RPS

BLOSSOM FIELDS,
COTEFIELD FARM
TRANSPORT ASSESSMENT

BLOSSOM FIELDS, COTEFIELD FARM

TRANSPORT ASSESSMENT

19 December 2014
Our Ref: RS/DF/JT/JNY8146-01E

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1 INTRODUCTION

Introduction

1.1 RPS Transport has been appointed by Mr O Wells to produce a Transport Assessment in support of a planning application for a proposed residential development in Bodicote on a site situated approximately 3.5km to the south of Banbury town centre, on land at Blossom Fields, Cotefield Farm.

1.2 The proposed scheme compromises of a total of 95 dwellings, as follows:

- 62 market units
  - 6 two-bedroom houses;
  - 25 three-bedroom houses;
  - 13 four-bedroom houses; and
  - 18 five bedroom houses.
- 33 affordable units
  - 4 one-bedroom maisonettes;
  - 20 two-bedroom houses;
  - 8 three-bedroom houses; and
  - 1 two bed bungalow.
- 220 allocated Car Parking Spaces and 27 unallocated car parking spaces.

1.3 An illustrative Masterplan of the proposed development has been produced by RPS and is reproduced as **Appendix A** of this report.

1.4 This site is currently in use as arable land and is located adjacent to land that was granted planning consent at appeal on 26th March 2012 for residential use (planning application reference: 11/00617/OUT). The proposed site is accessed off a road which provides access to Cotefield Nursery, the consented residential site and Cotefield Business Park. The access road in turn adjoins the A4260 Banbury Road via a three armed priority junction with right turn lane.

1.5 This report has been produced to assess the transport impacts of the proposed development, with all modes of travel considered.

1.6 The scope of this Transport Assessment has been agreed with officers at Oxfordshire County Council (OCC) following discussions in June 2014, with email correspondence attached at **Appendix B** of this report. In summary the following actions were agreed with OCC;

- Assess the most recent five year period of Personal Injury Accident data;
- Accessibility analysis using Visography TRACC;
- Trip generation calculated using TRICS trip generation database;
- Assess the Site Access junction and Weeping Cross junction using Junction 8 – PICADY
- Assess the Farmfield Road crossroads using LinSig V3;

- Examine any links where the increase is beyond 5%;
- Opening year junction assessments (2016) and plus five years (2021);
- Emphasis on assessment of peak hours (0800-0900 and 1700-1800) and the 30 minutes preceding and following both intervals; and
- A Travel plan is not required.

1.7 This Transport Assessment has been prepared in accordance with the Department for Transport (DfT) Guidance on Transport Assessment 2007, the National Planning Policy Framework 2012 (NPPF) and recently published Planning Practice Guidance (PPG): Travel plans, transport assessments and statements in decision-taking. The DfT 2007 guidance has not been cancelled by the PPG to date.

Report Structure

1.8 This report details the transport issues and the potential transport impacts of the development proposals. It is divided into the following sections:

- **Section 2** - Policy Context - Review of local and national transport planning policy in relation to the development proposals.
- **Section 3** - Existing Conditions - Describes the existing conditions at the site and surrounding transport network. In particular this focuses on the accessibility of the site by non-car modes. It also describes the surrounding highway network.
- **Section 4** - Development Proposals - Describes the proposed development, access arrangements and parking.
- **Section 5** - Trip Generation and Modal Share- Predicted number of trips generated as a result of the development proposal.
- **Section 6** – Impacts and Operational Assessments - Assessment of the number of trips that are likely to be generated by the proposed development with all modes of travel considered.
- **Section 7** - Mitigation – suggested mitigation measures as a result of the development.
- **Section 8** - Conclusions - Summary of the findings of the Transport Statement.

2 POLICY CONTEXT

2.1 This section details the transport policy documents against which the development proposals will be considered from a national and local perspective.

National Policy and Guidance

National Planning Policy Framework (March 2012)

2.2 The Department for Communities and Local Government published the National Planning Policy Framework (NPPF) in March 2012. The NPPF sets out Government planning policies and guidance, to be used by all local authorities in England when preparing development plans and determining planning applications. .

2.3 At the heart of the NPPF is a presumption in favour of sustainable development, with the policies set out within the Framework, taken as a whole, constituting the Government's view of what sustainable development means in practice.

2.4 Paragraph 17 states that the core planning principle relating to transport is that patterns of growth should be actively managed to make the fullest possible use of public transport, walking and cycling, and to focus significant development in locations which are or can be made sustainable.

2.5 In respect of promoting sustainable travel the NPPF advocates that planning policies and decisions should consider whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost-effectively limit the significant impacts of the development.

2.6 In paragraph 32 the guidance advises that, subject to the above considerations, development should not be prevented or refused on transport grounds unless the residual impacts of the development are severe.

Planning Practice Guidance (March 2014)

2.7 Planning Practice Guidance (PPG) was published in March 2014. The Planning Practice Guidance - *Travel Plans, Transport Assessments and Statements in decision-taking* provides a concise report on the use and importance of Transport Assessments / Statements and Travel Plans. With regard to whether to provide a Transport Assessment, Transport Statement or no assessment, the guidance states;

- **"Local planning authorities, developers, relevant transport authorities, and neighbourhood planning organisations should agree what evaluation is needed in each instance" (Paragraph 004).**

2.8 The guidance states that Transport Assessments / Statements and Travel Plans can positively contribute to;

- **"encouraging sustainable travel;**
- **lessening traffic generation and its detrimental impacts;**
- **reducing carbon emissions and climate impacts;**
- **creating accessible, connected, inclusive communities;**
- **improving health outcomes and quality of life;**
- **improving road safety; and**
- **reducing the need for new development to increase existing road capacity or provide new roads" (Paragraph 006).**

2.9 The guidance states that Transport Assessments / Statements and Travel Plans should be proportionate to the size and scope of the proposed development, be tailored to particular local circumstances and be established at the earliest practicable possible stage of a development proposal.

2.10 The guidance continues by stating that these reports should be brought forward through collaborative ongoing working between the Local Planning Authority / Transport Authority, transport operators, Rail Network Operators, Highways Agency and other relevant bodies.

2.11 With regard to parking the guidance moves away from the use of maximum parking guidance and states that;

- **"Maximum parking standards can lead to poor quality development and congested streets, local planning authorities should seek to ensure parking provision is appropriate to the needs of the development and not reduced below a level that could be considered reasonable" (Paragraph 008).**

Local Policy

2.12 National policy on transport and land use establishes broad policy objectives, which reflect the Government's aspirations for integrating land development and transport. The role of local Government is to develop strategies, based on specific local social and spatial requirements, which deliver the national aspirations.

2.13 Local strategy with respect to land use and transport is articulated in statutory documents prepared by planning and highway authorities, which, for this development, comprise:

- Oxfordshire County Council Local Transport Plan 3 (July 2012);
- Oxfordshire County Council 'Parking Standards for New Residential Development' (2011);
- Our District Our Future: Cherwell Sustainable Community Strategy (2010);
- Draft Cherwell Local Plan (2011-2031); and
- Adopted Cherwell Local Plan 1996 Saved Policies.

Oxfordshire County Council Local Transport Plan 3 2011-2030 (July 2012)

2.14 Local Transport Plan 3 sets out the transport policy and strategy across Oxfordshire from 2011-2030 and was adopted in July 2012. In summary, the policies in Local Transport Plan 3 identify a number of objectives for addressing transport challenges within Oxfordshire:

- Promote sustainable travel to reduce carbon footprint;
- Improve and encourage use of public transport particularly to areas of employment, services, healthcare and education;
- Manage parking to reduce congestion; and
- To improve accessibility through design of new development to make travelling sustainably accessible for all users.

2.15 Chapter 8 'Supporting Developments' sets out the policies which seek to enable development through securing infrastructure and services.

2.16 Chapter 15 is specific to the development of Banbury, particularly the revitalisation of the town centre with a focus to bringing economic and social improvements to the town and communities. It identifies that improvements to the cycle, pedestrian and bus networks are vital to supporting the redevelopment of the town centre by linking the key employment, leisure and retail facilities with residential areas.

Oxfordshire County Council 'Parking Standards for New Residential Development' (2011)

2.17 The Council has produced parking provision guidance for new developments, as well as the design of parking. The policy document was adopted in December 2011.

2.18 Some deviation from the parking standard may be acceptable, but discussions with the planning authority should take place early, to establish if the variance will be permitted. .

2.19 Appendix C of the policy document outlines the maximum amount of parking provision that is required for new residential developments that are not classified as Cherwell Urban Areas or in Oxford. Table C1 of the guidance has been reproduces in **Table 2.1** below.

Table 2.1: Oxfordshire County Council Residential Parking Standards

Number of bedrooms per dwelling	Maximum number of allocated spaces	Maximum number of spaces when two allocated space per dwelling Is provided		Maximum number of spaces when one allocated space per dwelling is provided		Maximum number of unallocated spaces when no allocated spaces
		Allocated spaces	Unallocated spaces*	Allocated spaces	Unallocated spaces	
1	1	N/A	N/A	1	0.4	1.2
2	2	2	0.3	1	0.6	1.4
2/3	2	2	0.3	1	0.8	1.6
3	2	2	0.4	1	0.9	1.8
3/4	2	2	0.5	1	1.1	2.1
4+	2	2	0.6	1	1.5	2.4

Source: Oxfordshire County Council: Parking standards for new residential developments (December 2011)
Note: The rows in the table for 2/3 bedrooms and 3/4 bedrooms can be used when there are additional rooms in the dwelling which are not shown as bedrooms but where there is a high chance that they could be used as bedrooms.
*Unallocated spaces are those which can be generally used by anyone.

Adopted Cherwell Local Plan (1996)

2.20 The Local Plan was adopted in November 1996 and initially covered development in the area up until 2001. Whilst the majority of the policies expired on 27 September 2007, a number of policies were saved until such time as the Local Plan Development Framework is adopted.

2.21 In relation to the current proposals, the following transport policy still applies:

- TR1 – Improvements to local highways, infrastructure and public transport must be provided and approved by the Council prior to permission being granted.

Draft Cherwell Local Plan (2011-2031)

2.22 The draft Local Plan was submitted to the Secretary of State for formal Examination on 31st January 2014. Proposed main modifications to the Submission Local Plan were submitted to the Secretary of State for formal examination on Monday 21 October 2014.

2.23 The plan follows on from the Adopted Cherwell Local Plan 1996 and sets out the future development plans for the district.

2.24 The development strategy largely focusses around the development of Banbury and Bicester and recognises;

- **"The need for limits to housing growth while enabling growth in locations where integration with existing communities is possible" (Foreword Page 1).**

2.25 Policy Villages 1 identifies the most sustainable villages (Category A) and their 'satellite' villages (Category B) in the District where minor development within built-up limits will, in principle, be supported. Bodicote is identified as a 'Category A' village meaning it has good access to services and facilities and good access by public transport, walking and cycling. Table 12 of Policy Villages 1 identifies Bodicote as a village that will receive minor development.

2.26 In order to reduce carbon emissions, paragraph B.181 emphasises the need to reduce dependence on private cars and locate new development in sustainable, accessible, locations. Policy ESD 18 states

- **"Proposals should maximise the opportunity to maintain and extend green infrastructure links to form a multi-functional network of open space, providing opportunities for walking and cycling, and connecting the towns to the urban fringe and the wider countryside beyond"**

2.27 Paragraph C.126 outlines the strategy to achieve the vision for the wider Banbury area and seeks to;

- **"Provide for new development in accessible locations which will provide good opportunities for improving and accessing public transport services, for delivering and using new cycleways, for travelling on foot and for minimising the impact on the highway network and traffic congestion"**

Summary

2.28 To summarise, the development will need to be assessed against the following policies:

- *NPPF* – in terms of sustainable development and safe and suitable access. Development should not be prevented or refused on transport grounds unless the residual impacts of the development are severe.
- *PPG* – supporting transport documents must demonstrate the site is in a location that is or can be made sustainable.
- *Oxfordshire LTP3 (2011-2030)* – the design of new developments should take into consideration sustainable transport modes and be designed to minimise congestion
- *Oxfordshire Parking Standards (2011)* - sets out the maximum car parking standards for new developments including the number of allocated and unallocated spaces based on the number of bedrooms per dwelling.
- *Draft Cherwell Local Plan* 2011 - 2031– identifies the need for housing in the County and the regeneration of Banbury town centre.
- *Adopted Cherwell Local Plan* 1996 – plans for highway improvements must be approved by the Council prior to approval.

3 EXISITING SITUATION

Introduction

3.1 This section describes the existing conditions at the site and surrounding transport network. In particular it focuses on the accessibility of the site by non-car modes. It also describes the surrounding highway network.

Site and Surroundings

3.2 The application site consists of a parcel of land in the single ownership of Mr R P Bratt on the southern edge of the settlement of Bodicote. The site is around 600m from Bodicote village centre, about 1km from Banbury's town edge and about 3km from Banbury Cross. The site forms the southern half of an agricultural field, the other half of which was granted planning consent on appeal in 2012 (Ref. 11/00617/OUT) for a residential development of 82 houses. This site has a total area of 4.5ha.

3.3 The site is currently laid to pasture and is bounded to the south and west by agricultural land, to the east by Cotefield Business Park and to the north by the aforementioned parcel of land which was granted planning consent in 2012 for 82 houses (all of which are owned by Mr Bratt). There is a significant woodland belt running along the southern and western field boundaries, which provides a natural field boundary.

3.4 Access to the site is taken from the A4260, via an access which currently serves Cotefield Nurseries and the existing businesses at Cotefield Business Park. The access also comprises the principal access for the immediately adjoining residential development of 82 houses, once completed. A secondary access to the property is available, also taken directly from the A4260, approximately 130m southeast of the principal access. If required as part of any consent, this secondary access could be used as an emergency access to the site.

3.5 The site is situated within an accessible location within recommended walking and cycling distance of a local shop, post office and local bus stops to Banbury and wider area. Bodicote and Banbury offer a full range of services for residents and are accessible by alternatives to the private car.

Site Access and Highway Network

3.6 The site is accessed off a road which currently provides access to Cotefield Nursery, Cotefield Business Park and the north-adjoining consented development. The access road in turn adjoins the A4260 Banbury Road. The junction takes the form of a ghost island right turn from the A4260 with a splitter island at the junction for pedestrians. Visibility in excess of 90 metres is provided to the east and west of the junction.

3.7 The A4260 Oxford Road becomes the A4260 Banbury Road south of Cotefield House. The A4260 Oxford Road has a carriageway width of approximately 9.6 metres in the vicinity of the site. The A4260 Banbury Road / Oxford Road routes from the A44, A34 and Kidlington in the south, to the A422 Henneff Way and Banbury Town Centre in the north. It is a single carriageway street lit road with a footway on the western side of the carriageway.

3.8 A footway is provided on both sides of the carriageway north of Broad Gap. Approximately 150 metres south of the access junction with the A4260, the speed limit reduces from 60mph to a 40mph restriction. Approximately 2 kilometres north of the access junction with the A4260, the speed limit further reduces to 30mph as the A4260 passes through Banbury.

3.9 Approximately 250 metres north of the site access junction, the A4260 Oxford Road meets Weeping Cross via a newly installed signalised junction. Weeping Cross is 6.5m wide and has street lighting and a continuous footway on the northern side of the carriageway. Weeping Cross leads into Bodicote village and is controlled by a 30mph speed restriction. The closest southbound bus stop to the site is also located on this junction.

3.10 Weeping Cross provides a route to Molyneux Drive, a residential road with streetlighting, footways on either side of the carriageway and an approximate width of 5.6 metres. It forms the minor arm of a priority junction with Weeping Cross at its northern end, and becomes Freemans Road at its southern end.

3.11 Approximately 1 kilometre south of the site access junction, the A4260 Banbury Road forms the major arms of a three armed priority junction with Twyford Road. Twyford Road routes from west to east, leading to the village of Kings Sutton. The A4260 Banbury Road continues south into the villages of Twyford and Adderbury.

Pedestrians

3.12 A footway is provided on the western side of the carriageway along the A4260 Oxford Road and it varies in width from 0.9-1.8 metres. The footway provides pedestrian access from the application site to both Banbury and Bodicote village.

3.13 A bridle path runs south of the development site, which provides a pedestrian and cycle link to the Sor Brook and Austin Road from the A4260 Oxford Road.

3.14 Once complete, the north-adjoining consented development will provide a pedestrian and cycle link to the village of Bodicote, via the current farm access point on to Molyneux Drive at the northernmost point of the site. Footways are provided on either side of the carriageway on Molyneux Drive, with an approximate width of 2 metres.

3.15 A number of the footways in close proximity to the site have dropped kerbs and street lights; however, they vary in width and condition.

3.16 The IHT publication 'Providing for Journeys on Foot' (IHT 2000) suggests acceptable walking distances for various land uses, as set out in **Table 3.1**.

Table 3.1: Suggested Acceptable Walking Distances

Definition	Town Centres (m)	Commuting/Schools (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Source: Providing for Journeys on Foot, IHT, 2000

3.17 Pedestrian isochrones from the development site have been generated using the accessibility software, Visography TRACC. The isochrones have been plotted at time intervals of five minutes from the site up to a maximum of 25 minutes (approximately 2km). These are based on an average walking speed of 1.33m/s equating to approximately 400m in 5 minutes or 2000m in 25 minutes which is considered the preferred maximum commuting distance by foot in the Institute of Highways and Transportation (IHT) document 'Providing for Journeys on Foot'.

3.18 The resulting pedestrian isochrones are shown on **Figure 2**. This demonstrates that there is potential for journeys to be made to/from the development site by foot to key attractions and facilities such as employment, education and leisure opportunities. The neighbouring consented residential development and Cotefield Nurseries are within a 5 minute walk from the centre of the site. Within a 10 minute walk of the site are Bannatynes Gym, the bus stops at on the A4260 at Weeping Cross, the bus stops on Molyneux Drive and Bodicote Stores.

3.19 Within a 25 minute walk of the site are Bodicote village, Cherwell District Council offices, Adderbury, Twyford, the Esso Garage, Bishop Loveday Primary School and Christopher Rawlins Primary School.

Cycling

3.20 A number of off and on road cycle routes are provided in the vicinity of the site, including National Cycle Route (NCR) 5, which is located approximately 1.5 km west of the development site. This is accessed via a combination of track roads and off road cycle routes as shown on **Figure 3**.

3.21 NCR 5 routes from Banbury through Bodicote, down to Oxford. Locally the route passes along Church Street, the High Street, White Post Road and Bankside and can be accessed 1.0km west of the site at the Freemans Road junction with Church Street.

3.22 Cycle lanes are provided on both sides of the carriageway on the A4260 Oxford Road north of Broad Gap. North of Mayfield Road these become shared cycle footways and provide a link to Sainsbury's and Horton Hospital.

3.23 A signed cycle route is provided along Bankside and Tramway Road, which provides a route from the A4260 to Banbury Railway Station and Town Centre.

3.24 Visography TRACC has also been used to generate isochrones to identify cycling accessibility to and from the site. The cycle isochrones have been plotted at time intervals of five minutes from the site up to a maximum of 25 minutes (approximately 5km). These are based on an average cycling speed of 16 km per hour equating to approximately 4 metres per second.

3.25 The resulting cycle isochrones are shown on **Figure 4.** This demonstrates that all areas of Banbury are located within a 25 minute cycle of the site. This includes Banbury Town Centre and Railway Station, both of which are within a 20 minute cycle of the site.

Bus

3.26 The nearest bus stops to the site are located on the A4260 Oxford Road, towards Banbury. The southbound bus stop is located approximately 250m north of the site access, at Weeping Cross, and the northbound bus stop is located approximately 430m north of the site access. Both bus stops are in the form of bus flags and provide timetable information.

3.27 In addition, there are bus stops provided on Molyneux Drive near to the junction with Austin Drive, which can be accessed via the north-adjoining site, approximately 400 metres from the centre of the application site.

3.28 The locations of bus stops within the vicinity of the site are illustrated in **Figure 5** along with the routing of the local services; the full extent of the bus services servicing Banbury are shown in the attached map at **Appendix C**. The routes that stop at the aforementioned bus stops are summarised within **Table 3.2**.

Table 3.2: Bus Service Summary

Route No.	Route	Weekday		Frequency (approx. minutes)				
		First Bus	Last Bus	Mon-Fri Peaks	Mon-Fri Daytime	Mon-Fri Evening	Sat	Sun
499	Brackley – Evenley – Aynho – King's Sutton – Banbury	0755	1714	1 service	Every 2 hours	1 service	Every 2 hours	No service
B2	Bodicote – Banbury	0632	1852	2 per hour	2 per hour	1 service	2 per hour	Every 2 hours
S4	Oxford – Steeple Aston – Deddington - Banbury	0753	2013	1 per hour	1 per hour	3 services	1 per hour	4services

Source: 'Traveline' [Accessed October 2014]

Rail

3.29 Banbury Railway Station is located approximately 3.7km north east of the application site. A total of 80 secure cycle parking spaces are provided at the rail station.

3.30 The station is managed by Chiltern Railways, providing a direct and regular link to London Marylebone via High Wycombe, and Princes Risborough and Kidderminster via Birmingham. A summary of the services provided from Banbury station are shown in **Table 3.3** below.

Table 3.3: Services from Banbury Station

Operator	Route	Monday-Friday			Saturday			Sunday		
		First train	Last train	Freq.	First train	Last train	Freq.	First train	Last train	Freq.
Chiltern Railways	Kidderminster – Birmingham - Banbury- London Marylebone	05:20	22:30	12-37 mins	06:04	23:24	16-61 mins	08:40	22:15	18-33 mins
	London Marylebone (via High Wycombe) - Banbury – Birmingham – Kidderminster*	06:05	01:35	5-38 mins	07:05	01:11	9-35 mins	09:28	01:20	10-32 mins
Cross Country	Newcastle to Reading via Birmingham New Street and Oxford	09:19	21:19	60 mins	09:19	21:20	60 mins	17:24	21:19	5 services
	Reading to Newcastle via Birmingham and Darlington	07:26	19:31	60 mins	07:33	17:24	60 mins	13:37	18:25	6 services
Cross Country	Manchester Piccadilly to Bournemouth via Birmingham New Street and Reading	06:54	22:55	60 mins	06:55	21:55	60 mins	09:55	20:55	60 mins
	Bournemouth to Manchester Piccadilly via Reading and Birmingham New Street	06:54	22:53	60 mins	06:56	21:55	60 mins	09:55	20:55	60 mins

Source: Chiltern Railways / Cross Country (Accessed October 2014)

*Some services terminate at Banbury

Public Transport Accessibility

3.31 Visography TRACC has been used to generate isochrones to identify public transport accessibility to and from the development site. The public transport isochrones have been plotted at time intervals of five minutes up to a maximum of 45 minutes' journey time to and from the site (including the walking time to and from the appropriate bus stops and waiting times for services).

3.32 The resulting public transport isochrones are shown on **Figure 6**. This indicates that King's Sutton, Adderbury, Bloxham, Broughton, Chacombe, Middleton Cheney, Bicester, Oxford and Chipping Norton are all located within a 45 minute public transport journey of the Site.

Access to Local Amenities

3.33 The town of Banbury has a large number and range of facilities such as schools, shops, health facilities and leisure facilities. The location of these are shown in **Figure 7** and summarised in **Table 3.4** with the approximate distances to each from the site access.

Table 3.4: Local Amenities

	Distance (m)	Journey Times (minutes)		
		Walk	Cycle	Bus*
Education				
Primary: Bishop Loveday Primary School	1,400	18	5	10
Secondary: Banbury Academy	3,100	39	12	19
College: Banbury and Bicester College	3,600	45	14	20
Health and Community				
Hospital: Horton General Hospital	2,500	31	9	9
Doctors: Hightown Surgery	2,500	31	9	12
Dentist: Cherwell Heights Dental Practice	2,000	25	8	10
Library: Adderbury Library	2,400	30	8	13
Shopping / Retail				
Post Office: Bodicote Post Office	650	7	2	-
Convenience Store: Bodicote Stores	650	7	2	-
Supermarket: Sainsbury's Supermarket	2,100	26	8	8
Town Site: Banbury town centre	3,600	45	14	18
Leisure				
Cinema: Odeon, Horse Fair, Banbury	3,400	41	10	16
Leisure Site: Bannatynes Gym, Oxford Road	<100	1	<1	-
Existing Public Open Spaces				
Recreation Ground: Bodicote Park, Oxford Road	<100	1	<1	-
Public Transport				
Bus Stop: Oxford Road	250	4	1	-
Bus Station: Banbury Bus Station	3,800	45	13	18
Railway Station: Banbury Railway Station	3,700	46	14	23

Note: Assumed walking speed of 1.33m/sec and cycling speed of 4m/sec.
*Minimum journey time includes walk time to and from relevant bus stop and waiting time at the stop

Road Safety

3.34 Personal Injury Accident (PIA) data was obtained from Oxfordshire County Council, with the study area encompassing the A4260 Oxford Road from the Farmfield Road crossroad junction in the north, to the Twyford Road priority junction in the south.

3.35 The data comprises details of each PIA that has taken place within the study area over the most recent 60-month period, to the end of May 2014. The full data output provided by Oxfordshire County Council is attached at **Appendix D** and the location of accidents is shown within **Figure 8**.

3.36 There were a total of 26 PIAs recorded over the given time period. Six of the accidents resulted in serious injury, whilst the remaining 20 of the accidents resulted in slight injuries. None of the injury accidents resulted in fatal injury. Four of the accidents involved motorcycles, three involved pedestrians and two involved pedal cycles.

3.37 All three of the PIAs were the result of collisions with other vehicles. One was the result of a vehicle failing to stop at a crossing, resulting in a slight injury. Another occurred when a wing mirror clipped a pedestrian, resulting in a serious injury. The third accident was the result of a pedestrian being struck by an oncoming vehicle whilst crossing the road, resulting in a serious injury. Both of the cyclist incidents occurred when drivers failed to see the cyclists turning.

3.38 The six serious injury accidents occurred at different locations within the study area; two involved pedestrians, one a motorcyclist, one a HGV and the other two involved cars only. All of the accidents resulted in different causalities.

3.39 One cluster of injury accidents was recorded at the Farmfield Road crossroads, where a total of 5 injury accidents occurred within the 5 year period. Two were the result of vehicles failing to give way, one was the result of a vehicle changing lanes and colliding with another vehicle, one was the result of a pedestrian being clipped by a vehicle's wing mirror and the remaining injury accident was the result of a vehicle losing control and colliding with a wall.

3.40 The analysis of the PIAs within the study area shows that there are no common contributory factors to the injury accidents in the area. In addition, there were no fatal injury accidents recorded within the study area and no injury accidents took place at the site access junction. Based on the recorded injury accident data, there is not considered to be a road safety problem within the vicinity of the site.

Future Public Transport Improvements

3.41 As part of the Oxfordshire Local Transport Plan (2011-2030), improvements to cycling facilities including improvements to the cycling network in Banbury are planned although no specific details are provided.

Air Quality Management Areas (AQMA)

3.42 The Department for Environment, Food and Rural Affairs website (http://aqma.defra.gov.uk) has been accessed to ascertain whether there is an AQMA within the vicinity of the site. The development site does not lie within a designated AQMA. The nearest AQMA is located on Hennef Way in Banbury, between Ermont Way and Concorde Avenue, approximately 5.0 kilometres north of the site.

3.43 The site is located within a sustainable location with good accessibility by sustainable modes. It is considered that the scheme would not have a material impact on air quality and would be in accordance with the Air Quality Action Plan (AQAP) for the AQMA.

Committed Development

3.44 As discussed with Oxfordshire County Council, there are a number of committed developments in Banbury, which are to be considered in the traffic impact of the proposed development. Further details of the committed developments that have been assessed are outlined in Section 5 of this report.

Traffic flows

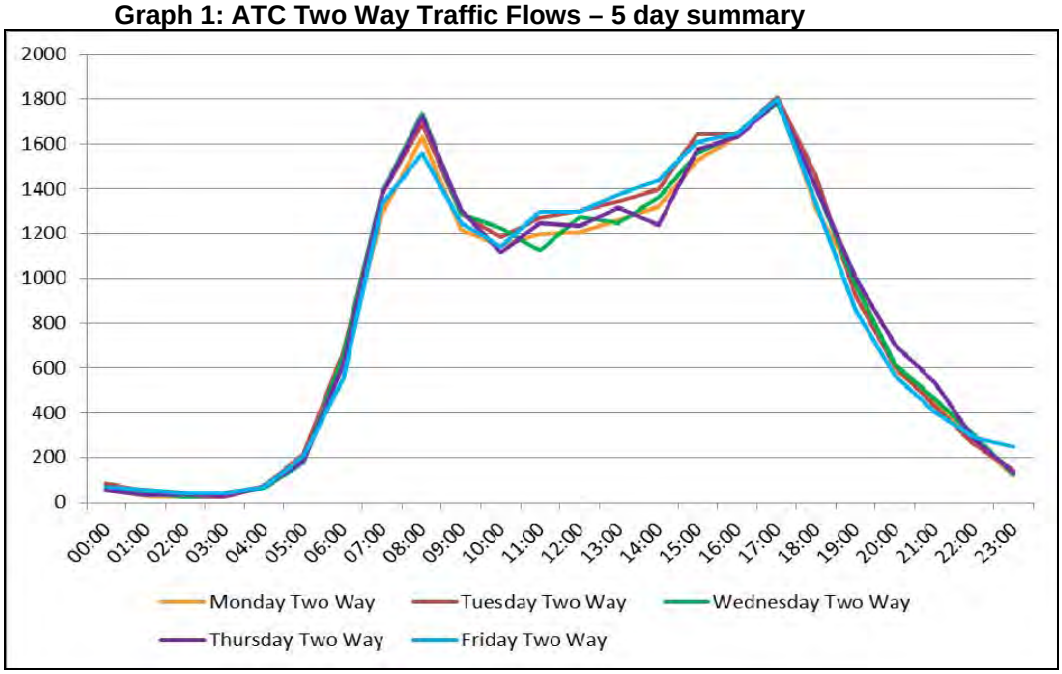
3.45 In order to obtain up-to-date traffic flows along the adjacent highway network, an independent specialist traffic survey company was commissioned to undertake traffic surveys. As shown at **Appendix E**, Manual Classified Counts (MCCs) were undertaken at the following locations:

- Oxford Road / Cotefield Nurseries Access priority junction;
- Oxford Road / Weeping Cross junction; and
- Oxford Road / Farmfield Road crossroad junction.

3.46 The MCCs were fully classified by turning movement and were undertaken on Tuesday 23rd September 2014 over the peak periods; 06:00-10:00 and 15:00-19:00. The MCC surveys identified the AM peak hour as being 08:00-09:00 at the site access and Weeping Cross junctions, and 07:45-08:45 at Farmfield Road crossroads. The PM peak hour was identified as 17:00-18:00 at the site access and Weeping Cross junctions and 16:45-17:45 at Farmfield Road crossroads.

3.47 The MCCs were validated by the placement of an Automatic Traffic Counter (ATC) located on Banbury Road just south of the application site access junction. The ATC was fully classified and was placed for a seven day period (Monday 22nd September 2014 to Sunday 28th September 2014). The full data is attached at **Appendix F,** with a summary of the weekday two-way traffic flows on the A4260 shown below in **Graph 1**.

Graph 1: ATC Two Way Traffic Flows – 5 day summary



3.48 The ATC shows that traffic flows vary on a day-to-day basis along the A4260, south of the site access. The observed 12-hour weekday traffic flows vary between 16,550 and 17,411 two-way vehicle movements, with a weekday average of 17,007.

3.49 The 23rd September 2014 survey data has been compared with 2nd March 2010 traffic survey data, which was undertaken for the north-adjoining consented development at the site access and Weeping Cross junctions. The 2010 traffic survey data is attached at **Appendix G** and identifies the network AM peak hour as being 07:45-08:45 and the PM peak hour as 16:45-17:45. A comparison of the 2010 and 2014 traffic survey data at the two junctions is provided in **Table 3.5**.

Table 3.5: Traffic Survey Difference

	2014 Survey (Two way traffic flows)		2010 Survey (Two way traffic flows)		Difference	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
A4260 North of Weeping Cross	1679	1779	1873	1887	-194	-108
A4260 South of Weeping Cross	1696	1769	1812	1823	-116	-54
Weeping Cross	169	152	191	186	-22	-34
A4260 North of Site Access	1687	1792	1825	1839	-138	-47
A4260 South of Site Access	1685	1794	1825	1825	-140	-31
Site Access	12	32	8	18	4	14

3.50 Table 3.4 shows the two way traffic flow on the A4260 is between 31 and 194 vehicles lower in the 2014 traffic surveys, when compared to the 2010 traffic surveys. This could be a result of more people travelling via sustainable modes or people choosing alternative routes in to Banbury town centre, as proposed in the Banbury Area Strategy.

3.51 The 2014 observed traffic flows for the site access, Weeping Cross and Sainsbury's junctions are shown within **Figure 9** for the AM peak hour and **Figure 10** for the PM peak hour.

Summary

3.52 This section has demonstrated that the proposed development at Blossom Fields is located in a sustainable and accessible location for all modes of transport. Various facilities are within recommended maximum walking and cycling distance of the site and a number of bus routes service the nearest bus stops to the site.

3.53 PIA data demonstrates a low level of incidents on the surrounding roads and junctions. It is considered that the scheme would not have a material impact on air quality and would be in accordance with the AQAP. Traffic surveys show that the traffic flow on the A4260 has marginally reduced since 2010. The site is in a location that provides access to a number of modes of travel and will encourage sustainability in compliance with national, regional and local policy objectives.

4 DEVELOPMENT PROPOSAL

Context

4.1 The proposed development comprises 95 dwellings on a parcel of land in the single ownership of Mr R P Bratt on the southern edge of the settlement of Bodicote. The site is around 600m from Bodicote village centre, about 1km from Banbury's town edge and about 3km from Banbury Cross. The site forms the southern half of an agricultural field, the other half of which was granted planning consent on appeal in 2012 (Ref. 11/00617/OUT) for a residential development of 82 houses. This site has a total area of 4.5ha.

4.2 The site is currently laid to pasture and is bounded to the south and west by agricultural land, to the east by Cotefield Business Park and to the north by the aforementioned parcel of land which was granted planning consent in 2012 for 82 houses (all of which are owned by Mr Bratt). There is a significant woodland belt running along the southern and western field boundaries, which provides a natural field boundary.

4.3 This chapter outlines the proposals for the development site, the vehicular access arrangements, the internal provision for pedestrian and cyclist movements and also the measures being promoted to encourage sustainable travel including by bus.

Development Proposal

4.4 The proposed development seeks to provide 95 dwellings. In accordance with the up-to-date planning policies, 35% of the units will be allocated for affordable dwellings. This equates to 33 affordable units and 62 privates units. The proposed mix compromises of:

- 62 market units
  - 6 two-bedroom houses;
  - 25 three-bedroom houses;
  - 13 four-bedroom houses; and
  - 18 five bedroom houses.
- 33 affordable units
  - 4 one-bedroom maisonettes;
  - 20 two-bedroom houses;
  - 8 three-bedroom houses; and
  - 1 two bed bungalow.
- 220 allocated Car Parking Spaces and 27 unallocated car parking spaces.

Vehicular Access

4.5 Vehicular access to the proposed development will be taken from the existing access to Cotefield Nurseries, Cotefield Business Park and the north-adjoining consented development.

4.6 Access routes to and throughout the proposed development are indicated in the Masterplan contained at **Appendix A.**

4.7 The proposed internal arrangement of roads and paths in the proposed development will be designed to similar standards and principles to those of the north-adjoining consented development. This will therefore provide continuity between both developments and will create a safe environment for all road users and particularly for on-carriageway cycle use.

Refuse Collection / Emergency Service Vehicle Access

4.8 The internal road network is designed to facilitate the manoeuvrability and navigation of refuse vehicles and emergency service vehicles throughout the development. An internal loop is provided, with streets accessing onto the loop. All the streets provide turning areas to enable servicing vehicles to enter and exit the site in forward gear.

Construction Traffic

4.9 Access to the site for construction vehicles can be accommodated by the existing road access off the A4260. At this stage the level of traffic that is likely to be generated during the construction of the proposed development is not known. However the construction traffic impacts will be temporary and can be managed through the implementation of a Construction Traffic Management Plan (CTMP) which could be secured by condition attached to the grant of planning permission.

4.10 The principal aim of a CTMP would be to ensure that construction works are organised and delivered in a manner that safeguards the highway impact, highway safety and amenity of the area surrounding the site.

4.11 Along with specifying the construction duration and hours of operation the CTMP would contain information such as an agreed routing plan for the construction vehicles. This would be established to seek to minimise the impacts on other users of the highway network, including pedestrians and cyclists. The CTMP would also set out the access arrangements for the project site throughout the construction stage.

Travel by Foot and Cycle

4.12 Careful consideration has been given to the integration of the proposed development with existing facilities and infrastructure, to ensure that the potential to utilise these sustainable modes is maximised. The design of the various links will ensure that continuity is maintained between the proposed development and neighbouring areas to provide safe and convenient access for all road users.

4.13 The Masterplan has been developed on the principle of providing permeability for all modes of travel. The primary circular access road within the development has been designed with traffic calming measures at various points to encourage slow vehicular speeds and taking into consideration the safety of all users. Footways will also be provided along the primary route along both sides of the carriageway. The secondary streets within the development have been designed to be shared spaces for all road users, allowing pedestrians and drivers to share the carriageway where lower volumes and speeds of vehicles permit this therefore giving priority to pedestrians and cyclists.

4.14 The development proposals will open up the site to the local area by providing a walking link along the western boundary of the site to connect with the Public Rights of Way along the sites southern and western boundaries, linking it with Bodicote village in the north, Oxford Road to the

east and the village of Adderbury to the south. The linkages will be convenient, well lit and follow desire lines where required. The existing footpaths connecting with Austin Road and along the western perimeter of the site will also be enhanced to provide better connections to Bodicote village and the bus stops on Molyneaux Drive.

4.15 Additionally, a footpath will be provided through the centre of the site running from the southern boundary up to the northern boundary of the site. The footpath will in turn provide a connection to the north-adjoining site to the north of the development site and further afield to the village of Bodicote where local facilities are provided including the nearest bus stops and a local post office.

4.16 In terms of provision for cyclists, cycle parking will be provided within the development within the curtilage of each individual dwelling.

4.17 In addition to the above, a number of design measures to cater for pedestrian and cycle movements within the development will be employed. This includes the promotion of a street pattern that generates natural surveillance where entrances and frontages face all public routes. The internal layout will encourage low vehicle speeds and therefore create an environment where pedestrians and cyclists are not intimidated by motor traffic.

4.18 The applicant is committed to providing high quality homes located in an accessible, sustainable environment.

Travel by Bus

4.19 The development enjoys a good level of public transport accessibility, with bus services serving the bus stops on Molyneux Drive near to the junction with Austin Drive as well as the bus stops on the A4260 Oxford Road at Weeping Cross. The bus stops on Molyneux Drive are within 400 metres of the centre of the site, whilst the southbound bus stop on the A4260 Oxford Road is within 550 metres of the centre of the site. Newly installed Puffin crossings at Weeping Cross will provide a safe and convenient crossing point of the A4260 Oxford Road and Weeping Cross. Moreover, care has been taken during the design of the masterplan to ensure that direct pedestrian routes are provided towards the bus stops from all areas of the development and through the north-adjoining site.

Car Parking and Cycle Parking

4.20 When determining the level and type of parking throughout the development, consideration has been given to the housing types proposed, the location of the development site and car ownership levels within the area. A design-led approach has been adopted, which seeks to provide parking that is well integrated and compliments, rather than dominates, the street scene.

4.21 The objective is to provide an adequate level of parking and, importantly, to ensure that the spaces that are designed for parking are used for parking, and that places where parking will cause problems are not going to be used for that purpose. This approach will help to prevent the problems that occur at some residential developments where parked cars obstruct footways and restrict access along a street.

4.22 Most car owners like to be able to see their vehicles and / or to know that they are securely parked. On-plot parking satisfies this strong desire. Acceptance of this means that the significant

majority of the parking at the proposed development has been designed to be provided within the curtilage of dwellings through the use of on-plot spaces and within garages.

4.23 The on-plot parking provision will be supplemented by well-designed parking courts that are located and overlooked such that they are likely to be preferred to ad hoc on-street parking.

4.24 The OCC 'Parking Standard for New Residential Development' (2011) document has been taken into consideration when calculating what level of parking should be provided. The policy seeks developers to provide a mixture of allocated and unallocated parking spaces. The parking standards are summarised in **Table 2.2** and are treated as maximum standards. The parking standards have been applied to the proposed development breakdown in **Table 4.1** below.

Table 4.1: Parking Standards Applied to Development Schedule

Affordable:	**No of Dwellings**	**Allocated Spaces**	**Unallocated Spaces**	**Total Spaces**
1 Bed	4	4	1.6	
2 Bed	20	40	6	
2 Bed Bungalow	1	2	0.3	
3 Bed	8	16	3.2	
Total Affordable:	**33**	**62**	**11**	**73**
Private:	**No of Dwellings**	**Allocated Spaces**	**Unallocated Spaces**	**Total Spaces**
2 Bed	6	12	1.8	
3 Bed	25	50	10	
4 Bed	13	26	6.5	
5 Bed	18	36	10.8	
Total Private:	**62**	**124**	**29**	**153**
TOTAL	**95**	**186**	**40**	**226**

4.25 Applying the OCC parking standards to the development schedule, we calculate that the proposed 95 development could provide up to 226 parking spaces, of which 186 spaces would be allocated to dwellings and the remaining 40 spaces would be unallocated spaces.

4.26 The illustrative masterplan which accompanies this application provides 248 spaces; of which 220 spaces are allocated and 28 spaces are unallocated. The 220 allocated spaces are made up of 129 spaces and driveways and 91 garages. The marginal uplift in allocated spaces from the OCC parking standards reflects that not all people use their garage for parking their vehicle and as such a sufficient uplift has been applied to avoid any overspill parking on street. The unallocated spaces have been strategically placed around the development to ensure that walking times from the spaces to the dwellings are minimised.

4.27 Cycle parking will be provided within the curtilage of each individual dwelling.

5 TRIP GENERATION AND MODAL SHARE

Introduction

5.1 This section of the Transport Assessment outlines the forecast trip generation and distribution of the proposed development in respect of vehicular trips as well as those by other modes of travel. The appraisal focuses on weekday morning and evening peak hours, which represent the busiest periods along the local highway network as well as the peak traffic generating periods of the proposed development.

Proposed Development

5.2 To undertake an analysis of the trips generated by the proposed residential development, trips have been generated based on the TRICS (Version 7.1.1) trip generation database. Trips have been generated based on a scheme design of 95 dwellings. Surveys of sites of a similar location, type and use from within England have been used from the private housing category and the affordable housing category.

5.3 Although the network peak AM period is between 0745 and 0845, the AM peak flows from 0800-0900 have been assumed to be generated between the 0745-0845 period. Likewise although the network peak PM period is between 1645 and 1745, the PM peak flows from 1700-1800 have been assumed to be generated between the 1645-1745 period.

Private Housing

5.4 All TRICS sites in a suburban location with between 40 and 120 houses have been used. This equated to a total of 7 sites. The number of trips generated by 62 private dwellings have been summarised within **Table 5.1** below. Full details of the surveys used and the outputs of the trip generation have been summarised within **Appendix H**.

Table 5.1: Private Housing – TRICS Trip rates

	Trip Rates								
	AM Peak			PM Peak			Daily		
	In	Out	Two Way	In	Out	Two Way	In	Out	Two Way
Vehicle Trip Rates	0.150	0.377	0.527	0.319	0.204	0.523	2.260	2.428	4.688
Vehicle Trips	9	23	32	20	13	33	140	151	291

5.5 Table 5.1 show that the private housing element of the development could generate up to 33 two-way trips in the peaks, and up to 291 two-way trips over an entire day.

Affordable Housing

5.6 All TRICS 'houses for rent' sites in a suburban location with between 10 and 50 houses have been used. This equated to a total of 4 sites. The number of trips generated by 33 affordable dwellings have been summarised within **Table 5.2** below. Full details of the surveys used and the outputs of the trip generation have been summarised within **Appendix I**.

Table 5.2: Affordable Housing – TRICS Trip rates

	Trip Rates								
	AM Peak			PM Peak			Daily		
	In	Out	Two Way	In	Out	Two Way	In	Out	Two Way
Vehicle Trip Rates	0.137	0.237	0.374	0.317	0.216	0.533	2.426	2.417	4.843
Vehicle Trips	5	8	13	10	7	17	80	80	160

5.7 Table 5.2 shows that the affordable housing element of the development could generate up to 17 two-way trips in the peaks and up to 160 two-way trips over an entire day.

Total Development

5.8 The total trips generated by 95 dwellings (62 Private / 33 Affordable) have been summarised within **Table 5.3** below.

Table 5.3: Total Development Trips

	Trip Rates								
	AM Peak			PM Peak			Daily		
	In	Out	Two Way	In	Out	Two Way	In	Out	Two Way
Vehicle Trips	14	31	45	30	20	50	220	231	451

5.9 Table 5.3 shows that a development of 95 dwellings could generate up to 45 two way trips in the AM peak, up to 50 two way trips in the PM peak and up to 451 two way trips over an entire day.

5.10 For the purposes of this assessment it has been assumed that all vehicles associated with the residential uses during the peak periods are light vehicles as the level of heavy goods vehicles (HGVs) are likely to be minimal and associated with servicing and delivery's.

Distribution and Assignment

5.11 The proposed residential development trips have been distributed across the network based on an analysis of the 2001 Census journey to work data (2011 census journey to work data is yet to be made available) for the Bloxham and Bodicote ward, in which the development is situated.

5.12 Although there would be some trips generated during the peak periods for other uses, the journey to work data has been used as a guide. The 2001 Census journey to work data is attached at **Appendix J**. The distribution of proposed residential traffic across the network has been summarised as follows:

- A4260 Oxford Road south of site access – 26%
- A4260 Oxford Road north of Broad Gap junction – 33%
- Broad Gap/Wykham Lane – 19%
- Weeping Cross – 14%
- Farmfield Road – 3%
- Bankside – 4%

5.13 The proposed residential traffic flows have been assigned onto the network based on the above distribution percentages, with the resultant traffic flows in the AM and PM peak periods shown in **Figures 11** and **12** respectively. These vehicle trips will be added to the base and base-plus-committed-development flows, to ascertain the impact of the development proposals.

Modal Split

5.14 To ascertain the number of vehicle trips that could be generated by the proposed residential development, the 2011 'method of travel to work (resident population)' census data has been used for all journeys to work in the ward of Bloxham and Bodicote. The modal split has been applied to the number of vehicle trips generated by TRICS for residential uses (the number of vehicles equates to car driver plus motorcycle trips). The modal split percentages and the resultant number of trips over a daily period are shown within **Table 5.4** below. The modal split percentages have been adapted through removing people who are not currently working and those that work from home.

Table 5.4: Modal Split of Person Trips

	%	AM Peak	PM Peak	Daily
Train	3.4%	2	2	20
Bus, minibus or coach	2.1%	1	1	12
Taxi or minicab	0.3%	0	0	1
Driving a car or van	77.7%	45	50	451
Passenger in a car or van	5.0%	3	3	29
Motorcycle, scooter or moped	0.8%	0	1	5
Bicycle	2.3%	2	2	14
On foot	8.0%	5	5	46
Other	0.4%	0	0	2
Total Person Trips	**100.0%**	**58**	**64**	**580**

5.15 **Table 5.4** demonstrates that the majority of trips would be generated by private vehicles, however this does not take into consideration leisure or retail journeys, for a number of everyday uses, which potential future residents would be less likely to need to use their car.

6 FUTURE YEAR TRAFFIC FLOWS

Introduction

6.1 This section considers the future year traffic flows for the local highway network and the associated growth factors.

Growth Rates

6.2 To establish future year peak hour traffic flows, against which the impacts of the proposed residential development can be assessed, the observed weekday AM and PM peak hour traffic flows shown in **Figures 9** and **10,** have been growthed using the Department for Transport (DfT) software TEMPRO.

6.3 The TEMPRO software presents the output of the DfT's National Trip End Model, which forms part of the National Transport Model (NTM).

6.4 To account for general traffic growth on the highway network, the base background traffic data has been factored to a base assessment year using NTM. The DfT's WebTag guidance Unit 3.15.2 advises the use of NTM in preference to the National Road Traffic Forecasts (NRTF), as the NTM data is based on a more up-to-date model. The dataset used for this assessment is the latest predictions from Version 6.2 of the NTM data set.

6.5 The proposed year of opening is not known at this stage, however for the purpose of this assessment it has been assumed that the proposed development would be first occupied in 2016. As such the background traffic has been growthed to a 2016 assessment opening year. At the request of OCC, the base traffic flows have also been growthed to a 2021 (opening year + 5 years) assessment year.

6.6 The growth factors have been based on the Banbury area, using all roads. The growth rates used to factor the base traffic flows are;

- 2014 – 2016 Weekday AM peak hour - 1.026
- 2014 – 2016 Weekday PM peak hour - 1.026
- 2014 – 2021 Weekday AM peak hour - 1.101
- 2014 – 2016 Weekday PM peak hour - 1.104

6.7 **Figures 13 and 14** illustrate the 2016 weekday AM and PM peak hours growthed traffic flows respectively. **Figures 15 and 16** illustrate the 2021 weekday AM and PM peak hours growthed traffic flows respectively

6.8 The 2016 and 2021 growthed traffic flows will be used to assess the impact of the proposed residential development traffic flows on the network. The 2016 growthed-plus development traffic flows are shown for the AM and PM peaks in **Figures 17 and 18** respectively. **Figure 19** outlines the 2021 growthed-plus development traffic flows in the AM peak whilst **Figure 20** outlines the 2021 growthed-plus development traffic flows in the PM peak.

Committed Developments

6.9 In order to estimate baseline future year traffic flows, it is normal to growth background traffic flows using growth rates and then add estimated traffic flows from any committed developments onto the network.

6.10 It should be noted that growth rates include an allowance for the general increase in background traffic flows as well as an element of development led increases in traffic flow. The application of growth rates as well as the addition of committed development traffic flows can sometimes therefore 'double count' the effect of traffic flows. However, such a method represents a worst case scenario and therefore represents a robust estimate of baseline future year traffic flows, which can be used in assessing the impact of a development proposal.

6.11 There are a number of committed / proposed developments in the area that the Council has identified should be included within this assessment. The following committed development, outlined in **Table 6.1**, have been suggested to be considered and included within the impact analysis of the local road network by OCC:

Table 6.1: Surrounding Committed Developments

Planning reference number	Application name	Development outline	Considered on the network
05/01337/OUT	Bankside	Mixed-use development including 1070 residential units and 2,200m^2 of B1 office land-use.	Colin Buchanan TA (April 2005). Traffic flows shown at Weeping Cross and Farmfield Road. Assumed straight on through our Site Access.
11/01870/F	Banbury Gateway Retail Park	27,432sqm retail space including M&S, non-food units and restaurants	Vectos 2011 TA Appendix I – Figure 23+26 Traffic Flows. No traffic on our network.
11/01868/F	Relocated Prodrive Factory	17,368sqm of warehousing light industrial and office use	Vectos 2011 TA Appendix I – Figure 23+26 Traffic Flows. No traffic on our network.
12/00849/F	Multi Storey Car Park	707 space car park for Banbury Rail Station	SKM Colin Buchanan TA May 2012 - Approx 142 two way on Bridge St in the AM Peak and 137 in the PM Peak. Therefore assumed by our network traffic dispersed and covered by TEMPRO NTM growth.
12/00080/OUT	Crouch Farm	145 residential dwellings	Peter Brett TA January 2012 - '2017 Factored Year + Dev' minus '2017 Factored Year' for both peaks. Traffic flows shown at Farmfield Road. Assumed to continue through Weeping Cross and Site Access.
12/01789/OUT	North Hanwell Fields	350 residential dwellings	WSP TA December 2012 - Figure 11 and 12: Assumed 33.3% of development traffic shown on A422 Warwick Road continues through each of our assessed junctions.
10/01575/OUT	Southern Road SAPA Site	Max 59,000 sqm of B1, B2 and B8 use	David Tucker Associates TA October 2010 - Table 5.7 and Table 5.8 show worst case flows at A422 / A361 roundabout. Assume 33.3% of development traffic shown on Southam Road continues through each of our assessed junctions.
11/01878/OUT	Central M40 Site	114,006m^2 of B2 and B8 use	Peter Brett TA December 2011 - 18 two way on Overthorpe Road. Therefore assumed by our network traffic dispersed and covered by TEMPRO NTM growth
13/00158/OUT	West of Southam Road	370 residential dwellings and a small local community/retail facility	David Tucker Associates TA January 2013 - Appendix J Zone J shows traffic on A4260 Oxford Road Assumed to continue through Weeping Cross and Site Access.
13/00159/OUT	East of Southam Road	510 residential dwellings and a local primary school	

Planning reference number	Application name	Development outline	Considered on the network
13/00656/OUT	West of Warwick Road	Up to 300 residential dwellings, local centre of approx. 500m^2 and public open space	RPS TA February 2013 Figure 6.1 and 6.2. Assume 33.3% of development traffic shown on A422 Warwick Road continues through each of our assessed junctions.
12/00329/OUT	Kraft Foods Site	Southam Road Business Park compromising of food store (5,574m^2) and A1 retail units (7,432m^2)	Peter Brett TA March 2012 - Appendix H shows peak flows. Assumed to continue through each of our assessed junctions.
13/00444/OUT	Bretch Hill	400 residential dwellings	Phil Jones Associates TA March 2013 - Appendix A outlines the Saturn Outputs and shows minimal traffic on the B4035 / A361 Roundabout. Therefore assumed by our network traffic dispersed and covered by TEMPRO NTM growth
11/00617/OUT	Land South Of Molyneux Drive (north-adjoining consented development)	82 residential dwellings	RPS TA April 2011 Figure 17. Assumed to continue straight on through Farmfield Road junction.

6.12 The traffic flows for each of the committed developments are outlined in **Appendix K**. The total committed development traffic is outlined in **Figure 21** for the AM peak hour and **Figure 22** for the PM peak hour.

Baseline Scenario

6.13 The aforementioned committed developments have been added to the 2016 and 2021 growthed traffic flows, for both the AM and PM peak hours to create both a 2016 baseline and a 2021 baseline scenario. The resultant 2016 Baseline traffic flows for the AM and PM peaks are outlined in **Figure 23 and 24** respectively. The 2021 Baseline traffic flows for the AM and PM peaks are outlined in **Figure 25 and 26** respectively.

6.14 The 2016 baseline plus development traffic flows are shown for the AM and PM peaks in **Figures 27 and 28** respectively. **Figure 29** outlines the 2021 baseline plus development traffic flows in the AM peak whilst **Figure 30** outlines the 2021 baseline plus development traffic flows in the PM peak. The baseline plus development scenarios will assess the impact of the existing consented development in partnership with the Blossom Fields development traffic on the existing road network.

7 IMPACTS AND OPERATIONAL ASSESSMENT

Introduction

7.1 The potential increase in traffic flows generated by the proposed development has been assessed for the assumed first year of occupation of 2016. Operational assessments have also been undertaken in 2021, being five years after the first year of occupation, consistent with the DfT Guidance on Transport Assessment and as requested by OCC.

7.2 Operational assessments of the site access and Weeping Cross junctions with the A4260 Oxford Road have been undertaken using the Transport Research Laboratory (TRL) modelling software Junctions 8 PICADY. Operational assessments of the Farmfield Road crossroads with the A4260 Oxford Road have been undertaken using the JCT Consultancy Ltd software LinSig V3. The Bankside development proposes to signalise the Weeping Cross junction. The signals have recently been installed, however are not in operation yet. As such the Weeping Cross junction has also been assessed using the JCT Consultancy Ltd software LinSig V3 for the 2016 and 2021 Baseline plus development scenarios

Traffic Flow Impacts

7.3 The percentage increases in traffic flows on the surrounding network have been calculated to establish the potential impact of the proposed development on the local highway network. As a worst case, the potential impacts have been assessed during a 2016 assessment year, when the base flows are at their lowest. Based on the growthed survey data shown within Section 6 and the trip generation shown within Section 5, the base traffic flows as well as the network traffic flows have been summarised within **Table 7.1** below.

Table 7.1: Impacts of proposed development

	2016 Growthed		Development Traffic		% Increase	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
A4260 North of Site Access	1731	1839	33	37	1.9%	2.0%
A4260 South of Site Access	1729	1841	12	13	0.7%	0.7%
A4260 North of Weeping Cross	1722	1826	26	30	1.5%	1.6%
A4260 South of Weeping Cross	1740	1816	32	37	1.8%	2.0%
Weeping Cross	174	156	6	7	3.4%	4.5%
A4260 South of Farmfield Road	1753	1882	16	19	0.9%	1.0%
A4260 North of Farmfield Road	1814	1885	15	17	0.8%	0.9%
Farmfield Road	259	166	1	2	0.4%	1.2%

7.4 **Table 7.1** shows that the traffic flows generated by the proposed development would have a maximum of a 4.5% impact on the two-way traffic flows on Weeping Cross during the PM peak hour.

7.5 In terms of the A4260 Oxford Road, the maximum impact of 2.0% is on the section of the A4260 between the site access and Weeping Cross during the PM peak hour.

Junction Capacity Assessments

7.6 As aforementioned, the operational and capacity assessments of the junctions have been undertaken using the TRL software Junction 8 – PICADY and the JCT software LinSig V3.

7.7 The junction geometries for the site access and Weeping Cross junctions have been based on on-site measurements.

7.8 The signal timings for the Farmfield Road crossroads have been obtained from OCC. The geometries are based on OS mapping measurements validated against the geometries presented in the Mayer Brown Transport Assessment (2009) for the proposed Extension of Sainsbury's. The Farmfield Road crossroads operates under a SCOOT (Split Cycle Offset Optimisation Technique) which is an adaptive system that responds automatically to fluctuations in traffic flow through the use of on-street detectors embedded in the road. As such the green time to different movements and the cycle time varies depending on traffic fluctuations. For the purpose of this assessment a 120 second cycle time has been used, which is the same as that used in the Mayer Brown assessment.

7.9 PICADY provides two main measures of junction capacity and operation, namely traffic intensity (RFC) and queue length. These measurements are discussed briefly below:

Traffic Intensity (RFC)

7.10 Within PICADY the RFC (ratio of flow to capacity) provides the primary measure of the capacity within a junction, and is reported for each entry arm. When RFC exceeds 1.0 the arm is considered to be operating over capacity, and queuing will occur. As a general rule, a ratio of less than 0.85 provides an acceptable design criterion.

Queue Length

7.11 Queue length (Q) provides an indication of how the overall junction performance may affect adjacent junctions on the highway network.

7.12 The traffic flows used within the LINSIG assessments are in Passenger Car Units (PCU's). These have been calculated by applying a 2.0 PCU factor to all HGV movement. The outputs of LINSIG include the Degree of Saturation (% Sat), Mean Maximum Queue (MMQ) and the Practical Reserve Capacity (PRC).

7.13 The % Sat is a ratio of demand to capacity for each traffic phase with a value of 100%, indicating that traffic demand and capacity are equal. Although not specified within any recognised guidance, it is often preferable to keep the % Sat below 90% to allow a level of confidence that the junction will operate within capacity even if day-to-day traffic flows vary. If the % Sat does exceed 100% then queues will build up during the red periods, be unable to fully dissipate within the next green period and will gradually become longer and longer during subsequent cycles.

7.14 The PRC is calculated from the maximum % Sat and is a measure of how much additional traffic could pass through the junction whilst maintaining a maximum % Sat of 90% on all links. Given

that the PRC is relative to a maximum % Sat of 90% means that it is not relative to the true capacity (100%) of the junction it is only relative to maintaining a maximum % Sat of 90%.

7.15 The MMQ represents the maximum queue within a typical cycle, averaged over all the cycles within the modelled time period. The MMQ provides an indication of how the overall junction performance may affect adjacent junctions on the highway network.

7.16 The junction capacity assessments have been carried out for the following scenarios:

- Observed 2014 AM Peak hour;
- Observed 2014 PM Peak hour;
- Growthed 2016 AM Peak hour;
- Growthed 2016 PM Peak hour;
- Growthed 2021 AM Peak hour;
- Growthed 2021 PM Peak hour;
- Growthed 2016 AM Peak hour + Development Traffic;
- Growthed 2016 PM Peak hour + Development Traffic;
- Growthed 2021 AM Peak hour + Development Traffic;
- Growthed 2021 PM Peak hour + Development Traffic;
- Growthed 2016 AM Peak hour + Committed Development Traffic;
- Growthed 2016 PM Peak hour + Committed Development Traffic;
- Growthed 2021 AM Peak hour + Committed Development Traffic;
- Growthed 2021 PM Peak hour + Committed Development Traffic;
- Growthed 2016 AM Peak hour + Development Traffic + Committed Development Traffic;
- Growthed 2016 PM Peak hour + Development Traffic + Committed Development Traffic;
- Growthed 2021 AM Peak hour + Development Traffic + Committed Development Traffic;
- Growthed 2021 PM Peak hour + Development Traffic + Committed Development Traffic;

Site Access / A4260 Priority junction

7.17 The existing road access will be used to serve the proposed development along with Cotefield Nurseries, Cotefield Business Park and the north-adjoining consented development. Junction capacity assessments using PICADY have been undertaken for this junction in all scenarios.

7.18 The results of the analyses in the base scenarios, without any development traffic at the site access / A4260 Priority junction, are shown in **Table 7.2** while the PICADY output can be found in **Appendix L**.

Table 7.2: Site Access / Oxford Road Junction 'Without Development' Results

Link	2014 Observed				2016 Growthed				2021 Growthed			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Nursery/Access left to A4260 Oxford Road (N)	0.007	0	0.026	0	0.007	0	0.026	0	0.007	0	0.031	0
Nursery/Access right to A4260 Oxford Road (S)	0.012	0	0.072	0	0.013	0	0.078	0	0.016	0	0.112	0
A4260 Oxford Road (N) Right Turn	0.009	0	0.009	0	0.009	0	0.010	0	0.010	0	0.010	0

7.19 **Table 7.2** shows that the site access junction currently operates with substantial spare capacity with a maximum RFC in the 2014 Observed PM peak of 0.072 on the site access right turn movement with no associated queue. The junction is anticipated to continue operating within capacity in the 2016 growthed and 2021 growthed scenarios with a maximum RFC in the 2021 PM peak of 0.112 on the site access right turn movement with no associated queue.

7.20 **Table 7.3** summarises the results of the 2016 Growthed and 2021 Growthed traffic flows with the addition of the proposed development traffic.

Table 7.3: Site Access / Oxford Road Junction 'With Development' Results

Link	2016 Growthed + Development				2021 Growthed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Nursery/Access left to A4260 Oxford Road (N)	0.058	0	0.061	0	0.056	0	0.068	0
Nursery/Access right to A4260 Oxford Road (S)	0.069	0	0.127	0	0.144	0	0.181	0
A4260 Oxford Road (N) Right Turn	0.033	0	0.062	0	0.034	0	0.065	0

7.21 **Table 7.3** shows that with the addition of the development traffic the site access junction is anticipated to continue operating within capacity in the 2016 growthed + development and 2021 growthed + development scenarios with a maximum RFC in the 2021 PM peak of 0.181 on the site access right turn movement with no associated queue.

7.22 The committed developments outlined in Section 6 have been added to the 2016 and 2021 growthed traffic flows and the results of the operational assessments are outlined in **Table 7.4** below.

Table 7.4: Site Access / Oxford Road Junction 'With Committed Development' Results

Link	2016 Growthed + Committed				2021 Growthed + Committed			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Nursery/Access left to A4260 Oxford Road (N)	0.053	0	0.068	0	0.056	0	0.089	0
Nursery/Access right to A4260 Oxford Road (S)	0.098	0	0.252	0	0.144	0	0.540	1
A4260 Oxford Road (N) Right Turn	0.033	0	0.075	0	0.034	0	0.079	0

7.23 **Table 7.4** shows that with the addition of the committed development traffic the site access junction is anticipated to continue operating within capacity in the 2016 and 2021 growthed +

committed scenarios with a maximum RFC of 0.540 on the site access right turn movement in the PM peak with an associated queue of one vehicle.

7.24 The proposed development traffic flows have been added to the 2016 and 2021 growthed + committed development scenarios and the results of the operational assessments are outlined in **Table 7.5** below.

Table 7.5: Site Access / Oxford Road Junction 'With Committed and Proposed Development' Results

Link	2016 Growthed + Committed + Development				2021 Growthed + Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Nursery/Access left to A4260 Oxford Road (N)	0.111	0	0.114	0	0.120	0	1.105	5
Nursery/Access right to A4260 Oxford Road (S)	0.196	0	0.397	1	0.293	0	1.048	3
A4260 Oxford Road (N) Right Turn	0.058	0	0.134	0	0.061	0	0.142	0

7.25 **Table 7.5** shows that with the site access junction is anticipated to continue operating within capacity in the 2016 growthed + committed + development scenario with a maximum RFC of 0.397 on the site access right turn movement in the PM peak with no associated queue.

7.26 In the 2021 growthed + committed + development scenario the junction is anticipated to operate within capacity in the AM peak with a maximum RFC of 0.293 on the site access right turn movement, with no associated queue. However in the 2021 growthed + committed + development PM peak the addition of the committed development is anticipated to result in the junction operating in excess of capacity with a maximum RFC of 1.105 on the site access right turn movement with an associated queue of five vehicles.

Weeping Cross / A4260 Priority junction

7.27 The existing Weeping Cross junction with the A4260 has been assessed using PICADY for all of the scenarios. The results of the analyses in the base scenarios without any development traffic at the Weeping Cross / A4260 Priority junction are shown in **Table 7.6** while the PICADY output can be found in **Appendix M**.

Table 7.6: Weeping Cross / Oxford Road Junction 'Without Development' Results

Link	2014 Observed				2016 Growthed				2021 Growthed			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Weeping Cross left to A4260 Oxford Road (N)	0.078	0	0.106	0	0.082	0	0.111	0	0.092	0	0.130	0
Weeping Cross right to A4260 Oxford Road (S)	0.150	0	0.195	0	0.165	0	0.214	0	0.212	0	0.283	0
A4260 Oxford Road (N) Right Turn	0.121	0	0.103	0	0.126	0	0.108	0	0.142	0	0.124	0

7.28 **Table 7.6** shows that the Weeping Cross junction currently operates with substantial spare capacity in with a maximum RFC in the 2014 observed PM peak of 0.195 on the Weeping Cross right turn movement with no associated queue. The junction is anticipated to continue operating within capacity in the 2016 growthed and 2021 growthed scenarios with a maximum RFC in the 2021 PM peak of 0.283 on the Weeping Cross right turn movement with no associated queue.

7.29 **Table 7.7** summarises the results of the 2016 growthed and 2021 growthed traffic flows with the addition of the proposed development traffic.

Table 7.7: Weeping Cross / Oxford Road Junction 'With Development' Results

Link	2016 Growthed + Development				2021 Growthed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Weeping Cross left to A4260 Oxford Road (N)	0.084	0	0.115	0	0.095	0	0.136	0
Weeping Cross right to A4260 Oxford Road (S)	0.183	0	0.250	0	0.238	0	0.332	0
A4260 Oxford Road (N) Right Turn	0.128	0	0.109	0	0.144	0	0.125	0

7.30 **Table 7.7** shows that with the addition of the development traffic the Weeping Cross junction is anticipated to continue operating within capacity in the 2016 growthed + development and 2021 growthed + development scenarios with a maximum RFC in the 2021 PM peak of 0.332 on the Weeping Cross right turn movement with no associated queue.

7.31 The committed developments outlined in Section 6 have been added to the 2016 and 2021 base traffic flows and the results of the operational assessments are outlined in **Table 7.8** below.

Table 7.8: Weeping Cross / Oxford Road Junction 'With Committed Development' Results

Link	2016 Growthed + Committed				2021 Growthed + Committed			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Weeping Cross left to A4260 Oxford Road (N)	0.115	0	0.164	0	0.137	0	0.265	0
Weeping Cross right to A4260 Oxford Road (S)	0.262	0	0.382	1	0.382	1	0.622	1
A4260 Oxford Road (N) Right Turn	0.166	0	0.147	0	0.187	0	0.167	0

7.32 **Table 7.8** shows that with the addition of the committed development, traffic the Weeping Cross junction is anticipated to continue operating within capacity in the 2016 and 2021 growthed + committed scenario. The maximum RFC of 0.622 is on the Weeping Cross right turn movement in the 2021 PM peak with no associated queue.

7.33 The proposed development traffic flows have been added to the 2016 and 2021 growthed + committed development scenarios and the results of the operational assessments are outlined in **Table 7.9** below.

Table 7.9: Weeping Cross / Oxford Road Junction 'With Committed and Proposed Development' Results

Link	2016 Growthed + Committed + Development				2021 Growthed + Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Weeping Cross left to A4260 Oxford Road (N)	0.114	0	0.170	0	0.141	0	0.522	1
Weeping Cross right to A4260 Oxford Road (S)	0.299	0	0.461	1	0.443	1	0.780	2
A4260 Oxford Road (N) Right Turn	0.169	0	0.149	0	0.191	0	0.170	0

7.34 **Table 7.9** shows that the Weeping Cross junction is anticipated to continue operating within capacity in the 2016 and 2021 growthed + committed + development scenario. The maximum RFC of 0.780 is on the Weeping Cross right turn movement in the 2021 PM peak with no associated queue.

7.35 As aforementioned, Weeping Cross has recently had traffic signals installed as part of the mitigation for the Bankside development. The signals are currently not in operation but will become operational prior to the Bankside development opening. As such the junction has been assessed using LinSig V3 for the 2016 growthed + committed + development and 2021 growthed + committed + development scenarios. The results are summarised in **Table 7.10**.

7.36 The signal timing data was not available from OCC and as such a worst case assessment has been undertaken. The geometries have been measured from the proposed layout drawing produced by Colin Buchanan (Drawing reference: 38581-Figure 60) and submitted with the Bankside application (05/01337/OUT). The intergreens have been calculated using the geometry, a cycle time of 60 seconds has been used, Pedestrian phases have been run every cycle for robustness, JCT values used for right turn give way slope / coefficient values and the right turn into Weeping Cross gives way to oncoming traffic and modelled as blocking ahead traffic. The full LinSig outputs are attached at **Appendix N**.

Table 7.10: Weeping Cross / Oxford Road Signalised Junction 'With Committed and Proposed Development' Results

Movement	2016 Growthed + Committed + Development				2021 Growthed + Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A4260 Oxford Road (N) Ahead	74.6%	11	77.2%	11	85.4%	14	89.9%	16
A4260 Oxford Road (N) Ahead Right	56.6%	5	57.0%	5	55.6%	5	54.8%	5
A4260 Oxford Road (S) Ahead Left	41.7%	4	43.3%	4	44.5%	4	46.1%	4
A4260 Oxford Road (S) Ahead	45.2%	5	47.0%	5	47.9%	5	49.8%	6
Weeping Cross Left Right	29.4%	1	36.9%	2	31.0%	1	39.5%	2
PRC	20.6		16.6		5.4		0.2	

7.37 **Table 7.10** shows that with signalised junction layout at Weeping Cross junction is anticipated to operate within capacity in the 2016 and 2021 growthed + committed + development scenario. The maximum DoS of 89.9% is on the A4260 Oxford Road (N) Ahead movement in the 2021 PM peak with an associated queue of 16 vehicles.

Farmfield Road / Oxford Road Junction

7.38 The existing Farmfield Road crossroads with the A4260 has been assessed using LinSig V3 for all of the scenarios. The results of the analyses in the base scenarios without any development traffic at the Farmfield Road crossroads are shown in **Table 7.11** while the LinSig output can be found in **Appendix O**.

Table 7.11: Farmfield Road / Sainsbury's / Oxford Road Signalised Crossroads 'Without Development' Results

Movement	2014 Observed				2016 Growthed				2021 Growthed			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A4260 Oxford Road (S) Ahead Left	88.2%	27	88.1%	29	90.4%	11	90.4%	31	97.2%	37	97.2%	41
A4260 Oxford Road (S) Right	57.8%	2	65.0%	3	64.7%	2	72.4%	3	102.2%	7	98.7%	7
Farmfield Road Left Right Ahead	88.3%	10	55.8%	3	90.8%	7	58.3%	3	96.9%	14	61.5%	3
A4260 Oxford Road (N) Left	18.8%	3	13.1%	2	19.3%	1	13.5%	2	20.7%	3	14.5%	2
A4260 Oxford Road (N) Ahead Right	85.9%	25	83.5%	25	88.1%	10	85.7%	27	94.5%	32	92.1%	32
Sainsburys Right Ahead + Left	89.2%	8	88.2%	8	91.8%	8	90.1%	8	98.1%	12	97.8%	12
PRC	0.9%		2.1%		-2.0%		-0.5%		-13.6%		-9.6%	

7.39 **Table 7.11** shows that the Farmfield Road crossroads currently operates within its operational capacity with a maximum DoS of 89.2% on the Sainsbury's Ahead and Left Lane in the AM peak with an associated queue of 8 vehicles. In the 2016 growthed scenario the junction is approaching capacity with a maximum DoS of 91.8% on the Sainsbury's arm in the AM peak with an associated queue of 8 vehicles.

7.40 In the 2021 growthed scenario the junction is operating at capacity in the AM peak on the majority of its arms with the A4260 Oxford Road (S) right turn Lane operating in excess of its operational capacity with a maximum DoS of 102.2% and an associated queue of 7 vehicles. In the PM peak the junction operates close to capacity with a maximum DoS of 98.7% on the A4260 Oxford Road (S) right turn Lane with an associated queue of 7 vehicles.

7.41 **Table 7.12** summarises the results of the 2016 growthed and 2021 growthed traffic flows with the addition of the proposed development traffic.

Table 7.12: Farmfield Road / Sainsbury's / Oxford Road Signalised Crossroads 'With Development' Results

Movement	2016 Growthed + Development				2021 Growthed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A4260 Oxford Road (S) Ahead Left	91.7%	30	91.2%	32	98.4%	40	98.0%	43
A4260 Oxford Road (S) Right	65.8%	3	75.3%	3	87.5%	4	103.3%	9
Farmfield Road Left Right Ahead	90.8%	11	59.1%	3	96.9%	14	62.3%	3
A4260 Oxford Road (N) Left	19.3%	3	13.5%	2	21.5%	4	14.5%	2
A4260 Oxford Road (N) Ahead Right	88.7%	27	86.7%	28	98.9%	39	93.2%	34
Sainsburys Right Ahead + Left	91.8%	9	90.1%	8	98.1%	12	97.8%	12
PRC	-2.0%		-1.4%		-9.9%		-14.8%	

7.42 **Table 7.12** shows that with the addition of the development traffic to the 2016 growthed traffic flows the Farmfield Road crossroads is anticipated to operate within its operational capacity with a maximum DoS of 91.8% on the Sainsbury's arm in the AM peak with an associated queue of 9 vehicles.

7.43 In the 2021 growthed + development scenario the crossroads is operating close to capacity on the majority of its links in the PM peak with the A4260 Oxford Road (S) right turn Lane operating in excess of its operational capacity with a maximum DoS of 103.3% and an associated queue of 9 vehicles. In the AM peak the crossroads operates close to capacity with a maximum DoS of 98.9% on the A4260 Oxford Road (N) ahead and right turn Lane with an associated queue of 39 vehicles.

7.44 The committed developments outlined in Section 6 have been added to the 2016 and 2021 base traffic flows and the results of the operational assessments are outlined in **Table 7.13** below.

Table 7.13: Farmfield Road / Sainsbury's / Oxford Road Signalised Crossroads 'With Committed Development' Results

Movement	2016 Growthed + Committed				2021 Growthed + Committed			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A4260 Oxford Road (S) Ahead Left	114.5%	112	107.1%	82	120.8%	145	113.6%	118
A4260 Oxford Road (S) Right	95.6%	5	122.2%	15	102.2%	7	131.1%	20
Farmfield Road Left Right Ahead	109.4%	23	74.6%	4	116.3%	30	77.8%	5
A4260 Oxford Road (N) Left	18.0%	3	13.0%	2	19.3%	3	14.0%	2
A4260 Oxford Road (N) Ahead Right	99.0%	42	108.3%	86	104.9%	64	114.4%	119
Sainsburys Right Ahead + Left	114.7%	25	112.7%	19	122.7%	33	122.2%	30
PRC	-27.5%		-35.8%		-36.3%		-45.7%	

7.45 **Table 7.13** shows that in the 2016 growthed + committed scenarios the crossroads are anticipated to operate in excess of capacity on three links in the AM peak with a maximum DoS of 114.7% on the Sainsbury's link with associated queues of 25 vehicles. In the PM peak the crossroads are anticipated to operate in excess of capacity on four links with a maximum DoS of 122.2% on the A4260 Oxford Road (S) right turn link with an associated queue of 15 vehicles.

7.46 In the 2021 growthed + committed traffic flows the crossroads are anticipated to operate in excess of capacity on five links in the AM peak with a maximum DoS of 122.7% on the Sainsbury's link with an associated queue of 33 vehicles. In the PM peak the crossroads are anticipated to operate in excess of capacity on four links with a maximum DoS of 131.1% on the A4260 Oxford Road (S) right turn link with an associated queue of 20 vehicles.

7.47 The proposed development traffic flows have been added to the 2016 and 2021 growthed + committed development scenarios and the results of the operational assessments are outlined in **Table 7.14** below.

Table 7.14: Farmfield Road / Oxford Road Signalised Crossroads 'With Committed and Proposed Development' Results

Movement	2016 Growthed + Committed + Development				2021 Growthed + Committed + Development			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A4260 Oxford Road (S) Ahead Left	115.7%	118	107.9%	86	121.9%	151	114.5%	122
A4260 Oxford Road (S) Right	95.6%	5	122.2%	15	102.2%	7	131.1%	20
Farmfield Road Left Right Ahead	109.4%	23	75.4%	4	116.3%	30	78.6%	5
A4260 Oxford Road (N) Left	18.0%	3	13.0%	2	19.3%	3	14.0%	2
A4260 Oxford Road (N) Ahead Right	99.5%	44	109.3%	91	105.5%	66	115.4%	125
Sainsburys Right Ahead + Left	115.7%	118	107.9%	86	122.7%	33	122.2%	30
PRC	-28.5%		-35.8%		-36.3%		-45.7%	

7.48 **Table 7.14** shows that in the 2016 growthed + committed + development scenarios the crossroads are anticipated to operate in excess of capacity on three links in the AM peak with a maximum DoS of 115.7% on the A4260 Oxford Road (S) ahead and left link and the Sainsbury's link with associated queues of 118 vehicles. In the PM peak the crossroads are anticipated to operate in excess of capacity on four links with a maximum DoS of 122.2% on the A4260 Oxford Road (S) right turn link with an associated queue of 15 vehicles.

7.49 In the 2021 growthed + committed + development traffic flows the crossroads are anticipated to operate in excess of capacity on five links in the AM peak with a maximum DoS of 122.7% on the Sainsbury's link with an associated queue of 33 vehicles. In the PM peak the crossroads are anticipated to operate in excess of capacity on four links with a maximum DoS of 131.1% on the A4260 Oxford Road (S) right turn link with an associated queue of 20 vehicles.

Impact on Non-Car Modes of Travel

7.50 **Table 5.4** identifies that the development is predicted to generate two train trips in the morning and evening peak hours, with a total of 20 train trips daily. This table also identifies that the development would be expected to generate up to one bus trip, two bicycle trips and up to five walking trips in the morning and evening peak hours respectively, with 12 bus trips, 14 bicycle trips and 46 walking trips daily.

7.51 It is anticipated that the local pedestrian, cycle and public transport networks could readily accommodate the trips predicted to be generated by the proposed development by these modes of travel.

Summary

7.52 The links assessments show that the proposed development traffic flows will result in negligible percentage increases on the A4260 Oxford Road (up to 2%).

7.53 The junction capacity assessments demonstrate that the proposed development will increase traffic flows on the local road network, however the majority of the junctions within the study area will operate within capacity with the addition of development traffic. With the addition of the committed development traffic flows the site access junction in the 2021 growthed + development + committed PM peak hour scenario will operate in excess of capacity on one link. The Farmfield Road crossroads will operate in excess of capacity in both the 2016 and 2021 growthed + development + committed scenarios.

7.54 The Weeping Cross junction is anticipated to operate within its operational capacity in all scenarios under its existing priority junction layout and under the proposed signalised junction layout.

7.55 Although the aforementioned junctions would operate over their maximum theoretical capacity in the future year assessments with the addition of the committed development, this would not be a result of traffic generated by the proposed development. This reduction in capacity would occur anyway, if the existing site use continued. The reduction in capacity would be as a result of the development traffic associated with the strategic development of Banbury. In addition, there are no queues on the main route along Oxford Road at the site access and delay would therefore not occur to drivers on the principal road network.

7.56 The Fourth Local Transport Plan (LTP4) for Oxfordshire is currently in production. Over £800 million is set to be invested in the Oxfordshire as part of the Transport Investment Programme. Improvements to the Banbury north-south vehicular corridor are proposed as part of the Banbury Area Strategy (2011-2030). This includes improvements to junctions and links including widening of the A4260 Oxford Road on the A4260 to increase highway capacity, developing alternative north south corridors through Banbury, improving sustainable transport links and routes and reviewing highway signage specifically on the A4260 Oxford Road. In addition to this the South East Relief Road (SERR) from Grimsbury to Bankside remains a longer-term option. Road improvements are also proposed on Bankside, Swan Close Road and Windsor Street to encourage the use of these roads as an alternative north south corridor to Banbury Town Centre and the M40, thus removing traffic from the A4260 Oxford Road and through the Farmfield Road crossroads.

7.57 All of these strategies will help to increase capacity on the A4260 Oxford Road and help remove existing traffic on the road either through the transfer to alternative modes or alternative routes, thus improving the operation of the assessed junctions.

7.58 The highway improvement schemes suggested within the Banbury Area Strategy would reduce the impact of the strategic development traffic on Oxford Road but are not required to alleviate traffic flows from this proposal.

7.59 It is considered that the development proposal would not have a detrimental impact on the operation of the local highway or transport networks or highway safety and would not have a severe residual impact, and it is thus in accordance with the requirements of the NPPF.

8 MITIGATION

8.1 This section describes the mitigation measures that will be implemented as part of the proposed development.

Walking and Cycling Improvements

8.2 The internal roads will be designed to encourage walking and cycling, with footways and wide carriageways sufficient to accommodate a cyclist alongside a vehicle. Links to the north-adjoining consented development will also be provided.

8.3 The development proposals will open up the site to the local area by providing a walking link along the western boundary of the site to connect with the Public Rights of Way along the sites southern and western boundaries, linking it with Bodicote village in the north, Oxford Road to the east and the village of Adderbury to the south. The linkages will be convenient, well lit and follow desire lines where required. The existing footpaths connecting with Austin Road and along the western perimeter of the site will also be enhanced to provide better connections to Bodicote village and the bus stops on Molyneaux Drive.

Transport Improvements

8.4 The proposed development will provide a capped financial contribution per dwelling towards sustainable transport improvements to further improve the accessibility of the site and schemes in the area. This would be agreed with the LHA as part of the S106 process.

9 SUMMARY

9.1 This Transport Assessment has been produced to support a planning application for 95 dwellings at Blossom Fields, Cotefield Farm, which is located approximately 3.5km to the south of Banbury town centre.

9.2 The existing site consists of agricultural land that forms part of Cotefield Farm and is situated adjacent to a site recently granted planning permission for 82 houses, Cotefield Business Park and Garden Centre.

9.3 The site would be accessed via the existing priority junction from Oxford Road. It is proposed as part of the north-adjoining consented development to realign the access road to give priority to the proposed and consented residential development whilst a secondary access for pedestrians, cyclists and emergency vehicles is provided in the northwest corner of the north-adjoining site.

9.4 Personal Injury Accident data shows that there are no road safety issues within the vicinity of the site that would be exacerbated by the proposed development.

9.5 The site is situated is an accessible and sustainable location within recommended walking and cycling distance of bus stops, schools, shops, education and leisure facilities. For a number of trips for everyday needs, residents would not need to travel via car.

9.6 The development proposals are consistent with transport planning policies at a national and local level.

9.7 Trips have been generated for the proposed development site using TRICS. These demonstrate that the proposed development will generate approximately 45 two way vehicular trips in the AM peak hour, 50 two way vehicular trips in the PM peak hour and 451 two way vehicular trips per day. The trip generation shows that the development trips are significantly less than the daily fluctuation on the existing network.

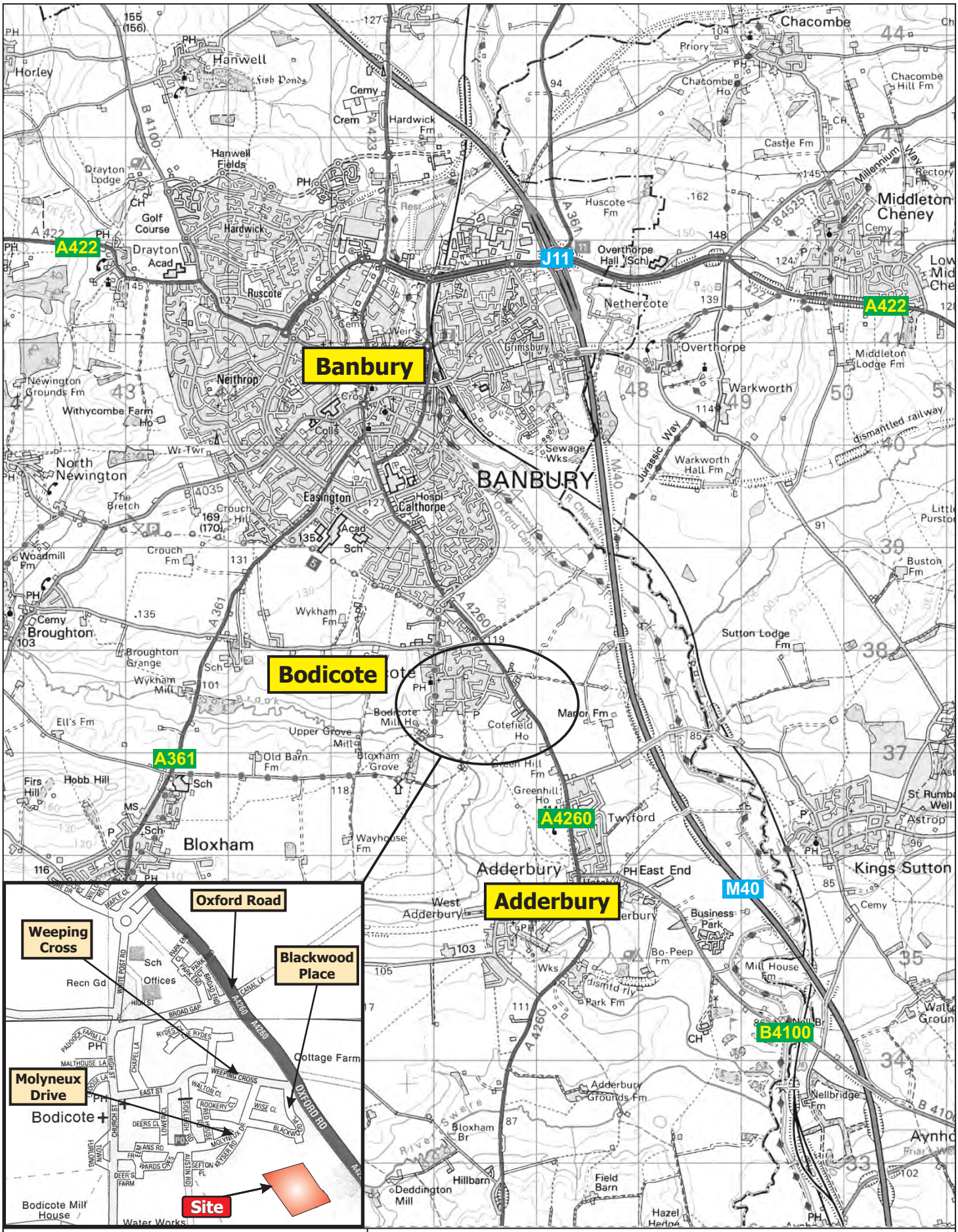
9.8 The links assessments show that the proposed development traffic flows will result in negligible percentage increases on the A4260 Oxford Road (up to 2%).

9.9 Operational assessments have been undertaken of the site access road / A4260 Oxford Road junction, the Weeping Cross / A4260 Oxford Road junction and the Farmfield Road / A4260 Oxford Road crossroads. These have demonstrated that in 2016 and 2021 the junctions will operate satisfactorily in the base scenarios and the inclusion of proposed development traffic will not adversely affect this.

9.10 Traffic flows associated with strategic / committed development within Banbury result in capacity issues at the junctions. However, the Banbury Area Strategy and the Bankside development mitigation include proposals which would help alleviate traffic congestion on the A4260 Oxford Road.

9.11 It is considered that the development proposal would not have a detrimental impact on the operation of the local highway or transport networks or highway safety and would not have a severe residual impact in accordance with the requirements of the NPPF.

FIGURES



RPS

Project:
LAND SOUTH OF BODICOTE

Title:
SITE LOCATION PLAN

Date: **JUN 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-01** Drawn: **JLT** Checked: **DF**

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1

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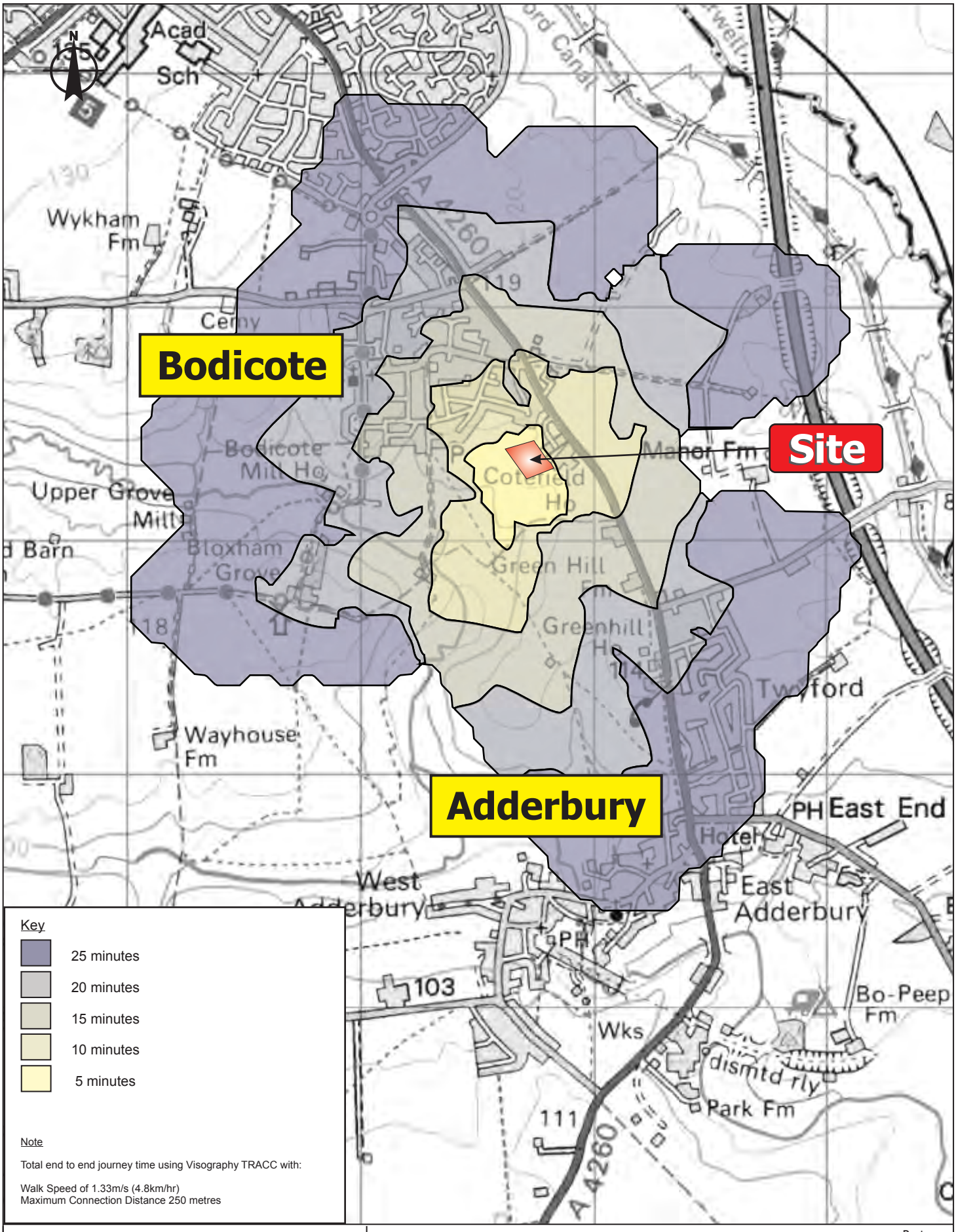

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
PEDESTRIAN ISOCHRONES

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-03** Drawn: **DF** Checked: **DF**

Figure No:
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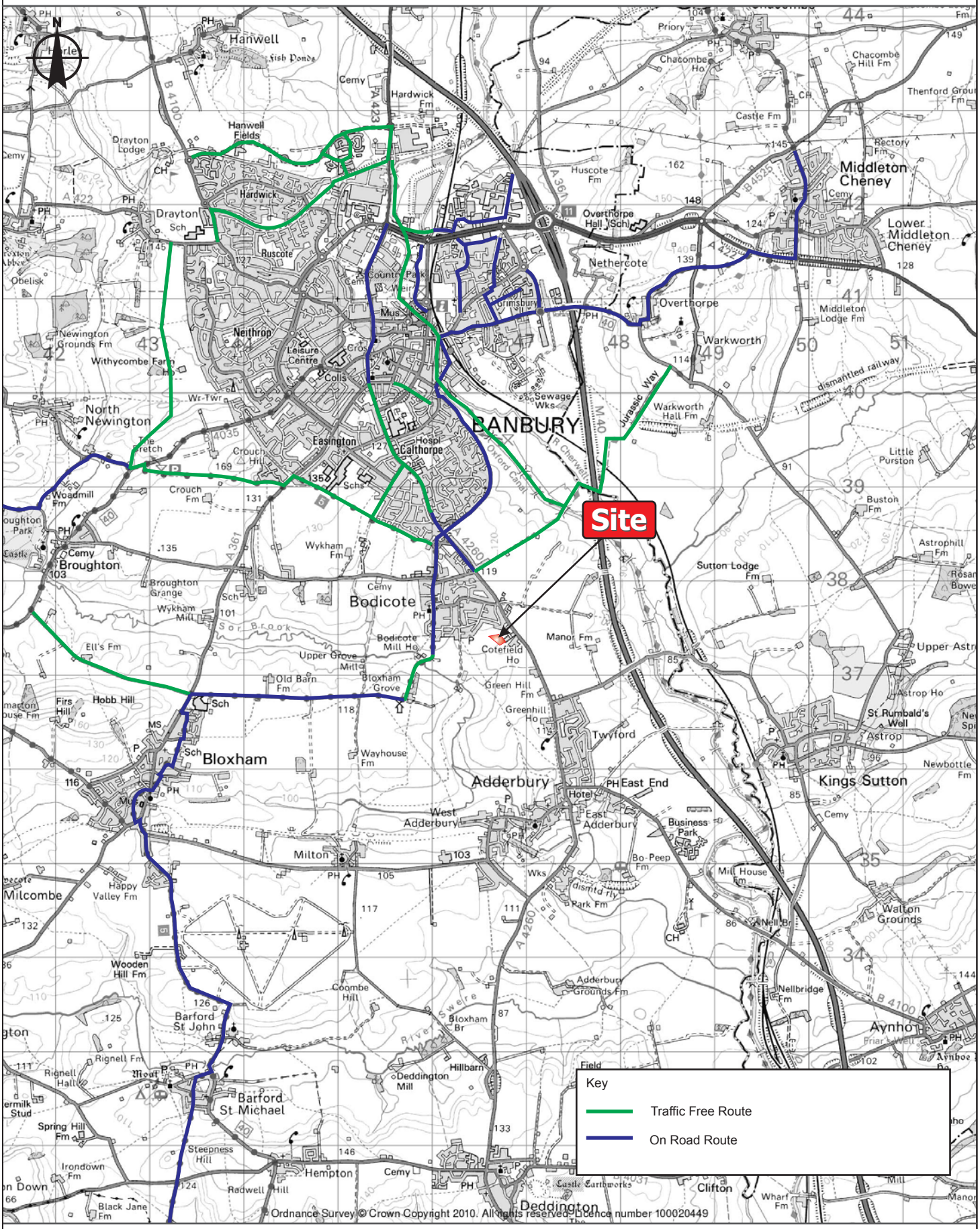

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
CYCLE ROUTES

Date: **OCT 2014**	Scale: **NTS**	Rev:
Drwg. No: **JNY8146-06**	Drawn: **DF**	Checked: **DF**

Figure No:
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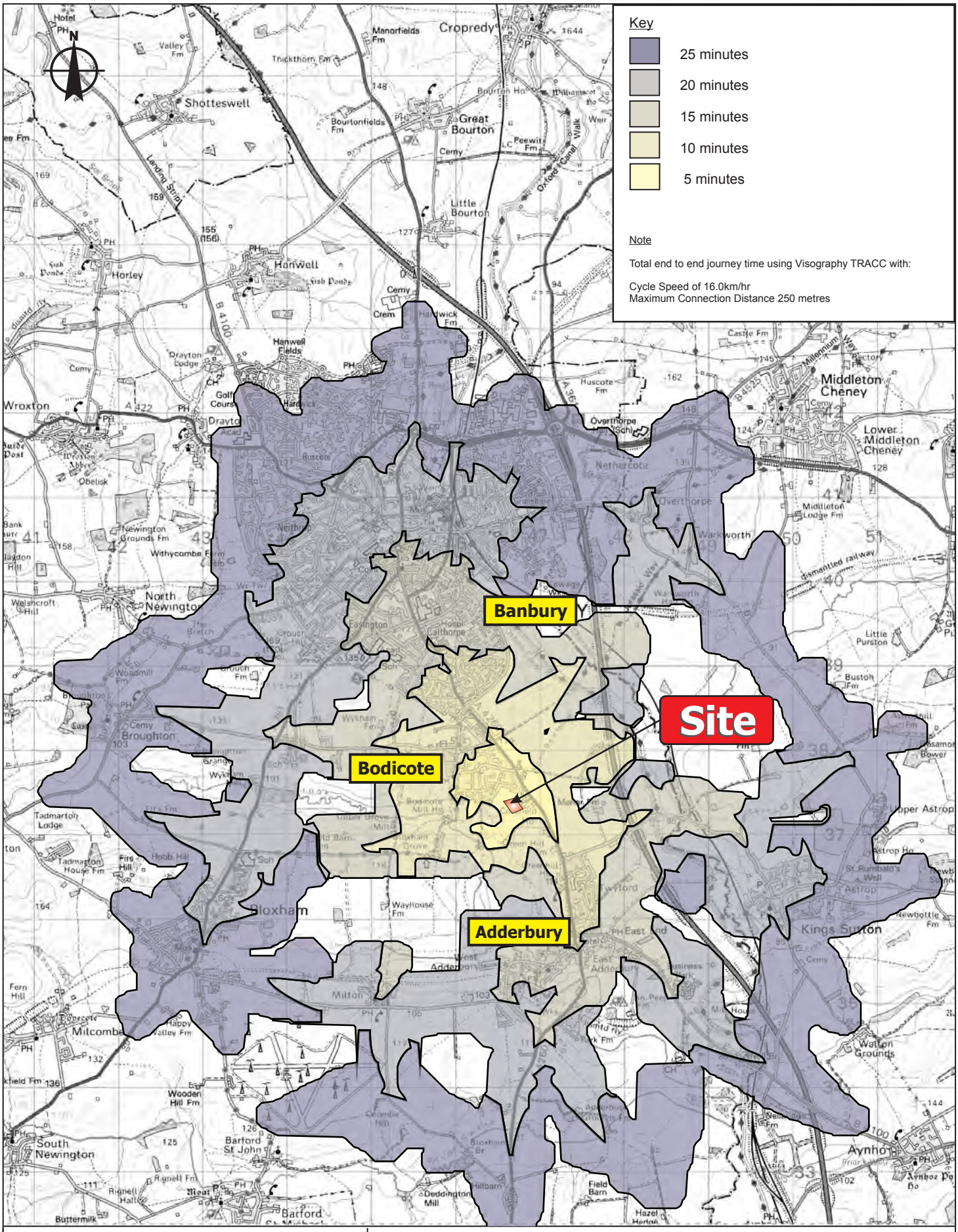

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
CYCLE ISOCHRONES

Date: **OCT 2014** Scale: **NTS** Rev:

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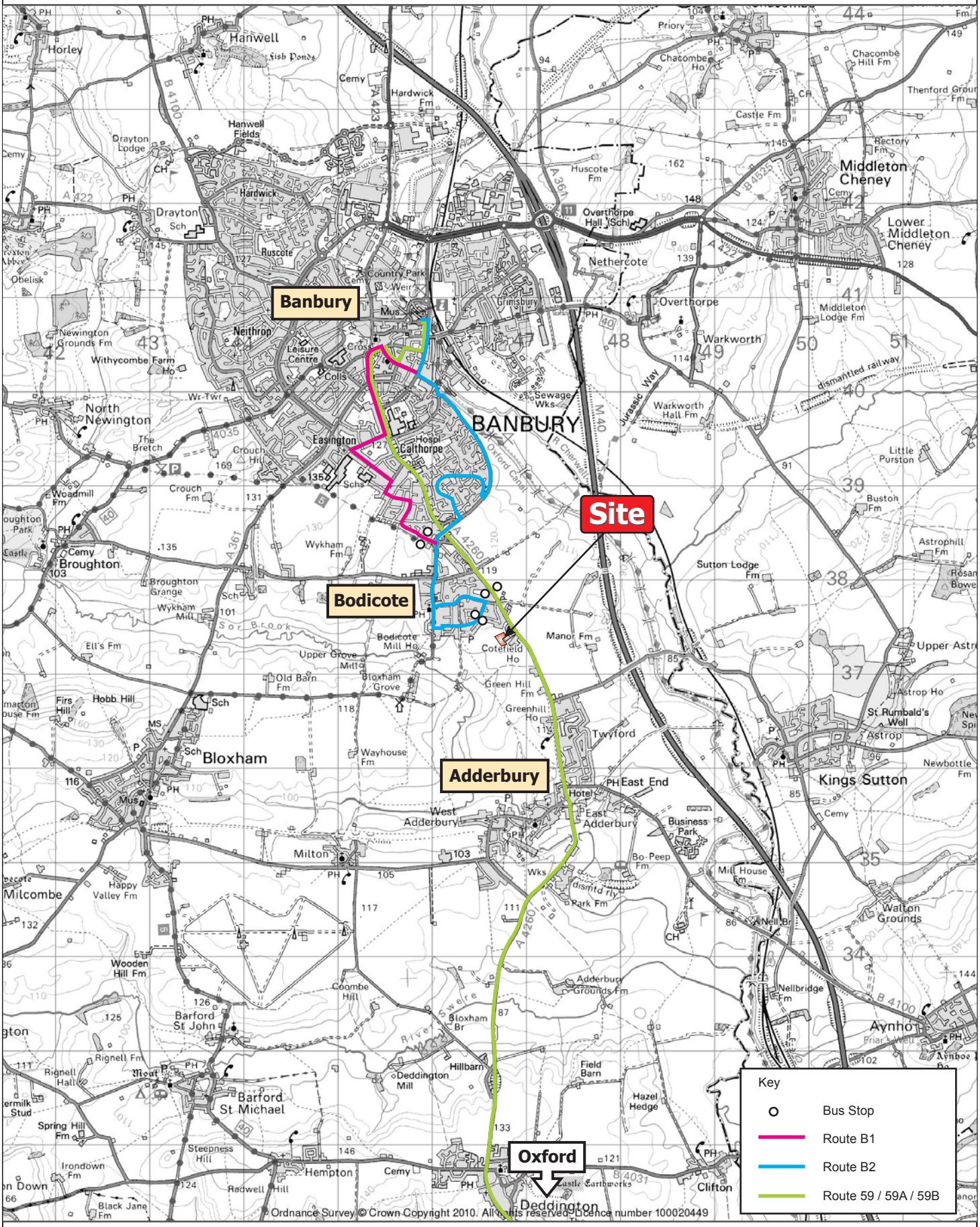

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
BUS ROUTES

Date: **JUN 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-02** Drawn: **JLT** Checked: **DF**

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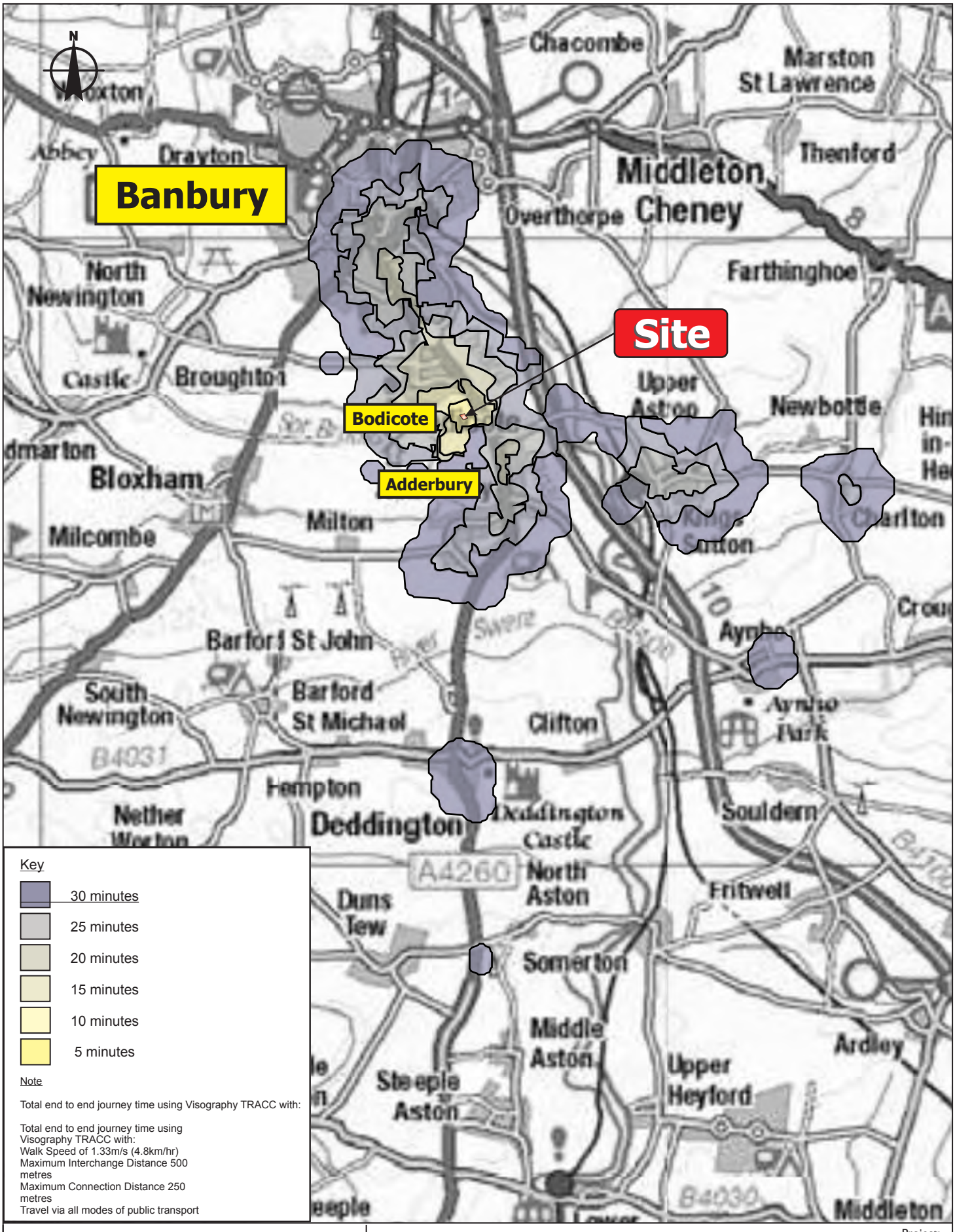

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
PUBLIC TRANSPORT ISOCHRONES

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-05** Drawn: **DF** Checked: **DF**

Figure No:
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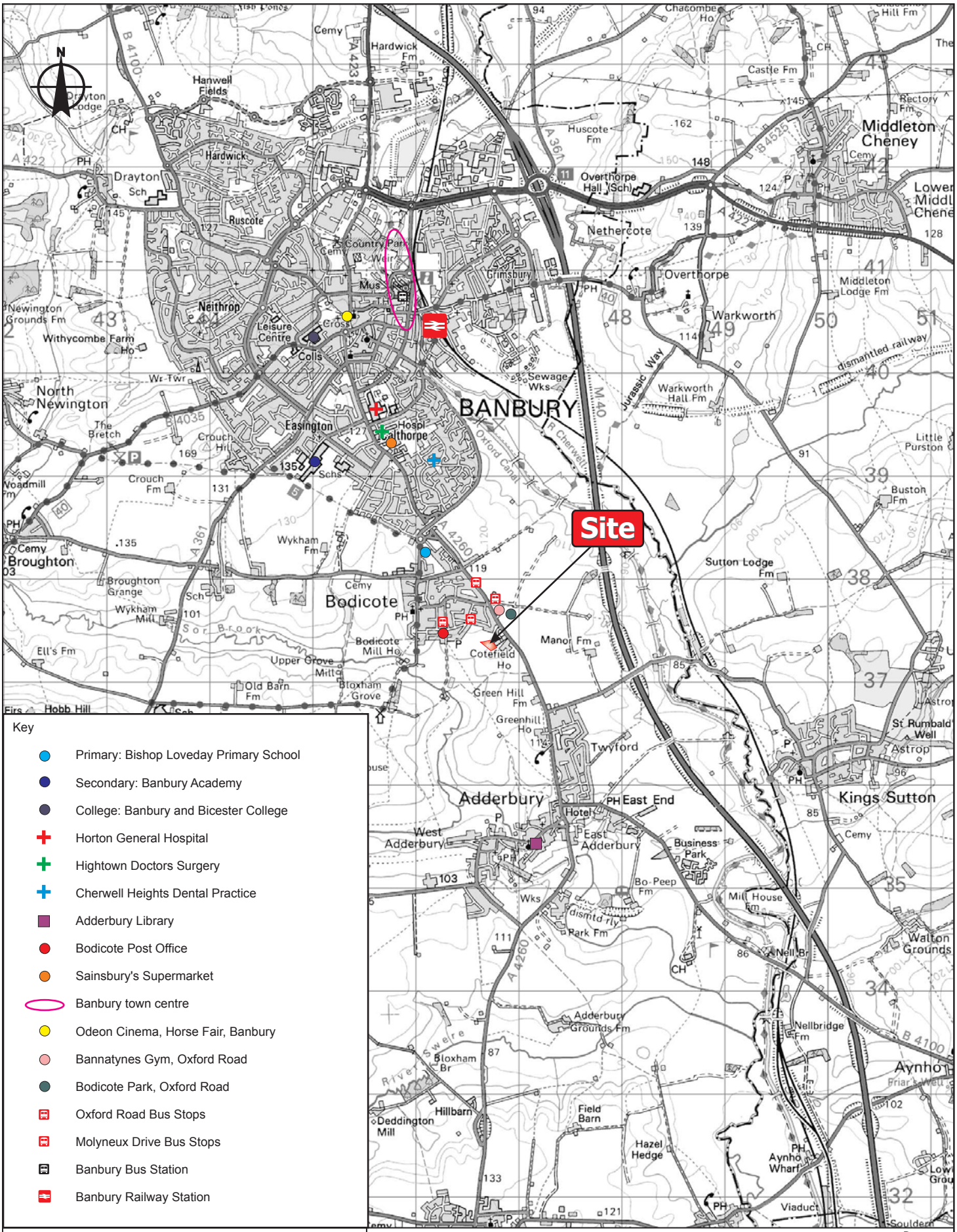


RPS

Project:

LAND SOUTH OF BODICOTE

Title:

LOCAL AMENITIES

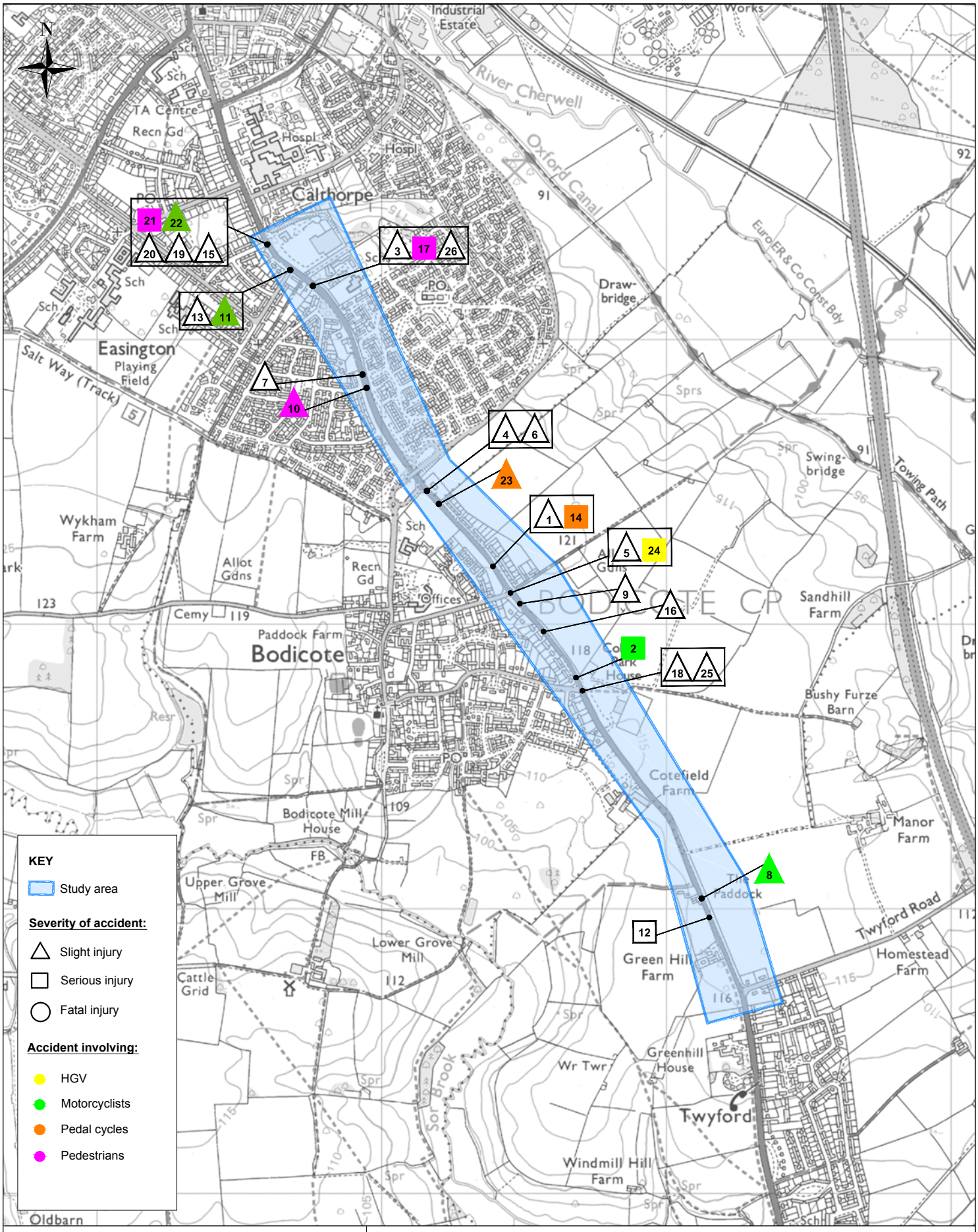
Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-07** Drawn: **DF** Checked: **DF**

Figure No:

7

Transport



KEY

Study area

Severity of accident:

- Slight injury
- Serious injury
- Fatal injury

Accident involving:

- HGV
- Motorcyclists
- Pedal cycles
- Pedestrians

RPS

Project: **COTEFIELD FARM PHASE 2, LAND SOUTH OF BODICOTE**

Title: **PERSONAL INJURY ACCIDENT ANALYSIS 01/06/2009 - 31/05/2014**

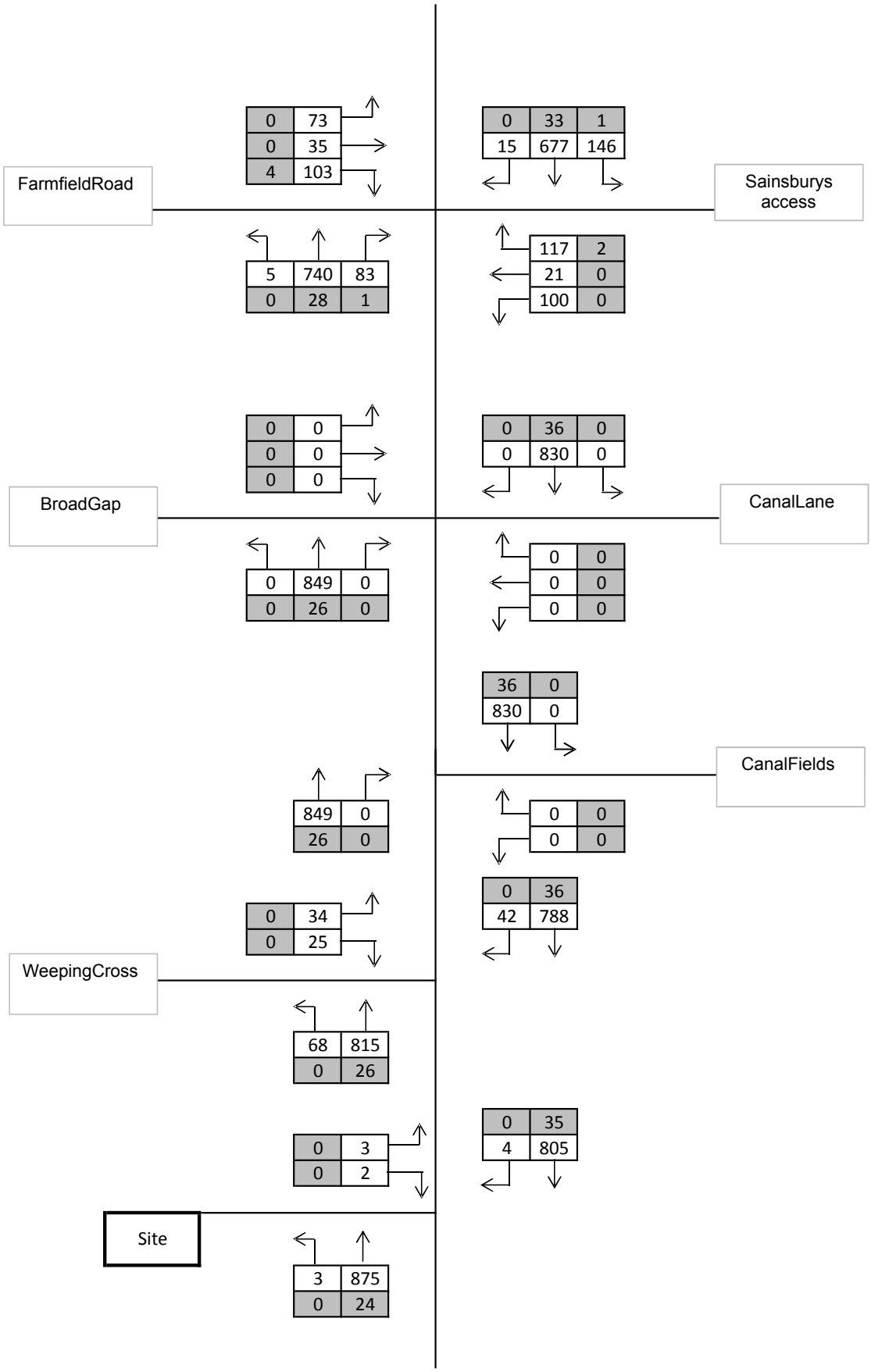
Date: **AUGUST 2014** Scale: **1:17500** Rev:

Drwg. No: **JNY8146-08** Drawn: **AVG** Checked: **JT/DF**

Figure No: **8**

Transport

7993-0041-01.dwg



Notes PeakHouratSiteAccessandWeepingCross-0800-0900
PeakHouratSainsbury'sJunction-0745-0845

RPS

Project:
LAND SOUTH OF BODICOTE

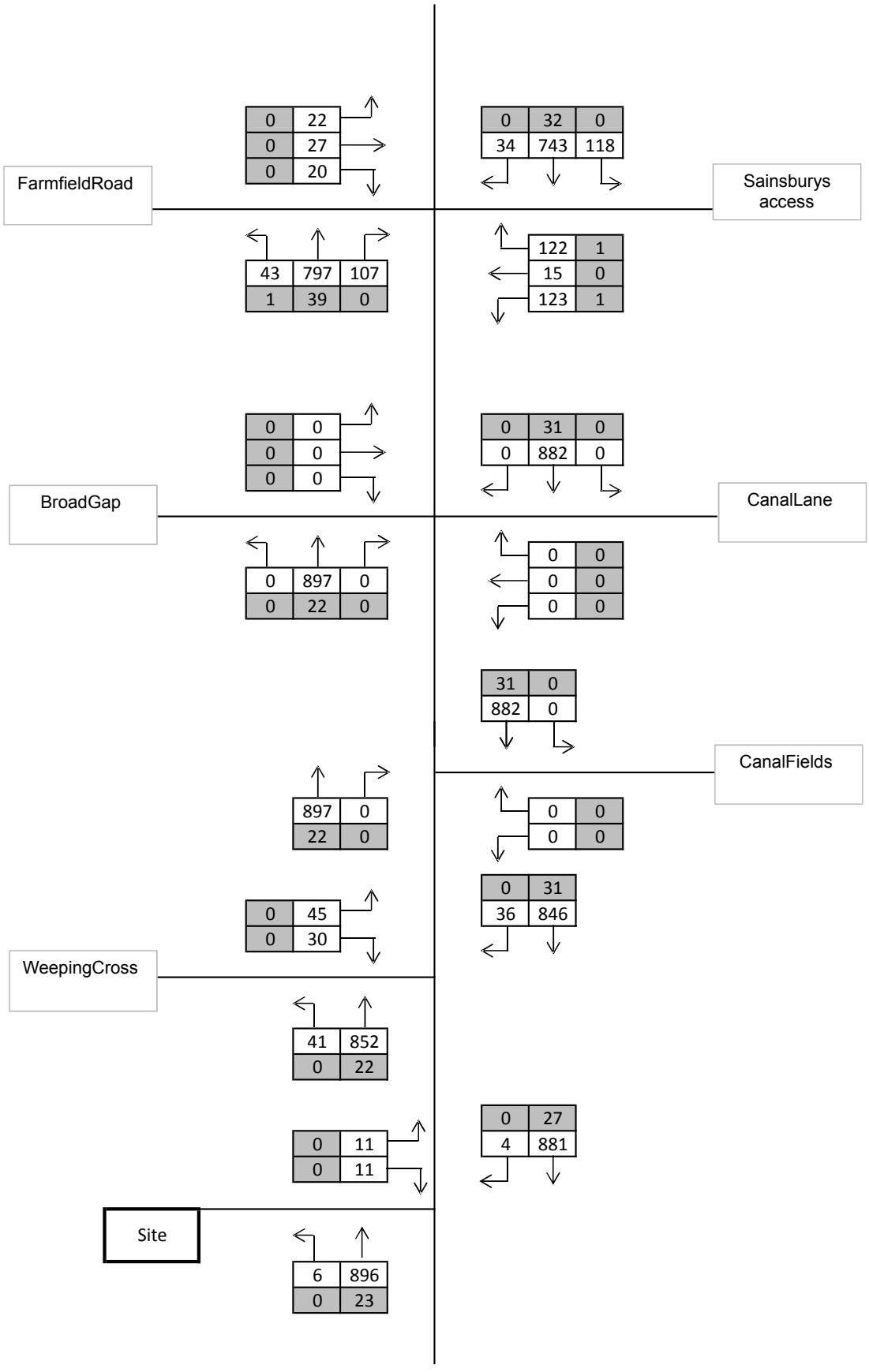
Title:
2014 OBSERVED TRAFFIC FLOWS AM PEAK HOUR

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-09** Drawn: **DF** Checked: **DF**

Figure No:
9

Transport



Notes PeakHouratSiteAccessandWeepingCross-1700-1800
PeakHouratSainsbury'sJunction-1645-1745

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2014 OBSERVED TRAFFIC FLOWS PM PEAK HOUR

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-10** Drawn: **DF** Checked: **DF**

Figure No:
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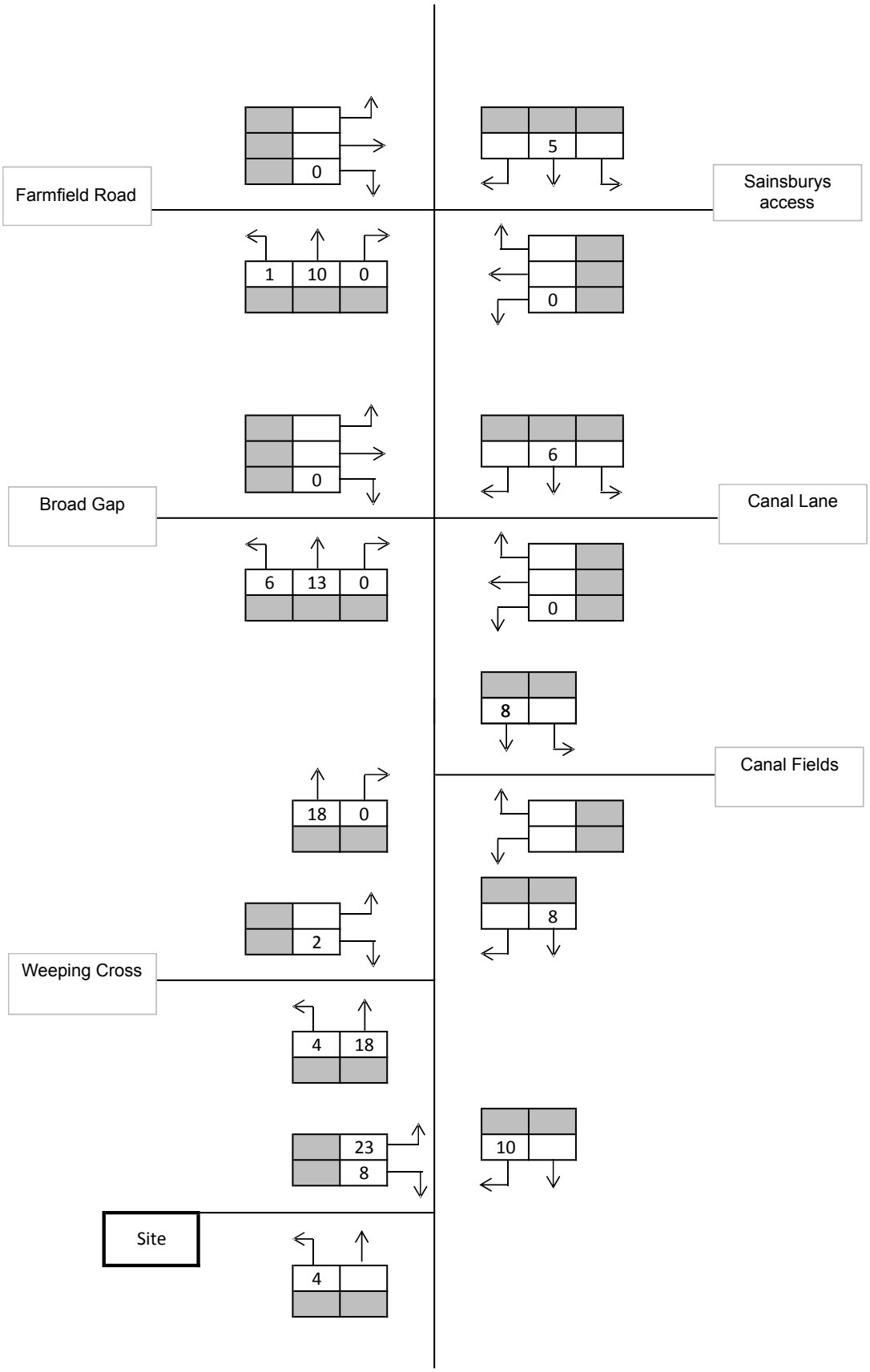

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
DEVELOPMENT TRAFFIC FLOWS AM PEAK HOUR

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-11** Drawn: **DF** Checked: **DF**

Figure No:
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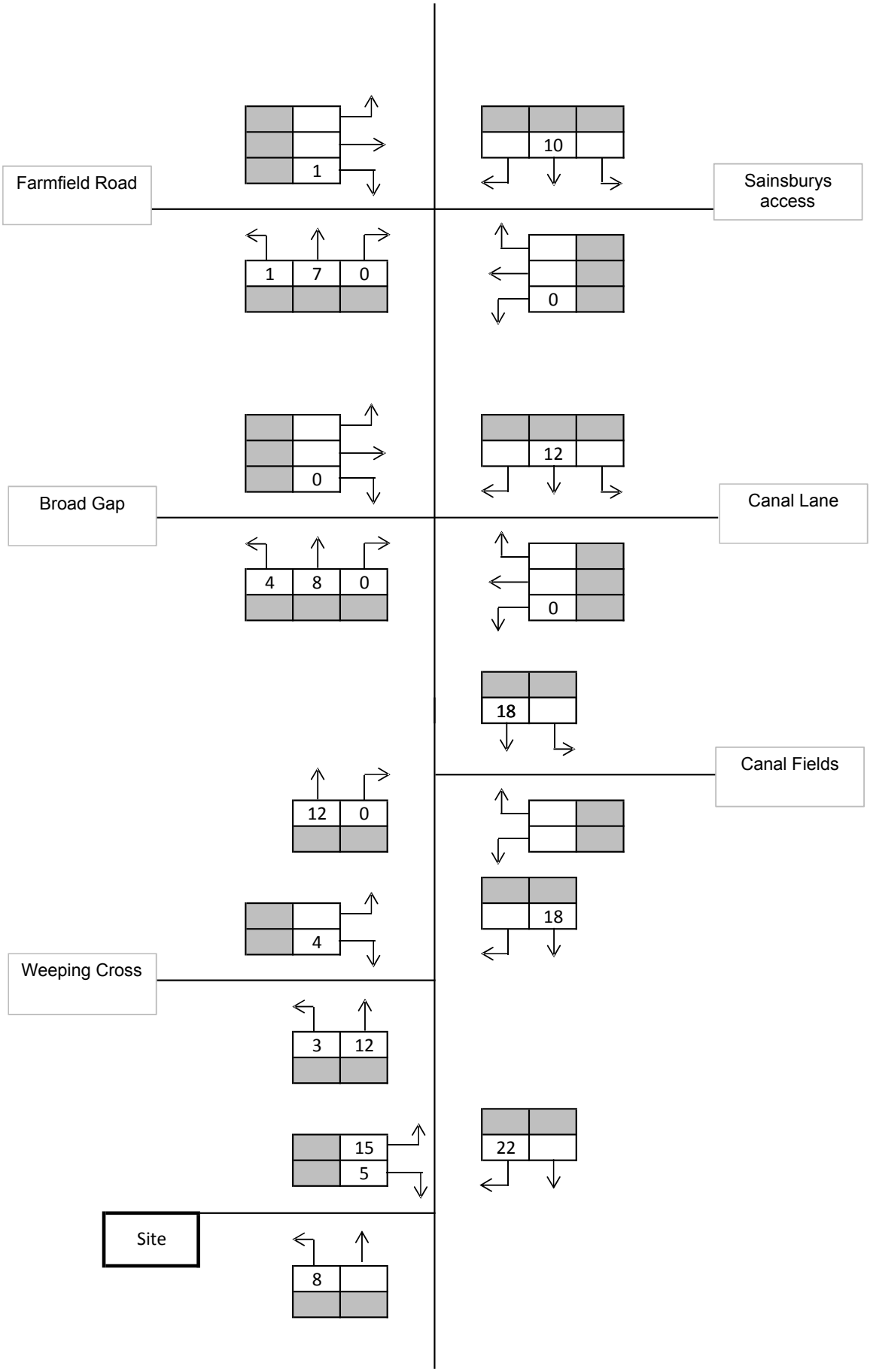

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
DEVELOPMENT TRAFFIC FLOWS PM PEAK HOUR

Date: **OCT 2014** Scale: **NTS** Rev:

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Figure No:
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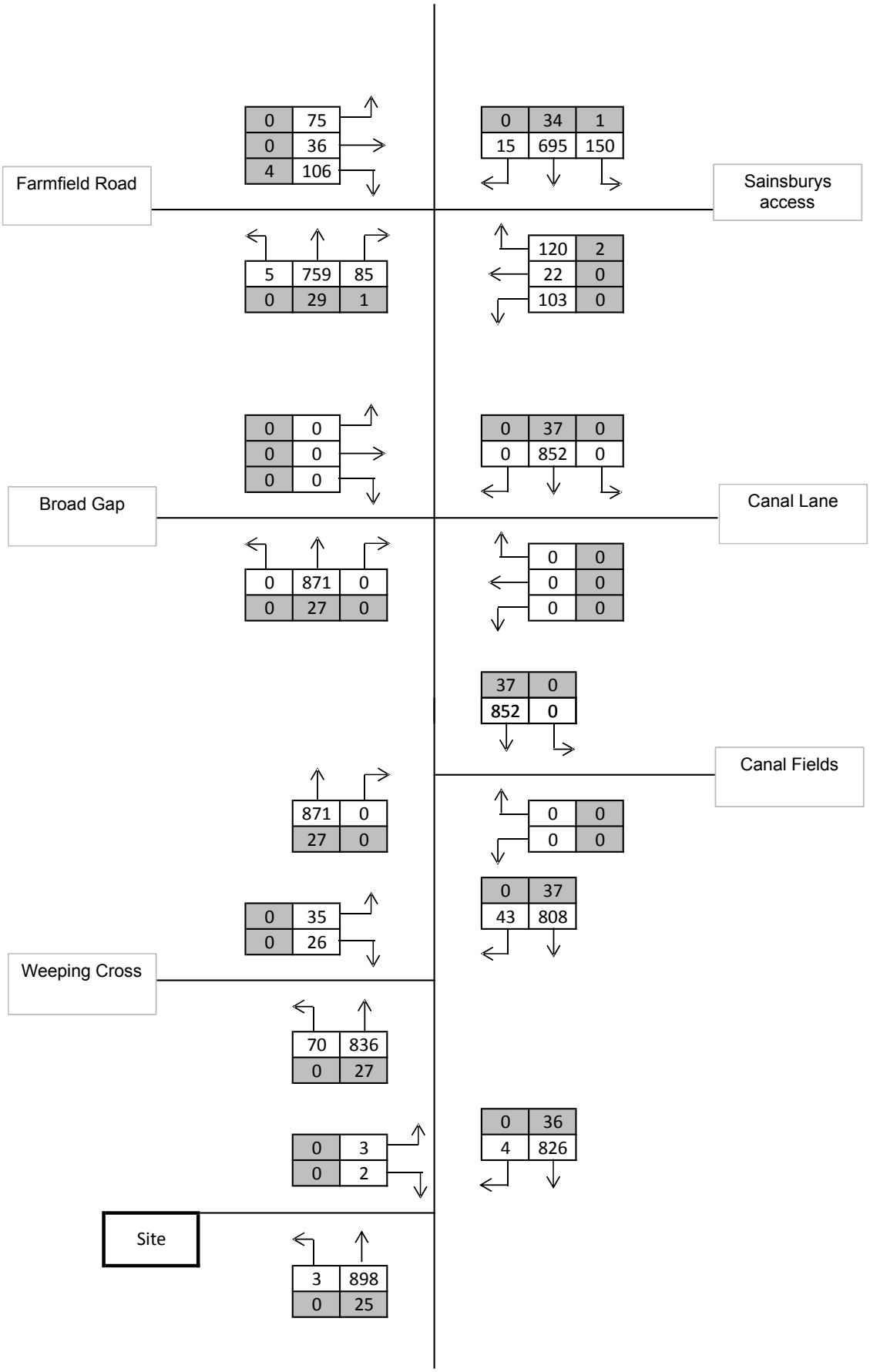

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		Title: **2016 GROWTHED TRAFFIC FLOWS AM PEAK**
Date: **OCT 2014**	Scale: **NTS**	Rev:
Drwg. No: **JNY8146-13**	Drawn: **DF**	Checked: **DF**
		Figure No: **13**

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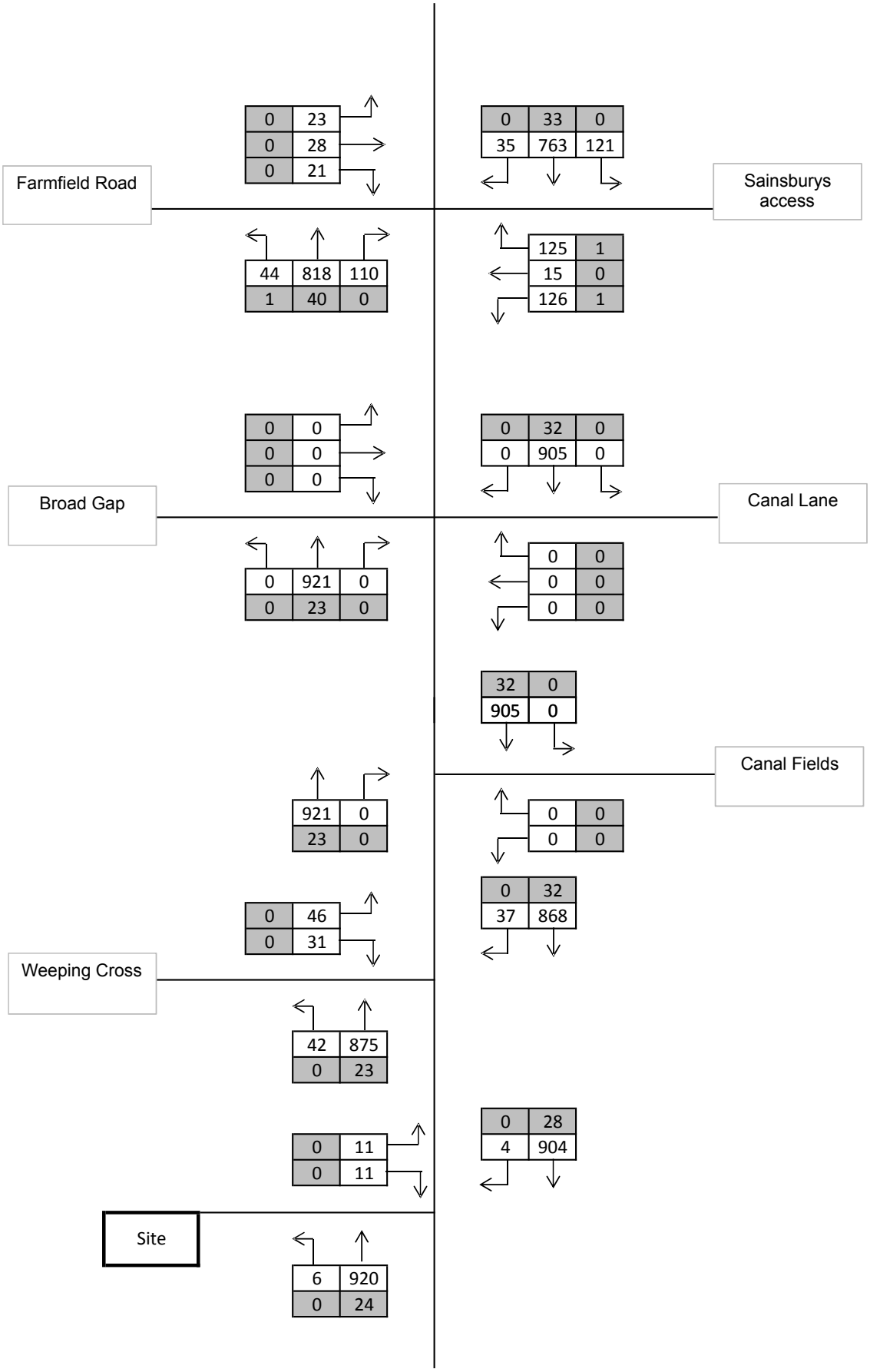

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2016 GROWTHED TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-14** Drawn: **DF** Checked: **DF**

Figure No:
14

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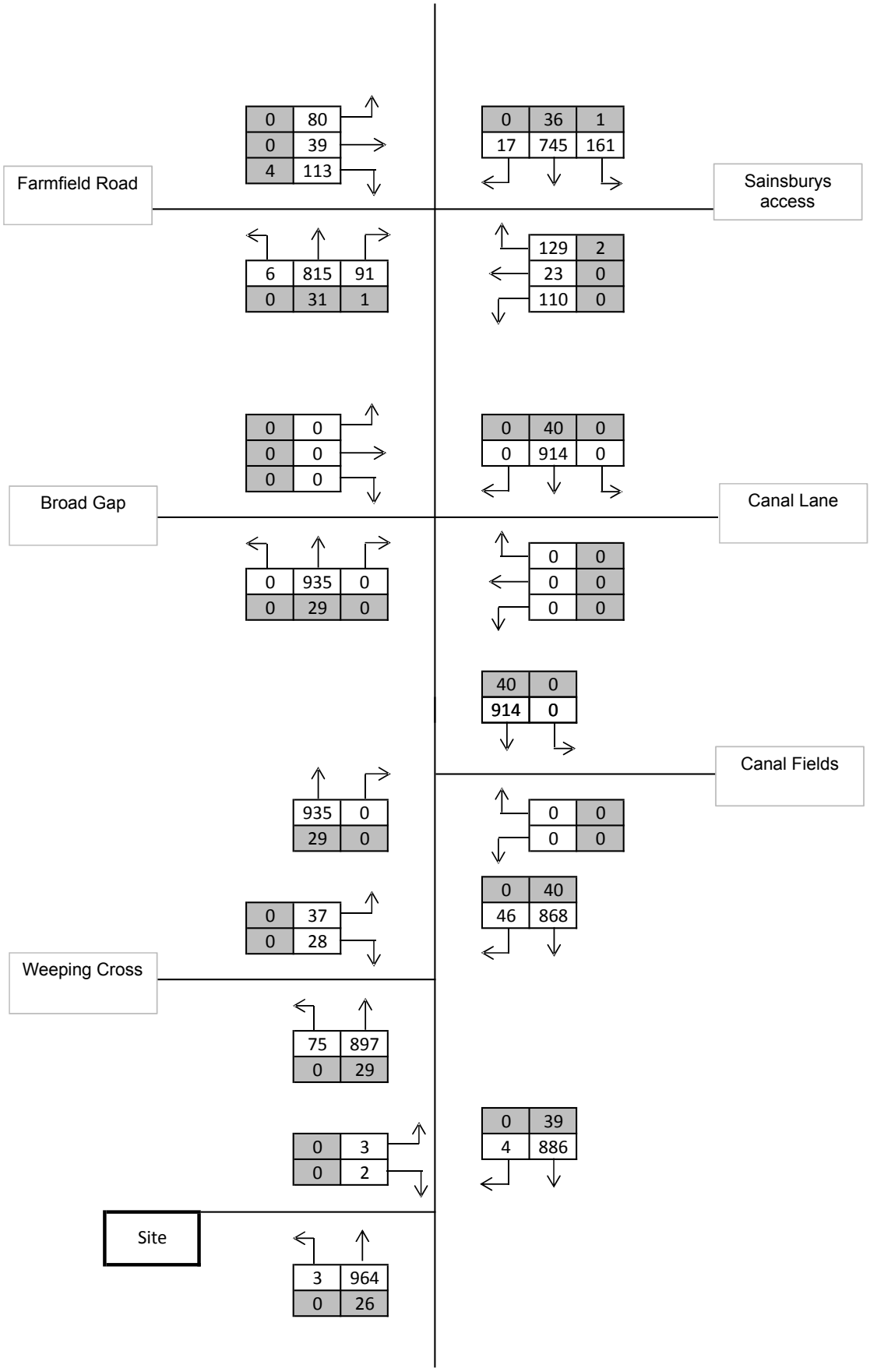

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	Title: **2021 GROWTHED TRAFFIC FLOWS AM PEAK**
Date: **OCT 2014** Scale: **NTS** Rev:	Figure No: **15**
Drwg. No: **JNY8146-15** Drawn: **DF** Checked: **DF**	

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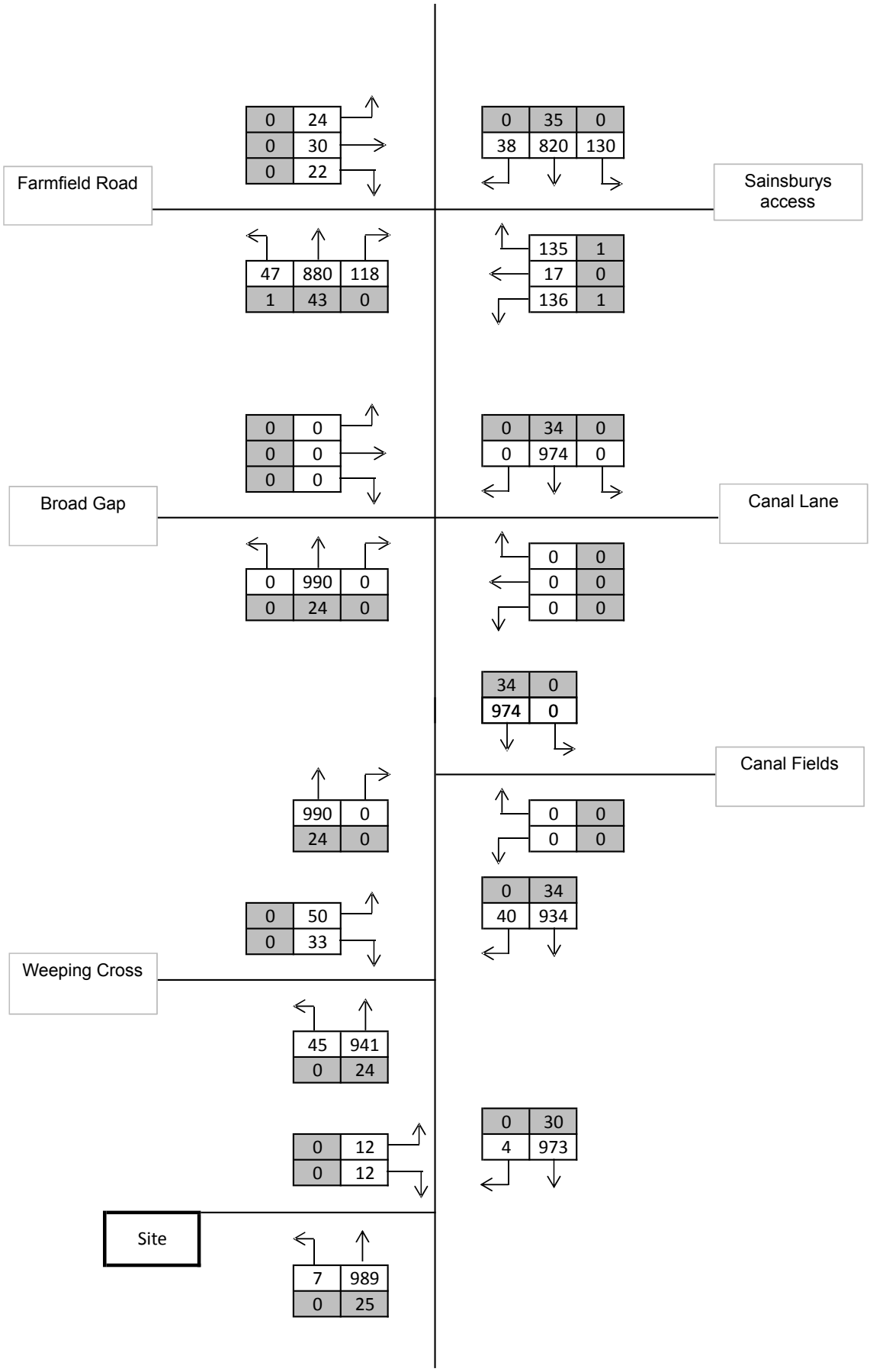

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 GROWTHED TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

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Figure No:
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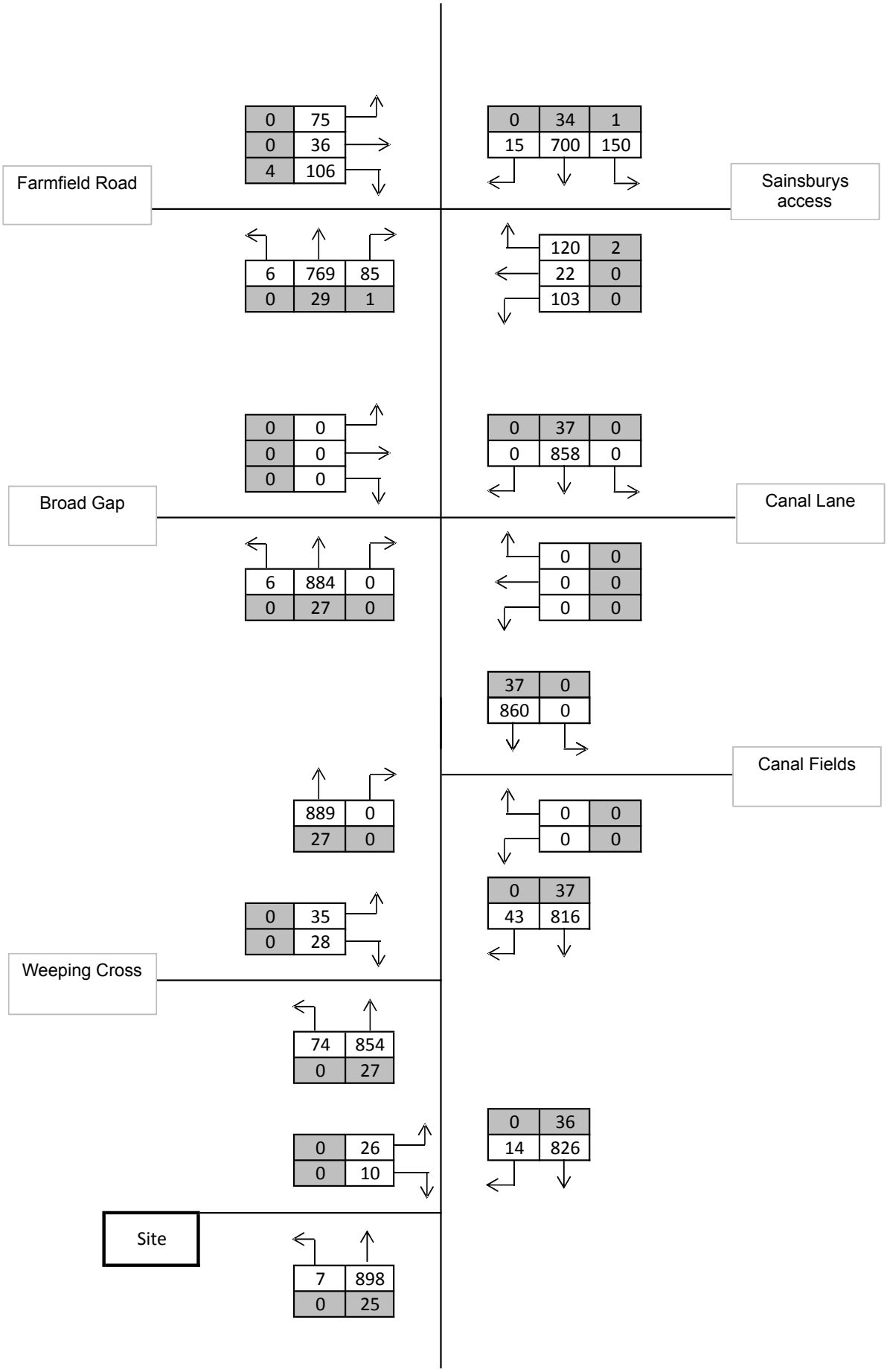

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2016 GROWTHED + DEVELOPMENT TRAFFIC FLOWS AM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-17** Drawn: **DF** Checked: **DF**

Figure No:
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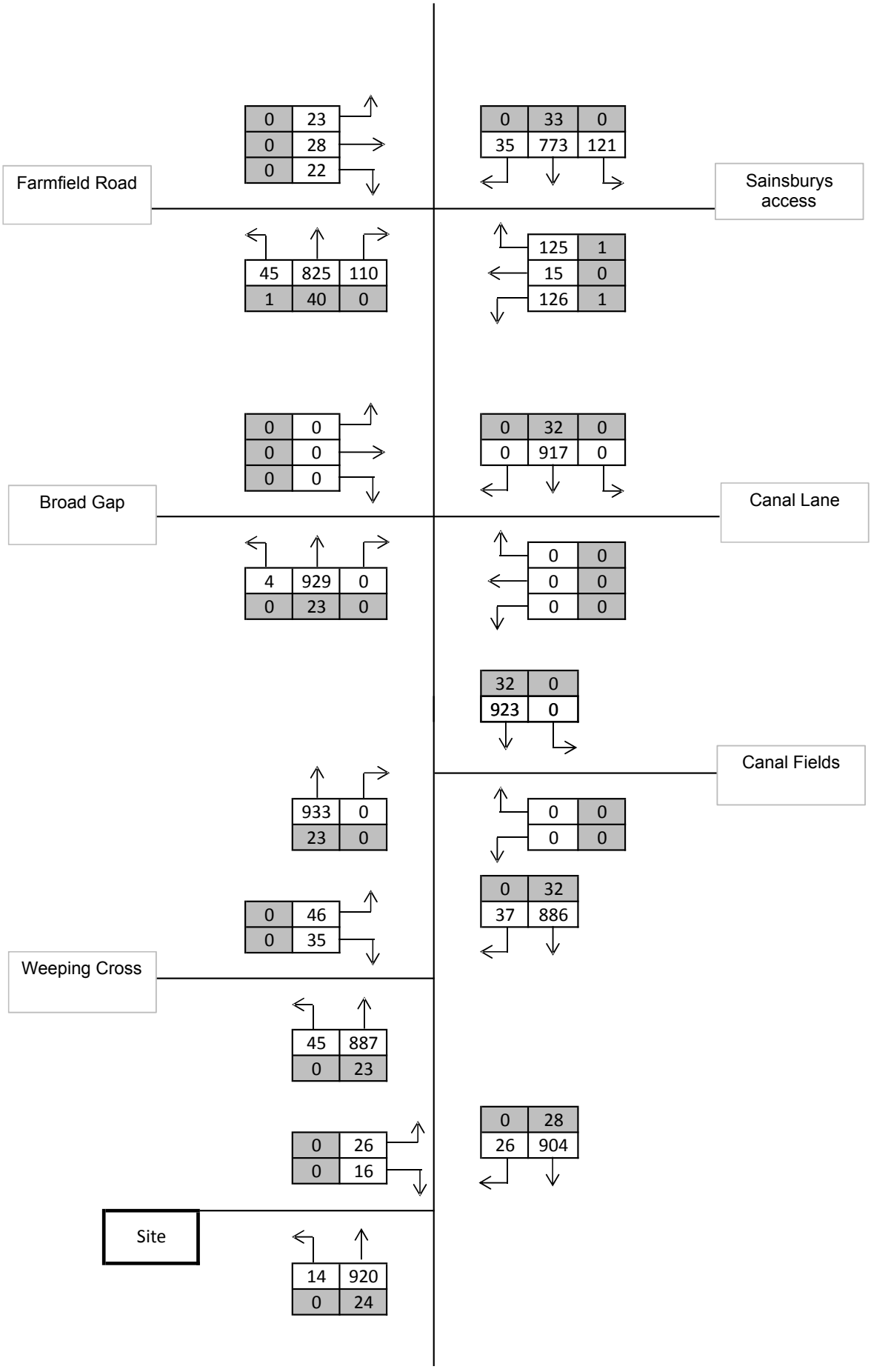

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	Title: **2016 GROWTHED + DEVELOPMENT TRAFFIC FLOWS PM PEAK**
Date: **OCT 2014** Scale: **NTS** Rev:	Figure No: **18**
Drwg. No: **JNY8146-18** Drawn: **DF** Checked: **DF**	

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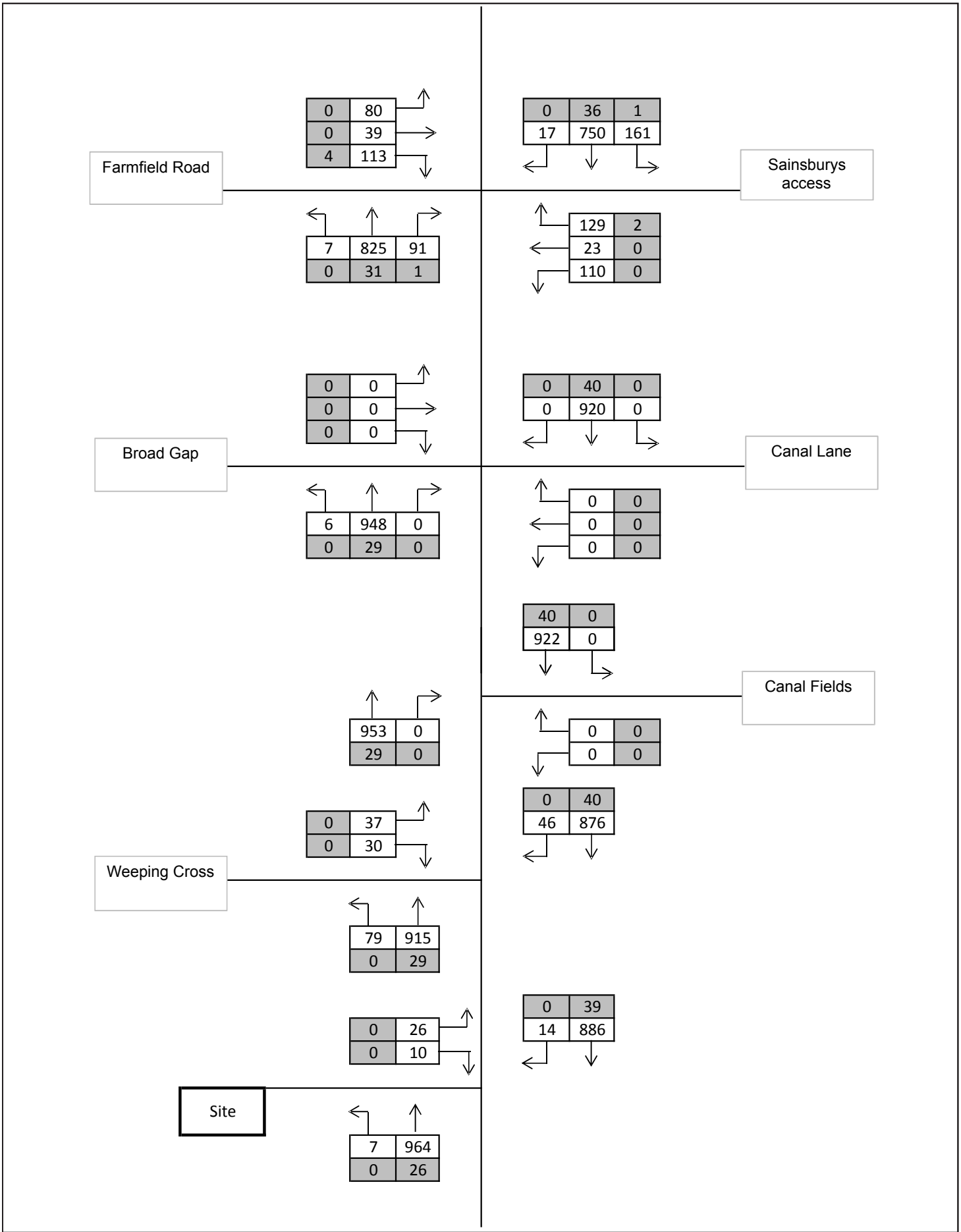

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 GROWTHED + DEVELOPMENT TRAFFIC FLOWS AM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-19** Drawn: **DF** Checked: **DF**

Figure No:
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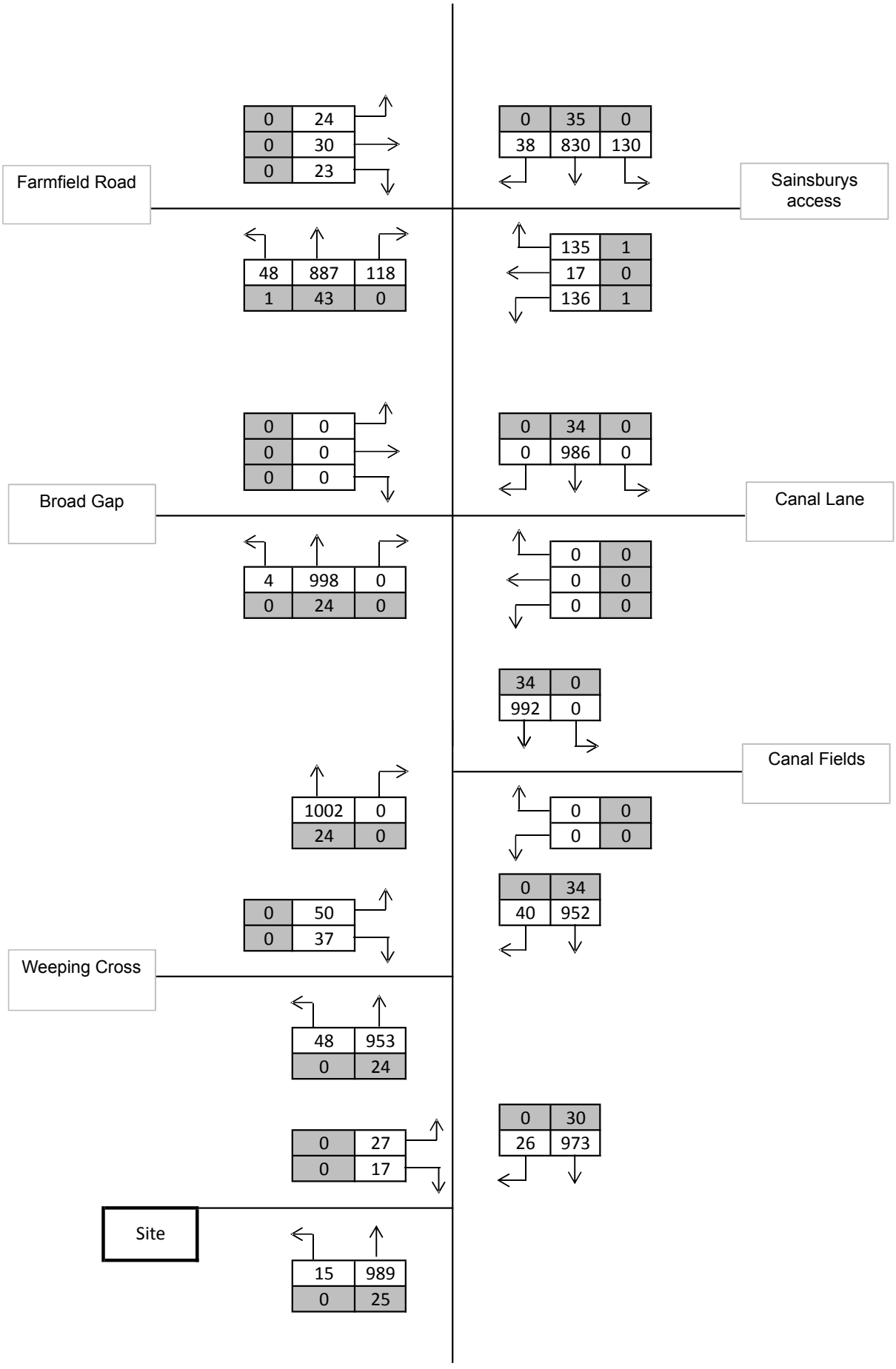

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 GROWTHED + DEVELOPMENT TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

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Figure No:
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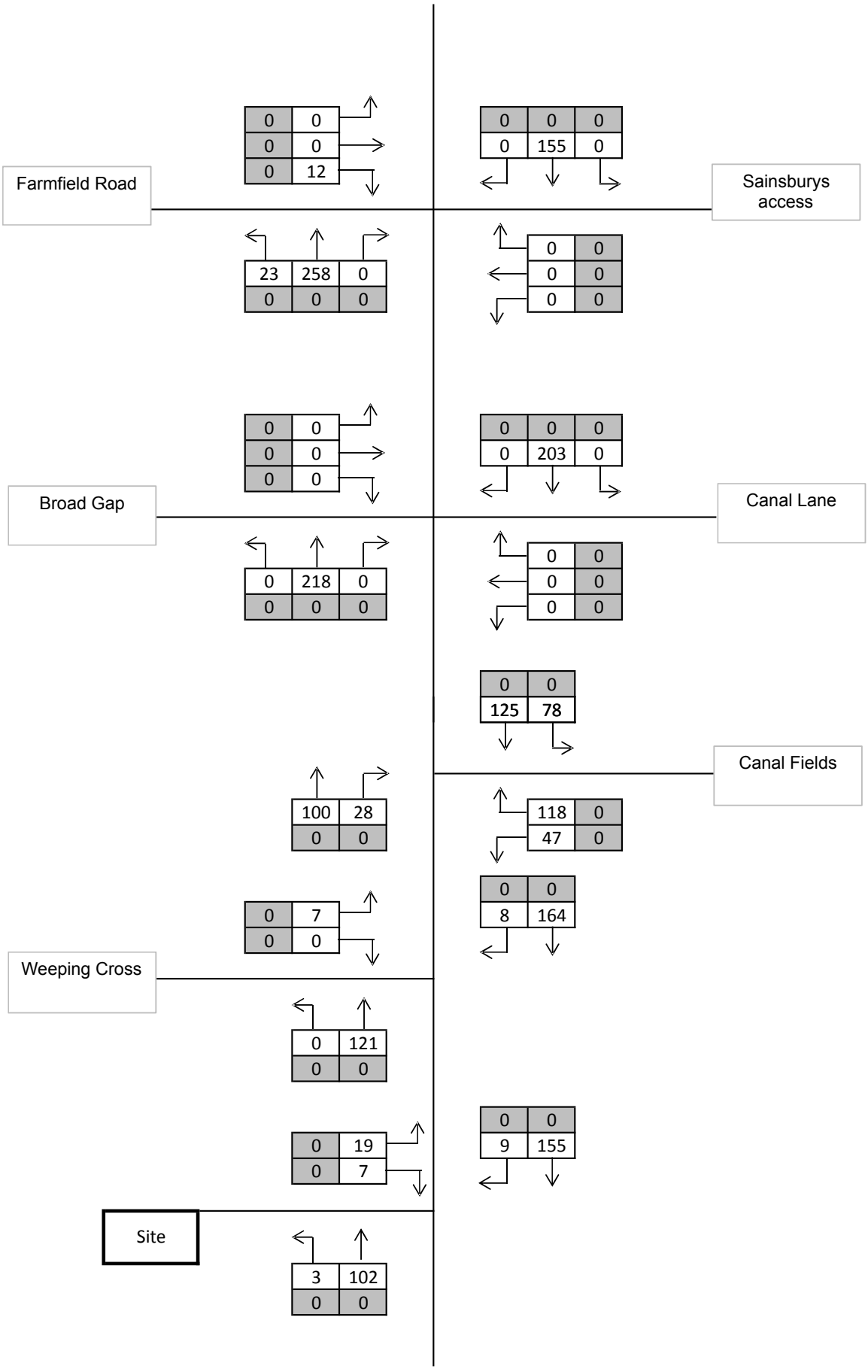

RPS	Project: LAND SOUTH OF BODICOTE	
	Title: COMMITTED DEVELOPMENT TRAFFIC FLOWS AM PEAK	
Date: OCT 2014	Scale: NTS	Rev:
Drwg. No: JNY8146-21	Drawn: DF	Checked: DF
	Figure No: 21	

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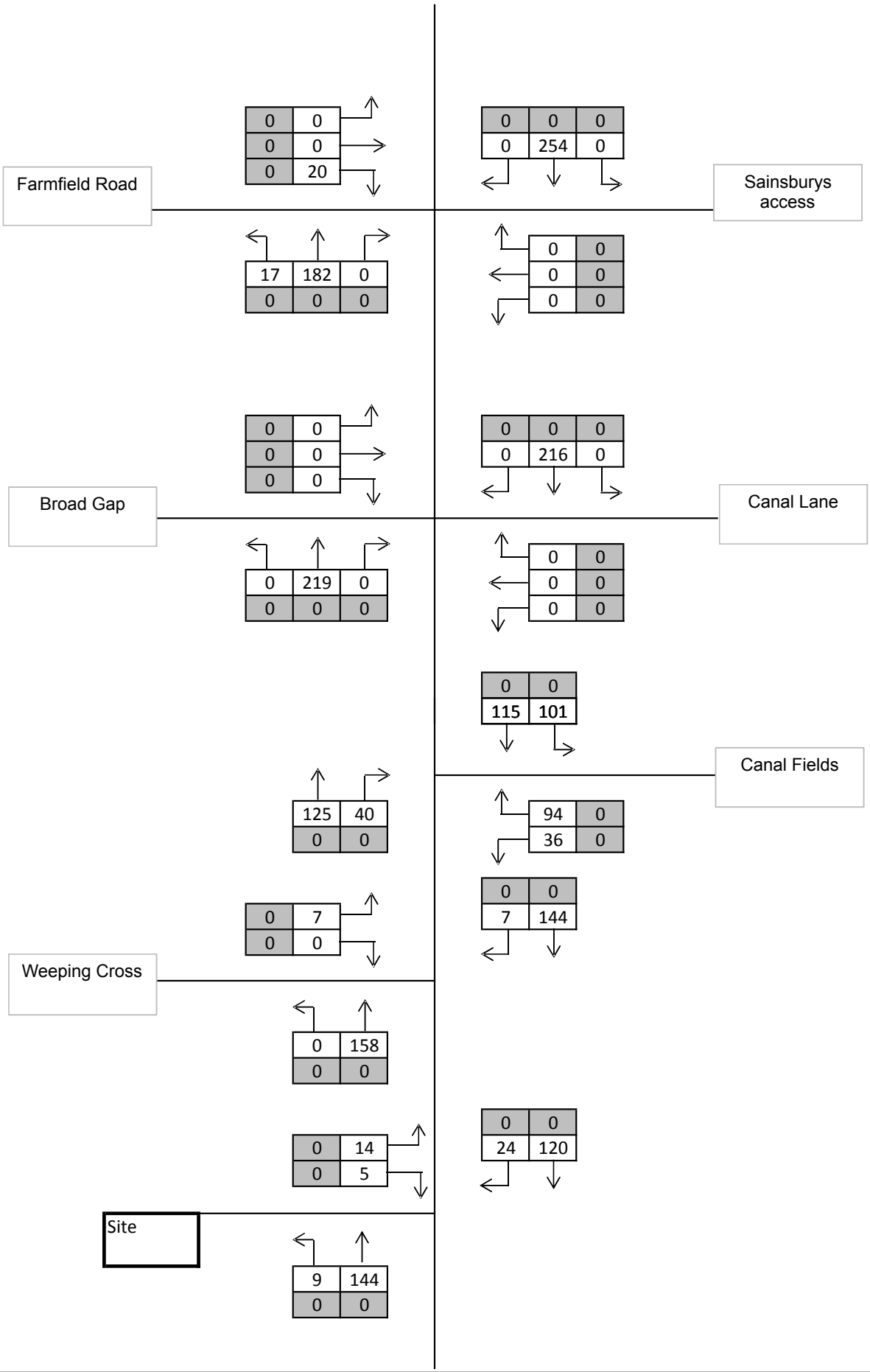

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Project:
LAND SOUTH OF BODICOTE

Title:
COMMITTED DEVELOPMENT TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-22** Drawn: **DF** Checked: **DF**

Figure No:
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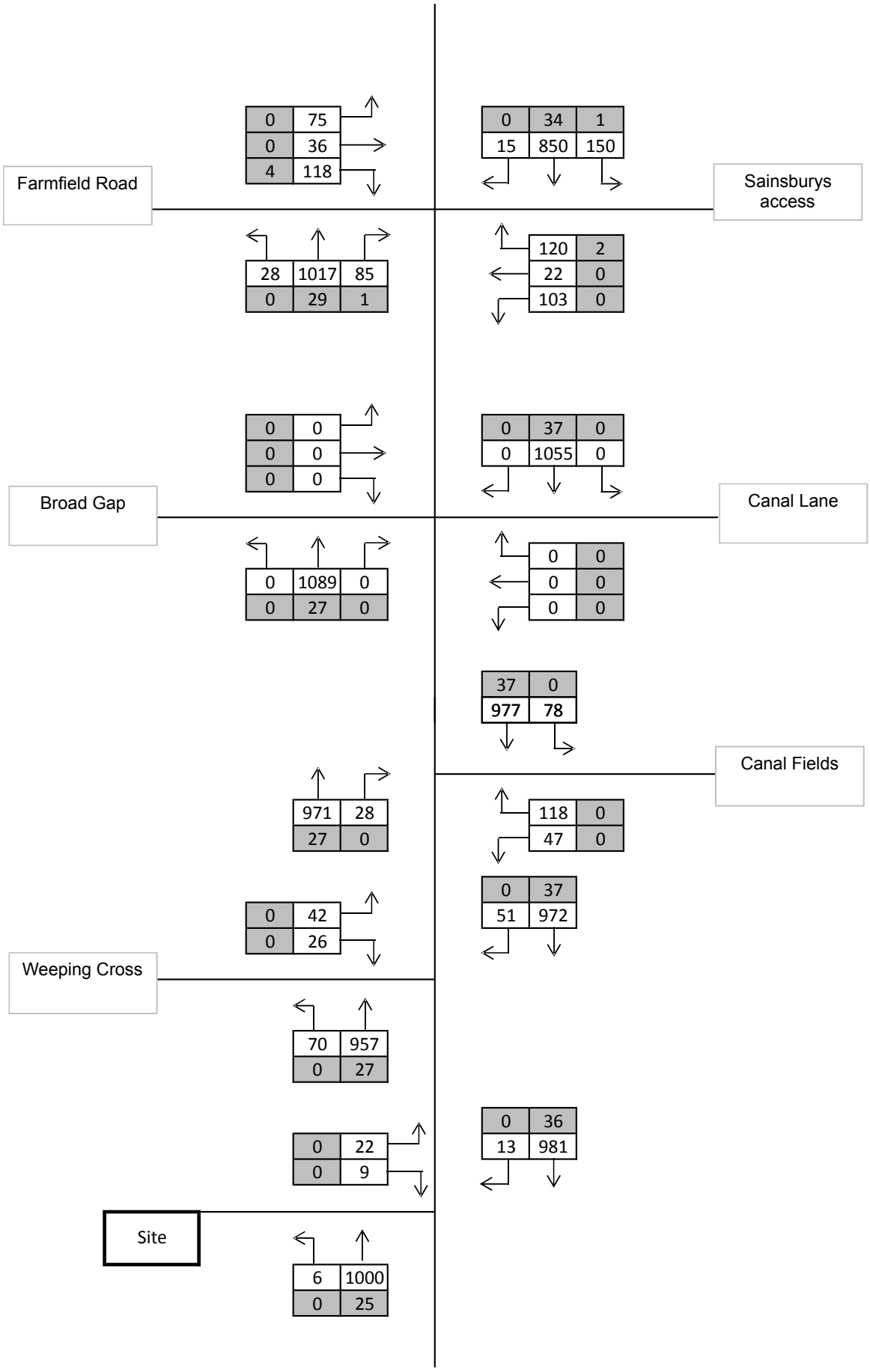

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	Title: 2016 BASELINE TRAFFIC FLOWS AM PEAK	
Date: OCT 2014	Scale: NTS	Rev:
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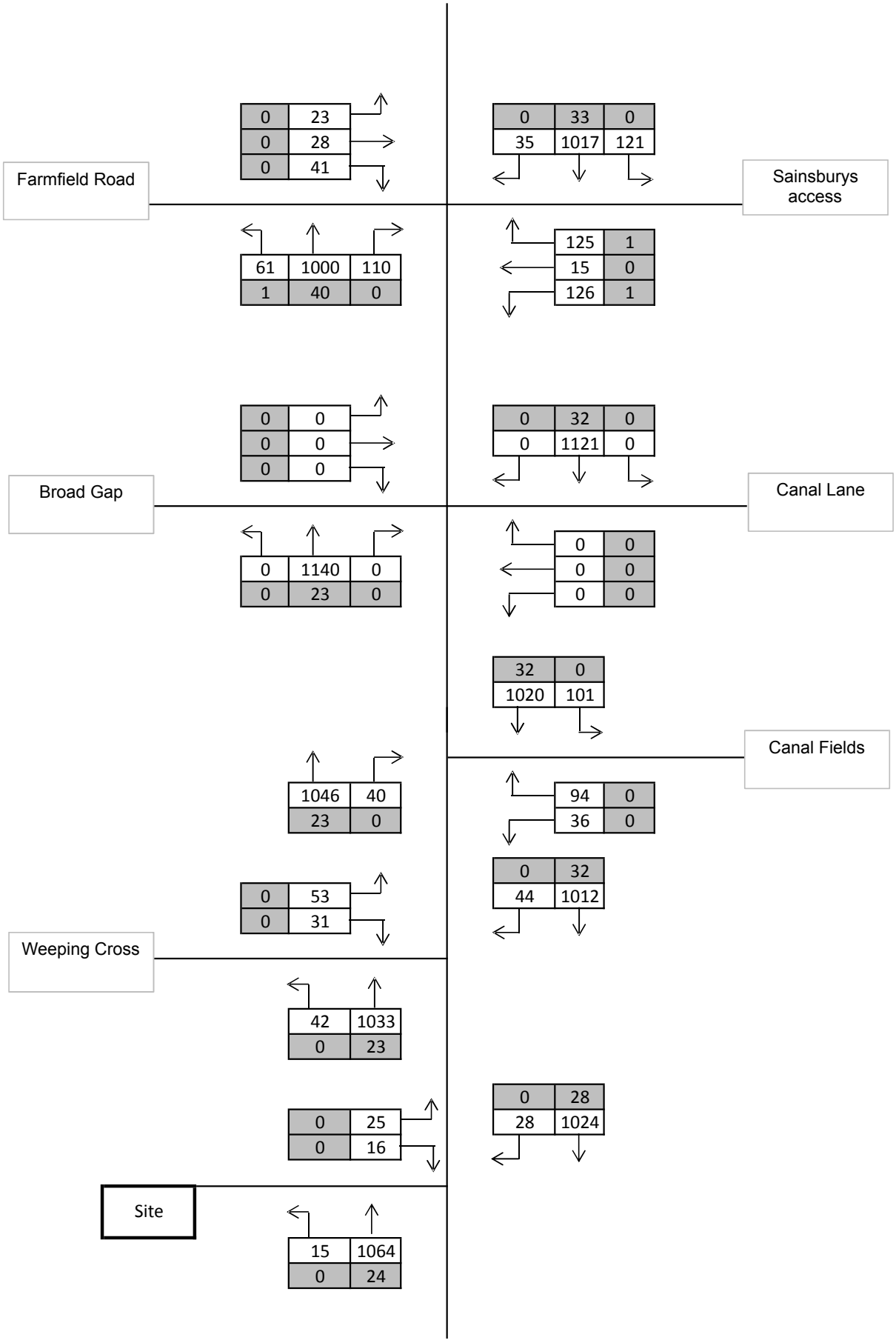

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2016 BASELINE TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-24** Drawn: **DF** Checked: **DF**

Figure No:
24

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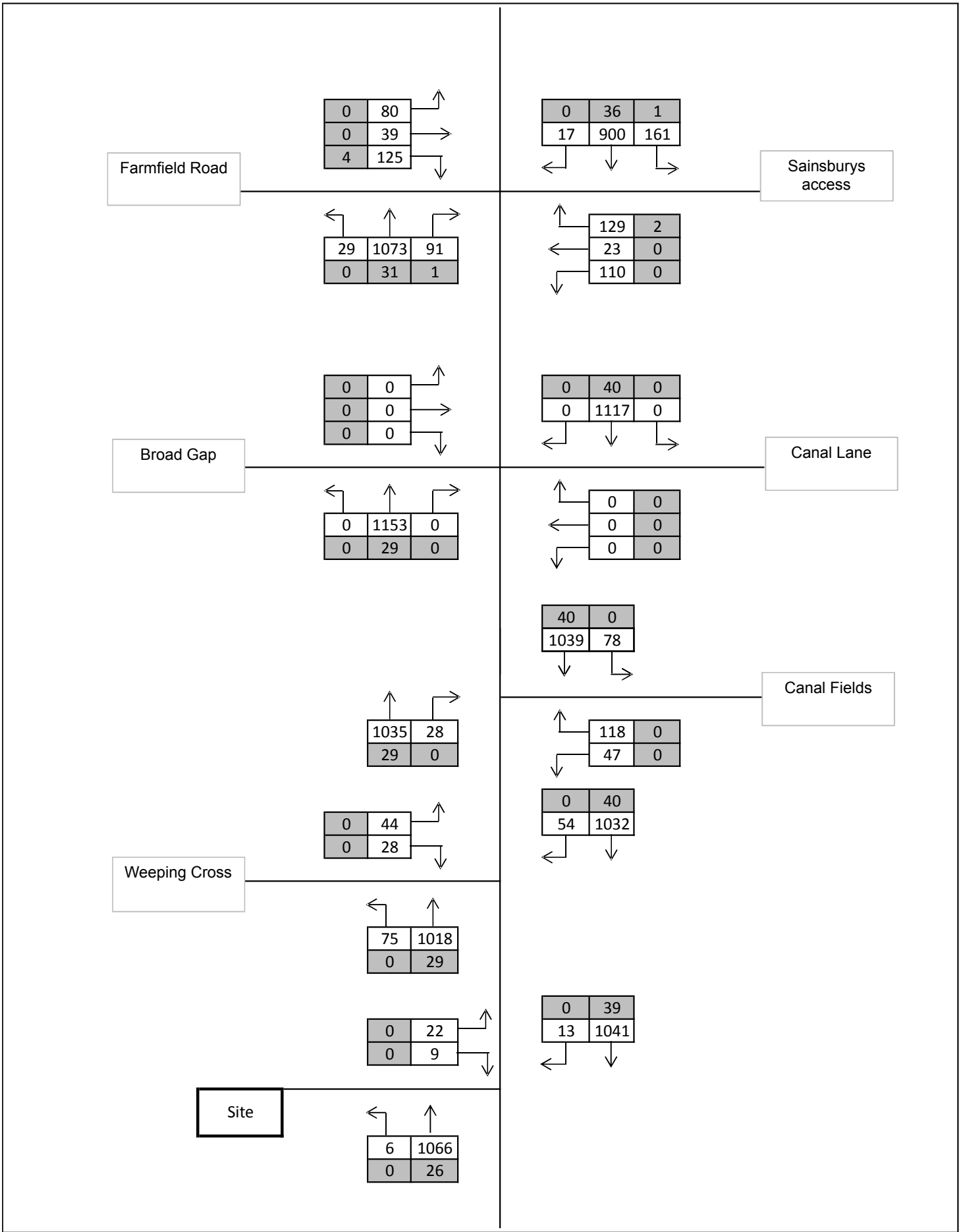

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 BASELINE TRAFFIC FLOWS AM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-25** Drawn: **DF** Checked: **DF**

Figure No:
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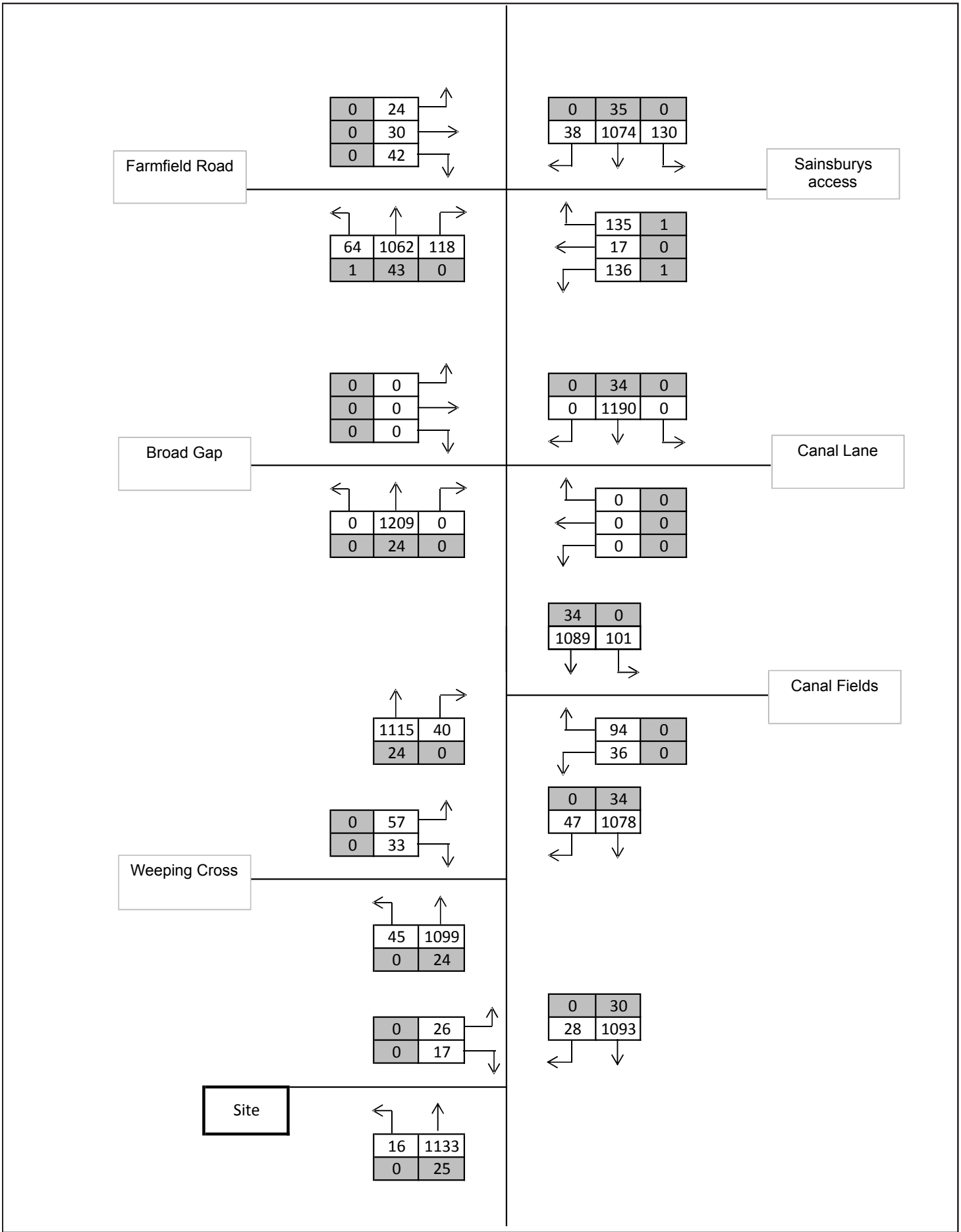

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 BASELINE TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-26** Drawn: **DF** Checked: **DF**

Figure No:
26

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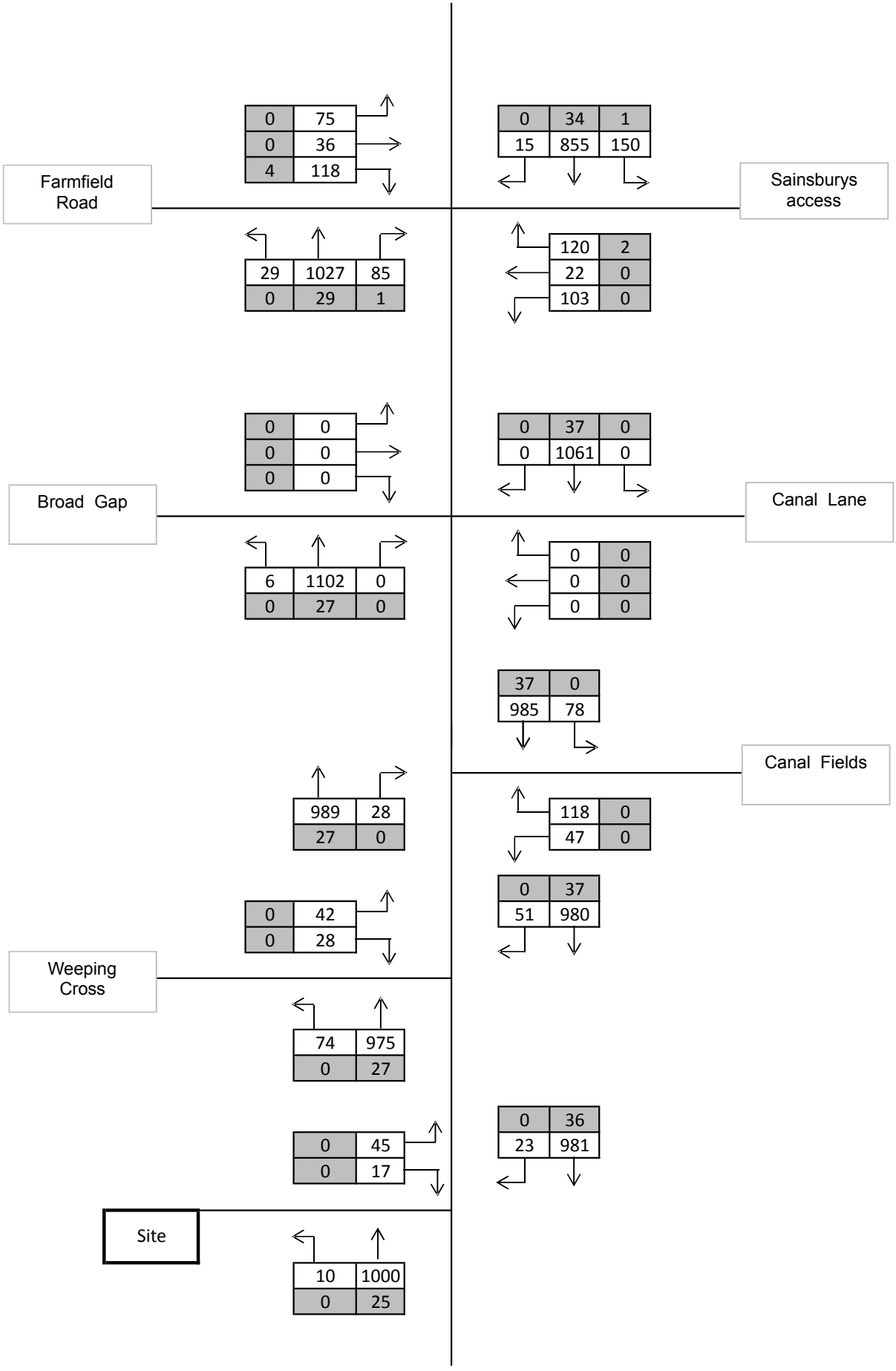

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2016 BASELINE + DEVELOPMENT TRAFFIC FLOWS AM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-27** Drawn: **DF** Checked: **DF**

Figure No:
27

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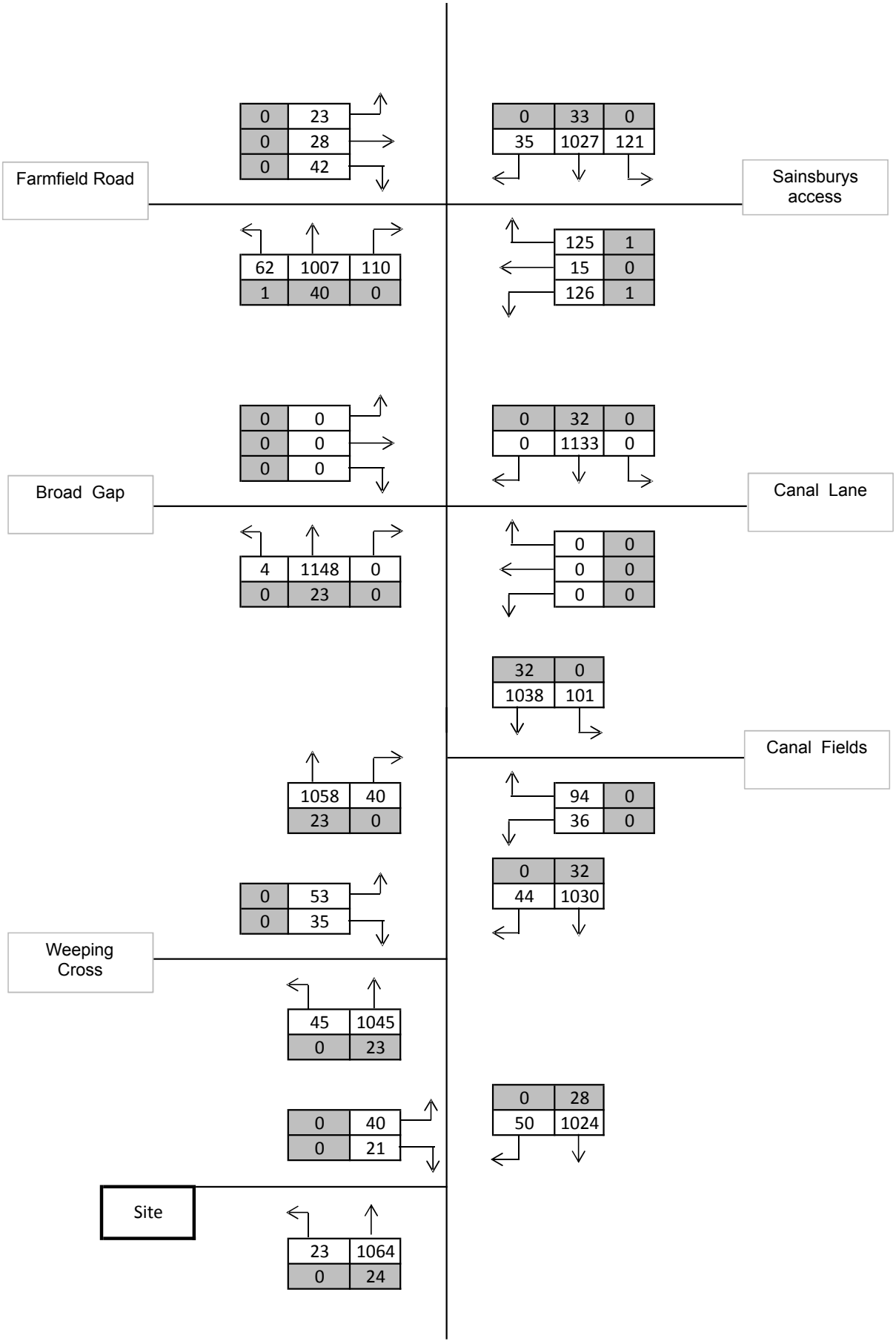

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2016 BASELINE + DEVELOPMENT TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-28** Drawn: **DF** Checked: **DF**

Figure No:
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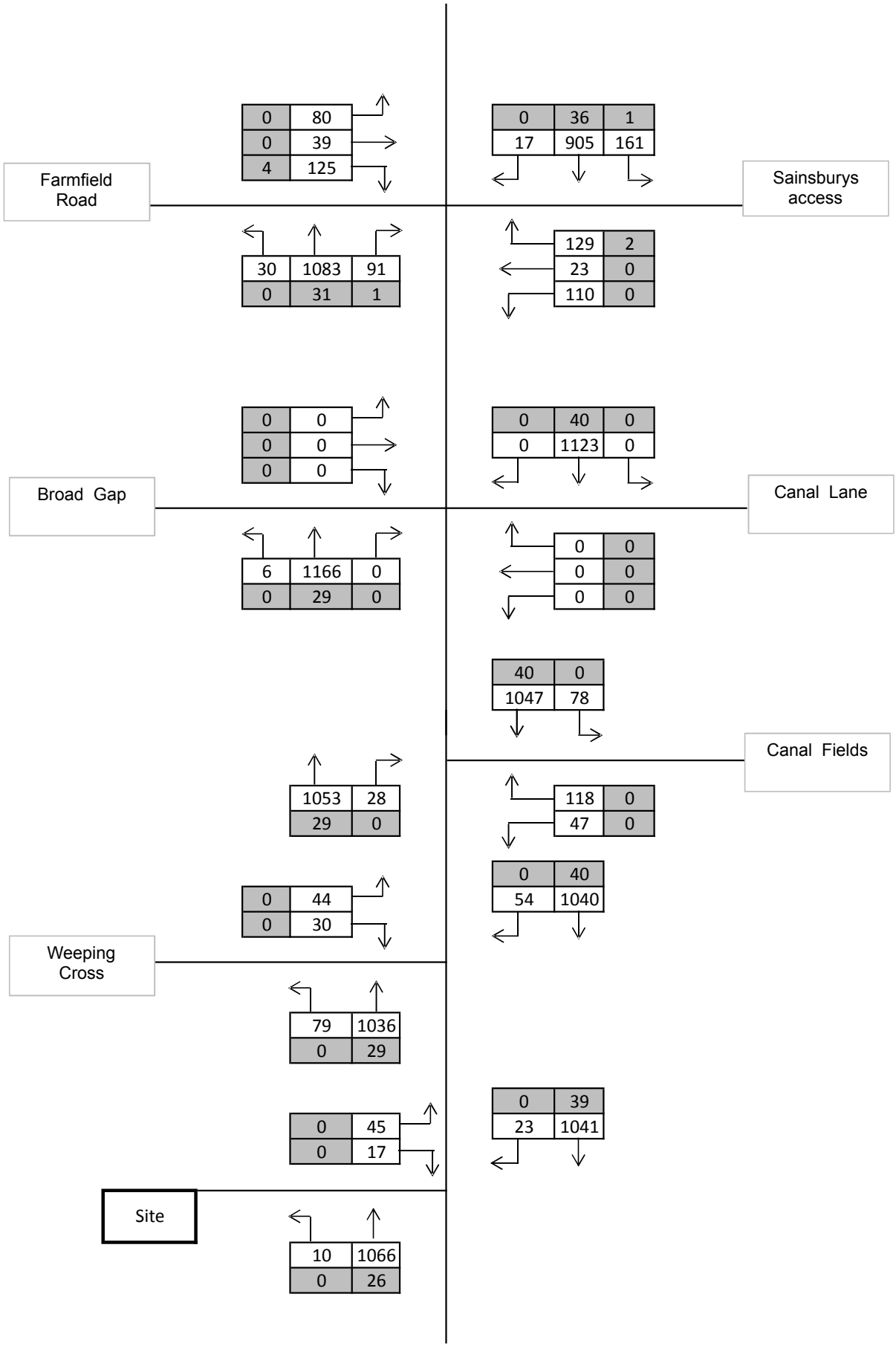

RPS

Project:
LAND SOUTH OF BODICOTE

Title:
2021 BASELINE + DEVELOPMENT TRAFFIC FLOWS AM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-29** Drawn: **DF** Checked: **DF**

Figure No:
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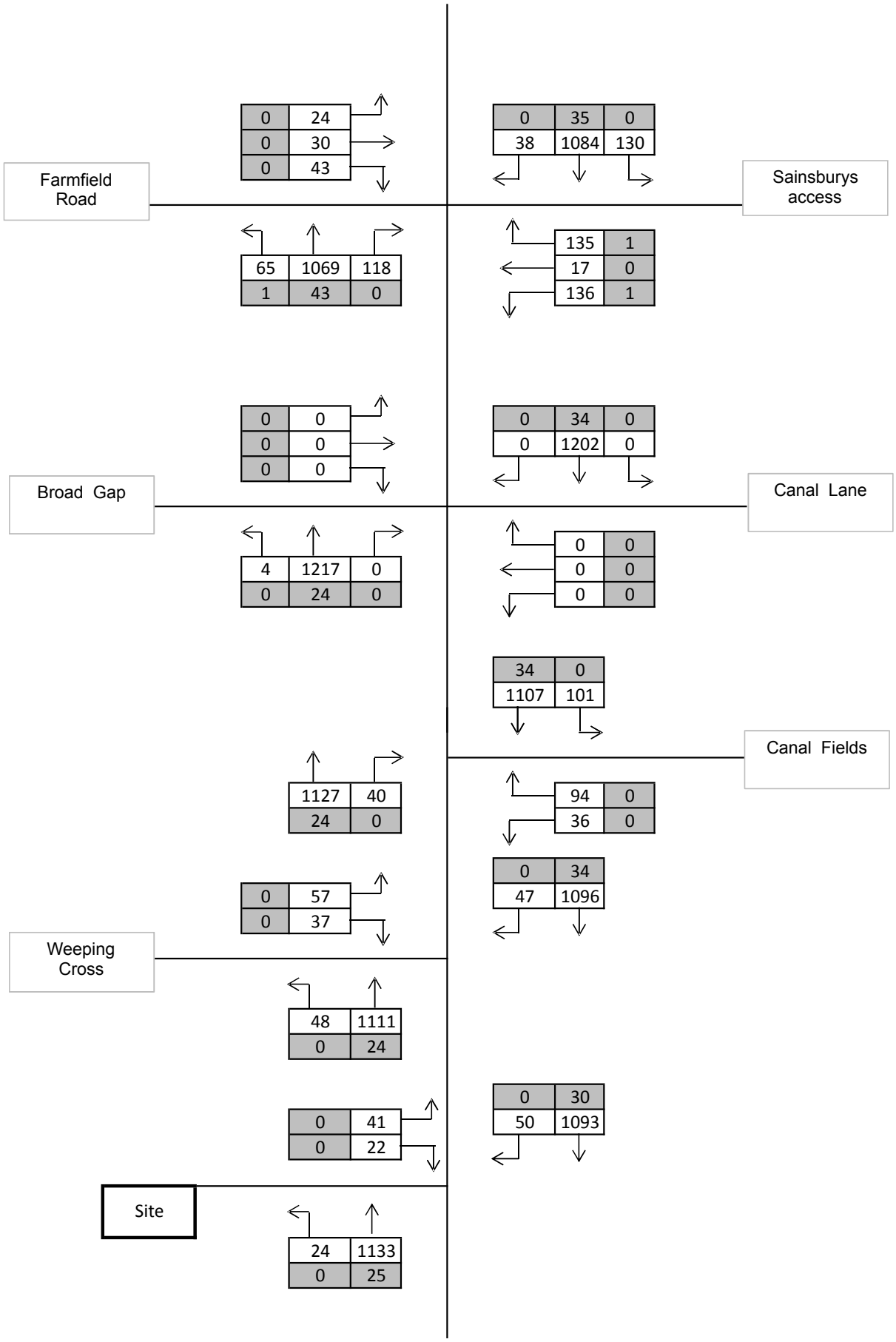

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Project:
LAND SOUTH OF BODICOTE

Title:
2021 BASELINE + DEVELOPMENT TRAFFIC FLOWS PM PEAK

Date: **OCT 2014** Scale: **NTS** Rev:

Drwg. No: **JNY8146-30** Drawn: **DF** Checked: **DF**

Figure No:
30

Transport

APPENDICES

APPENDIX A: MASTERPLAN

Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

Note:
Sketch produced by Mark Powell

Rev	Description	Date	Initial	Checked

RPS

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 **E:** rpsox@rpsgroup.com **F:** +44(0)1235 834 698

Client: Mr R Bratt

Project: Cotefield Farm, Bodicote

Title: Blossom Fields, Cotefield Farm

Status	Drawn By	PM/Checked by
Final	RM	BOD
Job Ref	**Scale @ A3**	**Date Created**
OXF	1:1,250	Nov-14

Figure Number	Rev
7993-0047-01	-

rpsgroup.com

O:\7993 Cotefield Farm 2\Tech\Drawings\7993-0047-01.dwg

O:\7993 Cotefield Farm 2\Tech\Drawings\7993-0047-01.dwg

APPENDIX B: SCOPING CORRESPONDENCE

Joely Thomas

From: Arnold, Geoffrey - Environment & Economy <Geoffrey.Arnold@Oxfordshire.gov.uk>
Sent: 19 June 2014 16:06
To: David Fletcher
Subject: RE: Bodicote, Banbury
Attachments: Banbury com dev.docx

Follow Up Flag: Follow up
Flag Status: Flagged

David

Thank you for your emails and the update relating to the number of dwellings; I confirm a TA would be appropriate. With regard to travel planning a framework plan would be beneficial at this stage but is not a pre-requisite. OCC travel plans team would be pleased to provide their advice on the matter and may be contacted by email at travelplan@oxfordshire.gov.uk .

The comprehensive approach you set out below is appropriate and in addition I have the following comments.

In addition to the junctions you quote, I suggest the junction of Farmfield Road and Oxford Road is included as it will be extremely sensitive to the increased demand. Beyond those junctions identified you should verify the impact would be negligible ie, less than 5%.

With regard to junction analysis I suggest opening year and 5years following would be appropriate. Peak hours of 0800-0900 and 1700-1800 are considered most critical although it would be beneficial to include the 30mins preceding and following both of those intervals. Also please would you supply electronic versions of the relevant Junctions 8 and LinSig analysis.

I attach a map showing committed development, you will be able to find relevant plans, TAs, etc. on the district website by using application details included on the table. Of particular relevance is the Bankside development, more recently known as Longford Park, to the North of your site and west of Oxford Road.

I trust this answers and confirms the points you raise. Should you need any further clarification then please email – I have a number of appointments tomorrow but will endeavour to reply between meetings.

Kind regards
Geoff

Geoffrey Arnold
Senior Engineer – Transport Development Control
Oxfordshire County Council
Speedwell House Oxford OX1 1NE
DD: 01865 328 797

From: David Fletcher [mailto:david.fletcher@rpsgroup.com]
Sent: 19 June 2014 14:00
To: Arnold, Geoffrey - Environment & Economy
Subject: RE: Bodicote, Banbury

Thanks Geoff

The reason for calling was our scope has marginally changed as the scheme looks like it will be nearer 90-100 dwellings and therefore we will produce a Transport Assessment instead. I would envisage you will require a Framework Travel Plan as well?

The key things we need to finalise this week is what junction assessments are required as we need to get traffic surveys undertaken ASAP. Given the increase in dwellings from 70 to nearer 90-100 dwellings we propose to assess the site access junction as well as the weeping cross junction. This is what we did for the previous application at Bodicote directly to the north of our development proposal. Can you confirm if this is acceptable with you? so that we can get traffic surveys booked in for week beginning 7th July when the roadwork's are finished on the A4260. We will then validate the proposed surveys against an ATC as well as the 2010 and 2005 survey data we have for the two junctions.

Many thanks

David Fletcher BA (Hons) MSc MCIHT MILT
Senior Consultant - RPS Planning & Development
20 Western Avenue, Milton Park,
Abingdon, Oxfordshire, OX14 4SH.
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Tel: +44 (0) 1235 432 190
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Email: david.fletcher@rpsgroup.com
www: www.rpsgroup.com

From: Arnold, Geoffrey - Environment & Economy [mailto:Geoffrey.Arnold@Oxfordshire.gov.uk]
Sent: 19 June 2014 13:45
To: David Fletcher
Subject: RE: Bodicote, Banbury

David
Apologies for the delay. I am trying to nail down relevant committed development and will get back to you later today.
Regards
Geoff

From: David Fletcher [mailto:david.fletcher@rpsgroup.com]
Sent: 19 June 2014 13:41
To: Arnold, Geoffrey - Environment & Economy
Subject: RE: Bodicote, Banbury

Geoffrey

Are you available talk about our scheme in Bodicote today?

Many thanks

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Senior Consultant - RPS Planning & Development
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www: www.rpsgroup.com

From: David Fletcher
Sent: 18 June 2014 13:46
To: 'Geoffrey.arnold@oxfordshire.gov.uk'
Subject: RE: Bodicote, Banbury

Geoffrey

I tried calling you earlier as I urgently need to discuss the scope of our project with you but was informed you were currently away from your desk. Can you give me a call back on the number below so that we can discuss our proposal at South Bodicote?

Many thanks

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From: David Fletcher
Sent: 16 June 2014 11:36
To: 'Geoffrey.arnold@oxfordshire.gov.uk'
Subject: RE: Bodicote, Banbury

Good morning Geoffrey

Have you had the opportunity to look into my below scoping request yet? If you could get back to me as soon as possible it would be much appreciated

Many thanks

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Senior Consultant - RPS Planning & Development
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www: www.rpsgroup.com

From: Transport Development Control [mailto:Transport.Development.Control@Oxfordshire.gov.uk]
Sent: 09 June 2014 14:30
To: David Fletcher
Subject: Bodicote, Banbury

Dear Sir

Thank you for contacting Oxfordshire County Council

Geoffrey Arnold will be dealing with your request, he will respond within 10 working days

Kind regards

Will Madgwick

Transport Development Control
Oxfordshire County Council

From: David Fletcher [mailto:david.fletcher@rpsgroup.com]
Sent: 05 June 2014 15:27
To: Transport Development Control
Subject: RE: Bodicote, Banbury

Good afternoon

Has anybody had the opportunity to look into my below scoping request?

Many thanks

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Email: david.fletcher@rpsgroup.com
www: www.rpsgroup.com

From: David Fletcher
Sent: 22 May 2014 16:46
To: 'transport.development.control@oxfordshire.gov.uk'
Subject: Bodicote, Banbury

Dear Sir / Madam

We have been appointed as transport consultants for a proposed residential development at Bodicote, near Banbury (location plan attached). The proposed residential site will provide between 60 and 80 dwellings and is located to the west of the A4260 Banbury Road, Bodicote, Oxfordshire. The site is bordered to the north by the Banner Homes residential site, to the east by Cotefield House and to the south and west by agricultural land. The site will be accessed from the A4260 Banbury Road access junction used for Cotefield Nurseries and the Banners Homes site to the north.

I would like to agree the scope of work that would be required and have outlined our approach below. Based on the proposed number of dwellings ranging between 60 and 80 we propose to produce a Transport Statement consistent with the DfT publication 'Guidelines on Transport Assessment' (2007). If the final masterplan was to exceed 80 dwellings then we would produce a Transport Assessment in accordance with the DfT guidelines.

The Transport Statement would include the following;

Baseline Situation

- Analysis of the local highway network;
- Review of National, Regional, Local policy
- Analysis of the most recent five years of Personal Injury Accident Data, identifying any accident problem areas, if any;
- Review the site's accessibility for all modes of travel (walking, cycling and public transport) to support the accessibility appraisal;
- Produce walking, cycling and public transport isochrones using Visography TRACC;
- Obtain and analyse available traffic data and growth to future assessment years using the DfT National Transport Model (NTM) using Tempro (and applying local growth figures).

- An appraisal of other committed developments including any major highways schemes or initiatives that may be relevant; (Information is provided within the BITLUS and CRAITLUS studies – however if you could provide details of developments which should be considered that would be much appreciated);
- Establish baseline traffic flows (base plus committed) against which to assess the development proposals;
- Review proposed transport improvements within the vicinity of the site (if you could provide information this would be appreciated);

Development Proposals

- Review vehicle and cycle parking layout and provision in comparison to the relevant OCC standards (Taken from Oxfordshire County Council Transport for New Developments: Parking Standards for New Residential Developments (December 2011));
- Demonstrate the suitability of internal layouts and accesses for heavy goods vehicles and service/emergency vehicles to access the site from the highway network using swept path analysis;
- Review of access arrangements by all modes of travel.

Trip Generation and **Distribution**

- Calculate the trips by all modes that are likely to be generated by the proposed development using comparable sites within TRICS (2014a) and Census data for the AM and PM peak hours;
- Distribute and assign the net trips onto the surrounding transport network using the most likely destinations of travel (based on census analysis of journeys to work) for the AM and PM peak hours.

Impacts and Operational Assessments

- Assessment of traffic impacts for the year of opening using the relevant software modelling packages for the site access junction with the A4260 Banbury Road

Mitigation Measures

- Detail improvements to sustainable transport and the highway network, if necessary, reasonable and required

Can you confirm that the above approach would be acceptable and as stated provide detailed of committed developments which should be considered within our assessments, as well as any future transport improvements within the vicinity of the site. In addition, I have summarised the parameters that we would like to agree with you below:

- Transport Statement for development if 60-80 dwellings (If the development size exceeds 80 dwellings then we will provide a revised scope for a Transport Assessment)
- Observed and Potential Year of Opening Assessment Years – AM and PM peak hour assessments
- Base Traffic Flow Data growthed using DfT National Transport Model applied through TEMPRO analysis
- Walking speeds of 4.8km/h and cycling speed of 16km/h for use within Visography TRACC accessibility analysis
- Operational Assessment of Site Access / A4260 Banbury Road using TRL Junctions 8

In addition, would you be able to confirm whether a Travel Plan would be required?

I would appreciate it if you could respond as soon as possible so that we can commission traffic surveys.

Many Thanks

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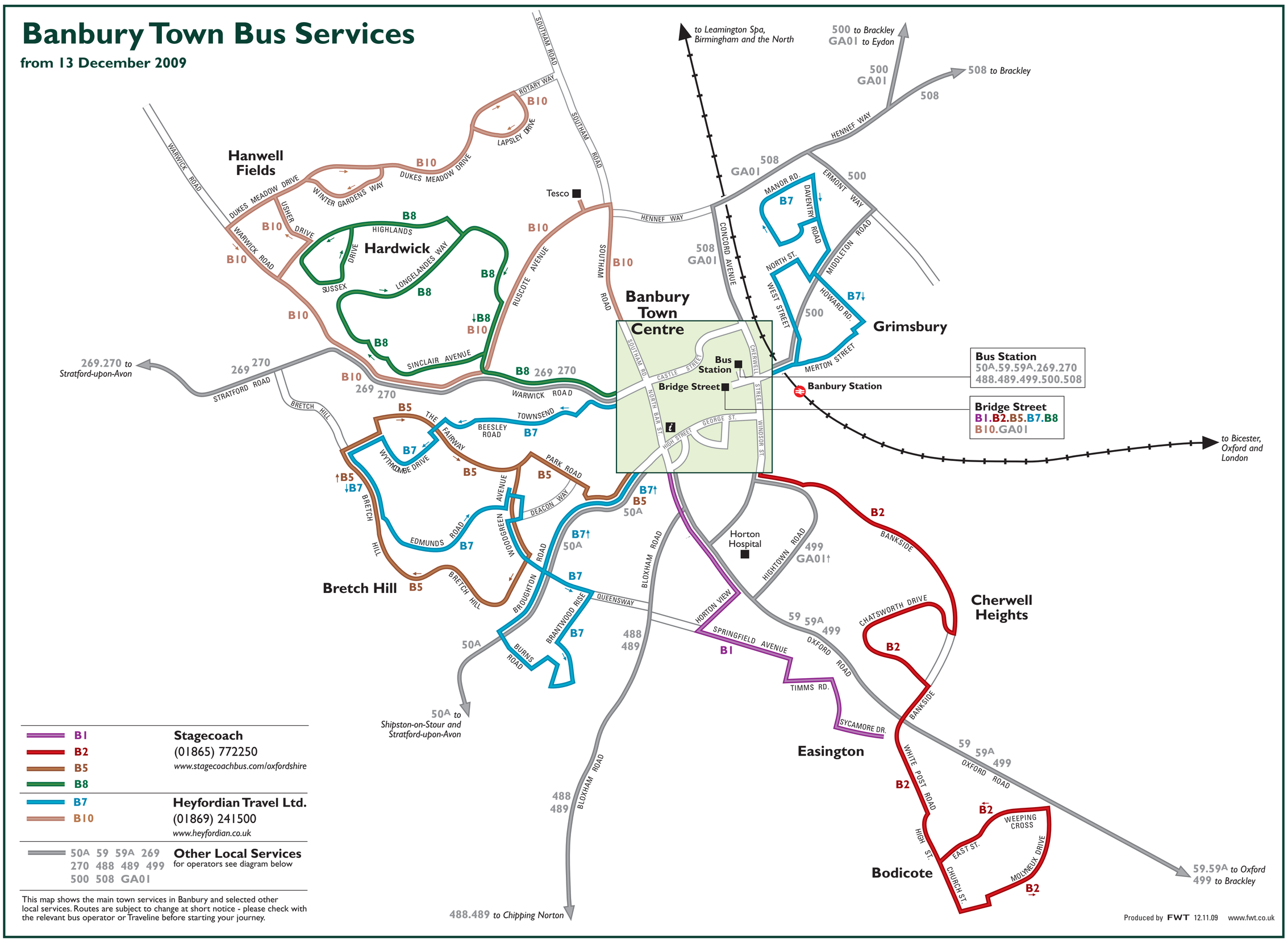
APPENDIX C: BANBURY BUS SERVICES

Local Transport Information

Banbury Town Bus Services

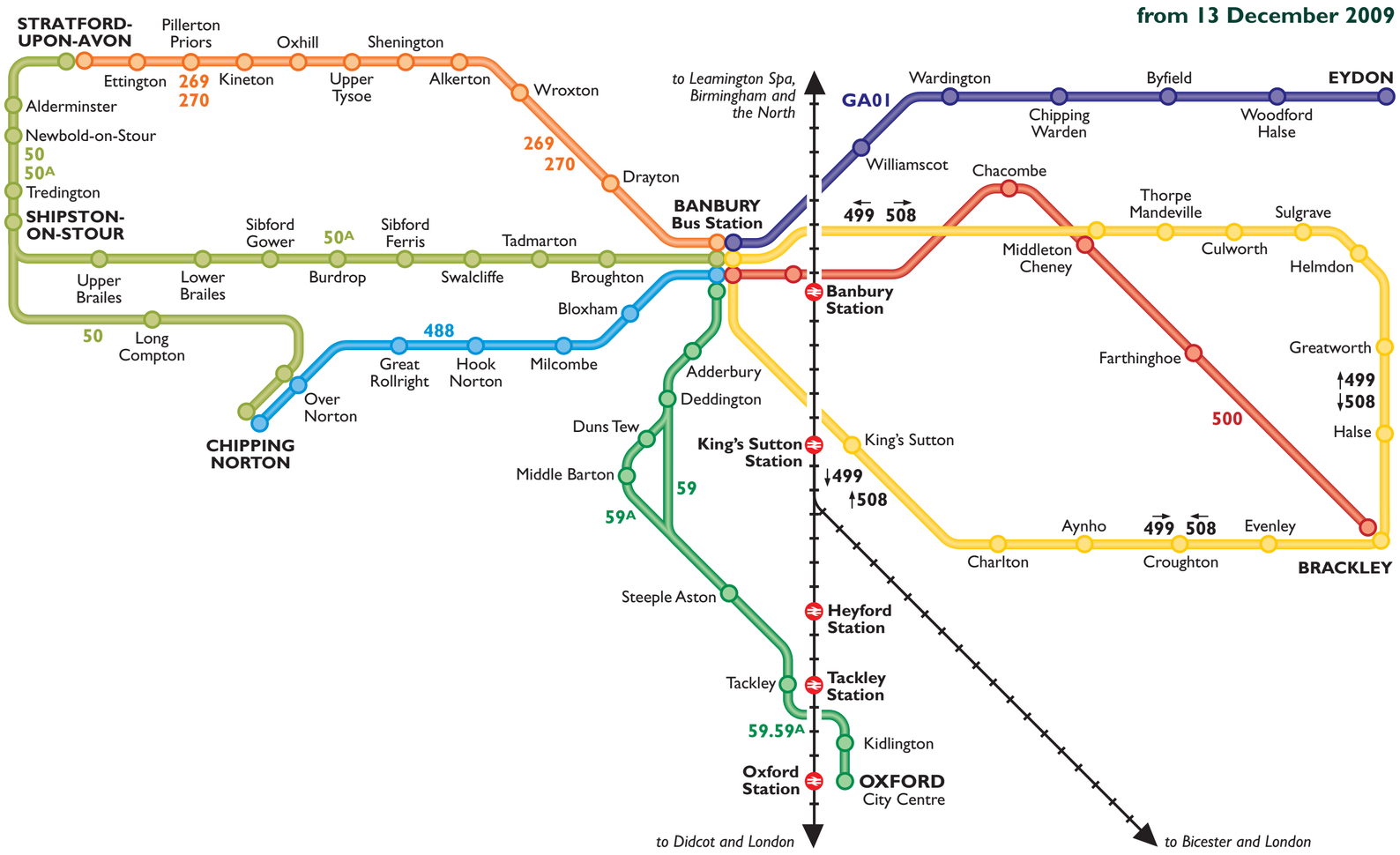
from 13 December 2009



This map shows the main town services in Banbury and selected other local services. Routes are subject to change at short notice - please check with the relevant bus operator or Traveline before starting your journey.

Area Bus Network

from 13 December 2009



This map shows the main bus routes in the local area, other infrequent routes also operate. Map is diagrammatic only and not to scale. Routes are subject to change at short notice - please check with the relevant bus operator or Traveline before starting your journey.

Taxi Information

Taxis are available from the taxi rank outside the station

50 50A 59 59A 488 500	**Stagecoach** (01865) 772250 *www.stagecoachbus.com/oxfordshire*
269 270	**Johnson's Coaches** (01564) 797000 *www.johnsonscoaches.co.uk*
GA01	**Geoff Amos Coaches** (01327) 260522 *www.geoffamos.co.uk*
499 508	**Tex Cars & Coaches** (01295) 257692 *www.texcoaches.co.uk*

traveline
public transport info
0871 200 22 33
(calls from landlines cost 10p per minute)

OXFORDSHIRE COUNTY COUNCIL
www.oxfordshire.gov.uk
Working for you

Produced by FWT 12.11.09 www.fwt.co.uk

APPENDIX D: PERSONAL INJURY ACCIDENT DATA

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Tuesday 13/01/2009 Time 0903 Slight at A4260 OXFORD RD J/W WEEPING CROSS RD BANBURY

E: 446703 N: 237775 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1 Car Moving from W to SE Turning right On main carriageway

Vehicle Reference 2 Car Moving from SE to N Going ahead other On main carriageway

Casualty Reference: 1 Age: 17 Female Driver/rider Severity: Slight Injured by vehicle: 2

Sunday 28/06/2009 Time 1218 Slight at A4260 AT J/W SERVICE ROAD APPROX 200M NW OF J/W BROAD GAP BODICOTE

E: 446356 N: 238261 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1 Car Moving from SE to N Going ahead other On main carriageway

Casualty Reference: 3 Age: 48 Female Driver/rider Severity: Slight Injured by vehicle: 1

Vehicle Reference 2 Car Moving from SE to N Going ahead but held up On main carriageway

Casualty Reference: 1 Age: 52 Male Driver/rider Severity: Slight Injured by vehicle: 2

Casualty Reference: 2 Age: 54 Male Passenger Severity: Slight Injured by vehicle: 2

Vehicle Reference 3 Car Moving from SE to NE Waiting to turn right On main carriageway

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Wednesday 26/08/2009 Time 1700 Serious at A4260 OXFORD RD APPROX 60M NW OF J/W WEEPING CROSS RD BANBURY

E: 446671 N: 237830 Junction Detail: 3 Control 4
Raining without high winds Road surface Wet/Damp Daylight:street lights present
Vehicle Reference 1 Motor Cycle over 1 Moving from SE to N Going ahead other On main carriageway

Casualty Reference: 1 Age: 57 Male Driver/rider Severity: Serious Injured by vehicle: 1

Wednesday 14/10/2009 Time 1521 Slight at A4260 OXFORD RD J/W THE HAWTHORNS BANBURY

E: 445771 N: 239185 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight:street lights present
Vehicle Reference 1 Car Moving from S to NE Going ahead other On main carriageway

Vehicle Reference 2 Car Moving from S to NE Going ahead but held up On main carriageway

Casualty Reference: 1 Age: 50 Female Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Friday 11/12/2009 Time 1828 Slight at A4260 OXFORD ROAD J/W ESSO PETROL FILLING STATION BODICOTE

E: 446176 N: 238464 Junction Detail: 9 Control 4
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit

Vehicle Reference 1	Car	Moving from	E	to	N	Turning right	On main carriageway	
Casualty Reference:	1	Age:	51	Female		Driver/rider	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Car	Moving from	N	to	S	Going ahead other	On main carriageway	

Monday 25/01/2010 Time 1659 Slight at A4260 AT J/W BROAD GAP BODICOTE

E: 446455 N: 238111 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Darkness: street lights present and lit

Vehicle Reference 1	Car	Moving from	N	to	SE	Overtaking nearside	On main carriageway	
Casualty Reference:	1	Age:	86	Female		Driver/rider	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Car	Moving from	N	to	S	Waiting to turn right	On main carriageway	

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Wednesday 03/03/2010 Time 0958 Slight at A4260 BY ESSO FILLING STATION JUST SE OF BODICOTE FLYOVER BODICOTE

E: 446200 N: 238431 Junction Detail: 8 Control 4
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	N	to	SE	Going ahead other	On main carriageway	
Vehicle Reference 2	Car	Moving from	N	to	SE	Going ahead other	On main carriageway	

Casualty Reference: 1 Age: 39 Male Driver/rider Severity: Slight Injured by vehicle: 2

Sunday 13/06/2010 Time 1110 Slight at A4260 OXFORD RD APPROX 100M S OF J/W BEADNELL CLOSE BANBURY - SOME UNCERTAINTY OVER EXACT LOCATION (DESCRIBED AS BEING NEAR SPEED CAMERA)

E: 445946 N: 238869 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	S	to	N	Going ahead other	On main carriageway	
Vehicle Reference 2	Car	Moving from	S	to	N	Going ahead other	On main carriageway	

Casualty Reference: 1 Age: 55 Female Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Tuesday 13/07/2010 Time 1445 Slight at A4260 ADDERBURY RD PROBABLY BETWEEN J/W TWYFORD RD AND BANBURY RUGBY CLUB ADDERBURY

E: 447134 N: 237021 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1 Car Moving from N to S Overtaking moving vehicle O/S On main carriageway

Vehicle Reference 2 Motorcycle 50cc and Moving from S to N Going ahead other On main carriageway

Casualty Reference: 1 Age: 16 Male Driver/rider Severity: Slight Injured by vehicle: 2

Vehicle Reference 3 Motorcycle 50cc and Moving from S to N Going ahead other On main carriageway

Casualty Reference: 2 Age: 16 Male Driver/rider Severity: Slight Injured by vehicle: 3

Sunday 26/09/2010 Time 1517 Slight at A4260 OXFORD ROAD APPROX 40M SE OF J/W BROAD GAP BODICOTE

E: 446485 N: 238074 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1 Car Moving from SE to N Starting On main carriageway

Vehicle Reference 2 Car Moving from SE to N Going ahead other On main carriageway

Casualty Reference: 1 Age: 38 Female Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Thursday 14/10/2010 Time 1824 Slight at A4260 OXFORD RD AT PELICAN CROSSING APPROX 100M S OF J/W BEADNELL CLOSE BANBURY

E: 445954 N: 238836 Junction Detail: 0 Control
Fine without high winds Road surface Dry Darkness: street lights present and lit
Vehicle Reference 1 Car Moving from N to S Going ahead other On main carriageway
Casualty Reference: 1 Age: 70 Male Driver/rider Severity: Slight Injured by vehicle: 1
Casualty Reference: 2 Age: 42 Female Pedestrian Severity: Slight Injured by vehicle: 1

Monday 22/11/2010 Time 0749 Slight at A4260 OXFORD ROAD J/W GRANGE ROAD BANBURY

E: 445684 N: 239250 Junction Detail: 3 Control 4
Fine without high winds Road surface Wet/Damp Daylight:street lights present
Vehicle Reference 1 Car Moving from N to S Turning right On main carriageway
Vehicle Reference 2 Motorcycle over 500 Moving from SE to N Overtaking stat vehicle O/S On main carriageway
Casualty Reference: 1 Age: 49 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Friday 26/11/2010 Time 1640 Serious at A4260 BY LAYBY APPROX 500M N OF J/W TWYFORD RD ADDERBURY

E: 447163 N: 236953 Junction Detail: 0 Control
Other Road surface Frost/Ice Darkness: street lights present and lit
Vehicle Reference 1 Car Moving from N to S Stopping On main carriageway
Casualty Reference: 1 Age: 89 Male Driver/rider Severity: Serious Injured by vehicle: 1
Vehicle Reference 2 Car Moving from N to S Going ahead but held up On main carriageway

Wednesday 06/04/2011 Time 0859 Slight at A4260 OXFORD RD J/W GRANGE RD BANBURY

E: 445685 N: 239248 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight:street lights present
Vehicle Reference 1 Pedal Cycle Moving from SE to N Going ahead other On main carriageway
Casualty Reference: 1 Age: 42 Male Driver/rider Severity: Slight Injured by vehicle: 1
Vehicle Reference 2 Goods 7.5 tonnes mg Moving from N to S Turning right On main carriageway

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Thursday 05/05/2011 Time 2226 Serious at A4260 OXFORD RD J/W SERVICE RD APPROX 200M NW OF J/W BROAD GAP BODICOTE

E: 446358 N: 238263 Junction Detail: 3 Control 4
Unknown Road surface Dry Darkness: street lights present and lit

Vehicle Reference 1	Car	Moving from	N	to	NE	Turning left	On main carriageway
Vehicle Reference 2	Pedal Cycle	Moving from	N	to	SE	Overtaking nearside	On main carriageway

Casualty Reference: 1 Age: 35 Male Driver/rider Severity: Serious Injured by vehicle: 2

Monday 20/06/2011 Time 1512 Slight at A4260 OXFORD RD ATS J/W FARMFIELD RD & SAINSBURYS STORE BANBURY

E: 445602 N: 239344 Junction Detail: 6 Control 2
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	N	to	S	Changing lane to right	On main carriageway
Vehicle Reference 2	Van or Goods 3.5 to	Moving from	N	to	S	Going ahead other	On main carriageway

Casualty Reference: 1 Age: 41 Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Tuesday 23/08/2011 Time 1350 Slight at A4260 OXFORD RD APPROX 170M SE OF J/W BROAD GAP BODICOTE

E: 446572 N: 237977 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	N	to	SE	Going ahead other	On main carriageway
Vehicle Reference 2	Car	Moving from	N	to	SE	Going ahead but held up	On main carriageway
Vehicle Reference 3	Car	Moving from	N	to	SE	Going ahead but held up	On main carriageway

Casualty Reference: 1 Age: 60 Female Passenger Severity: Slight Injured by vehicle: 3

Saturday 03/09/2011 Time 1233 Serious at A4260 OXFORD RD AT PEDESTRIAN REFUGE NEAR J/W THE HAWTHORNS BANBURY (CHECK LOCATION PLOTTED)

E: 445789 N: 239170 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	S	to	N	Going ahead left bend	On main carriageway

Casualty Reference: 1 Age: 79 Male Pedestrian Severity: Serious Injured by vehicle: 1

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Friday 13/01/2012 Time 0933 Slight at A4260 OXFORD RD J/W WEEPING CROSS RD BANBURY

E: 446700 N: 237778 Junction Detail: 3 Control 4
Fine without high winds Road surface Wet/Damp Daylight:street lights present

Vehicle Reference 1	Car	Moving from	N	to	SE	Going ahead other	On main carriageway	
Vehicle Reference 2	Car	Moving from	N	to	W	Waiting to turn right	On main carriageway	
Casualty Reference:	1	Age:	57	Male		Driver/rider	Severity: Slight	Injured by vehicle: 2

Friday 04/05/2012 Time 1325 Slight at A4260 OXFORD RD ATS XRDS J/W FARMFIELD RD & SAINSBURYS STORE BANBURY

E: 445606 N: 239344 Junction Detail: 6 Control 2
Fine without high winds Road surface Dry Daylight:street lights present

Vehicle Reference 1	Car	Moving from	S	to	E	Turning right	On main carriageway	
Casualty Reference:	1	Age:	43	Male		Driver/rider	Severity: Slight	Injured by vehicle: 1
Vehicle Reference 2	Van or Goods 3.5 to	Moving from	N	to	S	Going ahead other	On main carriageway	

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Monday 02/07/2012 Time 0530 Slight at A4260 OXFORD RD ATS XRDS J/W FARMFIELD RD & SAINSBURYS STORE BANBURY

E: 445602 N: 239339 Junction Detail: 6 Control 2
Fine without high winds Road surface Dry Daylight:street lights present
Vehicle Reference 1 Car Moving from N to S Going ahead other On main carriageway
Casualty Reference: 1 Age: 43 Male Driver/rider Severity: Slight Injured by vehicle: 1

Tuesday 16/04/2013 Time 1832 Serious at A4260 OXFORD RD ATS XRDS J/W FARMFIELD RD & SAINSBURYS STORE BANBURY

E: 445613 N: 239338 Junction Detail: 6 Control 2
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from NE to SE Turning left On main carriageway
Casualty Reference: 1 Age: 63 Female Pedestrian Severity: Serious Injured by vehicle: 1

Tuesday 04/06/2013 Time 1300 Slight at A4260 OXFORD RD J/W FARMFIELD RD & SAINSBURYS STORE BANBURY

E: 445597 N: 239342 Junction Detail: 6 Control 2
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Van or Goods 3.5 to Moving from N to S Turning right On main carriageway
Vehicle Reference 2 Motor Cycle over 1 Moving from SE to N Going ahead other On main carriageway
Casualty Reference: 1 Age: Male Driver/rider Severity: Slight Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Sunday 28/07/2013 Time 0945 Slight at A4260 J/W SERVICE RD S OF ESSO FILLING STATION BODICOTE

E: 446204 N: 238428 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from N to NE Turning left On main carriageway
Vehicle Reference 2 Pedal Cycle Moving from N to SE Going ahead other Cycle lane (on main carriageway)
Casualty Reference: 1 Age: 46 Male Driver/rider Severity: Slight Injured by vehicle: 2

Monday 19/08/2013 Time 0944 Serious at A4260 OXFORD ROAD J/W BROAD GAP & CANAL LANE BODICOTE

E: 446457 N: 238115 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Goods over 3.5 ton Moving from NE to S Starting On main carriageway
Vehicle Reference 2 Car Moving from N to SE Going ahead other On main carriageway
Casualty Reference: 1 Age: 78 Male Driver/rider Severity: Serious Injured by vehicle: 2

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months
Selection: **Notes:**
Selected using Manual Selection

Monday 21/10/2013 Time 1502 Slight at A4260 OXFORD RD J/W WEEPING CROSS RD BANBURY

E: 446702 N: 237779 Junction Detail: 3 Control 4
Raining without high winds Road surface Wet/Damp Daylight
Vehicle Reference 1 Car Moving from W to SE Turning right On main carriageway
Vehicle Reference 2 Car Moving from SE to N Going ahead other On main carriageway
Casualty Reference: 1 Age: 34 Male Driver/rider Severity: Slight Injured by vehicle: 2

Monday 04/11/2013 Time 1203 Slight at A4260 OXFORD RD J/W THE HAWTHORNS BANBURY

E: 445770 N: 239197 Junction Detail: 3 Control 4
Fine without high winds Road surface Dry Daylight
Vehicle Reference 1 Car Moving from NE to N Turning right On main carriageway
Casualty Reference: 1 Age: 87 Female Driver/rider Severity: Slight Injured by vehicle: 1
Casualty Reference: 2 Age: 44 Female Passenger Severity: Slight Injured by vehicle: 1
Vehicle Reference 2 Car Moving from N to SE Going ahead other On main carriageway

Accidents between dates **01/01/2009** **and** **31/05/2014** (65) months

Selection:
Selected using Manual Selection

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	4	16	20
2-wheeled motor vehicles	0	1	3	4
Pedal cycles	0	1	2	3
Horses & other	0	0	0	0
Total	0	6	21	27

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	2	16	18
Passenger	0	0	3	3
Motorcycle rider	0	1	4	5
Cyclist	0	1	2	3
Pedestrian	0	2	1	3
Other	0	0	0	0
Total	0	6	26	32

Number of casualties meeting the criteria: **32**

APPENDIX E: MANUAL CLASSIFIED COUNT TRAFFIC DATA

Bodicote - Manual Traffic Survey, Tuesday 23rd September 2014

Junction: (1) A4260 / Cotefield Nurseries

Approach: A4260 (North)

	Ahead to A4260 (South)				Right to Cotefield Nurseries				All Arms
TIME	LIGHT	HGV	BUS	**TOTAL**	LIGHT	HGV	BUS	**TOTAL**	**Total**
0600 - 0615	73	1	1	**75**	0	0	0	**0**	116
0615 - 0630	75	4	1	**80**	0	0	0	**0**	128
0630 - 0645	116	4	2	**122**	0	0	0	**0**	177
0645 - 0700	150	3	4	**157**	1	0	0	**1**	244
Hourly Total	**414**	**12**	**8**	**434**	**1**	**0**	**0**	**1**	
0700 - 0715	174	5	1	**180**	2	0	0	**2**	296
0715 - 0730	184	2	1	**187**	1	1	0	**2**	321
0730 - 0745	197	4	2	**203**	2	0	0	**2**	365
0745 - 0800	226	5	2	**233**	0	0	0	**0**	409
Hourly Total	**781**	**16**	**6**	**803**	**5**	**1**	**0**	**6**	
0800 - 0815	185	1	5	**191**	2	0	0	**2**	405
0815 - 0830	198	3	5	**206**	1	0	0	**1**	412
0830 - 0845	186	5	4	**195**	0	0	0	**0**	436
0845 - 0900	201	6	6	**213**	1	0	0	**1**	439
Hourly Total	**770**	**15**	**20**	**805**	**4**	**0**	**0**	**4**	
0900 - 0915	175	3	2	**180**	0	0	0	**0**	353
0915 - 0930	148	4	1	**153**	0	0	0	**0**	315
0930 - 0945	147	5	4	**156**	1	0	0	**1**	352
0945 - 1000	137	6	2	**145**	0	0	0	**0**	315
Hourly Total	**607**	**18**	**9**	**634**	**1**	**0**	**0**	**1**	
Session Total	**2572**	**61**	**43**	**2676**	**11**	**1**	**0**	**12**	
1500 - 1515	203	3	2	**208**	5	0	0	**5**	395
1515 - 1530	220	6	3	**229**	1	0	0	**1**	423
1530 - 1545	199	4	2	**205**	4	0	0	**4**	420
1545 - 1600	222	4	5	**231**	6	0	0	**6**	427
Hourly Total	**844**	**17**	**12**	**873**	**16**	**0**	**0**	**16**	
1600 - 1615	204	7	0	**211**	2	0	0	**2**	413
1615 - 1630	197	7	2	**206**	2	0	0	**2**	399
1630 - 1645	185	9	3	**197**	5	0	0	**5**	438
1645 - 1700	184	5	3	**192**	8	0	0	**8**	446
Hourly Total	**770**	**28**	**8**	**806**	**17**	**0**	**0**	**17**	
1700 - 1715	229	1	2	**232**	2	0	0	**2**	450
1715 - 1730	197	5	2	**204**	0	0	0	**0**	439
1730 - 1745	205	6	3	**214**	1	0	0	**1**	454
1745 - 1800	223	5	3	**231**	1	0	0	**1**	466
Hourly Total	**854**	**17**	**10**	**881**	**4**	**0**	**0**	**4**	
1800 - 1815	180	1	3	**184**	1	0	0	**1**	398
1815 - 1830	179	4	1	**184**	2	0	0	**2**	382
1830 - 1845	162	3	2	**167**	1	0	0	**1**	355
1845 - 1900	132	2	1	**135**	0	0	0	**0**	341
Hourly Total	**653**	**10**	**7**	**670**	**4**	**0**	**0**	**4**	
Session Total	**3121**	**72**	**37**	**3230**	**41**	**0**	**0**	**41**	

0600-0700	665	
0615-0715	845	
0630-0730	1038	
0645-0745	1226	
0700-0800	1391	
0715-0815	1500	
0730-0830	1591	
0745-0845	1662	
0800-0900	1692	
0815-0915	1640	
0830-0930	1543	
0845-0945	1459	
0900-1000	1335	
1500-1600	1665	
1515-1615	1683	
1530-1630	1659	
1545-1645	1677	
1600-1700	1696	
1615-1715	1733	
1630-1730	1773	
1645-1745	1789	
1700-1800	1809	
1715-1815	1757	
1730-1830	1700	
1745-1845	1601	
1800-1900	1476	

Bodicote - Manual Traffic Survey, Tuesday 23rd September 2014

Junction: (2) A4260 / Weeping Cross

Approach: A4260 (North)

	Ahead to A4260 (South)				Right to Weeping Cross				All Arms
TIME	LIGHT	HGV	BUS	TOTAL	LIGHT	HGV	BUS	TOTAL	Total
0600 - 0615	77	2	2	**81**	6	0	0	**6**	132
0615 - 0630	72	4	1	**77**	5	0	0	**5**	141
0630 - 0645	116	4	2	**122**	8	0	0	**8**	201
0645 - 0700	144	2	3	**149**	11	0	0	**11**	257
Hourly Total	**409**	**12**	**8**	**429**	**30**	**0**	**0**	**30**	
0700 - 0715	168	6	0	**174**	9	0	0	**9**	318
0715 - 0730	172	2	2	**176**	7	0	0	**7**	323
0730 - 0745	190	4	1	**195**	11	0	0	**11**	390
0745 - 0800	226	5	3	**234**	14	0	0	**14**	440
Hourly Total	**756**	**17**	**6**	**779**	**41**	**0**	**0**	**41**	
0800 - 0815	185	1	4	**190**	10	0	0	**10**	431
0815 - 0830	191	4	5	**200**	7	0	0	**7**	432
0830 - 0845	186	5	5	**196**	16	0	0	**16**	458
0845 - 0900	190	6	6	**202**	9	0	0	**9**	451
Hourly Total	**752**	**16**	**20**	**788**	**42**	**0**	**0**	**42**	
0900 - 0915	177	3	2	**182**	11	0	0	**11**	362
0915 - 0930	150	4	2	**156**	4	0	0	**4**	337
0930 - 0945	142	4	3	**149**	6	0	0	**6**	342
0945 - 1000	134	7	2	**143**	7	0	0	**7**	319
Hourly Total	**603**	**18**	**9**	**630**	**28**	**0**	**0**	**28**	
Session Total	**2520**	**63**	**43**	**2626**	**141**	**0**	**0**	**141**	
1500 - 1515	201	2	1	**204**	8	0	0	**8**	402
1515 - 1530	214	4	4	**222**	6	0	0	**6**	430
1530 - 1545	195	5	3	**203**	11	0	0	**11**	444
1545 - 1600	211	4	4	**219**	5	0	0	**5**	438
Hourly Total	**821**	**15**	**12**	**848**	**30**	**0**	**0**	**30**	
1600 - 1615	199	7	1	**207**	12	0	0	**12**	429
1615 - 1630	185	6	2	**193**	8	0	0	**8**	411
1630 - 1645	177	11	2	**190**	7	0	0	**7**	449
1645 - 1700	181	5	2	**188**	7	0	0	**7**	452
Hourly Total	**742**	**29**	**7**	**778**	**34**	**0**	**0**	**34**	
1700 - 1715	209	2	2	**213**	3	0	0	**3**	452
1715 - 1730	193	7	3	**203**	9	0	0	**9**	458
1730 - 1745	200	5	3	**208**	14	0	0	**14**	468
1745 - 1800	213	6	3	**222**	10	0	0	**10**	472
Hourly Total	**815**	**20**	**11**	**846**	**36**	**0**	**0**	**36**	
1800 - 1815	166	1	2	**169**	6	0	0	**6**	411
1815 - 1830	167	3	2	**172**	4	0	0	**4**	385
1830 - 1845	159	4	2	**165**	7	0	0	**7**	369
1845 - 1900	133	2	1	**136**	2	0	0	**2**	342
Hourly Total	**625**	**10**	**7**	**642**	**19**	**0**	**0**	**19**	
Session Total	**3003**	**74**	**37**	**3114**	**119**	**0**	**0**	**119**	

0600-0700	731
0615-0715	917
0630-0730	1099
0645-0745	1288
0700-0800	1471
0715-0815	1584
0730-0830	1693
0745-0845	1761
0800-0900	1772
0815-0915	1703
0830-0930	1608
0845-0945	1492
0900-1000	1360
1500-1600	1714
1515-1615	1741
1530-1630	1722
1545-1645	1727
1600-1700	1741
1615-1715	1764
1630-1730	1811
1645-1745	1830
1700-1800	1850
1715-1815	1809
1730-1830	1736
1745-1845	1637
1800-1900	1507

Bodicote - Manual Traffic Survey, Tuesday 23rd September 2014

Junction: (3) A4260 / Farmfield Road

Approach: A4260 (North)

	Left to Farmfield Road (East)				Ahead to A4260 (South)				Right to Farmfield Road (West)				All Arms
TIME	LIGHT	HGV	BUS	**TOTAL**	LIGHT	HGV	BUS	**TOTAL**	LIGHT	HGV	BUS	**TOTAL**	**Total**
0600 - 0615	12	0	0	**12**	68	3	2	**73**	0	0	0	**0**	161
0615 - 0630	14	0	0	**14**	74	3	1	**78**	1	0	0	**1**	187
0630 - 0645	22	1	0	**23**	97	6	3	**106**	0	0	0	**0**	233
0645 - 0700	20	0	0	**20**	114	1	2	**117**	1	0	0	**1**	273
Hourly Total	**68**	**1**	**0**	**69**	**353**	**13**	**8**	**374**	**2**	**0**	**0**	**2**	
0700 - 0715	21	1	0	**22**	136	5	4	**145**	1	0	0	**1**	335
0715 - 0730	26	0	0	**26**	142	3	2	**147**	0	0	0	**0**	386
0730 - 0745	30	1	0	**31**	157	4	2	**163**	0	0	0	**0**	451
0745 - 0800	39	1	0	**40**	195	6	3	**204**	4	0	0	**4**	535
Hourly Total	**116**	**3**	**0**	**119**	**630**	**18**	**11**	**659**	**5**	**0**	**0**	**5**	
0800 - 0815	39	0	0	**39**	139	4	2	**145**	1	0	0	**1**	489
0815 - 0830	36	0	0	**36**	154	4	2	**160**	6	0	0	**6**	539
0830 - 0845	31	0	0	**31**	156	9	3	**168**	4	0	0	**4**	552
0845 - 0900	30	1	0	**31**	142	6	2	**150**	3	0	0	**3**	528
Hourly Total	**136**	**1**	**0**	**137**	**591**	**23**	**9**	**623**	**14**	**0**	**0**	**14**	
0900 - 0915	27	0	0	**27**	137	4	1	**142**	4	0	0	**4**	471
0915 - 0930	33	1	0	**34**	116	5	3	**124**	1	0	0	**1**	447
0930 - 0945	26	0	0	**26**	109	4	2	**115**	1	0	0	**1**	422
0945 - 1000	24	0	0	**24**	112	6	2	**120**	2	0	0	**2**	406
Hourly Total	**110**	**1**	**0**	**111**	**474**	**19**	**8**	**501**	**8**	**0**	**0**	**8**	
Session Total	**430**	**6**	**0**	**436**	**2048**	**73**	**36**	**2157**	**29**	**0**	**0**	**29**	
1500 - 1515	29	0	0	**29**	166	4	2	**172**	1	0	0	**1**	469
1515 - 1530	27	2	0	**29**	169	5	2	**176**	2	0	0	**2**	496
1530 - 1545	33	0	0	**33**	174	1	1	**176**	6	0	0	**6**	520
1545 - 1600	35	0	0	**35**	166	6	4	**176**	11	0	0	**11**	500
Hourly Total	**124**	**2**	**0**	**126**	**675**	**16**	**9**	**700**	**20**	**0**	**0**	**20**	
1600 - 1615	37	1	0	**38**	167	2	1	**170**	15	0	0	**15**	522
1615 - 1630	33	1	0	**34**	159	7	3	**169**	9	0	0	**9**	520
1630 - 1645	39	0	0	**39**	157	9	1	**167**	5	0	0	**5**	511
1645 - 1700	34	0	0	**34**	159	5	2	**166**	9	0	0	**9**	534
Hourly Total	**143**	**2**	**0**	**145**	**642**	**23**	**7**	**672**	**38**	**0**	**0**	**38**	
1700 - 1715	27	0	0	**27**	186	2	2	**190**	2	0	0	**2**	531
1715 - 1730	36	0	0	**36**	174	10	4	**188**	6	0	0	**6**	547
1730 - 1745	21	0	0	**21**	192	5	2	**199**	17	0	0	**17**	559
1745 - 1800	22	1	0	**23**	179	1	3	**183**	22	0	0	**22**	526
Hourly Total	**106**	**1**	**0**	**107**	**731**	**18**	**11**	**760**	**47**	**0**	**0**	**47**	
1800 - 1815	29	0	0	**29**	146	2	5	**153**	15	0	0	**15**	477
1815 - 1830	21	0	0	**21**	150	5	0	**155**	6	0	0	**6**	439
1830 - 1845	15	0	0	**15**	131	2	1	**134**	9	0	0	**9**	391
1845 - 1900	20	0	0	**20**	112	2	2	**116**	3	0	0	**3**	364
Hourly Total	**85**	**0**	**0**	**85**	**539**	**11**	**8**	**558**	**33**	**0**	**0**	**33**	
Session Total	**458**	**5**	**0**	**463**	**2587**	**68**	**35**	**2690**	**138**	**0**	**0**	**138**	

All Three Junctions (Network)				
0600-0700	2250			
0615-0715	2790			
0630-0730	3364			
0645-0745	3959			
0700-0800	4569			
0715-0815	4945			
0730-0830	5298			
0745-0845	5538			
0800-0900	5572			
0815-0915	5433			
0830-0930	5149			
0845-0945	4819			
0900-1000	4441			
1500-1600	5364			
1515-1615	5462			
1530-1630	5443			
1545-1645	5457			
1600-1700	5524			
1615-1715	5593			
1630-1730	5707			
1645-1745	5790			
1700-1800	5822			
1715-1815	5675			
1730-1830	5437			
1745-1845	5071			
1800-1900	4654			

0600-0700	854		
0615-0715	1028		
0630-0730	1227		
0645-0745	1445		
0700-0800	1707		
0715-0815	1861		
0730-0830	2014		
0745-0845	2115		
0800-0900	2108		
0815-0915	2090		
0830-0930	1998		
0845-0945	1868		
0900-1000	1746		
1500-1600	1985		
1515-1615	2038		
1530-1630	2062		
1545-1645	2053		
1600-1700	2087		
1615-1715	2096		
1630-1730	2123		
1645-1745	2171		
1700-1800	2163		
1715-1815	2109		
1730-1830	2001		
1745-1845	1833		
1800-1900	1671		

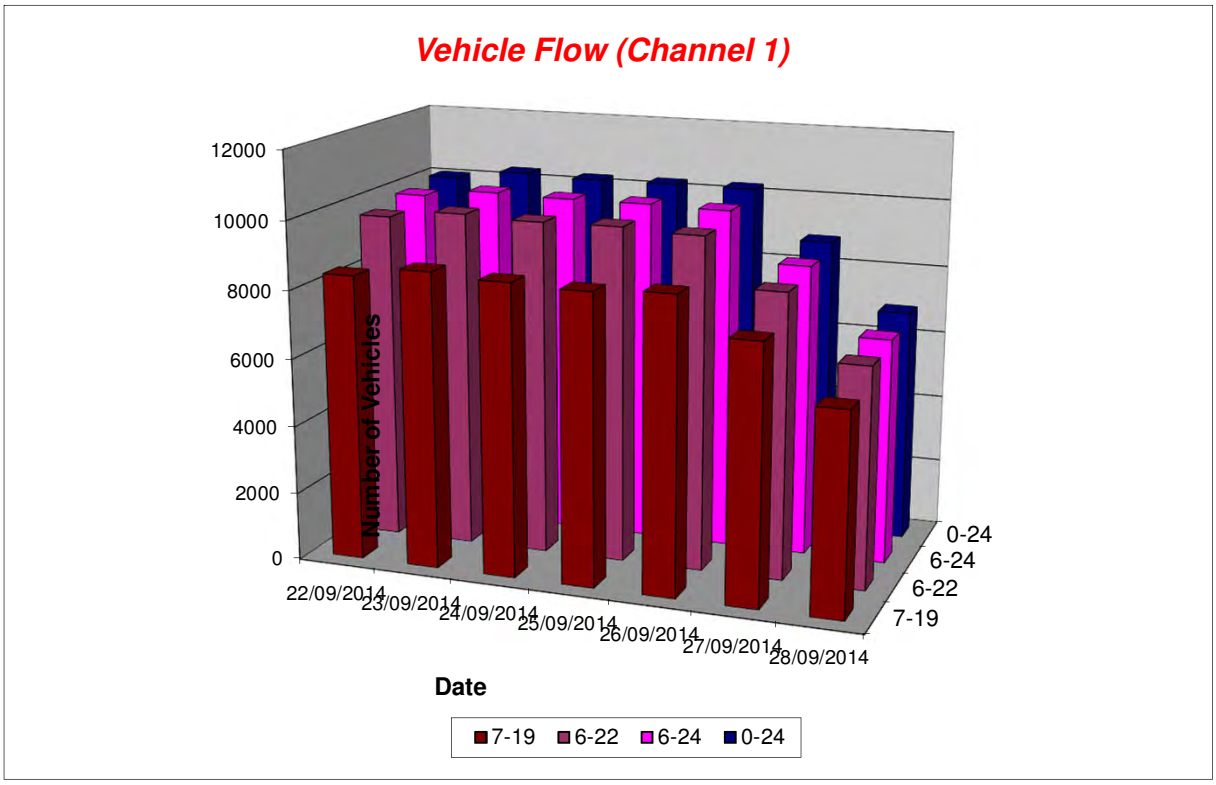
APPENDIX F: AUTOMATIC TRAFFIC COUNT TRAFFIC DATA

Bodicote ATC, A4260

Channel 1 - Northbound | **Vehicle Flow** | **Week 1**

Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday	5 Day Ave	7 Day Ave
1	24	29	29	27	42	69	71	30	42
2	15	26	17	21	31	38	38	22	27
3	9	12	18	22	21	25	28	16	19
4	20	15	28	23	25	22	27	22	23
5	29	39	26	26	30	40	28	30	31
6	65	80	59	59	73	32	31	67	57
7	196	227	201	194	196	103	43	203	166
8	556	571	577	603	584	214	124	578	461
9	925	872	956	912	824	507	161	898	737
10	623	669	687	726	668	643	413	675	633
11	632	635	677	619	604	801	687	633	665
12	613	660	583	641	687	834	685	637	672
13	618	675	607	592	666	773	775	632	672
14	624	656	632	633	690	751	592	647	654
15	663	657	709	618	691	672	628	668	663
16	724	767	719	751	767	635	563	746	704
17	835	837	828	817	809	628	508	825	752
18	910	909	896	882	931	547	434	906	787
19	678	788	705	713	709	540	343	719	639
20	509	471	471	549	471	282	260	494	430
21	315	301	344	351	275	208	167	317	280
22	237	196	223	243	182	216	108	216	201
23	142	149	176	161	152	145	98	156	146
24	83	68	73	66	125	90	59	83	81

7-19	8401	8696	8576	8507	8630	7545	5913	8562	8038
6-22	9658	9891	9815	9844	9754	8354	6491	9792	9115
6-24	9883	10108	10064	10071	10031	8589	6648	10031	9342
0-24	10045	10309	10241	10249	10253	8815	6871	10219	9540



Bodicote ATC, A4260

Channel 1 - Northbound **Average Speed** **Week 1**

Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
1	39.0	42.0	47.7	42.9	44.4	44.2	44.3
2	53.5	50.9	49.9	46.1	43.3	46.1	45.4
3	48.3	49.9	51.2	44.8	44.8	48.4	46.8
4	49.8	47.8	52.4	46.2	46.5	51.9	52.7
5	48.6	45.7	45.4	49.1	44.7	45.5	46.9
6	43.0	44.1	44.9	45.2	45.1	45.2	44.2
7	42.3	42.4	41.6	42.1	43.1	43.4	45.7
8	38.1	38.2	38.8	38.8	38.1	40.8	44.5
9	38.0	37.0	39.3	38.2	37.7	39.0	42.0
10	37.5	37.9	38.4	37.4	37.3	38.6	38.6
11	37.0	36.9	38.7	37.7	37.2	37.9	38.2
12	37.4	37.9	37.5	37.5	37.5	37.1	37.7
13	36.4	38.2	39.2	38.3	37.9	37.5	35.9
14	37.3	37.3	38.3	37.6	37.5	38.4	39.5
15	37.2	37.8	38.8	36.9	37.6	38.4	39.3
16	37.4	37.4	38.5	39.3	37.6	37.0	37.5
17	37.1	39.0	38.1	38.8	37.1	37.0	38.4
18	35.9	36.2	36.8	36.7	36.5	37.2	37.7
19	36.6	36.7	36.3	36.8	36.8	37.7	39.5
20	35.6	36.8	36.7	36.0	37.8	38.5	39.8
21	35.3	36.5	34.3	36.0	38.6	39.5	40.3
22	39.1	38.0	37.0	37.6	41.5	41.7	40.9
23	37.4	41.3	39.7	40.6	41.3	43.0	42.9
24	42.7	42.8	42.8	43.3	41.5	42.8	43.7
10-12	37.2	37.4	38.1	37.6	37.4	37.5	38.0
14-16	37.3	37.6	38.6	38.2	37.6	37.7	38.5
0-24	37.3	37.8	38.3	38.0	37.9	38.4	38.9

7 Day Ave	38.1

Channel 1 - Northbound **85th Percentile**

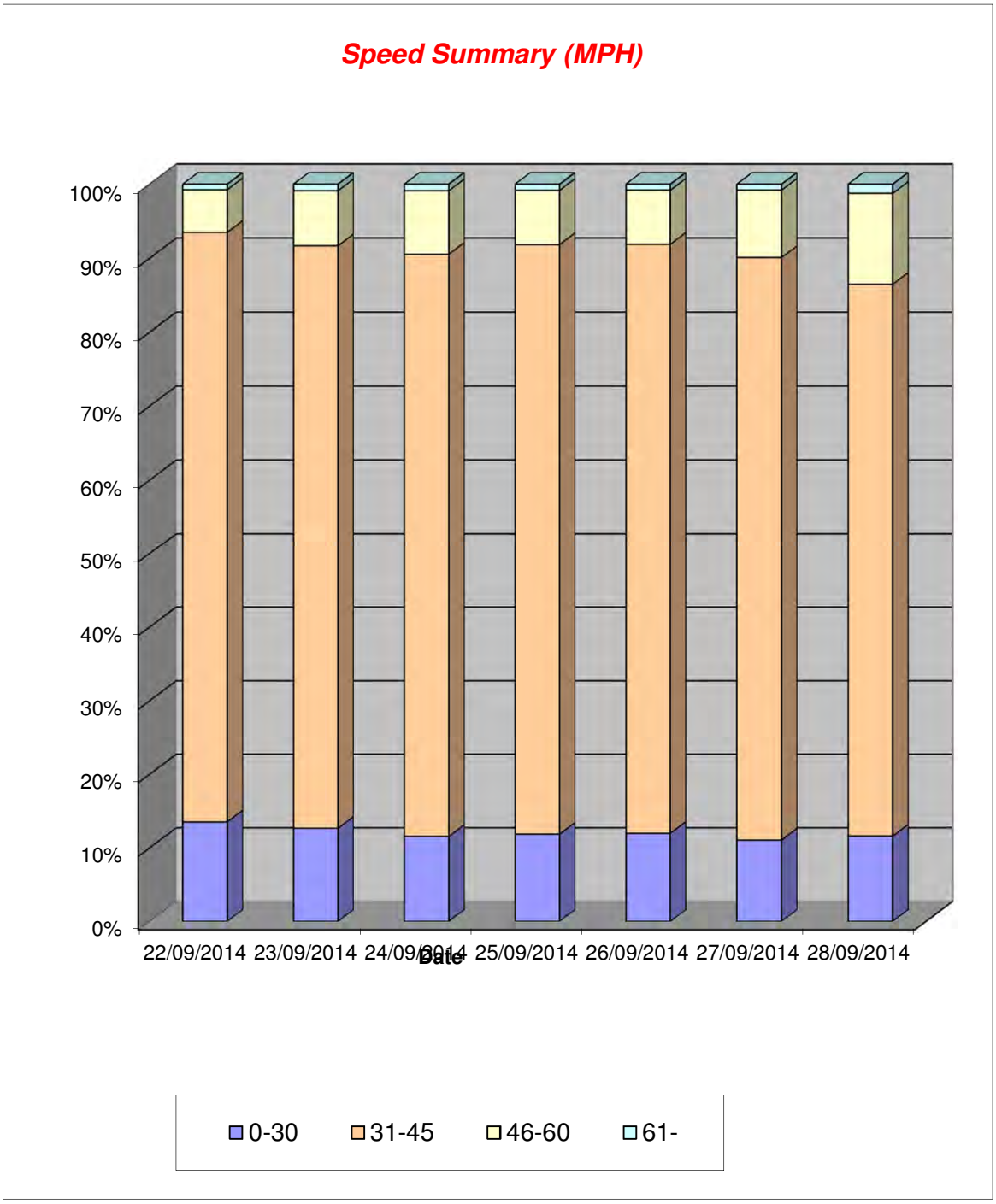
Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
1	43.7	48.6	59.0	48.7	58.9	53.7	53.2
2	66.0	58.3	65.9	58.9	53.7	58.9	53.5
3	58.6	58.3	65.8	53.8	53.5	58.5	65.8
4	58.3	58.8	65.7	65.5	58.4	65.6	65.8
5	58.3	53.8	58.2	58.5	53.1	53.8	58.0
6	53.8	53.6	53.6	53.9	53.8	53.4	53.5
7	53.0	49.0	48.4	53.4	53.5	53.5	53.2
8	43.8	43.9	43.4	43.7	43.8	48.5	53.9
9	43.8	43.2	43.7	43.5	43.6	43.2	53.6
10	43.7	43.7	43.3	43.5	43.8	43.3	48.8
11	43.0	44.0	43.6	43.5	43.0	43.1	43.9
12	43.4	43.2	43.2	43.4	43.2	43.6	43.3
13	43.9	43.5	48.2	43.4	43.1	43.2	43.5
14	43.8	43.1	43.6	43.3	43.1	43.9	48.1
15	43.4	44.0	43.1	43.1	43.3	43.1	43.6
16	44.0	43.7	43.5	43.2	43.1	43.4	43.4
17	43.9	43.0	43.9	44.0	43.0	43.3	44.0
18	43.1	43.6	43.3	43.1	43.5	43.9	43.1
19	43.9	43.1	43.8	43.4	43.7	43.8	48.9
20	43.4	43.1	43.4	43.4	43.5	43.3	48.6
21	43.5	48.8	43.3	43.5	48.8	48.7	48.3
22	48.8	43.3	48.9	48.2	48.1	48.3	48.1
23	48.1	53.0	43.6	48.5	48.2	53.1	48.5
24	53.6	48.3	48.6	48.3	48.7	48.0	53.2
10-12	43.5	43.4	43.4	43.6	43.5	43.3	44.0
14-16	43.3	43.3	43.1	43.5	43.4	43.8	43.1
0-24	43.6	43.9	43.6	43.2	43.1	43.3	43.0

7 Day Ave	43.4

Bodicote ATC, A4260

Channel 1 - Northbound **Speed Summary** **Week 1**

Speed (MPH)	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
0-30	1359	1305	1183	1216	1229	976	798
31-45	8033	8147	8090	8198	8193	6965	5145
46-60	579	767	878	751	749	804	844
61-	74	90	90	84	82	70	84
TOTAL	**10045**	**10309**	**10241**	**10249**	**10253**	**8815**	**6871**



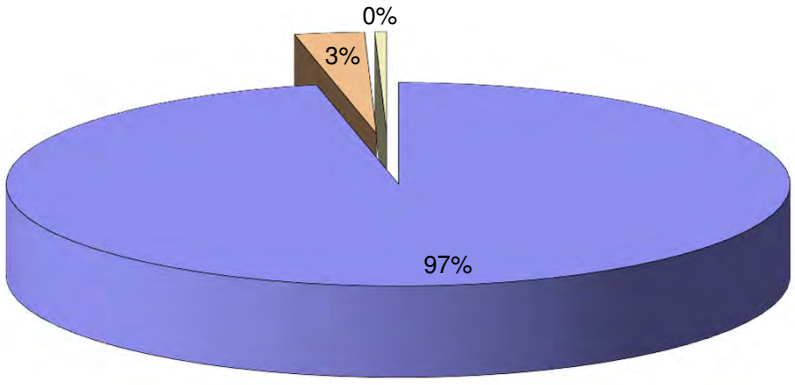
Bodicote ATC, A4260

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

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
22/09/2014				
7-19	8091	282	28	8401
6-22	9310	312	36	9658
6-24	9529	314	40	9883
0-24	9665	322	58	10045
23/09/2014				
7-19	8384	279	33	8696
6-22	9546	306	39	9891
6-24	9752	312	44	10108
0-24	9930	326	53	10309
24/09/2014				
7-19	8241	290	45	8576
6-22	9451	312	52	9815
6-24	9684	319	61	10064
0-24	9844	325	72	10241
25/09/2014				
7-19	8171	294	42	8507
6-22	9475	322	47	9844
6-24	9695	327	49	10071
0-24	9857	335	57	10249
26/09/2014				
7-19	8306	288	36	8630
6-22	9399	311	44	9754
6-24	9665	316	50	10031
0-24	9867	326	60	10253
27/09/2014				
7-19	7386	152	7	7545
6-22	8181	165	8	8354
6-24	8415	166	8	8589
0-24	8628	175	12	8815
28/09/2014				
7-19	5818	87	8	5913
6-22	6381	100	10	6491
6-24	6534	102	12	6648
0-24	6749	109	13	6871

Average				
7-19	7771	239	28	8038
6-22	8820	261	34	9115
6-24	9039	265	38	9342
0-24	9220	274	46	9540

Total Vehicle Class Distribution

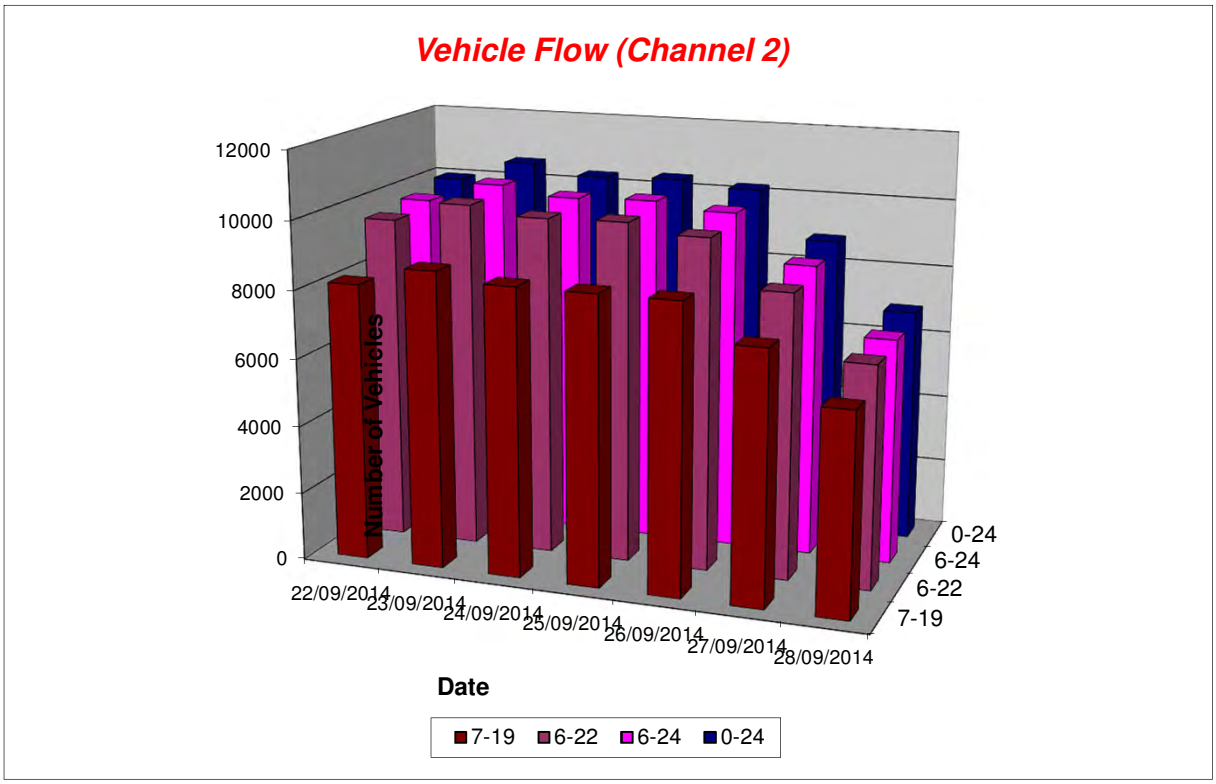


Bodicote ATC, A4260

Channel 2 - Southbound **Vehicle Flow** **Week 1**

Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday	5 Day Ave	7 Day Ave
1	34	55	39	29	29	78	85	37	50
2	13	23	25	13	25	35	33	20	24
3	14	12	6	17	20	19	26	14	16
4	15	9	7	3	15	17	29	10	14
5	44	35	38	46	39	31	23	40	37
6	140	136	120	125	133	67	45	131	109
7	436	445	454	421	356	102	103	422	331
8	734	807	806	773	750	244	127	774	606
9	705	819	778	812	735	370	193	770	630
10	593	620	603	580	581	511	456	595	563
11	515	547	548	497	537	601	500	529	535
12	586	611	540	605	609	706	565	590	603
13	586	626	668	642	630	736	685	630	653
14	638	686	616	682	686	798	753	662	694
15	658	741	653	618	746	730	670	683	688
16	800	877	840	824	843	768	709	837	809
17	801	809	816	813	840	785	559	816	775
18	901	902	887	910	867	657	365	893	784
19	632	670	702	696	626	462	321	665	587
20	483	449	497	451	385	278	242	453	398
21	279	309	272	353	291	393	139	301	291
22	210	235	238	291	220	196	140	239	219
23	134	113	125	123	140	136	65	127	119
24	37	72	49	67	123	120	52	70	74

7-19	8149	8715	8457	8452	8450	7368	5903	8445	7928
6-22	9557	10153	9918	9968	9702	8337	6527	9860	9166
6-24	9728	10338	10092	10158	9965	8593	6644	10056	9360
0-24	9988	10608	10327	10391	10226	8840	6885	10308	9609



Bodicote ATC, A4260

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

Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
1	45.9	50.5	49.2	46.6	47.6	49.9	48.0
2	54.0	46.0	47.8	49.3	45.1	55.8	48.3
3	49.8	54.2	54.2	46.2	51.0	49.8	57.3
4	53.8	51.3	48.7	25.3	50.8	54.2	55.0
5	49.8	48.8	50.0	48.8	51.3	50.6	53.3
6	51.0	50.5	51.6	50.8	50.2	51.2	50.8
7	44.0	43.3	42.6	41.6	43.6	47.8	49.7
8	41.9	41.0	41.5	42.0	40.7	46.2	46.3
9	40.4	40.4	40.5	40.5	39.7	41.6	41.9
10	38.2	39.2	38.7	39.1	39.3	39.6	34.4
11	39.1	40.4	40.2	39.8	39.7	39.8	39.5
12	39.1	39.8	41.3	39.6	40.1	40.0	40.1
13	38.8	38.7	39.7	39.9	38.7	39.4	40.5
14	38.3	39.2	40.9	39.6	39.4	39.6	41.5
15	39.2	39.8	40.9	40.1	39.7	38.4	40.3
16	38.7	37.3	39.1	40.6	37.4	39.4	39.6
17	38.8	39.0	39.2	38.8	38.3	38.6	40.9
18	36.5	35.5	37.6	36.8	38.4	39.3	43.1
19	38.8	37.8	36.1	38.1	40.5	42.2	42.5
20	38.2	40.0	37.6	40.5	41.1	43.4	45.0
21	41.8	41.7	40.2	41.9	42.4	42.6	44.9
22	44.1	44.2	44.0	43.7	45.3	45.5	46.2
23	44.8	46.2	44.6	46.1	44.6	46.4	47.6
24	50.9	45.3	48.1	46.1	47.1	47.4	47.7
10-12	39.1	40.1	40.8	39.7	39.9	39.9	39.8
14-16	38.9	38.4	39.9	40.4	38.5	38.9	39.9
0-24	39.7	39.7	40.1	40.2	40.1	40.8	41.4
						7 Day Ave	40.3

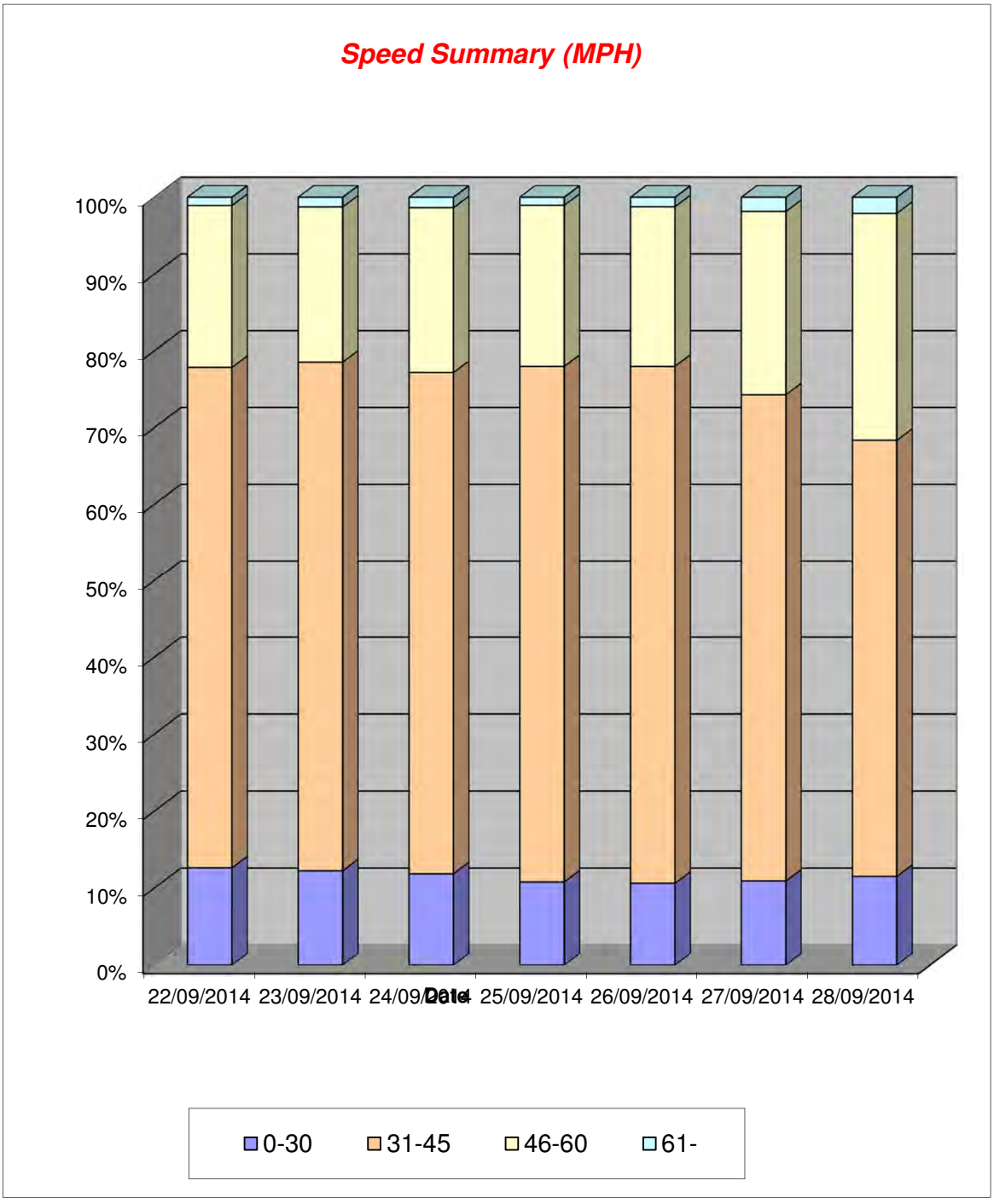
Channel 2 - Southbound **85th Percentile**

Hr Ending	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
1	53.3	65.8	53.7	48.6	58.2	66.1	53.8
2	66.0	53.3	53.5	58.3	53.2	66.3	53.3
3	53.9	65.7	76.1	53.1	65.8	58.5	66.2
4	58.5	66.0	53.2	38.2	58.8	65.7	65.9
5	58.4	58.2	66.0	58.1	58.1	66.4	66.3
6	66.3	66.1	66.2	65.9	66.0	65.9	66.2
7	53.8	53.4	53.8	49.0	53.8	65.8	58.4
8	48.7	48.9	48.4	48.5	48.8	58.8	58.1
9	48.7	48.5	48.9	48.5	48.3	53.2	53.4
10	49.0	48.2	48.7	49.0	49.0	48.4	48.3
11	48.3	48.7	48.1	48.2	48.8	48.2	48.7
12	48.5	48.7	48.6	48.4	48.7	48.9	48.3
13	48.4	48.6	48.7	48.4	48.9	48.6	48.8
14	48.7	48.8	48.0	48.3	48.9	48.4	48.2
15	48.2	48.2	48.4	48.5	48.4	48.4	48.6
16	43.4	48.8	48.4	48.1	48.1	48.9	49.0
17	48.5	48.2	48.3	48.5	44.0	48.6	48.2
18	43.8	44.0	44.0	44.0	48.8	48.9	48.9
19	48.5	48.1	48.8	48.6	48.7	48.5	48.1
20	48.4	48.1	48.7	48.9	48.4	48.3	54.0
21	48.5	48.8	48.4	48.7	48.0	48.9	48.6
22	53.2	53.4	53.7	53.4	53.2	53.3	58.6
23	53.6	53.5	53.3	53.7	53.2	53.3	53.9
24	58.5	53.1	65.9	53.1	58.5	58.2	66.1
10-12	48.7	48.1	48.4	48.8	48.4	48.3	48.2
14-16	48.9	48.2	48.9	48.7	48.1	48.0	48.9
0-24	48.4	48.0	48.1	48.5	48.3	48.7	48.1
						7 Day Ave	48.3

Bodicote ATC, A4260

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

Speed (MPH)	22/09/2014 Monday	23/09/2014 Tuesday	24/09/2014 Wednesday	25/09/2014 Thursday	26/09/2014 Friday	27/09/2014 Saturday	28/09/2014 Sunday
0-30	1262	1300	1225	1122	1086	966	792
31-45	6513	7030	6745	6980	6889	5601	3914
46-60	2106	2145	2217	2181	2127	2110	2036
61-	107	133	140	108	124	163	143
TOTAL	**9988**	**10608**	**10327**	**10391**	**10226**	**8840**	**6885**



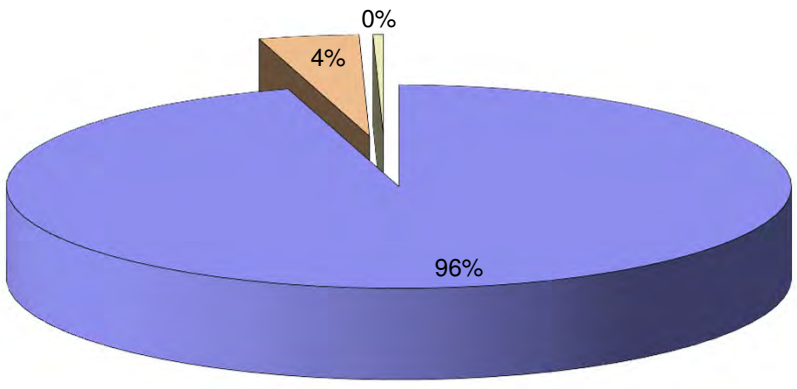
Bodicote ATC, A4260

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

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
22/09/2014				
7-19	7712	390	47	8149
6-22	9077	426	54	9557
6-24	9241	432	55	9728
0-24	9478	453	57	9988
23/09/2014				
7-19	8295	387	33	8715
6-22	9673	436	44	10153
6-24	9847	445	46	10338
0-24	10082	467	59	10608
24/09/2014				
7-19	8018	400	39	8457
6-22	9423	446	49	9918
6-24	9593	450	49	10092
0-24	9802	470	55	10327
25/09/2014				
7-19	8047	381	24	8452
6-22	9516	423	29	9968
6-24	9698	429	31	10158
0-24	9906	444	41	10391
26/09/2014				
7-19	8016	403	31	8450
6-22	9223	444	35	9702
6-24	9478	452	35	9965
0-24	9720	468	38	10226
27/09/2014				
7-19	7125	233	10	7368
6-22	8070	256	11	8337
6-24	8322	260	11	8593
0-24	8543	283	14	8840
28/09/2014				
7-19	5728	159	16	5903
6-22	6330	175	22	6527
6-24	6444	178	22	6644
0-24	6673	188	24	6885

Average				
7-19	7563	336	29	7928
6-22	8759	372	35	9166
6-24	8946	378	36	9360
0-24	9172	396	41	9609

Total Vehicle Class Distribution



APPENDIX G: 2010 TRAFFIC DATA

BODICOTE
SITE 1 - OXFORD ROAD / GARDEN CENTRE
TUESDAY 2ND MARCH

PLEASE NOTE THAT SOME OF THE MOVEMENTS ARE LABELLED BY LETTER ONLY
THIS CORRESPONDES WITH YOUR SUPPLIED PLANS

FROM A4260 OXFORD ROAD SOUTH
LEFT TURN TO 'C'

TIME	PEDAL CYCLES	MOTOR CYCLES	LIGHT CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	1	0	0	0	0	0	**1**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	2	0	0	0	0	0	**2**
0830-0845	0	0	1	0	0	0	0	0	**1**
0845-0900	0	0	1	0	0	0	3	0	**4**
0900-0915	0	0	2	0	0	0	0	0	**2**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**7**	**0**	**0**	**0**	**3**	**0**	**10**
1630-1645	0	0	0	0	0	0	0	0	**0**
1645-1700	0	0	0	0	0	0	0	0	**0**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

FROM A4260 OXFORD ROAD SOUTH
LEFT TURN TO 'A'

TIME	PEDAL CYCLES	MOTOR CYCLES	LIGHT CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	1	0	0	0	0	0	**1**
0915-0930	0	0	1	0	0	0	0	0	**1**
TOTAL	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**
1630-1645	0	0	0	0	0	0	0	0	**0**
1645-1700	0	0	1	0	0	0	0	0	**1**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

FROM A4260 OXFORD ROAD SOUTH
AHEAD TO A4260 OXFORD ROAD NORTH

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	2	118	22	4	0	2	0	**148**
0745-0800	1	0	157	29	5	2	4	0	**197**
0800-0815	0	0	203	27	3	0	2	0	**235**
0815-0830	4	1	206	36	4	2	8	0	**257**
0830-0845	0	1	199	15	9	1	2	0	**227**
0845-0900	0	0	222	13	3	0	1	0	**239**
0900-0915	0	0	156	12	4	3	4	0	**179**
0915-0930	0	0	142	12	4	0	4	0	**162**
TOTAL	**5**	**4**	**1403**	**166**	**36**	**8**	**27**	**0**	**1644**
1630-1645	0	3	162	27	4	1	1	0	**198**
1645-1700	0	2	200	24	3	1	3	0	**233**
1700-1715	0	0	192	29	0	0	3	0	**224**
1715-1730	0	1	207	20	1	0	1	0	**230**
1730-1745	0	1	233	28	1	1	1	0	**265**
1745-1800	1	1	188	25	1	0	2	0	**217**
1800-1815	2	1	173	18	0	1	0	0	**193**
1815-1830	0	1	175	11	0	3	2	0	**192**
TOTAL	**3**	**10**	**1530**	**182**	**10**	**7**	**13**	**0**	**1752**

FROM A4260 OXFORD ROAD NORTH
AHEAD TO A4260 OXFORD ROAD SOUTH

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	1	194	27	3	2	3	0	**230**
0745-0800	0	0	197	38	4	2	0	0	**241**
0800-0815	1	2	203	20	4	0	1	0	**230**
0815-0830	0	0	198	30	3	0	2	0	**233**
0830-0845	3	0	164	28	7	0	2	0	**201**
0845-0900	3	1	161	20	7	2	5	0	**196**
0900-0915	0	0	151	24	6	3	1	0	**185**
0915-0930	1	1	102	19	8	2	1	0	**133**
TOTAL	**8**	**5**	**1370**	**206**	**42**	**11**	**15**	**0**	**1649**
1630-1645	3	0	184	17	2	1	4	0	**208**
1645-1700	0	1	175	26	4	3	2	0	**211**
1700-1715	0	0	198	15	1	2	2	0	**218**
1715-1730	0	1	209	15	1	1	4	0	**231**
1730-1745	0	0	199	10	1	0	1	0	**211**
1745-1800	0	1	146	9	1	1	0	0	**158**
1800-1815	0	0	199	12	2	0	3	0	**216**
1815-1830	0	1	154	6	1	2	2	0	**166**
TOTAL	**3**	**4**	**1464**	**110**	**13**	**10**	**18**	**0**	**1619**

FROM A4260 OXFORD ROAD NORTH
RIGHT TURN TO 'C'

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	1	0	**1**
0845-0900	0	0	0	1	0	0	0	0	**1**
0900-0915	1	0	1	0	0	0	0	0	**1**
0915-0930	0	0	1	0	0	0	0	0	**1**
TOTAL	**1**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**4**
1630-1645	0	0	1	0	0	0	0	3	**4**
1645-1700	0	0	0	0	0	0	0	0	**0**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	3	0	0	0	0	0	**3**
1730-1745	0	0	2	0	0	0	0	0	**2**
1745-1800	0	0	1	0	0	0	0	0	**1**
1800-1815	1	0	1	0	0	0	0	1	**2**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**4**	**12**

FROM A4260 OXFORD ROAD NORTH
RIGHT TURN TO 'A'

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1630-1645	0	0	0	0	0	0	0	0	**0**
1645-1700	0	0	2	0	0	0	0	0	**2**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**

FROM 'C'
LEFT TURN TO 'A'

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1630-1645	0	0	0	0	1	0	0	0	**1**
1645-1700	0	0	1	0	0	0	0	0	**1**
1700-1715	0	0	1	0	0	0	0	0	**1**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**3**

FROM 'C'
RIGHT THEN LEFT TURN TO A4260 OXFORD ROAD NORTH

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	5	0	**5**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	1	0	0	0	0	0	1	0	**1**
0815-0830	1	0	1	0	0	0	0	0	**1**
0830-0845	0	0	0	0	0	0	1	0	**1**
0845-0900	1	0	0	0	0	0	0	0	**0**
0900-0915	0	0	3	0	0	0	0	0	**3**
0915-0930	0	0	1	0	0	0	0	0	**1**
TOTAL	**3**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**12**
1630-1645	0	0	3	0	0	0	0	0	**3**
1645-1700	2	0	3	0	0	0	0	0	**3**
1700-1715	0	0	0	2	0	0	0	0	**2**
1715-1730	0	0	1	0	0	0	0	0	**1**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	2	0	0	0	0	0	**2**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**2**	**0**	**9**	**2**	**0**	**0**	**0**	**0**	**11**

FROM 'C'
RIGHT THEN 2ND RIGHT TO A4260 OXFORD ROAD SOUTH

TIME	PEDAL CYCLES	MOTOR CYCLES	LIGHT CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1630-1645	0	0	1	0	0	0	0	0	**1**
1645-1700	0	0	0	0	0	0	0	0	**0**
1700-1715	0	0	1	0	0	0	0	0	**1**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**

FROM 'B'
LEFT TURN TO A4260 OXFORD ROAD NORTH

TIME	PEDAL CYCLES	MOTOR CYCLES	LIGHT CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	1	0	0	0	0	0	**1**
TOTAL	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**
1630-1645	0	0	0	0	0	0	0	0	**0**
1645-1700	0	0	3	0	0	0	0	0	**3**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**3**

FROM 'B'
RIGHT TURN TO A4260 OXFORD ROAD SOUTH

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1630-1645	0	0	0	0	0	0	0	0	**0**
1645-1700	0	0	0	0	0	0	0	0	**0**
1700-1715	0	0	0	0	0	0	0	0	**0**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	0	0	0	0	0	0	**0**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

FROM 'B'
RIGHT TURN TO 'C'

TIME	PEDAL CYCLES	MOTOR CYCLES	CARS	LIGHT GOODS	OGV 1	OGV 2	BUSES	COACH	TOTAL VEHICLES
0730-0745	0	0	0	0	0	0	0	0	**0**
0745-0800	0	0	0	0	0	0	0	0	**0**
0800-0815	0	0	0	0	0	0	0	0	**0**
0815-0830	0	0	0	0	0	0	0	0	**0**
0830-0845	0	0	0	0	0	0	0	0	**0**
0845-0900	0	0	0	0	0	0	0	0	**0**
0900-0915	0	0	0	0	0	0	0	0	**0**
0915-0930	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1630-1645	0	0	0	0	1	0	0	0	**1**
1645-1700	0	0	2	0	0	0	0	0	**2**
1700-1715	0	0	1	0	0	0	0	0	**1**
1715-1730	0	0	0	0	0	0	0	0	**0**
1730-1745	0	0	0	0	0	0	0	0	**0**
1745-1800	0	0	0	0	0	0	0	0	**0**
1800-1815	0	0	1	0	0	0	0	0	**1**
1815-1830	0	0	0	0	0	0	0	0	**0**
TOTAL	**0**	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**5**

APPENDIX H: PRIVATE HOUSING TRICS TRIP RATES

TRICS 7.1.1
Trip Rate Parameter: Number of dwellings

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

3	SOUTH WEST		
	CW	CORNWALL	1 days
4	EAST ANGLIA		
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
6	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	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: 52 to 115 (units:)
Range Selected by User: 40 to 120 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 22/10/12

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 1 days
Tuesday 2 days
Wednesday 1 days
Thursday 1 days
Friday 2 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 7 days
Directional ATC Count 0 days
This data displays the nu the total adding up to the overall number o whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	0
Edge of Town Centre	0
Suburban Area (PPS6 Ou	7
Edge of Town	0
Neighbourhood Centre (I	0
Free Standing (PPS6 Out	0
Not Known	0

This data displays the nu Edge of Town Suburban Area Neighbourhood Cen Edge of Town Cer Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	0
Commercial Zone	0
Development Zone	0
Residential Zone	6
Retail Zone	0
Built-Up Zone	0
Village	0
Out of Town	0
High Street	0
No Sub Category	1

This data displays the nu Industrial Zone Development Zone Residential Zone Retail Zone Built-Up Zone Village Out of Town High Street and No Sub Ca

Filtering Stage 3 selection:

Use Class:
C3 7 days
This data displays the nu which can be found within the Library module of TRICS®.

Population within 1 mile:
1,001 to 5,000 1 days
5,001 to 10,000 1 days
10,001 to 15,000 1 days
15,001 to 20,000 2 days
20,001 to 25,000 1 days
25,001 to 50,000 1 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 2 days
25,001 to 50,000 1 days
75,001 to 100,000 1 days
125,001 to 250,000 2 days
250,001 to 500,000 1 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 1 days
0.6 to 1.0 2 days
1.1 to 1.5 4 days
This data displays the nu within a radius of 5-miles of selected survey sites.

Travel Plan:
No 7 days
This data displays the nu and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CW-03-A-02 SEMI D./DETATCHED CORNWALL
BOSVEAN GARDENS

TRURO
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 73
Survey date: TUESDAY 18/09/2007 Survey Type: MANUAL

2 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 22/10/2012 Survey Type: MANUAL

3 NY-03-A-01 MIXED HOUSES NORTH YORKSHIRE
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: TUESDAY 25/09/2007 Survey Type: MANUAL

4 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 14/10/2011 Survey Type: MANUAL

5 SF-03-A-01 SEMI DETACHED SUFFOLK
A1156 FELIXSTOWE ROAD
RACECOURSE
IPSWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 77
Survey date: WEDNESDAY 23/05/2007 Survey Type: MANUAL

6 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 11/06/2009 Survey Type: MANUAL

7 WM-03-A-01 TERRACED WEST MIDLANDS
FOLESHILL ROAD
FOLESHILL
COVENTRY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 79
Survey date: FRIDAY 03/02/2006 Survey Type: MANUAL

This section provides a li: it displays a unique site reference code and the selected trip rate calculatio the day of the week and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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	7	86	0.058	7	86	0.284	7	86	0.342
08:00-09:00	7	86	0.150	7	86	0.377	7	86	0.527
09:00-10:00	7	86	0.156	7	86	0.199	7	86	0.355
10:00-11:00	7	86	0.151	7	86	0.196	7	86	0.347
11:00-12:00	7	86	0.159	7	86	0.154	7	86	0.313
12:00-13:00	7	86	0.184	7	86	0.161	7	86	0.345
13:00-14:00	7	86	0.166	7	86	0.145	7	86	0.311
14:00-15:00	7	86	0.159	7	86	0.191	7	86	0.350
15:00-16:00	7	86	0.241	7	86	0.184	7	86	0.425
16:00-17:00	7	86	0.286	7	86	0.159	7	86	0.445
17:00-18:00	7	86	0.319	7	86	0.204	7	86	0.523
18:00-19:00	7	86	0.231	7	86	0.174	7	86	0.405
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			2.260			2.428			4.688

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: OGVS

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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		7	86	0.000	7	86	0.000	7	86	0.000
08:00-09:00		7	86	0.002	7	86	0.002	7	86	0.004
09:00-10:00		7	86	0.000	7	86	0.000	7	86	0.000
10:00-11:00		7	86	0.003	7	86	0.000	7	86	0.003
11:00-12:00		7	86	0.002	7	86	0.003	7	86	0.005
12:00-13:00		7	86	0.005	7	86	0.002	7	86	0.007
13:00-14:00		7	86	0.002	7	86	0.005	7	86	0.007
14:00-15:00		7	86	0.002	7	86	0.003	7	86	0.005
15:00-16:00		7	86	0.000	7	86	0.000	7	86	0.000
16:00-17:00		7	86	0.000	7	86	0.000	7	86	0.000
17:00-18:00		7	86	0.002	7	86	0.002	7	86	0.004
18:00-19:00		7	86	0.002	7	86	0.000	7	86	0.002
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:				0.020			0.017			0.037

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: CYCLISTS

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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		7	86	0.008	7	86	0.013	7	86	0.021
08:00-09:00		7	86	0.007	7	86	0.020	7	86	0.027
09:00-10:00		7	86	0.000	7	86	0.005	7	86	0.005
10:00-11:00		7	86	0.007	7	86	0.012	7	86	0.019
11:00-12:00		7	86	0.008	7	86	0.003	7	86	0.011
12:00-13:00		7	86	0.008	7	86	0.003	7	86	0.011
13:00-14:00		7	86	0.002	7	86	0.005	7	86	0.007
14:00-15:00		7	86	0.000	7	86	0.007	7	86	0.007
15:00-16:00		7	86	0.018	7	86	0.013	7	86	0.031
16:00-17:00		7	86	0.010	7	86	0.017	7	86	0.027
17:00-18:00		7	86	0.032	7	86	0.010	7	86	0.042
18:00-19:00		7	86	0.010	7	86	0.003	7	86	0.013
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:				0.110			0.111			0.221

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: PEDESTRIANS

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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		7	86	0.035	7	86	0.080	7	86	0.115
08:00-09:00		7	86	0.025	7	86	0.216	7	86	0.241
09:00-10:00		7	86	0.061	7	86	0.080	7	86	0.141
10:00-11:00		7	86	0.058	7	86	0.075	7	86	0.133
11:00-12:00		7	86	0.056	7	86	0.053	7	86	0.109
12:00-13:00		7	86	0.068	7	86	0.055	7	86	0.123
13:00-14:00		7	86	0.071	7	86	0.070	7	86	0.141
14:00-15:00		7	86	0.068	7	86	0.066	7	86	0.134
15:00-16:00		7	86	0.183	7	86	0.118	7	86	0.301
16:00-17:00		7	86	0.140	7	86	0.076	7	86	0.216
17:00-18:00		7	86	0.123	7	86	0.060	7	86	0.183
18:00-19:00		7	86	0.056	7	86	0.058	7	86	0.114
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:				0.944			1.007			1.951

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: PUBLIC TRANSPORT USERS

		ARRIVALS			DEPARTURES			TOTALS	

Time Range	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		7	86	0.003	7	86	0.012	7	86	0.015
08:00-09:00		7	86	0.025	7	86	0.038	7	86	0.063
09:00-10:00		7	86	0.015	7	86	0.005	7	86	0.020
10:00-11:00		7	86	0.003	7	86	0.010	7	86	0.013
11:00-12:00		7	86	0.003	7	86	0.005	7	86	0.008
12:00-13:00		7	86	0.000	7	86	0.005	7	86	0.005
13:00-14:00		7	86	0.000	7	86	0.002	7	86	0.002
14:00-15:00		7	86	0.002	7	86	0.005	7	86	0.007
15:00-16:00		7	86	0.018	7	86	0.033	7	86	0.051
16:00-17:00		7	86	0.007	7	86	0.005	7	86	0.012
17:00-18:00		7	86	0.035	7	86	0.003	7	86	0.038
18:00-19:00		7	86	0.013	7	86	0.005	7	86	0.018
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:				0.124			0.128			0.252

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL PEOPLE

		ARRIVALS			DEPARTURES			TOTALS	
Time Range	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		7	86	0.116	7	86	0.439	7	86	0.555
08:00-09:00		7	86	0.241	7	86	0.769	7	86	1.010
09:00-10:00		7	86	0.266	7	86	0.346	7	86	0.612
10:00-11:00		7	86	0.259	7	86	0.350	7	86	0.609
11:00-12:00		7	86	0.261	7	86	0.257	7	86	0.518
12:00-13:00		7	86	0.306	7	86	0.274	7	86	0.580
13:00-14:00		7	86	0.279	7	86	0.272	7	86	0.551
14:00-15:00		7	86	0.256	7	86	0.329	7	86	0.585
15:00-16:00		7	86	0.570	7	86	0.395	7	86	0.965
16:00-17:00		7	86	0.542	7	86	0.317	7	86	0.859
17:00-18:00		7	86	0.605	7	86	0.341	7	86	0.946
18:00-19:00		7	86	0.380	7	86	0.324	7	86	0.704
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:				4.081			4.413			8.494

Parameter summary

Trip rate parameter rang 52 - 115 (units:)
Survey date date range: 01/01/05 - 22/10/12
Number of weekdays (M 7
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually remov 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 show. Finally
the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed

ıtegory.

APPENDIX I: AFFORDABLE HOUSING TRICS TRIP RATES

TRICS 7.1.1
Trip Rate Parameter: Number of dwellings

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category B - HOUSES FOR RENT
MULTI-MODAL VEHICLES

Selected regions and areas:

3	SOUTH WEST		
	DV	DEVON	1 days
4	EAST ANGLIA		
	SF	SUFFOLK	1 days
5	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 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: 29 to 46 (units:)
Range Selected by User: 10 to 50 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 18/06/13

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 1 days
Tuesday 2 days
Wednesday 1 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 4 days
Directional ATC Count 0 days
This data displays the nur the total adding up to the overall numbe whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	0
Edge of Town Centre	0
Suburban Area (PPS6 Out	4
Edge of Town	0
Neighbourhood Centre (P	0
Free Standing (PPS6 Out (	0
Not Known	0

This data displays the nur Edge of Town Suburban Area Neighbourhood (Edge of To Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	0
Commercial Zone	0
Development Zone	0
Residential Zone	2
Retail Zone	0
Built-Up Zone	1
Village	0
Out of Town	0
High Street	0
No Sub Category	1

This data displays the nur Industrial Zone Development Zone Residential Zone Retail Zone Built-Up Z(Village Out of Tow High Street and No Su

Filtering Stage 3 selection:

Use Class:
C3 3 days
This data displays the nur which can be found within the Library module of TRICS®.

Population within 1 mile:
1,001 to 5,000 1 days
15,001 to 20,000 1 days
25,001 to 50,000 2 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
75,001 to 100,000 1 days
250,001 to 500,000 3 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 3 days
1.1 to 1.5 1 days
This data displays the nur within a radius of 5-miles of selected survey sites.

Travel Plan:

b Category.