LW Developments

CHESHUNT SPORTS VILLAGE, THEOBALDS LANE, CHESHUNT, HERTFORDSHIRE

Transport Assessment

70019827
DECEMBER 2017

PUBLIC

LW Developments

CHESHUNT SPORTS VILLAGE, THEOBALDS LANE, CHESHUNT, HERTFORDSHIRE

Transport Assessment

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70019827
OUR REF. NO. 70019827

DATE: DECEMBER 2017

WSP
Unit 9, The Chase
John Tate Road, Foxholes Business Park
Hertford
SG13 7NN
Phone: +44 1992 526 000
Fax: +44 1992 526 001
WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	1st Issue			
Date	December 2017			
Prepared by	M.Brown			
Signature	Brown, Matthew Reason: I am the author of this document Date: 2018.01.16 15:53:16 Z			
Checked by	I. Dimbylow			
Signature	Digitally signed by Dimbylow, Ian Date: 2018.01.16 14:37:52 Z			
Authorised by	I. Dimbylow			
Signature	Digitally signed by Dimbylow, Ian Date: 2018.01.16 14:38:07 Z			
Project number	70019827			
Report number	01			
File reference	70019827			

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 REPORT BRIEF

1.1.1. WSP has been appointed by LW Developments Ltd, to prepare a Transport Assessment to support a planning application for the proposed development of the Cheshunt Football Club Site. This Transport Assessment (TA) examines the transport characteristics of the site and surrounding highway network and the site's accessibility to modes other than the private car.

1.1.2. This report also includes an assessment of local travel characteristics to predict the future travel demands of the proposed development site and likely impact on keys junctions.

1.1.3. LW Developments Ltd is proposing a mixed use development at the Cheshunt Football Club site. The development proposal is as follows:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 1330 seats and overall capacity for 2,000 spectators.
  - A north block which will be arranged across three floors totalling 2,400sqm (GIA) and will comprise changing rooms, bars and functions suites;
- 115 residential apartments;
- 48 residential houses; and
- A western block which will be arranged across three floors totalling 4,002sqm (GIA) and will comprise community use, service related industries, leisure use and offices.

BACKGROUND

1.1.4. WSP previously prepared a Transport Assessment (September 2016) to support a planning application (07/16/1939/F) for similar although larger development proposal detailed below:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 500 seats for spectators initially, with a future seated capacity of circa 5,192 seats;
    - A North block which will be arranged across floors totalling 2,727 sq.m (GIA) and will comprise changing rooms, bars and function suites;
- 136 residential apartments;
- 50 residential houses; and
- A Western block which will be arranged across four floors totalling 5,336sq.m (GIA) and will comprise community use, service related industries, leisure use and offices.

1.1.5. Hertfordshire County Council (HCC) raised a number of concerns in response to the previous Transport Assessment in early 2017. These concerns were addressed via a series of meetings, Addendum TA and correspondence. HCC raised no objections subject to conditions to the original scheme, however, the planning application was refused at committee.

1.1.6. On the basis that the previous transport technical work was acceptable to support the previous larger development, it is considered appropriate to support the latest planning application for the smaller scheme. Therefore this Transport Assessment will detail the specifics of the new development scheme and the supporting assessment work will be based on the previous application.

1.1.7. This TA has been prepared in accordance with the National Planning Policy Framework – Planning Guidance for Transport Assessments and Transport Statements and with reference to Manual for Streets. The TA has also been prepared in accordance with pre-application scoping discussions with Hertfordshire County Council the local highway authority.

1.2 REPORT FORMAT

1.2.1. Section 2 – of the report describes the existing site in relation the surrounding transport network. The collisions that have occurred in the local area over the past five years have been reviewed. The details of the Broxbourne Model and base traffic flows surrounding the site are also provided.

1.2.2. Section 3 – of the report describes the existing site's accessibility by modes other than the private car. This includes a description of walking and cycling facilities and access to public transport and local facilities.

1.2.3. Section 4 – of the report provides a review of the central government and local government planning policy guidelines that are considered relevant in transportation terms to the site.

1.2.4. Section 5 – provides details of the proposed development including, number and type of dwellings access arrangement both vehicular and pedestrian / cycle, the spine road and future accessibility refuse collection and vehicle and cycle parking.

1.2.5. Section 6 – details the likely vehicular traffic generation associated with the site and the distribution of traffic onto the local highway network.

1.2.6. Section 7 – considers the impact of the development traffic on the local highway network identified for assessment.

1.2.7. Section 8 – provides a summary of the report and conclusions.

2 EXISTING CONDITIONS

2.1 INTRODUCTION

2.1.1. This section of the report considers the site's context, demographics of the area, existing level of car ownership within Cheshunt and Broxbourne Borough, the travel to work characteristics of residents in the Theobald ward and a review of the local highway network and how well the site is connected. It also provides details of the base traffic flows.

2.2 SITE LOCATION

2.2.1. Cheshunt Football Club site is located to the north of Theobalds Lane, approximately 120m east of the A10 and just over 1km from Cheshunt Town centre. Cheshunt is a town in the Borough of Broxbourne, Hertfordshire England with a population of approximately 52,000 residents. The site location is contained in **Appendix A** and provided on Figure 1 below:

Figure 1 – Site Context Plan

2.2.2. The proposed development would be part of the site occupied by Cheshunt Football Club. The Cheshunt Sports Village site is bound by Theobalds Lane to the south, new football and playing fields to the northern boundary, Albury Farm and the A10 to the western boundary and residential dwellings from the eastern boundary.

2.2.3. Cheshunt Football Club is served by a vehicular and pedestrian access with Theobalds Lane to the south western boundary of the site.

2.3 EXISTING SITE USES

2.3.1. The site at Cheshunt Football Club comprises a main stadium and ancillary buildings, a large gravel car park, a full size floodlit artificial grass pitch and number of grass football pitches. In total the land extends to 10.04 ha (24.81 acres).

2.3.2. The land and buildings are predominately used for football competition and training. More than 27 teams play under the Cheshunt FC banner ranging from the senior teams to the grass roots youth, academy and disability teams. The club hosts regular school, league and cup finals and is also the home of other local community football clubs.

2.3.3. In recent years Cheshunt Football Club has also grown into a social hub for the community, used regularly for private functions, community meetings, education, performing arts, company training days and summer camps.

2.3.4. Use of the facilities at Cheshunt FC predominately occurs during off-peak hours at evenings and weekends. These are listed below.

Stadium

- The main stadium at Cheshunt Football Club has a capacity of 2,180, including 242 covered seating and 132 covered standing.
- There are currently 4 teams that use the stadium pitch for matches. These are Cheshunt 1st team, (Sat and Tues), Cheshunt u21s (Tues), FC Romania (Sat and Wed), and Tottenham Hotspur Ladies (Sun).
- Evening games kick off at 7.45pm and weekend games kick off at 3pm. On average there are 2-3 games a week on the stadium pitch.
- Ancillary to the stadium are the dressing rooms, physio room and managers office, all in a block measuring 176 sq. m GIA.

Artificial Grass Pitch (AGP)

- The AGP is used throughout the week for football training and youth matches.
- In a typical week the peak usage is 6pm-10pm Monday to Friday. On weekdays, the facility is used by the Stevenage\Cheshunt College Programme during the hours of 10am-midday and 1pm – 3pm. At the weekends the AGP is predominantly used between 9am and 1pm for training, soccer schools and youth matches. Soccer camps are also held throughout the summer.

Grass Pitches

- The grass football pitches are used for matches on Saturday and Sunday mornings. Kick-off times are staggered throughout the morning from 9am to 1pm.
- There are currently 6 pitches (4 junior and 2 senior) with junior matches on Saturday mornings and senior matches on Sunday mornings.

Clubhouse (Amber Sports Bar) – 293 sq. m GIA - A3, A4, A5, B1, D1 and D2 uses

- The clubhouse is as the heart of Cheshunt Football Club and is open every evening and weekends for matches, training and private functions. Occasionally the clubhouse is hired on weekdays for wakes or company training days.

Function Suite (Club Amber) – 252 sq. m GIA - A4, D1, Suis generis uses

- Club Amber is a popular venue for parties, social functions, training courses and community events.
- On average there are two private functions a week (Friday and Saturday night) and a regular monthly club night. The function suite is also used 3 nights a week by community groups (Tues, Wed and Thurs) as well as on a weekday morning (Thurs). These groups include Slimming World and Impulse Dance.
- Club Amber also regularly hosts first aid training courses, safeguarding courses and FA coaching courses.

Club Offices – B1 use

- The club offices are open 5 days a week 10am-4pm Monday to Friday."

2.4 EXISTING TRAFFIC MOVEMENTS

2.4.1. The football club access arrangement was included as part of the traffic surveys detailed in section 2.9 of this report. The existing movements are detailed below:

Table 1 – Existing traffic movements at Cheshunt Football Club AM and PM peak:

Period	Arrivals	Departures	Two-way
AM Peak 08:00-09:00	7	7	14
AM 07:00-10:00	44	35	79
PM Peak 17:00-18:00	36	14	50
PM 16:00-19:00	60	32	92

2.4.2. It should be noted that this existing traffic has not been removed from the network for the purposes of the assessment.

2.5 CAR OWNERSHIP

2.5.1. Table 2.1 identifies the car ownership in the Theobalds Ward; this information has been used when reviewing the predicted vehicular trips that are likely to be made by the development. This information has been obtained from the 2011 census data and also provides details for Broxbourne Borough as a whole.

Table 2 – Car ownership levels in Theobalds Ward and Broxbourne

Car Ownership	Theobalds Ward	Broxbourne Borough
None	22.3%	17.5%
One	45.7%	42.2%
Two	24.1%	29.7%
Three	5.7%	7.5%
Four or More	2.2%	3.1%

2.5.2. The above table shows that the level of car ownership within Theobalds Ward is very comparable to the car ownership levels for Broxbourne Borough as a whole. However, the data indicates that there are more households that do not own a car and reflects the good accessibility of the ward to modes other than the private car.

2.5.3. From the 2011 Census data it is possible to ascertain the overall level of car ownership based on the population of the Ward and the number of dwellings within the area. For the Theobalds Ward the data is as follows:

Table 3 - Car ownership per dwelling - Theobalds Ward and Broxbourne Borough

	Theobalds Ward	Broxbourne Borough
No.Households	3,017	37,658
Total number of cars owned	3,641	51,815

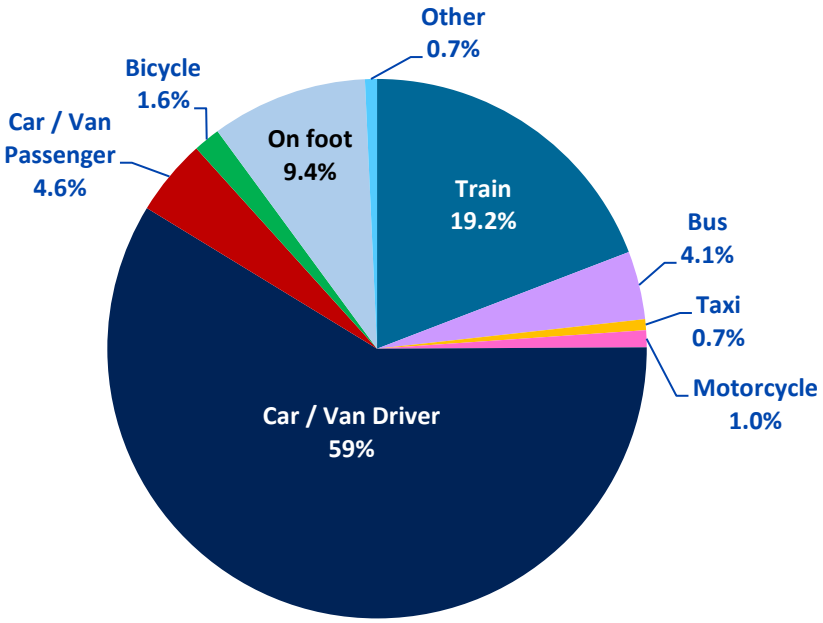
Car ownership per household	1.21	1.376

2.5.4. The above table indicates a lower level of car ownership in the Theobalds Ward compared to the Borough as a whole. The lower car ownership reflects the good accessibility to public transport and modes other than the private car.

2.6 TRAVEL TO WORK CHARACTERISTICS

2.6.1. The 2011 Census data 'Travel to Work' for the Theobald Ward identifies that 11% walk or cycle to work, 23% of residents use public transport as their main mode to work and 59% use the private car. Below are the modal splits for the Theobalds Ward.

Table 4 - Modal split - journey to work - Theobalds Ward



2.6.2. The 2011 Census database provides details of where residents within Theobalds Ward currently work. The main destination of trips from the Theobalds Ward are as follows:

- Broxbourne = 29.34%;
- Greater London = 48.72%;
  Main destinations:
  - Enfield = 18.99%
  - City of London = 4.11%
  - Westminster = 3.86%
  - Haringey = 3.47%
  - Camden = 3.09%
- East Hertfordshire = 5.19%;
- Epping Forest = 4.49%; and
- Welwyn Hatfield = 3.30%.

2.7 EXISTING HIGHWAY NETWORK

2.7.1. Theobalds Lane provides access to Cheshunt Football Club and runs on a broadly east /west alignment between Cheshunt High Street to the east and the A10 to the west.

2.7.2. Theobalds Lane forms a simple left in left out priority junction arrangement with the A10 southbound dual carriageway to the west of the site. Theobalds Lane is subject to a 30mph speed limit immediately to the east of the junction with the A10 and benefits from the provision of a system of street lighting. Theobalds Lane is

also subject to a 7.5 tonne weight limit that operates for the full extent of the lane. No waiting at any time (double yellow line) parking restrictions are provided on both sides of the carriageway from the junction with the A10 to the vehicular access to Cedars Park House at the eastern site boundary.

2.7.3. Theobalds Lane is fronted by trees and vegetation from the junction with the A10 until the Football Club access. The Football Club is serviced by a simple priority junction on the northern side of Theobalds Lane at the south western corner of the site. The priority junction provides access to the existing car parking area adjacent to the Football Club ground. It also provides pedestrian connection to the site.

2.7.4. A priority single lane working is located just to the west of the Football Club vehicular access, with a build out on the northern side of Theobalds Lane. The priority is for vehicles travelling east bound on Theobalds Lane and westbound vehicles give way.

2.7.5. A combined footway / cycleway located on the northern side of Theobalds Lane behind the trees and vegetation runs along the southern boundary of the site. The combined footway / cycleway provide connections to the A10 pedestrian bridge and the A10 footway adjacent to the southbound carriageway, to the west of the site. To the east of the site it connects to the existing footway / cycleway that run along the eastern boundary of the site. It also connects to the northern Theobalds Lane footway to the east of the site boundary. The footway / cycleway provide pedestrian connections to the Football Club via the access.

2.7.6. Cedars Park is served by a recently constructed priority junction located on the southern side of Theobalds Lane just to the east of the football club access. The new priority junction to Cedars Park provides a short length of footway to the west of the access that connects to the northern combined footway / cycleway via an uncontrolled pedestrian crossing. A combined footway / cycleway run on the southern side of Theobalds Lane to the east of the access to the vehicle access to Cedars Park House.

2.7.7. A combined footway / cycleway run on a north / south alignment along the eastern site boundary between Theobalds Lane to the south and Albury Ride to the north. The footway / cycleway are signed as part of the route that provides access to Cheshunt Station to the north of the site.

2.7.8. To the east of the site Theobalds Lane is fronted by residential development and provided with footways on both sides of carriageway that connect to the High Street. The eastern residential section of Theobalds Lane is subject to limited waiting parking restrictions that operate between 9am to 10am, Monday to Friday. Dudley Avenue forms mini roundabout junctions with Theobalds Lane at its eastern and western ends.

2.7.9. Theobalds Lane forms a mini roundabout junction with the B176 High Street. The B176 runs from the A121 Winston Way roundabout to the south and the A1170 Great Cambridge Road to the north. The B176 High Street is provided with footways on both sides of the carriageway that provide access to local facilities and Theobalds Grove rail station located to the south of the mini roundabout.

2.7.10. The B176 High Street is subject to a 20mph speed limit to the south of the mini roundabout junction with Theobalds Lane and is 30mph to the north of the roundabout. A signalised pedestrian crossing is located just to the south of the mini roundabout on the High Street and provides access to the eastern footway.

2.7.11. The A10 runs on a north / south alignment to the west of the site. The A10 is dual carriageway in the vicinity of the site and a footway is provided adjacent to the southbound carriageway. The A10 to the west of the site is subject to the national speed limit and benefits from the provision of street lighting.

2.7.12. The A10 forms a large roundabout junction with the A121 Winston Churchill Way approximately 100 metres to the south of the junction with Theobalds Lane. To the south the A10 connects to the M25 motorway via junction 25 a large signalised roundabout.

2.8 COLLISION ANALYSIS

2.8.1. WSP previously prepared a Transport Assessment (September 2016) to support a planning application (07/16/1939/F) for a larger development than currently proposed. The previous Transport Assessment included a review of personal injury collisions that occurred on the local road network in the vicinity of the site in the period from 1 April 2011 to 31 March 2016.

2.8.2. At the request of HCC the collision data has been updated and now extends to the 30th June 2017. A copy of the original and latest collision data is provided at **Appendix B** of this report.

2.8.3. The area covered includes the following links and junctions:

- Theobalds Lane in the vicinity of the site from the A10 left in left out junction to the High Street roundabout junction;
- Crossbrook Street / Theobalds Lane – mini roundabout junction;
- Theobalds Lane / A10 southbound carriageway – left in left out priority junction;
- High Street / Swanfield Road / Monarchs Way / Sturlas Way / Winston Churchill Way roundabout;
- A10 Great Cambridge Road / A121 / B198 Ellis Way roundabout; and
- Theobalds Lane / B176 High Street / Trinity Lane – double mini roundabout junction.

2.8.4. Table 5 summarises the severity of the collisions that have occurred at the above junctions and links, and the main causation factors:

Table 5 – Collision Analysis: Severity and Causation Factors

	Severity			Causation Factors
	Slight	Serious	Fatal	
Theobalds Lane	4	0	0	• Poor turn / indication • Driving too close • Failure to look • Loss of control (due to weather)
Crossbrook Street / Theobalds Lane	2	3	0	• Loss of control • New driver • Failure to look • Driver taken ill at the wheel
A10 / Theobalds Lane	3	0	0	• Poor turn • Driving too slow • Failure to look • Misjudgement of speed
High Street / Swanfield Road / Monarchs Way / Sturlas Way / Winston Churchill Way	17	0	0	• Failure to look • Aggressive driving • Poor turn/ indication • Driver impaired by alcohol • Driver impaired by fatigue • Reckless driving • Poor weather conditions
A10 / A121/ B198	100	7	0	• Driving too close • Failure to look • Poor turn/ indication • Reckless driving • Misjudgement of speed • Aggressive driving
Theobalds Lane / B176 / Trinity Lane	6	0	0	• Failure to look • Reckless manoeuvre • Misjudgement of speed • Poor weather conditions • Driving too close • Driving too slow • Illegal turn • Impaired by alcohol leading to loss of control • Driver distracted by mobile phone • Nervous driver

				• Aggressive driving • Poor turn / indication • New driver • Poor weather conditions • Loss of control (due to weather)
Total	**132**	**10**	**0**	

2.8.5. The review of the collision data indicates no common patterns of collisions due to the characteristics of the local highway network in the vicinity of the development, rather carelessness on behalf of drivers, indicating that the study area has no pre-existing inherent deficiencies.

2.9 BASELINE TRAFFIC SURVEY DATA

2.9.1. The initial Transport appraisal concluded that the impact of the development traffic would need to be considered at the following key junctions surrounding the site:

2.9.2. Theobalds Lane / A10 southbound carriageway – left in left out priority junction;

2.9.3. A10 Great Cambridge Road / A121 roundabout; and

2.9.4. Theobalds Lane / B176 High Street – mini roundabout junction.

BROXBOURNE BOROUGH COUNCIL'S LOCAL PLAN SATURN MODEL

2.9.5. The flows for the above junctions have been extracted from the Broxbourne Borough Council's (BBC) Local Plan Saturn Model.

2.9.6. It was agreed as part of the pre-application discussions with BBC that the model would be made available to undertake analysis of the developments impact on the local highway network. The model has been prepared by JMP Consultants on behalf of BBC to assess the highway impacts of the emerging Local Plan. The model has been developed using the SATURN based East London Highway Assignment Model (ELHAM) which has been extended and enhanced to incorporate the highway network in Broxbourne. The model includes 2013 base year flows and 2029 future year do minimum without local plan development and 2029 with the local plan developments included.

2.9.7. The model also includes committed developments that are approved to be built within the Broxbourne highway network during the interim period between 2013 and 2029. This growth is considered independent of the local plan allocations. The details of the committed development have been provided by BBC and the development quantum of the committed developments can be summarised as follows:

- Employment – 20 sites (49,000sqm);
- Retail – 25 sites (6,500sqm);
- Leisure – 11 sites (17,500sqm);
- Education – 13 sites (5,800sqm);and
- Residential – 2,150 dwellings mixture of flats and houses).

2.9.8. The details of the turning counts extracted from the BBC Model are provided at **Appendix C** of this report.

MANUAL CLASSIFIED COUNT AND QUEUE SURVEYS

2.9.9. Turning count data and queue surveys were collected on Tuesday 12 July 2016 for the following junctions:

- Cedars Park / Theobalds Lane / Cheshunt Football Ground – four arm priority junction;
- Theobalds Grove / B176 High Street – mini roundabout junction;
- Trinity Lane / B176 High Street – mini roundabout junction; and
- Sturlas Way / A121 Winston Churchill Way / B176 High Street / Swanfield Road / A121 Monarchs Way – roundabout junction.

2.9.10. The turning count data was collected in 15 minute intervals for the AM and PM peak period (07:00 – 10:00 and 16:00 – 19:00), while queue counts recorded the maximum queue length for each 5 minute interval for the AM and PM peak periods.

AUTOMATED TRAFFIC COUNT

2.9.11. An Automated Traffic Counter (ATC) was placed on Theobalds Lane in the vicinity of the proposed access arrangement for a seven day period between 23 June 2016 and 29 June 2016. The ATC provides information about traffic volumes along Theobalds Lane as well as providing an indication of the speeds. The results of the speed survey have been used to determine the visibility requirements at the access arrangement.

2.9.12. The observed turning count data and ATC survey is provided at **Appendix D** of this report.

2.9.13. Table 6 below shows the 7 day observed mean and 85th percentile speeds along Theobalds Lane in the vicinity of the site.

Table 6 – Observed vehicle speeds along Theobalds Lane

ATC Location	Direction	Mean Speed	85% Speed	Speed Limit
Theobalds Lane	Eastbound	26.0 mph	33.0 mph	30 mph
	Westbound	28.4 mph	35.0 mph	30 mph

2.9.14. Table 7 below shows the observed average weekday morning and evening peak flows along Theobalds Lane in the vicinity of the site.

Table 7 – 2016 2016 Observed Link Flows Along Theobalds Lane

ATC Location	Time Period	Eastbound	Westbound	Two-way
Theobalds Lane	AM Peak (08:00 – 09:00)	106	175	281
	PM Peak (17:00 – 18:00)	92	178	270

3 ACCESSIBILITY

3.1 INTRODUCTION

3.1.1. This section of the report considers the sustainability of the proposed site in terms of accessibility to public transport infrastructure, as well as opportunities for walking and cycling.

3.2 WALKING AND CYCLING

3.2.1. The proposed site will connect to the existing pedestrian facilities on Theobalds Lane that provide connection to the High Street and wider footway network with Cheshunt.

3.2.2. Theobalds Lane is served by a combined footway / cycleway that run to the south of the site and to the north of Theobalds Brook. To the west of the site footway / cycleway crosses the A10 via a pedestrian over bridge and also accesses the footway on the southbound A10 carriageway. The A10 over bridge provides connection to a footpath that leads to Bury Green and Churchgate to the west of Cheshunt.

3.2.3. To the east of the site the combined footway / cycleway connects to the northern footway on Theobalds Lane and also the footway / cycleway that runs adjacent to the eastern boundary and provides access to Albury Road. A further footway / cycleway are provided on the southern side of Theobalds Lane between the access to Cedars Park and the eastern site boundary.

3.2.4. Footways either side of Theobalds Lanes to the east of the site provide access to the B176 High Street and Theobalds Grove Station.

3.2.5. There are a number of pedestrian crossings in the vicinity of the site that could accommodate key pedestrian desire lines. These include the uncontrolled pedestrian crossing at the existing Football Club access that connects to the southern Theobalds Lane footway / cycleway. An uncontrolled pedestrian crossing is provided on Theobalds Lane at the eastern boundary of the site, to allow pedestrians to cross north to south and vice versa. The Theobalds Lane arm of the mini roundabout junction with the B176 High Street includes the provision of an uncontrolled pedestrian crossing. The B176 High Street to the south of the mini roundabout junction with Theobalds Lane provides a signalised pedestrian crossing, just to the north of the rail station. The pedestrian facilities will aid movement between the site and the local facilities on the High Street including the Theobalds Grove rail station.

3.2.6. **Appendix E** shows the indicative walking isochrones from the site based on a walking speed of 80m per minute (circa 4.8mph), up to a maximum distance of 2km from the centre of the proposed site. The walking isochrones demonstrate that within a 10 minute walk of the site, individuals can reach bus stops, rail stations and local facilities located on the High Street.

3.2.7. There are no formal cycle facilities on Theobalds Lane to the east of the site. However, Theobalds Lane is considered to be sufficiently lightly trafficked to accommodate cycle trips on the carriageway. The B176 High Street to the south of the mini-roundabout junction is subject to a 20mph speed limit and would be appropriate to accommodate cycle movements. The section of the High Street to the north of the mini-roundabout junction with Theobalds Lane is considered to be sufficiently wide to accommodate cyclists within the carriageway and would provide connections to local facilities. The combined footway / cycleway that runs along the eastern boundary of the site and connects to Albury Ride that provides a lightly trafficked route from the site to Cheshunt Rail Station.

3.2.8. **Appendix F** shows the indicative cycle isochrones from the site based on a cycling speed of 200m per minute (circa 12mph). The cycle isochrones indicate that individuals can reach the High Street and Theobalds Grove rail station within a 5 minute cycle ride.

3.3 PUBLIC TRANSPORT

BUS

3.3.1. No bus services operate on Theobalds Lane in the vicinity of the site. The nearest bus stops are located on either side of the High Street in the vicinity of Theobalds Grove rail station. Theobalds Grove rail station 'Bus Stop B' is located underneath the railway bridge on the High Street. The southbound Theobalds Grove rail station 'Bus Stop A' is located in a lay by to the north of the mini-roundabout junction with Theobalds Lane. The bus stops are approximately 420m (5 mins) walking distance to the east of the proposed site.

3.3.2. The Theobalds Grove Railway Station bus stops provide access to a number of services that operate on the High Street and table 8 below summarises the bus routes and frequency of service. A bus route plan is provided at **Appendix G** of this report.

Table 8 – Bus routes and frequencies – Theobalds Grove rail station bus stops – B176 High Street

Service	Operator	Route	Frequency		
			Mon-Fri	Sat	Sun
242	Metroline	Potters Bar – Hammond Street- Waltham Cross	2 per hour	2 per hour	1 every 2 hours
251	Arriva	Waltham Abbey – Waltham Cross / Hammond Street	4 per hour peak and 3 per hour off peak	2 per hour peak and 3 per hour off peak	No service
310	Arriva	Hertford – Waltham Cross	1 every 10 mins	4 per hour peak and 1 per hour off peak	1 per hour (runs as service 411)
410/410a/410x	Trusty Bus	Holdbrook Estate- Harlow	2 per hour	2 per hour	No service

3.3.3. The above table demonstrates that the proposed site is well served by a number of high frequency bus services that provide access to surrounding towns and villages. The bus services also provide links to Waltham Cross Bus Station, which provides access to London bus services. The bus station is also served by a Transport for London night bus route N279.

3.3.4. The bus services accessible from the site would offer future residents and those accessing the football stadium and other uses on the site with good opportunities to travel by bus. The frequency of the buses would provide a realistic alternative to the private car for all users at the proposed development.

3.4 RAIL

3.4.1. Theobalds Grove rail station is located approximately 440 metres (5 ½ mins walk) east of the site on the High Street to the south of the junction with Theobalds Lane. Theobalds Grove rail station is located on the Lea Valley lines and train services are provided by London Over ground. Oyster Cards are accepted at the station, which is in Travel card zone 7.

3.4.2. The typical off-peak service is two trains per hour to London Liverpool Street via Seven Sisters, and two trains per hour to Cheshunt. A number of trains run to Hertford East in peak hours.

3.4.3. The station also includes a covered cycle shelter with 5 stands and 4 stands not covered located adjacent to the station entrance.

3.4.4. Waltham Cross rail station is located approximately 1600m south of the site. The station is located on the West Anglia Mainline and train services are provided by Abellio Greater Anglia. The typical off-peak service is two trains per hour to London Liverpool Street via Tottenham Hale, two trains per hour to Hertford East, one train per hour to Hertford East, one train per hour to Stratford and one train per hour to Bishop's Stortford. The station provides 20 cycle parking stands adjacent to the entrance.

3.4.5. Cheshunt rail station is located approximately 2000m north east of the site at Windmill Lane. The station can be accessed via the combined footway / cycleway that run along the eastern boundary of the site and connects to Albury Ride, Russell's Ride and Windmill Lane.

3.4.6. Cheshunt Railway Station is on the West Anglia Main line and the Lea Valley Lines and train services are provided by Abellio Greater Anglia and London Overground. Oyster cards are accepted at the station, which is in Travel card zone 8.

3.4.7. The typical off peak services from the station is as follows:

- 4 trains per hour (tph) to London Liverpool Street via Tottenham Hale;
- 2 tph to London Liverpool Street via Seven Sisters;
- 2 tph to Cambridge;
- 2 tph to Bishop's Stortford;
- 2 tph to Hertford East; and
- 2 tph to Stratford

3.4.8. The Liverpool Street service via Seven Sisters is run by London Overground. All other services are run by Abellio Greater Anglia.

3.4.9. The station provides 80 cycle strands/ racks which are located next to the station entrance.

3.4.10. Theobalds Grove, Waltham Cross and Cheshunt Stations are within easy walking and cycle distance of the proposed development and would provide a good opportunity for combined cycle / train journeys.

3.5 ACCESSIBILITY TO LOCAL FACILITIES

3.5.1. Manual for Streets (paragraph 4.4.1) states the following:

3.5.2. "Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot."

3.5.3. The Institution of Highways and Transportation (IHT) "Guidelines for Providing Journeys on Foot" (2000) suggests acceptable, desirable and maximum walking distances. Table 9 contains the suggested walking distances for pedestrians without mobility impairment for some common trip purposes.

Table 9 - Acceptable, desirable and maximum walking distances

Definition	Walking Distances (M)		
	Town Centres	Commuting / Schools	Elsewhere
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

3.5.4. The table below identifies the walking and cycle distance and time to the local facilities, measured from the proposed development.

Table 10 – Accessibility to local facilities

Facility	Approx. Distance (M)	Approx. Walking Time (Mins)	Approx. Cycle Time (Mins)
Public transport			
High Street Bus Stops – Theobalds Grove Station	420m	5 mins	N/A
Theobalds Grove Station	440m	5 ½ mins	N/A
Waltham Cross Station	1600m	20 mins	8 mins
Cheshunt Station	2000m	25 mins	10 mins

Local shops and facilities			
Monarch's Way parade of shops including cafes, restaurant, off licence, book makers, hairdresser, newsagent and convenience store	700m	9 mins	3 ½ mins
Tesco Express High Street	800m	10 mins	4 mins
Sainsbury Supermarket Waltham Cross	1200m	15 mins	6 mins
Pavilions Shopping Centre – Waltham Cross, 50 shops including high street shops	1250m	15 ½ mins	6 ½ mins
Cheshunt Library	1200m	15 mins	6 mins
Health care			
Cheshunt Community Hospital	1200m	15 mins	6 mins
Stanhope Doctors Surgery	1200m	15 mins	6 mins
Wardens Lodge Medical Practice	1000m	12 ½ mins	5 mins
Spirals Dental Practice	1200m	15 mins	6 mins
Schools			
Holy Trinity CofE Primary School	800m	10 mins	4 mins
Four Swannes Primary School	1200m	15 mins	6 mins
St Joseph Primary School	1200m	15 mins	6 mins
Downfield Primary School	1200m	15 mins	6 mins
Burleigh Primary School	1600m	20 mins	8 mins
Millbrook School	1750m	22 mins	9 mins
Dewhurst CofE Primary School	2000m	25 mins	10 mins

Hurst Drive Primary School	2000m	25 mins	10 mins
St Mary's CofE High School	1200m	15 mins	6 mins
Cheshunt School	1600m	20 mins	8 mins

**Based on a walking speed of 80m per minute (circa 4.8km/h)*
**Based on a cycling speed of 200m per minute (circa 12km/h)*

3.5.5. In addition, the 2011 Census database indicates that the proposed stadium and commercial development would be accessible by 10,470 residents within 1km and 38,146 residents within 2km. The surrounding residential catchment would provide opportunities for future local staff and customers to walk or cycle to access the site.

3.6 TRAVEL PLANS

3.6.1. Given the locality of the site in relation to public transport and modes other than the private car, the opportunity exists to encourage future residents and staff and visitors to the football club and commercial uses to use non-car modes by providing Framework Travel Plans.

3.6.2. Framework Travel Plans will be produced as separate documents for both the residential and commercial uses. The Travel Plans will include details of a range of measures aimed at encouraging the use of sustainable travel modes for both future residents and employees at the football club and commercial uses. The Framework Travel Plans will be prepared in accordance with the DfT guidance 'Delivering Travel Plans through the Planning System' and the local Hertfordshire County Council Guidance Material.

3.6.3. The purpose of the Framework Travel Plans will be to encourage change in travel patterns and the main aim of the plan is to provide a reduction in private car mileage in favour of more sustainable modes of travel, including walking, cycling and car sharing, thus reflecting Government Policy in respect of transport. The plans will need to provide a range of initiatives to encourage the use of sustainable travel modes and reducing reliance on private motor vehicles.

3.6.4. The initiatives and measures proposed in the Travel Plans will need to comprise of 'hard' and 'soft measures. The 'hard' measures could include facilities such as car club parking space, safe and secure cycle parking. The 'soft' measures could include initiatives such as providing information on public transport services, cycle training and education on sustainable travel in lessons.

3.6.5. The Travel Plans will be an important tool to help mitigate and reduce the vehicle impact of the development proposals on Theobalds Lane and the surrounding highway network.

3.7 ACCESSIBILITY SUMMARY

3.7.1. The site benefits from good accessibility to high frequency bus services that provide access to surrounding towns and key amenities. The bus services also connect to Waltham Cross Bus Station, which provides links to London bus services. The bus services accessible from the site would offer future residents and employees / visitors to the site with good opportunities to travel by bus. The frequency of the buses would provide a realistic alternative to the private car for all users at the proposed development.

3.7.2. Theobalds Grove, Waltham Cross and Cheshunt rail stations are all within acceptable walk and easy cycle distance of the site. The stations provide links to London Liverpool Street, Bishop's Stortford, Cambridge, Stratford and Hertford.

3.7.3. The High Street is within the recommended 800m walk distance. It is considered that future residents would be likely to walk to access the local facilities. In addition the Pavilions Way shopping centre is 1250m walk distance from the site and would provide access to a wider range of retail opportunities. The site is also within walking and cycling distance of convenience food stores on the High Street and the Sainsbury Supermarket located at the Pavilions Way shopping centre. The site also offers excellent accessibility to local primary and secondary schools.

3.7.4. The proposed stadium and commercial development would be accessible by 10,470 residents within 1km and 38,146 residents within 2km. The surrounding residential catchment would provide opportunities for future staff and customers to walk or cycle to access the site.

3.7.5. In terms of sustainability, it is clear that the site benefits from good accessibility to existing highway frequency bus services that run on the High Street and access to three rail stations. Local facilities including shops, services and education are accessible by walking and cycling modes. The site therefore provides future residents, staff and customers with a realistic choice to the private car.

4 PLANNING POLICY

4.1 CENTRAL GOVERNMENT PLANNING POLICY

4.1.1. In the context of transportation and when considering new development, it is appropriate to assess the development in relation to the relevant planning policy guidance. The current planning policy guidance set by the government is the National Planning Policy Framework (NPPF) adopted in March 2012.

4.1.2. The NPPF sets out the Government's planning policies for England and how these are expected to be applied. The purpose of the planning system is to contribute to the achievement of 'Sustainable Development'. The ministerial foreword states that;

- Sustainable means ensuring that better lives for ourselves don't mean worse lives for the future generations.
- Development means growth.

4.1.3. Paragraph 14 states;

- At the heart of the NPPF is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision taking.

  For plan making this means that:

  - Local planning authorities should positively seek opportunities to meet the development needs of their area;
  - Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless;
  - Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this framework taken as a whole; or
  - Specific policies in this Framework indicate development should be restricted.

4.1.4. In terms of transport, paragraph 32 states:

- All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:
- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

4.1.5. In addition, the NPPF states in paragraph 36:

- A key tool to facilitate this will be a Travel Plan. All developments which generate a significant amount of movement should be required to provide a Travel Plan.
- In the context of NPPF it is considered that the scale of the development will not result in an impact which would be classed as severe.

4.2 BOROUGH OF BROXBOURNE LOCAL PLAN

4.2.1. Policy in relation to the transport planning of developments is set out in the Borough of Broxbourne Local Plan (2005) which is currently in the process of being updated. Chapter 9 deals specifically with transport planning and promoting sustainable transport.

4.2.2. The main aims of the transport chapter are set out below:

- Support an integrated approach to movement which will improve the environment, economy and accessibility of the Borough;
- Reduce the length and number of journeys undertaken by private motor vehicles;
- Encourage alternative means of travel which have less environmental impact;
- Encourage beneficial traffic management; and
- Promote equal access for all user groups.

4.2.3. Policy T1: Local Transport Plan states that:

- The Borough Council will work with Hertfordshire County Council, other public bodies and the private sector to prepare and implement the Lea Valley Area Transportation Plan and if necessary, other integrated transportation strategies covering the whole borough which support, where practicable, alternatives to the private car;

4.2.4. Policy T2: Passenger Transport and Interchange Facilities states that:

- Improvements to passenger transport interchange facilities will be supported at railway stations, town centres and other locations which attract a significant number of visitors or customers. Improvements to existing interchanges should seek to integrate all available forms of transport and include provision for people with wheelchairs, children and mobility disabilities; and
- In considering proposals for new development, the Council may impose conditions and seek to use planning obligations to secure passenger transport improvements as appropriate to the individual characteristics of the site.

4.2.5. Policy T3: Transport and New Development states that

- All development proposals including re-development and changes of use will be considered against the amount, type and timing of transport movements likely to be generated and the effect on the local highway, public transport systems, footpaths, bridleways, cycle routes and the environment.
- Development will not be permitted where:
  - There would be a significant detrimental impact on road congestion and movement, especially at peak travel times;
  - The safety of road users, including cyclists, powered two-wheelers and pedestrians, is compromised;
  - Traffic and/or parking generated by the development would severely adversely affect the surrounding environment; and/or
  - Insufficient provision is made for access by service and emergency vehicles.
- Applications for developments with major traffic implications will be required to submit a Local Transport Assessment.

4.2.6. Policy T4: Green Travel Plans states that:

- All applicants for major developments, particularly employment or leisure uses, will be expected to submit and operate a Green Travel Plan to minimise the number of private car trips generated. The Council may require the developer or occupiers to enter into a legal agreement or may impose planning conditions to ensure that the long-term benefits of a Green Travel Plan are maintained.

4.2.7. Policy T5: Development Standards states that:

- Highway proposals in association with new development will be assessed against the standards set out in 'Roads in Hertfordshire'.

4.2.8. Policy T7: Home Zones states that:

- Within home zones identified during the plan period, the Council will support appropriate speed limits and traffic calming measures to ensure that priority is given to the use of residential streets for pedestrians, cyclists and the benefit of local residents.

4.2.9. Policy T9: Pedestrian Needs states that: development proposals will be expected to provide for improved pedestrian accessibility by:

- Aiding pedestrian priority in both new developments and existing locations whenever and wherever possible;
- Aiding pedestrian access to and between modes of public transport;
- Ensuring that construction standards for footways, footpaths and crossing facilities make them suitable for all;
- Upgrading footways and towpaths;
- Improving signage; and
- Increasing safety and perceptions of safety in the walking experience via the using of planning out crime measures.

4.2.10. Policy T10: Cycling Provision states that: where appropriate, developers will be expected to consider provision for cyclists in new development through the following measures:

- Opportunities to promote development of the cycle network;
- Routes providing access to and around the site which can be ridden safely; and
- Provision of cycle storage, covered cycle parking and, where appropriate, changing and shower facilities.

4.3 THE BROXBOURNE LOCAL PLAN – A FRAMEWORK FOR THE FUTURE DEVELOPMENT OF THE BOROUGH – PRE-SUBMISSION CONSULTATION NOVEMBER – DECEMBER 2017

4.3.1. The pre-submission Local Plan stats the following regarding the proposed development site at paragraph 7.17:

- Cheshunt FC is proposing to progressively redevelop the stadium for sporting, commercial and community activities. This development would be financed through the construction and sale of new homes around the stadium and between the stadium and the existing urban edge at Montayne Road. The Council is supportive in principle of this development.

4.3.2. The site is included in the pre-submission Local Plan at Policy CH7 and states the following:

- A development of c. 165 new homes, community and commercial floorspace is proposed at Cheshunt FC to enable the development of the Cheshunt FC Stadium.

4.3.3. The pre-submission Local Plan includes the following transport objectives:

- Objective: Ensure that growth and regeneration can be safely accommodated by local roads, the A10 and the West Anglia Mainline and that the Plan encourages as many journeys as possible by bus, rail, walking and cycling so that people have a safe, viable and attractive alternative to driving;
- Whilst this Plan is promoting a sustainable pattern of development and sustainable places, the growth in population and employees will create additional demands for travel. There is already congestion on the Borough's roads and the situation will get worse unless people move to alternative forms of travel and/or road improvements are undertaken. This Plan promotes both and section 17 sets out in broad terms the Schemes that are proposed to deliver the transport objective.
- For Broxbourne's Roads, the strategy is to minimise congestion on the A10 and local roads by promoting schemes to improve the key junctions. New roads will be built to service development, but the only new distributor road proposed within the Local Plan is an extension of Brookfield Lane West to the Turnford roundabout on the A10.
- For rail, the strategy is to improve service frequency and capacity on the West Anglia mainline by supporting Crossrail 2, which currently proposes its northern terminus at Broxbourne, and the four tracking of the West Anglia mainline. This Plan is also promoting new stations at Turnford and at Park Plaza;
- For bus travel, the strategy is to ensure that new strategic developments are connected into bus services. The possibility of a new express bus service through the Borough will be explored. A new bus terminus is proposed at Brookfield; and
- For walking and cycling, the strategy is to create a network of interconnected safe routes throughout the Borough. A walking and cycling strategy will be produced by the Council.

4.4 BROXBOURNE LOCAL PLAN UPDATE – ISSUE 7 – NOVEMBER 2017 – THE TRANSPORT STRATEGY

4.4.1. The Transport Strategy supports the proposals set out in the Local Plan and confirms a package of measures anticipated to cost around £133 million in total, funded from a mix of sources including developer contribution and public sector finance. The main proposals that are considered relevant to the proposed development are as follows:

- Additional capacity of the A10 at Church Lane and College Road and a major redesign of the Lieutenant Ellis Way junction;
- Upgrades to Junction 25 of the M25; and
- New and enhanced bus services including a new service linking the railway stations.

4.4.2. The local cycling and walking infrastructure plan includes the following proposals:

- Investment in approaches to the town centres to make them more attractive, safe and inviting;
- Network of cycle paths connecting new and existing residential areas with popular destinations; and
- Better promotion of the opportunities and benefits of walking and cycling, including improved signage and wayfinding.

4.4.3. The Local Plan update also states the following regarding the proposed development site:

- In respect of the Cheshunt Football Club site, the draft Local Plan (summer 2016) estimated that 120 houses could be provided at the site. Planning permission for 186 homes was refused on 15 August 2017. The applicant is working on an amended scheme which will result in a reduction in the total number of homes by around 20. Based on the plans seen to date, officers are satisfied that this deals with the material concerns of the Council and that a scheme can be supported through the Local Plan and not currently with the benefit of planning permission, this will not commit the Council to accepting a scheme with this number of homes as the details would still need to be assessed through a planning application. It is, however, indicative of the scale of development that is Likely to found acceptable.

4.5 LOCAL TRANSPORT PLAN (2011-2031)

4.5.1. The third Hertfordshire Local Transport Plan (LTP3) is a statutory document to set out the county council's vision and strategy for the long term development of transport in the county.

4.5.2. The Hertfordshire vision is to:

- Provide a safe, efficient and resilient transport system that serves the needs of businesses and residents across Hertfordshire and minimise its impact on the environment.

4.5.3. The plan states that this will be achieved:

- Making best use of the existing network and introducing targeted schemes where improvements are required so as to deliver a reliable and readily usable transport network to benefit local businesses, encourage further economic growth and allow access for all to everyday facilities; and
- Promoting and supporting sustainable travel to reduce growth in car traffic and contribute to improved health and quality of life for residents with a positive impact on the environment and on the wider challenge of reducing transport's contribution to climate change.

4.5.4. The five LTP goals which form the basis of the county transport strategy are to:

a) Support economic development and planned dwelling growth;

- Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy;
- Support economic growth and new housing development through delivery of transport improvements and where necessary enhancements of the network capacity;

b) Improve transport opportunities for all and achieve behavioural change in mode choice;

- Improve accessibility for all and particularly for non-car users and the disadvantaged (disabled low income, elderly etc.);
- Achieve behavioural change as regards choice of transport mode increasing awareness of the advantages of walking, cycling and passenger transport, and of information on facilities and services available;
- Achieve further improvements in the provision of passenger transport (bus and rail services) to improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users;

c) Enhance quality of life, health and the natural, built and historic environment for all Hertfordshire residents;

- Improve journey experience for transport users in terms of comfort, regularity and reliability of service, safety concerns, ability to park and other aspects to improve access;
- Improve the health of individuals by encouraging and enabling the more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health;
- Maintain and enhance the natural, built and historic environment managing the streetscape and improving integration and connections of streets and neighbourhoods and minimising the adverse impacts of transport on the natural environment, heritage and landscape;

- Reduce the impact of transport noise especially in those areas where monitoring shows there be specific problems for residents;

d) Improve the safety and security of residents and other road users;

- Improve road safety in the county reducing the risk of death and injury due to collisions;
- Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised;

e) Reduce transport's contribution to greenhouse gas emissions and improve its resilience;

- Reduce greenhouse gas emissions from transport in the county to meet governments targets through the reduction in consumption of fossil fuels; and
- Design new infrastructure and the maintenance of the existing network in the light of likely future constraints and threats from changing climate, including the increasing likelihood of periods of severe weather conditions.

4.5.5. The preferred approach to achieve the efficient management of the existing network and an increase in the use of sustainable modes includes:

- The use of intelligent transport systems to better manage traffic with, for instance, linked traffic lights and real time traffic information for users;
- Small scale improvements to the road network to improve travel conditions including addressing congestion hotspots;
- Improvements to bus services to provide a network of efficient bus services which are responsive to existing and potential passenger needs;
- Improve information for bus users through real new technology such as real time information;
- Promoting the use of alternative modes to the car through publicity and travel planning;
- Promoting the benefits of modes, particularly walking and cycling, for healthy active travel;
- Improving facilities for walking and cycling particularly on routes identified for these modes;
- Promoting the use of cleaner vehicles and supporting the provision of infrastructure for electric vehicles;
- Targeting key corridors where traffic demand is greatest, to priorities interventions; and
- Promoting and, where appropriate, funding new infrastructure where necessary, particularly for passenger transport improvements.

4.5.6. In terms of sustainability, it is clear that the site benefits from good accessibility to existing high frequency bus services that run on the High Street and access to three rail stations. Local facilities including shops, services and education are accessible by walking and cycling modes. The site therefore provides residents with a realistic choice to the private car.

4.5.7. As such, the sites location is considered to accord to the relevant Local and Central Government Policy Guidelines, in terms of being in a sustainable location and is clearly accessible by modes other than the private car.

5 DEVELOPMENT PROPOSALS AND ACCESS

5.1.1. A full description of the proposed residential development is contained in the supporting documents accompanying the planning application. The following description is pertinent in transport terms.

5.1.2. LW Developments Ltd is proposing a mixed use development at the Cheshunt Football Club site. The development proposal is as follows:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 1330 seats and overall capacity for 2,000 spectators.
  - A north block which will be arranged across three floors totalling 2,400sqm (GIA) and will comprise changing rooms, bars and functions suites;
- 115 residential apartments;
- 48 residential houses; and
- A western block which will be arranged across three floors totalling 4,002sqm (GIA) and will comprise community use, service related industries, leisure use and offices.

5.1.3. The development layout is based on Drawing No. 15_238_PL15A produced by Bryant and Moore Architects and is provided at **Appendix H** of this report.

5.2 ACCESS ARRANGEMENTS

EXISTING ACCESS

5.2.1. Cheshunt Football Club site is currently served by a simple priority junction with Theobalds Lane to the west of the site. The junction provides access to the car park associated with the football club. The existing junction is approximately 6 metres wide with junction radii of 10 metres. The width of the access is considered sufficient to allow two large vehicles to pass and re-pass and consistent with the advice contained in the Department for Transports 'Manual for Streets' (MfS). The existing junction radii and width of the access would accommodate the swept path of the largest design vehicle a large refuse vehicle or coach.

5.2.2. The location of the existing access is shown on the master plan provided at Appendix H of this report.

VISIBILITY AT THE EXISTING ACCESS

5.2.3. The visibility at the existing junction ensures there is adequate inter-visibility between vehicles on the major and minor arms.

SPEED SURVEY

5.2.4. In order to ensure that the existing access arrangement accords to the relevant design standards an ATC (Automated Traffic Count) has been placed on Theobalds Lane in the vicinity of the access to establish the 85th percentile speed. The results of the speed survey undertaken on Theobalds Lane are as follows:

- Eastbound = 33.0 mph
- Westbound = 35.0 mph

5.2.5. MfS states the following in terms of traffic speeds at paragraph 7.5.1:

"This section provides guidance on stopping sight distance (SSD's) for streets where the 85th percentile speeds are up to 60km/hr. At speeds above this recommended SSD's in the Design Manual for Roads and Bridges may be appropriate."

5.2.6. The results of the speed survey indicate that the derived SSD for streets in table 7.1 of MfS can be applied.

5.2.7. The level of visibility is based on the 85th percentile measurements and the calculation provided in MfS, the visibility requirements are 2.4 x 53.6m to the left and 2.4m x 49.2m to the right.

5.2.8. The x distance of 2.4 metres should normally be used in most built up situations, as this represents a reasonable maximum distance between the front and rear of the car and the driver's eye.

5.2.9. The longer Y distance represents the distance that a driver who is about to exit from the minor arm can see to the left and right along the main alignment. For simplicity, it is measured along the nearside kerb line of the main arm, although vehicles will normally be travelling a distance from the edge of the carriageway. The measurement is taken from the point where this intersects the centre line of the minor arm.

5.2.10. The visibility splay at the existing access arrangement are indicated on drawing number 19827-GA-01 provided at **Appendix I** of this report. The proposed visibility splay accords with the advice contained in MfS.

PROPOSED ACCESS

5.2.11. The development also proposes the provision of a new access via Theobalds Lane located adjacent to the south east corner block of the stadium. The new access is broadly located in the same position of an existing gated access to football pitches, which previously connected to Theobalds Lane.

5.2.12. The vehicular access will be provided with a 6.5m carriageway width at the junction with Theobalds Lane. The width of the access is sufficient to allow two large vehicles to pass and re-pass and consistent with the advice contained within MfS. It is proposed that the junction radii are provided at 6m to accommodate the swept path of the largest design vehicle a large refuse vehicle.

5.2.13. The proposed access will also include a 2m footway on the eastern side that will extend to the east of the access on Theobalds Lane for short distance. This will allow the provision of an uncontrolled pedestrian crossing with associated tactile paving to be provided; to connect to the southern Theobalds Lane combined footway / cycleway.

5.2.14. The proposed access arrangement is shown on drawing number 19827-GA-02 provided at Appendix I of this report.

VISIBILITY AT THE PROPOSED ACCESS

5.2.15. The visibility at the proposed junction ensures there is adequate inter-visibility between vehicles on the major and minor arms.

SPEED SURVEY

5.2.16. In order to ensure that the proposed access arrangement accords to the relevant design standards an ATC (Automated Traffic Count) has been placed on Theobalds Lane in the vicinity of the access to establish the 85th percentile speed. The results of the speed survey undertaken on Theobalds Lane are as follows:

- Eastbound = 33.0 mph
- Westbound = 35.0 mph

5.2.17. The results of the speed survey indicate that the derived SSD for streets in table 7.1 of MfS can be applied.

5.2.18. The level of visibility is based on the 85th percentile measurements and the calculation provided in MfS, the visibility requirements are 2.4 x 53.6m to the left and 2.4m x 49.2m to the right.

5.2.19. The visibility splay at the proposed access arrangement are indicated on a plan provided at **Appendix I** of this report. The proposed visibility splay accords with the advice contained in MfS.

ACCESS STRATEGY

5.2.20. The existing vehicular access located to the west of the site is considered appropriate to serve the new football stadium, business and leisure and community space as well as residential apartments.

5.2.21. The provision of new access would provide a second means of access to the site and it would be logical that it serves residential houses and the residential apartments in the east and south block and north-east and south-east corner blocks of the stadium.

5.3 PEDESTRIAN AND CYCLE ACCESS

5.3.1. The development proposal provides the opportunity to connect to the following existing pedestrian and cycle facilities in the vicinity of the site:

5.3.2. Theobalds Lane combined footway / cycleway that runs to the south of the site and to the north of Theobalds Brook. It is proposed that connections are provided at the eastern and western site boundary;

5.3.3. The combined footway / cycleway that runs along the eastern site boundary on a north / south alignment between Theobalds Lane and Albury Road. It is proposed to provide connections to this existing facility at the south eastern corner of the site.

5.3.4. Theobalds Lane southern combined footway / cycleway that runs between the access to Cedars Park and the eastern site boundary. The existing football club vehicular access connects to the footway. It is also proposed to connect to the southern Theobalds Lane footway via the footway associated with the proposed vehicular access.

5.4 PARKING PROVISION

5.4.1. The parking standards for all types of development have been taken from the 'Borough-Wide Supplementary Planning Guidance' (updated in 2013) and replicated in table 11 below:

Table 11 – Residential Parking Provision

C3 Residential Use	Maximum Vehicle Parking Standards	Cycle Parking Standards
1 Bedroom dwelling	1.5 spaces per dwelling	1 long term space if no garage or shed provided
2 Bedroom dwellings	2 spaces per dwelling	
3 bedroom dwellings	2.5 spaces per dwelling	
4 or more bedroom dwellings	3 space per dwelling	

5.4.2. It should be noted that the Council has agreed to treat these car parking standards as guidelines rather than maximums. Planning applications will be determined on the basis of a sensible balance of residential car parking spaces based on relevant circumstances of the proposal, its site context and its wider surroundings and within the overall aim of reducing private car use in favour of alternative modes of transport.

5.4.3. It is proposed that the residential element of the development is served the following parking provision:

Table 12 - Residential Parking Provision

C3 Residential Use	Proposed Parking Provision
115 Flats (53 x 1 bedroom and 62 x 2 bedroom)	216 spaces
48 Houses (26 x 3 bedroom and 22 x 4 bedroom)	144 spaces

5.4.4. The 3 bed houses will be served by 2 spaces and the 4 bed houses by 3 spaces. The remaining 26 spaces will be provided for visitor parking located at various points on the internal layout. This will provide formal areas for visitors to parking and discourage inappropriate parking on the streets. The 1 bed flats will be served by 80 spaces and the 2 bed flats by 124 spaces. The remaining 12 spaces will also be provided for visitor parking located at various point through the development. The residential standards are for maximum provision and the parking provision at the site will accord with the above local standards.

5.4.5. It is proposed that all residential dwellings are served by 1 cycle parking space. The cycle parking for the houses will be accommodated within the curtilage of each property. The cycle parking for the flats will be accommodated in fully accessible convenient and secure storage areas located across the various blocks.

5.4.6. The business, leisure and community element of the development is proposed to be located on the western block of the new football stadium and comprises 4,002sqm of floor space across three floors. The exact mix of commercial development and use classes is not determined at this stage, as the developer wishes to maintain an element of flexibility. However, the developer has advised that the commercial block is likely to house a mixture non-food retail, restaurant / café, community use, office and leisure uses.

5.4.7. The north block is an area which facilities will be provided for Cheshunt Football Club. These will include changing rooms, physio rooms, laundry, club offices, bars, function rooms, hospitality suites, meeting rooms,

classrooms, canteen and kitchens. These facilities within the northern block are ancillary to a football club and fall under use class D2.

Table 13 - Non Residential Parking Standards

Use Class	Maximum Car Parking Standard	Cycle Parking Standard
A1 (e): Non-food retail parks	1 space per 40m² gfa	1 s/t space per 350m² gfa plus 1 l/t space per 10 f/t staff
A3: Restaurants and cafes	1 space of 5m² of floor space of dining area plus 3 spaces per 4 employees	1 s/t space per 100m² gfa plus 1 l/t space per 10 f/t staff
B1(a): Offices	1 space per 30m² gfa	1 s/t space per 500m² gfa plus 1 l/t space per 10 f/t staff
D1 (b): Community / family centres	1 space per 9m² gfa plus 1 space per f/t staff member or equivalent	1 s/t space per 200m² gfa plus 1 l/t space per 10 staff on duty at any one time
D2 (g): Fitness centres / Sports Clubs	1 space per 15m² gfa	1 s/t space per 25m² gfa plus 1 l/t space per 10 f/t staff

5.4.8. It should be noted that the council will treat these non-residential car parking standards as guidelines rather than maximums. Planning applications will be determined on the basis of a sensible balance of car parking spaces based on the relevant circumstances of the proposal, its site context and its wider surroundings and within the overall aim of reducing private car use in favour of alternative modes of transport.

5.4.9. If the parking standards in Table 13 are applied to the proposed commercial developments it would equate to the following maximum car parking provision and minimum cycle provision.

Table 14 – Maximum car and minimum cycle parking provision

Use Class	Maximum Car Parking Spaces	Minimum Cycle Parking Spaces
Ground Floor 1,334sqm		
A1 Non Food Retail (440sqm)	11	1
A3 Restaurant / café (227sqm) 60% dining area assumption 136sqm	27 (based on dining area assumption)	2
D1 Community (667sqm)	74	3
First Floor 1,334sqm		
D1 Community (334sqm)	37	1
D2 Leisure: Fitness Centres / Sports Clubs (1,000sqm)	67	40
Second Floor (1,334sqm)		
B1 Office (1,334sqm)	44	3

North Block		
D2 Leisure: North block football club facilities 2,400sqm	160	96
Total	**420**	**146**

5.4.10. It is proposed that the commercial development and football club as a whole is served by 305 parking spaces. It is proposed that 55 spaces will be reserved for the use of the football club and these will be located to the north of stadium. The remaining 250 parking spaces will be shared between the various commercial elements of the development.

5.4.11. The Supplementary Planning Guidance (SPG) parking standards states that there should be an overall reduction in the total parking provision to reflect linked trips on the site. The SPG suggest that a 25% reduction would be a good starting point for discussion. This is logical as daytime office workers will use the leisure facility provided. In addition, families or friends visiting the village together in the evening may do so for different reasons, be that football, leisure or community use.

5.4.12. This approach would also reflect the fact that different non-residential uses would be in use at different times of the day and different days of the week. Business space for example would be used on weekdays, while the football facilities would be used on week nights and weekends. This allows for all parking to be shared.

5.4.13. Applying the 25% reduction to the calculation of parking spaces gives a maximum of 315 spaces.

5.4.14. It is proposed that the commercial development and football club as a whole is served by 305 parking spaces (73% of the maximum standard) and is in line with the principle of the 25% reduction in parking provision. The parking spaces will be shared between the various non-residential elements of the development and will allow an element of flexibility as the arrival and departure profiles vary between the uses and there will be a number of linked trips on the site.

5.4.15. The total provision of non-residential parking spaces is within the maximum guidelines set out in the Council's Supplementary Planning Guidance.

5.4.16. It is proposed that the non-residential element of the development is served by 226 cycle spaces, significantly in excess of the minimum standards. The cycle parking will be provided in the form of 'Sheffield Stands' in a secure and convenient location. The cycle parking will be located in close proximity to the entrance to commercial block and the football club facilities. As the end user and staff requirements are not yet fully known, it is intended that the cycle parking for the non-residential elements will be finalised at a later stage as part of a Reserve Matters submission.

5.5 DISABLED PARKING PROVISION

5.5.1. The parking standards for disabled parking provision are set out in Policy T11 of the Local Plan (2005):

- ii) More than 200 spaces car park = 6 spaces plus 2% of total capacity.

5.5.2. To accord with the above disabled parking requirement it is proposed that the car park will be served by 16 disabled parking bays in excess of the above standard. The bays will be located at the frontage of the commercial block and the frontage of the football club facilities.

5.6 OFF SITE HIGHWAY IMPROVEMENT WORKS

5.6.1. As part of the previous planning application for the site the following off-site highway works were agreed with HCC:

- Theobald Lane – Traffic calming scheme providing three speed cushions as detailed on drawing number 19827-SK02;
- Theobald Lane – Provision of dropped kerbs and associated tactile paving as detailed on drawing number 19827-SK-01
- A10 / Theobalds Lane proposed junction improvement and localised widening as detailed on drawing numbers 19827-SK-03 and SK-06.;
- Provision of a new bus shelter on the northbound Theobalds Grove rail station 'Bus Stop B'.

5.6.2. The above measures were approved by HCC and considered suitable to support the previous application. The same measures are proposed as part of this latest application for a reduced scale development.

5.6.3. The plans detailing the approved off-site highway works are provided at **Appendix J** of this report.

6 TRIP GENERATION AND DISTRIBUTION

6.1 INTRODUCTION

6.1.1. WSP previously prepared a Transport Assessment (September 2016) to support a planning application (07/16/1939/F) for a larger development than currently proposed and detailed below:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:

A new stadium with 500 seats for spectators initially, with a future seated capacity of circa 5,192 seats;

- A North block which will be arranged across floors totalling 2,727 sq.m (GIA) and will comprise changing rooms, bars and function suites;
- 136 residential apartments;
- 50 residential houses; and
- A Western block which will be arranged across four floors totalling 5,336sq.m (GIA) and will comprise community use, service related industries, leisure use and offices.

6.1.2. The previous assessment work is based on the above development proposals. LW Developments Ltd as part of this latest application are proposing a smaller mixed use development at the Cheshunt Football Club site. The latest development proposal is as follows:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 1330 seats and overall capacity for 2,000 spectators.
  - A north block which will be arranged across three floors totalling 2,400sqm (GIA) and will comprise changing rooms, bars and functions suites;
- 115 residential apartments;
- 48 residential houses; and
- A western block which will be arranged across three floors totalling 4,002sqm (GIA) and will comprise community use, service related industries, leisure use and offices.

6.1.3. The commercial block floor area has been reduced by 25%, the number of residential dwellings has reduced by 23 dwellings and the northern block floor area by 14%.

6.1.4. As the previous assessment work was undertaken for 2016 and the latest planning application is for 2018. The DfT traffic growth methodology has been established from 2016 to 2018 using forecast from TEMPRO version 7.2 and the NTM for Broxbourne area 12 that covers the site and predicts the following growth rates:

- AM Peak 2016 – 2018 = 1.028164 (2.8% growth)
- PM Peak 2016 – 2018 = 1.028014 (2.8% growth)

6.1.5. The previous trip generation for the larger scheme was considered acceptable by HCC. On this basis it is not proposed to update the traffic generation to reflect the latest smaller development proposal, but to simply set out the traffic generation approved as part of the previous assessment. This will ensure a robust assessment for the latest reduced scale development.

6.2 TRIP GENERATION AGREED WITH HCC TO SUPPORT PREVIOUS APPLICATION

6.2.1. This section of the report details the trip generation agreed with HCC as part of the transport work to support the previous planning application for the larger development.

PREVIOUS RESIDENTIAL TRIP RATES

6.2.2. HCC expressed concern that the residential trip rates as set out in the original TA were not suitably robust for the purpose of the assessment.

6.2.3. The issue of trip generation for the residential elements of the development were revisited in the Addendum TA and the following trip rates agreed with HCC for both the private flats and houses.

Table15 – TRICS – Residential trip generation for 136 private flats

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Trip Rate	0.073	0.229	0.302	0.200	0.110	0.311
No.Trips	10	31	41	27	15	42

Table 16 – TRICS – TRICS – Residential trip generation for 50 houses

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Trip Rate	0.135	0.377	0.512	0.350	0.164	0.514
No.Trips	6	19	25	18	8	26

6.2.4. In total the residential traffic generation associated with the previous development proposal for 136 flats and 50 houses is detailed in the table below:

Table 17 - Total residential trip generation

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Flats	10	31	41	27	15	42
Houses	6	19	25	18	8	26
Total	16	50	66	45	23	68

6.2.5. The above table indicates that the previous development proposal for 186 residential dwellings at the site would result in 66 two-way trips in the AM peak and 68 two-way trips in the PM peak hour.

6.3 PREVIOUS COMMERCIAL TRIP RATES

6.3.1. The following trip rates and trips were agreed with HCC as part of the previous assessment for the larger 5,336sqm commercial development. These are detailed in a series of tables below:

Table 18 – Predicted vehicle trip generation – leisure and community uses – 2,660sqm

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Trip Rate	0.497	0.384	0.881	1.089	0.955	2.044
No.Trips	13	10	23	29	25	54

Table 19 - Predicted vehicle trip generation – non-food retail – 890sqm

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Trip Rate	0.278	0.078	0.356	0.876	1.048	1.924
No.Trips	2	1	3	8	9	17

Table 10 – Predicted vehicle trip generation – A3 restaurant 444sqm

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals
Trip Rate	0	0	0	2.515	1.800	4.315
No. Trips	0	0	0	11	8	19

Table 11 – Predicted vehicle trip generation – Office Use – 1,334sqm

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals
Trip Rate	1.783	0.220	2.003	0.207	1.561	1.768
No.Trips	24	3	27	3	21	24

6.4 PREVIOUS TOTAL DEVELOPMENT TRIP GENERATION

6.4.1. The residential trips detailed in table 17 have been added to the commercial trips detailed in table 19 -21 to provide details of the previous total development traffic during the AM and PM weekday peak hours. The table below details the predicted total development traffic based on the previous assessment work.

Table 12 – Total development trip generation

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals
186 residential dwellings	16	50	66	45	23	68
5,366sqm commercial	54	16	70	34	62	96
Total	70	66	136	79	85	164

6.4.2. The above table indicates that the previous larger development proposal would result in 136 two-way trips in the AM peak hour and 164 two-way trips in the PM peak hour.

6.5 TRIP DISTRIBUTION

6.5.1. The trip distribution for the residential and commercial traffic was agreed with HCC as part of the previous assessment work. The trip distribution is based on the Census database for residents and employees journeys to work. The tables below detail the approved traffic distribution for both the residential and commercial developments:

Table 23 – Residential trip distribution

Link	Arrivals	Departures
Theobalds Lane East	89%	41%
Theobalds Lane West	11%	59%
A10 Southbound carriageway	11%	59%
B176 High Street North	29%	29%
B176 High Street South	60%	12%

Table 24 – Commercial trip distribution

Link	Arrivals	Departures
Theobalds Lane East	60%	28%
Theobalds Lane West	40%	72%
A10 Southbound carriageway	40%	72%
B176 High Street North	10%	16%
B176 High Street South	50%	12%

6.5.2. The above traffic generation and distribution identifies the key junctions the development is likely to impact on. The development is predicted to impact on the following key junctions:

- Theobalds Lane / A10 southbound carriageway – left in left out priority junction;
- A10 Great Cambridge Road / A121 roundabout;
- Theobalds Lane / B176 High Street – mini roundabout junction;
- Cedars Park / Theobalds Lane / Cheshunt Football Ground – four arm priority junction;
- Theobalds Grove / B176 High Street / Trinity Lane – double mini roundabout junction;
- Sturlas Way / A121 Winston Churchill Way / B176 High Street / Swanfield Road / A121 Monarchs Way – roundabout junction.

6.5.3. The impact of the proposed development scenario is considered in the next chapter of this report.

6.6 FOOTBALL CLUB TRAFFIC GENERATION

6.6.1. The development proposal includes a new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:

- A new stadium with 1,330 seats and overall capacity for 2,000 spectators; and
- A north block which will be arranged across three floors totalling 2,400sqm (GIA) and will comprise changing rooms, bars and functions suites.

6.6.2. The rationale for Cheshunt Sports Village is to provide Cheshunt Football Club with enhanced facilities and the opportunity for sustainable growth.

6.6.3. It should be noted that the existing capacity of the stadium is for 2,180 spectators. The existing stadium could potentially operate at this capacity as part of its current consent.

6.6.4. Notwithstanding this the new 2,000 capacity stadium has been discussed with BBC local planning case officer, who has suggested that it would be sensible to produce a Stadium Event Management Plan (SEMP) to provide a framework for the management of match-day demands for movements by all modes of transport to the new stadium.

6.6.5. For the purposes of the SEMP and assessing match day demands for movements it is proposed that five match day attendance scenarios are considered as follows:

- 1. Playing in the Current League = 150 spectators
- 2. Playing in Isthmian Premier League = 300 spectators
- 3. Playing in National League South = 600 spectators
- 4. Playing in National League = 1,200 spectators
- 5. Playing in English Football League 2 = 2,000 spectators

6.6.6. The framework SEMP will be prepared as a separate document and include the following details and considerations:

- Introduction setting out the details of the proposed stadium and aims of the event management plan. It will provide background regarding the current operation of the club, league details and the current average attendance. The assessment scenarios above will also be detailed;
- Chapter 2: Will detail opportunities for travel to and from the new stadium including; public transport; pedestrians and cyclists and rail. It will also include details of a multi modal travel survey to gauge existing supporters travel patterns and feed into the SEMP; and
- Chapter 3: Will consider the management of match day movements to and from the new stadium by all modes of transport. This will include away supporters and details of likely match day demands for movements for each of the 5 assessment scenarios. This will include an indication of mode choice based on data from the football league and also likely car parking demand and stress.

6.6.7. The framework SEMP will provide the basis for the development of a detailed SEMP as the scheme progresses. This is a very similar approach to Travel Plans and will be a condition of planning.

7 TRAFFIC IMPACT ASSESSMENT

7.1 INTRODUCTION

7.1.1. This section of the report will detail the impact assessment work undertaken as part of the previous planning application for the larger development proposal.

7.2 PREVIOUS TRAFFIC IMPACT ASSESSMENT

FUTURE YEAR ASSESSMENT

7.2.1. The assessment of the local highway network has been based on traffic flows extracted from the BBC Local Plan Saturn Model for the 2029 local plan future year scenario. The 2029 future year flows include both committed developments and the draft local plan allocation sites.

7.2.2. The BBC Saturn model has been interrogated to extract 2029 turning count data for the following junctions:

- Theobalds Lane / A10 southbound carriageway – left in left out priority junction;
- A10 Great Cambridge Road / A121 roundabout; and
- Theobalds Lane / B176 High Street – mini roundabout junction.

7.2.3. The previous impact assessment was based on the 2029 BBC Saturn model. The BBC Saturn model now runs to 2033. However, as part of the pre-application discussions Broxbourne have confirmed that given the scale of the proposed development, it will not be necessary to re-run the model as it already includes all proposed future development impacts.

7.2.4. A traffic growth factor has been determined using the 2013 and 2029 BCC Saturn models. This has then been divided by the number of years (2013 -2029) to calculate a yearly growth rate, which has then been applied to the junctions with 2016 observed counts to create a 2029 base for the following junctions:

- Cedars Park / Theobalds Lane / Football Ground – four arm priority junction;
- Theobalds Grove / High Street – mini roundabout; and
- Sturlas Way / Winston Churchill Way / High Street / Swanfield Road / Monarchs Way – roundabout junction.

ASSESSMENT METHODOLOGY

7.2.5. The following junction analysis has been undertaken using the industry standard JUNCTIONS 8 for the following junctions:

- Theobalds Lane / B176 High Street –mini roundabout junction.
- Theobalds Lane / A10 southbound carriageway – left in left out priority junction;
- A10 Great Cambridge Road / A121 / B198 roundabout;
- Cedars Park / Theobalds Lane / Cheshunt Football Ground – four arm priority junction;
- Proposed Site Access / Theobalds Lane; and
- Theobalds Grove / B176 High Street / Trinity Lane – double mini roundabout junction.

7.2.6. The junction analysis has been undertaken using the industry standard LinSig V3 for:

- Sturlas Way / Winston Churchill Way / High Street / Swanfield Road / Monarchs Way – signalised roundabout junction.

7.2.7. The results of the 2029 modelling were set out in chapter 7 of the previous Transport Assessment. The results of the modelling indicated significant increases in queue lengths as a result of the development, in particular at the Theobalds Lane / B176 High Street mini roundabout and the A10 / A121 / B198 roundabout.

7.2.8. The majority of the development assumed to be included in the Local Plan model is not consented and detailed transport assessments are not available. This development added a considerable amount of traffic to the road network for 2029 prior to any assessment of the Cheshunt Football Club development impact.

7.2.9. The 2029 future year contains traffic growth and committed development flows and the additional traffic mainly accounted for the difference in queues, rather than the application site as the Local Plan expectations push the junctions above capacity.

7.2.10. It was therefore agreed with HCC that the modelling would be re-visited based on the 2016 observed flows to provide a clearer indication of the actual impact of the development at the junctions.

ADDENDUM TRANSPORT ASSESSMENT

7.2.11. The details of the modelling work based on the 2016 observed flows were provided in the Addendum Transport Assessment dated March 2017. The results of the 2016 assessment and results of the analysis indicated that the development alone can be accommodated without the need for highway improvement.

7.2.12. The Addendum Transport Assessment also provided an assessment of the A10 / College Lane signalised junction at the request of HCC. The results of the assessment demonstrated that the development would not materially affect traffic flows at the junction. The changes in traffic were within daily variations and any changes are likely to be imperceptible to other road users.

7.2.13. In addition the Addendum Transport Assessment at the request of HCC also included a two-way link flow assessment for the study area under consideration including the A10 / College Lane signalised junction.

TRAFFIC IMPACT NOTE AND FURTHER ASSESSMENT WORK

7.2.14. At the request of HCC a technical note dated May 2017 was prepared to set out the background to the modelling work undertaken for a 2029 assessment year and provided an explanation to account for the difference in queue lengths between the existing (2016) and 2029 scenarios.

7.2.15. In addition HCC requested an assessment of the following two key junctions in the vicinity of the development site based on a 2021 future year (5 year assessment):

- A10 / A121 roundabout; and
- Theobalds Lane / B176 High Street roundabout.

7.2.16. The results of the 2021 assessment indicated that the additional five years growth marginally increased queues compared to the 2016 analysis, but did not alter the conclusion that the development alone can be accommodated without the need for highway improvement.

RESULTS OF THE MODELLING WORK

7.2.17. The results of all above modelling work that supported the previous planning application are provided at **Appendix K** of this report.

7.3 SUMMARY

7.3.1. HCC as the Local Highway Authority examined in great detail the above technical work to support the previous application. This included input for the County Council safety audit team, the traffic data modelling tram and the team that assesses travel plans. The County Council has assessed the trip rates for the proposed residential and commercial uses on site and found them to be robust and acceptable.

7.3.2. HCC determined that the traffic generation associated with the proposed development does not result in a materially adverse impact on the free flow of traffic on the public highway, compared to the existing traffic flows.

7.3.3. The previous trip generation and traffic impact of the previous application for the larger scheme was considered acceptable by HCC. It has therefore been agreed with HCC that the previous modelling work will be suitably robust to support the current and reduced scale development proposal.

8 SUMMARY AND CONCLUSION

8.1.1. This Transport Assessment has been prepared on behalf of LW Developments Ltd to provide the Local Highway Authority with details of the proposed Cheshunt Sports Village located to the north of Theobalds Lane, Cheshunt, Hertfordshire.

8.1.2. Cheshunt Football Club site is located to the north of Theobalds Lane, approximately 120m east of the A10 and just over 1km from Cheshunt town centre. The proposed development is part of the site occupied by Cheshunt Football Club. The site comprises of approximately 4 hectares of sports grounds, associated parking area and football club buildings. The site is bound by Theobalds Lane to the south, new football and playing fields to the northern boundary, Albury Farm and the A10 to the western boundary and residential dwellings from the eastern boundary. Cheshunt Football Club is served by a vehicular and pedestrian access with Theobalds Lane to the south western boundary of the site.

8.1.3. LW Developments Ltd is proposing a mixed use development at the Cheshunt Football Club site. The development proposal is as follows:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 1330 seats and overall capacity for 2,000 spectators.
  - A north block which will be arranged across three floors totalling 2,400sqm (GIA) and will comprise changing rooms, bars and functions suites;
- 115 residential apartments;
- 48 residential houses; and
- A western block which will be arranged across three floors totalling 4,002sqm (GIA) and will comprise community use, service related industries, leisure use and offices.

8.1.4. WSP previously prepared a Transport Assessment (September 2016) to support a planning application (07/16/1939/F) for similar although larger development proposal detailed below:

- A new football stadium to replace the existing ground located to the south-west of the site next to the existing car park. The stadium will include the following elements:
  - A new stadium with 500 seats for spectators initially, with a future seated capacity of circa 5,192 seats;
  - A North block which will be arranged across floors totalling 2,727 sq.m (GIA) and will comprise changing rooms, bars and function suites;
- 136 residential apartments;
- 50 residential houses; and
- A Western block which will be arranged across four floors totalling 5,336sq.m (GIA) and will comprise community use, service related industries, leisure use and offices.

8.1.5. Hertfordshire County Council (HCC) raised a number of concerns in response to the previous Transport Assessment in early 2017. These concerns were addressed via a series of meetings, Addendum TA and correspondence. HCC raised no objections subject to conditions to the original scheme, however, the planning application was refused at committee.

8.1.6. On the basis that the previous transport technical work was acceptable to support the previous larger development, it is considered appropriate to support the latest planning application for the smaller scheme.

8.1.7. This assessment has been prepared in accordance with the relevant guidance and pre-application discussions with Hertfordshire County Council the local Highway Authority.

8.1.8. The existing vehicular access located to the west of the site is considered appropriate to serve the new football stadium, business and leisure and community space as well as residential apartments.

8.1.9. The provision of a new access would provide a second means of access to the site and it would be logical that it serves residential houses and the residential apartments in the east and south block and north-east and south-east corner blocks of the stadium. The provision of two points of access would also cater for emergency access.

8.1.10. The visibility splays achievable at both the existing and proposed access arrangements conforms to the advice contained within 'Manual for Streets'.

8.1.11. In terms of pedestrian and cycle access the scheme design seeks a permeable development. The development will provide pedestrian and cycle access points on to the existing highway network on Theobalds Lane to the south and east of the site.

8.1.12. The review of the collision data indicates no common patterns of collisions due to the characteristics of the local highway network in the vicinity of the development, rather carelessness on behalf of drivers, indicating that the study area has no pre-existing inherent deficiencies.

8.1.13. The parking provision standards are contained within the Broxbourne Borough Council Supplementary Planning Guidance. The residential standards are for maximum provision and the parking provision at the site will accord with the above local standards.

8.1.14. It is proposed that all residential dwellings are served by 1 cycle parking space. The cycle parking for the houses will be accommodated within the curtilage of each property. The cycle parking for the flats will be accommodated in fully accessible convenient and secure storage areas located across the various blocks.

8.1.15. It is proposed that the commercial development and football club as a whole is served by 305 parking spaces (73% of the maximum standard) and is in line with the principle of the 25% reduction in parking provision. The parking spaces will be shared between the various non-residential elements of the development and will allow an element of flexibility as the arrival and departure profiles vary between the uses and there will be a number of linked trips on the site.

8.1.16. The total provision of non-residential parking spaces is within the maximum guidelines set out in the Council's Supplementary Planning Guidance.

8.1.17. It is proposed that the non-residential element of the development is served by 226 cycle spaces, significantly in excess of the minimum standards. The cycle parking will be provided in the form of 'Sheffield Stands' in a secure and convenient location. The cycle parking will be located in close proximity to the entrance to commercial block and the football club facilities. As the end user and staff requirements are not yet fully known, it is intended that the cycle parking for the non-residential elements will be finalised at a later stage as part of a Reserve Matters submission.

8.1.18. As part of the previous planning application for the site the following off-site highway works were agreed with HCC:

- Theobald Lane – Traffic calming scheme providing three speed cushions;
- Theobald Lane – Provision of dropped kerbs and associated tactile paving at locations where there is currently no provision;
- A10 / Theobalds Lane proposed junction improvement and localised widening; and
- Provision of a new bus shelter on the northbound Theobalds Grove rail station 'Bus Stop B'.

8.1.19. The above measures were approved by HCC and considered suitable to support the previous application. The same measures are proposed as part of this latest application for a reduced scale development.

8.1.20. The site benefits from good accessibility to high frequency bus services that provide access to surrounding towns and villages. The bus services also connect to Waltham Cross Bus Station, which provides lines to London bus services. The bus services accessible from the site would offer future residents, staff and visitors with good opportunities to travel by bus to access employment, shopping, leisure and other services. The frequency of the buses would provide a realistic alternative to the private car for users to and from the proposed development.

8.1.21. Theobalds Grove, Waltham Cross and Cheshunt rail stations are all within acceptable walk and easy cycle distance of the site. The stations provide links to London Liverpool Street, Bishop's Stortford, Cambridge, Stratford and Hertford.

8.1.22. The High Street is within the recommended 800m walk distance. It is considered that future residents would be likely to walk to access the local facilities. In addition the Pavilions Way shopping centre is 1250m walk distance from the site and would provide access to a wide range of retail opportunities. The site is within walking and cycle distance of convenience food stores on the High Street and the Sainsbury Supermarket located at the Pavilions Way Shopping Centre. The site also offers excellent accessibility to local primary and secondary schools.

8.1.23. In terms of sustainability, it is clear that the site benefits from good accessibility to existing high frequency bus services that run on the High Street and access to three rail stations. Local facilities including shops, services and education are accessible by walking and cycling modes. The site therefore provides residents with a realistic choice to the private car.

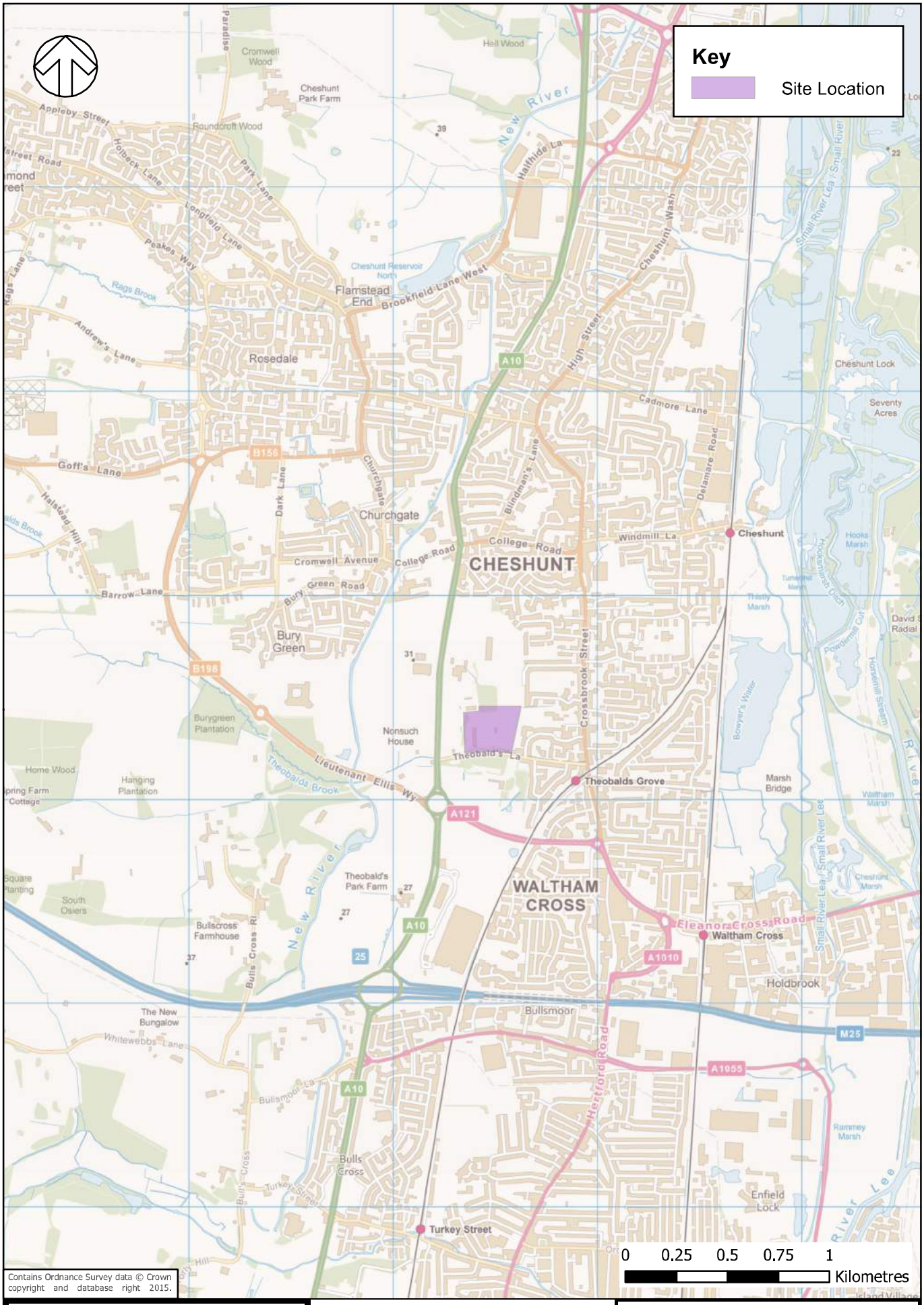
8.1.24. The sites location accords to the relevant Local and Central Government Policy Guidelines, in terms of being in a sustainable location that is clearly accessible by modes other than the private car.

8.1.25. The previous trip generation and traffic impact of the previous planning application (07/16/1939/F) for the larger scheme was considered acceptable by HCC. It has therefore been agreed with HCC that the previous modelling work will be suitably robust to support the current reduced scale development proposal. The previous impact assessment was based on the 2029 BBC Saturn model. The BBC Saturn model now runs to 2033. However, as part of the pre-application discussions Broxbourne have confirmed that given the scale of the proposed development, it will not be necessary to re-run the model as it already includes all proposed future development impacts.

8.1.26. HCC determined that the traffic generation associated with the previous larger application did not result in a materially adverse impact on the free flow of traffic on the public highway, compared to the existing traffic flows.

Appendix A

APPENDIX A - SITE LOCATION PLAN



WSP | PARSONS BRINCKERHOFF

TITLE:

SITE LOCATION PLAN

FIGURE No:

FIGURE 1

Appendix B

COLLISION DATA

Theobalds Lane, A10 & A121 Winston Churchill Way Cheshunt

Legend

Accidents by Severity from 1 Apr 2011 to 31 Mar 2016

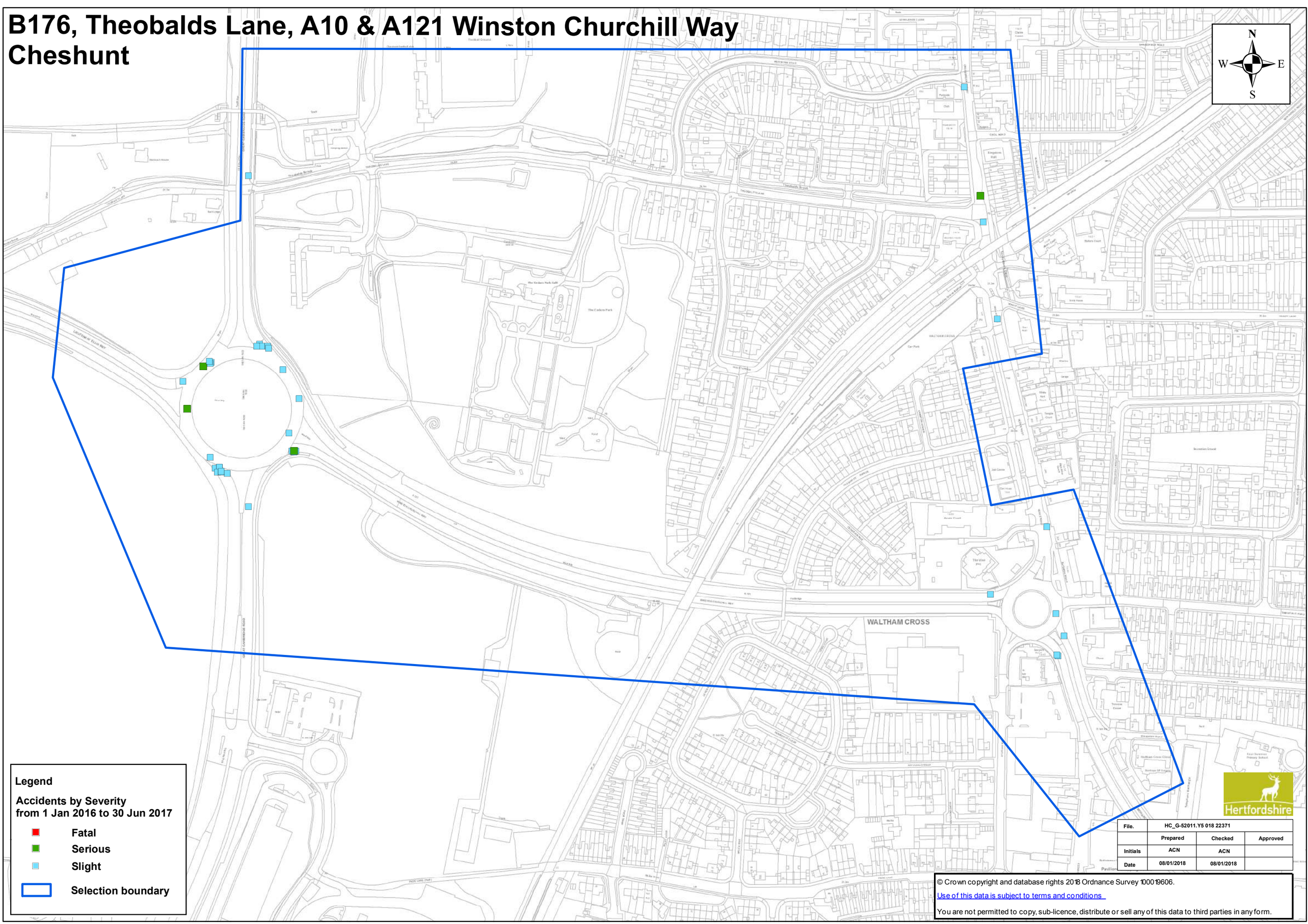
- Fatal
- Serious
- Slight
- Hazardous Site

N
W E
S

WALTHAM CROSS

File.	HC_G-52011.Y4 018 21019		
	Prepared	Checked	Approved
Initials	ACN	ACN	
Date	13/07/2016	13/07/2016	

B176, Theobalds Lane, A10 & A121 Winston Churchill Way Cheshunt



Legend

Accidents by Severity from 1 Jan 2016 to 30 Jun 2017

- Fatal
- Serious
- Slight
- Selection boundary

Hertfordshire

File.	HC_G-52011.Y5 018 22371		
	Prepared	Checked	Approved
Initials	ACN	ACN	
Date	08/01/2018	08/01/2018	

Appendix C

BBC SATURN MODEL TURNING

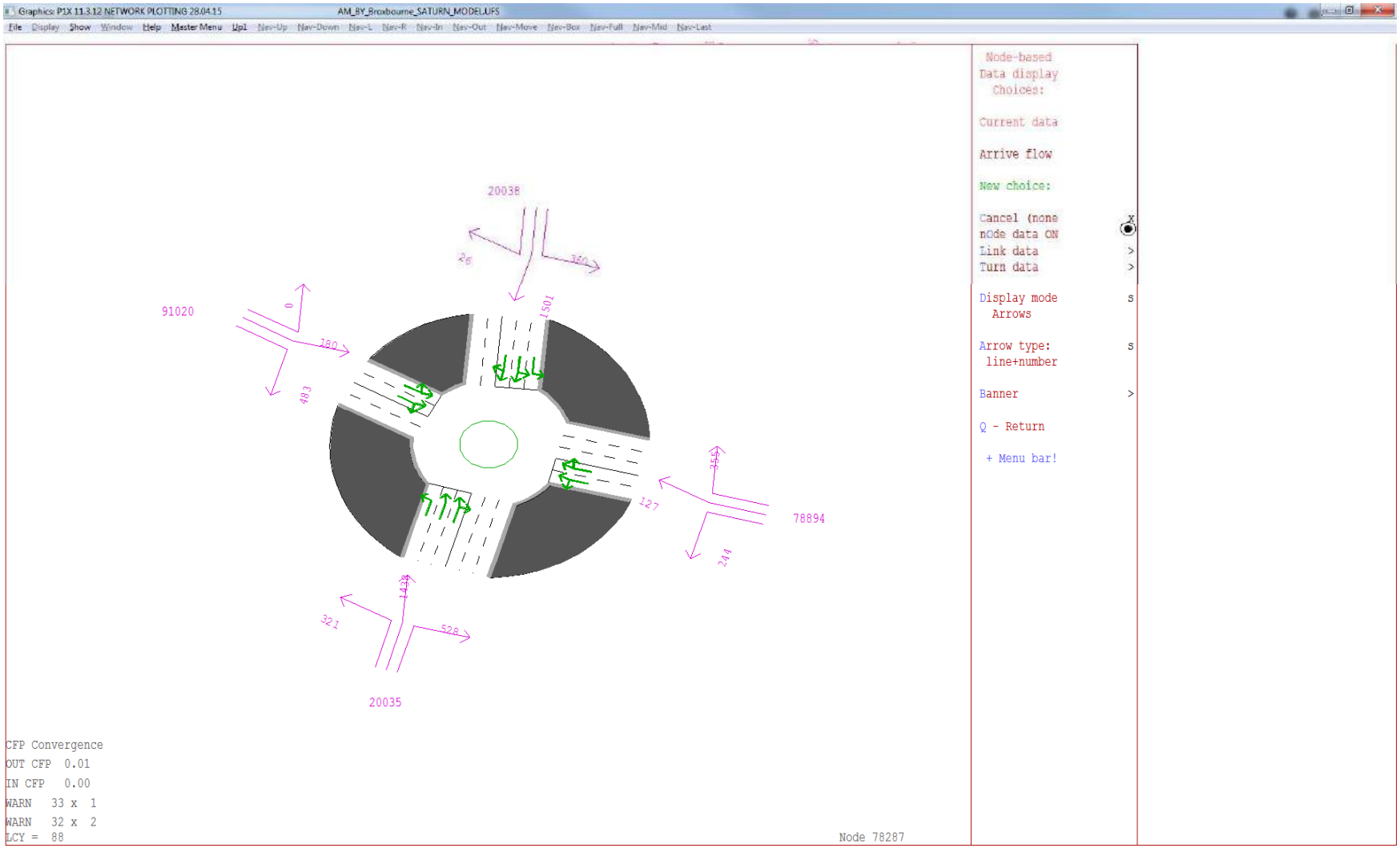
COUNTS

CHESHUNT SPORTS VILLAGE - ARRIVAL FLOWS (PCUs)

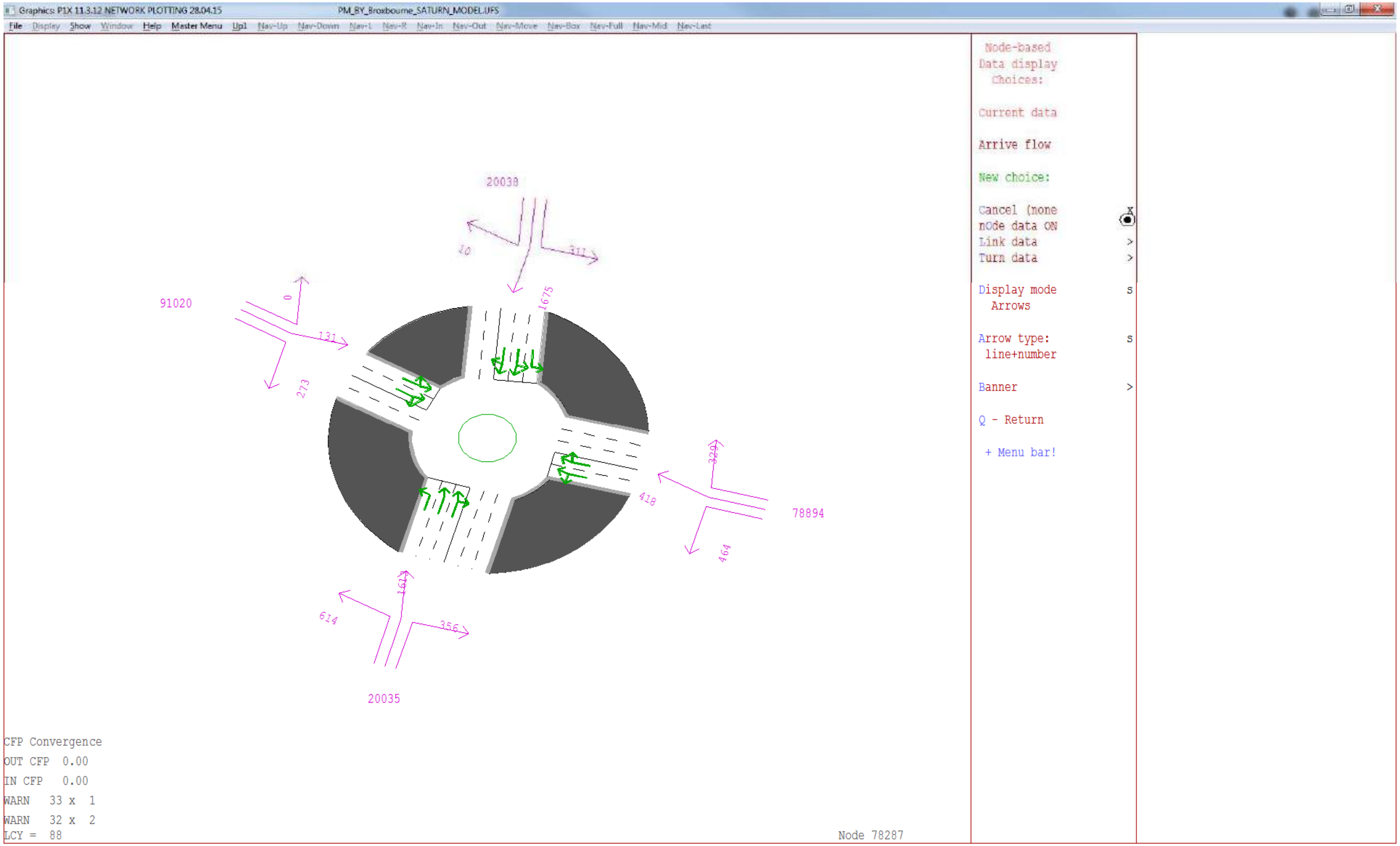
A10 / Winston Churchill Way (78287)

2013 Base

AM

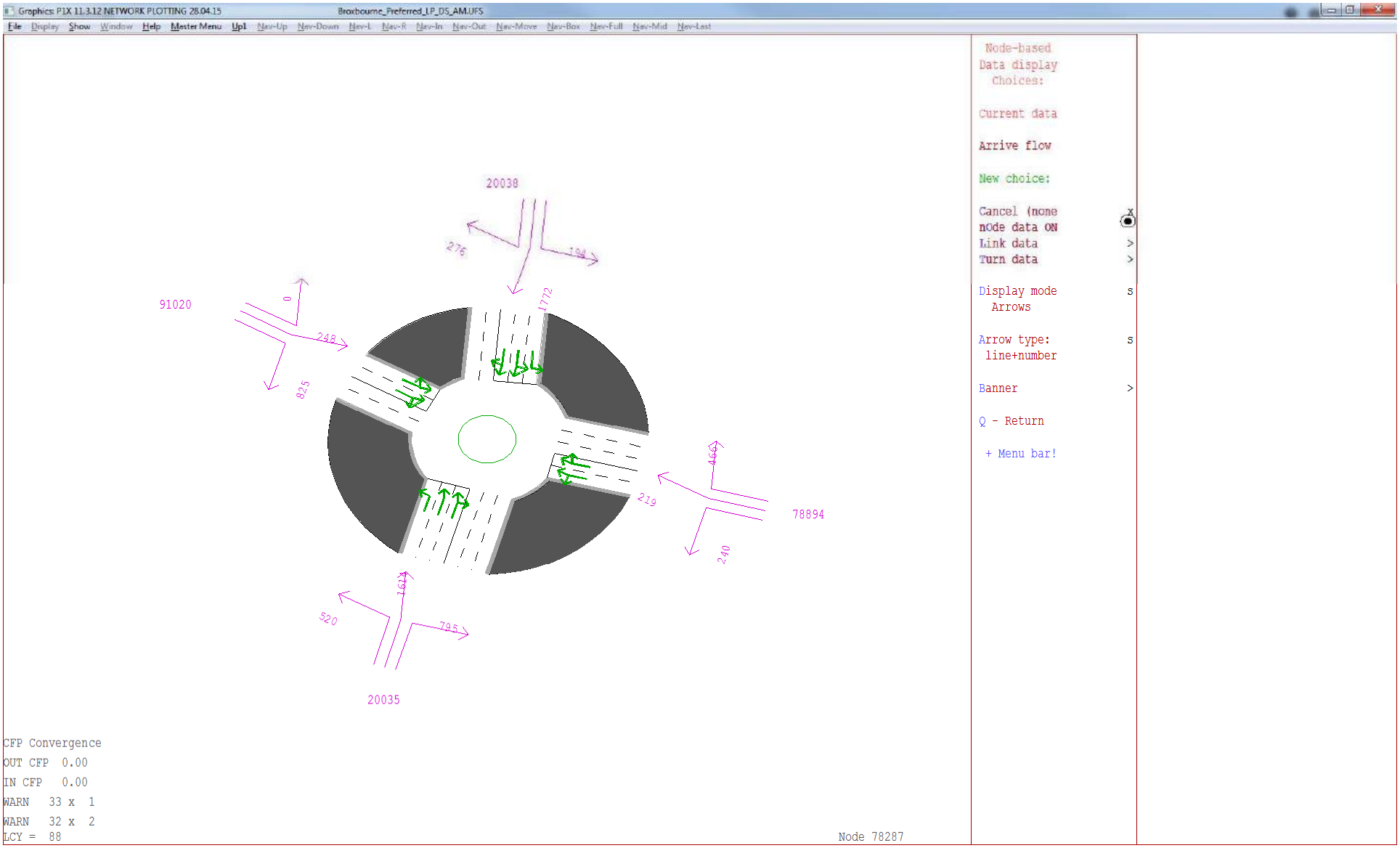


PM

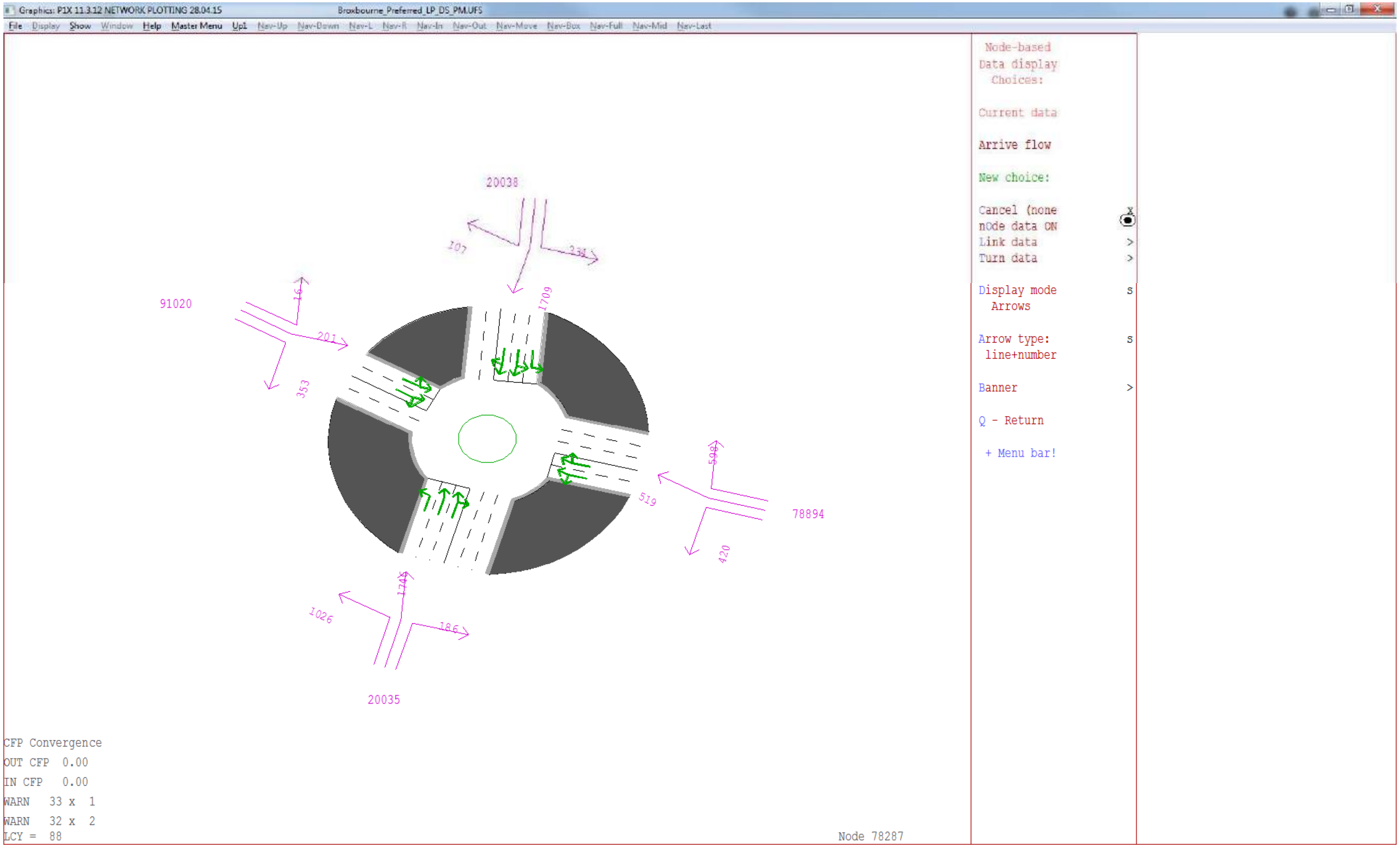

Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
PM_BY_Broxbourne_SATURN_MODEL.UFS
File Display Show Window Help Master Menu Upl Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
Node-based
Data display
Choices:
Current data
Arrive flow
New choice:
Cancel (none
nOde data ON
Link data
Turn data
Display mode
Arrows
Arrow type:
line+number
Banner
Q - Return
+ Menu bar!
20038
10
311
1675
91020
0
131
273
329
418
78894
464
161
614
356
20035
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 33 x 1
WARN 32 x 2
LCY = 88
Node 78287

2029 Local Plan Preferred Option

AM



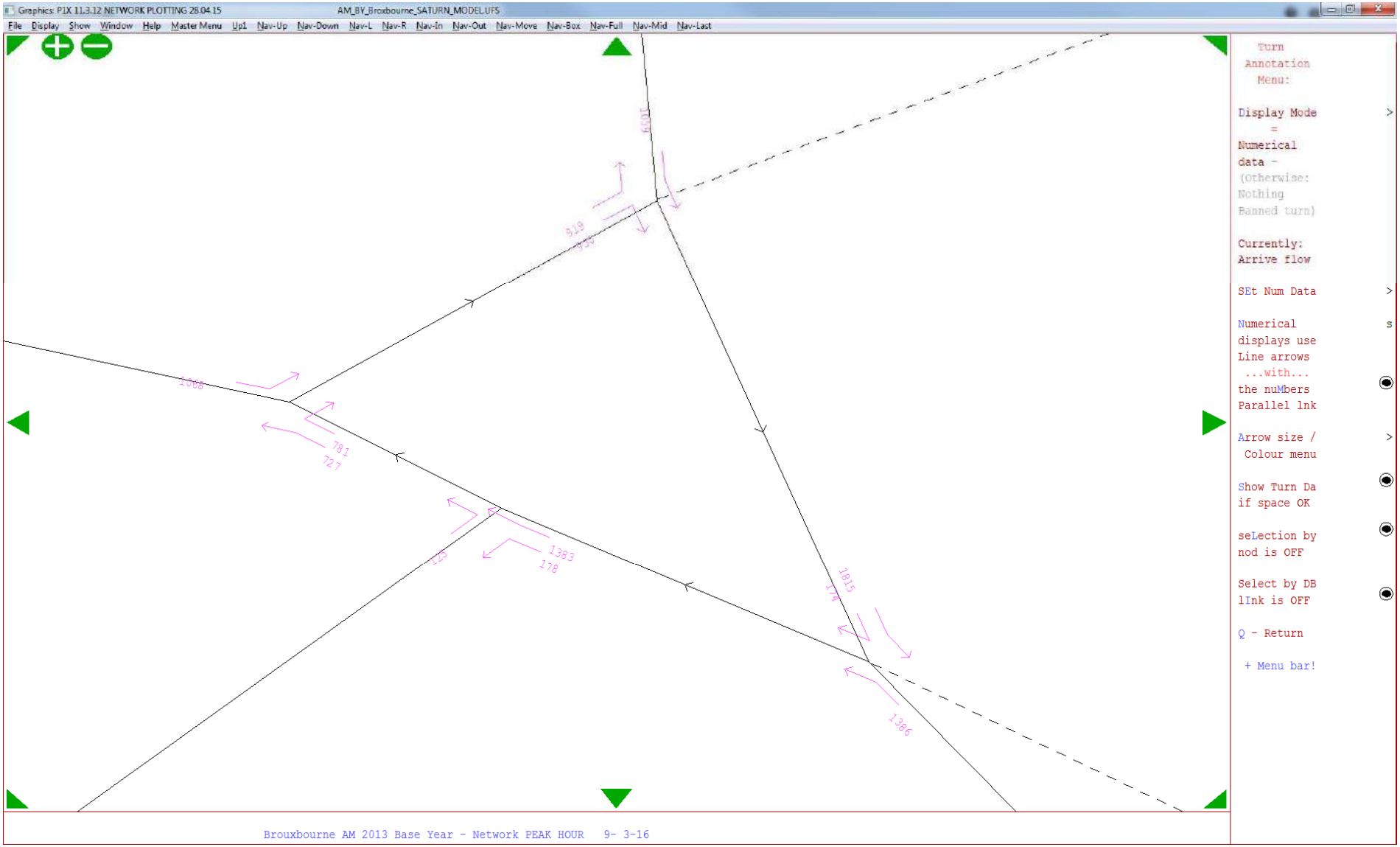
PM


Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
Broxbourne_Preferred_LP_DS_PM.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
20038
107
231
1709
91020
16
201
353
78894
519
420
20035
1026
186
Node-based
Data display
Choices:
Current data
Arrive flow
New choice:
Cancel (none
nOde data ON
Link data
Turn data
Display mode
Arrows
Arrow type:
line+number
Banner
Q - Return
+ Menu bar!
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 33 x 1
WARN 32 x 2
LCY = 88
Node 78287

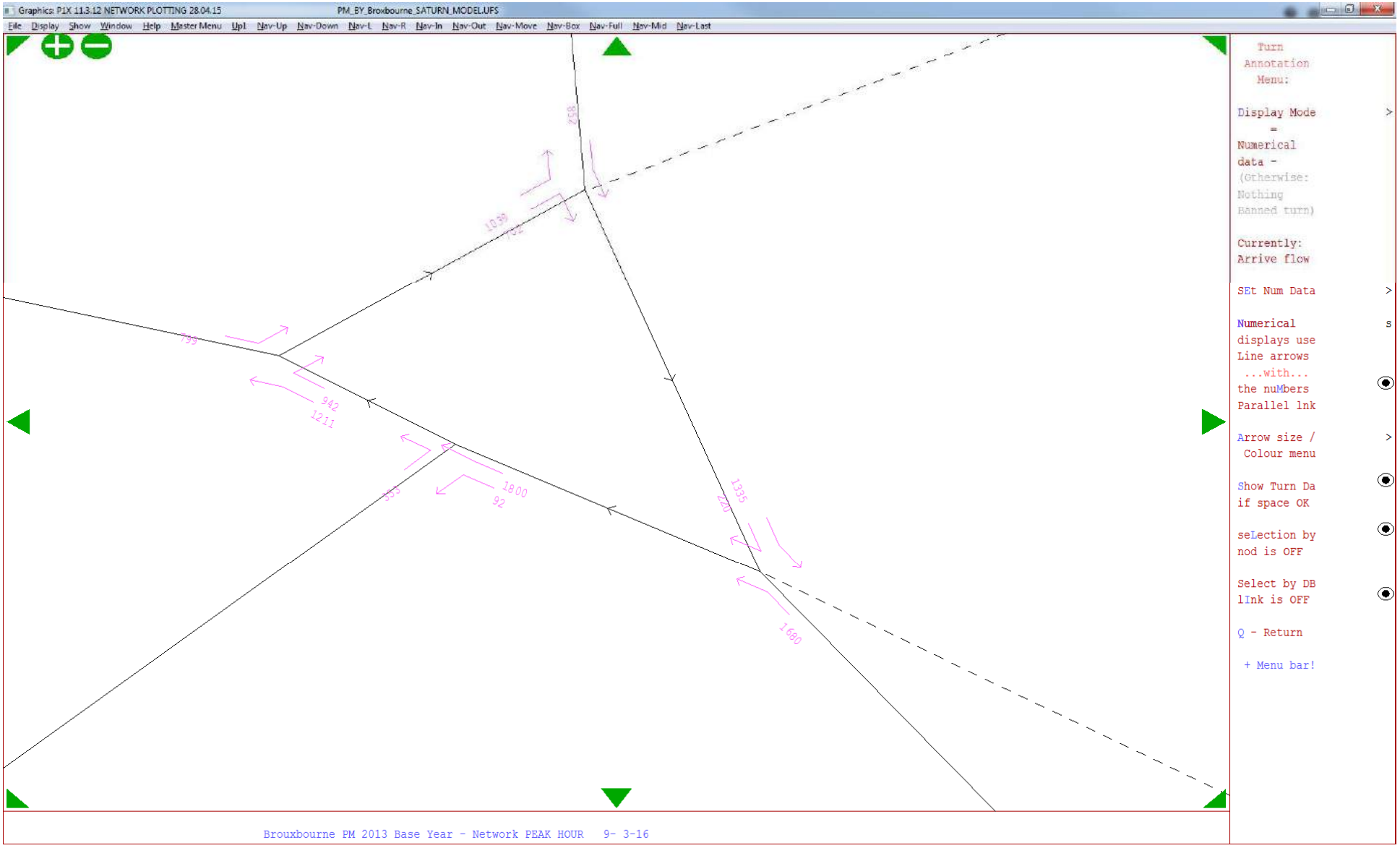
Winston Churchill Way / Monarchs Way / High Street (78895, 78706, 78894)

2013 Base

AM

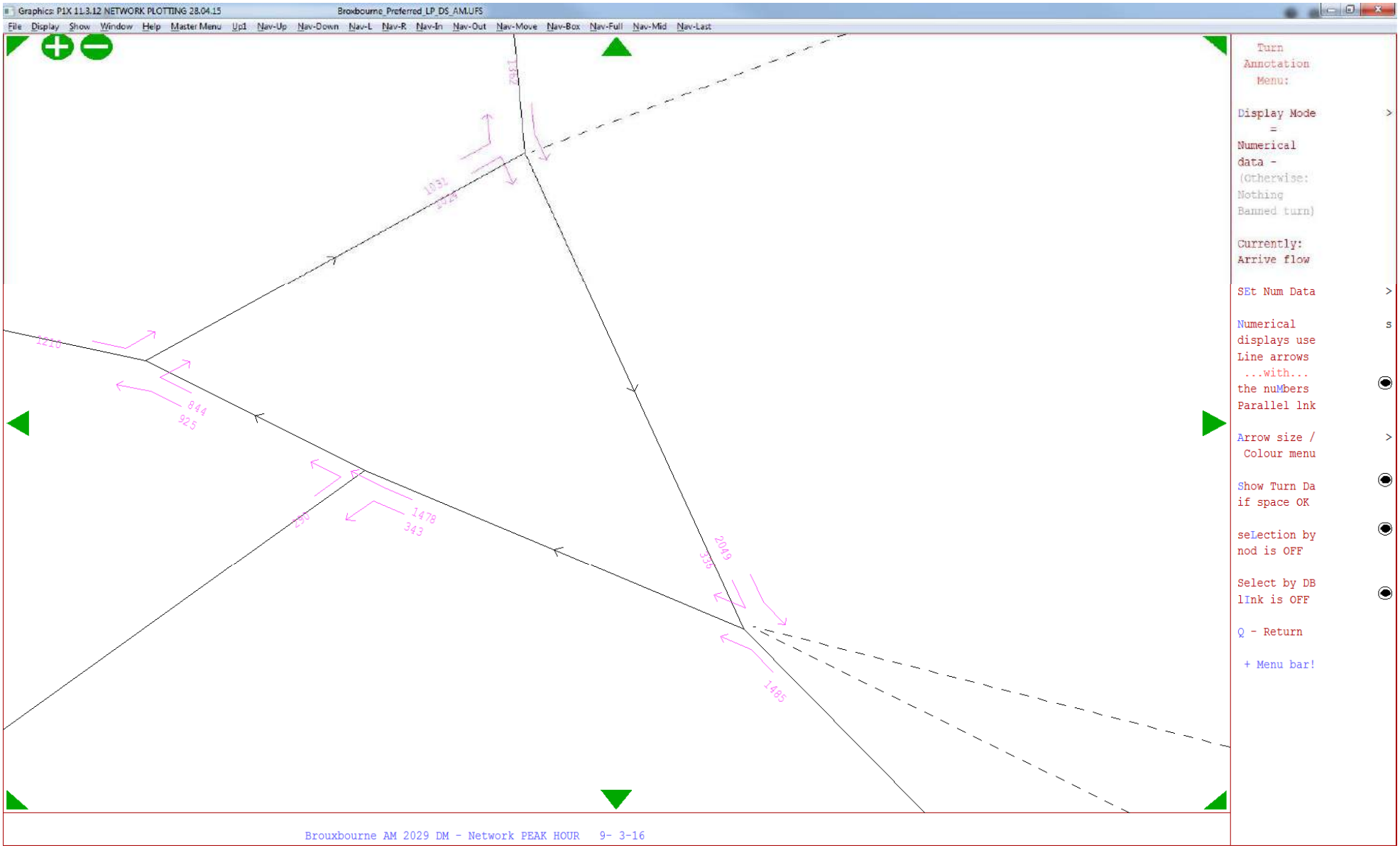


PM

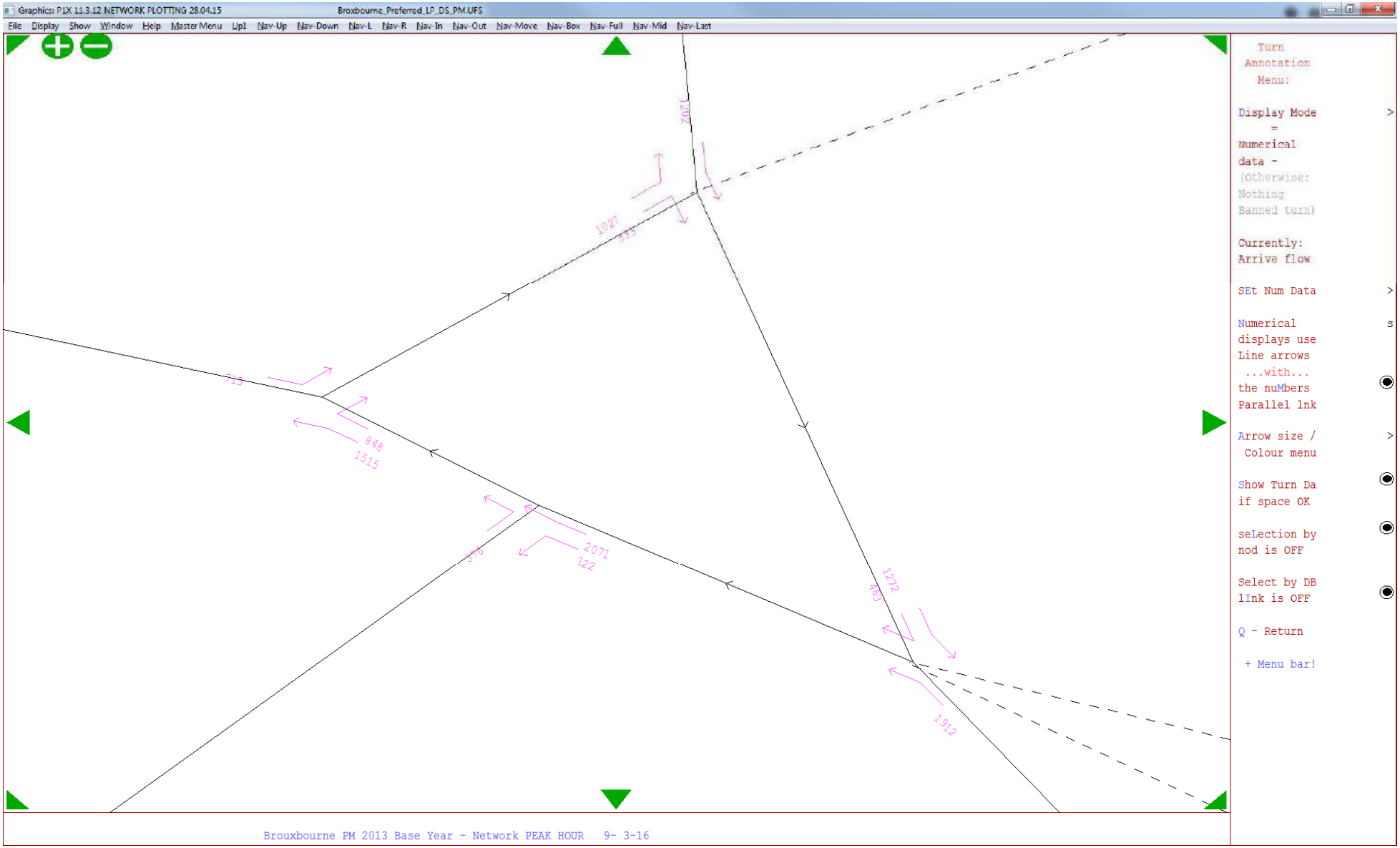

Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
PM_BY_Broxbourne_SATURN_MODELUFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
Turn Annotation Menu:
Display Mode =
Numerical data -
(Otherwise: Nothing Banned turn)
Currently: Arrive flow
SEt Num Data
Numerical displays use Line arrows ...with... the nuMbers Parallel lnk
Arrow size / Colour menu
Show Turn Da if space OK
seLection by nod is OFF
Select by DB lInk is OFF
Q - Return
+ Menu bar!
824
1039
799
942
1211
1800
92
1335
220
1680
Brouxbourne PM 2013 Base Year - Network PEAK HOUR 9- 3-16

2029 Local Plan Preferred Option

AM



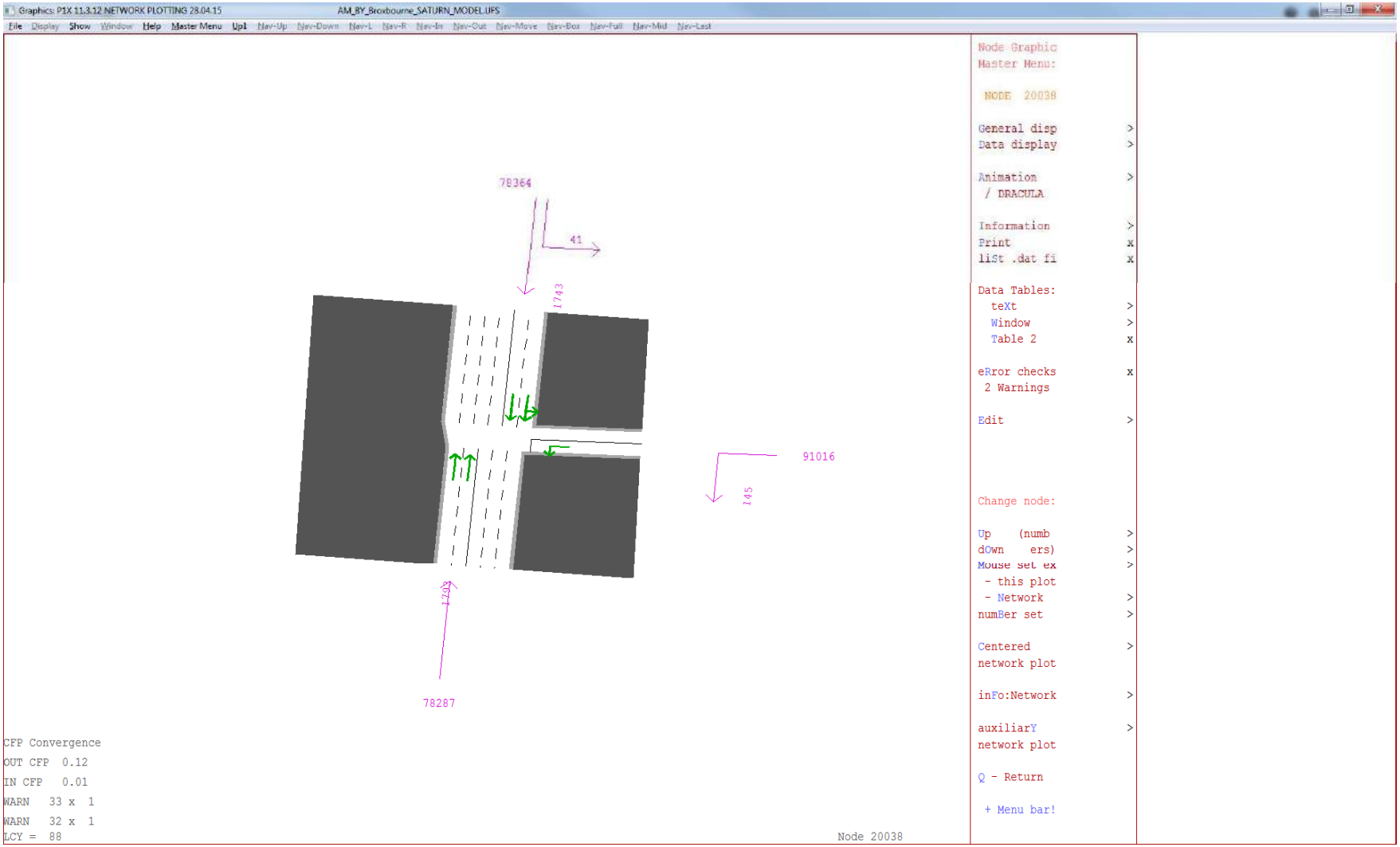
PM


Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
Broxbourne_Preferred_LP_DS_PM.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
Turn Annotation Menu:
Display Mode = Numerical data - (Otherwise: Nothing Banned turn)
Currently: Arrive flow
SEt Num Data
Numerical displays use Line arrows ...with... the nuMbers Parallel lnk
Arrow size / Colour menu
Show Turn Da if space OK
seLection by nod is OFF
Select by DB lInk is OFF
Q - Return
+ Menu bar!
2021
1027
835
848
1515
2071
122
1272
1912
Brouxbourne PM 2013 Base Year - Network PEAK HOUR 9- 3-16

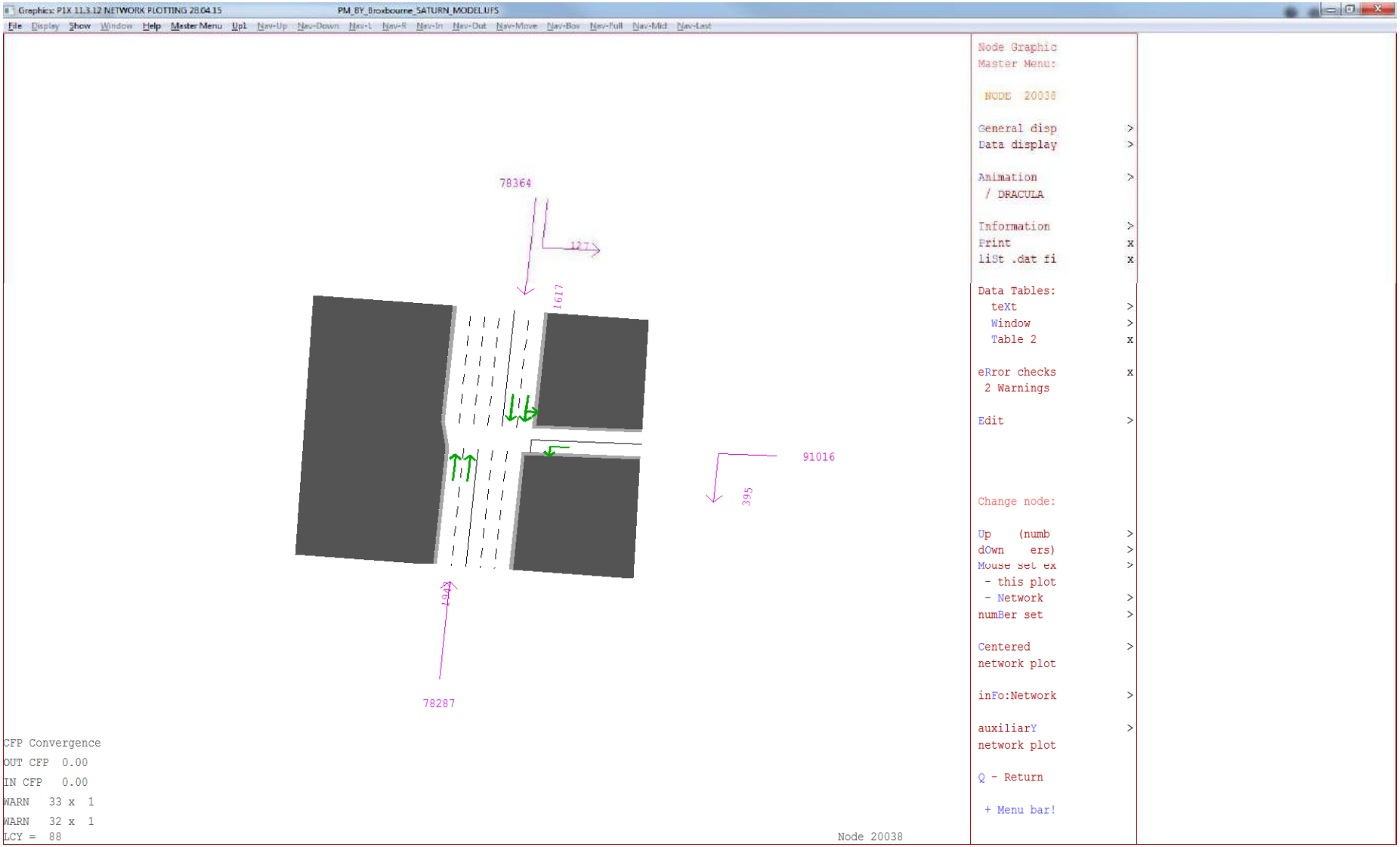
A10 / Theobalds Lane (20038)

2013 Base

AM

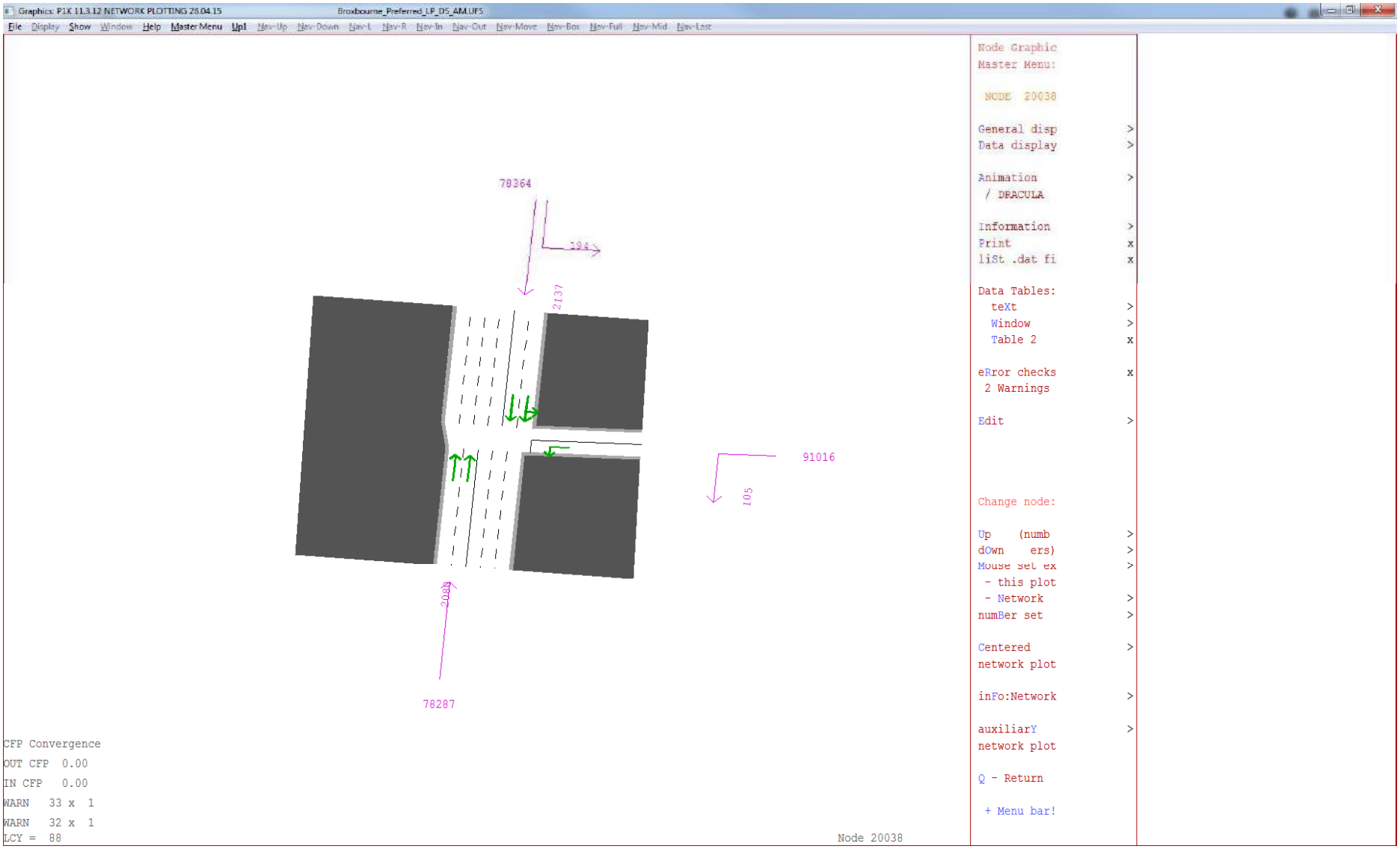


PM

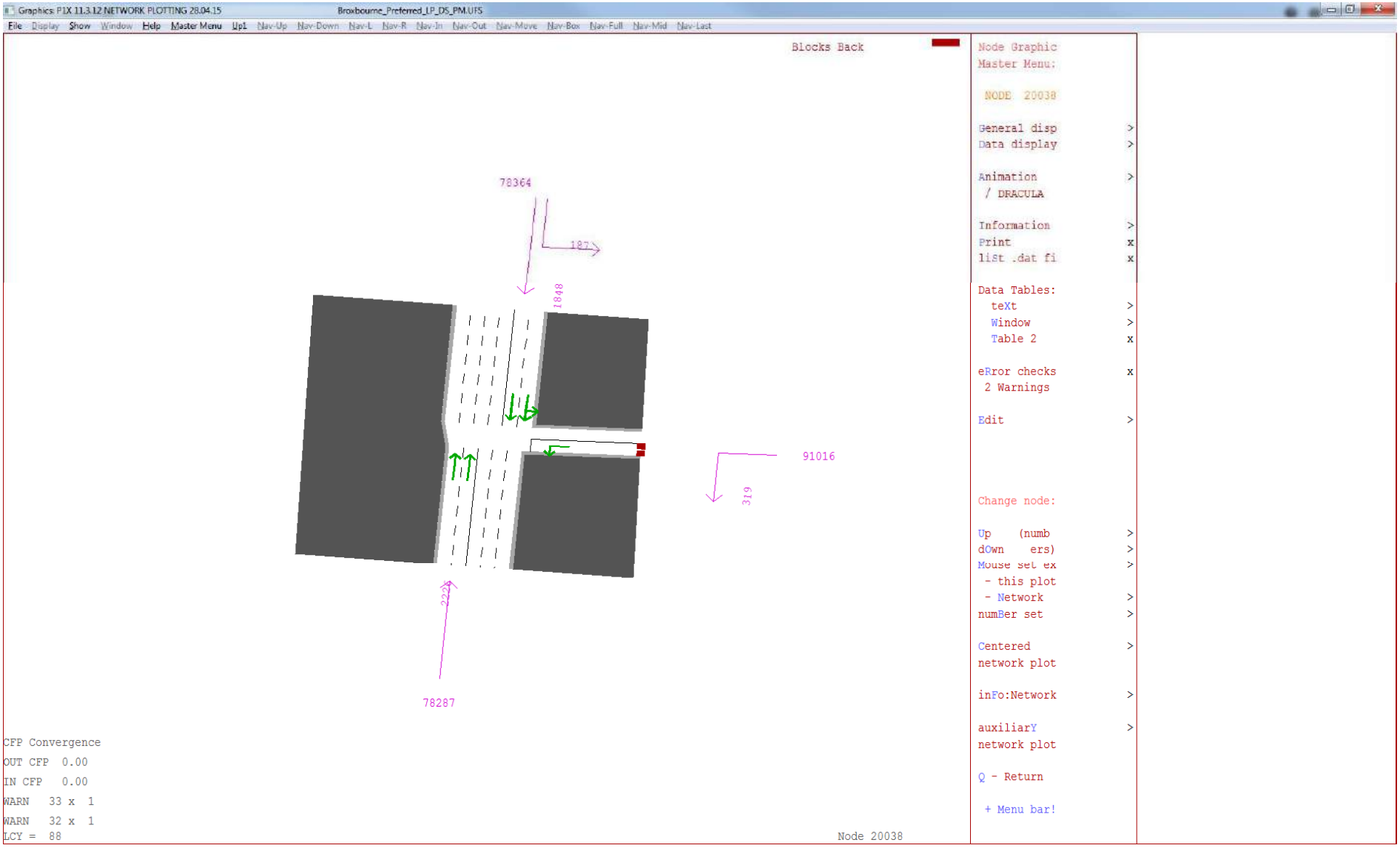

Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
PM_BY_Broxbourne_SATURN_MODEL.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
78364
127
1617
91016
395
1948
78287
Node Graphic
Master Menu:
NODE 20038
General disp >
Data display >
Animation >
/ DRACULA
Information >
Print x
liSt .dat fi x
Data Tables:
teXt >
Window >
Table 2 x
eRror checks x
2 Warnings
Edit >
Change node:
Up (numb >
dOwn ers) >
Mouse sel ex >
- this plot
- Network >
numBer set >
Centered >
network plot
inFo:Network >
auxiliarY >
network plot
Q - Return
+ Menu bar!
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 33 x 1
WARN 32 x 1
LCY = 88
Node 20038

2029 Local Plan

AM



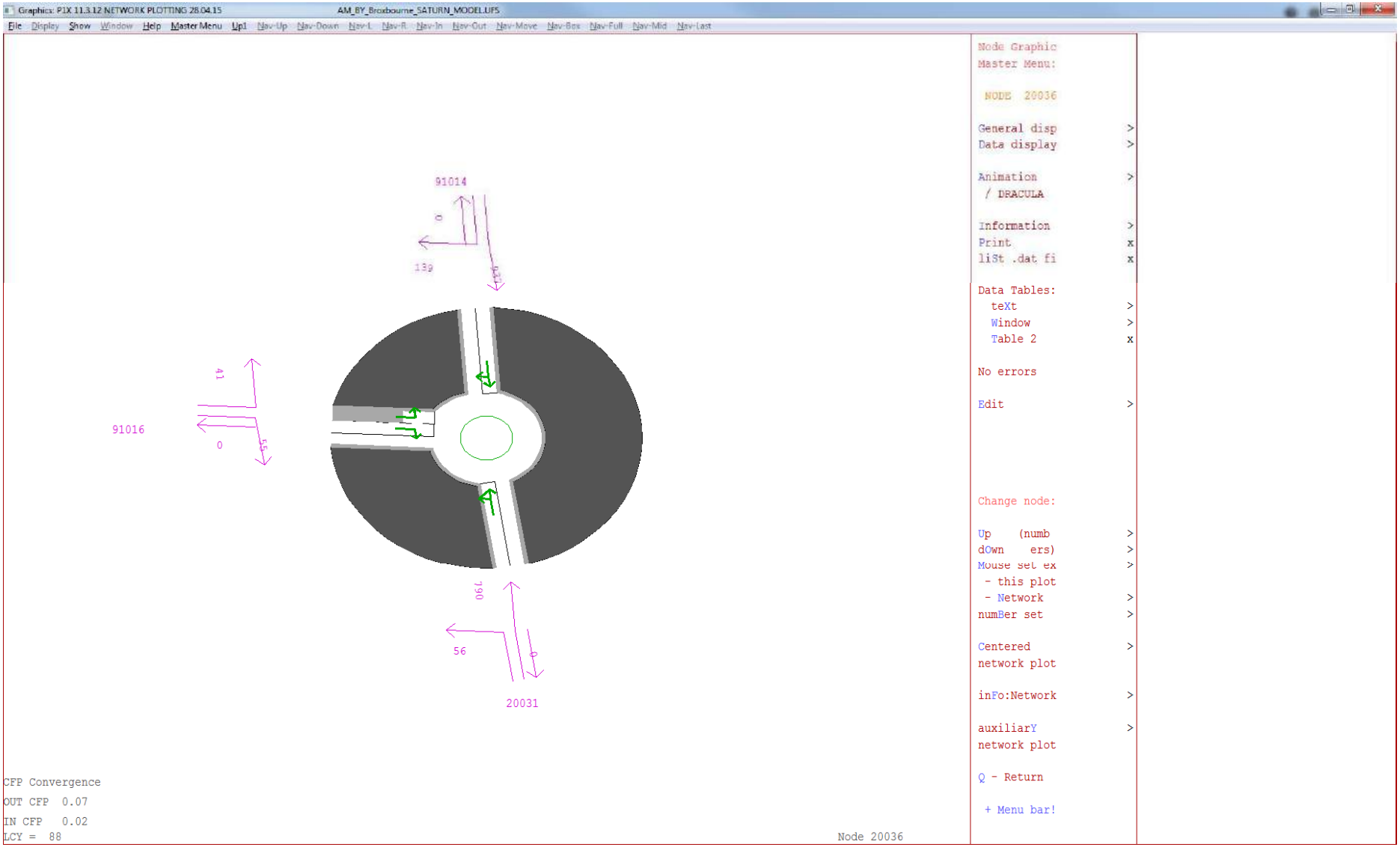
PM


Graphics: P1X.11.3.12.NETWORK PLOTTING 28.04.15
Broxbourne_Preferred_LP_DS_PM.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
Blocks Back
78364
187
1848
91016
319
222
78287
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
WARN 33 x 1
WARN 32 x 1
LCY = 88
Node 20038
Node Graphic
Master Menu:
NODE 20038
General disp >
Data display >
Animation >
/ DRACULA
Information >
Print x
list .dat fi x
Data Tables:
teXt >
Window >
Table 2 x
eRror checks x
2 Warnings
Edit >
Change node:
Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >
Centered >
network plot
inFo:Network >
auxiliarY >
network plot
Q - Return
+ Menu bar!

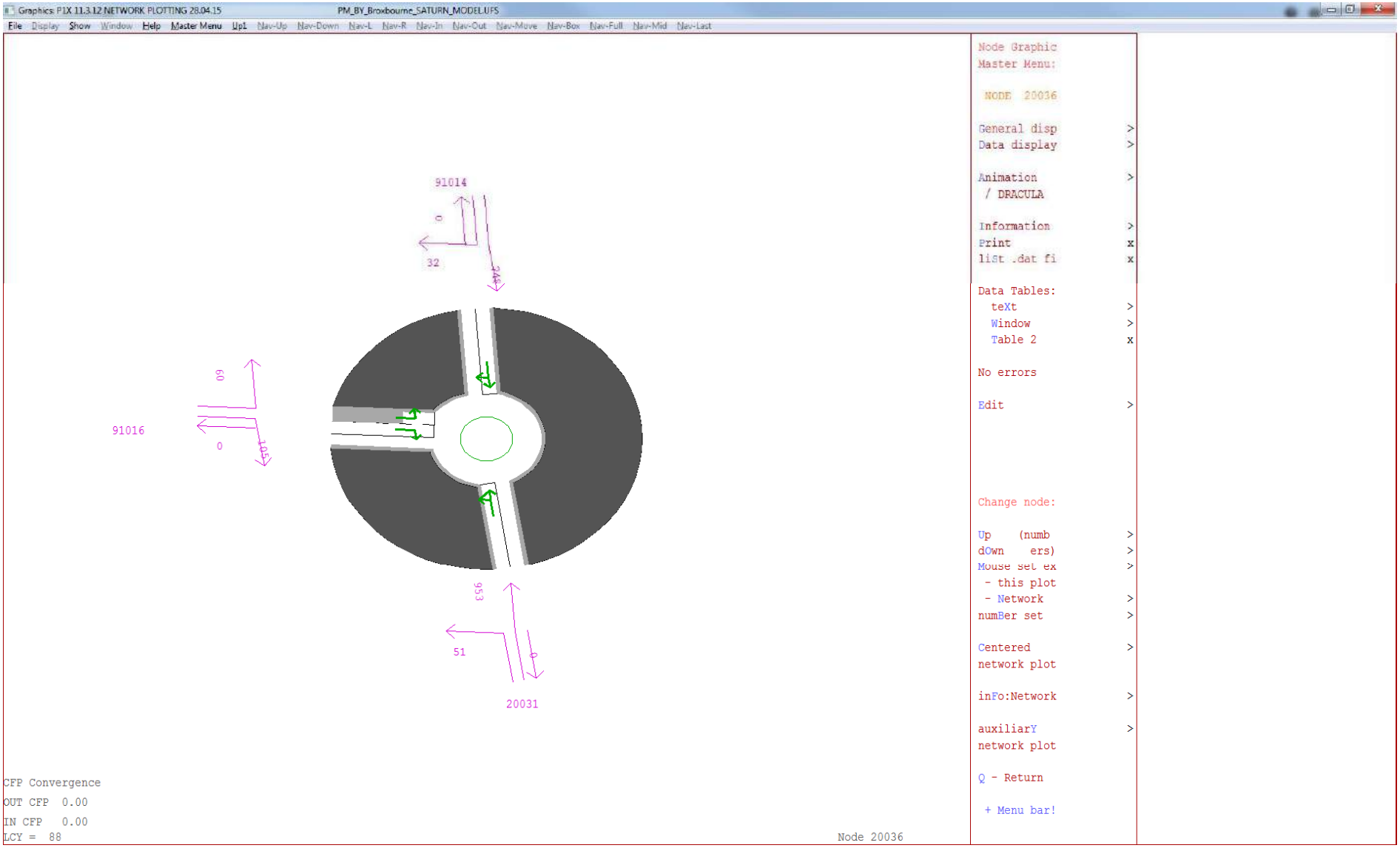
Theobalds Lane / Crossbrook Street / High Street (20036)

2013 Base

AM

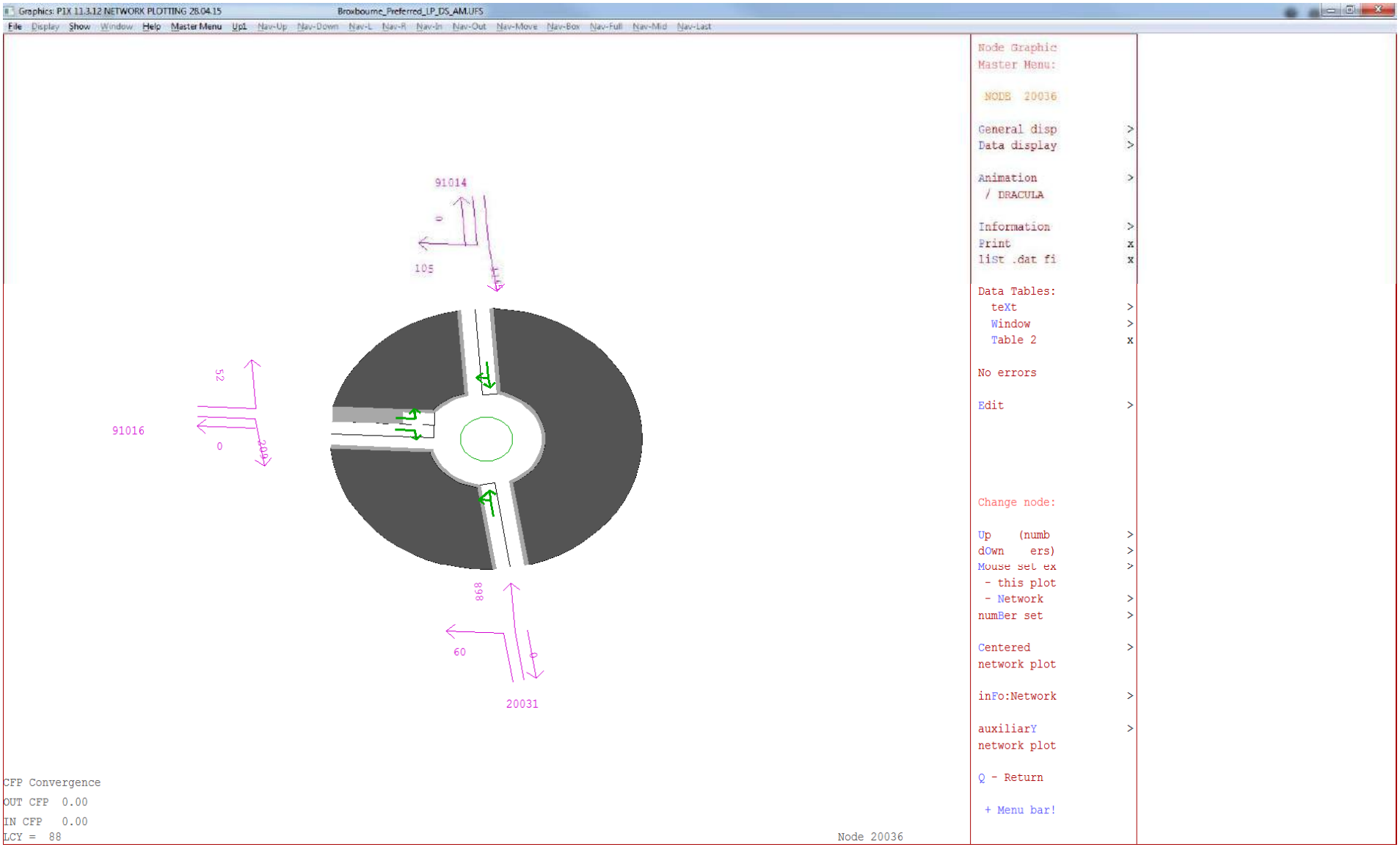


PM

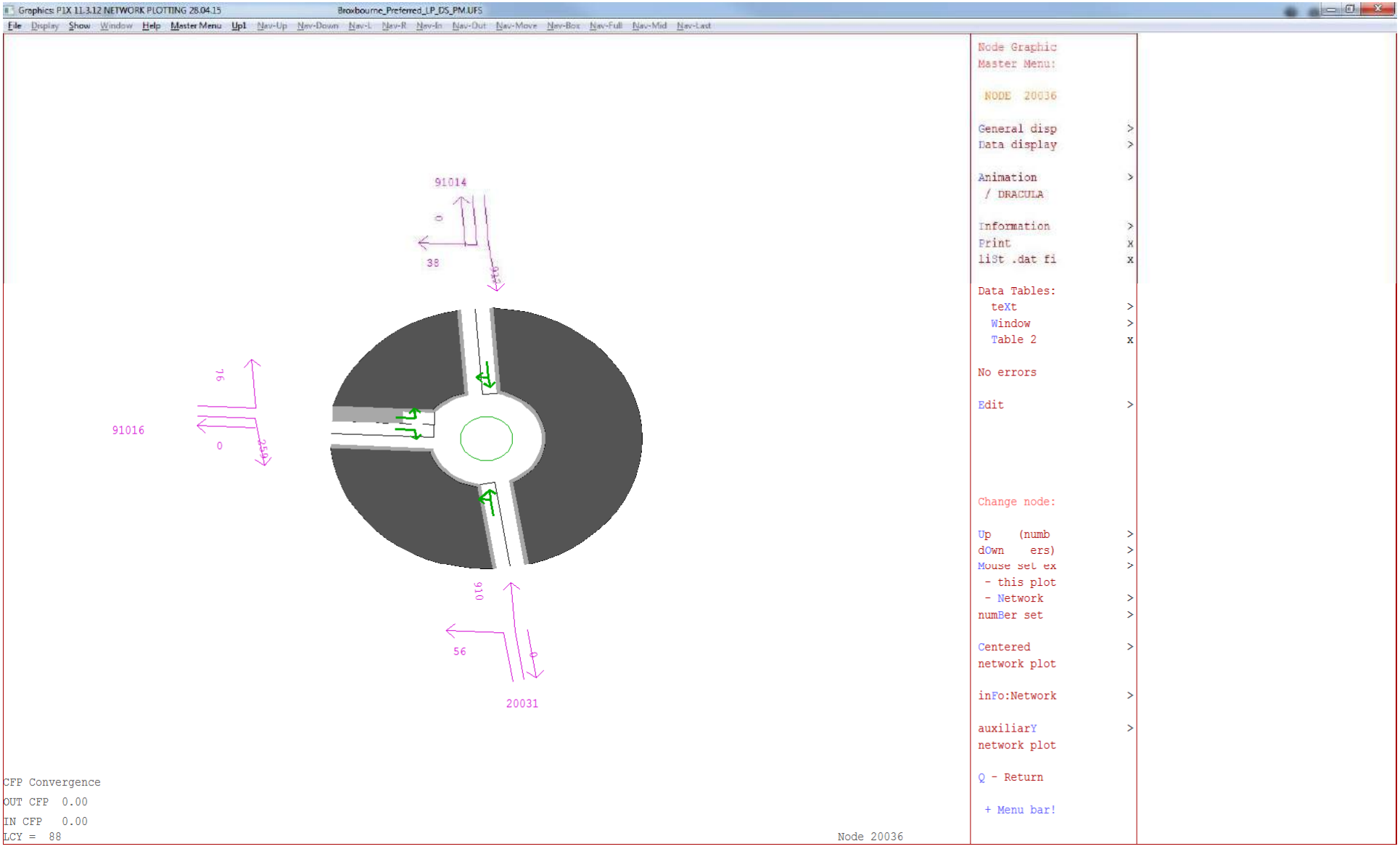

Graphics: P1X.11.3.12.NETWORK PLOTTING 28.04.15
PM_BY_Broxbourne_SATURN_MODEL.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
91014
0
32
344
91016
60
0
185
953
51
0
20031
Node Graphic
Master Menu:
NODE 20036
General disp >
Data display >
Animation >
/ DRACULA
Information >
Print x
list .dat fi x
Data Tables:
teXt >
Window >
Table 2 x
No errors
Edit >
Change node:
Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >
Centered >
network plot
inFo:Network >
auxiliarY >
network plot
Q - Return
+ Menu bar!
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCY = 88
Node 20036

2029 Local Plan Preferred Option

AM



PM


Graphics: P1X 11.3.12 NETWORK PLOTTING 28.04.15
Broxbourne_Preferred_LP_DS_PM.UFS
File Display Show Window Help Master Menu Up1 Nav-Up Nav-Down Nav-L Nav-R Nav-In Nav-Out Nav-Move Nav-Box Nav-Full Nav-Mid Nav-Last
91014
0
38
91016
16
0
256
910
56
0
20031
Node Graphic
Master Menu:
NODE 20036
General disp >
Data display >
Animation >
/ DRACULA
Information >
Print x
liSt .dat fi x
Data Tables:
teXt >
Window >
Table 2 x
No errors
Edit >
Change node:
Up (numb >
dOwn ers) >
Mouse set ex >
- this plot
- Network >
numBer set >
Centered >
network plot
inFo:Network >
auxiliarY >
network plot
Q - Return
+ Menu bar!
CFP Convergence
OUT CFP 0.00
IN CFP 0.00
LCY = 88
Node 20036

Appendix D

TRAFFIC SURVEYS

Cheshunt - Thursday 12th July 2016

Junction: Cedars Park/Theobalds Lane/Football Ground

Approach: Cedars Park

	Left Turn				Northbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
0715 - 0730	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
0730 - 0745	0	0	0	**0**	0	0	0	**0**	1	1	0	**2**
0745 - 0800	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**0**	**6**
0800 - 0815	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
0815 - 0830	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
0830 - 0845	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
0845 - 0900	1	0	0	**1**	0	0	0	**0**	3	0	0	**3**
Hourly Total	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**8**
0900 - 0915	1	0	0	**1**	0	0	0	**0**	2	0	0	**2**
0915 - 0930	3	0	0	**3**	0	0	0	**0**	2	0	0	**2**
0930 - 0945	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
0945 - 1000	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**
Hourly Total	**4**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**7**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**6**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**20**	**1**	**0**	**21**

	Left Turn				Northbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	3	0	0	**3**	0	0	0	**0**	5	0	0	**5**
1615 - 1630	2	0	0	**2**	0	0	0	**0**	5	0	0	**5**
1630 - 1645	1	0	0	**1**	0	0	0	**0**	12	0	0	**12**
1645 - 1700	1	0	0	**1**	0	0	0	**0**	4	0	0	**4**
Hourly Total	**7**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**26**
1700 - 1715	2	0	0	**2**	0	0	0	**0**	6	0	0	**6**
1715 - 1730	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1730 - 1745	2	0	0	**2**	0	0	0	**0**	1	0	0	**1**
1745 - 1800	3	0	0	**3**	0	0	0	**0**	4	0	0	**4**
Hourly Total	**8**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**12**
1800 - 1815	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1815 - 1830	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**
1830 - 1845	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1845 - 1900	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Hourly Total	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**3**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**17**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**41**	**0**	**0**	**41**

Cheshunt - Thursday 12th July 2016

Junction: Cedars Park/Theobalds Lane/Football Ground

Approach: Theobalds Lane EB

	Left Turn				Eastbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	0	0	0	**0**	8	0	0	**8**	1	0	0	**1**
0715 - 0730	0	0	0	**0**	11	0	0	**11**	0	1	0	**1**
0730 - 0745	1	0	0	**1**	16	0	0	**16**	0	0	0	**0**
0745 - 0800	1	0	0	**1**	16	0	0	**16**	0	0	0	**0**
Hourly Total	**2**	**0**	**0**	**2**	**51**	**0**	**0**	**51**	**1**	**1**	**0**	**2**
0800 - 0815	0	0	0	**0**	24	0	0	**24**	1	0	0	**1**
0815 - 0830	0	0	0	**0**	31	0	0	**31**	0	0	0	**0**
0830 - 0845	0	0	0	**0**	28	0	1	**29**	0	0	0	**0**
0845 - 0900	0	0	0	**0**	24	0	0	**24**	1	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**107**	**0**	**1**	**108**	**2**	**0**	**0**	**2**
0900 - 0915	1	0	0	**1**	17	0	0	**17**	4	0	0	**4**
0915 - 0930	2	0	0	**2**	22	0	0	**22**	5	0	0	**5**
0930 - 0945	1	0	0	**1**	21	0	0	**21**	2	0	0	**2**
0945 - 1000	1	0	0	**1**	14	0	0	**14**	3	0	0	**3**
Hourly Total	**5**	**0**	**0**	**5**	**74**	**0**	**0**	**74**	**14**	**0**	**0**	**14**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**7**	**0**	**0**	**7**	**232**	**0**	**1**	**233**	**17**	**1**	**0**	**18**

	Left Turn				Eastbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	1	0	0	**1**	31	0	0	**31**	3	0	0	**3**
1615 - 1630	0	0	0	**0**	24	0	0	**24**	1	0	0	**1**
1630 - 1645	5	0	0	**5**	24	0	0	**24**	1	0	0	**1**
1645 - 1700	2	0	0	**2**	24	0	0	**24**	1	0	0	**1**
Hourly Total	**1**	**0**	**0**	**8**	**103**	**0**	**0**	**103**	**6**	**0**	**0**	**6**
1700 - 1715	1	0	0	**1**	21	0	0	**21**	1	0	0	**1**
1715 - 1730	1	0	0	**1**	27	0	0	**27**	0	0	0	**0**
1730 - 1745	6	0	0	**6**	22	0	0	**22**	1	0	0	**1**
1745 - 1800	14	0	0	**14**	18	0	0	**18**	0	0	0	**0**
Hourly Total	**22**	**0**	**0**	**22**	**88**	**0**	**0**	**88**	**2**	**0**	**0**	**2**
1800 - 1815	2	0	0	**2**	23	0	0	**23**	0	0	0	**0**
1815 - 1830	0	0	0	**0**	17	0	0	**17**	0	0	0	**0**
1830 - 1845	1	0	0	**1**	19	0	0	**19**	0	0	0	**0**
1845 - 1900	0	0	0	**0**	14	0	0	**14**	0	0	0	**0**
Hourly Total	**3**	**0**	**0**	**3**	**73**	**0**	**0**	**73**	**0**	**0**	**0**	**0**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**26**	**0**	**0**	**33**	**264**	**0**	**0**	**264**	**8**	**0**	**0**	**8**

Cheshunt - Thursday 12th July 2016

Junction: Cedars Park/Theobalds Lane/Football Ground

Approach: Football Ground **School Drop Off**

	Left Turn				Southbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**
0715 - 0730	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
0730 - 0745	3	0	0	**3**	0	0	0	**0**	0	0	0	**0**
0745 - 0800	8	0	0	**8**	0	0	0	**0**	1	0	0	**1**
Hourly Total	**12**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
0800 - 0815	2	0	0	**2**	0	0	0	**0**	0	0	0	**0**
0815 - 0830	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
0830 - 0845	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**
0845 - 0900	2	0	0	**2**	0	0	0	**0**	0	0	0	**0**
Hourly Total	**6**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
0900 - 0915	4	0	0	**4**	0	0	0	**0**	1	0	0	**1**
0915 - 0930	3	0	0	**3**	0	0	0	**0**	1	0	0	**1**
0930 - 0945	2	0	0	**2**	0	0	0	**0**	1	0	0	**1**
0945 - 1000	3	0	0	**3**	0	0	0	**0**	0	0	0	**0**
Hourly Total	**12**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**3**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**30**	**0**	**0**	**30**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**5**

	Left Turn				Southbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1615 - 1630	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
1630 - 1645	1	0	0	**1**	0	0	0	**0**	0	0	0	**0**
1645 - 1700	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Hourly Total	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
1700 - 1715	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1715 - 1730	2	0	0	**2**	0	0	0	**0**	2	0	0	**2**
1730 - 1745	2	0	0	**2**	0	0	0	**0**	4	0	0	**4**
1745 - 1800	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
Hourly Total	**6**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**8**
1800 - 1815	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**
1815 - 1830	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**
1830 - 1845	2	0	0	**2**	0	0	0	**0**	3	0	0	**3**
1845 - 1900	4	0	0	**4**	0	0	0	**0**	2	0	0	**2**
Hourly Total	**7**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**8**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**15**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**17**

Cheshunt - Thursday 12th July 2016

Junction: Cedars Park/Theobalds Lane/Football Ground

Approach: Theobalds Lane WB **School Drop Off**

	Left Turn				Westbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	1	0	0	**1**	41	0	0	**41**	1	0	0	**1**
0715 - 0730	1	0	0	**1**	46	0	0	**46**	1	0	0	**1**
0730 - 0745	1	0	0	**1**	41	0	0	**41**	4	0	0	**4**
0745 - 0800	0	0	0	**0**	42	0	0	**42**	9	0	0	**9**
Hourly Total	**3**	**0**	**0**	**3**	**170**	**0**	**0**	**170**	**15**	**0**	**0**	**15**
0800 - 0815	2	0	0	**2**	38	0	0	**38**	2	0	0	**2**
0815 - 0830	3	0	0	**3**	51	0	0	**51**	1	0	0	**1**
0830 - 0845	7	0	0	**7**	44	0	1	**45**	1	0	0	**1**
0845 - 0900	2	0	0	**2**	42	0	0	**42**	3	0	0	**3**
Hourly Total	**14**	**0**	**0**	**14**	**175**	**0**	**1**	**176**	**7**	**0**	**0**	**7**
0900 - 0915	6	0	0	**6**	34	1	0	**35**	5	0	0	**5**
0915 - 0930	9	0	0	**9**	31	0	0	**31**	6	0	0	**6**
0930 - 0945	6	0	0	**6**	28	0	0	**28**	3	0	0	**3**
0945 - 1000	5	0	0	**5**	24	0	0	**24**	1	0	0	**1**
Hourly Total	**26**	**0**	**0**	**26**	**117**	**1**	**0**	**118**	**15**	**0**	**0**	**15**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**43**	**0**	**0**	**43**	**462**	**1**	**1**	**464**	**37**	**0**	**0**	**37**

	Left Turn				Westbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	7	0	0	**7**	41	0	0	**41**	1	0	0	**1**
1615 - 1630	2	0	0	**2**	27	0	0	**27**	2	0	0	**2**
1630 - 1645	2	0	0	**2**	32	0	0	**32**	1	0	0	**1**
1645 - 1700	2	0	0	**2**	34	0	0	**34**	2	0	0	**2**
Hourly Total	**13**	**0**	**0**	**13**	**134**	**0**	**0**	**134**	**6**	**0**	**0**	**6**
1700 - 1715	2	0	0	**2**	36	0	0	**36**	2	0	0	**2**
1715 - 1730	3	0	0	**3**	31	0	0	**31**	3	0	0	**3**
1730 - 1745	3	0	0	**3**	46	0	0	**46**	3	0	0	**3**
1745 - 1800	1	0	0	**1**	34	0	0	**34**	6	0	0	**6**
Hourly Total	**9**	**0**	**0**	**9**	**147**	**0**	**0**	**147**	**14**	**0**	**0**	**14**
1800 - 1815	1	0	0	**1**	38	0	0	**38**	2	0	0	**2**
1815 - 1830	0	0	0	**0**	34	0	0	**34**	2	0	0	**2**
1830 - 1845	0	0	0	**0**	24	0	0	**24**	1	0	0	**1**
1845 - 1900	0	0	0	**0**	26	0	0	**26**	2	0	0	**2**
Hourly Total	**1**	**0**	**0**	**1**	**122**	**0**	**0**	**122**	**7**	**0**	**0**	**7**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**23**	**0**	**0**	**23**	**403**	**0**	**0**	**403**	**27**	**0**	**0**	**27**

Cheshunt - Thursday 12th July 2016

Junction: Cedars Park/Theobalds Lane/Football Ground

School Drop Off

	Queue Lengths (Vehicles)			
TIME	Cedars Park	Theobalds Lane EB	Football Ground	Theobalds Lane WB
700	0	0	0	0
705	0	0	0	0
710	0	0	0	0
715	0	0	0	0
720	0	0	0	0
725	0	0	0	0
730	0	0	0	**2**
735	0	0	0	**2**
740	0	0	0	**4**
745	0	0	0	**3**
750	0	0	0	**3**
755	0	0	0	**2**
800	0	0	0	0
805	0	0	0	0
810	0	0	0	0
815	0	0	0	0
820	0	0	0	0
825	0	0	0	0
830	0	0	0	0
835	0	0	0	0
840	0	0	0	0
845	0	0	0	0
850	0	0	0	0
855	0	0	0	0
900	0	0	0	0
905	0	0	0	0
910	0	0	0	0
915	0	0	0	0
920	0	0	0	0
925	0	0	0	0
930	0	0	0	0
935	0	0	0	0
940	0	0	0	0
945	0	0	0	0
950	0	0	0	0
955	0	0	0	0
1000	0	0	0	0

	Queue Lengths (Vehicles)			
TIME	Cedars Park	Theobalds Lane EB	Football Ground	Theobalds Lane WB
1600	0	0	0	0
1605	0	0	0	0
1610	0	0	0	0
1615	0	0	0	0
1620	0	0	0	0
1625	0	0	0	0
1630	0	0	0	0
1635	0	0	4	0
1640	3	0	2	0
1645	0	0	0	0
1650	0	0	0	0
1655	0	0	0	0
1700	0	0	0	0
1705	0	0	0	0
1710	0	0	0	0
1715	0	0	0	0
1720	0	0	0	0
1725	0	0	0	0
1730	0	0	0	0
1735	0	0	0	0
1740	0	0	0	0
1745	0	0	0	0
1750	0	0	0	3
1755	0	0	0	0
1800	0	0	0	0
1805	0	0	0	0
1810	0	0	0	0
1815	0	0	0	0
1820	0	0	0	0
1825	0	0	0	0
1830	0	0	0	0
1835	0	0	0	0
1840	0	0	0	0
1845	0	0	0	0
1850	0	0	0	0
1855	0	0	0	0
1900	0	0	0	0

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Cheshunt - Thursday 12th July 2016

Junction: Trinity Lane/High St

Approach: Trinity Lane

	Left Turn				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	13	0	0	**13**	18	0	0	**18**
0715 - 0730	15	0	0	**15**	23	0	0	**23**
0730 - 0745	22	0	0	**22**	36	0	0	**36**
0745 - 0800	19	0	0	**19**	45	0	0	**45**
Hourly Total	**69**	**0**	**0**	**69**	**122**	**0**	**0**	**122**
0800 - 0815	21	0	0	**21**	42	0	0	**42**
0815 - 0830	24	0	0	**24**	48	0	0	**48**
0830 - 0845	26	0	0	**26**	45	0	0	**45**
0845 - 0900	23	0	0	**23**	35	0	0	**35**
Hourly Total	**94**	**0**	**0**	**94**	**170**	**0**	**0**	**170**
0900 - 0915	21	0	0	**21**	27	0	0	**27**
0915 - 0930	18	0	0	**18**	22	0	0	**22**
0930 - 0945	15	0	0	**15**	17	0	0	**17**
0945 - 1000	12	0	0	**12**	15	0	0	**15**
Hourly Total	**66**	**0**	**0**	**66**	**81**	**0**	**0**	**81**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**229**	**0**	**0**	**229**	**373**	**0**	**0**	**373**

	Left Turn				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	14	0	0	**14**	18	0	0	**18**
1615 - 1630	12	0	0	**12**	19	0	0	**19**
1630 - 1645	13	0	0	**13**	15	0	0	**15**
1645 - 1700	10	0	0	**10**	18	0	0	**18**
Hourly Total	**49**	**0**	**0**	**49**	**70**	**0**	**0**	**70**
1700 - 1715	10	0	0	**10**	26	0	0	**26**
1715 - 1730	11	0	0	**11**	27	0	0	**27**
1730 - 1745	10	0	0	**10**	29	0	0	**29**
1745 - 1800	9	0	0	**9**	20	0	0	**20**
Hourly Total	**40**	**0**	**0**	**40**	**102**	**0**	**0**	**102**
1800 - 1815	9	0	0	**9**	19	0	0	**19**
1815 - 1830	8	0	0	**8**	17	0	0	**17**
1830 - 1845	8	0	0	**8**	15	0	0	**15**
1845 - 1900	7	0	0	**7**	12	0	0	**12**
Hourly Total	**32**	**0**	**0**	**32**	**63**	**0**	**0**	**63**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**121**	**0**	**0**	**121**	**235**	**0**	**0**	**235**

Cheshunt - Thursday 12th July 2016

Junction: Trinity Lane/High St

Approach: High St NB

	Northbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	90	3	4	**97**	7	0	0	**7**
0715 - 0730	107	2	5	**114**	8	0	0	**8**
0730 - 0745	125	3	3	**131**	8	0	0	**8**
0745 - 0800	128	2	4	**134**	10	0	0	**10**
Hourly Total	**450**	**10**	**16**	**476**	**33**	**0**	**0**	**33**
0800 - 0815	126	3	3	**132**	15	0	0	**15**
0815 - 0830	138	2	3	**143**	13	0	0	**13**
0830 - 0845	141	3	3	**147**	9	0	0	**9**
0845 - 0900	121	3	4	**128**	13	0	0	**13**
Hourly Total	**526**	**11**	**13**	**550**	**50**	**0**	**0**	**50**
0900 - 0915	119	2	3	**124**	10	0	0	**10**
0915 - 0930	107	4	3	**114**	9	0	0	**9**
0930 - 0945	90	3	3	**96**	9	0	0	**9**
0945 - 1000	81	2	3	**86**	7	0	0	**7**
Hourly Total	**397**	**11**	**12**	**420**	**35**	**0**	**0**	**35**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**1373**	**32**	**41**	**1446**	**118**	**0**	**0**	**118**

	Northbound				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	152	2	3	**157**	19	0	0	**19**
1615 - 1630	185	2	3	**190**	18	0	0	**18**
1630 - 1645	180	3	3	**186**	17	0	0	**17**
1645 - 1700	189	2	4	**195**	16	0	0	**16**
Hourly Total	**706**	**9**	**13**	**728**	**70**	**0**	**0**	**70**
1700 - 1715	185	1	4	**190**	10	0	0	**10**
1715 - 1730	179	2	3	**184**	13	0	0	**13**
1730 - 1745	170	1	3	**174**	18	0	0	**18**
1745 - 1800	163	2	3	**168**	16	0	0	**16**
Hourly Total	**697**	**6**	**13**	**716**	**57**	**0**	**0**	**57**
1800 - 1815	156	2	3	**161**	15	0	0	**15**
1815 - 1830	154	1	3	**158**	13	0	0	**13**
1830 - 1845	147	1	4	**152**	12	0	0	**12**
1845 - 1900	139	0	3	**142**	10	0	0	**10**
Hourly Total	**596**	**4**	**13**	**613**	**50**	**0**	**0**	**50**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**1999**	**19**	**39**	**2057**	**177**	**0**	**0**	**177**

Cheshunt - Thursday 12th July 2016

Junction: Trinity Lane/High St

Approach: High St SB

	Left Turn				Southbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	6	0	0	**6**	175	3	4	**182**
0715 - 0730	9	0	0	**9**	182	4	4	**190**
0730 - 0745	12	0	0	**12**	190	3	3	**196**
0745 - 0800	14	0	0	**14**	179	3	2	**184**
Hourly Total	**41**	**0**	**0**	**41**	**726**	**13**	**13**	**752**
0800 - 0815	16	0	0	**16**	186	6	4	**196**
0815 - 0830	22	0	0	**22**	182	3	2	**187**
0830 - 0845	31	0	0	**31**	174	2	2	**178**
0845 - 0900	20	0	0	**20**	160	3	3	**166**
Hourly Total	**89**	**0**	**0**	**89**	**702**	**14**	**11**	**727**
0900 - 0915	18	0	0	**18**	158	3	3	**164**
0915 - 0930	12	0	0	**12**	140	3	4	**147**
0930 - 0945	10	0	0	**10**	137	2	3	**142**
0945 - 1000	8	0	0	**8**	131	0	3	**134**
Hourly Total	**48**	**0**	**0**	**48**	**566**	**8**	**13**	**587**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**178**	**0**	**0**	**178**	**1994**	**35**	**37**	**2066**

	Left Turn				Southbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	24	0	0	**24**	152	3	3	**158**
1615 - 1630	21	0	0	**21**	185	2	3	**190**
1630 - 1645	20	0	0	**20**	180	1	3	**184**
1645 - 1700	22	0	0	**22**	189	2	4	**195**
Hourly Total	**87**	**0**	**0**	**87**	**706**	**8**	**13**	**727**
1700 - 1715	22	0	0	**22**	185	2	4	**191**
1715 - 1730	23	0	0	**23**	179	3	3	**185**
1730 - 1745	27	0	0	**27**	170	2	3	**175**
1745 - 1800	24	0	0	**24**	163	2	3	**168**
Hourly Total	**96**	**0**	**0**	**96**	**697**	**9**	**13**	**719**
1800 - 1815	21	0	0	**21**	157	1	3	**161**
1815 - 1830	19	0	0	**19**	152	2	3	**157**
1830 - 1845	16	0	0	**16**	145	2	4	**151**
1845 - 1900	14	0	0	**14**	139	0	3	**142**
Hourly Total	**70**	**0**	**0**	**70**	**593**	**5**	**13**	**611**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**253**	**0**	**0**	**253**	**1996**	**22**	**39**	**2057**

Cheshunt - Thursday 12th July 2016

Junction: Trinity Lane/High St

	Queue Lengths (Vehicles)		
TIME	Trinity Lane	High St NB	High St SB
700	3	0	0
705	3	0	0
710	2	0	0
715	3	0	3
720	4	0	4
725	4	0	5
730	5	3	3
735	6	2	4
740	4	3	5
745	5	3	4
750	6	4	5
755	6	3	7
800	6	7	5
805	4	2	5
810	5	4	5
815	7	3	3
820	5	3	5
825	6	4	5
830	5	5	2
835	6	7	6
840	5	3	3
845	7	7	5
850	7	5	3
855	6	3	5
900	5	3	4
905	5	7	6
910	5	3	5
915	6	6	4
920	5	5	5
925	7	4	4
930	4	3	5
935	4	3	5
940	2	3	4
945	4	4	3
950	3	3	2
955	4	3	0
1000	2	3	0

	Queue Lengths (Vehicles)		
TIME	Trinity Lane	High St NB	High St SB
1600	4	0	0
1605	5	0	0
1610	4	0	0
1615	4	0	0
1620	5	0	3
1625	3	2	2
1630	2	3	2
1635	2	0	5
1640	3	4	4
1645	7	5	5
1650	6	6	6
1655	5	3	4
1700	4	5	3
1705	5	3	4
1710	6	6	5
1715	5	4	5
1720	4	3	4
1725	3	5	5
1730	7	4	5
1735	6	4	5
1740	5	3	6
1745	4	5	4
1750	5	4	4
1755	6	3	4
1800	5	5	5
1805	4	4	7
1810	6	5	4
1815	3	5	7
1820	4	4	4
1825	5	3	4
1830	4	3	5
1835	4	2	2
1840	5	2	2
1845	4	2	0
1850	2	0	2
1855	2	0	0
1900	3	0	0

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Cheshunt - Thursday 12th July 2016

Junction: Theobalds Grove/High St

Approach: Theobalds Grove

	Left Turn				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	4	0	0	**4**	5	0	0	**5**
0715 - 0730	2	0	0	**2**	9	0	0	**9**
0730 - 0745	2	0	0	**2**	2	0	0	**2**
0745 - 0800	6	0	0	**6**	3	0	0	**3**
Hourly Total	**14**	**0**	**0**	**14**	**19**	**0**	**0**	**19**
0800 - 0815	10	0	0	**10**	4	0	0	**4**
0815 - 0830	9	0	0	**9**	3	0	0	**3**
0830 - 0845	7	0	0	**7**	2	0	0	**2**
0845 - 0900	6	0	0	**6**	2	0	0	**2**
Hourly Total	**32**	**0**	**0**	**32**	**11**	**0**	**0**	**11**
0900 - 0915	5	0	0	**5**	2	0	0	**2**
0915 - 0930	4	0	0	**4**	3	0	0	**3**
0930 - 0945	3	0	0	**3**	1	0	0	**1**
0945 - 1000	4	0	0	**4**	2	0	0	**2**
Hourly Total	**16**	**0**	**0**	**16**	**8**	**0**	**0**	**8**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**62**	**0**	**0**	**62**	**38**	**0**	**0**	**38**

	Left Turn				Right Turn			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	6	0	0	**6**	3	0	0	**3**
1615 - 1630	8	0	0	**8**	9	0	0	**9**
1630 - 1645	9	0	0	**9**	5	0	0	**5**
1645 - 1700	10	0	0	**10**	7	0	0	**7**
Hourly Total	**33**	**0**	**0**	**33**	**24**	**0**	**0**	**24**
1700 - 1715	7	0	0	**7**	5	0	0	**5**
1715 - 1730	8	0	0	**8**	7	0	0	**7**
1730 - 1745	6	0	0	**6**	8	0	0	**8**
1745 - 1800	9	0	0	**9**	4	0	0	**4**
Hourly Total	**30**	**0**	**0**	**30**	**24**	**0**	**0**	**24**
1800 - 1815	5	0	0	**5**	5	0	0	**5**
1815 - 1830	7	0	0	**7**	6	0	0	**6**
1830 - 1845	6	0	0	**6**	4	0	0	**4**
1845 - 1900	4	0	0	**4**	3	0	0	**3**
Hourly Total	**22**	**0**	**0**	**22**	**18**	**0**	**0**	**18**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**85**	**0**	**0**	**85**	**66**	**0**	**0**	**66**

Cheshunt - Thursday 12th July 2016

Junction: Theobalds Grove/High St

Approach: High St NB

	Left Turn				Northbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	7	0	0	**7**	101	3	4	**108**
0715 - 0730	13	0	0	**13**	117	2	5	**124**
0730 - 0745	6	0	0	**6**	155	3	3	**161**
0745 - 0800	8	0	0	**8**	165	2	4	**171**
Hourly Total	**34**	**0**	**0**	**34**	**538**	**10**	**16**	**564**
0800 - 0815	8	0	0	**8**	160	3	3	**166**
0815 - 0830	4	0	0	**4**	182	2	3	**187**
0830 - 0845	2	0	0	**2**	184	3	3	**190**
0845 - 0900	6	0	0	**6**	150	3	4	**157**
Hourly Total	**20**	**0**	**0**	**20**	**676**	**11**	**13**	**700**
0900 - 0915	5	0	0	**5**	141	2	3	**146**
0915 - 0930	4	0	0	**4**	125	4	3	**132**
0930 - 0945	6	0	0	**6**	101	3	3	**107**
0945 - 1000	2	0	0	**2**	94	2	3	**99**
Hourly Total	**17**	**0**	**0**	**17**	**461**	**11**	**12**	**484**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**71**	**0**	**0**	**71**	**1675**	**32**	**41**	**1748**

	Left Turn				Northbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	2	0	0	**2**	168	2	3	**173**
1615 - 1630	2	0	0	**2**	202	2	3	**207**
1630 - 1645	5	0	0	**5**	190	3	3	**196**
1645 - 1700	3	0	0	**3**	204	2	4	**210**
Hourly Total	**12**	**0**	**0**	**12**	**764**	**9**	**13**	**786**
1700 - 1715	2	0	0	**2**	209	1	4	**214**
1715 - 1730	3	0	0	**3**	203	2	3	**208**
1730 - 1745	3	0	0	**3**	196	1	3	**200**
1745 - 1800	1	0	0	**1**	182	2	3	**187**
Hourly Total	**9**	**0**	**0**	**9**	**790**	**6**	**13**	**809**
1800 - 1815	3	0	0	**3**	172	2	3	**177**
1815 - 1830	2	0	0	**2**	169	1	3	**173**
1830 - 1845	2	0	0	**2**	160	1	4	**165**
1845 - 1900	2	0	0	**2**	149	0	3	**152**
Hourly Total	**9**	**0**	**0**	**9**	**650**	**4**	**13**	**667**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**30**	**0**	**0**	**30**	**2204**	**19**	**39**	**2262**

Cheshunt - Thursday 12th July 2016

Junction: Theobalds Grove/High St

Approach: High St SB

	Right Turn				Southbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	2	0	0	**2**	176	3	4	**183**
0715 - 0730	3	0	0	**3**	182	4	4	**190**
0730 - 0745	1	0	0	**1**	200	3	3	**206**
0745 - 0800	3	0	0	**3**	190	3	2	**195**
Hourly Total	**9**	**0**	**0**	**9**	**748**	**13**	**13**	**774**
0800 - 0815	3	0	0	**3**	198	6	4	**208**
0815 - 0830	2	0	0	**2**	201	3	2	**206**
0830 - 0845	1	0	0	**1**	203	2	2	**207**
0845 - 0900	1	0	0	**1**	178	3	3	**184**
Hourly Total	**7**	**0**	**0**	**7**	**780**	**14**	**11**	**805**
0900 - 0915	0	0	0	**0**	174	3	3	**180**
0915 - 0930	1	0	0	**1**	149	3	4	**156**
0930 - 0945	0	0	0	**0**	146	2	3	**151**
0945 - 1000	1	0	0	**1**	137	0	3	**140**
Hourly Total	**2**	**0**	**0**	**2**	**606**	**8**	**13**	**627**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**18**	**0**	**0**	**18**	**2134**	**35**	**37**	**2206**

	Right Turn				Southbound			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	0	0	0	**0**	173	3	3	**179**
1615 - 1630	3	0	0	**3**	197	2	3	**202**
1630 - 1645	2	0	0	**2**	195	1	3	**199**
1645 - 1700	4	0	0	**4**	204	2	4	**210**
Hourly Total	**9**	**0**	**0**	**9**	**769**	**8**	**13**	**790**
1700 - 1715	5	0	0	**5**	202	2	4	**208**
1715 - 1730	3	0	0	**3**	195	3	3	**201**
1730 - 1745	4	0	0	**4**	189	2	3	**194**
1745 - 1800	4	0	0	**4**	183	2	3	**188**
Hourly Total	**16**	**0**	**0**	**16**	**769**	**9**	**13**	**791**
1800 - 1815	2	0	0	**2**	173	1	3	**177**
1815 - 1830	3	0	0	**3**	165	2	3	**170**
1830 - 1845	2	0	0	**2**	157	2	4	**163**
1845 - 1900	1	0	0	**1**	150	0	3	**153**
Hourly Total	**8**	**0**	**0**	**8**	**645**	**5**	**13**	**663**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**33**	**0**	**0**	**33**	**2183**	**22**	**39**	**2244**

Cheshunt - Thursday 12th July 2016

Junction: Theobalds Grove/High St

	Queue Lengths (Vehicles)		
TIME	Theobalds Grove	High St NB	High St SB
700	0	0	0
705	0	0	0
710	0	0	0
715	0	0	0
720	0	0	0
725	0	0	0
730	2	0	0
735	2	0	0
740	2	0	0
745	0	0	0
750	0	0	0
755	3	0	0
800	2	0	0
805	2	0	0
810	0	0	0
815	2	0	0
820	2	0	0
825	2	0	0
830	0	0	0
835	2	0	0
840	2	0	0
845	3	0	0
850	2	0	0
855	2	0	0
900	0	0	0
905	2	0	0
910	0	0	0
915	2	0	0
920	2	0	0
925	2	0	0
930	0	0	0
935	0	0	0
940	0	0	0
945	0	0	0
950	2	0	0
955	0	0	0
1000	0	0	0

	Queue Lengths (Vehicles)		
TIME	Theobalds Grove	High St NB	High St SB
1600	0	0	0
1605	2	0	0
1610	0	0	0
1615	0	0	0
1620	2	0	0
1625	2	0	0
1630	2	0	0
1635	2	0	0
1640	3	0	0
1645	0	0	0
1650	2	0	0
1655	2	0	0
1700	2	0	0
1705	0	0	0
1710	2	0	0
1715	0	0	0
1720	2	0	0
1725	2	0	0
1730	2	0	0
1735	2	0	0
1740	2	0	0
1745	2	0	0
1750	0	0	0
1755	2	0	0
1800	2	0	0
1805	2	0	0
1810	0	0	0
1815	2	0	0
1820	0	0	0
1825	2	0	0
1830	0	0	0
1835	2	0	0
1840	0	0	0
1845	2	0	0
1850	0	0	0
1855	0	0	0
1900	0	0	0

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

Approach: A - STURLAS WAY

	To Arm B				To Arm C				To Arm D				To Arm E			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	10	0	0	**10**	4	0	0	**4**	0	0	0	**0**	8	0	0	**8**
0715 - 0730	14	1	0	**15**	7	0	0	**7**	1	0	0	**1**	6	1	0	**7**
0730 - 0745	16	2	0	**18**	9	0	0	**9**	0	0	0	**0**	9	0	0	**9**
0745 - 0800	21	0	0	**21**	8	0	0	**8**	1	0	0	**1**	10	3	0	**13**
Hourly Total	**61**	**3**	**0**	**64**	**28**	**0**	**0**	**28**	**2**	**0**	**0**	**2**	**33**	**4**	**0**	**37**
0800 - 0815	32	0	0	**32**	7	0	0	**7**	0	0	0	**0**	10	1	0	**11**
0815 - 0830	25	0	0	**25**	10	0	0	**10**	0	0	0	**0**	13	0	0	**13**
0830 - 0845	27	1	0	**28**	11	0	0	**11**	1	0	0	**1**	12	1	0	**13**
0845 - 0900	25	2	0	**27**	12	0	0	**12**	1	0	0	**1**	11	0	0	**11**
Hourly Total	**109**	**3**	**0**	**112**	**40**	**0**	**0**	**40**	**2**	**0**	**0**	**2**	**46**	**2**	**0**	**48**
0900 - 0915	33	1	0	**34**	7	0	0	**7**	1	0	0	**1**	11	1	0	**12**
0915 - 0930	32	1	0	**33**	11	0	0	**11**	0	0	0	**0**	12	1	0	**13**
0930 - 0945	30	2	0	**32**	15	0	0	**15**	1	0	0	**1**	10	0	0	**10**
0945 - 1000	44	2	0	**46**	9	0	0	**9**	1	0	0	**1**	7	1	0	**8**
Hourly Total	**139**	**6**	**0**	**145**	**42**	**0**	**0**	**42**	**3**	**0**	**0**	**3**	**40**	**3**	**0**	**43**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**309**	**12**	**0**	**321**	**110**	**0**	**0**	**110**	**7**	**0**	**0**	**7**	**119**	**9**	**0**	**128**

	To Arm B				To Arm C				To Arm D				To Arm E			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	45	1	0	**46**	13	0	0	**13**	1	0	0	**1**	15	0	0	**15**
1615 - 1630	35	0	0	**35**	11	0	0	**11**	0	0	0	**0**	12	0	0	**12**
1630 - 1645	43	0	0	**43**	11	0	0	**11**	1	0	0	**1**	13	0	0	**13**
1645 - 1700	36	1	0	**37**	14	1	0	**15**	0	0	0	**0**	16	2	0	**18**
Hourly Total	**159**	**2**	**0**	**161**	**49**	**1**	**0**	**50**	**2**	**0**	**0**	**2**	**56**	**2**	**0**	**58**
1700 - 1715	40	1	0	**41**	21	0	0	**21**	3	0	0	**3**	17	1	0	**18**
1715 - 1730	52	1	0	**53**	16	0	1	**17**	0	0	0	**0**	15	0	0	**15**
1730 - 1745	42	0	0	**42**	19	0	0	**19**	1	0	0	**1**	17	0	0	**17**
1745 - 1800	46	1	0	**47**	14	0	0	**14**	2	0	0	**2**	12	0	0	**12**
Hourly Total	**180**	**3**	**0**	**183**	**70**	**0**	**1**	**71**	**6**	**0**	**0**	**6**	**61**	**1**	**0**	**62**
1800 - 1815	41	2	0	**43**	12	0	0	**12**	1	0	0	**1**	11	0	0	**11**
1815 - 1830	29	0	0	**29**	19	0	0	**19**	1	0	0	**1**	6	0	0	**6**
1830 - 1845	25	0	0	**25**	11	0	0	**11**	0	0	0	**0**	6	0	0	**6**
1845 - 1900	25	0	0	**25**	12	0	0	**12**	2	0	0	**2**	5	0	0	**5**
Hourly Total	**120**	**2**	**0**	**122**	**54**	**0**	**0**	**54**	**4**	**0**	**0**	**4**	**28**	**0**	**0**	**28**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**459**	**7**	**0**	**466**	**173**	**1**	**1**	**175**	**12**	**0**	**0**	**12**	**145**	**3**	**0**	**148**

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

Approach: B - WINSTON CHURCHILL WAY

	To Arm C				To Arm D				To Arm E				To Arm A			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	11	1	0	**12**	3	0	0	**3**	163	15	2	**180**	5	1	0	**6**
0715 - 0730	18	2	0	**20**	1	0	0	**1**	151	23	1	**175**	8	0	0	**8**
0730 - 0745	24	0	0	**24**	4	0	0	**4**	151	14	1	**166**	12	1	0	**13**
0745 - 0800	19	2	0	**21**	1	0	0	**1**	152	15	0	**167**	19	1	0	**20**
Hourly Total	**72**	**5**	**0**	**77**	**9**	**0**	**0**	**9**	**617**	**67**	**4**	**688**	**44**	**3**	**0**	**47**
0800 - 0815	23	2	0	**25**	3	1	0	**4**	138	12	0	**150**	21	0	0	**21**
0815 - 0830	26	1	0	**27**	2	0	0	**2**	166	11	0	**177**	20	0	0	**20**
0830 - 0845	19	0	0	**19**	3	0	0	**3**	157	18	0	**175**	28	1	0	**29**
0845 - 0900	39	1	0	**40**	2	0	0	**2**	165	9	0	**174**	29	0	0	**29**
Hourly Total	**107**	**4**	**0**	**111**	**10**	**1**	**0**	**11**	**626**	**50**	**0**	**676**	**98**	**1**	**0**	**99**
0900 - 0915	38	2	0	**40**	5	0	0	**5**	147	14	0	**161**	22	0	0	**22**
0915 - 0930	19	2	0	**21**	4	0	0	**4**	152	20	1	**173**	36	0	0	**36**
0930 - 0945	22	1	0	**23**	3	0	0	**3**	149	16	3	**168**	18	2	0	**20**
0945 - 1000	26	4	0	**30**	3	0	0	**3**	121	16	0	**137**	19	1	0	**20**
Hourly Total	**105**	**9**	**0**	**114**	**15**	**0**	**0**	**15**	**569**	**66**	**4**	**639**	**95**	**3**	**0**	**98**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**284**	**18**	**0**	**302**	**34**	**1**	**0**	**35**	**1812**	**183**	**8**	**2003**	**237**	**7**	**0**	**244**

	To Arm C				To Arm D				To Arm E				To Arm A			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	40	4	0	**44**	4	0	0	**4**	120	11	0	**131**	19	0	0	**19**
1615 - 1630	41	1	0	**42**	2	0	0	**2**	111	7	0	**118**	20	0	0	**20**
1630 - 1645	38	1	0	**39**	3	0	0	**3**	102	6	0	**108**	19	1	0	**20**
1645 - 1700	49	1	0	**50**	7	0	0	**7**	106	10	0	**116**	20	1	0	**21**
Hourly Total	**168**	**7**	**0**	**175**	**16**	**0**	**0**	**16**	**439**	**34**	**0**	**473**	**78**	**2**	**0**	**80**
1700 - 1715	37	0	0	**37**	6	0	0	**6**	75	6	0	**81**	19	0	0	**19**
1715 - 1730	37	0	0	**37**	8	0	0	**8**	87	3	0	**90**	12	0	0	**12**
1730 - 1745	43	0	0	**43**	5	0	0	**5**	102	3	0	**105**	19	1	0	**20**
1745 - 1800	37	2	0	**39**	6	0	0	**6**	98	2	0	**100**	8	0	0	**8**
Hourly Total	**154**	**2**	**0**	**156**	**25**	**0**	**0**	**25**	**362**	**14**	**0**	**376**	**58**	**1**	**0**	**59**
1800 - 1815	56	1	0	**57**	11	0	0	**11**	93	8	0	**101**	10	0	0	**10**
1815 - 1830	43	0	0	**43**	7	0	0	**7**	78	3	0	**81**	14	0	0	**14**
1830 - 1845	50	0	0	**50**	4	0	0	**4**	89	5	0	**94**	13	0	0	**13**
1845 - 1900	37	1	0	**38**	6	0	0	**6**	81	1	0	**82**	14	1	0	**15**
Hourly Total	**186**	**2**	**0**	**188**	**28**	**0**	**0**	**28**	**341**	**17**	**0**	**358**	**51**	**1**	**0**	**52**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**508**	**11**	**0**	**519**	**69**	**0**	**0**	**69**	**1142**	**65**	**0**	**1207**	**187**	**4**	**0**	**191**

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

Approach: C - HIGH ST

	To Arm D				To Arm E				To Arm A				To Arm B			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	1	0	0	**1**	191	7	4	**202**	6	0	0	**6**	23	4	0	**27**
0715 - 0730	3	0	0	**3**	228	5	2	**235**	13	0	0	**13**	28	2	0	**30**
0730 - 0745	2	1	0	**3**	178	5	2	**185**	15	1	0	**16**	35	6	0	**41**
0745 - 0800	1	0	0	**1**	177	4	5	**186**	19	0	0	**19**	41	8	0	**49**
Hourly Total	**7**	**1**	**0**	**8**	**774**	**21**	**13**	**808**	**53**	**1**	**0**	**54**	**127**	**20**	**0**	**147**
0800 - 0815	6	0	0	**6**	136	5	2	**143**	20	0	0	**20**	33	2	0	**35**
0815 - 0830	1	0	0	**1**	146	4	3	**153**	22	0	0	**22**	36	2	0	**38**
0830 - 0845	4	0	0	**4**	131	4	1	**136**	25	0	0	**25**	28	5	0	**33**
0845 - 0900	6	0	0	**6**	117	3	1	**121**	21	0	0	**21**	41	3	0	**44**
Hourly Total	**17**	**0**	**0**	**17**	**530**	**16**	**7**	**553**	**88**	**0**	**0**	**88**	**138**	**12**	**0**	**150**
0900 - 0915	6	0	0	**6**	125	7	5	**137**	18	0	0	**18**	34	3	0	**37**
0915 - 0930	2	0	0	**2**	109	3	3	**115**	26	0	0	**26**	33	3	0	**36**
0930 - 0945	0	0	0	**0**	122	2	4	**128**	17	0	0	**17**	27	2	0	**29**
0945 - 1000	2	0	0	**2**	129	5	3	**137**	34	1	0	**35**	25	1	0	**26**
Hourly Total	**10**	**0**	**0**	**10**	**485**	**17**	**15**	**517**	**95**	**1**	**0**	**96**	**119**	**9**	**0**	**128**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**34**	**1**	**0**	**35**	**1789**	**54**	**35**	**1878**	**236**	**2**	**0**	**238**	**384**	**41**	**0**	**425**

	To Arm D				To Arm E				To Arm A				To Arm B			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	5	0	0	**5**	94	4	2	**100**	16	0	0	**16**	24	1	0	**25**
1615 - 1630	4	0	0	**4**	104	2	4	**110**	19	0	0	**19**	24	0	0	**24**
1630 - 1645	4	1	0	**5**	107	1	3	**111**	22	1	0	**23**	22	1	0	**23**
1645 - 1700	9	0	0	**9**	108	1	4	**113**	22	1	0	**23**	21	1	0	**22**
Hourly Total	**22**	**1**	**0**	**23**	**413**	**8**	**13**	**434**	**79**	**2**	**0**	**81**	**91**	**3**	**0**	**94**
1700 - 1715	7	0	0	**7**	98	2	3	**103**	20	0	0	**20**	21	0	0	**21**
1715 - 1730	4	0	1	**5**	109	4	3	**116**	16	0	0	**16**	28	0	0	**28**
1730 - 1745	4	0	0	**4**	89	1	1	**91**	16	0	0	**16**	37	1	0	**38**
1745 - 1800	3	1	0	**4**	94	2	3	**99**	9	0	0	**9**	33	0	0	**33**
Hourly Total	**18**	**1**	**1**	**20**	**390**	**9**	**10**	**409**	**61**	**0**	**0**	**61**	**119**	**1**	**0**	**120**
1800 - 1815	7	0	0	**7**	104	1	5	**110**	18	0	0	**18**	26	0	0	**26**
1815 - 1830	5	0	0	**5**	86	0	2	**88**	14	0	0	**14**	22	0	0	**22**
1830 - 1845	1	0	0	**1**	95	0	2	**97**	12	0	0	**12**	20	0	0	**20**
1845 - 1900	9	0	0	**9**	87	1	0	**88**	14	0	0	**14**	25	0	0	**25**
Hourly Total	**22**	**0**	**0**	**22**	**372**	**2**	**9**	**383**	**58**	**0**	**0**	**58**	**93**	**0**	**0**	**93**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**62**	**2**	**1**	**65**	**1175**	**19**	**32**	**1226**	**198**	**2**	**0**	**200**	**303**	**4**	**0**	**307**

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

Approach: D - SWANFIELD ROAD

	To Arm E				To Arm A				To Arm B				To Arm C			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	18	0	0	**18**	4	0	0	**4**	4	0	0	**4**	6	0	0	**6**
0715 - 0730	14	0	0	**14**	4	0	0	**4**	6	0	0	**6**	3	0	0	**3**
0730 - 0745	12	0	0	**12**	2	0	0	**2**	6	0	0	**6**	11	0	0	**11**
0745 - 0800	10	1	0	**11**	3	0	0	**3**	3	0	0	**3**	3	0	0	**3**
Hourly Total	**54**	**1**	**0**	55	**13**	**0**	**0**	13	**19**	**0**	**0**	19	**23**	**0**	**0**	23
0800 - 0815	7	2	0	**9**	2	0	0	**2**	3	0	0	**3**	6	0	0	**6**
0815 - 0830	10	0	0	**10**	4	0	0	**4**	2	0	0	**2**	5	0	0	**5**
0830 - 0845	15	0	0	**15**	8	0	0	**8**	6	0	0	**6**	4	0	0	**4**
0845 - 0900	24	0	0	**24**	3	0	0	**3**	3	0	0	**3**	8	0	0	**8**
Hourly Total	**56**	**2**	**0**	58	**17**	**0**	**0**	17	**14**	**0**	**0**	14	**23**	**0**	**0**	23
0900 - 0915	10	0	0	**10**	3	0	0	**3**	3	1	0	**4**	3	0	0	**3**
0915 - 0930	9	0	0	**9**	0	0	0	**0**	1	0	0	**1**	1	0	0	**1**
0930 - 0945	12	0	0	**12**	1	0	0	**1**	5	1	0	**6**	5	0	0	**5**
0945 - 1000	13	2	0	**15**	1	0	0	**1**	4	0	0	**4**	6	0	0	**6**
Hourly Total	**44**	**2**	**0**	46	**5**	**0**	**0**	5	**13**	**2**	**0**	15	**15**	**0**	**0**	15
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**154**	**5**	**0**	159	**35**	**0**	**0**	35	**46**	**2**	**0**	48	**61**	**0**	**0**	61

	To Arm E				To Arm A				To Arm B				To Arm C			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	14	0	0	**14**	3	0	0	**3**	6	0	0	**6**	4	0	0	**4**
1615 - 1630	5	0	0	**5**	3	0	0	**3**	3	0	0	**3**	3	0	0	**3**
1630 - 1645	15	0	0	**15**	5	0	0	**5**	5	0	0	**5**	7	0	0	**7**
1645 - 1700	11	0	0	**11**	5	0	0	**5**	4	0	0	**4**	4	0	0	**4**
Hourly Total	**45**	**0**	**0**	45	**16**	**0**	**0**	16	**18**	**0**	**0**	18	**18**	**0**	**0**	18
1700 - 1715	8	0	0	**8**	4	0	0	**4**	5	0	0	**5**	4	0	0	**4**
1715 - 1730	5	0	0	**5**	2	0	0	**2**	3	0	0	**3**	3	0	0	**3**
1730 - 1745	13	0	0	**13**	1	0	0	**1**	2	0	0	**2**	4	0	0	**4**
1745 - 1800	8	0	0	**8**	2	0	0	**2**	3	0	0	**3**	5	0	0	**5**
Hourly Total	**34**	**0**	**0**	34	**9**	**0**	**0**	9	**13**	**0**	**0**	13	**16**	**0**	**0**	16
1800 - 1815	9	0	0	**9**	6	0	0	**6**	1	0	0	**1**	2	0	0	**2**
1815 - 1830	9	0	0	**9**	1	0	0	**1**	4	0	0	**4**	4	0	0	**4**
1830 - 1845	6	0	0	**6**	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**
1845 - 1900	4	0	0	**4**	2	0	0	**2**	2	0	0	**2**	6	0	0	**6**
Hourly Total	**28**	**0**	**0**	28	**10**	**0**	**0**	10	**8**	**0**	**0**	8	**13**	**0**	**0**	13
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**107**	**0**	**0**	107	**35**	**0**	**0**	35	**39**	**0**	**0**	39	**47**	**0**	**0**	47

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

Approach: E - MONARCHS WAY

	To Arm A				To Arm B				To Arm C				To Arm D			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
0700 - 0715	8	0	0	**8**	59	3	0	**62**	52	3	4	**59**	2	0	0	**2**
0715 - 0730	9	0	0	**9**	86	8	0	**94**	75	5	5	**85**	2	0	0	**2**
0730 - 0745	16	1	0	**17**	68	5	0	**73**	90	2	3	**95**	6	1	0	**7**
0745 - 0800	16	1	0	**17**	81	12	0	**93**	85	6	3	**94**	6	0	0	**6**
Hourly Total	**49**	**2**	**0**	**51**	**294**	**28**	**0**	**322**	**302**	**16**	**15**	**333**	**16**	**1**	**0**	**17**
0800 - 0815	14	0	0	**14**	68	8	0	**76**	88	4	3	**95**	7	0	0	**7**
0815 - 0830	12	0	0	**12**	86	15	0	**101**	104	10	3	**117**	12	0	0	**12**
0830 - 0845	17	0	0	**17**	64	12	0	**76**	123	3	1	**127**	17	0	0	**17**
0845 - 0900	16	2	0	**18**	55	11	0	**66**	122	8	4	**134**	19	0	0	**19**
Hourly Total	**59**	**2**	**0**	**61**	**273**	**46**	**0**	**319**	**437**	**25**	**11**	**473**	**55**	**0**	**0**	**55**
0900 - 0915	20	1	0	**21**	74	7	0	**81**	111	3	1	**115**	16	0	0	**16**
0915 - 0930	17	2	0	**19**	77	14	0	**91**	108	6	3	**117**	4	0	0	**4**
0930 - 0945	15	0	0	**15**	93	14	1	**108**	100	5	5	**110**	6	1	0	**7**
0945 - 1000	22	0	0	**22**	75	16	0	**91**	78	2	4	**84**	5	0	0	**5**
Hourly Total	**74**	**3**	**0**	**77**	**319**	**51**	**1**	**371**	**397**	**16**	**13**	**426**	**31**	**1**	**0**	**32**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**182**	**7**	**0**	**189**	**886**	**125**	**1**	**1012**	**1136**	**57**	**39**	**1232**	**102**	**2**	**0**	**104**

	To Arm A				To Arm B				To Arm C				To Arm D			
TIME	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
1600 - 1615	17	0	0	**17**	116	6	0	**122**	144	0	3	**147**	13	0	0	**13**
1615 - 1630	11	0	0	**11**	122	10	0	**132**	182	8	3	**193**	18	0	0	**18**
1630 - 1645	17	0	0	**17**	107	5	0	**112**	161	4	3	**168**	21	0	0	**21**
1645 - 1700	11	1	0	**12**	139	4	0	**143**	144	2	2	**148**	13	0	0	**13**
Hourly Total	**56**	**1**	**0**	**57**	**484**	**25**	**0**	**509**	**631**	**14**	**11**	**656**	**65**	**0**	**0**	**65**
1700 - 1715	13	0	0	**13**	154	4	0	**158**	164	2	2	**168**	21	0	0	**21**
1715 - 1730	14	0	0	**14**	97	0	0	**97**	167	3	4	**174**	15	0	0	**15**
1730 - 1745	10	0	0	**10**	109	1	0	**110**	168	1	4	**173**	13	0	0	**13**
1745 - 1800	13	1	0	**14**	84	2	0	**86**	141	2	2	**145**	14	0	0	**14**
Hourly Total	**50**	**1**	**0**	**51**	**444**	**7**	**0**	**451**	**640**	**8**	**12**	**660**	**63**	**0**	**0**	**63**
1800 - 1815	10	0	0	**10**	103	4	0	**107**	136	2	3	**141**	10	0	0	**10**
1815 - 1830	13	0	0	**13**	105	2	0	**107**	124	0	5	**129**	11	0	0	**11**
1830 - 1845	10	0	0	**10**	112	4	0	**116**	116	1	2	**119**	7	1	0	**8**
1845 - 1900	9	0	0	**9**	87	1	0	**88**	110	1	3	**114**	11	0	0	**11**
Hourly Total	**42**	**0**	**0**	**42**	**407**	**11**	**0**	**418**	**486**	**4**	**13**	**503**	**39**	**1**	**0**	**40**
	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**	Lights	HGV	Bus/Coach	**TOTAL**
TOTAL	**148**	**2**	**0**	**150**	**1335**	**43**	**0**	**1378**	**1757**	**26**	**36**	**1819**	**167**	**1**	**0**	**168**

Cheshunt - Thursday 12th July 2016

Junction: Sturlas Way / Winston Churchill Way / High St / Swanfield Road / Monarchs Way

	Queue Lengths (Vehicles)								
	A - Sturlas Way	B - Winston Churchill Way			C - High St		D - Swanfield Rd	E - Monarchs Way	
TIME	Lane 1	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2
700	1	1	5	3	5	9	2	8	6
705	1	1	9	5	4	10	1	8	5
710	1	2	6	6	4	10	3	8	4
715	2	1	8	5	3	5	2	6	5
720	1	2	8	4	6	8	2	8	6
725	1	1	7	4	5	12	2	8	5
730	2	1	8	7	6	9	2	9	5
735	3	2	7	6	5	12	3	8	5
740	2	2	6	7	5	9	1	9	6
745	1	4	5	6	3	7	2	10	3
750	2	2	6	5	9	7	1	15	5
755	1	0	6	3	8	8	2	14	4
800	2	1	6	3	4	7	1	9	6
805	1	3	7	6	6	5	1	7	6
810	2	3	6	10	3	6	2	14	5
815	2	2	7	8	6	5	4	15	7
820	3	2	8	8	6	3	1	11	5
825	2	0	5	6	5	6	2	9	6
830	2	1	11	7	8	6	2	13	9
835	2	3	10	7	2	5	3	8	5
840	2	1	7	5	6	6	3	15	7
845	1	1	6	7	6	5	2	7	5
850	1	4	7	10	4	7	6	14	5
855	1	4	4	7	4	8	3	10	7
900	2	4	5	5	9	5	3	13	5
905	1	3	8	6	7	5	1	10	5
910	3	1	9	8	7	5	2	11	6
915	4	2	9	9	4	3	1	9	5
920	4	3	8	10	7	7	2	8	7
925	3	1	10	10	8	4	1	13	8
930	3	1	6	8	8	3	1	12	6
935	3	2	8	5	8	4	3	11	6
940	2	2	7	4	7	5	1	11	3
945	4	5	6	5	6	6	5	8	4
950	2	3	8	6	4	7	2	5	6
955	6	4	9	8	3	8	2	9	3

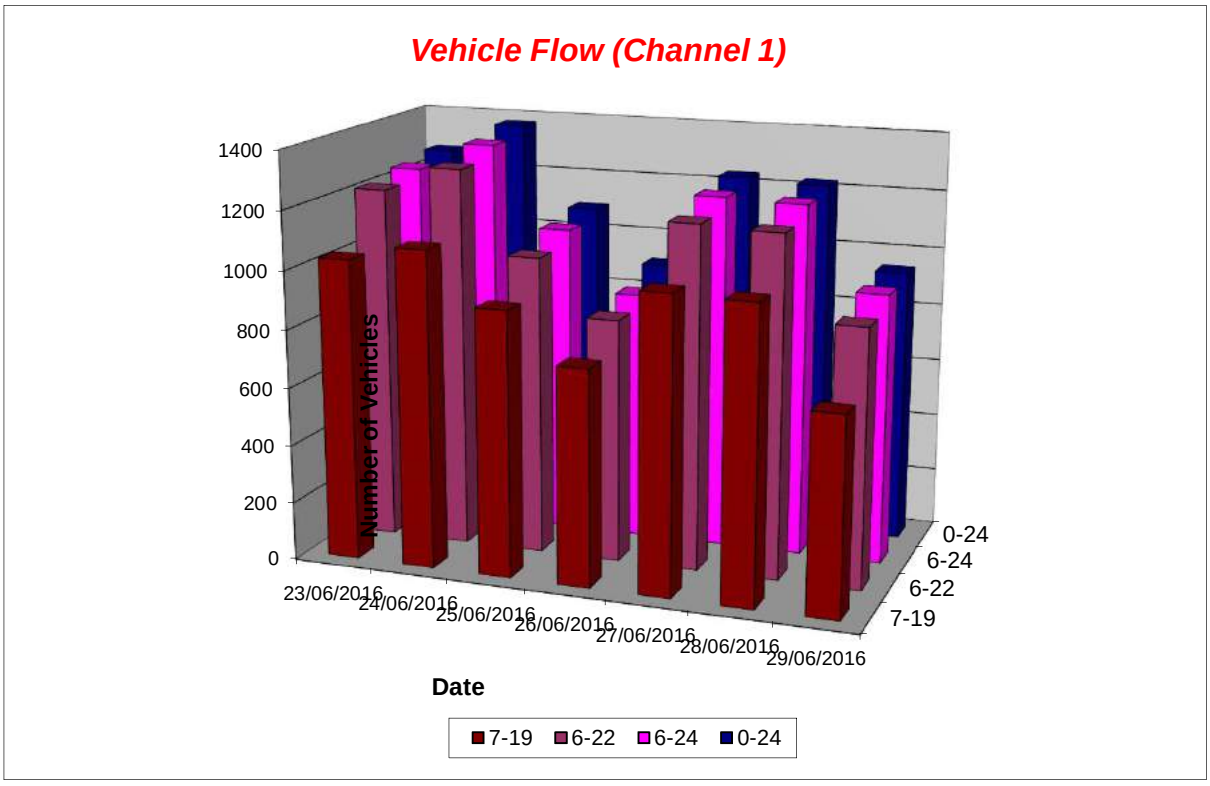
	Queue Lengths (Vehicles)								
	A - Sturlas Way	B - Winston Churchill Way			C - High St		D - Swanfield Rd	E - Monarchs Way	
TIME	Lane 1	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2
1600	4	3	5	4	5	4	3	12	4
1605	3	5	6	4	4	6	2	14	5
1610	2	2	5	6	4	8	1	15	16
1615	2	3	6	6	3	5	4	17	14
1620	3	5	6	8	6	5	1	16	9
1625	4	3	7	8	5	4	1	16	10
1630	6	4	4	7	6	3	3	19	8
1635	3	1	5	5	5	10	2	26	15
1640	2	4	4	5	5	6	3	15	8
1645	5	4	6	7	3	10	3	12	7
1650	3	4	4	6	9	7	1	13	6
1655	6	4	5	8	8	4	1	14	7
1700	2	2	5	7	4	4	2	8	8
1705	6	3	6	7	6	4	3	14	11
1710	8	5	5	5	3	5	1	14	9
1715	3	4	5	5	6	4	1	10	5
1720	3	3	4	4	6	5	1	9	6
1725	3	3	7	3	5	2	1	15	5
1730	4	1	4	4	8	7	2	15	11
1735	2	2	5	8	2	5	0	17	11
1740	8	4	5	5	6	5	2	8	8
1745	4	3	4	5	6	3	2	14	8
1750	3	5	4	7	4	3	0	13	6
1755	2	4	7	5	4	3	1	9	4
1800	2	5	3	5	9	6	2	9	5
1805	2	3	3	3	7	5	1	15	8
1810	2	6	3	5	7	6	2	13	8
1815	2	2	5	5	4	5	3	9	6
1820	2	3	3	3	7	3	2	8	9
1825	2	3	7	5	5	2	2	10	6
1830	3	5	5	4	5	4	1	9	4
1835	3	4	6	9	5	6	1	9	4
1840	3	3	5	3	7	7	2	8	4
1845	3	3	5	8	6	3	1	8	5
1850	4	1	4	4	4	6	1	7	4
1855	2	4	6	5	3	4	1	8	4

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Cheshunt ATC, Theobalds Lane

Channel 1 - Eastbound **Vehicle Flow** **Week 1**

Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday	5 Day Ave	7 Day Ave
1	5	6	6	18	4	3	3	4	6
2	3	4	8	15	3	1	1	2	5
3	3	4	2	7	1	2	2	2	3
4	0	1	2	4	2	1	2	1	2
5	0	4	0	2	1	0	3	2	1
6	12	10	6	1	10	10	4	9	8
7	26	29	9	8	26	32	25	28	22
8	45	51	25	7	55	64	33	50	40
9	98	86	31	24	115	132	98	106	83
10	115	71	48	30	86	88	62	84	71
11	74	68	100	54	64	64	59	66	69
12	69	84	97	85	69	71	50	69	75
13	63	81	108	98	72	85	54	71	80
14	67	66	116	106	50	73	49	61	75
15	76	100	117	71	85	61	56	76	81
16	121	104	70	89	110	97	70	100	94
17	108	152	83	80	124	102	45	106	99
18	101	118	69	59	103	95	43	92	84
19	96	106	45	38	76	72	56	81	70
20	71	98	51	37	85	59	87	80	70
21	58	50	34	31	27	38	47	44	41
22	30	41	21	18	30	33	50	37	32
23	24	22	22	15	30	27	30	27	24
24	4	18	20	8	9	15	13	12	12
7-19	1033	1087	909	741	1009	1004	675	962	923
6-22	1218	1305	1024	835	1177	1166	884	1150	1087
6-24	1246	1345	1066	858	1216	1208	927	1188	1124
0-24	1269	1374	1090	905	1237	1225	942	1209	1149



Cheshunt ATC, Theobalds Lane

Channel 1 - Eastbound **Average Speed** **Week 1**

Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
1	29.0	29.5	25.3	24.9	23.5	30.3	27.3
2	27.0	31.8	26.3	22.8	21.3	25.0	37.0
3	25.0	25.8	30.0	25.7	32.0	21.0	25.5
4	-	34.0	27.0	23.5	27.0	26.0	29.0
5	-	37.3	-	26.5	35.0	-	37.7
6	30.5	35.9	26.8	36.0	26.9	33.1	31.8
7	27.2	29.2	30.3	25.1	30.3	27.0	27.5
8	27.3	25.2	26.4	24.3	26.8	26.0	23.8
9	26.7	27.2	25.7	23.0	27.0	26.8	25.9
10	26.2	26.8	27.5	25.4	25.7	27.3	26.0
11	26.7	25.5	23.5	24.1	25.1	26.3	24.9
12	24.5	24.6	24.8	24.3	25.9	25.5	24.5
13	24.0	24.9	25.2	24.4	25.7	26.6	27.1
14	26.1	25.4	25.6	24.6	24.5	25.0	24.8
15	27.1	26.2	26.1	25.6	24.6	24.4	26.4
16	25.7	24.9	25.7	25.9	26.5	26.5	26.2
17	25.4	27.3	26.4	24.0	26.5	26.9	25.2
18	28.7	26.6	26.2	25.6	25.7	27.8	21.6
19	27.2	27.1	29.0	25.6	26.4	27.7	26.5
20	27.5	24.4	28.1	29.1	21.2	25.9	21.9
21	26.1	23.9	25.9	29.1	26.1	29.1	25.8
22	27.6	25.9	26.7	27.7	26.6	25.7	23.8
23	29.1	28.9	26.3	27.7	29.5	24.7	24.0
24	23.0	29.6	25.5	29.3	27.2	29.6	29.2
10-12	25.6	25.0	24.1	24.2	25.5	25.9	24.7
14-16	26.3	25.5	25.9	25.7	25.7	25.7	26.3
0-24	26.5	26.2	25.9	25.2	25.9	26.6	25.2

7 Day Ave	26.0

Channel 1 - Eastbound **85th Percentile**

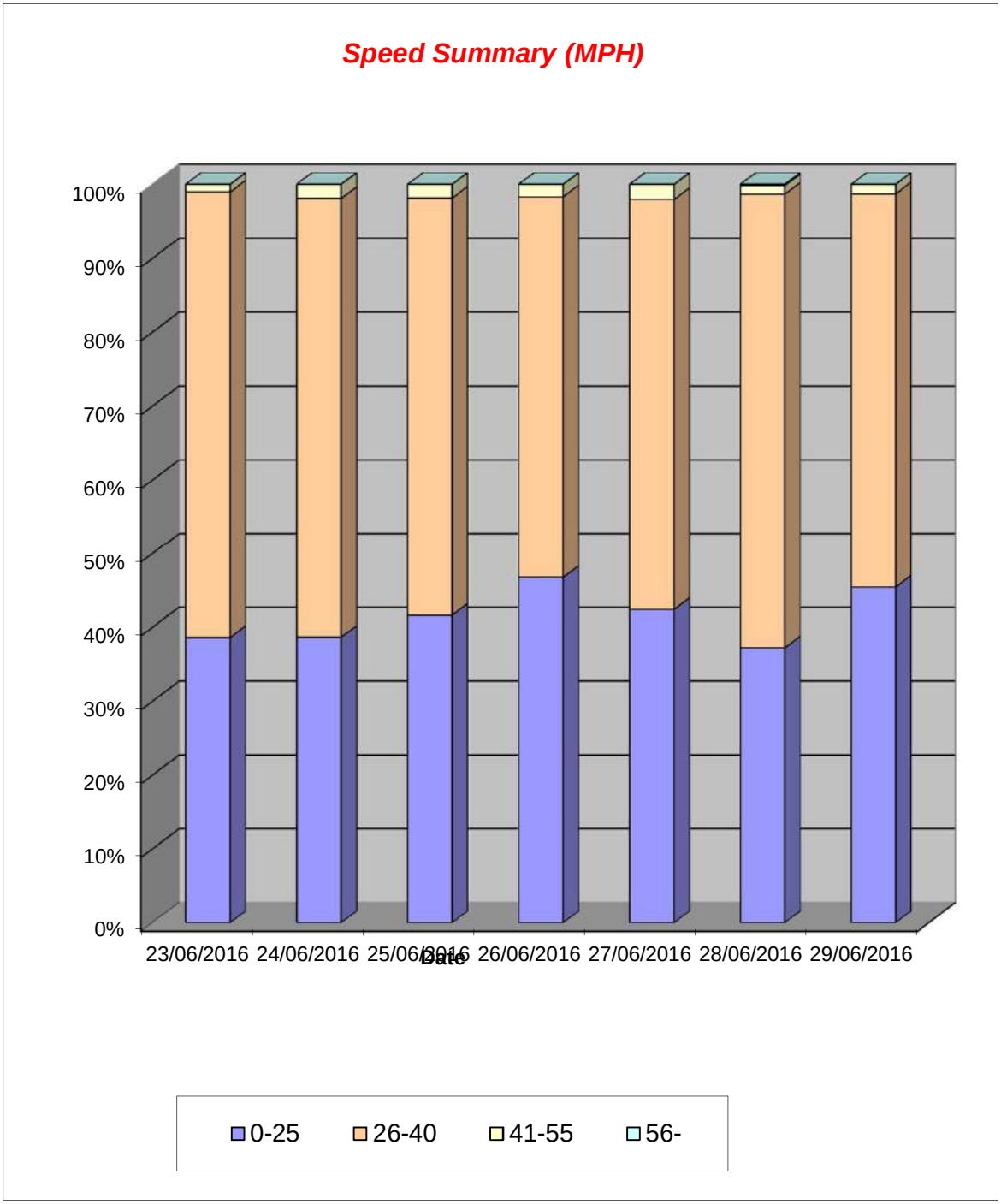
Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
1	31.6	38.5	27.8	32.0	26.1	34.7	31.9
2	30.2	37.6	28.0	32.6	25.1	-	-
3	31.5	31.6	31.4	27.4	-	23.8	34.3
4	-	-	27.7	29.4	27.7	-	31.1
5	-	42.5	-	26.9	-	-	43.4
6	38.4	41.0	33.3	-	33.0	40.0	36.3
7	33.5	35.8	39.6	32.9	36.8	33.0	33.0
8	31.2	30.5	32.0	31.8	33.9	32.6	28.4
9	32.0	32.3	32.0	33.6	33.0	32.0	31.0
10	31.0	31.0	34.0	34.0	33.0	33.0	31.9
11	34.1	34.0	32.0	33.0	30.0	33.0	31.3
12	31.0	32.0	31.0	32.0	33.0	32.0	31.0
13	31.7	30.0	33.0	31.0	32.0	34.4	36.0
14	33.0	32.0	32.8	33.0	33.7	33.0	30.8
15	33.0	33.0	32.0	34.0	32.0	31.0	33.8
16	33.0	30.0	31.7	31.8	33.7	31.6	32.0
17	31.0	33.0	32.7	31.2	33.0	34.0	33.8
18	34.0	33.0	33.0	33.3	33.0	33.9	27.0
19	33.8	33.0	35.2	33.0	33.8	33.0	34.0
20	33.0	32.0	33.5	35.2	28.4	34.0	29.1
21	33.0	31.0	34.1	35.5	35.3	36.0	34.0
22	35.0	32.0	32.0	31.5	33.0	33.0	34.0
23	34.0	36.7	32.0	31.0	34.7	30.3	33.7
24	24.6	33.9	29.3	35.9	30.6	35.8	37.8
10-12	34.1	34.0	32.0	33.0	30.0	33.0	31.3
14-16	33.0	31.0	32.0	33.0	32.0	31.0	33.0
0-24	33.0	33.0	33.0	33.0	33.0	33.0	33.0

7 Day Ave	33.0

Cheshunt ATC, Theobalds Lane

Channel 1 - Eastbound **Speed Summary** **Week 1**

Speed (MPH)	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
0-25	490	531	454	423	525	456	428
26-40	766	817	616	467	687	753	502
41-55	13	26	20	15	25	14	12
56-	0	0	0	0	0	2	0
TOTAL	**1269**	**1374**	**1090**	**905**	**1237**	**1225**	**942**

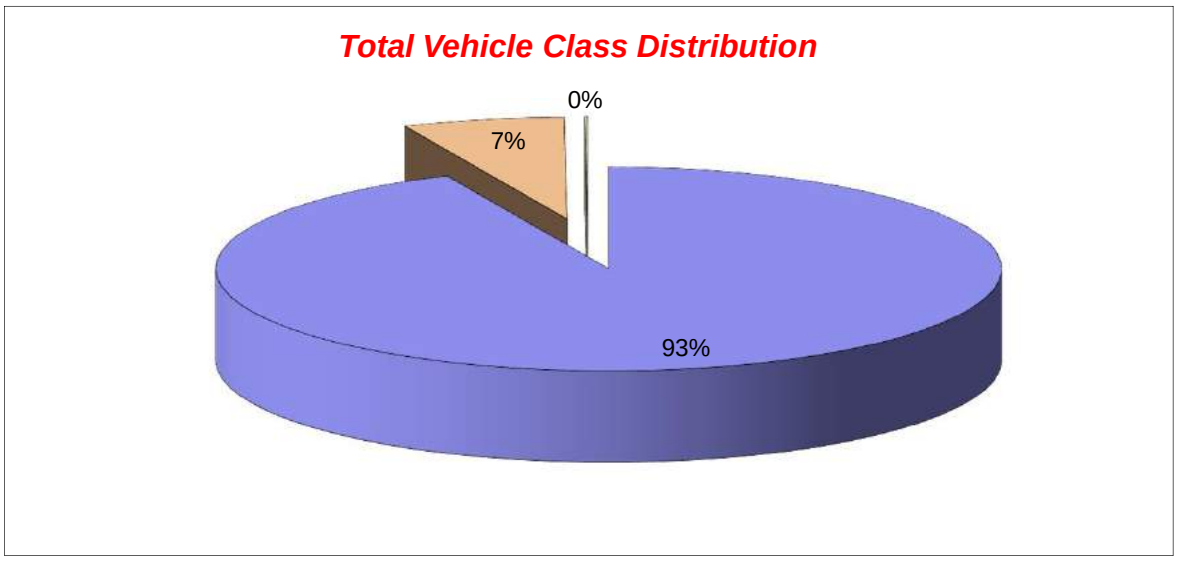


Cheshunt ATC, Theobalds Lane

Channel 1 - Eastbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
23/06/2016				
7-19	955	78	0	1033
6-22	1123	95	0	1218
6-24	1148	98	0	1246
0-24	1170	99	0	1269
24/06/2016				
7-19	1001	83	3	1087
6-22	1212	90	3	1305
6-24	1248	94	3	1345
0-24	1273	98	3	1374
25/06/2016				
7-19	860	49	0	909
6-22	969	55	0	1024
6-24	1009	57	0	1066
0-24	1031	59	0	1090
26/06/2016				
7-19	719	21	1	741
6-22	807	27	1	835
6-24	828	29	1	858
0-24	873	31	1	905
27/06/2016				
7-19	937	71	1	1009
6-22	1100	76	1	1177
6-24	1136	79	1	1216
0-24	1155	81	1	1237
28/06/2016				
7-19	926	76	2	1004
6-22	1074	90	2	1166
6-24	1114	92	2	1208
0-24	1128	95	2	1225
29/06/2016				
7-19	615	58	2	675
6-22	813	69	2	884
6-24	854	71	2	927
0-24	868	72	2	942

Average				
7-19	859	62	1	923
6-22	1014	72	1	1087
6-24	1048	74	1	1124
0-24	1071	76	1	1149

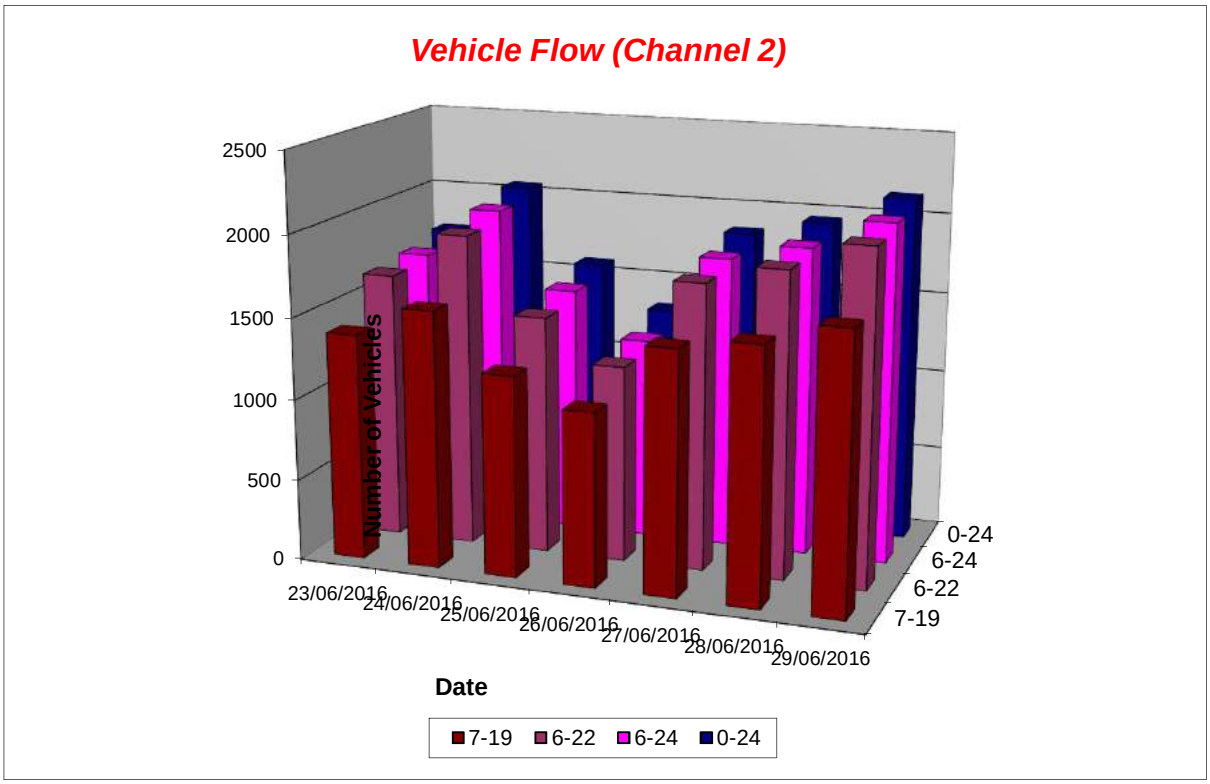


Cheshunt ATC, Theobalds Lane

Channel 2 - Westbound | **Vehicle Flow** | **Week 1**

Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday	5 Day Ave	7 Day Ave
1	6	8	14	28	4	3	3	5	9
2	3	8	9	25	4	1	2	4	7
3	3	3	7	4	1	5	2	3	4
4	6	5	4	6	5	2	3	4	4
5	13	10	7	7	10	11	10	11	10
6	34	28	21	8	34	33	31	32	27
7	89	108	29	20	106	112	117	106	83
8	160	192	59	27	191	192	234	194	151
9	157	169	108	47	159	169	219	175	147
10	108	104	140	99	108	104	114	108	111
11	95	119	134	117	105	103	87	102	109
12	97	100	117	132	90	105	78	94	103
13	101	122	118	122	97	113	96	106	110
14	91	111	113	127	100	98	107	101	107
15	111	111	128	107	104	104	92	104	108
16	105	138	89	68	88	103	131	113	103
17	123	144	95	76	123	125	130	129	117
18	141	144	68	72	185	195	227	178	147
19	104	124	65	71	135	143	174	136	117
20	74	146	78	65	105	126	127	116	103
21	42	58	73	31	28	48	63	48	49
22	49	38	51	26	29	31	48	39	39
23	21	37	37	31	31	21	27	27	29
24	9	25	19	6	11	7	12	13	13

7-19	1393	1578	1234	1065	1485	1554	1689	1540	1428
6-22	1647	1928	1465	1207	1753	1871	2044	1849	1702
6-24	1677	1990	1521	1244	1795	1899	2083	1889	1744
0-24	1742	2052	1583	1322	1853	1954	2134	1947	1806



Cheshunt ATC, Theobalds Lane

Channel 2 - Westbound **Average Speed** **Week 1**

Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
1	35.0	31.8	30.6	26.0	31.8	37.7	34.7
2	33.7	32.5	27.8	26.6	28.3	37.0	34.5
3	32.7	22.7	26.9	25.0	37.0	26.4	36.5
4	31.8	27.8	25.8	30.0	34.8	33.0	33.0
5	29.0	33.5	26.9	31.7	32.8	33.4	33.7
6	33.0	34.5	34.0	37.8	33.0	32.9	31.3
7	31.3	32.1	33.2	30.8	33.2	32.1	32.9
8	29.7	28.7	31.2	31.0	28.1	27.9	29.1
9	28.6	28.7	28.5	28.4	28.2	28.1	27.8
10	26.6	26.8	27.7	27.2	26.7	28.9	26.0
11	27.9	26.5	26.9	27.1	29.3	27.4	27.3
12	27.1	27.7	27.6	25.5	28.6	27.5	28.3
13	26.6	27.5	26.6	25.1	28.6	28.5	30.0
14	27.9	26.7	25.8	26.3	27.3	26.7	26.5
15	29.0	28.4	28.2	24.0	27.3	29.6	29.1
16	26.6	26.8	27.8	24.9	25.5	27.8	28.9
17	29.1	28.0	28.7	26.7	28.9	28.7	29.8
18	30.1	29.7	28.5	28.2	28.0	27.6	26.8
19	28.0	29.2	30.0	30.5	28.5	29.9	29.1
20	29.5	25.5	28.3	30.2	27.0	27.7	27.1
21	29.5	30.1	25.0	31.0	30.1	30.1	29.3
22	31.0	32.6	29.4	32.7	29.8	31.2	29.4
23	31.2	31.7	27.1	31.1	32.1	28.8	30.0
24	30.4	32.7	30.8	28.7	32.1	32.4	30.5
10-12	27.5	27.0	27.2	26.2	29.0	27.5	27.8
14-16	27.8	27.5	28.1	24.3	26.5	28.7	29.0
0-24	28.8	28.4	28.0	27.2	28.5	28.6	28.6
						7 Day Ave	28.4

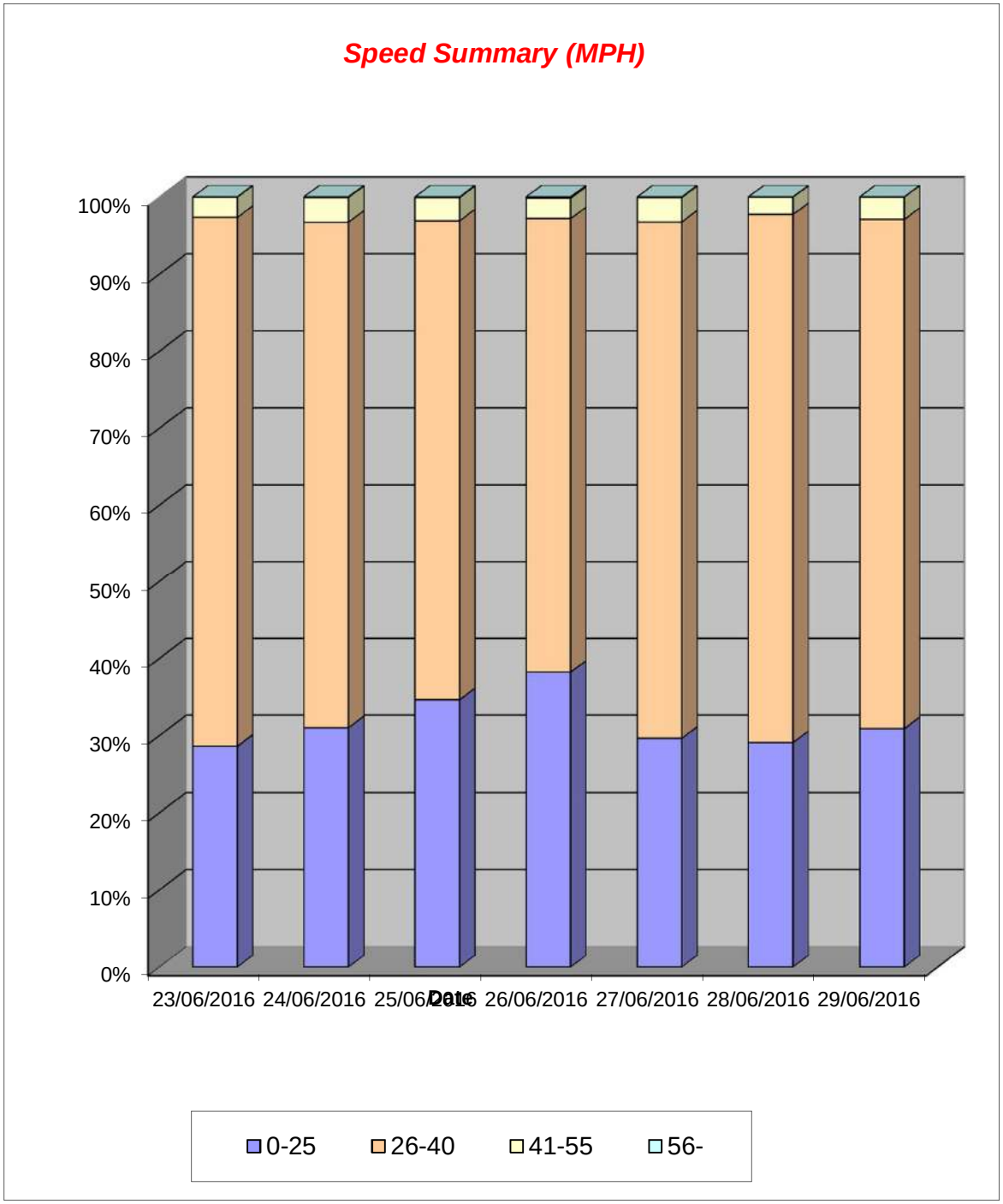
Channel 2 - Westbound **85th Percentile**

Hr Ending	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
1	39.5	35.9	37.2	34.0	33.8	42.0	40.5
2	36.8	41.7	32.4	33.0	32.6	-	34.9
3	36.2	27.1	36.2	28.6	-	30.8	40.4
4	36.0	32.8	28.8	33.0	40.8	37.2	37.0
5	34.2	38.0	31.1	37.3	39.0	39.5	40.0
6	39.1	41.0	39.0	47.5	36.1	39.0	37.5
7	36.8	37.0	41.8	38.6	39.0	37.0	39.0
8	35.0	33.4	38.0	40.1	34.0	34.0	35.0
9	35.0	34.0	35.0	34.0	34.3	34.0	34.0
10	34.0	35.0	35.0	35.0	33.0	36.0	34.0
11	34.0	34.3	34.0	35.0	35.4	33.0	34.0
12	35.0	34.0	34.0	33.0	34.7	35.0	34.0
13	33.0	35.0	34.0	31.9	35.0	34.0	37.0
14	34.5	33.5	32.0	34.0	34.0	34.5	34.0
15	35.0	35.0	34.0	30.0	34.0	35.0	35.0
16	33.0	34.0	35.0	32.0	32.0	33.7	34.0
17	35.0	34.0	35.9	34.8	35.0	34.0	35.0
18	35.0	35.0	34.0	34.4	35.0	34.0	33.0
19	34.0	35.0	35.0	37.5	34.9	35.0	35.0
20	36.0	35.0	35.5	36.0	34.0	35.0	35.0
21	36.9	37.0	31.0	35.5	35.0	38.0	37.0
22	36.8	38.0	36.5	38.0	34.0	36.0	37.0
23	35.0	39.0	33.6	36.0	40.0	34.0	35.1
24	34.8	37.8	35.3	33.3	37.5	35.2	35.0
10-12	34.0	34.3	34.0	35.0	35.4	33.0	34.0
14-16	35.0	34.0	34.6	31.0	33.0	35.0	34.0
0-24	35.0	35.0	35.0	35.0	35.0	35.0	35.0
						7 Day Ave	35.0

Cheshunt ATC, Theobalds Lane

Channel 2 - Westbound **Speed Summary** **Week 1**

Speed (MPH)	23/06/2016 Thursday	24/06/2016 Friday	25/06/2016 Saturday	26/06/2016 Sunday	27/06/2016 Monday	28/06/2016 Tuesday	29/06/2016 Wednesday
0-25	498	636	548	505	549	568	659
26-40	1198	1349	986	780	1244	1342	1413
41-55	46	66	48	35	59	44	62
56-	0	1	1	2	1	0	0
TOTAL	**1742**	**2052**	**1583**	**1322**	**1853**	**1954**	**2134**

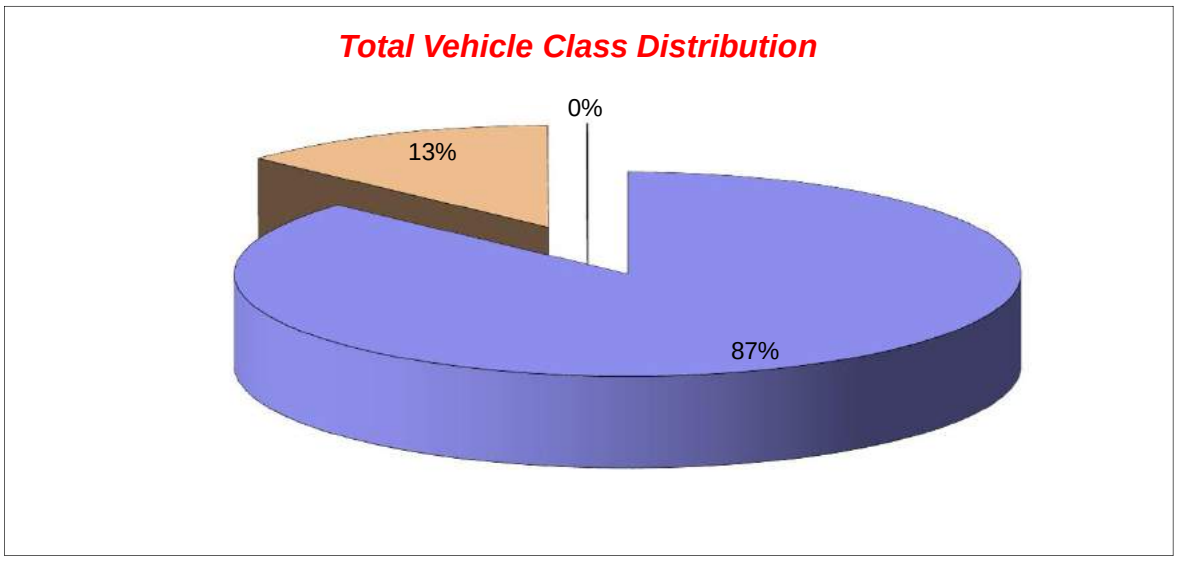


Cheshunt ATC, Theobalds Lane

Channel 2 - Westbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
23/06/2016				
7-19	1209	184	0	1393
6-22	1422	225	0	1647
6-24	1448	229	0	1677
0-24	1499	243	0	1742
24/06/2016				
7-19	1360	216	2	1578
6-22	1652	274	2	1928
6-24	1706	282	2	1990
0-24	1759	291	2	2052
25/06/2016				
7-19	1078	155	1	1234
6-22	1288	176	1	1465
6-24	1342	178	1	1521
0-24	1398	184	1	1583
26/06/2016				
7-19	957	108	0	1065
6-22	1088	119	0	1207
6-24	1124	120	0	1244
0-24	1192	130	0	1322
27/06/2016				
7-19	1259	225	1	1485
6-22	1496	256	1	1753
6-24	1536	258	1	1795
0-24	1584	268	1	1853
28/06/2016				
7-19	1330	224	0	1554
6-22	1599	272	0	1871
6-24	1625	274	0	1899
0-24	1671	283	0	1954
29/06/2016				
7-19	1484	205	0	1689
6-22	1791	253	0	2044
6-24	1827	256	0	2083
0-24	1868	266	0	2134

Average				
7-19	1240	188	1	1428
6-22	1477	225	1	1702
6-24	1515	228	1	1744
0-24	1567	238	1	1806



Appendix E

WALK ISOCHRONES

Date Modified: 10/06/2015

Drawn By: ukjey001

Schools

1 Holdbrook Primary School
2 Four Swannes Primary School
3 Hurst Drive Primary School
4 Downfield Primary School
5 Bonneygrove School
6 Burleigh Primary School
7 Millbrook School
8 Dewhurst CofE Primary School
9 Holy Trinity CofE Primary School
10 St Joseph RC Primary School
11 Lea Valley High School
12 Cheshunt School
13 Goffs School
14 St Mary's CofE High School
15 Capel Manor College

Key

- Site Location
- Co-op
- Costcutter
- Lidl
- Londis
- One Stop Convenience
- Sainsbury's
- Tesco
- Cheshunt Community Hospital
- Doctor
- Dentist
- Sports / Fitness Facility
- Primary School
- Secondary School
- Further Education
- Library
- Ambulance Station
- Fire Station
- Police Station
- Bus Stop
- Railway Station
- 0 - 5 minute walk
- 5 - 10 minute walk
- 10 - 15 minute walk
- 15 - 20 minute walk
- 20 - 25 minute walk

Note

Walk times based on a speed of 4.8kph approx. (3mph) 80m per minute.

0 0.25 0.5 0.75 1 Kilometres

WSP | PARSONS BRINCKERHOFF

TITLE:

FACILITIES PLAN SHOWING WALK CATCHMENT

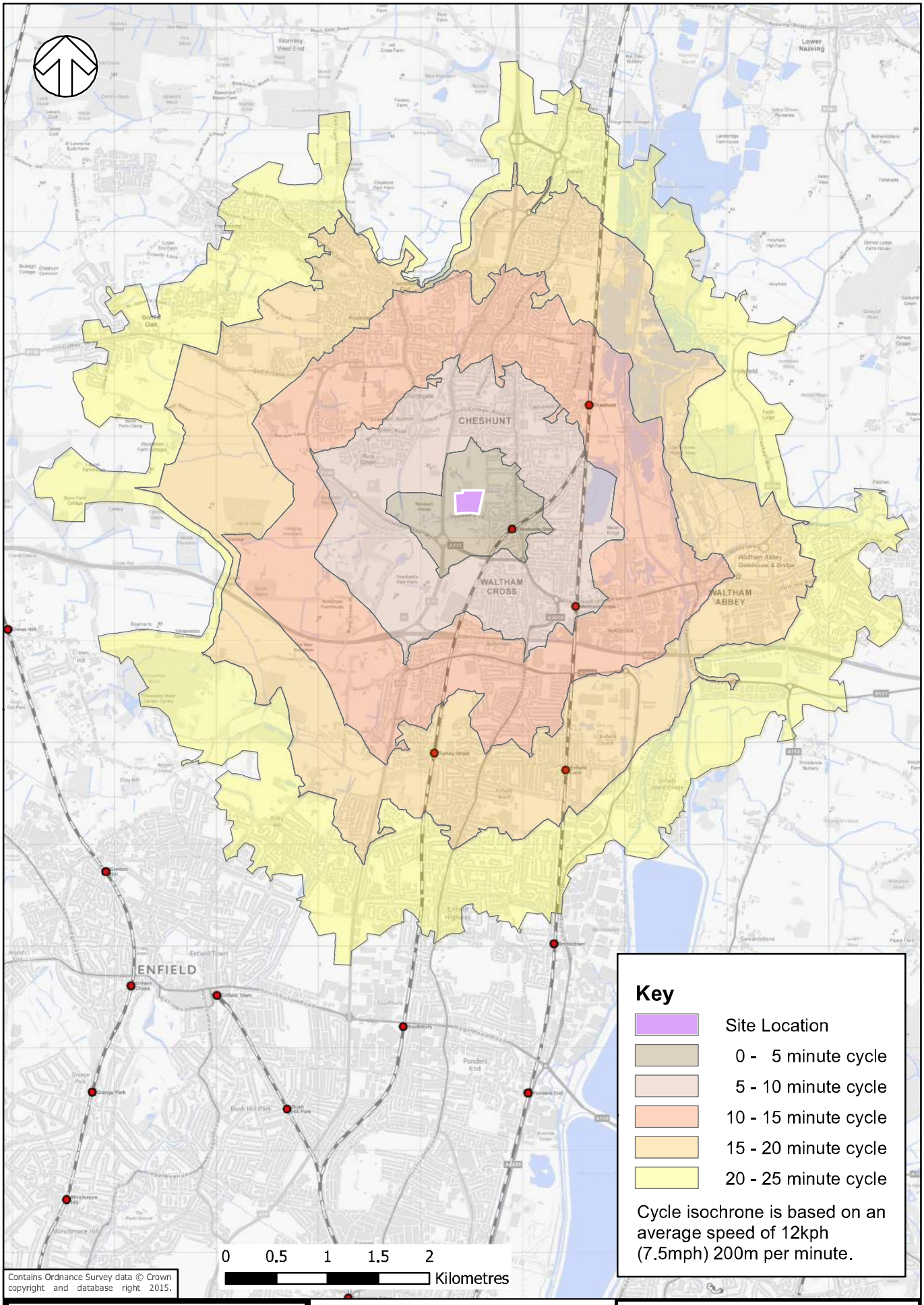
FIGURE No:

APPENDIX E

File: Q:\WSP_UK\WSP_D\Hertford\Cheshunt Football Club\Ped Iso - Cheshunt FC.mxd

Appendix F

CYCLE ISOCHRONES



WSP | PARSONS BRINCKERHOFF

TITLE:

CYCLE ISOCHRONES

FIGURE No:

APPENDIX F

Drawn By: ukjey001 Date Modified: 10/06/2015

File: Q:\WSP_UK\WSP_D\Hertford\Cheshunt Football Club\Cyc Iso - Cheshunt FC.mxd

Appendix G

BUS ROUTE PLAN

Drawn By: UKSXB076 Date Modified: 26/06/2015

File: Q:\WSP_UK\WSP_D\Hertford\Cheshunt Football Club\Buses - Cheshunt FC.mxd

WSP | PARSONS BRINCKERHOFF

TITLE:

LOCAL BUS ROUTES

FIGURE No:

APPENDIX G

Date Modified: 02/09/2016

Drawn By: ukpxp057

File: Q:\WSP_UK\WSP_D\Hertford\Cheshunt Football Club\Buses Regional - Cheshunt FC.mxd

310/411

410A Via Hunsdon

410/410X

410X

242 Sunday route extends to Hatfield and Welwyn Garden City

242

251

242

242

SITE

251

242

310/411

410/410X

WSP | PARSONS BRINCKERHOFF

TITLE:

REGIONAL BUS ROUTES ORIGINS AND DESTINATIONS

FIGURE No:

APPENDIX G

0 0.375 0.75 1.5 2.25 3 Kilometres