

P/17/00426



Bellway Homes

**Residential Development
Bramshall Road, Uttoxeter**

Transport Statement

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DOCUMENT CONTROL

Page 1 of 1



Project Title Bramshall Road, Uttoxeter
Report Type Transport Statement
Job Number T17070 Report Reference T17070/TS/01

Date	Revision	Comments	
29/03/17	-	First Issue	
		Prepared by	Checked by
		Name SAM	AMP
Date	Revision	Comments	
29/03/17	A	Updated to site layout plan (Rev F) and minor updates to text.	
		Prepared by	Checked by
		Name SM	AMP
Date	Revision	Comments	
		Prepared by	Checked by
		Name	
		Date	Revision
		Prepared by	Checked by
		Name	

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1.0 INTRODUCTION

1.1 Background

- 1.1.1 Travis Baker are appointed by Bellway Homes to provide highways and transport advice in support of a full planning application to East Staffordshire Borough Council (ESBC) for a residential development of 119 dwellings on land off Bramshall Road, Uttoxeter.
- 1.1.2 The application site forms part of a larger development area that was subject to an outline planning application by St Modwen Properties (ESBC ref: P/2013/00882). The outline application for a mixed-use development including 700 residential dwellings was approved by ESBC, subject to a Section 106 Agreement and various conditions, in November 2015.
- 1.1.3 The outline application was supported by a full Transport Assessment (TA) dated July 2013 and prepared by Croft Transport Solutions (Croft). Separate TA Addendum documents were subsequently submitted by Croft for Phases 1 and 2 of the scheme (both dated December 2013).
- 1.1.4 In May 2014, a Technical Note was prepared by Waterman Transportation and Development Ltd (Waterman) in support of the proposed Phase 1 Enabling Works, which comprise the southern section of the development Spine Road and its junction with Bramshall Road, together with associated drainage, landscaping and other works. Subsequent to this, Waterman submitted a further Technical Note dated June 2014, which provided an Addendum to the previous reports in respect of the first 87 dwellings, immediately north of Bramshall Road.
- 1.1.5 An annotated version of the original scheme Masterplan is provided in **Appendix A**. The annotations show the two main development phases and the location of Bellway's scheme relative to them. The residential scheme now proposed by Bellway Homes forms the northern part of Phase 1.

1.2 Scope

- 1.2.1 This report presents a Transport Statement (TS) in support of the proposed residential development by Bellway Homes. It seeks to demonstrate that the scheme is compatible with the overall site access strategy as approved in-principle by virtue of the outline planning consent.
- 1.2.2 The TS should be read in conjunction with the original TA and the TA Addendum for Phase 1, which presents the overall site access strategy and assesses the transport impacts of the Masterplan scheme. In conjunction with the more recent Technical Notes in respect of the other elements of Phase 1, it should be regarded as a further Addendum to the original TA and TA Addendum.
- 1.2.3 The scope of the TS is substantially in accordance with that of the previous Technical Notes and therefore seeks to demonstrate the following:
- That the proposals for access to the development are compatible with provision of the Spine Road and its junction with Bramshall Road as previously assessed/approved.
 - That the proposed development would comply with relevant transport policies, consistent with the original TA and TA Addendum.
 - That the proposed development would be accessible by sustainable travel modes, consistent with the original TA and TA Addendum.



- That the internal road layout within the proposed development would provide appropriate geometric standards and would be accessible by the relevant design vehicles.
- That the assessment of off-site traffic impacts and highway capacity presented in the original TA and TA Addendum remain valid and provide sufficient confidence that the proposed development can be satisfactorily accommodated.
- That the proposed means of access from the external highway network would provide sufficient capacity for the full Phase 1 development.

1.2.4 The report concludes that the proposed development complies with the principles of access and the transport mitigation strategies previously assessed and that there are therefore no transport-related issues that would prevent the detailed planning application by Bellway Homes from being approved.

2.0 PROPOSED DEVELOPMENT

2.1 Site Location and Context

- 2.1.1 The wider development site as approved by the outline consent is shown on the annotated Masterplan, at **Appendix A**. The site is currently undeveloped agricultural land, but will provide for an extension of the existing urban area on the west side of Uttoxeter. The site is bounded by the B5027 Bramshall Road to the south and the A50 to the north.
- 2.1.2 Phase 1 comprises the southern part of the wider development and lies to the north of Bramshall Road. The southern-most part of Phase 1, comprising 87 dwellings, has been approved and is under construction by St Modwen Homes. The Bellway development site lies immediately to the north and will form a continuation of the Phase 1 residential development. Phase 1 will also include the proposed primary school, which will lie directly to the north-west of the Bellway scheme, and playing fields to the north-east.
- 2.1.3 The wider development will be served by a Spine Road that will eventually link Bramshall Road with a new A50/A522 interchange to the north, which is currently being constructed as part of the Highways England A50 Growth Corridor "Project A" scheme. The total development will provide 700 dwellings together with 10 hectares of employment development, a primary school and a local centre.

2.2 Development Layout and Access

- 2.2.1 The development proposal by Bellway Homes comprises 119 dwellings, of which 18 would be affordable homes. The development layout plan is shown in **Appendix B**.
- 2.2.2 The whole of Phase 1 is to be served by the southern part of the Spine Road, which will connect with Bramshall Road at a new ghost-island priority junction. The new junction and the Spine Road immediately to the north form part of the Enabling Works, which have been approved (ESBC ref: P/2014/01407). The St Modwen scheme is accessed from this first section of the Spine Road.
- 2.2.3 The Bellway scheme will be accessed from a further extension of the Spine Road, to be provided by St Modwen. In a similar manner to the St Modwen scheme, dwellings would be accessed directly from the Spine Road or from culs-de-sac leading from it.
- 2.2.4 Further details of the site access strategy are provided in Section 5.



3.0 POLICY AND PLANNING BACKGROUND

3.1 Overview

3.1.1 The Original TA (July 2013) considered the transport-related policies contained within the following documents:

- The National Planning Policy Framework (NPPF);
- PPG13: A Guide to Better Practice;
- The East Staffordshire Borough Local Plan
- The Staffordshire Local Transport Plan Strategy 2011 - 2015

3.1.2 The TA found that the scheme would be located close to a range of schools, retail outlets and other facilities, which would be accessible within walking distance. It is also located such that there would be good opportunities for access to public transport services. The scheme was therefore found to comply with the requirements of the NPPF.

3.1.3 It was also shown that the scheme could be accessed from the adjacent highway network in a safe and efficient manner, in accordance with the Borough Local Plan and consistent with the objectives of the Local Transport Plan.

3.1.4 The proposal was therefore found to comply with relevant transport planning policies.

3.1.5 Since the original TA was prepared, the following changes to the policy framework need to be considered:

- "*PPG13: A Guide to Better Practice*" has been replaced by "*Planning Practice Guidance: Travel Plans, Transport Assessments and Statements*". This new document sets out the information that should be included in a TA.
- The new Local Plan, covering the period 2012 to 2031, was adopted by ESBC in October 2015.

3.1.6 The implications of these updated policy documents are considered below.

3.2 Planning Practice Guidance

3.2.1 The current Planning Practice Guidance (PPG) on Transport Assessments and Statements provides updated advice on the preparation of such documents, in accordance with the requirements of the NPPF. In summary, it states that Travel Plans, Transport Assessments and Statements should be:

- Proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- Established at the earliest practicable possible stage of a development proposal;
- Tailored to particular local circumstances;

- Brought forward through collaborative working between the local planning authority/transport authority, transport operators, and other relevant bodies.

3.2.2 The original TA has been reviewed and is considered to comply with these requirements. This TS has been prepared in accordance with the same requirements and its scope is considered proportionate to the scale of development proposed. For consistency, it is based substantially on the same information that has already been presented in the TA and subsequent documentary submissions to ESBC in respect of the wider development, Phase 1 Enabling Works, etc.

3.2.3 The updated PPG provides a list of information that should be included in a TA. This list has been reviewed and it is considered that the original TA and subsequent documents remain fit-for-purpose in this respect subject to updating of certain data, which is provided in this report.

3.3 East Staffordshire Local Plan, 2012 to 2031

3.3.1 The current Local Plan, adopted in 2015, replaced the previous version that was examined in the original TA. The new Local Plan "Vision" states that in Uttoxeter, "*Significant growth and change will be welcomed through the implementation of sustainable urban extensions.*" To realise this Vision, a number of "Strategic Objectives" are set including:

SO3: Accessibility and Transport Infrastructure: *To ensure that new development will be supported by effective transport infrastructure and wherever possible, designed in a way that reduces the need and desire to travel by car through encouraging the use of public transport, walking, cycling and rail travel.*

3.3.2 It is considered that the proposed development is fully in accordance with this objective and that this has been adequately demonstrated within the original TA. This TS also shows how the development will be supported by the required infrastructure and how it will be connected to adjacent communities and facilities.

3.3.3 The Local Plan includes Strategic Policies that guide the pattern and scale of development within the Borough over the Local Plan period. The following Strategic Policies are considered relevant to this assessment:

- **Policy SP1** states that sustainable development should have good links to the strategic highway network and should not result in harm to residential amenity or road safety. It should also be convenient to walk, cycle or travel by public transport to reach homes, workplaces, education, health, recreation, leisure and community facilities.
- **Policy SP2** states that development will be directed in accordance with a settlement hierarchy that identifies the main towns of Uttoxeter and Burton-on-Trent as the most sustainable locations for development.
- **Policy SP4** identifies "Uttoxeter West" as a green-field location where 750 new homes will be provided.
- **Policy SP7** allocates the land in question for a major Sustainable Urban Extension (SUE) west of Uttoxeter. All SUEs are to make provision for a range of housing, employment, retail, leisure, health, sport, cultural and community facilities. Good links to facilities in adjacent urban areas should be provided and there should be well-designed walking and



cycling routes, separated from traffic where appropriate. Houses should be located within 300m of a frequent and accessible bus service where viable.

- **Policy SP15** sets out the Council's commitment to developing a well-integrated community that is connected by a sustainable transport system. This is to be achieved by encouraging the use of sustainable travel modes. As part of this approach, developments that are likely to have an impact on the wider highway network must be supported by a TA.

- 3.3.4 It is considered that the proposed development complies with the above policies. The wider development is supported by a comprehensive TA, which shows how the development will be connected to the adjacent Uttoxeter urban area, demonstrates its impact on the adjacent transport networks and identifies the infrastructure that is required to support it.
- 3.3.5 This TS confirms that the site will be developed in accordance with the overall access and transport strategy identified in the submitted TA and approved at outline application stage. The Bellway scheme will therefore be adequately connected to the adjacent highway and sustainable travel networks, as shown in the remainder of this report.

4.0 SUSTAINABLE TRAVEL

4.1 Walking

- 4.1.1 The original TA included a comprehensive assessment of the accessibility of the development in terms of opportunities to walk to local amenities. It showed that the site would be located within the desirable maximum walking distance of 2,000m from the northern part of Uttoxeter town centre and numerous other local facilities. As such, the site was found to be within the preferred maximum walking distances to amenities as given in the Chartered Institution of Highways and Transportation (CIHT) document, "Providing for Journeys on Foot" (2000). Beyond the site, facilities for pedestrians are available in the form of footways, traffic free footpaths and a range of crossing facilities, enabling convenient walking to the town centre, local shops, bus stops, etc.
- 4.1.2 The TA Addendum for Phase 1 stated that pedestrian and cycle access to Phase 1 will be provided in the form of footways on both sides of the Spine Road and a pedestrian refuge at the Bramshall Road/Spine Road junction. Pedestrians will therefore be able to access the external network via the Spine Road and existing footway on the north side of Bramshall Road.
- 4.1.3 Additionally, the existing Public Right of Way (PRoW) that runs through the site to the west is to be enhanced and a new pedestrian/cycle link to Grenville Close provided, although these features are not part of the Bellway scheme. It is understood that the link to Grenville Close is to be provided as part of the next phase of residential development by St Modwen, to the east. Bellway's scheme makes provision for connection to this link and will thus benefit from it in due course.

4.2 Cycling

- 4.2.1 The previous PPG13 guidance provided advice on cycling journey lengths. Although PPG13 has since been superseded, it is still commonly accepted that cycling offers strong potential to replace car-based trips for journeys under 5km, or those made as part of a multi-modal trip that includes cycling and public transport. A 5km distance is equivalent to a typical cycling time of 15 to 20 minutes.
- 4.2.2 The original TA showed that the whole of Uttoxeter can be reached within the recommended 5km cycling distance.
- 4.2.3 Cyclists originating within the development would access the wider network via the Spine Road and its junction with Bramshall Road. Byrds Lane and the northern section of Holly Road are designated as advisory on-road cycle routes on the Uttoxeter Cycle Map (**Appendix C**). These routes connect with Bramshall Road a short distance to the east of the Spine Road junction and provide access to employment areas north of the town centre.
- 4.2.4 The town centre can also be reached via Bramshall Road, part of which is an advisory cycle route, or via a footpath link from Holly Road and Heath Road to Cockstubbles Road and High Street. The railway station can also be reached via this route and using off-carriageway cycleways and TOUCAN crossings of Town Meadows Way.
- 4.2.5 Having regard to the above, it is considered that the proposed development would provide significant opportunities for local trips generated by the proposed development to be made by cycle, consistent with the findings of the original TA and TA Addendum.



4.3 Bus Services

- 4.3.1 Currently, the nearest bus stops to the site are located on Byrds Lane, approximately 400m walking distance from the site via the Spine Road and Bramshall Road. Footways are available along both sides of the Spine Road and along the north side of Bramshall Lane and Byrds Lane, enabling pedestrians to reach these stops conveniently.
- 4.3.2 The bus stops on Byrds Lane are served by routes 406 and 841. Route 841 provides an hourly service (Monday to Saturday) to/from the town centre and also to/from Stafford town centre. Route 406 is a circular service operating on a 30-minute frequency (Monday to Saturday) and connecting with the town centre bus station, where interchange with the full range of town bus services is possible.
- 4.3.3 Bramshall Road is served by routes 841 and 411. Route 411 provides a single circular service (Wednesdays only) covering the northern part of the town and outlying communities to the north-west.
- 4.3.4 There are currently no formal bus stops on Bramshall Road in the vicinity of the site, but as stated in the original TA, it is likely that additional bus stops could be provided near to the Spine Road junction to support the additional patronage created by the development.
- 4.3.5 Alternative bus stops are available on Marlborough Way, and are served by the more frequent route 406. It will be possible to reach these within 400m using Milverton Drive or Grenville Close, when these route are connected to the development site via the next phase of development by St Modwen.
- 4.3.6 Routes 406 and 411 combine to provide 3 bus services per hour to/from the town centre. This is a similar level of service to that identified in the original TA and is therefore considered acceptable to serve the proposed development.
- 4.3.7 Notwithstanding this, the layout of the Spine Road within the development would support penetration of the site by bus services as proposed in the original TA. It is understood that Staffordshire County Council (SCC) have entered into discussions with the local bus operators with a view to securing such a service at a later stage of development, most likely when the Spine Road has been completed.

4.4 Rail Services

- 4.4.1 Uttoxeter railway station is located approximately 2.8km from the site by road, or approximately 800m walking distance from the town bus station. As such, it can be readily accessed by bus or by cycle. Hourly train services to Derby and Stoke-on-Trent/Crewe are available, which is a similar level of service to that reported in the original TA.
- 4.4.2 As such, the conclusion reached in the original TA that rail services are accessible from the site remains valid.

5.0 HIGHWAY ACCESS

5.1 Spine Road

- 5.1.1 The Spine Road within the site will be constructed by St Modwen to the same standard as the section that is currently being provided to the south. As such, it will have a carriageway width of 6.5m and footways of 1.8m width to each side. The design speed of the road is 20mph and speeds will be limited to around this level by the proposed curving alignment with only short straight sections between curves. Forward visibility splays of 33m will be provided throughout and side road junctions will also have 2.4m x 33m visibility splays.
- 5.1.2 The junction of the Spine Road with Bramshall Road is to be a ghost-island priority arrangement and will be provided as part of the Enabling Works. The preliminary layout is shown in **Appendix D** and formed part of the Technical Note by Waterman (27/05/14) that supported the Enabling Works planning application as subsequently approved.

5.2 Other Roads

- 5.2.1 The development will include two cul-de-sac side roads, which will have simple priority junctions with the Spine Road on opposite sides. The spacing between the two junctions will exceed the normal maximum requirement of 50m for opposite-side junctions (measured between the side road centre-lines).
- 5.2.2 The two side roads will each serve fewer than 50 dwellings and will have a carriageway width of 5.0m and footways of 1.8m width to each side (where there is residential frontage). This standard of provision is consistent with the approved St Modwen development to the south and is also in accordance with the SCC Residential Design Guide for a "*Minor Residential Access Road*" serving up to 100 units.
- 5.2.3 At the western side road junction, corner radii of 6m would be provided, which is considered appropriate since the side road will serve only 16 dwellings. At the eastern junction, the minimum corner radius would be 10m. Turning heads would be provided at the end of each side road.

5.3 Servicing

- 5.3.1 Vehicle swept path analysis of the proposed internal roads and turning heads has been undertaken for a typical standard refuse collection vehicle (10.52m long). The analysis demonstrates that this design vehicle would be able to access the site and manoeuvre within it such that the refuse can be collected from all properties. The swept path analysis is shown on drawings within **Appendix E**.
- 5.3.2 The layout of the site has been designed to ensure that total refuse bin drag distances do not exceed 30m for residents and 25m for waste collection operatives, in accordance with the Manual for Streets guidance. Where this cannot be achieved, bin collection points will be included within the development layout.

5.4 Parking

- 5.4.1 Vehicle parking will be provided in accordance with local standards, at a typical rate of two spaces per dwelling. Houses will be provided with driveway parking spaces within the dwelling curtilage. Apartments will be provided with car parking spaces within centrally-located courtyards.



- 5.4.2 For houses, cycle parking will be provided within the garages of each dwelling property or, where a garage is not provided, within a timber shed to be located within the property boundary. For apartments, a secure cycle store will be provided.

6.0 ASSESSMENT OF TRAFFIC IMPACT

6.1 Overview

6.1.1 The TA Addendum (December 2013) assessed the traffic impact of Phase 1 in isolation, on the basis of 250 residential dwellings being accessed from Bramshall Road. It concluded that the whole of Phase 1 could be accommodated without giving rise to any significant traffic impacts, and that no off-site highway works would be required to accommodate it.

6.1.2 The Bellway scheme and the St Modwen scheme to the south will together provide 206 units (119 + 87), which is below the level of development assessed in the TA Addendum. It follows that the Bellway scheme will not give rise to cumulative traffic impacts that would require mitigation. For completeness, however, the parameters used in the TA Addendum to assess the Phase 1 scheme have been reviewed to confirm that they remain suitable for use and that the conclusions reached remain robust.

6.2 Traffic Survey Data

6.2.1 The traffic survey data used in the TA and TA Addendum was collected in March 2012. This data is now approximately 5-years old, and is therefore at the end of its normal maximum useful life. However, the two Technical Notes prepared by Waterman for the Enabling Works and the first St Modwen scheme (May and June 2014) both used this data by agreement with SCC.

6.2.2 It is considered that traffic flows on the network of interest are unlikely to have altered significantly since these assessments were made and, for consistency with all the previous reports, it is considered that this data should be used as a basis for the assessment of the Phase 1 development scheme that is the subject of this report.

6.3 Assessment Year

6.3.1 The TA Addendum assessed the Spine Road junction and all off-site junctions (except for those on the A50) at 5 years after registration of the planning application, in accordance with normal practice and former DfT guidance. The corresponding assessment year was 2018 and was adopted in all subsequent assessments, by agreement with SCC. For consistency, the same assessment year has been used in this assessment.

6.4 Traffic Growth

6.4.1 Growth in background traffic growth from 2012 to 2018 was previously assessed using a set of growth factors derived from the National Trip End Model (NTEM). National and local road traffic forecasts have recently been revised, and a new set of growth factors has been calculated using the latest version of the TEMPRO database. The resulting growth factors are summarised in **Table 6.1**, which also provides the factors used in the original TA (and also the TA Addendum) for comparison purposes.

Table 6.1: Background Traffic Growth Factors

Growth Period	Version	Peak Period	NTM Growth Factors East Staffordshire Area
2012-2018	Original TA	AM	1.060
		PM	1.064
2012-2018	This assessment	AM	1.076
		PM	1.079

6.4.2 It can be seen that growth forecasts are now slightly higher than those used in the original TA. Given the need to take into account an additional committed development near to the Spine Road junction (see below), these new traffic growth assumptions also need to be reflected in an updated capacity assessment of the proposed junction (see below).

6.4.3 The use of slightly higher future year traffic background traffic flows is not expected to alter the conclusions reached in the TA Addendum regarding the impact of Phase 1 at other off-site junctions. All off-site junctions on the local highway network were forecast to operate with significant reserve capacity and can therefore be expected to absorb modest additional levels of background traffic comfortably. On the strategic highway network, the A50/B5030 and A50/A521 roundabouts were forecast to operate above capacity, but the impact of the proposed development in both cases was found to be negligible. This would clearly remain the case for the combined impacts of the Bellway and current St Modwen schemes, given the conclusion reached in paragraph 6.1.2 above.

6.5 Committed Development

6.5.1 The original TA listed the following committed developments as having been identified for inclusion in the assessments by SCC:

- JCB Heavy Products Factory Redevelopment
- Redevelopment of former Uttoxeter Cattle Market (Carter's Square)

6.5.2 No other committed developments were taken into account in the TA, the TA Addendum or any of the subsequent transport Technical Notes.

6.5.3 A residential development scheme to the east of the site was originally refused by ESBC (outline planning application reference P/2013/01287) but was approved on appeal in 2015. This scheme will provide up to 140 dwellings and will be accessed from Bramshall Road, some 0.5km east of the Spine Road junction. Its traffic effects therefore need to be taken into account in the updated capacity assessment of the proposed Bramshall Road/Spine Road junction that follows.

6.5.4 The TA that was submitted in support of the outline planning application predicted that an additional 6 two-way trips would use Bramshall Lane west of the development during each of the weekday peak hours. This level of traffic is not expected to have any material impact on the volume of traffic using the Bramshall Lane/Spine Road junction, but has nevertheless been taken into account in the assessment that follows for completeness.

6.5.5 No additional schemes of significance that would need to be taken into account as committed developments have been identified.

6.6 Vehicle Traffic Generation

6.6.1 In the TA Addendum, the trip generation of Phase 1 was assessed in accordance with a set of vehicle traffic generation rates derived from the TRICS database and agreed with SCC. These are summarised in **Table 6.2**.

Table 6.2: Trip Generation Rates from Original TA and TA Addendum

Time Period	Arrivals	Departures	TOTAL
AM Peak (08:00-09:00)	0.156	0.436	0.592
PM Peak (17:00-18:00)	0.410	0.242	0.652

6.6.2 An updated set of trip generation rates has been obtained from the TRICS database. To provide a representative sample of similar developments and areas, TRICS sites were selected in accordance with the following criteria:

- TRICS land use category 03- "Residential - Privately Owned";
- Sites from Greater London, Scotland Northern Ireland and the Republic of Ireland removed;
- Default TRICS survey date cut-off used;
- Default TRICS development size range;
- 'Edge of Town Centre' sites have been removed;
- Weekday counts only;
- No adjustments to other primary or secondary parameters.

6.6.3 The resulting set of trips rates is included in **Appendix F** and summarised in **Table 6.3**.

Table 6.3: Updated Trip Generation Rates (Based on current version of TRICS)

Time Period	Arrivals	Departures	TOTAL
AM Peak (08:00-09:00)	0.133	0.380	0.513
PM Peak (17:00-18:00)	0.328	0.182	0.510

6.6.4 It can be seen that the updated trip rates are in all cases lower than those used in the original TA and the TA Addendum. The trip rates from the original TA can therefore be regarded as robust and have therefore been re-used in this assessment. The resulting development traffic generation for a Phase 1 scheme of up to 250 dwellings is summarised in **Table 6.4**.

Table 6.4: Phase 1 Total Traffic Generation Rates (250 dwellings, original trip rates)

Time Period	Arrivals	Departures	TOTAL
AM Peak (08:00-09:00)	39	109	148
PM Peak (17:00-18:00)	102	61	163



6.7 Trip Distribution

6.7.1 The distribution of development traffic on the adjacent highway network was assessed in the TA Addendum and agreed with SCC. The resulting distribution at the Bramshall Road/Spine Road junction is as follows:

- Bramshall Road East – 97%
- Bramshall Road West – 3%

6.7.2 The resulting assignment of development traffic flows at the site access, based on the trip rates summarised in Table 6.2 and a Phase 1 development of up to 250 dwellings, is as summarised in **Table 6.4**.

Table 6.4: Traffic Generation at Bramshall Road/Spine Road Junction (TA Addendum)

Time Period	Bramshall Road East		Bramshall Road West	
	Inbound	Outbound	Inbound	Outbound
AM Peak (08:00-09:00)	38	106	1	3
PM Peak (17:00-18:00)	100	59	3	2

6.7.3 There have been no changes to the highway network or the pattern of development that would affect the above distribution of trips pending completion of Phase 1. The above assignment of development trips is therefore considered suitable for use in the subsequent capacity assessments.

6.8 Capacity Assessments

6.8.1 Given the changes noted above in terms of traffic growth factors and committed development assumptions, an updated capacity assessment of the Bramshall Road/Spine Road junction has been undertaken using TRL’s JUNCTIONS 9 software.

6.8.2 The JUNCTIONS 9 model has been built using the same geometric inputs as those used in the TA Addendum. The assessment has been undertaken at the accepted assessment year of 2018, using the original 2012 survey data as a base and applying updated traffic growth and committed development assumptions detailed above. Development traffic flows from Table 6.4, for a total Phase 1 development of up to 250 dwellings, have then been added.

6.8.3 Full details of the capacity assessment and input traffic flows are provided in **Appendix G**. For priority junctions, JUNCTIONS 9 quotes results by traffic stream. The software does not provide results for “free-flow” streams that are not delayed (e.g. – straight ahead major road movement where it is not blocked by vehicles waiting to turn right into the side road); such movements are therefore marked as “-” within the summary tables. Each arm of a priority junction is identified by a letter and each stream is thus defined by an origin-destination pairing (e.g. C-AB is any movement from Arm C to either Arm A or Arm B).

6.8.4 **Table 6.5** summarises the capacity assessment results for the proposed junction. The traffic stream labels are as follows:

- A – Bramshall Road West;
- B - Site Access;
- C – Bramshall Road East.

Table 6.5: Capacity Assessment Results - Bramshall Road/Spine Road Junction (2018 with 250 Dwellings)

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	With Dev 2025					
Stream B-AC	0.30	8.00	0.21	0.10	6.99	0.12
Stream C-AB	0.10	6.59	0.07	0.20	7.28	0.18

6.8.5 Table 6.5 confirms that the proposed junction would operate well within capacity at the 2018 assessment year with the proposed Phase 1 development of 250 dwellings fully complete. It follows that the junction would comfortably accommodate the Bellway scheme of 119 dwellings in addition to the ongoing St Modwen scheme of 87 dwellings to the south with considerable reserve capacity.

6.9 Road Safety

6.9.1 The original TA presented an analysis of Personal Injury Accident (PIA) data over a 5-year period from 2007 to 2012 and identified 2 PIAs on Bramshall Road in the vicinity of the proposed Spine Road junction. It was concluded that there were no road safety issues of significance at that location.

6.9.2 An updated assessment of PIAs recorded over the more recent 5-year period between 2012 and 2016 has been undertaken using the "Crashmap" internet database (www.crashmap.co.uk). The relevant Crashmap screenshot is presented in **Appendix H** and shows that just 2 PICs were recorded on Bramshall Road, both to the west of the proposed junction and both involving slight injury. The 2 PICs were recorded some distance apart and are therefore isolated incidents.

6.9.3 There is therefore no evidence of a road safety issue on Bramshall Road in the vicinity of the proposed Spine Road junction, based on this updated assessment.

6.9.4 The junction layout has been the subject of an independent Stage 1 Road Safety Audit (RSA), which was included in the original TA. It will be subject to Stage 2 and 3 RSAs in due course. Through this process, the safety of the proposed junction will be maximised within the design.

7.0 CONCLUSIONS

7.1 Summary

- 7.1.1 This report has provided a Transport Statement (TS) in support of proposals by Bellway Homes to provide a residential development on land to the west of Uttoxeter. The site on which the development would take place is part of a larger Sustainable Urban Extension, which has outline planning consent.
- 7.1.2 The wider development has been the subject of a Transport Assessment (TA) and a TA Addendum, which considered separately the traffic impacts and access requirements of Phase 1 (250 dwellings accessed from the B5027 Bramshall Road). Subsequent Technical Notes were prepared in support of the Enabling Works, which comprise the junction of the proposed Phase 1 Spine Road with Bramshall Road and the first part of Phase 1 (87 dwellings).
- 7.1.3 The first part of Phase 1 is currently being implemented by St Modwen Homes. The Bellway scheme forms next part of Phase 1 and will be accessed from a continuation of the Spine Road northwards.
- 7.1.4 This TS has reviewed the information contained within the previous TA, TA Addendum and Technical notes and has provided updates where necessary. With respect to both the Bellway scheme and the whole of Phase 1, it has been demonstrated that:
- The proposals for access to the development are compatible with provision of the Spine Road and its junction with Bramshall Road as previously assessed/approved.
 - The proposed development would comply with relevant transport policies.
 - The proposed development would be accessible by sustainable travel modes, in a manner consistent with the original TA and TA Addendum.
 - The internal road layout within the proposed development would provide appropriate geometric standards and would be accessible by the relevant design vehicles.
 - The assessment of off-site traffic impacts and highway capacity presented in the original TA and TA Addendum remain valid and provide sufficient confidence that the proposed development can be satisfactorily accommodated.
 - The proposed Bramshall Road/Spine Road junction would provide more than sufficient capacity for forecast Phase 1 traffic flows, which have been updated where necessary.

7.2 Overall Conclusion

- 7.2.1 Satisfactorily vehicular access to the scheme can be achieved and the proposed development would also be accessible by sustainable travel modes such as public transport, walking and cycling.
- 7.2.2 The proposed development complies with relevant transport-related policies and is not forecast to give rise to materially adverse traffic impacts.
- 7.2.3 It is considered that the proposed development complies with the principles of access and the transport mitigation strategies previously assessed.



7.2.4 There are therefore no transport-related issues that would prevent the detailed planning application by Bellway Homes from being approved.



APPENDIX A: Annotated Masterplan

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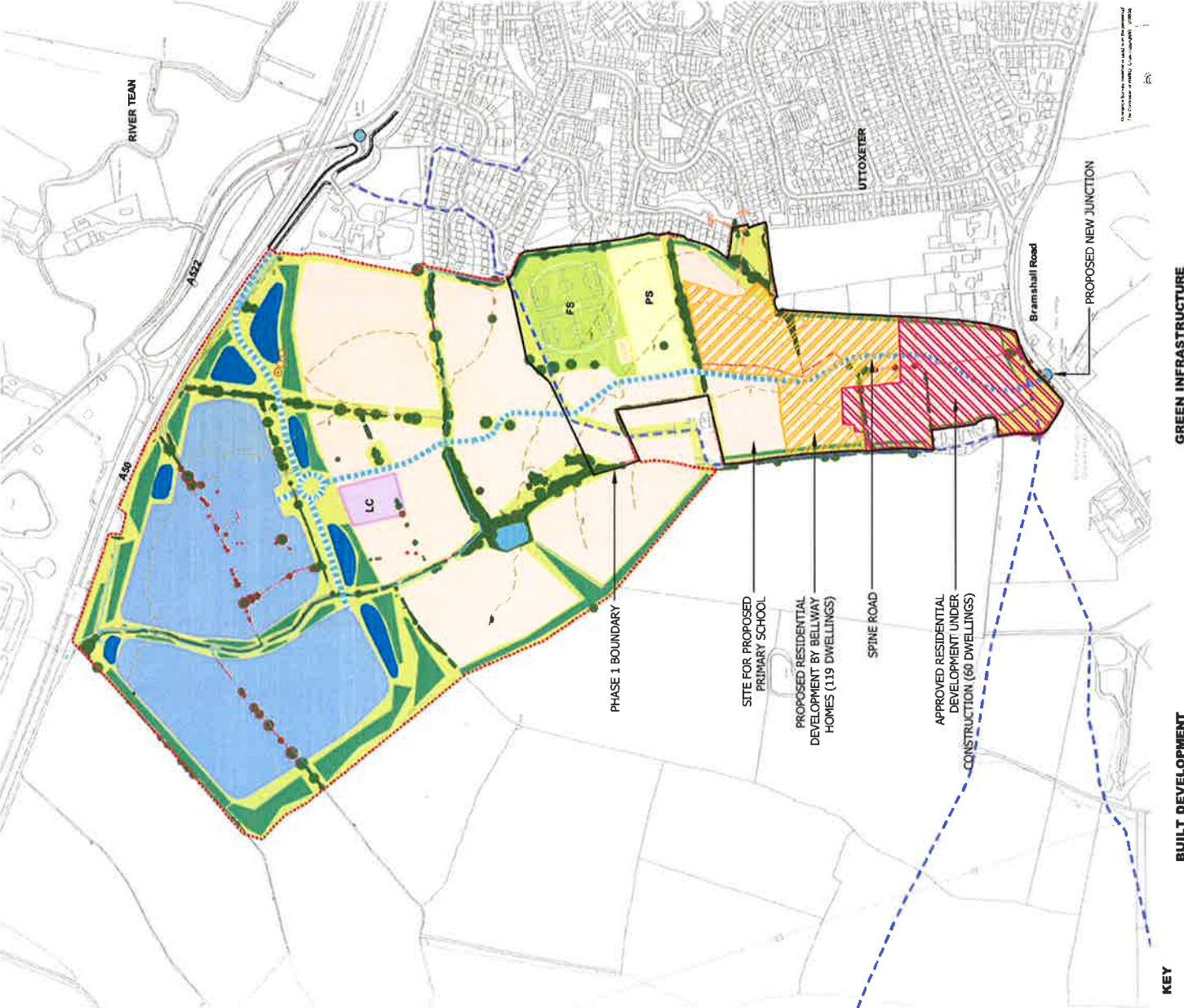
MASTERPLAN REPRODUCED FROM ORIGINAL TRANSPORT ASSESSMENT, JULY 2013 (CROFT TRANSPORT SOLUTIONS). ORIGINAL PLAN PRODUCED BY F.P.C.R LLP AND DATED MAY 2013

REV	DESCRIPTION	DATE	BY	AUTH



Travis Baker
The City Centre
Newcastle
NE1 2EX
0151 908 8000
info@travisbaker.co.uk
www.travisbaker.co.uk

CLIENT		BELLWAY HOMES	
PROJECT		BRAMSHALL ROAD, UTTOXETER	
TITLE		ANNOTATED MASTER PLAN	
DRAWN	AUTHORISED	SCALE	DATE
WH	SM	N.T.S	27.03.17
PROJECT NO	T17070	DRAWING NO	SK01
REV			
STATUS: FOR INFORMATION			
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BUILT DEVELOPMENT

GREEN INFRASTRUCTURE

KEY



APPENDIX B: Development Layout Plan

The information shown on this drawing is based on the information provided to the architect by the client. The architect is not responsible for the accuracy of the information provided to the client. The architect is not responsible for the accuracy of the information provided to the client. The architect is not responsible for the accuracy of the information provided to the client.



Block Name	No. of Units	300' E	400'
Block 1	100	100	100
Block 2	100	100	100
Block 3	100	100	100
Block 4	100	100	100
Block 5	100	100	100
Block 6	100	100	100
Block 7	100	100	100
Block 8	100	100	100
Block 9	100	100	100
Block 10	100	100	100
Block 11	100	100	100
Block 12	100	100	100
Block 13	100	100	100
Block 14	100	100	100
Block 15	100	100	100
Block 16	100	100	100
Block 17	100	100	100
Block 18	100	100	100
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Block 97	100	100	100
Block 98	100	100	100
Block 99	100	100	100
Block 100	100	100	100

- Key**
- ▲ Access Door
 - Block Flving (Red hatched pattern)
 - ⋈ Gate Position
 - Garage Personnel Door
 - Affordable Tenure
 - ⊙ Shared Ownership
 - ⊖ Affordable Rent
 - ⊗ Existing tree's to be retained
 - ⊞ Bin Collection Point
 - ⊕ Denotes handed from working drawing
 - ⊞ Denotes sewer easement

Revisions

Bellway

BELLWAY HOMES WEST MIDLANDS
 15 BRAMSHALL ROAD, UTTOXETER, LEICESTERSHIRE LE17 3PA
 TEL: 01530 226755 FAX: 01530 226756

Site: BRAMSHALL ROAD, UTTOXETER

Drawing: PROPOSED SITE PLAN

Date: 24.01.17 Drg. No: UTT-LAY-01E
 Scale: 1:500 @ A1
 Drawn By: ADA

Prepared by: [Name] [Title] [Date]
 Checked by: [Name] [Title] [Date]
 Approved by: [Name] [Title] [Date]



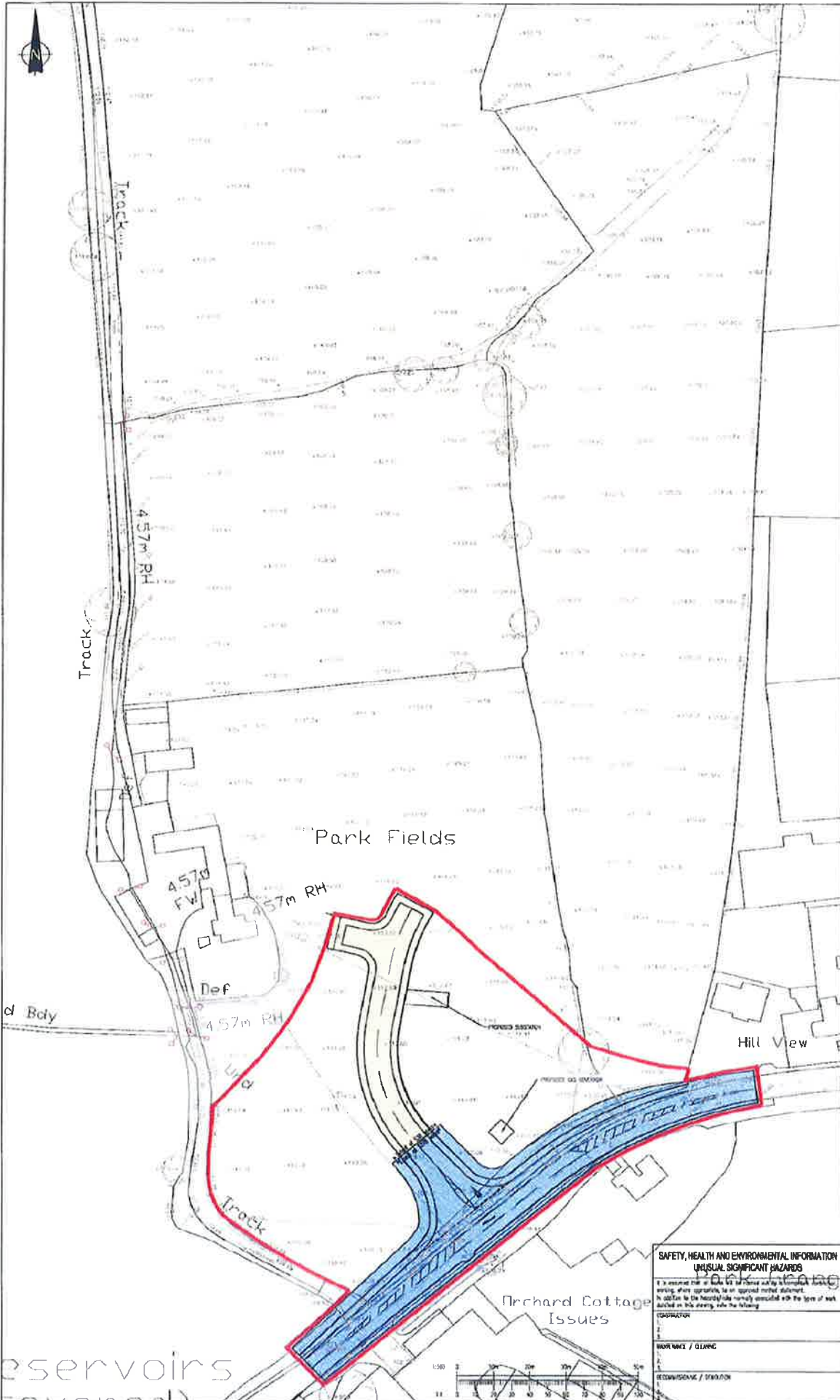
APPENDIX C: Uttoxeter Cycle Map

Uttoxeter town cycle map cannot be reproduced for copyright reasons.

To view the latest version, please visit www.staffordshire.gov.uk



APPENDIX D: Bramshall Road Junction Layout



The information on this drawing should not be used for any other purpose than that for which it was prepared. The user of this drawing shall be responsible for its use. The Engineer is not responsible for any errors or omissions in this drawing. The user of this drawing shall be responsible for its use. The Engineer is not responsible for any errors or omissions in this drawing.

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3. THE CONTRACTOR MUST ENSURE AND WILL BE HELD RESPONSIBLE FOR THE STABILITY OF THE BUILDING/STRUCTURE/FOUNDATION AT ALL STAGES OF THE WORK.
4. ALL WORK BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE COMPLIED WITH.
5. ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES AND REGULATIONS.

KEY

	ENABLING WORKS
	15% HOVING WORKS WITHIN CHANGING WORKS
	FIXTURE INTERNAL HOVING WORKS
	15% HOVING WORKS WITHIN CHANGING WORKS
	PROPOSED RESIDENTIAL DEVELOPMENT

457 (20/20)	15% CHANGING WORKS BOUNDARY AMENDED	20	
457 (25/25)	15% CHANGING WORKS BOUNDARY AMENDED	20	
457 (20/20)	15% CHANGING WORKS BOUNDARY AMENDED	20	
Rev	Date	Description	By

Project	UTOXETER
File	INFRASTRUCTURE ENABLING WORKS PLANNING LAYOUT
Client	ST MOOVIECH



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION UNUSUAL SIGNIFICANT HAZARDS

It is assumed that the works to be carried out by the contractor are of a nature which, where appropriate, is an approved method statement. In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:

CONTRACTOR	
MANAGER / CLERK	
DESIGNING / DRAWING	

PRELIMINARY			
Designed by	DP	Checked by	RY
Drawn by	DP	Date	04/07/2014
Scale	1:500 @ A1	Project No.	14468
Issue	001	Revision	
CIV	SA	90	002
A03			

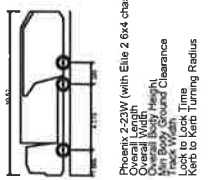
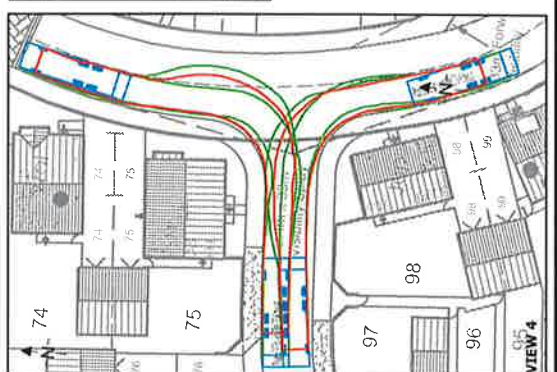
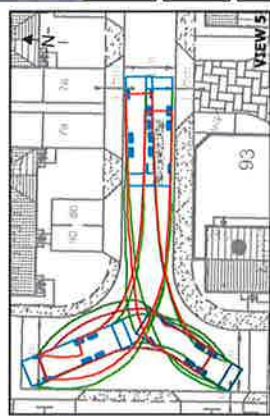
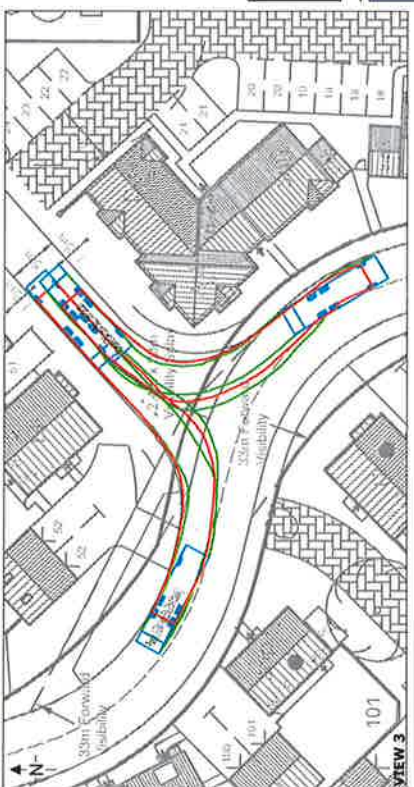
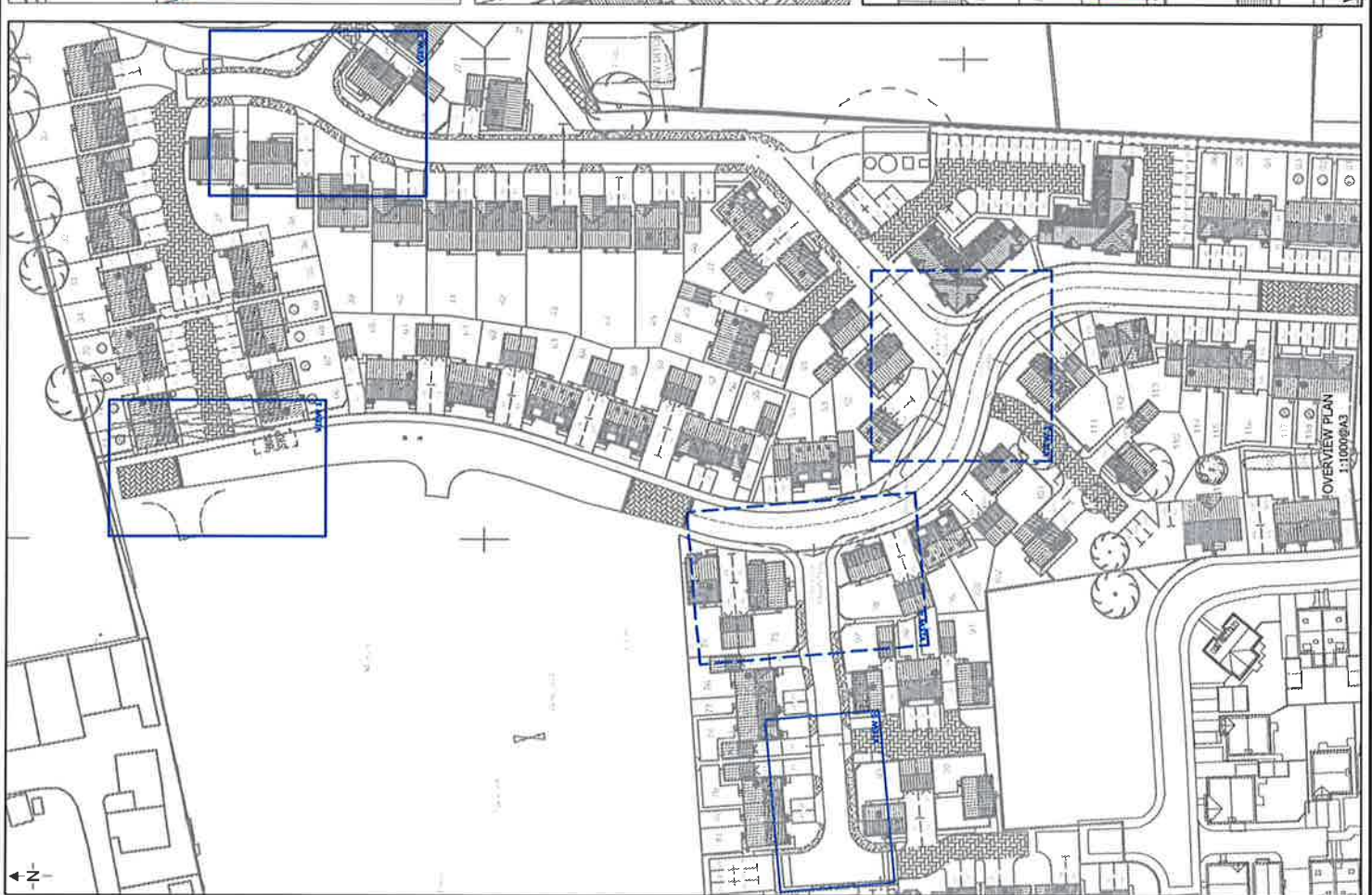
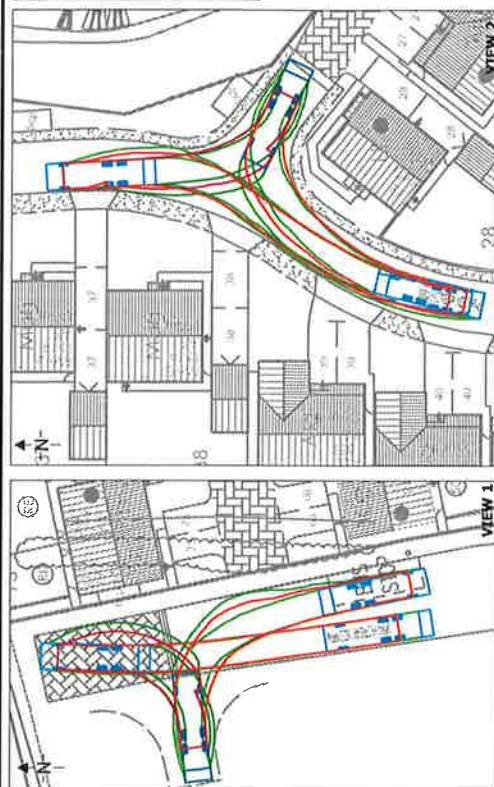


**Bellway Homes
Residential Development
Bramshall Road, Uttoxeter
Transport Statement**



APPENDIX E: Swept Path Analysis

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REV	DESCRIPTION	DATE	BY	APP'D
1	UPDATED TO PLANNING LAYOUT 17003 - 01F (SITE PLAN)	29.03.17	WH	SM
2	DRAWING ADMITTED TO CLIENT COMMENT	29.03.17	WH	SM

travis baker

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 www.travisbaker.co.uk

CLIENT		BELLWAY HOMES	
PROJECT		BRAMSHALL ROAD, UTTOXETER	
TITLE			
VEHICLE SWEEP PATH ANALYSIS			
DRAWN	AUTHORISED	SCALE	DATE
WH	SM	1:5000/A3 U.O.S.	27.03.17
PROJECT NO.	DRAWING NO.	REV	
T17070	SK02	B	
FOR INFORMATION			

**Bellway Homes
Residential Development
Bramshall Road, Uttoxeter
Transport Statement**



APPENDIX F: TRICS Data

Calculation Reference: AUDIT-549501-170328-0356

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

VEHICLESSelected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	DC DORSET	2 days
	DV DEVON	3 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	3 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	4 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	6 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	5 days
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	2 days
	TW TYNE & WEAR	2 days
10	WALES	
	PS POWYS	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 6 to 432 (units:)
 Range Selected by User: 6 to 4334 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 13/11/15

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	9 days
Tuesday	11 days
Wednesday	9 days
Thursday	9 days
Friday	8 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	46 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	23
Edge of Town	22
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	38
Village	1
No Sub Category	7

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:Use Class:

C1	1 days
C3	44 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	13 days
10,001 to 15,000	11 days
15,001 to 20,000	6 days
20,001 to 25,000	5 days
25,001 to 50,000	5 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	6 days
25,001 to 50,000	5 days
50,001 to 75,000	4 days
75,001 to 100,000	11 days
100,001 to 125,000	5 days
125,001 to 250,000	7 days
250,001 to 500,000	7 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	15 days
1.1 to 1.5	31 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	4 days
No	42 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	46 days
-----------------	---------

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	THORPE PARK ROAD PETERBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 9 <i>Survey date: TUESDAY 18/10/11</i>			<i>Survey Type: MANUAL</i>
2	CB-03-A-03	SEMI DETACHED		CUMBRIA
	HAWKSHEAD AVENUE WORKINGTON Edge of Town Residential Zone Total Number of dwellings: 40 <i>Survey date: THURSDAY 20/11/08</i>			<i>Survey Type: MANUAL</i>
3	CB-03-A-04	SEMI DETACHED		CUMBRIA
	MOORCLOSE ROAD SALTERBACK WORKINGTON Edge of Town No Sub Category Total Number of dwellings: 82 <i>Survey date: FRIDAY 24/04/09</i>			<i>Survey Type: MANUAL</i>
4	CH-03-A-02	HOUSES/FLATS		CHESHIRE
	SYDNEY ROAD CREWE Edge of Town Residential Zone Total Number of dwellings: 174 <i>Survey date: TUESDAY 14/10/08</i>			<i>Survey Type: MANUAL</i>
5	CH-03-A-05	DETACHED		CHESHIRE
	SYDNEY ROAD SYDNEY CREWE Edge of Town Residential Zone Total Number of dwellings: 17 <i>Survey date: TUESDAY 14/10/08</i>			<i>Survey Type: MANUAL</i>
6	CH-03-A-06	SEMI-DET./BUNGALOWS		CHESHIRE
	CREWE ROAD CREWE Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 129 <i>Survey date: TUESDAY 14/10/08</i>			<i>Survey Type: MANUAL</i>
7	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD BOUGHTON HEATH CHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 11 <i>Survey date: TUESDAY 22/05/12</i>			<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

8	CH-03-A-09	TERRACED HOUSES	CHESHIRE
	GREYSTOKE ROAD HURDSFIELD MACCLESFIELD Edge of Town Residential Zone Total Number of dwellings: 24 Survey date: MONDAY 24/11/14		Survey Type: MANUAL
9	DC-03-A-01	DETACHED	DORSET
	ISAACS CLOSE POOLE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 51 Survey date: WEDNESDAY 16/07/08		Survey Type: MANUAL
10	DC-03-A-08	BUNGALOWS	DORSET
	HURSTDENE ROAD CASTLE LANE WEST BOURNEMOUTH Edge of Town Residential Zone Total Number of dwellings: 28 Survey date: MONDAY 24/03/14		Survey Type: MANUAL
11	DV-03-A-01	TERRACED HOUSES	DEVON
	BRONSHILL ROAD TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 37 Survey date: WEDNESDAY 30/09/15		Survey Type: MANUAL
12	DV-03-A-02	HOUSES & BUNGALOWS	DEVON
	MILLHEAD ROAD HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 116 Survey date: FRIDAY 25/09/15		Survey Type: MANUAL
13	DV-03-A-03	TERRACED & SEMI DETACHED	DEVON
	LOWER BRAND LANE HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 70 Survey date: MONDAY 28/09/15		Survey Type: MANUAL
14	ES-03-A-02	PRIVATE HOUSING	EAST SUSSEX
	SOUTH COAST ROAD PEACEHAVEN Edge of Town Residential Zone Total Number of dwellings: 37 Survey date: FRIDAY 18/11/11		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	EX-03-A-01	SEMI-DET.		ESSEX
	MILTON ROAD			
	CORRINGHAM			
	STANFORD-LE-HOPE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		237	
	<i>Survey date: TUESDAY</i>		13/05/08	<i>Survey Type: MANUAL</i>
16	GM-03-A-10	DETACHED/SEMI		GREATER MANCHESTER
	BUTT HILL DRIVE			
	PRESTWICH			
	MANCHESTER			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		29	
	<i>Survey date: WEDNESDAY</i>		12/10/11	<i>Survey Type: MANUAL</i>
17	HC-03-A-17	HOUSES & FLATS		HAMPSHIRE
	CANADA WAY			
	LIPHOOK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		36	
	<i>Survey date: THURSDAY</i>		12/11/15	<i>Survey Type: MANUAL</i>
18	LN-03-A-03	SEMI DETACHED		LINCOLNSHIRE
	ROOKERY LANE			
	BOULTHAM			
	LINCOLN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		22	
	<i>Survey date: TUESDAY</i>		18/09/12	<i>Survey Type: MANUAL</i>
19	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	OTTERSPOOL			
	LIVERPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		15	
	<i>Survey date: FRIDAY</i>		21/06/13	<i>Survey Type: MANUAL</i>
20	NE-03-A-02	SEMI DETACHED & DETACHED		NORTH EAST LINCOLNSHIRE
	HANOVER WALK			
	SCUNTHORPE			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:		432	
	<i>Survey date: MONDAY</i>		12/05/14	<i>Survey Type: MANUAL</i>
21	NF-03-A-01	SEMI DET. & BUNGALOWS		NORFOLK
	YARMOUTH ROAD			
	CAISTER-ON-SEA			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		27	
	<i>Survey date: TUESDAY</i>		16/10/12	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

22	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL
23	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
24	NY-03-A-06	BUNGALOWS & SEMI DET.	NORTH YORKSHIRE
	HORSEFAIR		
	BOROUGHBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	115	
	Survey date: FRIDAY	14/10/11	Survey Type: MANUAL
25	NY-03-A-07	DETACHED & SEMI DET.	NORTH YORKSHIRE
	CRAVEN WAY		
	BOROUGHBRIDGE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	23	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
26	NY-03-A-08	TERRACED HOUSES	NORTH YORKSHIRE
	NICHOLAS STREET		
	YORK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	21	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL
27	NY-03-A-09	MIXED HOUSING	NORTH YORKSHIRE
	GRAMMAR SCHOOL LANE		
	NORTHALLERTON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	52	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL
28	NY-03-A-10	HOUSES AND FLATS	NORTH YORKSHIRE
	BOROUGHBRIDGE ROAD		
	RIPON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	71	
	Survey date: TUESDAY	17/09/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

29	NY-03-A-11	PRIVATE HOUSING	NORTH YORKSHIRE
	HORSEFAIR		
	BOROUGHBRIDGE		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	23	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL
30	PS-03-A-02	DETACHED/SEMI-DETACHED	POWYS
	GUNROG ROAD		
	WELSHPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	28	
	Survey date: MONDAY	11/05/15	Survey Type: MANUAL
31	SC-03-A-04	DETACHED & TERRACED	SURREY
	HIGH ROAD		
	BYFLEET		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	71	
	Survey date: THURSDAY	23/01/14	Survey Type: MANUAL
32	SF-03-A-04	DETACHED & BUNGALOWS	SUFFOLK
	NORMANSTON DRIVE		
	LOWESTOFT		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	7	
	Survey date: TUESDAY	23/10/12	Survey Type: MANUAL
33	SF-03-A-05	DETACHED HOUSES	SUFFOLK
	VALE LANE		
	BURY ST EDMUNDS		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	18	
	Survey date: WEDNESDAY	09/09/15	Survey Type: MANUAL
34	SH-03-A-03	DETACHED	SHROPSHIRE
	SOMERBY DRIVE		
	BICTON HEATH		
	SHREWSBURY		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	10	
	Survey date: FRIDAY	26/06/09	Survey Type: MANUAL
35	SH-03-A-04	TERRACED	SHROPSHIRE
	ST MICHAEL'S STREET		
	SHREWSBURY		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	108	
	Survey date: THURSDAY	11/06/09	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

36	SH-03-A-05	SEMI-DETACHED/TERRACED	SHROPSHIRE
	SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings:	54	
	Survey date: THURSDAY	24/10/13	Survey Type: MANUAL
37	SH-03-A-06	BUNGALOWS	SHROPSHIRE
	ELLESMERE ROAD SHREWSBURY Edge of Town Residential Zone Total Number of dwellings:	16	
	Survey date: THURSDAY	22/05/14	Survey Type: MANUAL
38	SM-03-A-01	DETACHED & SEMI	SOMERSET
	WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone Total Number of dwellings:	33	
	Survey date: THURSDAY	24/09/15	Survey Type: MANUAL
39	ST-03-A-05	TERRACED & DETACHED	STAFFORDSHIRE
	WATERMEET GROVE ETRURIA STOKE-ON-TRENT Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings:	14	
	Survey date: WEDNESDAY	26/11/08	Survey Type: MANUAL
40	SY-03-A-01	SEMI DETACHED HOUSES	SOUTH YORKSHIRE
	A19 BENTLEY ROAD BENTLEY RISE DONCASTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings:	54	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL
41	TW-03-A-02	SEMI-DETACHED	TYNE & WEAR
	WEST PARK ROAD GATESHEAD Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
42	TW-03-A-03	MIXED HOUSES	TYNE & WEAR
	STATION ROAD BACKWORTH NEAR NEWCASTLE Neighbourhood Centre (PPS6 Local Centre) Village Total Number of dwellings:	33	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
43	WK-03-A-01	TERRACED/SEMI/DET.	WARWICKSHIRE
	ARLINGTON AVENUE LEAMINGTON SPA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings:	6	
	Survey date: FRIDAY	21/10/11	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

<p>44 WK-03-A-02 BUNGALOWS</p> <p>NARBERTH WAY POTTERS GREEN COVENTRY Edge of Town Residential Zone Total Number of dwellings: 17 Survey date: THURSDAY 17/10/13</p>	<p>WARWICKSHIRE</p> <p>Survey Type: MANUAL</p>
<p>45 WS-03-A-04 MIXED HOUSES</p> <p>HILLS FARM LANE BROADBRIDGE HEATH HORSHAM Edge of Town Residential Zone Total Number of dwellings: 151 Survey date: THURSDAY 11/12/14</p>	<p>WEST SUSSEX</p> <p>Survey Type: MANUAL</p>
<p>46 WS-03-A-05 TERRACED & FLATS</p> <p>UPPER SHOREHAM ROAD</p> <p>SHOREHAM BY SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 48 Survey date: WEDNESDAY 18/04/12</p>	<p>WEST SUSSEX</p> <p>Survey Type: MANUAL</p>

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	46	59	0.072	46	59	0.269	46	59	0.341
08:00 - 09:00	46	59	0.133	46	59	0.380	46	59	0.513
09:00 - 10:00	46	59	0.140	46	59	0.165	46	59	0.305
10:00 - 11:00	46	59	0.142	46	59	0.162	46	59	0.304
11:00 - 12:00	46	59	0.146	46	59	0.154	46	59	0.300
12:00 - 13:00	46	59	0.170	46	59	0.158	46	59	0.328
13:00 - 14:00	46	59	0.161	46	59	0.153	46	59	0.314
14:00 - 15:00	46	59	0.164	46	59	0.178	46	59	0.342
15:00 - 16:00	46	59	0.272	46	59	0.196	46	59	0.468
16:00 - 17:00	46	59	0.290	46	59	0.176	46	59	0.466
17:00 - 18:00	46	59	0.328	46	59	0.182	46	59	0.510
18:00 - 19:00	46	59	0.232	46	59	0.161	46	59	0.393
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.250			2.334			4.584

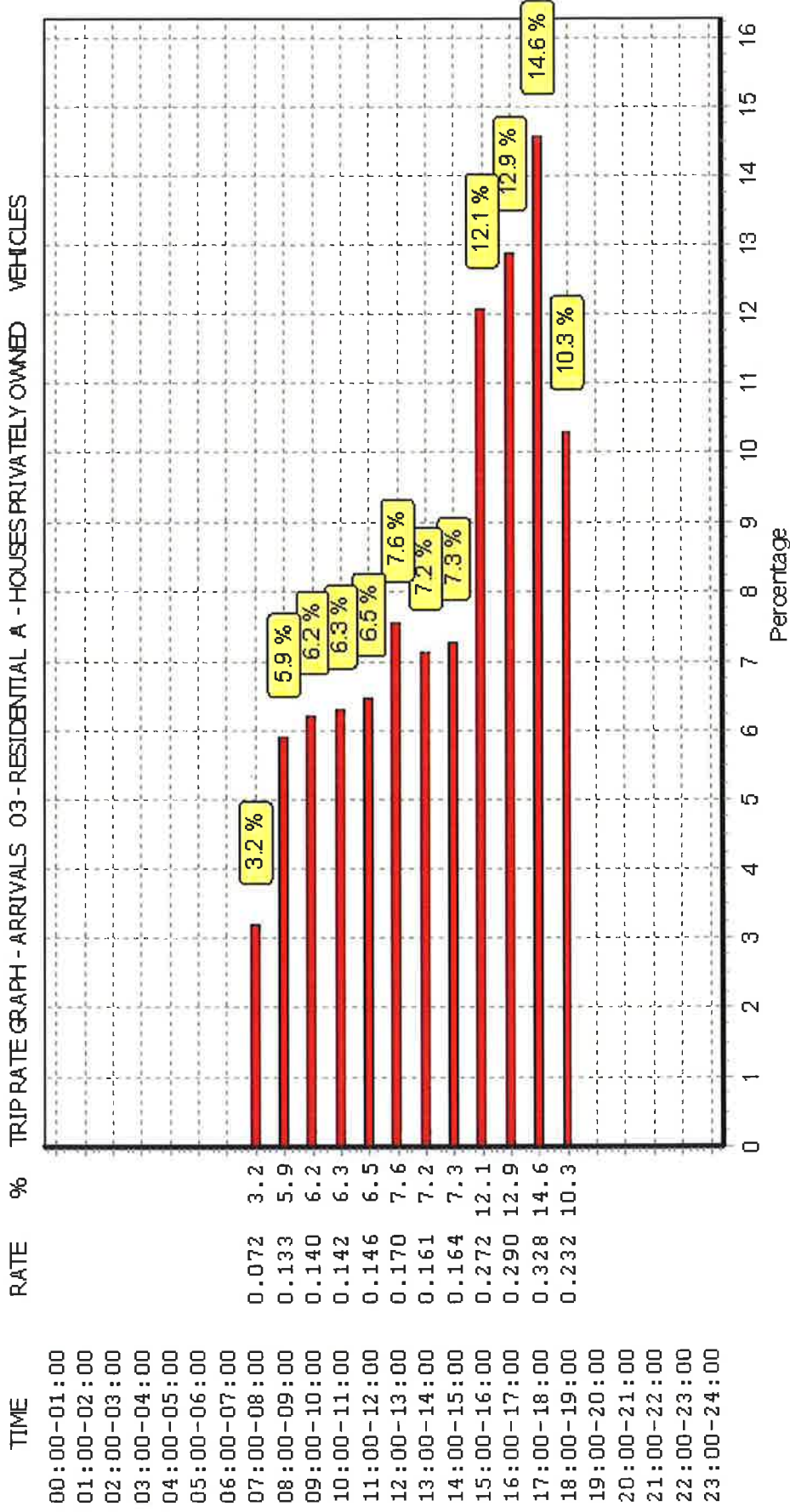
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

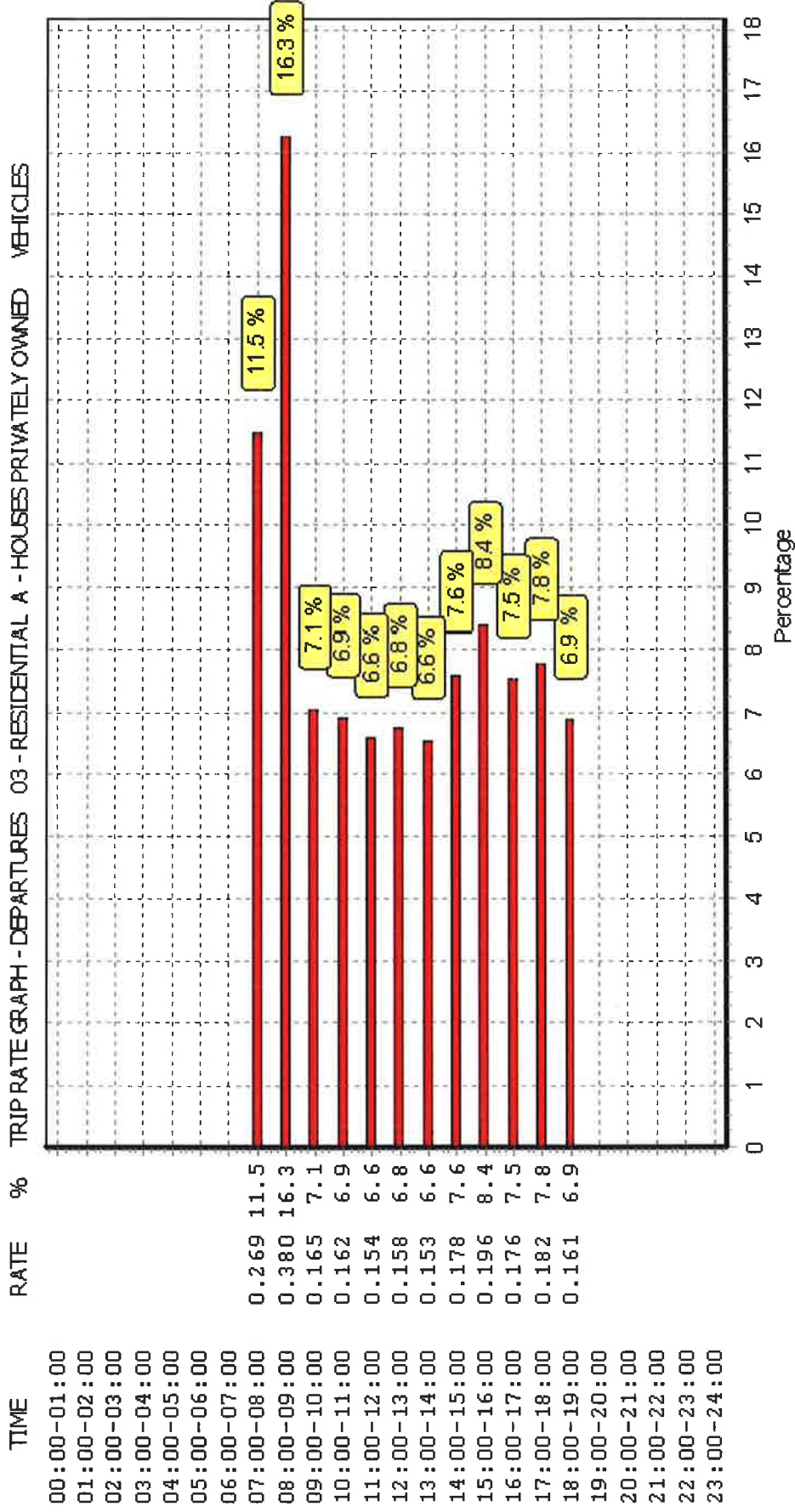
Parameter summary

Trip rate parameter range selected: 6 - 432 (units:)
 Survey date date range: 01/01/08 - 13/11/15
 Number of weekdays (Monday-Friday): 46
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

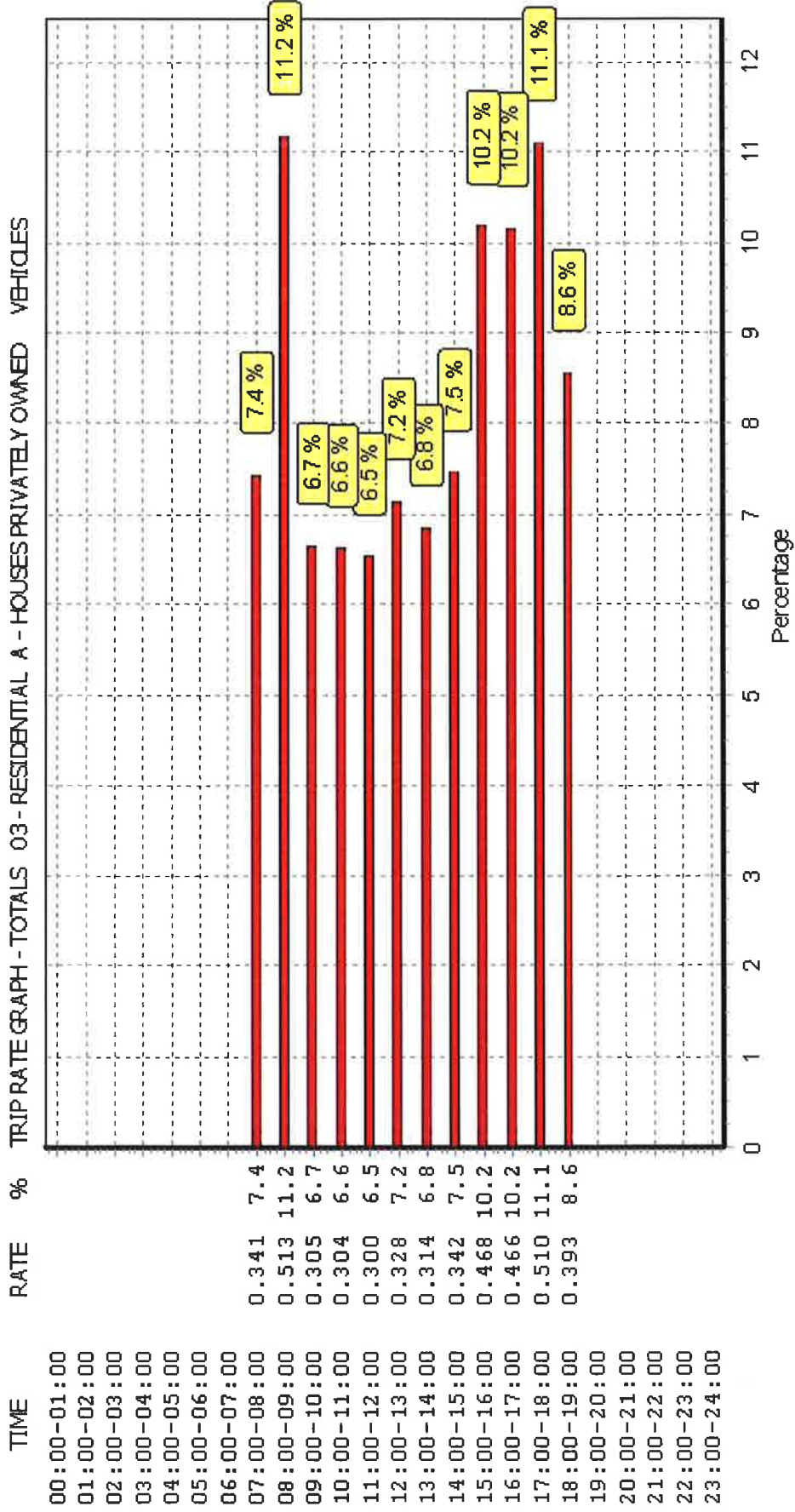
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	46	59	0.003	46	59	0.003	46	59	0.006
08:00 - 09:00	46	59	0.005	46	59	0.004	46	59	0.009
09:00 - 10:00	46	59	0.003	46	59	0.003	46	59	0.006
10:00 - 11:00	46	59	0.003	46	59	0.003	46	59	0.006
11:00 - 12:00	46	59	0.002	46	59	0.002	46	59	0.004
12:00 - 13:00	46	59	0.001	46	59	0.001	46	59	0.002
13:00 - 14:00	46	59	0.001	46	59	0.001	46	59	0.002
14:00 - 15:00	46	59	0.004	46	59	0.003	46	59	0.007
15:00 - 16:00	46	59	0.006	46	59	0.006	46	59	0.012
16:00 - 17:00	46	59	0.004	46	59	0.003	46	59	0.007
17:00 - 18:00	46	59	0.002	46	59	0.002	46	59	0.004
18:00 - 19:00	46	59	0.002	46	59	0.002	46	59	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.033			0.069

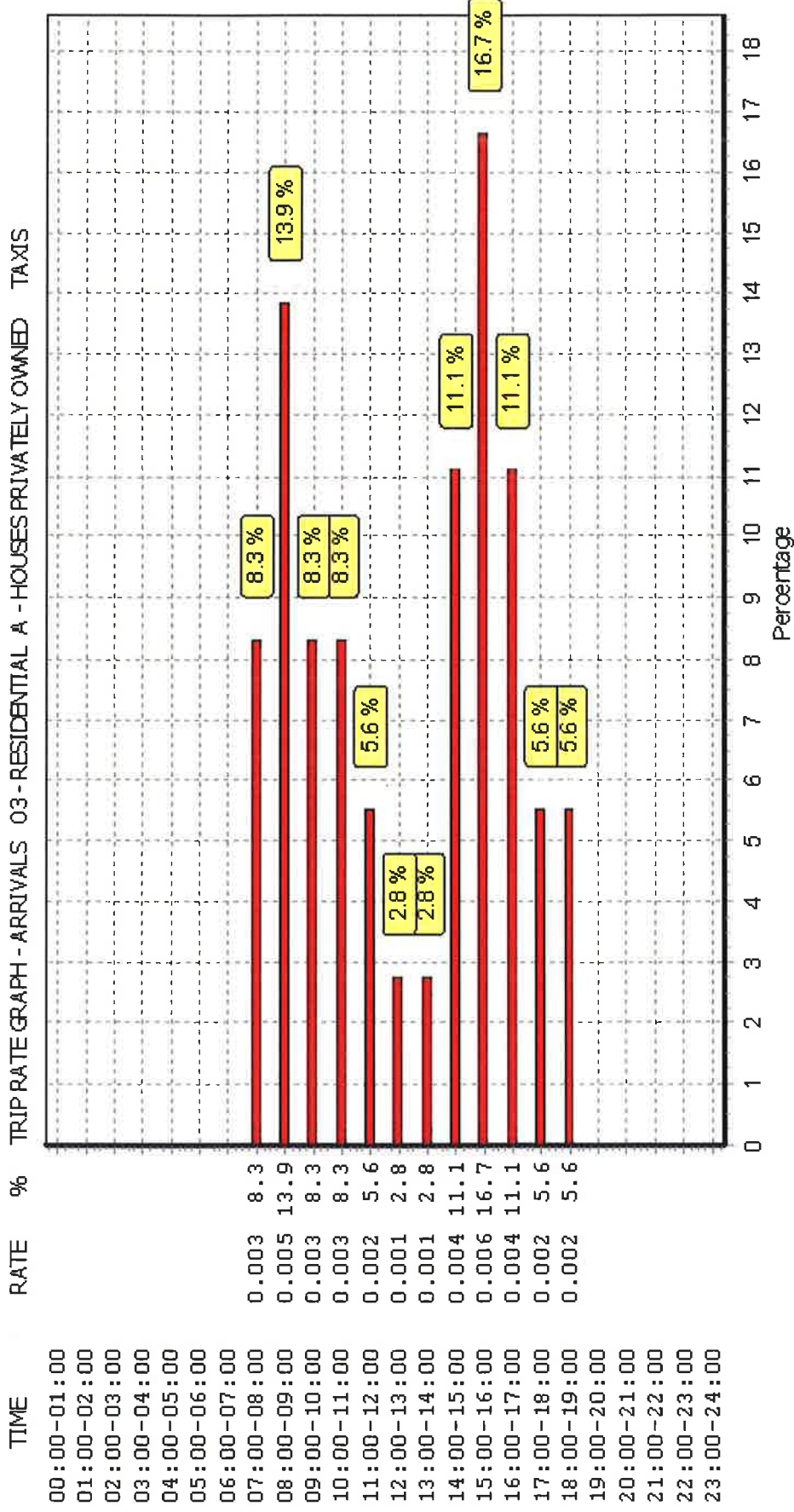
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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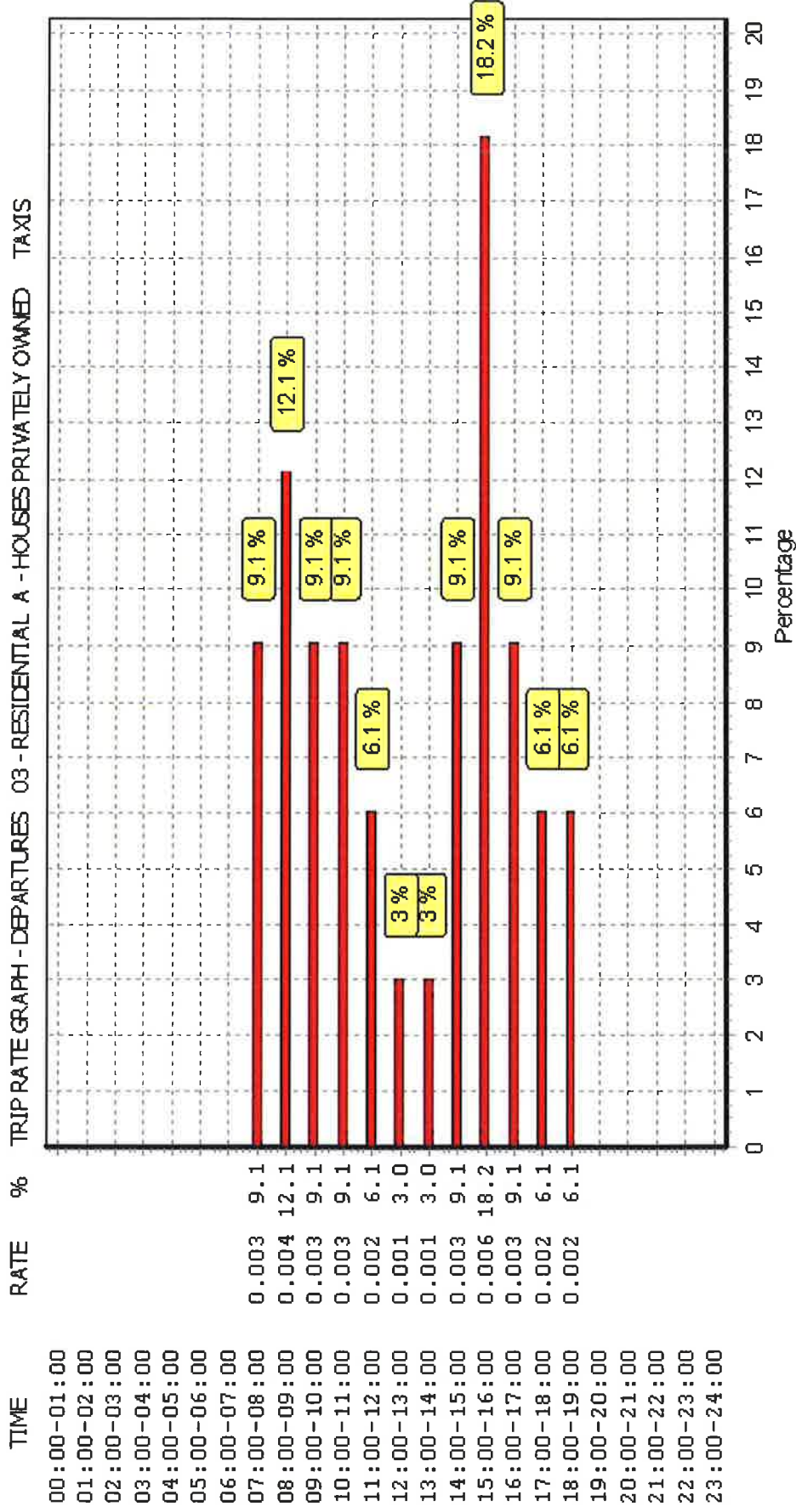
Parameter summary

Trip rate parameter range selected: 6 - 432 (units:)
 Survey date date range: 01/01/08 - 13/11/15
 Number of weekdays (Monday-Friday): 46
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

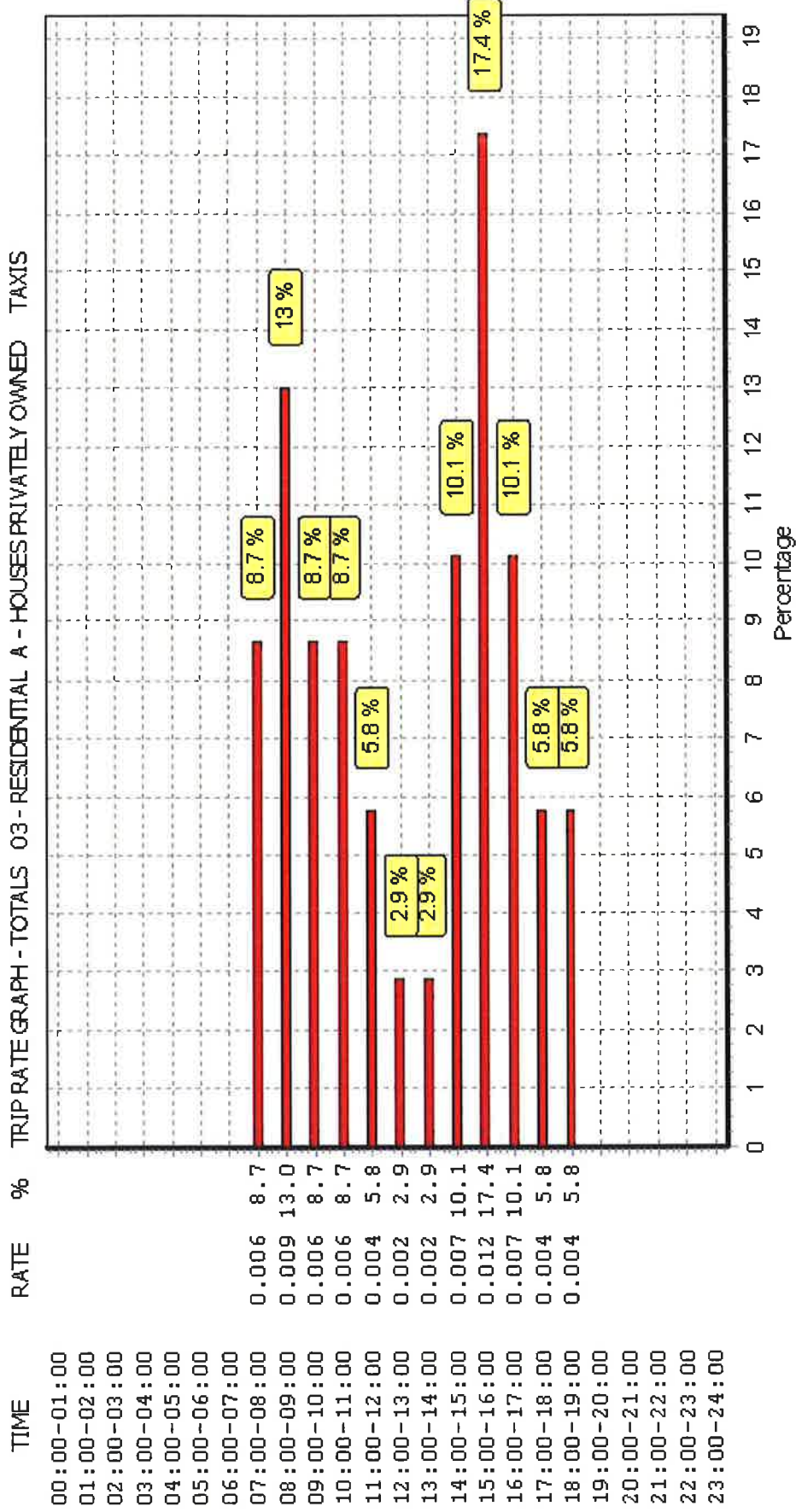
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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

OGVS**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	46	59	0.001	46	59	0.001	46	59	0.002
08:00 - 09:00	46	59	0.002	46	59	0.002	46	59	0.004
09:00 - 10:00	46	59	0.003	46	59	0.002	46	59	0.005
10:00 - 11:00	46	59	0.004	46	59	0.003	46	59	0.007
11:00 - 12:00	46	59	0.003	46	59	0.003	46	59	0.006
12:00 - 13:00	46	59	0.003	46	59	0.004	46	59	0.007
13:00 - 14:00	46	59	0.003	46	59	0.003	46	59	0.006
14:00 - 15:00	46	59	0.001	46	59	0.003	46	59	0.004
15:00 - 16:00	46	59	0.001	46	59	0.001	46	59	0.002
16:00 - 17:00	46	59	0.001	46	59	0.001	46	59	0.002
17:00 - 18:00	46	59	0.001	46	59	0.001	46	59	0.002
18:00 - 19:00	46	59	0.000	46	59	0.000	46	59	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.024			0.047

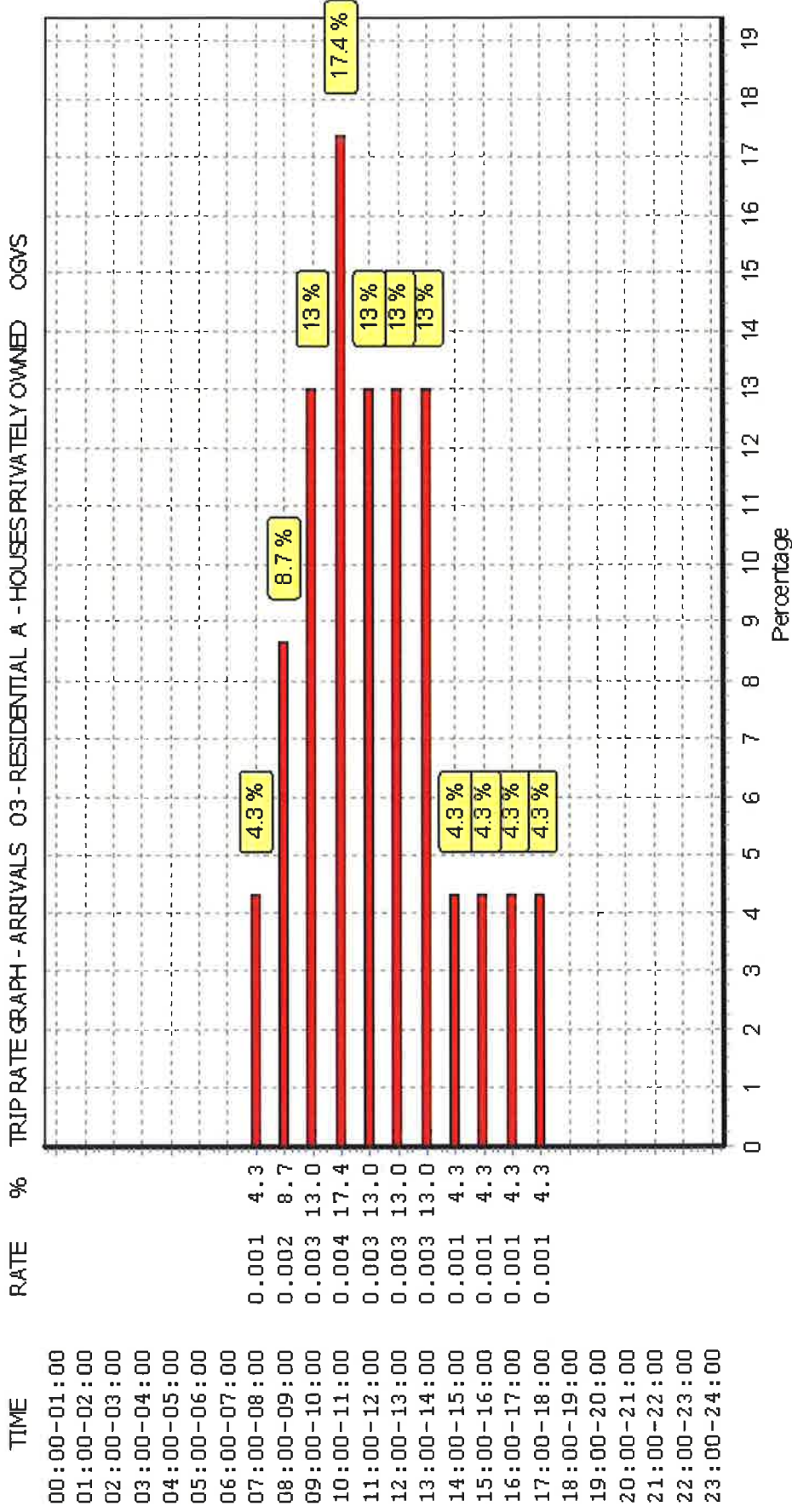
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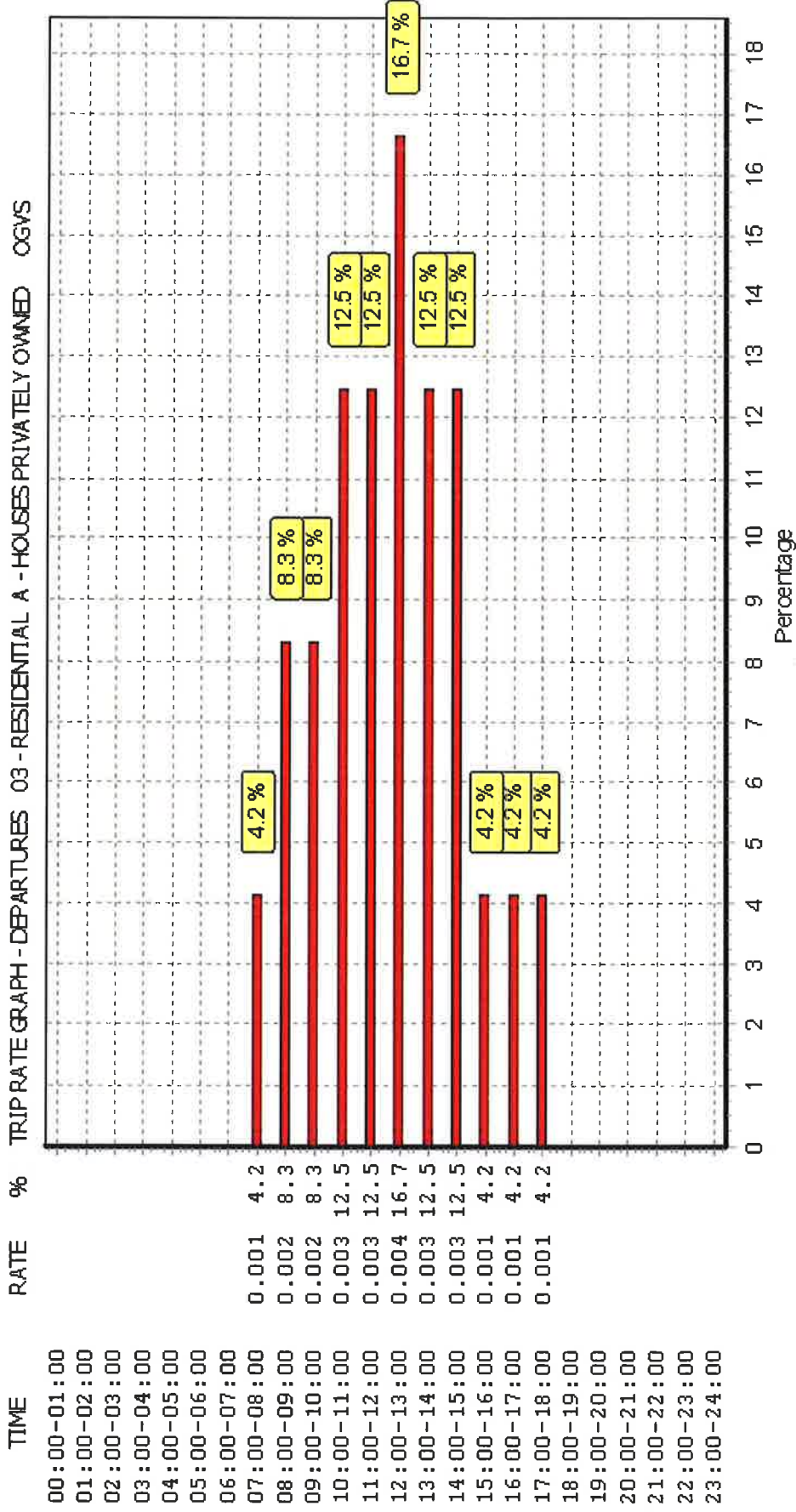
Parameter summary

Trip rate parameter range selected: 6 - 432 (units:)
 Survey date date range: 01/01/08 - 13/11/15
 Number of weekdays (Monday-Friday): 46
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

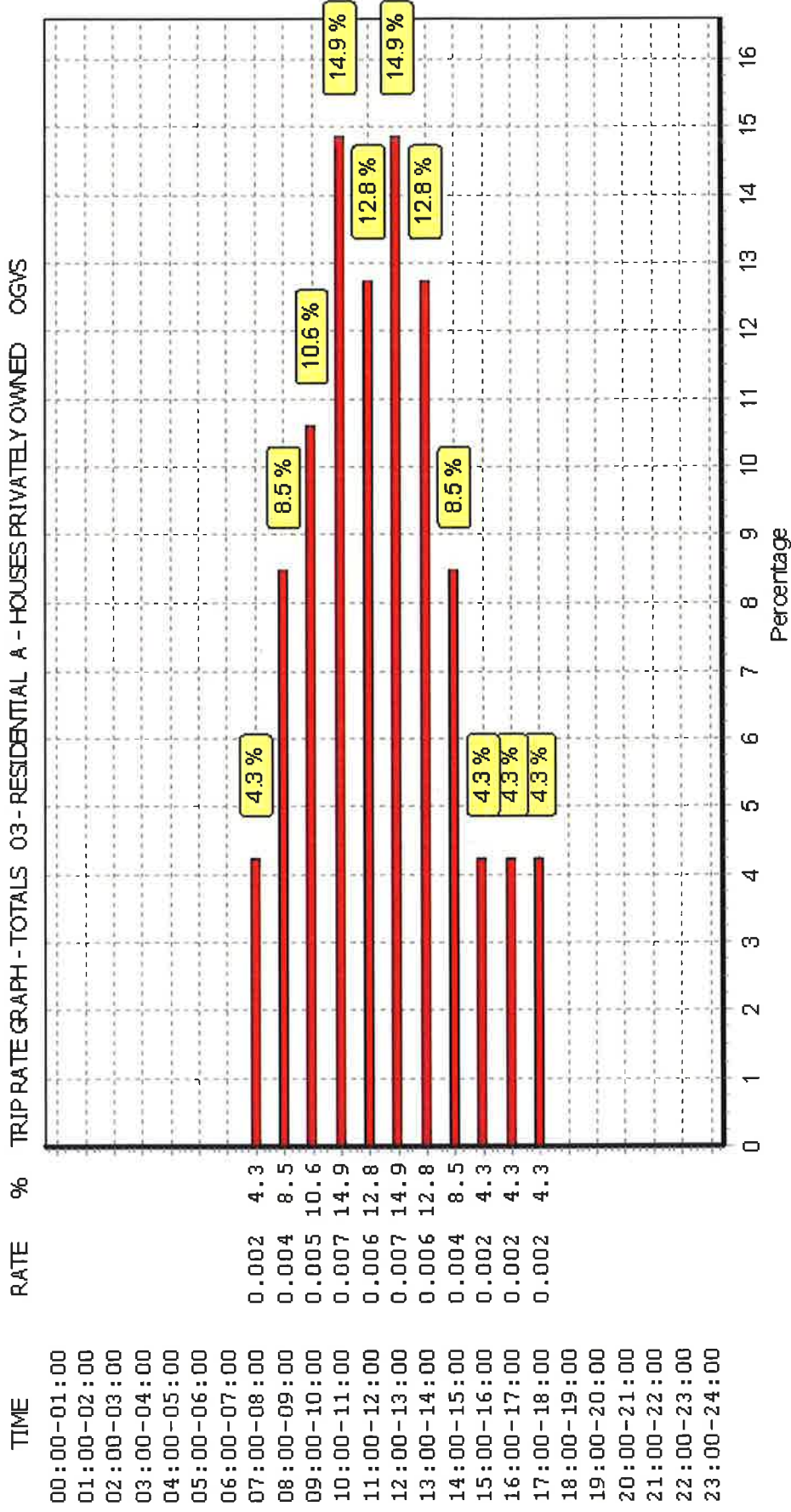
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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

PSVS**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	46	59	0.000	46	59	0.000	46	59	0.000
08:00 - 09:00	46	59	0.000	46	59	0.000	46	59	0.000
09:00 - 10:00	46	59	0.000	46	59	0.000	46	59	0.000
10:00 - 11:00	46	59	0.000	46	59	0.000	46	59	0.000
11:00 - 12:00	46	59	0.001	46	59	0.001	46	59	0.002
12:00 - 13:00	46	59	0.000	46	59	0.000	46	59	0.000
13:00 - 14:00	46	59	0.000	46	59	0.000	46	59	0.000
14:00 - 15:00	46	59	0.000	46	59	0.000	46	59	0.000
15:00 - 16:00	46	59	0.000	46	59	0.000	46	59	0.000
16:00 - 17:00	46	59	0.000	46	59	0.000	46	59	0.000
17:00 - 18:00	46	59	0.000	46	59	0.000	46	59	0.000
18:00 - 19:00	46	59	0.000	46	59	0.000	46	59	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

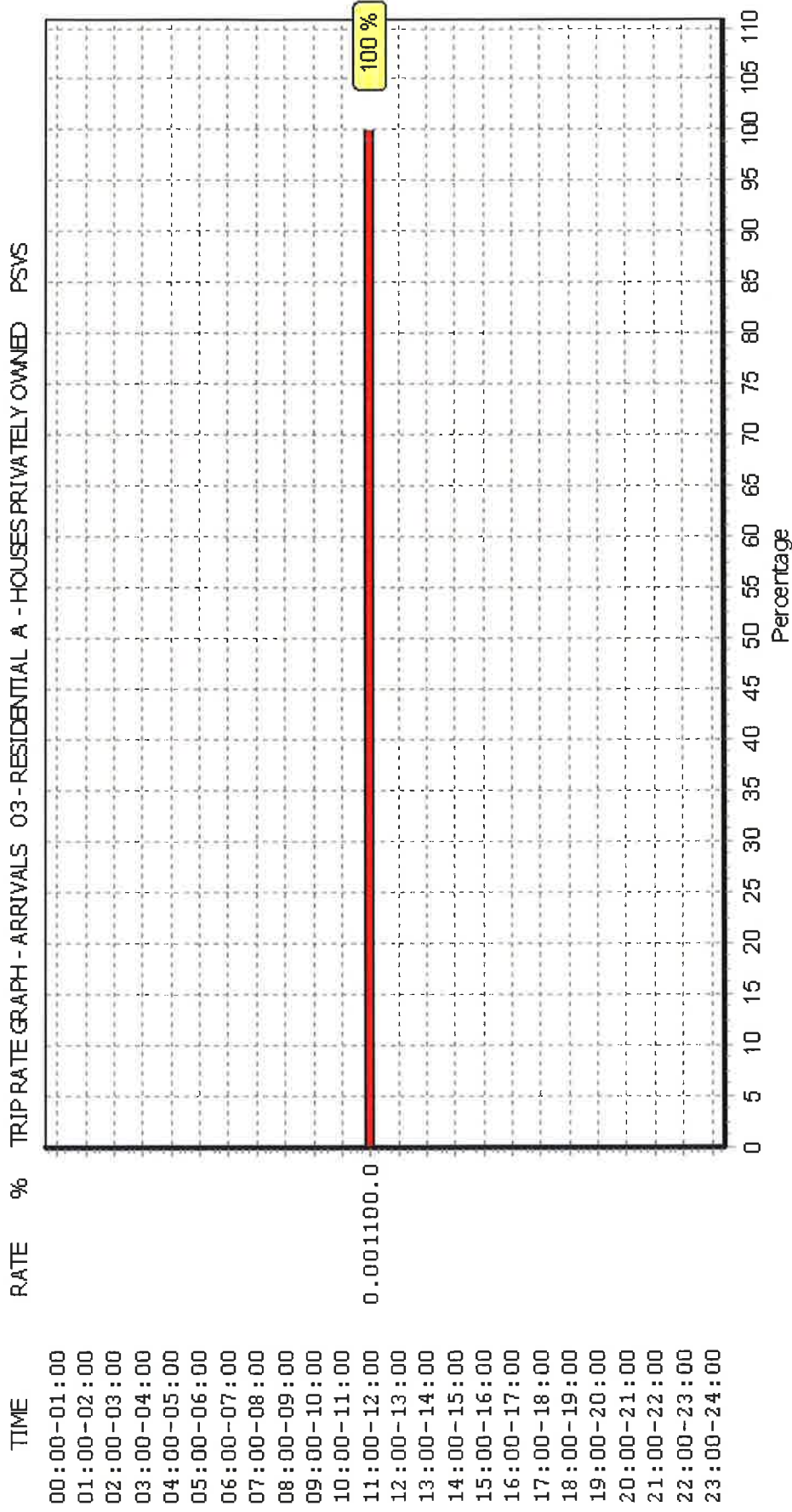
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

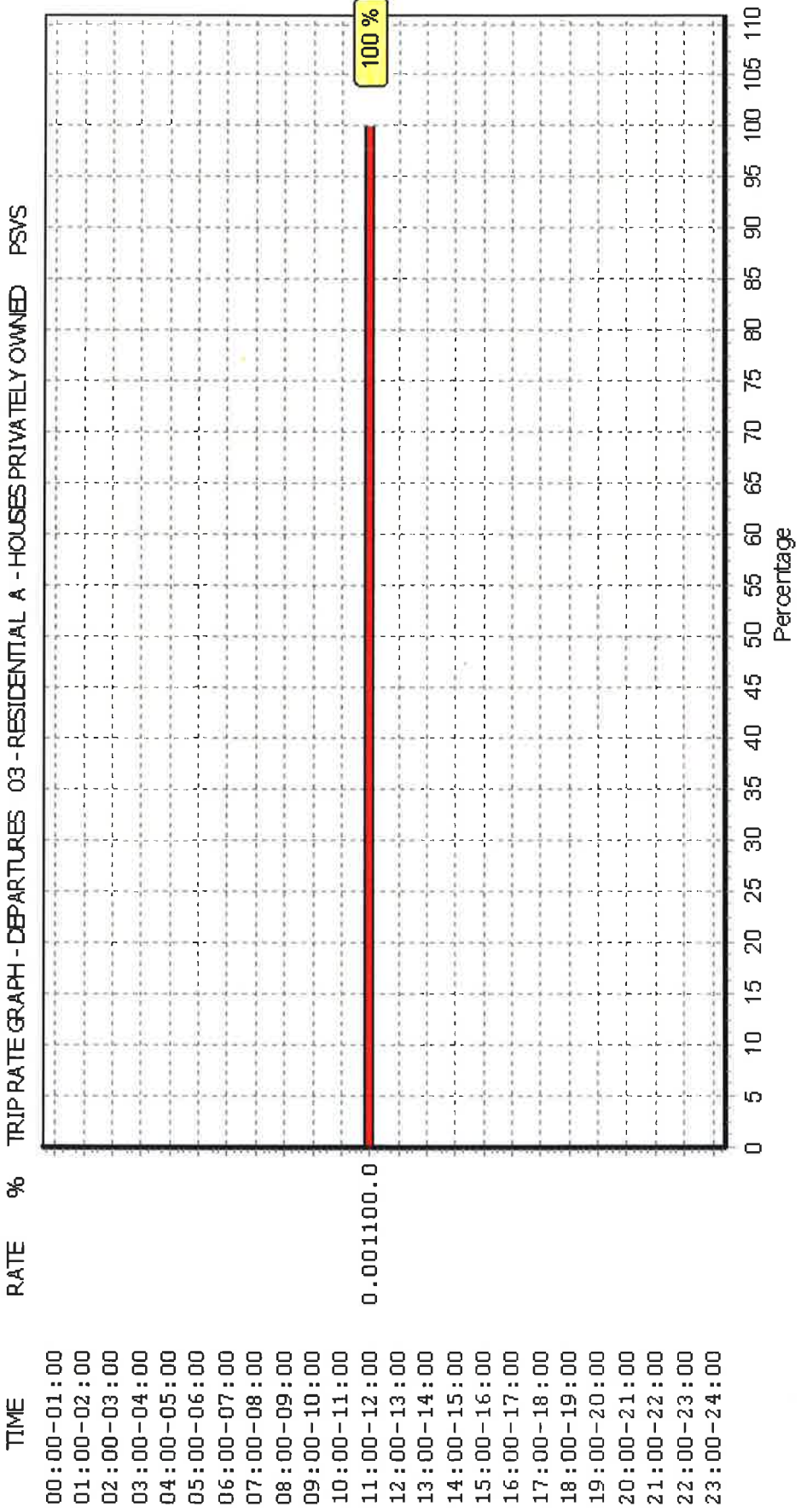
Parameter summary

Trip rate parameter range selected: 6 - 432 (units:)
 Survey date date range: 01/01/08 - 13/11/15
 Number of weekdays (Monday-Friday): 46
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

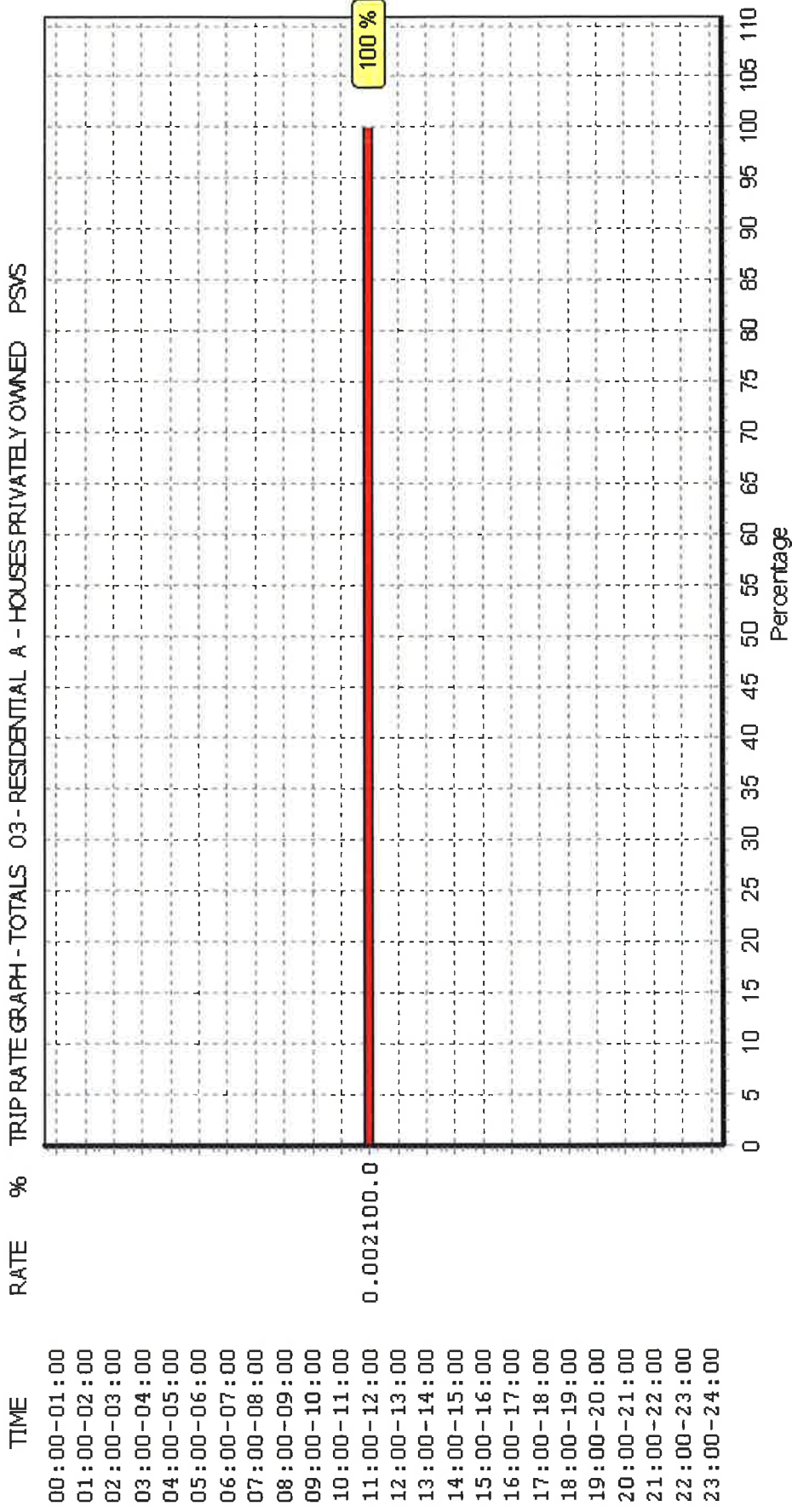


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRAVIS BAKER TRANSPORT PLANNING LTD 11 MALIN HILL, THE LACE MARKET NOTTINGHAM NG1 1JQ Licence No: 549501



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

CYCLISTS**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	46	59	0.005	46	59	0.017	46	59	0.022
08:00 - 09:00	46	59	0.001	46	59	0.016	46	59	0.017
09:00 - 10:00	46	59	0.002	46	59	0.005	46	59	0.007
10:00 - 11:00	46	59	0.003	46	59	0.008	46	59	0.011
11:00 - 12:00	46	59	0.004	46	59	0.003	46	59	0.007
12:00 - 13:00	46	59	0.007	46	59	0.004	46	59	0.011
13:00 - 14:00	46	59	0.005	46	59	0.004	46	59	0.009
14:00 - 15:00	46	59	0.004	46	59	0.004	46	59	0.008
15:00 - 16:00	46	59	0.014	46	59	0.004	46	59	0.018
16:00 - 17:00	46	59	0.013	46	59	0.004	46	59	0.017
17:00 - 18:00	46	59	0.016	46	59	0.008	46	59	0.024
18:00 - 19:00	46	59	0.008	46	59	0.005	46	59	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.082			0.082			0.164

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

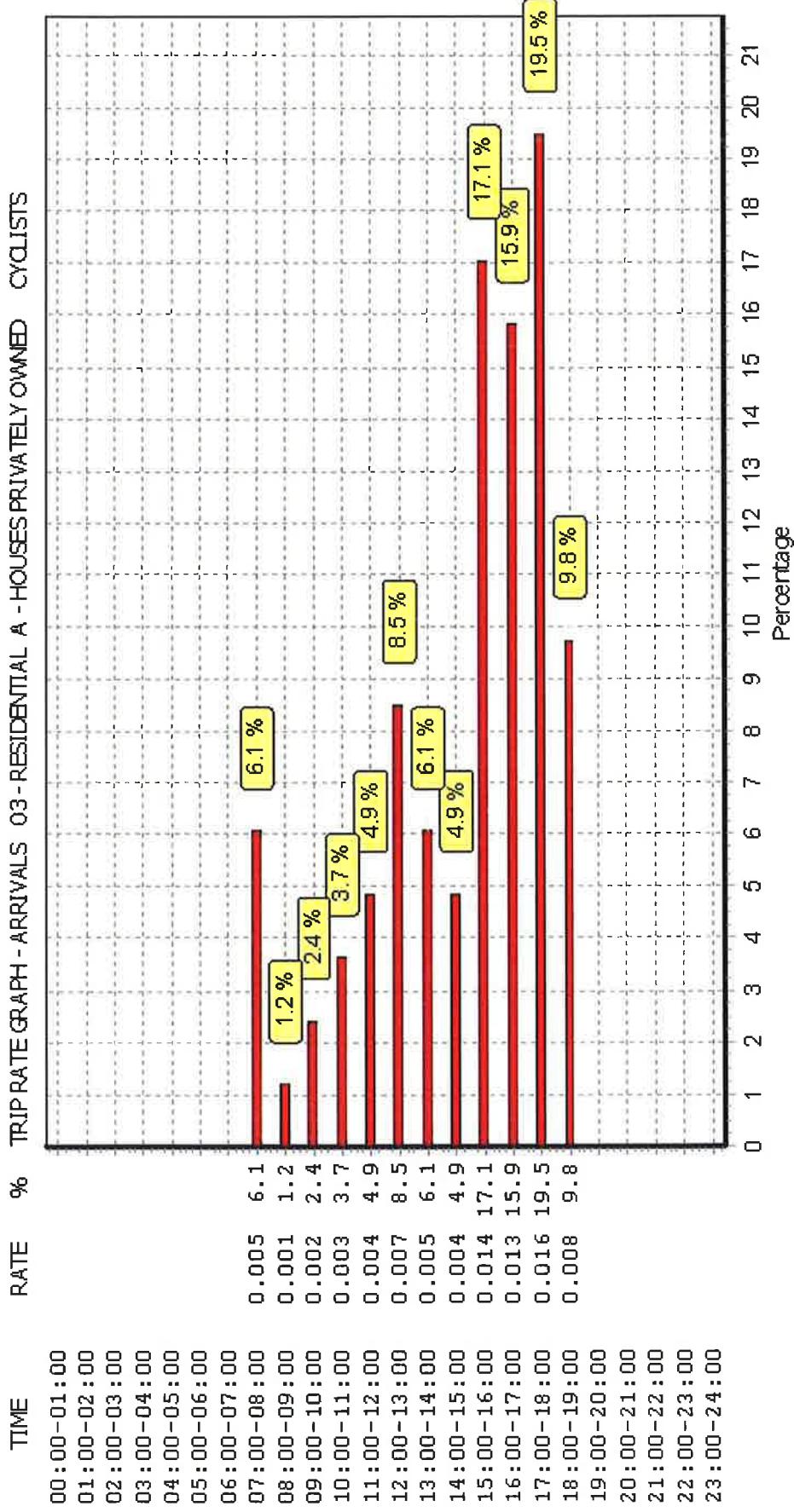
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

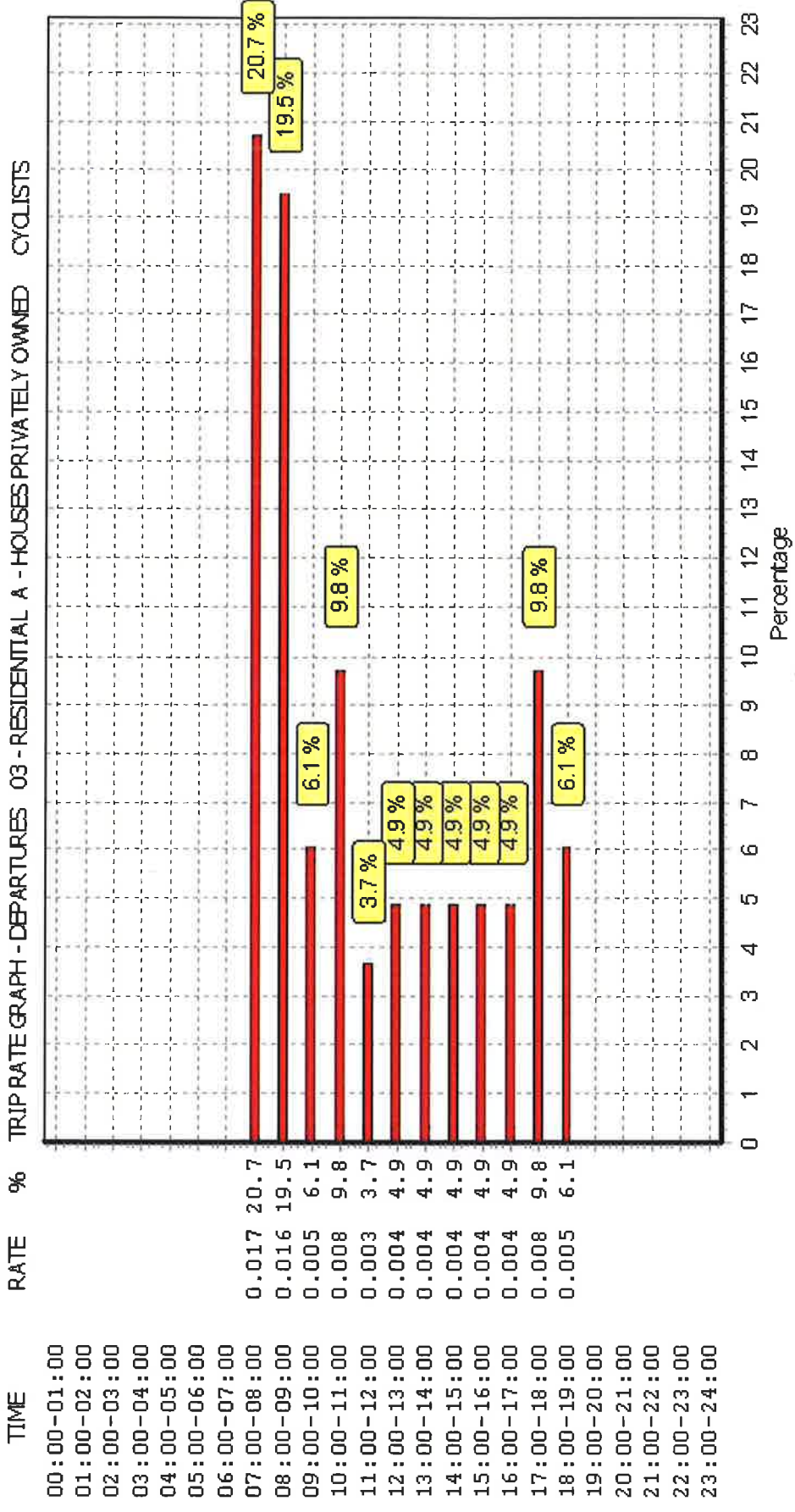
Trip rate parameter range selected:	6 - 432 (units:)
Survey date date range:	01/01/08 - 13/11/15
Number of weekdays (Monday-Friday):	46
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

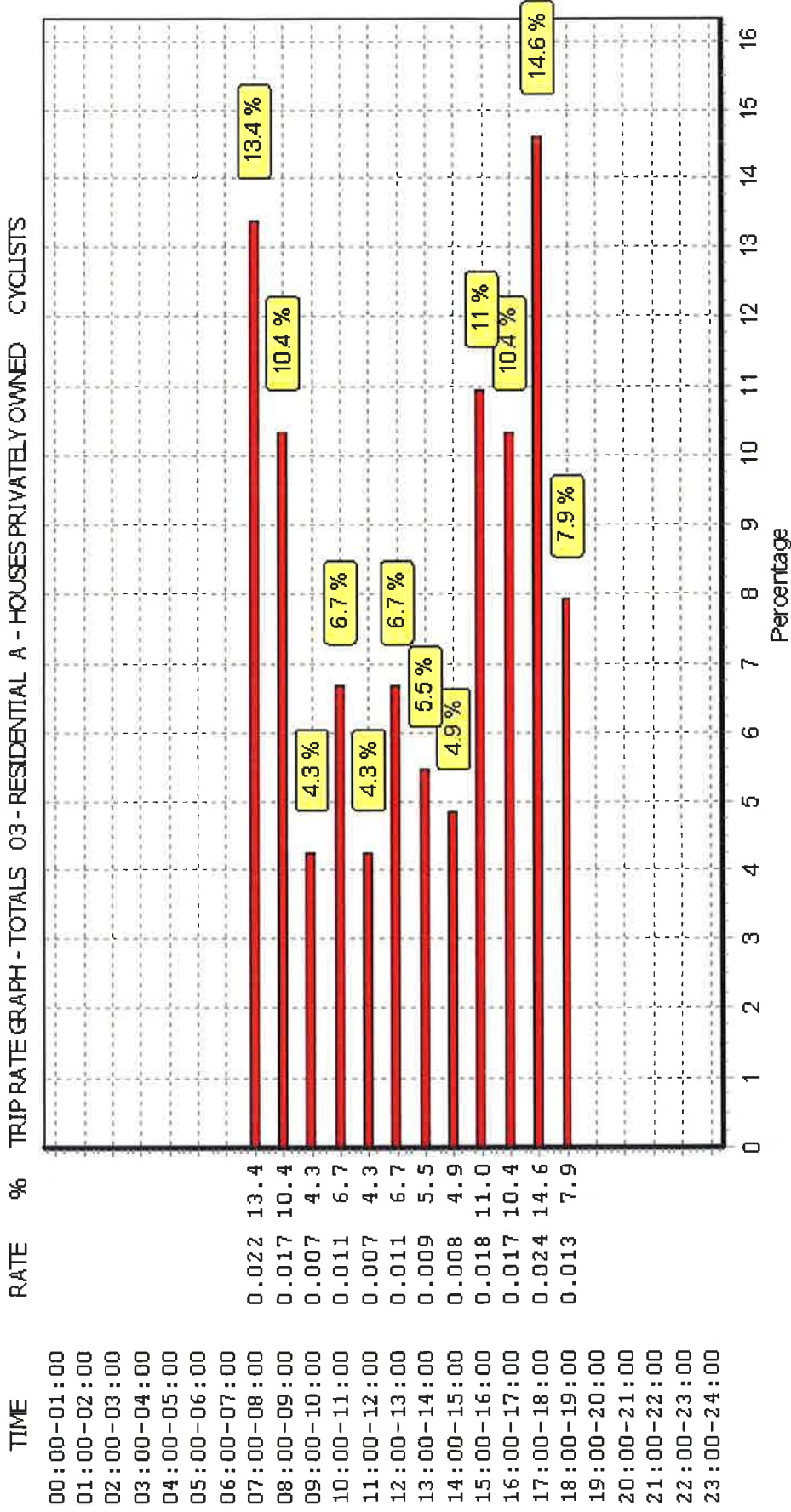
TRIP RATE GRAPH - ARRIVALS 03 - RESIDENTIAL A - HOUSES PRIVATELY OWNED CYCLISTS



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

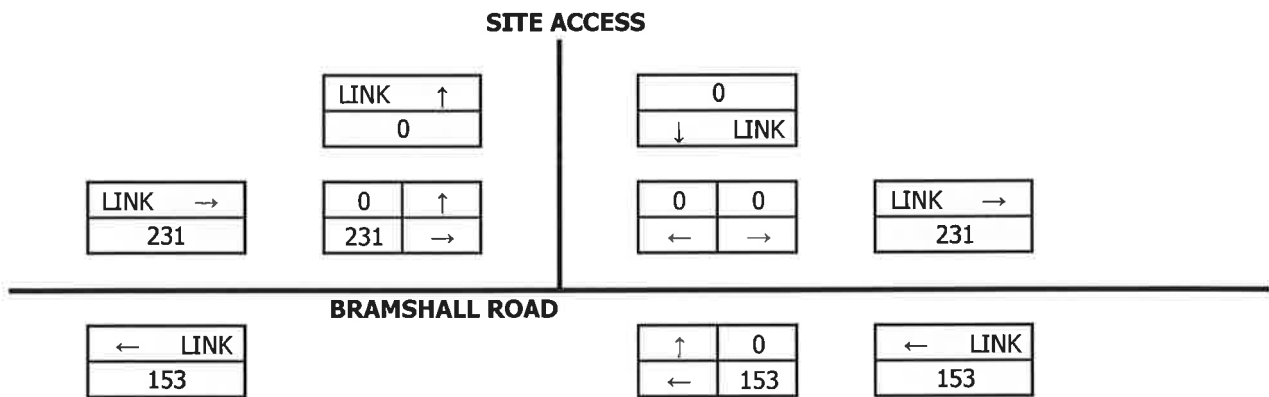


APPENDIX G: Capacity Assessment (Bramshall Road/Spine Road Junction)

**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

SURVEYED FLOWS 2012

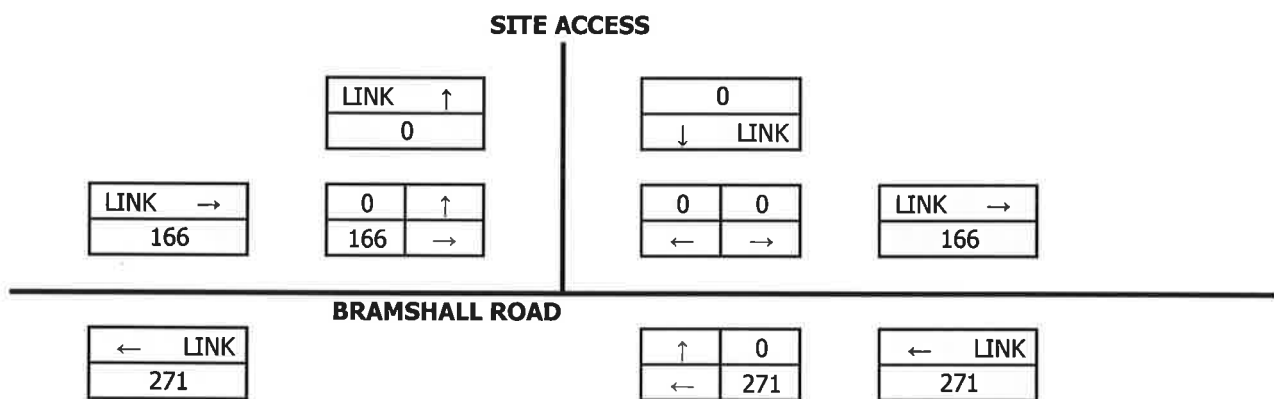
AM PEAK HOUR



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

SURVEYED FLOWS 2012

PM PEAK HOUR

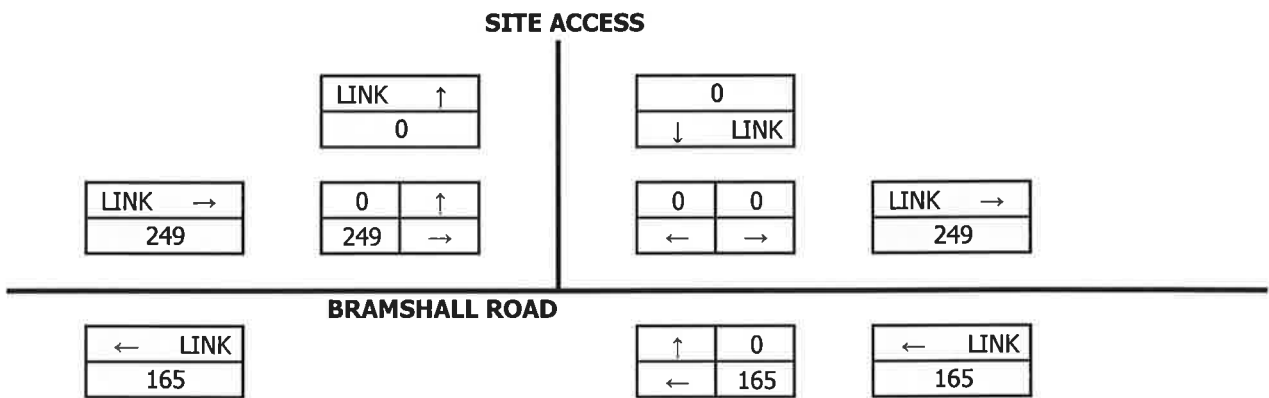


BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

BASE FLOWS 2018

AM PEAK HOUR

TRAFFIC GROWTH FACTOR 1.076

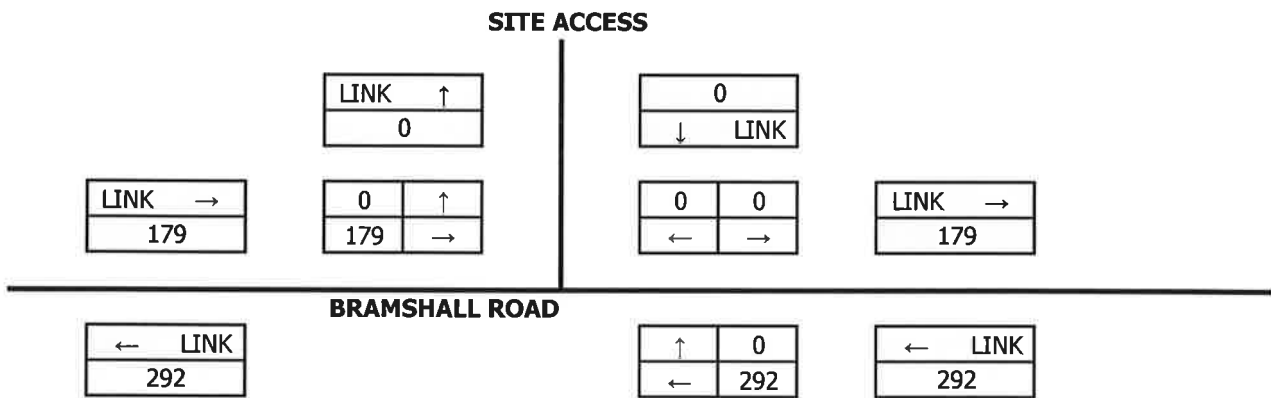


BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

BASE FLOWS 2018

PM PEAK HOUR

TRAFFIC GROWTH FACTOR 1.079



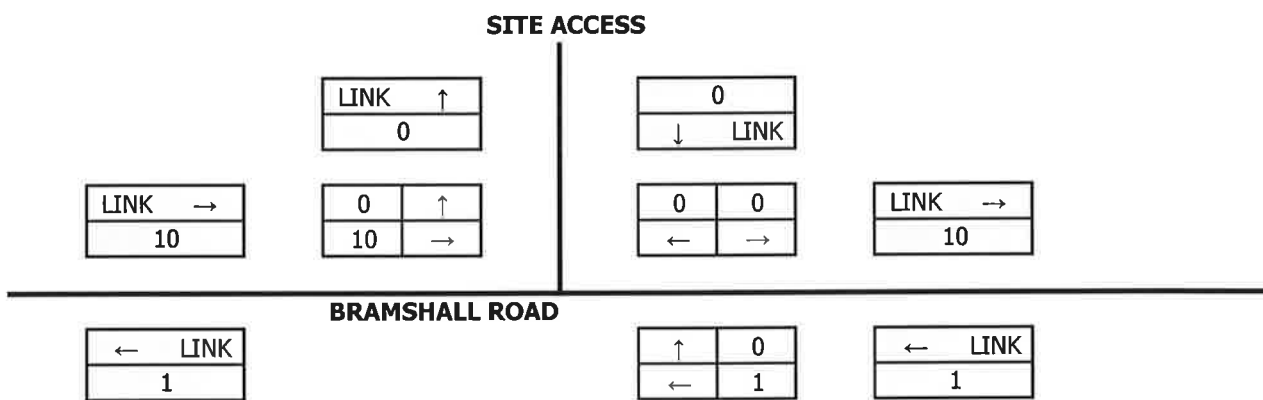
BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

COMMITTED DEVELOPMENT

AM PEAK HOUR

JCB

From TA Addendum, December 2012



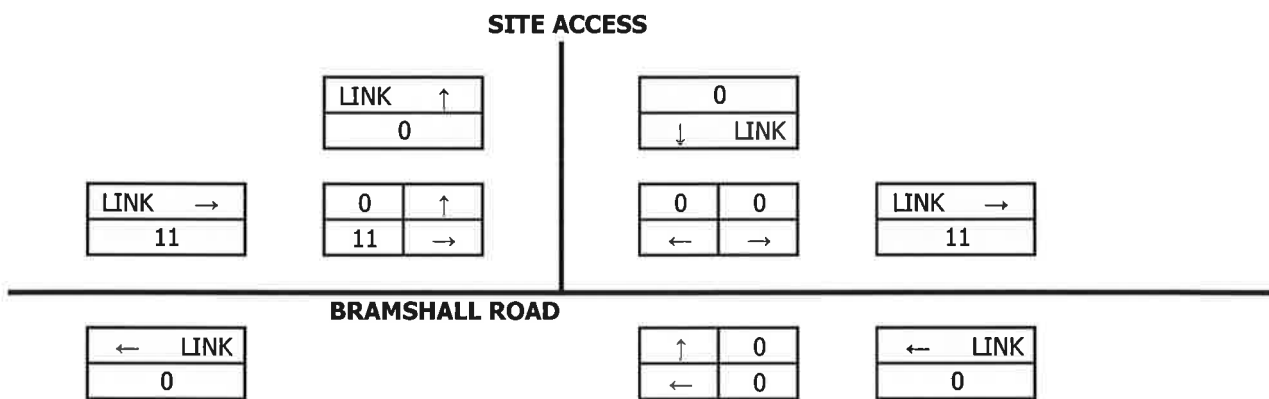
BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

COMMITTED DEVELOPMENT

PM PEAK HOUR

JCB

From TA Addendum, December 2012



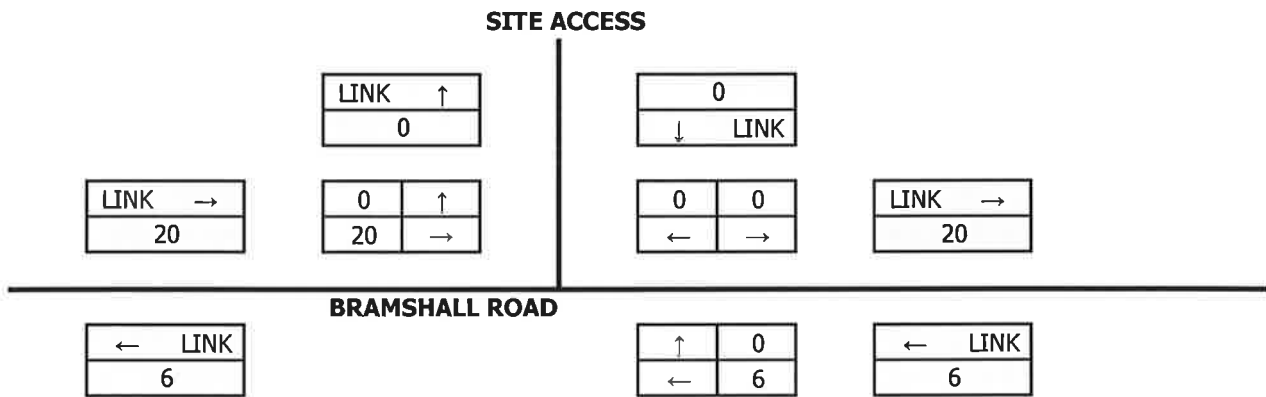
BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

COMMITTED DEVELOPMENT

AM PEAK HOUR

CARTERS SQUARE

From TA Addendum, December 2012



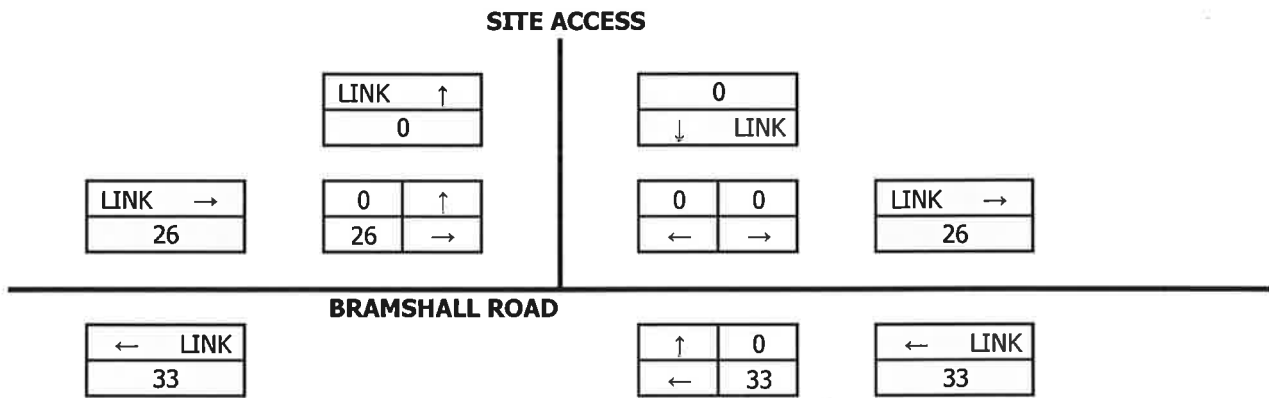
**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

COMMITTED DEVELOPMENT

PM PEAK HOUR

CARTERS SQUARE

From TA Addendum, December 2012



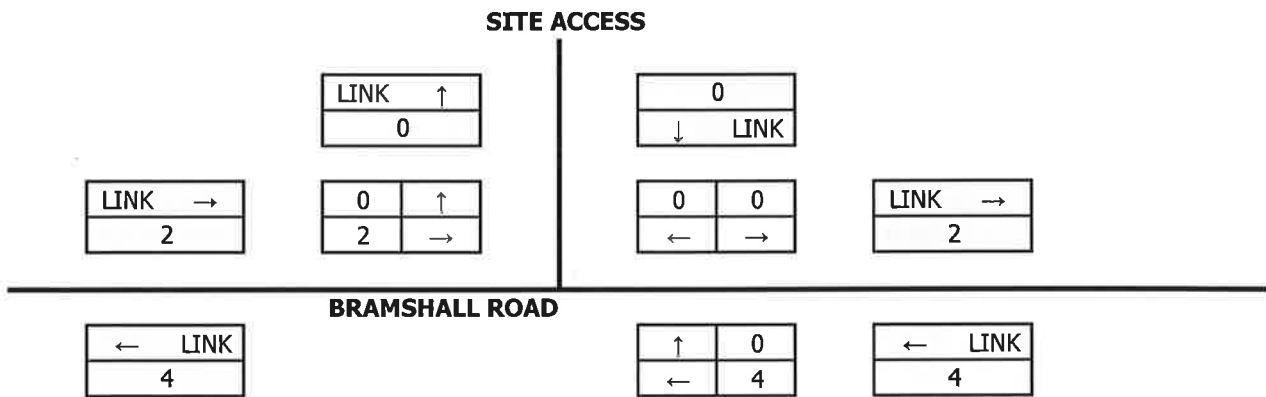
BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

COMMITTED DEVELOPMENT

AM PEAK HOUR

140 DWELLINGS OFF BRAMSHALL LANE (P/2013/01287)

From TA by Phil Jones Associates, November 2013, as submitted with outline application



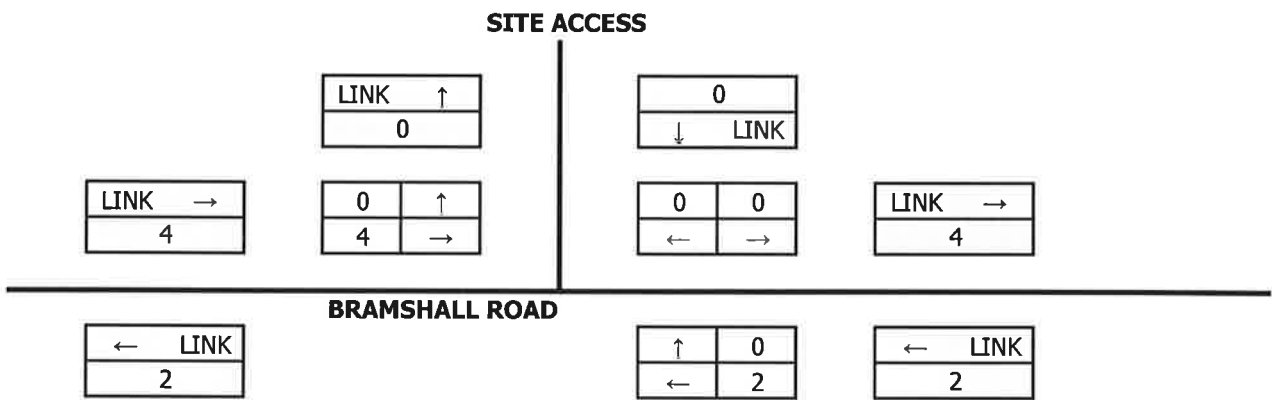
**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

COMMITTED DEVELOPMENT

PM PEAK HOUR

140 DWELLINGS OFF BRAMSHALL LANE (P/2013/01287)

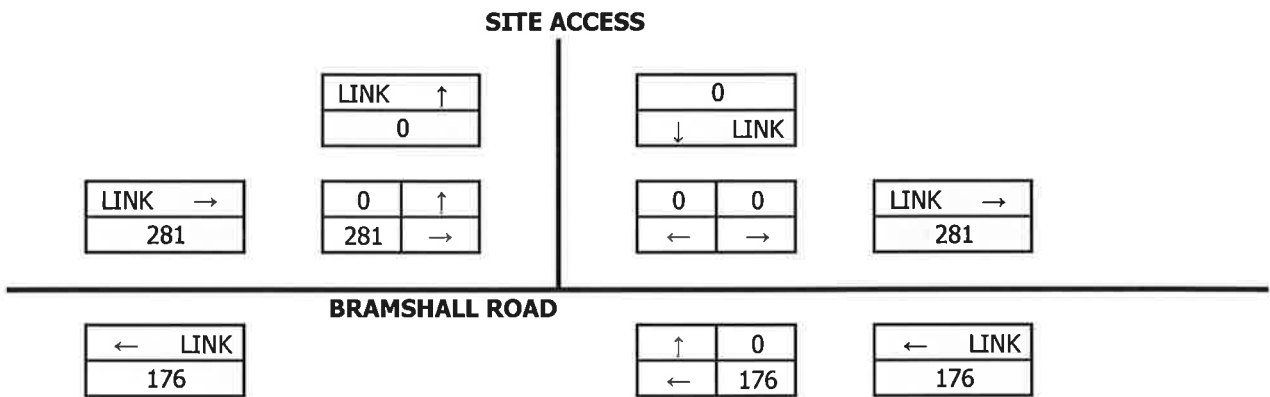
From TA by Phil Jones Associates, November 2013, as submitted with outline application



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

NO DEVELOPMENT FLOWS 2018

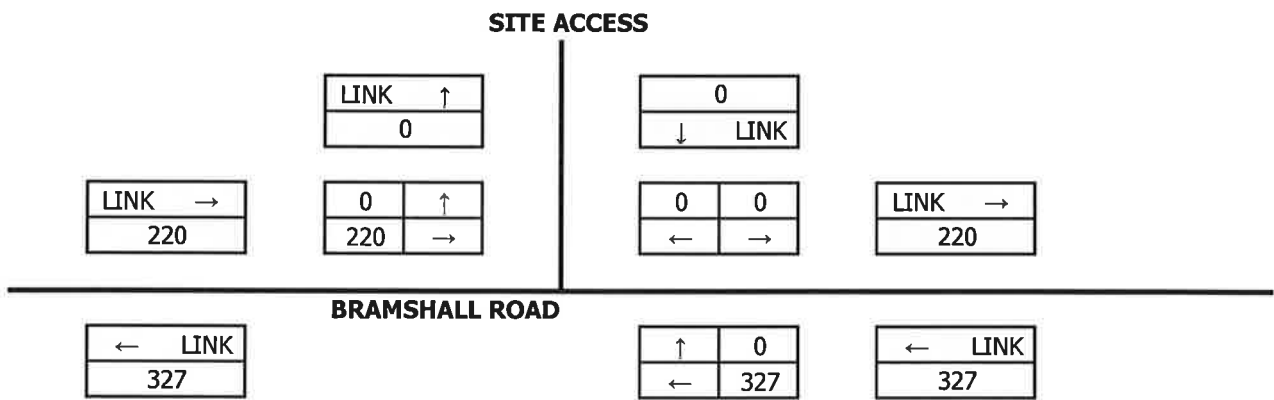
AM PEAK HOUR



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

NO DEVELOPMENT FLOWS 2018

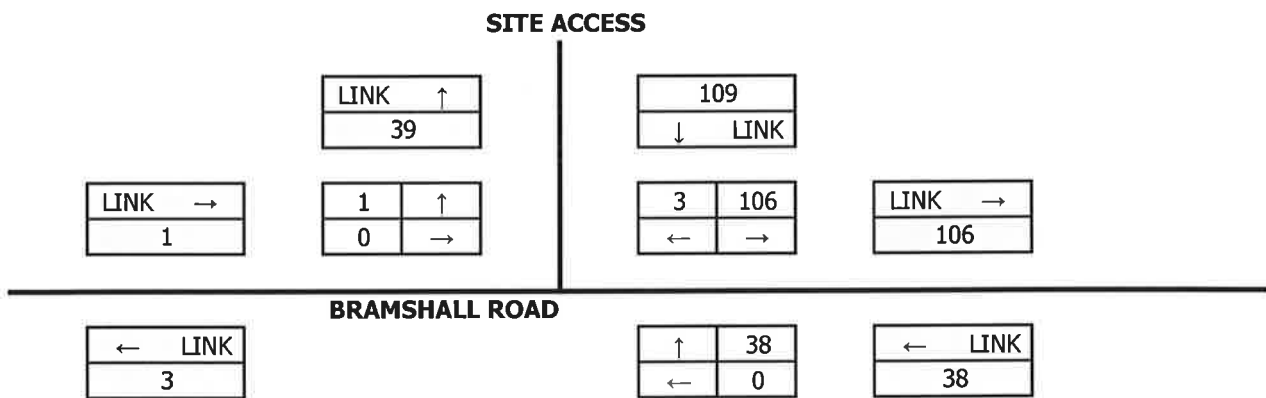
PM PEAK HOUR



BELLWAY HOMES PROPOSED RESIDENTIAL DEVELOPMENT BRAMSHALL ROAD, UTTOXETER

DEVELOPMENT FLOWS

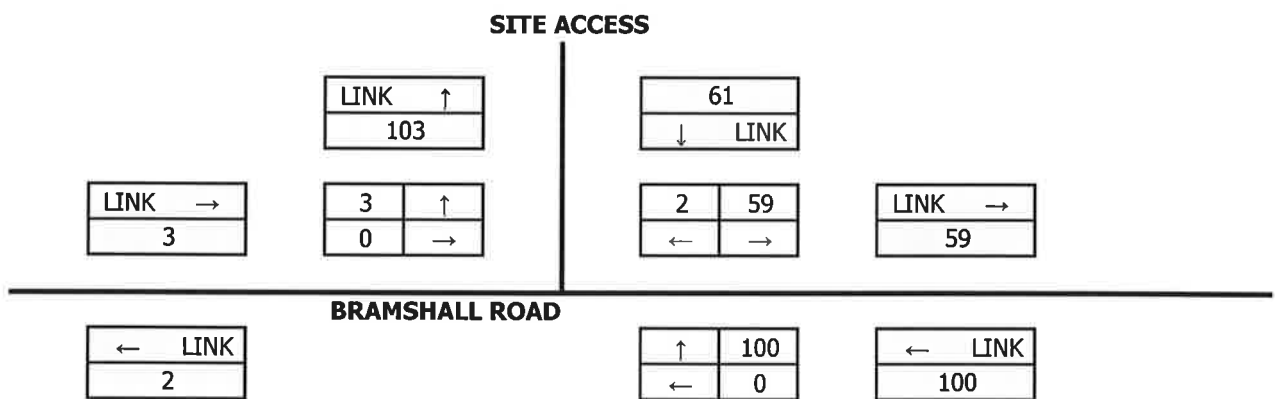
AM PEAK HOUR



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

DEVELOPMENT FLOWS

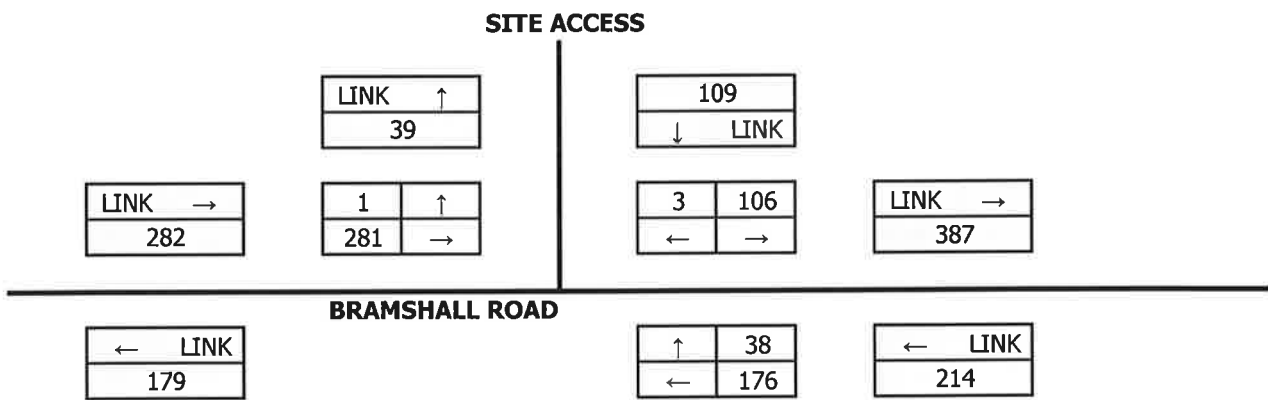
PM PEAK HOUR



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

WITH DEVELOPMENT FLOWS 2018

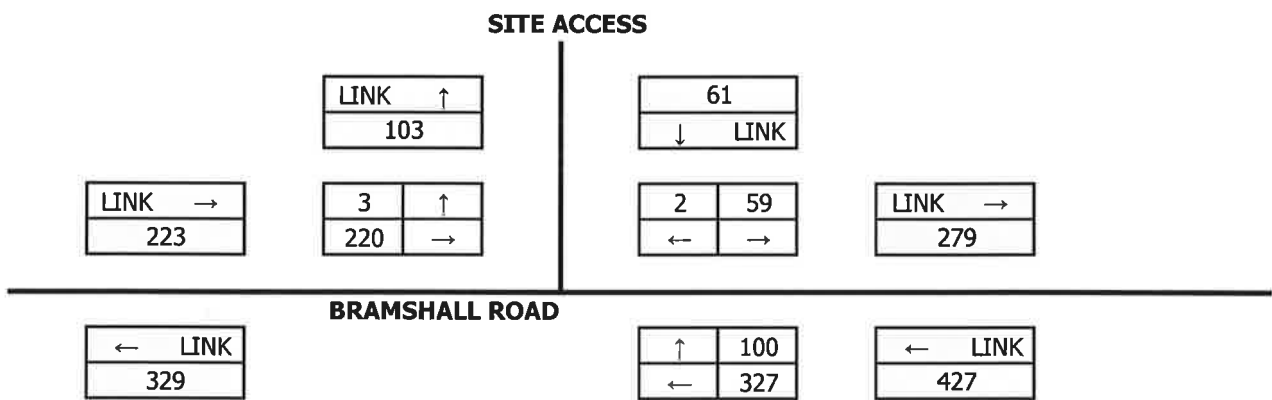
AM PEAK HOUR



**BELLWAY HOMES
 PROPOSED RESIDENTIAL DEVELOPMENT
 BRAMSHALL ROAD, UTTOXETER**

WITH DEVELOPMENT FLOWS 2018

PM PEAK HOUR



Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trisoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: J1 Bramshall Road.j9
Path: G:\General\PROJECTS\T17070 Uttoxeter\Project Calculations\JUNCTIONS 9
Report generation date: 29-Mar-17 12:08:09 PM

»2018 with development flows, AM
 »2018 with development flows, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 with development flows								
Stream B-AC	0.3	8.00	0.21	A	0.1	6.99	0.12	A
Stream C-AB	0.1	6.59	0.07	A	0.2	7.28	0.18	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

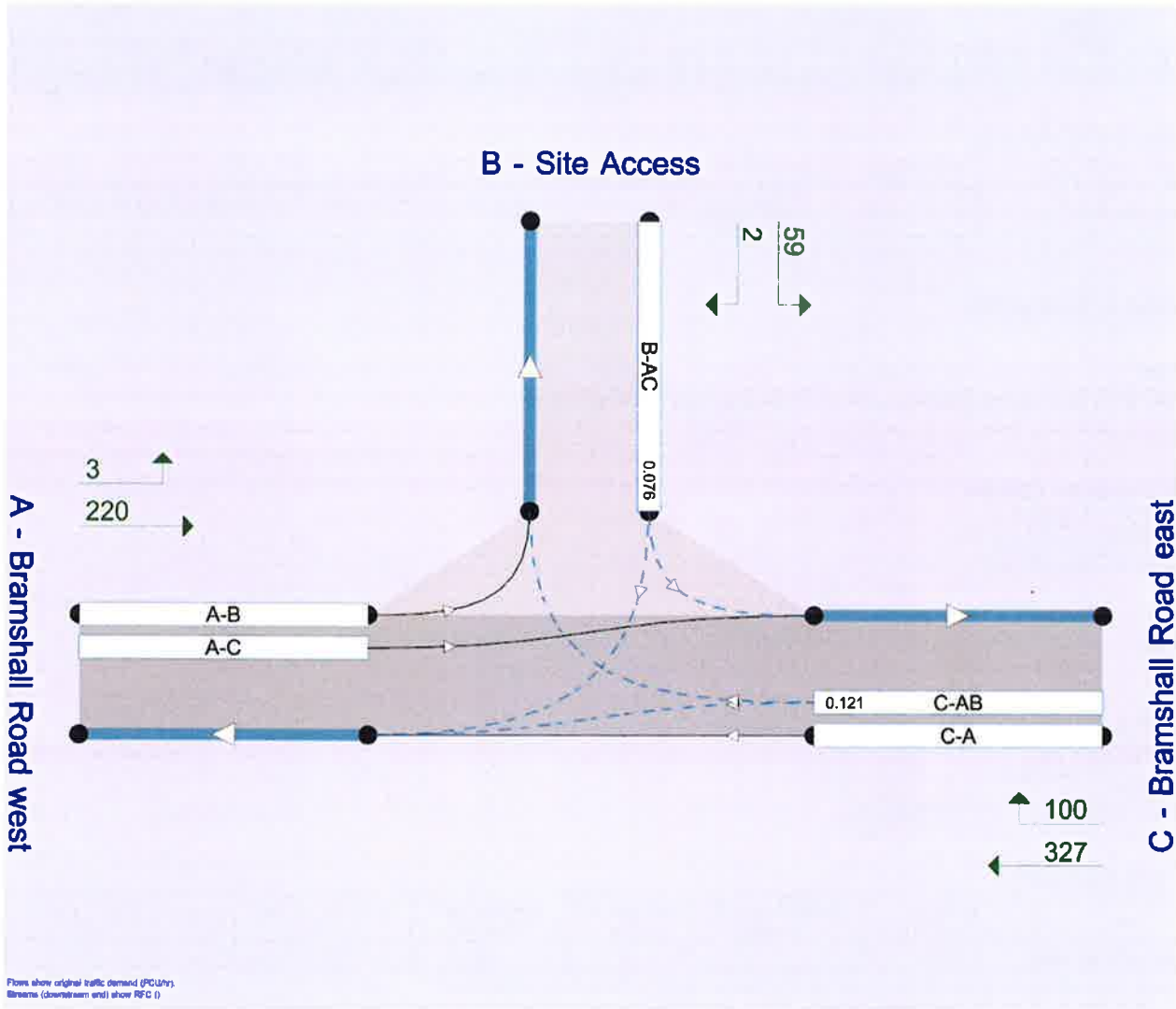
File summary

File Description

Title	Bramshaw Road - Site Access (Phase 1)
Location	Uttoxeter
Site number	Phase 1
Date	29-Mar-17
Version	1
Status	TS
Identifier	Site Access
Client	St Modwen
Jobnumber	T17070
Enumerator	TBTPWilliam.Harriman
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 with development flows	AM	ONE HOUR	07:30	09:00	15	✓
D2	2018 with development flows	PM	ONE HOUR	07:30	09:00	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2018 with development flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Bramshall Road west		Major
B	Site Access		Minor
C	Bramshall Road east		Major

Major Arm Geometry

Arm	Width of - carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Bramshall Road east	6.00		✓	3.00	70.0	✓	5.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.00	70	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	525	0.096	0.242	0.152	0.345
1	B-C	655	0.100	0.254	-	-
1	C-B	668	0.259	0.259	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 with development flows	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bramshall Road west		ONE HOUR	✓	282	100.000
B - Site Access		ONE HOUR	✓	109	100.000
C - Bramshall Road east		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bramshall Road west	B - Site Access	C - Bramshall Road east
From	A - Bramshall Road west	0	1	281
	B - Site Access	3	0	106
	C - Bramshall Road east	176	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bramshall Road west	B - Site Access	C - Bramshall Road east
From	A - Bramshall Road west	0	0	0
	B - Site Access	0	0	0
	C - Bramshall Road east	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.21	8.00	0.3	A	100	150
C-AB	0.07	6.59	0.1	A	35	52
C-A					162	242
A-B					0.92	1
A-C					258	387

Main Results for each time segment
07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	82	21	596	0.138	81	0.0	0.2	6.990	A
C-AB	29	7	613	0.047	28	0.0	0.0	6.156	A
C-A	133	33			133				
A-B	0.75	0.19			0.75				
A-C	212	53			212				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	98	24	585	0.167	98	0.2	0.2	7.387	A
C-AB	34	9	602	0.057	34	0.0	0.1	6.334	A
C-A	158	40			158				
A-B	0.90	0.22			0.90				
A-C	253	63			253				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	120	30	570	0.210	120	0.2	0.3	7.990	A
C-AB	42	10	588	0.071	42	0.1	0.1	6.594	A
C-A	194	48			194				
A-B	1	0.28			1				
A-C	309	77			309				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	120	30	570	0.210	120	0.3	0.3	7.997	A
C-AB	42	10	588	0.071	42	0.1	0.1	6.594	A
C-A	194	48			194				
A-B	1	0.28			1				
A-C	309	77			309				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	98	24	585	0.167	98	0.3	0.2	7.401	A
C-AB	34	9	602	0.057	34	0.1	0.1	6.336	A
C-A	158	40			158				
A-B	0.90	0.22			0.90				
A-C	253	63			253				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	82	21	596	0.138	82	0.2	0.2	7.011	A
C-AB	29	7	613	0.047	29	0.1	0.0	6.162	A
C-A	133	33			133				
A-B	0.75	0.19			0.75				
A-C	212	53			212				

2018 with development flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 with development flows	PM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Bramshall Road west		ONE HOUR	✓	223	100.000
B - Site Access		ONE HOUR	✓	61	100.000
C - Bramshall Road east		ONE HOUR	✓	427	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Bramshall Road west	B - Site Access	C - Bramshall Road east
From	A - Bramshall Road west	0	3	220
	B - Site Access	2	0	59
	C - Bramshall Road east	327	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Bramshall Road west	B - Site Access	C - Bramshall Road east
From	A - Bramshall Road west	0	0	0
	B - Site Access	0	0	0
	C - Bramshall Road east	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	6.99	0.1	A	56	84
C-AB	0.18	7.28	0.2	A	92	138
C-A					300	450
A-B					3	4
A-C					202	303

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	46	11	604	0.076	46	0.0	0.1	6.443	A
C-AB	75	19	625	0.121	75	0.0	0.1	6.540	A
C-A	246	62			246				
A-B	2	0.56			2				
A-C	166	41			166				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55	14	595	0.092	55	0.1	0.1	6.663	A
C-AB	90	22	616	0.146	90	0.1	0.2	6.837	A
C-A	294	73			294				
A-B	3	0.67			3				
A-C	198	49			198				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	67	17	582	0.115	67	0.1	0.1	6.984	A
C-AB	110	28	605	0.182	110	0.2	0.2	7.274	A
C-A	360	90			360				
A-B	3	0.83			3				
A-C	242	61			242				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	67	17	582	0.115	67	0.1	0.1	6.987	A
C-AB	110	28	605	0.182	110	0.2	0.2	7.280	A
C-A	360	90			360				
A-B	3	0.83			3				
A-C	242	61			242				



08:30 - 08:45

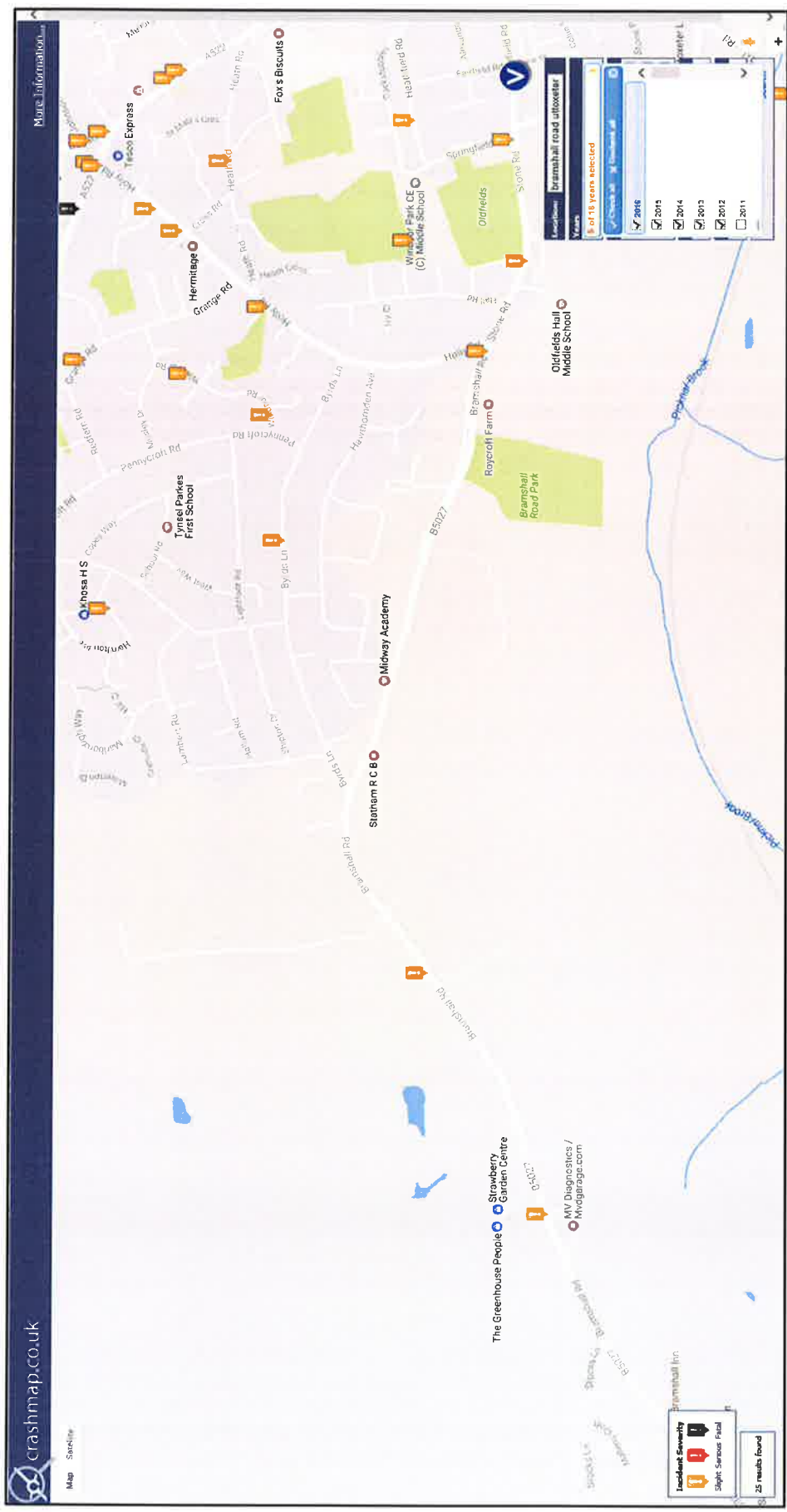
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55	14	595	0.092	55	0.1	0.1	6.669	A
C-AB	90	22	616	0.146	90	0.2	0.2	6.848	A
C-A	294	73			294				
A-B	3	0.67			3				
A-C	198	49			198				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	46	11	604	0.076	46	0.1	0.1	6.453	A
C-AB	75	19	625	0.121	75	0.2	0.1	6.556	A
C-A	246	62			246				
A-B	2	0.56			2				
A-C	166	41			166				



APPENDIX H: Crashmap Analysis



Map: Stanfley

crashmap.co.uk

More information

Incident Severity
 Slight Serious Fatal

25 results found

Search: Bramshill road intersection

Years: 6 of 16 years selected

<input checked="" type="checkbox"/>	2016
<input checked="" type="checkbox"/>	2015
<input checked="" type="checkbox"/>	2014
<input checked="" type="checkbox"/>	2013
<input checked="" type="checkbox"/>	2012
<input type="checkbox"/>	2011

The Greenhouse People
 Strawberry Garden Centre

MV Diagnostics / MyGarage.com

Sturham R C
 Midway Academy

Tyresel Parkes First School

Oldfields Hall Middle School

Oldfields

Fox's Biscuits

