

Access Highway Design Planning Consultancy.

HIGHWAYS REPORT

**In support of a suggested allocation of land for a
residential development of up to 40 dwellings
on land off York Close / Essex Drive
Bidduph**



**Client: Seabridge Developments Limited
Dec 2015**

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1 INTRODUCTION

- 1.1 Access hdpc have been commissioned by Seabridge Developments Limited to produce a Highways Report to support the LHA's assertion that land off York Close Biddulph, could potentially be allocated for a development of up to 40 dwellings without detriment to both highways safety or to the capacity of the surrounding local highway network, to be included in the emerging site allocations plan. (See location Plan 1a, 1b and Site Plan 2)
- 1.2 The application site is located on unkempt undeveloped land off York Close adjacent to a residential area. Access would be taken off York Close, via Essex Drive and Mow Lane. The site offers excellent pedestrian / cycle connectivity / permeability and can be successfully grafted onto the edge of the settlement to form an integral and accessible part of the urban area.
- 1.3 The site forms part of Staffordshire Moorland Strategic Housing Land Availability Assessment (SHLAA) Site Reference Number 117, SMDC Ref No. BD062 (Land north of York Close / Essex Drive) See Appendix 1, site assessment form.
- 1.4 This report provides supporting highways information for a potential residential development of up to 40 dwellings, on land off York Close.
- 1.5 Section 2 of the report will consider the existing highway conditions and Sections 3 provides details of the proposed site allocation.
- 1.6 The relevant highway related planning policies are considered in Section 4 and the potential traffic impact described in Section 5 of the report.

- 1.7 The accessibility of the site is examined in Section 6, details of the accident data is provided in Section 7 and a conclusion in section 8.

2 EXISTING HIGHWAY CONDITIONS

- 2.1 This potential site falls within the administrative region of Staffordshire Moorlands and the site is adjacent to an established residential location at the end of York Close. The site is close to local amenities, with schools and public transport all within a short walking distance.
- 2.2 The site is bound to the south and west by residential estates with good connectivity into Gillow Heath and to the centre of Biddulph town. York Close and the surrounding streets are all subject to a speed limit of 30mph. York Close has a system of public street lighting in place, with a footways on both sides.
- 2.3 There is an existing public footpath just inside the boundary of the site alongside the embankment along which the National Cycle Route 55 runs. It enters the cycle way where the footpath from York Close does also. There is the potential to reroute this public footpath along the road within the site and connect to the existing cycle way where the footpath from York Close joins the cycle way.
- 2.4 This site is located in a very sustainable location for both walking, cycling and for public transport, with bus stops close by providing access to Congleton, Kidsgrove, Leek, Newcastle-under-Lyme, Stoke-on-Trent, Nantwich and Crewe.

2.5 Existing Highway Network

- 2.6 York Close links to Essex Drive and Mow Lane connects to the A527 with Congleton to the north, Kisdgrove, Newcastle-under-Lyme and Stoke-on-Trent to the south and Nantwich and Crewe to the West. (See location Plans 1b)
- 2.7 York Close is generally around 5 metres wide to the site boundary, with a 1.8 metre wide footway running along both sides. There is a system of street lighting in place along York Close, which is subject to a 30mph speed limit.
- 2.8 Speed readings have been taken along York Close and Mow Lane in accordance with TA22/81 resulting in 85th percentile readings of 12mph mph along York Close and 26mph along Essex Drive. This demonstrates that both roads operating well below the design speed limit. *(Please note that due to the low number of vehicular movements, it wasn't practical to record 100 vehicular movement in each direction).*
- 2.9 At the junctions of York Close with Essex Drive and Essex Drive with Mow Lane, excellent visibility and forward stopping site distances are available and in accordance with manual for streets. All of the junction's radii also comply with Manual for Streets Guidelines.
- 2.10 An additional small development close to these priority junctions would not have a significant impact upon them, as they are all operating well below their theoretical capacities at present.

3 SITE ALLOCATION

3.1 This site has the potential to support a residential development of up to 40 units. York Close and the surrounding roads, currently operate well below their theoretical capacity and any increase in vehicular movements generated from this site would have little or no impact on any of the local priority junctions.

3.2 Vehicular Access

3.3 York Close is subject to a speed limit of 30mph and therefore the appropriate design standards to use are Manual for Streets. Forward stopping sight distances at the site entrance with York Close can also comply with specification within Manual for Streets.

3.4 Discussions took place with the highways authority, who agreed in principle that this site could be developed for residential use. The location and specification of the access would be constructed in accordance with Staffordshire Moorland design guide for the construction of roads and footways.

3.5 An access road to serve the site would need to be constructed to an adoptable standard, able to accommodate refuse vehicles. Forward visibility at this location is achievable and in accordance with the Manual for Streets Guidelines.

3.6 A sensitivity analysis of Essex Drive junction with Mow Lane was carried out at peak times and showed free flowing traffic movements taking place with plenty of gaps in the traffic along Mow Lane to aid egress with Essex Drive. The surrounding road network has adequate road and foot way widths to accommodate the existing traffic and pedestrian movements. A small development off York Close of up to 40 dwellings would therefore not have a severe impact on York Close, Essex Drive, Mow Lane or along the A527 during peak times and the highways authority agreed.

3.7 Pedestrian and Cycle Access

3.8 Enhanced pedestrian links could be provided to improve pedestrian connectivity across the site between Essex Drive, York Close and Long Valley Road. The existing railway walk (national route 55) shall have links to the site and can be diverted if required. See example provided in Plan N3.

3.9 The National Cycle Network Route 55, connects Biddulph with Congleton to the north and as far as Leek Road at Stoke-on Trent to the south. This route is adjacent to this site and offers a sustainable connection to Biddulph and Congleton to the north and as far as Leek Road, Stoke-on Trent to the south.

4 TRANSPORT PLANNING POLICY

4.1 National Policy

4.2 The relevant national policy documents are the National Planning Policy Framework (NPPF) published in March 2012 and the National Planning Practice Guidance (NPPG) published in April 2014. This guidance sets out the Government's planning policies to achieve sustainable development.

4.3 The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure, safe and suitable access to the site can be achieved for all people, improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

4.4 Increasing travel choice and reducing dependency on car travel is an established aim across all areas of government policy development, documents and guidance alongside addressing climate change and reducing CO₂ emissions. Travel planning to date has focused on reducing single occupancy car use to specific destinations. Recent national guidance has broadened this, outlining the potential for Residential Travel Plans and addressing trips generated from individual origins (homes) to multiple and changing destinations. The Department for Transport (DfT) also published "Smarter Choices –

4.5 Changing the Way We Travel" focusing on softer education and persuasive measures which are a key element of travel plans.

4.6 National planning policy ensuring that development plans and planning application decisions contribute to delivery of development that is sustainable. It states that development should ensure environmental, social and economic objectives will be achieved together over time.

4.7 It will also contribute to global sustainability, by addressing the causes and impacts of climate change, reducing energy use and emissions by encouraging development patterns that reduce the need to travel by car and impact of transporting goods as well as in making decisions in the location and design of development.

4.8 Future of Transport 2004

4.9 2004, Department for Transport (DfT) published a long-term strategy (Future of Transport White Paper) which examines the factors that will shape travel and transport over the next thirty years. It sets out how the Government will respond to the increasing demand for travel, maximising the benefits of transport while minimising the negative impact on people and the environment.

4.10 Central to the strategy is the need to bring transport costs under control, the importance of shared decision making at local, regional and national levels to ensure better transport delivery, and improvements in the management of the network to make the most of existing capacity.

4.11 National Planning Policy Framework

4.12 The NPPF has replaced the previous PPG13 and sets out the policy framework for sustainable development and supersedes the previous advice. Abstracts are provided for reference, **the bold italics** are added to emphasis the key policies related to the development.

4.13 Achieving sustainable development

4.14 There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- an economic role - contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- a social role - supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, **with accessible local services that reflect the community's needs and support its health, social and cultural well-being**; and
- an environmental role - contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

4.15 The presumption in favour of sustainable development

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

For decision-taking this means:

- approving development proposals that accord with the development plan without delay; and

- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:
- any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or
- specific policies in this Framework indicate development should be restricted

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

4.18 Core planning principles

4.19 Within the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision-taking.

- encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value;
- actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable; and
- take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs.

5.0 TRAFFIC IMPACT ANALYSIS

5.1 Introduction

5.2 The guidance thresholds in the DfT Guidance on Transport Assessments indicate that a proposed development of up to 40 units would support a Transport Statement. The following section of the report considers the traffic impact of the development proposals on the local highway network.

5.2 Traffic Surveys

5.3 In order to assess the impact of a development up to 40 dwellings on the local highway network, peak hour traffic surveys were undertaken at York Close junction with Essex Drive

5.4 The AM and PM peak hours were identified as 0800 to 0900 hours and 1700 to 1800 hours.

5.5 The results from the traffic surveys carried out during peak times are as follows:

- **York Close junction with Essex Drive**

Peak Hour	IN	OUT
AM 08:00hrs to 09:00hrs	02	12
PM 17:00hrs to 18:00hrs	14	6

5.6 Peak time vehicular movements are low at this location and could not be considered severe or detrimental to highways safety.

5.7 Trip Generation

5.8 In order to forecast the likely number of trips that a development of 39 units would generate the TRICS (Appendix 2) Version 7.1.1 database was analysed. Trip rates from all developments in the field' Residential – Houses privately owned within the range of 6 – 50 units were used.

5.9 Given the semi-rural location of the site, it is assumed that the majority of trips to and from the site will be car based. Therefore, in order to provide a robust assessment of the traffic impact 85%ile trips rates have been used.

5.10 The peak hour trip rates and forecast generation are shown in Table 1

Peak Hour	Trip Rates		Trip Generation	
	In	Out	In	Out
AM	0.193	0.420	08	17
PM	0.394	0.236	16	09

Table 1 - Forecast trip Generation 85%ile rates

5.11 The residential development of consisting of up to 40 units is forecast to generate a two-way flow of 25 trips in the AM peak and 25 trips in the PM peak hour. These two way trips amount to a maximum of less than one vehicle movement every two minutes which could not be considered severe impact upon the local highway network or along York Close.

6 NON-CAR ACCESSIBILITY

6.2 Introduction

6.3 The NPPF places great emphasis on promoting sustainable development and make the most of the existing infrastructure and also the use of public transport and also walking and cycling.

6.4 Access on Foot

6.5 It is likely that the primary pedestrian desire line will be to the south of the site towards various different amenities. A 2 metre footway providing a link into York Close and with the NCN Route 55 and Long Valley Road. Additional street lighting shall also be provided if required.

6.6 The Highways and Transportation (IHT) document 'Guidelines for Providing Journeys on Foot' identifies that a distance of 800 metres as the preferred maximum walking distance for town centres, with 2 kilometres as a maximum for commuting. Local primary schools, community center, Churches, post office and amenities are all well within walking distance of the site and linked to the existing footway network

6.7 Access by Cycle

6.8 An alternative mode of travel to the site can be achieved by cycle, over short distances cycling can replace car journeys and it is generally accepted that 5 km is an acceptable cycling distance.

6.9 The area surrounding the site lends itself to cycling as its broadly flat and suitable for cycling, there is identified cycle routes/paths, with NCN 55 adjacent to the site connecting to Congleton to the north and Stoke-on-Trent to the south. The internal layout of the site will ensure that vehicular speeds are low and as such would assist cycle accessibility.

6.10 In summary, the proposed site can be considered accessible by cycle.

6.11 Access by Bus and Rail.

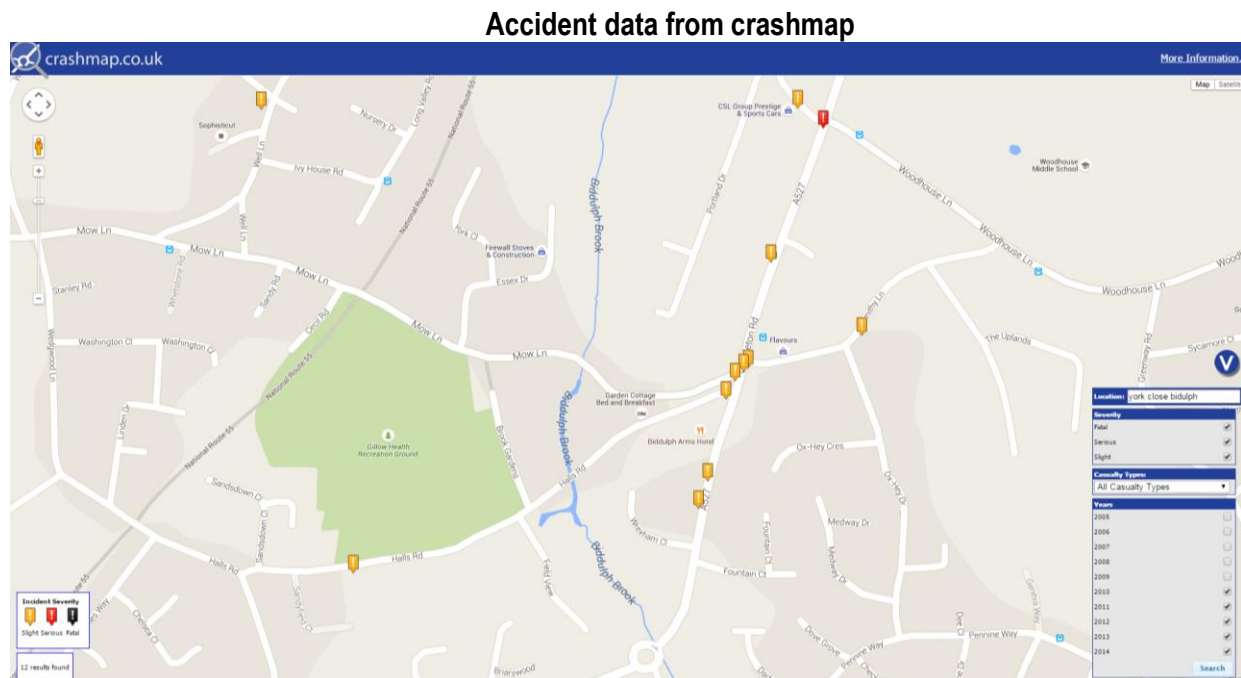
6.12 The location of the site is in an urban location with opportunities to use public transport for employment based trips. There is a good bus and rails services to and from Congleton, Kidsgrove, Newcastle-under-Lyme, Stoke-on-Trent, Crewe and Nantwich. It is recognised that the accessibility of the site in this regard is very good.

6.13 The bus services operate half hourly in each direction during the day, hourly in an evening and at weekends. The bus services do operate within the peak hours in each direction and are capable of providing an alternative to car use but is limited in terms of frequency.

7 ACCIDENT ANALYSIS

7.1 Introduction

7.2 Accident data analysis has been carried out in the vicinity of the site using crashmap. There are no recorded accidents in the general area of the site between 2010 and 2014.



7.3 Summary

7.4 As there have been no recorded accident in the general area of the site in the Last 5 years. There have been four recorded accidents at the junction of Mow Lane with Congleton Road (A527). All of these accident were recorded back in 2011 prior to the junction improvement scheme currently in place that has increased visibility at this junction. It can be concluded that the local highway network in the vicinity of the site does not have an unduly poor safety record and is very unlikely that this situation would be materially worsened by the development proposals.

8 CONCLUSIONS

7.1 This report has assessed the transport impact of a proposed residential development off York Close, with the following conclusions can be drawn regarding the development.

7.2 A proposed development of up to 40 dwellings can be achieved by safe means of access design that complies with the technical standards adopted by Staffordshire Moorlands and in accordance with Manual for Street Design guide.

7.3 It can be demonstrated that the traffic associated with a development of up to 40 dwellings, can safely be accommodated onto the local highway network. The existing peak time traffic flows currently operate well below their theoretical capacity, meaning that a development of up to 40 dwellings would have a very little impact on the local highway network and would not constitute severe impact to warrant refusal as stated in the NPPF.

7.4 The site can be accessed by both walking and cycling and therefore provides alternative modes of transport opportunities to the car to access the local schools and amenities. There are also public transport services that operate from Congleton Road (A527) and the surrounding area within a very short walking distance of the proposed development. Overall it can be concluded that the site is very sustainable and offers a wide range of alternative modes of transport locally.

7.5 Given the limited size of this site, it is not proposed that a Residential Travel Plan would be required and this accords with the DfT guidance on Transport Assessments..

7.6 The National Planning Policy Framework states that, "Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe",

7.7 Overall, the proposed development does not produce a residual cumulative impact on the road network and is considered acceptable in transport terms. The site is located in a sustainable location and would therefore deliver a highly sustainable small scale graft onto the existing urban area.

7.8 In light of information contained within this report, I am satisfied that the proposed access, to serve the application site off York Close, the surrounding priority junctions and footway connectivity can safely accommodate all vehicular and pedestrian movements and ask that the planning and highways authority support this site for an allocation for residential use.

Simon Boone

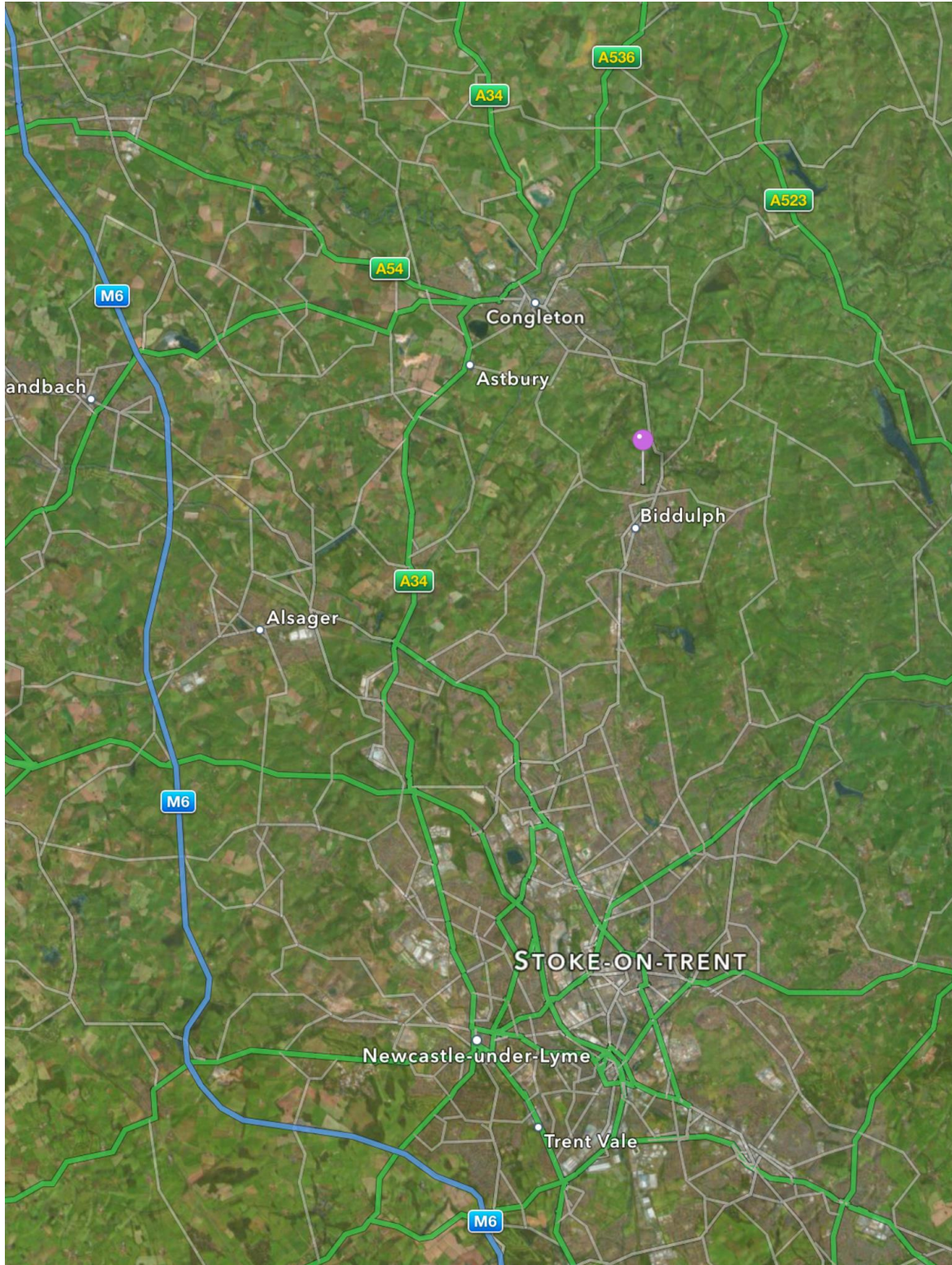
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December 2015

Site Location Plan, York Close, Biddulph.

PLAN 1a

(Purple pin in the site location)



Site Location Plan, York Close, Biddulph.

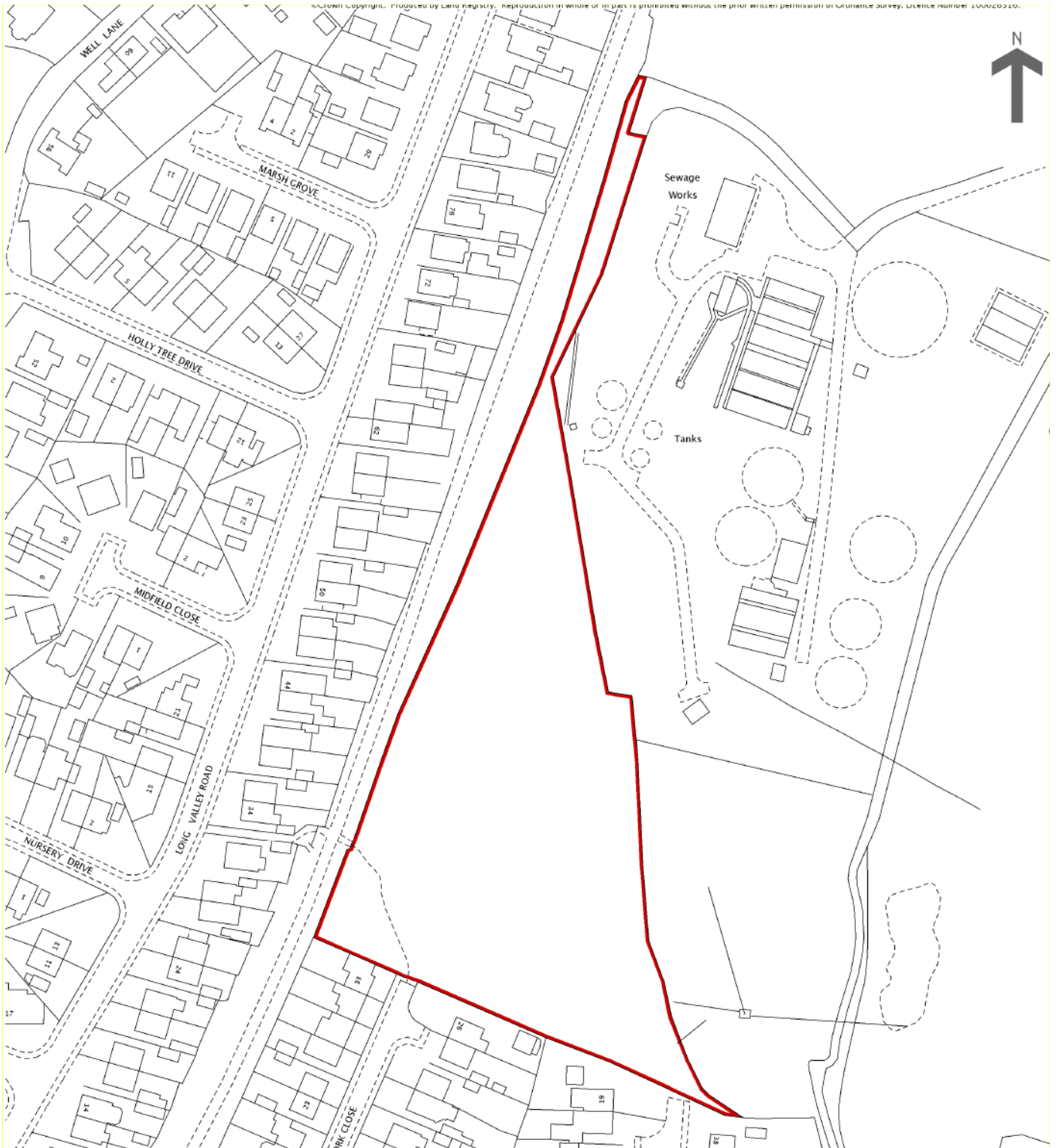
PLAN 1b

(Purple pin in the site location)



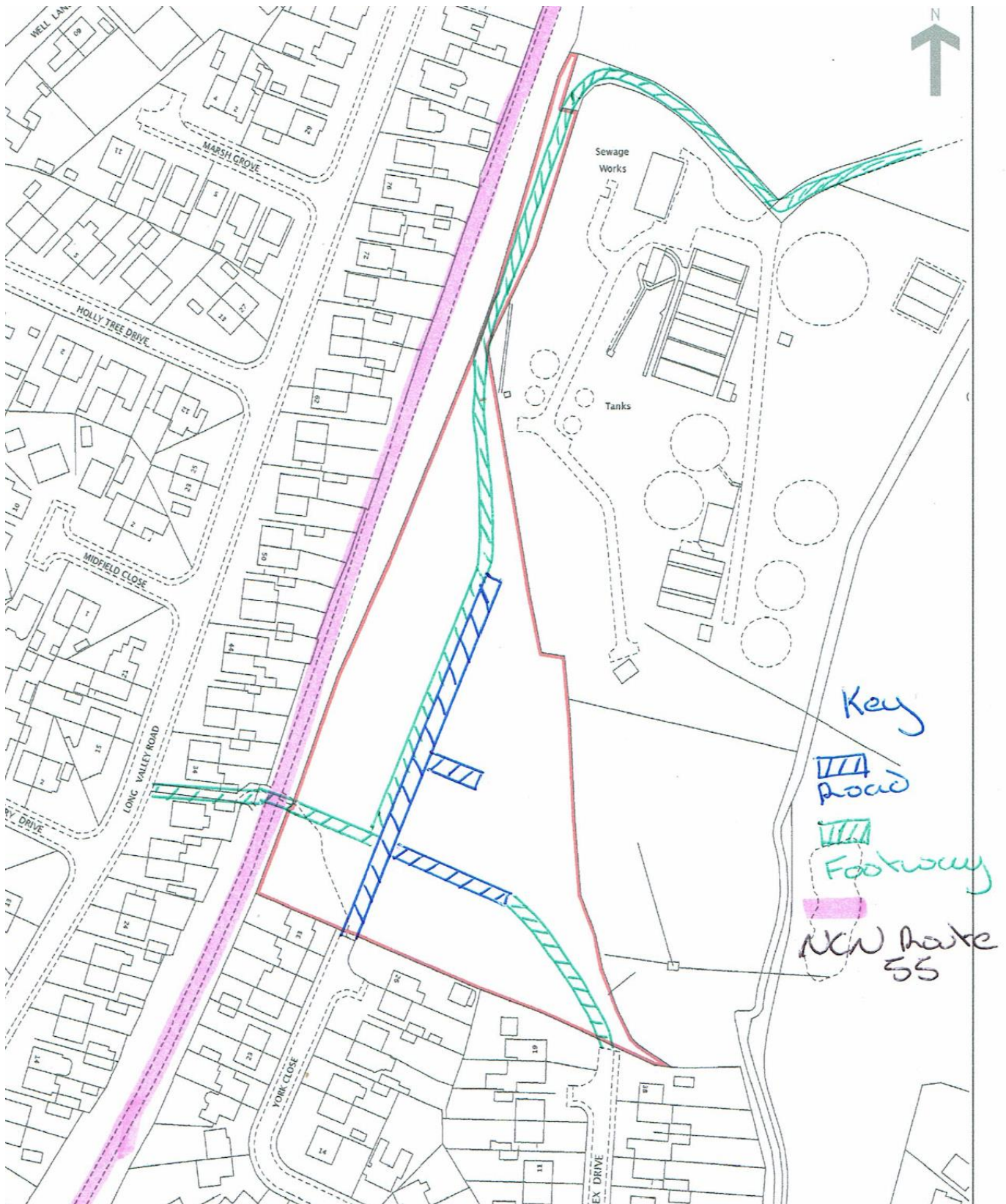
Site Plan.

PLAN 2



Potential Access and footway connectivity off York Close

PLAN 3



Site Assessment Form

Appendix 1

SITE ASSESSMENT FORM

Site Ref. No.:	<input type="text" value="117"/>	Land north of York Close / Essex Drive Biddulph
SMDC Ref. No.:	<input type="text" value="BD062"/>	
NLUD Ref. No.:	<input type="text"/>	
PA Ref. No.:	<input type="text"/>	
LDF Ref. No.:	<input type="text"/>	

Site Details

Description	<input type="text" value="Undeveloped land in the green belt"/>		
Comments:	<input type="text" value="Undeveloped sloping grass land in the green belt."/>		
Area:	<input type="text" value="1.45"/> ha. gross	<input type="text" value="1.450"/> ha. net	Policy: <input type="text" value="2/8"/>
Grid Ref.:	<input type="text" value="E 388567 N 358827"/>		Status: <input type="text" value="NC"/>
Type:	<input type="text" value="G"/>	Hierarchy: <input type="text" value="T"/>	Commitment: <input type="text" value="7"/>
Greenbelt:	<input type="text" value="Y"/>	Flooding: <input type="text" value="Y"/>	Use: <input type="text" value="6"/>
			Conversion: <input type="text" value="NB"/>
			Location: <input type="text" value="R"/>
			Replacement Dwg: <input type="text" value="N"/>
			Owner: <input type="text" value="3"/>

Site Assessment

Site Features:

Site bounded by footpath (w), sewage works (n), Brook (e) and residential development (s). Overgrown grass land with mature trees, eastern side slopes down to stream. Agent considers site to be of poor amenity value and unattractive with fly tipping.

Available Access:

York Close / Essex Drive - access stubs already in place. However, both streets lead on to Mow Lane for access on to Congleton Road. Been refused planning permission in past due to insufficient capacity of York Close/Essex Drive. Highways say 40 dw ok.

Additional Comments:

Small part of site by stream is categorised as Flood Zones 2 and 3. PROW along western part of site ok. Appears to be scrub land. Issue of future residents amenity due to close proximity of sewage work. Agent has sent info demonstrating viability.

Strengths/ Opportunities:

Could yield approximately 50 dwellings at 40dph (according to HLAA representation). If constraints can be overcome, potentially suitable for residential development (though limited capacity). Not high landscape quality. Surrounded by housing.

Weaknesses/ Constraints:

Adjacent to sewage works (been refused planning permission in past for this reason), in the green belt, access difficulties (refused planning permission), eastern side of site low lying and susceptible to flooding, concentration of sewage pipes. EH view.

Deliverability Assessment

Availability:

SHLAA form submitted. EA comment - marginal FZ. Needs SFRA5. Excluded Flood Zone 3 area from site boundary in April 14 as dev not acceptable within zone.

Suitability:

Potentially suitable for residential development. Low impact on greenbelt. Low capacity assumed due to constraints. County Highways say 40 dwellings acceptable. Agent has sent info demonstrating viability. Extended P1 Habitat report also provided.

Achievability:

Development would be economically viable taking into account all likely costs and planning obligations associated with the site.

Classification:

Full Capacity

5 Year Capacity

Density

Planning Application Details

Planning Application:	<input type="text"/>	Application Type:	<input type="text"/>	Approval Date:	<input type="text"/>
Building Control Ref	<input type="text"/>	Other Application:	<input type="text"/>	Approval Life:	<input type="text"/>

Date Last Updated

Date Form Printed

Trics Data

Appendix 2

TRICS 7.2.3	251015 B17.27	(C) 2015 TRICS Consortium Ltd	Thursday 26/11/15
Biddulph			Page 1
Cheshire East Council	Delamere Street	Crewe	Licence No: 749701

Calculation Reference: AUDIT-749701-151126-1122

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	KI KINGSTON	2 days
	KN KENSINGTON AND CHELSEA	1 days
	SK SOUTHWARK	1 days
	WE WESTMINSTER	1 days
02	SOUTH EAST	
	ES EAST SUSSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	ST STAFFORDSHIRE	2 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	5 days
08	NORTH WEST	
	CH CHESHIRE	3 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CF CARDIFF	1 days
	CM CARMARTHENSHIRE	1 days
11	SCOTLAND	
	AG ANGUS	1 days
	EA EAST Ayrshire	1 days
	FA FALKIRK	1 days
	HI HIGHLAND	1 days
	PK PERTH & KINROSS	1 days
12	CONNAUGHT	
	CS SLIGO	2 days
	GA GALWAY	1 days
	RO ROSCOMMON	3 days
14	LEINSTER	
	KK KILKENNY	2 days
	WX WEXFORD	1 days
15	GREATER DUBLIN	
	DL DUBLIN	2 days
16	ULSTER (REPUBLIC OF IRELAND)	
	CV CAVAN	1 days
	DN DONEGAL	2 days

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

Filtering Stage 2 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 50 (units:)
Range Selected by User: 4 to 50 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 26/09/14

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	8 days
Tuesday	10 days
Wednesday	4 days
Thursday	17 days
Friday	9 days
Saturday	1 days
Sunday	4 days

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

Selected survey types:

Manual count	53 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:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	26
Edge of Town	19
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	41
Built-Up Zone	1
No Sub Category	11

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.

Filtering Stage 3 selection:

Use Class:

C1	1 days
C3	51 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®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	11 days
5,001 to 10,000	6 days
10,001 to 15,000	12 days
15,001 to 20,000	10 days
20,001 to 25,000	3 days
25,001 to 50,000	8 days
50,001 to 100,000	2 days
101,000 or More	1 days

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

Population within 5 miles:

5,000 or Less	3 days
5,001 to 25,000	11 days
25,001 to 50,000	4 days
50,001 to 75,000	1 days
75,001 to 100,000	11 days
100,001 to 125,000	3 days
125,001 to 250,000	4 days
250,001 to 500,000	7 days
500,001 or More	9 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	16 days
1.1 to 1.5	33 days
1.6 to 2.0	2 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	1 days
No	52 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.

LIST OF SITES relevant to selection parameters

1	AG-03-A-01	BUNGALOWS/DET.		ANGUS
	KEPTIE ROAD			
	ARBROATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	7		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
2	CA-03-A-03	SEMI-DET.		CAMBRIDGESHIRE
	SUGAR WAY			
	WOODSTON			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: SUNDAY	11/05/08		Survey Type: MANUAL
3	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	THORPE PARK ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	9		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
4	CB-03-A-03	SEMI DETACHED		CUMBRIA
	HAWKSHEAD AVENUE			
	WORKINGTON			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	40		
	Survey date: THURSDAY	20/11/08		Survey Type: MANUAL
5	CF-03-A-03	DETACHED		CARDIFF
	LLANTRISANT ROAD			
	CARDIFF			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	29		
	Survey date: MONDAY	08/10/07		Survey Type: MANUAL
6	CH-03-A-04	DETACHED/SEMI-DET.		CHESHIRE
	LIME TREE AVENUE			
	CREWE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	25		
	Survey date: SUNDAY	19/10/08		Survey Type: MANUAL
7	CH-03-A-05	DETACHED		CHESHIRE
	SYDNEY ROAD			
	SYDNEY			
	CREWE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	17		
	Survey date: TUESDAY	14/10/08		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	CH-03-A-08	DETACHED		CESHIRE
	WHITCHURCH ROAD			
	BOUGHTON HEATH			
	CHESTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
9	CM-03-A-01	DETAT./BG'LOWS		CARMARTHENSHIRE
	TREVAUGHAN ROAD			
	TREVAUGHAN			
	CARMARTHEN			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	17		
	Survey date: SATURDAY	13/09/08		Survey Type: MANUAL
10	CS-03-A-01	TERRACED		SLIGO
	CIRCULAR ROAD			
	SLIGO			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	46		
	Survey date: THURSDAY	14/06/07		Survey Type: MANUAL
11	CS-03-A-02	DETACHED		SLIGO
	CHURCH HILL			
	SLIGO			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	35		
	Survey date: THURSDAY	14/06/07		Survey Type: MANUAL
12	CV-03-A-01	DETACHED		CAVAN
	DUBLIN ROAD			
	CAVAN			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	37		
	Survey date: TUESDAY	18/12/12		Survey Type: MANUAL
13	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
14	DL-03-A-08	VARIOUS HOUSES		DUBLIN
	CASTLE PARK ROAD			
	DALKEY			
	DUBLIN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	36		
	Survey date: MONDAY	26/09/11		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	DL-03-A-09	TERRACED	DUBLIN
	RATHFARNHAM ROAD		
	RATHFARNHAM		
	DUBLIN		
	Neighbourhood Centre (PPS6 Local Centre)		
	No Sub Category		
	Total Number of dwellings:	8	
	Survey date: FRIDAY	07/09/12	Survey Type: MANUAL
16	DN-03-A-02	DETACHED	DONEGAL
	GLENFIN ROAD		
	BALLYBOFEY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	7	
	Survey date: THURSDAY	05/09/13	Survey Type: MANUAL
17	DN-03-A-03	DETACHED/SEMI-DETACHED	DONEGAL
	THE GRANGE		
	GLENCAR IRISH		
	LETTERKENNY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	50	
	Survey date: MONDAY	01/09/14	Survey Type: MANUAL
18	EA-03-A-01	DETACHED	EAST AYRSHIRE
	TALISKER AVENUE		
	KILMARNOCK		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	39	
	Survey date: THURSDAY	05/06/08	Survey Type: MANUAL
19	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
20	FA-03-A-01	SEMI-DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
21	GA-03-A-04	SEMI DET. & BUNGALOWS	GALWAY
	R347 CAHEROYN ROAD		
	ATHENRY		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	21	
	Survey date: TUESDAY	09/10/12	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	GM-03-A-10	DETACHED/SEMI		GREATER MANCHESTER
	BUTT HILL DRIVE			
	PRESTWICH			
	MANCHESTER			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	29		
	Survey date: WEDNESDAY	12/10/11		Survey Type: MANUAL
23	HI-03-A-13	HOUSING		HIGHLAND
	KINGSMILLS ROAD			
	INVERNESS			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	9		
	Survey date: THURSDAY	21/05/09		Survey Type: MANUAL
24	KI-03-A-01	DETACHED		KINGSTON
	COOMBE RISE			
	KINGSTON UPON THAMES			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	12		
	Survey date: THURSDAY	24/06/10		Survey Type: MANUAL
25	KI-03-A-02	DETACHED		KINGSTON
	WOLSEY CLOSE			
	KINGSTON UPON THAMES			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	20		
	Survey date: THURSDAY	24/06/10		Survey Type: MANUAL
26	KK-03-A-01	DETACHED		KILKENNY
	ASHLEIGH COURT			
	KILKENNY			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	10		
	Survey date: MONDAY	24/11/08		Survey Type: MANUAL
27	KK-03-A-04	TERRACED		KILKENNY
	PATRICK STREET			
	KILKENNY			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	30		
	Survey date: THURSDAY	27/11/08		Survey Type: MANUAL
28	KN-03-A-01	TERRACED		KENSINGTON AND CHELSEA
	BARLBY ROAD			
	NORTH KENSINGTON			
	Suburban Area (PPS6 Out of Centre)			
	Built-Up Zone			
	Total Number of dwellings:	24		
	Survey date: FRIDAY	26/01/07		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

29	LC-03-A-30	SEMI-DETACHED		LANCASHIRE
	WATSON ROAD			
	BLACKPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	24		
	Survey date: FRIDAY	14/06/13		Survey Type: MANUAL
30	LN-03-A-03	SEMI DETACHED		LINCOLNSHIRE
	ROOKERY LANE			
	BOULTHAM			
	LINCOLN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	22		
	Survey date: TUESDAY	18/09/12		Survey Type: MANUAL
31	MS-03-A-02	DETACHED		MERSEYSIDE
	RIVERSIDE DRIVE			
	AIGBURTH			
	LIVERPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	31		
	Survey date: SUNDAY	05/09/10		Survey Type: MANUAL
32	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	OTTERSPOOL			
	LIVERPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	15		
	Survey date: FRIDAY	21/06/13		Survey Type: MANUAL
33	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		
	Survey date: TUESDAY	16/10/12		Survey Type: MANUAL
34	NY-03-A-02	DETACHED		NORTH YORKSHIRE
	CLOTHOLME ROAD			
	RIPON			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	22		
	Survey date: SUNDAY	21/09/08		Survey Type: MANUAL
35	NY-03-A-03	PRIVATE HOUSING		NORTH YORKSHIRE
	NEW ROW			
	BOROUGHBRIDGE			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	14		
	Survey date: MONDAY	15/09/08		Survey Type: MANUAL
36	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

LIST OF SITES relevant to selection parameters (Cont.)

37	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
38	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
39	PK-03-A-01	DETAC. & BUNGALOWS	PERTH & KINROSS
	TULLYLUMB TERRACE		
	GORNHILL		
	PERTH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	36	
	Survey date: WEDNESDAY	11/05/11	Survey Type: MANUAL
40	RO-03-A-02	SEMI DET. & BUNGALOWS	ROSCOMMON
	SLIGO ROAD		
	BALLAGHADERREEN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	31	
	Survey date: THURSDAY	14/07/11	Survey Type: MANUAL
41	RO-03-A-03	DETACHED HOUSES	ROSCOMMON
	N61		
	GREATMEADOW		
	BOYLE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	23	
	Survey date: THURSDAY	25/09/14	Survey Type: MANUAL
42	RO-03-A-04	SEMI DET. & BUNGALOWS	ROSCOMMON
	EAGLE COURT		
	ARDNANAGH		
	ROSCOMMON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	39	
	Survey date: FRIDAY	26/09/14	Survey Type: MANUAL
43	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

LIST OF SITES relevant to selection parameters (Cont.)

44	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
45	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
46	SK-03-A-01	SEMI DET. & TERRACED		SOUTHWARK
	TIMBER POND ROAD			
	CANADA WATER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	15		
	Survey date: THURSDAY	23/10/08		Survey Type: MANUAL
47	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
48	ST-03-A-06	SEMI-DET. & TERRACED		STAFFORDSHIRE
	STANFORD ROAD			
	BLAKENHALL			
	WOLVERHAMPTON			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:	17		
	Survey date: FRIDAY	09/05/14		Survey Type: MANUAL
49	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
50	WE-03-A-01	PRINCES MEWS		WESTMINSTER
	HEREFORD ROAD			
	NOTTING HILL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	18		
	Survey date: THURSDAY	15/10/09		Survey Type: MANUAL
51	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.)

52	WK-03-A-02	BUNGALOWS	WARWICKSHIRE
	NARBERTH WAY		
	POTTERS GREEN		
	COVENTRY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL
53	WX-03-A-01	SEMI-DETACHED	WEXFORD
	CLONARD ROAD		
	WEXFORD		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	34	
	Survey date: THURSDAY	25/09/14	Survey Type: MANUAL

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

Estimated TRIP rate value per 39 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated 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	1	30	0.133	5.200	1	30	0.033	1.300	1	30	0.166	6.500
07:00 - 08:00	53	23	0.068	2.655	53	23	0.233	9.086	53	23	0.301	11.741
08:00 - 09:00	53	23	0.193	7.518	53	23	0.420	16.381	53	23	0.613	23.899
09:00 - 10:00	53	23	0.194	7.582	53	23	0.248	9.662	53	23	0.442	17.244
10:00 - 11:00	53	23	0.181	7.071	53	23	0.194	7.582	53	23	0.375	14.653
11:00 - 12:00	53	23	0.180	7.039	53	23	0.217	8.446	53	23	0.397	15.485
12:00 - 13:00	53	23	0.231	8.990	53	23	0.205	7.998	53	23	0.436	16.988
13:00 - 14:00	53	23	0.270	10.526	53	23	0.226	8.830	53	23	0.496	19.356
14:00 - 15:00	53	23	0.262	10.206	53	23	0.292	11.390	53	23	0.554	21.596
15:00 - 16:00	53	23	0.286	11.166	53	23	0.240	9.374	53	23	0.526	20.540
16:00 - 17:00	53	23	0.363	14.141	53	23	0.249	9.726	53	23	0.612	23.867
17:00 - 18:00	53	23	0.394	15.357	53	23	0.236	9.214	53	23	0.630	24.571
18:00 - 19:00	53	23	0.326	12.701	53	23	0.234	9.118	53	23	0.560	21.819
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			3.081	120.152			3.027	118.107			6.108	238.259

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 - 50 (units:)
Survey date range: 01/01/07 - 26/09/14
Number of weekdays (Monday-Friday): 48
Number of Saturdays: 1
Number of Sundays: 4
Surveys manually removed from selection: 2

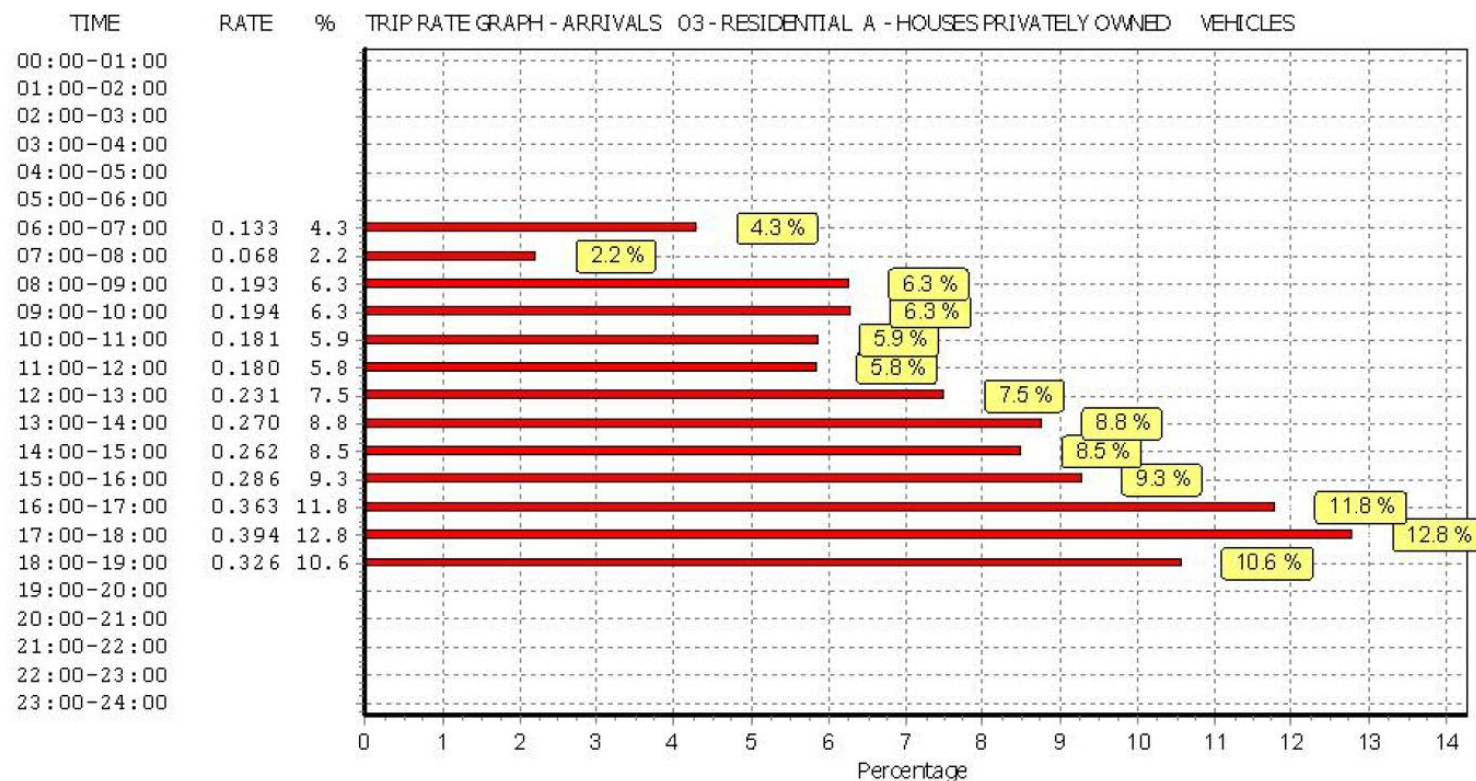
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.

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Thursday 26/11/15
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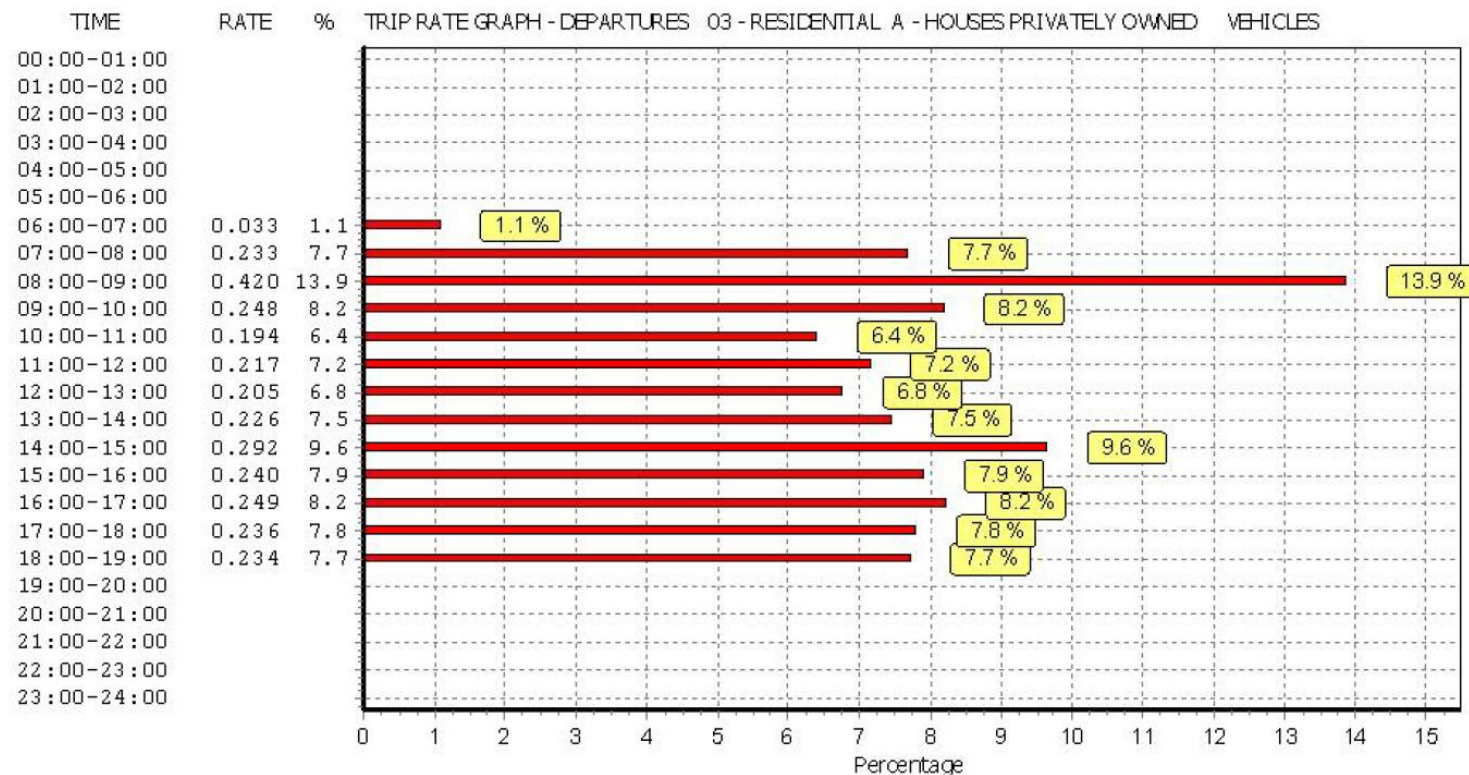
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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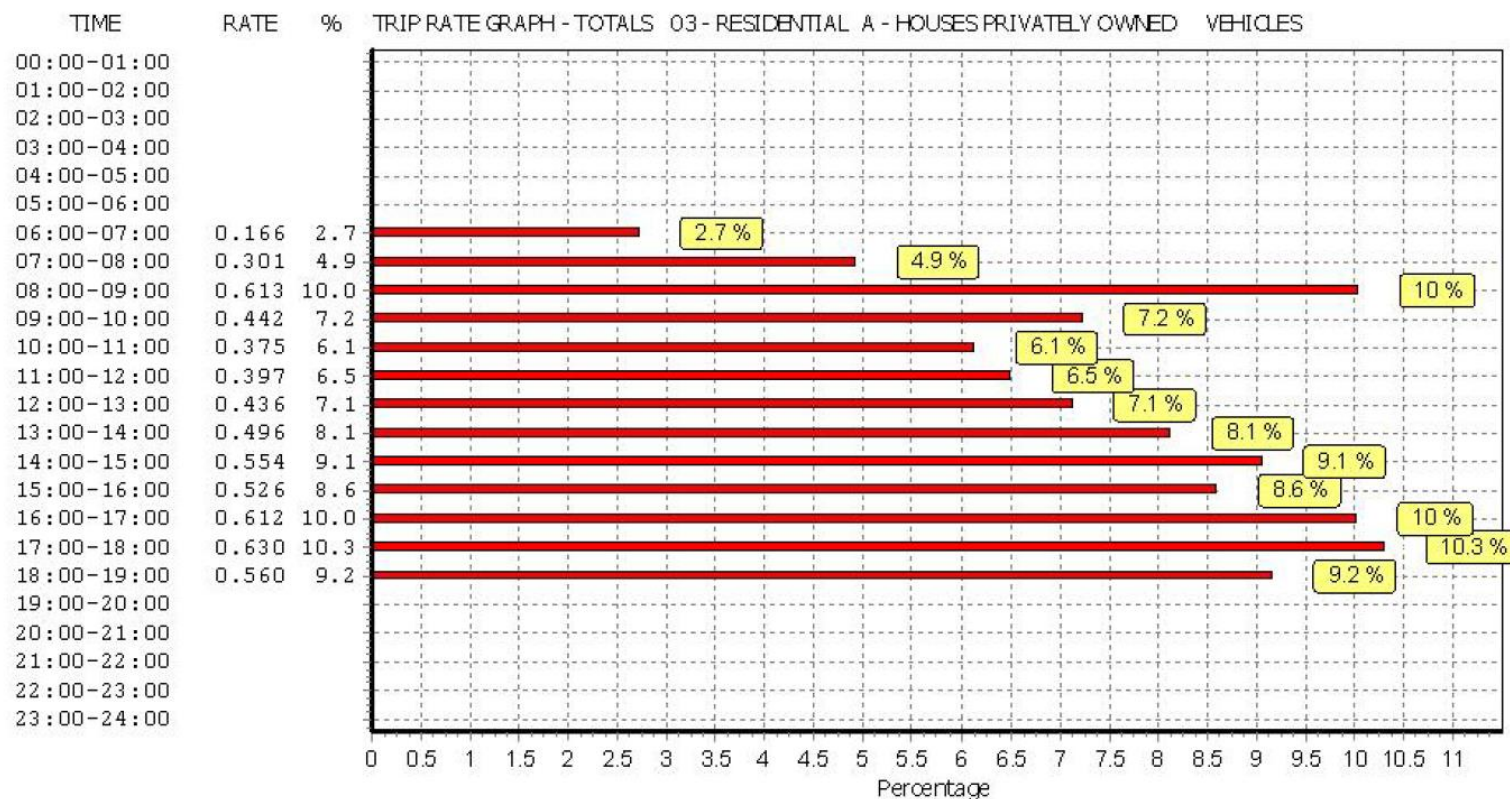
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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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.

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