2 | 235 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1800 - 1815 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 6 | 1 | 2 | 48 | 11 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1815 - 1830 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 1 | 47 | 7 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1830 - 1845 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 4 | 43 | 7 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1845 - 1900 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 27 | 3 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 13 | 5 | 0 | 0 | 0 | 18 | 1 | 7 | 165 | 28 | 0 | 0 | 0 | 201 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Session Total | 1 | 2 | 78 | 11 | 1 | 0 | 1 | 94 | 2 | 15 | 585 | 81 | 5 | 2 | 3 | 693 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |

PCC Southend-On-Sea - Manual Traffic Survey, Tuesday 22nd March 2011
Public Information Consultancy

Junction: (6) Southend Road / Star Lane

Approach: Southend Road (West)

| TIME | Ahead to Southend Road (East) | | | | | | | Right to Star Lane | | | | | | | U-Turn to Southend Road (West) | | | | | | | | | |
|----------------------|-------------------------------|-----------|------------|-----------|----------|----------|----------|--------------------|----------|----------|------------|-----------|----------|-----------|--------------------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|
| | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL | P/CYCLE | M/CYCLE | CAR | LGV | OGV1 | OGV2 | BUS | TOTAL |
| 0700 - 0715 | 0 | 0 | 14 | 3 | 0 | 0 | 0 | 17 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0715 - 0730 | 0 | 0 | 12 | 3 | 0 | 0 | 0 | 15 | 0 | 0 | 7 | 3 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0730 - 0745 | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 15 | 0 | 2 | 14 | 1 | 0 | 1 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0745 - 0800 | 0 | 0 | 13 | 5 | 0 | 0 | 0 | 18 | 0 | 0 | 7 | 2 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 50 | 15 | 0 | 0 | 0 | 65 | 0 | 2 | 30 | 7 | 2 | 3 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0800 - 0815 | 0 | 0 | 14 | 4 | 0 | 0 | 1 | 19 | 0 | 0 | 16 | 1 | 0 | 3 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0815 - 0830 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 23 | 0 | 1 | 8 | 2 | 4 | 0 | 0 | 15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0830 - 0845 | 0 | 1 | 18 | 3 | 0 | 0 | 0 | 22 | 0 | 0 | 10 | 3 | 1 | 1 | 0 | 15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0845 - 0900 | 0 | 0 | 24 | 8 | 1 | 1 | 0 | 34 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 1 | 79 | 15 | 1 | 1 | 1 | 98 | 0 | 1 | 44 | 8 | 5 | 4 | 0 | 62 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 0900 - 0915 | 0 | 0 | 23 | 5 | 0 | 0 | 1 | 29 | 0 | 0 | 5 | 1 | 0 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0915 - 0930 | 0 | 0 | 23 | 3 | 0 | 0 | 0 | 26 | 0 | 0 | 4 | 1 | 2 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0930 - 0945 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 15 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0945 - 1000 | 0 | 0 | 21 | 3 | 1 | 0 | 0 | 25 | 0 | 0 | 7 | 3 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 0 | 0 | 80 | 13 | 1 | 0 | 1 | 95 | 0 | 0 | 27 | 7 | 2 | 4 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Session Total | 0 | 1 | 209 | 43 | 2 | 1 | 2 | 258 | 0 | 3 | 101 | 22 | 9 | 11 | 0 | 146 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 1600 - 1615 | 0 | 2 | 48 | 6 | 0 | 0 | 2 | 58 | 0 | 0 | 12 | 3 | 0 | 2 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1615 - 1630 | 0 | 1 | 63 | 8 | 0 | 0 | 0 | 72 | 0 | 0 | 14 | 0 | 1 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1630 - 1645 | 4 | 1 | 45 | 7 | 0 | 0 | 0 | 57 | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1645 - 1700 | 0 | 0 | 44 | 7 | 0 | 0 | 0 | 51 | 0 | 1 | 13 | 2 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 4 | 4 | 200 | 28 | 0 | 0 | 2 | 238 | 0 | 1 | 50 | 9 | 1 | 2 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1700 - 1715 | 0 | 1 | 68 | 15 | 0 | 0 | 0 | 84 | 0 | 0 | 15 | 4 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1715 - 1730 | 0 | 3 | 56 | 12 | 0 | 0 | 0 | 71 | 0 | 1 | 12 | 3 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1730 - 1745 | 1 | 1 | 75 | 6 | 0 | 0 | 0 | 83 | 1 | 0 | 29 | 1 | 0 | 0 | 0 | 31 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1745 - 1800 | 0 | 1 | 74 | 8 | 0 | 0 | 0 | 83 | 0 | 1 | 31 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 6 | 273 | 41 | 0 | 0 | 0 | 321 | 1 | 2 | 87 | 8 | 0 | 0 | 0 | 98 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| 1800 - 1815 | 0 | 1 | 52 | 3 | 0 | 0 | 0 | 56 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1815 - 1830 | 0 | 1 | 57 | 5 | 0 | 0 | 0 | 63 | 0 | 1 | 19 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1830 - 1845 | 0 | 0 | 53 | 3 | 0 | 0 | 0 | 56 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1845 - 1900 | 1 | 1 | 59 | 1 | 0 | 0 | 0 | 62 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hourly Total | 1 | 3 | 221 | 12 | 0 | 0 | 0 | 237 | 0 | 1 | 74 | 0 | 0 | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Session Total | 6 | 13 | 694 | 81 | 0 | 0 | 2 | 796 | 1 | 4 | 211 | 17 | 1 | 2 | 0 | 236 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |

Appendix D

Traffic Survey Data – Automatic Traffic Counts

Southend On Sea ATC, Star Lane

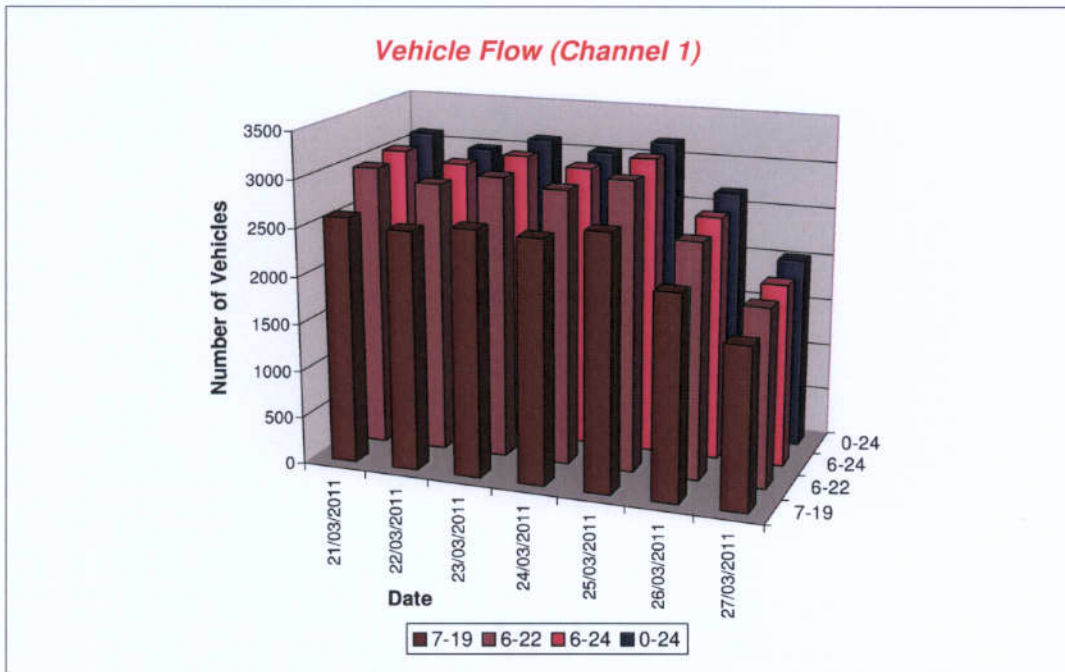
Produced by PCC Traffic Information Consultancy Ltd.

Channel 1 - Northbound

Vehicle Flow

Week 1

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday | 5 Day Ave | 7 Day Ave |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|-----------|-----------|
| 1 | 5 | 8 | 12 | 10 | 9 | 43 | 38 | 9 | 18 |
| 2 | 4 | 4 | 6 | 2 | 2 | 16 | 18 | 4 | 7 |
| 3 | 3 | 5 | 4 | 2 | 3 | 16 | 0 | 3 | 5 |
| 4 | 2 | 4 | 4 | 3 | 2 | 8 | 12 | 3 | 5 |
| 5 | 13 | 3 | 6 | 4 | 5 | 10 | 11 | 6 | 7 |
| 6 | 42 | 12 | 17 | 15 | 16 | 11 | 7 | 20 | 17 |
| 7 | 108 | 53 | 52 | 47 | 50 | 24 | 6 | 62 | 49 |
| 8 | 206 | 189 | 176 | 182 | 172 | 56 | 15 | 185 | 142 |
| 9 | 261 | 254 | 248 | 261 | 255 | 109 | 46 | 256 | 205 |
| 10 | 155 | 179 | 162 | 147 | 187 | 183 | 113 | 166 | 161 |
| 11 | 184 | 166 | 180 | 171 | 166 | 220 | 139 | 173 | 175 |
| 12 | 176 | 193 | 204 | 207 | 218 | 210 | 162 | 200 | 196 |
| 13 | 190 | 170 | 219 | 175 | 224 | 237 | 189 | 196 | 201 |
| 14 | 216 | 182 | 191 | 181 | 224 | 207 | 200 | 199 | 200 |
| 15 | 204 | 204 | 209 | 203 | 212 | 216 | 238 | 206 | 212 |
| 16 | 249 | 229 | 211 | 222 | 247 | 200 | 181 | 232 | 220 |
| 17 | 275 | 287 | 297 | 281 | 297 | 165 | 162 | 287 | 252 |
| 18 | 269 | 254 | 285 | 291 | 251 | 169 | 134 | 270 | 236 |
| 19 | 216 | 213 | 208 | 238 | 225 | 169 | 116 | 220 | 198 |
| 20 | 121 | 141 | 157 | 139 | 144 | 150 | 76 | 140 | 133 |
| 21 | 93 | 85 | 92 | 87 | 95 | 82 | 72 | 90 | 87 |
| 22 | 55 | 59 | 87 | 65 | 75 | 86 | 31 | 68 | 65 |
| 23 | 43 | 49 | 59 | 57 | 53 | 50 | 36 | 52 | 50 |
| 24 | 17 | 31 | 34 | 35 | 42 | 42 | 19 | 32 | 31 |
| 7-19 | 2601 | 2520 | 2590 | 2559 | 2678 | 2141 | 1695 | 2590 | 2398 |
| 6-22 | 2978 | 2858 | 2978 | 2897 | 3042 | 2483 | 1880 | 2951 | 2731 |
| 6-24 | 3038 | 2938 | 3071 | 2989 | 3137 | 2575 | 1935 | 3035 | 2812 |
| 0-24 | 3107 | 2974 | 3120 | 3025 | 3174 | 2679 | 2021 | 3080 | 2871 |



Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

Channel 1 - Northbound

Average Speed

Week 1

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 1 | 50.5 | 44.9 | 45.9 | 43.0 | 46.9 | 44.8 | 47.3 |
| 2 | 51.8 | 48.0 | 43.0 | 48.0 | 50.5 | 46.9 | 44.2 |
| 3 | 48.0 | 47.0 | 41.8 | 45.5 | 48.0 | 48.8 | - |
| 4 | 50.5 | 41.8 | 45.5 | 43.0 | 48.0 | 45.5 | 46.3 |
| 5 | 41.8 | 32.2 | 39.2 | 34.9 | 38.5 | 42.8 | 46.6 |
| 6 | 43.4 | 46.5 | 45.9 | 42.7 | 47.4 | 43.7 | 48.7 |
| 7 | 43.3 | 44.9 | 43.8 | 45.6 | 47.0 | 45.7 | 47.2 |
| 8 | 44.8 | 44.6 | 45.0 | 43.4 | 43.7 | 42.3 | 43.8 |
| 9 | 43.5 | 43.3 | 43.6 | 42.8 | 45.1 | 44.0 | 44.0 |
| 10 | 43.1 | 43.0 | 41.4 | 43.0 | 42.7 | 43.1 | 45.2 |
| 11 | 43.0 | 43.2 | 42.9 | 42.0 | 42.7 | 43.4 | 42.5 |
| 12 | 43.3 | 42.3 | 41.9 | 42.4 | 42.2 | 43.2 | 43.6 |
| 13 | 43.8 | 42.7 | 42.6 | 43.2 | 42.7 | 44.1 | 42.6 |
| 14 | 42.0 | 43.4 | 41.4 | 43.6 | 43.0 | 42.5 | 44.1 |
| 15 | 41.6 | 43.6 | 41.6 | 41.7 | 43.6 | 43.4 | 42.8 |
| 16 | 42.8 | 44.4 | 43.3 | 42.7 | 42.7 | 44.2 | 45.0 |
| 17 | 43.3 | 43.4 | 43.0 | 43.7 | 42.4 | 45.0 | 41.6 |
| 18 | 44.2 | 45.9 | 44.0 | 43.4 | 43.6 | 44.9 | 36.8 |
| 19 | 45.1 | 42.5 | 42.7 | 43.6 | 43.5 | 44.4 | 46.1 |
| 20 | 44.0 | 45.3 | 44.3 | 44.3 | 44.5 | 43.3 | 44.6 |
| 21 | 45.5 | 46.4 | 44.8 | 44.9 | 45.1 | 45.6 | 48.3 |
| 22 | 44.2 | 46.3 | 42.9 | 44.1 | 44.5 | 45.3 | 48.2 |
| 23 | 45.0 | 45.6 | 44.5 | 45.1 | 48.0 | 44.2 | 48.0 |
| 24 | 49.6 | 47.7 | 44.3 | 46.2 | 43.7 | 45.6 | 44.6 |

| | | | | | | | |
|-------|------|------|------|------|------|------|------|
| 10-12 | 43.2 | 42.7 | 42.4 | 42.3 | 42.4 | 43.3 | 43.1 |
| 14-16 | 42.2 | 44.0 | 42.4 | 42.2 | 43.1 | 43.8 | 43.7 |
| 0-24 | 43.6 | 43.9 | 43.1 | 43.3 | 43.5 | 43.9 | 43.6 |

7 Day Ave 43.6

85th Percentile

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 1 | 76.2 | 53.6 | 54.0 | 48.7 | 53.9 | 53.7 | 53.2 |
| 2 | 58.5 | 53.3 | 48.4 | 58.9 | 53.7 | 53.9 | 48.5 |
| 3 | 58.6 | 53.3 | 48.3 | 48.8 | 53.5 | 53.5 | - |
| 4 | 53.3 | 48.8 | 53.2 | 53.0 | 58.4 | 53.1 | 53.3 |
| 5 | 48.3 | 43.8 | 48.2 | 48.5 | 48.1 | 48.8 | 53.3 |
| 6 | 53.8 | 53.6 | 53.6 | 48.9 | 53.8 | 53.4 | 58.0 |
| 7 | 53.0 | 54.0 | 53.4 | 53.4 | 53.5 | 53.5 | 58.5 |
| 8 | 53.8 | 53.9 | 53.4 | 53.7 | 53.8 | 53.5 | 48.2 |
| 9 | 53.8 | 48.2 | 48.7 | 48.5 | 53.6 | 53.2 | 53.9 |
| 10 | 48.7 | 53.7 | 48.3 | 48.5 | 48.8 | 53.3 | 53.6 |
| 11 | 48.0 | 49.0 | 53.6 | 53.5 | 48.0 | 48.1 | 48.8 |
| 12 | 53.4 | 48.2 | 48.2 | 48.4 | 48.2 | 53.6 | 48.9 |
| 13 | 48.9 | 48.5 | 48.2 | 48.4 | 48.1 | 53.2 | 48.3 |
| 14 | 48.8 | 48.1 | 48.6 | 53.3 | 53.1 | 48.9 | 48.5 |
| 15 | 48.4 | 54.0 | 48.1 | 53.1 | 53.3 | 53.1 | 48.1 |
| 16 | 49.0 | 53.7 | 53.5 | 48.2 | 53.1 | 53.4 | 53.6 |
| 17 | 48.9 | 53.0 | 48.9 | 54.0 | 48.0 | 53.3 | 53.4 |
| 18 | 53.1 | 53.6 | 53.3 | 53.1 | 53.5 | 53.9 | 49.0 |
| 19 | 53.9 | 48.1 | 53.8 | 53.4 | 53.7 | 53.8 | 58.1 |
| 20 | 48.4 | 53.1 | 53.4 | 53.4 | 53.5 | 48.3 | 53.9 |
| 21 | 53.5 | 53.8 | 53.3 | 53.5 | 53.8 | 53.7 | 58.6 |
| 22 | 53.8 | 53.3 | 48.9 | 53.2 | 53.1 | 53.3 | 58.3 |
| 23 | 53.1 | 58.0 | 53.6 | 53.5 | 58.2 | 53.1 | 53.1 |
| 24 | 58.6 | 53.3 | 48.6 | 53.3 | 48.7 | 58.0 | 53.5 |

| | | | | | | | |
|-------|------|------|------|------|------|------|------|
| 10-12 | 48.5 | 48.4 | 48.4 | 48.6 | 48.5 | 53.3 | 53.2 |
| 14-16 | 48.3 | 53.3 | 48.1 | 53.5 | 53.4 | 53.8 | 54.0 |
| 0-24 | 53.6 | 53.9 | 53.6 | 53.2 | 53.1 | 53.3 | 53.1 |

7 Day Ave 53.4

Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

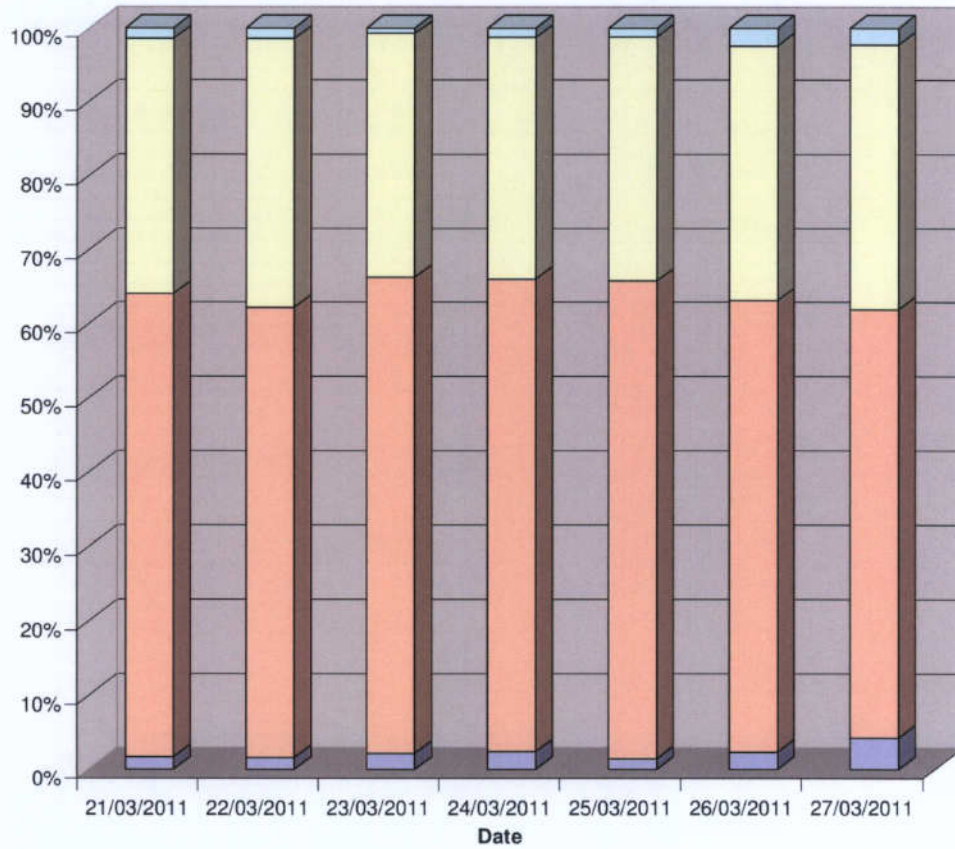
Channel 1 - Northbound

Speed Summary

Week 1

| Speed (MPH) | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|--------------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 0-30 | 53 | 47 | 68 | 72 | 46 | 63 | 86 |
| 31-45 | 1939 | 1803 | 2001 | 1927 | 2043 | 1629 | 1167 |
| 46-60 | 1070 | 1080 | 1027 | 988 | 1047 | 923 | 722 |
| 61-123 | 45 | 44 | 24 | 38 | 38 | 64 | 46 |
| TOTAL | 3107 | 2974 | 3120 | 3025 | 3174 | 2679 | 2021 |

Speed Summary (MPH)



■ 0-30
 ■ 31-45
 ■ 46-60
 ■ 61-123

Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

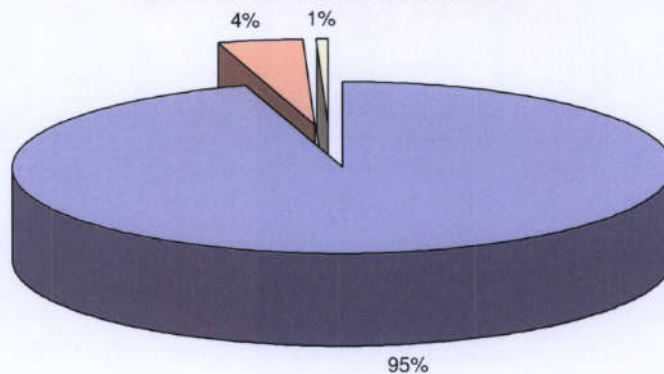
Channel 1 - Northbound

Vehicle Class

Week 1

| Day / Time | Classes | Car / LGV / Caravan - 1 | OGV1 / Bus - 2,3,5,6,7,12 | OGV2 - 4,8,9,10,11,13 | TOTAL - 1-13 |
|------------|---------|----------------------------|------------------------------|--------------------------|-----------------|
| 21/03/2011 | | | | | |
| 7-19 | | 2479 | 109 | 13 | 2601 |
| 6-22 | | 2838 | 124 | 16 | 2978 |
| 6-24 | | 2898 | 124 | 16 | 3038 |
| 0-24 | | 2963 | 128 | 16 | 3107 |
| 22/03/2011 | | | | | |
| 7-19 | | 2375 | 123 | 22 | 2520 |
| 6-22 | | 2699 | 134 | 25 | 2858 |
| 6-24 | | 2778 | 135 | 25 | 2938 |
| 0-24 | | 2810 | 139 | 25 | 2974 |
| 23/03/2011 | | | | | |
| 7-19 | | 2435 | 130 | 25 | 2590 |
| 6-22 | | 2810 | 139 | 29 | 2978 |
| 6-24 | | 2901 | 141 | 29 | 3071 |
| 0-24 | | 2949 | 142 | 29 | 3120 |
| 24/03/2011 | | | | | |
| 7-19 | | 2420 | 111 | 28 | 2559 |
| 6-22 | | 2751 | 117 | 29 | 2897 |
| 6-24 | | 2841 | 119 | 29 | 2989 |
| 0-24 | | 2873 | 123 | 29 | 3025 |
| 25/03/2011 | | | | | |
| 7-19 | | 2539 | 119 | 20 | 2678 |
| 6-22 | | 2893 | 129 | 20 | 3042 |
| 6-24 | | 2987 | 130 | 20 | 3137 |
| 0-24 | | 3023 | 131 | 20 | 3174 |
| 26/03/2011 | | | | | |
| 7-19 | | 2045 | 90 | 6 | 2141 |
| 6-22 | | 2371 | 104 | 8 | 2483 |
| 6-24 | | 2460 | 107 | 8 | 2575 |
| 0-24 | | 2560 | 111 | 8 | 2679 |
| 27/03/2011 | | | | | |
| 7-19 | | 1641 | 53 | 1 | 1695 |
| 6-22 | | 1822 | 57 | 1 | 1880 |
| 6-24 | | 1877 | 57 | 1 | 1935 |
| 0-24 | | 1957 | 62 | 2 | 2021 |
| Average | | | | | |
| 7-19 | | 2276 | 105 | 16 | 2398 |
| 6-22 | | 2598 | 115 | 18 | 2731 |
| 6-24 | | 2677 | 116 | 18 | 2812 |
| 0-24 | | 2734 | 119 | 18 | 2871 |

Total Vehicle Class Distribution



Southend On Sea ATC, Star Lane

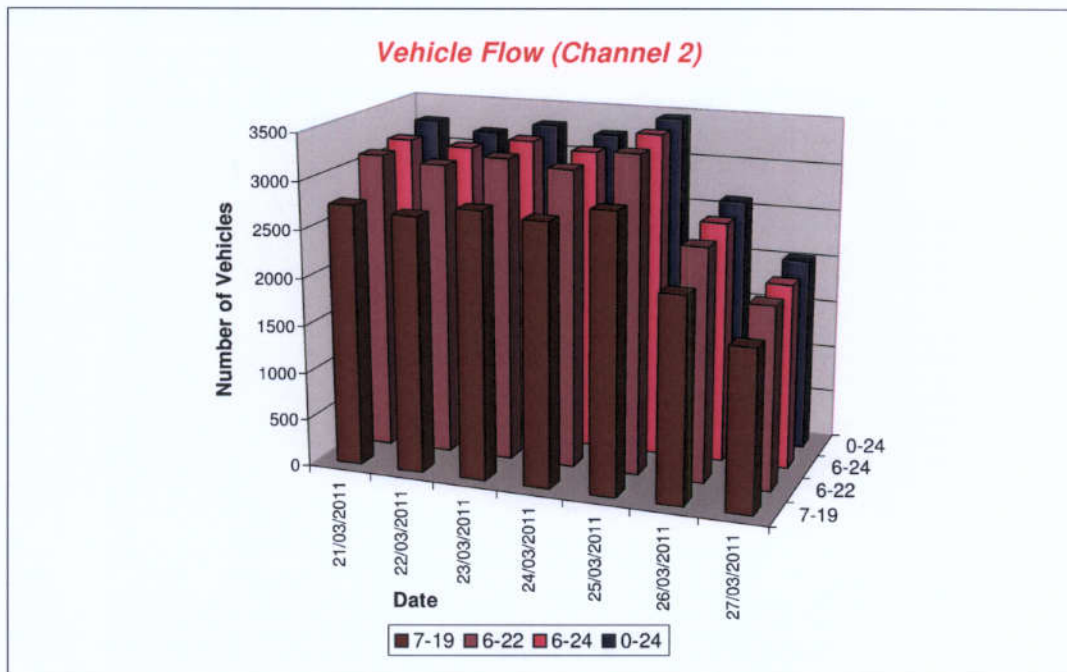
Produced by PCC Traffic Information Consultancy Ltd.

Channel 2 - Southbound

Vehicle Flow

Week 1

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday | 5 Day Ave | 7 Day Ave |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|-----------|-----------|
| 1 | 2 | 5 | 9 | 8 | 4 | 24 | 34 | 6 | 12 |
| 2 | 3 | 4 | 3 | 1 | 1 | 15 | 23 | 2 | 7 |
| 3 | 3 | 2 | 2 | 1 | 0 | 10 | 0 | 2 | 3 |
| 4 | 9 | 6 | 3 | 5 | 4 | 3 | 9 | 5 | 6 |
| 5 | 21 | 5 | 4 | 5 | 6 | 8 | 10 | 8 | 8 |
| 6 | 52 | 24 | 25 | 35 | 31 | 12 | 5 | 33 | 26 |
| 7 | 149 | 129 | 130 | 127 | 120 | 22 | 9 | 131 | 98 |
| 8 | 269 | 210 | 217 | 191 | 203 | 58 | 21 | 218 | 167 |
| 9 | 282 | 359 | 375 | 386 | 372 | 148 | 33 | 355 | 279 |
| 10 | 246 | 240 | 258 | 265 | 254 | 199 | 95 | 253 | 222 |
| 11 | 180 | 179 | 165 | 160 | 209 | 217 | 131 | 179 | 177 |
| 12 | 193 | 174 | 182 | 188 | 215 | 199 | 165 | 190 | 188 |
| 13 | 192 | 160 | 218 | 178 | 196 | 218 | 223 | 189 | 198 |
| 14 | 188 | 184 | 182 | 174 | 225 | 194 | 222 | 191 | 196 |
| 15 | 205 | 197 | 202 | 191 | 226 | 216 | 216 | 204 | 208 |
| 16 | 234 | 220 | 207 | 220 | 246 | 184 | 161 | 225 | 210 |
| 17 | 260 | 274 | 272 | 245 | 243 | 164 | 150 | 259 | 230 |
| 18 | 283 | 274 | 277 | 300 | 297 | 181 | 152 | 286 | 252 |
| 19 | 218 | 217 | 247 | 249 | 221 | 162 | 124 | 230 | 205 |
| 20 | 109 | 125 | 112 | 120 | 148 | 146 | 94 | 123 | 122 |
| 21 | 71 | 87 | 74 | 73 | 105 | 71 | 79 | 82 | 80 |
| 22 | 53 | 47 | 72 | 59 | 52 | 70 | 44 | 57 | 57 |
| 23 | 36 | 34 | 42 | 37 | 49 | 37 | 19 | 40 | 36 |
| 24 | 9 | 28 | 22 | 20 | 26 | 52 | 14 | 21 | 24 |
| 7-19 | 2750 | 2688 | 2802 | 2747 | 2907 | 2140 | 1693 | 2779 | 2532 |
| 6-22 | 3132 | 3076 | 3190 | 3126 | 3332 | 2449 | 1919 | 3171 | 2889 |
| 6-24 | 3177 | 3138 | 3254 | 3183 | 3407 | 2538 | 1952 | 3232 | 2950 |
| 0-24 | 3267 | 3184 | 3300 | 3238 | 3453 | 2610 | 2033 | 3288 | 3012 |



Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

Channel 2 - Southbound

Average Speed

Week 1

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 1 | 38.0 | 47.0 | 46.3 | 49.9 | 43.0 | 48.7 | 45.2 |
| 2 | 39.7 | 46.8 | 39.7 | 38.0 | 43.0 | 45.8 | 44.2 |
| 3 | 41.3 | 40.5 | 43.0 | 43.0 | - | 46.0 | - |
| 4 | 48.0 | 45.9 | 38.0 | 43.0 | 49.2 | 48.0 | 43.0 |
| 5 | 49.4 | 38.0 | 41.8 | 38.0 | 44.7 | 42.1 | 45.5 |
| 6 | 42.9 | 51.9 | 44.7 | 42.3 | 49.2 | 50.7 | 49.0 |
| 7 | 45.9 | 45.3 | 45.9 | 46.7 | 45.6 | 41.5 | 45.8 |
| 8 | 44.1 | 47.8 | 45.2 | 46.2 | 46.4 | 45.0 | 46.5 |
| 9 | 44.5 | 44.9 | 44.2 | 45.7 | 46.4 | 45.9 | 46.6 |
| 10 | 43.4 | 44.1 | 43.8 | 44.8 | 45.5 | 44.9 | 46.8 |
| 11 | 43.6 | 43.2 | 43.6 | 44.8 | 45.0 | 45.1 | 44.8 |
| 12 | 44.7 | 44.4 | 43.6 | 43.7 | 42.3 | 44.6 | 43.4 |
| 13 | 45.2 | 43.8 | 43.3 | 43.7 | 43.6 | 44.9 | 45.5 |
| 14 | 44.0 | 44.9 | 44.5 | 44.3 | 44.2 | 44.9 | 44.5 |
| 15 | 44.1 | 44.3 | 44.2 | 44.4 | 44.9 | 45.7 | 44.7 |
| 16 | 45.0 | 44.5 | 45.4 | 45.2 | 44.4 | 45.9 | 45.7 |
| 17 | 45.4 | 45.0 | 45.3 | 45.8 | 45.1 | 47.1 | 37.4 |
| 18 | 45.4 | 44.8 | 45.8 | 45.5 | 46.2 | 45.8 | 33.7 |
| 19 | 45.1 | 45.4 | 43.4 | 45.3 | 45.5 | 44.8 | 47.9 |
| 20 | 44.2 | 46.0 | 45.5 | 44.7 | 46.0 | 43.6 | 47.8 |
| 21 | 46.2 | 47.7 | 44.8 | 44.0 | 44.5 | 47.0 | 46.6 |
| 22 | 45.9 | 48.7 | 43.6 | 46.7 | 48.1 | 45.0 | 44.6 |
| 23 | 43.3 | 46.7 | 44.3 | 48.3 | 46.0 | 46.8 | 47.2 |
| 24 | 48.0 | 45.1 | 42.8 | 41.9 | 42.9 | 42.9 | 49.1 |

| | | | | | | | |
|-------|------|------|------|------|------|------|------|
| 10-12 | 44.2 | 43.8 | 43.6 | 44.2 | 43.7 | 44.9 | 44.0 |
| 14-16 | 44.6 | 44.4 | 44.8 | 44.8 | 44.6 | 45.8 | 45.2 |
| 0-24 | 44.7 | 45.1 | 44.5 | 45.1 | 45.2 | 45.3 | 44.0 |

| | |
|-----------|------|
| 7 Day Ave | 44.8 |
|-----------|------|

85th Percentile

| Hr Ending | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|-----------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 1 | 38.0 | 53.4 | 53.0 | 65.6 | 48.5 | 58.1 | 53.0 |
| 2 | 43.3 | 53.3 | 43.7 | 38.6 | 43.2 | 53.3 | 48.7 |
| 3 | 48.5 | 43.3 | 43.5 | 43.3 | - | 53.6 | - |
| 4 | 58.9 | 65.7 | 43.6 | 53.1 | 53.2 | 53.8 | 48.8 |
| 5 | 58.5 | 48.5 | 48.2 | 43.2 | 53.3 | 53.5 | 53.3 |
| 6 | 53.4 | 58.2 | 53.5 | 53.1 | 58.8 | 58.2 | 53.7 |
| 7 | 53.8 | 53.6 | 53.7 | 53.4 | 53.1 | 53.9 | 53.4 |
| 8 | 53.8 | 53.4 | 53.8 | 54.0 | 58.5 | 53.4 | 53.8 |
| 9 | 53.7 | 53.9 | 53.4 | 53.5 | 53.8 | 53.3 | 58.7 |
| 10 | 48.7 | 53.5 | 53.9 | 53.5 | 53.8 | 53.8 | 53.4 |
| 11 | 49.0 | 53.2 | 53.7 | 54.0 | 53.3 | 53.2 | 53.1 |
| 12 | 53.3 | 53.7 | 53.1 | 48.2 | 49.0 | 53.4 | 53.4 |
| 13 | 53.5 | 53.7 | 48.6 | 53.4 | 53.8 | 53.2 | 53.3 |
| 14 | 53.4 | 53.6 | 53.7 | 53.4 | 53.7 | 53.9 | 53.7 |
| 15 | 53.7 | 53.8 | 53.0 | 53.3 | 53.9 | 53.6 | 53.3 |
| 16 | 53.2 | 53.2 | 53.4 | 53.5 | 53.9 | 53.4 | 53.8 |
| 17 | 53.4 | 53.8 | 53.4 | 53.1 | 53.4 | 58.4 | 48.2 |
| 18 | 53.5 | 53.2 | 53.3 | 53.5 | 53.1 | 53.9 | 53.6 |
| 19 | 53.8 | 54.0 | 54.0 | 54.0 | 54.0 | 53.6 | 59.0 |
| 20 | 53.5 | 53.1 | 53.8 | 53.6 | 53.8 | 48.9 | 58.2 |
| 21 | 53.4 | 65.6 | 53.7 | 53.9 | 53.7 | 53.5 | 58.9 |
| 22 | 58.5 | 58.8 | 53.4 | 53.7 | 53.4 | 53.3 | 53.1 |
| 23 | 53.2 | 53.4 | 53.7 | 58.4 | 53.0 | 58.9 | 54.0 |
| 24 | 53.6 | 53.5 | 58.3 | 48.7 | 53.2 | 53.3 | 58.6 |

| | | | | | | | |
|-------|------|------|------|------|------|------|------|
| 10-12 | 53.5 | 53.1 | 53.4 | 53.1 | 53.2 | 53.3 | 53.6 |
| 14-16 | 53.7 | 53.1 | 53.4 | 53.8 | 53.5 | 53.2 | 53.9 |
| 0-24 | 53.9 | 53.2 | 53.9 | 53.7 | 53.4 | 53.3 | 53.6 |

| | |
|-----------|------|
| 7 Day Ave | 53.6 |
|-----------|------|

Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

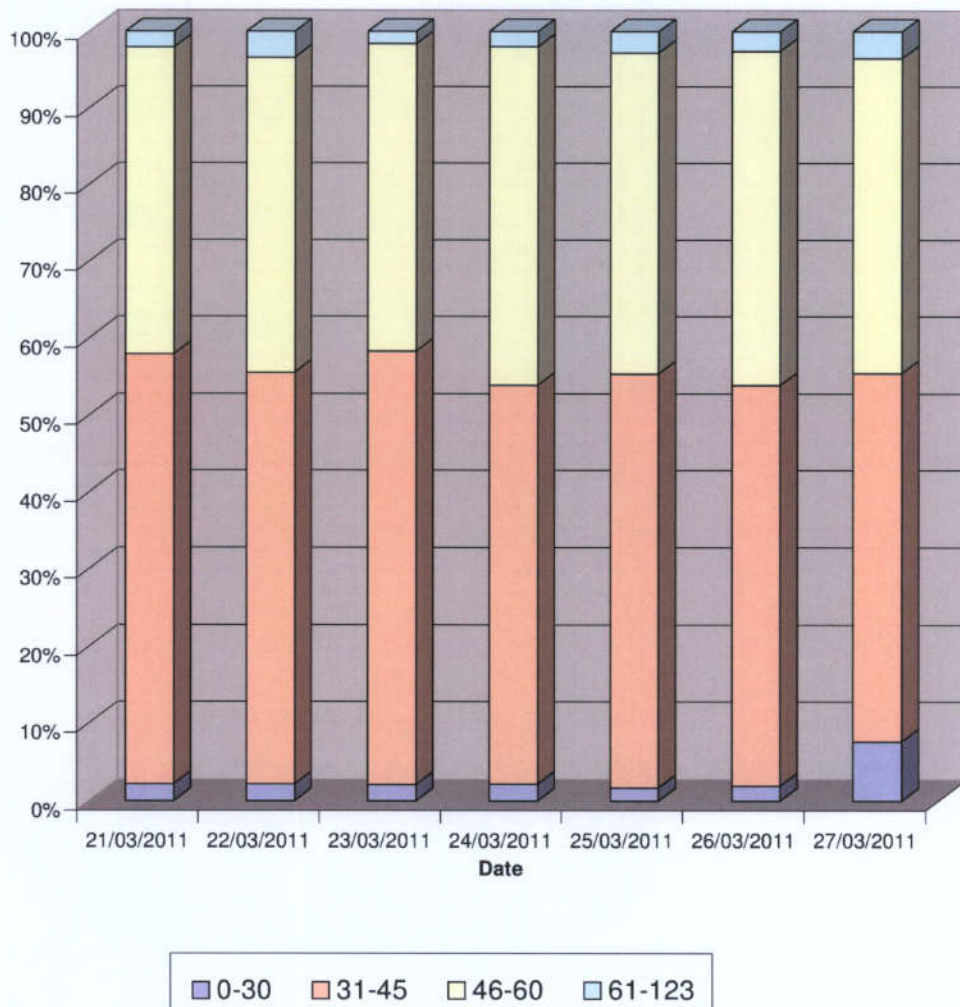
Channel 2 - Southbound

Speed Summary

Week 1

| Speed (MPH) | 21/03/2011 Monday | 22/03/2011 Tuesday | 23/03/2011 Wednesday | 24/03/2011 Thursday | 25/03/2011 Friday | 26/03/2011 Saturday | 27/03/2011 Sunday |
|--------------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|----------------------|
| 0-30 | 73 | 69 | 71 | 71 | 60 | 52 | 155 |
| 31-45 | 1822 | 1701 | 1856 | 1676 | 1852 | 1355 | 973 |
| 46-60 | 1302 | 1305 | 1319 | 1425 | 1443 | 1136 | 833 |
| 61-123 | 70 | 109 | 54 | 66 | 98 | 67 | 72 |
| TOTAL | 3267 | 3184 | 3300 | 3238 | 3453 | 2610 | 2033 |

Speed Summary (MPH)



Southend On Sea ATC, Star Lane

Produced by PCC Traffic Information Consultancy Ltd.

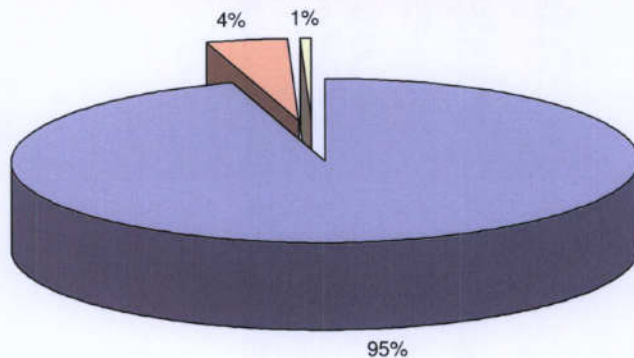
Channel 2 - Southbound

Vehicle Class

Week 1

| Day / Time | Classes | Car / LGV / Caravan - 1 | OGV1 / Bus - 2,3,5,6,7,12 | OGV2 - 4,8,9,10,11,13 | TOTAL - 1-13 |
|------------|---------|----------------------------|------------------------------|--------------------------|-----------------|
| 21/03/2011 | | | | | |
| 7-19 | | 2626 | 109 | 15 | 2750 |
| 6-22 | | 2987 | 129 | 16 | 3132 |
| 6-24 | | 3028 | 133 | 16 | 3177 |
| 0-24 | | 3112 | 136 | 19 | 3267 |
| 22/03/2011 | | | | | |
| 7-19 | | 2558 | 110 | 20 | 2688 |
| 6-22 | | 2920 | 133 | 23 | 3076 |
| 6-24 | | 2979 | 136 | 23 | 3138 |
| 0-24 | | 3022 | 138 | 24 | 3184 |
| 23/03/2011 | | | | | |
| 7-19 | | 2857 | 125 | 20 | 2802 |
| 6-22 | | 3027 | 143 | 20 | 3190 |
| 6-24 | | 3088 | 146 | 20 | 3254 |
| 0-24 | | 3130 | 147 | 23 | 3300 |
| 24/03/2011 | | | | | |
| 7-19 | | 2603 | 119 | 25 | 2747 |
| 6-22 | | 2969 | 131 | 26 | 3126 |
| 6-24 | | 3022 | 135 | 26 | 3183 |
| 0-24 | | 3074 | 136 | 28 | 3238 |
| 25/03/2011 | | | | | |
| 7-19 | | 2761 | 120 | 26 | 2907 |
| 6-22 | | 3173 | 133 | 26 | 3332 |
| 6-24 | | 3245 | 136 | 26 | 3407 |
| 0-24 | | 3289 | 137 | 27 | 3453 |
| 26/03/2011 | | | | | |
| 7-19 | | 2039 | 97 | 4 | 2140 |
| 6-22 | | 2336 | 109 | 4 | 2449 |
| 6-24 | | 2421 | 113 | 4 | 2538 |
| 0-24 | | 2491 | 115 | 4 | 2610 |
| 27/03/2011 | | | | | |
| 7-19 | | 1636 | 55 | 2 | 1693 |
| 6-22 | | 1857 | 60 | 2 | 1919 |
| 6-24 | | 1890 | 60 | 2 | 1952 |
| 0-24 | | 1970 | 61 | 2 | 2033 |
| Average | | | | | |
| 7-19 | | 2411 | 105 | 16 | 2532 |
| 6-22 | | 2753 | 120 | 17 | 2889 |
| 6-24 | | 2810 | 123 | 17 | 2950 |
| 0-24 | | 2870 | 124 | 18 | 3012 |

Total Vehicle Class Distribution



Appendix E
TRICS Trip Rate Data

Glanville Foxhall Road Didcot

Licence No: 225601

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : L - MIXED NON-PRIVATE HOUSING

VEHICLES

Selected regions and areas:

07 YORKSHIRE & NORTH LINCOLNSHIRE
NO NORTH LINCOLNSHIRE 1 days
08 NORTH WEST
CH CHESHIRE 1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 40 to 79 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 25/11/08

Selected survey days:

Tuesday 1 days
Friday 1 days

Selected survey types:

Manual count 2 days
Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre 1
Neighbourhood Centre (PPS6 Local Centre) 1

Selected Location Sub Categories:

Village 1
No Sub Category 1

Filtering Stage 3 selection:

Use Class:

C3 2 days

Population within 1 mile:

1,001 to 5,000 1 days
15,001 to 20,000 1 days

Population within 5 miles:

25,001 to 50,000 1 days
50,001 to 75,000 1 days

Car ownership within 5 miles:

0.6 to 1.0 1 days
1.1 to 1.5 1 days

Travel Plan:

No 2 days

LIST OF SITES relevant to selection parameters

- | | | | |
|----------|---|------------------------------------|---------------------------|
| 1 | CH-03-L-01 | MIXED HOUSING, MACCLESFIELD | CHESHIRE |
| | PERCYVALE STREET HURDSFIELD MACCLESFIELD Edge of Town Centre No Sub Category Total Number of dwellings: 40 <i>Survey date: TUESDAY 26/06/07</i> | | |
| 2 | NO-03-L-01 | TERRACED/FLATS, BELTON | NORTH LINCOLNSHIRE |
| | A161 HIGH STREET BELTON Neighbourhood Centre (PPS6 Local Centre) Village Total Number of dwellings: 79 <i>Survey date: FRIDAY 11/04/03</i> | | |

Survey Type: MANUAL

Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/L - MIXED NON-PRIVATE HOUSING
VEHICLES

Calculation factor: 1 DWELLS

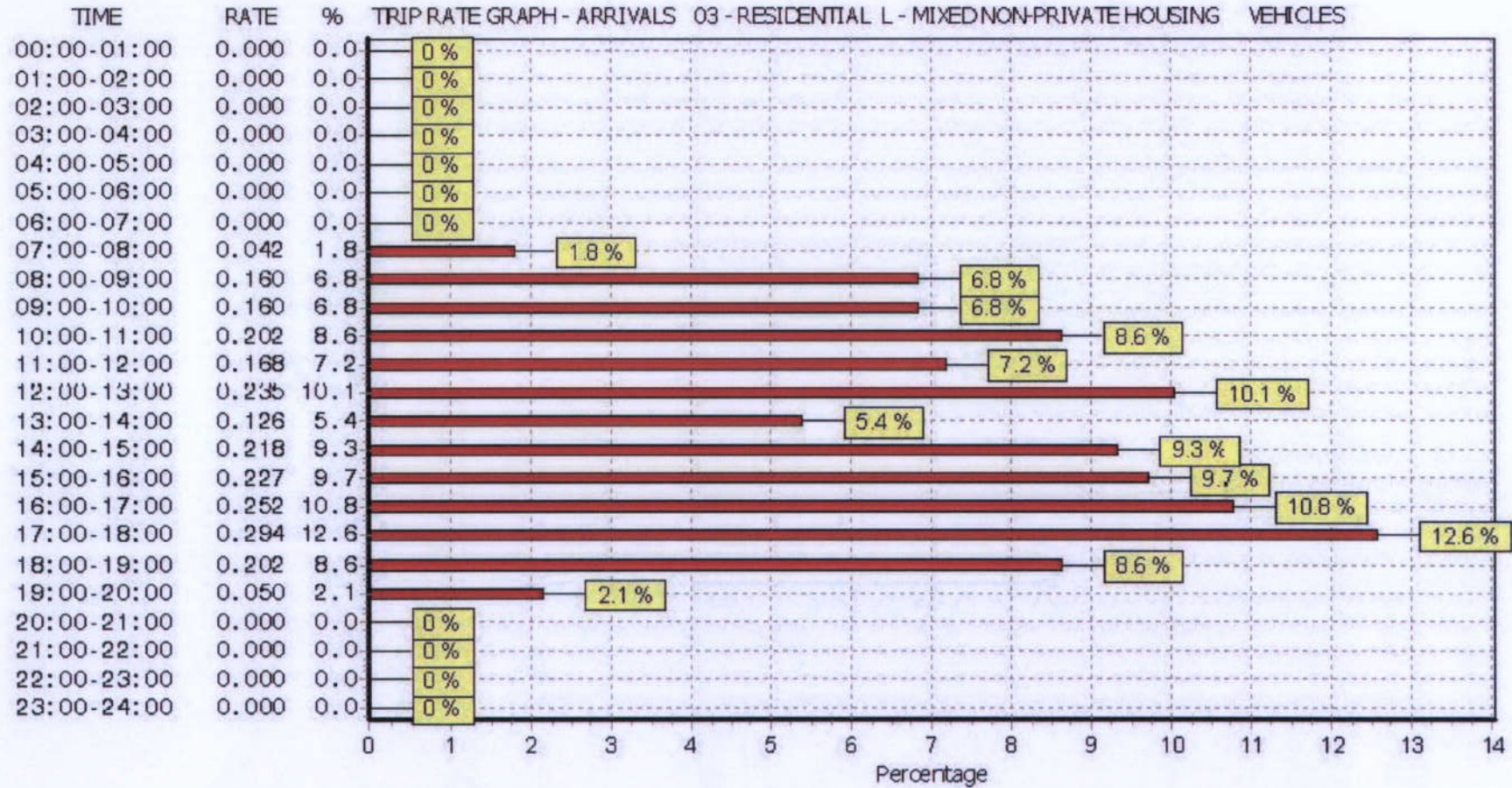
BOLD print indicates peak (busiest) period

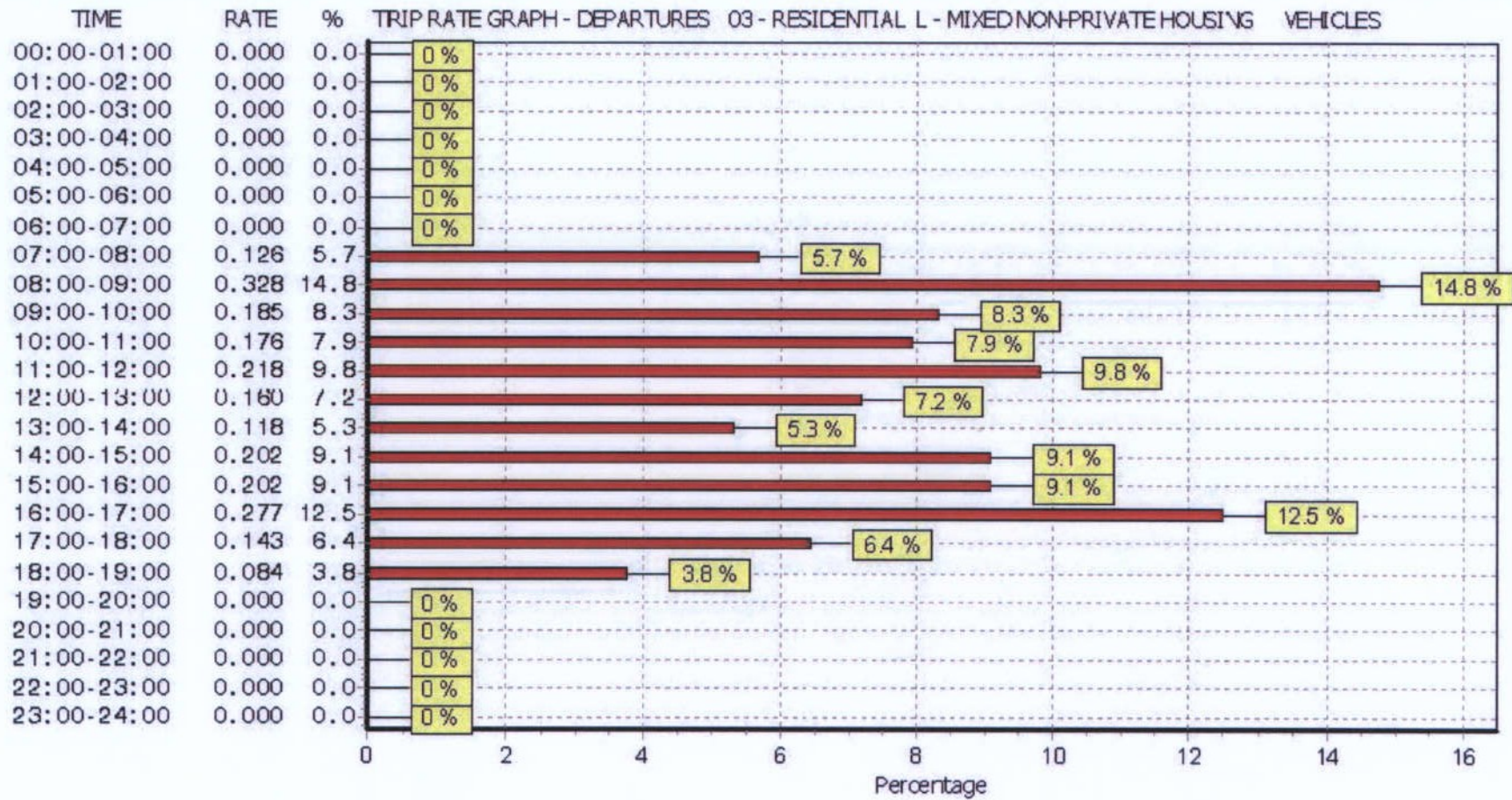
| Time Range | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---------------------|----------|-------------|--------------|------------|-------------|--------------|----------|-------------|--------------|
| | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate |
| 00:00 - 01:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 01:00 - 02:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 02:00 - 03:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 03:00 - 04:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 04:00 - 05:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 05:00 - 06:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 06:00 - 07:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 07:00 - 08:00 | 2 | 60 | 0.042 | 2 | 60 | 0.126 | 2 | 60 | 0.168 |
| 08:00 - 09:00 | 2 | 60 | 0.160 | 2 | 60 | 0.328 | 2 | 60 | 0.488 |
| 09:00 - 10:00 | 2 | 60 | 0.160 | 2 | 60 | 0.185 | 2 | 60 | 0.345 |
| 10:00 - 11:00 | 2 | 60 | 0.202 | 2 | 60 | 0.176 | 2 | 60 | 0.378 |
| 11:00 - 12:00 | 2 | 60 | 0.168 | 2 | 60 | 0.218 | 2 | 60 | 0.386 |
| 12:00 - 13:00 | 2 | 60 | 0.235 | 2 | 60 | 0.160 | 2 | 60 | 0.395 |
| 13:00 - 14:00 | 2 | 60 | 0.126 | 2 | 60 | 0.118 | 2 | 60 | 0.244 |
| 14:00 - 15:00 | 2 | 60 | 0.218 | 2 | 60 | 0.202 | 2 | 60 | 0.420 |
| 15:00 - 16:00 | 2 | 60 | 0.227 | 2 | 60 | 0.202 | 2 | 60 | 0.429 |
| 16:00 - 17:00 | 2 | 60 | 0.252 | 2 | 60 | 0.277 | 2 | 60 | 0.529 |
| 17:00 - 18:00 | 2 | 60 | 0.294 | 2 | 60 | 0.143 | 2 | 60 | 0.437 |
| 18:00 - 19:00 | 2 | 60 | 0.202 | 2 | 60 | 0.084 | 2 | 60 | 0.286 |
| 19:00 - 20:00 | 1 | 40 | 0.050 | 1 | 40 | 0.000 | 1 | 40 | 0.050 |
| 20:00 - 21:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 21:00 - 22:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 22:00 - 23:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 23:00 - 24:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| Total Rates: | | | 2.336 | | | 2.219 | | | 4.555 |

Parameter summary

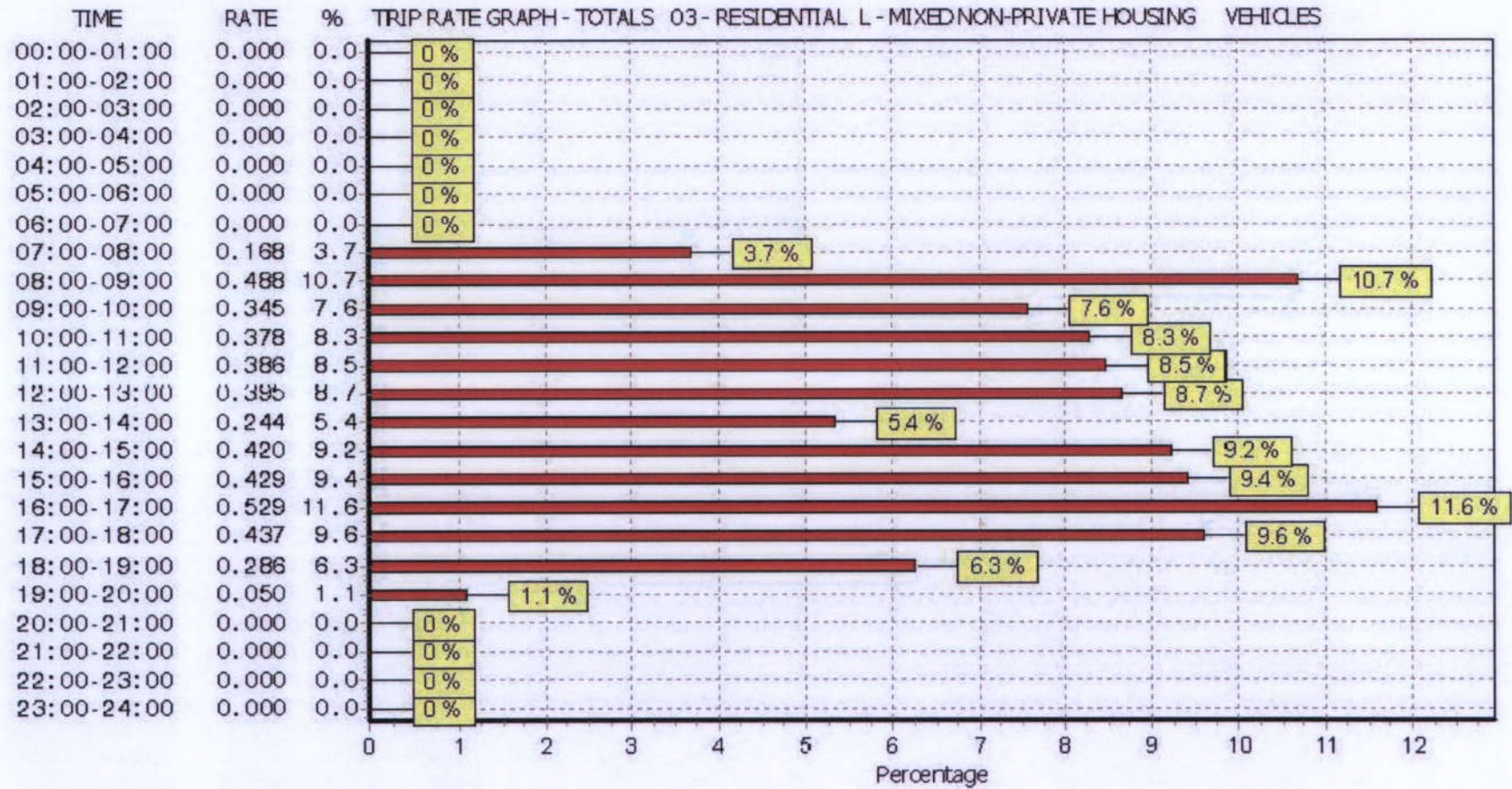
Trip rate parameter range selected: 40 - 79 (units:)
 Survey date date range: 01/01/00 - 25/11/08
 Number of weekdays (Monday-Friday): 2
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 4

Licence No: 225601





Licence No: 225601



TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : K - MIXED PRIVATE HOUSING

VEHICLES

Selected regions and areas:

| | | |
|-----------|---|--------|
| 02 | SOUTH EAST | |
| | HF HERTFORDSHIRE | 1 days |
| | RE READING | 2 days |
| | WS WEST SUSSEX | 1 days |
| 03 | SOUTH WEST | |
| | DC DORSET | 1 days |
| | GS GLOUCESTERSHIRE | 1 days |
| 04 | EAST ANGLIA | |
| | SF SUFFOLK | 1 days |
| 05 | EAST MIDLANDS | |
| | LN LINCOLNSHIRE | 1 days |
| 06 | WEST MIDLANDS | |
| | ST STAFFORDSHIRE | 2 days |
| | WK WARWICKSHIRE | 1 days |
| | WO WORCESTERSHIRE | 1 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE | |
| | NY NORTH YORKSHIRE | 1 days |
| 10 | WALES | |
| | CF CARDIFF | 1 days |
| | CP CAERPHILLY | 1 days |
| 11 | SCOTLAND | |
| | AD ABERDEEN CITY | 1 days |
| | FI FIFE | 1 days |
| | HI HIGHLAND | 1 days |

Glanville Foxhall Road Didcot

Licence No: 225601

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 19 to 162 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 29/04/10

Selected survey days:

| | |
|-----------|--------|
| Monday | 1 days |
| Tuesday | 4 days |
| Wednesday | 4 days |
| Thursday | 4 days |
| Friday | 5 days |

Selected survey types:

| | |
|-----------------------|---------|
| Manual count | 18 days |
| Directional ATC Count | 0 days |

Selected Locations:

| | |
|------------------------------------|----|
| Edge of Town Centre | 3 |
| Suburban Area (PPS6 Out of Centre) | 10 |
| Edge of Town | 5 |

Selected Location Sub Categories:

| | |
|------------------|----|
| Residential Zone | 12 |
| Built-Up Zone | 1 |
| No Sub Category | 5 |

Filtering Stage 3 selection:

Use Class:

| | |
|----|---------|
| C3 | 18 days |
|----|---------|

Population within 1 mile:

| | |
|------------------|--------|
| 1,001 to 5,000 | 1 days |
| 10,001 to 15,000 | 2 days |
| 15,001 to 20,000 | 4 days |
| 20,001 to 25,000 | 4 days |
| 25,001 to 50,000 | 7 days |

Population within 5 miles:

| | |
|--------------------|--------|
| 5,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 2 days |
| 75,001 to 100,000 | 1 days |
| 100,001 to 125,000 | 1 days |
| 125,001 to 250,000 | 9 days |
| 250,001 to 500,000 | 4 days |

Car ownership within 5 miles:

| | |
|------------|---------|
| 0.6 to 1.0 | 7 days |
| 1.1 to 1.5 | 10 days |
| 1.6 to 2.0 | 1 days |

Travel Plan:

| | |
|-----------|---------|
| Not Known | 2 days |
| No | 16 days |

LIST OF SITES relevant to selection parameters

- | | | | |
|----------|-------------------|------------------------------------|------------------------|
| 1 | AD-03-K-01 | SEMI DET./FLATS, ABERDEEN | ABERDEEN CITY |
| | | ASHGROVE ROAD | |
| | | ABERDEEN | |
| | | Suburban Area (PPS6 Out of Centre) | |
| | | Residential Zone | |
| | | Total Number of dwellings: | 24 |
| | | Survey date: WEDNESDAY | 11/05/05 |
| | | | Survey Type: MANUAL |
| 2 | CF-03-K-01 | TERRACED/FLATS, CARDIFF | CARDIFF |
| | | BISHOPS ROAD | |
| | | LLANDAFF NORTH | |
| | | CARDIFF | |
| | | Suburban Area (PPS6 Out of Centre) | |
| | | Residential Zone | |
| | | Total Number of dwellings: | 84 |
| | | Survey date: MONDAY | 08/10/07 |
| | | | Survey Type: MANUAL |
| 3 | CP-03-K-01 | HOUSES/FLATS, CAERPHILLY | CAERPHILLY |
| | | TRECENYDD | |
| | | CAERPHILLY | |
| | | Edge of Town | |
| | | Residential Zone | |
| | | Total Number of dwellings: | 61 |
| | | Survey date: FRIDAY | 19/09/08 |
| | | | Survey Type: MANUAL |
| 4 | DC-03-K-03 | MIXED HOUSING, DORCHESTER | DORSET |
| | | MAUMBURY MEWS | |
| | | DORCHESTER | |
| | | Edge of Town Centre | |
| | | No Sub Category | |
| | | Total Number of dwellings: | 24 |
| | | Survey date: FRIDAY | 04/07/08 |
| | | | Survey Type: MANUAL |
| 5 | FI-03-K-01 | MIXED HOUSING, DUNFERMLINE | FIFE |
| | | WOODMILL ROAD | |
| | | DUNFERMLINE | |
| | | Suburban Area (PPS6 Out of Centre) | |
| | | Residential Zone | |
| | | Total Number of dwellings: | 36 |
| | | Survey date: FRIDAY | 20/04/07 |
| | | | Survey Type: MANUAL |
| 6 | GS-03-K-01 | MIXED HOUSING, GLOUCESTER | GLOUCESTERSHIRE |
| | | CONEY HILL ROAD | |
| | | CONEY HILL | |
| | | GLOUCESTER | |
| | | Suburban Area (PPS6 Out of Centre) | |
| | | Residential Zone | |
| | | Total Number of dwellings: | 33 |
| | | Survey date: THURSDAY | 29/04/10 |
| | | | Survey Type: MANUAL |
| 7 | HF-03-K-01 | PRIVATE HOUSING, WATFORD | HERTFORDSHIRE |
| | | MURIEL AVENUE | |
| | | WATFORD | |
| | | Edge of Town Centre | |
| | | No Sub Category | |
| | | Total Number of dwellings: | 31 |
| | | Survey date: TUESDAY | 22/07/08 |
| | | | Survey Type: MANUAL |

LIST OF SITES relevant to selection parameters (Cont.)

- | | | | |
|-----------|-------------------|---|-----------------------|
| 15 | ST-03-K-02 | TERRACED/FLATS, STOKE | STAFFORDSHIRE |
| | | CHASEWATER DRIVE FORD GREEN STOKE-ON-TRENT Edge of Town Residential Zone Total Number of dwellings: 73 Survey date: WEDNESDAY 26/11/08 | Survey Type: MANUAL |
| 16 | WK-03-K-01 | TERRACED/FLATS, STRATFORD | WARWICKSHIRE |
| | | A422 SEVEN MEADOWS RD OLD TOWN STRATFORD UPON AVON Edge of Town Residential Zone Total Number of dwellings: 64 Survey date: THURSDAY 07/09/00 | Survey Type: MANUAL |
| 17 | WO-03-K-03 | TERRACED/FLATS, WORCESTER | WORCESTERSHIRE |
| | | TALLOW HILL WORCESTER Suburban Area (PPS6 Out of Centre) Built-Up Zone Total Number of dwellings: 103 Survey date: TUESDAY 03/06/03 | Survey Type: MANUAL |
| 18 | WS-03-K-02 | MIXED HOUSING, CRAWLEY | WEST SUSSEX |
| | | RUSSELL WAY CRAWLEY Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 61 Survey date: WEDNESDAY 28/11/07 | Survey Type: MANUAL |

TRIP RATE for Land Use 03 - RESIDENTIAL/K - MIXED PRIVATE HOUSING
VEHICLES

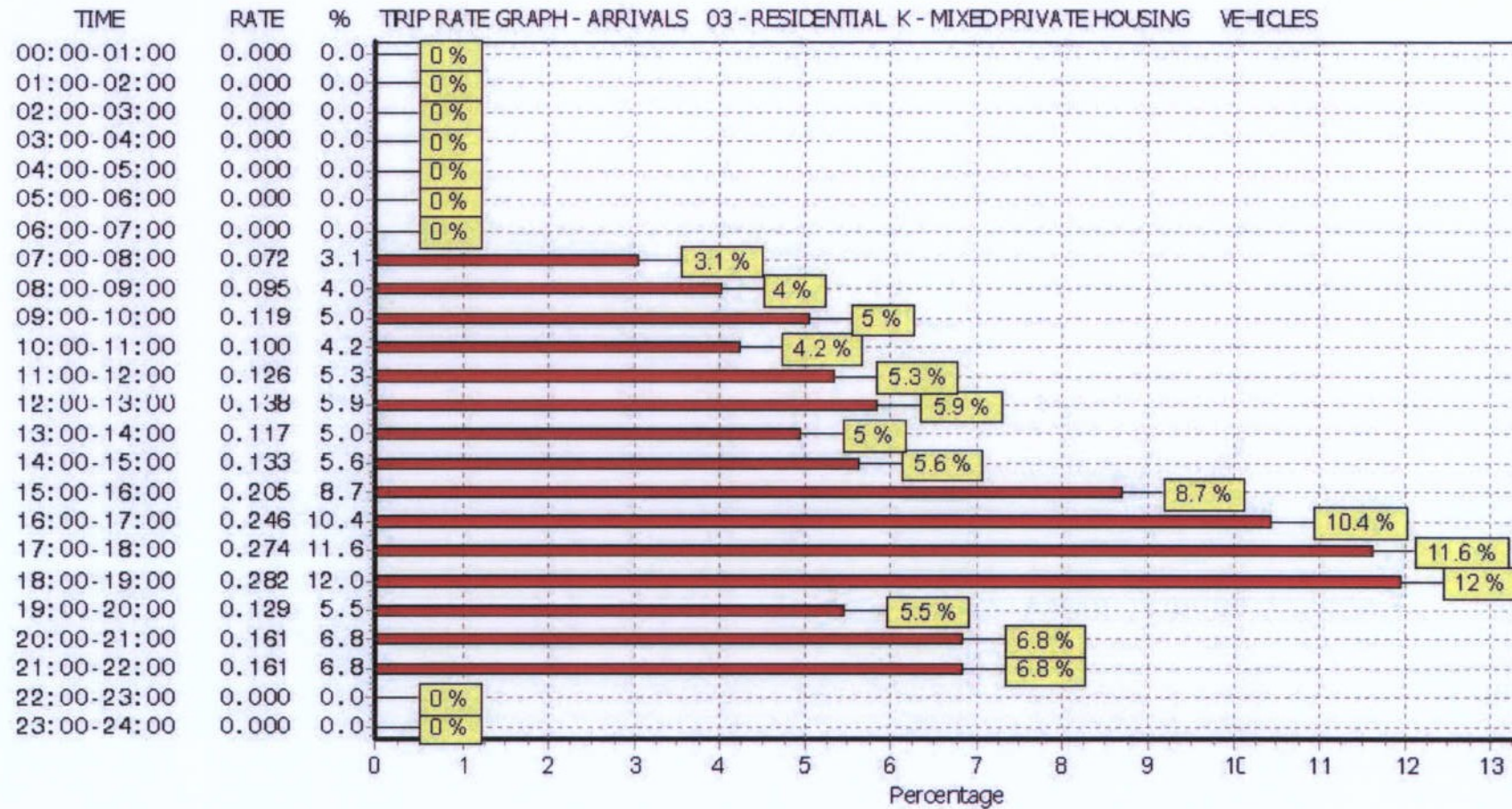
Calculation factor: **1 DWELLS**

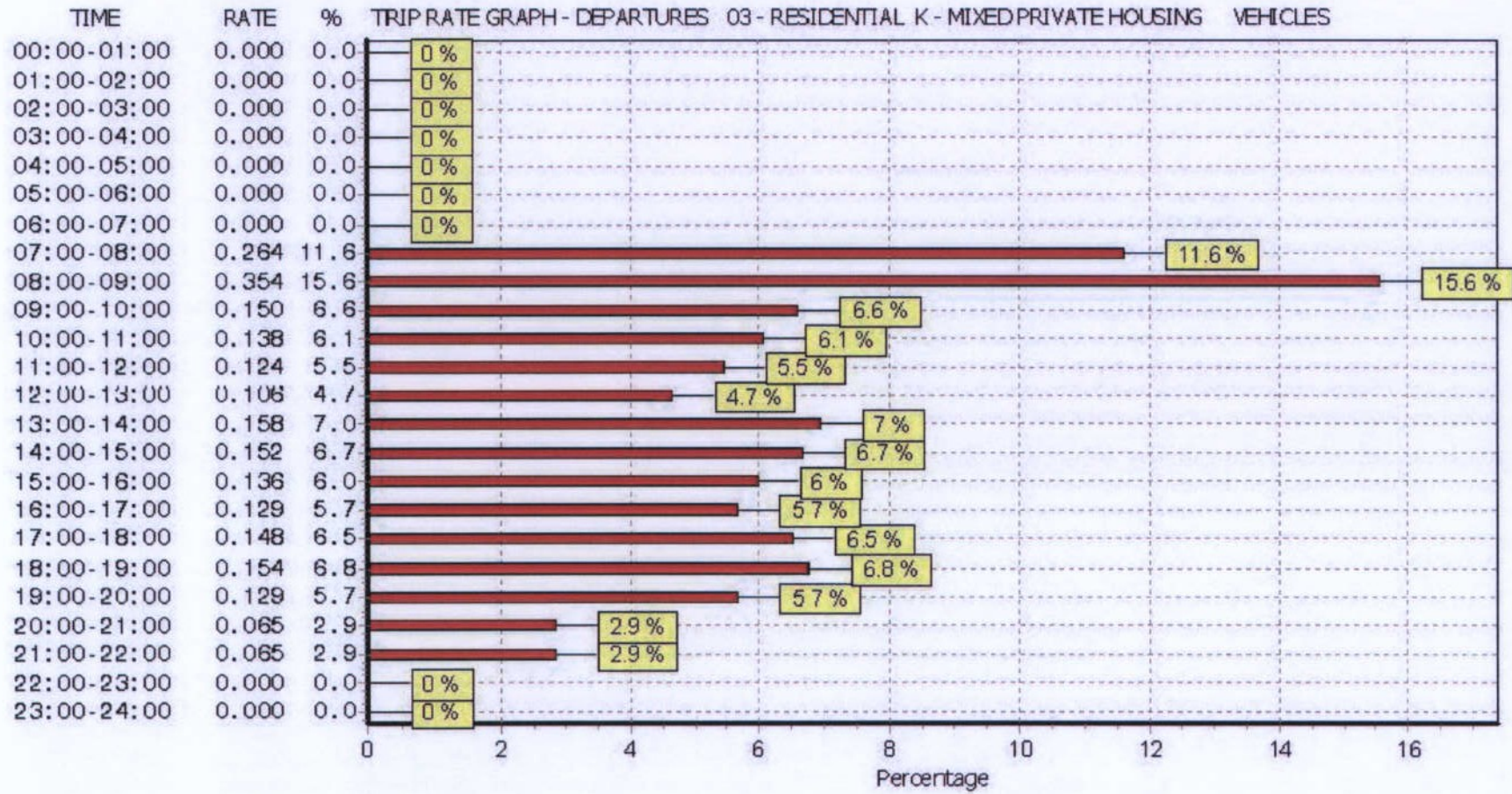
BOLD print indicates peak (busiest) period

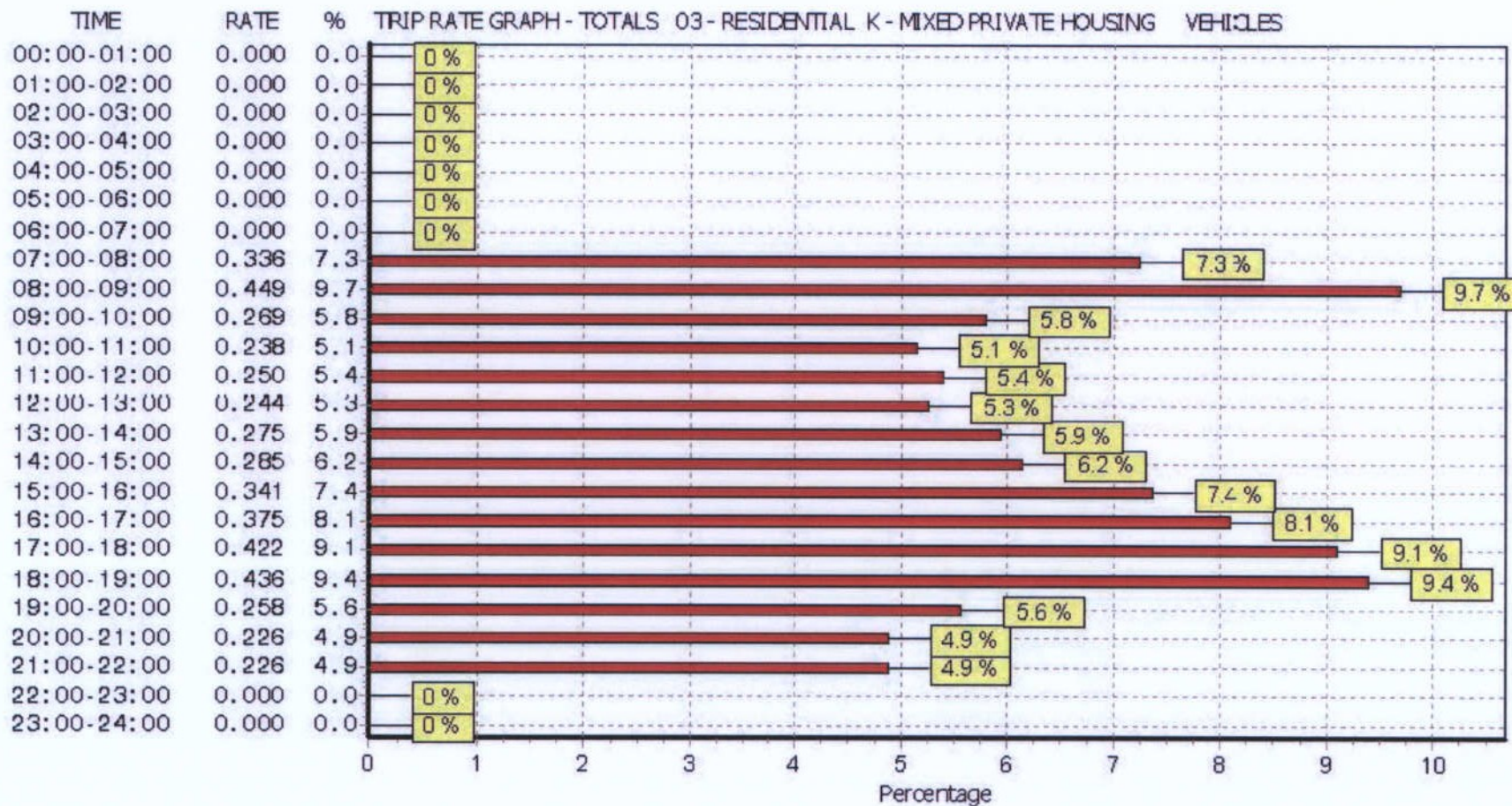
| Time Range | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---------------------|-----------|-------------|--------------|------------|-------------|--------------|-----------|-------------|--------------|
| | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate |
| 00:00 - 01:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 01:00 - 02:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 02:00 - 03:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 03:00 - 04:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 04:00 - 05:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 05:00 - 06:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 06:00 - 07:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 07:00 - 08:00 | 18 | 58 | 0.072 | 18 | 58 | 0.264 | 18 | 58 | 0.336 |
| 08:00 - 09:00 | 18 | 58 | 0.095 | 18 | 58 | 0.354 | 18 | 58 | 0.449 |
| 09:00 - 10:00 | 18 | 58 | 0.119 | 18 | 58 | 0.150 | 18 | 58 | 0.269 |
| 10:00 - 11:00 | 18 | 58 | 0.100 | 18 | 58 | 0.138 | 18 | 58 | 0.238 |
| 11:00 - 12:00 | 18 | 58 | 0.126 | 18 | 58 | 0.124 | 18 | 58 | 0.250 |
| 12:00 - 13:00 | 18 | 58 | 0.138 | 18 | 58 | 0.106 | 18 | 58 | 0.244 |
| 13:00 - 14:00 | 18 | 58 | 0.117 | 18 | 58 | 0.158 | 18 | 58 | 0.275 |
| 14:00 - 15:00 | 18 | 58 | 0.133 | 18 | 58 | 0.152 | 18 | 58 | 0.285 |
| 15:00 - 16:00 | 18 | 58 | 0.205 | 18 | 58 | 0.136 | 18 | 58 | 0.341 |
| 16:00 - 17:00 | 18 | 58 | 0.246 | 18 | 58 | 0.129 | 18 | 58 | 0.375 |
| 17:00 - 18:00 | 18 | 58 | 0.274 | 18 | 58 | 0.148 | 18 | 58 | 0.422 |
| 18:00 - 19:00 | 18 | 58 | 0.282 | 18 | 58 | 0.154 | 18 | 58 | 0.436 |
| 19:00 - 20:00 | 1 | 31 | 0.129 | 1 | 31 | 0.129 | 1 | 31 | 0.258 |
| 20:00 - 21:00 | 1 | 31 | 0.161 | 1 | 31 | 0.065 | 1 | 31 | 0.226 |
| 21:00 - 22:00 | 1 | 31 | 0.161 | 1 | 31 | 0.065 | 1 | 31 | 0.226 |
| 22:00 - 23:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| 23:00 - 24:00 | 0 | 0 | 0.000 | 0 | 0 | 0.000 | 0 | 0 | 0.000 |
| Total Rates: | | | 2.358 | | | 2.272 | | | 4.630 |

Parameter summary

Trip rate parameter range selected: 19 - 162 (units:)
 Survey date range: 01/01/00 - 29/04/10
 Number of weekdays (Monday-Friday): 18
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 1







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : H - QUARRY

VEHICLES

Selected regions and areas:

| | |
|-------------------------|--------|
| 05 EAST MIDLANDS | |
| NR NORTHAMPTONSHIRE | 1 days |
| 09 NORTH | |
| DH DURHAM | 1 days |

Filtering Stage 2 selection:

Parameter: Site Area
Range: 10.00 to 14.50 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 02/12/08

Selected survey days:

| | |
|-----------|--------|
| Tuesday | 1 days |
| Wednesday | 1 days |

Selected survey types:

| | |
|-----------------------|--------|
| Manual count | 2 days |
| Directional ATC Count | 0 days |

Selected Locations:

| | |
|----------------------------------|---|
| Free Standing (PPS6 Out of Town) | 2 |
|----------------------------------|---|

Selected Location Sub Categories:

| | |
|-------------|---|
| Out of Town | 2 |
|-------------|---|

Filtering Stage 3 selection:

Use Class:

| | |
|----|--------|
| B2 | 2 days |
|----|--------|

Population within 1 mile:

| | |
|----------------|--------|
| 1,000 or Less | 1 days |
| 1,001 to 5,000 | 1 days |

Population within 5 miles:

| | |
|-------------------|--------|
| 50,001 to 75,000 | 1 days |
| 75,001 to 100,000 | 1 days |

Car ownership within 5 miles:

| | |
|------------|--------|
| 0.6 to 1.0 | 1 days |
| 1.1 to 1.5 | 1 days |

Travel Plan:

| | |
|----|--------|
| No | 2 days |
|----|--------|

LIST OF SITES relevant to selection parameters

- | | | | |
|----------|---|-----------------------------------|-------------------------|
| 1 | DH-02-H-01 | LIMESTONE QUARRY,NR DURHAM | DURHAM |
| | STONYBECK LANE BISHOP MIDDLEHAM NEAR DURHAM Free Standing (PPS6 Out of Town) Out of Town Total Site Area: 10.00 hect <i>Survey date: TUESDAY 02/12/08</i> | | |
| 2 | NR-02-H-01 | GRAVEL QUARRY, BOZEAT | NORTHAMPTONSHIRE |
| | WOLLASTON ROAD WELLINGBOROUGH BOZEAT Free Standing (PPS6 Out of Town) Out of Town Total Site Area: 14.50 hect <i>Survey date: WEDNESDAY 26/11/08</i> | | |

TRIP RATE for Land Use 02 - EMPLOYMENT/H - QUARRY

VEHICLES

Calculation factor: 1 hect

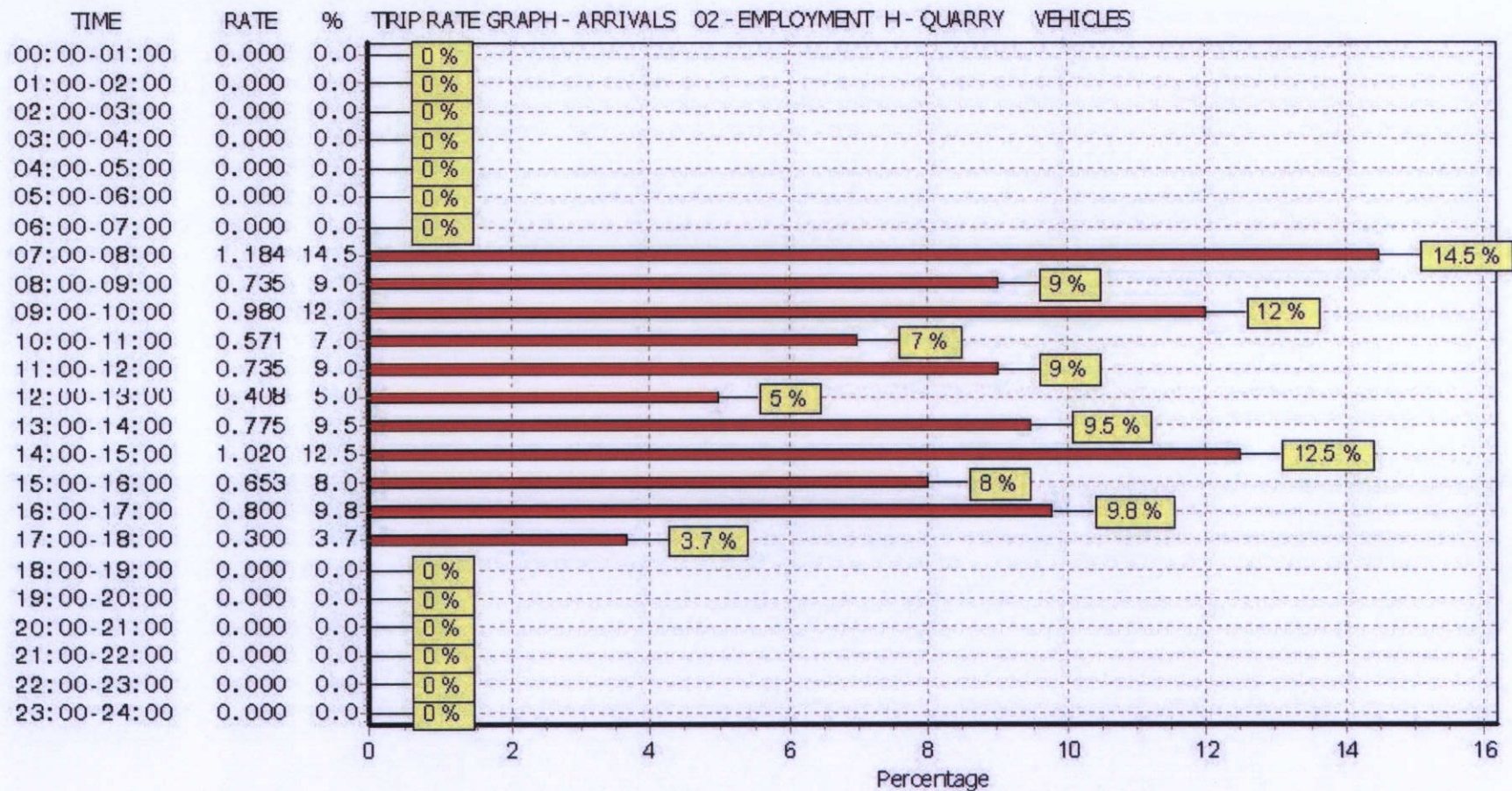
BOLD print indicates peak (busiest) period

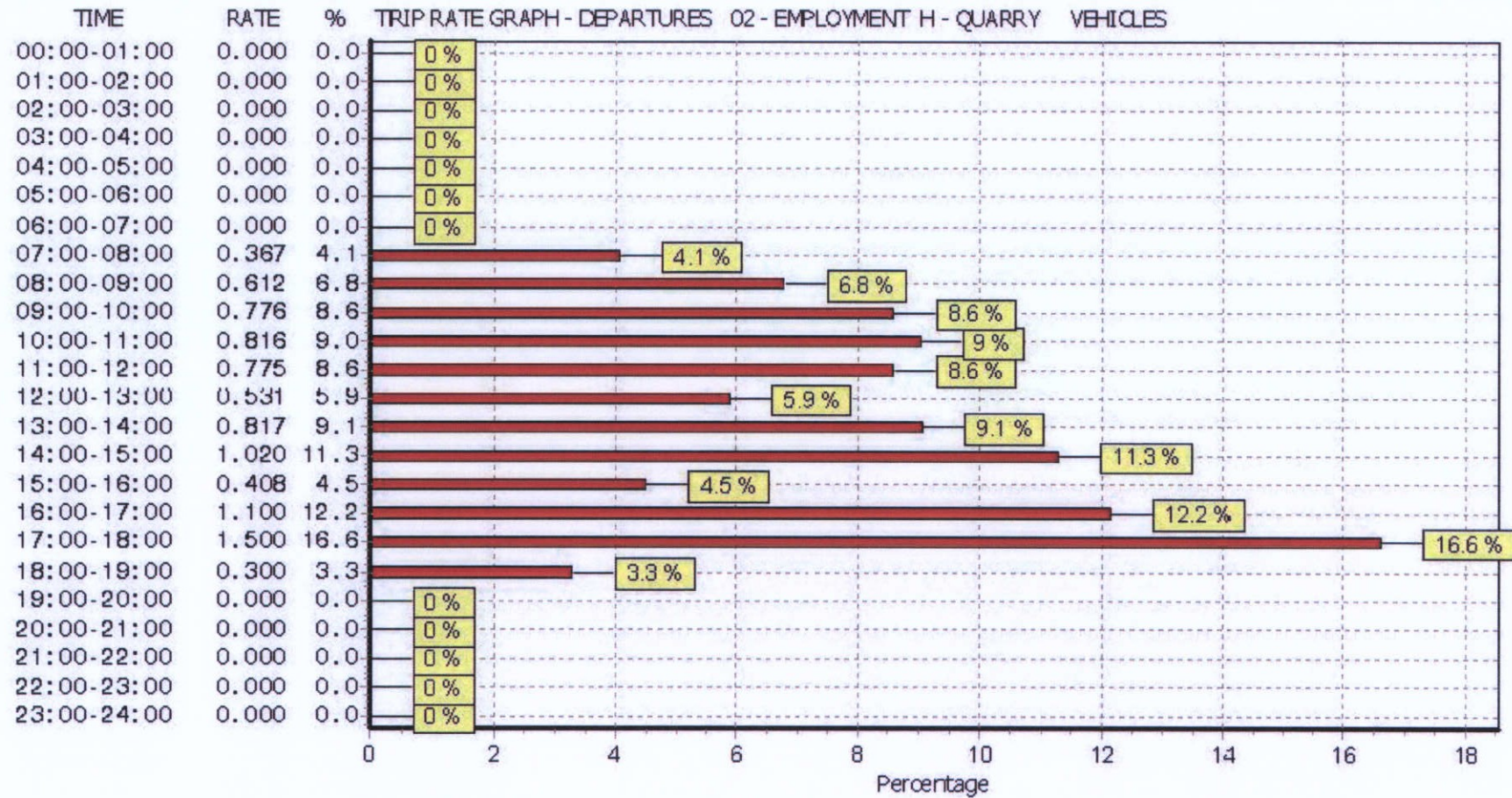
| Time Range | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---------------------|----------|--------------|--------------|------------|--------------|--------------|----------|--------------|--------------|
| | No. Days | Ave. AREA | Trip Rate | No. Days | Ave. AREA | Trip Rate | No. Days | Ave. AREA | Trip Rate |
| 00:00 - 00:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 00:30 - 01:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 01:00 - 01:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 01:30 - 02:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 02:00 - 02:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 02:30 - 03:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 03:00 - 03:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 03:30 - 04:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 04:00 - 04:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 04:30 - 05:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 05:00 - 05:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 05:30 - 06:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 06:00 - 06:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 06:30 - 07:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 07:00 - 07:30 | 2 | 12.25 | 0.898 | 2 | 12.25 | 0.122 | 2 | 12.25 | 1.020 |
| 07:30 - 08:00 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.245 | 2 | 12.25 | 0.531 |
| 08:00 - 08:30 | 2 | 12.25 | 0.408 | 2 | 12.25 | 0.245 | 2 | 12.25 | 0.653 |
| 08:30 - 09:00 | 2 | 12.25 | 0.327 | 2 | 12.25 | 0.367 | 2 | 12.25 | 0.694 |
| 09:00 - 09:30 | 2 | 12.25 | 0.490 | 2 | 12.25 | 0.490 | 2 | 12.25 | 0.980 |
| 09:30 - 10:00 | 2 | 12.25 | 0.490 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.776 |
| 10:00 - 10:30 | 2 | 12.25 | 0.204 | 2 | 12.25 | 0.408 | 2 | 12.25 | 0.612 |
| 10:30 - 11:00 | 2 | 12.25 | 0.367 | 2 | 12.25 | 0.408 | 2 | 12.25 | 0.775 |
| 11:00 - 11:30 | 2 | 12.25 | 0.449 | 2 | 12.25 | 0.367 | 2 | 12.25 | 0.816 |
| 11:30 - 12:00 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.408 | 2 | 12.25 | 0.694 |
| 12:00 - 12:30 | 2 | 12.25 | 0.122 | 2 | 12.25 | 0.245 | 2 | 12.25 | 0.367 |
| 12:30 - 13:00 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.572 |
| 13:00 - 13:30 | 2 | 12.25 | 0.367 | 2 | 12.25 | 0.327 | 2 | 12.25 | 0.694 |
| 13:30 - 14:00 | 2 | 12.25 | 0.408 | 2 | 12.25 | 0.490 | 2 | 12.25 | 0.898 |
| 14:00 - 14:30 | 2 | 12.25 | 0.571 | 2 | 12.25 | 0.449 | 2 | 12.25 | 1.020 |
| 14:30 - 15:00 | 2 | 12.25 | 0.449 | 2 | 12.25 | 0.571 | 2 | 12.25 | 1.020 |
| 15:00 - 15:30 | 2 | 12.25 | 0.367 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.653 |
| 15:30 - 16:00 | 2 | 12.25 | 0.286 | 2 | 12.25 | 0.122 | 2 | 12.25 | 0.408 |
| 16:00 - 16:30 | 1 | 10.00 | 0.500 | 1 | 10.00 | 0.500 | 1 | 10.00 | 1.000 |
| 16:30 - 17:00 | 1 | 10.00 | 0.300 | 1 | 10.00 | 0.600 | 1 | 10.00 | 0.900 |
| 17:00 - 17:30 | 1 | 10.00 | 0.200 | 1 | 10.00 | 0.200 | 1 | 10.00 | 0.400 |
| 17:30 - 18:00 | 1 | 10.00 | 0.100 | 1 | 10.00 | 1.300 | 1 | 10.00 | 1.400 |
| 18:00 - 18:30 | 1 | 10.00 | 0.000 | 1 | 10.00 | 0.300 | 1 | 10.00 | 0.300 |
| 18:30 - 19:00 | 1 | 10.00 | 0.000 | 1 | 10.00 | 0.000 | 1 | 10.00 | 0.000 |
| 19:00 - 19:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 19:30 - 20:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 20:00 - 20:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 20:30 - 21:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 21:00 - 21:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 21:30 - 22:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 22:00 - 22:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 22:30 - 23:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 23:00 - 23:30 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| 23:30 - 24:00 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 | 0 | 0.00 | 0.000 |
| Total Rates: | | | 8.161 | | | 9.022 | | | 17.183 |

Parameter summary

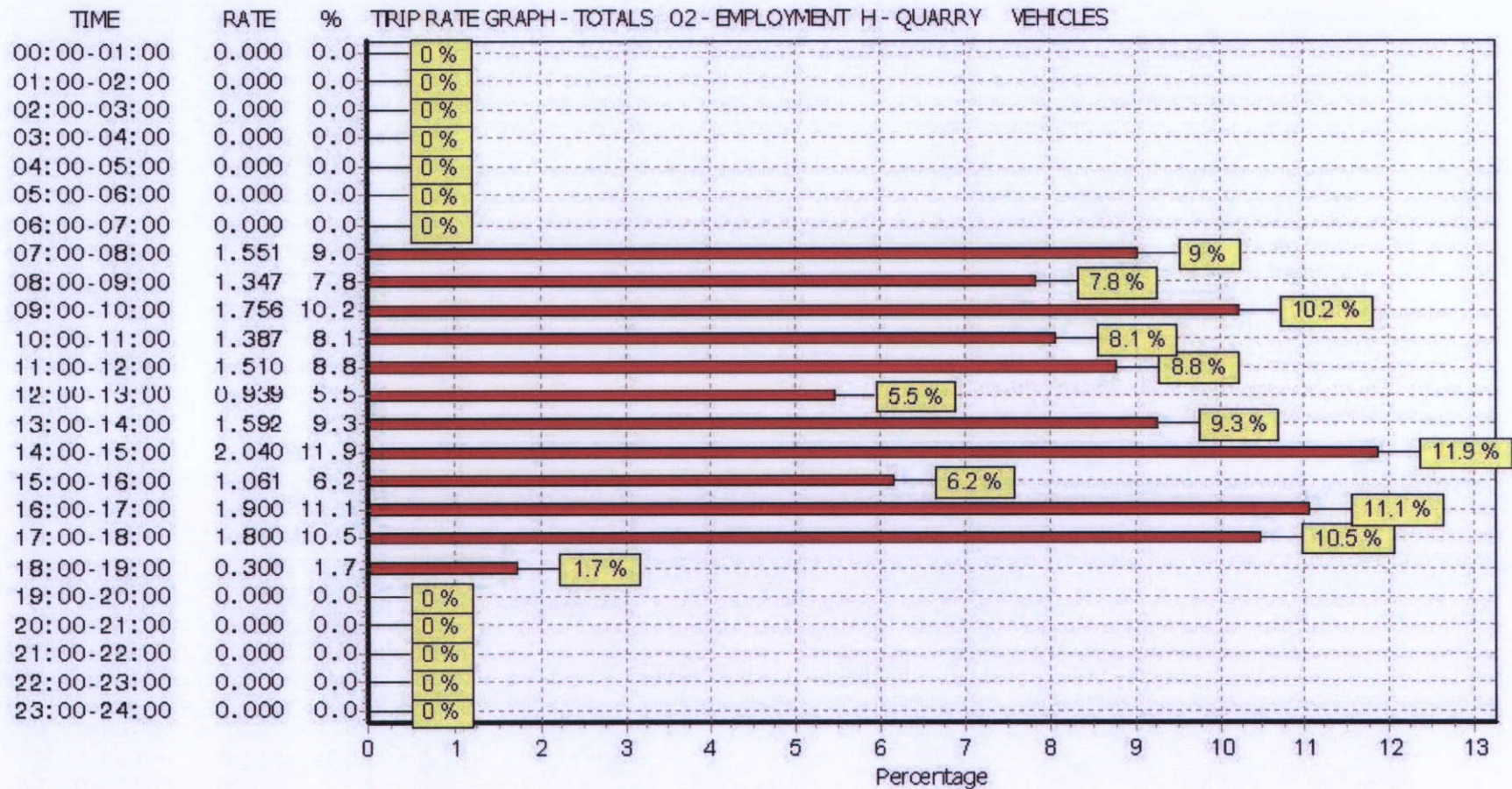
| | |
|--|------------------------------|
| Trip rate parameter range selected: | 10.00 to 14.50 (units: hect) |
| Survey date date range: | 01/01/00 - 02/12/08 |
| Number of weekdays (Monday-Friday): | 2 |
| Number of Saturdays: | 0 |
| Number of Sundays: | 0 |
| Surveys manually removed from selection: | 0 |

Licence No: 225601





Licence No: 225601



Appendix F

Capacity Assessments Junction Ref. 1A

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 1A A1159 Royal Artillery Way / Southchurch Boulevard / Thorpe Hall Avenue
 Type: Standard Roundabout
 Modelling Software: ARCADY 6.0

| Ref. | Peak Period | Year | Scenarios | ARCADY Output | Arm A | Arm B | Arm C | Arm D | Total Traffic | % Increase |
|------|-------------|------|--------------------------------------|---------------|---------------------------|---------------------------|--------------------|------------------------|---------------|------------|
| | | | | | A1159 Royal Artillery Way | Southchurch Boulevard (E) | Thorpe Hall Avenue | Southend Boulevard (W) | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 865 | 1587 | 662 | 473 | 3587 | - |
| | | | | Max RFC | 0.550 | 0.860 | 0.570 | 0.480 | | |
| | | | | Max Q | 1.2 | 6.0 | 1.3 | 0.9 | | |
| b | AM | 2018 | <u>Without Development</u> | Traffic | 901 | 1652 | 689 | 493 | 3735 | 4.1% |
| | | | | Max RFC | 0.580 | 0.900 | 0.610 | 0.520 | | |
| | | | | Max Q | 1.4 | 8.6 | 1.6 | 1.1 | | |
| c | AM | 2018 | <u>With Development</u> | Traffic | 905 | 1674 | 689 | 495 | 3763 | 0.7% |
| | | | | Max RFC | 0.590 | 0.920 | 0.620 | 0.530 | | |
| | | | | MaxQ | 1.4 | 9.8 | 1.6 | 1.1 | | |
| d | AM | 2018 | <u>With Development + Mitigation</u> | Traffic | 905 | 1674 | 689 | 495 | 3763 | 0.7% |
| | | | | Max RFC | 0.550 | 0.870 | 0.620 | 0.530 | | |
| | | | | MaxQ | 1.2 | 6.3 | 1.6 | 1.1 | | |
| e | PM | 2013 | <u>Existing</u> | Traffic | 1339 | 1116 | 421 | 656 | 3532 | - |
| | | | | Max RFC | 0.860 | 0.650 | 0.290 | 0.520 | | |
| | | | | Max Q | 5.9 | 1.8 | 0.4 | 1.1 | | |
| f | PM | 2018 | <u>Without Development</u> | Traffic | 1405 | 1171 | 441 | 689 | 3706 | 4.9% |
| | | | | Max RFC | 0.920 | 0.690 | 0.320 | 0.560 | | |
| | | | | Max Q | 10.1 | 2.2 | 0.5 | 1.3 | | |
| g | PM | 2018 | <u>With Development</u> | Traffic | 1418 | 1177 | 441 | 694 | 3730 | 0.6% |
| | | | | Max RFC | 0.930 | 0.690 | 0.320 | 0.570 | | |
| | | | | MaxQ | 11.3 | 2.2 | 0.5 | 1.3 | | |
| h | PM | 2018 | <u>With Development + Mitigation</u> | Traffic | 1418 | 1177 | 441 | 694 | 3730 | 0.6% |
| | | | | Max RFC | 0.880 | 0.650 | 0.320 | 0.570 | | |
| | | | | MaxQ | 6.8 | 1.9 | 0.5 | 1.3 | | |

Appendix G

Capacity Assessments Junction Ref. 1B

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 1B Waking Road / Bournes Green Chase / Shoebury Road / Southchurch Boulevard

Type: Standard Roundabout

Modelling Software: ARCADY 6.0

| Ref. | Peak Period | Year | Scenarios | ARCADY Output | Arm A | Arm B | Arm C | Arm D | Total Traffic | % Increase | |
|------|----------------------------|-------------------------|----------------------------|-----------------|-------------|---------------------|---------------|-----------------------|---------------|------------|---|
| | | | | | Waking Road | Bournes Green Chase | Shoebury Road | Southchurch Boulevard | | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 640 | 958 | 130 | 1202 | 2930 | - | |
| | | | | Max RFC | 0.630 | 0.710 | 0.310 | 0.800 | | | |
| | | | | Max Q | 1.7 | 2.5 | 0.4 | 3.9 | | | |
| b | | 2018 | <u>Without Development</u> | Traffic | 666 | 997 | 135 | 1251 | 3049 | 4.1% | |
| | | | | Max RFC | 0.670 | 0.750 | 0.350 | 0.830 | | | |
| | | | | Max Q | 2.0 | 3.2 | 0.6 | 4.9 | | | |
| c | <u>With Development</u> | | Traffic | 666 | 1019 | 135 | 1257 | 3077 | 0.9% | | |
| | | | Max RFC | 0.670 | 0.770 | 0.360 | 0.840 | | | | |
| | | | MaxQ | 2.0 | 3.2 | 0.6 | 4.9 | | | | |
| d | | PM | 2013 | <u>Existing</u> | Traffic | 411 | 798 | 56 | 1604 | 2869 | - |
| | | | | | Max RFC | 0.500 | 0.530 | 0.090 | 1.040 | | |
| | | | | | Max Q | 1.0 | 1.1 | 0.1 | 52.0 | | |
| e | <u>Without Development</u> | | Traffic | 431 | 837 | 59 | 1683 | 3010 | 4.9% | | |
| | | | Max RFC | 0.520 | 0.560 | 0.100 | 1.090 | | | | |
| | | | Max Q | 1.1 | 1.3 | 0.1 | 90.6 | | | | |
| f | | <u>With Development</u> | Traffic | 431 | 843 | 59 | 1701 | 3034 | 0.8% | | |
| | | | Max RFC | 0.520 | 0.570 | 0.100 | 1.100 | | | | |
| | | | MaxQ | 1.1 | 1.3 | 0.1 | 100.2 | | | | |

Appendix H
Capacity Assessments Junction Ref. 2

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 2 A13 Bournes Green Chase / Maplin Way North
 Type: Standard Roundabout
 Modelling Software: ARCADY 6.0

| Ref. | Peak Period | Year | Scenarios | ARCADY Output | Arm A | Arm B | Arm C | Total Traffic | % Increase | |
|------|-------------|------|-----------------|--------------------------------------|-------------------------|--------------|-------------------------|---------------|------------|------|
| | | | | | Bournes Green Chase (E) | Maplin Way N | Bournes Green Chase (W) | | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 925 | 301 | 764 | 1990 | - | |
| | | | | Max RFC | 0.790 | 0.380 | 0.660 | | | |
| | | | | Max Q | 3.6 | 0.6 | 2.0 | | | |
| | | b | 2018 | <u>Without Development</u> | Traffic | 963 | 313 | 795 | 2071 | 4.1% |
| | | | | | Max RFC | 0.820 | 0.410 | 0.690 | | |
| | | | | | Max Q | 4.5 | 0.7 | 2.2 | | |
| | | c | 2018 | <u>With Development</u> | Traffic | 988 | 314 | 801 | 2103 | 1.5% |
| | | | | | Max RFC | 0.840 | 0.420 | 0.700 | | |
| | | | | | MaxQ | 5.1 | 0.7 | 2.3 | | |
| | | d | 2018 | <u>With Development + Mitigation</u> | Traffic | 988 | 314 | 801 | 2103 | 1.5% |
| | | | | | Max RFC | 0.840 | 0.420 | 0.640 | | |
| | | | | | MaxQ | 5.1 | 0.7 | 1.8 | | |
| e | PM | 2013 | <u>Existing</u> | Traffic | 721 | 294 | 1122 | 2137 | - | |
| | | | | Max RFC | 0.610 | 0.034 | 0.960 | | | |
| | | | | Max Q | 1.5 | 0.5 | 15.1 | | | |
| | | f | 2018 | <u>Without Development</u> | Traffic | 757 | 308 | 1177 | 2242 | 4.9% |
| | | | | | Max RFC | 0.640 | 0.370 | 1.010 | | |
| | | | | | Max Q | 1.8 | 0.6 | 29.1 | | |
| | | g | 2018 | <u>With Development</u> | Traffic | 764 | 310 | 1195 | 2269 | 1.2% |
| | | | | | Max RFC | 0.650 | 0.300 | 1.030 | | |
| | | | | | MaxQ | 1.8 | 0.6 | 36.0 | | |
| | | d | 2018 | <u>With Development + Mitigation</u> | Traffic | 764 | 310 | 1195 | 2269 | 1.2% |
| | | | | | Max RFC | 0.650 | 0.370 | 0.940 | | |
| | | | | | MaxQ | 1.8 | 0.6 | 12.5 | | |

Appendix I
Capacity Assessments Junction Ref. 3

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 3 B1017 Poynters Lane / A13 North Shoebury Road / Bishopsteignton / A13 Bournes Green Chase

Type: Standard Roundabout

Modelling Software: ARCADY 6.0

| Ref. | Peak Period | Year | Scenarios | ARCADY Output | Arm A | Arm B | Arm C | Arm D | Total Traffic | % Increase |
|------|-------------------------|-------------------------|----------------------------|---------------|---------------------|---------------------|-----------------|---------------------|---------------|------------|
| | | | | | B1017 Poynters Lane | North Shoebury Road | Bishopsteignton | Bournes Green Chase | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 664 | 494 | 83 | 670 | 1911 | - |
| | | | | Max RFC | 0.610 | 0.310 | 0.110 | 0.420 | | |
| | | | | Max Q | 1.6 | 0.5 | 0.1 | 0.7 | | |
| b | | 2018 | <u>Without Development</u> | Traffic | 692 | 515 | 87 | 698 | 1992 | 4.2% |
| | | | | Max RFC | 0.650 | 0.330 | 0.120 | 0.430 | | |
| | | | | Max Q | 1.8 | 0.5 | 0.1 | 0.8 | | |
| c | <u>With Development</u> | | Traffic | 719 | 516 | 87 | 705 | 2027 | 1.8% | |
| | | | Max RFC | 0.670 | 0.340 | 0.120 | 0.440 | | | |
| | | | MaxQ | 2.0 | 0.5 | 0.1 | 0.8 | | | |
| d | | PM | <u>Existing</u> | Traffic | 404 | 597 | 83 | 1050 | 2134 | - |
| | | | | Max RFC | 0.390 | 0.340 | 0.100 | 0.640 | | |
| | | | | Max Q | 0.6 | 0.5 | 0.1 | 1.8 | | |
| e | 2018 | | <u>Without Development</u> | Traffic | 423 | 626 | 87 | 1102 | 2238 | 4.9% |
| | | | | Max RFC | 0.410 | 0.360 | 0.110 | 0.670 | | |
| | | | | Max Q | 0.7 | 0.6 | 0.1 | 2.0 | | |
| f | | <u>With Development</u> | Traffic | 431 | 628 | 87 | 1122 | 2268 | 1.3% | |
| | | | Max RFC | 0.420 | 0.360 | 0.110 | 0.690 | | | |
| | | | MaxQ | 0.7 | 0.6 | 0.1 | 2.2 | | | |

Appendix J

Capacity Assessments Junction Ref. 4

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 4 B1017 Star Lane / Poynters Lane
 Type: Priority Junction
 Modelling Software: PICADY 4.1

| Ref. | Peak Period | Year | Scenarios | PICADY Output | Arm A | Arm B | Arm C | Total Traffic | % Increase |
|------|-------------------------|-------------------------|----------------------------|---------------|-----------------|-------------------|-------------------|---------------|------------|
| | | | | | B1017 Star Lane | Poynters Lane (E) | Poynters Lane (W) | | |
| | | | | | A - BC | B - AC | C - AB | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 369 | 290 | 304 | 963 | - |
| | | | | Max RFC | - | 0.584 | 0.199 | | |
| | | | | Max Q | - | 1.4 | 0.4 | | |
| b | | 2018 | <u>Without Development</u> | Traffic | 384 | 302 | 316 | 1,002 | 4.0% |
| | | | | Max RFC | - | 0.615 | 0.209 | | |
| | | | | Max Q | - | 1.6 | 0.4 | | |
| c | <u>With Development</u> | | Traffic | 414 | 303 | 323 | 1,040 | 3.8% | |
| | | | Max RFC | - | 0.629 | 0.213 | | | |
| | | | MaxQ | - | 1.6 | 0.4 | | | |
| d | | 2013 | <u>Existing</u> | Traffic | 294 | 186 | 468 | 948 | - |
| | | | | Max RFC | - | 0.371 | 0.502 | | |
| | | | | Max Q | - | 0.6 | 1.3 | | |
| e | 2018 | | <u>Without Development</u> | Traffic | 308 | 196 | 491 | 995 | 5.0% |
| | | | | Max RFC | - | 0.396 | 0.536 | | |
| | | | | Max Q | - | 0.6 | 1.5 | | |
| f | | <u>With Development</u> | Traffic | 317 | 198 | 513 | 1,028 | 3.3% | |
| | | | Max RFC | - | 0.406 | 0.547 | | | |
| | | | MaxQ | - | 0.7 | 1.6 | | | |

Appendix K

Capacity Assessments Junction Ref. 5

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 5 B1017 Southend Road / B1017 Star Lane
 Type: Mini Roundabout
 Modelling Software: ARCADY 6.0

| Ref. | Peak Period | Year | Scenarios | ARCADY Output | Arm A | Arm B | Arm C | Total Traffic | % Increase | |
|------|-------------------------|-------------------------|----------------------------|-----------------|-------------------|-----------|-------------------|---------------|------------|---|
| | | | | | Southend Road (E) | Star Lane | Southend Road (W) | | | |
| a | AM | 2013 | <u>Existing</u> | Traffic | 587 | 256 | 162 | 1005 | - | |
| | | | | Max RFC | 0.700 | 0.300 | 0.210 | | | |
| | | | | Max Q | 2.3 | 0.4 | 0.3 | | | |
| b | | 2018 | <u>Without Development</u> | Traffic | 611 | 267 | 169 | 1047 | 4.2% | |
| | | | | Max RFC | 0.730 | 0.320 | 0.220 | | | |
| | | | | Max Q | 2.7 | 0.5 | 0.3 | | | |
| c | <u>With Development</u> | | Traffic | 612 | 275 | 170 | 1057 | 1.0% | | |
| | | | Max RFC | 0.730 | 0.330 | 0.220 | | | | |
| | | | MaxQ | 2.7 | 0.5 | 0.3 | | | | |
| d | | PM | 2013 | <u>Existing</u> | Traffic | 347 | 272 | 371 | 990 | - |
| | | | | | Max RFC | 0.420 | 0.280 | 0.470 | | |
| | | | | | Max Q | 0.7 | 0.4 | 0.9 | | |
| e | 2018 | | <u>Without Development</u> | Traffic | 364 | 286 | 389 | 1039 | 4.9% | |
| | | | | Max RFC | 0.440 | 0.300 | 0.490 | | | |
| | | | | Max Q | 0.8 | 0.4 | 1.0 | | | |
| f | | <u>With Development</u> | Traffic | 368 | 289 | 392 | 1049 | 1.0% | | |
| | | | Max RFC | 0.440 | 0.300 | 0.500 | | | | |
| | | | MaxQ | 0.8 | 0.4 | 0.9 | | | | |

Appendix L

Capacity Assessments Junction Ref. 6

TR8100953 - Star Lane, Southend-on-Sea

JUNCTION CAPACITY ANALYSIS SUMMARY

Junction: 6 Proposed Site Access / B1017 Star Lane

Type: Priority Junction

Modelling Software: PICADY 4.1

| Ref. | Peak Period | Year | Scenarios | PICADY Output | Arm A | Arm B | Arm C | Total Traffic | % Increase |
|------|-------------|------|------------------|---------------|---------------------|-------------|---------------------|---------------|------------|
| | | | | | B1017 Star Lane (N) | Site Access | B1017 Star Lane (S) | | |
| | | | | | A - BC | B - AC | C - AB | | |
| a | AM | 2016 | With Development | Traffic | 386 | 38 | 283 | 707 | - |
| | | | | Max RFC | - | 0.078 | 0.017 | | |
| | | | | MaxQ | - | 0.1 | 0.0 | | |
| b | PM | 2016 | With Development | Traffic | 315 | 12 | 317 | 644 | - |
| | | | | Max RFC | - | 0.024 | 0.050 | | |
| | | | | MaxQ | - | 0.0 | 0.1 | | |



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