



**CHALCROFT NURSERIES,
CHALCRAFT LANE, BOGNOR REGIS**

Proposed Residential Development

Transport Planning Statement

**Prepared on behalf of
Orchard Enterprises (Southern) Limited**

SAJ/PMR/OREN/09/1046/R01

June 2009



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Chalcroft Nurseries, Chalcroft Lane, Bognor Regis
SAJ/PMR/OREN/09/1046/R01
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i



CONTENTS

APPENDICES	II
1 INTRODUCTION	1
1.1 Background	1
1.2 The Proposed Development	1
1.3 Report Structure and Scope	2
2 THE EXISTING SITE	4
2.1 Site Background and Operation	4
2.2 Local Highway Network	5
2.3 Accessibility	6
Walking and Cycling	7
Bus Facilities	7
Rail Facilities	8
Summary	8
2.4 Accident History	9
3 PROPOSED DEVELOPMENT	10
3.1 Development Context	10
3.2 Parking Provisions	10
3.3 Vehicular Access	11
3.4 Highway Improvements	12
3.5 Stage I Road Safety Audit and Designer's Response	13
3.6 Trip Generation	13
Existing Traffic Generation	14
Proposed Development Traffic Generation	16
3.7 Comparison of Traffic Generation with Previous Use of the Site	17
3.8 Vehicle Trip Distribution and Assignment	18
4 DEVELOPMENT TRAFFIC IMPACT	19
4.1 Background	19
4.2 Assessment of Growth on Local Highway Network	19
4.3 Network Capacity Analysis	20
Site Access/Chalcraft Lane Junction	20
Royal Oak junction	20
5 SUMMARY AND CONCLUSIONS	23

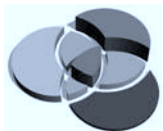
APPENDICES

FIGURES

Figure 01	Site Access Vehicle Flows – AM Peak Hour
Figure 02	Site Access Vehicle Flows – PM Peak Hour
Figure 03	Royal Oak Junction Vehicle Flows – AM Peak Hour
Figure 04	Royal Oak Junction Vehicle Flows – PM Peak Hour

CHARTS

Chart 01	Junction Visibility against Design Speed
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PLANS

Plan 01 Site Location and Accessibility Plan

DRAWINGS

2009/1046/001 Proposed Pedestrian Improvements
2009/1046/002 Proposed Access Arrangement
2009/1046/003 Swept Path Assessment

APPENDICES

Appendix A Existing Site Layout
Appendix B WSCC Pre-Planning Consultation
Appendix C Extracts from ADC Sustainability Study
Appendix D Accident Data
Appendix E Car Ownership
Appendix F Speed Survey Results
Appendix G Stage 1 Road Safety Audit
Appendix H Certificate of Lawful land Use
Appendix I TRICS Database Assessment
Appendix J Extracts from Site 6 Development Transport Assessment
Appendix K TEMPRO/NRTF Growth Adjustment
Appendix L PICADY Assessment – Site Access
Appendix M LINSIG Assessment – Royal Oak Junction

TABLES

Table 2.1 Summary of Local Bus Services
Table 3.1 Summary of Existing Site Vehicle Movements
Table 3.2 Summary of Proposed Development Trip Rates
Table 3.3 Summary of Development Related Trip Rates
Table 3.4 Net Traffic Generation
Table 3.5 Net Traffic Impact on Chalcraft Lane
Table 4.1 Site Access/Chalcraft Lane PICADY Summary (2011 Development)
Table 4.2 Proposed Signalised Royal Oak Junction – 2011 Capacity Analysis (Site 6 Assessment)
Table 4.3 Proposed Signalised Royal Oak Junction – 2011 'With Development' Capacity



1 INTRODUCTION

1.1 Background

- 1.1.1 RGP has been commissioned by Orchard Enterprises (Southern) Limited to advise on highways and transportation matters in relation to the proposed re-development of Chalcroft Nurseries, located in Chalcroft Lane, North Bersted, Bognor Regis. The site is identified on **Plan 01**.
- 1.1.2 The site currently operates as Chalcroft Nurseries, a garden centre and nursery complex consisting of a number of separate operations with its 2.5 hectare site.
- 1.1.3 This Transport Planning Statement (TPS) has been prepared to address the key highways issues in respect of the proposed re-development of the site to provide up to 70 residential units. In deciding upon the key issues, RGP considered the site's history, other planning proposals locally, in particular Site 6 and communicated with West Sussex County Council.

1.2 The Proposed Development

- 1.2.1 The proposed development would create a change of use of the site to provide up to 70 residential dwellings. The application is made in outline but the indicative layout suggests that the mix would comprise a mix of 2 and 3 bedroom dwellings, with approximately 40% of the total dwellings allocated as affordable.
- 1.2.2 The proposed development would be accessed via a single vehicular route served by Chalcroft Lane, as existing, which would be upgraded in order to allow access for all necessary vehicles into the site.
- 1.2.3 The internal layout of the site, contained within **Appendix A** has been designed with consideration of Manual for Streets (MfS) guidance, providing adequate internal visibility throughout, with turning facilities to accommodate all anticipated vehicles.
- 1.2.4 The indicative layout has been designed to provide sufficient space to accommodate car parking and cycle spaces up to the Councils maximum standards but the developer intends to provide for car parking on the basis of 1.2 spaces per dwelling.
- 1.2.5 As part of the proposals, the existing property of No.78 Chalcroft Lane would be demolished to provide an area of open space.
- 1.2.6 Off-site improvements are also proposed to the existing pedestrian facilities surrounding the site, with emphasis on improving crossing points and links to the local centres and open spaces, schools and public transport facilities. These improvements are primarily designed to enhance the non-car accessibility credentials of the site.



1.3 Report Structure and Scope

- 1.3.1 The previous planning application for a larger development on the site was refused in 2007 (Ref. BE/136/06) in part due to the insufficient supporting information provided by the Applicant.
- 1.3.2 As part of the previous application, which involved a larger mixed residential development of 132 units, WSCC's Development Control department provided pre-planning advice with respect to a scope of assessment work to sufficiently address all highway-related concerns. Correspondences relating to the consultation comments provided by WSCC are attached hereto at **Appendix B**. WSCC's initial comments related to the provision of a full Transport Assessment for the site.
- 1.3.3 The Department for Transport's (DfT) 'Guidance on Transport Assessments', dated March 2007, provides direction on the level of assessment required for residential development schemes. The guidance states that for a development of between 50 and 80 units, a Transport Statement is required to address all highway matters. It is considered therefore that the proposed development of a reduced 70 units would no longer require a full Transport Assessment, in accordance with DfT guidance, and therefore this TPS has been produced to address all highway matters.
- 1.3.4 WSCC's pre-planning communications have also made reference to the level of assessment work required as part of a potential development; the proposals would be required to consider the junction of Chalcraft Lane with A259 Chichester Road, known as the Royal Oak junction, located approximately 500 metres to the north of the site. This junction is currently sensitive during the peak periods, particularly in the morning when traffic queues are observed along Chalcraft Lane on the approach to the junction. WSCC previously required capacity tests taking into account traffic movements with and without the 'Site 6' development in North Bersted, which at the time of the advice was going through the Application stage.
- 1.3.5 Since previous communications with WSCC took place, the Site 6 development of 650 dwellings, including implementation of the western section of the Bognor Northern Relief Road (completion date estimated as 2011) has been granted full Planning consent. The Bognor North Relief Road (BNRR) provides the primary means of access to the Site 6 development but will also provide an alternative route through Bognor Regis to the existing A259 which is often congested, particularly during peak periods.
- 1.3.6 As part of the Site 6 development outline proposals, a detailed Transport Assessment was produced, reviewing the traffic impact on the local highway network, and providing improvements to the mini-roundabout junction by introducing a signalised arrangement.
- 1.3.7 This TPS therefore considers the potential impact on the existing Royal Oak junction in the context of the completed Site 6 Development and the forthcoming junction improvements.
- 1.3.8 This report has been structured in accordance with West Sussex County Council's (WSCC) *Transport Assessment Methodology*, in accordance with the Department for Transport's "Guidance on Transport Assessment" document, dated March 2007.



1.3.9 The structure of this report is therefore as follows:

- (i) Section 2 – reviews the existing site, its surroundings and the accessibility of the local area for all modes of transport;
- (ii) Section 3 – presents the development proposals including access and parking arrangements and off-site highway improvements, including review of a Stage I Road Safety Audit of the site;
- (iii) Section 4 – assesses the likely trip generation associated with the development and the transport impact of the development on the local highway network;
- (iv) Section 5 – summarises the content of the report and highlights RGP's conclusions and recommendations for taking the project forward.



2 THE EXISTING SITE

2.1 Site Background and Operation

- 2.1.1 Chalcroft Nurseries and Garden Centre are situated on the northern side of Chalcraft Lane on the northern edge of Bognor Regis, as shown on **Plan 01**.
- 2.1.2 The site carries a lawful and permitted land use as an A1 retail complex, and houses a number of facilities on site, including a nursery, garden centre and aquatics centre.
- 2.1.3 The site provides gravelled areas of parking at certain locations throughout the site, providing space for between 60-70 vehicles.
- 2.1.4 To the rear of the nursery site is a large expanse of unused 'brown' land that is overgrown with vegetation. The existing layout of the site is illustrated on the site plan attached hereto at **Appendix A**.
- 2.1.5 The existing garden centre and nursery are accessed via a single vehicular route served by Chalcraft Lane. The existing access takes the form of a large vehicle crossover and is approximately 6 metres wide. The existing site access is gated at its western end.



Existing Site Access at Chalcroft Nurseries

- 2.1.6 The photographs below show the current visibility splays from the site access. Currently a good level of visibility is provided in each direction along Chalcraft Lane. As part of the proposed upgrade of the access, a speed survey has been undertaken to determine the Design Speed of vehicles approaching the site from both directions along Chalcraft Lane, and therefore provide the necessary visibility from the junction.



Existing visibility to the left (trailing traffic direction) along Chalcraft Lane

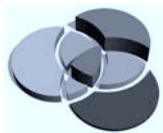


Existing visibility to the right (leading traffic direction) along Chalcraft Lane

- 2.1.7 The proposals also incorporate the property of No.78 Chalcraft Lane, which abuts the development to its rear. No.78 currently shares a separate access with No.76 Chalcraft Lane, accessed from a vehicle crossover located 40 metres north of the garden centre access.

2.2 Local Highway Network

- 2.2.1 Chalcraft Lane is a District Distributor road subject to a 30 mph speed limit, linking the local residential routes to the A259. Chalcraft Lane links to the A259 and North Bersted Street at its northern end, forming a double mini-roundabout junction, known as the Royal Oak or Pink Pub junction.
- 2.2.2 In the vicinity of the site, Chalcraft Lane is a single carriageway road, approximately 7.0 metres wide with kerbed edges, street lighting and footways on either side. Chalcraft Lane is characterised by primarily residential frontage development, with a large number of properties having direct access via private driveways. Additionally there are a number of priority junctions along Chalcraft Lane which provide access to adjoining residential estates.
- 2.2.3 The A259 is part of the West Sussex County Council Strategic Road Network and runs broadly east-west through Bognor. The A259 runs east from Emsworth in Hampshire, into West Sussex via Chichester, Bognor Regis, Littlehampton, Ferring, Worthing, Lancing, Shoreham-by-Sea, Portslade And East Sussex via Hove, Brighton, Peacehaven, Newhaven, Seaford, Eastbourne, Pevensey, Bexhill, Hastings and Rye. Over the border in Kent, it continues through New Romney and Hythe to terminate at Folkestone. The A259 is subject to a 30mph speed limit across its junction with Chalcraft Lane.
- 2.2.4 The local highway network currently suffers from peak congestion, particularly during the morning peak where outbound traffic on Chichester Road, Chalcraft Lane and North Bersted Street experiences delays where the routes come together onto the Royal Oak junction. Queuing occurs at this junction along the north-west bound approach on Chichester Road, the South-west bound approach on North Bersted Street and the north-east bound approach on Chalcraft Lane. This leads to slow-moving and standing traffic along each of these roads.
- 2.2.5 During the evening peak, inbound traffic also experiences congestion on the approach to the Royal Oak junction.



- 2.2.6 Central Avenue, located approximately 500 metres north of the site, provides a popular alternative eastbound route onto Chichester Road, by-passing the Royal Oak junction. Central Drive also provides access to local shopping facilities and employment located at its eastern end.
- 2.2.7 Adjacent to the development site, Chalcraft Lane carries peak hour traffic two-way flows of approximately 1100 vehicles per hour (vph).
- 2.2.8 The land at North Bersted forms part of the wider Bognor Site 6 proposals, which also include the development of land at Felpham an Oldlands Farm, along with the delivery of the Bognor Northern Relief Road (BNRR). The proposed development at North Bersted would provide a total of 650 new dwellings to the area.

2.3 Accessibility

- 2.3.1 The location of the site is such that it is well placed to a good mix of services and facilities within a 2 kilometre walk, with regular bus services with close proximity, and regular rail services within a short bus or cycle journey. The site is located approximately 2.5 kilometres from Bognor Regis town centre, within a reasonable travel distance of the site. The location of the site relative to local facilities is illustrated on **Plan 01** attached hereto.
- 2.3.2 Chichester Road provides a local shopping parade approximately 200 metres east of the site, which would accommodate a large proportion of retail needs. These facilities are accessed directly via Central Drive to the north of the development site, offering good footway facilities along its length.
- 2.3.3 Arun District Council's '*Settlement Sustainability Study*' produced in July 2007, provides guidance on the level of sustainability of the development site and the surrounding area. The study was produced for the Arun Local Development Framework. The guidance assesses the sustainability of the district's settlements to help inform decisions on the location of future residential and other development. Extracts from the Study are attached at **Appendix C**.
- 2.3.4 The Sustainability study considers the location of settlements relative to facilities including, Educational, Local Health Services and a range of private and commercial services. The guidance provides a breakdown of the accessibility levels of site, and an accessibility score dependant upon which distance threshold the site falls within.
- 2.3.5 The settlements are scored between 0.00–2.00+ ranging from very poor to very good accessibility. It is evident from the results of the assessment that the Bersted Settlement, of which the site lies, has a score of 1.79 and is considered to have an overall 'good accessibility' level. The accessibility of the site is considered high when compared with the four sites that were rated above Bersted, which comprises of the much larger settlements of Eastergate, Westergate, Bognor and Littlehampton respectively.
- 2.3.6 The site is also rated highly with respect to employment opportunities and public transport availability, with a 'good' rating in employment and a 'fair' rating in public transport provision.



Walking and Cycling

- 2.3.7 Walking links to the site are provided along Chalcraft Lane, with good footway provision on both sides. Chichester Road provides a parade of shops to the east approximately 200 metres from the site. These facilities are accessed via Central Drive which provides a direct route to these facilities, with good provision for pedestrians.
- 2.3.8 Currently no footway is provided along the site access road, with pedestrians sharing access with vehicular traffic.
- 2.3.9 The local parade provides a supermarket, chemist, bakers, off-license and take-away restaurants, and would cater for residents basic retail needs.
- 2.3.10 Bognor Regis town centre is located approximately 2.5km. The town centre is located within comfortable cycling distance via a choice of designated cycle routes.
- 2.3.11 The town centre provides more significant employment opportunities within Bognor, including the industrial estates and retail parks close to the A29. The town centre itself contains a high concentration of employment with a wide range of shops and offices.
- 2.3.12 The site's location to these facilities is recognised within Arun's Sustainability Study. Table 7.5 of the document highlights the accessibility of local facilities from the Bersted area. The site is classified as having the highest rating within the assessment, with 'very good accessibility' to most local facilities, including retail facilities, health facilities and schools.
- 2.3.13 Several educational facilities are located close to the site, most importantly Bognor Regis Community School, approximately 1 km southeast of the site. These facilities provide infant, junior, primary and secondary school education within a short walking distance. The location of the local schools is illustrated on **Plan 01**.

Bus Facilities

- 2.3.14 A section of Chalcraft Lane to the south forms part of a bus route, with bus stops located on its southern side approximately 150 metres south of the site. The 'Star 2' local bus service operates in one direction offering a regular circuit to Bognor Regis town centre. Further regional bus services are located along A259 Chichester Road, with further stops located close to the Royal Oak pub junction. All local services in the area are operated by Stagecoach. The routes of the local services are shown on **Plan 01**, with services summarised in **Table 2.1** below.



Service	Route	Frequency (Weekday)	
		Peak	Off-Peak
Star 2	West Meads – Bognor Community College – Bognor High Street - Aldwick	Hourly	Hourly
700	Brighton – Bognor Regis – Chichester - Portsmouth	3 per hour	2 per hour

Table 2.1 – Summary of Local Bus Services

- 2.3.15 Route Star 2 operates between West Meads to the south of the site to Aldwick, via Bognor Regis high street at an hourly frequency between 07:00 and 19:00 from Monday to Saturday.
- 2.3.16 The services commences in Bognor Regis High Street and travels north into North Bersted and follows a circular route around the residential estates, visiting the Community college before returning to the town centre. The bus service then travels south to Aldwick where it follows a further circular route, before returning to the town centre once more. The journey time from the site to Bognor Regis town centre is approximately 15 minutes.
- 2.3.17 Route 700 runs along Chichester Road approximately 1 kilometre north of the site. This is a long-distance, regional service, operating between Brighton and Portsmouth, with a 20 minute frequency in both directions during the peak periods. This service provides a direct route between the site and Bognor Regis railway station and town centre, with journey times of approximately 7 minutes.
- 2.3.18 The Bersted area is recognised as having a ‘very good’ level of accessibility within Arun’s Sustainability Study, and it is considered that residents of the site would find these facilities a desirable alternative to the use of a private car.

Rail Facilities

- 2.3.19 Bognor Regis railway station is located approximately 2.5 kilometres from the site. Direct services are provided north to London (Victoria) and east and west including Chichester, Brighton and Portsmouth.
- 2.3.20 These services operate regularly and provide access to further employment and retail services in alternative destinations.

Summary

- 2.3.21 Based on the above, it can be seen that a wide range of shopping and educational facilities are available by alternative modes to the private car. The site lies close to a main town centre which can be accessed realistically by cycle, or via regular and reliable public transport links nearby.



- 2.3.22 It is recognised by Arun District Council through local studies that the site has good accessibility to local facilities and very good links to public transport, thus reducing the reliance of the private vehicle.

2.4 Accident History

- 2.4.1 Accident statistics have been obtained from WSCC for the last 5 years to review the historical safety record of Chalcraft Lane and its junction with A259 Chichester Road.
- 2.4.2 The data requested was for Personal Injury Accidents (PIAs) occurring along Chalcraft Lane between B2166 to the south to the Royal Oak junction. A total of 27 PIAs occurred along this 1.7 kilometre stretch during this period, the majority of which located at the Royal Oak Junction. The data is contained with **Appendix D**.
- 2.4.3 No PIAs occurred at the existing site access with Chalcraft Lane during the last five years of the operation of the site. It is considered that the existing site access operated well with good visibility for an egressing vehicle in both directions. The proposed development would offer improvements to the existing access, in order to develop visibility further, whilst facilitating pedestrian activity to/from the site. The proposed development is anticipated to reduce traffic considerably over a typical weekday and even more so during the weekend period, as detailed in Section 3 of this report. It is therefore considered that the proposed development would have no discernable impact on the access arrangement with Chalcraft Lane, improving an already unflawed access arrangement.
- 2.4.4 A total of 10 accidents have occurred at the Royal Oak junction to the north during the last 5 year period comprising of 9 slight accidents and 1 serious accident, at a ratio of 2 accidents per year.
- 2.4.5 Based on national statistics, the assessment of accident rates for a 4 arm mini-roundabout junction, the average PIAs for a junction is 1.35 accidents per annum. The Royal Oak junction is anticipated to generate a slightly higher than average accident rate due to its unique format, including two mini-roundabouts within the 4-arm junction.
- 2.4.6 It is considered that based on the traffic generating characteristics of the proposed development, the proposed 70 dwelling development would have no significant impact on the capacity of Chalcraft Lane or the junction following its execution and would therefore have no discernable impact on the accident rate of the local area.
- 2.4.7 The accident problems at the junction are anticipated to be reduced following the implementation of a signalised arrangement at the junction as part of the nearby Site 6 development. The proposals would provide considerable passage relief to the junction and extensively improve the junction's safety and capacity for all road users.



3 PROPOSED DEVELOPMENT

3.1 Development Context

3.1.1 This section outlines the development proposals and describes the changes in trips expected as consequence of the proposals.

3.1.2 The development site encompasses some 2.5 hectares and the proposed development is for up to 70 residential units. The application is made in outline but the indicative layout suggests that the mix would comprise a mix of 2 and 3 bedroom dwellings, with approximately 40% of the total dwellings allocated as affordable.

3.2 Parking Provisions

3.2.1 It is proposed there be a mixture of parking courts and driveways to cater for the developments parking needs. Car parking would be accessed via secondary roads adjoining the main service road travelling through the centre of the site. A total of 85 car parking spaces are proposed at a ratio of 1.2 spaces per dwelling.

3.2.2 ADC's parking standards are set out within the 'Parking Standards' Supplementary Planning Guidance (SPG) adopted in October 2000. The standards state that the following are maximum parking standards for residential land uses:

- | | | |
|------|---|--------------------------|
| (i) | 1/2/3 bed dwellings (less than 15 dwellings): | 2 spaces per dwelling; |
| (ii) | 1/2/3 bed dwellings (more than 15 dwellings): | 2.2 spaces per dwelling; |

3.2.3 The guidance states that a maximum of 1 space per dwelling should be provided for residents, plus 1.2 spaces per dwelling for visitors and service vehicles 'where possible' should be provided. Based on the ADC standards and the mix of units proposed the maximum parking provision for a proposed development of up to 70 dwellings would be 154 spaces.

3.2.4 Given the accessibility credentials of the site, it is considered that ADC's maximum standard is excessive and would most likely encourage households to own a second car and increase the likelihood of residents using for car for non-essential journeys.

3.2.5 It is considered therefore that a reduction in parking provision should be applied for this development. Given the site's location, close to bus services and local facilities, it is recognised within Arun District Council's Sustainability guidance as having a 'good' level of accessibility, and is rated in the top four relative to accessibility. It is considered that the site is justified a significant reduction from the maximum parking standards.

3.2.6 The proposed parking provision of 85 residential spaces, equates to 1.2 spaces per dwelling, equivalent to 55% of the maximum standards. Given the accessibility credentials of the site, this reduction is therefore considered to be appropriate and it is considered that this provision would reduce the likelihood of households owning two cars and hence reduce the use of the private car for non-essential journeys.



- 3.2.7 The proposed level of parking reflects the current car ownership of the local area, based on National Statistics. Census 2001 data has been interrogated to determine car ownership for the Bersted Ward, within which the site lies.
- 3.2.8 The Census output is attached hereto at **Appendix E** and states that current car ownership in Bersted is 1.169 cars per dwelling. On this basis it is considered that the proposed level of parking is suitable to meet demand.
- 3.2.9 It is proposed that cycle parking be provided in accordance with WSCC's parking guidance, which states that for dwellings of 2 beds or more, 2 cycle spaces per dwelling plus 1 space per 8 dwellings for visitors should be provided.
- 3.2.10 The proposed development would therefore provide a total of 149 cycle spaces within the site. These spaces would be provided with a mixture of garage spaces and secure cycle storage, with spaces allocated per dwelling.

3.3 Vehicular Access

- 3.3.1 It is proposed to retain the existing priority junction access served by Chalcraft Lane, albeit in a slightly relocated position. The proposals are shown on Drawing **2009/1046/002** attached hereto.
- 3.3.2 These modifications to the access enable provision of footways on either side leading into the site, whilst providing visibility splays in accordance with Manual for Streets (MfS) guidance. Visibility has been provided based on the Design Speed of vehicles travelling along Chalcraft Lane, which is subject to a 30mph speed limit along its length.
- 3.3.3 In order to assess the level of visibility which is appropriate and safe given the size of development and conditions on the local highway network, RGP have commissioned a speed survey of vehicles travelling along Chalcraft Lane, adjacent to the existing point of access. The survey was undertaken between 20th and 28th May 2009 which coincided partly with the school half term period, although this anticipated to have any effect on vehicle speeds.
- 3.3.4 The results of the survey are attached hereto at **Appendix F**, and can be summarised as follows:
- Southbound vehicles – 85th percentile speed (dry) = 33.6mph (54.07kph);
- Northbound vehicles – 85th percentile speed (dry) = 31.5mph (50.69kph).
- 3.3.5 Based on TA 22/81 'Vehicle Speed Measurement on All Purpose Roads' Section 3.4, the Design Speed for Chalcraft Lane can be determined by making the 4 kph (2.5 mph) adjustment for wet weather speeds. It is considered appropriate in this instance to make the adjustment for wet weather speeds since during the week of the survey the weather was primarily warm and dry. On this basis the Design Speed is determined as follows:

Southbound Design speed (wet weather 85th %ile) = 31.1mph (50.07 kph);



Northbound Design speed (wet weather 85th %ile) = 29.0mph (46.69kph).

- 3.3.6 Due to the status of Chalcraft Lane and based on previous communications with WSCC, it is considered most appropriate to relate the design speed to the guidance given within Manual for Streets (MfS), which is up-to-date design guidance within the transport planning industry.
- 3.3.7 At table 7.1 of MfS, the correlation between y-distance and Design Speed is summarised. **Chart 01** attached hereto indicates the complete correlation. Based on the design speeds identified from the survey, expressed above, the appropriate y-distances are as follows:
- Y-distance = 45 metres to the right (to the south);
- Y-distance = 41 metres to the left (to the north).
- 3.3.8 As identified on drawing number **2009/1046/002**, the achievable visibility splays accord with design guidance provided in MfS. It is considered therefore that the proposed access is suitable and the development would not impact on the condition of highway safety.
- 3.3.9 The proposed access road would be upgraded to provide a formal bell-mouthed access road, 5.5 metres in wide with 2.0 metre footways on either side. The bell-mouth would comprise 6 metre radius kerbs on both sides.
- 3.3.10 As illustrated on Drawing **2009/1046/002**, a narrowing would occur 35 metres into the access road due to land constraints, maintaining a 4.8 metre access road and 1.8 metre footways. This localised narrowing would not affect the operation or capacity of the access road.

3.4 Highway Improvements

- 3.4.1 The proposed development includes the provision and upgrade of a number pedestrian facilities in the local area, in order to maximum permeability to the local shops, schools and buses. This proposed highway improves are illustrated on drawing **2009/1046/001** attached hereto, and are summarised as follows:
- (i) Footways would be provided on either side of the proposed access road, providing a safe passage for residents entering/egressing from the site. Tactile paving would also be provided across the site access;
 - (ii) A further pedestrian route would be provided from the proposed open space area that would replace No.78 Chalcraft Lane. The proposals would allow residents to have a pedestrian right of way over the existing vehicle access route;
 - (iii) A crossing point would be provided across Chalcraft Lane within the site's pedestrian desire line to the local shops, providing a safe refuge for pedestrians across the busy road. The crossing would also provide a link to the Bognor Regis Community College, and would serve as a popular route for pupils;
 - (iv) The existing crossing point to the south of the site would be upgraded with tactile paving to improve links to the local bus stops;



- (v) Further crossing points would be provided along Central Avenue, crossing Greencourt Drive and Chichester Road, to provide a complete pedestrian route to the local shops.

3.4.2 The proposed access arrangement and pedestrian improvements have been reviewed within a Stage 1 Road Safety Audit.

3.5 Stage I Road Safety Audit and Designer's Response

3.5.1 In line with WSCC policy, for all developments over 10 dwellings, an independent Stage I Road Safety Audit was commissioned on the access arrangement and proposed pedestrian improvements. The Audit was undertaken by The Safety Forum (TSF) and the report is enclosed herewith at **Appendix F**, and was based on a design contained within drawing numbers **2009/1046/001**, revision A and **2009/046/002**, revision A.

3.5.2 This sections sets out our RGP's Designer's Response to the audit report, by consideration of each of the points raised, as follows:

- (i) **Item 3.1** Drawing **2009/1046/003** attached hereto illustrates a large car turning out of each of the nearby driveways to adjacent dwellings. A large car is considered the maximum that would be required to enter these properties;
- (ii) **Item 3.2** Drawing **2009/1046/003** also illustrates the swept path of a refuse vehicle turning into the site whilst car waits to turn left out. It is considered that a refuse vehicle is the largest vehicle that is likely to visit a residential development of this size. A refuse vehicle would visit the site on a weekly basis, generally in the early hours of the morning and therefore a likelihood of this vehicle meeting a car at the access is unlikely. The good level of visibility provided at the proposed junction would allow a vehicle egressing from the site to leave safely whilst observing an approaching refuse vehicle.

A further swept path on drawing **2009/1046/003** illustrate that two vehicles can pass along the access road safely at all locations, including simultaneously at the bell-mouth.

3.5.3 The comments of the Stage 1 Road Safety Audit have therefore been addressed within drawing **2009/1046/003**, with no amendments required to the audited drawings.

3.6 Trip Generation

3.6.1 An investigation was conducted into the level of vehicle trips that would be attracted to the existing and proposed development site. A standard trip assignment and distribution exercise was then undertaken.



Existing Traffic Generation

- 3.6.2 Vehicle trip attractions for the existing site use have been derived by interrogation of the TRICS database. The TRICS database is the industry standard tool for calculating trip rates for a variety of land uses and contains several hundred traffic surveys of varying land use, size, accessibility and location.
- 3.6.3 The existing site is a lawful and permitted A1 retail land use, and as such is permitted to occupy a range of A1 retail uses. The site is currently occupied by a garden centre, nursery and aquatics centre. The existing site plan attached hereto at **Appendix A** defines the areas of the existing building floor spaces, display areas and graveled areas. A large majority of the gravelled areas are also used as retail sales areas through out the site as part of the lawful land use, although the areas are not defined in detail on this plan.
- 3.6.4 The certificate of lawful use or development is attached hereto at **Appendix I** and provides a detailed breakdown of the areas of each of the uses. The existing garden centre comprises a Retail Floor Area (RFA) of approximately 4515m², with the aquatics centre covering 619m² RFA. Therefore a total RFA can be assumed as 5134m².
- 3.6.5 The existing nursery to the rear of the site would also generate a small amount of traffic associated with its use, although it is assumed that the majority of its produce would be supplied to the garden centre for resale. The extent of nursery use is also highlighted within the certificate of lawful use, however it is evident that half of the nursery site is unused 'brown' land and overgrown with dense vegetation. It is therefore assumed that half of the allocated nursery land is operational, or a floor area of 6500m². For a robust assessment of the small amount of traffic generation, the existing small amount of traffic that the nursery would generate has been discounted.
- 3.6.6 The site also incorporates an existing dwelling on site, which would be demolished as part of the proposals to provide open space. This has been incorporated into the existing traffic generation of the site, using the predicted trip rates for residential agreed by WSCC.
- 3.6.7 The TRICS database has been interrogated for Garden Centre site in suburban, out of town locations throughout the UK. Although the existing site is not a mainstream retail outlet, it is considered that its lawful planning use provides the opportunity for the site to operate as a full garden centre use, and therefore the TRICS sites provided in this regard would be considered appropriate. Full TRICS data is contained within **Appendix J**. The derived trip rates and likely associated vehicle movements for the existing site are summarised in **Table 3.1** below.



Existing Garden and Aquatics Centre (5134m ²)			Trip Rates (Vehicle Movements/100 m ²)			
	ARRIVALS		DEPARTURES		TOTAL	
	<i>Trip Rate</i>	<i>Traffic</i>	<i>Trip Rate</i>	<i>Traffic</i>	<i>Trip Rate</i>	<i>Traffic</i>
AM Peak Hour (08:00-09:00)	0.371	19	0.057	3	0.428	22
PM Peak Hour (17:00-18:00)	0.114	6	0.286	15	0.400	21
Daily Traffic	7.885	405	7.915	406	15.800	811
Existing 1 Dwelling			Trip Rates (Vehicle Movements/Dwelling)			
AM Peak Hour (08:00-09:00)	0	0	1	1	1	1
PM Peak Hour (17:00-18:00)	1	1	0	0	1	1
Daily Traffic	3	3	3	3	6	6
TOTAL TRAFFIC						
AM Peak Hour (08:00-09:00)	-	19	-	4	-	23
PM Peak Hour (17:00-18:00)	-	7	-	15	-	22
Daily Traffic	-	408	-	409	-	817

Table 3.1 Summary of Existing Site Vehicle Movements

- 3.6.8 As summarised in **Table 3.1**, the existing sites lawful land has the potential to generate a total of 817 movements throughout a typical weekday, based on trip rates of a similar sized suburban garden centre site. The majority of traffic associated with the site is linked to the garden centre use; however a small amount of traffic is afforded to the existing dwelling, which is access via a shared access with No.76 Chalcraft Lane. Some traffic would also be generated by the nursery, which has not been included for robustness.
- 3.6.9 The daily traffic associated with the garden centre is generally spread with a small proportion generated during the peak hours. In the morning peak hour (08:00-09:00) a total of 23 movements occur at the site, with a total of 22 movements occurring in the evening peak hour (17:00-18:00). **Figures 01** and **02** illustrate the existing traffic flows for the site.
- 3.6.10 The existing garden centre would generate the majority of its traffic during the weekend period, when most customers would visit. By nature of the use of the site, visitors generally drive to a garden centre as they would be purchasing heavy goods such as compost, aggregates, garden furniture. The traffic impact of the existing site is therefore likely to be much higher during the weekend period.



Proposed Development Traffic Generation

- 3.6.11 An investigation was conducted into the level of vehicle trips that would be attracted to the proposed development site. A standard trip assignment and distribution exercise was then undertaken.
- 3.6.12 Vehicle trip attractions for the proposed development have also been derived from interrogation of the TRICS database. The Mixed Residential category was interrogated, taking into account size, locational aspects and public transport level. Full TRICS data is available at **Appendix I**. The derived trip rates are summarised in **Table 3.2**.

Trip Rates (Vehicle Movements/dwelling)			
	IN	OUT	TOTAL
08:00 – 09:00	0.277	0.408	0.685
17:00 – 18:00	0.408	0.214	0.622
Daily	2.830	2.897	5.727

Table 3.2– Summary of Proposed Development Trip Rates

- 3.6.13 For assessment purposes therefore the likely associated traffic movements for up to 70 dwellings in this location are summarised in **Table 3.3**.

Vehicle Movements (70 Dwellings)			
	IN	OUT	TOTAL
08:00 – 09:00	20	29	49
17:00 – 18:00	29	15	44
Daily	198	203	401

Table 3.3 – Summary of Development Related Vehicle Movements

- 3.6.14 The derived two-way daily trip rate for a housing site of the type proposed equates to 5.727 daily trips per dwelling. Based on a residential development of up to 70 dwellings, this equates to some 401 daily vehicle movements and 49/44 vehicle movements in each peak hour.



3.7 Comparison of Traffic Generation with Previous Use of the Site

3.7.1 From consideration of the data presented within Table 3.3, 3.4 and 3.5 it is possible to determine the effect of the proposed development compared with the previous use of the site, and hence its comparative impact on the operation of the local highway network, based on the scenarios identified above.

3.7.2 The comparison of the proposals is summarised in **Table 3.4** below:

	Morning Peak	Evening Peak	Daily Traffic
Existing Site	23	22	817
Proposed 70 Dwellings	49	44	401
Net Traffic Impact	+26	+22	-410

Table 3.4 – Net Traffic Generation

3.7.3 The proposed development of up to residential dwellings is forecast to generate 401 daily trips while the existing land use generates 817 trips per day. The proposed development would therefore generate a reduction in traffic of 410 movements over a typical weekday.

3.7.4 The proposals would generate a slight increase in traffic during the peak periods of 26 and 22 vehicle movements in the morning and evening peak hours respectively.

3.7.5 In terms of impact on Chalcraft Lane, the recorded traffic flows along Chalcraft Lane indicates a two way flow of 1060 vehicles during the morning peak hour and 1209 during the evening peak hour. **Table 3.5** compares the peak hour link impact of the previous garden centre use, against a 70 dwelling development.

	Morning Peak	Evening Peak
Existing	23	22
Proposed	49	44
Existing two-way Flows on Chalcraft Lane	1060	1209
Impact (%)	2.4%	1.8%

Table 3.5 – Net Traffic Impact on Chalcraft Lane

3.7.6 Based on normal Highway Authority practice, any impact of less than 5% is not considered significant and does not generally warrant detailed investigation.



- 3.7.7 This impact on the network would be further reduced following the completion of the Site 6 proposals, which, based on the Site 6 Transport Assessment, are likely to generate approximately 259 additional two-way movements in the morning peak hour and 331 additional two-way vehicle movements in the evening peak period along Chalcraft Lane. The proposals would therefore have an impact following completion of Site 6 of under 2% in each of the peak periods.
- 3.7.8 Furthermore, the development provides opportunity to enhance local accessibility and travel choice through improvements to the local pedestrian links and crossings, thus supporting sustainable development principles.
- 3.7.9 Based on the proposed changes in travel, a proposed development of up to 70 dwellings would have a negligible impact on the highway network as a whole, without any detriment to highway safety. It is therefore considered that no assessment of impact on the local highway network is necessary; however in the interests of a comprehensive Transport Planning Statement, the operation of the junction post development has been reviewed.
- 3.7.10 A proposed residential use is likely to generate only a small amount of traffic during the weekend periods, compared with a garden centre use currently implemented. It is therefore considered that the proposals would have an even greater reduction in traffic impact during the weekend periods.

3.8 Vehicle Trip Distribution and Assignment

- 3.8.1 Vehicle trips have been distributed to and from the development site by assessing the existing proportions of travel direction from the existing flows along Chalcraft Lane. The existing flows indicate that the majority of traffic travels towards the A259 in the morning and towards the south in the evening, with an approximate 57% northeast and 43% southwest split in the morning peak hour and 45% northeast and 55% southwest split to/from Chalcraft Lane in the evening peak hour.
- 3.8.2 It was observed from the ATC results that a proportion of northbound traffic passing the Garden Centre does not visit the Royal Oak junction to the north and vice-versa for southbound traffic. It is determined that approximately 20% of traffic passing the site uses Central Drive to the north as a cut-through, rather than use the busy A259 junction. It is therefore considered that this through-route would be used by users of the existing and proposed sites. Therefore 20% of traffic departing from the site north would turn right into Central Avenue, with 80% travelling to the Royal Oak junction.
- 3.8.3 **Figures 01 and 02** attached hereto illustrate the assumed traffic distribution for the existing and proposed site uses, based on interpolation of the recorded directional traffic data.
- 3.8.4 The existing turning proportions for the Royal Oak junction have been determined within the Site 6 Transport Assessment, based on recorded traffic flows on all arms. Details of the recorded traffic flows for the junction are detailed later in this report.



4 DEVELOPMENT TRAFFIC IMPACT

4.1 Background

- 4.1.1 This section illustrates and addresses the transport impact of the proposals on the local highway network.
- 4.1.2 As part of the Site 6 development proposals, detailed assessment of the Royal Oak junction was undertaken through comprehensive traffic modelling, to derive the future design year flows for the road network in Bognor, allowing for the full Site 6 development, completion of the Bognor North Relief Road (BNRR) and other network changes.
- 4.1.3 It is widely recognised that the double mini-roundabout junction presently experiences congestion during the morning and evening peak periods. This results in slow moving queues of traffic on all approaches to the roundabout during these times, primarily during the morning peak hour.
- 4.1.4 This is reflected with the Transport Assessment for Site 6, which recognises that junction improvements in the form of a signalised junction would be necessary to relieve the existing congestion at the junction and more importantly minimise the impact of the proposed 650 dwelling Site 6 development even with the implementation of the BNRR. Extracts from the TA are attached hereto at **Appendix J**, which detail the results of the signalisation of the junction relating to capacity and queuing, and provides a proposed layout for the re-design of the junction to signals.
- 4.1.5 This section therefore reviews the impact on the highway network locally, and reviews the predicted impact that the proposals would have on the proposed signalised junction, which would be completed prior to the opening of the development.
- 4.1.6 The proposed development of up to 70 dwellings is predicted to generate a net reduction in daily traffic, based on TRICS, with a total increase of 22 and 26 movements at the junction in the AM and PM peak hours respectively, and would therefore generate a minimal impact on the local highway network.

4.2 Assessment of Growth on Local Highway Network

- 4.2.1 Under the development proposals the estimated year of opening for the development would be up to 2011. It is considered that this offers a realistic forecast of the base traffic generation for a potential development of this nature.
- 4.2.2 Growth rates have been determined for the local network based on TEMPRO and NRTF (National Road Traffic Forecast) data, to determine a 2011 two-way flow along Chalcraft Lane. The TEMPRO/NRTF outputs and growth calculations for the development are attached hereto at **Appendix K**.
- 4.2.3 The result of the growth assessment indicated that growth rates for the Bognor Regis area are slightly higher than the Great Britain average, with growth rates of 1.063 applied for the AM and PM peak periods respectively between 2009 and 2011.



4.2.4 **Figures 01 and 02** illustrate the traffic flows for the anticipated year of opening (2011) assuming no development, for the AM and PM peak hours respectively, assuming a medium level of growth. The anticipated growth between 2009-2011 is predicted to generate 2 additional arrivals and departures at the site.

4.2.5 The traffic flow diagrams include the additional traffic anticipate from the Site 6 development on the Royal Oak junction, based on junction flows taken from the Site 6 Transport Assessment. As copy of the flow diagrams for Site 6 are attached hereto at **Appendix J**.

4.3 Network Capacity Analysis

Site Access/Chalcraft Lane Junction

4.3.1 Analysis using PICADY modeling software has been undertaken in order to assess the impact of the proposed development on the operation of the junction. The model has been constructed to assess the proposed traffic generation of the site.

4.3.2 The anticipated traffic flows for the proposed have been factored to account for growth, and applied to the existing highway network. The proposed 2011 'with development' traffic flows for the site are shown on **Figures 01 and 02** for the AM and PM peak hours respectively.

4.3.3 **Table 4.1** summarises the results at the junction expressed in terms of Ratio of Flow to Capacity (RFC) and maximum mean queue lengths in pcu's (passenger car units). The full analysis output data is provided in **Appendix L**.

Approach	AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q
Site Access (Left & Right)	0.117	0	0.068	0
Chalcraft Lane (Ahead & Right)	0.320	0	0.074	0

Table 4.1 – Site Access/Chalcraft Lane PICADY Summary (2011 Development)

4.3.4 As demonstrated by the results on the above table, the amount of traffic likely to be generated by the proposals would not have any adverse effects on the junction operation.

Royal Oak junction

4.3.5 The proposed signal controlled junction improvements have been tested within the Site 6 TA for the 2011 'with full development' flows. The junction modelling was undertaken with consideration of completion of the development and the BNRR. The proposed signalised arrangement would relocate the eastbound Chichester Road left turn, which currently runs along the north-west side of the Royal Oak Pub, and designate the existing lane for use of buses and cycles only.



- 4.3.6 A full copy of the proposed signalised layout and the full LINSIG outputs from the Site 6 TA are also contained within **Appendix J**. The results of the Site 6 analysis is summarised in **Table 4.2** below.

Approach	2011 AM Peak		2011 PM Peak	
	% Sat	Max Q	% Sat	Max Q
A259 Chichester Road (West)	80%	13	97%	13
North Bersted Street	97%	15	93%	13
Chichester Road (East)	97%	22	93%	17
Chalcraft Lane	96%	21	94%	13

Table 4.2 – Proposed Signalised Royal Oak Junction – 2011 Capacity Analysis (Site 6 Assessment)

- 4.3.7 The capacity assessment indicates that all approaches of the proposed signal controlled junction would operate within capacity during the 2011 morning and evening peak hour following completion of Site 6 and the BNRR.
- 4.3.8 A further assessment has been undertaken to predict the potential impact that a development of up to 70 dwellings would have on the Royal Oak junction. **Figures 03** and **04** illustrate the ‘with development’ flows for the Royal Oak junction.
- 4.3.9 A further LINSIG has been produced with consideration of the parameters used within the completed Site 6 models, to determine the capacity of the junction with the development flows. A full copy of the LINSIG assessment is attached hereto at **Appendix M**, with the results summarised in **Table 4.3** below.

Approach	2011 AM Peak ‘With Development’		2011 PM Peak ‘With Development’	
	% Sat	Max Q	% Sat	Max Q
A259 Chichester Road (West)	80%	13	97%	13
North Bersted Street	97%	15	94%	14
Chichester Road (East)	97%	22	97%	20
Chalcraft Lane	97%	22	94%	13

Table 4.3 – Proposed Signalised Royal Oak junction – 2011 ‘with development’ capacity



- 4.3.10 The results indicate that no significant increase in capacity would occur at the junction, within the peak hours following implementation of the development scheme.
- 4.3.11 The results show that all arms would remain within capacity, and would not exceed the 97% Saturation that would occur without the development proposals being incorporated.
- 4.3.12 In the morning peak period, a 1% increase in saturation would occur on the Chalcraft Lane arm of the development, with 1 additional vehicle queuing anticipated as a maximum, which is not considered significant.
- 4.3.13 During the evening peak period, an increase of 1 vehicle is predicted on the North Bersted Street arm, with a 1% increase in saturation. A slight increase is also anticipated on the westbound approach to the junction, with a maximum of 3 additional vehicles queuing and a maximum of 4% increase on saturation maintaining 97% saturation on that arm.
- 4.3.14 Based on the Site 6 results, the proposed signalisation of the junction and the completion of the Bognor North Relief Road would significantly improve the capacity of the Royal Oak pub junction. The impact of the proposed development on the signalised junction would not be significant, with all arms of the junction operating within capacity following implementation of the proposals.

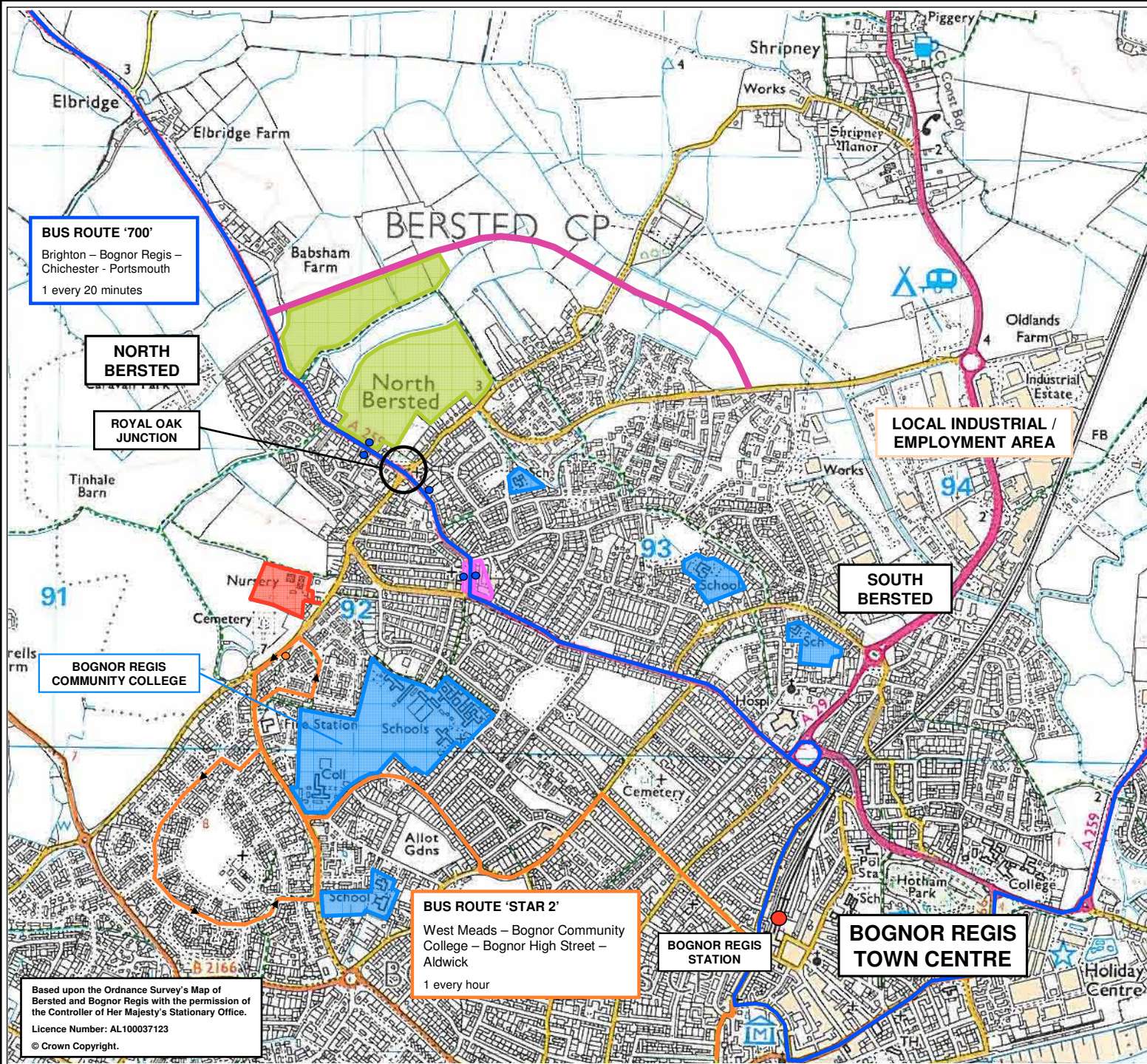


5 SUMMARY AND CONCLUSIONS

- 5.1.1 This Transport Planning Statement has been prepared to review all highways and transportation matters with respect to the proposed re-development of land associated with Chalcroft nursery and garden centre. The site is located south of the A259, along Chalcraft Lane in North Bersted.
- 5.1.2 This report provides background to the re-development of the site to provide up to 70 residential dwellings, with associated vehicle and bicycle parking on site. The TPS has been written in accordance with local and national development control policies, and follows pre-planning discussions with West Sussex County Council from both current and passed proposals. The principal conclusions of this report are as follows:
- (i) The site is located within a predominantly residential area. The site is close to many day-to-day facilities located within a short walk including shops and services, particularly within Bognor Regis town centre. The site is located within a short distance of various bus facilities, providing a short journey to the town centre and linking with the local train stations. The local public transport facilities available along with the convenient pedestrian links provide a realistic alternative for commuting journeys to the site;
 - (ii) The proposals would represent a significant reduction in traffic during a typical daytime period when compared against the site's lawful use. The proposals would generate a slight increase in traffic in the peak periods due to the shift in travel patterns when compared to the existing uses, which would not have an adverse effect on the local highway network, following completion of a full capacity assessment;
 - (iii) The traffic impact of the development proposals would be negligible on the condition of capacity and safety on the local highway network in its present condition. The size of the proposed development is such that it can be accommodated by the existing highway network without any discernable impact on the nearby local junctions, and is not reliant upon local highway improvements to be accommodated on the network. The proposed Site 6 development, which includes the implementation of local highway schemes in particular the Bognor North Relief Road, would further provide relief to the local traffic routes and further reduce the already minimal impact of the proposed development.
 - (iv) The proposed parking provision generally accords with local policy and reflects the accessibility credentials of the site. The proposals would not increase on street parking demand and is not at a level which would result in reliance upon the private car from prospective residents;
 - (v) The access arrangements accord with general design guidance and have been modified to reflect the comments of an independent Road Safety Audit. The proposals also provide pedestrian improvements to the local area to link the site with the local facilities and further encourage travel by non-car modes.



PLANS



Transport Planners and Civil Engineers
Primrose Place
Portsmouth Road
Godalming
Surrey GU7 2JN

Orchard Enterprises (Southern) Limited

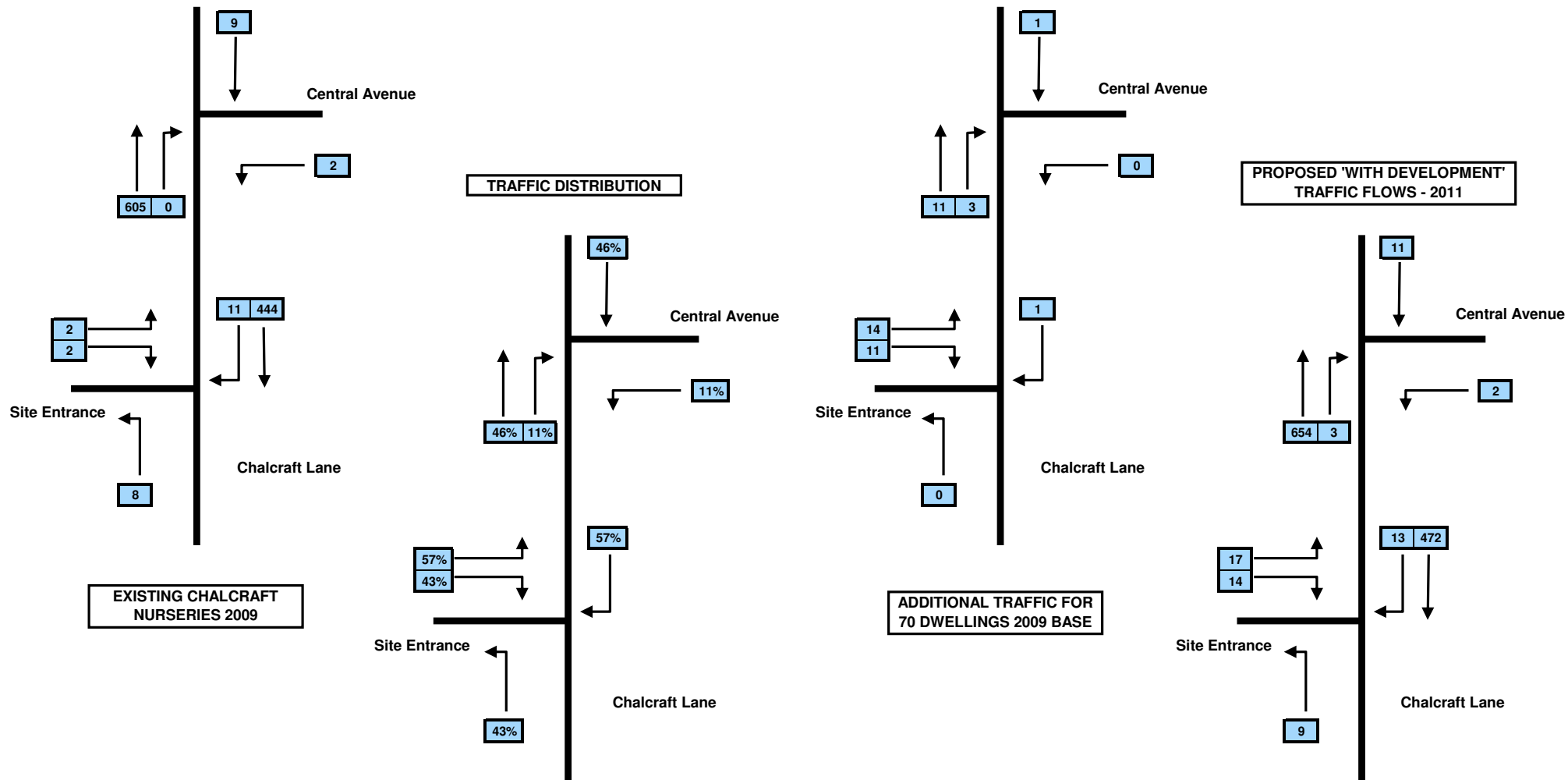
Chalcroft Nurseries, Chalcroft Lane,
North Bersted, Bognor Regis

Site Location & Accessibility Plan

Plan No:	Plan 01	Job No:	09/1046	Date:	May 2009	Scale:	1:12500
Drawn By:	SAJ	Checked By:	KFM	Approved By:	CMB	Rev:	-



FIGURES



LEGEND

Total Traffic Flows

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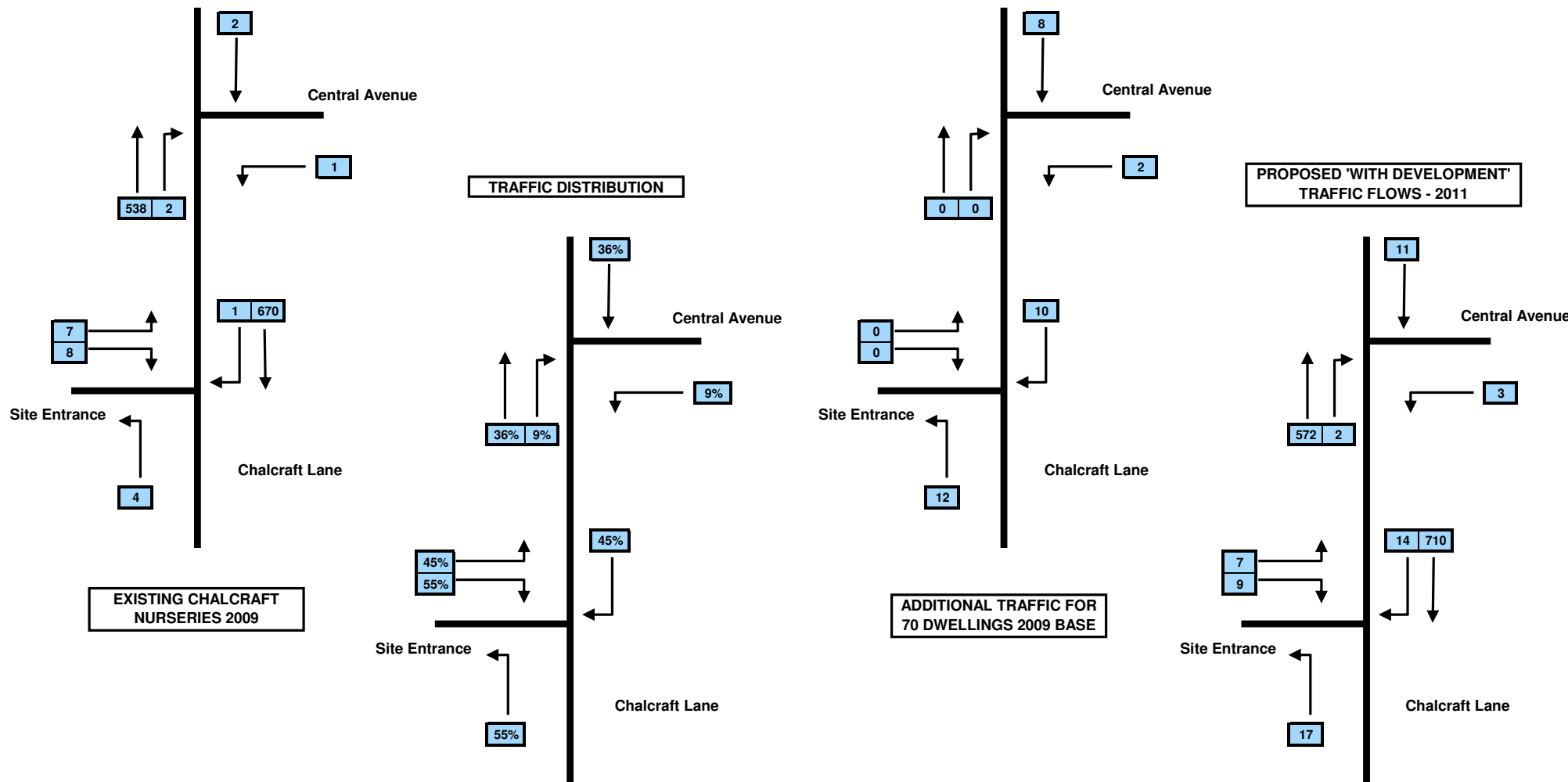


PROJECT: Chalcraft Nurseries, Chalcraft Lane, Bersted

JOB NO: 09/1046

FIGURE NO: Figure 01

TITLE: Site Access Vehicle Flows - AM Peak Hour



LEGEND

Total Traffic Flows

#

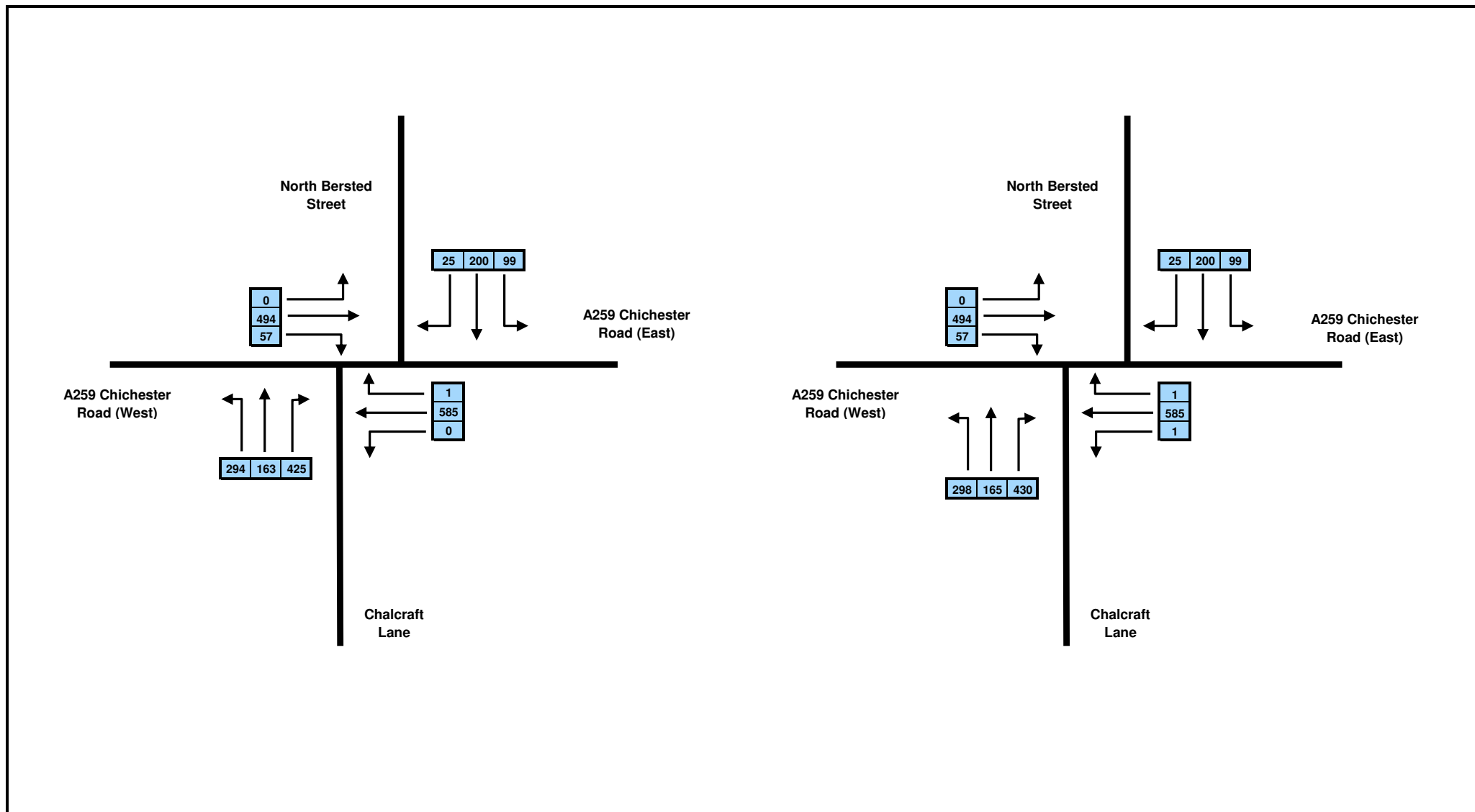


PROJECT: Chalcraft Nurseries, Chalcraft Lane, Bersted

JOB NO: 09/1046

FIGURE NO: Figure 02

TITLE: Site Access Vehicle Flows - PM Peak Hour



LEGEND

Total Traffic Flows



Existing traffic flows based on LINSIG Assessment flows from Site 6 Transport Assessment - Param 2011 with Full Dev AM

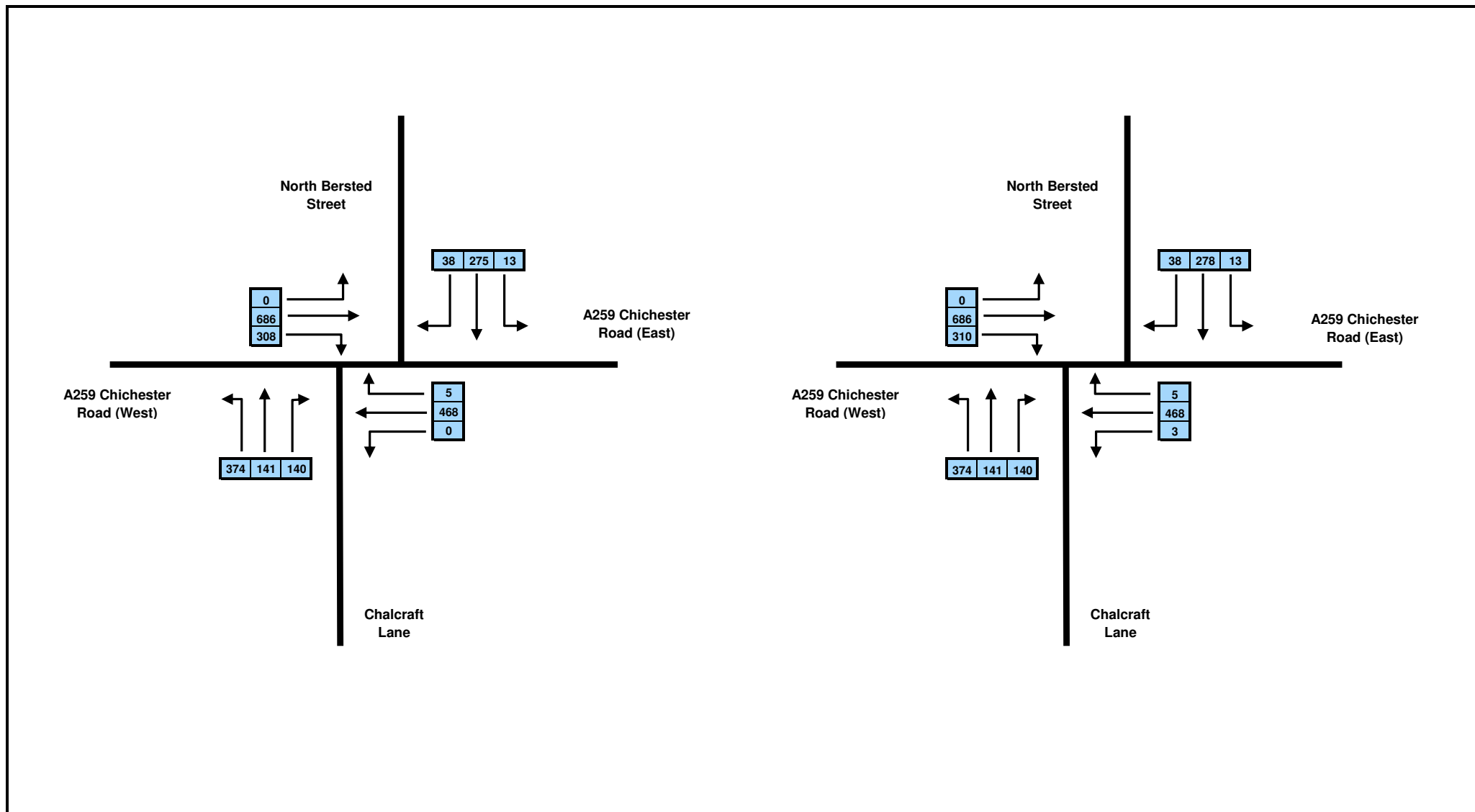


PROJECT: Chalcraft Nuseries, Chalcraft Lane, Bersted

JOB NO: 09/1046

FIGURE NO: Figure 03

TITLE: Royal Oak Junction Vehicle Flows - AM Peak Hour



LEGEND

Total Traffic Flows

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Existing traffic flows based on LINSIG Assessment flows from Site 6 Transport Assessment - Param 2011 with Full Dev PM



PROJECT: Chalcraft Nuseries, Chalcraft Lane, Bersted

JOB NO: 09/1046

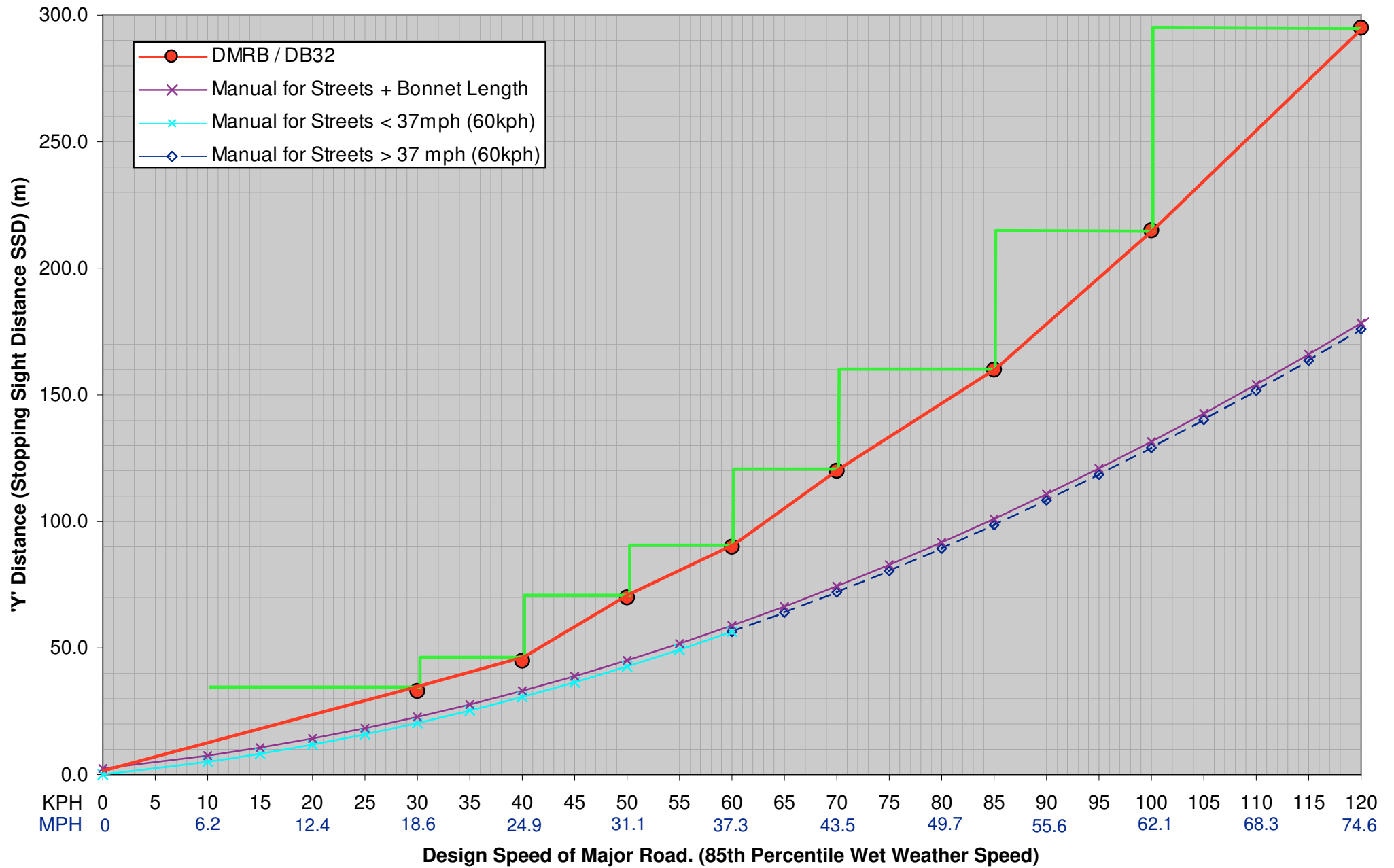
FIGURE NO: Figure 04

TITLE: Royal Oak Junction Vehicle Flows - PM Peak Hour



CHARTS

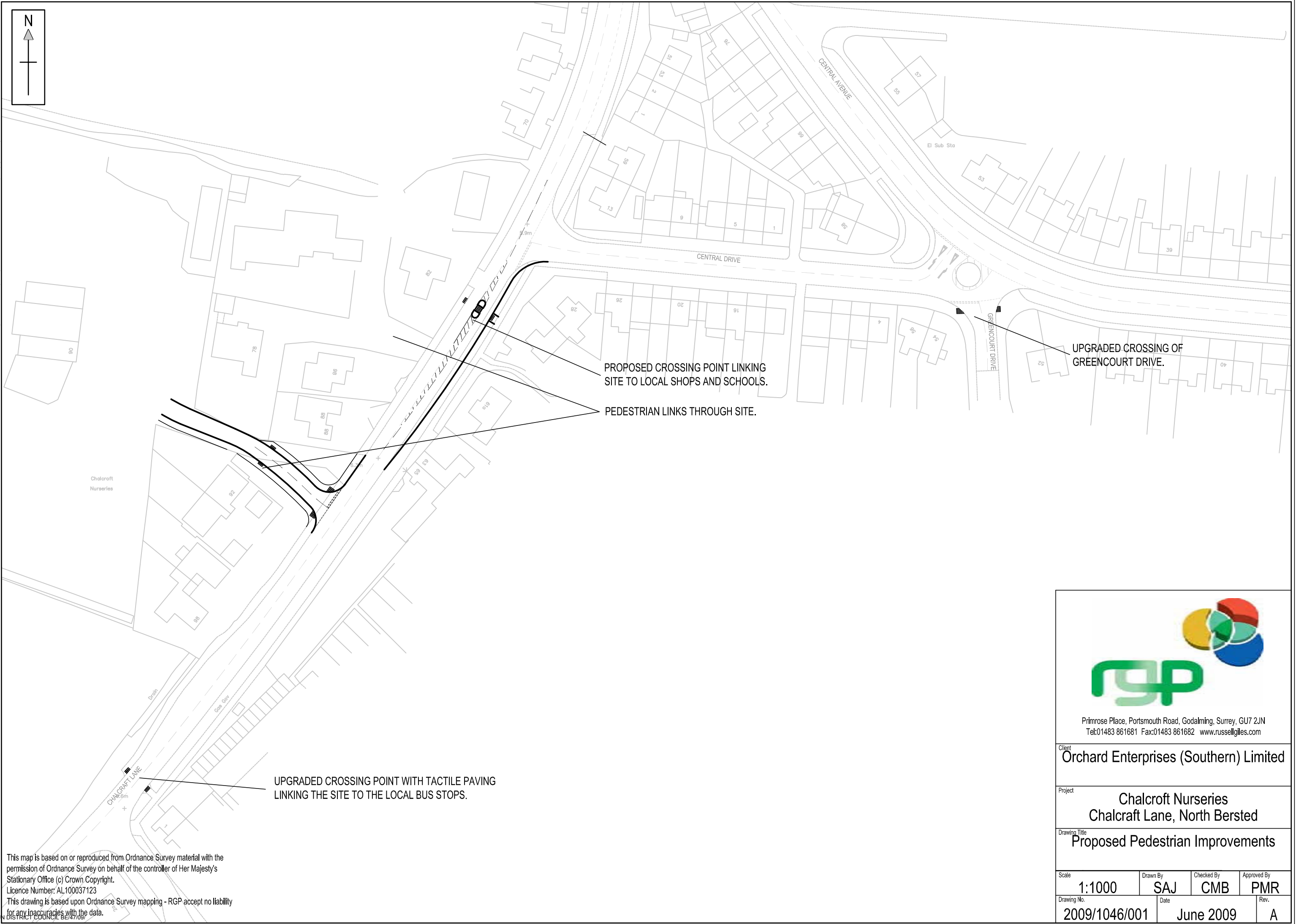
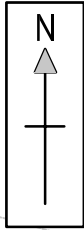
Chart 01 - Design Speed against visibility along Major Road for new priority junctions.





DRAWINGS

PROJECTS\2009 PROJECTS\1046 CHALCRAFT NURSERIES, CHALCRAFT LANE, BERSTED\DRAWINGS - CURRENT\2009-1046-001 REV A.DWG (LAYOUT1) (Jun 05, 2009 - 11:47am) (sjones)



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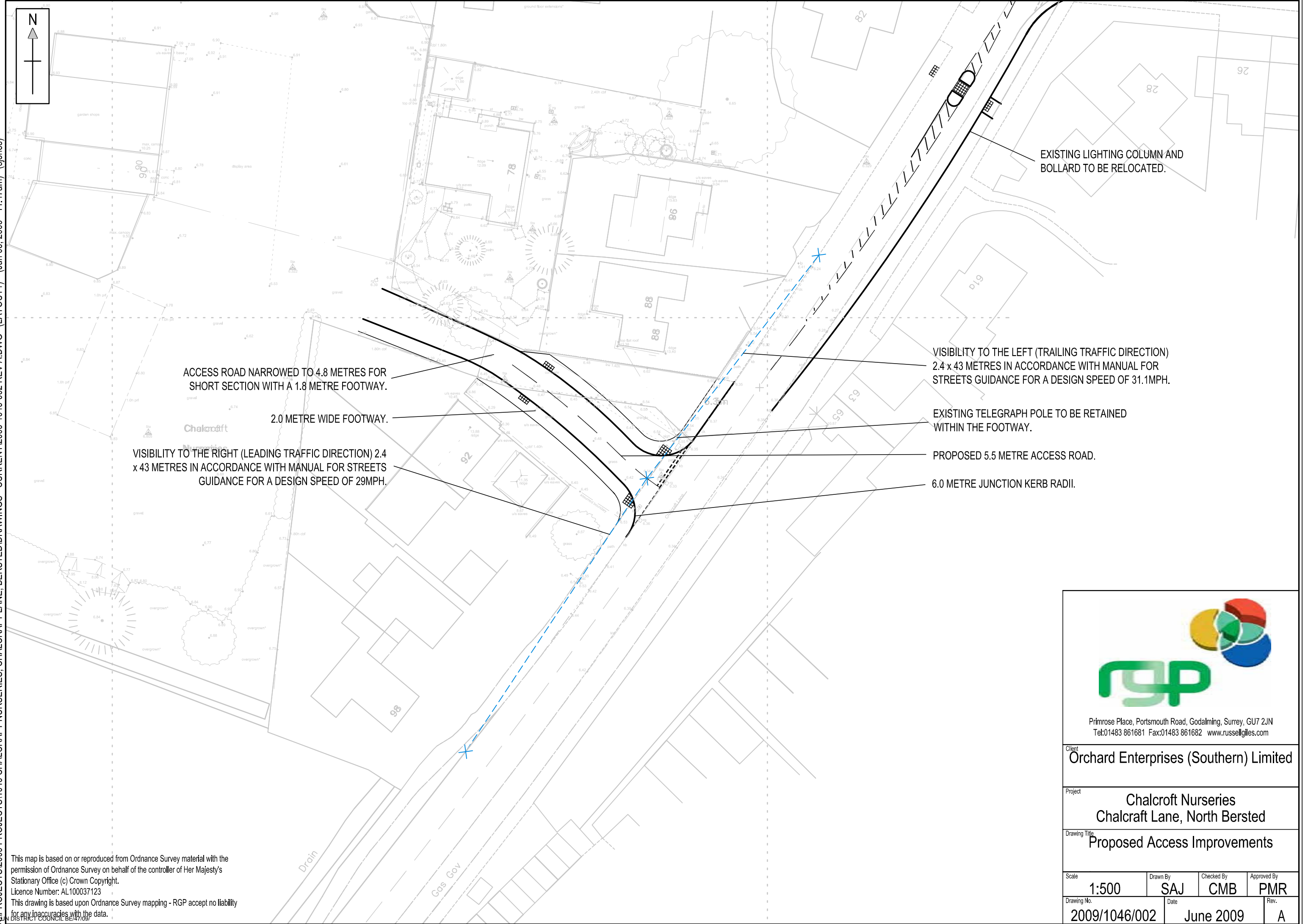
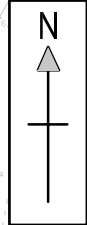
Project
**Chalcraft Nurseries
Chalcraft Lane, North Bersted**

Drawing Title
Proposed Pedestrian Improvements

Scale	1:1000	Drawn By	SAJ	Checked By	CMB	Approved By	PMR
Drawing No.	2009/1046/001	Date	June 2009	Rev.	A		

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PROJECTS\2009 PROJECTS\1046 CHALCRAFT NURSERIES, CHALCRAFT LANE, BERSTED\DRAWINGS - CURRENT\2009-1046-002 REV A.DWG (LAYOUT1) (Jun 05, 2009 - 11:47am) (stones)



ACCESS ROAD NARROWED TO 4.8 METRES FOR SHORT SECTION WITH A 1.8 METRE FOOTWAY.

2.0 METRE WIDE FOOTWAY.

VISIBILITY TO THE RIGHT (LEADING TRAFFIC DIRECTION) 2.4 x 43 METRES IN ACCORDANCE WITH MANUAL FOR STREETS GUIDANCE FOR A DESIGN SPEED OF 29MPH.

EXISTING LIGHTING COLUMN AND BOLLARD TO BE RELOCATED.

VISIBILITY TO THE LEFT (TRAILING TRAFFIC DIRECTION) 2.4 x 43 METRES IN ACCORDANCE WITH MANUAL FOR STREETS GUIDANCE FOR A DESIGN SPEED OF 31.1MPH.

EXISTING TELEGRAPH POLE TO BE RETAINED WITHIN THE FOOTWAY.

PROPOSED 5.5 METRE ACCESS ROAD.

6.0 METRE JUNCTION KERB RADII.



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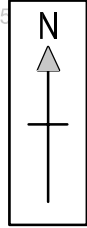
Project
Chalcraft Nurseries
Chalcraft Lane, North Bersted

Drawing Title
Proposed Access Improvements

Scale	1:500	Drawn By	SAJ	Checked By	CMB	Approved By	PMR
Drawing No.	2009/1046/002	Date	June 2009	Rev.	A		

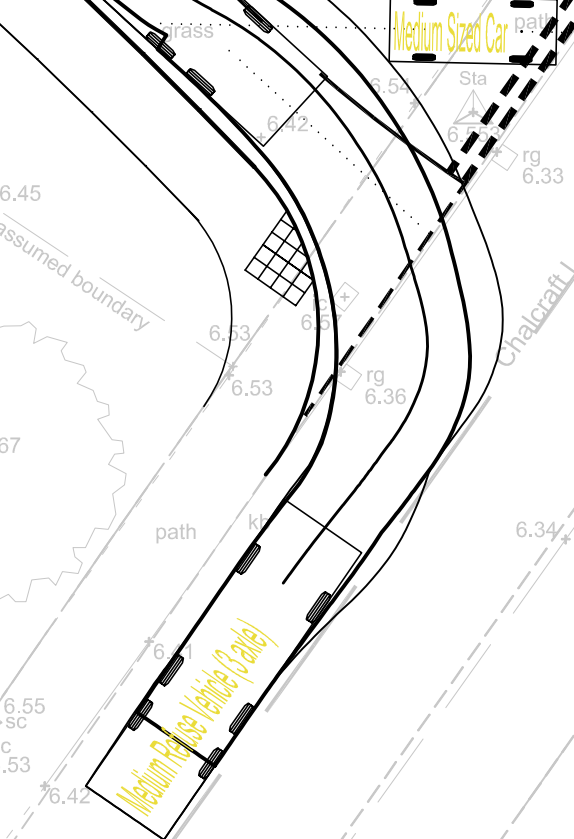
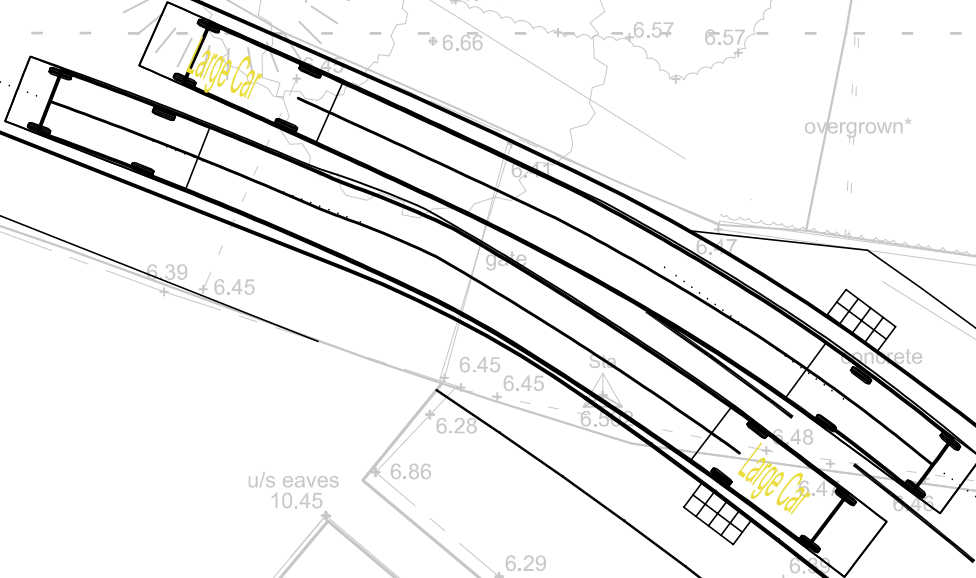
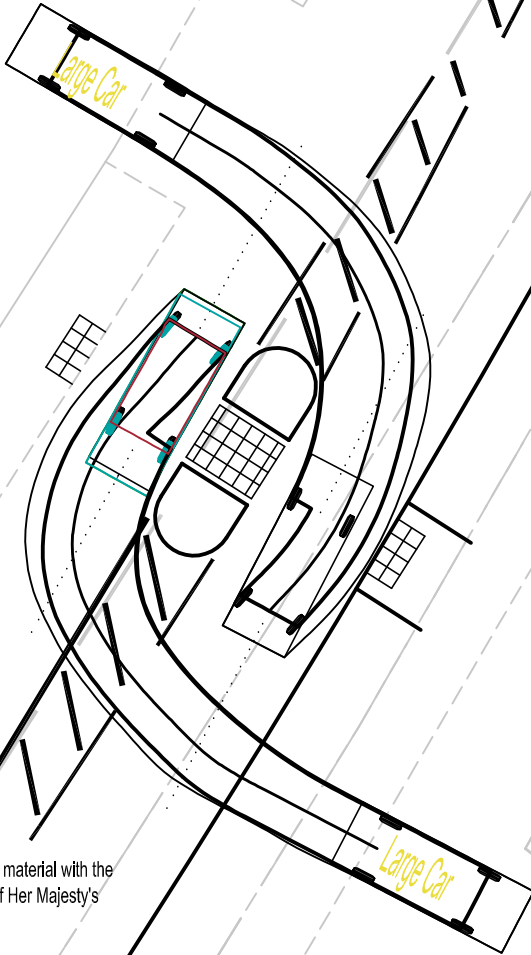
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82

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Client
Orchard Enterprises (Southern) Limited

Project
**Chalcroft Nurseries
Chalcroft Lane, North Bersted**

Drawing Title
Swept Path Assessments

Scale 1:200	Drawn By SAJ	Checked By CMB	Approved By PMR
Drawing No. 2009/1046/003	Date June 2009	Rev. -	



APPENDIX A



APPENDIX B

**WEST SUSSEX COUNTY COUNCIL
HIGHWAYS AND TRANSPORT SERVICES CONSULTATION**

DATE: 2nd March, 2007

**FROM: Spencer Bryan TO: Arun District Council
FAO: K. Wheway**

SUBJECT: BE/136/06 - Outline application for 132 affordable residential units consisting of 27x1 bed flats, 36x2 bed flats, 47x2 bed houses, 2x3 bed houses, 2x3 bed wheelchair compatible houses. Departure from the development plan

Chalcroft Nurseries, Chalcraft Lane, North Bersted, West Sussex

CONSULTATION DATE: 8th January, 2007

RECOMMENDATION:

**Advice
Objection**

X

**Modification
No Objection**

**More Information
Refusal**

TAD contribution: £

This is a development proposal for 132 residential dwellings, consisting 27 one bedroom flats, 36 two bedroom flats, 47 two bedroom houses and 22 three bedroom houses, served by approx 133 car parking spaces, in place of the existing nursery/garden centre. This equates to a parking ratio of 1 spec per dwelling. Access will be achieved from a new access onto Chalcraft Lane to the west of the existing access.

In support of this application, the applicant has provided a Transport Assessment on which I have made the following comments.

Network Traffic Volume and Growth

Existing Traffic

The existing development generates a total of 448 vehicles (5 day/ 12 hours average). The majority of traffic generated is outside of the network peaks. During the network peak, traffic generation in both directions is indicated to be; 08:00-09:00 – 14 vehicles and 17:00-18:00 – 17 vehicles. There is a consistent pattern of traffic during the inter-peak hours. For example, 11:00-12:00 64 vehicles and 16:00-17:00 51 vehicles. Traffic on Sundays is higher than other weekdays.

Traffic Generation and Distribution

The TA suggests there would be a total of 518 daily movements – a net increase of 70 vehicles. However, further work is required to trip generation and distribution.

The TA needs to provide a methodology for the peak hour trip rate calculation. The figures currently appear too low, speculative and are not evidenced.

The TA argues that because homes will be allocated to teachers/ police etc - of which operate shift patterns, many trips will be made outside the peak hours. It is considered the trip rate distribution would be comparable to typical development of private and rented dwellings. Therefore, whilst

there are no specific sites for affordable homes available on TRICS, the data should be used in order to calculate the proportion of peak hour trips, associated with the proposed levels of houses and flats.

PICADY assessment has been undertaken for the site junction access and is commented upon in the TA. However, these need to be related to the revised peak hour trip rates. PICADY runs should also be provide in the appendix.

ARCADY assessment is also required for the junction of Chalcraft Lane with Chichester Road, A259. (The TA should demonstrate peak hour calculations with and without development and all run data should be included in the appendices).

Because the proposal is for 100% affordable homes and there is no TRICS data available in order to calculate respective trip rates, it would appear previous discussions with WSCC agreed the principle that a trip rate of 6 would be reasonable for a development of this nature. Having looked at a relatively comparable site on TRICs (a mix of dwelling types private and public) this appears reasonable. It would be useful to clarify this issue by submitting full details of the correspondence between Keith Cummins and the applicant.

Traffic Capacity Impact

The TA currently suggests the development would generate a net increase of 70 movements per day. However, with the request for revised trip rate calculations, trip generation is likely to be higher, particularly during the peak hours. The TA suggests the net increases in development traffic will be mitigated by a proportion of traffic reductions achieved through the School Travel Plan (STP) targets. There is however no assurance that these targets, especially in related to the opening year of development, will be achieved and what the delivery mechanisms would be.

The TA should be clear in terms of the mitigation measures being offered, in particular but not exclusive to the infrastructure measures proposed to support the development/STP.

Site Layout and Highway Issues

Paragraph 6.3 says “as a result of the provision of the new access, a lay-by would need to be closed. However, alternative parking will be provided within the sites and it is understood that this arrangement has been agreed with the Highway Authority”. It is not known what level of agreement was reached with the highway authority. Any such correspondence would be useful to help clarify this point. Further design work would be needed to indicate this consideration and this would be assessed on submission of the drawing rather than any previous informal discussions between the applicant and the highway authority.

Whilst it is appreciated the site layout plan is indicative, the following comments are made:

- Comments in the Road Safety Audit – Preliminary Design Stage 1 should be addressed
- There is scope to make more efficient and effect use of land (e.g. some of the car parking arrangements result in considerable areas of road space).
- No objection is raised to the 3 access points onto the existing PROW
- Pedestrian priority should be achieved at vehicle crossovers.

A proposed access restricted to cyclists and pedestrian is supported. Further design work would be required to indicate how the facility would tie into the existing highway network.

Although a Stage I Road Safety Audit has been received, there is not suggestion that the applicant intends to actions the findings normally evident from a Designers Response. This is outlined in the County Councils adopted policy for Safety Audits viewable on the web site.

I would expect that applicant to demonstrate how the scheme will be amended in light of the comments raised above.

Bus and Rail Services

A more thorough assessment of bus and rail services should be provided, including services to Bognor Town Centre and rail links.

Green Travel Plan

The provision of a travel plan should be required to promote sustainable travel for development related travel. A Bond will be the mechanism used to deliver and monitor the agreed targets with appropriate release triggers.

Summary

Development trip rate generation and distribution requires further work to include, both an assessment of the site access junction and the junction of the A259 with Chalcroft Lane. The predicted open year of the development should be highlighted.

Further consideration is required to sustainable travel to include specific infrastructure proposals and how these would relate to the STP and the associated levels of mitigated development traffic. A thorough review of bus and rail services should be provided and a Residential Travel Plan should be produced for the development itself.

Until these matters have been addressed, I am unable to assess the impact of the development and the likely mitigation measures necessary to support the proposal. For this reason I would have to recommend the application for refusal.

Spencer Bryan
Development Control



APPENDIX C

5.4 Stage 2: Categorisation of the settlements according to the average accessibility scores:

Score	Accessibility Category
2.00 +	Very Good Accessibility
1.50 – 1.99	Good Accessibility
1.00 – 1.49	Fair Accessibility
0.50 – 0.99	Poor Accessibility
0.00 – 0.49	Very Poor Accessibility

5.5 Having undertaken the above steps, the settlements have been categorised as follows:

Table 5.1: a) : Facilities Accessibility for Larger Settlements (with Built-up Area Boundary)

Settlements	Facilities Accessibility Score	Facilities Accessibility Category
Eastergate	2.27	Very Good
Westergate	2.11	Very Good
Bognor	2.09	Very Good
Littlehampton	1.99	Good
Bersted	1.79	Good
Rustington	1.76	Good
Felpham	1.75	Good
Aldwick	1.68	Good
Arundel	1.66	Good
Barnham	1.63	Good
Angmering	1.59	Good
Ferring	1.56	Good
East Preston	1.38	Fair
Findon	1.35	Fair
Middleton	1.33	Fair
Pagham	1.26	Fair
Walberton	1.24	Fair
Yapton	1.20	Fair

Table 5.1 : b): Facilities Accessibility for Smaller Settlements (without a Built-up Area Boundary)

Settlements	Facilities Accessibility Score	Facilities Accessibility Category
Clapham	1.36	Fair
Bilsham	1.09	Fair
Patching	0.91	Poor
Slindon	0.91	Poor
Climping	0.77	Poor
Kingston	0.73	Poor
Tortington	0.64	Poor
Burpham & Wepham	0.55	Poor
Fontwell	0.55	Poor
Aldingbourne & Norton	0.50	Poor
Binsted	0.45	Very Poor
Crossbush & Lyminster	0.45	Very Poor
Ford	0.36	Very Poor
Madehurst	0.27	Very Poor
Lidsey	0.18	Very Poor
Hammerpot	0.09	Very Poor
Houghton, Offham & South Stoke	0.09	Very Poor
Poling	0.00	Very Poor
Shripney	0.00	Very Poor
Warningcamp	0.00	Very Poor

5.6 Stage 3: Categorise the settlements according to the employment availability:

Employment Availability (Count)	Category
5000 +	Very Good
2000 – 4999	Good
1000 – 1999	Fair
500 – 999	Limited
0 – 499	Poor

5.7 The settlements were then categorised for the purpose of employment availability as follows:

Table 5.2: a) : Employment Availability for Larger Settlements (with Built-up Area Boundary)

Settlements	Employment Availability Score	Employment Availability Category
Bognor	10572	Very Good
Littlehampton	8375	Very Good
Rustington	4579	Good
Bersted	3352	Good
Felpham	1761	Fair
Aldwick	1494	Fair
Arundel	1135	Fair
East Preston	1112	Fair
Angmering	990	Limited
Ferring	848	Limited
Yapton	839	Limited
Barnham	797	Limited
Pagham	763	Limited
Middleton	749	Limited
Findon	478	Poor
Westergate	448	Poor
Eastergate	142	Poor
Walberton	131	Poor

Table 5.2: b) : Employment Availability for Smaller Settlements (without a Built-up Area Boundary)

Settlements	Employment Availability Score	Employment Availability Category
Climping	928	Limited
Ford	857	Limited
Aldingbourne & Norton	312	Poor
Hammerpot	298	Poor
Tortington	238	Poor
Clapham	229	Poor
Fontwell	217	Poor
Binsted	203	Poor
Slindon	182	Poor
Crossbush & Lyminster	137	Poor
Kingston	89	Poor
Patching	82	Poor
Houghton, Offham & South Stoke	57	Poor
Shripney	57	Poor
Burpham & Wepham	55	Poor
Lidsey	46	Poor
Bilsham	42	Poor
Madehurst	31	Poor
Warningcamp	27	Poor
Poling	26	Poor

5.8 Stage 4: Categorise the settlements according to the public transport availability:

Score	Accessibility Category
2.00 +	Very Good Accessibility
1.50 – 1.99	Good Accessibility
1.00 – 1.49	Fair Accessibility
0.50 – 0.99	Poor Accessibility
0.00 – 0.49	Very Poor Accessibility

5.9 The settlements were categorised for the purpose of public transport availability as follows:

Table 5.3: b) : Transport Accessibility for Smaller Settlements (without a Built-up Area Boundary)

Table 5.3: a) : Transport Accessibility for Larger Settlements (with Built-up Area Boundary)

Settlements	Transport Accessibility Score	Transport Accessibility Category
East Preston	2.10	Very Good
Bognor	1.83	Good
Rustington	1.69	Good
Littlehampton	1.68	Good
Felpham	1.43	Fair
Ferring	1.41	Fair
Bersted	1.35	Fair
Barnham	1.11	Fair
Middleton	1.05	Fair
Angmering	0.69	Poor
Arundel	0.40	Poor
Eastergate	0.25	Poor
Yapton	0.17	Poor
Aldwick	0.13	Poor
Findon	0.00	Very Poor
Pagham	0.00	Very Poor
Walberton	0.00	Very Poor
Westergate	0.00	Very Poor

Settlements	Transport Accessibility Score	Transport Accessibility Category
Climping	1.25	Fair
Ford	1	Fair
Crossbush & Lyminster	0.5	Poor
Kingston	0.5	Poor
Warningcamp	0.5	Poor
Aldingbourne & Norton	0	Very Poor
Bilsham	0	Very Poor
Binsted	0	Very Poor
Burpham & Wepham	0	Very Poor
Clapham	0	Very Poor
Fontwell	0	Very Poor
Hammerpot	0	Very Poor
Houghton, Offham & South Stoke	0	Very Poor
Lidsey	0	Very Poor
Madehurst	0	Very Poor
Patching	0	Very Poor
Poling	0	Very Poor
Shripney	0	Very Poor
Slindon	0	Very Poor
Tortington	0	Very Poor

6.0 Conclusions

6.1 Limitations

Before drawing some conclusions it is necessary to give some important 'health warnings' that should be recognised when interpreting the findings. The aim of this study is to *help* inform decisions on the location of new development. This study is only one factor that will inform the decision making process.

- 6.2 Although settlement Built-up Area Boundaries are recognised boundaries in planning terms people do not necessarily relate to these in everyday life, especially where a degree of coalescence between settlements has occurred. One person's definition of the edge of a settlement may differ from that of another person. However, for convenience this study has used the Built Up Area Boundaries and applied them consistently throughout the study for the larger settlements. The smaller settlement boundaries should be viewed with caution since they are simply based on OA boundaries and in most cases have little resemblance to the settlement nucleation. The boundaries are available in Appendices 3 and 4 and should be referred to when interpreting the results of this study.
- 6.3 In relation to the facilities accessibility assessment, it is important to recognise that the methodology used averages out accessibility across the whole of a settlement. In large settlements areas of high accessibility will be reduced by areas of poor accessibility. The accessibility score is only an average of differing levels of accessibility within a settlement. For this reason, Eastergate, a small compact settlement, scores better in terms of overall access to basic facilities than the larger settlements with a much wider range of facilities such as Bognor Regis. However, in general, the larger settlements, particularly in the coastal urban areas, score better in terms of access to facilities. To this end the facilities accessibility maps in Appendix 4 clearly allows identification of areas of differing accessibility within and around settlements. These maps should be referred to when interpreting the results of the study.
- 6.4 The analysis of facilities accessibility has not 'weighted' particular facilities as more important than others, for example banks and GP surgeries have been considered equal in value. This approach was taken to avoid making subjective judgements about which facilities are more important since personal circumstances will determine how important a particular facility is for everyday needs, e.g. schools will only be important for families with children. This study provides baseline information on accessibility levels that allow interpretations of the data to be made.
- 6.5 It is also important to note that the facilities included in the study are the more basic facilities for each settlement, since the aim of the study was to assess the extent to which the different settlements could provide for residents' everyday needs. As a result, the settlement ranking based on the average facilities score has not taken into account the much greater range of shops and services that places such as Bognor, Rustington and Littlehampton have. This in turn has meant that places such as Eastergate and Westergate have received higher scores despite having fewer facilities in total, and also having a much smaller range of different facilities.

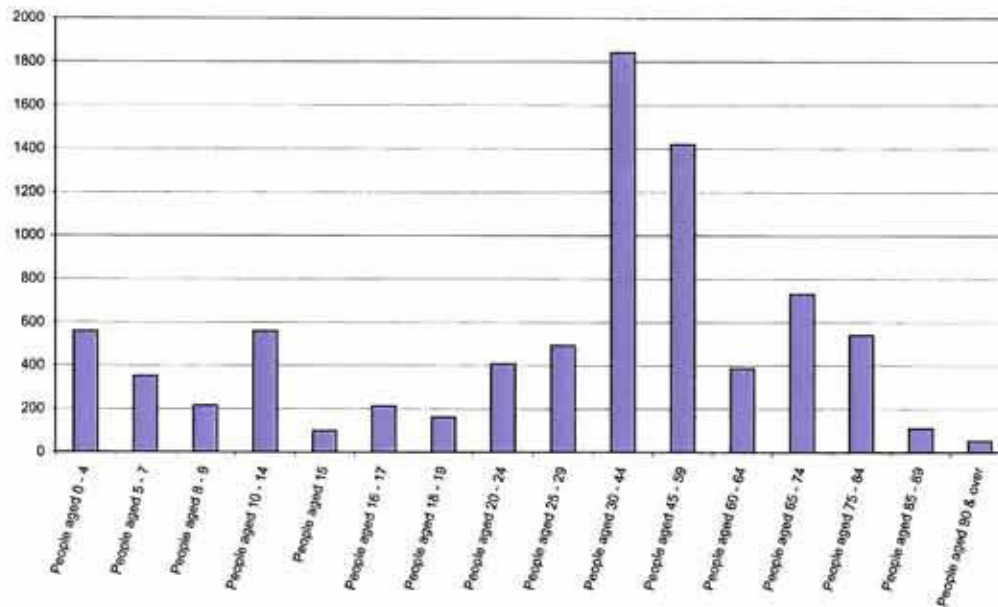
7.5 Bersted Settlement Results

Population Total: 8147 (5.8% of district total)

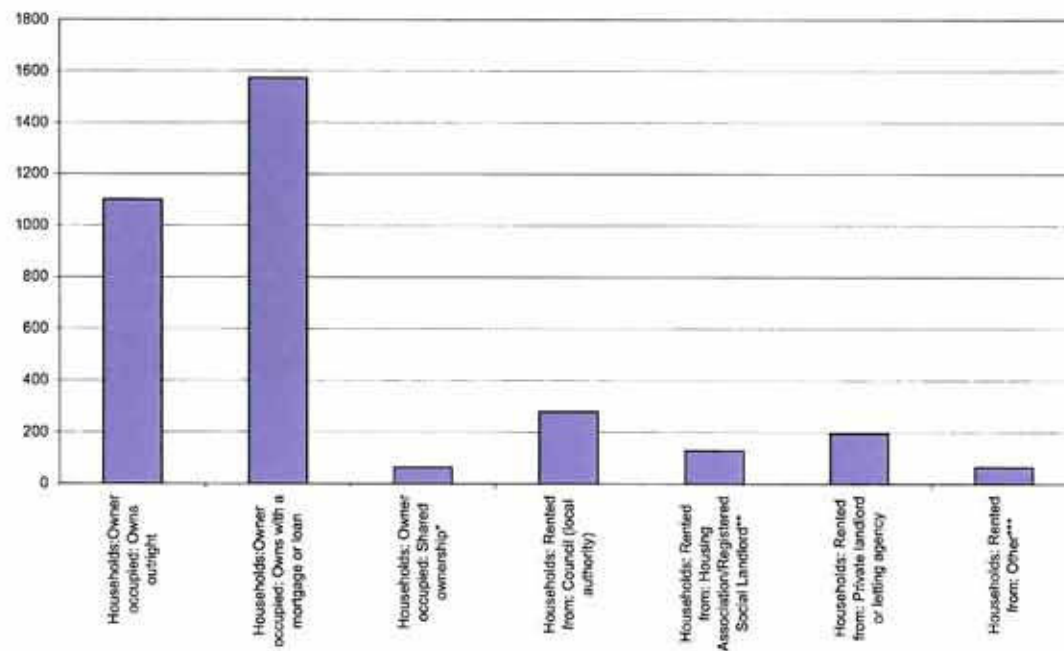
Population Male: 3947

Population Female: 4200

Graph 7.5 Bersted Age



Graph 7.5 Bersted Tenure



Graph 7.5 Bersted Household Composition

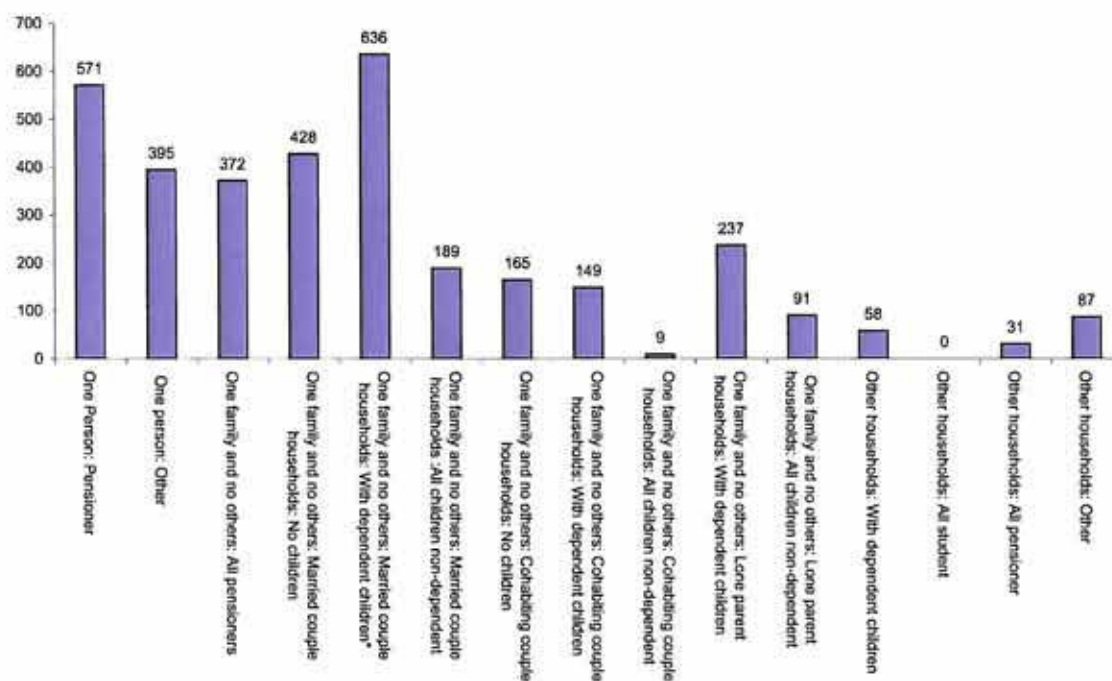


Table 7.5 Bersted Facilities Accessibility

Facility	Score	Accessibility Category
Bank	0.04	Very Poor Accessibility
Bus	2.37	Very Good Accessibility
Community Hall	2.00	Very Good Accessibility
Food Store	2.11	Very Good Accessibility
Further Education Institution	1.48	Fair Accessibility
G.P. Surgery	1.96	Good Accessibility
Petrol Station	1.52	Good Accessibility
Pharmacy	2.37	Very Good Accessibility
Place of Worship	2.15	Very Good Accessibility
Post Office	2.37	Very Good Accessibility
Primary School	2.22	Very Good Accessibility
Secondary School	1.48	Fair Accessibility
Train Station	0.33	Very Poor Accessibility

Graph 7.5 Bersted Industry of Employed Residents

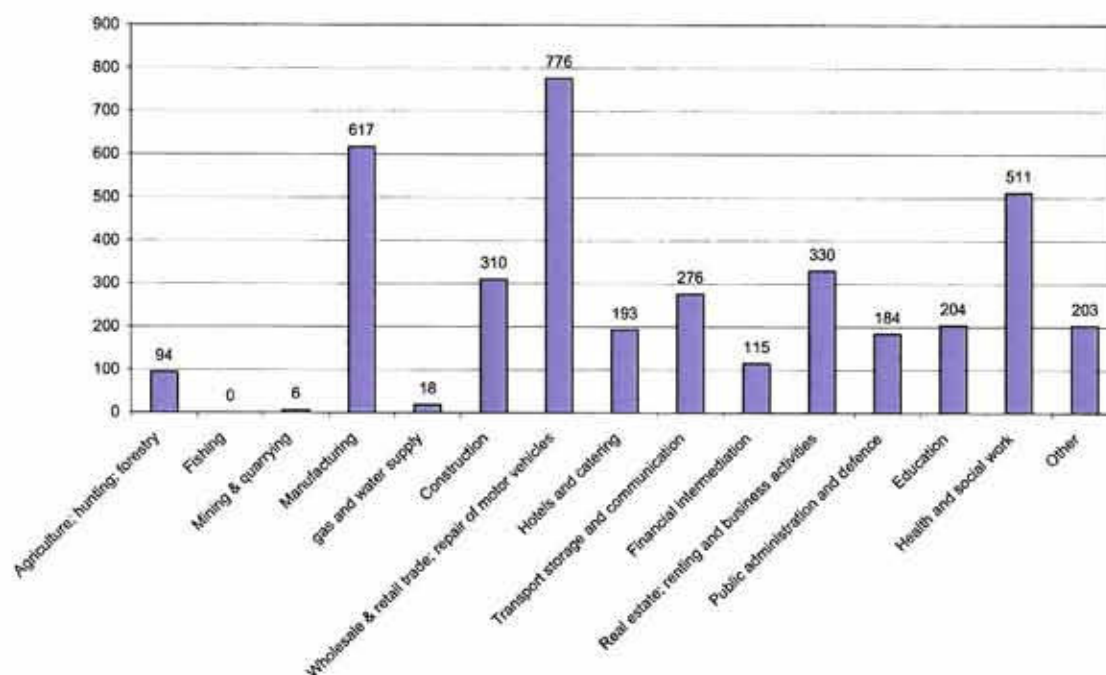


Table 7.5 Bersted Travel to Work Patterns

Trips originating from study settlement	3973 (49% of settlement population)
Trips starting and concluding in study settlement	996
Trips from study settlement to any other settlement	2977
% of trips from settlement that are contained within the settlement	25.07%
Trips concluding in study settlement	3352
Trips into settlement from external settlements	2356
% of employees in the settlement who live in the settlement	29.71%
Net flow of employees*	-621

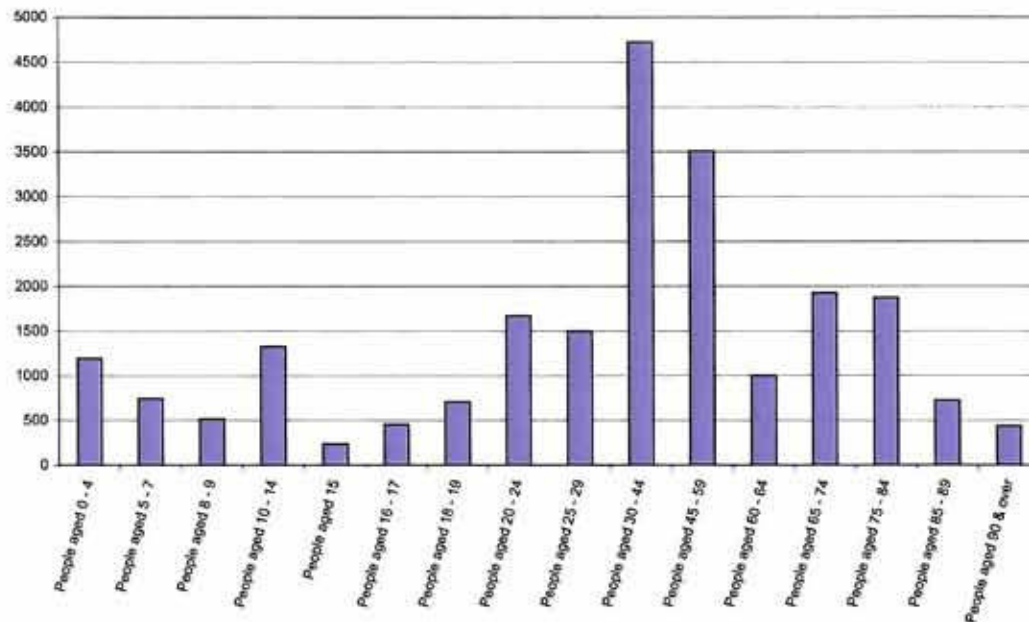
7.6 Bognor Settlement Results

Population Total: 22555 (16% of district total)

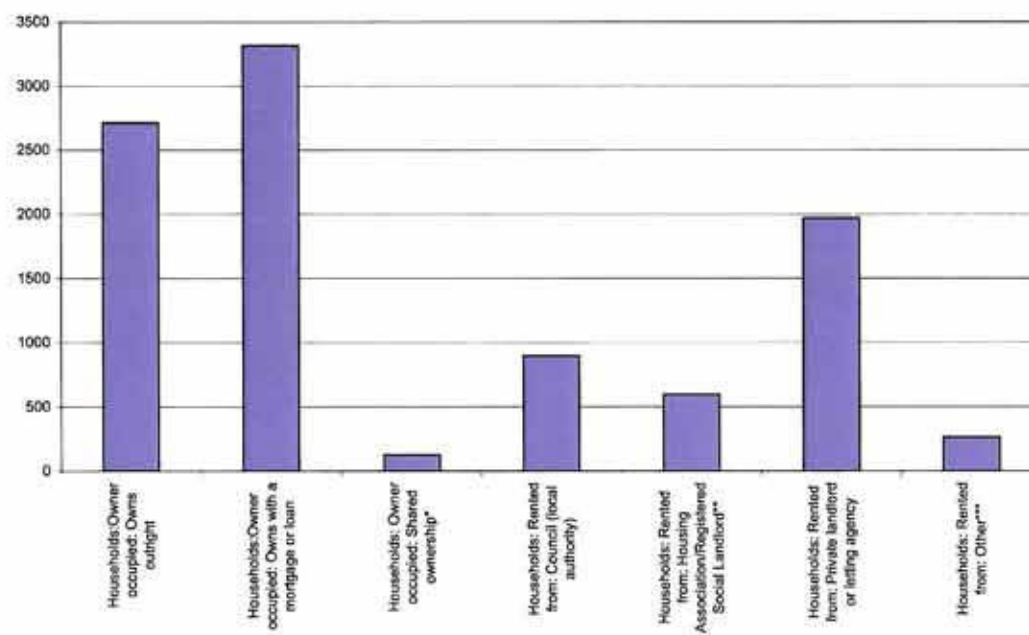
Population Male: 10489

Population Female: 12066

Graph 7.6 Bognor: Age



Graph 7.6 Bognor: Tenure



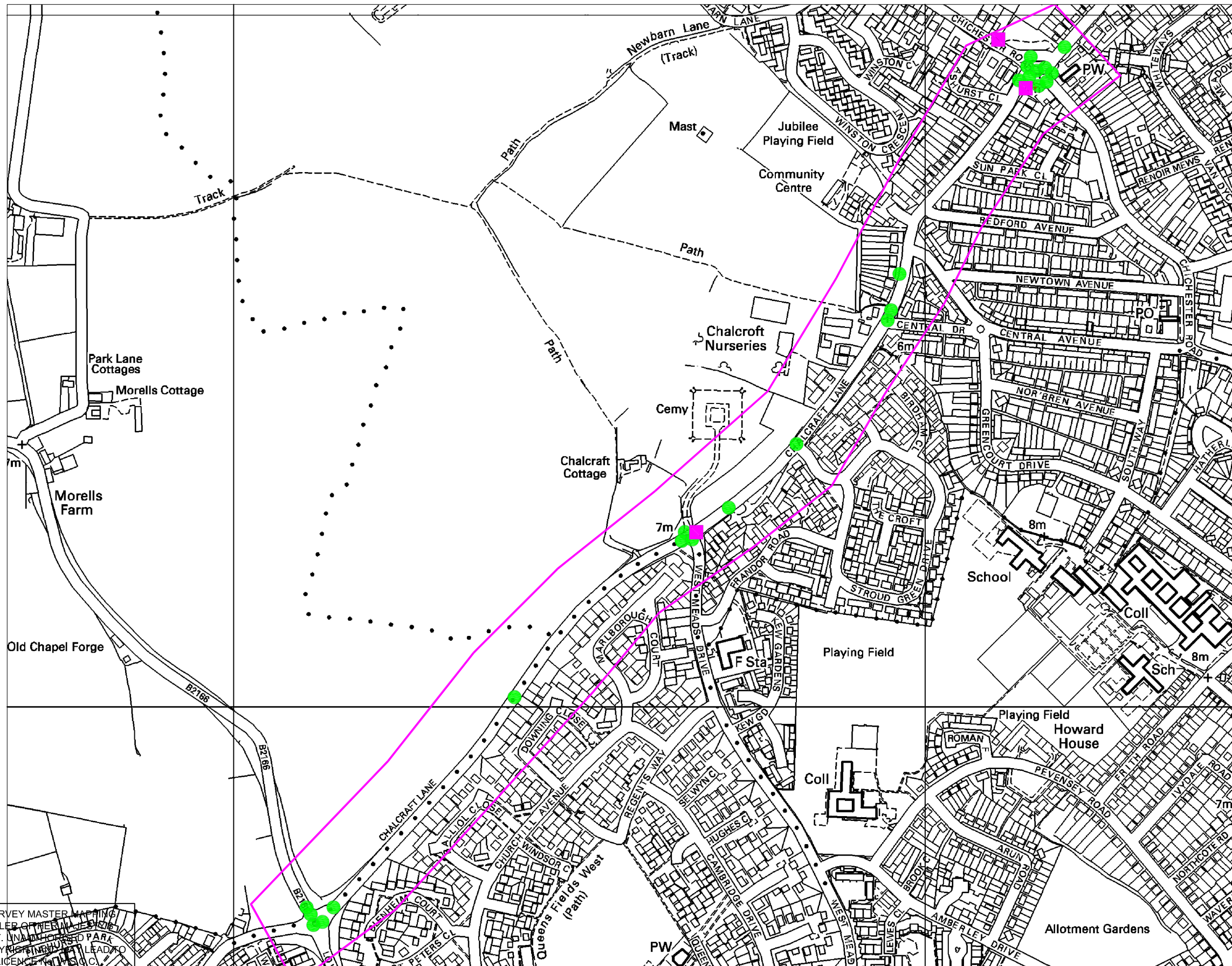


APPENDIX D

Accident Severity		
●	Slight	24
■	Serious	3
▲	Fatal	0

Casualty Severity		
●	Slight	29
■	Serious	3
▲	Fatal	0

Casualty Class		
	Driver	19
	P.Riders	4
	Pass.	8
	Ped.	1



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AREA	Western	DRAWN	dn
ROUTE No.		CHECKED	
FILE No.	09129	DATE	19/05/09
Rev	Date	Amendment	Name



Data Req Ref 09129
Chalcraft Lane Bognor Regis
5yr to 30 Apr 2009

DRG No.
SCALE Non std
Tony Toynton Director of Infrastructure Operations County Hall, West Street Chichester, West Sussex, PO19 1RH (Tel: 01243 642105)



APPENDIX E

Neighbourhood Statistics



Original URL: <http://www.neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=7&b=6095257&c=PO21+5TS&d=14&e=16&f=81&g=495136&i=1001x1003x1004x1005&l=161&o=1&m=0&r=0&s=1244188238870&enc=1>

Area: Bersted (Ward)

Cars or Vans (UV62)

Period: Apr01

		Bersted	Arun (Non-Metropolitan District)	South East	England
All Households (Households) ¹	Count	3,526	62,733	3,287,489	20,451,427
No car or van (Households) ¹	Count	739	13,597	638,772	5,488,386
1 car or van (Households) ¹	Count	1,713	29,523	1,400,989	8,935,718
2 cars or vans (Households) ¹	Count	870	15,759	971,698	4,818,581
3 cars or vans (Households) ¹	Count	162	2,882	206,914	924,289
4 or more cars or vans (Households) ¹	Count	42	972	69,116	284,453
Total cars or vans (Vehicles) ¹	Count	4,123	73,997	4,271,483	22,607,629

Last Updated: 01 March 2007

Source: Office for National Statistics

Notes

1 National Statistics

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APPENDIX F

TSF Speed

Globals

Report Id CustomList-100
Descriptor TSF Speed
Created by MetroCount Traffic Executive
Creation Time (UTC) 2009-06-01T09:47:02
Legal Copyright (c)1997 - 2007 MetroCount
Graphic header.gif
Language English
Country United Kingdom
Create Version 3.18.14162.0
Metric FALSE
Speed Unit mph
Length Unit ft
Mass Unit ton

Dataset

Site Name 5
Site Attribute [-32.000000 +115.000000]
File Name C:\Users\mbarrett\Desktop\atc\MetroCount\MTE 3.18\Data\501Jun2009.ECO
File Type Plus
Algorithm Factory default
Description Chalcraft lane s of central drve bersted
Lane 0
Direction 7
Direction Text 7 - North bound A>B, South bound B>A.
Layout Text Axle sensors - Paired (Class/Speed/Count)
Setup Time 2009-05-20T08:44:29
Start Time 2009-05-20T12:00:00
Finish Time 2009-06-01T10:09:29
Operator RKM
Configuration 00000000 80 00 14 6a 6a 00 00 00 00 00 , Standard

Profile

Name Default Profile
Title MetroCount Traffic Executive
Graphic Logo
Header
Footer
Percentile 1 85
Percentile 2 95
Pace 10
Filter Start 2009-05-20T12:00:00
Filter End 2009-06-01T10:09:29
Class Scheme AustRoads94
Low Speed 5
High Speed 100
Posted Limit 30
Speed Limits 30
Separation 0.000
Separation Type Headway
Direction NORTHBOUND
Encoded Direction 5

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

20 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
1200	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1300	155	30.9	0	1	11	40	74	26	3	0	0	0	0	0	0	0	0	4.5	26.3
1400	433	29.3	0	14	45	127	192	41	10	3	0	0	0	0	0	0	1	5.7	25.3
1500	457	30.2	2	7	45	127	199	63	12	2	0	0	0	0	0	0	0	5	25.7
1600	499	30.6	1	15	36	132	216	83	15	1	0	0	0	0	0	0	0	5	26.2
1700	540	30.4	3	28	92	158	166	84	8	0	1	0	0	0	0	0	0	5.7	24.3
1800	433	30.4	3	17	61	129	146	69	7	1	0	0	0	0	0	0	0	5.6	24.8
1900	337	31.3	3	10	46	89	118	59	10	2	0	0	0	0	0	0	0	5.7	25.4
2000	208	33.3	0	2	12	65	70	40	14	3	2	0	0	0	0	0	0	5.5	27.5
2100	151	33.1	0	2	9	33	58	31	14	4	0	0	0	0	0	0	0	5.6	27.7
2200	117	32	0	0	4	28	56	21	7	1	0	0	0	0	0	0	0	4.4	27.7
2300	50	35.6	0	0	4	8	11	17	8	2	0	0	0	0	0	0	0	6.2	29.4
07-19	2517	30.4	9	82	290	713	993	366	55	7	1	0	0	0	0	0	1	5.4	25.3
06-22	3213	30.6	12	96	357	900	1239	496	93	16	3	0	0	0	0	0	1	5.5	25.6
06-00	3380	30.9	12	96	365	936	1306	534	108	19	3	0	0	0	0	0	1	5.5	25.7
00-00	3380	30.9	12	96	365	936	1306	534	108	19	3	0	0	0	0	0	1	5.5	25.7

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

21 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	19	36.2	0	0	0	3	7	5	3	1	0	0	0	0	0	0	0	5.4	30.3
0100	10	-	1	0	0	2	0	5	2	0	0	0	0	0	0	0	0	9.5	28.7
0200	9	-	0	0	0	2	3	3	1	0	0	0	0	0	0	0	0	4.9	29
0300	8	-	0	0	1	0	2	0	4	1	0	0	0	0	0	0	0	8.1	33.4
0400	11	38	0	0	0	1	2	2	4	0	0	2	0	0	0	0	0	9.3	35.5
0500	96	40.3	0	1	1	9	28	25	16	15	1	0	0	0	0	0	0	6.5	32.4
0600	244	35.1	0	2	15	29	74	84	31	8	1	0	0	0	0	0	0	5.9	29.8
0700	529	30.9	0	14	45	132	221	97	20	0	0	0	0	0	0	0	0	5.1	26.3
0800	614	28.6	1	16	80	222	244	45	6	0	0	0	0	0	0	0	0	4.5	24.4
0900	584	28.4	1	18	71	214	228	48	4	0	0	0	0	0	0	0	0	4.5	24.4
1000	530	28.4	1	13	55	174	254	33	0	0	0	0	0	0	0	0	0	4.2	24.8
1100	478	29.8	1	16	56	130	212	59	2	1	0	0	0	0	0	0	0	5.8	25.3
1200	453	29.8	1	9	45	146	191	54	7	0	0	0	0	0	0	0	0	4.6	25.3
1300	487	30	1	8	40	125	236	68	7	1	1	0	0	0	0	0	0	4.5	26
1400	497	28.9	0	11	75	187	179	42	2	1	0	0	0	0	0	0	0	4.6	24.3
1500	505	30.2	2	9	58	154	194	78	9	1	0	0	0	0	0	0	0	4.9	25.4
1600	483	30.6	4	16	69	135	160	89	6	3	1	0	0	0	0	0	0	5.6	25.1
1700	526	29.8	2	20	73	139	222	54	16	0	0	0	0	0	0	0	0	5.3	25
1800	433	31.5	0	11	43	112	161	85	21	0	0	0	0	0	0	0	0	5.3	26.5
1900	384	30.9	0	8	30	97	160	73	11	4	0	0	1	0	0	0	0	5.3	26.6
2000	227	33.6	1	3	7	63	81	46	25	1	0	0	0	0	0	0	0	5.4	27.7
2100	176	33.1	0	0	3	46	70	44	9	4	0	0	0	0	0	0	0	4.9	28.3
2200	90	36.2	0	0	3	13	26	30	14	2	1	1	0	0	0	0	0	5.9	30.3
2300	56	36.2	0	0	1	7	24	13	6	4	0	1	0	0	0	0	0	6	30.4
07-19	6119	29.8	14	161	710	1870	2502	752	100	7	2	0	0	0	0	0	0	5	25.2
06-22	7150	30.2	15	174	765	2105	2887	999	176	24	3	0	1	0	0	0	0	5.2	25.6
06-00	7296	30.4	15	174	769	2125	2937	1042	196	30	4	2	1	0	0	0	0	5.2	25.7
00-00	7449	30.6	16	175	771	2142	2979	1082	226	47	5	4	1	0	0	0	0	5.3	25.8

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

22 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	29	36	0	0	1	7	9	4	6	2	0	0	0	0	0	0	0	6.9	29.4
0100	10	-	0	0	0	3	1	4	1	1	0	0	0	0	0	0	0	6.8	31.1
0200	13	39.4	0	0	0	0	2	5	5	0	1	0	0	0	0	0	0	6	35.1
0300	10	-	0	0	1	1	0	2	3	1	2	0	0	0	0	0	0	9.6	35.3
0400	19	45	0	0	1	1	5	1	4	4	1	2	0	0	0	0	0	10.7	35.9
0500	101	40.3	0	1	2	7	23	21	29	11	7	0	0	0	0	0	0	7.3	33.6
0600	252	37.1	0	3	2	22	67	90	43	17	6	2	0	0	0	0	0	6.2	31.8
0700	508	32.4	0	8	36	95	198	130	34	7	0	0	0	0	0	0	0	5.4	27.8
0800	597	29.5	1	8	62	184	264	66	11	1	0	0	0	0	0	0	0	4.6	25.5
0900	585	28.4	2	17	75	212	228	48	3	0	0	0	0	0	0	0	0	4.5	24.3
1000	528	28	2	21	69	179	222	32	3	0	0	0	0	0	0	0	0	4.5	24.2
1100	528	28.4	0	15	63	201	210	34	5	0	0	0	0	0	0	0	0	4.4	24.4
1200	467	30	0	10	32	134	221	60	9	1	0	0	0	0	0	0	0	4.6	26.2
1300	491	29.5	0	23	75	150	178	58	7	0	0	0	0	0	0	0	0	5.2	24.5
1400	492	30.2	5	18	38	117	230	78	6	0	0	0	0	0	0	0	0	5	25.6
1500	499	30	2	20	77	152	173	62	11	1	0	0	0	1	0	0	0	5.7	24.8
1600	473	30.9	7	20	47	132	180	73	11	2	0	1	0	0	0	0	0	5.8	25.3
1700	549	30.2	4	14	77	185	179	76	12	2	0	0	0	0	0	0	0	5.5	24.8
1800	422	31.3	1	11	60	117	134	85	12	2	0	0	0	0	0	0	0	5.6	25.6
1900	335	32.7	0	2	26	82	104	96	20	5	0	0	0	0	0	0	0	5.6	27.6
2000	234	32.2	0	1	13	51	97	59	12	0	1	0	0	0	0	0	0	4.8	27.6
2100	146	34	0	1	5	32	62	30	14	2	0	0	0	0	0	0	0	5.3	28.3
2200	126	35.6	0	0	6	21	41	30	24	1	3	0	0	0	0	0	0	6.2	29.7
2300	93	36.7	0	0	1	19	32	25	9	4	2	1	0	0	0	0	0	6.6	30
07-19	6139	30	24	185	711	1858	2417	802	124	16	0	1	0	1	0	0	0	5.1	25.2
06-22	7106	30.6	24	192	757	2045	2747	1077	213	40	7	3	0	1	0	0	0	5.4	25.7
06-00	7325	30.9	24	192	764	2085	2820	1132	246	45	12	4	0	1	0	0	0	5.5	25.8
00-00	7507	31.1	24	193	769	2104	2860	1169	294	64	23	6	0	1	0	0	0	5.6	26

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

23 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	47	35.3	0	0	0	8	16	13	9	0	1	0	0	0	0	0	0	5.1	30.2
0100	26	39.4	0	0	0	1	4	6	12	3	0	0	0	0	0	0	0	5.2	34.8
0200	22	42.5	0	0	1	1	4	8	4	2	2	0	0	0	0	0	0	7.2	33.9
0300	25	39.8	0	0	1	4	5	5	6	3	0	1	0	0	0	0	0	7.8	32
0400	29	42.3	0	1	1	2	4	10	4	4	2	1	0	0	0	0	0	8.9	33.9
0500	49	42.5	0	0	1	5	10	12	10	8	3	0	0	0	0	0	0	7	33.9
0600	114	37.6	0	0	5	16	31	26	26	7	3	0	0	0	0	0	0	6.7	30.9
0700	206	33.3	0	2	6	44	77	51	21	2	2	1	0	0	0	0	0	5.6	28.8
0800	395	32	2	5	12	87	161	106	22	0	0	0	0	0	0	0	0	4.9	27.5
0900	488	30.2	1	13	48	139	208	75	2	2	0	0	0	0	0	0	0	4.8	25.6
1000	591	29.5	4	21	88	179	224	66	9	0	0	0	0	0	0	0	0	5.1	24.6
1100	537	29.1	2	9	72	177	221	51	4	1	0	0	0	0	0	0	0	4.6	24.8
1200	549	29.3	1	17	69	163	234	60	5	0	0	0	0	0	0	0	0	4.7	24.9
1300	454	30.6	3	10	55	121	175	77	10	3	0	0	0	0	0	0	0	5.3	25.6
1400	498	29.8	2	13	47	118	246	60	9	3	0	0	0	0	0	0	0	4.9	25.7
1500	468	30.9	0	7	52	101	219	70	19	0	0	0	0	0	0	0	0	5	26.3
1600	413	31.1	1	13	41	81	177	83	14	2	1	0	0	0	0	0	0	5.4	26.5
1700	398	31.1	3	12	37	91	169	68	16	2	0	0	0	0	0	0	0	5.5	26.2
1800	348	33.1	0	7	28	73	129	79	28	4	0	0	0	0	0	0	0	5.6	27.6
1900	260	33.1	1	5	14	54	103	59	20	4	0	0	0	0	0	0	0	5.6	27.7
2000	205	34.4	0	2	8	37	72	60	24	2	0	0	0	0	0	0	0	5.3	29
2100	112	35.8	0	1	5	23	35	27	13	8	0	0	0	0	0	0	0	6.5	29.4
2200	101	36	0	0	4	16	32	24	18	5	1	1	0	0	0	0	0	6.4	30.4
2300	120	35.3	0	2	3	17	39	33	21	3	2	0	0	0	0	0	0	6.2	29.8
07-19	5345	30.6	19	129	555	1374	2240	846	159	19	3	1	0	0	0	0	0	5.2	25.9
06-22	6036	31.1	20	137	587	1504	2481	1018	242	40	6	1	0	0	0	0	0	5.4	26.2
06-00	6257	31.3	20	139	594	1537	2552	1075	281	48	9	2	0	0	0	0	0	5.4	26.4
00-00	6455	31.8	20	140	598	1558	2595	1129	326	68	17	4	0	0	0	0	0	5.6	26.6

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

24 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	58	36.9	0	0	3	12	14	17	6	5	1	0	0	0	0	0	0	6.9	30.2
0100	36	39.6	0	0	0	6	7	7	12	3	1	0	0	0	0	0	0	7.1	33.1
0200	22	41.4	0	0	0	2	1	6	8	4	0	1	0	0	0	0	0	6.7	35.9
0300	24	40.3	0	0	0	3	6	5	5	4	0	0	1	0	0	0	0	7.7	33.5
0400	13	45.6	0	0	0	1	3	2	1	2	3	1	0	0	0	0	0	9	37.2
0500	24	37.8	0	0	1	2	5	5	7	3	0	1	0	0	0	0	0	7.4	33
0600	57	38	0	0	2	4	17	17	12	3	1	0	1	0	0	0	0	6.8	32
0700	110	36.2	0	2	3	17	35	33	17	1	2	0	0	0	0	0	0	6.2	29.8
0800	168	35.3	1	3	5	21	68	40	24	4	2	0	0	0	0	0	0	6.1	29.4
0900	327	31.8	0	2	10	59	168	70	13	5	0	0	0	0	0	0	0	4.4	28
1000	519	29.5	2	6	52	158	238	57	6	0	0	0	0	0	0	0	0	4.4	25.4
1100	543	29.1	1	23	54	169	236	57	2	1	0	0	0	0	0	0	0	4.7	24.8
1200	497	29.8	3	12	73	131	207	60	9	2	0	0	0	0	0	0	0	5.2	25
1300	372	31.1	3	7	25	104	154	66	12	1	0	0	0	0	0	0	0	5	26.3
1400	356	32.4	0	9	21	81	151	73	17	2	2	0	0	0	0	0	0	5.5	27.1
1500	354	32.7	2	11	26	79	123	83	24	5	0	1	0	0	0	0	0	6.2	27
1600	329	33.1	0	2	23	65	135	76	23	5	0	0	0	0	0	0	0	5.3	28
1700	302	34.4	0	3	10	39	106	104	28	8	4	0	0	0	0	0	0	5.6	29.6
1800	305	33.6	0	1	17	73	96	88	24	5	1	0	0	0	0	0	0	5.5	28.3
1900	239	34.4	0	1	13	32	76	89	24	4	0	0	0	0	0	0	0	5.3	29.4
2000	187	33.8	0	2	6	35	65	58	15	6	0	0	0	0	0	0	0	5.4	28.9
2100	133	31.8	0	1	8	29	63	24	5	3	0	0	0	0	0	0	0	4.9	27.4
2200	108	33.8	0	0	1	33	31	27	12	2	1	1	0	0	0	0	0	6	28.8
2300	61	36.2	0	0	0	10	20	19	8	3	0	0	1	0	0	0	0	6.3	30.6
07-19	4182	32	12	81	319	996	1717	807	199	39	11	1	0	0	0	0	0	5.5	26.8
06-22	4798	32.2	12	85	348	1096	1938	995	255	55	12	1	1	0	0	0	0	5.5	27.1
06-00	4967	32.4	12	85	349	1139	1989	1041	275	60	13	2	2	0	0	0	0	5.6	27.2
00-00	5144	32.7	12	85	353	1165	2025	1083	314	81	18	5	3	0	0	0	0	5.7	27.4

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drve bersted

Direction - AB

25 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	38	34.9	0	0	1	8	11	12	3	2	1	0	0	0	0	0	0	6.4	30
0100	15	37.6	0	0	0	1	6	4	2	1	1	0	0	0	0	0	0	6.2	32.2
0200	20	39.4	0	0	0	1	3	6	7	0	3	0	0	0	0	0	0	6.6	35.4
0300	29	44.5	0	0	1	1	1	3	11	8	3	1	0	0	0	0	0	7.3	38.4
0400	24	41.4	0	1	0	1	1	4	6	11	0	0	0	0	0	0	0	6.8	36.6
0500	30	37.8	0	0	1	4	10	5	7	3	0	0	0	0	0	0	0	6.8	31.2
0600	95	37.1	0	0	2	11	32	26	17	5	2	0	0	0	0	0	0	6.2	31.2
0700	158	35.6	0	2	3	25	53	47	21	4	2	1	0	0	0	0	0	5.8	29.9
0800	173	34.9	1	1	5	24	64	52	23	2	1	0	0	0	0	0	0	5.5	29.6
0900	286	32	1	0	8	53	134	72	15	3	0	0	0	0	0	0	0	4.6	28
1000	479	31.1	1	1	18	101	254	84	19	1	0	0	0	0	0	0	0	4.2	27.3
1100	553	30.4	1	11	50	136	255	90	9	1	0	0	0	0	0	0	0	4.7	26
1200	486	32	1	10	30	114	200	106	22	3	0	0	0	0	0	0	0	5.2	27
1300	409	31.8	6	9	39	101	130	100	19	5	0	0	0	0	0	0	0	6	26.5
1400	483	29.8	2	16	65	129	199	63	7	2	0	0	0	0	0	0	0	5.2	25.1
1500	387	30	3	13	45	98	161	58	8	1	0	0	0	0	0	0	0	5.5	25.4
1600	373	30.6	2	5	23	77	196	56	11	2	0	1	0	0	0	0	0	4.9	26.6
1700	360	32.2	1	5	30	87	137	78	19	3	0	0	0	0	0	0	0	5.5	26.9
1800	262	32.7	0	2	12	65	97	71	15	0	0	0	0	0	0	0	0	4.8	27.8
1900	253	35.6	0	0	3	42	89	72	42	3	2	0	0	0	0	0	0	5.1	29.9
2000	157	35.8	0	2	2	33	41	48	19	11	0	1	0	0	0	0	0	6.4	30.1
2100	98	34	0	0	6	14	33	31	11	2	1	0	0	0	0	0	0	5.4	29.6
2200	88	35.1	0	0	3	17	28	25	13	1	1	0	0	0	0	0	0	5.5	29.3
2300	39	38	0	0	0	4	12	13	6	3	1	0	0	0	0	0	0	6	32.2
07-19	4409	31.8	19	75	328	1010	1880	877	188	27	3	2	0	0	0	0	0	5.3	26.8
06-22	5012	32.2	19	77	341	1110	2075	1054	277	48	8	3	0	0	0	0	0	5.4	27.2
06-00	5139	32.4	19	77	344	1131	2115	1092	296	52	10	3	0	0	0	0	0	5.5	27.3
00-00	5295	32.7	19	78	347	1147	2147	1126	332	77	18	4	0	0	0	0	0	5.6	27.5

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drve bersted

Direction - AB

26 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	16	39.6	0	0	0	5	3	3	3	2	0	0	0	0	0	0	0	7.2	31
0100	14	39.6	0	0	0	4	3	3	2	1	1	0	0	0	0	0	0	7.5	31.2
0200	6		0	0	0	0	4	1	1	0	0	0	0	0	0	0	0	3.9	30.2
0300	12	39.6	0	0	1	1	2	4	3	1	0	0	0	0	0	0	0	7.3	32.8
0400	19	41.8	0	0	1	1	2	6	5	2	2	0	0	0	0	0	0	7.1	34.9
0500	98	39.6	0	1	0	7	24	26	25	13	2	0	0	0	0	0	0	6.3	33.5
0600	254	36	0	0	13	18	64	107	40	9	2	1	0	0	0	0	0	5.5	31.1
0700	435	33.3	1	3	14	93	164	123	31	6	0	0	0	0	0	0	0	5	28.4
0800	531	30.2	0	5	34	99	298	84	11	0	0	0	0	0	0	0	0	4.2	26.7
0900	508	29.5	1	7	34	137	264	59	5	1	0	0	0	0	0	0	0	4.2	26
1000	528	28.4	3	25	76	174	207	36	7	0	0	0	0	0	0	0	0	5	23.9
1100	487	28.9	13	14	63	147	203	42	4	1	0	0	0	0	0	0	0	5.4	24.3
1200	485	28.9	2	15	55	140	221	41	10	0	1	0	0	0	0	0	0	4.8	25
1300	465	30.4	1	9	46	117	204	78	10	0	0	0	0	0	0	0	0	4.8	26
1400	524	30	3	20	57	137	228	71	6	2	0	0	0	0	0	0	0	5.3	25.2
1500	467	30.2	3	12	43	123	208	66	12	0	0	0	0	0	0	0	0	5.1	25.7
1600	505	30.6	5	15	45	169	175	82	14	0	0	0	0	0	0	0	0	5.4	25.3
1700	531	30.2	4	36	65	144	191	76	14	1	0	0	0	0	0	0	0	5.9	24.7
1800	437	31.8	0	7	49	107	161	84	24	5	0	0	0	0	0	0	0	5.6	26.6
1900	318	33.6	0	2	14	52	126	90	30	3	1	0	0	0	0	0	0	5	28.8
2000	212	34	0	0	9	37	81	60	20	5	0	0	0	0	0	0	0	5.3	29
2100	139	34.7	0	2	8	26	41	43	13	3	3	0	0	0	0	0	0	6.2	29.1
2200	101	33.3	0	0	2	22	34	32	6	4	1	0	0	0	0	0	0	5.5	29.2
2300	56	36.9	0	0	1	8	18	17	9	2	1	0	0	0	0	0	0	5.8	30.3
07-19	5903	30.2	36	168	581	1587	2524	842	148	16	1	0	0	0	0	0	0	5.2	25.6
06-22	6826	31.1	36	172	625	1720	2836	1142	251	36	7	1	0	0	0	0	0	5.4	26.1
06-00	6983	31.3	36	172	628	1750	2888	1191	266	42	9	1	0	0	0	0	0	5.4	26.2
00-00	7148	31.5	36	173	630	1768	2926	1234	305	61	14	1	0	0	0	0	0	5.6	26.4

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

27 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	25	39.1	0	0	0	5	8	6	2	3	1	0	0	0	0	0	0	7.1	30.7
0100	9		0	0	1	2	1	2	2	1	0	0	0	0	0	0	0	7.7	30
0200	15	38.3	0	0	0	0	2	5	6	1	1	0	0	0	0	0	0	4.6	35
0300	17	38.7	0	0	1	0	3	3	8	1	1	0	0	0	0	0	0	6.9	34.5
0400	15	41.8	0	0	0	0	1	4	7	2	1	0	0	0	0	0	0	4.5	36.5
0500	94	41.4	0	1	0	8	17	24	23	17	3	0	1	0	0	0	0	7.4	34.3
0600	226	35.1	0	0	6	30	73	77	28	9	3	0	0	0	0	0	0	5.7	30.5
0700	461	31.5	1	12	36	96	205	92	17	2	0	0	0	0	0	0	0	5.2	26.7
0800	505	30.9	1	5	30	118	247	92	12	0	0	0	0	0	0	0	0	4.4	26.7
0900	477	29.8	3	6	40	155	202	65	5	1	0	0	0	0	0	0	0	4.5	25.6
1000	501	29.5	3	17	53	160	199	64	5	0	0	0	0	0	0	0	0	5	25.1
1100	433	30.4	0	12	35	123	182	68	13	0	0	0	0	0	0	0	0	4.9	26
1200	460	31.1	0	9	32	120	193	92	11	3	0	0	0	0	0	0	0	4.9	26.6
1300	425	31.8	1	2	21	93	193	95	18	1	1	0	0	0	0	0	0	4.8	27.5
1400	423	30.6	3	7	28	93	206	72	14	0	0	0	0	0	0	0	0	4.8	26.6
1500	462	30.9	2	7	40	117	204	77	13	2	0	0	0	0	0	0	0	4.9	26.2
1600	438	30.4	3	14	54	121	171	60	15	0	0	0	0	0	0	0	0	5.5	25.2
1700	484	30.2	2	13	59	152	179	68	8	2	1	0	0	0	0	0	0	5.2	25.2
1800	385	32.4	0	8	21	89	158	84	23	1	0	0	1	0	0	0	0	5.4	27.3
1900	291	33.6	0	2	17	55	103	80	28	5	1	0	0	0	0	0	0	5.5	28.5
2000	164	35.1	0	3	7	24	53	49	18	10	0	0	0	0	0	0	0	6.2	29.3
2100	126	32.9	0	1	6	21	44	44	8	1	1	0	0	0	0	0	0	5.1	28.5
2200	111	34.4	0	0	3	19	43	30	10	4	2	0	0	0	0	0	0	5.4	29.6
2300	50	37.4	0	0	4	11	11	14	6	3	1	0	0	0	0	0	0	7.1	29.5
07-19	5454	30.9	19	112	449	1437	2339	929	154	12	2	0	1	0	0	0	0	5	26.2
06-22	6261	31.3	19	118	485	1567	2612	1179	236	37	7	0	1	0	0	0	0	5.2	26.6
06-00	6422	31.5	19	118	492	1597	2666	1223	252	44	10	0	1	0	0	0	0	5.2	26.7
00-00	6597	31.8	19	119	494	1612	2698	1267	300	69	17	0	2	0	0	0	0	5.4	26.8

TSF Speed

Report Id - CustomList-100

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - AB

28 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	26	42.7	0	0	2	3	3	8	3	4	1	2	0	0	0	0	0	9.3	33.5
0100	7 -		0	1	0	2	1	1	2	0	0	0	0	0	0	0	0	8.7	28.5
0200	11	38	0	0	0	0	5	3	1	2	0	0	0	0	0	0	0	6.1	32.7
0300	11	44.1	0	0	0	0	3	2	2	2	1	1	0	0	0	0	0	8.5	38.3
0400	10 -		0	0	0	0	0	1	6	1	1	1	0	0	0	0	0	5.8	39.6
0500	81	42.5	0	0	1	1	14	20	22	15	6	1	1	0	0	0	0	6.9	35.9
0600	215	37.8	0	0	7	11	71	73	34	13	6	0	0	0	0	0	0	5.9	31.6
0700	485	32.7	1	9	19	72	210	136	32	6	0	0	0	0	0	0	0	5.1	28.2
0800	556	29.8	4	20	46	142	264	73	7	0	0	0	0	0	0	0	0	5.1	25.6
0900	514	29.5	0	9	33	166	236	59	9	1	0	0	0	0	0	0	0	5	25.7
1000	547	29.8	11	15	37	146	257	71	9	1	0	0	0	0	0	0	0	5.3	25.6
1100	521	29.1	1	18	60	148	240	46	7	1	0	0	0	0	0	0	0	4.8	25
1200	466	29.3	3	10	51	135	210	49	5	2	1	0	0	0	0	0	0	4.9	25.3
1300	444	30.4	4	15	38	129	177	75	6	0	0	0	0	0	0	0	0	5.3	25.5
1400	339	29.5	1	9	28	109	144	46	2	0	0	0	0	0	0	0	0	4.5	25.4
07-19	3872	30.2	25	105	312	1047	1738	555	77	11	1	0	0	0	0	0	0	5.1	25.8
06-22	4087	30.6	25	105	319	1058	1809	628	111	24	7	0	0	0	0	0	0	5.3	26.1
06-00	4087	30.6	25	105	319	1058	1809	628	111	24	7	0	0	0	0	0	0	5.3	26.1
00-00	4233	30.9	25	106	322	1064	1835	663	147	48	16	5	1	0	0	0	0	5.7	26.4

TSF Speed

Report Id - CustomList-100
Site Name - 5
Description - Chalcraft lane s of central drve bersted
Direction - AB

Grand Total

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
--	53208	31.5	183	1165	4649	13496	21371	9287	2352	534	131	29	7	1	0	0	1	5.6	26.5

TSF Speed

Globals

Report Id	CustomList-101
Descriptor	TSF Speed
Created by	MetroCount Traffic Executive
Creation Time (UTC)	2009-06-01T09:49:18
Legal	Copyright (c)1997 - 2007 MetroCount
Graphic	header.gif
Language	English
Country	United Kingdom
Create Version	3.18.14162.0
Metric	FALSE
Speed Unit	mph
Length Unit	ft
Mass Unit	ton

Dataset

Site Name	5
Site Attribute	[-32.000000 +115.000000]
File Name	C:\Users\mbarrett\Desktop\atc\MetroCount\MTE 3.18\Data\501Jun2009.EC0
File Type	Plus
Algorithm	Factory default
Description	Chalcraff lane s of central drive bersted
Lane	0
Direction	7
Direction Text	7 - North bound A>B, South bound B>A.
Layout Text	Axle sensors - Paired (Class/Speed/Count)
Setup Time	2009-05-20T08:44:29
Start Time	2009-05-20T12:00:00
Finish Time	2009-06-01T10:09:29
Operator	RKM
Configuration	00000000 80 00 14 6a 6a 00 00 00 00 00 , Standard

Profile

Name	Default Profile
Title	MetroCount Traffic Executive
Graphic Logo	
Header	
Footer	
Percentile 1	85
Percentile 2	95
Pace	10
Filter Start	2009-05-20T12:00:00
Filter End	2009-06-01T10:09:29
Class Scheme	AustRoads94
Low Speed	5
High Speed	100
Posted Limit	30
Speed Limits	30
Separation	0.000
Separation Type	Headway
Direction	SOUTHBOUND
Encoded Direction	5

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

20 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
1200	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1300	168	32	0	4	16	30	63	43	10	2	0	0	0	0	0	0	0	5.5	27.1
1400	538	32.2	0	12	71	65	203	154	32	1	0	0	0	0	0	0	0	5.7	27.2
1500	570	31.8	6	18	91	111	187	134	20	2	1	0	0	0	0	0	0	6.1	25.9
1600	661	32.4	0	6	79	137	223	189	24	3	0	0	0	0	0	0	0	5.4	27.1
1700	677	32.9	1	7	56	134	227	199	47	3	3	0	0	0	0	0	0	5.6	27.8
1800	609	33.3	0	8	60	113	197	182	39	9	0	1	0	0	0	0	0	5.7	27.9
1900	451	34.2	0	3	48	61	141	140	49	4	3	1	1	0	0	0	0	6.2	28.7
2000	336	35.1	0	2	23	44	86	128	39	13	1	0	0	0	0	0	0	6	29.8
2100	218	34.9	0	2	11	21	84	66	23	9	2	0	0	0	0	0	0	5.8	29.7
2200	149	36	0	4	12	33	35	32	22	9	1	1	0	0	0	0	0	7.4	28.8
2300	84	37.6	0	0	4	17	19	20	15	6	2	1	0	0	0	0	0	7.3	31
07-19	3223	32.4	7	55	373	590	1100	901	172	20	4	1	0	0	0	0	0	5.7	27.2
06-22	4228	33.1	7	62	455	716	1411	1235	283	46	10	2	1	0	0	0	0	5.9	27.7
06-00	4461	33.3	7	66	471	766	1465	1287	320	61	13	4	1	0	0	0	0	6	27.8
00-00	4461	33.3	7	66	471	766	1465	1287	320	61	13	4	1	0	0	0	0	6	27.8

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

21 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	33	39.1	0	0	3	8	6	7	4	3	2	0	0	0	0	0	0	8.5	30.5
0100	12	43.6	0	0	0	3	1	2	2	3	1	0	0	0	0	0	0	9.1	34.3
0200	12	39.6	0	0	1	3	0	2	4	0	2	0	0	0	0	0	0	9.4	32.6
0300	6 -		0	0	0	1	3	0	1	1	0	0	0	0	0	0	0	7.2	29.7
0400	7 -		0	1	0	2	1	0	2	0	1	0	0	0	0	0	0	11.4	30.2
0500	26	37.8	0	0	5	7	4	3	3	3	1	0	0	0	0	0	0	9	28.5
0600	95	37.1	0	3	9	22	15	19	20	5	2	0	0	0	0	0	0	8	29.2
0700	296	34.7	1	10	42	60	55	86	32	9	0	1	0	0	0	0	0	7.3	27.5
0800	459	32.4	1	8	66	125	121	105	28	5	0	0	0	0	0	0	0	6	26.2
0900	453	31.5	0	14	55	101	166	94	19	3	1	0	0	0	0	0	0	5.8	26.4
1000	463	32	3	8	50	87	180	106	24	5	0	0	0	0	0	0	0	5.7	26.9
1100	511	32.2	2	8	64	68	213	135	19	1	0	0	0	0	0	0	0	6.3	27.1
1200	511	32	3	7	60	87	181	142	25	6	0	0	0	0	0	0	0	5.7	27.2
1300	512	31.8	4	4	49	104	208	122	18	3	0	0	0	0	0	0	0	5.3	27
1400	555	31.8	3	8	56	109	211	146	20	2	0	0	0	0	0	0	0	5.4	26.8
1500	579	31.8	0	7	52	133	215	147	24	1	0	0	0	0	0	0	0	5.1	27
1600	662	32.4	3	6	77	123	249	164	31	8	1	0	0	0	0	0	0	5.7	27.1
1700	667	33.1	0	7	63	131	204	216	36	10	0	0	0	0	0	0	0	5.7	27.8
1800	596	34.2	0	9	53	97	141	224	67	3	2	0	0	0	0	0	0	6.1	28.7
1900	427	34.4	2	7	37	51	127	143	50	8	1	0	1	0	0	0	0	6.2	28.9
2000	338	35.1	2	2	25	55	95	104	46	8	1	0	0	0	0	0	0	6.2	29.2
2100	244	35.1	0	0	18	37	74	71	33	10	1	0	0	0	0	0	0	6.1	29.4
2200	166	37.1	0	1	12	25	47	45	23	8	2	1	1	0	1	0	0	7.7	30.2
2300	87	37.8	0	0	1	9	24	29	19	1	3	1	0	0	0	0	0	5.9	32
07-19	6264	32.7	20	96	687	1225	2144	1687	343	56	4	1	0	0	0	0	0	5.8	27.2
06-22	7368	33.1	24	108	776	1390	2455	2024	492	87	9	1	1	0	0	0	0	5.9	27.5
06-00	7621	33.1	24	109	789	1424	2526	2098	534	96	14	3	2	0	1	0	0	6	27.6
00-00	7717	33.1	24	110	798	1448	2541	2112	550	106	21	3	2	0	1	0	0	6.1	27.6

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drve bersted

Direction - BA

22 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	34	42.3	0	0	2	2	9	5	7	5	4	0	0	0	0	0	0	8.1	34
0100	17	38.9	0	0	0	0	4	8	3	0	1	1	0	0	0	0	0	6.9	34.3
0200	15	42.3	0	0	2	1	3	1	4	4	0	0	0	0	0	0	0	9	32.6
0300	11	38.9	0	1	0	1	1	1	5	1	1	0	0	0	0	0	0	9.9	34.4
0400	7	-	0	0	0	2	0	1	2	1	0	1	0	0	0	0	0	11.6	35.5
0500	25	40.3	0	0	1	6	3	7	3	2	3	0	0	0	0	0	0	8.4	32
0600	88	38.7	0	3	9	18	8	19	21	7	3	0	0	0	0	0	0	8.7	30.2
0700	285	35.1	0	3	37	65	59	75	27	13	6	0	0	0	0	0	0	7.3	28.2
0800	452	31.8	0	6	57	118	148	99	21	3	0	0	0	0	0	0	0	5.5	26.4
0900	431	31.5	6	6	47	96	160	90	23	3	0	0	0	0	0	0	0	5.9	26.4
1000	506	32	5	20	72	77	200	107	21	3	1	0	0	0	0	0	0	6.3	26.2
1100	540	31.5	6	7	57	107	213	135	14	1	0	0	0	0	0	0	0	5.4	26.7
1200	606	32.9	0	4	57	103	211	189	36	5	0	1	0	0	0	0	0	5.4	27.9
1300	566	31.8	1	7	51	116	221	151	19	0	0	0	0	0	0	0	0	5.1	27.1
1400	603	32.4	2	12	74	114	208	154	38	1	0	0	0	0	0	0	0	5.8	26.9
1500	603	32	1	22	78	113	204	159	23	2	0	1	0	0	0	0	0	6	26.5
1600	697	32	0	7	68	155	269	166	31	1	0	0	0	0	0	0	0	5.1	27
1700	668	33.6	1	14	67	117	195	202	61	11	0	0	0	0	0	0	0	6.1	27.9
1800	573	33.1	1	10	47	102	183	177	42	11	0	0	0	0	0	0	0	5.9	28
1900	480	34.7	1	5	42	68	127	168	50	15	3	0	1	0	0	0	0	6.3	29.3
2000	358	35.1	0	1	25	52	95	125	50	7	2	0	0	0	1	0	0	6.1	29.7
2100	226	35.6	1	1	18	38	65	64	30	9	0	0	0	0	0	0	0	6.3	29.1
2200	188	35.6	0	1	16	23	55	60	23	7	2	1	0	0	0	0	0	6.3	29.7
2300	136	37.1	0	2	4	16	40	41	21	8	1	3	0	0	0	0	0	6.9	30.8
07-19	6530	32.4	23	118	712	1283	2271	1704	356	54	7	2	0	0	0	0	0	5.8	27.1
06-22	7682	32.9	25	128	806	1459	2566	2080	507	92	15	2	1	0	1	0	0	5.9	27.4
06-00	8006	32.9	25	131	826	1498	2661	2181	551	107	18	6	1	0	1	0	0	6	27.6
00-00	8115	33.1	25	132	831	1510	2681	2204	575	120	27	8	1	0	1	0	0	6.1	27.6

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

23 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	73	36.9	0	0	4	7	12	26	20	3	1	0	0	0	0	0	0	6.1	31.6
0100	39	38.5	0	0	2	3	6	14	10	3	0	0	1	0	0	0	0	7.3	32.5
0200	17	40.7	0	0	1	2	2	3	5	3	1	0	0	0	0	0	0	8.1	34.1
0300	18	42.7	0	0	1	3	0	6	2	3	3	0	0	0	0	0	0	9.7	34.6
0400	18	36.7	0	1	1	7	0	3	3	2	0	1	0	0	0	0	0	10.5	30.4
0500	22	39.4	0	0	3	4	4	4	4	0	1	1	1	0	0	0	0	11.1	31.5
0600	57	34.4	0	2	5	25	10	6	8	1	0	0	0	0	0	0	0	6.9	25.7
0700	155	36.5	1	4	14	33	33	39	18	9	2	1	1	0	0	0	0	8	28.8
0800	258	34.2	1	3	23	37	74	86	30	3	1	0	0	0	0	0	0	6	28.8
0900	392	33.6	0	1	39	74	125	113	34	5	1	0	0	0	0	0	0	5.7	28
1000	522	32.7	1	4	56	93	199	128	35	5	0	1	0	0	0	0	0	5.7	27.5
1100	609	32.2	3	9	86	112	221	145	29	2	1	1	0	0	0	0	0	5.9	26.7
1200	614	32	6	24	72	126	214	152	17	3	0	0	0	0	0	0	0	6	26.1
1300	598	32.4	2	11	80	110	204	158	28	4	0	0	1	0	0	0	0	5.9	26.9
1400	522	32.7	1	12	54	79	217	121	31	5	2	0	0	0	0	0	0	5.8	27.3
1500	524	32.7	0	12	53	82	184	160	29	3	1	0	0	0	0	0	0	5.7	27.6
1600	528	32.9	1	2	45	93	188	159	37	3	0	0	0	0	0	0	0	5.3	27.9
1700	505	34.4	1	4	44	69	167	151	59	10	0	0	0	0	0	0	0	5.9	28.8
1800	406	35.6	0	2	31	55	96	149	64	8	1	0	0	0	0	0	0	6	29.7
1900	359	35.3	0	1	30	40	110	118	39	17	3	1	0	0	0	0	0	6.3	29.9
2000	234	36	1	0	15	27	59	82	31	13	3	2	1	0	0	0	0	6.8	30.8
2100	179	35.6	0	1	18	31	39	58	22	7	2	1	0	0	0	0	0	7.1	29.2
2200	138	35.3	1	2	7	20	44	41	15	6	0	1	0	1	0	0	0	7.1	29.5
2300	130	36.9	0	0	7	15	32	46	21	5	3	1	0	0	0	0	0	6.6	31.1
07-19	5633	33.1	17	88	597	963	1922	1561	411	60	9	3	2	0	0	0	0	5.9	27.6
06-22	6462	33.6	18	92	665	1086	2140	1825	511	98	17	7	3	0	0	0	0	6.1	27.9
06-00	6730	33.6	19	94	679	1121	2216	1912	547	109	20	9	3	1	0	0	0	6.1	28
00-00	6917	33.8	19	95	691	1147	2240	1968	591	123	26	11	5	1	0	0	0	6.2	28.1

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

24 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	103	37.1	0	0	3	14	29	32	17	6	2	0	0	0	0	0	0	6.2	31.1
0100	52	40.7	0	0	5	4	5	12	14	8	2	2	0	0	0	0	0	8.4	34.3
0200	26	41.8	0	0	0	7	1	5	8	3	0	1	1	0	0	0	0	9.9	33.9
0300	36	42.9	1	0	0	6	7	9	4	5	3	0	0	1	0	0	0	10.2	33.1
0400	13	45.4	0	0	0	0	1	1	4	4	2	0	1	0	0	0	0	7.7	40.7
0500	13	44.7	0	0	4	1	1	2	1	2	1	0	1	0	0	0	0	13.8	31.9
0600	53	38	0	0	9	17	8	8	5	4	1	1	0	0	0	0	0	8.7	27.8
0700	77	38.9	0	2	9	10	14	20	14	6	1	1	0	0	0	0	0	8.5	30.3
0800	115	37.1	0	1	11	12	28	31	25	1	4	2	0	0	0	0	0	7.5	30.8
0900	190	34.4	0	2	27	25	59	52	18	4	2	0	1	0	0	0	0	6.8	28.3
1000	424	32.7	0	9	50	73	151	116	18	5	2	0	0	0	0	0	0	6	27.2
1100	540	31.1	4	7	65	116	205	109	31	3	0	0	0	0	0	0	0	5.6	26.5
1200	578	32.4	0	5	63	109	222	133	40	4	1	1	0	0	0	0	0	5.6	27.4
1300	458	33.1	0	7	48	72	157	128	41	3	2	0	0	0	0	0	0	5.8	27.8
1400	421	34.4	1	3	28	66	127	140	53	3	0	0	0	0	0	0	0	5.6	28.9
1500	465	33.3	0	5	45	70	130	172	37	3	3	0	0	0	0	0	0	5.9	28.4
1600	403	35.1	2	3	25	50	115	145	51	10	1	1	0	0	0	0	0	5.9	29.7
1700	333	35.8	0	3	22	43	76	128	49	10	1	0	1	0	0	0	0	6.4	30.1
1800	296	36.5	0	3	29	39	52	107	52	12	2	0	0	0	0	0	0	6.8	30.2
1900	269	36.5	0	2	18	30	43	108	50	12	3	3	0	0	0	0	0	6.7	31.2
2000	203	37.4	0	3	13	34	44	61	34	10	3	0	1	0	0	0	0	7.1	30.1
2100	163	36.2	0	0	13	18	39	59	24	7	2	1	0	0	0	0	0	6.5	30.5
2200	125	38.9	0	0	9	15	38	33	18	10	2	0	0	0	0	0	0	6.9	30.7
2300	103	38.5	1	1	3	10	22	34	20	9	1	1	1	0	0	0	0	7.3	31.9
07-19	4300	34	7	50	422	685	1336	1281	429	64	19	5	2	0	0	0	0	6.2	28.4
06-22	4988	34.4	7	55	475	784	1470	1517	542	97	28	10	3	0	0	0	0	6.3	28.7
06-00	5216	34.7	8	56	487	809	1530	1584	580	116	31	11	4	0	0	0	0	6.4	28.8
00-00	5459	34.9	9	56	499	841	1574	1645	628	144	41	14	7	1	0	0	0	6.6	29

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

26 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	30	40.5	0	0	0	5	7	4	9	5	0	0	0	0	0	0	0	6.7	33.2
0100	11	34.9	0	0	1	3	2	2	2	0	0	1	0	0	0	0	0	9.3	30.2
0200	1 -		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0 -		42.5
0300	8 -		0	0	0	2	0	6	0	0	0	0	0	0	0	0	0	5.7	29.7
0400	5 -		0	1	0	0	1	0	0	2	1	0	0	0	0	0	0	14	34.6
0500	29	38	0	0	6	6	6	6	1	3	1	0	0	0	0	0	0	8.3	28.7
0600	91	36.7	0	4	11	25	11	19	14	7	0	0	0	0	0	0	0	8.1	28
0700	254	34.7	1	2	33	54	50	76	34	4	0	0	0	0	0	0	0	6.5	28.1
0800	336	32.7	0	3	35	75	113	89	18	3	0	0	0	0	0	0	0	5.6	27.3
0900	428	32.2	1	3	37	69	184	109	22	3	0	0	0	0	0	0	0	5.2	27.6
1000	588	31.5	0	4	86	127	232	116	19	3	1	0	0	0	0	0	0	5.4	26.3
1100	631	31.3	6	21	98	144	215	117	25	3	2	0	0	0	0	0	0	6.1	25.7
1200	612	31.8	1	4	69	128	240	136	30	4	0	0	0	0	0	0	0	5.3	27
1300	559	32.9	2	9	63	95	201	153	30	6	0	0	0	0	0	0	0	5.8	27.3
1400	549	32.2	4	12	58	97	200	144	28	6	0	0	0	0	0	0	0	5.7	27.1
1500	571	32.7	1	4	75	94	202	152	40	2	0	1	0	0	0	0	0	5.8	27.2
1600	614	33.1	1	6	64	135	194	169	38	7	0	0	0	0	0	0	0	5.8	27.3
1700	645	34	2	7	66	113	180	203	65	9	0	0	0	0	0	0	0	6.1	28.1
1800	534	34.7	0	4	43	86	113	215	57	14	0	2	0	0	0	0	0	6.1	29.3
1900	442	36.2	0	2	32	60	119	136	75	16	2	0	0	0	0	0	0	6.2	30
2000	306	35.6	0	0	24	41	68	114	44	12	2	1	0	0	0	0	0	6.2	30
2100	207	35.6	0	2	9	27	70	59	30	8	2	0	0	0	0	0	0	5.9	29.9
2200	165	35.6	0	2	7	23	47	52	24	5	2	2	1	0	0	0	0	6.7	30.4
2300	83	37.1	1	0	2	9	20	28	15	6	1	1	0	0	0	0	0	6.9	31.3
07-19	6321	32.9	19	79	727	1217	2124	1679	406	64	3	3	0	0	0	0	0	5.8	27.3
06-22	7367	33.3	19	87	803	1370	2392	2007	569	107	9	4	0	0	0	0	0	6	27.6
06-00	7615	33.6	20	89	812	1402	2459	2087	608	118	12	7	1	0	0	0	0	6	27.7
00-00	7699	33.6	20	90	819	1418	2475	2105	620	129	14	8	1	0	0	0	0	6.1	27.8

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

25 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	46	39.8	0	0	1	11	4	12	11	7	0	0	0	0	0	0	0	7.5	31.9
0100	30	41.8	0	0	1	7	4	7	5	3	3	0	0	0	0	0	0	8.3	32.4
0200	28	44.1	0	1	0	2	5	2	11	3	3	1	0	0	0	0	0	8.6	35.5
0300	22	48.1	0	0	0	3	1	0	6	6	3	3	0	0	0	0	0	9.4	39.3
0400	18	49.2	0	0	0	2	0	3	2	3	6	2	0	0	0	0	0	8.8	41.3
0500	22	39.8	0	1	6	5	5	1	1	1	2	0	0	0	0	0	0	9.9	26.2
0600	54	41.4	0	1	16	10	4	6	7	6	3	0	1	0	0	0	0	10.6	28.4
0700	96	35.8	1	1	11	16	18	29	16	4	0	0	0	0	0	0	0	7.1	28.9
0800	127	34	0	3	12	25	28	44	13	2	0	0	0	0	0	0	0	6.3	28.3
0900	186	33.8	0	3	17	30	52	62	14	5	3	0	0	0	0	0	0	6.5	28.8
1000	349	33.3	1	5	23	56	114	123	23	4	0	0	0	0	0	0	0	5.4	28.3
1100	470	32.2	0	4	46	78	189	118	28	7	0	0	0	0	0	0	0	5.4	27.5
1200	519	32.7	0	6	50	78	199	151	27	6	1	0	1	0	0	0	0	5.6	27.9
1300	554	32.9	2	4	50	82	205	167	36	7	1	0	0	0	0	0	0	5.6	28.1
1400	470	33.3	0	4	49	74	157	142	39	5	0	0	0	0	0	0	0	5.7	28.1
1500	480	32.4	2	6	43	67	186	148	24	3	1	0	0	0	0	0	0	5.3	27.8
1600	439	34	1	1	35	72	128	148	49	3	2	0	0	0	0	0	0	5.8	28.7
1700	371	34.4	0	1	28	47	128	119	40	6	1	0	1	0	0	0	0	5.8	29.2
1800	325	35.1	0	2	37	44	78	109	39	12	2	2	0	0	0	0	0	6.5	29.3
1900	273	36.9	0	1	14	38	56	98	52	12	2	0	0	0	0	0	0	6.3	30.7
2000	218	35.3	0	2	12	33	44	89	32	4	1	1	0	0	0	0	0	6.1	30.1
2100	122	35.6	0	1	11	19	40	28	14	8	0	0	1	0	0	0	0	7	29.3
2200	95	34.4	0	0	14	24	16	31	6	3	1	0	0	0	0	0	0	6.5	28
2300	68	40	0	0	5	9	9	21	13	10	0	0	1	0	0	0	0	7.7	32
07-19	4386	33.6	7	40	401	669	1482	1360	348	64	11	2	2	0	0	0	0	5.8	28.3
06-22	5053	34	7	45	454	769	1626	1581	453	94	17	3	4	0	0	0	0	6	28.5
06-00	5216	34	7	45	473	802	1651	1633	472	107	18	3	5	0	0	0	0	6	28.6
00-00	5382	34.2	7	47	481	832	1670	1658	508	130	35	9	5	0	0	0	0	6.2	28.7

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drive bersted

Direction - BA

27 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	29	42.1	0	0	2	2	5	7	7	6	0	0	0	0	0	0	0	7.6	33.5
0100	18	38.5	0	1	1	0	3	7	3	0	1	2	0	0	0	0	0	10.1	33.8
0200	20	42.7	0	1	0	0	1	5	9	2	0	1	0	0	1	0	0	10.2	37.3
0300	13	44.7	0	0	0	0	4	1	3	3	2	0	0	0	0	0	0	7.2	36.8
0400	12	39.6	0	0	2	1	3	1	3	2	0	0	0	0	0	0	0	8.3	31
0500	32	36	0	0	3	9	5	6	5	3	1	0	0	0	0	0	0	8	29
0600	99	37.6	1	2	11	18	12	29	18	6	1	1	0	0	0	0	0	8	29.8
0700	265	34.2	1	4	35	67	62	62	28	4	2	0	0	0	0	0	0	6.7	27.3
0800	320	33.6	0	0	36	80	85	85	32	2	0	0	0	0	0	0	0	5.8	27.7
0900	383	32	6	7	54	70	137	88	19	2	0	0	0	0	0	0	0	6.1	26.2
1000	434	32.2	0	6	36	86	172	122	10	2	0	0	0	0	0	0	0	5	27.2
1100	489	31.5	0	7	59	79	217	108	16	2	0	1	0	0	0	0	0	5.3	26.9
1200	520	32	0	4	48	92	232	118	22	3	1	0	0	0	0	0	0	5.1	27.3
1300	477	32.9	2	9	37	75	188	129	32	5	0	0	0	0	0	0	0	5.5	27.9
1400	479	32.2	1	3	37	70	194	144	26	3	1	0	0	0	0	0	0	5	27.9
1500	539	33.1	0	4	52	97	190	165	26	2	2	1	0	0	0	0	0	5.5	27.7
1600	621	32.9	1	4	57	103	230	186	35	5	0	0	0	0	0	0	0	5.3	27.9
1700	697	32.7	1	11	77	162	219	178	41	4	2	2	0	0	0	0	0	5.9	27
1800	528	34	0	3	42	73	180	171	48	9	1	1	0	0	0	0	0	5.6	28.8
1900	396	35.3	0	3	24	61	110	132	58	7	1	0	0	0	0	0	0	5.9	29.5
2000	256	36.7	0	2	10	40	56	85	46	10	6	0	1	0	0	0	0	6.7	30.8
2100	169	35.3	0	1	9	34	55	41	22	4	2	1	0	0	0	0	0	6.5	29.1
2200	164	35.6	0	0	14	20	47	50	19	10	2	1	0	1	0	0	0	7	30.4
2300	96	36	0	0	8	15	19	34	14	4	2	0	0	0	0	0	0	6.6	30.2
07-19	5752	32.7	12	62	570	1054	2106	1556	335	43	9	5	0	0	0	0	0	5.6	27.5
06-22	6672	33.1	13	70	624	1207	2339	1843	479	70	19	7	1	0	0	0	0	5.8	27.8
06-00	6932	33.3	13	70	646	1242	2405	1927	512	84	23	8	1	1	0	0	0	5.8	27.9
00-00	7056	33.6	13	72	654	1254	2426	1954	542	100	27	11	1	1	1	0	0	5.9	28

TSF Speed

Report Id - CustomList-101

Site Name - 5

Description - Chalcraft lane s of central drve bersted

Direction - BA

28 May 2009

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
0000	29	38	0	0	1	5	6	9	4	1	2	0	0	0	1	0	0	10.1	32.6
0100	14	43.8	0	1	0	3	4	0	2	3	0	0	0	1	0	0	0	12.6	32.6
0200	12	38.3	0	0	0	3	2	2	3	1	1	0	0	0	0	0	0	8.9	32.1
0300	3 -		0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	6.9	39.4
0400	7 -		0	1	0	1	1	2	1	1	0	0	0	0	0	0	0	9.7	30.4
0500	23	41.6	0	0	1	8	2	5	2	4	1	0	0	0	0	0	0	8.8	30.7
0600	91	38.3	0	0	10	22	14	16	25	4	0	0	0	0	0	0	0	7.8	29.5
0700	266	36	1	5	31	50	48	80	39	11	1	0	0	0	0	0	0	7.3	28.9
0800	325	33.8	1	9	42	62	82	99	26	3	1	0	0	0	0	0	0	6.6	27.3
0900	399	31.1	0	5	54	96	136	90	14	3	1	0	0	0	0	0	0	5.5	26.4
1000	478	32	1	13	54	92	162	134	17	5	0	0	0	0	0	0	0	5.8	26.8
1100	511	32.2	0	4	69	94	200	113	29	2	0	0	0	0	0	0	0	5.5	26.8
1200	607	31.1	2	9	68	120	258	129	16	5	0	0	0	0	0	0	0	5.2	26.6
1300	505	31.8	4	9	52	81	192	144	22	1	0	0	0	0	0	0	0	5.6	27.2
1400	347	31.3	0	11	33	91	124	66	16	4	1	1	0	0	0	0	0	5.9	26.5
1500	1 -		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0 -		24.1
07-19	3439	32.2	9	65	403	687	1202	855	179	34	4	1	0	0	0	0	0	5.8	26.9
06-22	3530	32.4	9	65	413	709	1216	871	204	38	4	1	0	0	0	0	0	5.9	27
06-00	3530	32.4	9	65	413	709	1216	871	204	38	4	1	0	0	0	0	0	5.9	27
00-00	3618	32.7	9	67	415	729	1231	890	217	48	9	1	0	1	1	0	0	6.1	27.1

TSF Speed

Report Id - CustomList-101
Site Name - 5
Description - Chalcraft lane s of central drve bersted
Direction - BA

Grand Total

Time	Total	Vpp 85	Vbin 5 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 55	Vbin 55 60	Vbin 60 65	Vbin 65 70	Vbin 70 75	Vbin 75 80	SD	Mean
--	56424	33.6	133	735	5659	9945	18303	15823	4551	961	213	69	23	4	4	0	0	6.2	28



APPENDIX G

CHALCROFT NURSERIES, CHALCRAFT LANE NORTH BERSTED, WEST SUSSEX

PROPOSED ACCESS & PEDESTRIAN IMPROVEMENTS

Stage 1 Road Safety Audit

JUNE 2009

MB/RR/09/0317/RSA1

Revision Status	Prepared by: (Name)	Checked by: (Name)	Approved by: (Signature)	Date Approved:
Original	Mark Barrett	Ross Rawlings		4 June 2009
Designer's Response				
Authority's Response				
Audit Response				

Client:

Russell Giles Partnership

Primrose Place
Portsmouth Road
Godalming
Surrey
GU7 2JN

Engineer:

The Safety Forum Ltd

PO Box 744
Godalming
Surrey
GU7 9DU

Date: 4 June 2009

1.0 INTRODUCTION

1.1 General

1.1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on the proposed access and pedestrian improvements for the redevelopment of Chalcraft Nurseries, Chalcraft Lane, North Bersted, West Sussex. The Nurseries will be redeveloped to a residential development consisting of up to 70 dwellings. The existing access will be formalised to form a priority junction with dropped kerbs and tactile paving. A 5.5 m wide access road will be provided for the development. It is also proposed to carry out the following improvements to pedestrian crossing facilities in the area:

- a) Construction of a pedestrian refuge island on Chalcraft Lane, northeast of the site
- b) Provision of dropped kerbs and tactile paving at the junction of Green Court Drive and Central Drive
- c) Improved pedestrian crossing facilities south west of the site

1.1.2 The RSA was carried out at the request of Stuart Jones of Russell Giles Partnership.

1.1.3 The Audit was carried out between 1st June 2009 and 4th June 2009 by consultants working on behalf of The Safety Forum Limited. The Auditors were:

Mark Barrett MIHT

Ross Rawlings MIHT

1.1.4 The Audit Team, which is established from THE SAFETY FORUM LTD and independent of the project design team, have had no other involvement with the project.

1.1.5 The report has been prepared in accordance with the Design Manual for Roads and Bridges (DMRB) Highways Directive (HD) 19/03.

1.1.6 Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of

the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.

- 1.1.7 The Audit consisted of a desktop study and a site visit, which was carried out on Monday 1st June 2009 between 13:30 and 14:30. The weather was sunny and the road surface was also dry.
- 1.1.8 The recommendations in this report are aimed at addressing the road safety problems; however there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities.
- 1.1.9 The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit, and would encourage the Designer to consult them on this matter.
- 1.1.10 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the *As Built* design pack to be provided and retained by the LHA on final completion.

2.0 ITEMS CONSIDERED

- 2.1 The Road Safety Audit was undertaken on the scheme detailed in the following Russell Giles Partnership documentation:

Drawing no.	Rev	Title
2009/1046/001	A	Proposed Pedestrian Improvements
2009/1046/002	A	Proposed Access Improvements

- 2.2 The Auditors have also been provided with the details of the personal injury accident record for Chalcraft Lane for the five year period ending 30th April 2009.
- 2.3 Details of speed checks undertaken in May 2009 in the vicinity of the nurseries reveal 85th % speeds of 31.5mph for northbound vehicles and 33.6mph for southbound.
- 2.3 The Auditors have not been notified of any departures from standards.

3.0 MATTERS ARISING FROM THIS STAGE 1 AUDIT

3.1 PROBLEM

LOCATION: Pedestrian refuge on Chalcraft Lane.

It is unclear from the information provided if vehicles can turn in and out of the accesses either side of the proposed island without carrying out multiple manoeuvres. This may increase the risk of conflicts with other vehicles travelling on Chalcraft Lane.

RECOMMENDATION

Ensure all vehicles can enter/exit the accesses either side of the island in one simultaneous movement.

3.2 PROBLEM

LOCATION: Proposed access.

The proposed access may not be able to accommodate two vehicles turning in and out simultaneously. This may lead to either head-on conflicts within the access, or rear-end shunt conflicts as vehicles turning in have to suddenly stop in the main carriageway to allow other vehicles to exit the site.

RECOMMENDATION

Ensure that all vehicles anticipating visiting the site can safely manoeuvre into and out of the new site entrance simultaneously.

4.0 AUDITOR STATEMENT

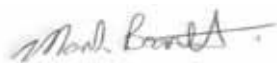
4.1 I certify that this audit has been carried out in accordance with HD 19/03.

AUDIT TEAM LEADER

Mark Barrett MIHT
The Safety Forum Ltd
PO Box 744
Godalming
Surrey
GU7 9DU

AUDIT TEAM MEMBER

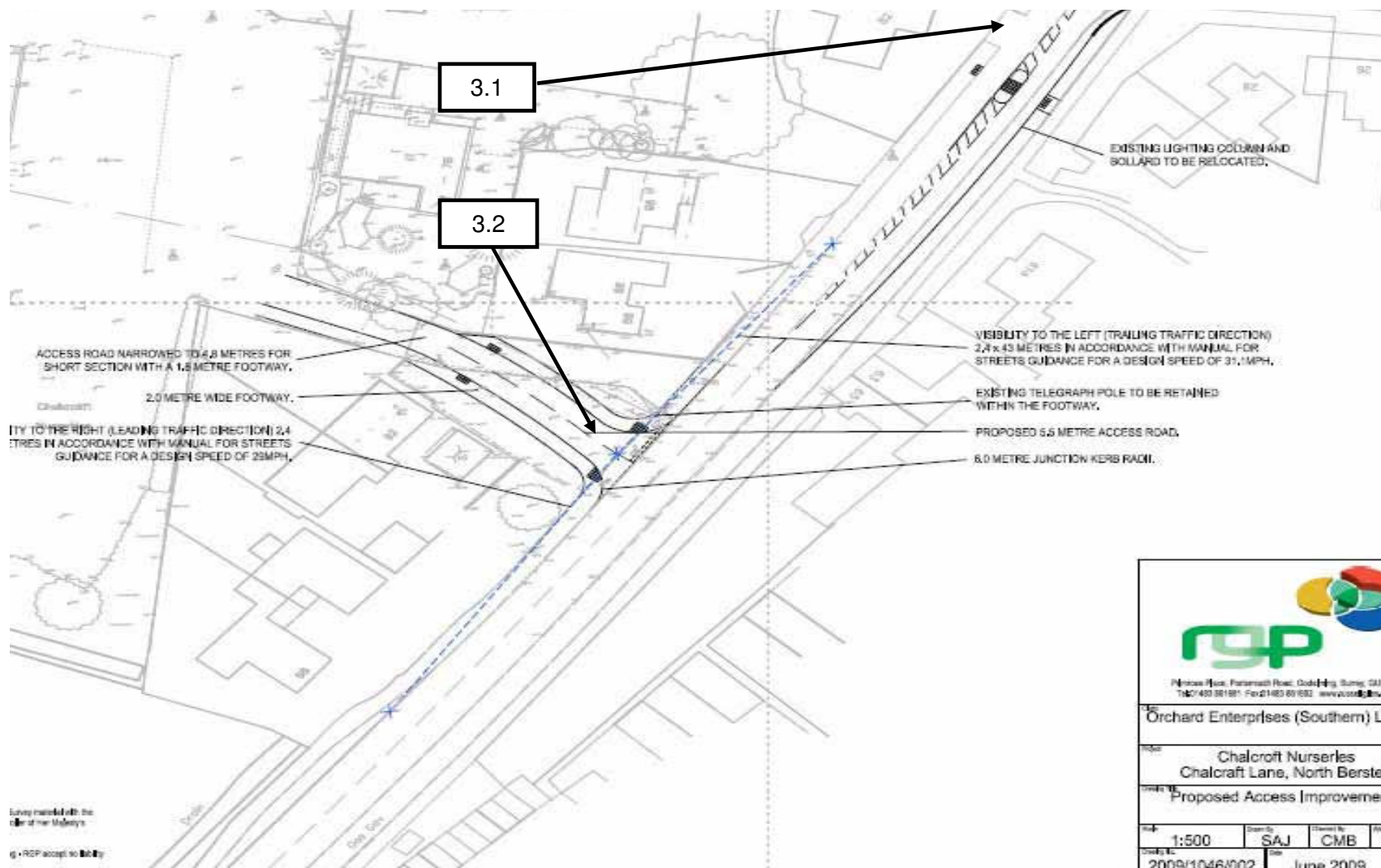
Ross Rawlings



Signed:

Date: 4 June 2009

APPENDIX A: KEY PLAN



Road Safety Audit – Stage 1
CHALCRAFT NURSERIES, CHALCRAFT LANE, NORTH BERSTED, WEST SUSSEX – PROPOSED ACCESS AND PEDESTRIAN IMPROVEMENTS.

APPENDIX B: DESIGNERS RESPONSE

Auditors: Mark Barrett (Team Leader) and Ross Rawlings (Team Member).

Scheme: Chalcraft Nurseries, Chalcraft Lane, North Bersted, West Sussex–Proposed Access and Pedestrian Improvements.

Date Audit Completed: 4 June 2009.

This response is to a Stage 1 Road Safety Audit to the design standard detailed within HD19/03 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

Problem no. in safety audit report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measure (detail description)
3.1			
3.2			

Principal Engineer's Statement:

Road Safety Audit for Chalcraft Nurseries, Chalcraft Lane, North Bersted, West Sussex.
Proposed Access and Pedestrian Improvements.

I certify that I have considered the items raised in the Stage 1 Road Safety Audit Report and I am content to accept all of its recommendations except for the ones listed above. I have stated my reasons for not accepting them and I seek the Chief Engineer's endorsement of my proposals.

..... Date.....

Principal Engineer

Chief Engineer's Decision:

I accept these proposals by the Principal Engineer.

..... Date.....

Chief Engineer



APPENDIX H

BE/156/07/CLE

APPLICATION NO: BE/156/07/CLE
TOWN AND COUNTRY PLANNING ACT 1990
SECTION 191 AND 192
(as amended by section 10 of the Planning and Compensation Act 1991)
TOWN AND COUNTRY PLANNING GENERAL DEVELOPMENT PROCEDURE
CERTIFICATE OF LAWFUL USE OR DEVELOPMENT

The Arun District Council hereby certify that on the 29th November 2007 the use hereby described in the First Schedule hereto in respect of the land specified in the Second Schedule hereto and edged boldly on the plan attached to this certificate was lawful within the meaning of section 191 of the Town and Country Planning Act 1990 (as amended), for the following reason(s)

Howard Cheadle

Signed

On behalf of Arun District Council

Howard Cheadle
 Head of Planning & Housing Strategy

Date of Decision: 14th January 2008

Date Decision Issued: 14th January 2008

Case Officer: Mr K Wheway

First Schedule

Use of land at Chalcroft Nurseries, Chalcroft Lane, Bersted as a garden centre, aquatic sales centre and nursery with car parking.

Extent of Use

Chalcroft Garden Centre :

Single storey shop and outside sales area (as indicated by the cross-hatched notation on the plan).

Chalcroft Nursery :

Growing tunnels, office caravan, store and land (as indicated by the dotted notation on the plan).

Tropikoi Aquatic Sales Centre :

Two single storey buildings (as indicated by the diagonal notation on the attached plan).

Car parking area and access (as indicated by the blank notation on the attached plan).

Second Schedule

Chalcroft Nurseries, Chalcroft Lane, Bersted, West Sussex which is shown on the plan attached this certificate, within the area edged boldly in black.

BE/156/07/CLE

IT IS IMPORTANT THAT YOU READ THE NOTES ATTACHED TO THIS DOCUMENT

BE/156/07/CLE

NOTES RELATING TO CERTIFICATE OF EXISTING LAWFUL USE OR DEVELOPMENT

TOWN & COUNTRY PLANNING ACT 1990

This certificate is issued solely for the purpose of section 191 of the Town & Country Planning Act 1990 (as amended).

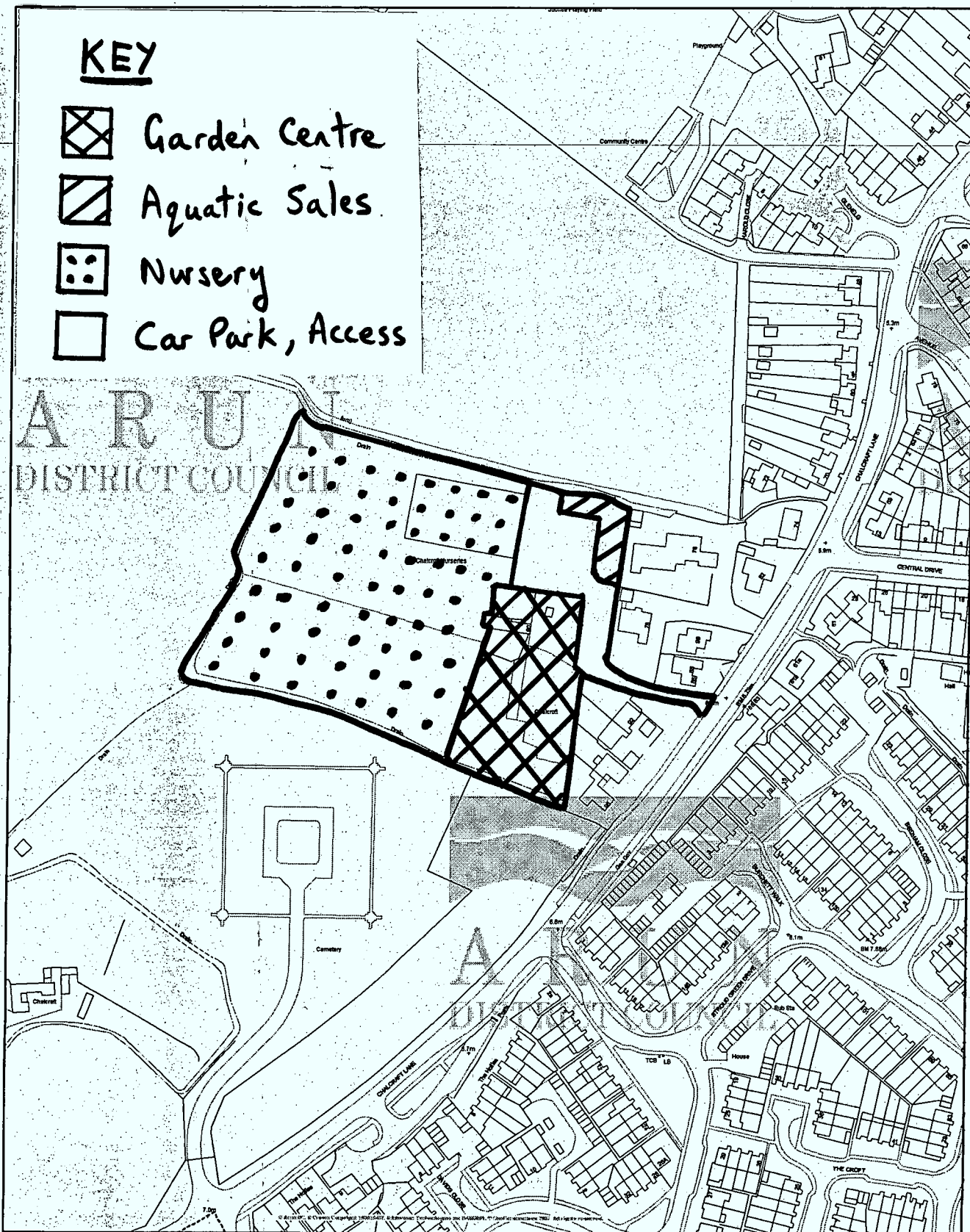
It certifies that the use specified in the First Schedule taking place on the land described in the Second Schedule was lawful, on the specified date and thus, was not liable to enforcement action under section 172 of the 1990 Act on that date.

This Certificate applies only to the extent of the use described in the First Schedule and to the land specified in the Second Schedule and identified on the attached plan. Any use which is materially different from that described or which relates to other land may render the owner or occupier liable to enforcement action.

BE/156/07CLE

**KEY**

-  Garden Centre
-  Aquatic Sales
-  Nursery
-  Car Park, Access



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Arun District Council 100018487.

Scale 1/2500

Date 10/1/2008

Centre = 491788 E 100523 N



Arun District Council
 Arun Civic Centre
 Maltravers Road
 Littlehampton
 West Sussex BN17 5LF
 Planning & Building Control
 General Enquiries
 Tel: (01903) 737756
 Fax: (01903) 716019
 Dx: 57406 Littlehampton
 Minicom: 01903 732765
 e-mail: planning@arun.gov.uk

South East Planning Service
 Bartram House
 Station Road
 Pulborough
 West Sussex
 RH20 1AJ

Your Ref:

Our Ref: BE/156/07/CLE

Please ask for: Mr K Wheway
 Direct Dial: 01903 737794

14th January 2008

Dear Mr Gray

**Town and Country Planning General Development Procedure Order 1995
 Hedgerows Regulations 1997**

Application for a lawful development certificate for an existing use - garden centre,
 aquatic sales centre and nursery

Chalcroft Nurseries Chalcroft Lane Bognor Regis

I refer to your recent application and I enclose herewith the Council's decision.

Yours sincerely

Howard Cheadle

Howard Cheadle
 Head of Planning & Housing Strategy

Enc

PMAC15

Ian Sumnall, Chief Executive, Strategy Director

Alan Carter, Resources Director

Colin Rogers, Services Director



APPENDIX I

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : H - GARDEN CENTRE

VEHICLES

Selected regions and areas:

02 SOUTH EAST

HC HAMPSHIRE

1 days

Main parameter selection:

Parameter: Retail floor area
Range: 1700 to 22600 (units: sqm)

Date Range: 01/01/00 to 22/11/08

Selected survey days:

Monday 1 days

Selected survey types:

Manual count 1 days
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1

Selected Location Sub Categories:

No Sub Category 1

LIST OF SITES relevant to selection parameters

1	HC-01-H-03	GARDEN CENTRE, WINCHESTER	HAMPSHIRE
	ROMSEY ROAD		
	WINCHESTER		
	Total Retail floor area:	3500 sqm	

TRIP RATE for Land Use 01 - RETAIL/H - GARDEN CENTRE

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	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	0	0	0.000	0	0	0.000	0	0	0.000
08:00 - 09:00	1	3500	0.371	1	3500	0.057	1	3500	0.428
09:00 - 10:00	1	3500	0.286	1	3500	0.286	1	3500	0.572
10:00 - 11:00	1	3500	0.800	1	3500	0.800	1	3500	1.600
11:00 - 12:00	1	3500	1.600	1	3500	1.686	1	3500	3.286
12:00 - 13:00	1	3500	0.886	1	3500	0.886	1	3500	1.772
13:00 - 14:00	1	3500	1.057	1	3500	0.914	1	3500	1.971
14:00 - 15:00	1	3500	1.486	1	3500	1.000	1	3500	2.486
15:00 - 16:00	1	3500	0.914	1	3500	1.314	1	3500	2.228
16:00 - 17:00	1	3500	0.371	1	3500	0.686	1	3500	1.057
17:00 - 18:00	1	3500	0.114	1	3500	0.286	1	3500	0.400
18:00 - 19:00	0	0	0.000	0	0	0.000	0	0	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
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:			7.885			7.915			15.800

Parameter summary

Trip rate parameter range selected: 1700 - 22600 (units: sqm)
Survey date range: 01/01/00 - 22/11/08
Number of weekdays (Monday-Friday): 1
Number of Saturdays: 0
Number of Sundays: 0
Optional parameters used in selection: NO
Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : M - MIXED PRIVATE/NON-PRIVATE HOUSING

VEHICLES

Selected regions and areas:

06 WEST MIDLANDS	
HE	HEREFORDSHIRE 1 days
07 YORKSHIRE & NORTH LINCOLNSHIRE	
NY	NORTH YORKSHIRE 2 days
08 NORTH WEST	
LC	LANCASHIRE 1 days
MS	MERSEYSIDE 1 days

Main parameter selection:

Parameter: Number of dwellings
 Range: 14 to 1874 (units:)

Date Range: 01/01/00 to 11/09/08

Selected survey days:

Monday	1 days
Wednesday	2 days
Thursday	2 days

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	3
Village	1

LIST OF SITES relevant to selection parameters

1	HE-03-M-01	SEMI D./TERRACED, HEREFORD	HEREFORDSHIRE
	WHITECROSS ROAD		
	WIDEMARSH		
	HEREFORD		
	Total Number of dwellings:	57	
2	LC-03-M-03	MIXED HOUSES, NR LANCASTER	LANCASHIRE
	HIGH ROAD		
	HALTON		
	NEAR LANCASTER		
	Total Number of dwellings:	81	
3	MS-03-M-01	HOUSING, LIVERPOOL	MERSEYSIDE
	OFF KINGSWAY		
	PRECOT		
	LIVERPOOL		
	Total Number of dwellings:	40	
4	NY-03-M-01	SEMI D./TERRACED, HARROGATE	NORTH YORKSHIRE
	CAWTHORN AVENUE		
	HARROGATE		
	Total Number of dwellings:	14	
5	NY-03-M-03	SEMI D./TERRACED, HARROGATE	NORTH YORKSHIRE
	CAWTHORN AVENUE		
	HARROGATE		
	Total Number of dwellings:	14	

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/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	5	41	0.087	5	41	0.218	5	41	0.305
08:00 - 09:00	5	41	0.277	5	41	0.408	5	41	0.685
09:00 - 10:00	5	41	0.170	5	41	0.209	5	41	0.379
10:00 - 11:00	5	41	0.194	5	41	0.233	5	41	0.427
11:00 - 12:00	5	41	0.233	5	41	0.252	5	41	0.485
12:00 - 13:00	5	41	0.243	5	41	0.286	5	41	0.529
13:00 - 14:00	5	41	0.214	5	41	0.209	5	41	0.423
14:00 - 15:00	5	41	0.189	5	41	0.155	5	41	0.344
15:00 - 16:00	5	41	0.252	5	41	0.199	5	41	0.451
16:00 - 17:00	5	41	0.340	5	41	0.262	5	41	0.602
17:00 - 18:00	5	41	0.408	5	41	0.214	5	41	0.622
18:00 - 19:00	5	41	0.223	5	41	0.252	5	41	0.475
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
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:			2.830				2.897	5.727	

Parameter summary

Trip rate parameter range selected: 14 - 1874 (units:)
 Survey date range: 01/01/00 - 11/09/08
 Number of weekdays (Monday-Friday): 5
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 2



APPENDIX J

Microsoft Office

File View Junction Phase Stage Stage Sequence Traffic Flows Analysis Window Help

Function Layout

Phases

Arm 1 - Chichester Road (west)

Arm 2 - North Basset Road

Arm 3 - Chichester Road (east)

Arm 4 - Chichester Lane

Traffic Flows

	A	B	C	D	E	F	G	H	I	J
A	5	5	5	9	5	5	7	7	7	5
B	5	5	5	9	5	5	7	7	7	5
C	5	5	5	9	5	5	7	7	7	5
D	5	5	5	9	5	5	7	7	7	5
E	5	5	5	9	5	5	7	7	7	5
F	5	5	5	9	5	5	7	7	7	5
G	5	5	5	9	5	5	7	7	7	5
H	5	5	5	9	5	5	7	7	7	5
I	5	5	5	9	5	5	7	7	7	5
J	5	5	5	9	5	5	7	7	7	5

	1/1	1/2	2/1	3/1	4/1	4/2
1 : Param 2007 With Ph I AM	588	48	237	814	223	507
2 : Param 2007 With Ph I PM	536	100	301	862	176	345
3 : Param 2011 With Full Dev AM	494	57	324	585	294	588
4 : Param 2011 With Full Dev PM	686	308	326	473	374	281
5 : 2011 AM With Dev/School/Su...	524	82	339	614	327	588
6 : 2011 PM With Dev/School/Su...	701	317	332	477	380	281

Ready

Start

Inbox - Microsoft Outlook

Linisg for Windows - ...

2:05 PM

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 1
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Phases

Phase Data					
Phase Name		Phase Type	Assoc Phase	Street Min	Cont Min
A	Chichester Road (west)	Traffic		7	7
B	North Berstead Road	Traffic		7	7
C	Chichester Road (east)	Traffic		7	7
D	Chalcraft Lane Left	Traffic		7	7
E	Chalcraft Lane Ahead Right	Traffic		7	7
F	Pedestrians across Chalcraft Lane west	Pedestrian		5	5
G	Pedestrians across Chalcraft Lane east	Pedestrian		5	5
H	Pedestrians across Chichester Rd east	Pedestrian		6	6
I	Pedestrians across North Berstead Rd	Pedestrian		5	5
J	Chichester Road (west) Right IGA	Ind. Arrow	A	4	4

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 2
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Phase Intergreens

From Phase	Phase Intergreens To Phase									
	A	B	C	D	E	F	G	H	I	J
A		5			5		7	7	7	
B	5		5	9	5		9	7	5	5
C		5		7	5		9	5	7	5
D		5	5			5				
E	7	5	5			5		10	9	5
F				8	8					
G	6	6	6							6
H	10	10	10		7					
I	10	10	10		7					
J		5	5		5		7			

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 3
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Phase Delays

Phase Delays						
No	From Stage	To Stage	Phase	Delay Time		
				Abs	Rel	Cntr
1	4	2	D			6
2	4	2	E			1
3	6	1	F			5

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 4
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Prohibited Moves and Interstage Lengths

From Stage	Prohibited Moves To Stage					
	1	2	3	4	5	6
1	X	5	7	9	7	5
2	5	X	7	7	5	5
3	10	X	X	7	7	10
4	7	X	10	X	0	6
5	7	X	10	0	X	5
6	5	5	9	9	9	X

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 5
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Stages

Stage Data	
Stage	Phases In Stage
1	AC
2	AJ
3	DHI
4	DEG
5	DE
6	BF

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 6
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Links

Link Data							
Ref Num	Link	Type	Full Phase	Arrw Phase	Opposing Arm/Link	R Turn Storage	Max Turn
1/1	Chichester Road (west) Left Ahead	U	A				
1/2	Chichester Road (west) Right	O	A	J	3/1	3	3
2/1	North Berstead Road Right Left Ahead	U	B				
3/1	Chichester Road (east) Ahead Right Left	U	C				
4/1	Chalcraft Lane Left	U	D				
4/2	Chalcraft Lane Ahead Right	U	E				

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 7
Location	North Berstead, Bognor Regis	File	Royal Oak-Params1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Lanes

Lane Data								
Ref Num	Lane	Length (pcu)	Gradient (%)	Width (m)	Propn Turn (%)	Radius (m)	User Satn	RR67 Satn
1/1	Chichester Road (west) Left Ahead	Inf	0.00	4.00	2	10.00	1800	2009
1/2	Chichester Road (west) Right	Inf	0.00	3.25	100	15.00	1800	1891
2/1	North Berstead Road Right Left Ahead	Inf	0.00	3.65	46	20.00	1800	1914
3/1	Chichester Road (east) Ahead Right Left	Inf	0.00	3.80	30	25.00	1800	1960
4/1	Chalcraft Lane Left	Inf	0.00	3.25	100	20.00	0	1805
4/2	Chalcraft Lane Ahead Right	Inf	0.00	3.65	13	25.00	1800	2104

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 8
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Traffic Flows

Traffic Flows									
Grp Num	Time Start	Time End	Title	Link Number					
				1/1	1/2	2/1	3/1	4/1	4/2
1	08:00	09:00	Param 2007 With Ph I AM	588	48	237	814	223	507
2	17:00	18:00	Param 2007 With Ph I PM	536	100	301	862	176	345
3	08:00	09:00	Param 2011 With Full Dev AM	494	57	324	585	294	588
4	17:00	18:00	Param 2011 With Full Dev PM	686	308	326	473	374	281
5	08:00	09:00	2011 AM With Dev\School\Surgery	524	82	339	614	327	588
6	17:00	18:00	2011 PM With Dev\School\Surgery	701	317	332	477	380	281

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 9
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	Param 2011 With Full Dev AM
Flow Group Period	08:00 to 09:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR57

Stage Results

Stage Timings					
Stage Sequence	1	3	4	5	6
Stage Duration	36	6	30	4	20
Stage Change Point	0	41	54	91	95

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 10
Location	North Berstead, Bognor Regis	File:	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (west) Left Ahead	U	A		36	494	2009	619	79.7	49.8	6.8	12.6
1/2	Chichester Road (west) Right	O	A	J	36	57	1891	100	57.1	58.8	0.9	1.6
2/1	North Berstead Road Right Left Ahead	U	B		20	324	1914	335	96.7	121.4	10.9	15.4
3/1	Chichester Road (east) Ahead Right Left	U	C		36	585	1960	604	96.8	90.2	14.7	21.5
4/1	Chalcraft Lane Left	U	D		47	294	1805	722	40.7	28.1	2.3	6.0
4/2	Chalcraft Lane Ahead Right	U	E		34	588	2104	614	95.8	85.1	13.9	20.9
Cycle Time 120 s				PRC -7.6 %				Total Delay 49.5 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (west) Right	0	0.3	3.0

User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 11
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	Param 2011 With Full Dev PM
Flow Group Period	17:00 to 18:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR67

Stage Results

Stage Timings						
Stage Sequence	1	2	3	4	5	6
Stage Duration	31	16	6	13	4	21
Stage Change Point	0	36	57	70	90	94

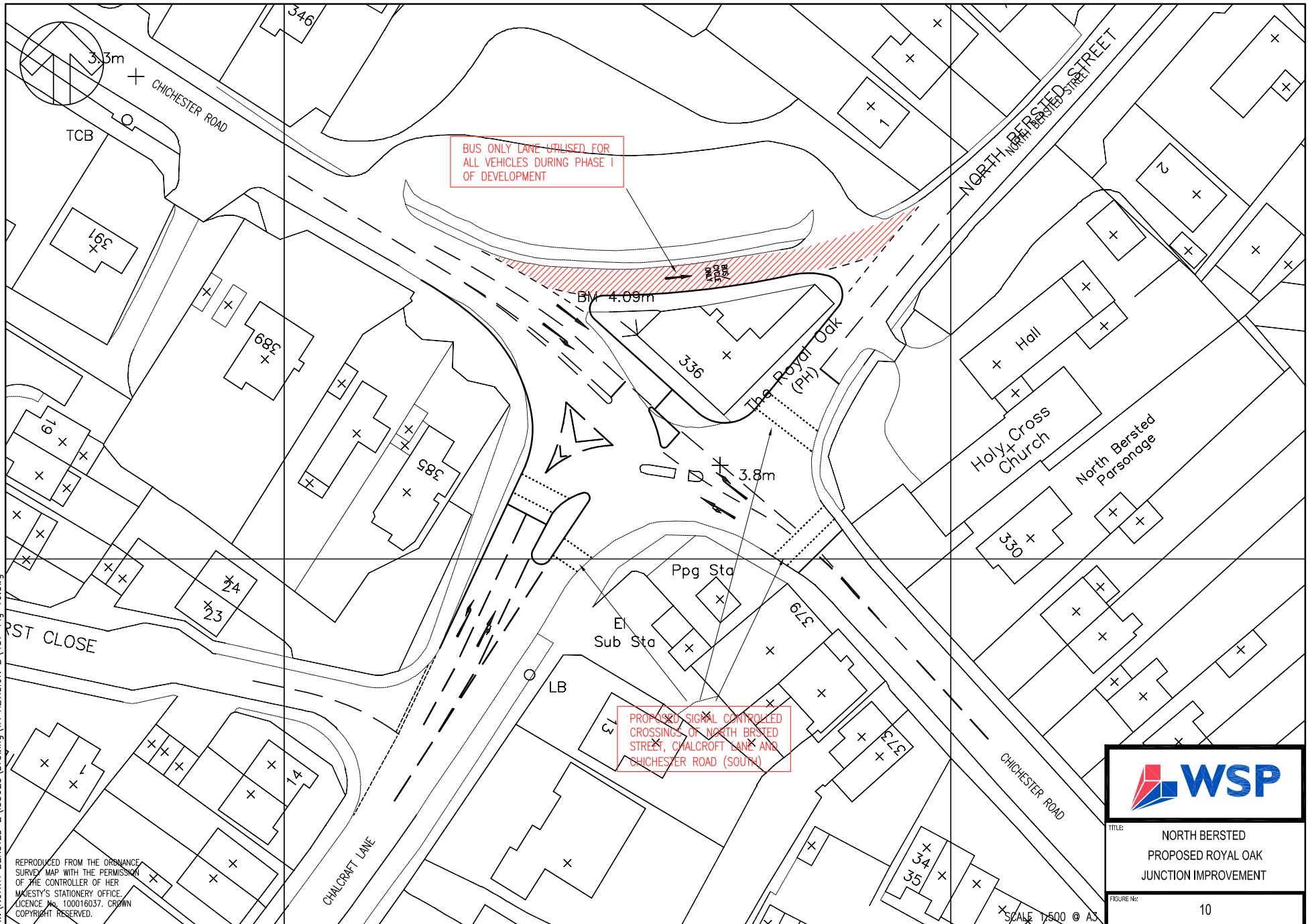
User	WSP Group plc - Basingstoke	Project	North Berstead, Bognor Regis				Page 12
Location	North Berstead, Bognor Regis	File	Royal Oak-Paramics1.LSG	SCN		Chkd	
Title	Royal Oak Junction			Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (west) Left Ahead	U	A		52	686	2009	887	77.3	35.8	6.8	13.3
1/2	Chichester Road (west) Right	O	A	J	52	308	1891	341	90.3	71.8	6.1	9.0
2/1	North Berstead Road Right Left Ahead	U	B		21	326	1914	351	92.9	97.4	8.8	13.3
3/1	Chichester Road (east) Ahead Right Left	U	C		31	473	1960	523	90.5	71.2	9.4	15.2
4/1	Chalcraft Lane Left	U	D		35	374	1805	542	69.1	45.0	4.7	9.1
4/2	Chalcraft Lane Ahead Right	U	E		17	281	2104	316	89.0	89.3	7.0	11.0
Cycle Time 120 s				PRC -3.2 %				Total Delay 42.8 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (west) Right	16	0.9	1.5





APPENDIX K

Chalcraft Lane, Bersted - TEMPRO / NRTF Calculations

AM PEAK 2009-2011

TEMPRO Results			NRTF 2009-2011		
Area	2009-2011	Prop of UK	LOW	MEDIUM	HIGH
South East (Region)	1.023	0.997	1.044	1.059	1.072
West Sussex (County)	1.026	1.000	1.047	1.062	1.075
Arun (Authority)	1.026	1.000	1.047	1.062	1.075
Bognor Regis (Zone)	1.027	1.001	1.048	1.063	1.076
UK	1.026		1.047	1.062	1.075

PM PEAK 2009-2011

TEMPRO Results			NRTF 2009-2011		
Area	2009-2011	Prop of UK	LOW	MEDIUM	HIGH
South East (Region)	1.025	1.000	1.047	1.062	1.075
West Sussex (County)	1.000	0.976	1.021	1.036	1.049
Arun (Authority)	1.026	1.001	1.048	1.063	1.076
Bognor Regis (Zone)	1.026	1.001	1.048	1.063	1.076
UK	1.025		1.047	1.062	1.075



APPENDIX L

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 4.1 ANALYSIS PROGRAM
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Run with file:-

"p:\2009 Projects (1003-)\1046 Chalcraft Nurseries, Chalcraft Lane, Bognor Regis\Junction Assesements\
AM With Dev PICADY.vpi"
(drive-on-the-left) at 11:31:39 on Tuesday, 2 June 2009

RUN TITLE

1046 Proposed AM 'With Development' Traffic Flows 2011

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Chalcraft Lane (North)
ARM B IS Site Access
ARM C IS Chalcraft Lane (South)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

TRAFFIC DEMAND DATA

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	07.45-08.00									I
I	B-AC	0.39	5.92	0.065		0.0	0.1	1.0		I
I	C-AB	0.24	13.54	0.018		0.0	0.0	0.3		I
I	C-A	8.08								I
I	A-B	0.16								I
I	A-C	5.90								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.00-08.15									I
I	B-AC	0.46	5.48	0.084		0.1	0.1	1.3		I
I	C-AB	0.33	14.25	0.023		0.0	0.0	0.4		I
I	C-A	9.61								I
I	A-B	0.19								I
I	A-C	7.05								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.15-08.30									I
I	B-AC	0.57	4.84	0.117		0.1	0.1	1.9		I
I	C-AB	0.48	15.17	0.032		0.0	0.0	0.6		I
I	C-A	11.69								I
I	A-B	0.24								I
I	A-C	8.63								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.30-08.45									I
I	B-AC	0.57	4.84	0.117		0.1	0.1	2.0		I
I	C-AB	0.48	15.17	0.032		0.0	0.0	0.6		I
I	C-A	11.69								I
I	A-B	0.24								I
I	A-C	8.63								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.45-09.00									I
I	B-AC	0.46	5.48	0.084		0.1	0.1	1.5		I
I	C-AB	0.33	14.25	0.023		0.0	0.0	0.4		I
I	C-A	9.61								I
I	A-B	0.19								I
I	A-C	7.05								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	09.00-09.15									I
I	B-AC	0.39	5.92	0.065		0.1	0.1	1.1		I
I	C-AB	0.24	13.54	0.018		0.0	0.0	0.3		I
I	C-A	8.08								I
I	A-B	0.16								I
I	A-C	5.90								I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	42.5	I	28.3	I	8.7	I
I	C-AB	I	31.7	I	21.1	I	2.8	I
I	C-A	I	881.5	I	587.7	I		I
I	A-B	I	17.8	I	11.9	I		I
I	A-C	I	647.2	I	431.5	I		I
I	ALL	I	1620.8	I	1080.5	I	11.5	I
							0.01	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

***** PICADY 4 run completed.

===== end of file =====

[Printed at 11:33:03 on 02/06/2009]

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

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Run with file:-

"p:\2009 Projects (1003-)\1046 Chalcroft Nurseries, Chalcroft Lane, Bognor Regis\Junction Assesements\
PM With Dev PICADY.vpi"
(drive-on-the-left) at 11:35:26 on Tuesday, 2 June 2009

RUN TITLE

1046 Proposed PM 'With Development' Traffic Flows 2011

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Chalcroft Lane (North)
ARM B IS Site Access
ARM C IS Chalcroft Lane (South)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

TRAFFIC DEMAND DATA

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARUN DISTRICT COUNCIL BE/47/09/

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	07.45-08.00									I
I	B-AC	0.20	5.64	0.035		0.0	0.0	0.5		I
I	C-AB	0.45	12.40	0.036		0.0	0.0	0.7		I
I	C-A	6.94								I
I	A-B	0.17								I
I	A-C	8.88								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.00-08.15									I
I	B-AC	0.24	5.08	0.047		0.0	0.0	0.7		I
I	C-AB	0.68	13.26	0.051		0.0	0.1	1.2		I
I	C-A	8.14								I
I	A-B	0.21								I
I	A-C	10.60								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.15-08.30									I
I	B-AC	0.29	4.28	0.068		0.0	0.1	1.0		I
I	C-AB	1.05	14.19	0.074		0.1	0.1	2.0		I
I	C-A	9.76								I
I	A-B	0.26								I
I	A-C	12.98								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.30-08.45									I
I	B-AC	0.29	4.28	0.068		0.1	0.1	1.1		I
I	C-AB	1.05	14.19	0.074		0.1	0.1	2.0		I
I	C-A	9.75								I
I	A-B	0.26								I
I	A-C	12.98								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	08.45-09.00									I
I	B-AC	0.24	5.08	0.047		0.1	0.0	0.8		I
I	C-AB	0.68	13.27	0.051		0.1	0.1	1.2		I
I	C-A	8.14								I
I	A-B	0.21								I
I	A-C	10.60								I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I
I	09.00-09.15									I
I	B-AC	0.20	5.64	0.035		0.0	0.0	0.6		I
I	C-AB	0.45	12.40	0.036		0.1	0.1	0.8		I
I	C-A	6.94								I
I	A-B	0.17								I
I	A-C	8.88								I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	21.9	I	4.7	I	4.7	I
I	C-AB	I	65.3	I	7.8	I	7.8	I
I	C-A	I	745.1	I	I	I	I	I
I	A-B	I	19.2	I	I	I	I	I
I	A-C	I	973.6	I	I	I	I	I
I	ALL	I	1825.1	I	12.5	I	12.5	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

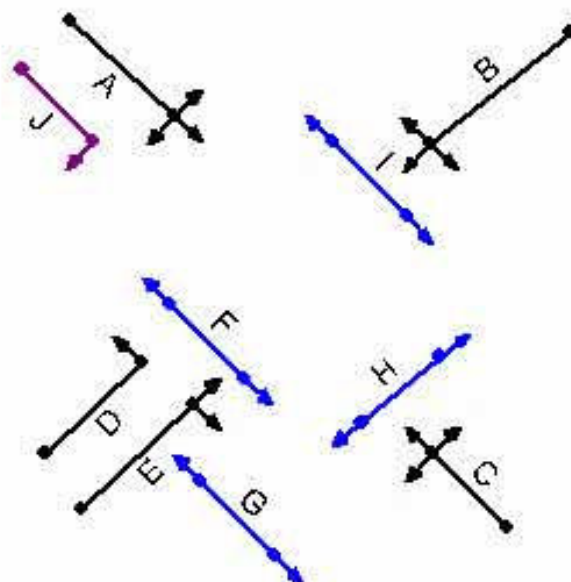
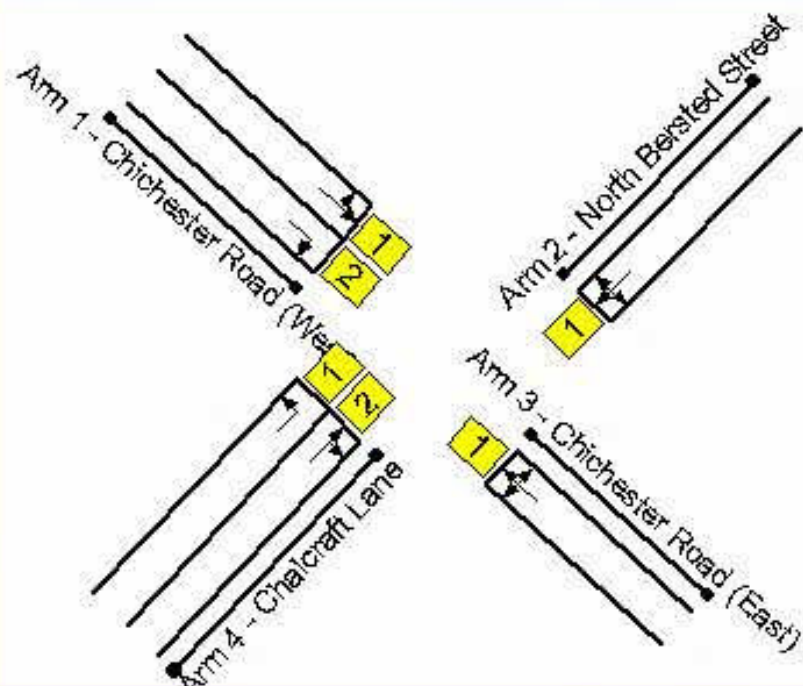
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[Printed at 11:36:20 on 02/06/2009]



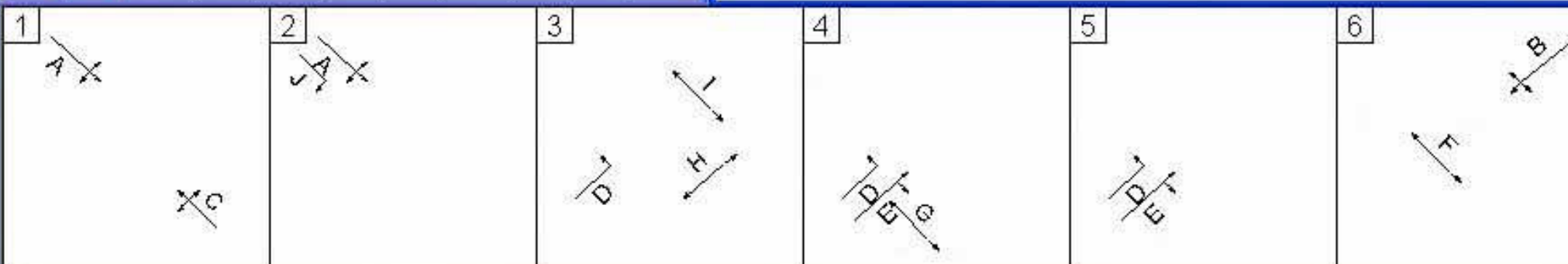
APPENDIX M



	A	B	C	D	E	F	G	H	I	J
A		5	-	-	5	-	7	7	7	-
B	5		5	9	5	-	9	7	5	5
C	-	5		7	5	-	9	5	7	5
D	-	5	5		-	5	-	-	-	-
E	7	5	5	-		5	-	10	9	5
F	-	-	-	8	8		-	-	-	-
G	6	6	6	-	-	-		-	-	6
H	10	10	10	-	7	-	-		-	-
I	10	10	10	-	7	-	-	-		-
J	-	5	5	-	5	-	7	-	-	

Traffic Flows

	1/1	1/2	2/1	3/1	4/1	4/2
1 : Site 6 With Dev Flows AM	494	57	324	585	294	588
2 : Site 6 With Dev Flows PM	686	308	326	473	374	281
3 : 2011 AM 'With Dev' Flows	494	57	324	586	298	595
4 : 2011 PM 'With Dev' Flows	686	310	329	476	374	281



User	Russell Giles Partnership - Godalming	Project					Page 1
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phases

Phase Data					
Phase Name		Phase Type	Assoc Phase	Street Min	Cont MIn
A	Chichester Road (West) Chichester Rd (west)	Traffic		7	7
B	North Bersted Street North Berstead Street	Traffic		7	7
C	Chichester Road (East) Chichester Rd (east)	Traffic		7	7
D	Chalcroft Lane Left Chalcroft Lane	Traffic		7	7
E	Chalcroft Lane Ahead Right Chalcroft Lane (ahead&right)	Traffic		7	7
F	Pedestrians across Ped over Chalcroft Lane	Pedestrian		5	5
G	Pedestrians across Ped over Chalcroft Lane (south)	Pedestrian		5	5
H	Pedestrians across Ped over Chichester Road	Pedestrian		6	6
I	Pedestrians across Ped over North Berstead Rd	Pedestrian		5	5
J	Chichester Road (West) Right IGA Chichester Rd RT	Ind. Arrow	A	4	4

User	Russell Giles Partnership - Godalming	Project					Page 2
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phase Intergreens

From Phase	Phase Intergreens To Phase									
	A	B	C	D	E	F	G	H	I	J
A		5			5		7	7	7	
B	5		5	9	5		9	7	5	5
C		5		7	5		9	5	7	5
D		5	5			5				
E	7	5	5			5		10	9	5
F				8	8					
G	6	6	6							6
H	10	10	10		7					
I	10	10	10		7					
J		5	5		5		7			

User	Russell Giles Partnership - Godalming	Project					Page 3
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phase Delays

Phase Delays						
No	From Stage	To Stage	Phase	Delay Time		
				Abs	Rel	Cntr
1	4	2	D			6
2	4	2	E			1
3	6	1	F			5

User	Russell Giles Partnership - Godalming	Project					Page 4
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Prohibited Moves

From Stage	Prohibited Moves To Stage					
	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

User	Russell Giles Partnership - Godalming	Project					Page 5
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Stages

Stage Data	
Stage	Phases In Stage
1	AC
2	AJ
3	DHI
4	DEG
5	DE
6	BF

User	Russell Giles Partnership - Godalming	Project					Page 6
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Links

Link Data							
Ref Num	Link	Type	Full Phase	Arrw Phase	Opposing Arm/Link	R Turn Storage	Max Turn
1/1	Chichester Road (West) Left Ahead	U	A				
1/2	Chichester Road (West) Right	O	A	J	3/1	3	3
2/1	North Bersted Street Right Left Ahead	U	B				
3/1	Chichester Road (East) Ahead Right Left	U	C				
4/1	Chalcroft Lane Left	U	D				
4/2	Chalcroft Lane Ahead Right	U	E				

User	Russell Giles Partnership - Godalming	Project					Page 7
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Lanes

Lane Data								
Ref Num	Lane	Length (pcu)	Gradient (%)	Width (m)	Propn Turn(%)	Radius (m)	User Satn	RR67 Satn
1/1	Chichester Road (West) Left Ahead	Inf	0.00	4.00	2	10.00	1800	2009
1/2	Chichester Road (West) Right	Inf	0.00	3.25	100	15.00	1800	1891
2/1	North Bersted Street Right Left Ahead	Inf	0.00	3.65	46	20.00	1800	1914
3/1	Chichester Road (East) Ahead Right Left	Inf	0.00	3.80	30	25.00	1800	1960
4/1	Chalcroft Lane Left	Inf	0.00	3.25	100	20.00	0	1805
4/2	Chalcroft Lane Ahead Right	Inf	0.00	3.65	13	25.00	1800	2104

User	Russell Giles Partnership - Godalming	Project					Page 8
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Traffic Flows

Traffic Flows									
Grp Num	Time Start	Time End	Title	Link Number					
				1/1	1/2	2/1	3/1	4/1	4/2
1	08:00	09:00	Site 6 With Dev Flows AM	494	57	324	585	294	588
2	17:00	18:00	Site 6 With Dev Flows PM	686	308	326	473	374	281
3	08:00	09:00	2011 AM 'With Dev' Flows	494	57	324	586	298	595
4	17:00	18:00	2011 PM 'With Dev' Flows	686	310	329	476	374	0

User	Russell Giles Partnership - Godalming	Project					Page 9
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	Site 6 With Dev Flows AM
Flow Group Period	08:00 to 09:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR67

Stage Results

Stage Timings					
Stage Sequence	1	3	4	5	6
Stage Duration	36	6	30	4	20
Stage Change Point	0	41	54	91	95

User	Russell Giles Partnership - Godalming	Project					Page 10
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (West) Left Ahead	U	A		36	494	2009	619	79.7	49.8	6.8	12.6
1/2	Chichester Road (West) Right	O	A	J	36	57	1891	100	57.1	58.8	0.9	1.6
2/1	North Bersted Street Right Left Ahead	U	B		20	324	1914	335	96.7	121.4	10.9	15.4
3/1	Chichester Road (East) Ahead Right Left	U	C		36	585	1960	604	96.8	90.2	14.7	21.5
4/1	Chalcroft Lane Left	U	D		47	294	1805	722	40.7	28.1	2.3	6.0
4/2	Chalcroft Lane Ahead Right	U	E		34	588	2104	614	95.8	85.1	13.9	20.9
Cycle Time 120 s				PRC -7.6 %				Total Delay 49.5 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (West) Right	0	0.3	3.0

User	Russell Giles Partnership - Godalming	Project					Page 11
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	2011 AM 'With Dev' Flows
Flow Group Period	08:00 to 09:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR67

Stage Results

Stage Timings					
Stage Sequence	1	3	4	5	6
Stage Duration	36	6	30	4	20
Stage Change Point	0	41	54	91	95

User	Russell Giles Partnership - Godalming	Project					Page 12
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (West) Left Ahead	U	A		36	494	2009	619	79.7	49.8	6.8	12.6
1/2	Chichester Road (West) Right	O	A	J	36	57	1891	100	57.3	59.0	0.9	1.6
2/1	North Bersted Street Right Left Ahead	U	B		20	324	1914	335	96.7	121.4	10.9	15.4
3/1	Chichester Road (East) Ahead Right Left	U	C		36	586	1960	604	97.0	91.3	14.9	21.7
4/1	Chalcroft Lane Left	U	D		47	298	1805	722	41.3	28.2	2.3	6.0
4/2	Chalcroft Lane Ahead Right	U	E		34	595	2104	614	97.0	91.7	15.2	22.3
Cycle Time 120 s				PRC -7.7 %				Total Delay 51.0 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (West) Right	0	0.3	3.0

User	Russell Giles Partnership - Godalming	Project					Page 1
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phases

Phase Data					
Phase Name		Phase Type	Assoc Phase	Street Min	Cont MIn
A	Chichester Road (West) Chichester Rd (west)	Traffic		7	7
B	North Bersted Street North Berstead Street	Traffic		7	7
C	Chichester Road (East) Chichester Rd (east)	Traffic		7	7
D	Chalcroft Lane Left Chalcroft Lane	Traffic		7	7
E	Chalcroft Lane Ahead Right Chalcroft Lane (ahead&right)	Traffic		7	7
F	Pedestrians across Ped over Chalcroft Lane	Pedestrian		5	5
G	Pedestrians across Ped over Chalcroft Lane (south)	Pedestrian		5	5
H	Pedestrians across Ped over Chichester Road	Pedestrian		6	6
I	Pedestrians across Ped over North Berstead Rd	Pedestrian		5	5
J	Chichester Road (West) Right IGA Chichester Rd RT	Ind. Arrow	A	4	4

User	Russell Giles Partnership - Godalming	Project					Page 2
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phase Intergreens

From Phase	Phase Intergreens To Phase									
	A	B	C	D	E	F	G	H	I	J
A		5			5		7	7	7	
B	5		5	9	5		9	7	5	5
C		5		7	5		9	5	7	5
D		5	5			5				
E	7	5	5			5		10	9	5
F				8	8					
G	6	6	6							6
H	10	10	10		7					
I	10	10	10		7					
J		5	5		5		7			

User	Russell Giles Partnership - Godalming	Project					Page 3
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Phase Delays

Phase Delays						
No	From Stage	To Stage	Phase	Delay Time		
				Abs	Rel	Cntr
1	4	2	D			6
2	4	2	E			1
3	6	1	F			5

User	Russell Giles Partnership - Godalming	Project					Page 4
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Prohibited Moves

From Stage	Prohibited Moves To Stage					
	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

User	Russell Giles Partnership - Godalming	Project					Page 5
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Stages

Stage Data	
Stage	Phases In Stage
1	AC
2	AJ
3	DHI
4	DEG
5	DE
6	BF

User	Russell Giles Partnership - Godalming	Project					Page 6
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Links

Link Data							
Ref Num	Link	Type	Full Phase	Arrw Phase	Opposing Arm/Link	R Turn Storage	Max Turn
1/1	Chichester Road (West) Left Ahead	U	A				
1/2	Chichester Road (West) Right	O	A	J	3/1	3	3
2/1	North Bersted Street Right Left Ahead	U	B				
3/1	Chichester Road (East) Ahead Right Left	U	C				
4/1	Chalcroft Lane Left	U	D				
4/2	Chalcroft Lane Ahead Right	U	E				

User	Russell Giles Partnership - Godalming	Project					Page 7
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Lanes

Lane Data								
Ref Num	Lane	Length (pcu)	Gradient (%)	Width (m)	Propn Turn(%)	Radius (m)	User Satn	RR67 Satn
1/1	Chichester Road (West) Left Ahead	Inf	0.00	4.00	2	10.00	1800	2009
1/2	Chichester Road (West) Right	Inf	0.00	3.25	100	15.00	1800	1891
2/1	North Bersted Street Right Left Ahead	Inf	0.00	3.65	46	20.00	1800	1914
3/1	Chichester Road (East) Ahead Right Left	Inf	0.00	3.80	30	25.00	1800	1960
4/1	Chalcroft Lane Left	Inf	0.00	3.25	100	20.00	0	1805
4/2	Chalcroft Lane Ahead Right	Inf	0.00	3.65	13	25.00	1800	2104

User	Russell Giles Partnership - Godalming	Project					Page 8
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Traffic Flows

Traffic Flows									
Grp Num	Time Start	Time End	Title	Link Number					
				1/1	1/2	2/1	3/1	4/1	4/2
1	08:00	09:00	Site 6 With Dev Flows AM	494	57	324	585	294	588
2	17:00	18:00	Site 6 With Dev Flows PM	686	308	326	473	374	281
3	08:00	09:00	2011 AM 'With Dev' Flows	494	57	324	586	298	595
4	17:00	18:00	2011 PM 'With Dev' Flows	686	310	329	476	374	281

User	Russell Giles Partnership - Godalming	Project					Page 9
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	Site 6 With Dev Flows PM
Flow Group Period	17:00 to 18:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR67

Stage Results

Stage Timings						
Stage Sequence	1	2	3	4	5	6
Stage Duration	30	18	6	12	4	21
Stage Change Point	0	35	58	71	90	94

User	Russell Giles Partnership - Godalming	Project					Page 10
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (West) Left Ahead	U	A		53	686	2009	904	75.9	34.3	6.5	12.9
1/2	Chichester Road (West) Right	O	A	J	53	308	1891	318	96.9	107.7	9.2	12.1
2/1	North Bersted Street Right Left Ahead	U	B		21	326	1914	351	92.9	97.4	8.8	13.3
3/1	Chichester Road (East) Ahead Right Left	U	C		30	473	1960	506	93.4	82.2	10.8	16.7
4/1	Chalcroft Lane Left	U	D		34	374	1805	526	71.0	46.8	4.9	9.3
4/2	Chalcroft Lane Ahead Right	U	E		16	281	2104	298	94.3	113.6	8.9	12.9
Cycle Time 120 s				PRC -7.6 %				Total Delay 49.1 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (West) Right	18	0.6	0.0

User	Russell Giles Partnership - Godalming	Project					Page 11
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Parameters Selected

Parameters Selected	
Flow Group	2011 PM 'With Dev' Flows
Flow Group Period	17:00 to 18:00
Phase Minimum Type	Street
CycleTime	120
Flow Factor	1.00
Sat Flows Used	RR67

Stage Results

Stage Timings						
Stage Sequence	1	2	3	4	5	6
Stage Duration	29	19	6	12	4	21
Stage Change Point	0	34	58	71	90	94

User	Russell Giles Partnership - Godalming	Project					Page 12
Location		File	Chalcroft Lane LINSIG.LSG	SCN		Chkd	
Title				Controller	Generic	Appvd	

Link Results

Link Results												
Link Ref	Link Name	Link Type	Full Phs	Arw Phs	Tot Grn (s)	Dem Flow pcu	Max Satn pcu/h	Cap pcu	Deg Sat %	Tot Del s/pcu	TDel pcuh	Que' pcu
1/1	Chichester Road (West) Left Ahead	U	A		53	686	2009	904	75.9	34.3	6.5	12.9
1/2	Chichester Road (West) Right	O	A	J	53	310	1891	323	96.0	101.2	8.7	11.6
2/1	North Bersted Street Right Left Ahead	U	B		21	329	1914	351	93.8	101.4	9.3	13.8
3/1	Chichester Road (East) Ahead Right Left	U	C		29	476	1960	490	97.1	103.5	13.7	19.7
4/1	Chalcroft Lane Left	U	D		34	374	1805	526	71.0	46.8	4.9	9.3
4/2	Chalcroft Lane Ahead Right	U	E		16	281	2104	298	94.3	113.6	8.9	12.9
Cycle Time 120 s				PRC -7.9 %				Total Delay 51.9 PCUh				

Opposed Link Results

Opposed Movement Detail				
Link Ref	Link Name	Arr Grn	Gaps /cyc	Ign /cyc
1/2	Chichester Road (West) Right	19	0.3	0.0